



# Notice of Public Meeting

## The Board of Retirement of the San Mateo County Employees' Retirement Association will meet on **Tuesday, August 23, 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 Administration of Oath of Office to Newly Elected Trustee
- 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 July 27, 2016
- 4. Approval of the Consent Agenda**

<ol style="list-style-type: none"><li>4.1 Disability Retirements<ul style="list-style-type: none"><li>• Elsie Iniguez</li><li>• Linda Selhorn</li><li>• Rafael Urena</li></ul></li><li>4.2 Service Retirements</li><li>4.3 Continuances</li></ol>	<ol style="list-style-type: none"><li>4.4 Deferred Retirements</li><li>4.5 Member Account Refunds</li><li>4.6 Member Account Rollovers</li><li>4.7 Acceptance of Semi-Annual Compliance Certification Statements for Period Ended June 30, 2016</li></ol>
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- 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 Performance Report for the Period Ending July 31, 2016
  - 6.2 Report on Quarterly Investment Performance Report for the Period Ended June 30, 2016
  - 6.3 Report on the Growth Equity Manager Annual Reviews
  - 6.4 Report on Asset Liability Mixes: Asset Allocation Mixes (continued)
  - 6.5 Presentation on the Volatility Risk Premium
  - 6.6 Approval of Proposed Alternative Investment (to be heard in Closed Session, Confidential Under Gov. Code §54956.81 and §6254.26, see item C2.)
- 7. Board & Management Support**
  - 7.1 Preliminary Financial Statements for the Fiscal Year Ended June 30, 2016
  - 7.2 Preliminary Report on Budget-to-Actual for the Fiscal Year Ended June 30, 2016
  - 7.3 Approval of Process and Questions for the Annual Review of Brown Armstrong
  - 7.4 Update on Progress of SamCERA's Information Technology Projects
- 8. Management Reports**
  - 8.1 Chief Executive Officer's Report
  - 8.2 Assistant Executive Officer's Reports

# Notice of Public Meeting

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- 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 Discussion and Approval of Proposed Alternative Investment (Confidential Under Gov. Code §54956.81 and §6254.2 – see also item 6.6)

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

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

Pagan, Michael	May 9, 2016	Probation
Larson, Joan	July 4, 2016	Library
Lamis, Aurelia	July 9, 2016	Medical Center
Farr, Grover	July 17, 2016	Chope Hospital
Sylvester, Mary	July 19, 2016	Medical Center
Spiker, John	July 22, 2016	Public Works
Lanphear, Eva	July 27, 2016	Human Services Agency
Ganley, Mary	July 28, 2016	Sheriff's
Reppas, John	July 28, 2016	Agr. Weights & Measures
Kierig, Leslie	July 30, 2016	Health Services
Griffin Ramseur, Mary E.	August 10, 2016	Board of Supervisors



Scott Hood, Chief Executive Officer

Posted: August 17, 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

August 23, 2016

Agenda Item 1.1

**TO:** Board of Retirement

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



**SUBJECT:** Administration of the Oath of Office to Newly Elected Trustee

In this agenda item, the Trustee Oath of Office will be given to:

- Third Member, **Natalie Kwan Lloyd**, elected by the General Membership;

**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**  
**JULY 27, 2016 – REGULAR BOARD MEETING MINUTES**

1607.1 **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 2:02 p.m.

**Roll Call:**

*Present:* Sandie Arnott, Mark Battey, Ben Bowler, Paul Hackleman, Michal Settles, David Spinello, and Shirley Tourel.

*Excused:* Natalie Kwan Lloyd and Eric Tashman

*Alternates present:* Alma Salas and Susan Lee (for Natalie Kwan Lloyd)

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

*Consultants:* Margaret Jadallah, Stephen Quirk, Faraz Shooshani, Joe Abdou, Derek Kong and John Nicolini (*Verus*)

*Also present:* Michael Barber, Legislative Aide, San Mateo County

1607.1.1 **Administration of Oath of Office to Newly Elected Trustees:** Sandie Arnott administered the oath of office to Paul Hackleman (Eighth Member) and Alma Salas (Eighth Member Alternate). Mr. Hackleman also announced that the Board's current officers would "hold over" until the Board of Supervisors takes action on the trustee appointments for the 5<sup>th</sup> (Bowler) and 9<sup>th</sup> (Settles) members' seats. The Ad-Hoc Nominating Committee, headed by Ms. Arnott, will meet to nominate the Board of Retirement officers pending those appointments.

1607.2.1 **Oral Communications from the Board:** Mr. Battey, Ms. Tourel and Mr. Hackleman reported their attendance at International and Emerging Market Investing, a 2.5 day Wharton class held in San Francisco, July 25-27, 2016. Ms. Arnott reported her attendance at the GFOA Annual Conference, in Toronto, Ontario, on May 19-24, 2016; as well as attending the SACRS Spring Conference in Costa Mesa, on May 8-10, 2016. Ms. Settles reported her attendance at IMN's Global Indexing and ETFs Conference, in Dana Point, CA, June 26-28, 2016.

1607.2.2 **Oral Communications from the Public:** None.

1607.3.1 **Approval of Board Meeting Minutes from June 7, 2016:** Mr. Hackleman asked if there were any changes or corrections to the minutes from June 7, 2016 and none were noted.  
**Action:** Ms. Settles moved to approve the minutes from June 7, 2016; the motion was seconded by Mr. Battey. The motion carried with a vote of 6-0-2 with trustees Battey, Hackleman, Lee (for Kwan Lloyd), Settles, Spinello, and Tourel all in favor; none opposed; Arnott and Bowler abstaining, as they were not in attendance at the June 7th meeting.

1607.4.0 **Approval of the Consent Agenda:** Mr. Hackleman asked if there were any items to be removed from the Consent Agenda, and no items were requested to be removed.  
**Action:** Mr. Spinello moved to approve the Consent Agenda, and the motion was seconded by Ms. Arnott. The motion carried with a vote of 8-0 with trustees Arnott, Battey, Bowler, Hackleman, Lee (for Kwan Lloyd), Settles, Spinello, and Tourel all in favor; none opposed.

1607.4.1 **Disability Retirements**

a) The Board found that Mary Paengalau is (1) permanently incapacitated from the performance of her usual and customary duties as a Fiscal Office Specialist, (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 Christine Steaveson is (1) permanently incapacitated from the performance of her usual and customary duties as a Communications Dispatch 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.

1607.4.2 **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>
Cabugao, Teresita	June 1, 2016	Medical Center
Crandall, Deborah	April 30, 2016	Human Services Agency
Cummings, Stephen	June 1, 2016	Medical Center
Halkyard, Rosalinda	May 28, 2016	Medical Center
Jimenez, Reuben	May 31, 2016	Deferred from Social Services
Jones, Aniceta	June 1, 2016	Environmental Health
Kwok, Yin Mei	May 19, 2016	Deferred from Medical Center
Lineback, Nancy	May 9, 2016	Deferred from Medical Center
Lira, Lillian	June 1, 2016	Aging and Adult Services
Luft, John	December 25, 2015	Deferred from District Attorney
Luft, Pauline	February 8, 2016	QDRO
Mariano, Josefina	May 25, 2016	Deferred from Medical Center
McKee-Parks, Craig	April 30, 2016	Deferred from Sheriff's
Melnicoe, Shirley	April 17, 2016	Deferred from CMO
Merritt, Nancy	March 31, 2016	Deferred from Probation
Meynard, C E	May 24, 2016	Deferred from Medical Center
Nypaver, Christina	May 6, 2016	Deferred from Library
O'Brien, Eileen	May 28, 2016	Deferred from Human Services
Perez, Alfredo	April 26, 2016	Deferred from Social Services
Petrovitz, Cindy	June 1, 2016	Deferred from Superior Court
Schofield, Georgette	April 19, 2016	Deferred from Sheriff's
Stone, Randy	May 12, 2016	Deferred from Medical Center
Tolentino, Irma	May 17, 2016	Deferred from Superior Court

1607.4.3 **Continuances:**

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

<b>Survivor's Name</b>	<b>Beneficiary of:</b>
Beconsall, Teresa Lynn	Beconsall, Paul
Franklyn, Linda Joyce	Franklyn, Bernard
Green, Lynda L	Green, Gerald L
Johnson, John	Majors, Amanda
Magulac, Stanley G	Magulac, Ruth
Mc Namara, Michael	Brewer, Shay
Morton, Christine	Morton, Harry
Ward, Robert A	Ward, Bernice

1607.4.4 **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>
Acha, Roderick C.	S4, Vested
Baxley, Amabel	G4, Vested
Beebe, Alexis N.	G7, Non-vested - Reciprocity

Ehrlich, Susan P.	G4, Vested - Reciprocity
Lang, Kenneth	G4, Vested
Langan, Brad J.	P4, Vested
Lowe, Steven W.	G4, Vested - Reciprocity
Martinez, Brian L.	G4, Vested - Reciprocity
O’Kane, Mollie	G4, Vested
Quadrelli, Melissa	G4, Vested
Rugama, Candida	G4, Vested
Wongsrikasem, Natthawut	G5/S5, Non-vested - Reciprocity
Yee, Raymond G.	G4, Vested

1607.4.5 **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>
Amin, Nawied	G7, Non-vested
Borgueta, Clementine	G7, Non-vested
Davalos, Edgar	P7, Non-vested
Flatmoe, Chris	G5, Non-vested
Kelly, Sean	G4, Vested
Miranda, Ma Melanie	G4, Vested
Takla, La Tanya	G5, Non-vested
Valentin-Cubing, Susan	G4, QDRO

1607.4.6 **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>
Davis, Michelle	G5, Non-vested
Downey, Bryan	G7, Non-vested
Li, Yinglin	G7, Non-vested
Maitoza, Edward	G4, Non-vested
Osback, Terry	G7, Non-vested
Yokota, Jessica	G4, Non-vested

1607.4.7 **Approval of Questions for Annual Review of Milliman, Inc.:** The Board approved the questions proposed for the annual actuarial consultant evaluation.

1607.4.8 **Acceptance of July 2016 Addendum to the 2015 Actuarial Valuation and Resolution Accepting Contribution Rates to Recommend to the Board of Supervisors for the 2016-2017 Fiscal Year:** The Board accepted the addendum to the 2015 Actuarial Valuation and approved a resolution accepting the contribution rates contained in the July 20, 2016 addendum to the 2015 Actuarial Valuation to recommend to the Board of Supervisors for the 2016-2017 Fiscal Year.

1607.4.9 **Acceptance of Semi-Annual Compliance Certification Statements for Period Ended June 30, 2016:** The Board accepted the semi-annual Compliance Certification Statements for SamCERA’s non-alternative investment managers, as of June 30, 2016.

1607.5.1 **Consideration of Agenda Items, if any, Removed from the Consent Agenda:** None.

- 1607.6.1 **Preliminary Monthly Portfolio Performance Report for the Period Ended June 30, 2016:** Mr. Coultrip discussed the preliminary monthly performance report with the Board. He reported that SamCERA's net preliminary return for June was 0.55 %, while the preliminary trailing twelve-month return ending June 30, 2016 was 0.73 % net. This item was informational and for discussion only, no action was taken.
- 1607.6.2 **Report on International Equity Manager Annual Reviews:** Ms. Ng reported that staff met with representatives from Franklin Templeton, Eaton Vance Parametric, and Fidelity Institutional Asset Management on May 19, 2016. Ms. Ng reported there were no significant concerns identified during the portfolio reviews, and the submitted meeting notes contain more detail. This item was informational and for discussion only, no action was taken.
- 1607.6.3 **Report on Value Manager Annual Reviews:** Ms. Ng reported that staff met with representatives from Barrow Hanley, Mondrian and The Boston Company on June 16, 2016. Ms. Ng reported there were no significant concerns identified during the portfolio review, and the submitted meeting notes contain more detail. This item was informational and for discussion only, no action was taken.

The Board took Item 6.7 next, out of order. The remaining items were heard in the order listed below. The Board adjourned into closed session at 2:42 p.m. and reconvened at 3:00 p.m.

- 1607.6.7 **Approval of Proposed Alternative Investment (to be heard in Closed Session, Confidential Under Gov. Code §54956.81 and §6254.26, see item C2.):** The Board met in closed session to discuss this item. Upon conclusion of the closed session, Ms. Carlson reported the following action was taken by the Board.

**Action:** A motion was made and seconded, to approve a commitment of \$10 million in Angeles Equity Partners I, as part of SamCERA's allocation to private equity. The motion carried with a vote of 8-0, with trustees Arnott, Battey, Bowler, Hackleman, Lee (for Kwan Lloyd) Settles, Spinello and Tourel, all in favor; none opposed.

- 1607.6.4 **Approval of Small-Capitalization Core Manager Finalist:** Mr. Coultrip reviewed the selection process thus far with the Board. He reported that staff and SamCERA's consultant completed in depth due-diligence, including an on-site visit, for the finalist, Quantitative Management Associates (QMA). Board members discussed the recommendation with Ms. Jadallah and Mr. Coultrip, and topics of the discussion included fee structure, trading analysis, and how QMA would complement the current strategies in the portfolio. Utilizing a transition manager in this process was also recommended and was included in the motion.

**Action:** Mr. Battey moved to approve the recommendation to hire Quantitative Management Associates (QMA) for a Small-Cap Core mandate with an initial investment of \$110 million, utilizing a transition manager; and to approve changing SamCERA's domestic equity benchmark to the Russell 3000 Index. The motion was seconded by Mr. Bowler and carried with a vote of 8-0, with trustees Arnott, Battey, Bowler, Hackleman, Lee (for Kwan Lloyd) Settles, Spinello and Tourel, all in favor; none opposed.

1607.6.5 **Approval of Liquid Real Asset Pool Implementation:** Mr. Coultrip and Mr. Nicolini discussed the proposed change to the current commodity strategy to a more passive strategy, with a better fee structure; which would become the permanent Liquid Pool portion of the Inflation Hedge portfolio.

**Action:** Mr. Battey moved to approve staff and consultant's recommendation to move SamCERA's current commodity strategy exposure (approx. \$85-90 million) to a new custom liquid real asset strategy managed by State Street Global Advisors. The motion was seconded by Ms. Arnott and carried with a vote of 8-0, with trustees Arnott, Battey, Bowler, Hackleman, Lee (for Kwan Lloyd) Settles, Spinello and Tourel, all in favor; none opposed.

The meeting was adjourned for a break at 3:35 p.m.; and reconvened at 3:50 p.m.

1607.6.6 **Report on Asset/Liability Study: Asset Allocation Mixes:** Ms. Jadallah reviewed and discussed the Asset/Liability Study report with the Board. She presented a range of asset allocation portfolios, and summarized their key metrics, including funded ratio, contributions in dollars, and contributions as a percentage of pay. Open discussion followed and Board members discussed the timeline for payoff of the unfunded liability, outcome of lowering risk, cash flow, as well as other topics; and gave direction to staff and Verus to come back with more information on 50/20/20 and 40/25/25 asset allocation strategies. This item was informational and for discussion only, no action was taken.

1607.7.1 **Approval of a Resolution Authorizing the Chief Executive Officer to Contract for Audit Services of the Internal Controls of the Pension Administration Software System (PASS):** Mr. Hood discussed the proposed agreement for an Internal Controls Audit of the Pension Administration Software System (PASS), and provided a glossary of terms to the Board members in their meeting folder. He explained this was different than penetration testing, as this audit service would provide information about internal control vulnerabilities, and assure "traceability"; and permit corrections to be made before the PASS system goes live.

**Action:** Ms. Settles moved to approve a resolution authorizing the Chief Executive Officer to execute an agreement, not to exceed \$250,000, for an Internal Control Audit of the Pension Administration Software System (PASS). The motion was seconded by Ms. Arnott and carried with a vote of 8-0, with trustees Arnott, Battey, Bowler, Hackleman, Lee (for Kwan Lloyd) Settles, Spinello and Tourel, all in favor; none opposed.

1607.8.1 **Chief Executive Officer's Report:** Mr. Hood reported he was working with the Mosquito and Vector Control District to answer their questions about unfunded liability pay down, and that Milliman, Inc. was assisting. He commented on the items in the "Day of Meeting" folder, including the Board calendar and annual trustee travel expenditures. Mr. Hood will be auditing the CALAPRS Principles of Pension Management class in August.

1607.8.2 **Assistant Executive Officer's Report:** Ms. Smith reported her attendance at the recent SCORPA meeting. She introduced new employees, Hollie Song-Duell (Accountant) and Janet Nishimura (Retirement Support Specialist) to the Board.

1607.8.3 **Chief Investment Officer's Report:** Mr. Coultrip notified the Board that an additional educational session on volatility would be scheduled soon. He reported that Doris Ng attended the SACRS Public Pension Investment Management Program, July 17-20, in Berkeley.

1607.8.4 **Chief Legal Counsel's Report:** Ms. Carlson reviewed a PEPRA related court decision involving CalPERS regarding pensionable pay and defining a publicly stated pay rate.



**CLOSED SESSION**

- C1 **Consideration of Disability Items, if any, Removed from the Consent Agenda** – None.
  - C2 **Approval of Purchase of Proposed Alternative Investment** (Confidential Under Gov. Code §54956.81 and §6254.2) –See item 6.7 for action taken.
  - C3 **Public Employee Performance Evaluation, in Accordance with Government Code Section 54957**  
Title: Chief Executive Officer
  - C4 **Conference with Labor Negotiator, in Accordance with Government Code Section 54957.6**  
Designated Representative: Brenda B. Carlson. Employee Position: Chief Executive Officer
- 1607.9 **Report on Actions Taken in Closed Session:** See item 6.7. The Board adjourned into closed session to consider Items C3 and C4 at 5:12 p.m. Upon reconvening, at approximately 5:40 p.m., Ms. Carlson reported that the Board had not taken any reportable action on these items.
- 1607.10 **Adjournment:** Mr. Hackleman adjourned the meeting at 5:12 p.m. in memory of the deceased members listed below.

Green, Gerald	May 21, 2016	Public Works
Becconsall, Paul	May 23, 2016	Public Works
Freemon, Peggy	May 29, 2016	Human Services
Springer, Richard	May 31, 2016	General Services
Saito, Kay	June 4, 2016	Social Services
Banez, Eulogio	June 11, 2016	Medical Center
Miller, George	June 11, 2016	Planning
Sullivan, Harley	June 11, 2016	Probation
Cardoza, Leonard	June 12, 2016	Sheriff's
Jones, Sarah	June 13, 2016	Electronic Data Processing
Luzzi, Robert	June 26, 2016	Treasurer
Redwine, Julia	June 27, 2016	Human Services
Donati, Harriet	June 29, 2016	Superior Court
Kunitani, Suzu	July 1, 2016	Public Health

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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**

August 23, 2016

Agenda Items 4.1- 4.6

**TO:** Board of Retirement

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



**SUBJECT:** Approval of Consent Agenda Items 4.1 – 4.6

**4.1 Disability Retirements**

- a) The Board (1) accept the proposed findings and recommendations of the Hearing Officer, George Camerlengo, (2) find that **Elsie Iniguez** is permanently incapacitated for the performance of her usual and customary duties as a 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.
  
- b) The Board find that **Linda Selhorn** is (1) not permanently incapacitated for the performance of her usual and customary duties as a Telephone Operator and (2) deny her application for a service-connected disability retirement.
  
- c) The Board find that **Rafael Urena** is (1) permanently incapacitated from the performance of his usual and customary duties as Road Maintenance Worker, (2) find that his disability was the result of an injury arising out of and in the course of his employment and (3) grant his application for a service-connected disability retirement.

**4.2 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>
Cummings, Stephen	June 6, 2016	QDRO account
Day, Christopher	June 29, 2016	Deferred from Environmental Health
Jackson, Wilbur	July 1, 2016	Family Health
Jenson, Jill	June 1, 2008	Probation
Kocel, Katherine	July 1, 2016	Deferred from Child Support Services
Kollerer-Olear, Elizabeth	June 8, 2016	Deferred from Courts
Larmour, Rodney	July 1, 2016	Sheriff's

Moore, Suzanne	July 1, 2016	Medical Center
Selhorn, Linda	July 1, 2016	Information Services
Stephens, Madeline	July 1, 2016	Deferred from Health Services
Toth, William	June 11, 2016	Human Services Agency
Urena, Rafael	June 19, 2016	Public Works

#### **4.3 Continuances**

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

<b>Survivor's Name</b>	<b>Beneficiary of:</b>
Cardoza, Shirley E (B)	Cardoza, Leonard
Fletcher, Kimberly M (B)	Fletcher, David
Zimmerman, Walter G (B)	Miller, George

#### **4.4 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>
Barriga, Eliseo T.	G4, Vested
Barthe, Jean-Francois	G4, Vested
Coulehan, Holly D.	G4, Vested - Reciprocity
Gonzalez, Alma L.	G2, Vested
Loomis, Michelle H.	G4, Vested
Luayon, Jennifer A.	G4, Non-vested - Reciprocity
Mosher, Janelle A.	G4, Vested
Rider, Cynthia J.	G4, Vested - Reciprocity
Valentino, Arnold B.	G4, Vested
Viet, John N.	G7, Non-vested - Reciprocity

#### **4.5 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>
Dumlupinar, Firuz	G7, Non-vested
Estorga, Casey	G7, Non-vested
Hayes, Gregory	G7, Non-vested
Hernandez, Sylvia	G4, Vested
Jimenez, Chellee	G4, Vested
Keller, Jennifer	G7, Non-vested
Manaysay, Kenneth	G7, Non-vested
Pierce, Katherine	G5, Non-vested
Walker, Jamica	G5, Non-vested

#### **4.6 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>
Collier, Rowmeeka	G4, Non-vested



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

August 23, 2016

Consent Agenda Item 4.7

**TO:** Board of Retirement

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

**SUBJECT:** Semi-Annual Compliance Certification Statements for Period Ended  
June 30, 2016

**Staff Recommendation**

Accept the semi-annual Compliance Certification Statements for SamCERA's equity and fixed income investment managers as of June 30, 2016.

**Background**

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

**Discussion**

The attached Compliance Certification Statements report that BlackRock and Franklin Templeton were in compliance with SamCERA's Investment Policy as of June 30, 2016. There were no reported significant developments in portfolio construction, investment approach, firm ownership or organizational structure. There were no notable issues regarding industry or regulatory actions that impact SamCERA. The manager was also requested to provide data regarding the characteristics and composition of their portfolios. No prominent issues were identified during the review. Any items that raise concern will be brought to the manager's attention and will be thoroughly vetted by staff.

**Attachments**

- Compliance Certification Statement Matrix 06-2016
- Compliance Certification Statements (3)
  - A. Domestic Equity: BlackRock S&P 500
  - B. International Equity - Developed: BlackRock EAFE
  - C. Global Equity: Franklin Templeton

## Compliance Certification Statement Matrix – June 30, 2016

Investment Manager	Mandate	General Compliance Issues	Derivative Instruments	Investment Manager Guidelines	Mandate Specific
<b>Domestic Equity</b>					
<b>BlackRock S&amp;P</b>		No Concerns; <ul style="list-style-type: none"> <li>• April 2016 – New org structure in Beta Strategies Grp.</li> <li>• Chris Bliss, Hd of Institu PM left. Responsib to be assumed by Creighton Jue, Hd of Alter Beta &amp; Rachel Aguirre, Sr. PM of Int’l Dev Mkts</li> <li>• Corin Frost, Glb Hd of Index Prod Strategy retired, succeeded by Kristen Dickey, Mnging Director, Index Prod Strategy</li> </ul>	No Concerns	No Concerns	<ul style="list-style-type: none"> <li>• 2.82% Apple</li> </ul> <u>Industry Exposure&gt;15%:</u> <ul style="list-style-type: none"> <li>• 19.8% Information Technology</li> <li>• 15.7% Financials</li> </ul>
<b>International Equity - Developed</b>					
<b>BlackRock EAFE</b>		See updates in BlackRock S&P above	No Concerns	No Concerns	<ul style="list-style-type: none"> <li>• 0.06% ADR</li> </ul>

## Compliance Certification Statement Matrix – June 30, 2016

Investment Manager	Mandate	General Compliance Issues	Derivative Instruments	Investment Manager Guidelines	Mandate Specific
<b>Global Fixed Income</b>					
Franklin Templeton		No Concerns; <ul style="list-style-type: none"> <li>• April 2016-Stephen Dover became CIO of Emrg Mkts Grp, in addit to CIO of Local Asset Mgmt</li> <li>• Mar 2016-Shlomi Kramer joined as rsrch analyst</li> <li>• Feb 2016-Kang Tan left</li> </ul>	No Concerns	No Concerns	<ul style="list-style-type: none"> <li>• 0.14% ADR</li> </ul>

## ***BlackRock S&P 500 Index – June 30, 2016***

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

***San Mateo County***

***Employees' Retirement Association***

In accordance with SamCERA's Investment Policy Statement, the following compliance worksheet will be completed by each of *SamCERA's* investment managers on a semi-annual basis. These statements must be e-mailed to *SamCERA's* office ([Investments@samcera.org](mailto:Investments@samcera.org)) by **Monday, July 11, 2016.**

#### **General Compliance Issues**

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

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

BlackRock, Inc. is independent in ownership and governance, with no single majority stockholder and a majority of independent directors. As of 30 June 2016, the PNC Financial Services Group, Inc. ("PNC") owned 21.9% of BlackRock and institutional investors, employees and the public held economic interest of 78.1%. With regard to voting stock, PNC owned 21.2% and institutional investors, employees and the public owned 78.8% of voting shares.

As we continue to evolve, Beta Strategies has deployed a new organizational structure that leverages the Aladdin platform to create scale and efficiency. By simplifying and improving many aspects of its operations, we can work in smaller teams across asset classes and strategies to build better beta for clients. As a result, Beta Strategies consolidated certain portfolio oversight responsibilities and Chris Bliss, Head of Institutional Portfolio Management, left the firm in April 2016. Creighton Jue, previously the Head of Alternative Beta, and Rachel Aguirre, previously Senior Portfolio Manager of International Developed Markets, assumed Chris' responsibilities. Both Creighton and Rachel are veterans of the Beta Strategies business with more than a decade's experience each.

Separately, Corin Frost, Global Head of Index Product Strategy within Beta Strategies, has decided the time is right to retire. Corin has long been a leader in index strategy. We are grateful for all his contributions and wish him the best. Kristen Dickey, Managing Director within Index Product Strategy, will succeed Corin as Global Head of Index Strategy. Kristen has been a product strategist in the Beta Strategies group since 2013 and previously led BlackRock's Financial Institution's group as well as serving as Head of Investor Relations. Kristen joined the firm in 1996 and brings twenty years of BlackRock experience to this role.

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

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

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

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

\*We will send over this information as of Q2 2016 when available and finalized, likely in early August.

4. Have proxy ballots been voted in accordance with the best economic interest of *SamCERA*?

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



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

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

5. Has the firm's insurance coverage been sustained?

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

### Investment Management Fees

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

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

### Derivative Investments

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

**Yes: Please ANSWER the remaining questions in this section.**

**No: Please SKIP the remaining questions in this section.**

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

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

All derivatives currently in the portfolio are exchange traded. However, the guidelines permit for the usage of non-exchange traded derivatives. Please see additional details below and attached in the "16 Things to Know about BTC" document.

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

**Yes** /  **No**

N/A

If **Yes**:

a) Do the counter-parties have investment grade debt?  **Yes**/  **No**

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

N/A

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

**Yes** /  **No**

N/A

If **Yes**:

a) Do the counter-parties have investment grade debt?  **Yes**/  **No**

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

Yes/  No: Please explain.

N/A

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

a) What is the largest exposure to a single counter-party within the portfolio?

b) Please specify the name of the counter-party and the amount of exposure.

c) Have there been any changes to the investment manager's list of approved counter-parties over the past six months?

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

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

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

BlackRock's Global Valuation Methodologies Committee provides oversight of the valuation of investments for the Funds and certain Accounts. The Global Assets of Funds and Accounts are valued in accordance with Financial Accounting Standards Board Accounting Standards Codification ("ASC") 820-10, Fair Value Measurements and Disclosures. ASC 820-10 establishes a fair valuation hierarchy to increase consistency and comparability in fair value measurements and related disclosures. The fair value hierarchy prioritizes inputs to valuation techniques used to measure fair value into three broad levels: Level I, Level II, and Level III. Inputs may be based on independent market data ("observable inputs") or they may be internally developed ("unobservable inputs"). See additional details about valuation procedures and external pricing agents/sources on pages 9-11 in "16 Things You Should Know," attached.

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

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

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

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

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

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

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

<i>Common Stock</i>	<i>98%</i>
<i>Preferred Stock</i>	<i>0%</i>
<i>Convertible Securities</i>	<i>0%</i>
<i>Cash &amp; Equivalents</i>	<i>2%</i>

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

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

\* Unadjusted company market capitalization.

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

0%

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

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

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

2.82% In Apple.

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

19.8% Information Technology  
15.7% Financials

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

As of 6/30/16, SamCERA's account (#523935) represented 0.76% of units outstanding of Equity Index Fund. Total firm AUM as of 6/31/2016 was \$4.89 trillion. As such, SamCERA's account constituted approximately 0.0117% of overall firm AUM as of 6/30/2016.

**Signed by: Laryssa Temnycky**

**Dated: 7/11/2016, Update 8/16/2016**

**Name of Firm: BlackRock**



## ***BlackRock EAFE Index – June 30, 2016***

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

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

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

In accordance with SamCERA's Investment Policy Statement, the following compliance worksheet will be completed by each of *SamCERA's* investment managers on a semi-annual basis. These statements must be e-mailed to *SamCERA's* office ([Investments@samcera.org](mailto:Investments@samcera.org)) by **Monday, July 11, 2016.**

### **General Compliance Issues**

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

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

BlackRock, Inc. is independent in ownership and governance, with no single majority stockholder and a majority of independent directors. As of 30 June 2016, the PNC Financial Services Group, Inc. ("PNC") owned 21.9% of BlackRock and institutional investors, employees and the public held economic interest of 78.1%. With regard to voting stock, PNC owned 21.2% and institutional investors, employees and the public owned 78.8% of voting shares.

As we continue to evolve, Beta Strategies has deployed a new organizational structure that leverages the Aladdin platform to create scale and efficiency. By simplifying and improving many aspects of its operations, we can work in smaller teams across asset classes and strategies to build better beta for clients. As a result, Beta Strategies consolidated certain portfolio oversight responsibilities and Chris Bliss, Head of Institutional Portfolio Management, left the firm in April 2016. Creighton Jue, previously the Head of Alternative Beta, and Rachel Aguirre, previously Senior Portfolio Manager of International Developed Markets, assumed Chris' responsibilities. Both Creighton and Rachel are veterans of the Beta Strategies business with more than a decade's experience each.

Separately, Corin Frost, Global Head of Index Product Strategy within Beta Strategies, has decided the time is right to retire. Corin has long been a leader in index strategy. We are grateful for all his contributions and wish him the best. Kristen Dickey, Managing Director within Index Product Strategy, will succeed Corin as Global Head of Index Strategy. Kristen has been a product strategist in the Beta Strategies group since 2013 and previously led BlackRock's Financial Institution's group as well as serving as Head of Investor Relations. Kristen joined the firm in 1996 and brings twenty years of BlackRock experience to this role.

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

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

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

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

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

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

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

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

### **Investment Management Fees**

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

### **Derivative Investments**

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

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

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

N/A

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

N/A

**If Yes:**

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

N/A

4. For non-exchange traded derivative transactions, were the counter-parties financial institutions (banks)?  
 **Yes /**  **No**

N/A

**If Yes:**

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

5. Is individual counter-party exposure well diversified?  **Yes/**  **No: Please explain.**
- a) What is the largest exposure to a single counter-party within the portfolio?
  - b) Please specify the name of the counter-party and the amount of exposure.
  - c) Have there been any changes to the investment manager's list of approved counter-parties over the past six months?

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

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

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

BlackRock's Global Valuation Methodologies Committee provides oversight of the valuation of investments for the Funds and certain Accounts. The Global Assets of Funds and Accounts are valued in accordance with Financial Accounting Standards Board Accounting Standards Codification ("ASC") 820-10, Fair Value Measurements and Disclosures. ASC 820-10 establishes a fair valuation hierarchy to increase consistency and comparability in fair value measurements and related disclosures. The fair value hierarchy prioritizes inputs to valuation techniques used to measure fair value into three broad levels: Level I, Level II, and Level III. Inputs may be based on independent market data ("observable inputs") or they may be internally developed ("unobservable inputs"). See additional details about valuation procedures and external pricing agents/sources on pages 9-11 in "16 Things You Should Know," attached.

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

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

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

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

## International Equity Portfolios - Developed

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

<i>Foreign Ordinary Shares</i>	<i>99.93%</i>
<i>ADR's</i>	<i>0.06%</i>
<i>Cash &amp; Equivalents (Foreign)</i>	<i>0.00%</i>
<i>Cash &amp; Equivalents (Domestic)</i>	<i>0.01%</i>

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

<i>Large-Cap*</i>	<i>92.97%</i>
<i>Mid-Cap</i>	<i>7.03%</i>
<i>Small-Cap</i>	<i>0%</i>

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

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

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

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

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

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

Beta Strategies team works closely with RQA to ensure portfolio risks are consistent across mandates and each client's formal risk guidelines. RQA provides independent risk oversight leveraging BlackRock's enterprise risk and investment system, Aladdin®. Aladdin integrates fixed income and equity risk analytics

with a sophisticated trading platform that supports straight-through processing of investments from trade entry to compliance to operations to administration to reporting.

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

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

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

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

As of 6/30/2016, SamCERA's account (#523935) represented 0.29% of units outstanding of EAFE Equity Index Fund. Total firm AUM as of 6/30/2016 was \$4.89 trillion. As such, SamCERA's account constituted approximately 0.0025% of overall firm AUM as of 6/30/2016.

Signed by: Laryssa Temnycky

Dated: 7/11/2016; Updated 8/16/2016

Name of Firm: BlackRock



FRANKLIN TEMPLETON  
INSTITUTIONAL

August 17, 2016

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

Franklin Templeton Global Multisector Plus (Master) Fund, Ltd. (3c7)  
*Review Period: January 1, 2016 – June 30, 2016*

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**Bill Deakyne, CFA, AIF**

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

tel: (650) 312-2270

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

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**APPENDIX 1**

FRANKLIN ADVISERS, INC. REGULATORY HISTORY

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

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



## GENERAL COMPLIANCE ISSUES

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

Yes       No

If yes, please explain.

### Portfolio Developments

There have been no significant developments to the Franklin Templeton Global Multisector Plus (Master) Fund, Ltd. over the last six months ended June 30, 2016.

### Firm Ownership

There have been no material changes to the ownership structure of Franklin Resources, Inc. (Parent Company) during the past six months ended June 30, 2016.

### Organizational Structure

In April 2016, Stephen Dover became Chief Investment Officer of Templeton Emerging Markets Group and is responsible for overseeing the emerging market strategies and investment processes. Mr. Dover retains his current role as Chief Investment Officer of Local Asset Management (LAM). Dr. Mark Mobius, Executive Chairman of TEMG remains a key spokesperson for the group sharing his perspectives on investment opportunities across emerging markets.

Although there was a change to the organizational structure for the firm, the strategies used by the Templeton Global Macro group to run the portfolios and the underlying investment research process of the strategy have not changed.

### Personnel

The investment team responsible for managing the Franklin Templeton Global Multisector Plus (Master) Fund, Ltd., the Templeton Global Macro group, has experienced limited turnover during the past six months ending June 30, 2016. In March 2016, Shlomi Kramer, CFA joined the team as a research analyst. Also, in February 2016, Kang Tan, CFA left the company to pursue other opportunities.

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

Yes  No

**If yes, please explain.**

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

Yes  No

**If yes, please explain.**

During the period of January 1, 2016 through June 30, 2016, Franklin Advisers Inc. (FAV) was not the subject of any *investment-related proceedings, findings or orders* brought or made by any U.S. federal or state regulatory agency, *foreign financial regulatory authority or self-regulatory organization*.

For a summary of *investment-related proceedings, findings or orders* brought or made by any U.S. federal or state regulatory agency, *foreign financial regulatory authority or self-regulatory organization* against FAV and/or certain of its *advisory affiliates* in the past 10 years ended June 30, 2016, as well as certain other regulatory matters, please see Appendix 1: Franklin Advisers, Inc. Regulatory History. From time to time, FAV and its *advisory affiliates* receive subpoenas and inquiries from regulators, including requests for documents or information, and also may become the subject of governmental or regulatory examinations or investigations. *Findings or orders* resulting from such subpoenas, inquiries, examinations or investigations if any, will be reported, to the extent required and permitted by law, on FAV's Form ADV filed with the U.S. Securities and Exchange Commission. (Italicized terms are as defined on Form ADV.)

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

Yes  No

**If no, please explain.**

**INVESTMENT MANAGEMENT FEES**

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

Yes       No

If yes, please explain.

## DERIVATIVE INVESTMENTS

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

Yes       No

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

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

Yes       No

If no, please explain.

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

Yes       No

If yes:

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

Yes       No

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

Yes       No

If no, please explain.

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

Yes       No

If yes:

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

Yes       No

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

Yes       No

If no, please explain.

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

Yes       No

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

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

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

If no, please explain.

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

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

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

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

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

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

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

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

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

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

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

Yes       No

**If yes, please explain.**

## INVESTMENT MANAGER GUIDELINES

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

Yes       No

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

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

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

**If no, please explain.**

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

Yes       No

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

**If yes, please explain.**

## GLOBAL FIXED INCOME PORTFOLIOS

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

The following table represents the sector versus region breakdown as of June 30, 2016.

Sector	Region	MV%
Certificates of Deposit (by region)	-	-
Cash & Cash Equivalents	-	11.92
Preferred Stock <sup>[1]</sup>		0.55%
Commercial Paper (by region)		-
Other high grade short-term securities (by region)		-
Government securities (by region)	US	-
	Non-US	81.69
Agency Securities (by region)	US	-
	Non-US	-
Investment Grade Corporate Bonds (by region)	US	0.14
	Non-US	0.16
High Yield Corporate Bonds (by region)	US	0.16
	Non-US	0.21
Mortgage and asset-backed securities (by region)		-
Certificates of Deposit (by region)		-
Commercial Paper (by region)		-
Supranational		0.08
Derivatives		-2.88
Bank Loans		0.00
Other <sup>[2]</sup>		7.97

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

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



## San Mateo County Employees' Retirement Association

The following table represents the sector breakdown for the portfolio as of June 30, 2016.

Types of Securities	Investment Objective	Percentage of Portfolio (%)
Cash & Cash Equivalents		11.92
Convertibles		0.55
Corporate Bonds	Investment Grade	0.30
	Non-Investment Grade	0.37
Derivatives		-2.88
International Government/Agency Bonds	Investment Grade	59.34
	Non-Investment Grade	22.34
Others <sup>[1]</sup>		0.01
Sovereign Bonds	Investment Grade	0.00
	Non-Investment Grade	7.97
Supranational		0.08
<b>Total</b>		

<sup>[1]</sup> Includes Equity and Bank Loans.

The following table represents the regional breakdown for the portfolio as of June 30, 2016.

Region	Percentage (%)
Americas	37.47
Asia	36.64
Europe/Africa	13.89
Cash and Cash Equivalents	11.92
Other	-
Supranational	0.08
<b>Total</b>	<b>100.00</b>

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

The table below represents the allocation ratings data, as of June 30, 2016. During that quarter, 30.25% of the portfolios fall below investment grade or are not rated.

Range	IG/Non-IG	Perc
AAA	IG	0.07
AA+	IG	0.00
AA	IG	8.52
AA-	IG	2.16
A+	IG	0.13
A	IG	11.32

Range	IG/Non-IG	Perc
A-	IG	14.35
BBB+	IG	3.34
BBB	IG	7.91
BBB-	IG	10.03
BB+	Non-IG	2.59
BB	Non-IG	15.77
BB-	Non-IG	3.44
B+	Non-IG	0.50
B	Non-IG	0.46
B-	Non-IG	2.23
CCC+	Non-IG	0.00
CCC	Non-IG	4.53
CCC-	Non-IG	0.00
CC+	Non-IG	0.00
CC	Non-IG	0.04
C	Non-IG	0.00
D	Non-IG	0.14
NR	Non-IG	0.55
N/A	Non-IG	0.00
Cash & Cash Equivalents	Non-IG	11.92

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

Yes  No

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

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

0.14% of the portfolio is held under Rule 144A securities, as of June 30, 2016.

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

Yes  No

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

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

The table below provides assets under management figures requested regarding the Templeton Global Multisector Plus strategy and the Franklin Templeton Global Multisector Plus (Master) Fund, Ltd. (3c7) as of June 30, 2016.

	Assets Under Management (in Millions \$)	% of Total Firm Assets
Templeton Global Multisector Plus Strategy	40,573.56	5.54
Franklin Templeton Global Multisector Plus (Master) Fund, Ltd. (3c7)	1,163.68	0.16

The table below provides the requested figures regarding the SamCERA account assets compared to Templeton Global Multisector Plus strategy and the Franklin Templeton Global Multisector Plus (Master) Fund, Ltd. (3c7) as of June 30, 2016.

SamCERA Assets Under Management (in Millions \$)	% of Strategy Assets	% of Product Assets
100.00	0.25	8.59

**Signed By:**



**Name:**

Breda Beckerle

**Title:**

Chief Compliance Officer

**Dated:**

Thursday, August 17, 2016

**Name of Firm:**

Franklin Advisers, Inc. (FAV)

## IMPORTANT NOTES

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

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

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

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

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

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

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

August 23, 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 July 31, 2016

**Staff Recommendation**

Accept the preliminary performance report dated July 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 July was 2.5%, while the preliminary trailing twelve-month return ending July 2016 was 2.8% net. The twelve-month net return of 2.8% trails both SamCERA's Total Plan Policy Benchmark return of 3.3% and the Actuarial Assumed Earnings Rate of 7.0%.

Volatility was lower during the month as financial markets digested the Brexit news. Global equity markets rallied during the month. The broad U.S. equity market (as measured by the S&P 500 Index) was up 3.7% on the month, while international equity indices were also higher, with developed markets (as measured by MSCI EAFE) up 5.1%, and emerging markets up 5%.

Economic data was mixed on the month. Real GDP increased at an annual rate of 1.2% in the second quarter, which was well below the 2.5% consensus forecast, while the labor market continued to show strength.

The U.S. Treasury yield curve flattened during the month, with short-term rates moving higher as the market began forecasting that a potential Federal Reserve increase is now back on the table for

later this year. Longer rates declined as inflation and global economic growth expectations remain relatively subdued.

The general U.S. fixed income market was up 0.6% during the month. Credit spreads tightened again during the month, leading the high yield market higher by 2.7%, while emerging debt returned 1.8%. Commodities were down 5.1% during the month.

**Attachments**

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





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

JULY 2016

Capital Markets Update



# Market commentary

## ECONOMIC CLIMATE

- The Fed left interest rates unchanged at its July meeting, although the FOMC statement acknowledged that “near-term risks to the economic outlook have diminished.” However, the odds for a rate increase in September remain low. As of August 8<sup>th</sup>, there was an 18% chance of a hike based on Fed Fund futures prices.
- The labor market beat expectations again as nonfarm payrolls added 255,000 jobs in July compared to the consensus estimate of 185,000 according to Econoday.
- The unemployment rate ticked up 0.1% to 4.9%. This may be a positive indication that workers are reentering the labor force. The participation rate also increased 0.1% to 62.8%.
- Job gains extended to less educated workers (less than a high school diploma) as the unemployment rate for this segment fell from 7.5% to 6.3%, the lowest level since October 2006.

## DOMESTIC EQUITIES

- U.S. equities continued higher following the market rally to end June - the S&P 500 returned 3.7%. The equity market was characterized by steady gains and low volatility in July with an annualized standard deviation of 7.4%.
- Implied volatility has also continued downward after spiking following Brexit. The VIX finished July at 11.9.
- Information technology (7.9%) was the best performing sector in the S&P 500 boosted by strong earnings reports from Alphabet, Facebook, and Microsoft. Energy (-1.9%) was the worst performing sector amid falling oil prices during the month.

## DOMESTIC FIXED INCOME

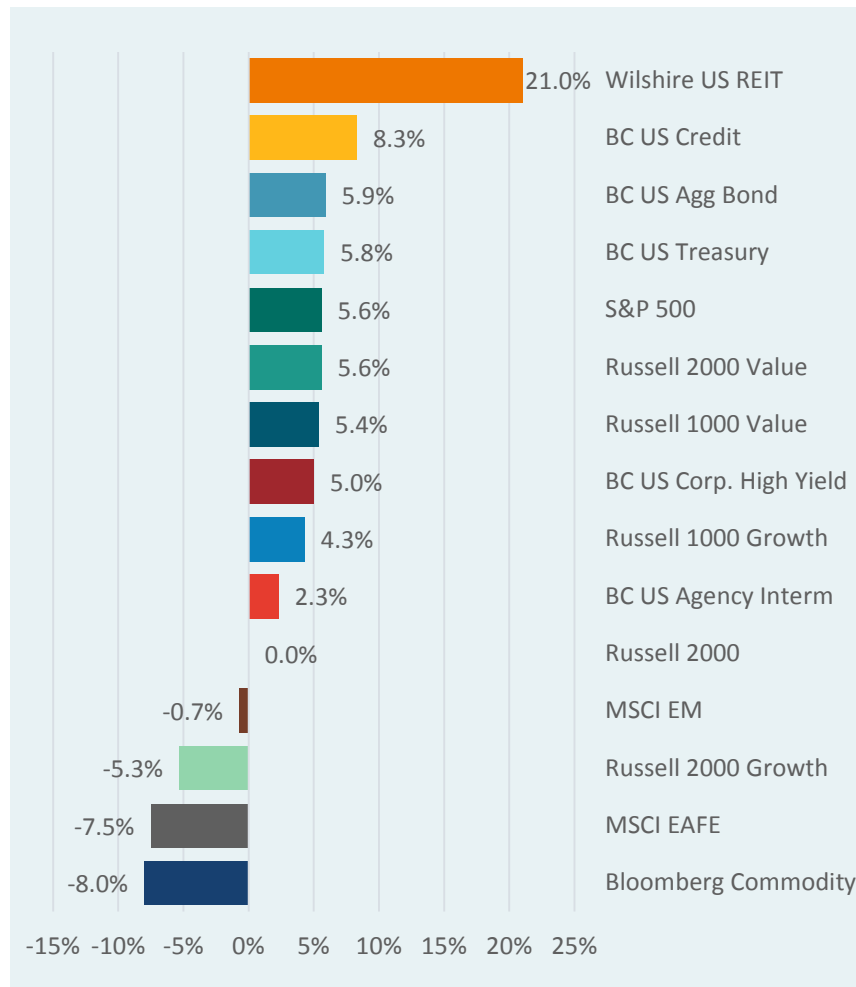
- The Treasury curve flattened once again in July as short-term rates continued to increase and long-term rates continued to fall. The 10-year minus 2-year spread (an indicator of curve flatness) stands at only 79 basis points at month-end, the lowest (flattest) since October 2007.
- High yield option adjusted spreads compressed 52 basis points to 5.6% as the high yield sector was one of the best performers in the fixed income market. The BC High Yield Index returned 2.7%.

## INTERNATIONAL MARKETS

- International equity markets were also positive in July. The MSCI ACWI ex US Index returned 4.9%.
- The Bank of Japan opted to leave interest rates unchanged at its July meeting in addition to deciding against the use of helicopter money, which some had speculated may be an option. The BOJ stated it will make a comprehensive assessment of the economy’s response to current monetary policy before taking further action.
- The European Central Bank also made no changes to its monetary policy, taking a wait and see approach to how the region will respond to Brexit.
- China’s economy grew 6.7% in the second quarter, which exceeded expectations and was well within the government’s target range of 6.5-7%.

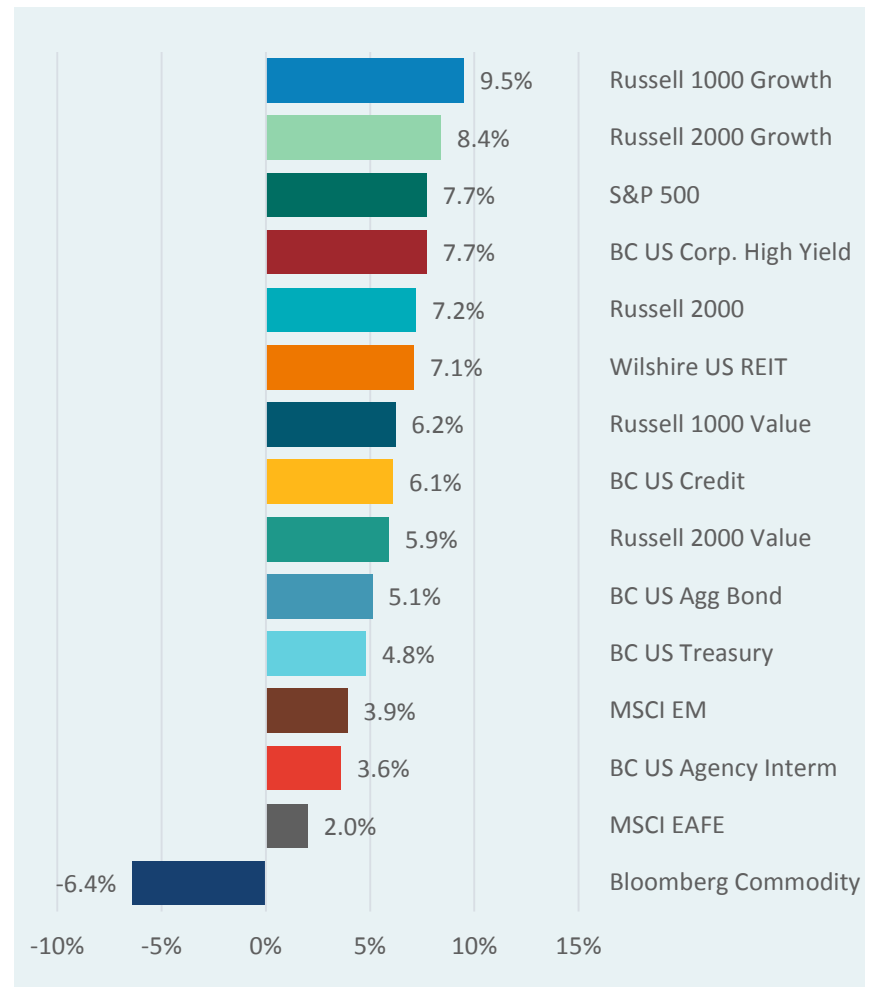
# Major asset class returns

ONE YEAR ENDING JULY



Source: Morningstar, as of 7/31/16

TEN YEARS ENDING JULY



Source: Morningstar, as of 7/31/16

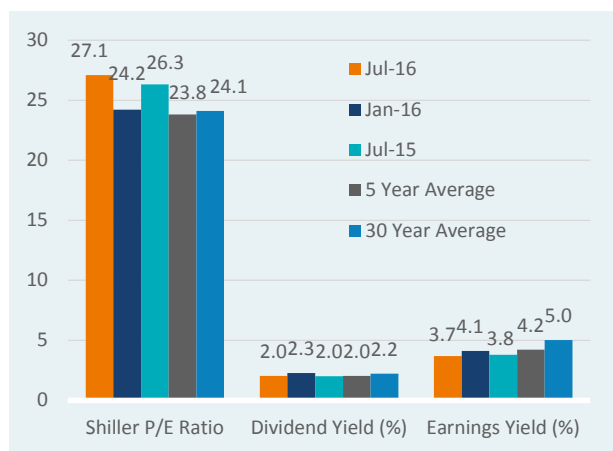
# U.S. large cap equities

- Large cap equities moved steadily higher in July marking the fifth straight month of positive performance. The S&P 500 returned 3.7%.
- At month-end, the blended earnings decline for the S&P 500 was only -3.8%, compared to the estimated earnings decline of -5.3% forecast before reporting began.
- If the S&P 500 does report an earnings contraction for Q2, it will mark the fifth consecutive quarter of

earnings decline. According to Factset, positive earnings growth is not expected to return until Q4.

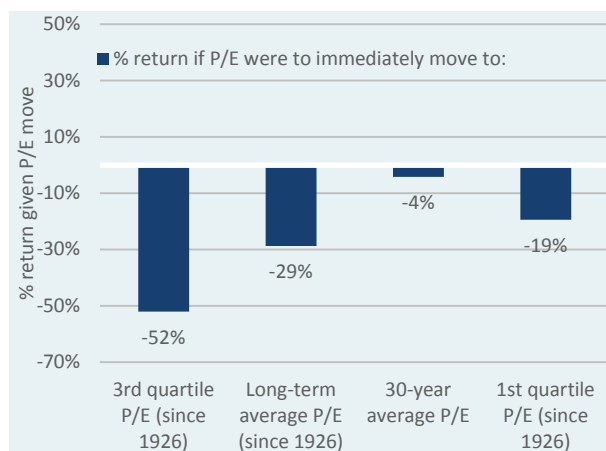
- However, the current earnings recession has been heavily influenced by the energy sector. In Q2, the blended earnings decline for the energy sector is -85.6%.
- The S&P 500 Shiller P/E ratio increased to 27.1 and the 1-year forward P/E increased to 19.0 in July.

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



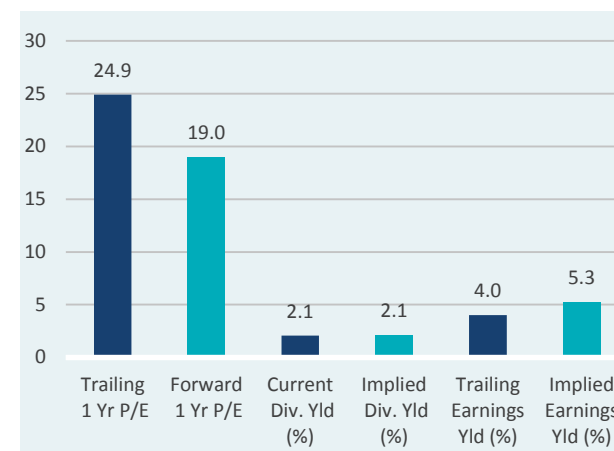
Source: Yale/Shiller, as of 7/31/16

**RETURNS IF P/E MOVED TO HISTORIC LEVEL**



Source: Yale/Shiller, Verus

**S&P 500 VALUATION SNAPSHOT**



Source: Standard & Poor's, as of 7/31/16

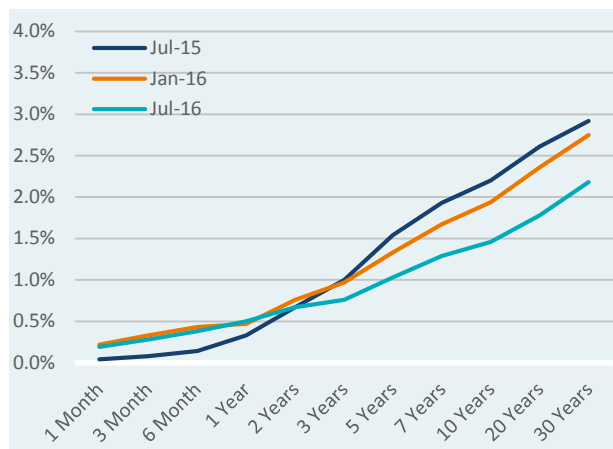
# Fixed income

- Domestic yields fell slightly throughout the fixed income market in July, and the Barclays Aggregate Index returned 0.6%. Another month of positive performance extended the year-to-date gain to 6.0%.
- Pending money market reform to take effect in October requiring institutional money markets to float their NAV has caused 3-month Libor to increase significantly. The benchmark short-term borrowing

rate rose 11 bps to finish the month at 76 bps.

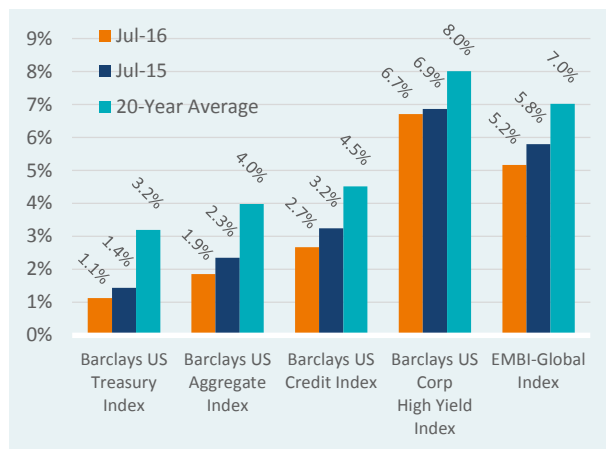
- CPI data released for June continued to show a moderate increase in consumer prices, with a month over month increase of 0.2%.
- The 5 and 10-year TIPS breakeven rate finished the month at 1.3% and 1.5%, respectively.

## U.S. TREASURY YIELD CURVE



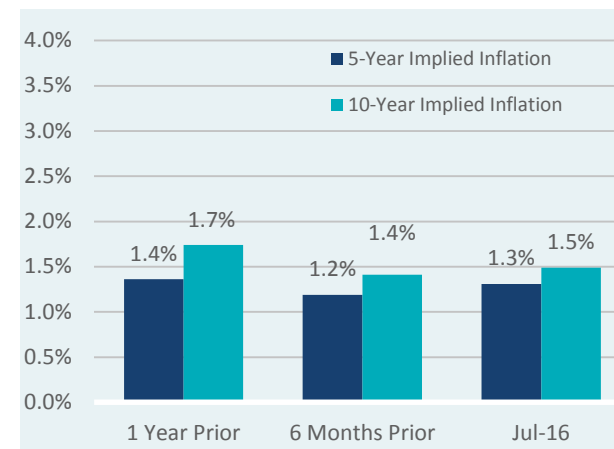
Source: Federal Reserve

## NOMINAL FIXED INCOME YIELDS



Source: Morningstar, as of 7/31/16

## IMPLIED INFLATION (TIPS BREAKEVEN)



Source: Federal Reserve, as of 7/31/16

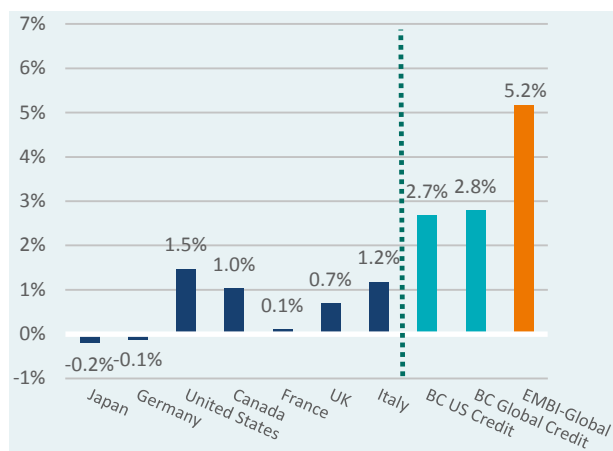
# Global markets

- International developed markets (MSCI EAFE 5.1%) outperformed domestic markets (S&P 500 3.7%) and were in line with emerging markets (MSCI EM 5.0%) in July.
- Sovereign yields rose slightly in Japan and Germany after hitting record lows, while rates in other developed countries fell. The biggest movement came in the U.K., with the 10-year yield falling 18 bps on the expectations of further monetary stimulus.
- European banks continue to be under pressure from the low interest rate environment, which is expected

to continue in the short to medium-term. At the end of the month regulators announced new stress tests revealed a few of the region's biggest banks would be vulnerable in an economic downturn.

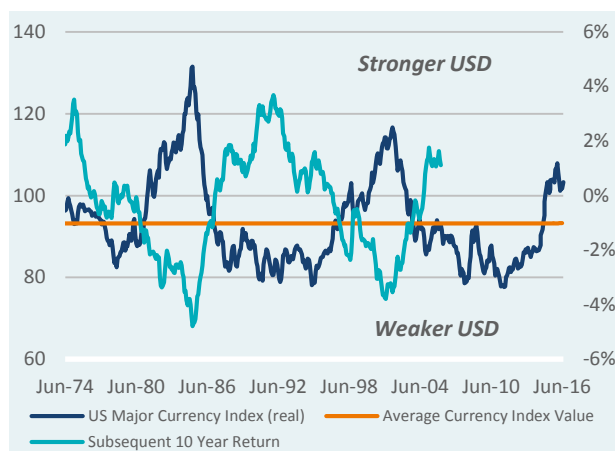
- The U.S. Dollar Major Currency Index rose 1.5% in July, influenced by the strong June employment report and increased expectations of a Fed rate hike this year.

**GLOBAL SOVEREIGN 10 YEAR INDEX YIELDS**



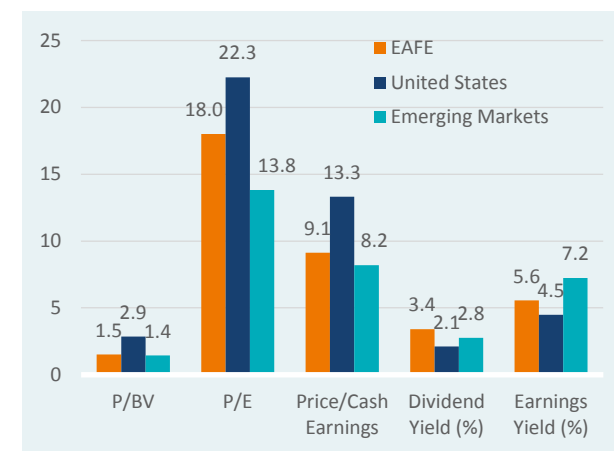
Source: Bloomberg, Morningstar, as of 7/31/16

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



Source: Federal Reserve, as of 7/31/16

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



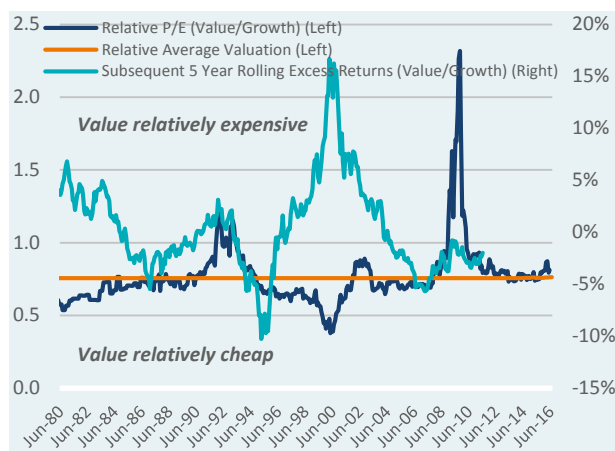
Source: MSCI, as of 7/31/16

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

- Growth stocks outperformed value stocks in July as the Russell 1000 Growth Index and Russell 1000 Value Index returned 4.7% and 2.9%, respectively.
- The relative P/E ratio of value to growth stocks rose to 0.81 from 0.79. This metric remains above its long-term average of 0.76.
- While value stocks have outperformed significantly

year-to-date by 3.2%, growth stocks have provided a better risk-adjusted return over nearly all recent time periods examined relative to value stocks, except over the very long-term (20 years).

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



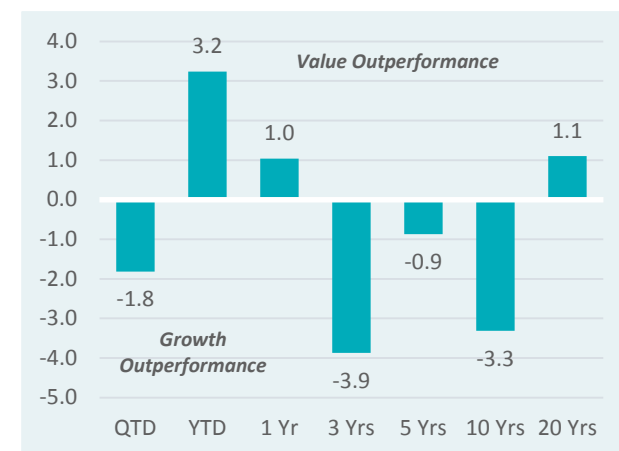
Source: Russell, Bloomberg, as of 7/31/16

U.S. VALUE VS. GROWTH ABSOLUTE PERFORMANCE

	RUSSELL 1000 GROWTH	RUSSELL 1000 VALUE
	ANNUALIZED RETURN TO DATE % ANNUALIZED RETURN TO DATE %	
QTD	4.7	2.9
YTD	6.1	9.4
1 YEAR	4.3	5.4
3 YEARS	12.9	9.0
5 YEARS	13.6	12.7
7 YEARS	15.1	13.7
10 YEARS	9.5	6.2
20 YEARS	7.7	8.8
	SHARPE RATIO SHARPE RATIO	
3 YEARS	1.09	0.80
5 YEARS	1.08	1.02
7 YEARS	1.13	1.03
10 YEARS	0.55	0.33
20 YEARS	0.30	0.43

Source: Morningstar, as of 7/31/16

U.S. VALUE VS GROWTH RELATIVE PERFORMANCE

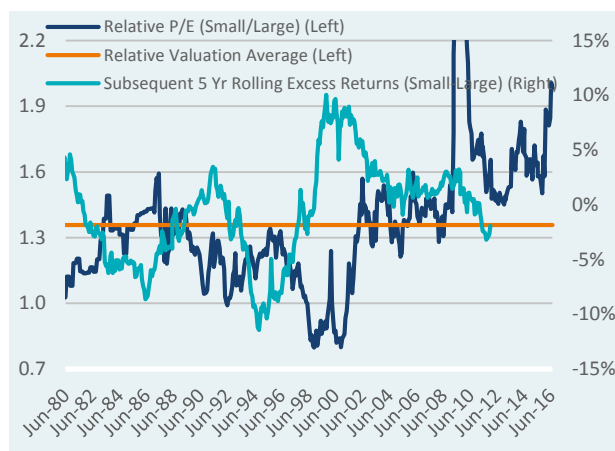


Source: Morningstar, as of 7/31/16

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

- Small cap equities outperformed large cap equities in July as the Russell 2000 and Russell 1000 returned 6.0% and 3.8%, respectively. Small caps have also slightly outperformed large caps by 0.6% year-to-date.
- The relative P/E ratio of small to large cap equities at the end of June was 1.98, well above its long-term average of 1.38, suggesting small cap stocks are relatively overvalued.
- Besides the current year, the Russell 1000 Index has outperformed the Russell 2000 Index on an absolute and risk-adjusted basis in every time period examined over the last 20 years.

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



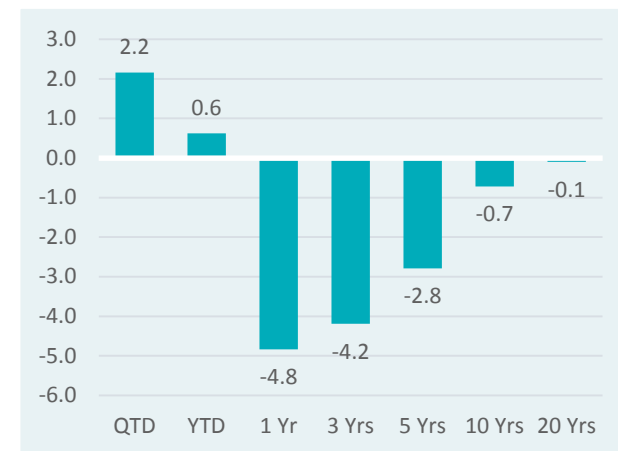
Source: Russell, Bloomberg, as of 7/31/16

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

	RUSSELL 1000 INDEX ANNUALIZED RETURN TO DATE %	RUSSELL 2000 INDEX ANNUALIZED RETURN TO DATE %
QTD	3.8	6.0
YTD	7.7	8.3
1 YEAR	4.8	0.0
3 YEARS	10.9	6.7
5 YEARS	13.2	10.4
7 YEARS	14.4	13.4
10 YEARS	7.9	7.2
20 YEARS	8.5	8.4
	SHARPE RATIO	SHARPE RATIO
3 YEARS	0.97	0.44
5 YEARS	1.07	0.62
7 YEARS	1.10	0.76
10 YEARS	0.45	0.31
20 YEARS	0.40	0.31

Source: Morningstar, as of 7/31/16

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



Source: Morningstar, as of 7/31/16

# Commodities

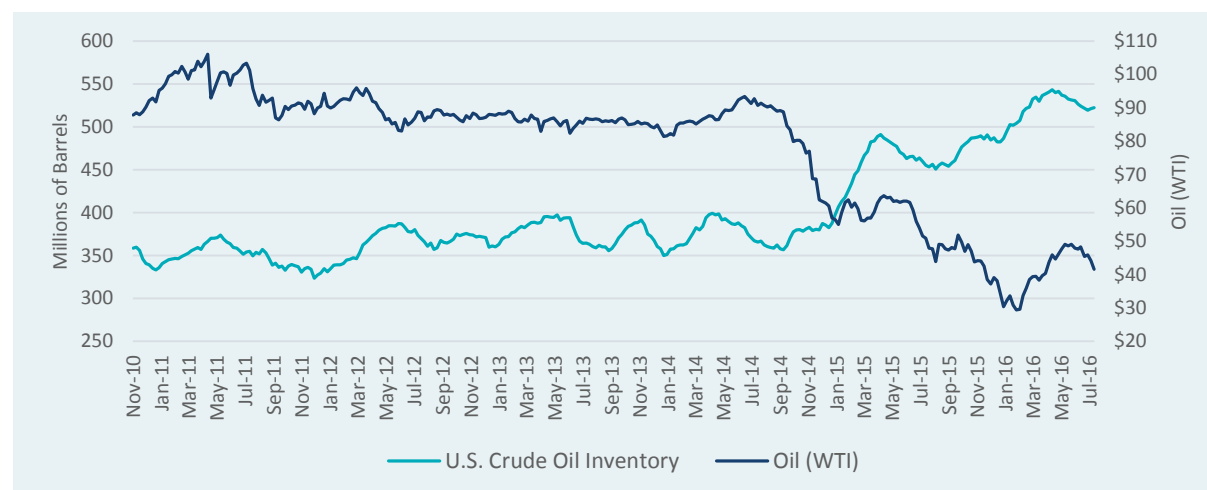
- A stronger U.S. dollar provided a headwind for commodities during the month. The Bloomberg Commodity Index returned -5.1% in July.
- The price of oil fell sharply during the month. WTI finished at \$41.06 per barrel and re-entered a technical bear market. The decline was influenced by renewed fears of oversupply and slowing peak season demand.
- Petroleum (-13.9%) and energy (-10.7%) were the major detractors from the Bloomberg Commodity Index in July. Precious metals (4.3%) and industrial metals (3.2%) were the only sub-sectors with positive performance during the month.

## INDEX AND SECTOR PERFORMANCE

	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg Commodity	(5.1)	7.5	(8.0)	(12.5)	(12.3)	(6.4)
Bloomberg Agriculture	(7.4)	5.1	1.0	(8.4)	(8.4)	0.6
Bloomberg Energy	(10.7)	(2.5)	(31.6)	(28.1)	(21.6)	(20.5)
Bloomberg Grains	(9.9)	(3.3)	(11.4)	(12.9)	(8.9)	0.1
Bloomberg Industrial Metals	3.2	12.0	(1.5)	(7.5)	(13.0)	(6.1)
Bloomberg Livestock	(9.3)	(9.9)	(15.9)	(5.8)	(5.6)	(7.8)
Bloomberg Petroleum	(13.9)	(4.9)	(33.0)	(31.3)	(19.3)	(13.7)
Bloomberg Precious Metals	4.3	32.5	27.0	0.6	(6.5)	6.8
Bloomberg Softs	(0.8)	18.4	32.3	(3.5)	(11.6)	(2.1)

Source: Morningstar, as of 7/31/16

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



Source: Bloomberg, as of 7/31/16



# 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
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	11.8	13.6	9.5
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	11.8	13.2	8.4
Large Cap Value	26.3	6.4	37.2	22.4	31.8	20.3	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	9.4	11.5	7.9
Small Cap Equity	23.8	4.4	31.0	21.6	30.5	19.3	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	8.3	12.7	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	7.7	10.8	7.2
Commodities	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	7.5	10.4	6.2
60/40 Global Portfolio	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	7.4	10.0	5.9
Large Cap Growth	13.4	-1.5	18.5	11.3	12.9	4.9	20.9	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	6.1	4.7	5.1
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	6.0	3.6	4.8
Small 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	4.8	1.8	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	3.0	2.0
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	0.4	0.1	1.7
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	-2.7	0.9
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	-1.4	-12.3	-6.4

BEST

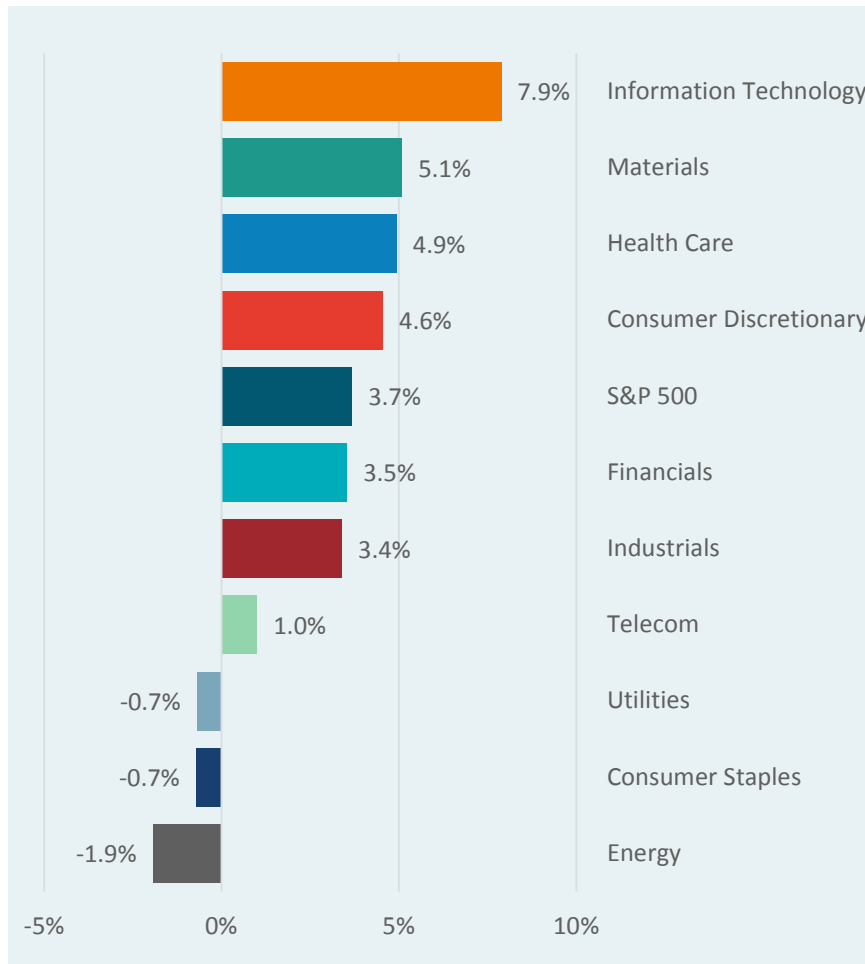
WORST

- 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 Index performance data as of 6/30/16.

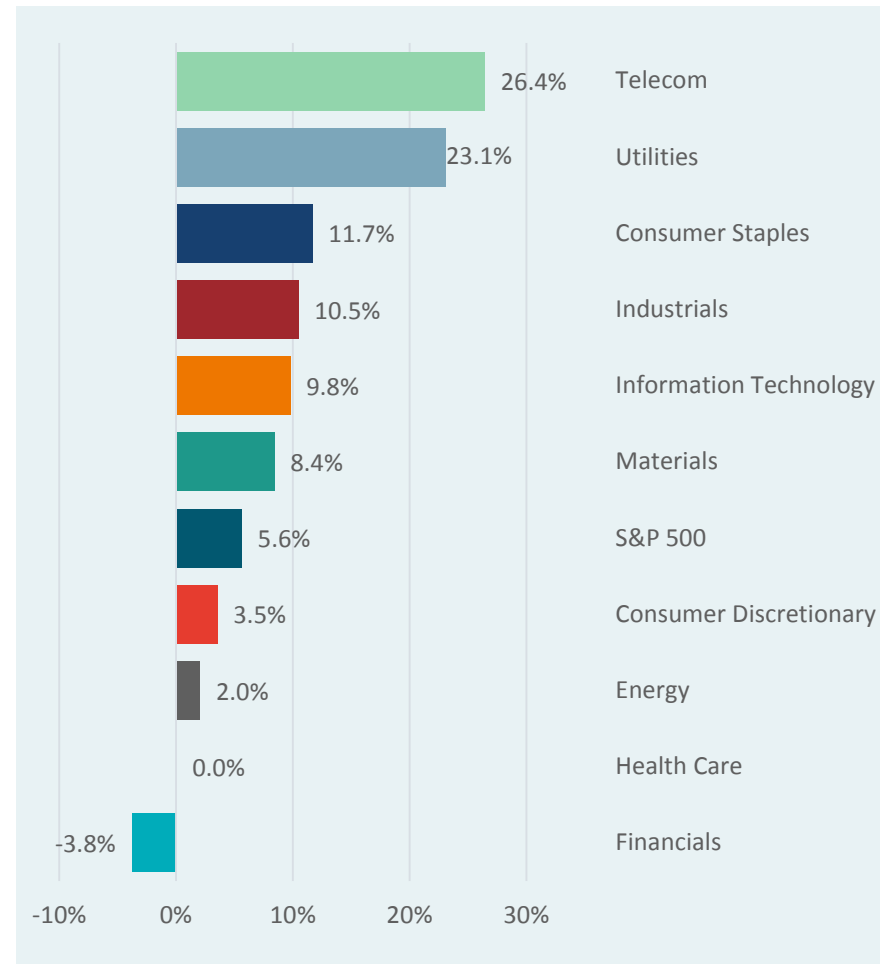
# S&P 500 and S&P 500 sector returns

QTD



Source: Morningstar, as of 7/31/16

ONE YEAR ENDING JULY



Source: Morningstar, as of 7/31/16

# Detailed index returns

## DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Core Index</b>							
S&P 500	3.7	3.7	7.7	5.6	11.2	13.4	7.7
S&P 500 Equal Weighted	4.2	4.2	10.2	6.0	11.1	13.6	9.3
DJ Industrial Average	2.9	2.9	7.4	7.0	8.6	11.5	7.9
Russell Top 200	3.5	3.5	6.6	5.0	11.2	13.4	7.5
Russell 1000	3.8	3.8	7.7	4.8	10.9	13.2	7.9
Russell 2000	6.0	6.0	8.3	0.0	6.7	10.4	7.2
Russell 3000	4.0	4.0	7.7	4.4	10.6	13.0	7.8
Russell Mid Cap	4.6	4.6	10.3	4.4	10.4	12.7	8.8
<b>Style Index</b>							
Russell 1000 Growth	4.7	4.7	6.1	4.3	12.9	13.6	9.5
Russell 1000 Value	2.9	2.9	9.4	5.4	9.0	12.7	6.2
Russell 2000 Growth	6.5	6.5	4.8	(5.3)	7.4	10.8	8.4
Russell 2000 Value	5.4	5.4	11.8	5.6	6.0	10.0	5.9

## INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
MSCI EAFE	5.1	5.1	0.4	(7.5)	2.0	3.0	2.0
MSCI AC World ex US	4.9	4.9	3.9	(5.5)	1.3	1.4	2.3
MSCI EM	5.0	5.0	11.8	(0.7)	(0.3)	(2.7)	3.9
MSCI EAFE Small Cap	6.1	6.1	2.8	1.4	7.3	6.3	4.5
<b>Style Index</b>							
MSCI EAFE Growth	4.9	4.9	2.6	(2.5)	4.2	4.4	3.3
MSCI EAFE Value	5.3	5.3	(1.7)	(12.5)	(0.3)	1.6	0.6
<b>Regional Index</b>							
MSCI UK	2.8	2.8	(0.4)	(11.2)	(0.5)	2.3	1.5
MSCI Japan	6.5	6.5	0.5	(3.5)	4.7	4.8	0.8
MSCI Euro	5.5	5.5	(2.3)	(11.5)	0.7	1.4	0.6
MSCI EM Asia	4.8	4.8	7.2	(0.8)	3.0	0.2	5.8
MSCI EM Latin American	5.5	5.5	32.4	6.4	(6.3)	(8.5)	2.6

## FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
BC US Treasury US TIPS	0.9	0.9	7.2	5.0	2.4	2.0	4.7
BC US Treasury Bills	0.0	0.0	0.2	0.3	0.1	0.1	1.1
BC US Agg Bond	0.6	0.6	6.0	5.9	4.2	3.6	5.1
<b>Duration</b>							
BC US Treasury 1-3 Yr	(0.1)	(0.1)	1.4	1.2	0.9	0.8	2.4
BC US Treasury Long	2.2	2.2	17.7	17.8	12.0	9.9	8.8
BC US Treasury	0.4	0.4	5.8	5.8	3.7	3.2	4.8
<b>Issuer</b>							
BC US MBS	0.2	0.2	3.3	3.9	3.9	2.9	4.8
BC US Corp. High Yield	2.7	2.7	12.0	5.0	4.5	6.2	7.7
BC US Agency Interim	0.0	0.0	2.3	2.3	1.9	1.6	3.6
BC US Credit	1.3	1.3	8.9	8.3	5.5	5.0	6.1

## OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Index</b>							
Bloomberg Commodity	(5.1)	(5.1)	7.5	(8.0)	(12.5)	(12.3)	(6.4)
Wilshire US REIT	4.4	4.4	15.9	21.0	14.9	13.1	7.1
<b>Regional Index</b>							
JPM EMBI Global Div	1.8	1.8	12.3	11.2	7.4	6.4	7.8
JPM GBI-EM Global Div	0.6	0.6	14.7	5.3	(3.2)	(2.4)	5.3

Source: Morningstar, as of 7/31/16

# Notices & disclosures

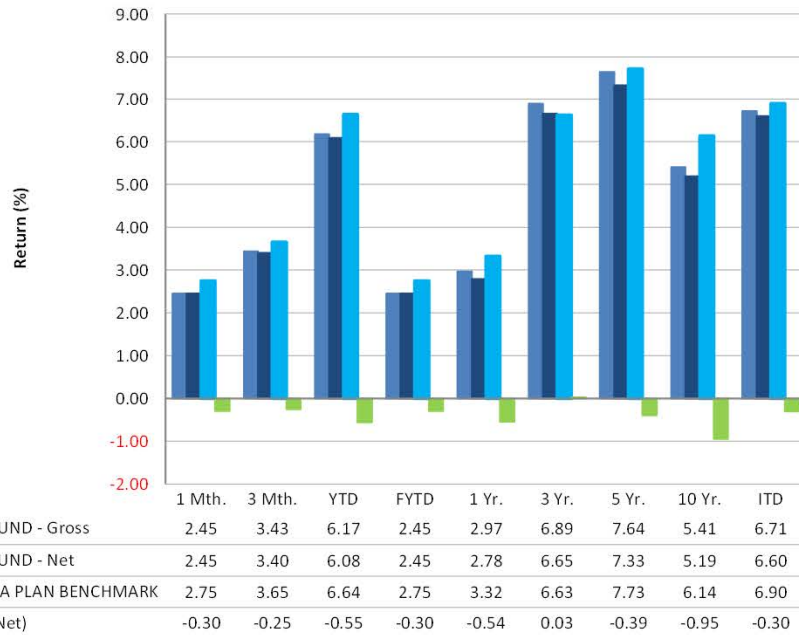
***Past performance is no guarantee of future results.** This document is provided for informational purposes only and is directed to institutional clients and eligible institutional counterparties only and is not intended for retail investors. Nothing herein constitutes investment, legal, accounting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

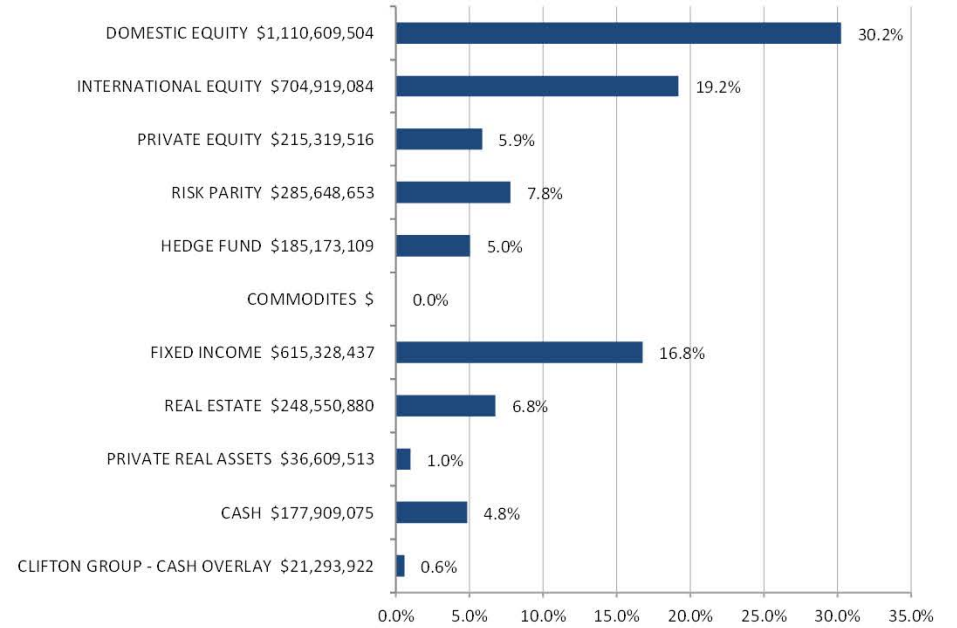


July 31, 2016

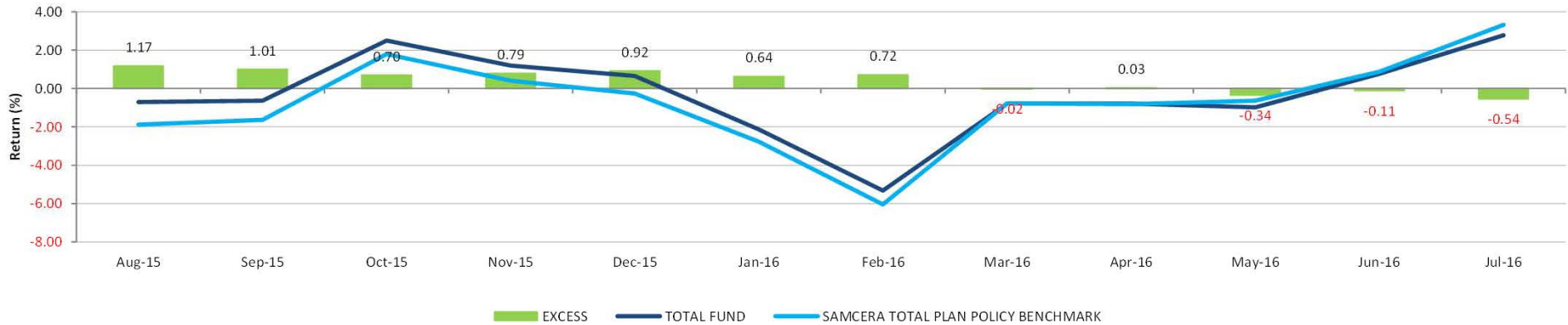
**Total Fund Performance**



**Asset Allocation**



**Rolling Month End Annual Returns**

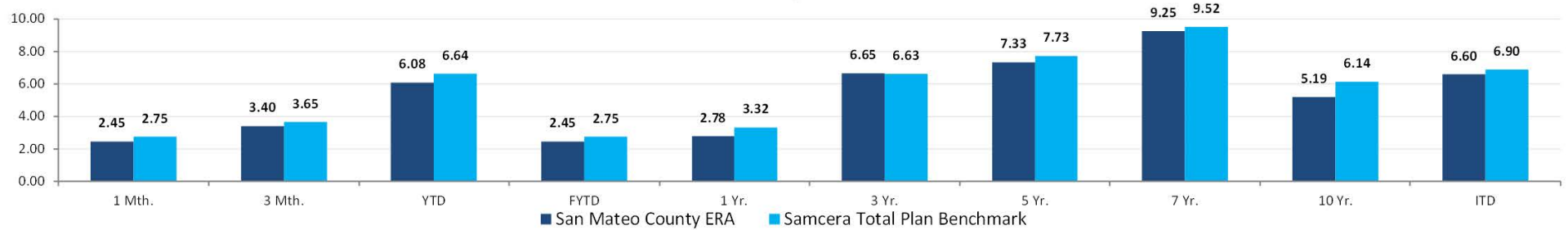


# San Mateo County Composite Return Summary



July 31, 2016

Return Comparison



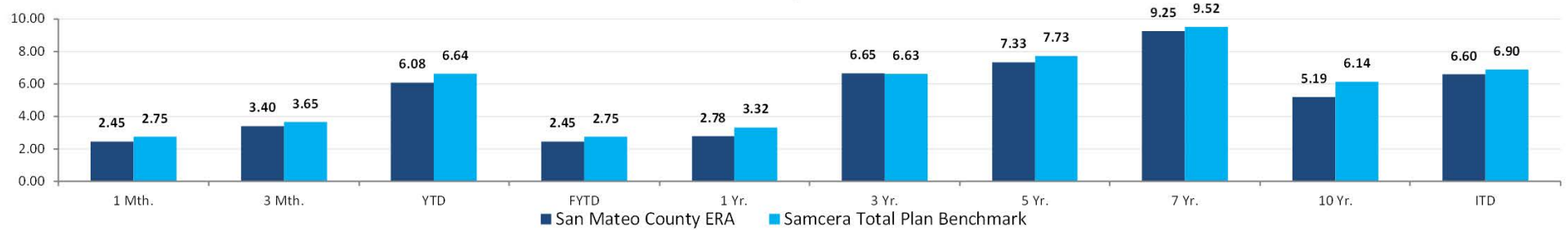
Composite Returns (Net of Manager Fees)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
San Mateo County ERA	3,671,874,188	2.45	3.40	6.08	2.45	2.78	6.65	7.33	9.25	5.19	6.60
Samcera Total Plan Benchmark		2.75	3.65	6.64	2.75	3.32	6.63	7.73	9.52	6.14	6.90
Excess		-0.30	-0.25	-0.55	-0.30	-0.54	0.03	-0.39	-0.27	-0.95	-0.30
San Mateo Ex-Clifton Overlay	3,650,580,266	2.59	3.39	5.89	2.59	2.63	6.51	7.28	9.18	5.06	6.52
Samcera Total Plan Benchmark		2.75	3.65	6.64	2.75	3.32	6.63	7.73	9.52	6.14	6.90
Excess		-0.16	-0.27	-0.75	-0.16	-0.69	-0.11	-0.44	-0.34	-1.08	-0.38
Total Equity	1,815,528,589	4.25	4.25	6.11	4.25	0.97	7.10	8.63	10.66	4.88	7.40
Samcera Total Equity Benchmark		4.33	5.37	7.05	4.33	2.26	8.43	9.64	11.68	6.40	7.96
Excess		-0.08	-1.12	-0.94	-0.08	-1.29	-1.33	-1.01	-1.02	-1.53	-0.56
Total Fixed Income	615,328,437	1.05	2.17	5.62	1.05	3.52	3.81	4.34	6.31	5.34	5.66
Samcera Fixed Income Benchmark		1.12	2.68	7.65	1.12	6.48	4.05	3.35	4.54	5.13	5.32
Excess		-0.08	-0.51	-2.03	-0.08	-2.97	-0.25	0.99	1.77	0.22	0.33
Total Risk Parity	285,648,653	1.98	7.77	15.66	1.98	7.97	7.66	5.78	--	--	6.70
Samcera Risk Parity Benchmark		2.63	4.62	7.16	2.63	5.31	8.18	9.35	--	--	8.70
Excess		-0.65	3.15	8.50	-0.65	2.66	-0.52	-3.58	--	--	-1.99

# San Mateo County Composite Return Summary



July 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	185,173,109	0.70	1.03	-2.29	0.70	5.26	6.87	5.33	--	--	5.03
Samcera LIBOR + 4%		0.37	1.10	2.57	0.37	4.34	4.23	4.23	--	--	4.23
Excess		0.33	-0.07	-4.86	0.33	0.92	2.64	1.09	--	--	0.80
Total Private Equity	215,319,516	1.36	0.22	0.34	1.36	2.75	14.30	9.21	--	--	-28.98
Samcera PE Benchmark		4.22	6.82	9.59	4.22	7.57	13.79	16.29	--	--	16.67
Excess		-2.85	-6.60	-9.25	-2.85	-4.82	0.51	-7.08	--	--	-45.65
Total Private Real Assets	36,609,513	3.49	3.66	--	3.49	--	--	--	--	--	18.78
Samcera CPI + 5%		0.00	1.53	--	0.00	--	--	--	--	--	2.40
Excess		3.49	2.13	--	3.49	--	--	--	--	--	16.38
Total Real Estate	248,550,880	0.07	3.48	--	0.07	--	--	--	--	--	4.85
Samcera NCREIF ODCE EW (gross)		0.00	2.18	--	0.00	--	--	--	--	--	2.18
Excess		0.07	1.30	--	0.07	--	--	--	--	--	2.67
Total Cash	177,909,075	0.05	0.13	0.23	0.05	0.35	0.46	0.50	0.63	0.98	2.07
Samcera Cash Benchmark		0.03	0.07	0.17	0.03	0.22	0.10	0.09	0.11	1.00	1.93
Excess		0.02	0.05	0.06	0.02	0.12	0.36	0.41	0.52	-0.02	0.14



# San Mateo County Manager Return Summary



July 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	1,815,528,589	4.25	4.25	6.11	4.25	0.97	7.10	8.63	10.66	4.88	7.40
Samcera Total Equity Benchmark		4.33	5.37	7.05	4.33	2.26	8.43	9.64	11.68	6.40	7.96
Excess		-0.08	-1.12	-0.94	-0.08	-1.29	-1.33	-1.01	-1.02	-1.53	-0.56
Total Domestic Equity	1,110,609,504	3.90	5.22	6.42	3.90	3.25	9.38	11.76	13.55	6.37	8.17
Samcera Dom. Equity Benchmark		4.12	6.21	7.79	4.12	3.85	10.13	12.70	14.28	7.79	8.57
Excess		-0.22	-0.99	-1.37	-0.22	-0.60	-0.74	-0.93	-0.73	-1.42	-0.40
Total Large Cap Equity	945,506,925	3.80	5.33	6.74	3.80	4.51	10.60	12.44	13.62	6.71	8.95
Russell 1000		3.81	5.87	7.69	3.81	4.84	10.93	13.22	14.44	7.89	9.34
Excess		-0.01	-0.54	-0.95	-0.01	-0.33	-0.33	-0.78	-0.82	-1.17	-0.40
Barrow Hanley	110,225,926	3.48	2.66	3.65	3.48	-0.39	7.56	11.97	13.21	--	13.21
Russell 1000 Value		2.90	5.41	9.38	2.90	5.38	8.99	12.75	13.69	--	13.69
Excess		0.58	-2.75	-5.74	0.58	-5.77	-1.43	-0.78	-0.48	--	-0.48
Blackrock S&P 500 Index Fund	596,989,180	3.69	5.82	7.68	3.69	5.70	11.21	--	--	--	13.64
S&P 500		3.69	5.82	7.66	3.69	5.61	11.16	--	--	--	13.59
Excess		0.00	0.00	0.02	0.00	0.08	0.06	--	--	--	0.05
Brown Advisory	114,202,169	4.02	3.53	2.43	4.02	1.25	9.48	--	--	--	10.74
Russell 1000 Growth		4.72	6.33	6.15	4.72	4.35	12.86	--	--	--	13.59
Excess		-0.70	-2.80	-3.72	-0.70	-3.10	-3.38	--	--	--	-2.85
DE Shaw Commingled Fund	124,089,651	4.41	7.11	9.27	4.41	6.52	--	--	--	--	7.57
Russell 1000		3.81	5.87	7.69	3.81	4.84	--	--	--	--	5.40
Excess		0.60	1.25	1.58	0.60	1.69	--	--	--	--	2.17
Total Small Cap Equity	165,102,579	4.45	4.60	4.63	4.45	-2.95	4.08	9.15	13.23	4.86	5.98
Russell 2000		5.97	8.29	8.32	5.97	0.00	6.74	10.43	13.39	7.17	7.32
Excess		-1.52	-3.69	-3.69	-1.52	-2.95	-2.66	-1.28	-0.16	-2.31	-1.34

# San Mateo County Manager Return Summary



July 31, 2016

Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Boston Company	86,394,988	4.73	7.42	11.54	4.73	4.89	6.02	11.39	12.84	--	12.84
Russell 2000 Value		5.40	7.65	11.81	5.40	5.59	6.01	10.03	12.61	--	12.61
Excess		-0.67	-0.23	-0.26	-0.67	-0.69	0.01	1.37	0.24	--	0.24
Chartwell Investment Mgmt	78,707,592	4.15	1.67	-2.04	4.15	-10.31	2.11	8.23	13.39	6.92	6.89
MSCI ACW ex US-IMI		5.03	1.62	4.08	5.03	-4.59	1.84	1.62	5.11	2.57	4.58
Excess		-0.23	1.14	1.55	-0.23	1.91	1.23	0.79	-0.26	-0.68	0.59
Total Developed Markets Equity	629,055,148	4.85	2.70	4.65	4.85	-3.10	3.49	2.96	5.31	2.38	3.92
MSCI ACW ex US-IMI		5.03	1.62	4.08	5.03	-4.59	1.84	1.62	5.11	2.57	4.29
Excess		-0.18	1.08	0.57	-0.18	1.49	1.65	1.34	0.20	-0.19	-0.37
Baillie Gifford	217,038,011	6.76	5.03	6.76	6.76	1.45	5.31	--	--	--	7.64
MSCI ACWI ex US Growth		4.82	3.85	5.25	4.82	-1.58	3.85	--	--	--	5.24
Excess		1.94	1.18	1.51	1.94	3.02	1.46	--	--	--	2.40
Blackrock EAFE Index Fund	130,697,878	5.08	0.75	0.74	5.08	-7.22	--	--	--	--	-1.78
MSCI EAFE ND		5.07	0.62	0.42	5.07	-7.53	--	--	--	--	-2.08
Excess		0.01	0.13	0.32	0.01	0.32	--	--	--	--	0.29
Mondrian Investment Partners	209,078,158	2.91	1.53	4.99	2.91	-5.89	2.28	2.53	5.19	2.60	4.95
MSCI ACWI ex US Value		5.12	-0.30	3.28	5.12	-8.60	-0.29	0.62	3.79	1.67	4.25
Excess		-2.21	1.83	1.71	-2.21	2.71	2.58	1.91	1.40	0.93	0.70
FIAM Intl Small Cap	72,241,101	4.53	2.85	5.08	4.53	0.24	4.56	--	--	--	5.89
MSCI ACWI Small Cap ex US Net		5.56	1.79	5.36	5.56	1.74	5.13	--	--	--	6.01
Excess		-1.03	1.06	-0.28	-1.03	-1.50	-0.58	--	--	--	-0.12

# San Mateo County Manager Return Summary



July 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	75,863,936	4.37	3.27	14.68	4.37	0.97	-0.70	--	--	--	-0.70
MSCI Emerging Markets ND		5.03	5.16	11.77	5.03	-0.75	-0.29	--	--	--	-1.45
Excess		-0.66	-1.89	2.92	-0.66	1.72	-0.41	--	--	--	0.75
EV Parametric EM	75,863,936	4.37	3.27	14.68	4.37	2.35	--	--	--	--	2.35
MSCI Emerging Markets GD		5.09	5.33	12.02	5.09	-0.38	--	--	--	--	-0.38
Excess		-0.72	-2.06	2.66	-0.72	2.73	--	--	--	--	2.73
Total Fixed Income	615,328,437	1.05	2.17	5.62	1.05	3.52	3.81	4.34	6.31	5.34	5.66
Samcera Fixed Income Benchmark		1.12	2.68	7.65	1.12	6.48	4.05	3.35	4.54	5.13	5.32
Excess		-0.08	-0.51	-2.03	-0.08	-2.97	-0.25	0.99	1.77	0.22	0.33
Total Domestic Fixed Income	515,944,782	1.37	2.62	6.60	1.37	4.74	4.34	4.60	6.47	5.51	5.84
Samcera US Fixed Inc Benchmark		1.17	2.69	7.16	1.17	5.82	4.20	3.65	4.73	5.27	5.54
Excess		0.20	-0.07	-0.57	0.20	-1.08	0.13	0.95	1.74	0.24	0.31
Total Core Fixed Income	355,142,850	1.18	2.52	6.06	1.18	5.37	4.71	4.37	6.09	5.24	5.69
BC U.S. Aggregate		0.63	2.47	5.98	0.63	5.94	4.23	3.57	4.44	5.06	5.41
Excess		0.55	0.06	0.09	0.55	-0.56	0.48	0.81	1.65	0.18	0.27
FIAM Core Bond	249,704,855	1.00	2.78	7.13	1.00	6.44	4.73	4.18	5.65	5.47	5.29
BC U.S. Aggregate		0.63	2.47	5.98	0.63	5.94	4.23	3.57	4.44	5.06	4.87
Excess		0.37	0.31	1.15	0.37	0.51	0.49	0.62	1.21	0.41	0.41
Western Total Return	105,437,995	1.62	1.93	3.62	1.62	2.85	--	--	--	--	2.85
BC U.S. Aggregate		0.63	2.47	5.98	0.63	5.94	--	--	--	--	5.94
Excess		0.99	-0.53	-2.36	0.99	-3.08	--	--	--	--	-3.08
Total Opportunistic Credit	160,801,932	1.79	2.82	7.19	1.79	3.04	5.13	7.79	--	--	9.46
BC BA Intermediate HY Index		2.27	3.26	9.26	2.27	5.77	5.41	6.39	--	--	8.04
Excess		-0.49	-0.44	-2.07	-0.49	-2.73	-0.27	1.40	--	--	1.42



# San Mateo County Manager Return Summary



July 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	22,954,152	0.00	-0.36	0.03	0.00	1.52	--	--	--	--	-0.30
BC BA Intermediate HY Index		2.27	3.26	9.26	2.27	5.77	--	--	--	--	4.12
Excess		-2.27	-3.63	-9.23	-2.27	-4.25	--	--	--	--	-4.42
Angelo Gordon	30,280,443	0.00	-2.27	-3.26	0.00	-2.05	6.98	--	--	--	7.82
BC BA Intermediate HY Index		2.27	3.26	9.26	2.27	5.77	5.41	--	--	--	5.20
Excess		-2.27	-5.53	-12.53	-2.27	-7.82	1.57	--	--	--	2.62
Beach Point Select Fund	41,774,490	2.04	4.26	8.23	2.04	6.24	--	--	--	--	7.95
BC BA Intermediate HY Index		2.27	3.26	9.26	2.27	5.77	--	--	--	--	4.77
Excess		-0.23	1.00	-1.03	-0.23	0.47	--	--	--	--	3.19
Brigade Cap Mngmt	65,792,847	3.13	5.74	15.62	3.13	3.51	2.88	5.27	--	--	6.35
BC BA Intermediate HY Index		2.27	3.26	9.26	2.27	5.77	5.41	6.39	--	--	7.18
Excess		0.86	2.48	6.35	0.86	-2.26	-2.53	-1.12	--	--	-0.83
Total Global Fixed Income	99,383,655	-0.62	-0.10	0.61	-0.62	-2.90	1.07	2.73	--	--	3.66
Samcera Global Fixed Benchmark		0.85	2.39	9.98	0.85	9.37	2.66	1.66	--	--	2.64
Excess		-1.47	-2.50	-9.37	-1.47	-12.27	-1.59	1.07	--	--	1.02
Franklin Templeton	99,383,655	-0.62	-0.10	0.61	-0.62	-2.90	0.62	2.45	--	--	3.41
BC Multiverse Index		0.85	2.39	9.98	0.85	9.37	2.66	1.66	--	--	2.64
Excess		-1.47	-2.50	-9.37	-1.47	-12.27	-2.04	0.79	--	--	0.77
Total Risk Parity	285,648,653	1.98	7.77	15.66	1.98	7.97	7.66	5.78	--	--	6.70
Samcera Risk Parity Benchmark		2.63	4.62	7.16	2.63	5.31	8.18	9.35	--	--	8.70
Excess		-0.65	3.15	8.50	-0.65	2.66	-0.52	-3.58	--	--	-1.99
AQR Global Risk III	129,874,121	1.14	4.90	10.86	1.14	2.52	3.90	3.55	--	--	4.63
Samcera Risk Parity Benchmark		2.63	4.62	7.16	2.63	5.31	8.18	9.35	--	--	8.69
Excess		-1.49	0.28	3.69	-1.49	-2.78	-4.27	-5.81	--	--	-4.07

# San Mateo County Manager Return Summary



July 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	155,774,532	2.69	10.29	20.00	2.69	12.98	--	--	--	--	9.03
Samcera Risk Parity Benchmark		2.63	4.62	7.16	2.63	5.31	--	--	--	--	5.68
Excess		0.06	5.67	12.83	0.06	7.67	--	--	--	--	3.34
Total Alternatives	400,492,625	1.05	0.60	-1.14	1.05	0.14	4.37	3.22	-9.05	-7.84	-4.06
Samcera Alternatives Benchmark		2.61	4.41	6.50	2.61	3.39	5.70	7.38	9.60	6.41	7.10
Excess		-1.56	-3.82	-7.63	-1.56	-3.25	-1.33	-4.15	-18.65	-14.25	-11.16
Total Private Equity	215,319,516	1.36	0.22	0.34	1.36	2.75	14.30	9.21	--	--	-28.98
Samcera PE Benchmark		4.22	6.82	9.59	4.22	7.57	13.79	16.29	--	--	16.67
Excess		-2.85	-6.60	-9.25	-2.85	-4.82	0.51	-7.08	--	--	-45.65
Total Hedge Fund Composite	185,173,109	0.70	1.03	-2.29	0.70	5.26	6.87	5.33	--	--	5.03
Samcera LIBOR + 4%		0.37	1.10	2.57	0.37	4.34	4.23	4.23	--	--	4.23
Excess		0.33	-0.07	-4.86	0.33	0.92	2.64	1.09	--	--	0.80
AQR Delta XN	151,618,825	0.78	1.41	-1.97	0.78	6.00	7.12	5.47	--	--	5.18
Samcera LIBOR + 4%		0.37	1.10	2.57	0.37	4.34	4.23	4.23	--	--	4.23
Excess		0.41	0.31	-4.54	0.41	1.66	2.89	1.24	--	--	0.94
Standard Life GARS	33,554,284	0.35	-0.66	-3.72	0.35	--	--	--	--	--	-4.13
Samcera LIBOR + 4%		0.37	1.10	2.57	0.37	--	--	--	--	--	3.63
Excess		-0.01	-1.76	-6.29	-0.01	--	--	--	--	--	-7.76
Total Inflation Hedge	355,672,887	0.53	2.61	--	0.53	--	--	--	--	--	6.00
SamCERA Inflation Hedge Index		-0.97	1.35	--	-0.97	--	--	--	--	--	3.38
Excess		1.50	1.26	--	1.50	--	--	--	--	--	2.63
Total TIPS	70,512,495	0.66	1.17	--	0.66	--	--	--	--	--	1.52
BC US Tips		0.87	2.24	--	0.87	--	--	--	--	--	2.59
Excess		-0.21	-1.07	--	-0.21	--	--	--	--	--	-1.07

# San Mateo County Manager Return Summary



July 31, 2016

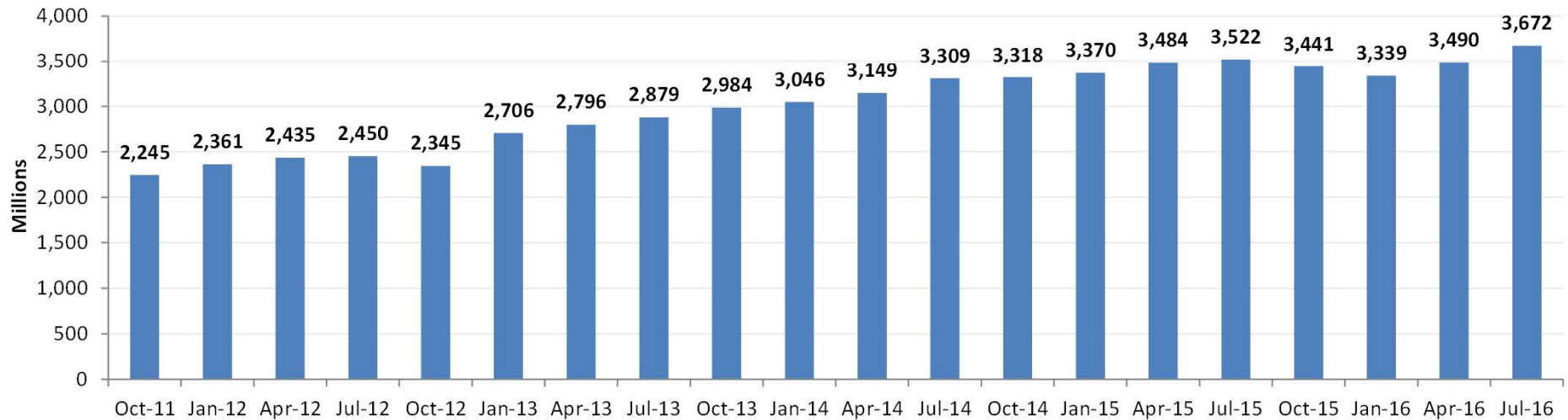
Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Brown Brothers Harriman	70,512,495	0.66	1.17	4.94	0.66	2.97	0.67	1.21	--	--	2.84
BC US Tips		0.87	2.24	7.16	0.87	5.04	2.36	2.02	--	--	3.59
Excess		-0.21	-1.07	-2.22	-0.21	-2.07	-1.69	-0.82	--	--	-0.75
Total Real Estate	248,550,880	0.07	3.48	--	0.07	--	--	--	--	--	4.85
Samcera NCREIF ODCE EW (gross)		0.00	2.18	--	0.00	--	--	--	--	--	2.18
Excess		0.07	1.30	--	0.07	--	--	--	--	--	2.67
CIM Infrastructure	3,988,175	--	--	--	--	--	--	--	--	--	0.00
Invesco Core Real Estate		0.00	3.53	7.50	0.00	10.60	12.62	11.88	10.46	5.60	7.87
Excess		--	--	--	--	--	--	--	--	--	-7.87
Invesco Core Real Estate	236,273,300	0.00	3.53	7.50	0.00	10.60	12.62	11.88	10.46	5.60	7.87
Samcera NCREIF ODCE EW (gross)		0.00	2.18	4.67	0.00	12.19	13.03	12.69	10.57	5.91	7.68
Excess		0.00	1.35	2.83	0.00	-1.59	-0.41	-0.81	-0.11	-0.32	0.19
Invesco US Val IV	8,289,405	2.04	2.04	18.28	2.04	--	--	--	--	--	12.99
Samcera NCREIF ODCE EW (gross)		0.00	2.18	4.67	0.00	--	--	--	--	--	8.26
Excess		2.04	-0.14	13.61	2.04	--	--	--	--	--	4.72
Total Private Real Assets	36,609,513	3.49	3.66	--	3.49	--	--	--	--	--	18.78
Samcera CPI + 5%		0.00	1.53	--	0.00	--	--	--	--	--	2.40
Excess		3.49	2.13	--	3.49	--	--	--	--	--	16.38
Total Cash	177,909,075	0.05	0.13	0.23	0.05	0.35	0.46	0.50	0.63	0.98	2.07
Samcera Cash Benchmark		0.03	0.07	0.17	0.03	0.22	0.10	0.09	0.11	1.00	1.93
Excess		0.02	0.05	0.06	0.02	0.12	0.36	0.41	0.52	-0.02	0.14
SamCera General Account	139,660,613	0.04	0.13	0.28	0.04	0.38	0.24	0.21	0.24	1.22	2.07
County Treasury Pool	38,240,482	0.00	0.00	0.00	0.00	0.00	0.27	0.47	0.64	0.88	2.78
San Mateo County ERA	3,671,874,188	2.45	3.40	6.08	2.45	2.78	6.65	7.33	9.25	5.19	6.60
Samcera Total Plan Benchmark		2.75	3.65	6.64	2.75	3.32	6.63	7.73	9.52	6.14	6.90
Excess		-0.30	-0.25	-0.55	-0.30	-0.54	0.03	-0.39	-0.27	-0.95	-0.30

July 31, 2016

**Record of Asset Growth**

	Three Months	One Year
<b>TOTAL FUND</b>		
Beginning Market Value	3,489,912,452	3,522,031,535
Contributions	111,354,816	334,254,513
Withdrawals	-50,620,503	-291,004,949
Income Received	9,994,833	39,156,071
Gain/Loss	111,297,351	66,339,075
Ending Market Value	3,671,874,188	3,671,874,188

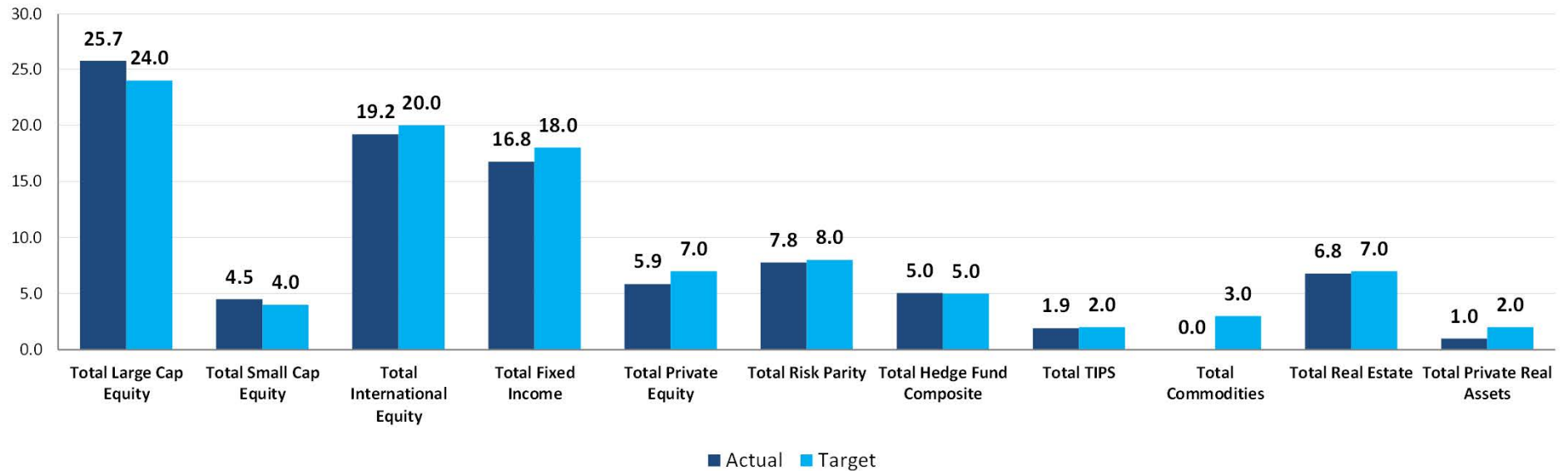
**Net Asset Values Over Time (\$000)**





July 31, 2016

Actual vs Target Weights

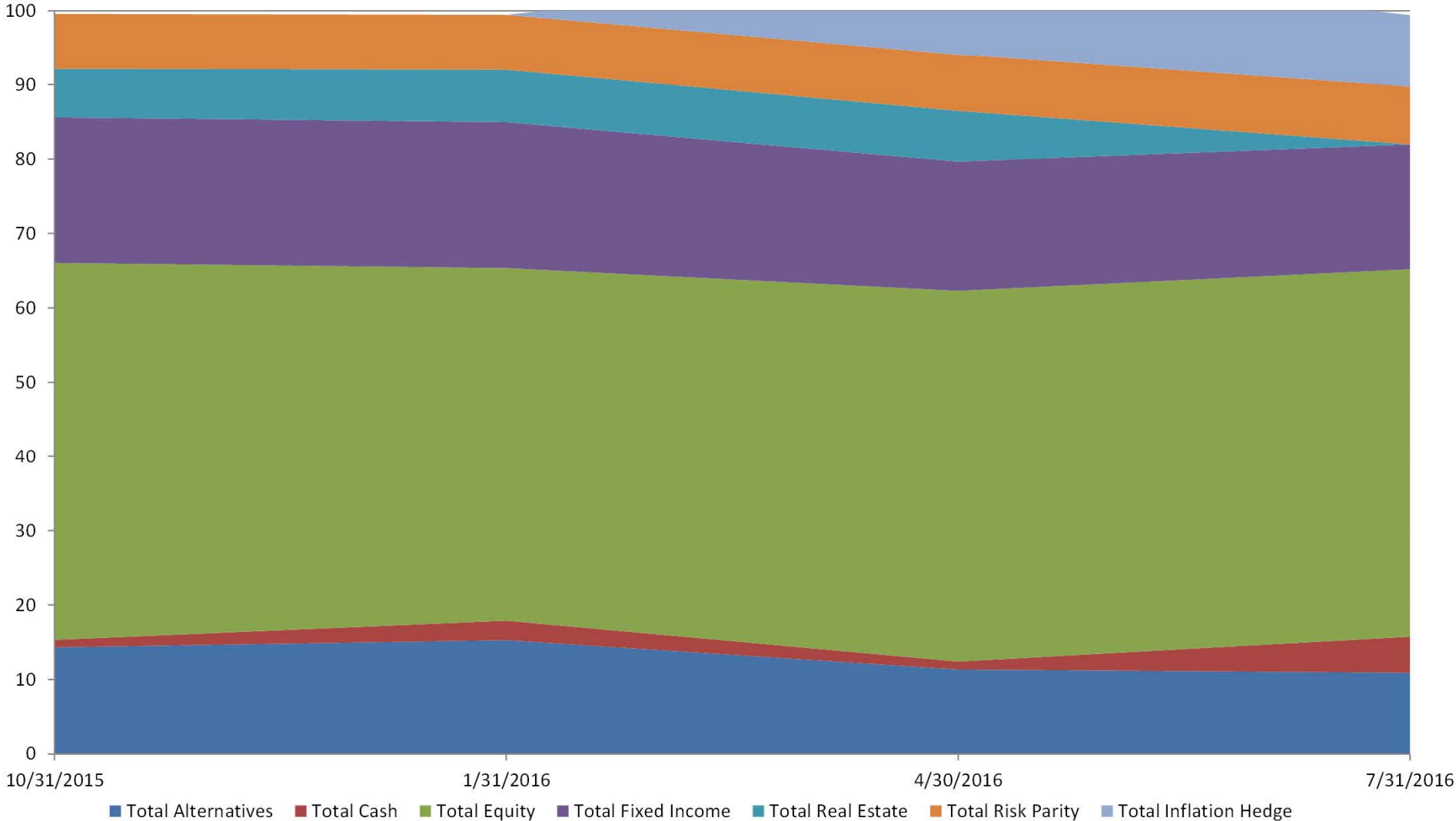


	Min	Actual	Target	Deviation	Max
<b>Total Large Cap Equity</b>	22.0	25.7	24.0	1.7	26.0
<b>Total Small Cap Equity</b>	2.0	4.5	4.0	0.5	6.0
<b>Total International Equity</b>	18.0	19.2	20.0	-0.8	22.0
<b>Total Fixed Income</b>	16.0	16.8	18.0	-1.2	20.0
<b>Total Private Equity</b>	5.0	5.9	7.0	-1.1	9.0
<b>Total Risk Parity</b>	6.0	7.8	8.0	-0.2	10.0
<b>Total Hedge Fund Composite</b>	3.0	5.0	5.0	0.0	7.0
<b>Total TIPS</b>	0.0	1.9	2.0	-0.1	4.0
<b>Total Commodities</b>	1.0	0.0	3.0	-3.0	5.0
<b>Total Real Estate</b>	5.0	6.8	7.0	-0.2	9.0
<b>Total Private Real Assets</b>	0.0	1.0	2.0	-1.0	4.0



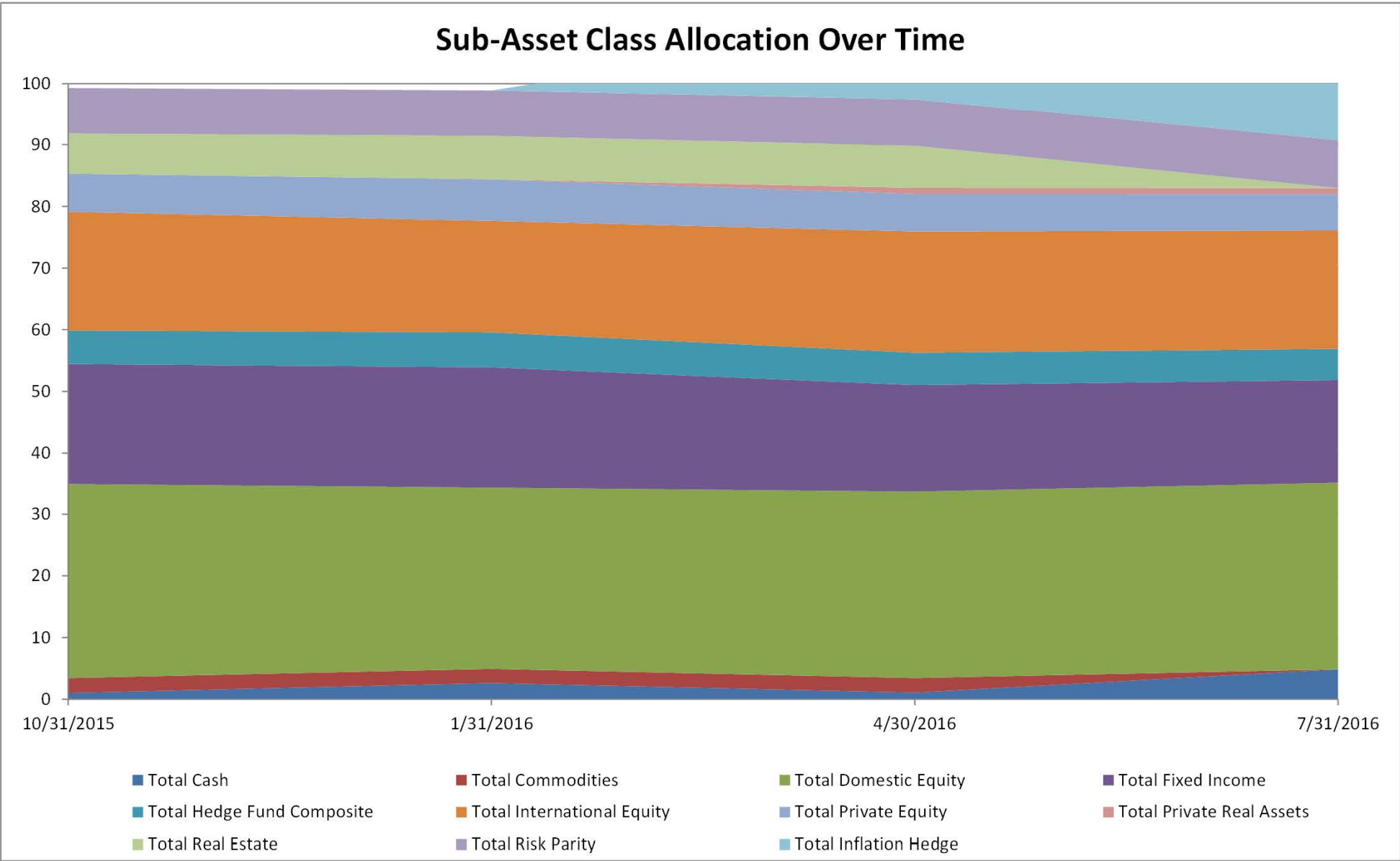
July 31, 2016

Asset Allocation over Time



July 31, 2016

Sub-Asset Class Allocation Over Time



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

August 23, 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 June 30, 2016

**Staff Recommendation**

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

**Discussion**

The 1st quarter net total return for the SamCERA portfolio was 2.0%, which was 20 bps lower than the 2.2% policy benchmark return. As can be seen on Pages 18 and 19, outperformance in our Risk Parity composite was more than offset by underperformance in our U.S. Equity and Alternatives composite.

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

**Attachment**

Verus Quarterly Performance Report Ending 6/30/2016



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



**PERIOD ENDING: JUNE 30, 2016**

Investment Performance Review for

**San Mateo County Employees' Retirement Association**

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

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

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Market Environment

TAB I

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Alternatives

TAB VI

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Total Fund

TAB II

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Inflation 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



- U.S. equity markets have been in a “risk-on/risk-off” trading environment since the Fed ended its QE program a little over a year and a half ago. At the end of last month, the UK electorate’s vote to leave the EU triggered a bout of risk aversion across global financial markets. Although markets will likely remain volatile as they digest the economic impact of the vote, as well as the potential of a growing anti-EU sentiment among remaining members, it is encouraging to see the initial response of asset prices. MSCI ACWI ex-US equities recovered the bulk of their immediate post-Brexit drop and closed the quarter marginally negative. The S&P500 was up 2.5%, while EM equities were slightly up. There is no sign of stress in funding markets, and beyond the drop in sterling, currency moves have been quite modest.
- The political reverberations of Brexit are uncertain and ultimately could amplify the global shock by depressing risk appetites in financial markets—in addition to business and consumer confidence. Outside Europe, the contagion risk could be potentially magnified by the fact that businesses are already feeling cautious. Sensitivity may be particularly pronounced in the US, where a fall in corporate profits has led to a contraction in capex and a slowdown in hiring. Indeed, the US financial sector was among the worst performers in Q2.
- The first half of the year was characterized by a broad-based rally in government bonds, amid weaker economic data, financial market turmoil and the Brexit vote. The BoJ, BoE and ECB are all likely to ease further, and the Fed continues to ratchet down rate hike expectations. As the immediate shocks begin to subside, fundamental drivers are likely to take over. All US corporate bonds finished Q2 in positive territory, led by BAA-rated bonds, up 4.3% for the quarter. Treasury and Agency debt also rose and closed the quarter 2.1% and 1.2% higher, respectively.
- With the UK referendum finally in the rearview mirror, investor reaction was reflected in the sharp decline of the sterling. The currency lost 7% in Q2.
- The State Street Investor Confidence Index® (ICI) measures risk appetite by analyzing the buying and selling patterns of the institutional investors. The Global ICI declined marginally to 105.9, down 0.1 points from May’s revised reading of 106. The North American ICI declined further in June by 2.0 points to 105.9, while the Asian ICI rose from 112.3 to 113.4 and the European ICI increased by 3.5 points to 100.3.
- For the period ending 6/30/16, one quarter returns for the NAREIT Equity Index and the NCREIF Property Index (one quarter lag) were respectively 7.0% and 2.2%; one year 24.0% and 11.8%; three years 13.6% and 11.9%; and five years 12.6% and 11.9%.

- REITs have now outperformed both the S&P 500 and Russell 2000 in each of the last four quarters as real estate fundamentals have remained strong and interest rates have continued to decline, especially after the Brexit vote late in the second quarter. Sector dispersion within REITs have remained high as interest rate sensitive sectors performed well in 2Q. Industrial, Health Care and Manufactured Housing were all up over 12%, while Apartments, Hotels and Storage were all negative for the quarter. Industrial demand has been buoyed by the secular trend of increasing internet retailing and cloud computing.
- REIT dividend yields declined by 29 bps in the second quarter to 3.5%, while the ten-year U.S. Treasury yield also fell 30 bps to 1.5% during the quarter, keeping spreads at 200 bps, well above the historical average of 111 bps. NCREIF Property Index cap rates declined 5 bps in the 1st quarter to 4.5%.

**Equity Markets**

	<u>QTR</u>	<u>1 Year</u>	<u>3 Year</u>
S&P 500	2.5	4.0	11.7
Dow Jones Industrial Average	2.1	4.5	9.0
NASDAQ	-0.6	-2.9	12.5
Russell 1000	2.5	2.9	11.5
Russell 2000	3.8	-6.7	7.1
Russell 3000	2.6	2.1	11.1
MSCI EAFE (Net)	-1.5	-10.2	2.1
MSCI Emerging Markets (Net)	0.7	-12.1	-1.6
MSCI All Country World ex US (Net)	-0.6	-10.2	1.2

**Bond Markets**

	<u>QTR</u>	<u>1 Year</u>	<u>3 Year</u>
Barclays Capital Aggregate	2.2	6.0	4.1
Barclays Capital Gov/Credit	2.7	6.7	4.2
Barclays Capital Universal	2.5	5.8	4.2
Barclays Capital Corp. High Yield	5.5	1.6	4.2
CG Non-US World Govt.	4.0	13.8	2.4

**Non-Public Markets**

*lagged quarterly*

	<u>QTR</u>	<u>1 Year</u>	<u>3 Year</u>
NCREIF Property	2.2	11.8	11.9
State Street Private Equity Index	0.7	4.6	10.1

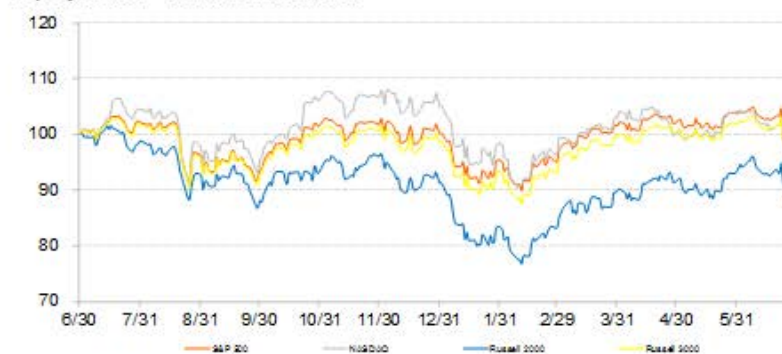
**U.S. Equity Market**

- Although accompanied by significant volatility—particularly at the beginning and end of the period—US stocks gained ground in the first half of 2016. S&P500 finished the second quarter 2.5% higher.
- Bonds posted positive returns for the second quarter in a row, as interest rates fell and credit spreads tightened. Long-duration and lower-credit-quality categories led, with some categories registering double-digit returns year to date. Bond yields fell near their all-time lows.
- High-yield bonds benefited from higher oil prices and more favorable liquidity conditions rising 5.4% in Q2.

**Equity Index – Quarterly Growth Rate**



**Equity Index – 1-Year Growth Rate**

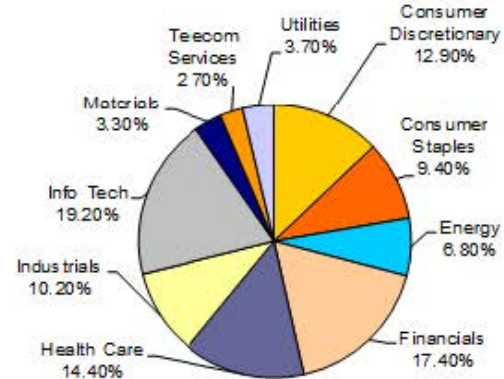




### U.S. Equity – Russell 3000

- Sector performance was mixed in Q2, with a combination of cyclicals and defensives beating the benchmark. Falling rates boosted dividend-yielding sectors, such as utilities and telecoms, which led the pack among defensives. Amid a rally in oil prices, investors bid commodity sectors higher, and materials and energy both delivered stronger returns than the benchmark.
- Overall, the Russell 3000 rose 2.6% in the second quarter.

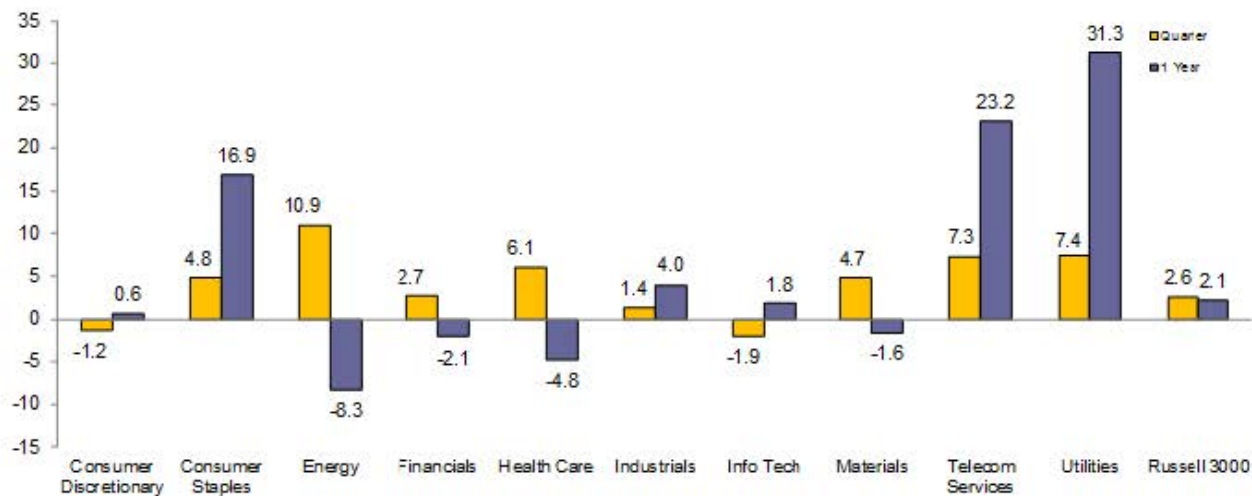
Ending Sector Weights



Characteristics

Div Yield (%)	2.05
P/B Ratio	4.80
P/E Ratio	25.82
Forward P/E Ratio	17.41
Fundamental Beta	1.02
Market Cap - Cap Wtd (MM\$)	107,844

Sector Returns (%)

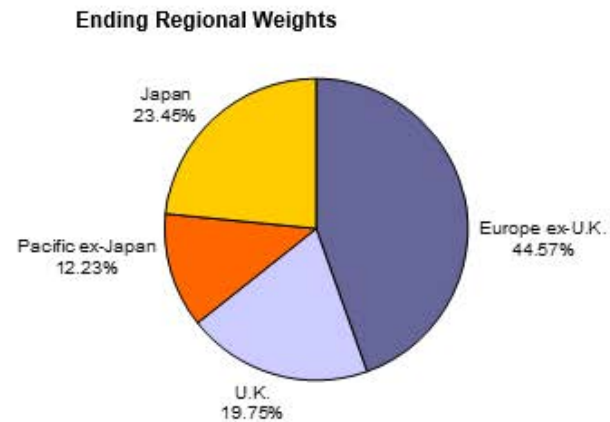


Contribution to Return:

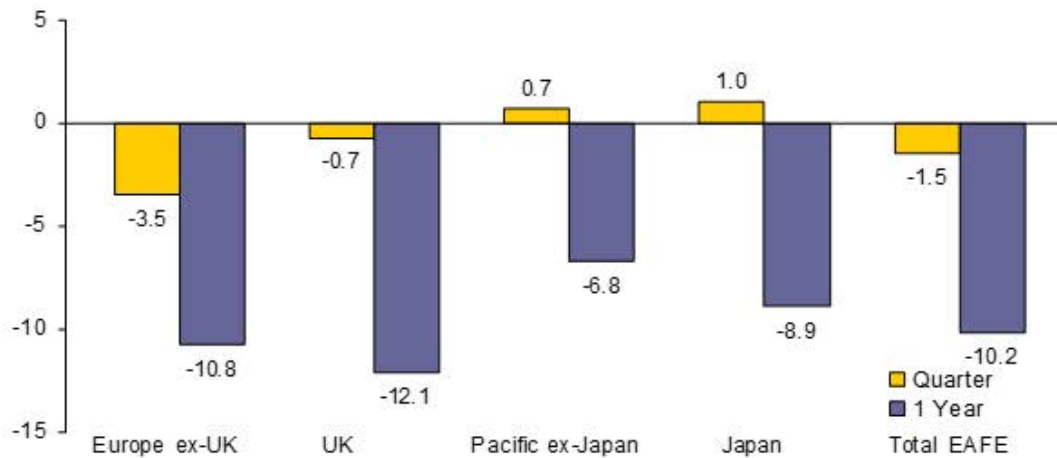
Qtr	-0.2	0.4	0.7	0.5	0.8	0.1	-0.4	0.2	0.2	0.3	2.6
1 Year	0.1	1.4	-0.6	-0.4	-0.7	0.4	0.3	-0.1	0.5	0.9	2.1

### Developed Equity – MSCI EAFE (Net)

- Despite the referendum outcome in June, the UK managed to outperform the EAFE benchmark in Q2, down 0.7% vs. -1.5% for EAFE. Investors have been buying the former for much of this year as the precipitous decline in the sterling offers support for exporters. Two-thirds of revenue for MSCI UK equities comes from overseas and thus continued currency weakness could provide a little offset to wider risk aversion.
- The Brexit vote could revive Eurozone break-up concerns, reflected in the 3.5% decline in Europe ex-UK in Q2.
- Japan was the biggest winner last quarter, up 1%.



**Regional Returns (%)**

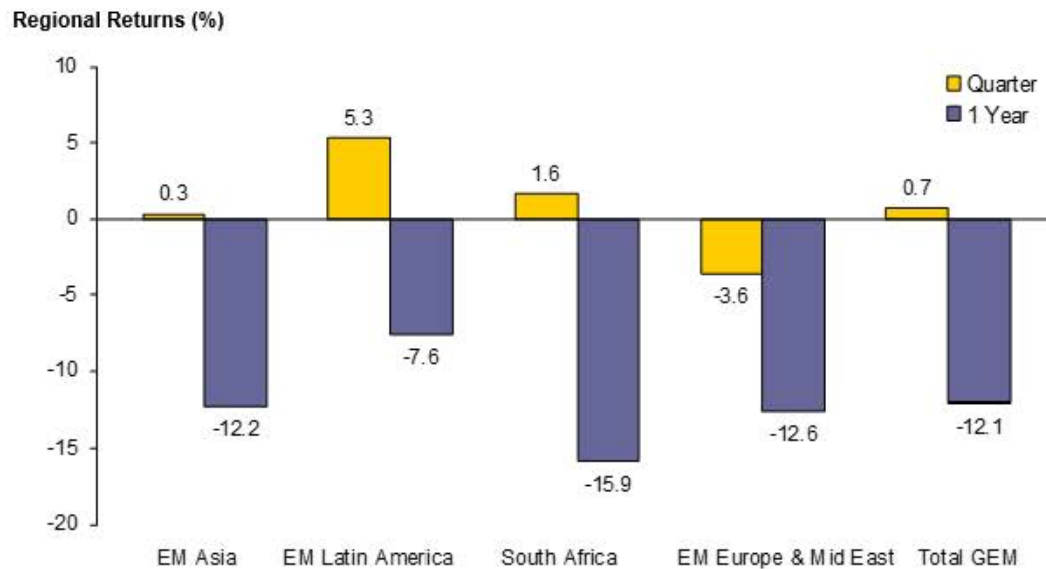
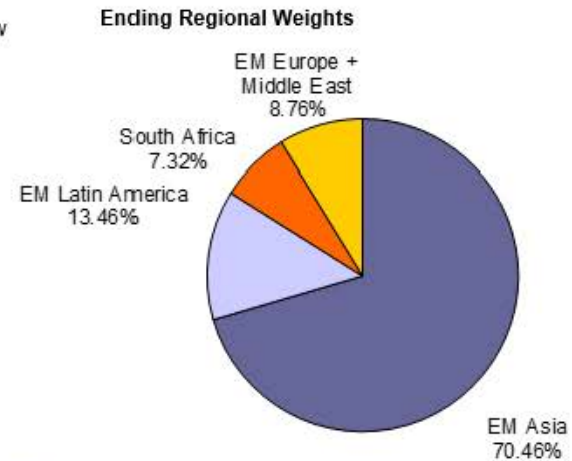


**Contribution to Return:**

Qtr	-1.6	-0.1	0.1	0.2	-1.5
1 Yr	-4.8	-2.4	-0.8	-2.1	-10.2

### Emerging Markets Equity – MSCI EM (Net)

- The MSCI EM index rose 0.7% in Q2, led by Latin America as a leveraged play on commodities. The new president of Brazil has not disappointed on his willingness to deliver a market-friendly agenda, which— together with a stronger USD-BRL and overall political de-risking—has supported Brazilian equities. EM Asia remained effectively unchanged during the quarter, while EM Europe and Middle East lagged the benchmark, likely driven by concerns over spillover effects of a divided Eurozone.
- On a 1-year basis, South Africa lost the most, down 15.9% despite the significant rally in the first half of this year. Following the sharp decline of the rand over the past year, inflation remains rampant in the country, tying the hands of policy makers. The SARB hiked rates twice already this year, in an effort to stabilize prices.



Contribution to Return:

	EM Asia	EM Latin America	South Africa	EM Europe & Mid East	Total GEM
Qtr	0.2	0.7	0.1	-0.3	0.7
1 Yr	-8.6	-1.0	-1.2	-1.1	-12.1

### Currency Markets

- In Q2, the U.S. Dollar gained 2.5% against the Euro but lost 9% against the Yen.
- The sterling lost 7% in Q2, following the UK decision to leave the EU.

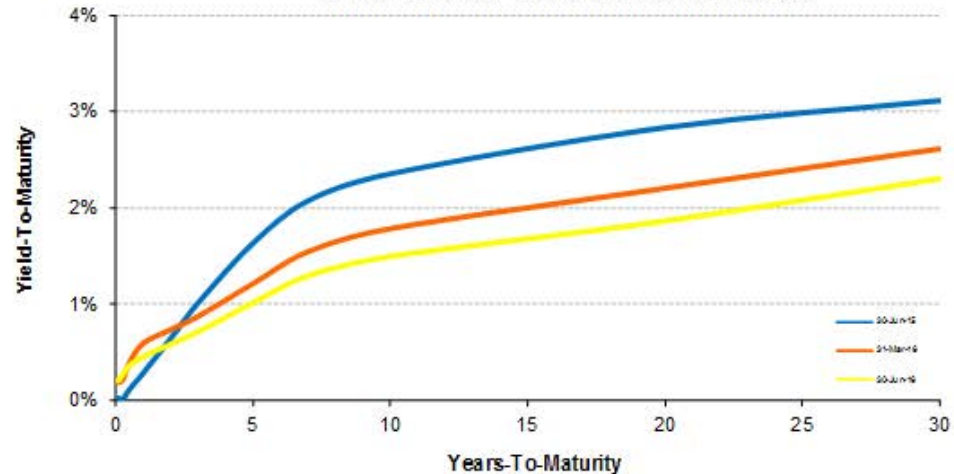
Currency Returns (%)



### Yield Curve

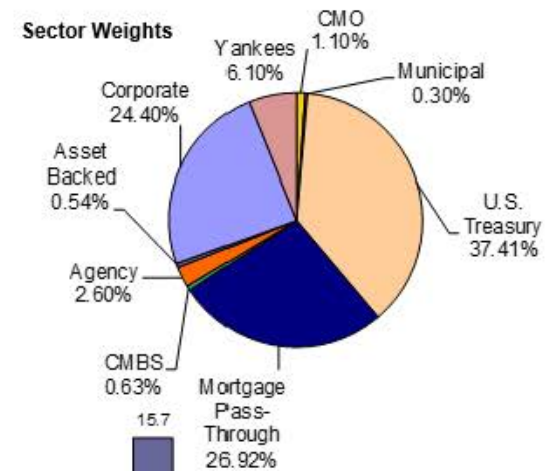
- The late-June UK vote to leave the EU fueled political and economic uncertainty in the markets, leading to a spike in volatility and a continued drop in bond yields. An expectation of even easier monetary policies by the world's central banks added fuel to the global sovereign-bond rally and pushed trillions of dollars of government bonds into negative-yield territory.
- The US Treasury yield curve shifted lower last quarter, except for 1-month and 3-month yields which rose.
- 10-year yields fell 29 bps during Q2, while 30-year yields fell by 31 bps.
- The yields on the 1-month and 2-month Treasuries rose by 2 bps and 5 bps, respectively.

INTEREST RATE TERM STRUCTURE  
 Government Issues - 3 Months to 30 Years Maturity

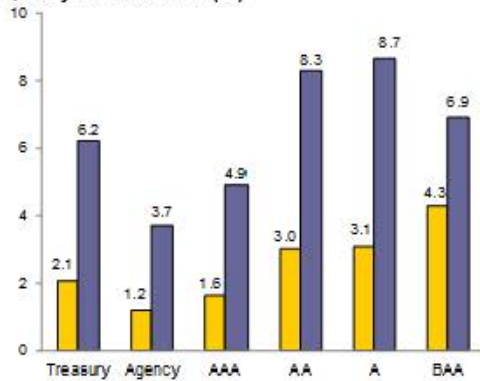


### U.S. Bond Market Returns – Barclays Capital Aggregate

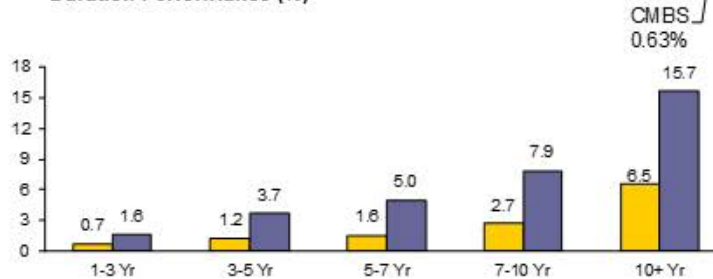
- U.S. Treasuries rose 2.1% in Q2, supported by an increase in risk aversion among investors.
- Longer-duration US Government bonds led the gains and bonds with durations over 10 years rose 6.5% in Q2.
- Among sectors, municipal debt rose the most again, up 15.1%, while mortgage pass-through, agency and asset-backed debt lagged the benchmark the most.



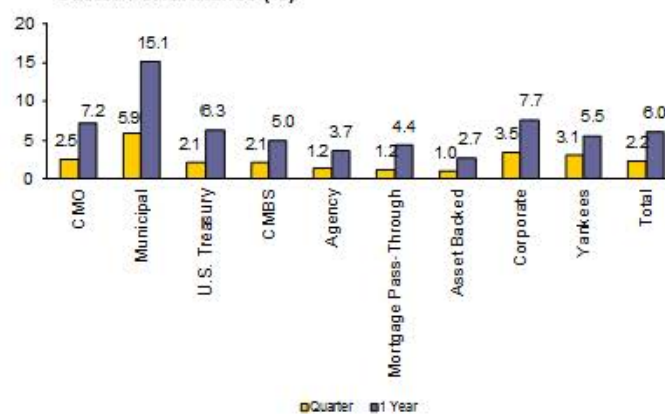
Quality Performance (%)



Duration Performance (%)



Sector Performance (%)





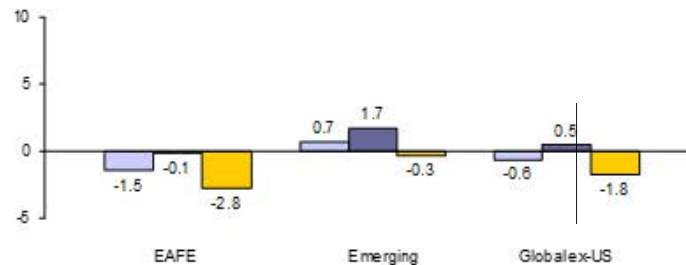
### Style & Capitalization Returns

- Value continued leading the gains across US indices in Q2. In ex-US markets, however, investors exhibited a preference for growth over value.
- Sustaining the trend that began in Q1, emerging markets were again the best performer across styles in Q2, while EAFE lost the most.

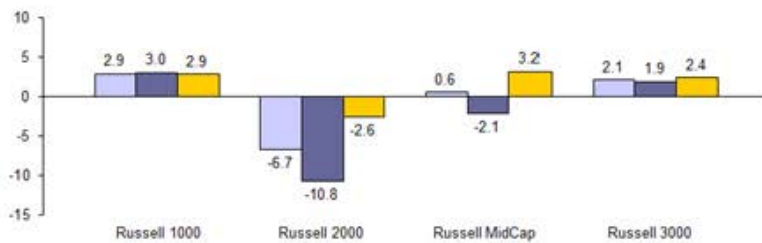
Russell US Style Returns (%) – Quarter



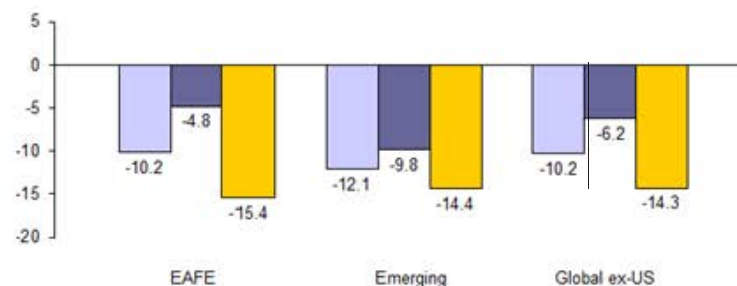
MSCI Non-US Style Returns (%) – Quarter



Russell US Style Returns (%) – 1 Year



MSCI Non-US Style Returns (%) – 1 Year



Neutral Growth Value

- The Total Fund, net of manager fees, returned 2.0% in the second quarter of 2016 and ranked 32<sup>th</sup> among other public plans greater than \$1 billion (median of 1.7%). It lagged the policy index return of 2.2%. The Total Fund w/o Overlay was 1.9% for the quarter. The Total Fund one year return of 0.7% was behind its policy index return of 1.0% and ranked in 26<sup>th</sup> percentile of its peer universe. The three-year return of 7.0% (20<sup>th</sup> percentile) was above median among large public plans (6.0%).
- Second quarter results were enhanced by the following factors:
  1. For the second quarter in a row, PanAgora beat its benchmark, the blended 60% Russell 3000/ 40% Barclays Aggregate Index (8.0% vs. 2.5%), bringing the YTD outperformance to 12.5%. Each of the main asset classes used in the portfolio provided a positive contribution to performance. Along with the continued rally in commodities, both international and U.S. Government debt were the contributors to performance.
  2. Brigade Capital returned 8.5% beating its benchmark by 5.2%, and ranked in the 1<sup>st</sup> percentile of the US High Yield Universe. April performance of 5.8% was led by the recovery in oil and gas. The main contributors to performance were AMD which provided better than expected second quarter guidance, a distressed bank debt position TCEH which rallied due to a rise in natural gas prices, and Cenveo a high yield position that rallied on expectations the company would complete a restructuring of its unsecured debt.
  3. AQR Global Risk Premium, 10% Volatility Fund was up 5.8% while the blended 60% Russell 3000/ 40% Barclays Aggregate Index returned 2.5%. Second quarter gross return attribution is as follows: equity (0.2%), nominal interest rates (2.5%), inflation (3.2%) and credit/currency (0.1%) risk. The best performing asset class in the second quarter was commodities.
  4. Mondrian gained 0.4% ranking in the top quartile of its peers. Stock selection within markets was a dominant influence on investment returns specifically in Switzerland and Japan. Additionally, the portfolio benefitted from an overweight position in the UK and Singapore.
  5. DE Shaw led its benchmark, the Russell 1000 Index (4.1% vs. 2.5%). The outperformance was led by stock selection in IT, in particular in Internet Commerce and content. Fundamental forecasts were the primary contributors to outperformance, while technical risk factors detracted.

— Second quarter results were hindered by the following factors:

1. Chartwell fell -1.6% for the quarter ranking in the bottom of its Small Cap Growth peers. Main detractors from performance were the Business Services and Consumer Services sectors.
2. Barrow Hanley rose 1.6% while the Russell 1000 Value (11<sup>th</sup> percentile) gained 4.6%. Most US Large Value managers underperformed the index.
3. The Boston Co. gained 2.3%, falling short of the Russell 2000 Value (4.3%), but raking in the middle of its peers.
4. Franklin Templeton lagged the Barclays Multi-verse (1.1% vs 3.0%). Interest-rate positioning continues to detract from the portfolio's relative performance.
5. Brown Advisory lost -0.1% compared to the 0.6% return for the Russell 1000 Growth. Stericycle (-0.66%) and Alexion Pharmaceuticals (-0.41%) were the biggest detractors from the portfolio return, while Amazon (0.96%) was the largest contributor.



Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2016

	3 Mo (%)	Rank	YTD (%)	Rank *	Fiscal YTD (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Total Fund **</b>	<b>2.0</b>	<b>32</b>	<b>3.5</b>	<b>15</b>	<b>0.7</b>	<b>26</b>	<b>2.1</b>	<b>21</b>	<b>7.0</b>	<b>20</b>	<b>6.7</b>	<b>29</b>	<b>4.9</b>	<b>77</b>
<i>Policy Index</i> <sup>1</sup>	2.2	17	3.8	10	1.0	21	1.9	29	7.0	18	7.0	19	5.9	22
<i>Allocation Index</i>	2.3	13	3.9	8	1.1	19	1.9	29	7.0	17	--	--	--	--
<i>InvestorForce Public DB &gt; \$1B Net Median</i>	1.7		2.7		-0.5		1.4		6.0		6.0		5.3	
<b>Total Fund ex Overlay</b>	<b>1.9</b>	<b>38</b>	<b>3.2</b>	<b>29</b>	<b>0.4</b>	<b>35</b>	<b>1.9</b>	<b>27</b>	<b>6.8</b>	<b>30</b>	<b>6.6</b>	<b>32</b>	<b>4.9</b>	<b>81</b>
<i>Policy Index</i> <sup>1</sup>	2.2	17	3.8	10	1.0	21	1.9	29	7.0	18	7.0	19	5.9	22
<i>Allocation Index</i>	2.3	13	3.9	8	1.1	19	1.9	29	7.0	17	--	--	--	--
<i>InvestorForce Public DB &gt; \$1B Net Median</i>	1.7		2.7		-0.5		1.4		6.0		6.0		5.3	
<b>Public Equity</b>	<b>1.2</b>	<b>64</b>	<b>1.8</b>	<b>45</b>	<b>-2.2</b>	<b>34</b>	<b>0.3</b>	<b>39</b>	<b>7.4</b>	<b>44</b>	<b>7.4</b>	<b>40</b>	<b>4.5</b>	<b>70</b>
<i>Blended Public Equity Index</i> <sup>2</sup>	1.4	48	1.8	44	-3.2	49	-0.4	56	7.2	47	7.3	41	5.5	37
<i>InvestorForce All DB Total Eq Net Median</i>	1.4		1.6		-3.3		-0.2		7.0		6.9		5.2	
<b>US Equity</b>	<b>2.0</b>	<b>70</b>	<b>2.4</b>	<b>63</b>	<b>0.7</b>	<b>45</b>	<b>3.9</b>	<b>44</b>	<b>10.1</b>	<b>55</b>	<b>10.5</b>	<b>52</b>	<b>6.0</b>	<b>87</b>
<i>Blended US Equity Index</i> <sup>2</sup>	2.7	27	3.5	38	1.1	40	4.1	39	10.7	32	11.2	23	7.3	27
<i>Russell 3000</i>	2.6	35	3.6	34	2.1	24	4.7	22	11.1	17	11.6	12	7.4	20
<i>InvestorForce All DB US Eq Net Median</i>	2.4		3.0		0.3		3.6		10.2		10.5		6.9	
<b>Large Cap Equity</b>	<b>2.2</b>	<b>--</b>	<b>2.8</b>	<b>--</b>	<b>2.6</b>	<b>--</b>	<b>5.4</b>	<b>--</b>	<b>11.1</b>	<b>--</b>	<b>11.2</b>	<b>--</b>	<b>6.4</b>	<b>--</b>
<i>Russell 1000</i>	2.5	--	3.7	--	2.9	--	5.1	--	11.5	--	11.9	--	7.5	--
<i>Barrow Hanley</i>	1.6	64	-0.1	79	-4.1	71	1.7	49	8.5	60	10.1	51	--	--
<i>Russell 1000 Value</i>	4.6	11	6.3	18	2.9	23	3.5	23	9.9	26	11.4	21	6.1	58
<i>eA US Large Cap Value Equity Net Median</i>	2.1		2.7		-1.3		1.6		8.8		10.1		6.4	
<i>BlackRock S&amp;P 500 Index</i>	2.5	32	3.8	22	4.0	20	5.7	21	11.7	23	--	--	--	--
<i>S&amp;P 500</i>	2.5	32	3.8	22	4.0	20	5.7	23	11.7	24	12.1	18	7.4	44
<i>eA US Large Cap Core Equity Net Median</i>	1.6		1.5		0.0		3.8		10.5		10.8		7.2	

\* 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 1/1/16, Policy Index is 24% Russell 1000/ 4% Russell 2000/ 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: June 30, 2016

	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Brown Advisory	-0.1	64	-1.5	53	0.6	32	5.0	41	9.5	85	--	--	--	--
<i>Russell 1000 Growth</i>	0.6	46	1.4	17	3.0	15	6.7	15	13.1	17	12.3	14	8.8	24
<i>eA US Large Cap Growth Equity Net Median</i>	0.4		-1.4		-1.7		4.6		11.5		10.7		7.9	
DE Shaw	4.1	7	4.7	20	4.1	20	6.8	12	12.2	11	13.0	6	--	--
<i>Russell 1000</i>	2.5	29	3.7	23	2.9	25	5.1	29	11.5	25	11.9	26	7.5	42
<i>eA US Large Cap Core Equity Net Median</i>	1.6		1.5		0.0		3.8		10.5		10.8		7.2	
<b>Small Cap Equity</b>	<b>0.4</b>	<b>84</b>	<b>0.2</b>	<b>70</b>	<b>-8.2</b>	<b>69</b>	<b>-3.0</b>	<b>79</b>	<b>5.4</b>	<b>77</b>	<b>7.7</b>	<b>69</b>	<b>4.1</b>	<b>96</b>
<i>Russell 2000</i>	3.8	34	2.2	51	-6.7	60	-0.3	58	7.1	56	8.4	56	6.2	63
<i>eA US Small Cap Equity Net Median</i>	2.7		2.3		-5.6		0.2		7.4		8.8		6.8	
The Boston Co	2.3	49	6.5	22	-1.9	33	-0.1	48	7.1	57	9.7	30	--	--
<i>Russell 2000 Value</i>	4.3	17	6.1	27	-2.6	38	-0.9	61	6.4	72	8.1	69	5.2	86
<i>eA US Small Cap Value Equity Net Median</i>	2.2		4.3		-3.9		-0.2		7.5		9.0		6.6	
Chartwell	-1.6	99	-5.9	90	-14.5	78	-5.8	94	3.8	86	6.9	72	5.8	70
<i>Russell 2000 Growth</i>	3.2	53	-1.6	61	-10.8	60	0.1	49	7.7	36	8.5	42	7.1	42
<i>eA US Small Cap Growth Equity Net Median</i>	3.6		-0.7		-8.7		-0.1		7.0		8.2		6.8	
<b>International Equity</b>	<b>-0.1</b>	<b>36</b>	<b>0.8</b>	<b>22</b>	<b>-6.8</b>	<b>13</b>	<b>-5.5</b>	<b>24</b>	<b>2.7</b>	<b>24</b>	<b>1.3</b>	<b>42</b>	<b>1.7</b>	<b>59</b>
<i>MSCI ACWI ex US IMI<sup>2</sup></i>	-0.5	48	-0.6	42	-9.2	42	-6.9	52	2.0	42	0.8	55	2.4	35
<i>MSCI EAFE Gross</i>	-1.2	72	-4.0	89	-9.7	50	-6.8	47	2.5	29	2.1	24	2.1	48
<i>InvestorForce All DB ex-US Eq Net Median</i>	-0.5		-1.0		-9.7		-6.9		1.9		1.0		2.0	
<b>Developed Markets</b>	<b>-0.3</b>	<b>32</b>	<b>-0.2</b>	<b>16</b>	<b>-6.7</b>	<b>14</b>	<b>-5.1</b>	<b>28</b>	<b>3.2</b>	<b>31</b>	<b>1.8</b>	<b>48</b>	<b>1.9</b>	<b>53</b>
<i>MSCI ACWI ex USA Gross</i>	-0.4	37	-0.7	19	-9.8	48	-7.4	65	1.6	68	0.6	80	2.3	37
<i>InvestorForce All DB Dev Mkt ex-US Eq Net Median</i>	-1.0		-2.8		-10.0		-6.3		2.5		1.8		2.0	
Baillie Gifford	-0.3	48	0.0	27	-5.1	53	-3.0	54	4.6	46	--	--	--	--
<i>MSCI ACWI ex US<sup>2</sup></i>	-0.4	52	-0.7	33	-9.8	79	-7.4	92	2.4	83	--	--	--	--

2. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2016

	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<i>MSCI ACWI ex US Growth<sup>2</sup></i>	0.6	31	0.4	23	-5.8	56	-3.8	65	4.2	54	--	--	--	--
<i>eA ACWI ex-US Growth Equity Net Median</i>	-0.4		-2.6		-5.0		-2.7		4.3		3.2		4.5	
<b>BlackRock EAFE Index</b>	-1.2	35	-4.1	49	-9.9	60	-7.0	76	--	--	--	--	--	--
<i>MSCI EAFE</i>	-1.5	42	-4.4	54	-10.2	61	-7.2	80	2.1	71	1.7	72	1.6	74
<i>MSCI EAFE Gross</i>	-1.2	33	-4.0	47	-9.7	59	-6.8	74	2.5	64	2.1	64	2.1	65
<i>eA EAFE Core Equity Net Median</i>	-1.8		-4.2		-9.3		-5.5		3.2		2.7		2.4	
<b>FIAM Equity<sup>+</sup></b>	-0.4	31	0.5	24	-4.6	65	-2.8	56	4.5	64	--	--	--	--
<i>MSCI ACWI ex US Small Cap Gross</i>	-0.7	42	0.0	31	-5.1	72	-3.9	69	5.3	55	2.7	79	4.5	78
<i>eA ACWI ex-US Small Cap Equity Net Median</i>	-1.3		-1.7		-3.2		-2.5		5.8		5.0		6.1	
<b>Mondrian</b>	0.4	24	2.0	20	-7.0	43	-6.8	60	2.4	60	1.8	61	2.6	38
<i>MSCI ACWI ex USA Value Gross</i>	-1.5	45	-1.8	53	-13.7	82	-10.9	86	-0.3	84	-0.8	83	1.4	81
<i>MSCI ACWI ex USA Gross</i>	-0.4	32	-0.7	49	-9.8	55	-7.4	62	1.6	66	0.6	72	2.3	41
<i>eA ACWI ex-US Value Equity Net Median</i>	-1.8		-0.9		-8.2		-5.5		3.1		2.4		2.1	
<b>Emerging Markets</b>	1.3	69	10.2	23	-7.5	22	-8.8	67	-1.2	41	--	--	--	--
<i>MSCI Emerging Markets Gross</i>	0.8	89	6.6	63	-11.7	74	-8.3	61	-1.2	41	-3.4	57	3.9	35
<i>InvestorForce All DB Emg Mkt Eq Net Median</i>	1.9		7.6		-9.5		-7.7		-1.3		-3.2		3.3	
<b>Parametric Core<sup>*</sup></b>	1.4	57	10.3	13	--	--	--	--	--	--	--	--	--	--
<i>MSCI Emerging Markets Gross</i>	0.8	73	6.6	42	-11.7	68	-8.3	63	-1.2	61	-3.4	73	3.9	70
<i>eA Emg Mkts Equity Net Median</i>	1.8		5.9		-9.7		-7.4		-0.8		-2.3		4.5	
<b>Fixed Income</b>	2.9	33	4.7	62	2.4	83	1.6	76	3.4	50	4.3	35	5.3	59
<i>Blended Fixed Income Index<sup>2</sup></i>	2.7	43	6.5	31	5.8	28	2.9	42	3.8	40	3.5	65	5.1	66
<i>InvestorForce All DB Total Fix Inc Net Median</i>	2.5		5.2		4.3		2.7		3.4		3.8		5.5	
<b>US Fixed Income</b>	3.3	30	5.4	46	3.5	78	2.5	76	3.9	51	4.6	39	5.4	49
<i>Blended US Fixed Index<sup>2</sup></i>	2.6	48	6.0	35	5.3	42	3.3	46	3.9	52	3.9	60	5.3	56
<i>InvestorForce All DB US Fix Inc Net Median</i>	2.5		5.3		4.7		3.2		3.9		4.1		5.4	

+ Name change from Pyramis Equity in September 2015.  
\* Funded July 2015. (Parametric closed September 2015.)  
2. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2016

	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Core Fixed</b>	2.7	--	4.8	--	4.8	--	3.2	--	4.1	--	4.3	--	5.1	--
Barclays Aggregate	2.2	--	5.3	--	6.0	--	3.9	--	4.1	--	3.8	--	5.1	--
FIAM Bond <sup>+</sup>	2.7	18	6.1	11	6.1	33	4.0	34	4.5	24	4.3	28	5.5	41
Western TRU <sup>*</sup>	2.6	28	1.8	99	--	--	--	--	--	--	--	--	--	--
3-Month Libor Total Return USD	0.2	99	0.3	99	0.5	99	0.4	99	0.3	99	0.4	99	1.4	99
Barclays Aggregate	2.2	63	5.3	43	6.0	41	3.9	41	4.1	56	3.8	70	5.1	75
eA US Core Fixed Inc Net Median	2.3		5.3		5.8		3.8		4.1		4.0		5.4	
<b>Opportunistic Credit</b>	4.7	--	6.1	--	0.7	--	1.2	--	4.9	--	7.8	--	--	--
Barclays BA Intermediate HY	3.3	--	6.8	--	3.7	--	2.6	--	4.2	--	4.9	--	--	--
Angelo Gordon Opportunistic <sup>**</sup>	0.3	--	0.0	--	-0.3	--	-1.0	--	--	--	--	--	--	--
Angelo Gordon STAR <sup>***</sup>	2.0	--	0.0	--	0.3	--	4.5	--	8.6	--	--	--	--	--
Barclays Aggregate	2.2	--	5.3	--	6.0	--	3.9	--	4.1	--	3.8	--	5.1	--
Beach Point Select	4.0	63	6.5	59	4.1	3	--	--	--	--	--	--	--	--
Barclays BA Intermediate HY <sup>2</sup>	3.3	76	6.8	51	3.7	4	2.6	6	4.2	38	4.9	70	--	--
eA US High Yield Fixed Inc Net Median	4.3		6.9		0.8		0.4		3.9		5.4		6.8	
Brigade Capital	8.5	1	11.8	1	-1.8	86	-2.5	95	1.6	96	4.4	87	--	--
Barclays BA Intermediate HY <sup>2</sup>	3.3	76	6.8	51	3.7	4	2.6	6	4.2	38	4.9	70	--	--
50% Barclays HY/ 50% Bank Loan	4.2	53	6.6	54	1.3	38	1.1	39	3.6	57	4.9	69	--	--
eA US High Yield Fixed Inc Net Median	4.3		6.9		0.8		0.4		3.9		5.4		6.8	
<b>Global Fixed Income</b>	1.1	86	1.2	96	-3.4	96	-2.8	87	0.6	88	2.6	85	--	--
Barclays Multi-verse	3.0	40	9.1	27	8.6	8	0.5	38	2.8	47	1.9	93	4.5	79
InvestorForce All DB Gbl Fix Inc Net Median	2.4		6.6		3.0		-0.3		2.5		3.7		5.7	
Franklin Templeton	1.1	79	1.2	89	-3.4	95	-2.9	89	0.6	87	2.6	55	--	--
Barclays Multi-verse	3.0	31	9.1	16	8.6	10	0.5	44	2.8	56	1.9	68	4.5	68
eA All Global Fixed Inc Net Median	2.2		6.3		3.4		0.1		3.1		2.9		5.0	

<sup>+</sup> Name change from Pyramid Bond in September 2015.

<sup>\*</sup> Funded August 2015.

<sup>\*\*</sup> Preliminary return as of 6/30/2016. Changed from one-quarter lag to quarterly in June 2015.

<sup>\*\*\*</sup> Preliminary return as of 6/30/2016.

<sup>2</sup> See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2016

	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Risk Parity</b>	7.0	--	14.0	--	5.7	--	2.1	--	7.3	--	5.9	--	--	--
60/40 Russell 3000/Barclays Aggregate	2.5	--	4.4	--	3.9	--	4.6	--	8.4	--	8.6	--	6.8	--
<b>AQR GRP, 10% Volatility</b>	5.8	--	10.7	--	-0.7	--	-2.5	--	4.0	--	4.0	--	--	--
PanAgora	8.0	--	16.9	--	11.9	--	--	--	--	--	--	--	--	--
60/40 Russell 3000/Barclays Aggregate	2.5	--	4.4	--	3.9	--	4.6	--	8.4	--	8.6	--	6.8	--
60/40 MSCI World/Barclays Global Aggregate	1.6	--	2.8	--	1.4	--	1.8	--	6.4	--	6.1	--	--	--
<b>Alternatives</b>	-1.0	--	-0.9	--	-0.7	--	3.5	--	5.4	--	4.1	--	--	--
Alternatives Allocation Index <sup>2</sup>	2.0	--	3.3	--	-0.5	--	-0.7	--	4.2	--	4.0	--	--	--
Blended Alternatives Index	2.0	--	3.4	--	-0.3	--	0.3	--	5.7	--	6.5	--	--	--
<b>Private Equity</b>	-0.8	90	-1.1	83	3.5	54	14.2	8	15.6	8	9.7	40	--	--
Russell 3000 +3%	2.7	9	4.5	13	5.1	44	7.7	41	14.1	18	14.6	3	10.4	23
InvestorForce All DB Private Eq Net Median	0.3		1.3		4.1		6.8		10.1		9.1		8.4	
<b>Hedge Fund/Absolute Return</b>	-1.3	96	-2.7	76	6.9	1	8.4	1	6.7	2	5.0	4	--	--
Libor 1 month +4%	1.1	47	2.1	7	4.3	1	4.2	4	4.2	12	4.2	13	--	--
InvestorForce All DB Hedge Funds Net Median	1.0		-2.0		-5.0		-1.2		2.3		3.0		3.1	
<b>AQR DELTA XN</b>	-1.4	82	-2.4	76	7.7	17	8.8	18	6.9	34	5.2	33	--	--
Libor 1 month +4%	1.1	56	2.1	46	4.3	30	4.2	36	4.2	51	4.2	42	--	--
eV Alt All Multi-Strategy Median	1.4		1.7		0.1		1.7		4.2		3.5		5.8	
<b>Standard Life GARS*</b>	-0.8	79	-4.1	84	--	--	--	--	--	--	--	--	--	--
Libor 1 month +4%	1.1	56	2.1	46	4.3	30	4.2	36	4.2	51	4.2	42	--	--
eV Alt All Multi-Strategy Median	1.4		1.7		0.1		1.7		4.2		3.5		5.8	
<b>Inflation Pool</b>	3.7	--	--	--	--	--	--	--	--	--	--	--	--	--
Blended Inflation Pool Index <sup>2</sup>	4.4	--	--	--	--	--	--	--	--	--	--	--	--	--

\* Funded October 2015.  
2. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2016

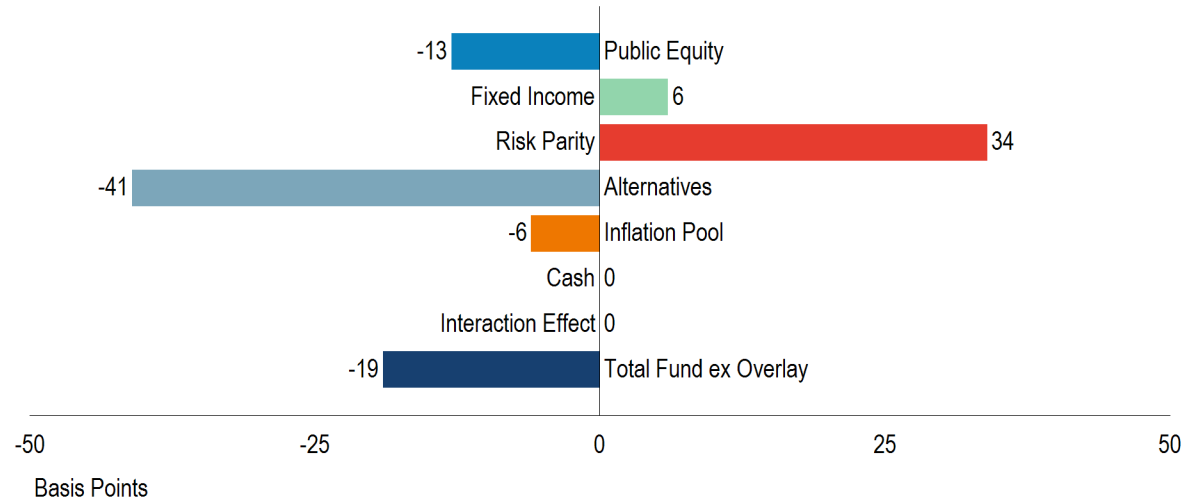
	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Real Estate</b>	3.5	15	4.8	27	11.0	40	13.5	13	12.5	26	11.8	35	5.6	32
<i>NCREIF ODCE</i>	2.1	39	4.4	33	11.8	23	13.1	19	13.0	17	12.7	11	6.6	16
<i>InvestorForce All DB Real Estate Pub Net Median</i>	1.7		3.8		10.8		11.9		11.9		10.9		5.0	
<b>Invesco</b>	3.5	--	5.0	--	10.7	--	13.3	--	12.4	--	11.7	--	5.5	--
<i>NCREIF ODCE</i>	2.1	--	4.4	--	11.8	--	13.1	--	13.0	--	12.7	--	6.6	--
<b>Invesco US Val IV*</b>	2.0	--	1.8	--	--	--	--	--	--	--	--	--	--	--
<i>NCREIF ODCE</i>	2.1	--	4.4	--	11.8	--	13.1	--	13.0	--	12.7	--	6.6	--
<i>NCREIF CEVA 1Q Lag - NET</i>	2.5	--	8.5	--	17.2	--	17.7	--	--	--	--	--	--	--
<b>TIPS</b>	0.9	--	4.3	--	2.0	--	0.0	--	1.1	--	2.1	--	--	--
<i>Barclays US TIPS</i>	1.7	--	6.2	--	4.4	--	1.3	--	2.3	--	2.6	--	4.7	--
<b>Brown Brothers Harriman</b>	0.9	89	4.3	84	2.0	84	0.0	77	1.1	77	2.1	67	--	--
<i>Barclays US TIPS</i>	1.7	40	6.2	34	4.4	18	1.3	25	2.3	21	2.6	33	4.7	55
<i>eA TIPS / Infl Indexed Fixed Inc Net Median</i>	1.6		6.0		4.0		0.6		1.9		2.4		4.8	
<b>Private Real Asset**</b>	-0.2	--	45.1	--	38.5	--	--	--	--	--	--	--	--	--
<i>CPI +5%</i>	2.7	--	4.0	--	6.4	--	5.3	--	--	--	--	--	--	--
<b>Cash</b>	0.3	--	0.4	--	1.4	--	1.1	--	0.8	--	0.7	--	1.1	--
<i>91 Day T-Bills</i>	0.1	--	0.1	--	0.2	--	0.1	--	0.1	--	0.1	--	0.9	--
<b>General Account</b>	0.3	--	0.6	--	2.1	--	1.5	--	1.0	--	0.7	--	1.5	--
<b>Treasury &amp; LAIF</b>	0.3	--	1.0	--	1.2	--	1.0	--	1.0	--	0.9	--	1.1	--
<i>91 Day T-Bills</i>	0.1	--	0.1	--	0.2	--	0.1	--	0.1	--	0.1	--	0.9	--

\* Funded December 2015.

\*\* Preliminary return as of 6/30/2016.

Total Fund ex Overlay  
Performance Attribution

Period Ending: June 30, 2016

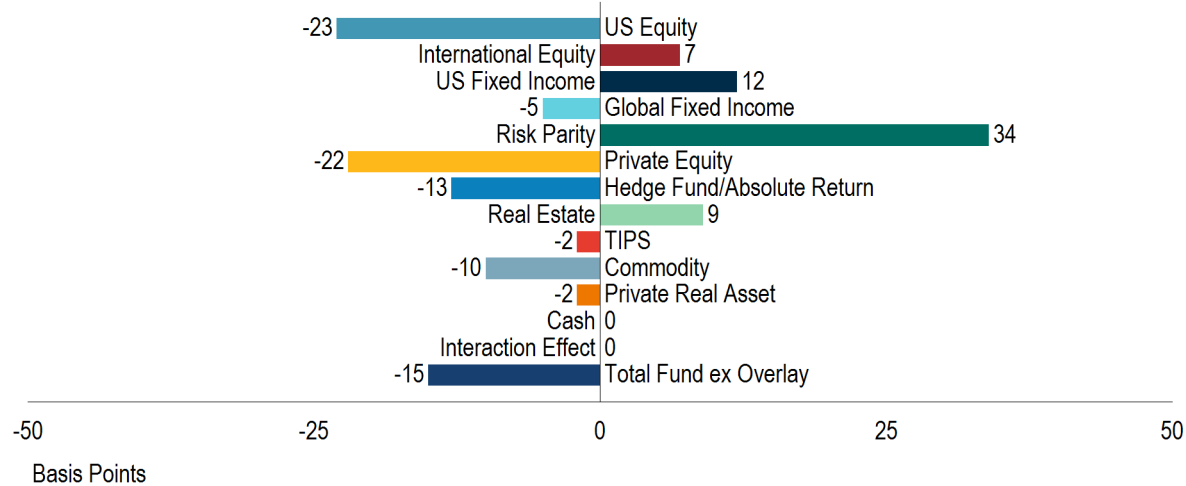


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction*	Total Effects
Public Equity	1.15%	1.41%	-0.25%	-0.13%	0.00%	0.00%	-0.13%
Fixed Income	2.94%	2.65%	0.29%	0.06%	0.00%	0.00%	0.06%
Risk Parity	6.98%	2.47%	4.50%	0.34%	0.00%	0.00%	0.34%
Alternatives	-1.04%	2.02%	-3.06%	-0.41%	0.00%	0.00%	-0.41%
Inflation Pool	3.74%	4.41%	-0.67%	-0.06%	0.00%	0.00%	-0.06%
Cash	0.25%	0.06%	0.19%	0.00%	0.00%	0.00%	0.00%
<b>Total</b>	<b>1.80%</b>	<b>1.99%</b>	<b>-0.19%</b>	<b>-0.19%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>-0.19%</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: June 30, 2016



	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction* Effects	Total Effects
US Equity	1.96%	2.72%	-0.75%	-0.23%	0.00%	0.00%	-0.23%
International Equity	-0.10%	-0.45%	0.35%	0.07%	0.00%	0.00%	0.07%
US Fixed Income	3.31%	2.58%	0.73%	0.12%	0.00%	0.00%	0.12%
Global Fixed Income	1.11%	3.00%	-1.89%	-0.05%	0.00%	0.00%	-0.05%
Risk Parity	6.98%	2.47%	4.50%	0.34%	0.00%	0.00%	0.34%
Private Equity	-0.83%	2.65%	-3.48%	-0.22%	0.00%	0.00%	-0.22%
Hedge Fund/Absolute Return	-1.30%	1.13%	-2.42%	-0.13%	0.00%	0.00%	-0.13%
Real Estate	3.49%	2.13%	1.36%	0.09%	0.00%	0.00%	0.09%
TIPS	0.86%	1.71%	-0.85%	-0.02%	0.00%	0.00%	-0.02%
Commodity	--	8.31%	--	-0.10%	0.00%	0.00%	-0.10%
Private Real Asset	-0.21%	2.70%	-2.92%	-0.02%	0.00%	0.00%	-0.02%
Cash	0.25%	0.06%	0.19%	0.00%	0.00%	0.00%	0.00%
<b>Total</b>	<b>1.86%</b>	<b>2.00%</b>	<b>-0.15%</b>	<b>-0.15%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>-0.15%</b>

Attribution does not include the impact of the Parametric Minneapolis strategy.

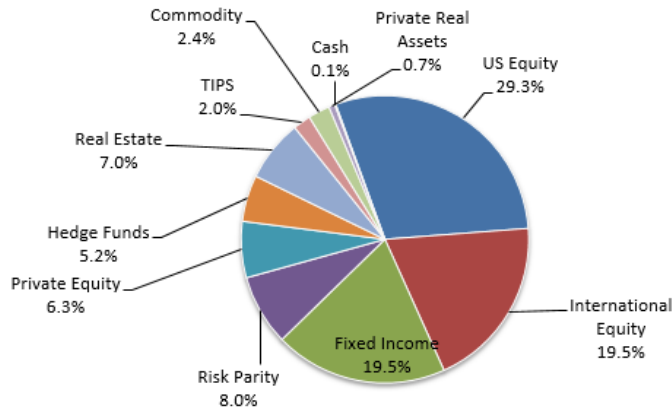
\* Interaction Effects include Residual Effects.



Total Fund  
Asset Allocation Analysis

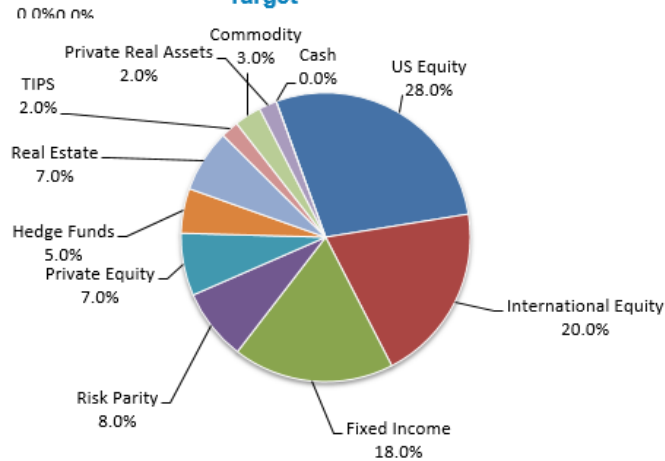
Period Ending: June 30, 2016

Current w/ Overlay



ASSET ALLOCATION	MARKET VALUE		
	W/O OVERLAY	W/ OVERLAY	W/O OVERLAY
US Equity	1,068,951,484	29.3%	30.4%
International Equity	672,632,744	19.5%	19.1%
Fixed Income	610,595,456	19.5%	17.4%
Risk Parity	280,336,357	8.0%	8.0%
Private Equity	222,609,731	6.3%	6.3%
Hedge Funds	183,886,234	5.2%	5.2%
Real Estate	244,563,043	7.0%	7.0%
TIPS	70,052,988	2.0%	2.0%
Commodity	0	2.4%	0.0%
Private Real Assets	24,644,177	0.7%	0.7%
Cash	138,058,103	0.1%	3.9%
<b>TOTAL</b>	<b>3,516,330,316</b>	<b>100.0%</b>	<b>100.0%</b>

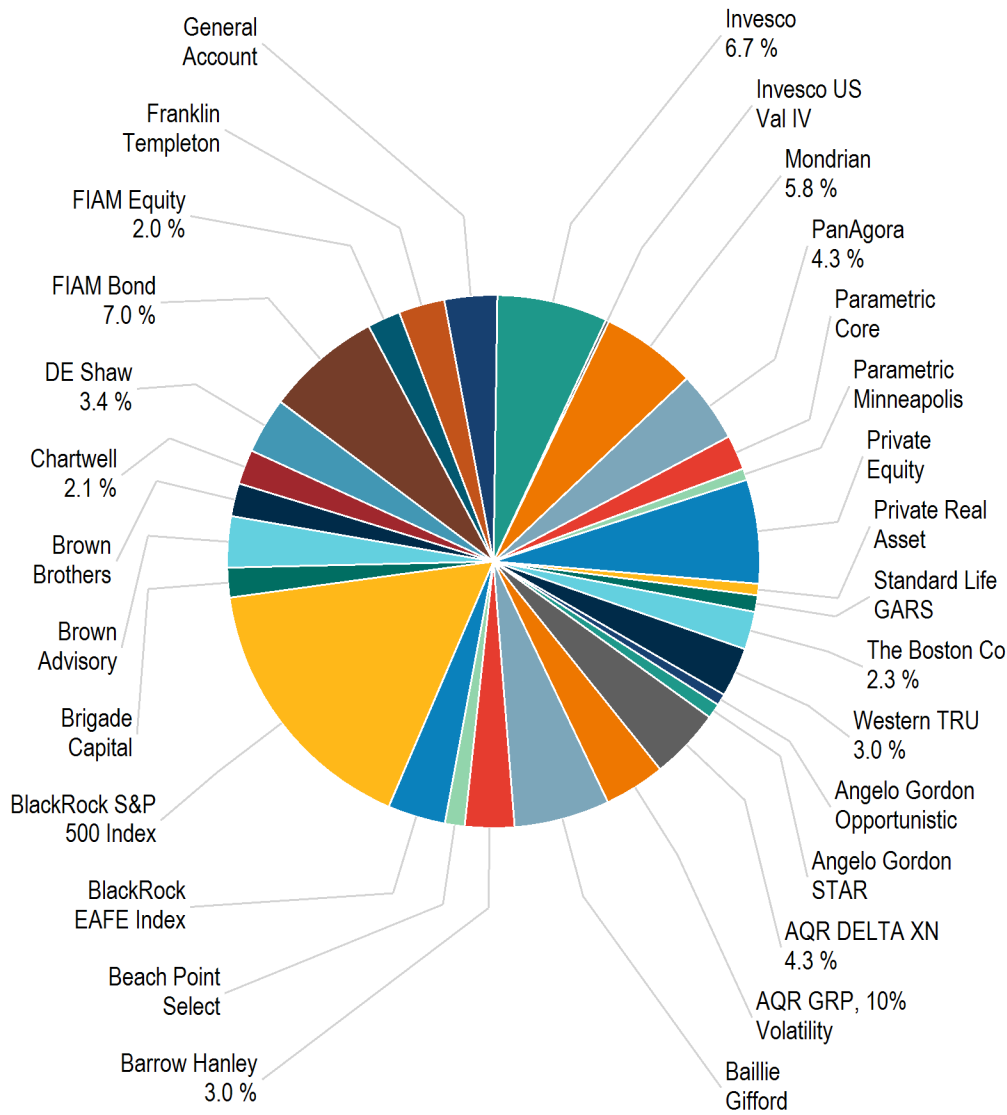
Target



ASSET ALLOCATION	W/ OVERLAY	TARGET	DIFF
US Equity	29.3%	28.0%	1.3%
International Equity	19.5%	20.0%	-0.5%
Fixed Income	19.5%	18.0%	1.5%
Risk Parity	8.0%	8.0%	-0.0%
Private Equity	6.3%	7.0%	-0.7%
Hedge Funds	5.2%	5.0%	0.2%
Real Estate	7.0%	7.0%	-0.0%
TIPS	2.0%	2.0%	-0.0%
Commodity	2.4%	0.03	-0.6%
Private Real Assets	0.7%	2.0%	-1.3%
Cash	0.1%	0.0%	0.1%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-0.0%</b>

# Total Fund Manager Allocation Analysis

Period Ending: June 30, 2016



	Actual (\$)	Actual %
Angelo Gordon Opportunistic	\$23,028,000	1%
Angelo Gordon STAR	\$31,854,000	1%
AQR DELTA XN	\$150,450,044	4%
AQR GRP, 10% Volatility	\$128,642,392	4%
Baillie Gifford	\$203,287,693	6%
Barrow Hanley	\$106,514,720	3%
Beach Point Select	\$40,939,328	1%
BlackRock EAFE Index	\$124,380,213	4%
BlackRock S&P 500 Index	\$575,736,217	16%
Brigade Capital	\$63,784,385	2%
Brown Advisory	\$109,784,426	3%
Brown Brothers Harriman	\$70,052,988	2%
Chartwell	\$75,574,451	2%
DE Shaw	\$118,848,435	3%
FIAM Bond	\$247,229,262	7%
FIAM Equity	\$69,107,354	2%
Franklin Templeton	\$100,003,677	3%
General Account	\$111,245,920	3%
Invesco	\$236,273,638	7%
Invesco US Val IV	\$8,289,405	0%
Mondrian	\$203,168,921	6%
PanAgora	\$151,693,965	4%
Parametric Core	\$72,688,563	2%
Parametric Minneapolis Overlay	\$25,575,964	1%
Private Equity	\$222,609,731	6%
Private Real Asset	\$24,644,177	1%
Standard Life GARS	\$33,436,190	1%
The Boston Co	\$82,493,235	2%
Treasury & LAIF	\$1,236,219	0%
Western TRU	\$103,756,803	3%
<b>Total</b>	<b>\$3,516,330,316</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	7.0%	20	7.1%	67	1.0	33	0.0	39	1.0%	28
Policy Index	7.0%	18	7.6%	82	0.9	45	--	--	0.0%	1
InvestorForce Public DB > \$1B Net Median	6.0%	--	6.7%	--	0.9	--	-0.3	--	1.2%	--

**Statistics Summary**

**5 Years**

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	6.7%	29	8.3%	75	0.8	51	-0.3	61	1.1%	24
Policy Index	7.0%	19	8.7%	87	0.8	51	--	--	0.0%	1
InvestorForce Public DB > \$1B Net Median	6.0%	--	7.5%	--	0.8	--	-0.1	--	1.2%	--

**Statistics Summary**

**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Cash	0.8%	0.4%	1.8	1.9	0.4%
91 Day T-Bills	0.1%	0.0%	0.0	--	0.0%
General Account	1.0%	0.6%	1.6	1.6	0.6%
91 Day T-Bills	0.1%	0.0%	0.0	--	0.0%
Treasury & LAIF	1.0%	0.5%	1.8	1.8	0.5%
91 Day T-Bills	0.1%	0.0%	0.0	--	0.0%

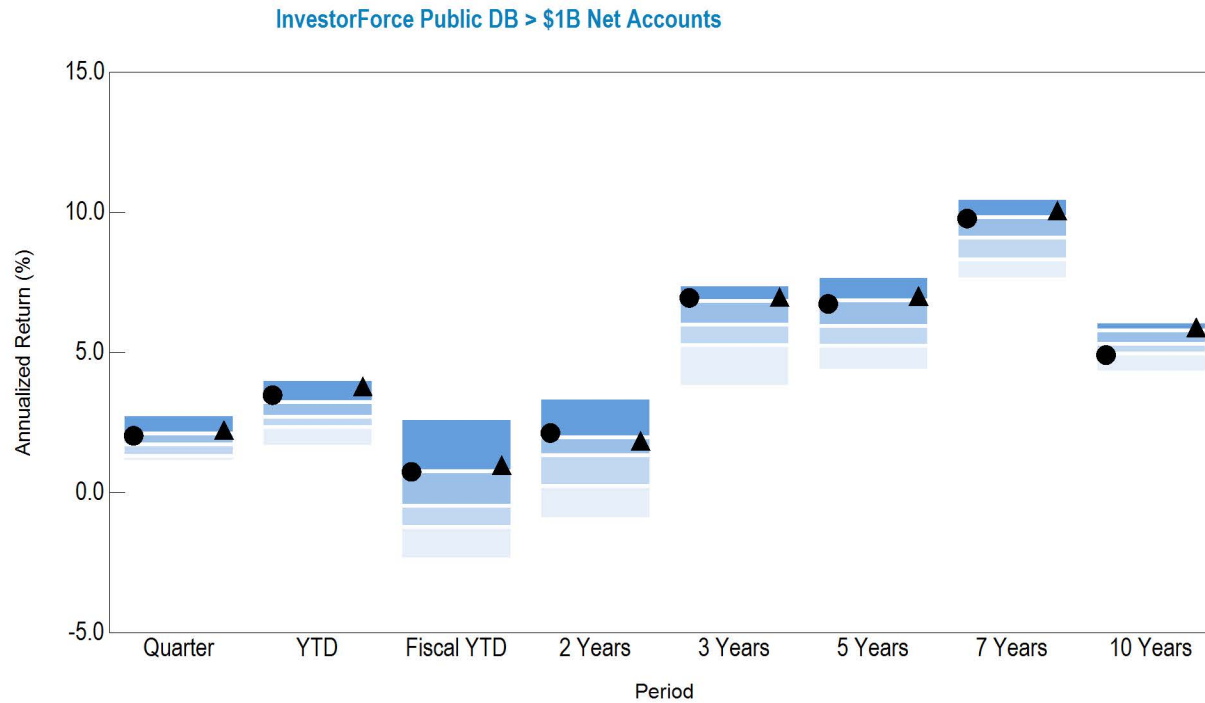
**Statistics Summary**

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Cash	0.7%	0.3%	2.1	2.2	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%	2.1	2.1	0.4%
91 Day T-Bills	0.1%	0.0%	0.0	--	0.0%

Total Fund  
Peer Universe Comparison

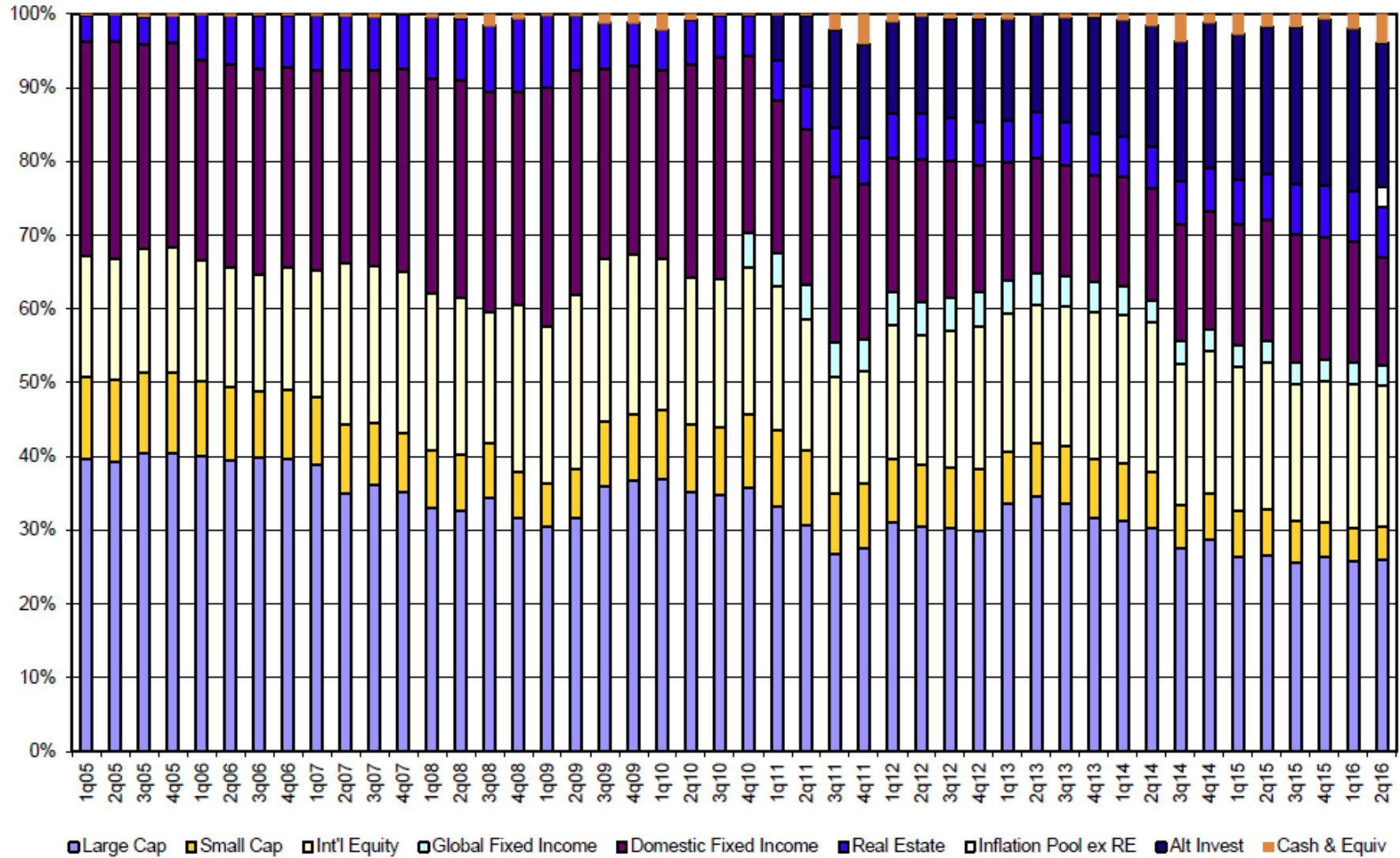
Period Ending: June 30, 2016

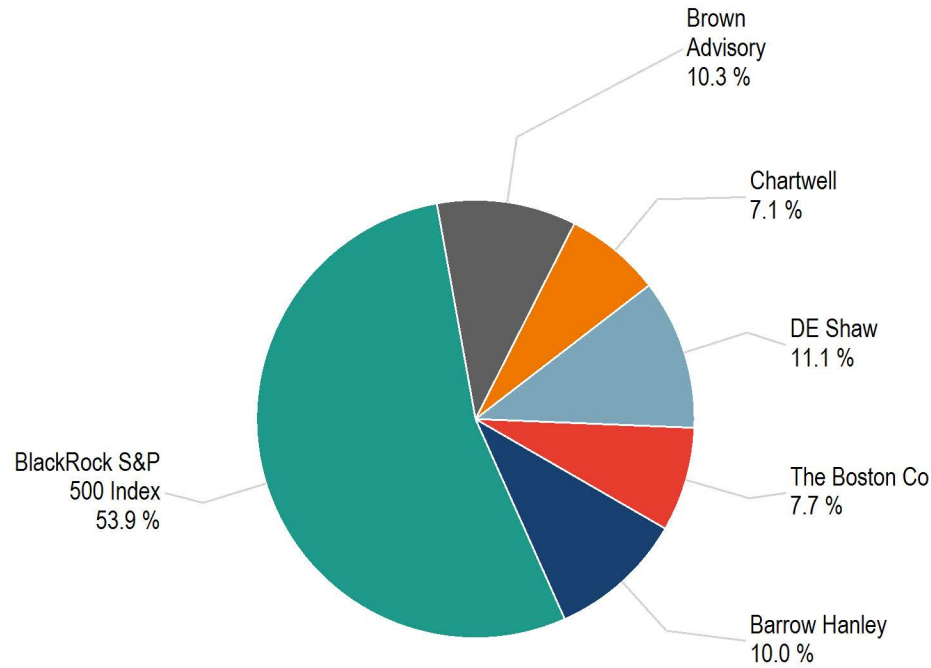


	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	2.8	4.0	2.7	3.4	7.4	7.7	10.5	6.1
25th Percentile	2.1	3.2	0.8	2.0	6.9	6.9	9.8	5.8
Median	1.7	2.7	-0.5	1.4	6.0	6.0	9.1	5.3
75th Percentile	1.3	2.4	-1.2	0.2	5.3	5.3	8.3	5.0
95th Percentile	1.1	1.6	-2.4	-0.9	3.8	4.4	7.6	4.3
# of Portfolios	55	55	55	54	53	53	52	48
● Total Fund	2.0 (32)	3.5 (15)	0.7 (26)	2.1 (21)	7.0 (20)	6.7 (29)	9.8 (32)	4.9 (77)
▲ Policy Index	2.2 (17)	3.8 (10)	1.0 (21)	1.9 (29)	7.0 (18)	7.0 (19)	10.1 (14)	5.9 (22)

Total Fund  
Asset Allocation History

Period Ending: June 30, 2016





	Actual \$	Actual %	Manager Contribution to Excess Return %
Barrow Hanley	\$106,514,720	10.0%	-0.3%
BlackRock S&P 500 Index	\$575,736,217	53.9%	-0.0%
Brown Advisory	\$109,784,426	10.3%	-0.1%
Chartwell	\$75,574,451	7.1%	0.0%
DE Shaw	\$118,848,435	11.1%	0.2%
The Boston Co	\$82,493,235	7.7%	-0.2%
Actual vs. Policy Weight Difference			-0.4%
<b>Total</b>	<b>\$1,068,951,483</b>	<b>100.0%</b>	<b>-0.8%</b>



**Statistics Summary**

**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	10.1%	11.6%	0.9	-0.7	0.8%
Blended US Equity Index	10.7%	11.7%	0.9	--	0.0%
Russell 3000	11.1%	11.5%	1.0	0.5	1.0%

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	11.1%	11.2%	1.0	-0.4	0.8%
Russell 1000	11.5%	11.3%	1.0	--	0.0%
Barrow Hanley	8.5%	11.9%	0.7	-0.4	3.3%
Russell 1000 Value	9.9%	11.3%	0.9	--	0.0%
DE Shaw	12.2%	11.8%	1.0	0.3	2.3%
Russell 1000	11.5%	11.3%	1.0	--	0.0%
Small Cap Equity	5.4%	14.6%	0.4	-0.6	2.7%
Russell 2000	7.1%	15.2%	0.5	--	0.0%
The Boston Co	7.1%	13.8%	0.5	0.2	3.2%
Russell 2000 Value	6.4%	14.5%	0.4	--	0.0%
Chartwell	3.8%	15.9%	0.2	-0.9	4.6%
Russell 2000 Growth	7.7%	16.5%	0.5	--	0.0%

**Statistics Summary**

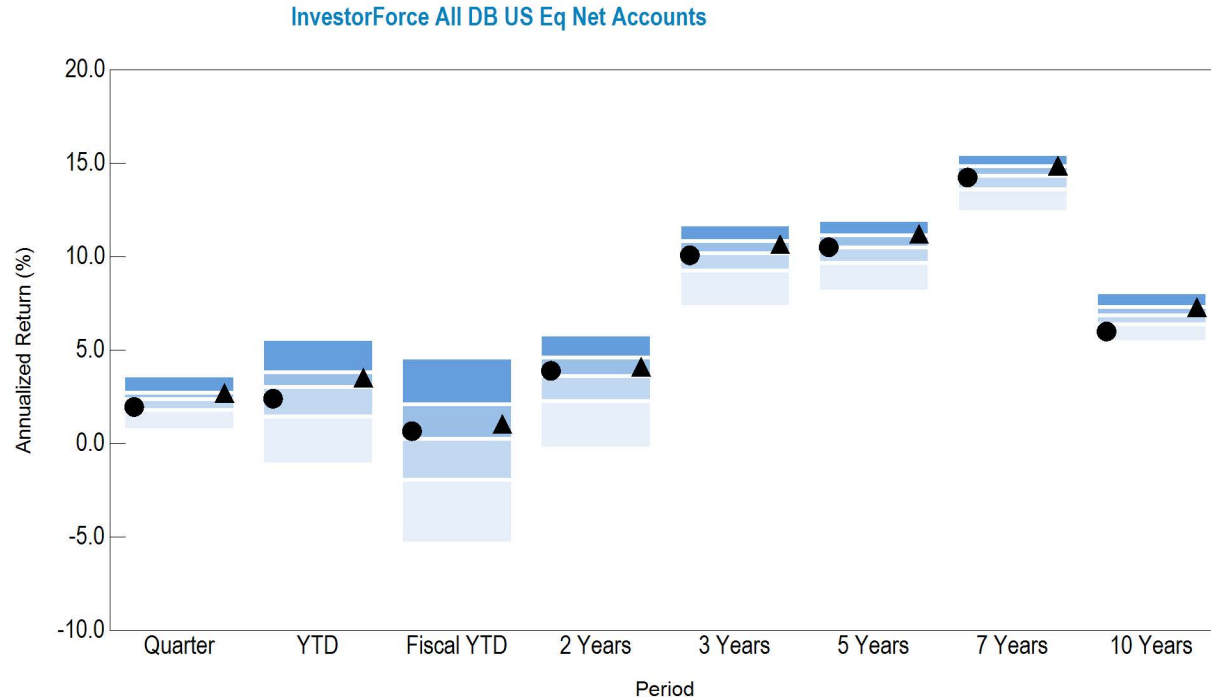
**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	10.5%	13.1%	0.8	-0.7	1.1%
Blended US Equity Index	11.2%	12.9%	0.9	--	0.0%
Russell 3000	11.6%	12.6%	0.9	0.4	0.9%

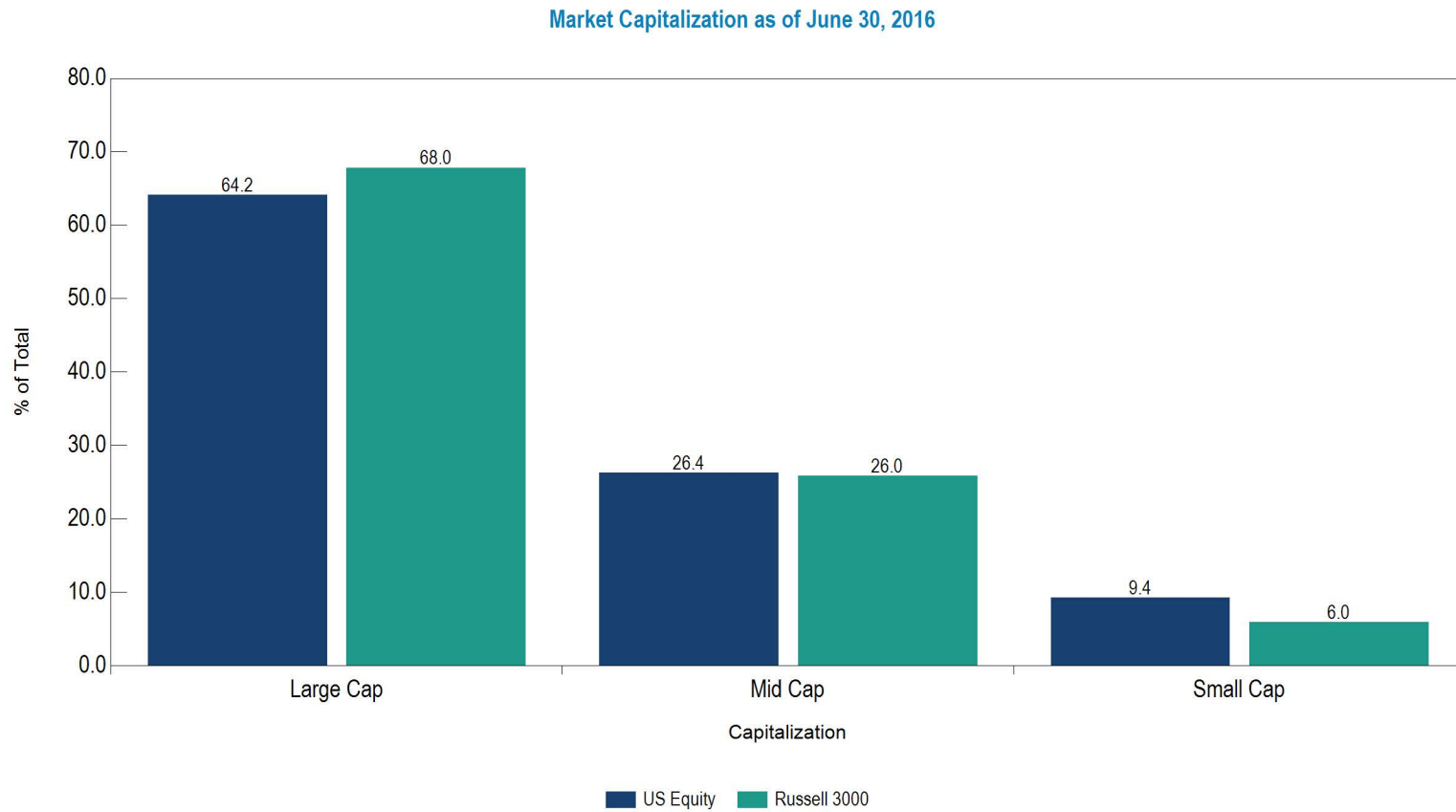
Statistics Summary

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	11.2%	12.6%	0.9	-0.7	1.0%
Russell 1000	11.9%	12.3%	1.0	--	0.0%
Barrow Hanley	10.1%	13.1%	0.8	-0.4	3.0%
Russell 1000 Value	11.4%	12.6%	0.9	--	0.0%
DE Shaw	13.0%	12.9%	1.0	0.5	2.1%
Russell 1000	11.9%	12.3%	1.0	--	0.0%
Small Cap Equity	7.7%	16.2%	0.5	-0.2	3.0%
Russell 2000	8.4%	16.6%	0.5	--	0.0%
The Boston Co	9.7%	15.6%	0.6	0.5	3.1%
Russell 2000 Value	8.1%	15.8%	0.5	--	0.0%
Chartwell	6.9%	17.6%	0.4	-0.4	4.6%
Russell 2000 Growth	8.5%	17.7%	0.5	--	0.0%



	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	3.6	5.6	4.6	5.8	11.7	12.0	15.5	8.1
25th Percentile	2.7	3.8	2.1	4.6	10.9	11.2	14.9	7.3
Median	2.4	3.0	0.3	3.6	10.2	10.5	14.4	6.9
75th Percentile	1.8	1.5	-1.9	2.3	9.3	9.7	13.6	6.4
95th Percentile	0.7	-1.1	-5.4	-0.3	7.3	8.2	12.4	5.4
# of Portfolios	672	672	668	656	613	513	441	347
● US Equity	2.0 (70)	2.4 (63)	0.7 (45)	3.9 (44)	10.1 (55)	10.5 (52)	14.2 (54)	6.0 (87)
▲ Blended US Equity Index	2.7 (27)	3.5 (38)	1.1 (40)	4.1 (39)	10.7 (32)	11.2 (23)	14.9 (24)	7.3 (27)



See appendix for the market capitalization breakpoints.

Characteristics

	Portfolio	Russell 3000
Number of Holdings	2,507	3,007
Weighted Avg. Market Cap. (\$B)	95.9	106.3
Median Market Cap. (\$B)	2.2	1.3
Price To Earnings	24.6	23.3
Price To Book	4.6	3.6
Price To Sales	3.6	3.1
Return on Equity (%)	17.6	15.9
Yield (%)	1.9	2.0
Beta (holdings; domestic)	1.0	1.0

Top Holdings

APPLE	2.0%
AMAZON.COM	1.8%
FACEBOOK CLASS A	1.4%
JOHNSON & JOHNSON	1.3%
MICROSOFT	1.3%
EXXON MOBIL	1.2%
VISA 'A'	1.0%
ALPHABET 'A'	0.9%
BERKSHIRE HATHAWAY 'B'	0.9%
ALPHABET 'C'	0.9%

Best Performers

	Return %
RYERSON HOLDING (RYI)	214.7%
CLAYTON WILLIAMS EN. (CWEI)	207.8%
FAIRMONT SANTROL HDG. (FMSA)	207.2%
EZCORP 'A' NON VTG. (EZPW)	154.5%
NORTH ATLANTIC DRILLING (NADL)	146.0%
ECLIPSE RESOURCES (ECR)	131.9%
SILVER STANDARD RES. (C:SSO)	131.0%
NANOSPHERE (NSPH)	113.9%
PIONEER ENERGY SERVICES (PES)	109.1%
BLUCORA (BCOR)	100.8%

Worst Performers

	Return %
CODE REBEL (CDRBQ)	-98.9%
STEMCELLS (STEM)	-87.1%
SEVENTY SEVEN ENERGY (SSEIQ)	-84.1%
JG WENTWORTH CLASS A (JGWE)	-79.1%
INFINITY PHARMACEUTICALS (INFI)	-74.8%
MIRATI THERAPEUTICS(NAS) (MRTX)	-74.5%
LIPOCINE (LPCN)	-70.0%
REPUBLIC AIRWAYS HDG. (RJETQ)	-64.6%
WALTER INVESTMENT MAN. (WAC)	-63.9%
IMMUNOGEN (IMGN)	-63.8%

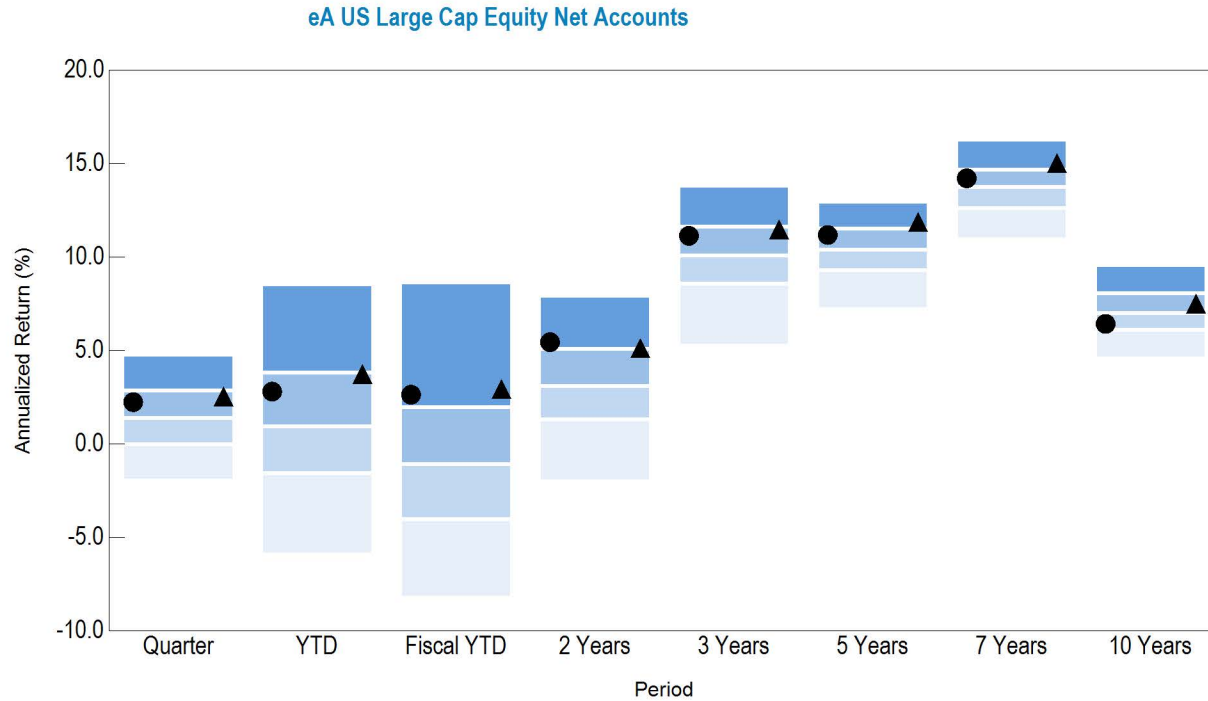


US Equity Performance Attribution vs. Russell 3000

	Attribution Effects				Returns		Sector Weights				
	Total	Selection	Allocation	Interaction	Portfolio	Benchmark	Portfolio	Benchmark			
	Effects	Effect	Effect	Effects							
Energy	0.0%	0.1%	0.0%	0.0%	12.2%	11.0%	5.6%	6.1%			
Materials	0.0%	0.0%	0.0%	0.0%	4.7%	4.8%	3.4%	3.2%			
Industrials	-0.1%	-0.1%	0.0%	0.0%	1.0%	1.5%	12.1%	11.0%			
Cons. Disc.	-0.2%	-0.2%	0.0%	0.0%	-2.6%	-1.5%	14.1%	13.4%			
Cons. Staples	0.0%	0.0%	0.0%	0.0%	5.0%	4.7%	8.7%	9.2%			
Health Care	0.0%	0.0%	0.0%	0.0%	5.9%	5.9%	14.3%	13.7%			
Financials	-0.2%	-0.3%	0.0%	0.0%	1.2%	2.7%	15.3%	17.3%			
Info. Tech	0.1%	0.1%	0.0%	0.0%	-1.4%	-1.9%	21.0%	20.1%			
Telecomm.	0.0%	0.0%	0.0%	0.0%	6.6%	7.4%	2.1%	2.5%			
Utilities	-0.1%	0.0%	0.0%	0.0%	6.9%	7.3%	2.6%	3.5%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	0.8%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	2.5%	--	0.1%	0.0%			
<b>Portfolio</b>	<b>-0.5%</b>	<b>=</b>	<b>-0.3%</b>	<b>+</b>	<b>-0.2%</b>	<b>+</b>	<b>0.0%</b>	<b>2.1%</b>	<b>2.6%</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	4.8	8.5	8.6	7.9	13.8	13.0	16.3	9.6
25th Percentile	2.9	3.8	2.0	5.1	11.7	11.6	14.7	8.1
Median	1.4	1.0	-1.1	3.1	10.1	10.4	13.8	7.0
75th Percentile	0.0	-1.5	-4.0	1.3	8.6	9.3	12.6	6.1
95th Percentile	-2.0	-5.9	-8.2	-2.0	5.3	7.2	11.0	4.6
# of Portfolios	544	543	539	522	510	455	425	348
● Large Cap Equity	2.2 (34)	2.8 (32)	2.6 (21)	5.4 (22)	11.1 (33)	11.2 (33)	14.2 (36)	6.4 (69)
▲ Russell 1000	2.5 (29)	3.7 (26)	2.9 (21)	5.1 (25)	11.5 (27)	11.9 (20)	15.0 (18)	7.5 (40)

Characteristics

	Portfolio	Russell 1000
Number of Holdings	2,458	1,001
Weighted Avg. Market Cap. (\$B)	111.8	114.7
Median Market Cap. (\$B)	2.5	7.7
Price To Earnings	24.3	23.9
Price To Book	4.8	4.3
Price To Sales	3.7	3.2
Return on Equity (%)	18.4	17.0
Yield (%)	2.0	2.1
Beta (holdings; domestic)	1.0	1.0

Top Holdings

APPLE	2.3%
AMAZON.COM	2.1%
FACEBOOK CLASS A	1.6%
JOHNSON & JOHNSON	1.6%
MICROSOFT	1.6%
EXXON MOBIL	1.4%
VISA 'A'	1.2%
ALPHABET 'A'	1.1%
BERKSHIRE HATHAWAY 'B'	1.1%
ALPHABET 'C'	1.1%

Best Performers

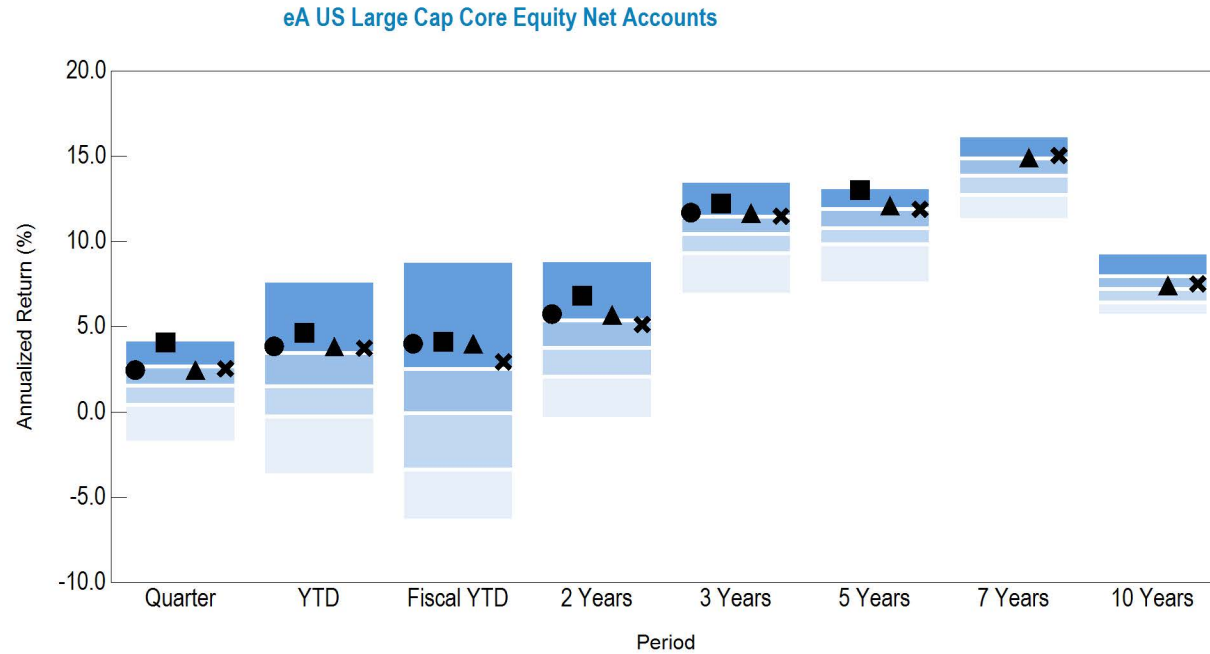
	Return %
RYERSON HOLDING (RYI)	214.7%
CLAYTON WILLIAMS EN. (CWEI)	207.8%
FAIRMONT SANTROL HDG. (FMSA)	207.2%
EZCORP 'A' NON VTG. (EZPW)	154.5%
NORTH ATLANTIC DRILLING (NADL)	146.0%
ECLIPSE RESOURCES (ECR)	131.9%
SILVER STANDARD RES. (C:SSO)	131.0%
NANOSPHERE (NSPH)	113.9%
PIONEER ENERGY SERVICES (PES)	109.1%
BLUCORA (BCOR)	100.8%

Worst Performers

	Return %
CODE REBEL (CDRBQ)	-98.9%
STEMCELLS (STEM)	-87.1%
SEVENTY SEVEN ENERGY (SSEIQ)	-84.1%
JG WENTWORTH CLASS A (JGWE)	-79.1%
INFINITY PHARMACEUTICALS (INFI)	-74.8%
MIRATI THERAPEUTICS(NAS) (MRTX)	-74.5%
LIPOCINE (LPCN)	-70.0%
REPUBLIC AIRWAYS HDG. (RJETQ)	-64.6%
WALTER INVESTMENT MAN. (WAC)	-63.9%
IMMUNOGEN (IMGN)	-63.8%

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	0.0%	0.1%	0.0%	0.0%	12.1%	11.1%	5.9%	6.4%			
Materials	0.0%	0.0%	0.0%	0.0%	4.7%	4.0%	3.7%	3.2%			
Industrials	-0.1%	-0.1%	0.0%	0.0%	0.7%	1.4%	11.4%	10.8%			
Cons. Disc.	0.0%	0.0%	0.0%	0.0%	-1.6%	-1.4%	13.0%	13.3%			
Cons. Staples	0.0%	0.0%	0.0%	0.0%	4.8%	4.6%	9.8%	9.7%			
Health Care	0.1%	0.0%	0.0%	0.0%	6.3%	6.1%	14.9%	13.7%			
Financials	-0.2%	-0.3%	0.0%	0.0%	0.8%	2.5%	14.0%	16.6%			
Info. Tech	0.0%	0.1%	-0.1%	0.0%	-1.8%	-2.2%	21.6%	20.3%			
Telecomm.	0.0%	0.0%	0.0%	0.0%	6.6%	7.3%	2.5%	2.6%			
Utilities	-0.1%	0.0%	0.0%	0.0%	6.6%	7.1%	2.4%	3.4%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	0.8%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	2.5%	--	0.1%	0.0%			
<b>Portfolio</b>	<b>-0.3%</b>	<b>=</b>	<b>-0.2%</b>	<b>+</b>	<b>-0.1%</b>	<b>+</b>	<b>0.1%</b>	<b>2.2%</b>	<b>2.5%</b>	<b>100.0%</b>	<b>100.0%</b>



	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	4.2	7.7	8.8	8.9	13.5	13.2	16.2	9.3
25th Percentile	2.7	3.5	2.5	5.4	11.5	11.9	14.9	8.0
Median	1.6	1.5	0.0	3.8	10.5	10.8	13.9	7.2
75th Percentile	0.5	-0.2	-3.3	2.1	9.3	9.9	12.7	6.4
95th Percentile	-1.8	-3.7	-6.3	-0.4	6.9	7.6	11.3	5.7
# of Portfolios	147	147	146	142	137	122	109	93
● BlackRock S&P 500 Index	2.5 (32)	3.8 (22)	4.0 (20)	5.7 (21)	11.7 (23)	-- (--)	-- (--)	-- (--)
■ DE Shaw	4.1 (7)	4.7 (20)	4.1 (20)	6.8 (12)	12.2 (11)	13.0 (6)	-- (--)	-- (--)
▲ S&P 500	2.5 (32)	3.8 (22)	4.0 (20)	5.7 (23)	11.7 (24)	12.1 (18)	14.9 (25)	7.4 (44)
✕ Russell 1000	2.5 (29)	3.7 (23)	2.9 (25)	5.1 (29)	11.5 (25)	11.9 (26)	15.0 (21)	7.5 (42)

Characteristics

	Portfolio	S&P 500
Number of Holdings	510	505
Weighted Avg. Market Cap. (\$B)	127.6	127.6
Median Market Cap. (\$B)	17.9	18.1
Price To Earnings	23.8	23.3
Price To Book	4.9	4.4
Price To Sales	3.5	3.0
Return on Equity (%)	18.9	17.7
Yield (%)	2.2	2.2
Beta (holdings; domestic)	0.9	1.0

Top Holdings

APPLE	2.9%
MICROSOFT	2.2%
EXXON MOBIL	2.1%
JOHNSON & JOHNSON	1.8%
GENERAL ELECTRIC	1.6%
AMAZON.COM	1.5%
BERKSHIRE HATHAWAY 'B'	1.5%
AT&T	1.5%
FACEBOOK CLASS A	1.5%
VERIZON COMMUNICATIONS	1.3%

Best Performers

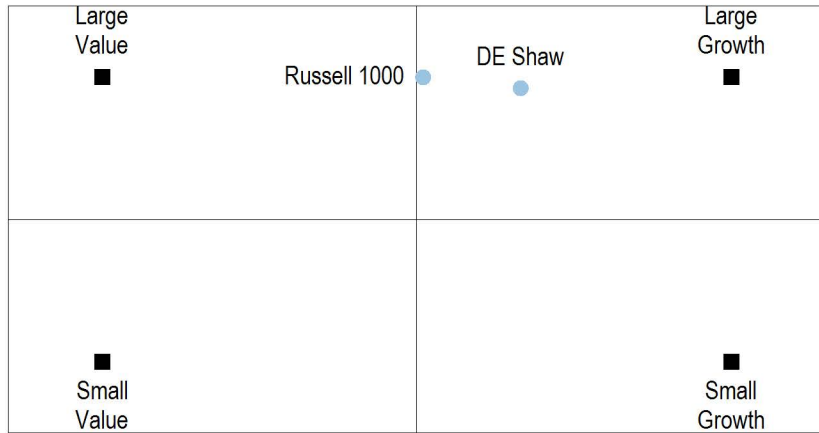
	Return %
ONEOK (OKE)	61.7%
SOUTHWESTERN ENERGY (SWN)	55.9%
NEWMONT MINING (NEM)	47.3%
ST.JUDE MEDICAL (STJ)	42.4%
WILLIAMS (WMB)	38.5%
MARATHON OIL (MRO)	35.3%
RANGE RES. (RRC)	33.3%
NEWFIELD EXPLORATION (NFX)	32.9%
DEVON ENERGY (DVN)	32.3%
NVIDIA (NVDA)	32.3%

Worst Performers

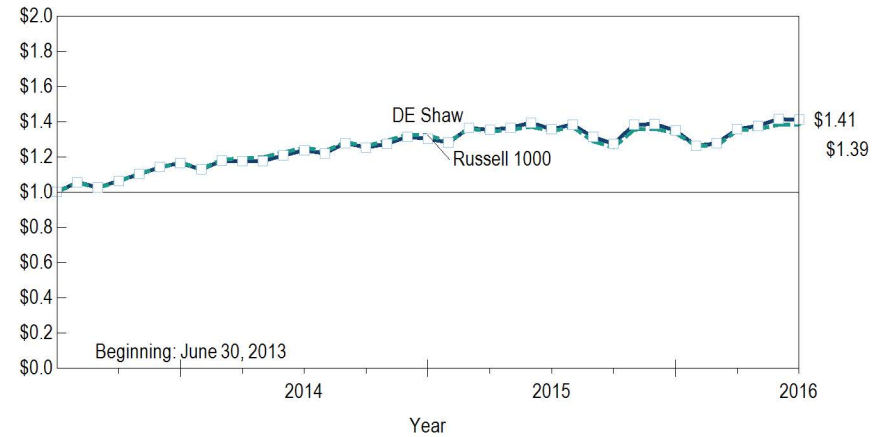
	Return %
ENDO INTERNATIONAL (ENDP)	-44.6%
SIGNET JEWELERS (SIG)	-33.4%
NORDSTROM (JWN)	-32.8%
UNITED CONTINENTAL HDG. (UAL)	-31.4%
AMERICAN AIRLINES GROUP (AAL)	-30.8%
FIRST SOLAR (FSLR)	-29.2%
PERRIGO (PRGO)	-29.0%
GAP (GPS)	-27.3%
SEAGATE TECH. (STX)	-27.0%
DELTA AIR LINES (DAL)	-24.9%



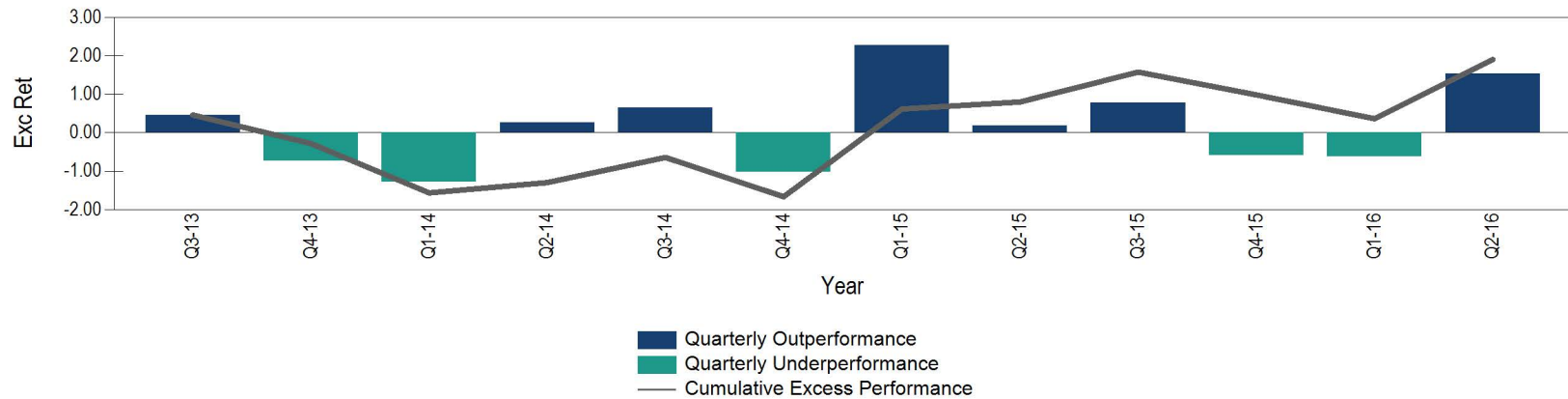
U.S. Effective Style Map

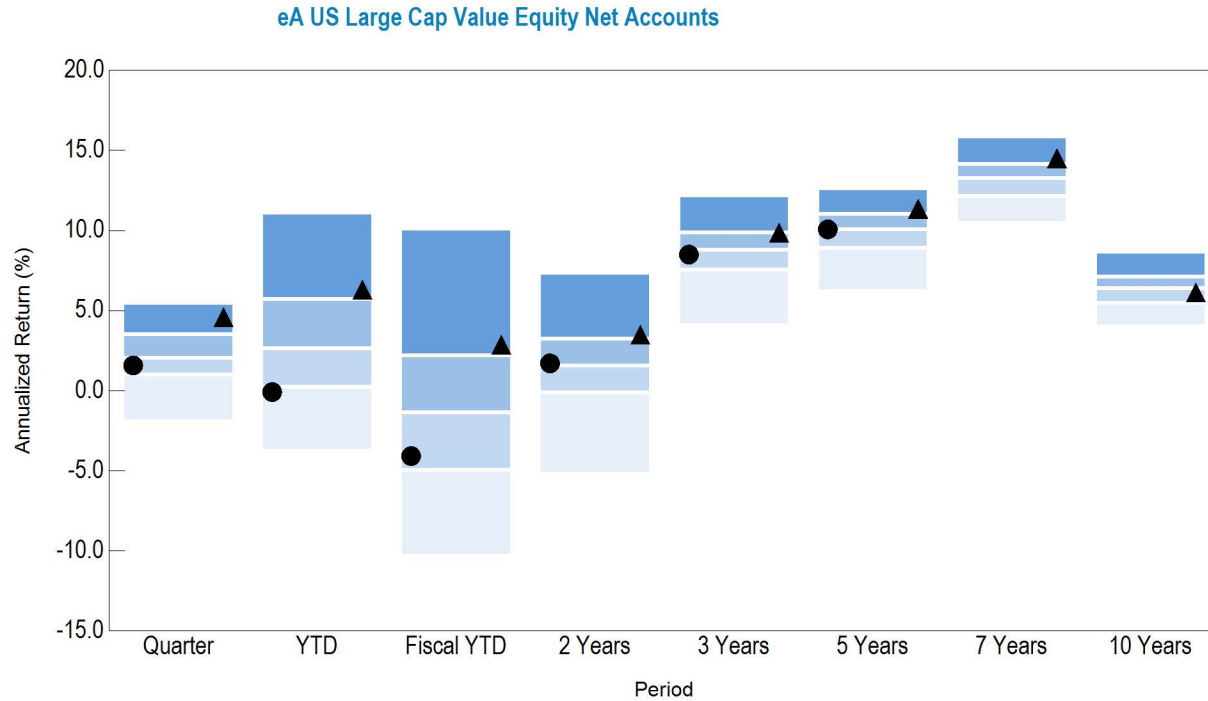


Growth of a Dollar



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	5.5	11.1	10.1	7.4	12.2	12.6	15.9	8.7
25th Percentile	3.5	5.7	2.2	3.3	9.9	11.1	14.2	7.2
Median	2.1	2.7	-1.3	1.6	8.8	10.1	13.3	6.4
75th Percentile	1.0	0.3	-4.9	-0.1	7.6	8.9	12.2	5.5
95th Percentile	-1.9	-3.7	-10.3	-5.2	4.1	6.2	10.5	4.0
# of Portfolios	213	213	213	205	200	179	170	138
● Barrow Hanley	1.6 (64)	-0.1 (79)	-4.1 (71)	1.7 (49)	8.5 (60)	10.1 (51)	-- (--)	-- (--)
▲ Russell 1000 Value	4.6 (11)	6.3 (18)	2.9 (23)	3.5 (23)	9.9 (26)	11.4 (21)	14.5 (19)	6.1 (58)

**Characteristics**

	Portfolio	Russell 1000 Value
Number of Holdings	75	692
Weighted Avg. Market Cap. (\$B)	81.8	109.2
Median Market Cap. (\$B)	32.8	7.3
Price To Earnings	18.2	19.8
Price To Book	2.6	2.3
Price To Sales	2.3	2.6
Return on Equity (%)	16.2	12.0
Yield (%)	2.6	2.6
Beta (holdings; domestic)	1.1	1.0

**Top Holdings**

ALTRIA GROUP	2.2%
CAPITAL ONE FINL.	2.1%
CITIGROUP	2.1%
JP MORGAN CHASE & CO.	2.0%
MEDTRONIC	2.0%
WELLS FARGO & CO	1.8%
CRH ADR 1:1	1.8%
OWENS CORNING	1.8%
UNITEDHEALTH GROUP	1.7%
CHEVRON	1.7%

**Best Performers**

	Return %
FAIRMONT SANTROL HDG. (FMSA)	207.2%
BP SPN.ADR 1:6 (BP)	19.9%
PFIZER (PFE)	19.9%
CALIFORNIA RESOURCES (CRC)	18.4%
TYCO INTERNATIONAL (TYC)	16.7%
MEDTRONIC (MDT)	15.7%
FMC (FMC)	15.1%
JOHNSON CONTROLS (JCI)	14.3%
JOHNSON & JOHNSON (JNJ)	12.9%
OCCIDENTAL PTL. (OXY)	11.5%

**Worst Performers**

	Return %
SEAWORLD ENTERTAINMENT (SEAS)	-31.0%
NORWEGIAN CRUISE LINE HDG. (NCLH)	-27.9%
ROYAL CARIBBEAN CRUISES (RCL)	-17.9%
CARNIVAL (CCL)	-15.6%
TARGET (TGT)	-14.5%
KBR (KBR)	-14.0%
LYONDELLBASELL INDS.CL.A (LYB)	-12.1%
HANESBRANDS (HBI)	-11.0%
CAPITAL ONE FINL. (COF)	-7.8%
PHILLIPS 66 (PSX)	-7.6%

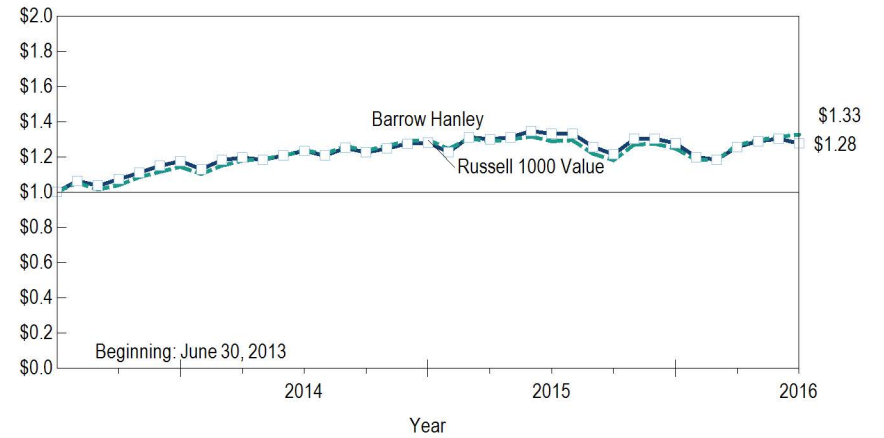
**Barrow Hanley Performance Attribution vs. Russell 1000 Value**

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.1%	0.4%	-0.3%	-0.2%	13.7%	10.6%	7.3%	12.7%			
Materials	-0.2%	-0.1%	0.1%	-0.2%	1.8%	6.3%	6.1%	2.8%			
Industrials	0.1%	0.2%	-0.1%	0.1%	4.0%	2.4%	15.5%	10.4%			
Cons. Disc.	-1.6%	-0.4%	-0.6%	-0.5%	-13.0%	-5.5%	12.2%	5.3%			
Cons. Staples	0.1%	0.2%	0.0%	-0.1%	8.3%	6.1%	4.9%	7.4%			
Health Care	-0.3%	-0.4%	0.2%	-0.1%	6.0%	9.3%	14.9%	11.7%			
Financials	-0.7%	-0.7%	0.0%	0.0%	-0.2%	2.2%	26.5%	28.2%			
Info. Tech	0.2%	0.1%	0.1%	0.0%	2.2%	1.2%	8.5%	11.6%			
Telecomm.	-0.2%	-0.2%	0.0%	0.0%	2.9%	8.8%	2.4%	2.9%			
Utilities	-0.2%	--	-0.2%	--	--	7.1%	0.0%	7.0%			
Cash	-0.1%	0.0%	-0.1%	0.0%	0.1%	--	1.8%	0.0%			
<b>Portfolio</b>	<b>-2.9%</b>	<b>=</b>	<b>-0.9%</b>	<b>+</b>	<b>-1.1%</b>	<b>+</b>	<b>-0.9%</b>	<b>1.7%</b>	<b>4.6%</b>	<b>100.0%</b>	<b>100.0%</b>

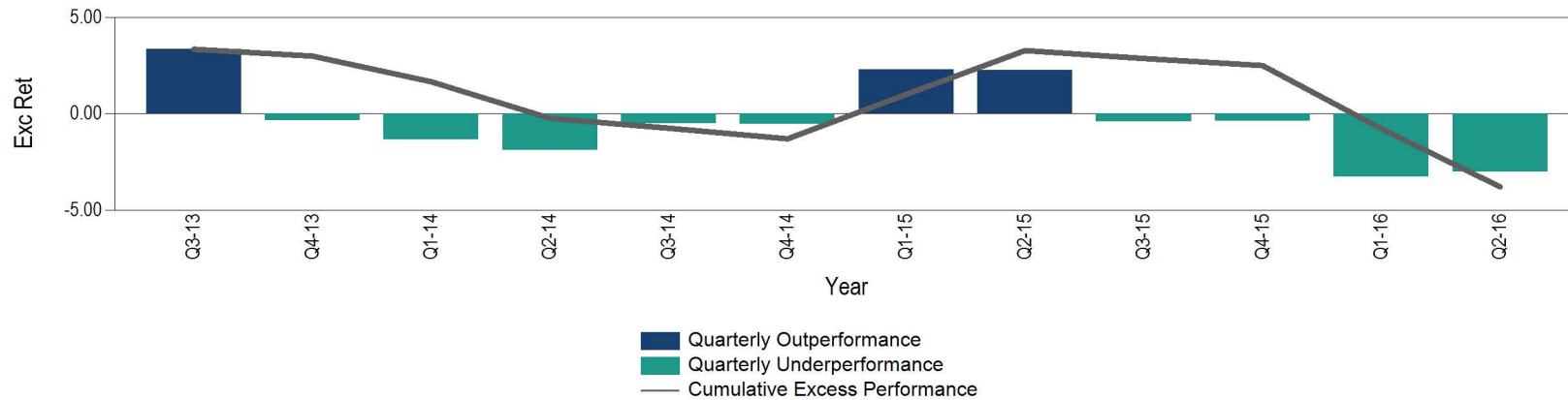
U.S. Effective Style Map



Growth of a Dollar

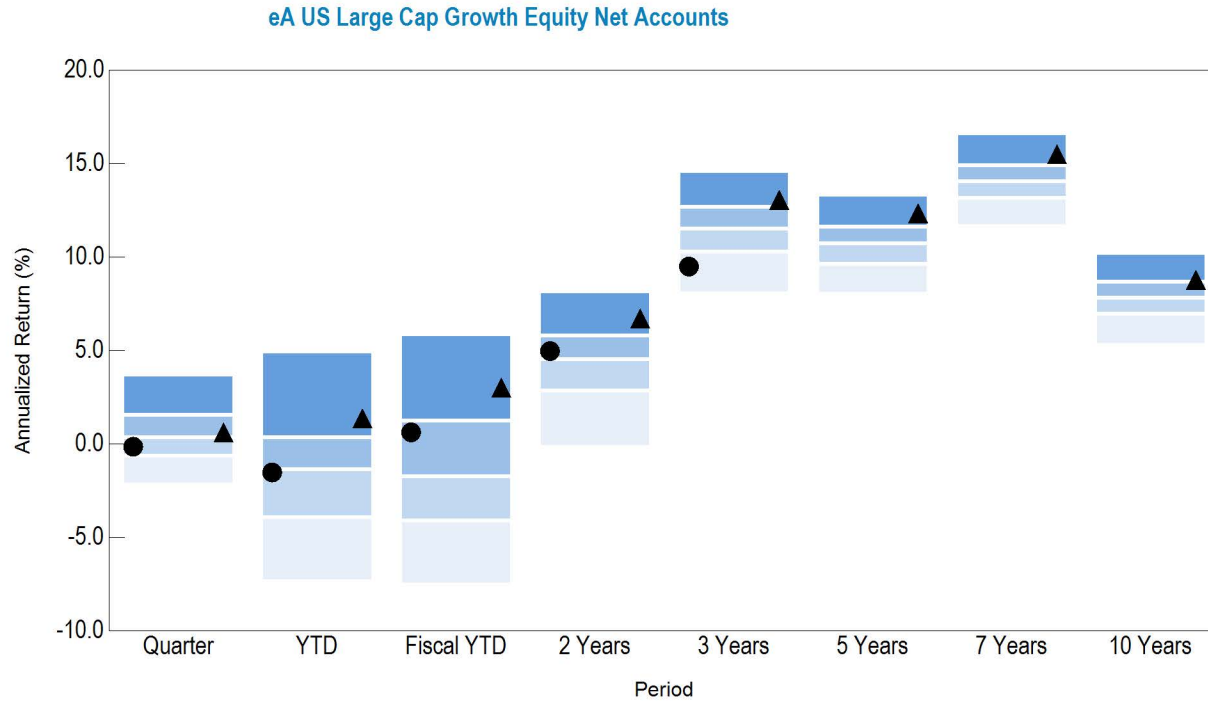


Quarterly and Cumulative Excess Performance



# Large Cap Growth Equity Peer Universe Comparison

Period Ending: June 30, 2016



	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	3.7	5.0	5.9	8.2	14.6	13.3	16.6	10.2
25th Percentile	1.6	0.4	1.3	5.8	12.7	11.7	14.9	8.7
Median	0.4	-1.4	-1.7	4.6	11.5	10.7	14.1	7.9
75th Percentile	-0.6	-3.9	-4.1	2.9	10.3	9.7	13.2	7.0
95th Percentile	-2.2	-7.3	-7.5	-0.1	8.1	8.1	11.7	5.3
# of Portfolios	184	183	180	175	173	154	146	117
● Brown Advisory	-0.1 (64)	-1.5 (53)	0.6 (32)	5.0 (41)	9.5 (85)	-- (--)	-- (--)	-- (--)
▲ Russell 1000 Growth	0.6 (46)	1.4 (17)	3.0 (15)	6.7 (15)	13.1 (17)	12.3 (14)	15.5 (17)	8.8 (24)

Characteristics

	Portfolio	Russell 1000 Growth
Number of Holdings	37	600
Weighted Avg. Market Cap. (\$B)	75.6	120.1
Median Market Cap. (\$B)	26.2	8.5
Price To Earnings	34.9	27.2
Price To Book	6.9	6.5
Price To Sales	6.0	3.9
Return on Equity (%)	18.6	23.5
Yield (%)	0.5	1.6
Beta (holdings; domestic)	1.1	0.9

Top Holdings

AMAZON.COM	5.1%
VISA 'A'	4.7%
FACEBOOK CLASS A	4.6%
STARBUCKS	4.3%
DANAHER	4.3%
COSTCO WHOLESALE	4.0%
BRISTOL MYERS SQUIBB	3.9%
ESTEE LAUDER COS.'A'	3.8%
INTUITIVE SURGICAL	3.8%
ECOLAB	3.7%

Best Performers

	Return %
AMAZON.COM (AMZN)	20.5%
BRISTOL MYERS SQUIBB (BMY)	15.7%
EXPRESS SCRIPTS HOLDING (ESRX)	10.4%
INTUITIVE SURGICAL (ISRG)	10.0%
SBA COMMS. (SBAC)	7.8%
SALESFORCE.COM (CRM)	7.6%
MEAD JOHNSON NUTRITION (MJN)	7.3%
ECOLAB (ECL)	6.7%
DANAHER (DHR)	6.6%
NETSUITE (N)	6.3%

Worst Performers

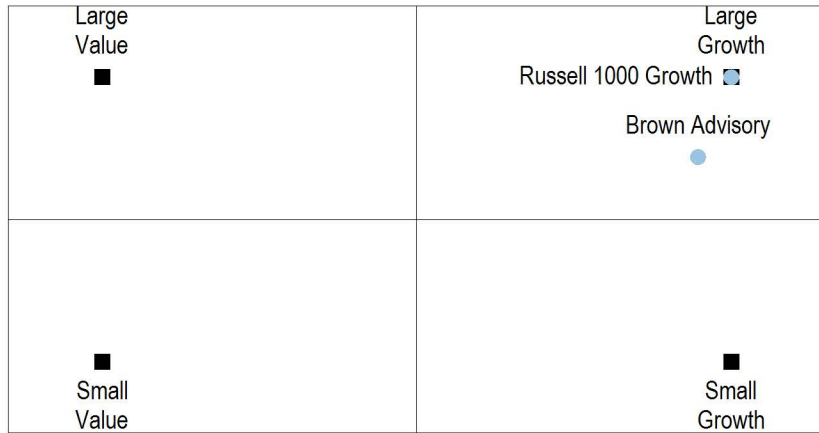
	Return %
STERICYCLE (SRCL)	-17.5%
ALEXION PHARMS. (ALXN)	-16.1%
APPLE (AAPL)	-11.7%
WABTEC (WAB)	-11.3%
CHARLES SCHWAB (SCHW)	-9.4%
FASTENAL (FAST)	-8.8%
COGNIZANT TECH.SLTN.'A' (CTSH)	-8.7%
UNDER ARMOUR 'A' (UA)	-8.4%
NATIONAL INSTS. (NATI)	-8.3%
ALPHABET 'A' (GOOGL)	-7.8%



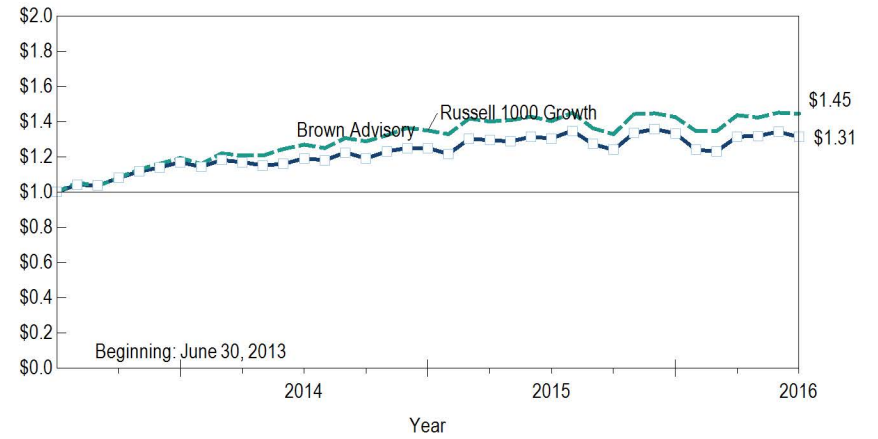
**Brown Advisory Performance Attribution vs. Russell 1000 Growth**

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.1%	--	-0.1%	--	--	20.2%	0.0%	0.5%			
Materials	0.1%	0.2%	0.0%	0.0%	6.7%	2.2%	3.2%	3.5%			
Industrials	-0.9%	-1.0%	0.0%	0.1%	-8.3%	0.4%	11.1%	11.1%			
Cons. Disc.	0.6%	0.8%	0.1%	-0.3%	3.6%	-0.3%	13.9%	21.4%			
Cons. Staples	-0.3%	-0.3%	-0.1%	0.1%	1.1%	3.7%	10.1%	11.7%			
Health Care	0.3%	0.4%	-0.1%	-0.1%	6.7%	3.9%	13.6%	15.6%			
Financials	-0.5%	-0.7%	-0.1%	0.3%	-9.4%	3.9%	2.9%	5.5%			
Info. Tech	0.1%	0.4%	-0.4%	0.1%	-2.1%	-3.4%	39.0%	28.3%			
Telecomm.	0.0%	0.1%	0.0%	0.0%	7.8%	5.5%	1.8%	2.4%			
Utilities	0.0%	--	0.0%	--	--	5.4%	0.0%	0.1%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	4.3%	0.0%			
<b>Portfolio</b>	<b>-0.6%</b>	<b>=</b>	<b>-0.1%</b>	<b>+</b>	<b>-0.7%</b>	<b>+</b>	<b>0.2%</b>	<b>0.0%</b>	<b>0.6%</b>	<b>100.0%</b>	<b>100.0%</b>

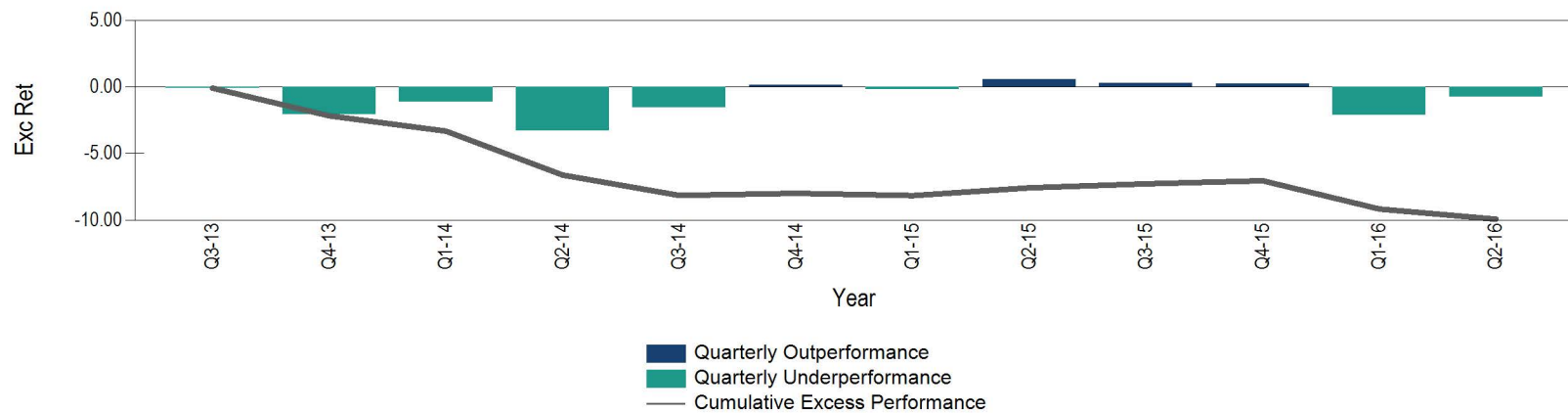
U.S. Effective Style Map

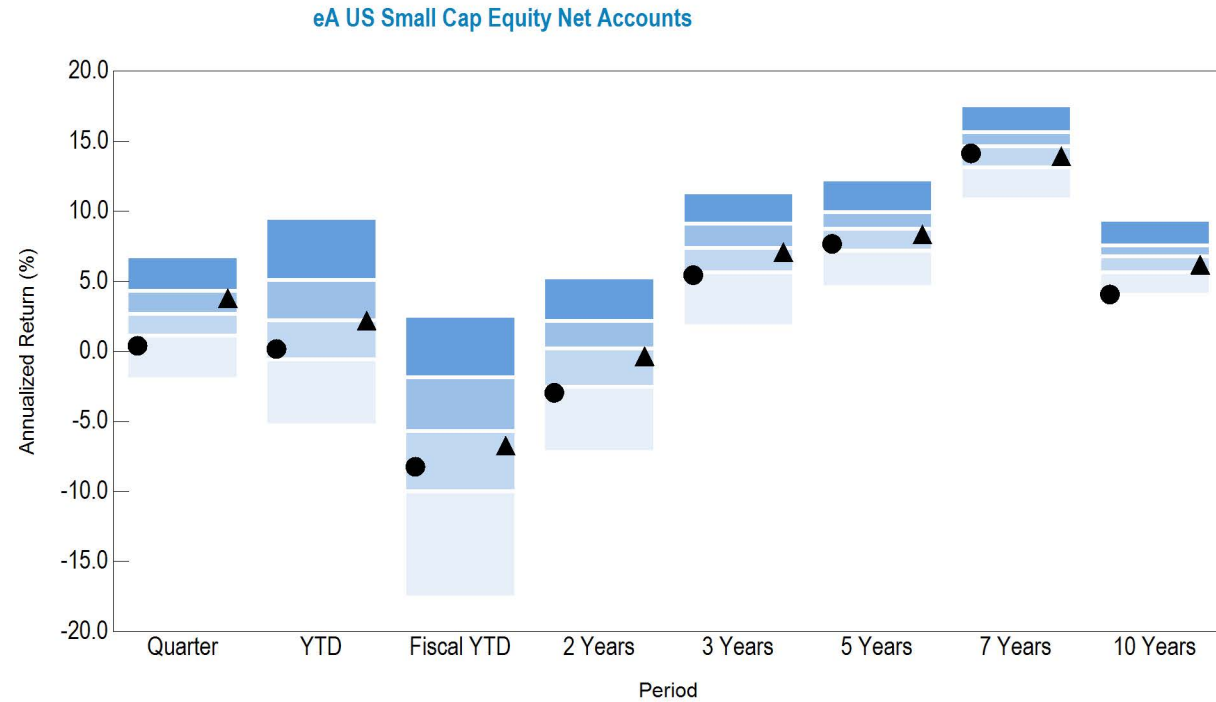


Growth of a Dollar



Quarterly and Cumulative Excess Performance





	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	6.8	9.5	2.5	5.3	11.3	12.2	17.6	9.4
25th Percentile	4.4	5.1	-1.8	2.2	9.1	10.0	15.7	7.6
Median	2.7	2.3	-5.6	0.2	7.4	8.8	14.7	6.8
75th Percentile	1.1	-0.5	-9.9	-2.5	5.7	7.2	13.2	5.7
95th Percentile	-2.0	-5.3	-17.5	-7.2	1.8	4.6	10.9	4.1
# of Portfolios	343	342	338	329	318	292	274	220
● Small Cap Equity	0.4 (84)	0.2 (70)	-8.2 (69)	-3.0 (79)	5.4 (77)	7.7 (69)	14.1 (58)	4.1 (96)
▲ Russell 2000	3.8 (34)	2.2 (51)	-6.7 (60)	-0.3 (58)	7.1 (56)	8.4 (56)	13.9 (62)	6.2 (63)

Characteristics

	Portfolio	Russell 2000
Number of Holdings	209	2,006
Weighted Avg. Market Cap. (\$B)	2.4	1.7
Median Market Cap. (\$B)	1.7	0.7
Price To Earnings	26.4	20.7
Price To Book	3.1	2.7
Price To Sales	2.7	2.6
Return on Equity (%)	12.8	10.1
Yield (%)	1.1	1.3
Beta (holdings; domestic)	1.3	1.3

Top Holdings

H&E EQUIPMENT SERVICES	2.4%
MDC PARTNERS 'A'	2.3%
FIRST BANCORP PRICO.	2.1%
ON ASSIGNMENT	2.1%
ELTN.FOR IMAG.	1.8%
SS&C TECHNOLOGIES HDG.	1.7%
CARDTRONICS	1.7%
BRUNSWICK	1.6%
MARINEMAX	1.6%
WNS HDG.ADR 1:1	1.3%

Best Performers

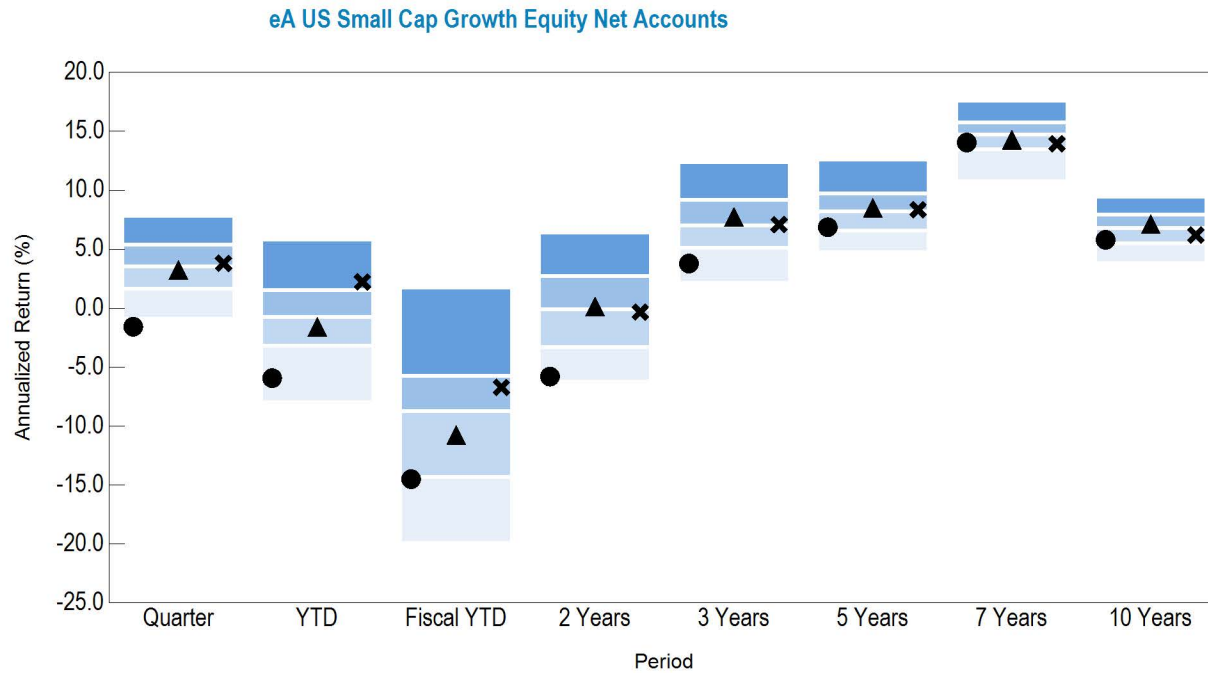
	Return %
TRIBUNE PUBLISHING (TRNC)	78.8%
NXSTAGE MEDICAL (NXTM)	44.6%
SPS COMMERCE (SPSC)	41.1%
ROYAL GOLD (RGLD)	40.9%
SUPERIOR ENERGY SVS. (SPN)	37.5%
FIRST BANCORP PRICO. (FBP)	36.0%
SUPERNUS PHARMACEUTICALS (SUPN)	33.6%
GEOSPACE TECHNOLOGIES (GEOS)	32.7%
ENERGEN (EGN)	31.8%
CAL.WATER SER. (CWT)	31.5%

Worst Performers

	Return %
EVERI HOLDINGS (EVRI)	-49.8%
ISIS PHARMACEUTICALS (IONS)	-42.5%
CAVIUM (CAVM)	-36.9%
EXPRESS (EXPR)	-32.2%
VERA BRADLEY (VRA)	-30.3%
ZUMIEZ (ZUMZ)	-28.2%
TRUEBLUE (TBI)	-27.6%
RED ROBIN GMT.BURGERS (RRGB)	-26.4%
PIPER JAFFRAY (PJC)	-23.9%
SONIC (SONC)	-22.8%

**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	0.3%	0.1%	0.1%	0.1%	12.6%	7.5%	4.2%	2.6%			
Materials	-0.3%	-0.3%	-0.2%	0.2%	6.0%	12.9%	1.5%	3.9%			
Industrials	-0.2%	-0.1%	0.0%	0.0%	2.2%	3.0%	16.3%	13.1%			
Cons. Disc.	-1.4%	-0.7%	-0.4%	-0.3%	-6.7%	-1.7%	20.7%	14.1%			
Cons. Staples	-0.1%	0.1%	-0.1%	-0.1%	12.5%	9.7%	1.8%	3.6%			
Health Care	-0.2%	-0.3%	0.0%	0.1%	2.2%	4.1%	10.4%	13.7%			
Financials	-0.3%	-0.4%	0.0%	0.1%	3.0%	4.3%	22.5%	26.3%			
Info. Tech	-0.1%	-0.1%	0.0%	0.0%	2.0%	2.4%	17.9%	17.7%			
Telecomm.	-0.1%	--	-0.1%	--	--	13.2%	0.0%	0.9%			
Utilities	-0.1%	-0.1%	0.0%	0.0%	8.1%	10.1%	3.5%	4.1%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	1.3%	0.0%			
<b>Portfolio</b>	<b>-2.5%</b>	<b>=</b>	<b>-1.6%</b>	<b>+</b>	<b>-0.9%</b>	<b>+</b>	<b>0.0%</b>	<b>1.3%</b>	<b>3.8%</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	7.8	5.8	1.7	6.4	12.4	12.6	17.6	9.4
25th Percentile	5.4	1.5	-5.7	2.7	9.2	9.7	15.8	8.0
Median	3.6	-0.7	-8.7	-0.1	7.0	8.2	14.8	6.8
75th Percentile	1.7	-3.2	-14.3	-3.3	5.1	6.6	13.5	5.5
95th Percentile	-0.9	-7.9	-19.9	-6.2	2.1	4.7	10.8	3.8
# of Portfolios	110	109	106	104	101	93	88	75
● Chartwell	-1.6 (99)	-5.9 (90)	-14.5 (78)	-5.8 (94)	3.8 (86)	6.9 (72)	14.0 (62)	5.8 (70)
▲ Russell 2000 Growth	3.2 (53)	-1.6 (61)	-10.8 (60)	0.1 (49)	7.7 (36)	8.5 (42)	14.3 (57)	7.1 (42)
✕ Russell 2000	3.8 (47)	2.2 (19)	-6.7 (33)	-0.3 (55)	7.1 (49)	8.4 (45)	13.9 (65)	6.2 (63)

**Characteristics**

	Portfolio	Russell 2000 Growth
Number of Holdings	71	1,177
Weighted Avg. Market Cap. (\$B)	2.6	1.8
Median Market Cap. (\$B)	1.9	0.8
Price To Earnings	27.1	26.6
Price To Book	3.9	4.3
Price To Sales	2.7	3.1
Return on Equity (%)	17.2	14.6
Yield (%)	0.7	0.7
Beta (holdings; domestic)	1.5	1.3

**Top Holdings**

H&E EQUIPMENT SERVICES	5.1%
MDC PARTNERS 'A'	4.9%
FIRST BANCORP PRICO.	4.5%
ON ASSIGNMENT	4.4%
SS&C TECHNOLOGIES HDG.	3.6%
CARDTRONICS	3.5%
BRUNSWICK	3.5%
MARINEMAX	3.4%
ELTN.FOR IMAG.	3.0%
WNS HDG.ADR 1:1	2.8%

**Best Performers**

	Return %
TRIBUNE PUBLISHING (TRNC)	78.8%
NXSTAGE MEDICAL (NXTM)	44.6%
SPS COMMERCE (SPSC)	41.1%
SUPERIOR ENERGY SVS. (SPN)	37.5%
FIRST BANCORP PRICO. (FBP)	36.0%
TYLER TECHNOLOGIES (TYL)	29.6%
SPECTRANETICS (SPNC)	28.9%
MASIMO (MASI)	25.5%
NUVASIVE (NUVA)	22.8%
AMN HLTHCR.SVS. (AHS)	18.9%

**Worst Performers**

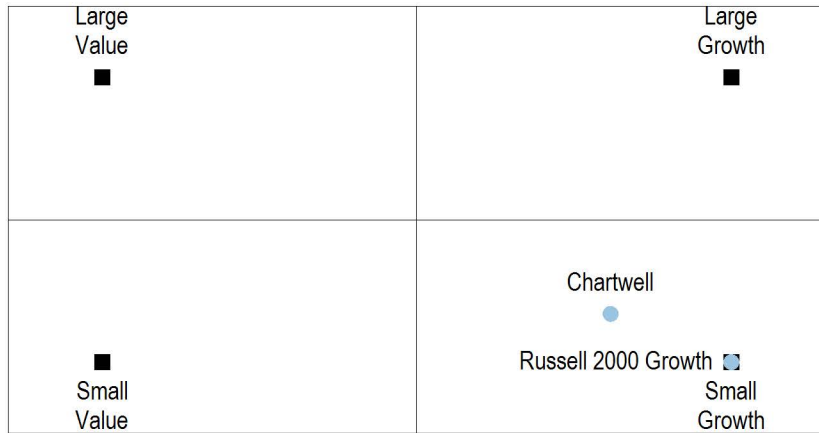
	Return %
EVERI HOLDINGS (EVRI)	-49.8%
ISIS PHARMACEUTICALS (IONS)	-42.5%
CAVIUM (CAVM)	-36.9%
EXPRESS (EXPR)	-32.2%
TRUEBLUE (TBI)	-27.6%
RED ROBIN GMT.BURGERS (RRGB)	-26.4%
SONIC (SONC)	-22.8%
MOLINA HEALTHCARE (MOH)	-22.6%
MGIC INVESTMENT (MTG)	-22.4%
COWEN GROUP CLASS A (COWN)	-22.3%

**Chartwell Performance Attribution vs. Russell 2000 Growth**

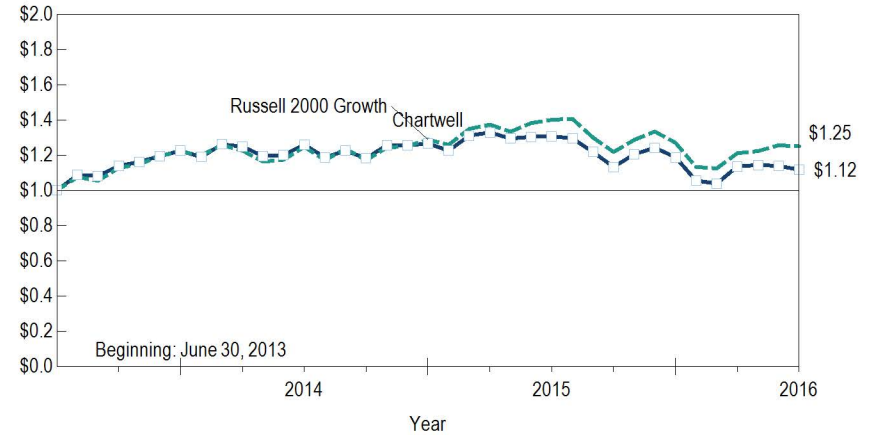
	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.4%	0.1%	0.2%	0.1%	23.2%	13.4%	2.2%	1.0%			
Materials	-0.2%	--	-0.2%	--	--	7.7%	0.0%	4.3%			
Industrials	-0.5%	-0.4%	-0.1%	-0.1%	-0.7%	1.8%	17.6%	14.1%			
Cons. Disc.	-2.3%	-1.7%	-0.2%	-0.4%	-10.5%	-1.3%	23.0%	18.4%			
Cons. Staples	-0.2%	--	-0.2%	--	--	9.4%	0.0%	3.6%			
Health Care	-0.7%	-0.9%	-0.1%	0.3%	1.6%	5.2%	14.4%	23.7%			
Financials	0.4%	0.3%	-0.1%	0.1%	5.3%	1.5%	14.6%	8.4%			
Info. Tech	-0.1%	-0.1%	0.0%	-0.1%	3.1%	3.4%	26.1%	25.4%			
Telecomm.	-0.1%	--	-0.1%	--	--	14.3%	0.0%	1.0%			
Utilities	0.0%	--	0.0%	--	--	11.2%	0.0%	0.1%			
Cash	-0.1%	0.0%	-0.1%	0.0%	0.1%	--	2.1%	0.0%			
<b>Portfolio</b>	<b>-3.5%</b>	<b>=</b>	<b>-2.6%</b>	<b>+</b>	<b>-0.9%</b>	<b>+</b>	<b>0.0%</b>	<b>-0.3%</b>	<b>3.2%</b>	<b>100.0%</b>	<b>100.0%</b>



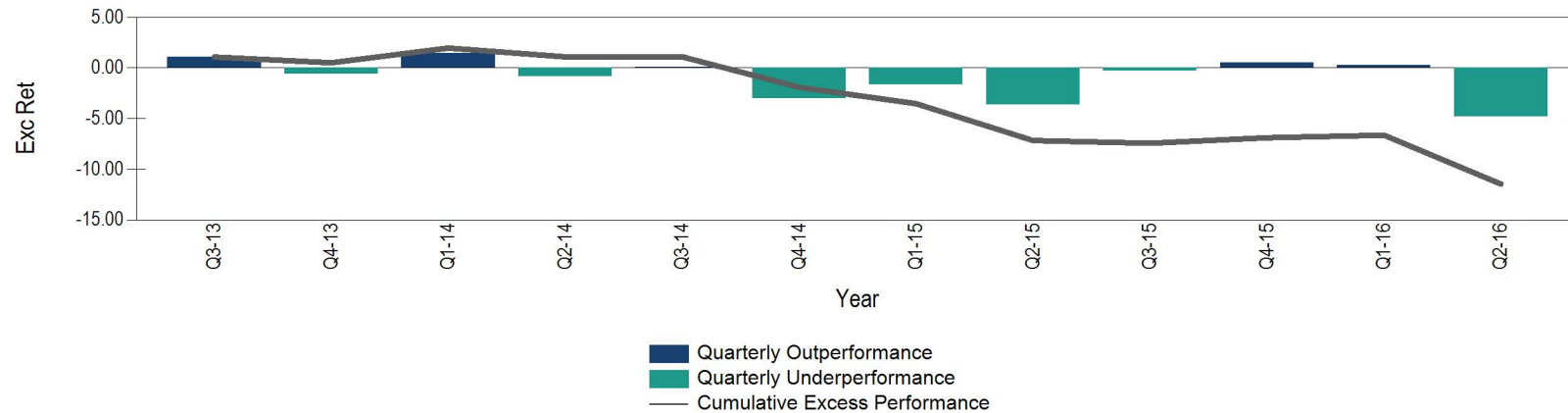
U.S. Effective Style Map

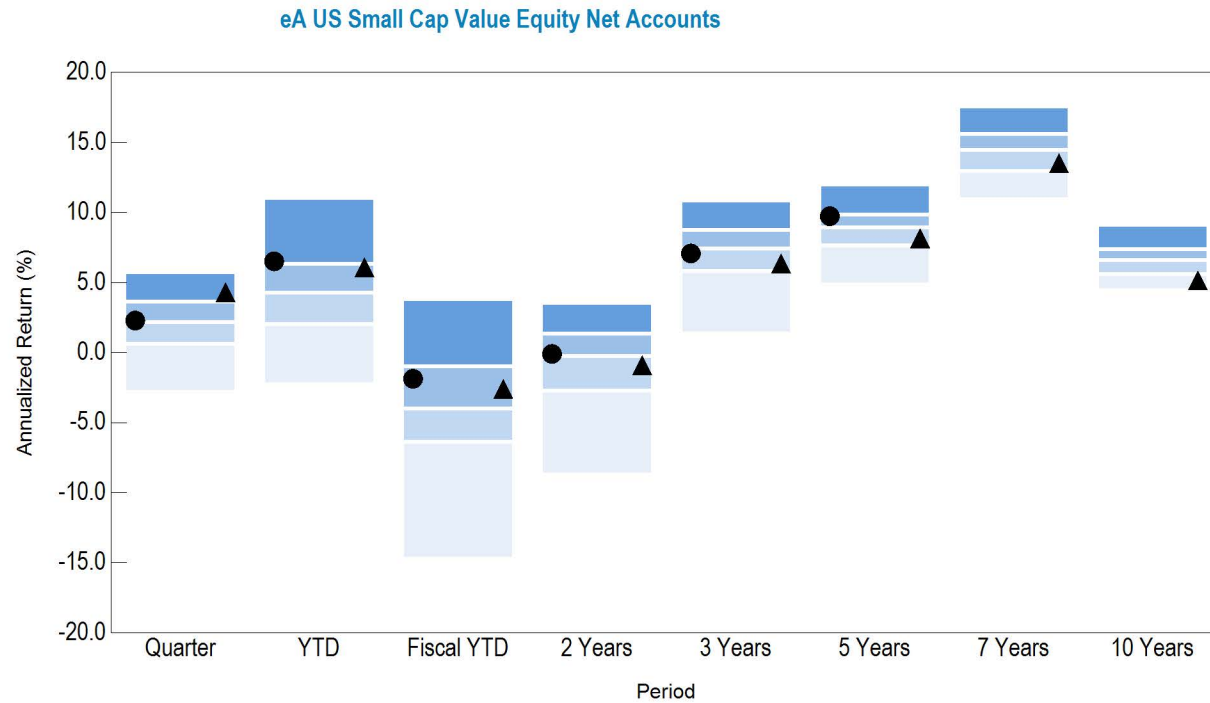


Growth of a Dollar



Quarterly and Cumulative Excess Performance





	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	5.7	11.0	3.8	3.5	10.8	12.0	17.6	9.1
25th Percentile	3.6	6.3	-1.0	1.4	8.8	9.9	15.6	7.4
Median	2.2	4.3	-3.9	-0.2	7.5	9.0	14.5	6.6
75th Percentile	0.7	2.1	-6.3	-2.7	5.9	7.7	13.0	5.6
95th Percentile	-2.8	-2.2	-14.7	-8.7	1.4	4.9	11.0	4.5
# of Portfolios	148	148	147	141	135	128	123	98
● The Boston Co	2.3 (49)	6.5 (22)	-1.9 (33)	-0.1 (48)	7.1 (57)	9.7 (30)	-- (--)	-- (--)
▲ Russell 2000 Value	4.3 (17)	6.1 (27)	-2.6 (38)	-0.9 (61)	6.4 (72)	8.1 (69)	13.5 (67)	5.2 (86)

**Characteristics**

	Portfolio	Russell 2000 Value
Number of Holdings	145	1,361
Weighted Avg. Market Cap. (\$B)	2.1	1.6
Median Market Cap. (\$B)	1.6	0.6
Price To Earnings	25.9	16.8
Price To Book	2.4	1.5
Price To Sales	2.7	2.3
Return on Equity (%)	9.4	7.1
Yield (%)	1.5	2.0
Beta (holdings; domestic)	1.1	1.2

**Top Holdings**

UNITED NATURAL FOODS	1.8%
WEBSTER FINANCIAL	1.6%
UMB FINANCIAL	1.4%
SCRIPPS E W 'A'	1.3%
CHEESECAKE FACTORY	1.3%
PEBBLEBROOK HOTEL TRUST	1.2%
PORTLAND GEN.ELEC.	1.2%
EMCOR GROUP	1.1%
CLARCOR	1.1%
CYRUSONE	1.1%

**Best Performers**

	Return %
ROYAL GOLD (RGLD)	40.9%
SUPERNUS PHARMACEUTICALS (SUPN)	33.6%
GEOSPACE TECHNOLOGIES (GEOS)	32.7%
ENERGEN (EGN)	31.8%
CAL.WATER SER. (CWT)	31.5%
NANOMETRICS (NANO)	31.2%
FRESH DEL MONTE PRODUCE (FDP)	29.7%
TASER INTL. (TASR)	26.7%
MCGRATH RENTCORP (MGRC)	23.3%
SAGENT PHARMACEUTICALS (SGNT)	23.1%

**Worst Performers**

	Return %
EXPRESS (EXPR)	-32.2%
VERA BRADLEY (VRA)	-30.3%
ZUMIEZ (ZUMZ)	-28.2%
PIPER JAFFRAY (PJC)	-23.9%
IXIA (XXIA)	-21.2%
GUESS (GES)	-18.7%
INTERFACE (TILE)	-17.5%
URBAN OUTFITTERS (URBN)	-16.9%
OXFORD INDUSTRIES (OXM)	-15.4%
HAVERTY FRTR.COS. (HVT)	-14.3%

The Boston Co Performance Attribution vs. Russell 2000 Value

	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%	6.4%	7.9%	5.8%	4.1%			
Materials	-0.5%	-0.4%	-0.1%	0.1%	6.9%	19.6%	2.7%	3.4%			
Industrials	-0.2%	-0.1%	0.0%	0.0%	3.3%	4.4%	14.6%	11.8%			
Cons. Disc.	-1.1%	-0.3%	-0.5%	-0.2%	-5.4%	-2.4%	18.1%	10.0%			
Cons. Staples	0.1%	0.1%	0.0%	0.0%	12.5%	10.2%	3.3%	3.6%			
Health Care	0.2%	0.2%	-0.1%	0.1%	6.5%	2.8%	6.5%	4.2%			
Financials	-0.3%	-0.5%	0.0%	0.2%	3.8%	4.9%	29.1%	43.0%			
Info. Tech	0.0%	0.0%	-0.1%	0.0%	0.9%	0.7%	12.8%	10.7%			
Telecomm.	-0.1%	--	-0.1%	--	--	12.0%	0.0%	0.9%			
Utilities	-0.2%	-0.2%	-0.1%	0.0%	7.5%	10.1%	6.6%	8.2%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	0.5%	0.0%			
<b>Portfolio</b>	<b>-2.2%</b>	<b>=</b>	<b>-1.3%</b>	<b>+</b>	<b>-1.0%</b>	<b>+</b>	<b>0.1%</b>	<b>2.6%</b>	<b>4.8%</b>	<b>100.0%</b>	<b>100.0%</b>

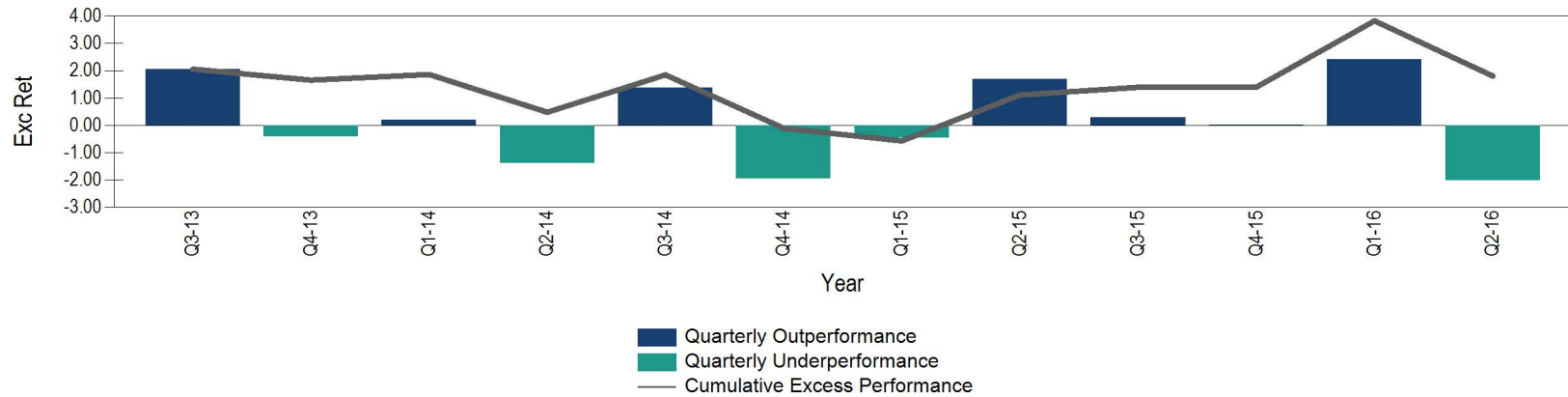
U.S. Effective Style Map

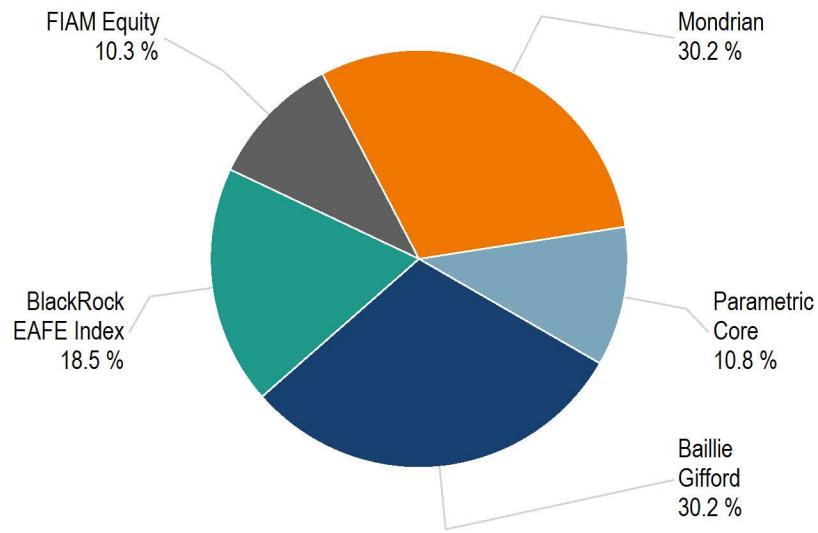


Growth of a Dollar



Quarterly and Cumulative Excess Performance





	Actual \$	Actual %	Manager Contribution to Excess Return %
Baillie Gifford	\$203,287,693	30.2%	0.0%
BlackRock EAFE Index	\$124,380,213	18.5%	0.0%
FIAM Equity	\$69,107,354	10.3%	0.0%
Mondrian	\$203,168,921	30.2%	0.6%
Parametric Core	\$72,688,563	10.8%	0.1%
Actual vs. Policy Weight Difference			-0.4%
<b>Total</b>	<b>\$672,632,744</b>	<b>100.0%</b>	<b>0.4%</b>

**Statistics Summary**

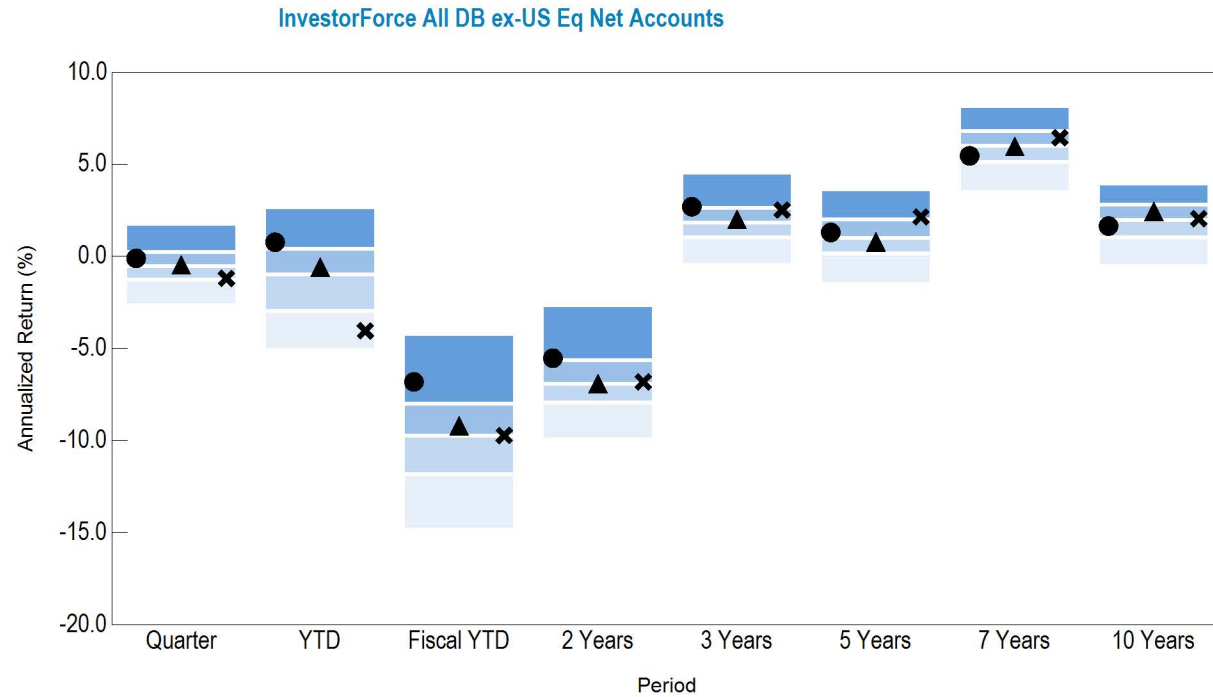
**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	2.7%	12.8%	0.2	0.4	1.7%
MSCI ACWI ex US IMI	2.0%	13.1%	0.1	--	0.0%
Baillie Gifford	4.6%	13.8%	0.3	0.6	3.6%
MSCI ACWI ex US	2.4%	13.4%	0.2	--	0.0%
FIAM Equity	4.5%	12.3%	0.4	-0.3	2.6%
MSCI ACWI ex US Small Cap Gross	5.3%	12.8%	0.4	--	0.0%
Mondrian	2.4%	12.6%	0.2	0.6	4.6%
MSCI ACWI ex USA Value Gross	-0.3%	14.4%	0.0	--	0.0%

**Statistics Summary**

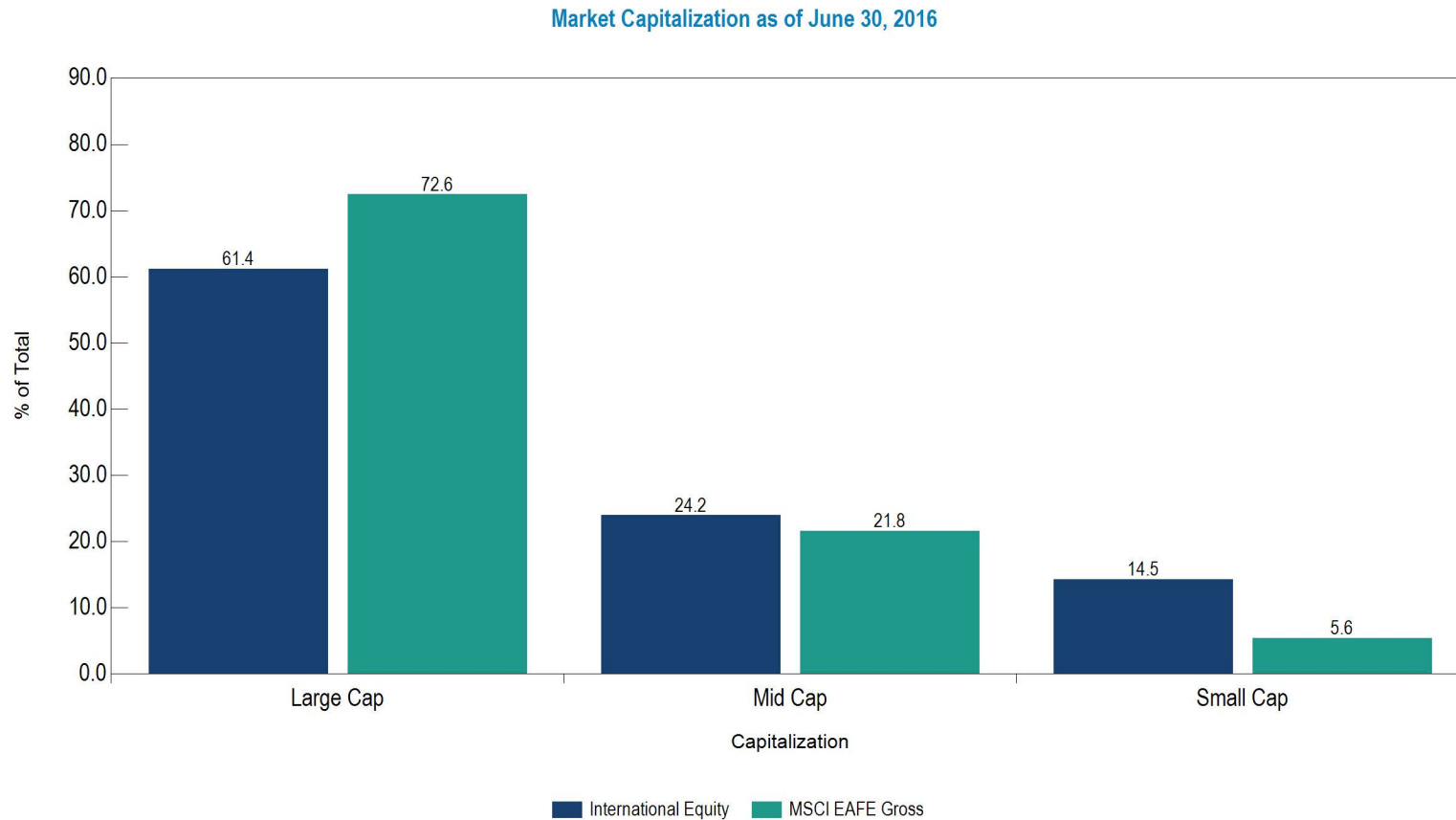
**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	1.3%	14.6%	0.1	0.2	2.0%
MSCI ACWI ex US IMI	0.8%	15.5%	0.0	--	0.0%
Mondrian	1.8%	13.8%	0.1	0.5	4.8%
MSCI ACWI ex USA Value Gross	-0.8%	16.3%	-0.1	--	0.0%



	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	1.7	2.6	-4.2	-2.7	4.5	3.6	8.1	3.9
25th Percentile	0.3	0.4	-8.0	-5.6	2.7	2.0	6.8	2.8
Median	-0.5	-1.0	-9.7	-6.9	1.9	1.0	6.0	2.0
75th Percentile	-1.2	-3.0	-11.8	-7.9	1.1	0.2	5.2	1.1
95th Percentile	-2.6	-5.1	-14.8	-9.9	-0.4	-1.5	3.5	-0.5
# of Portfolios	476	476	471	460	422	358	298	225
● International Equity	-0.1 (36)	0.8 (22)	-6.8 (13)	-5.5 (24)	2.7 (24)	1.3 (42)	5.5 (69)	1.7 (59)
▲ MSCI ACWI ex US IMI	-0.5 (48)	-0.6 (42)	-9.2 (42)	-6.9 (52)	2.0 (42)	0.8 (55)	6.0 (53)	2.4 (35)
✕ MSCI EAFE Gross	-1.2 (72)	-4.0 (89)	-9.7 (50)	-6.8 (47)	2.5 (29)	2.1 (24)	6.4 (37)	2.1 (48)





Excludes FIAM Equity holdings.

See appendix for the market capitalization breakpoints.

Characteristics

	Portfolio	MSCI ACWI ex USA IMI Gross
Number of Holdings	2,032	6,227
Weighted Avg. Market Cap. (\$B)	41.5	41.6
Median Market Cap. (\$B)	5.8	1.2
Price To Earnings	21.9	18.8
Price To Book	4.0	2.4
Price To Sales	2.9	2.2
Return on Equity (%)	17.1	13.9
Yield (%)	3.1	3.1
Beta (holdings; global)	1.0	1.0

Top Holdings

NESTLE 'R'	1.8%
UNILEVER (UK)	1.6%
UNITED OVERSEAS BANK	1.2%
NOVO NORDISK 'B'	1.1%
GLAXOSMITHKLINE	1.1%
COCHLEAR	1.0%
SANOFI	1.0%
BP	1.0%
ABB LTD N	1.0%
IBERDROLA	0.9%

Best Performers

	Return %
BANGKOK CHAIN HOSP. FB (Q:BHLF)	241.8%
PTT EXPLORATION & PRDN. FB (Q:PTTF)	204.9%
IAMGOLD (NYS) (IAG)	87.3%
INDUST PENOLES (MX:PA2)	87.3%
CTI.ELETR BRAS- ELETROBRAS SR.B PN (BR:EL6)	85.5%
THAI AIRWAYS INTL.FB (Q:TAIF)	76.5%
GRANA Y MONTERO (PE:GYM)	72.5%
ESTACIO PARTICIPACOES ON (BR:EST)	64.0%
CIA.MINAS BUENAVENTURA ADR 1:1 (BVN)	62.4%
RUMO LOG.OPD.MULTIMODAL (BR:P3M)	62.3%

Worst Performers

	Return %
SEVENTY SEVEN ENERGY (SSEIQ)	-84.1%
DRYSHIPS (DRYS)	-76.0%
BRAMMER (UKIR:BRAM)	-66.7%
MESOBLAST (A:MSBX)	-59.5%
INTEGER PL SR.A B C D E (PO:ITE)	-58.9%
PETROSONIC ENERGY (PSON)	-49.0%
ASTERIAS BIOTH.SR.A (AST)	-46.7%
INTERMOLECULAR (IMI)	-41.5%
MINERAL DEPOSITS (A:MDLX)	-39.9%
GLOBETRONICS TECHNOLOGY (L:GLTE)	-39.5%

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	-0.2%	0.0%	-0.1%	0.0%	6.8%	8.4%	5.1%	6.0%			
Materials	-0.3%	-0.2%	-0.1%	0.1%	0.3%	3.7%	4.6%	7.4%			
Industrials	0.0%	0.1%	0.0%	-0.1%	-1.8%	-1.7%	12.7%	12.7%			
Cons. Disc.	0.4%	0.5%	-0.1%	0.0%	-2.7%	-6.2%	14.1%	12.6%			
Cons. Staples	0.3%	0.0%	0.1%	0.2%	5.0%	3.3%	13.7%	10.7%			
Health Care	-0.1%	-0.2%	0.0%	0.1%	3.2%	4.5%	9.3%	8.6%			
Financials	0.2%	-0.3%	0.3%	0.2%	-4.7%	-3.9%	17.5%	25.0%			
Info. Tech	-0.2%	-0.1%	0.0%	0.0%	-1.2%	0.3%	10.8%	8.8%			
Telecomm.	0.0%	0.0%	0.0%	0.0%	0.1%	-0.4%	6.0%	4.8%			
Utilities	0.1%	0.1%	0.0%	0.0%	4.9%	2.3%	3.8%	3.4%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	2.4%	0.0%			
<b>Portfolio</b>	<b>0.4%</b>	<b>=</b>	<b>-0.2%</b>	<b>+</b>	<b>0.1%</b>	<b>+</b>	<b>0.4%</b>	<b>0.0%</b>	<b>-0.4%</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	-27.0%	-8.8%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Belgium	-4.5%	2.0%	0.1%	1.1%	-0.1%	0.0%	0.0%	0.1%	0.0%
Czech Republic*	-3.4%	-3.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Denmark	-1.4%	-1.1%	2.2%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Finland	-2.3%	-0.1%	0.6%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
France	-2.6%	-3.5%	2.7%	6.7%	0.1%	0.0%	0.1%	0.0%	0.2%
Germany	-1.3%	-4.8%	4.6%	6.3%	0.2%	0.0%	0.0%	-0.1%	0.2%
Greece*	-5.8%	-11.6%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Hungary*	-3.0%	-4.5%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Ireland	6.3%	-11.0%	0.1%	0.4%	0.1%	0.0%	0.0%	-0.1%	0.1%
Italy	6.8%	-10.4%	0.9%	1.7%	0.3%	0.1%	0.0%	-0.1%	0.2%
Luxembourg	-9.2%	-0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	5.9%	-4.4%	1.9%	2.1%	0.2%	0.0%	0.0%	0.0%	0.2%
Norway	15.6%	3.6%	0.0%	0.5%	0.1%	0.0%	0.0%	-0.1%	0.0%
Poland*	-15.5%	-16.8%	0.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Portugal	-2.2%	-7.5%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Russia*	4.0%	4.8%	0.8%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Spain	-3.2%	-7.5%	3.3%	2.2%	0.1%	-0.1%	0.0%	0.0%	0.1%
Sweden	-6.5%	-4.8%	3.8%	2.4%	0.0%	0.0%	-0.1%	0.0%	-0.1%
Switzerland	1.7%	2.1%	6.7%	6.1%	0.0%	0.0%	0.0%	0.0%	0.0%
United Kingdom	-3.0%	-1.9%	15.8%	13.9%	-0.2%	0.1%	-0.1%	0.0%	-0.2%

Excludes FIAM Equity holdings.

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

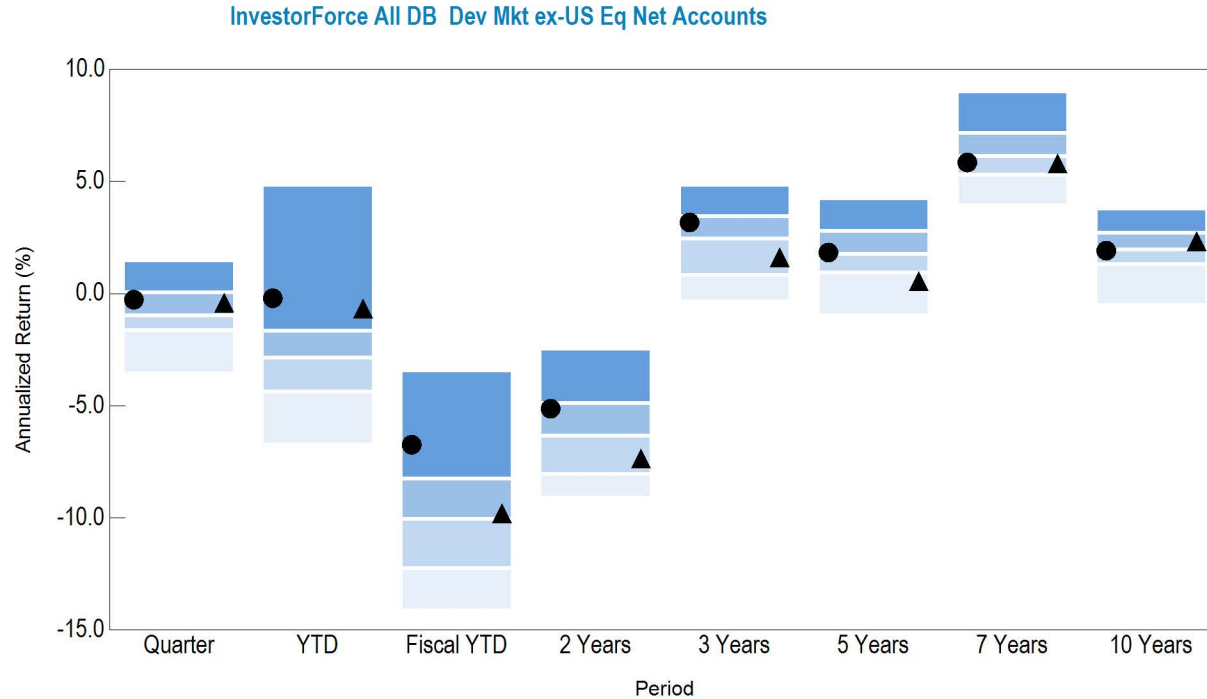
	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>AsiaPacific</b>									
Australia	0.5%	0.7%	3.3%	4.9%	0.0%	-0.1%	0.1%	0.0%	0.0%
China*	-7.4%	0.9%	2.4%	5.0%	-0.4%	0.0%	0.0%	0.2%	-0.2%
Hong Kong	1.7%	0.7%	3.1%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%
India*	8.4%	4.8%	1.6%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Indonesia*	3.2%	5.1%	0.7%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Japan	1.2%	1.5%	18.8%	16.9%	0.0%	-0.1%	0.2%	0.0%	0.0%
Korea*	-2.4%	-1.3%	3.0%	3.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Malaysia*	-6.1%	-6.0%	0.8%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	--	5.1%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Philippines*	5.7%	6.8%	0.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Singapore	4.0%	0.4%	2.9%	1.0%	0.0%	0.0%	0.0%	0.1%	0.1%
Taiwan*	1.0%	0.5%	2.9%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Thailand*	3.8%	3.9%	0.5%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Americas</b>									
Brazil*	18.2%	14.3%	1.4%	1.3%	0.1%	0.0%	0.0%	0.0%	0.1%
Canada	10.5%	4.9%	0.5%	6.6%	0.4%	-0.3%	0.0%	-0.3%	-0.3%
Chile*	4.7%	3.8%	0.6%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Colombia*	3.2%	2.6%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Mexico*	-4.2%	-6.6%	1.4%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Peru*	19.8%	17.1%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
United States	-0.1%	2.4%	4.2%	0.0%	0.0%	0.1%	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*	--	-4.2%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Israel	2.0%	-3.8%	0.1%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Kazakhstan**	-9.8%	-10.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Kuwait**	1.9%	1.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	-1.3%	-4.9%	0.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania**	-10.4%	-3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
South Africa*	17.7%	2.2%	2.1%	1.5%	0.2%	0.0%	0.0%	0.0%	0.3%
Turkey*	3.7%	-7.5%	0.6%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
United Arab Emirates*	5.0%	0.5%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Totals</b>									
Americas	4.6%	5.2%	8.7%	9.3%	0.2%	-0.1%	-0.1%	-0.1%	-0.1%
Europe	-1.0%	-2.7%	45.1%	47.0%	1.1%	0.1%	-0.9%	0.3%	0.6%
Asia/Pacific	0.5%	1.1%	40.6%	40.8%	-0.6%	0.0%	0.3%	0.0%	-0.2%
Other	16.4%	-0.7%	3.6%	2.8%	0.5%	0.0%	0.0%	-0.2%	0.3%
Cash	0.1%	--	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>0.2%</b>	<b>-0.4%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>1.2%</b>	<b>0.0%</b>	<b>-0.6%</b>	<b>0.0%</b>	<b>0.6%</b>
<b>Totals</b>									
Developed	0.1%	-0.8%	76.3%	78.5%	1.0%	0.0%	-0.7%	0.2%	0.5%
Emerging*	3.0%	1.2%	21.4%	21.5%	0.5%	-0.2%	0.0%	-0.2%	0.1%
Frontier**	-0.4%	--	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.1%	--	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Excludes FIAM Equity holdings.



	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
<b>5th Percentile</b>	1.5	4.8	-3.4	-2.5	4.8	4.2	9.0	3.8
<b>25th Percentile</b>	0.1	-1.6	-8.2	-4.9	3.5	2.8	7.2	2.7
<b>Median</b>	-1.0	-2.8	-10.0	-6.3	2.5	1.8	6.1	2.0
<b>75th Percentile</b>	-1.6	-4.4	-12.2	-8.1	0.8	0.9	5.3	1.3
<b>95th Percentile</b>	-3.6	-6.7	-14.1	-9.1	-0.3	-0.9	3.9	-0.5
<b># of Portfolios</b>	151	151	151	145	137	112	98	58
<b>● Developed Markets</b>	-0.3 (32)	-0.2 (16)	-6.7 (14)	-5.1 (28)	3.2 (31)	1.8 (48)	5.9 (60)	1.9 (53)
<b>▲ MSCI ACWI ex USA Gross</b>	-0.4 (37)	-0.7 (19)	-9.8 (48)	-7.4 (65)	1.6 (68)	0.6 (80)	5.8 (61)	2.3 (37)

Characteristics

	Portfolio	MSCI ACWI ex USA Gross
Number of Holdings	1,058	1,859
Weighted Avg. Market Cap. (\$B)	44.8	48.1
Median Market Cap. (\$B)	9.0	6.5
Price To Earnings	22.3	18.8
Price To Book	4.1	2.4
Price To Sales	2.9	2.3
Return on Equity (%)	17.3	13.9
Yield (%)	3.1	3.2
Beta (holdings; global)	1.0	1.0

Top Holdings

NESTLE 'R'	2.0%
UNILEVER (UK)	1.8%
UNITED OVERSEAS BANK	1.4%
NOVO NORDISK 'B'	1.3%
GLAXOSMITHKLINE	1.3%
COCHLEAR	1.2%
SANOFI	1.1%
BP	1.1%
ABB LTD N	1.1%
IBERDROLA	1.0%

Best Performers

	Return %
IAMGOLD (NYS) (IAG)	87.3%
ECOD.INFU.E LOG.ON (BR:EON)	54.5%
SUMITOMO DAINIPPON PHA. (J:DPPH)	49.4%
TRINET GROUP (TNET)	44.9%
SALIENT MIDSTREAM & MLP FD. (SMM)	44.7%
FAGRON (B:FAGR)	43.5%
ST.JUDE MEDICAL (STJ)	42.4%
BIDVEST GROUP (R:BVTJ)	39.6%
TOSHIBA (J:TS@N)	38.3%
M3 (J:SNET)	37.3%

Worst Performers

	Return %
SEVENTY SEVEN ENERGY (SSEIQ)	-84.1%
BRAMMER (UKIR:BRAM)	-66.7%
MESOBLAST (A:MSBX)	-59.5%
PETROSONIC ENERGY (PSON)	-49.0%
ASTERIAS BIOTH.SR.A (AST)	-46.7%
INTERMOLECULAR (IMI)	-41.5%
MINERAL DEPOSITS (A:MDLX)	-39.9%
BASIC ENERGY SVS. (BAS)	-39.1%
MITSUBISHI MOTORS (J:MMOT)	-39.0%
VIRGIN MONEY HOLDINGS (UKIR:VM.)	-36.1%

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	-0.1%	0.1%	-0.2%	-0.1%	8.8%	8.3%	4.4%	6.4%			
Materials	-0.2%	-0.2%	-0.1%	0.1%	0.5%	3.3%	3.7%	7.0%			
Industrials	-0.1%	0.1%	0.0%	-0.1%	-2.0%	-1.4%	13.1%	11.5%			
Cons. Disc.	0.3%	0.5%	-0.2%	0.1%	-3.1%	-6.7%	14.6%	12.0%			
Cons. Staples	0.4%	-0.1%	0.1%	0.3%	5.2%	3.1%	14.1%	11.3%			
Health Care	-0.1%	-0.2%	0.0%	0.1%	3.2%	4.5%	9.7%	8.8%			
Financials	0.1%	-0.4%	0.3%	0.3%	-5.3%	-4.0%	17.6%	25.7%			
Info. Tech	-0.2%	-0.2%	0.0%	-0.1%	-1.6%	0.7%	11.1%	8.4%			
Telecomm.	0.0%	0.0%	0.0%	0.0%	0.3%	-0.3%	5.6%	5.4%			
Utilities	0.1%	0.2%	0.0%	-0.1%	5.9%	1.9%	3.4%	3.6%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	2.2%	0.0%			
Unclassified	0.1%	0.0%	0.1%	0.0%	15.6%	--	0.4%	0.0%			
<b>Portfolio</b>	<b>0.3%</b>	<b>=</b>	<b>-0.2%</b>	<b>+</b>	<b>-0.1%</b>	<b>+</b>	<b>0.5%</b>	<b>-0.1%</b>	<b>-0.4%</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	-7.8%	-9.7%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Belgium	6.2%	2.3%	0.1%	1.0%	0.1%	0.0%	0.0%	0.0%	0.0%
Czech Republic*	--	-3.8%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	-1.2%	-0.5%	2.5%	1.4%	0.0%	0.0%	-0.1%	0.0%	0.0%
Finland	-2.6%	-0.9%	0.7%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
France	-2.7%	-3.5%	3.0%	7.2%	0.1%	0.0%	0.1%	0.0%	0.2%
Germany	-1.6%	-5.0%	5.1%	6.6%	0.2%	0.0%	0.0%	0.0%	0.2%
Greece*	--	-14.0%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Hungary*	--	-4.6%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Ireland	3.0%	-9.7%	0.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Italy	9.3%	-10.0%	1.0%	1.6%	0.3%	0.0%	0.0%	-0.1%	0.2%
Luxembourg	-0.4%	2.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	6.9%	-4.1%	2.2%	2.2%	0.2%	0.0%	0.0%	0.0%	0.2%
Norway	10.8%	3.0%	0.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	--	-16.8%	0.0%	0.3%	--	0.0%	0.0%	--	0.1%
Portugal	-2.2%	-4.8%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Russia*	20.4%	4.4%	0.1%	0.8%	0.1%	0.0%	0.0%	-0.1%	0.0%
Spain	0.1%	-7.8%	3.7%	2.3%	0.2%	-0.1%	0.0%	0.1%	0.2%
Sweden	-6.2%	-4.7%	4.3%	2.1%	0.0%	0.0%	-0.2%	0.0%	-0.3%
Switzerland	2.1%	2.5%	7.6%	6.5%	0.0%	0.1%	-0.1%	0.0%	0.0%
United Kingdom	-2.0%	-0.6%	17.8%	13.9%	-0.2%	0.5%	-0.6%	0.0%	-0.4%

Excludes FIAM Equity holdings.

Developed Markets Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	Total Effects
<b>AsiaPacific</b>									
Australia	0.5%	0.5%	3.7%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%
China*	-9.4%	1.2%	2.1%	5.1%	-0.5%	0.0%	0.0%	0.3%	-0.2%
Hong Kong	1.8%	0.9%	2.9%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%
India*	10.9%	3.7%	1.2%	1.8%	0.1%	0.0%	0.0%	0.0%	0.1%
Indonesia*	-4.9%	4.6%	0.2%	0.6%	-0.1%	0.0%	0.0%	0.0%	0.0%
Japan	1.2%	1.0%	21.2%	16.1%	0.0%	-0.4%	0.5%	0.0%	0.1%
Korea*	-1.6%	-1.1%	2.4%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Malaysia*	-5.2%	-5.9%	0.4%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	--	5.9%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Philippines*	8.6%	6.4%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Singapore	4.0%	0.3%	3.2%	1.0%	0.0%	0.0%	0.0%	0.1%	0.1%
Taiwan*	1.4%	1.1%	2.3%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Thailand*	4.7%	2.7%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Americas</b>									
Brazil*	20.0%	13.9%	0.5%	1.4%	0.2%	0.0%	-0.1%	-0.1%	-0.1%
Canada	10.5%	3.6%	0.6%	6.6%	0.4%	-0.2%	0.0%	-0.4%	-0.2%
Chile*	10.9%	3.7%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Colombia*	--	2.9%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	-1.6%	-6.9%	0.7%	1.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Peru*	19.7%	17.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
United States	-0.4%	2.4%	4.6%	0.0%	0.0%	0.1%	0.0%	-0.1%	0.0%

Excludes FIAM Equity holdings.

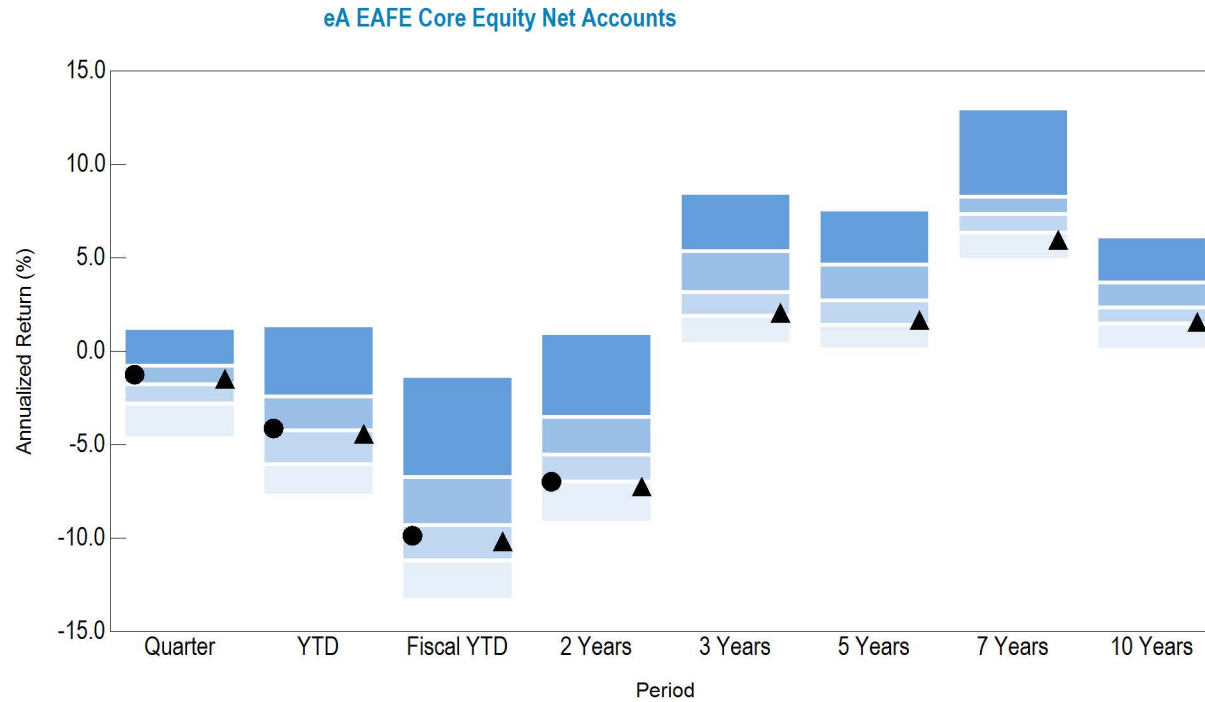
Developed Markets  
Equity Performance Attribution

Period Ending: June 30, 2016

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*	--	0.7%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	2.0%	-4.7%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Kazakhstan**	-9.8%	-10.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	0.2%	-4.8%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania**	-10.4%	-3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
South Africa*	15.5%	2.2%	1.4%	1.6%	0.2%	0.0%	0.0%	0.0%	0.2%
Turkey*	2.0%	-7.5%	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
United Arab Emirates*	8.5%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Totals</b>									
Americas	3.8%	4.3%	6.8%	9.5%	0.2%	-0.1%	-0.1%	-0.2%	-0.2%
Europe	-1.0%	-2.3%	49.0%	47.9%	0.9%	0.1%	-0.8%	0.2%	0.4%
Asia/Pacific	0.9%	0.9%	40.0%	39.7%	-0.5%	0.0%	0.4%	0.0%	0.0%
Other	15.2%	-0.8%	1.9%	2.9%	0.5%	0.0%	0.0%	-0.2%	0.3%
Cash	0.1%	--	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>0.2%</b>	<b>-0.3%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>1.1%</b>	<b>0.0%</b>	<b>-0.5%</b>	<b>-0.1%</b>	<b>0.5%</b>
<b>Totals</b>									
Developed	0.0%	-0.8%	85.2%	78.4%	0.9%	0.0%	-0.4%	0.1%	0.6%
Emerging*	2.0%	1.2%	12.5%	21.6%	0.3%	-0.1%	-0.1%	-0.2%	-0.1%
Frontier**	-10.1%	--	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.1%	--	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Excludes FIAM Equity holdings.



	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	1.2	1.4	-1.3	1.0	8.5	7.6	13.0	6.2
25th Percentile	-0.7	-2.4	-6.7	-3.5	5.4	4.7	8.3	3.7
Median	-1.8	-4.2	-9.3	-5.5	3.2	2.7	7.4	2.4
75th Percentile	-2.8	-6.0	-11.2	-7.0	1.9	1.5	6.4	1.5
95th Percentile	-4.6	-7.7	-13.3	-9.1	0.4	0.2	4.9	0.1
# of Portfolios	94	94	94	89	83	73	63	47
● BlackRock EAFE Index	-1.2 (35)	-4.1 (49)	-9.9 (60)	-7.0 (76)	-- (--)	-- (--)	-- (--)	-- (--)
▲ MSCI EAFE	-1.5 (42)	-4.4 (54)	-10.2 (61)	-7.2 (80)	2.1 (71)	1.7 (72)	6.0 (85)	1.6 (74)

Characteristics

	Portfolio	MSCI EAFE
Number of Holdings	930	930
Weighted Avg. Market Cap. (\$B)	51.4	51.3
Median Market Cap. (\$B)	8.5	8.5
Price To Earnings	19.7	19.1
Price To Book	3.3	2.4
Price To Sales	2.5	2.2
Return on Equity (%)	14.8	12.7
Yield (%)	3.4	3.4
Beta (holdings; global)	1.0	1.0

Top Holdings

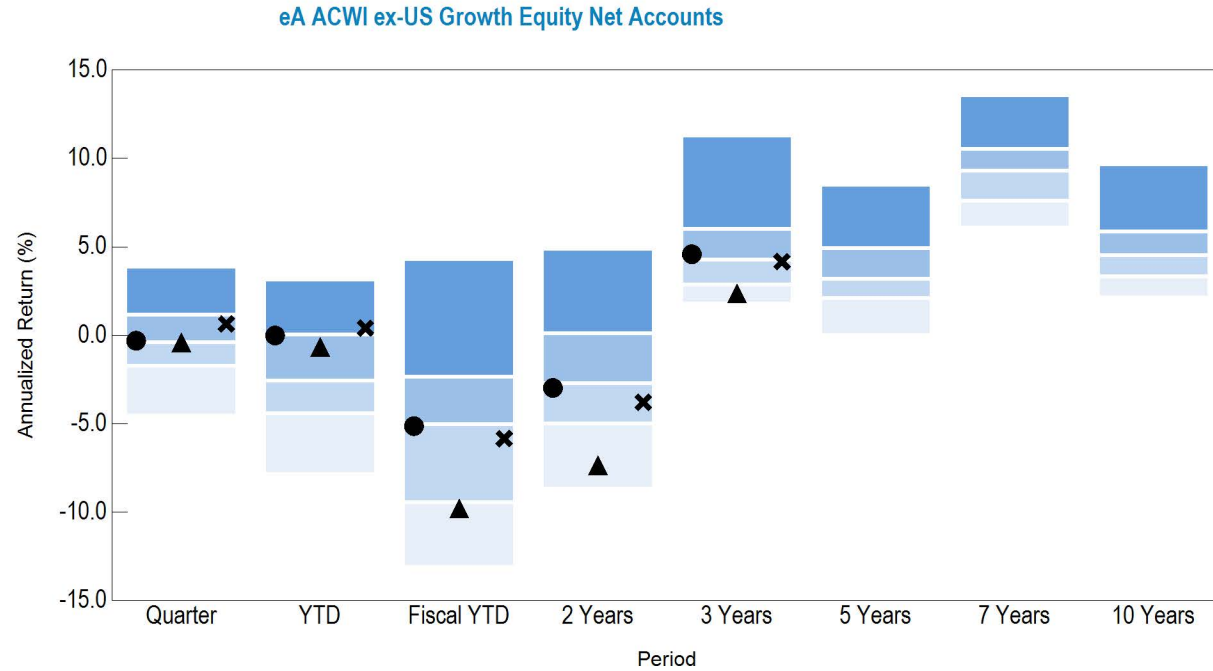
NESTLE 'R'	2.1%
NOVARTIS 'R'	1.6%
ROCHE HOLDING	1.6%
TOYOTA MOTOR	1.1%
HSBC HDG. (ORD \$0.50)	1.0%
BRITISH AMERICAN TOBACCO	1.0%
ROYAL DUTCH SHELL A(LON)	1.0%
ANHEUSER-BUSCH INBEV	0.9%
TOTAL	0.9%
BP	0.9%

Best Performers

	Return %
IAMGOLD (NYS) (IAG)	87.3%
SUMITOMO DAINIPPON PHA. (J:DPPH)	49.4%
TRINET GROUP (TNET)	44.9%
SALIENT MIDSTREAM & MLP FD. (SMM)	44.7%
ST.JUDE MEDICAL (STJ)	42.4%
TOSHIBA (J:TS@N)	38.3%
M3 (J:SNET)	37.3%
SERVOTRONICS (SVT)	35.7%
SANDSTORM GOLD (ASE) (SAND)	35.6%
TILE SHOP HOLDINGS (TTS)	33.3%

Worst Performers

	Return %
SEVENTY SEVEN ENERGY (SSEIQ)	-84.1%
PETROSONIC ENERGY (PSON)	-49.0%
ASTERIAS BIOTH.SR.A (AST)	-46.7%
INTERMOLECULAR (IMI)	-41.5%
BASIC ENERGY SVS. (BAS)	-39.1%
MITSUBISHI MOTORS (J:MMOT)	-39.0%
EMPRESAS ICA ADR 1:4 (ICAYY)	-30.8%
AMERICAN AIRLINES GROUP (AAL)	-30.8%
CASIO COMPUTER (J:CC@N)	-29.4%
ANDREA ELECTRONICS (ANDR)	-28.8%



	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	3.9	3.1	4.3	4.9	11.3	8.5	13.6	9.7
25th Percentile	1.2	0.1	-2.3	0.1	6.0	4.9	10.6	5.9
Median	-0.4	-2.6	-5.0	-2.7	4.3	3.2	9.3	4.5
75th Percentile	-1.7	-4.4	-9.4	-5.0	2.9	2.1	7.6	3.4
95th Percentile	-4.5	-7.8	-13.1	-8.7	1.8	0.0	6.1	2.2
# of Portfolios	47	47	47	42	39	37	32	26
● Baillie Gifford	-0.3 (48)	0.0 (27)	-5.1 (53)	-3.0 (54)	4.6 (46)	-- (--)	-- (--)	-- (--)
▲ MSCI ACWI ex US	-0.4 (52)	-0.7 (33)	-9.8 (79)	-7.4 (92)	2.4 (83)	-- (--)	-- (--)	-- (--)
✕ MSCI ACWI ex US Growth	0.6 (31)	0.4 (23)	-5.8 (56)	-3.8 (65)	4.2 (54)	-- (--)	-- (--)	-- (--)

Characteristics

	Portfolio	MSCI ACWI ex USA Gross
Number of Holdings	90	1,859
Weighted Avg. Market Cap. (\$B)	33.8	48.1
Median Market Cap. (\$B)	11.3	6.5
Price To Earnings	26.8	18.8
Price To Book	6.3	2.4
Price To Sales	4.4	2.3
Return on Equity (%)	25.2	13.9
Yield (%)	1.9	3.2
Beta (holdings; global)	1.0	1.0

Top Holdings

COCHLEAR	3.0%
NOVO NORDISK 'B'	2.8%
KAO	2.4%
TAIWAN SEMICON.SPN.ADR 1:5	2.4%
SHIMANO	2.4%
NASPERS	2.4%
ARM HOLDINGS	2.3%
ASOS	2.1%
UNILEVER (UK)	2.0%
MS&AD INSURANCE GP.HDG.	2.0%

Best Performers

	Return %
THAI BEVERAGE PUBLIC (T:THBE)	30.5%
CLICKS GROUP (R:CLSJ)	27.6%
ADIDAS (D:ADS)	24.0%
WEIR GROUP (UKIR:WEIR)	23.9%
MAHINDRA & MAHINDRA GDR REG 'S' (UKIR:MHID)	18.1%
SHISEIDO (J:SHDO)	15.5%
COCHLEAR (A:COHX)	14.7%
ASOS (UKIR:ASC)	14.1%
PUREGOLD PRICE CLUB (PH:PUR)	13.3%
PIGEON (J:PIGC)	12.8%

Worst Performers

	Return %
MESOBLAST (A:MSBX)	-59.5%
JAPAN EXCHANGE GROUP (J:OSEX)	-25.8%
PROTALIX BIOTH. (PLX)	-23.9%
BURBERRY GROUP (UKIR:BRBY)	-21.0%
JD.COM 'A' ADR 1:2 (JD)	-19.9%
RIGHTMOVE (UKIR:RMV)	-18.9%
ZALANDO (D:ZAL)	-18.8%
JUPITER FUND MANAGEMENT (UKIR:JUP)	-16.9%
AUTO TRADER GROUP (UKIR:AUTO)	-15.7%
THE SWATCH GROUP 'B' (S:UHR)	-14.4%



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

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.5%	0.2%	-0.6%	-0.1%	6.6%	8.3%	0.7%	6.4%			
Materials	-0.2%	0.2%	-0.2%	-0.2%	1.8%	3.4%	2.8%	7.0%			
Industrials	-0.1%	0.2%	-0.1%	-0.3%	-2.1%	-1.5%	14.2%	11.5%			
Cons. Disc.	0.6%	0.8%	-0.7%	0.5%	-0.6%	-6.6%	20.6%	12.0%			
Cons. Staples	1.0%	0.0%	0.4%	0.5%	7.1%	3.1%	19.5%	11.3%			
Health Care	-0.1%	-0.2%	0.1%	0.0%	2.9%	4.5%	10.4%	8.8%			
Financials	-0.4%	-1.2%	0.4%	0.5%	-8.8%	-4.0%	16.7%	25.7%			
Info. Tech	-0.3%	0.0%	0.0%	-0.3%	-1.5%	0.7%	13.4%	8.4%			
Telecomm.	0.0%	--	0.0%	--	--	-0.3%	0.0%	5.4%			
Utilities	-0.1%	--	-0.1%	--	--	1.9%	0.0%	3.6%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	1.7%	0.0%			
<b>Portfolio</b>	<b>0.1%</b>	<b>=</b>	<b>0.1%</b>	<b>+</b>	<b>-0.7%</b>	<b>+</b>	<b>0.7%</b>	<b>-0.3%</b>	<b>-0.3%</b>	<b>100.0%</b>	<b>100.0%</b>

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

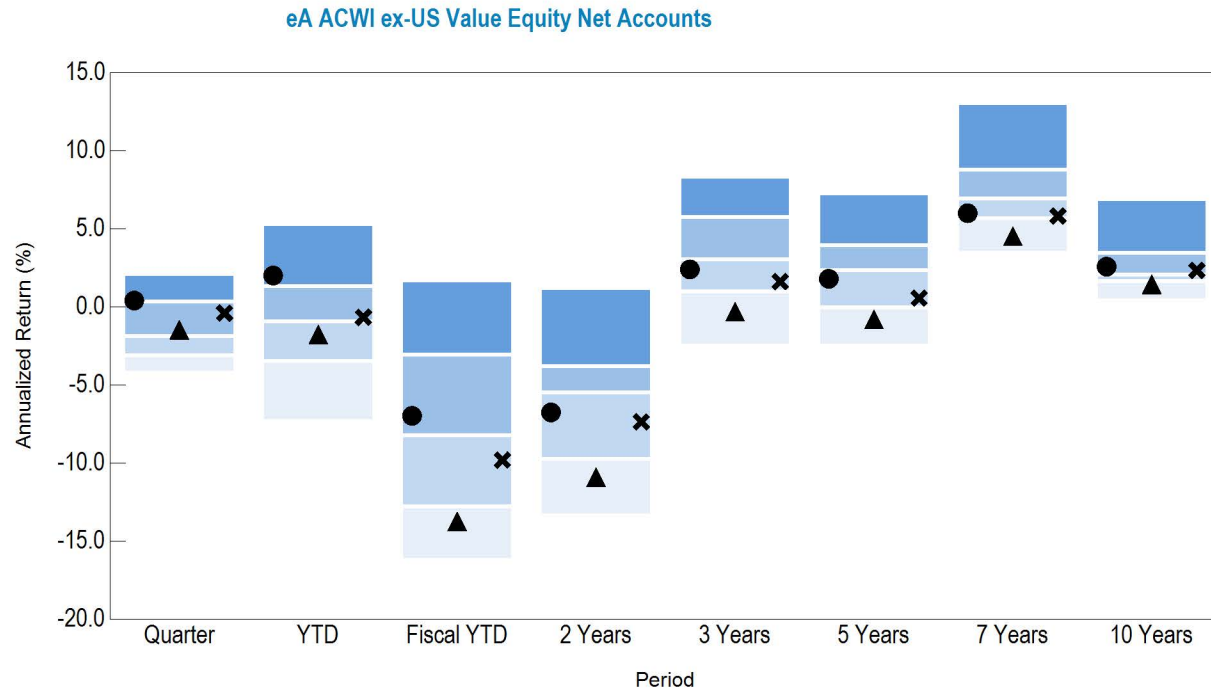
	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Europe</b>									
Austria	--	-9.7%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Belgium	--	2.3%	0.0%	1.0%	--	0.0%	0.0%	--	0.0%
Czech Republic*	--	-3.8%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	-0.1%	-0.5%	5.4%	1.4%	0.0%	0.1%	-0.1%	0.0%	0.0%
Finland	-5.1%	-0.9%	1.3%	0.7%	0.0%	0.0%	0.0%	0.0%	-0.1%
France	-6.2%	-3.5%	0.9%	7.2%	-0.2%	0.1%	0.2%	0.2%	0.2%
Germany	6.3%	-5.0%	2.6%	6.6%	0.7%	0.1%	0.1%	-0.4%	0.5%
Greece*	--	-14.0%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Hungary*	--	-4.6%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Ireland	--	-9.7%	0.0%	0.4%	--	0.0%	0.0%	--	0.0%
Italy	--	-10.0%	0.0%	1.6%	--	0.1%	0.0%	--	0.2%
Netherlands	--	-4.1%	0.0%	2.2%	--	0.0%	0.1%	--	0.1%
Norway	--	3.0%	0.0%	0.4%	--	0.0%	0.0%	--	0.0%
Poland*	--	-16.8%	0.0%	0.3%	--	0.0%	0.0%	--	0.1%
Portugal	-2.2%	-4.8%	1.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Russia*	--	4.4%	0.0%	0.8%	--	0.0%	0.0%	--	0.0%
Spain	5.1%	-7.8%	3.1%	2.3%	0.3%	0.0%	0.0%	0.0%	0.3%
Sweden	-3.8%	-4.7%	7.0%	2.1%	0.0%	0.0%	-0.2%	0.0%	-0.2%
Switzerland	-1.2%	2.5%	6.1%	6.5%	-0.2%	0.0%	0.0%	0.0%	-0.2%
United Kingdom	-4.0%	-0.6%	18.9%	13.9%	-0.5%	0.3%	-0.3%	-0.2%	-0.7%

**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	0.9%	0.6%	6.4%	5.0%	0.0%	0.0%	-0.1%	0.0%	0.0%
China*	-10.1%	1.1%	5.2%	5.1%	-0.6%	0.0%	0.0%	0.0%	-0.6%
Hong Kong	6.3%	0.9%	1.5%	2.5%	0.1%	0.0%	0.0%	-0.1%	0.1%
India*	18.1%	3.7%	1.3%	1.8%	0.2%	0.0%	0.0%	-0.1%	0.2%
Indonesia*	--	4.5%	0.0%	0.6%	--	0.0%	0.0%	--	0.0%
Japan	0.1%	1.0%	20.2%	16.1%	-0.1%	-0.3%	0.3%	0.0%	-0.1%
Korea*	-2.0%	-1.1%	3.4%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Malaysia*	--	-5.9%	0.0%	0.8%	--	0.0%	0.0%	--	0.0%
New Zealand	--	5.9%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Philippines*	13.3%	6.5%	0.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Singapore	5.8%	0.3%	4.1%	1.0%	0.1%	0.0%	0.0%	0.2%	0.2%
Taiwan*	0.8%	1.1%	3.5%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Thailand*	--	2.7%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
<b>Americas</b>									
Brazil*	10.1%	14.2%	0.5%	1.4%	0.1%	0.0%	-0.2%	-0.1%	-0.2%
Canada	--	3.7%	0.0%	6.6%	--	-0.2%	0.0%	--	-0.2%
Chile*	--	3.4%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Colombia*	--	2.9%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	1.4%	-6.9%	0.8%	1.0%	0.1%	0.0%	0.0%	0.0%	0.1%
Peru*	--	17.1%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
United States	4.4%	2.4%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	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*	--	0.7%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	--	-4.7%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
Qatar*	--	-4.8%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
South Africa*	14.5%	2.2%	3.0%	1.6%	0.2%	0.0%	0.0%	0.2%	0.4%
Turkey*	--	-7.5%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
United Arab Emirates*	--	0.0%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
<b>Totals</b>									
Americas	4.6%	4.3%	2.8%	9.5%	0.3%	-0.2%	-0.1%	-0.2%	-0.3%
Europe	-2.1%	-2.3%	46.4%	47.9%	0.5%	0.0%	-0.3%	0.0%	0.1%
Asia/Pacific	0.3%	0.9%	46.0%	39.7%	-0.4%	-0.1%	0.3%	-0.1%	-0.3%
Other	14.5%	-0.8%	3.0%	2.9%	0.4%	0.0%	0.0%	0.0%	0.5%
Cash	0.1%	--	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>-0.3%</b>	<b>-0.3%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.8%</b>	<b>-0.4%</b>	<b>-0.1%</b>	<b>-0.3%</b>	<b>0.1%</b>
<b>Totals</b>									
Developed	-0.6%	-0.8%	80.3%	78.4%	0.1%	0.0%	0.0%	0.0%	0.1%
Emerging*	1.1%	1.2%	18.0%	21.6%	0.1%	0.0%	-0.1%	0.0%	-0.1%
Cash	0.1%	--	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%



	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	2.1	5.3	1.7	1.2	8.3	7.3	13.0	6.9
25th Percentile	0.4	1.3	-3.0	-3.8	5.8	4.0	8.8	3.5
Median	-1.8	-0.9	-8.2	-5.5	3.1	2.4	7.0	2.1
75th Percentile	-3.1	-3.5	-12.7	-9.7	1.0	0.0	5.7	1.7
95th Percentile	-4.2	-7.3	-16.2	-13.3	-2.5	-2.5	3.5	0.4
# of Portfolios	34	33	32	30	27	22	18	16
● Mondrian	0.4 (24)	2.0 (20)	-7.0 (43)	-6.8 (60)	2.4 (60)	1.8 (61)	6.0 (65)	2.6 (38)
▲ MSCI ACWI ex USA Value Gross	-1.5 (45)	-1.8 (53)	-13.7 (82)	-10.9 (86)	-0.3 (84)	-0.8 (83)	4.5 (85)	1.4 (81)
✕ MSCI ACWI ex USA Gross	-0.4 (32)	-0.7 (49)	-9.8 (55)	-7.4 (62)	1.6 (66)	0.6 (72)	5.8 (72)	2.3 (41)

Characteristics

	Portfolio	MSCI ACWI ex USA Value Gross
Number of Holdings	142	1,038
Weighted Avg. Market Cap. (\$B)	51.6	43.9
Median Market Cap. (\$B)	15.4	6.1
Price To Earnings	19.2	12.9
Price To Book	2.6	1.3
Price To Sales	1.8	1.5
Return on Equity (%)	11.4	9.8
Yield (%)	4.1	4.3
Beta (holdings: global)	0.9	1.1

Top Holdings

GLAXOSMITHKLINE	2.8%
ABB LTD N	2.6%
IBERDROLA	2.5%
KIRIN HOLDINGS	2.5%
UNILEVER (UK)	2.5%
SYNGENTA	2.5%
AHOLD KON.	2.4%
NESTLE 'R'	2.4%
SANOFI	2.4%
BP	2.3%

Best Performers

	Return %
ECOD.INFU.E LOG.ON (BR:EON)	54.5%
BIDVEST GROUP (R:BVTJ)	39.6%
CMPH.COCS. RODOVIARIAS ON (BR:CCR)	32.5%
CIELO ON (BR:VIS)	28.5%
TOKYO ELECTRON (J:RG@N)	28.1%
RWE (D:RWE)	22.9%
CPFL EN.ON SPN.ADR.1:2 (CPL)	22.3%
KIRIN HOLDINGS (J:KB@N)	21.0%
LARSEN & TOUBRO (IN:LST)	20.7%
CPFL ENERGIA ON (BR:CPL)	20.3%

Worst Performers

	Return %
CHINA BLUE CHEMICAL 'H' (K:CHBC)	-26.6%
LLOYDS BANKING GROUP (UKIR:LLOY)	-23.8%
ERICSSON 'B' (W:SL@G)	-20.8%
KINGFISHER (UKIR:KGF)	-18.8%
DAIMLER (D:DAI)	-17.9%
CHINA RES.POWER HDG. (K:CREP)	-15.2%
TESCO (UKIR:TSCO)	-15.2%
SANDS CHINA (K:SNDC)	-14.9%
TUPRAS TKI.PEL.RFNE. (TK:TUP)	-14.3%
TELEFONICA (E:TEF)	-13.3%

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

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.1%	0.6%	-0.3%	-0.3%	11.8%	8.6%	8.3%	10.7%			
Materials	-0.6%	-0.9%	-0.3%	0.6%	-5.0%	5.3%	3.0%	7.7%			
Industrials	0.2%	0.4%	0.0%	-0.2%	0.1%	-2.1%	9.3%	10.1%			
Cons. Disc.	0.1%	0.3%	0.0%	-0.2%	-7.5%	-8.6%	8.4%	8.6%			
Cons. Staples	0.4%	0.0%	0.5%	-0.2%	3.6%	3.1%	14.1%	3.6%			
Health Care	0.0%	-0.3%	0.4%	-0.1%	3.4%	6.4%	9.9%	5.5%			
Financials	1.0%	0.3%	0.7%	-0.1%	-3.1%	-3.8%	14.9%	36.9%			
Info. Tech	-0.1%	0.0%	-0.2%	0.1%	-1.8%	-2.5%	9.3%	4.5%			
Telecomm.	-0.1%	0.0%	0.0%	-0.1%	-0.7%	-0.2%	12.7%	6.7%			
Utilities	0.3%	0.3%	0.0%	-0.1%	5.4%	1.5%	7.1%	5.6%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	3.0%	0.0%			
<b>Portfolio</b>	<b>1.3%</b>	<b>=</b>	<b>0.9%</b>	<b>+</b>	<b>0.9%</b>	<b>+</b>	<b>-0.4%</b>	<b>0.7%</b>	<b>-0.6%</b>	<b>100.0%</b>	<b>100.0%</b>

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

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Europe</b>									
Austria	--	-9.2%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Belgium	--	-3.3%	0.0%	0.6%	--	0.0%	0.0%	--	0.0%
Czech Republic*	--	5.1%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	-4.0%	0.2%	0.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Finland	--	-1.3%	0.0%	0.8%	--	0.0%	0.0%	--	0.0%
France	-2.5%	-3.3%	4.9%	8.4%	0.1%	0.0%	0.1%	0.0%	0.1%
Germany	-3.5%	-6.0%	8.0%	6.2%	0.1%	-0.1%	-0.1%	0.1%	0.0%
Greece*	--	-18.5%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Hungary*	--	-3.4%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Italy	9.7%	-4.1%	1.9%	2.0%	0.3%	0.0%	0.0%	0.0%	0.3%
Netherlands	6.5%	-10.7%	4.0%	1.1%	0.2%	-0.3%	-0.1%	0.6%	0.4%
Norway	--	3.0%	0.0%	0.8%	--	0.0%	0.0%	--	0.0%
Poland*	--	-17.2%	0.0%	0.3%	--	0.0%	0.0%	--	0.1%
Portugal	--	-2.8%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Russia*	20.4%	2.5%	0.3%	0.8%	0.1%	0.0%	0.0%	-0.1%	0.0%
Spain	-5.4%	-8.1%	4.6%	2.8%	0.1%	-0.2%	-0.1%	0.1%	-0.1%
Sweden	-12.0%	-8.8%	3.6%	2.0%	-0.1%	-0.1%	-0.1%	0.0%	-0.3%
Switzerland	4.1%	1.4%	10.9%	4.5%	0.1%	0.3%	-0.2%	0.2%	0.4%
United Kingdom	-0.2%	1.9%	20.4%	15.9%	-0.3%	0.7%	-0.7%	0.0%	-0.4%

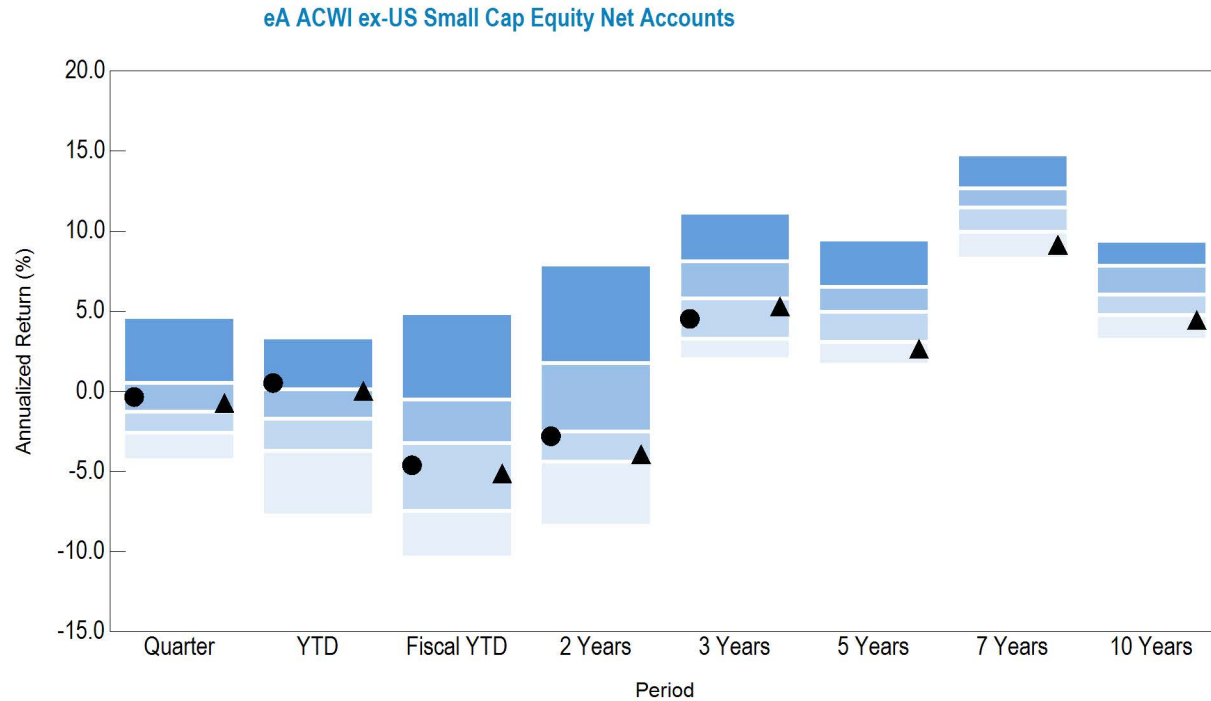


**Mondrian Performance Attribution vs. MSCI ACWI ex USA Value Gross**

	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	-7.5%	0.7%	0.8%	4.8%	-0.3%	-0.2%	0.1%	0.2%	-0.1%
China*	-3.5%	2.6%	0.4%	5.4%	-0.2%	-0.1%	0.0%	0.2%	-0.1%
Hong Kong	0.1%	-1.1%	2.8%	2.7%	0.0%	-0.1%	0.0%	0.0%	0.0%
India*	1.0%	4.3%	2.0%	1.8%	0.0%	-0.1%	0.0%	0.0%	-0.1%
Indonesia*	-5.1%	-1.1%	0.6%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Japan	2.5%	-0.9%	14.6%	15.8%	0.5%	-0.1%	0.0%	0.1%	0.5%
Korea*	-0.7%	-4.0%	1.8%	3.5%	0.0%	0.1%	0.0%	0.0%	0.1%
Malaysia*	-0.1%	-7.3%	1.1%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	--	6.4%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Philippines*	-14.8%	6.4%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	-0.1%
Singapore	2.3%	-1.1%	4.1%	1.0%	0.0%	0.0%	0.0%	0.1%	0.1%
Taiwan*	-4.7%	-1.1%	2.7%	2.6%	0.0%	-0.2%	0.0%	0.0%	-0.2%
Thailand*	7.3%	2.1%	0.4%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Americas</b>									
Brazil*	14.8%	13.8%	0.8%	1.6%	0.0%	0.0%	-0.2%	0.0%	-0.1%
Canada	4.1%	5.9%	1.1%	7.0%	-0.1%	-0.4%	0.0%	0.1%	-0.4%
Chile*	2.7%	2.6%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Colombia*	--	2.1%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	1.7%	-6.2%	1.2%	1.0%	0.0%	0.0%	0.1%	0.0%	0.1%
Peru*	12.8%	23.2%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
United States	-4.5%	0.6%	0.7%	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				
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	Total Effects
<b>Other</b>									
Egypt*	--	-0.7%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	--	-5.4%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
Kazakhstan**	-9.8%	3.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	0.2%	-6.0%	0.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania**	-10.4%	3.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
South Africa*	7.2%	-1.5%	0.7%	1.6%	0.0%	0.0%	0.0%	0.0%	0.1%
Turkey*	2.0%	-5.1%	0.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
United Arab Emirates*	8.5%	0.8%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Totals</b>									
Americas	5.8%	6.0%	4.4%	9.9%	0.3%	-0.3%	-0.1%	-0.4%	-0.5%
Europe	-0.4%	-2.1%	59.3%	47.2%	0.8%	0.4%	-1.2%	0.7%	0.7%
Asia/Pacific	0.3%	-0.3%	31.5%	39.8%	-0.5%	0.4%	0.2%	0.1%	0.2%
Other	3.8%	-2.7%	1.9%	3.0%	0.0%	0.1%	0.0%	0.0%	0.1%
Cash	0.1%	--	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>-0.1%</b>	<b>-0.6%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.6%</b>	<b>0.5%</b>	<b>-1.0%</b>	<b>0.4%</b>	<b>0.5%</b>
<b>Totals</b>									
Developed	0.1%	-0.9%	83.0%	77.8%	1.2%	0.0%	-1.0%	0.6%	0.7%
Emerging*	1.0%	0.5%	13.9%	22.2%	0.0%	-0.2%	0.0%	0.0%	-0.2%
Frontier**	-10.1%	--	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.1%	--	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%



	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	4.6	3.4	4.9	7.9	11.1	9.5	14.8	9.4
25th Percentile	0.6	0.1	-0.5	1.8	8.1	6.5	12.7	7.9
Median	-1.3	-1.7	-3.2	-2.5	5.8	5.0	11.5	6.1
75th Percentile	-2.6	-3.7	-7.4	-4.4	3.3	3.1	10.0	4.8
95th Percentile	-4.3	-7.7	-10.4	-8.4	2.0	1.7	8.3	3.2
# of Portfolios	34	33	32	27	22	17	16	12
● FIAM Equity	-0.4 (31)	0.5 (24)	-4.6 (65)	-2.8 (56)	4.5 (64)	-- (--)	-- (--)	-- (--)
▲ MSCI ACWI ex US Small Cap Gross	-0.7 (42)	0.0 (31)	-5.1 (72)	-3.9 (69)	5.3 (55)	2.7 (79)	9.2 (92)	4.5 (78)

Characteristics

	Portfolio	MSCI ACWI ex-US Small Cap
No. of Securities	225	4,356
Wgt'd. Avg. Market Cap (000's)	2,649	1,818
Price to Book Ratio	1.6	1.4
Return on Equity	12.7%	10.8%

Ten Holdings

TECHTRONIC INDUSTRIES CO LTD	1.8
OBIC CO LTD	1.6
NIHON PARKERIZING CO LTD	1.4
REGUS PLC	1.2
SUNDRUG CO LTD	1.1
QUEBECOR INC CL B SUB VTG	1.0
SURUGA BANK LTD	1.0
MISUMI GROUP INC	1.0
FRUTAROM INDS LTD	1.0
SPARK INFRA GRP (STAPLED)	1.0

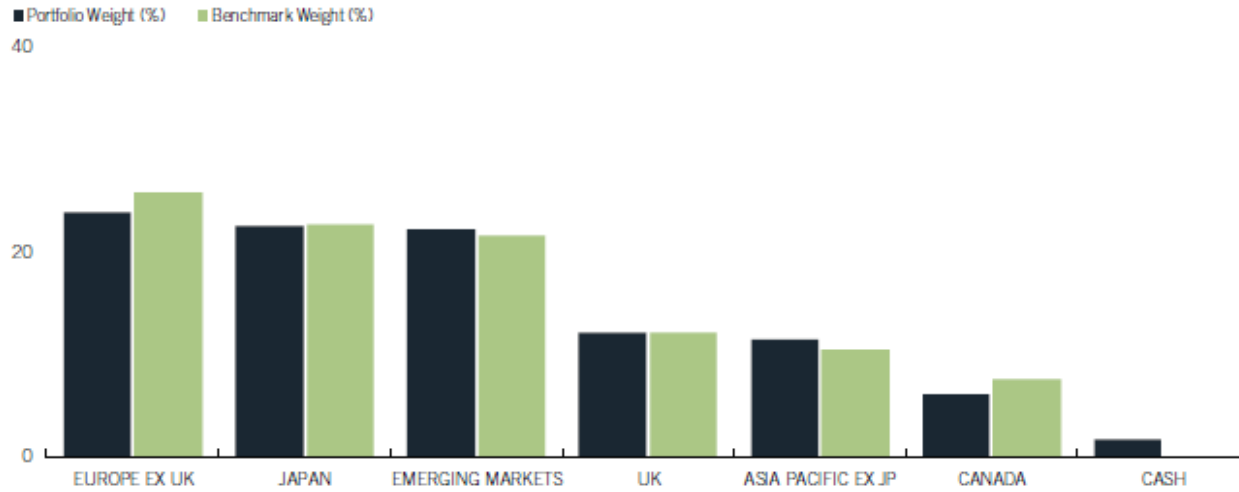
Best Performers (Absolute Return %)

ALAMOS GOLD INC A	61.1
DETOUR GOLD CORP	57.4
TRILOGY ENERGY CORP	52.2
TAHOE RESOURCES INC	47.7
TEGMA GESTAO LOGISTICA	46.8
HERMES MICROVISION INC	44.1
KINGBOARD LAMINAT HOLDINGS LTD	35.3
TSUKUI CORP	34.8
AKER SOLUTIONS ASA	31.9
WESTERN ENERGY SERVICES CORP	30.0

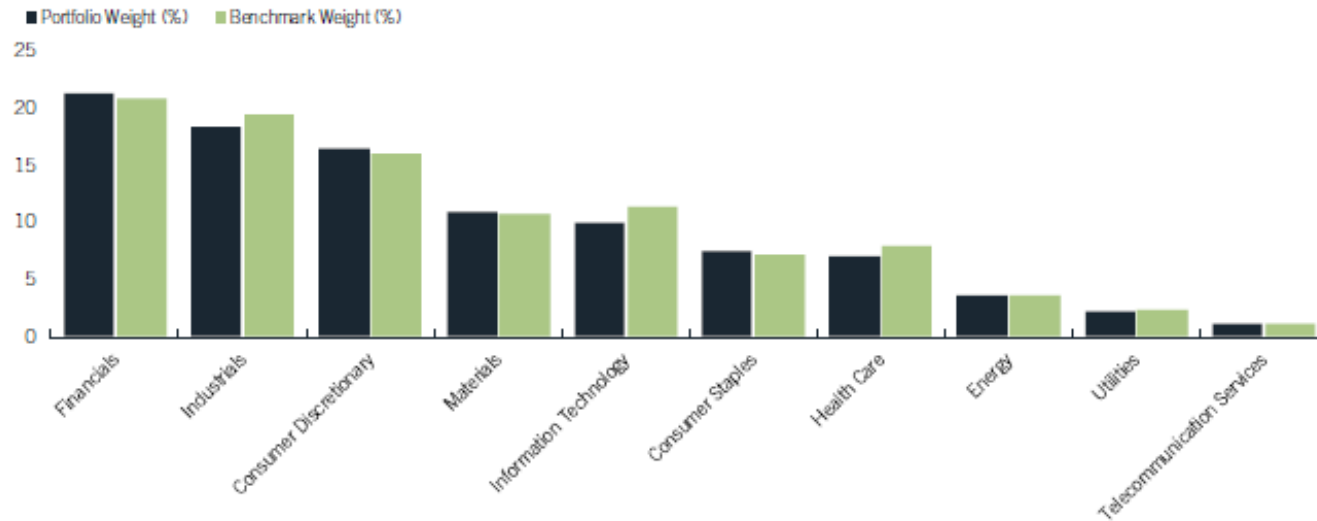
Worst Performers (Absolute Return %)

BRAMMER PLC	(66.7)
MINERAL DEPOSITS LTD	(39.9)
TK CORP	(29.6)
THE RESTAURANT GROUP PLC	(29.5)
ZUMTOBEL GROUP AG	(27.9)
REDROW PLC	(27.3)
CANFOR CORP NEW	(27.2)
ELRINGKLINGER AG	(26.6)
WIENERBERGER AG	(26.4)
STHREE PLC	(24.2)

**Regional Weights**

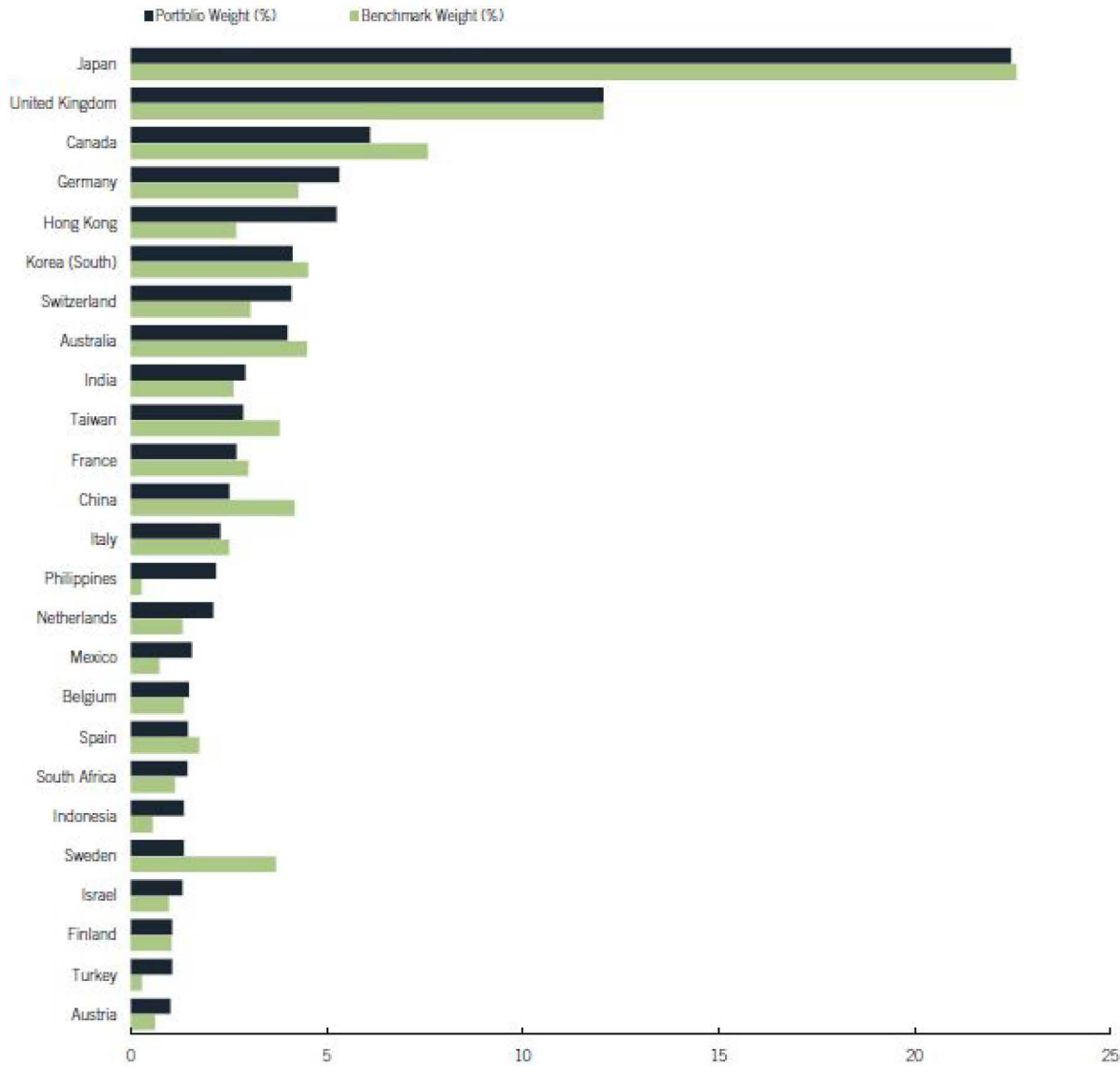


**Sector Weights**

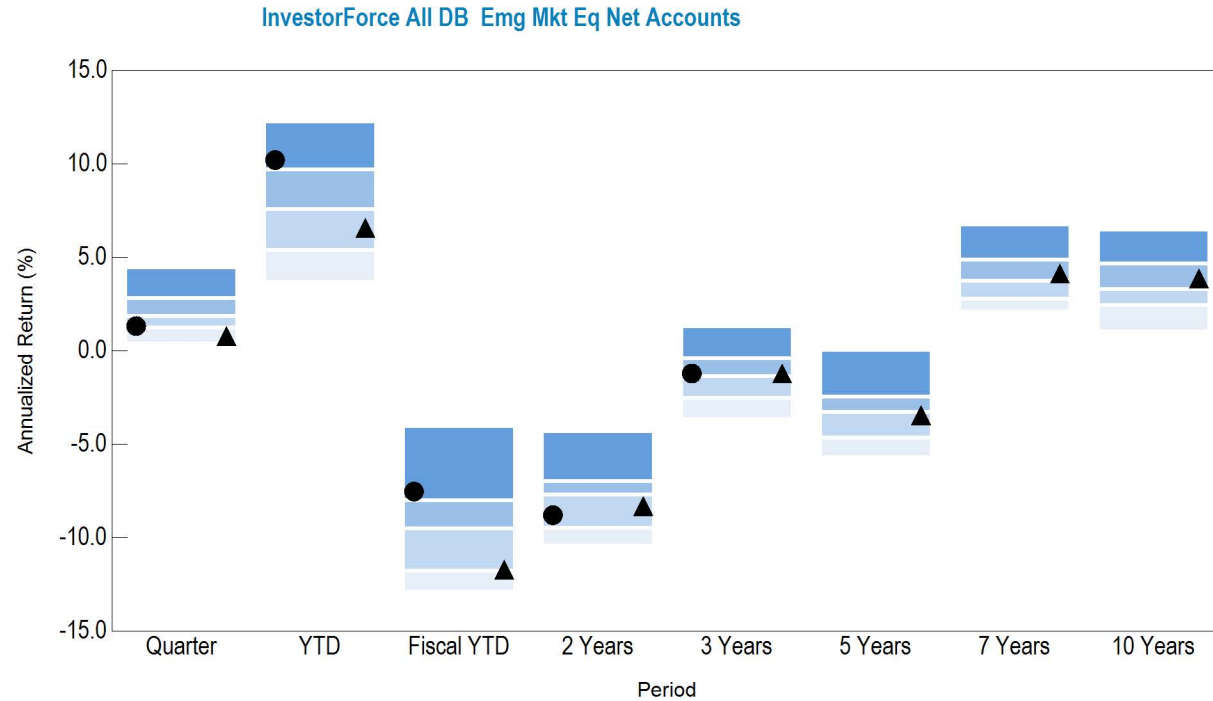


Sector breakdowns are only applied to equities and convertibles and the allocation percentages may not add to 100%.  
Benchmark: MSCI AC Wld Sm Cap xUS(N)

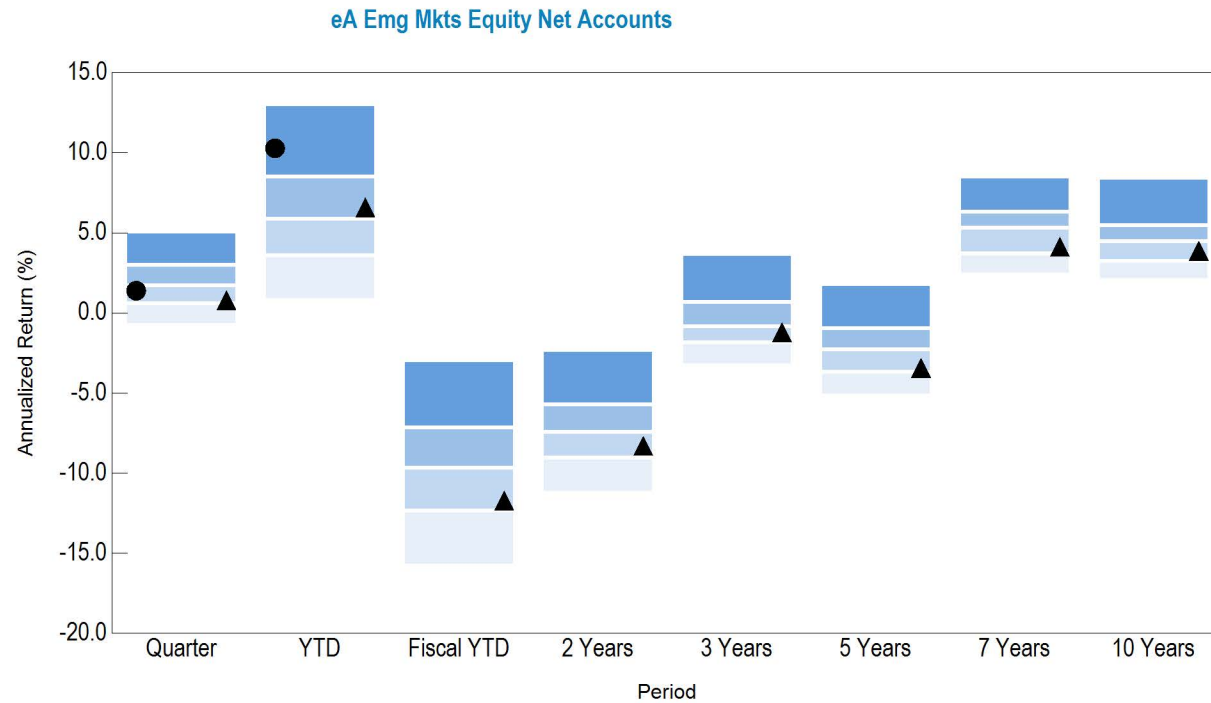
Top 25 Country Weights



Benchmark: MSCI AC Wid Sm Cap xUS(N)



	Return (Rank)											
5th Percentile	4.5	12.3	-4.0	-4.3	1.3	0.1	6.7	6.5				
25th Percentile	2.9	9.7	-8.0	-6.9	-0.4	-2.4	4.9	4.7				
Median	1.9	7.6	-9.5	-7.7	-1.3	-3.2	3.8	3.3				
75th Percentile	1.3	5.4	-11.7	-9.5	-2.5	-4.6	2.8	2.5				
95th Percentile	0.4	3.7	-12.9	-10.4	-3.6	-5.7	2.1	1.1				
# of Portfolios	85	85	84	80	67	44	20	15				
● Emerging Markets	1.3 (69)	10.2 (23)	-7.5 (22)	-8.8 (67)	-1.2 (41)	-- (--)	-- (--)	-- (--)				
▲ MSCI Emerging Markets Gross	0.8 (89)	6.6 (63)	-11.7 (74)	-8.3 (61)	-1.2 (41)	-3.4 (57)	4.1 (41)	3.9 (35)				



	Return (Rank)													
5th Percentile	5.1	13.0	-3.0	-2.4	3.7	1.8	8.5	8.4						
25th Percentile	3.0	8.5	-7.1	-5.7	0.7	-1.0	6.3	5.5						
Median	1.8	5.9	-9.7	-7.4	-0.8	-2.3	5.3	4.5						
75th Percentile	0.6	3.6	-12.3	-9.0	-1.8	-3.7	3.8	3.3						
95th Percentile	-0.7	0.8	-15.8	-11.2	-3.3	-5.1	2.4	2.1						
# of Portfolios	156	155	154	144	136	96	69	48						
● Parametric Core	1.4 (57)	10.3 (13)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)						
▲ MSCI Emerging Markets Gross	0.8 (73)	6.6 (42)	-11.7 (68)	-8.3 (63)	-1.2 (61)	-3.4 (73)	4.1 (72)	3.9 (70)						



Characteristics

	Portfolio	MSCI Emerging Markets Gross
Number of Holdings	1,040	836
Weighted Avg. Market Cap. (\$B)	17.6	42.9
Median Market Cap. (\$B)	3.1	4.6
Price To Earnings	19.1	17.7
Price To Book	2.9	2.6
Price To Sales	2.5	2.4
Return on Equity (%)	15.8	17.8
Yield (%)	2.8	2.7
Beta (holdings; global)	1.0	1.0

Top Holdings

SBERBANK OF RUSSIA	1.1%
AMERICA MOVIL SAB DE CV SPN.ADR 'L' 1:20	1.0%
CHINA MOBILE	0.9%
TAIWAN SEMICON.MNFG.	0.9%
OAO GAZPROM SPN.ADR 1:2	0.8%
SASOL	0.7%
CREDICORP	0.7%
CIELO ON	0.7%
KOREA ELECTRIC POWER	0.6%
MTN GROUP	0.6%

Best Performers

	Return %
BANGKOK CHAIN HOSP. FB (Q:BHLF)	241.8%
PTT EXPLORATION & PRDN. FB (Q:PTTF)	204.9%
INDUST PENOLES (MX:PA2)	87.3%
CTI.ELETR BRAS- ELETROBRAS SR.B PN (BR:EL6)	85.5%
THAI AIRWAYS INTL.FB (Q:TAIF)	76.5%
GRANA Y MONTERO (PE:GYM)	72.5%
ESTACIO PARTICIPACOES ON (BR:EST)	64.0%
CIA.MINAS BUENAVENTURA ADR 1:1 (BVN)	62.4%
RUMO LOG.OPD.MULTIMODAL (BR:P3M)	62.3%
SILOAM INTL.HOSPS. (ID:SIO)	59.5%

Worst Performers

	Return %
DRYSHIPS (DRYS)	-76.0%
INTEGER PL SR.A B C D E (PO:ITE)	-58.9%
GLOBETRONICS TECHNOLOGY (L:GLTE)	-39.5%
TRUE CORPORATION FB (Q:TSFB)	-34.7%
PPC (R:PPCJ)	-34.1%
WEST CHINA CEMENT (K:WCC)	-33.6%
GRUPA AZOTY (PO:ZAT)	-32.1%
ENERGA (PO:ERE)	-31.9%
SIHUAN PHARM.HDG.GP. SUSP - 27/03/15 (K:SPH)	-31.4%
AXTEL CPO (MX:AXT)	-31.3%

**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%	0.0%	0.0%	-0.1%	0.1%	1.9%	10.2%	7.7%			
Materials	0.0%	0.1%	-0.1%	0.0%	-0.1%	-0.8%	11.8%	6.8%			
Industrials	0.2%	0.2%	-0.1%	0.1%	1.1%	-2.1%	9.8%	6.5%			
Cons. Disc.	0.2%	0.2%	0.0%	0.1%	2.2%	-0.4%	10.0%	9.8%			
Cons. Staples	-0.1%	-0.1%	0.1%	0.0%	3.2%	4.5%	10.3%	8.3%			
Health Care	0.2%	0.1%	0.0%	0.1%	3.7%	0.6%	5.9%	2.6%			
Financials	0.0%	0.1%	0.1%	-0.2%	0.4%	0.6%	17.4%	27.5%			
Info. Tech	-0.3%	-0.2%	-0.3%	0.2%	3.7%	3.5%	8.1%	20.8%			
Telecomm.	-0.1%	-0.1%	0.0%	0.1%	-0.6%	0.0%	9.1%	6.9%			
Utilities	0.0%	0.0%	0.0%	0.0%	1.1%	0.9%	7.0%	3.2%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	0.4%	0.0%			
Unclassified	0.0%	--	--	--	--	--	0.0%	0.0%			
<b>Portfolio</b>	<b>0.0%</b>	<b>=</b>	<b>0.2%</b>	<b>+</b>	<b>-0.4%</b>	<b>+</b>	<b>0.3%</b>	<b>1.3%</b>	<b>1.2%</b>	<b>100.0%</b>	<b>100.0%</b>

Parametric Core Performance Attribution vs. MSCI Emerging Markets Gross

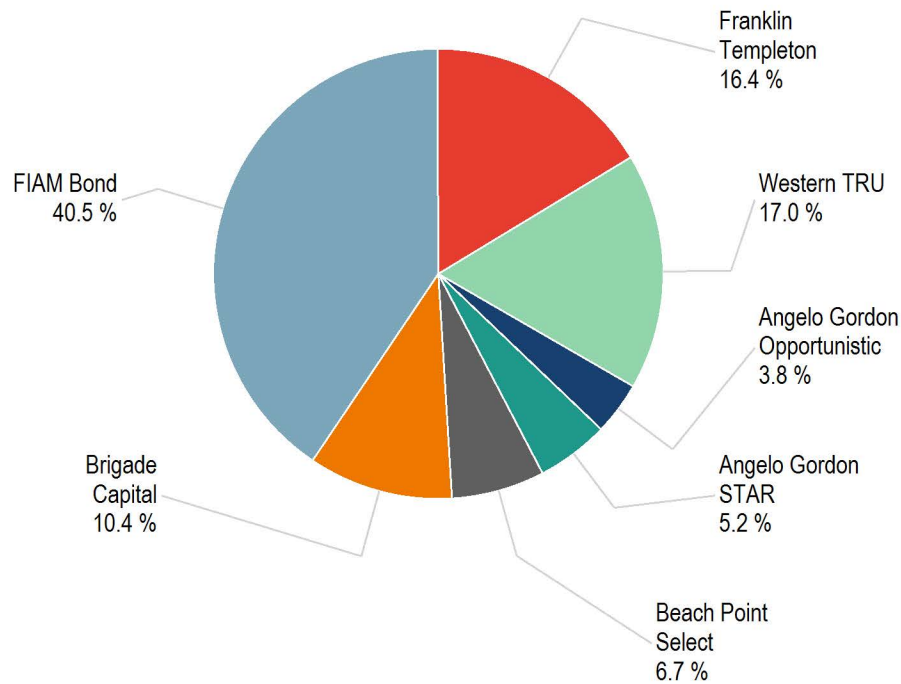
	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Europe</b>									
Czech Republic*	-3.4%	-3.8%	0.7%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Greece*	-5.8%	-13.7%	1.6%	0.4%	0.0%	-0.1%	0.0%	0.1%	0.0%
Hungary*	-3.0%	-4.7%	1.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Luxembourg	-4.7%	1.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	-8.0%	-5.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	-15.5%	-17.3%	3.8%	1.4%	0.0%	-0.3%	-0.1%	0.0%	-0.4%
Russia*	4.4%	4.3%	6.6%	3.8%	0.1%	0.0%	0.0%	0.0%	0.1%
United Kingdom	23.7%	-0.7%	0.4%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
<b>AsiaPacific</b>									
China*	-0.7%	1.2%	5.0%	23.4%	-0.4%	0.0%	0.0%	0.4%	-0.1%
Hong Kong	1.2%	-0.8%	5.0%	0.0%	0.0%	-0.1%	0.0%	0.1%	0.0%
India*	3.4%	3.7%	4.8%	8.1%	-0.2%	-0.2%	0.2%	0.1%	-0.1%
Indonesia*	6.3%	4.6%	4.2%	2.7%	0.0%	0.0%	0.0%	0.0%	0.1%
Korea*	-4.1%	-1.1%	7.7%	15.7%	-0.5%	0.1%	0.1%	0.2%	0.0%
Malaysia*	-6.8%	-5.9%	4.1%	3.5%	0.0%	0.0%	0.0%	0.0%	-0.1%
Philippines*	3.9%	6.4%	3.6%	1.5%	0.0%	0.2%	0.0%	-0.1%	0.0%
Singapore	8.6%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Taiwan*	0.1%	1.1%	7.2%	12.4%	-0.1%	0.0%	0.0%	0.1%	-0.1%
Thailand*	3.5%	2.7%	3.2%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Americas</b>									
Brazil*	17.3%	13.9%	8.1%	6.7%	0.3%	0.0%	0.0%	0.1%	0.4%
Chile*	2.4%	3.7%	3.6%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Colombia*	3.2%	2.9%	1.9%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Mexico*	-6.4%	-6.9%	7.0%	4.6%	-0.1%	0.0%	0.0%	0.0%	-0.2%
Peru*	19.8%	17.1%	1.5%	0.4%	0.0%	0.2%	0.0%	0.0%	0.2%
United States	7.9%	2.4%	1.3%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%

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

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Other</b>									
Egypt*	--	0.8%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Kuwait**	-1.3%	-6.5%	1.8%	0.0%	0.0%	-0.1%	0.0%	0.1%	0.0%
Qatar*	-5.6%	-4.9%	1.8%	1.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%
South Africa*	5.7%	2.6%	7.5%	7.3%	0.2%	0.0%	0.0%	0.0%	0.2%
Turkey*	-7.7%	-7.5%	4.1%	1.5%	0.0%	-0.2%	0.0%	0.0%	-0.2%
United Arab Emirates*	2.0%	0.1%	1.5%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Totals</b>									
Americas	6.4%	5.6%	23.4%	13.5%	0.2%	0.1%	0.1%	0.2%	0.6%
Europe	-2.6%	-2.6%	14.5%	6.1%	0.1%	-0.4%	-0.2%	0.2%	-0.3%
Asia/Pacific	0.3%	0.9%	45.0%	69.5%	-0.4%	-0.1%	0.2%	0.2%	-0.2%
Other	0.1%	0.3%	16.7%	10.9%	0.0%	-0.1%	0.0%	0.0%	-0.1%
Cash	0.1%	--	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>1.3%</b>	<b>1.2%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-0.1%</b>	<b>-0.4%</b>	<b>0.0%</b>	<b>0.5%</b>	<b>0.0%</b>
<b>Totals</b>									
Developed	3.7%	--	7.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%
Emerging*	1.1%	1.2%	90.8%	100.0%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Frontier**	-1.3%	--	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.1%	--	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Fixed Income  
 Manager Allocation Analysis

Period Ending: June 30, 2016



	Actual \$	Actual %	Manager Contribution to Excess Return %
Angelo Gordon Opportunistic	\$23,028,000	3.8%	-0.1%
Angelo Gordon STAR	\$31,854,000	5.2%	-0.0%
Beach Point Select	\$40,939,328	6.7%	0.0%
Brigade Capital	\$63,784,385	10.4%	0.5%
FIAM Bond	\$247,229,262	40.5%	1.0%
Franklin Templeton	\$100,003,677	16.4%	-0.3%
Western Asset TRU	\$103,756,803	17.0%	0.4%
Actual vs. Policy Weight Difference			-1.3%
<b>Total</b>	<b>\$610,595,455</b>	<b>100.0%</b>	<b>0.3%</b>

Statistics Summary

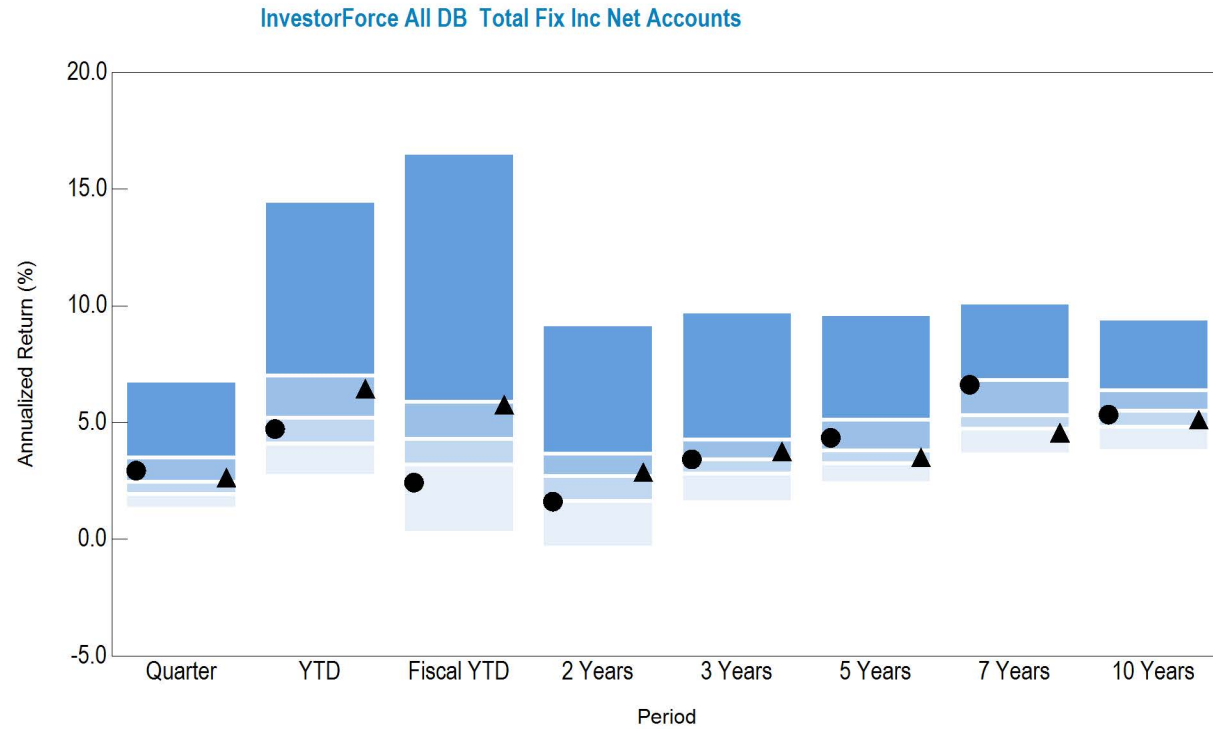
3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	3.4%	3.0%	1.1	-0.2	1.8%
Blended Fixed Income Index	3.8%	3.0%	1.2	--	0.0%
US Fixed Income	3.9%	2.8%	1.4	0.0	1.4%
Blended US Fixed Index	3.9%	2.9%	1.3	--	0.0%
FIAM Bond	4.5%	2.9%	1.5	0.5	0.9%
Barclays Aggregate	4.1%	2.7%	1.5	--	0.0%
Angelo Gordon STAR	8.6%	5.4%	1.6	0.7	6.5%
Barclays Aggregate	4.1%	2.7%	1.5	--	0.0%
Brigade Capital	1.6%	7.1%	0.2	-0.6	4.5%
Barclays BA Intermediate HY	4.2%	4.9%	0.8	--	0.0%
Franklin Templeton	0.6%	6.3%	0.1	-0.3	6.5%
Barclays Multi-verse	2.8%	4.4%	0.6	--	0.0%

Statistics Summary

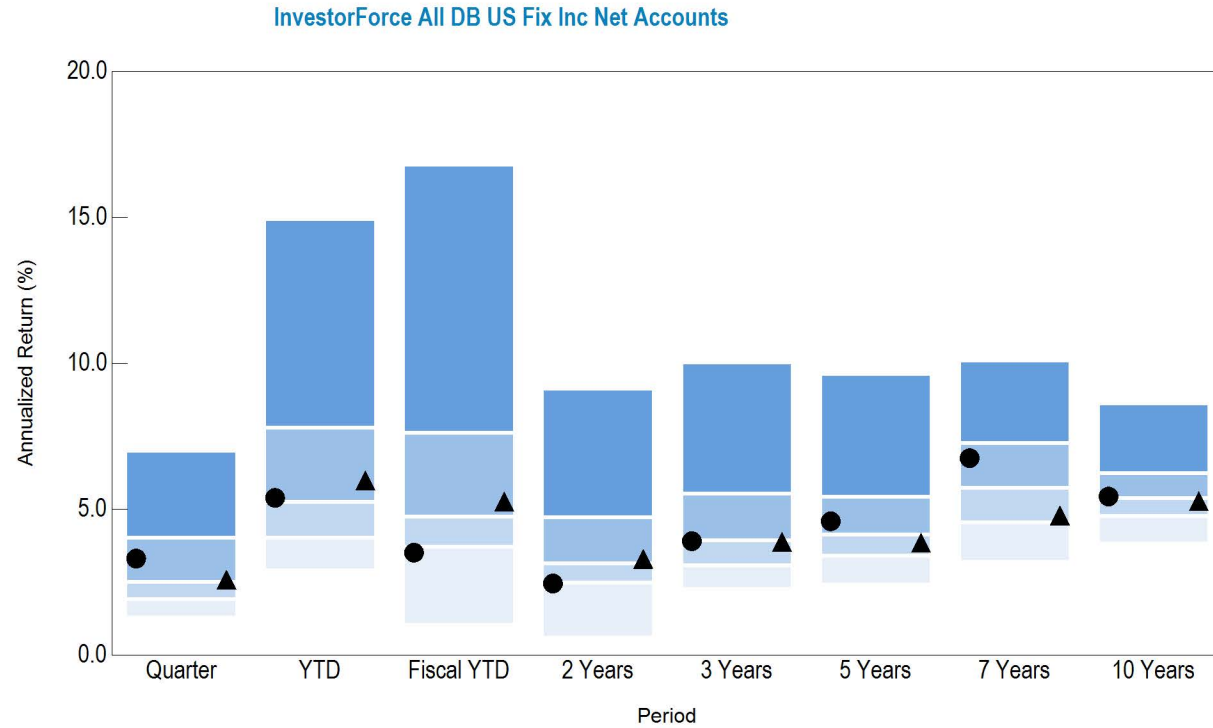
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	4.3%	3.6%	1.2	0.4	2.3%
Blended Fixed Income Index	3.5%	3.3%	1.0	--	0.0%
US Fixed Income	4.6%	3.0%	1.5	0.4	1.6%
Blended US Fixed Index	3.9%	3.3%	1.2	--	0.0%
FIAM Bond	4.3%	3.0%	1.4	0.7	0.8%
Barclays Aggregate	3.8%	2.8%	1.3	--	0.0%
Brigade Capital	4.4%	6.4%	0.7	-0.1	4.6%
Barclays BA Intermediate HY	4.9%	5.2%	0.9	--	0.0%
Franklin Templeton	2.6%	9.5%	0.3	0.1	8.1%
Barclays Multi-verse	1.9%	4.5%	0.4	--	0.0%

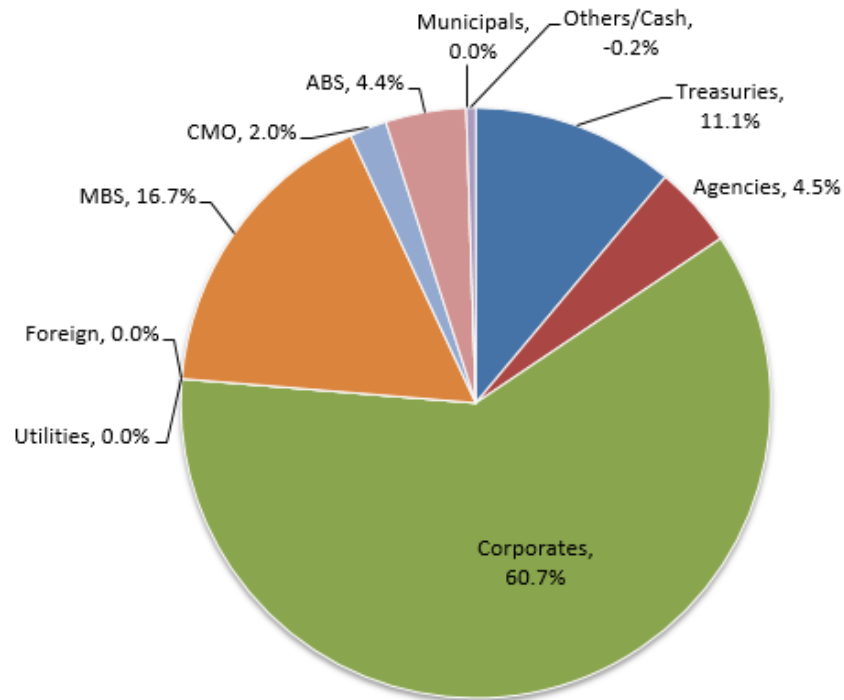


	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	6.8	14.5	16.5	9.2	9.7	9.6	10.1	9.4
25th Percentile	3.5	7.0	5.9	3.7	4.3	5.1	6.8	6.4
Median	2.5	5.2	4.3	2.7	3.4	3.8	5.3	5.5
75th Percentile	2.0	4.1	3.2	1.7	2.8	3.3	4.7	4.8
95th Percentile	1.3	2.7	0.3	-0.3	1.6	2.4	3.6	3.8
# of Portfolios	340	340	339	332	319	270	225	188
● Fixed Income	2.9 (33)	4.7 (62)	2.4 (83)	1.6 (76)	3.4 (50)	4.3 (35)	6.6 (28)	5.3 (59)
▲ Blended Fixed Income Index	2.7 (43)	6.5 (31)	5.8 (28)	2.9 (42)	3.8 (40)	3.5 (65)	4.6 (79)	5.1 (66)





	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	7.0	14.9	16.8	9.1	10.0	9.6	10.1	8.6
25th Percentile	4.0	7.8	7.6	4.7	5.5	5.4	7.3	6.3
Median	2.5	5.3	4.7	3.2	3.9	4.1	5.7	5.4
75th Percentile	1.9	4.0	3.7	2.5	3.1	3.4	4.6	4.8
95th Percentile	1.3	2.9	1.1	0.6	2.3	2.4	3.2	3.8
# of Portfolios	445	445	443	436	399	336	282	203
● US Fixed Income	3.3 (30)	5.4 (46)	3.5 (78)	2.5 (76)	3.9 (51)	4.6 (39)	6.7 (31)	5.4 (49)
▲ Blended US Fixed Index	2.6 (48)	6.0 (35)	5.3 (42)	3.3 (46)	3.9 (52)	3.9 (60)	4.8 (70)	5.3 (56)



Sector*	Account Weight	BC Aggregate Weight	Difference
Treasuries	11.1%	36.5%	-25.4%
Agencies	4.5%	8.2%	-3.7%
Corporates	60.7%	25.0%	35.7%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS	16.7%	28.1%	-11.4%
CMO	2.0%	0.0%	2.0%
ABS	4.4%	2.2%	2.2%
Municipals	0.0%	0.0%	0.0%
Others/Cash	0.5%	0.0%	0.5%
<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: June 30, 2016

Portfolio Characteristics*		Portfolio	BC Aggregate
Total Number of Securities			
Total Market Value	\$	350,986,065	
Current Coupon		2.64	3.23
Yield to Maturity		10.47	12.68
Average Life		8.12	7.65
Duration		4.09	5.51
Quality		AA-	AA

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

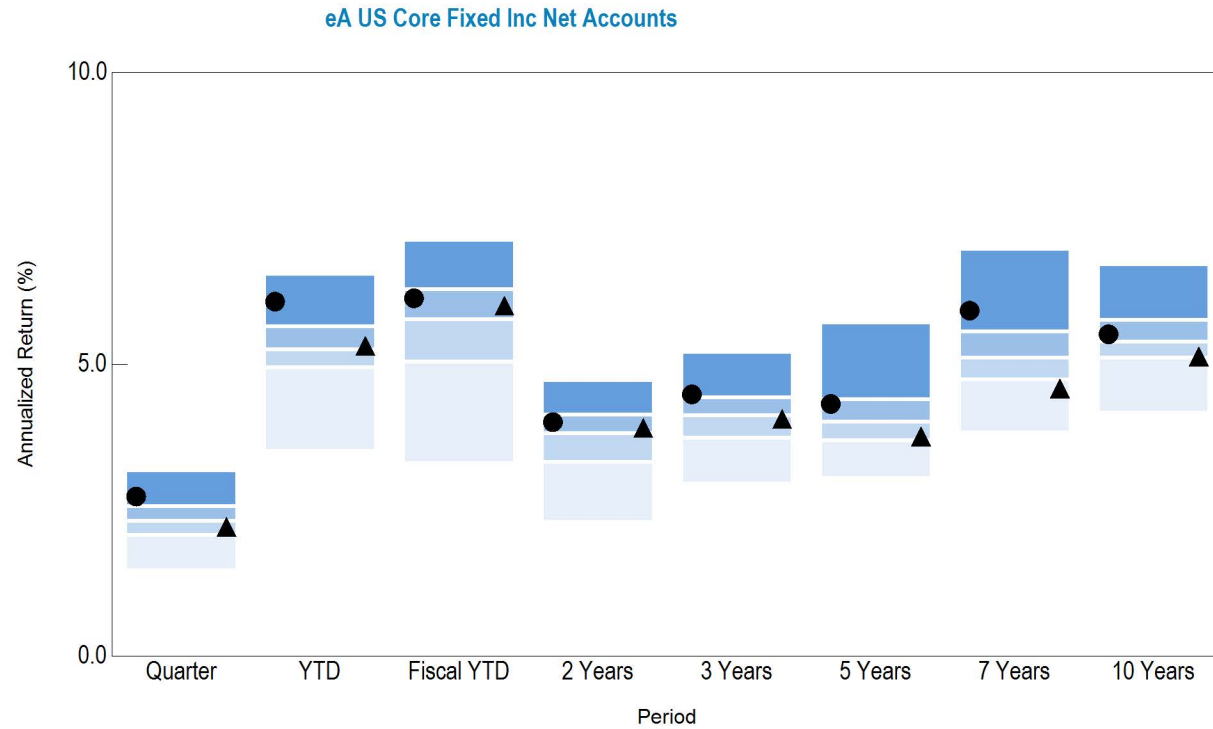
Average Life	
Range	% Held
0.0 - 1.0	3.1
1.0 - 3.0	8.2
3.0 - 5.0	22.0
5.0 - 10.0	53.7
10.0 - 20.0	2.4
20.0+	10.7
Unclassified	0.0

Duration	
Range	% Held
0.0 - 1.0	3.0
1.0 - 3.0	45.8
3.0 - 5.0	22.0
5.0 - 7.0	9.9
7.0 - 10.0	6.7
10.0+	12.7
Unclassified	0.0

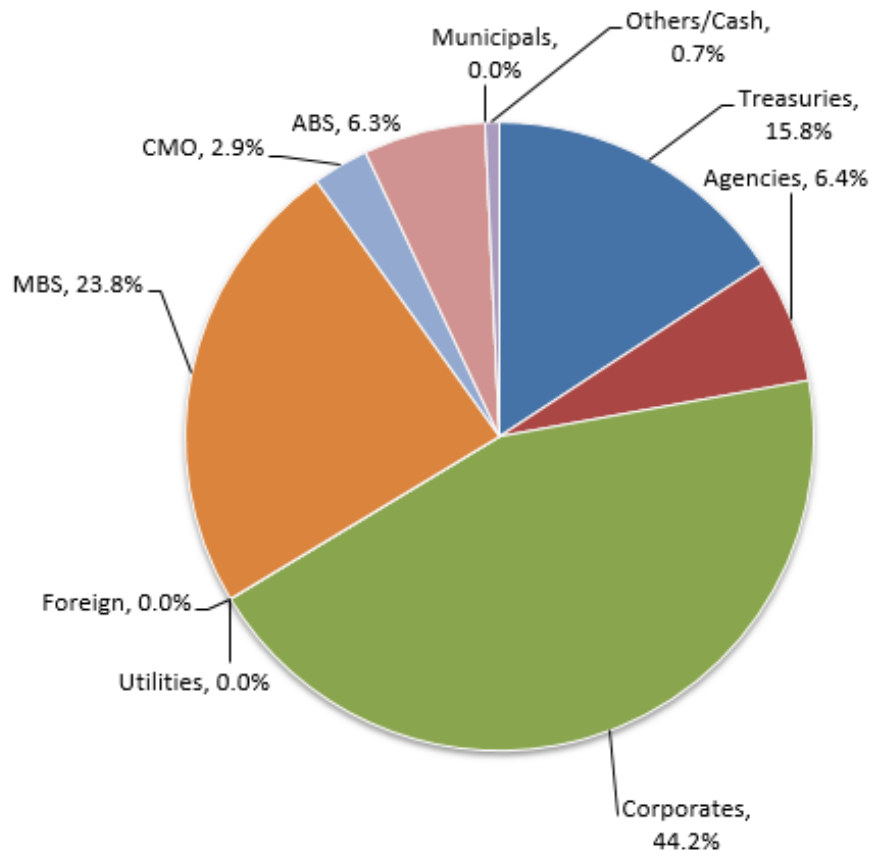
Quality	
Range	% Held
Govt (10)	30.8
Aaa (10)	2.0
Aa (9)	1.8
A (8)	14.6
Baa (7)	48.1
Below Baa (6-1)	2.2
Other	0.5

Coupon	
Range	% Held
0.0 - 5.0	81.9
5.0 - 7.0	13.8
7.0 - 9.0	2.2
9.0 - 11.0	0.1
11.0 - 13.0	0.0
13.0+	2.1
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	3.2	6.5	7.1	4.7	5.2	5.7	7.0	6.7
25th Percentile	2.6	5.7	6.3	4.1	4.4	4.4	5.6	5.8
Median	2.3	5.3	5.8	3.8	4.1	4.0	5.1	5.4
75th Percentile	2.1	5.0	5.1	3.3	3.7	3.7	4.7	5.1
95th Percentile	1.5	3.5	3.3	2.3	3.0	3.1	3.8	4.2
# of Portfolios	114	114	113	112	111	103	96	85
● FIAM Bond	2.7 (18)	6.1 (11)	6.1 (33)	4.0 (34)	4.5 (24)	4.3 (28)	5.9 (18)	5.5 (41)
▲ Barclays Aggregate	2.2 (63)	5.3 (43)	6.0 (41)	3.9 (41)	4.1 (56)	3.8 (70)	4.6 (81)	5.1 (75)



Sector	Account Weight	BC Aggregate Weight	Difference
Treasuries	15.8%	36.5%	-20.7%
Agencies	6.4%	8.2%	-1.8%
Corporates	44.2%	25.0%	19.2%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS	23.8%	28.1%	-4.4%
CMO	2.9%	0.0%	2.9%
ABS	6.3%	2.2%	4.1%
Municipals	0.0%	0.0%	0.0%
Others/Cash	0.7%	0.0%	0.7%
<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: June 30, 2016

Portfolio Characteristics		Portfolio
Total Number of Securities		935
Total Market Value	\$	247,229,262
Current Coupon		3.75
Yield to Maturity		13.02
Average Life		8.11
Duration		5.38
Quality		A+

BC Aggregate
3.23
12.68
7.65
5.51
AA

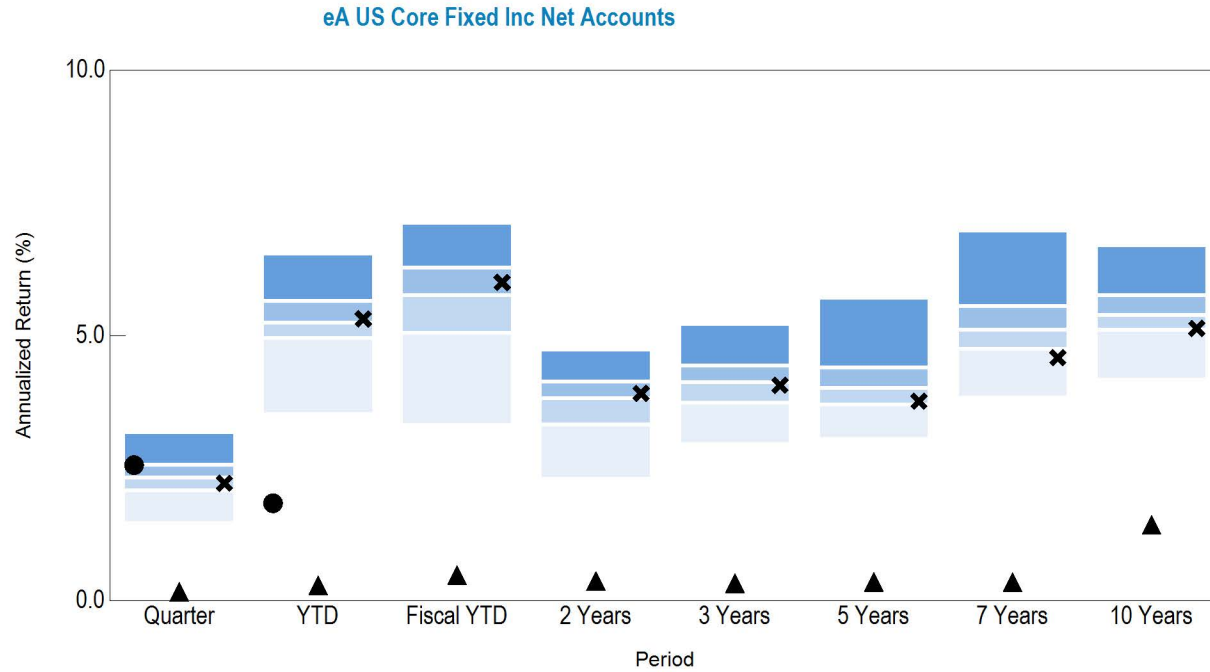
Yield to Maturity	
Range	% Held
0.0 - 5.0	86.9
5.0 - 7.0	6.9
7.0 - 9.0	0.9
9.0 - 11.0	0.3
11.0 - 13.0	0.1
13.0+	5.0
Unclassified	0.0

Average Life	
Range	% Held
0.0 - 1.0	4.4
1.0 - 3.0	11.6
3.0 - 5.0	31.2
5.0 - 10.0	34.2
10.0 - 20.0	3.4
20.0+	15.2
Unclassified	0.0

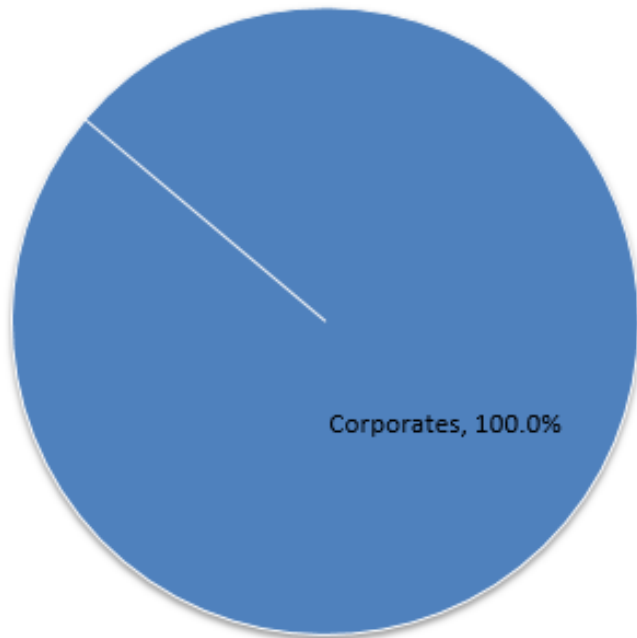
Duration	
Range	% Held
0.0 - 1.0	4.2
1.0 - 3.0	23.0
3.0 - 5.0	31.2
5.0 - 7.0	14.0
7.0 - 10.0	9.5
10.0+	18.0
Unclassified	0.0

Quality	
Range	% Held
Govt (10)	43.7
Aaa (10)	2.9
Aa (9)	2.6
A (8)	20.7
Baa (7)	26.3
Below Baa (6-1)	3.1
Other	0.7

Coupon	
Range	% Held
0.0 - 5.0	74.3
5.0 - 7.0	19.5
7.0 - 9.0	3.1
9.0 - 11.0	0.1
11.0 - 13.0	0.0
13.0+	3.0
Unclassified	0.0



	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	3.2	6.5	7.1	4.7	5.2	5.7	7.0	6.7
25th Percentile	2.6	5.7	6.3	4.1	4.4	4.4	5.6	5.8
Median	2.3	5.3	5.8	3.8	4.1	4.0	5.1	5.4
75th Percentile	2.1	5.0	5.1	3.3	3.7	3.7	4.7	5.1
95th Percentile	1.5	3.5	3.3	2.3	3.0	3.1	3.8	4.2
# of Portfolios	114	114	113	112	111	103	96	85
● Western TRU	2.6 (28)	1.8 (99)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
▲ 3-Month Libor Total Return USD	0.2 (99)	0.3 (99)	0.5 (99)	0.4 (99)	0.3 (99)	0.4 (99)	0.4 (99)	1.4 (99)
✕ Barclays Aggregate	2.2 (63)	5.3 (43)	6.0 (41)	3.9 (41)	4.1 (56)	3.8 (70)	4.6 (81)	5.1 (75)



Sector	Account Weight	BC Aggregate Weight	Difference
Treasuries	0.0%	36.5%	-36.5%
Agencies	0.0%	8.2%	-8.2%
Corporates	100.0%	25.0%	75.0%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS	0.0%	28.1%	-28.1%
CMO	0.0%	0.0%	0.0%
ABS	0.0%	2.2%	-2.2%
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	\$	103,756,803	
Current Coupon		0.00	3.23
Yield to Maturity		4.40	12.68
Average Life		8.13	7.65
Duration		1.01	5.51
Quality		BBB+	AA

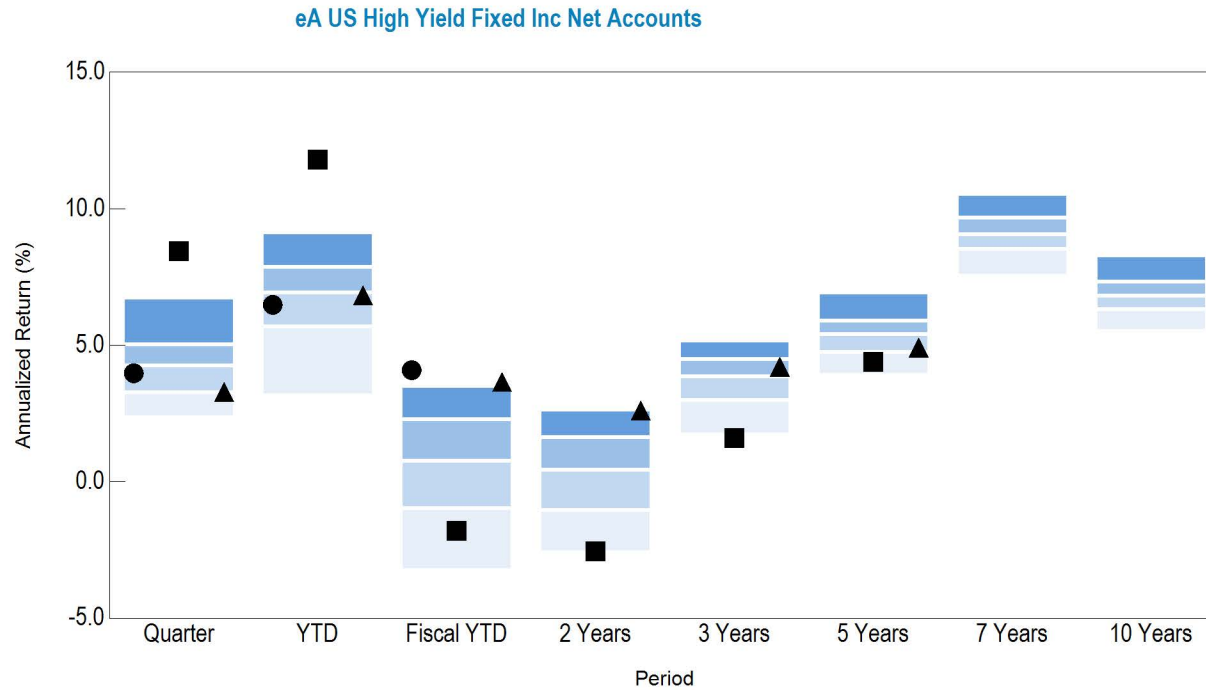
Yield to Maturity	
Range	% Held
0.0 - 5.0	n/a
5.0 - 7.0	n/a
7.0 - 9.0	n/a
9.0 - 11.0	n/a
11.0 - 13.0	n/a
13.0+	n/a
Unclassified	n/a

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

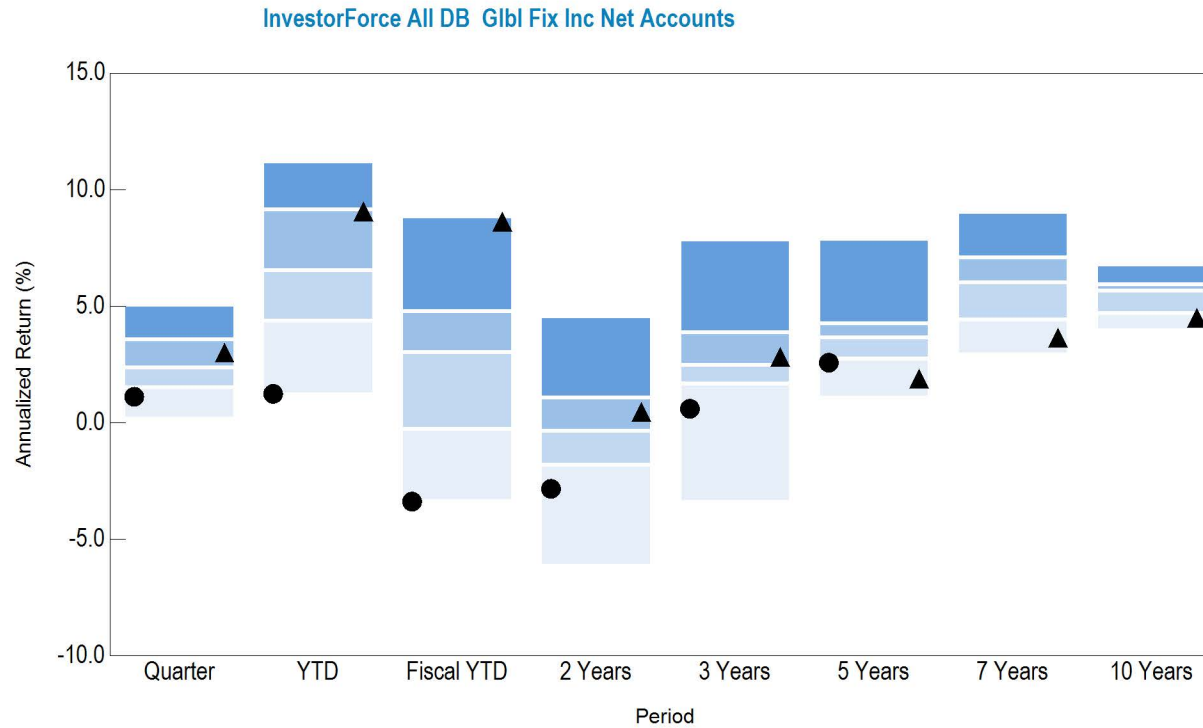
Duration	
Range	% Held
0.0 - 1.0	0.0
1.0 - 3.0	100.0
3.0 - 5.0	0.0
5.0 - 7.0	0.0
7.0 - 10.0	0.0
10.0+	0.0
Unclassified	0.0

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

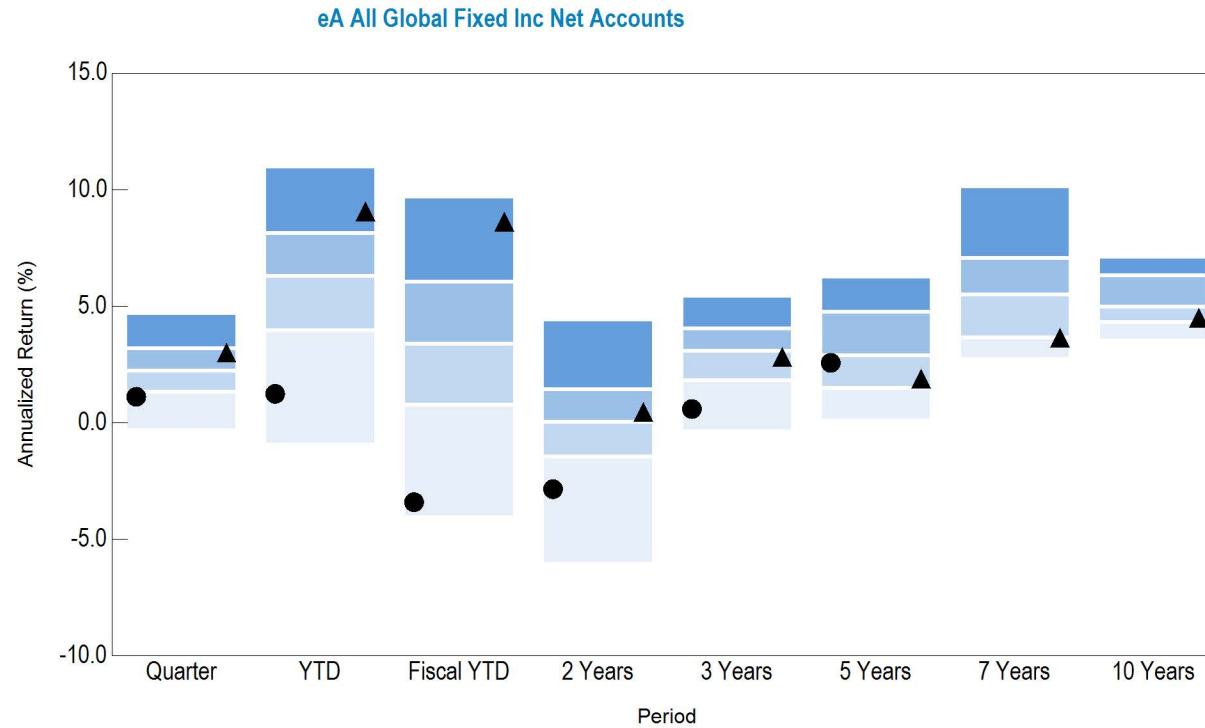
Coupon	
Range	% Held
0.0 - 5.0	100.0
5.0 - 7.0	0.0
7.0 - 9.0	0.0
9.0 - 10.0	0.0
10.0+	0.0
Unclassified	0.0



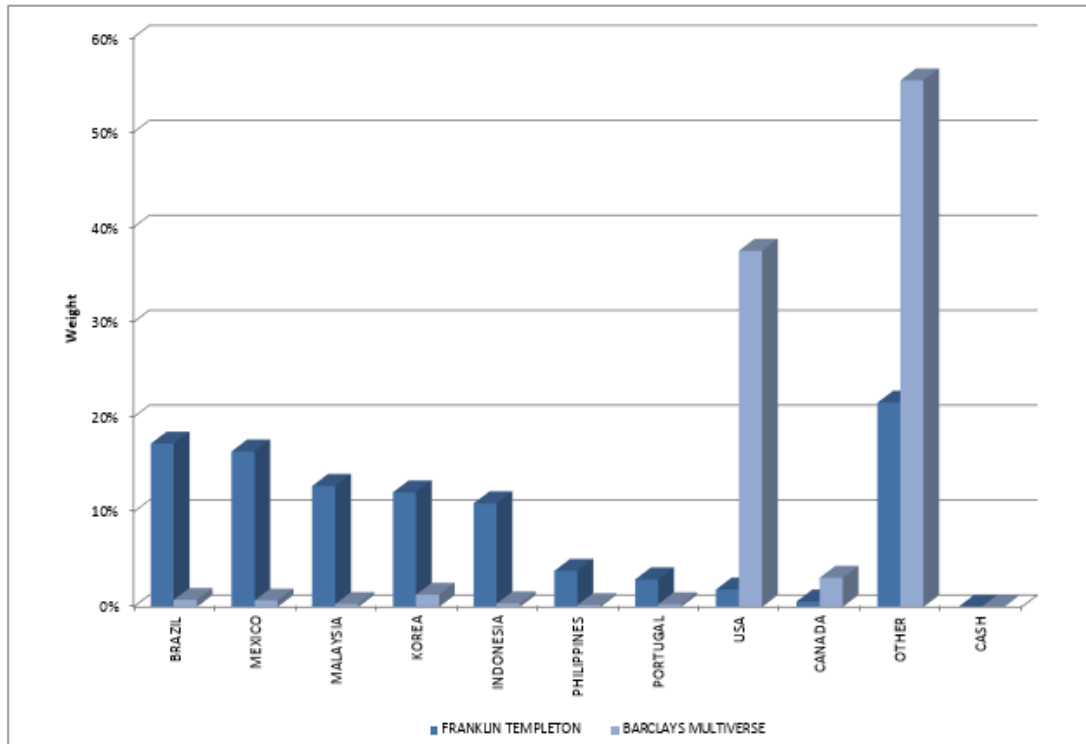
	Return (Rank)															
	Quarter		YTD		Fiscal YTD		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	6.7	9.1	3.5	2.6	5.2	6.9	10.5	8.3								
25th Percentile	5.0	7.9	2.3	1.7	4.5	5.9	9.7	7.3								
Median	4.3	6.9	0.8	0.4	3.9	5.4	9.1	6.8								
75th Percentile	3.3	5.7	-1.0	-1.0	3.0	4.8	8.5	6.3								
95th Percentile	2.4	3.2	-3.2	-2.6	1.8	3.9	7.6	5.5								
# of Portfolios	87	87	87	83	81	71	61	52								
● Beach Point Select	4.0 (63)	6.5 (59)	4.1 (3)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)								
■ Brigade Capital	8.5 (1)	11.8 (1)	-1.8 (86)	-2.5 (95)	1.6 (96)	4.4 (87)	-- (--)	-- (--)								
▲ Barclays BA Intermediate HY	3.3 (76)	6.8 (51)	3.7 (4)	2.6 (6)	4.2 (38)	4.9 (70)	-- (--)	-- (--)								



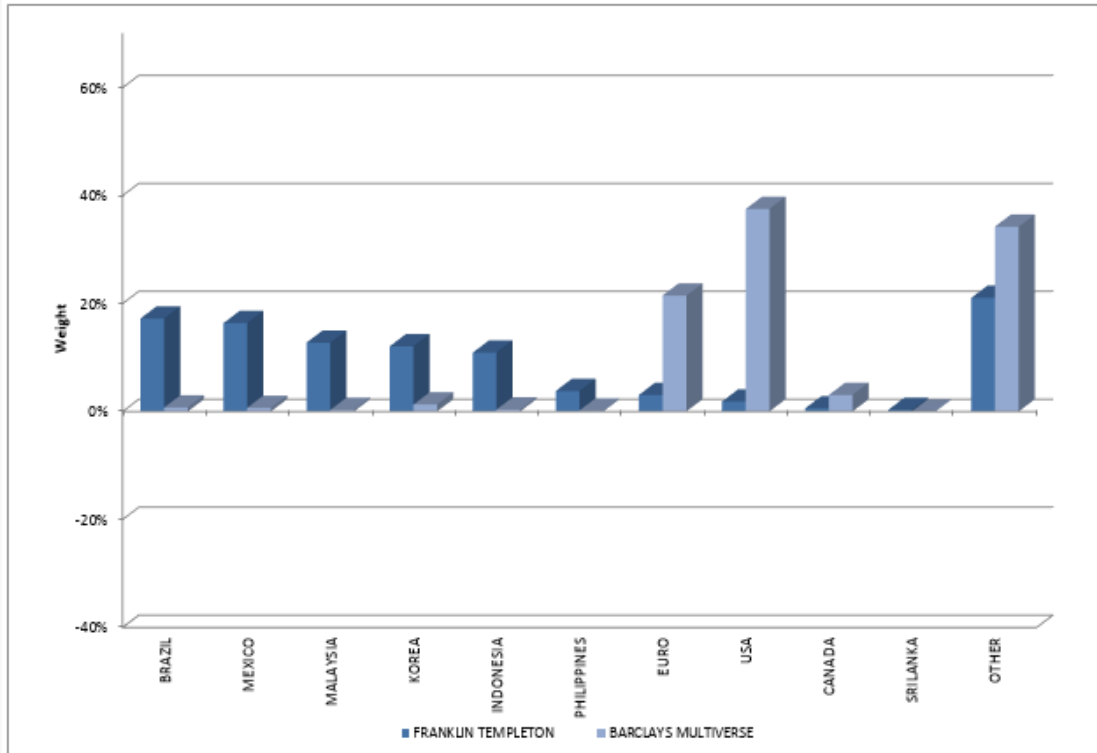
	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	5.0	11.2	8.8	4.6	7.9	7.9	9.0	6.8
25th Percentile	3.6	9.2	4.8	1.1	3.9	4.3	7.1	6.0
Median	2.4	6.6	3.0	-0.3	2.5	3.7	6.0	5.7
75th Percentile	1.5	4.4	-0.3	-1.8	1.7	2.8	4.5	4.7
95th Percentile	0.2	1.2	-3.4	-6.1	-3.4	1.1	2.9	4.0
# of Portfolios	42	42	42	39	34	27	20	14
● Global Fixed Income	1.1 (86)	1.2 (96)	-3.4 (96)	-2.8 (87)	0.6 (88)	2.6 (85)	-- (--)	-- (--)
▲ Barclays Multi-verse	3.0 (40)	9.1 (27)	8.6 (8)	0.5 (38)	2.8 (47)	1.9 (93)	3.6 (91)	4.5 (79)



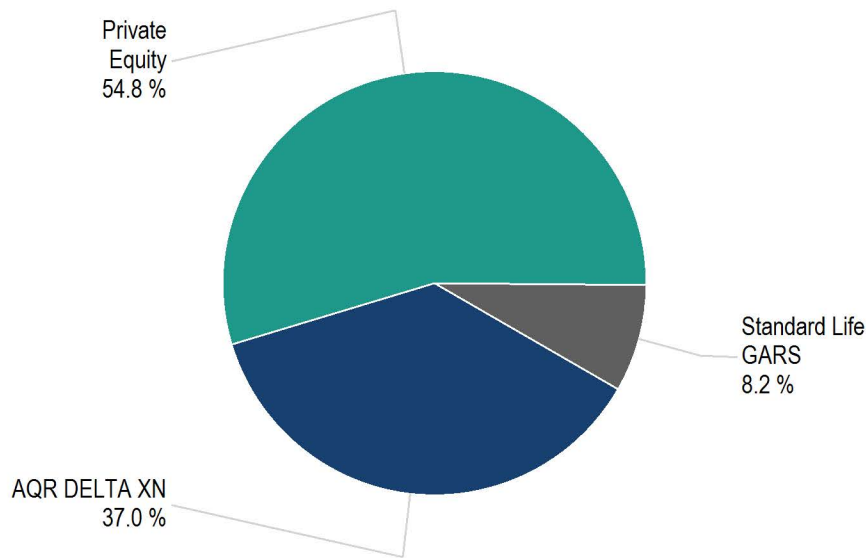
	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	4.7	11.0	9.7	4.4	5.4	6.3	10.1	7.1
25th Percentile	3.2	8.1	6.1	1.5	4.1	4.8	7.1	6.3
Median	2.2	6.3	3.4	0.1	3.1	2.9	5.5	5.0
75th Percentile	1.3	4.0	0.8	-1.4	1.8	1.5	3.7	4.3
95th Percentile	-0.3	-0.9	-4.0	-6.0	-0.4	0.1	2.8	3.5
# of Portfolios	186	183	174	166	161	129	104	73
● Franklin Templeton	1.1 (79)	1.2 (89)	-3.4 (95)	-2.9 (89)	0.6 (87)	2.6 (55)	-- (--)	-- (--)
▲ Barclays Multi-verse	3.0 (31)	9.1 (16)	8.6 (10)	0.5 (44)	2.8 (56)	1.9 (68)	3.6 (77)	4.5 (68)



COUNTRY	MARKET VALUE	FRANKLIN TEMPLETON	BARCLAYS MULTIVERSE	DIFF
BRAZIL	\$ 17,213	17.2%	0.7%	+16.5%
MEXICO	\$ 16,383	16.4%	0.7%	+15.7%
MALAYSIA	\$ 12,751	12.8%	0.3%	+12.4%
KOREA	\$ 12,074	12.1%	1.3%	+10.8%
INDONESIA	\$ 10,921	10.9%	0.4%	+10.6%
PHILIPPINES	\$ 3,803	3.8%	0.2%	+3.6%
PORTUGAL	\$ 2,907	2.9%	0.3%	+2.6%
USA	\$ 1,839	1.8%	37.5%	-35.7%
CANADA	\$ 587	0.6%	3.1%	-2.5%
OTHER	\$ 21,525	21.5%	55.5%	-33.9%
CASH	\$ -	0.0%	0.0%	0.0%
	\$ 100,004	100.0%	100.0%	0.0%



CURRENCY	MARKET VALUE	FRANKLIN TEMPLETON	BARCLAYS MULTIVERSE	DIFF
BRAZIL	\$ 17,213	17.2%	0.7%	+16.5%
MEXICO	\$ 16,383	16.4%	0.7%	+15.7%
MALAYSIA	\$ 12,751	12.8%	0.3%	+12.4%
KOREA	\$ 12,074	12.1%	1.3%	+10.8%
INDONESIA	\$ 10,921	10.9%	0.4%	+10.6%
PHILIPPINES	\$ 3,803	3.8%	0.2%	+3.6%
EURO	\$ 3,063	3.1%	21.5%	-18.4%
USA	\$ 1,839	1.8%	37.5%	-35.7%
CANADA	\$ 587	0.6%	3.1%	-2.5%
SRILANKA	\$ 293	0.3%	0.0%	+0.3%
OTHER	\$ 21,075	21.1%	34.3%	-13.2%
	\$ 100,004	100.0%	100.0%	0.0%



	Actual \$	Actual %	Manager Contribution to Excess Return %
AQR DELTA XN	\$150,450,044	37.0%	-0.9%
Private Equity	\$222,609,731	54.8%	-1.9%
Standard Life GARS	\$33,436,190	8.2%	-0.2%
Actual vs. Policy Weight Difference			0.0%
<b>Total</b>	<b>\$406,495,965</b>	<b>100.0%</b>	<b>-3.0%</b>

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	5.4%	4.1%	1.3	0.2	6.3%
Alternatives Allocation Index	4.2%	6.1%	0.7	--	0.0%
Private Equity	15.6%	9.2%	1.7	0.1	14.3%
Russell 3000 +3%	14.1%	11.2%	1.2	--	0.0%
Hedge Fund/Absolute Return	6.7%	5.3%	1.2	0.5	5.3%
Libor 1 month +4%	4.2%	0.1%	44.3	--	0.0%
AQR DELTA XN	6.9%	5.5%	1.3	0.5	5.5%
Libor 1 month +4%	4.2%	0.1%	44.3	--	0.0%



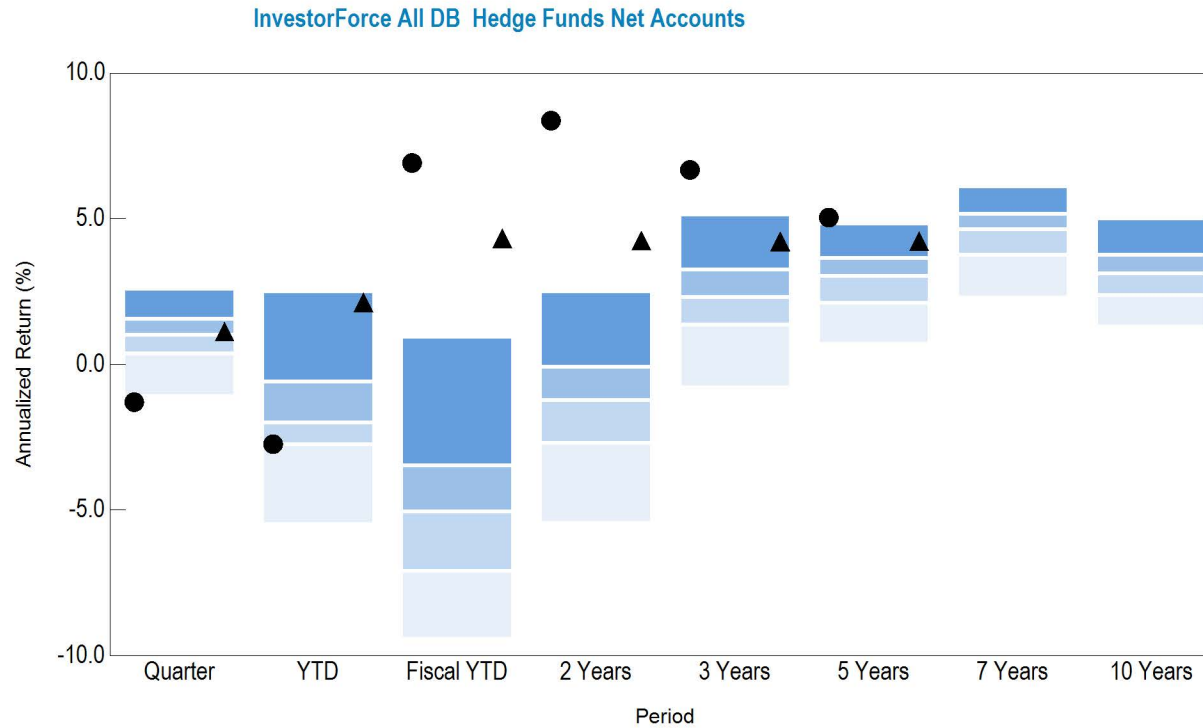
Statistics Summary

5 Years

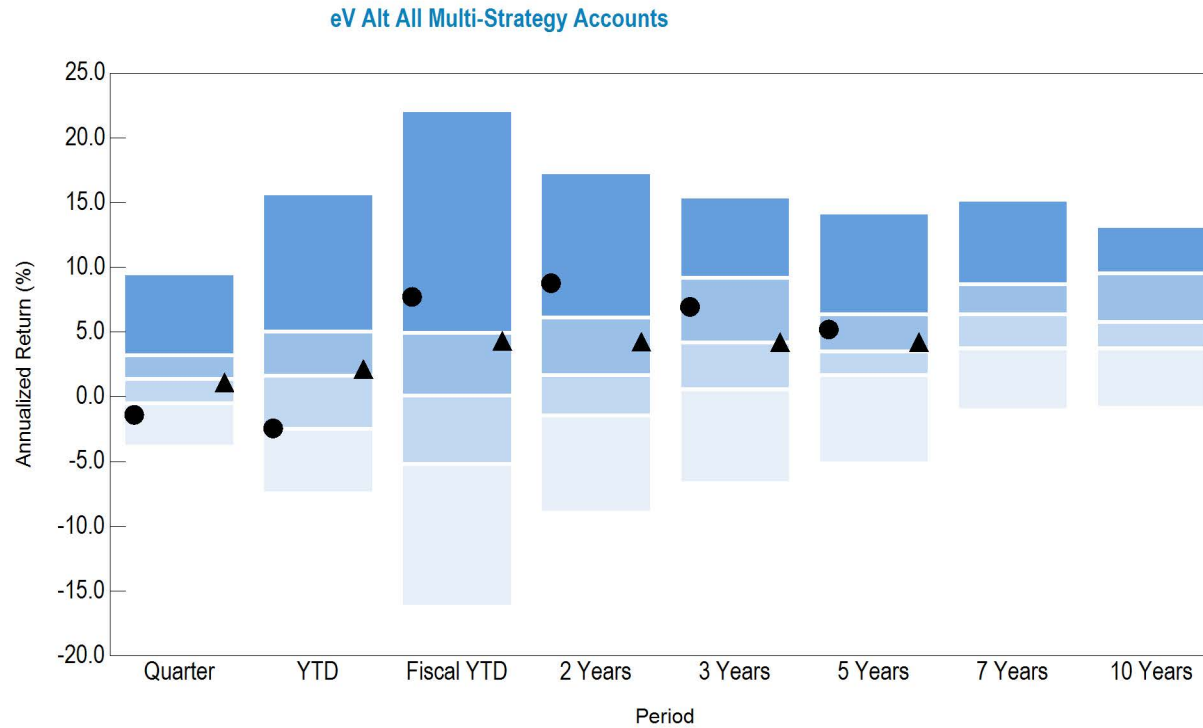
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	4.1%	6.0%	0.7	0.0	5.7%
Alternatives Allocation Index	4.0%	6.9%	0.6	--	0.0%
Private Equity	9.7%	9.8%	1.0	-0.3	15.6%
Russell 3000 +3%	14.6%	12.3%	1.2	--	0.0%

Hedge Fund/Absolute Return  
Peer Universe Comparison

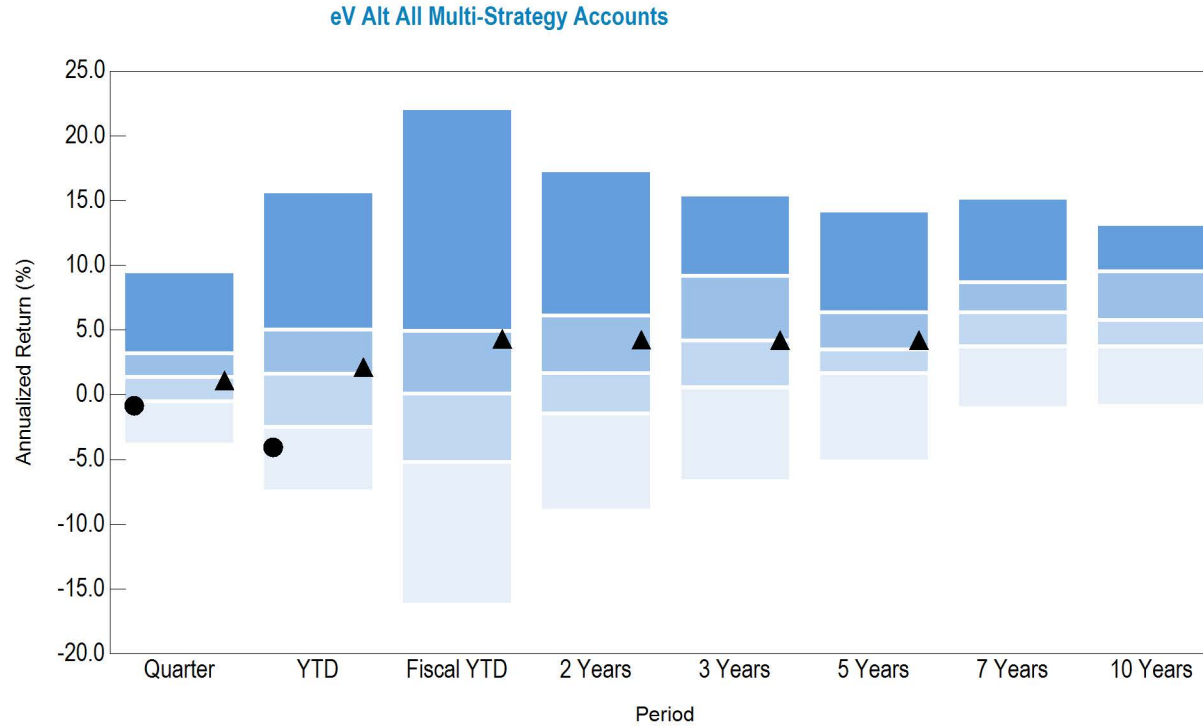
Period Ending: June 30, 2016



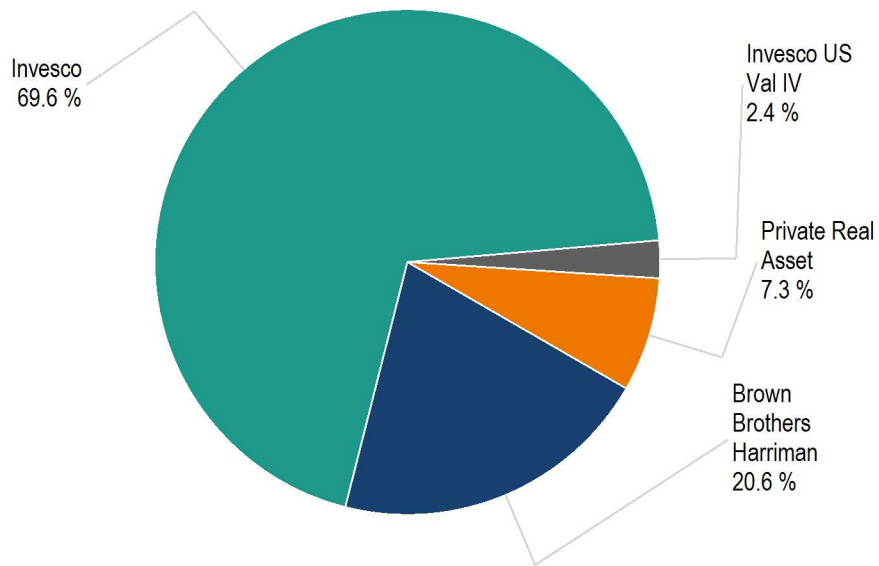
	Return (Rank)							
5th Percentile	2.6	2.5	0.9	2.5	5.1	4.8	6.1	5.0
25th Percentile	1.6	-0.6	-3.5	-0.1	3.3	3.7	5.2	3.8
Median	1.0	-2.0	-5.0	-1.2	2.3	3.0	4.7	3.1
75th Percentile	0.4	-2.7	-7.1	-2.7	1.4	2.1	3.8	2.4
95th Percentile	-1.1	-5.5	-9.4	-5.4	-0.8	0.7	2.3	1.3
# of Portfolios	245	245	243	239	227	193	139	72
● Hedge Fund/Absolute Return	-1.3 (96)	-2.7 (76)	6.9 (1)	8.4 (1)	6.7 (2)	5.0 (4)	-- (--)	-- (--)
▲ Libor 1 month +4%	1.1 (47)	2.1 (7)	4.3 (1)	4.2 (4)	4.2 (12)	4.2 (13)	-- (--)	-- (--)



	Return (Rank)							
5th Percentile	9.5	15.7	22.1	17.3	15.4	14.2	15.2	13.2
25th Percentile	3.2	5.0	4.9	6.2	9.2	6.4	8.7	9.6
Median	1.4	1.7	0.1	1.7	4.2	3.5	6.4	5.8
75th Percentile	-0.5	-2.4	-5.2	-1.4	0.6	1.7	3.8	3.8
95th Percentile	-3.8	-7.4	-16.2	-8.9	-6.6	-5.1	-1.0	-0.8
# of Portfolios	244	242	235	221	192	145	120	77
● AQR DELTA XN	-1.4 (82)	-2.4 (76)	7.7 (17)	8.8 (18)	6.9 (34)	5.2 (33)	-- (--)	-- (--)
▲ Libor 1 month +4%	1.1 (56)	2.1 (46)	4.3 (30)	4.2 (36)	4.2 (51)	4.2 (42)	-- (--)	-- (--)



	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	9.5	15.7	22.1	17.3	15.4	14.2	15.2	13.2
25th Percentile	3.2	5.0	4.9	6.2	9.2	6.4	8.7	9.6
Median	1.4	1.7	0.1	1.7	4.2	3.5	6.4	5.8
75th Percentile	-0.5	-2.4	-5.2	-1.4	0.6	1.7	3.8	3.8
95th Percentile	-3.8	-7.4	-16.2	-8.9	-6.6	-5.1	-1.0	-0.8
# of Portfolios	244	242	235	221	192	145	120	77
● Standard Life GARS	-0.8 (79)	-4.1 (84)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
▲ Libor 1 month +4%	1.1 (56)	2.1 (46)	4.3 (30)	4.2 (36)	4.2 (51)	4.2 (42)	-- (--)	-- (--)



	Actual \$	Actual %	Manager Contribution to Excess Return %
Invesco	\$236,273,638	69.6%	1.0%
Invesco US Val IV	\$8,289,405	2.4%	-0.0%
Brown Brother Harriman	\$70,052,988	11.5%	-0.1%
Private Real Asset	\$24,644,177	6.1%	-0.1%
Actual vs. Policy Weight Difference			-1.5%
<b>Total</b>	<b>\$339,260,208</b>	<b>89.6%</b>	<b>-0.7%</b>

**Statistics Summary**

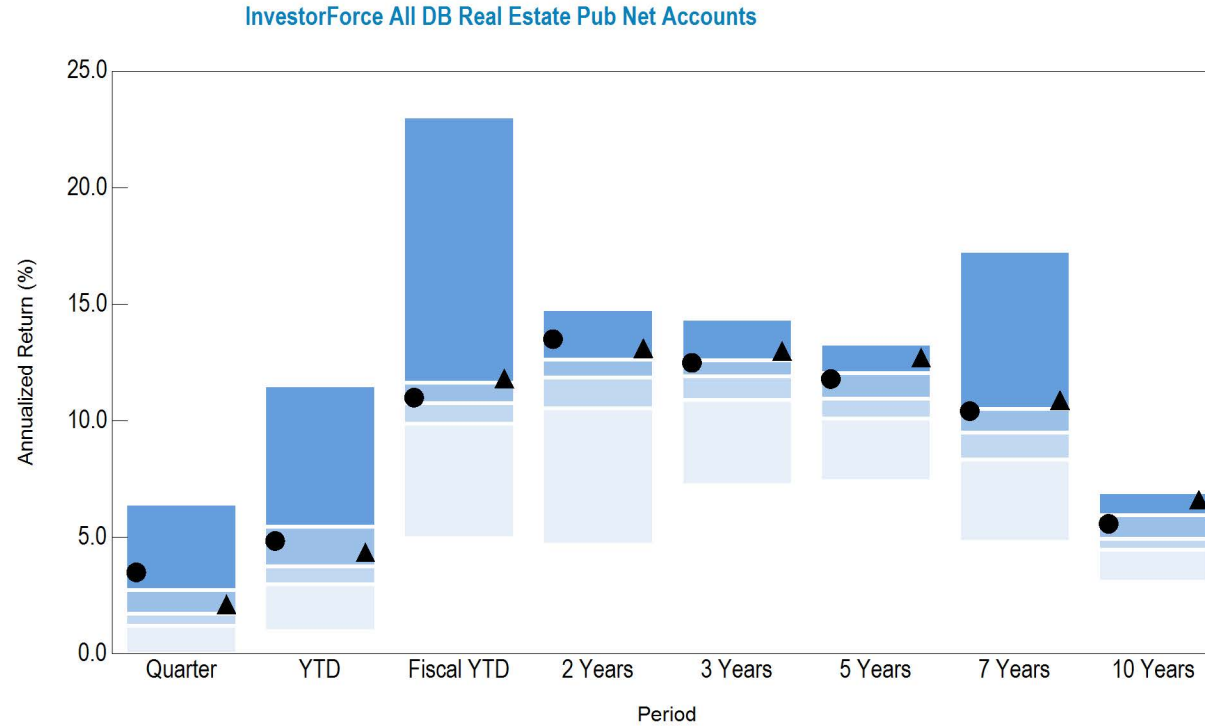
**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Real Estate	12.48%	5.33%	2.33	-0.30	1.68%
NCREIF ODCE	12.99%	5.25%	2.46	--	0.00%
Invesco	12.37%	5.29%	2.32	-0.36	1.74%
NCREIF ODCE	12.99%	5.25%	2.46	--	0.00%
TIPS	1.05%	3.27%	0.30	-0.91	1.38%
Barclays US TIPS	2.31%	4.27%	0.52	--	0.00%
Brown Brothers Harriman	1.05%	3.27%	0.30	-0.91	1.38%
Barclays US TIPS	2.31%	4.27%	0.52	--	0.00%

Statistics Summary

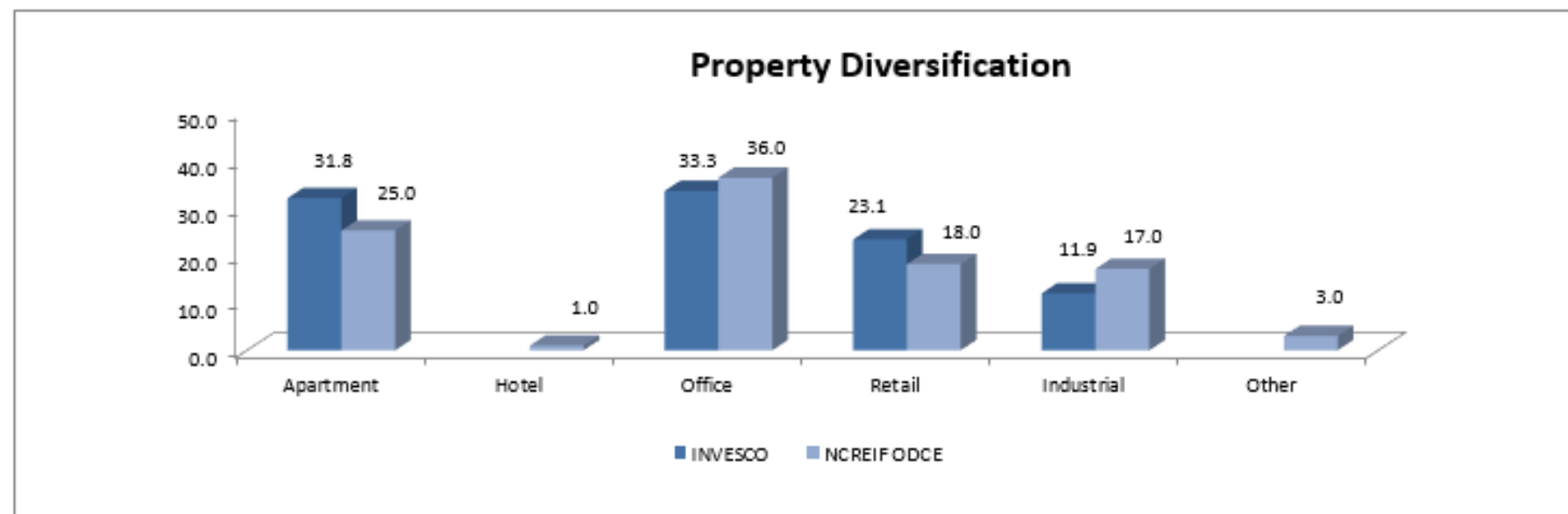
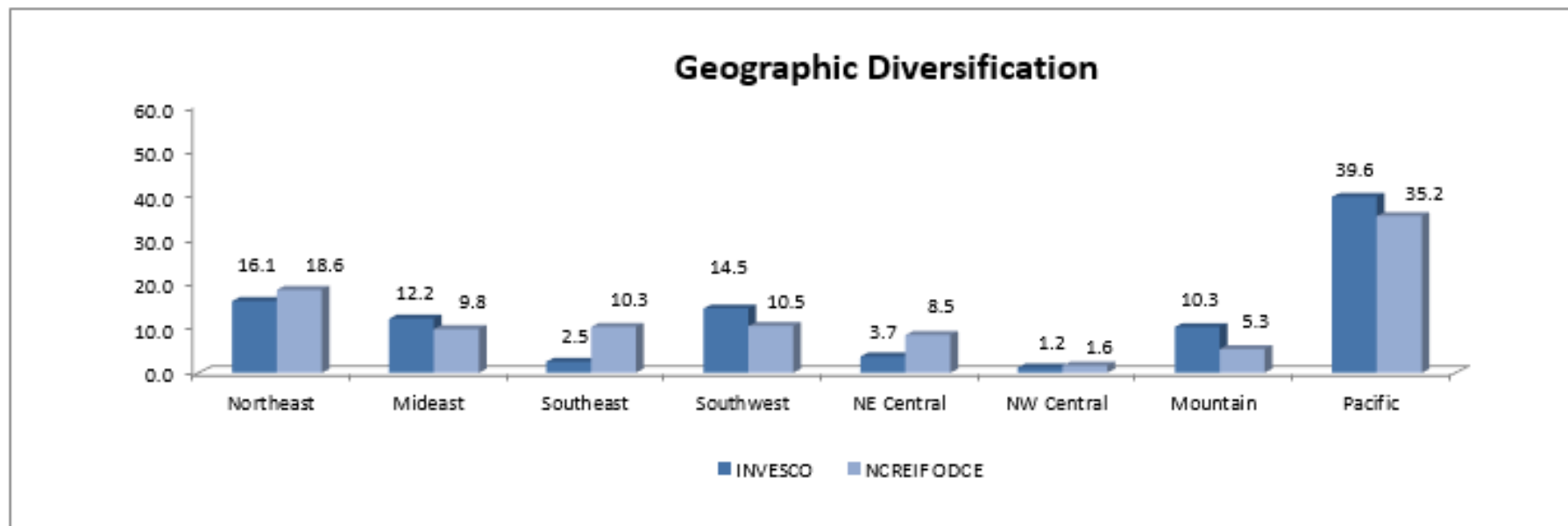
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error Rank
Real Estate	11.79%	5.06%	2.32	-0.56	41
NCREIF ODCE	12.71%	5.11%	2.48	--	1
Invesco	11.72%	5.04%	2.31	-0.59	--
NCREIF ODCE	12.71%	5.11%	2.48	--	--
TIPS	2.05%	4.67%	0.42	-0.51	--
Barclays US TIPS	2.63%	5.02%	0.51	--	--
Brown Brothers Harriman	2.05%	4.67%	0.42	-0.51	55
Barclays US TIPS	2.63%	5.02%	0.51	--	1



	Return (Rank)							
5th Percentile	6.4	11.5	23.0	14.8	14.4	13.3	17.3	6.9
25th Percentile	2.7	5.5	11.6	12.6	12.6	12.0	10.5	6.0
Median	1.7	3.8	10.8	11.9	11.9	10.9	9.5	5.0
75th Percentile	1.2	3.0	9.9	10.5	10.9	10.1	8.4	4.5
95th Percentile	0.0	1.0	5.0	4.7	7.3	7.4	4.8	3.1
# of Portfolios	84	84	84	81	79	68	61	32
● Real Estate	3.5 (15)	4.8 (27)	11.0 (40)	13.5 (13)	12.5 (26)	11.8 (35)	10.4 (26)	5.6 (32)
▲ NCREIF ODCE	2.1 (39)	4.4 (33)	11.8 (23)	13.1 (19)	13.0 (17)	12.7 (11)	10.9 (19)	6.6 (16)





INVESCO Core Real Estate  
Real Estate Valuation Analysis

Period Ending: June 30, 2016

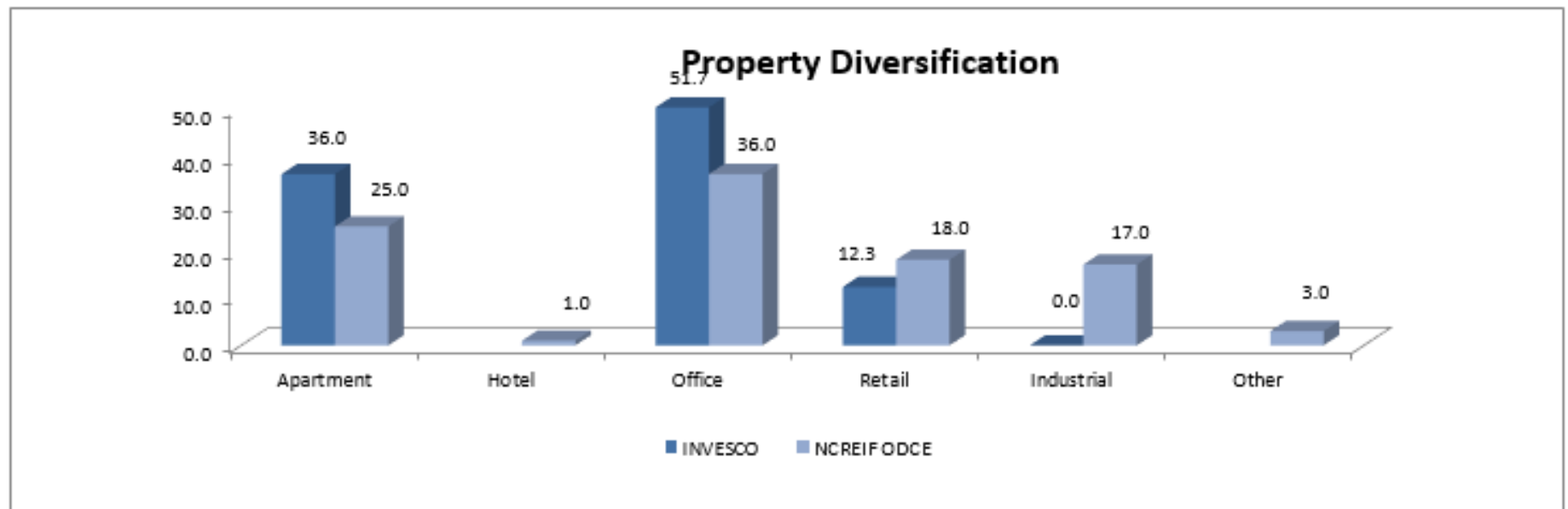
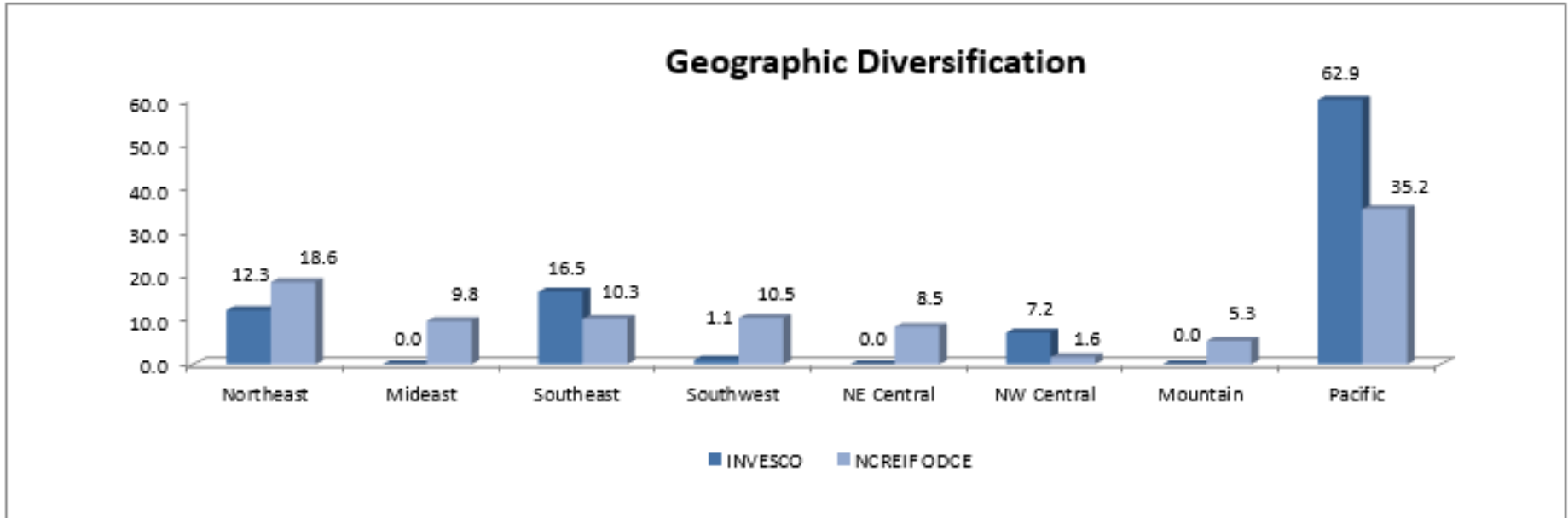
Property Name	MSA	Prior Quarter Carry Value	Current Quarter Carry Value	Net Market Value	Date Added to Fund	Last Valuation Date	SamCERA ownership as of 06/30/2016 2.94%
<b>APARTMENTS</b>							
Milestone Apt Portfolio	Various States - South	\$1,990,912	\$2,259,791	\$2,259,791	2Q06	June-16	\$66,449
Stoneridge Apartments	Pleasanton, CA	\$213,000,000	\$227,400,000	\$227,400,000	4Q06	June-16	\$6,686,727
Sterling Parc Apartments	Cedar Knolls, NJ	\$89,300,000	\$0	\$0	2Q07	Sold 2Q16	\$0
Instrata Pentagon City	Arlington, VA	\$149,000,000	\$151,000,000	\$90,898,591	3Q10	June-16	\$2,672,885
Ladd Tower	Portland, OR	\$135,000,000	\$135,000,000	\$78,054,498	4Q10	June-16	\$2,295,203
Legacy Fountain Plaza	San Jose, CA	\$141,957,508	\$144,957,952	\$144,957,952	1Q11	June-16	\$4,262,508
Instrata Gramercy (fka The Elektra)	New York, NY	\$153,000,000	\$173,100,000	\$100,035,452	1Q11	June-16	\$2,941,556
Instrata Brooklyn Heights (fka 75 Clinton Street)	Brooklyn, NY	\$64,400,000	\$70,800,000	\$70,800,000	1Q12	June-16	\$2,081,883
The Artisan Laguna Beach	Orange County, CA	\$158,000,000	\$158,000,000	\$96,373,195	3Q12	June-16	\$2,833,867
The GoodWynn	Atlanta, GA	\$99,200,000	\$100,000,000	\$63,013,638	4Q12	June-16	\$1,852,924
Instrata Hell's Kitchen	New York, NY	\$207,000,000	\$210,000,000	\$135,276,000	1Q13	June-16	\$3,977,809
Sunset Vine Tower	Los Angeles, CA	\$97,800,000	\$98,200,000	\$98,200,000	2Q13	June-16	\$2,887,584
The Ashton	Dallas, TX	\$115,000,000	\$118,000,000	\$60,752,962	4Q13	June-16	\$1,786,449
The Pointe at Westchester	West Chester, PA	\$67,500,000	\$67,600,000	\$67,600,000	4Q13	June-16	\$1,987,787
206 Bell	Seattle, WA	\$44,600,000	\$44,900,000	\$44,900,000	4Q13	June-16	\$1,320,290
Cadence Union Station	Denver, CO	\$85,100,000	\$88,000,000	\$50,832,578	1Q14	June-16	\$1,494,739
Joseph Arnold Lofts	Seattle, WA	\$69,300,000	\$72,000,000	\$37,716,694	2Q14	June-16	\$1,109,064
Verve	Denver, CO	\$108,000,000	\$108,000,000	\$108,000,000	3Q14	June-16	\$3,175,754
Broadstone Little Italy	San Diego CA	\$117,000,000	\$118,000,000	\$64,737,030	3Q14	June-16	\$1,903,601
33 Tehama	San Francisco, CA	\$94,388,745	\$106,251,501	\$106,250,579	3Q14	June-16	\$3,124,312
The Parker	Portland, OR	\$65,200,000	\$66,000,000	\$33,016,865	1Q15	June-16	\$970,865
Legacy West Apartments	Plano, TX	\$30,689,399	\$47,216,576	\$47,216,577	1Q15	June-16	\$1,388,410
Village at Park Place	Irvine, CA	\$61,695,139	\$70,733,481	\$70,150,083	2Q15	June-16	\$2,062,772
Wheaton 121	Wheaton, IL	\$91,500,000	\$92,700,000	\$92,700,000	2Q15	June-16	\$2,725,856
Jefferson Marketplace	Washington, DC	\$142,000,000	\$142,000,000	\$71,557,412	4Q15	June-16	\$2,104,155
Retreat at Park Meadows	Littleton, CO	\$126,000,000	\$126,000,000	\$126,000,000	4Q15	June-16	\$3,705,047
North Water	Chicago, IL	\$246,000,000	\$256,000,000	\$256,000,000	1Q16	June-16	\$7,527,714
2270 Broadway	Oakland, CA	\$18,935,211	\$18,938,467	\$18,938,464	1Q16	June-16	\$556,888
Runway at Playa Vista -Apartments	Playa Vista, CA	\$130,525,926	\$149,460,000	\$85,992,500	1Q16	June-16	\$2,528,621
Clayton Lane Apartments	Denver, CO	\$0	\$32,048,746	\$32,048,746	1Q16	June-16	\$942,398
Biscayne 27	Miami, FL	\$0	\$15,676,778	\$15,676,779	2Q16	Acq 2Q16	\$460,978
Flats 8300	Washington DC	\$0	\$207,000,000	\$103,500,000	2Q16	Acq 2Q16	\$3,043,431
		<b>\$3,123,082,840</b>	<b>\$3,417,243,292</b>	<b>\$2,600,856,386</b>			<b>\$76,478,526</b>
<b>INDUSTRIAL</b>							
Arjons Industrial Park	San Diego CA	\$38,400,000	\$39,500,000	\$39,500,000	2Q04	June-16	\$1,161,503
Gateway Business Park	Dallas TX	\$13,000,000	\$13,100,000	\$13,100,000	2Q04	June-16	\$385,207
Hayward Industrial	Oakland CA	\$142,100,000	\$151,700,000	\$151,700,000	3Q04-3Q07	June-16	\$4,460,759
Lackman Park	Kansas City MO-KS	\$24,500,000	\$24,300,000	\$24,300,000	2Q04	June-16	\$714,545
Crossroads Industrial	Kansas City MO-KS	\$8,100,000	\$7,900,000	\$7,900,000	1Q06	June-16	\$232,301
Oakesdale Commerce Center	Seattle - Belle - Eve WA	\$46,800,000	\$49,900,000	\$49,900,000	1Q06	June-16	\$1,467,316
South Bay Industrial	Los Angeles, CA	\$43,700,000	\$45,100,000	\$45,100,000	4Q06	June-16	\$1,326,171
VIP Holdings I	Chicago, IL	\$73,894,809	\$0	\$0	2Q06	Sold 2Q16	\$0
Tempe Commerce Park	Phoenix - Mesa AZ	\$60,300,000	\$0	\$0	4Q07	Sold 2Q16	\$0
Steeplechase 95 International Business Park	Capitol Heights, MD	\$91,600,000	\$92,700,000	\$92,700,000	1Q11	June-16	\$2,725,856
Airport Trade Center Portfolio	Dallas, TX	\$119,800,000	\$119,900,000	\$119,900,000	1Q11	June-16	\$3,525,675
IE Logistics	San Bernardino, CA	\$128,400,000	\$129,600,000	\$129,600,000	3Q11	June-16	\$3,810,905
Railhead Drive Industrial	Dallas, TX	\$62,000,000	\$62,000,000	\$62,000,000	4Q11	June-16	\$1,823,118
Empire Gateway aka Chino South Logistics Center	Chino, CA	\$232,000,000	\$241,000,000	\$241,000,000	4Q12	June-16	\$7,086,637
SFO Logistics Center	San Francisco, CA	\$130,000,000	\$142,000,000	\$142,000,000	4Q13	June-16	\$4,175,529
Miami Industrial Portfolio	Various ,FL	\$87,638,765	\$91,208,994	\$55,156,564	1Q16	June-16	\$1,621,886
OMP Burbank	Los Angeles, CA	\$0	\$67,139,802	\$67,139,802	2Q16	Acq 2Q16	\$1,974,255
		<b>\$1,302,233,574</b>	<b>\$1,277,048,796</b>	<b>\$1,240,996,366</b>			<b>\$36,491,662</b>

INVESCO Core Real Estate  
Real Estate Valuation Analysis

Period Ending: June 30, 2016

OFFICE							
55 Cambridge Parkway	Boston MA - NH	\$260,000,000	\$252,000,000	\$252,000,000	4Q06	June-16	\$7,410,093
Valencia Town Center	Valencia, CA	\$130,000,000	\$0	\$0	3Q07	Sold 2Q16	\$0
The Executive Building	Washington, D.C.	\$231,000,000	\$231,000,000	\$231,000,000	2Q08	June-16	\$6,792,586
1111 Pennsylvania Avenue	Washington, D.C.	\$307,000,000	\$310,000,000	\$310,000,000	4Q10	June-16	\$9,115,591
1800 Larimer	Denver, CO	\$309,000,000	\$314,000,000	\$314,000,000	1Q11	June-16	\$9,233,212
Hillview Office	San Jose, CA	\$77,000,000	\$78,000,000	\$78,000,000	3Q12	June-16	\$2,293,600
Williams Tower	Houston, TX	\$590,000,000	\$585,000,000	\$399,878,683	1Q13	June-16	\$11,758,486
Westlake Park Place	Westlake Village, CA	\$111,000,000	\$111,000,000	\$111,000,000	4Q13	June-16	\$3,263,970
101 Second	San Francisco, CA	\$366,000,000	\$371,000,000	\$371,000,000	1Q14	June-16	\$10,909,304
Energy Crossing II	Houston, TX	\$113,000,000	\$113,000,000	\$113,000,000	2Q14	June-16	\$3,322,780
1776 Wilson Blvd.	Arlington, VA	\$94,700,000	\$95,000,000	\$95,000,000	3Q14	June-16	\$2,793,488
631 Howard	San Francisco, CA	\$90,200,000	\$90,500,000	\$90,500,000	3Q14	June-16	\$2,661,164
Barton Oaks	Austin, TX	\$83,100,000	\$84,500,000	\$84,500,000	3Q14	June-16	\$2,484,734
Hercules East and South Campus	Los Angeles, CA	\$147,758,313	\$149,711,997	\$149,711,997	3Q14	June-16	\$4,402,301
The Reserve	Playa Vista, CA	\$331,628,621	\$352,073,107	\$352,073,108	1Q15	June-16	\$10,352,756
Fort Point Portfolio	Boston, MA	\$206,752,386	\$210,580,355	\$121,281,921	2Q15	June-16	\$3,566,311
Legacy West Office	Plano, TX	\$47,312,824	\$33,962,800	\$33,962,801	1Q15	June-16	\$998,681
Summit IV	Aliso Viejo, CA	\$109,000,000	\$113,000,000	\$74,488,295	2Q15	June-16	\$2,190,338
1101 Westlake	Seattle, WA	\$85,300,000	\$85,300,000	\$85,300,000	3Q15	June-16	\$2,508,258
		<b>\$3,689,752,144</b>	<b>\$3,579,628,259</b>	<b>\$3,266,696,805</b>			<b>\$96,057,652</b>
RETAIL							
Broadway at Surf	Chicago IL	\$32,600,000	\$33,100,000	\$33,100,000	2Q04	June-16	\$973,310
Chandler Pavilion	Phoenix - Mesa AZ	\$22,100,000	\$22,700,000	\$22,700,000	2Q04	June-16	\$667,497
Matthews Township	Charlotte - G - RH NC-SC	\$25,500,000	\$26,000,000	\$26,000,000	2Q04	June-16	\$764,533
Windward Commons	Atlanta GA	\$24,400,000	\$24,800,000	\$24,800,000	2Q04	June-16	\$729,247
Cityline at Tenley	Washington, D.C.	\$55,200,000	\$58,100,000	\$58,100,000	4Q05	June-16	\$1,708,438
Ridgehaven Shopping Center	Minnetonka, MN	\$42,400,000	\$42,600,000	\$42,600,000	4Q05	June-16	\$1,252,659
The Beacon Retail	San Francisco, CA	\$66,000,000	\$65,000,000	\$65,000,000	1Q06	June-16	\$1,911,334
The Beacon Garage (units)	San Francisco, CA	\$30,700,000	\$35,600,000	\$35,600,000	1Q06	June-16	\$1,046,823
The Beacon Office (210 King)	San Francisco, CA	\$14,400,000	\$23,000,000	\$23,000,000	1Q15	June-16	\$676,318
Hawthorne Plaza	Overland Park, KS	\$54,300,000	\$54,800,000	\$54,800,000	4Q07	June-16	\$1,611,401
The Loop	Boston MA - NH	\$96,400,000	\$96,400,000	\$96,400,000	1Q08	June-16	\$2,834,655
Westbank Market	Austin, TX	\$59,600,000	\$60,300,000	\$60,300,000	3Q10	June-16	\$1,773,129
910 Lincoln Road	Miami, FL	\$36,100,000	\$36,600,000	\$36,600,000	4Q10	June-16	\$1,076,228
Lake Pointe Village	Houston, TX	\$76,050,000	\$76,350,000	\$76,350,000	4Q11	June-16	\$2,245,082
Safeway Kapahulu	Hawaii	\$85,200,000	\$85,700,000	\$49,462,474	4Q11	June-16	\$1,454,451
Safeway Burlingame	San Francisco, CA	\$54,800,000	\$56,600,000	\$33,779,398	4Q11	June-16	\$993,288
Shamrock Plaza	Oakland, CA	\$37,900,000	\$38,100,000	\$21,838,864	4Q11	June-16	\$642,175
Pavilions Marketplace	West Hollywood, CA	\$58,300,000	\$62,200,000	\$37,472,562	1Q12	June-16	\$1,101,886
130 Prince	New York, NY	\$218,000,000	\$219,000,000	\$219,000,000	2Q12	June-16	\$6,439,724
Safeway Pleasanton	Pleasanton, CA	\$80,200,000	\$81,200,000	\$81,200,000	4Q12	June-16	\$2,387,697
Liberty Wharf	Boston, MA	\$89,400,000	\$89,700,000	\$55,834,736	4Q12	June-16	\$1,641,828
Shops at Legacy	Plano, TX	\$109,710,916	\$109,710,916	\$109,710,916	3Q13	June-16	\$3,226,064
Pasadena Commons	Pasadena, CA	\$50,900,000	\$51,800,000	\$51,800,000	4Q14	June-16	\$1,523,186
Rush Street Retail	Chicago, IL	\$15,300,000	\$15,500,000	\$15,500,000	4Q14	June-16	\$455,780
Legacy West Retail	Plano, TX	\$49,870,274	\$124,005,640	\$103,492,772	1Q15	June-16	\$3,043,219
Legacy West Land	Plano, TX	\$0	\$8,469,173	\$8,469,173	2Q16	June-16	\$249,037
131-137 Spring Street	New York, NY	\$224,800,000	\$230,887,714	\$118,628,515	3Q15	June-16	\$3,488,287
Runway at Playa Vista - Retail	Playa Vista, CA	\$128,345,953	\$118,720,000	\$56,312,500	1Q16	June-16	\$1,655,877
139 Spring	New York, NY	\$111,059,200	\$116,017,200	\$116,017,200	1Q16	June-16	\$3,411,501
Clayton Lane	Denver, CO	\$168,062,319	\$142,504,211	\$95,683,173	1Q16	June-16	\$2,813,576
4th & Colorado	Santa Monica, CA	\$12,597,554	\$12,640,000	\$12,640,000	1Q16	June-16	\$371,681
Shops at Crystals	Las Vegas, NV	\$0	\$271,980,000	\$134,480,000	2Q16	Acq 2Q16	\$3,954,402
		<b>\$2,130,196,216</b>	<b>\$2,490,084,854</b>	<b>\$1,976,672,283</b>			<b>\$58,124,310</b>
<b>Portfolio Total</b>		<b>\$10,245,264,774</b>	<b>\$10,764,005,201</b>	<b>\$9,085,221,840</b>			<b>\$267,152,151</b>





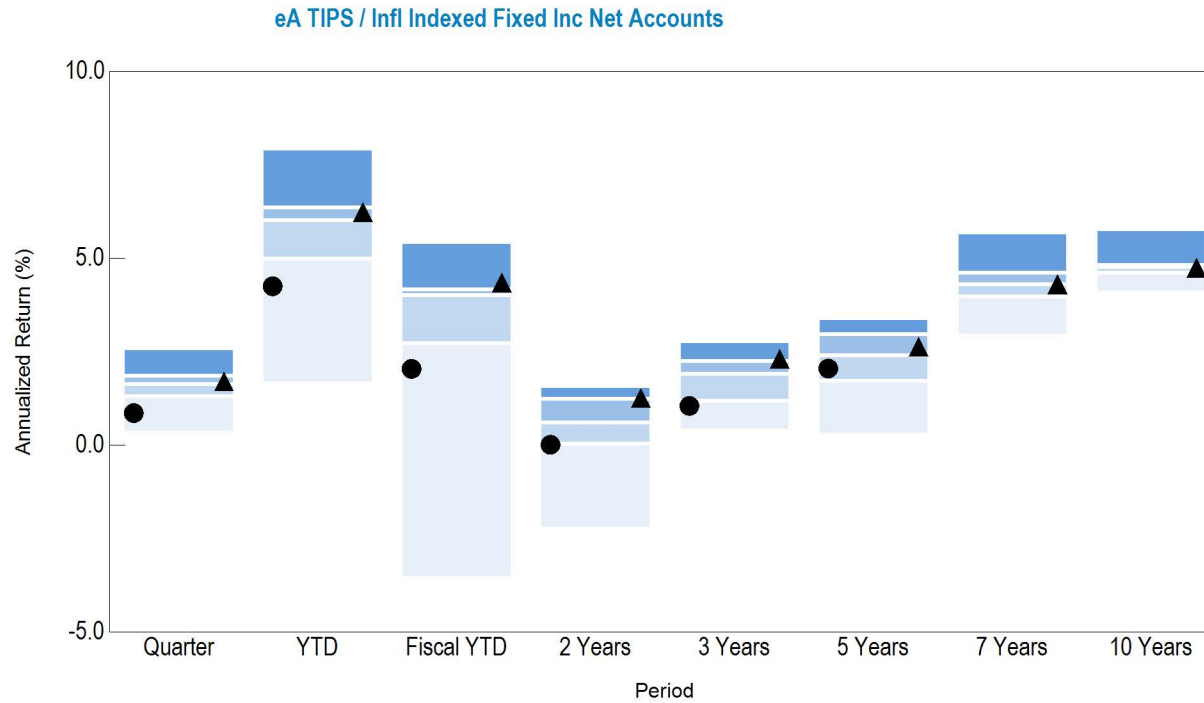
INVESCO US Val IV  
Real Estate Valuation Analysis

Period Ending: June 30, 2016

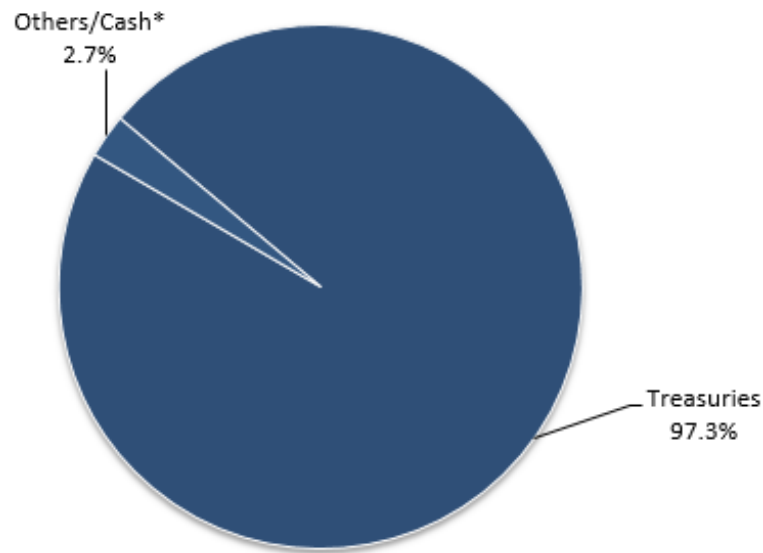
Property Name	Region Classification	Geographic Classification	MSA	Prior Quarter Carry Value	Current Quarter Carry Value	Net Market Value	Date Added to Fund	Last Valuation Date
<b>APARTMENTS</b>								
Brookwood	West	Southeast	Atlanta, GA	\$42,840,948	\$53,711,062	\$21,792,169	3Q14	June-16
Broadstone Harbor Beach	East	Southeast	Ft. Lauderdale, FL	\$53,681,509	\$65,349,263	\$37,079,196	1Q15	June-16
Downtown East	MidWest	West North Central	Minneapolis, MN	\$47,169,752	\$51,940,118	\$21,978,534	2Q15	June-16
Wyndham Park	West	Pacific	Portland, OR	\$73,500,000	\$81,000,000	\$39,305,521	2Q15	June-16
Legacy West Mid-Rise	MidWest	Southwest	Dallas, TX	\$0	\$7,858,777	\$7,877,255	2Q16	June-16
				<b>\$217,192,209</b>	<b>\$259,859,221</b>	<b>\$128,032,675</b>		
<b>INDUSTRIAL</b>								
<b>OFFICE</b>								
55 Hawthorne	East	Pacific	San Francisco, CA	\$126,100,000	\$126,100,000	\$64,407,854	3Q14	June-16
Silicon Valley Towers	East	Pacific	San Jose, CA	\$80,000,000	\$87,000,000	\$42,299,743	2Q15	June-16
Post 3rd	West	Pacific	Los Angeles, CA	\$77,200,000	\$78,528,274	\$31,109,958	1Q16	June-16
LAM Campus	West	Pacific	San Jose, CA	\$0	\$82,000,000	\$82,100,000	2Q16	June-16
				<b>\$283,300,000</b>	<b>\$373,628,274</b>	<b>\$219,917,555</b>		
<b>RETAIL</b>								
Ledgewood Mall	East	Northeast	Roxbury, NJ	\$30,000,000	\$30,000,000	\$15,590,619	3Q15	June-16
Paramus Retail Portfolio	East	Northeast	Paramus, NJ	\$58,800,000	\$58,800,000	\$22,224,942	4Q15	June-16
				<b>\$88,800,000</b>	<b>\$88,800,000</b>	<b>\$37,815,561</b>		
			<b>Portfolio Total</b>	<b>\$589,292,209</b>	<b>\$722,287,495</b>	<b>\$385,765,791</b>		

TIPS / Inflation Indexed Fixed Income  
Peer Universe Comparison

Period Ending: June 30, 2016



	Return (Rank)							
	Quarter	YTD	Fiscal YTD	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	2.6	7.9	5.4	1.6	2.8	3.4	5.7	5.8
25th Percentile	1.9	6.4	4.2	1.3	2.3	3.0	4.6	4.8
Median	1.6	6.0	4.0	0.6	1.9	2.4	4.3	4.8
75th Percentile	1.3	5.0	2.7	0.1	1.2	1.7	4.0	4.6
95th Percentile	0.3	1.7	-3.5	-2.2	0.4	0.3	2.9	4.1
# of Portfolios	23	23	23	21	20	17	12	9
● Brown Brothers Harriman	0.9 (89)	4.3 (84)	2.0 (84)	0.0 (77)	1.1 (77)	2.1 (67)	-- (--)	-- (--)
▲ Barclays US TIPS	1.7 (40)	6.2 (34)	4.4 (18)	1.3 (25)	2.3 (21)	2.6 (33)	4.3 (56)	4.7 (55)



Sector	Account Weight	Barclays TIPS	
		Index	Difference
Treasuries	97.3%	100.0%	-2.7%
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*	2.7%	0.0%	2.7%
<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	\$	70,052,988
Current Coupon		0.77
Yield to Maturity		-0.05
Average Life		
Duration		5.80
Quality		GOV

Barclays TIPS	
Total Number of Securities	37
Total Market Value	N/A
Current Coupon	0.89
Yield to Maturity	-0.13
Average Life	
Duration	7.89
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

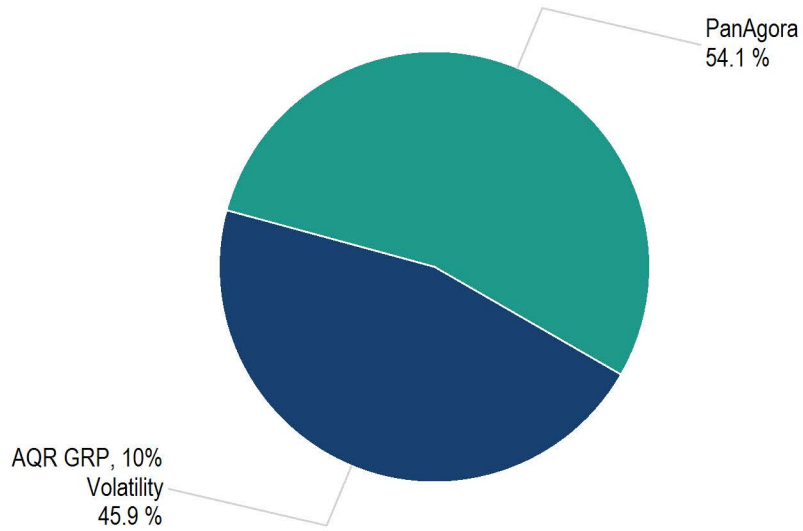
Average Life	
Range	% Held
0.0 - 3.0	13.2
3.0 - 5.0	8.6
5.0 - 10.0	56.0
10.0- 15.0	11.4
15.0+	10.9
Unclassified	0.0

Duration	
Range	% Held
0.0 - 3.0	8.9
3.0 - 5.0	12.8
5.0 - 10.0	56.0
10.0- 15.0	11.1
15.0+	11.2
Unclassified	0.0

Quality	
Range	% Held
Govt (10)	97.3
Aaa (10)	0.0
Aa (9)	0.0
A (8)	0.0
Baa (7)	0.0
Below Baa (6-1)	0.0
Other	2.7

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





	Actual \$	Actual %	Manager Contribution to Excess Return %
AQR GRP, 10% Volatility	\$128,642,392	45.9%	1.5%
PanAgora	\$151,693,965	54.1%	3.0%
Actual vs. Policy Weight Difference			0.0%
<b>Total</b>	<b>\$280,336,357</b>	<b>100.0%</b>	<b>4.5%</b>

**Statistics Summary**

**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Risk Parity	7.3%	8.7%	0.8	-0.2	6.5%
60/40 Russell 3000/Barclays Aggregate	8.4%	6.9%	1.2	--	0.0%
AQR GRP, 10% Volatility	4.0%	8.9%	0.4	-0.7	6.5%
60/40 Russell 3000/Barclays Aggregate	8.4%	6.9%	1.2	--	0.0%

**Statistics Summary**

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Risk Parity	5.9%	9.3%	0.6	-0.4	7.0%
60/40 Russell 3000/Barclays Aggregate	8.6%	7.4%	1.2	--	0.0%
AQR GRP, 10% Volatility	4.0%	9.4%	0.4	-0.7	7.0%
60/40 Russell 3000/Barclays Aggregate	8.6%	7.4%	1.2	--	0.0%

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: June 30, 2016

	3 Mo (%)	YTD (%)	Fiscal YTD (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Total Fund</b>	<b>2.1</b>	<b>3.6</b>	<b>1.0</b>	<b>2.4</b>	<b>7.2</b>	<b>7.1</b>	<b>5.2</b>
Policy Index	2.2	3.8	1.0	1.9	7.0	7.0	5.9
Allocation Index	2.3	3.9	1.1	1.9	7.0	--	--
<b>Total Fund ex Overlay</b>	<b>1.9</b>	<b>3.3</b>	<b>0.7</b>	<b>2.2</b>	<b>7.1</b>	<b>7.0</b>	<b>5.2</b>
Policy Index	2.2	3.8	1.0	1.9	7.0	7.0	5.9
Allocation Index	2.3	3.9	1.1	1.9	7.0	--	--
<b>Public Equity</b>	<b>1.2</b>	<b>1.9</b>	<b>-1.9</b>	<b>0.7</b>	<b>7.7</b>	<b>7.7</b>	<b>4.9</b>
Blended Public Equity Index	1.4	1.8	-3.2	-0.4	7.2	7.3	5.5
<b>US Equity</b>	<b>2.0</b>	<b>2.6</b>	<b>1.0</b>	<b>4.2</b>	<b>10.4</b>	<b>10.9</b>	<b>6.4</b>
Blended US Equity Index	2.7	3.5	1.1	4.1	10.7	11.2	7.3
Russell 3000	2.6	3.6	2.1	4.7	11.1	11.6	7.4
<b>Large Cap Equity</b>	<b>2.3</b>	<b>2.9</b>	<b>2.9</b>	<b>5.7</b>	<b>11.4</b>	<b>11.5</b>	<b>6.7</b>
Russell 1000	2.5	3.7	2.9	5.1	11.5	11.9	7.5
Barrow Hanley	1.7	0.2	-3.6	2.2	9.0	10.6	--
Russell 1000 Value	4.6	6.3	2.9	3.5	9.9	11.4	6.1
BlackRock S&P 500 Index	2.5	3.9	4.0	5.8	11.7	--	--
S&P 500	2.5	3.8	4.0	5.7	11.7	12.1	7.4
Brown Advisory	0.0	-1.3	1.1	5.5	10.0	--	--
Russell 1000 Growth	0.6	1.4	3.0	6.7	13.1	12.3	8.8
DE Shaw	4.3	5.1	4.9	7.5	12.8	13.6	--
Russell 1000	2.5	3.7	2.9	5.1	11.5	11.9	7.5
<b>Small Cap Equity</b>	<b>0.6</b>	<b>0.6</b>	<b>-7.5</b>	<b>-2.3</b>	<b>6.2</b>	<b>8.5</b>	<b>4.8</b>
Russell 2000	3.8	2.2	-6.7	-0.3	7.1	8.4	6.2
The Boston Co	2.5	7.0	-1.0	0.7	7.9	10.6	--
Russell 2000 Value	4.3	6.1	-2.6	-0.9	6.4	8.1	5.2
Chartwell	-1.4	-5.6	-13.8	-5.2	4.5	7.6	6.6
Russell 2000 Growth	3.2	-1.6	-10.8	0.1	7.7	8.5	7.1

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: June 30, 2016

	3 Mo (%)	YTD (%)	Fiscal YTD (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>International Equity</b>	<b>0.0</b>	<b>1.0</b>	<b>-6.4</b>	<b>-5.2</b>	<b>3.1</b>	<b>1.7</b>	<b>2.0</b>
MSCI ACWI ex US IMI	-0.5	-0.6	-9.2	-6.9	2.0	0.8	2.4
MSCI EAFE Gross	-1.2	-4.0	-9.7	-6.8	2.5	2.1	2.1
<b>Developed Markets</b>	<b>-0.2</b>	<b>0.0</b>	<b>-6.4</b>	<b>-4.8</b>	<b>3.5</b>	<b>2.2</b>	<b>2.3</b>
MSCI ACWI ex USA Gross	-0.4	-0.7	-9.8	-7.4	1.6	0.6	2.3
Baillie Gifford	-0.2	0.2	-4.7	-2.6	5.0	--	--
MSCI ACWI ex US	-0.4	-0.7	-9.8	-7.4	2.4	--	--
MSCI ACWI ex US Growth	0.6	0.4	-5.8	-3.8	4.2	--	--
BlackRock EAFE Index	-1.2	-4.1	-9.8	-6.9	--	--	--
MSCI EAFE	-1.5	-4.4	-10.2	-7.2	2.1	1.7	1.6
MSCI EAFE Gross	-1.2	-4.0	-9.7	-6.8	2.5	2.1	2.1
FIAM Equity	-0.2	1.0	-3.8	-2.0	5.4	--	--
MSCI ACWI ex US Small Cap Gross	-0.7	0.0	-5.1	-3.9	5.3	2.7	4.5
Mondrian	0.5	2.2	-6.6	-6.5	2.7	2.1	2.8
MSCI ACWI ex USA Value Gross	-1.5	-1.8	-13.7	-10.9	-0.3	-0.8	1.4
MSCI ACWI ex USA Gross	-0.4	-0.7	-9.8	-7.4	1.6	0.6	2.3
<b>Emerging Markets</b>	<b>1.4</b>	<b>10.4</b>	<b>-7.1</b>	<b>-8.2</b>	<b>-0.5</b>	<b>--</b>	<b>--</b>
MSCI Emerging Markets Gross	0.8	6.6	-11.7	-8.3	-1.2	-3.4	3.9
Parametric Core	1.4	10.4	--	--	--	--	--
MSCI Emerging Markets Gross	0.8	6.6	-11.7	-8.3	-1.2	-3.4	3.9
<b>Fixed Income</b>	<b>3.0</b>	<b>4.9</b>	<b>2.7</b>	<b>1.9</b>	<b>3.7</b>	<b>4.6</b>	<b>5.6</b>
Blended Fixed Income Index	2.7	6.5	5.8	2.9	3.8	3.5	5.1
<b>US Fixed Income</b>	<b>3.4</b>	<b>5.6</b>	<b>3.9</b>	<b>2.8</b>	<b>4.3</b>	<b>4.9</b>	<b>5.7</b>
Blended US Fixed Index	2.6	6.0	5.3	3.3	3.9	3.9	5.3
<b>Core Fixed</b>	<b>2.7</b>	<b>4.9</b>	<b>4.9</b>	<b>3.4</b>	<b>4.3</b>	<b>4.5</b>	<b>5.3</b>
Barclays Aggregate	2.2	5.3	6.0	3.9	4.1	3.8	5.1

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: June 30, 2016

	3 Mo (%)	YTD (%)	Fiscal YTD (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
FIAM Bond	2.8	6.1	6.3	4.1	4.6	4.5	5.7
Western TRU	2.6	2.0	--	--	--	--	--
3-Month Libor Total Return USD	0.2	0.3	0.5	0.4	0.3	0.4	1.4
Barclays Aggregate	2.2	5.3	6.0	3.9	4.1	3.8	5.1
<b>Opportunistic Credit</b>	<b>4.8</b>	<b>6.5</b>	<b>1.5</b>	<b>2.1</b>	<b>5.9</b>	<b>8.5</b>	<b>--</b>
Barclays BA Intermediate HY	3.3	6.8	3.7	2.6	4.2	4.9	--
Angelo Gordon Opportunistic	0.3	0.2	0.5	-0.3	--	--	--
Angelo Gordon STAR	2.0	0.4	1.3	5.7	9.9	--	--
Barclays Aggregate	2.2	5.3	6.0	3.9	4.1	3.8	5.1
Beach Point Select	4.2	7.0	5.1	--	--	--	--
Barclays BA Intermediate HY	3.3	6.8	3.7	2.6	4.2	4.9	--
Brigade Capital	8.5	12.1	-1.1	-1.8	2.3	4.9	--
Barclays BA Intermediate HY	3.3	6.8	3.7	2.6	4.2	4.9	--
50% Barclays HY/ 50% Bank Loan	4.2	6.6	1.3	1.1	3.6	4.9	--
<b>Global Fixed Income</b>	<b>1.1</b>	<b>1.2</b>	<b>-3.4</b>	<b>-2.8</b>	<b>0.7</b>	<b>2.8</b>	<b>--</b>
Barclays Multi-verse	3.0	9.1	8.6	0.5	2.8	1.9	4.5
Franklin Templeton	1.1	1.2	-3.4	-2.9	0.7	2.8	--
Barclays Multi-verse	3.0	9.1	8.6	0.5	2.8	1.9	4.5
<b>Risk Parity</b>	<b>7.0</b>	<b>14.0</b>	<b>5.7</b>	<b>2.1</b>	<b>7.3</b>	<b>6.2</b>	<b>--</b>
60/40 Russell 3000/Barclays Aggregate	2.5	4.4	3.9	4.6	8.4	8.6	6.8
<b>AQR GRP, 10% Volatility</b>	<b>5.8</b>	<b>10.7</b>	<b>-0.7</b>	<b>-2.5</b>	<b>4.1</b>	<b>4.2</b>	<b>--</b>
PanAgora	8.0	16.9	11.9	--	--	--	--
60/40 Russell 3000/Barclays Aggregate	2.5	4.4	3.9	4.6	8.4	8.6	6.8
60/40 MSCI World/Barclays Global Aggregate	1.6	2.8	1.4	1.8	6.4	6.1	--
<b>Alternatives</b>	<b>-1.0</b>	<b>-0.9</b>	<b>-0.7</b>	<b>3.6</b>	<b>5.5</b>	<b>4.3</b>	<b>--</b>
Alternatives Allocation Index	2.0	3.3	-0.5	-0.7	4.2	4.0	--
Blended Alternatives Index	2.0	3.4	-0.3	0.3	5.7	6.5	--

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: June 30, 2016

	3 Mo (%)	YTD (%)	Fiscal YTD (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Private Equity</b>	-0.8	-1.1	3.5	14.2	15.6	9.7	--
<i>Russell 3000 +3%</i>	2.7	4.5	5.1	7.7	14.1	14.6	10.4
<b>Hedge Fund/Absolute Return</b>	-1.3	-2.7	6.9	8.4	6.7	5.3	--
<i>Libor 1 month +4%</i>	1.1	2.1	4.3	4.2	4.2	4.2	--
AQR DELTA XN	-1.4	-2.4	7.7	8.8	6.9	5.4	--
<i>Libor 1 month +4%</i>	1.1	2.1	4.3	4.2	4.2	4.2	--
Standard Life GARS	-0.8	-4.1	--	--	--	--	--
<i>Libor 1 month +4%</i>	1.1	2.1	4.3	4.2	4.2	4.2	--
<b>Inflation Pool</b>	3.8	--	--	--	--	--	--
<i>Blended Inflation Pool Index</i>	4.4	--	--	--	--	--	--
<b>Real Estate</b>	3.6	5.1	11.3	13.9	12.9	12.2	6.0
<i>NCREIF ODCE</i>	2.1	4.4	11.8	13.1	13.0	12.7	6.6
Invesco	3.6	5.2	10.9	13.7	12.8	12.1	6.0
<i>NCREIF ODCE</i>	2.1	4.4	11.8	13.1	13.0	12.7	6.6
Invesco US Val IV	2.3	2.7	--	--	--	--	--
<i>NCREIF ODCE</i>	2.1	4.4	11.8	13.1	13.0	12.7	6.6
<i>NCREIF CEVA 1Q Lag - NET</i>	2.5	8.5	17.2	17.7	--	--	--
<b>TIPS</b>	0.9	4.3	2.2	0.2	1.2	2.2	--
<i>Barclays US TIPS</i>	1.7	6.2	4.4	1.3	2.3	2.6	4.7
<b>Brown Brothers Harriman</b>	0.9	4.3	2.2	0.2	1.2	2.2	--
<i>Barclays US TIPS</i>	1.7	6.2	4.4	1.3	2.3	2.6	4.7
<b>Private Real Asset</b>	-0.2	45.1	41.9	--	--	--	--
<i>CPI +5%</i>	2.7	4.0	6.4	5.3	--	--	--
<b>Cash</b>	0.3	0.4	1.4	1.1	0.8	0.7	1.1
<i>91 Day T-Bills</i>	0.1	0.1	0.2	0.1	0.1	0.1	0.9
General Account	0.3	0.6	2.1	1.5	1.0	0.7	1.5
Treasury & LAIF	0.3	1.0	1.2	1.0	1.0	0.9	1.1
<i>91 Day T-Bills</i>	0.1	0.1	0.2	0.1	0.1	0.1	0.9

## **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.



## **Blue Road Capital**

Blue Road Capital was formed in 2013 by John Duryea, Luis Paz-Galindo, David Blue and Daniel Fabian. The Blue Road team has been working together for seven years while they ran the Ospraie Special Opportunities pool ("OSO"), which was established in 2006. OSO had a fairly broad mandate to invest in natural resource industries ranging from liquid publicly traded securities to illiquid private equity style investments. The Blue Road team, led by John Duryea, seeks to make similar investments in agricultural industries that they executed within the OSO pool. Specifically, the team looks to identify supply and/or demand imbalances in the agricultural value chain and capitalize on that opportunity by bringing institutional capital and management to the industry identified. Blue Road aims to achieve private equity style returns by building enterprise value beyond just the intrinsic value of a real asset (e.g. farmland). While owning farmland will be a significant component of the Fund's invested capital, Blue Road's aim is to drive value creation by executing on a business plan whether that is building a vertically integrated production company or by exploiting supply chain inefficiencies within agriculture.

## **The Boston Company – Small Cap Value**

The Boston Company's approach to small cap value investing is to conduct bottom-up fundamental research in an effort to add value through security selection. The investment process seeks to identify the stocks of companies which have compelling valuations and business fundamentals, as well as a catalyst for positive change. The appropriate valuation metrics for an individual company can vary depending on industry. Ideas are generated from company meetings, industry contacts and team's internal research. The universe of domestic small-cap equity securities is quantitatively screened for valuation, business health and earnings revisions. In addition, they also screen/track operating income and EBITDA estimate revisions. Once candidates for investment are identified, individual stock weights are determined by portfolio risk, liquidity, and analyst conviction. Normally, portfolios will contain between 120-150 holdings (from a short list of 500 securities), with a maximum individual security weighting of 5%, though most are less than 3%. Securities will typically be in the \$100 million - \$2 billion market cap range at time of purchase. Generally, sector exposure is limited to no more than 2X the index weight with a maximum overweight of 10 percentage points and a maximum underweight of half that of the index. The goal is for portfolios to be close to fully invested at all times, with cash typically below 5%. Any stock down 20% from the purchase price is reviewed. In addition, portfolios are reviewed on a regular basis for unintended risk. Positions are sold when any one of the three investment criteria (valuation, fundamentals, catalyst) breaks down.

## **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).

## **Chartwell Investment Partners – Small Cap Growth**

Chartwell's Small Cap Growth product strives to hold stocks with strong fundamentals that are best positioned for rapid growth. These businesses typically demonstrate strong increases in earnings per share. Chartwell invests in these securities with an intermediate time horizon in mind. They initiate investments opportunistically and when stocks are attractively valued. Chartwell focuses on high growth companies that lie in the middle of the momentum and growth at a reasonable price continuum, and construct Small Cap Growth portfolios with fairly low tracking errors. Portfolios contain 50-70 stocks with market capitalizations between \$200 million and \$2.5 billion at purchase. Meetings with management are an important part of the investment process. This product is closed to new investors.

## **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%.

## **EverStream Solar Infrastructure I – Private Real Assets**

EverStream Solar Infrastructure I's principal objective is to acquire a high-quality diversified portfolio of Solar PV and Wind assets and projects. EverStream will seek to invest in high-quality solar and wind project opportunities developed by experienced solar/wind project developers, including SunEdison and First Wind. The objective of the Fund is to generate long-term capital appreciation and cash yield with a focus on Solar PV projects and the opportunistic investment in attractive wind projects already in the development phase. It is expected that each investment will be privately negotiated and may be structured in the form of equity, equity-linked securities, debt or some combination thereof. The Fund expects to make investments ranging from \$5 million to \$20 million over the life of the Investment in a portfolio asset. The Investment Team believes that this is an area of the market underserved by most energy and infrastructure funds. EverStream will focus on solar infrastructure projects with energy off-take contracts, reliable technology and predictable cash-flows, in sectors where the Investment Team has an edge by virtue of its experience and its relationship with SunEdison, among other developers. The targeted holding period for an investment is generally expected to range from two to five years. The Fund intends to invest (i) a minimum of 50% of the aggregate Capital Commitments in assets, or in securities of issuers whose principal assets or operations are, located in the United States and Canada, (ii) a maximum of 50% of the aggregate Capital Commitments in assets, or in securities of issuers whose principal assets or operations are, located in other OECD countries, and (iii) a maximum of 33% of the aggregate Capital Commitments in assets, or in securities of issuers whose principal assets or operations, are located in the rest of the world.

## **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.

## **SSARIS Global Multisector Plus – Commodities**

SSARIS believes that the commodities markets are not fully efficient, and that a disciplined, quantitative investment process can identify and exploit futures contract mispricings. They believe in taking a small number of large active positions in order to capitalize on these mispricings in a timely manner, utilizing a systematic process to evaluate commodity market prices, to process this information objectively, to build investment models, and to construct efficient portfolios. The strategy's three quantitative models each seek to capture distinct inefficiencies prevalent in the commodity markets: mean reversion, structural imbalances and price dislocations. Backwardation: This model establishes a medium-term view on individual commodity price movement by observing the futures prices associated with a particular commodity. Regime Switching: Price cycles for a given commodity market tends to be persistent in duration yet also change from time to time (and often quite abruptly). This model ascertains the most probable regime in which an individual commodity resides, how likely this regime is to change, and the expected short-term price impact for a given level of price change. Trend Following: This model uses an annual commodity market selection and risk budgeting process to set the universe of commodity markets to be traded. The selection process takes into account liquidity, volatility and prior period drawdowns. The top ranked markets will receive a larger share of risk capital relative to those that are selected, yet not as highly ranked. It then utilizes trend following and momentum algorithms that are based upon price series analysis ranging over time periods from several weeks to months to enter and exit specific markets.

## **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.

## **Taurus Mining – Private Real Assets**

Taurus is forming their first Mining Debt Fund to implement its investment strategy of making loans to late stage mining projects around the globe. The Fund seeks to selectively finance those projects that have completed the multitude of hurdles required to commence construction and subsequently move into production thereby being able to generate sufficient cash flow to repay their loans. In addition, the loans will carry an additional return through an attached structured equity instrument such as a gross revenue royalty, off-take agreement, warrants/options, or some other structure. The investment thesis can be distilled into a fundamental bottom up thesis that "Project Development Creates Value." The Fund will provide late stage mine development finance, investing in the debt of emerging public, and private mining companies used to finance or refinance project development for those companies which have material value-adding projects under development or expansion. Essentially as a project clears each hurdle towards successful development the expected cash flows become more likely and less distant. The curve works because firstly, the risk of a mining project decreases, and the discount (risk) rate applied to the project decreases, as the project progresses through its evaluation phases, and secondly, because the cash flows that will be produced by the project become closer in time. The value creation which occurs through successful project development is therefore a natural NPV effect.

## **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: June 30, 2016

Total Plan Policy Index	As of											
	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%	8.0%	10.0%	10.0%
60% Russell 3000/40% BC Aggregate (RP)	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%	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%	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%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Barclays Credit BAA	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%	3.8%	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%	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%	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%	5.0%	9.0%	9.0%
CPI + 5% (RA)	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%	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%	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%	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%	20.0%	20.0%	20.0%
NCREIF ODCE	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%	6.0%	6.0%	0.0%	0.0%	0.0%
Russell 1000	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%	5.0%	5.0%	0.0%
Russell 2000	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 +3% (PE)	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%	5.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



Total Equity Benchmark	As of:							
	1/1/16	1/1/14	10/1/10	5/1/07	6/1/00	3/1/99	9/1/98	1/1/96
MSCI ACWI ex-US	0.0%	0.0%	34.0%	31.3%	23.1%	0.0%	0.0%	0.0%
MSCI ACWI ex-US IMI	41.7%	40.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI EAFE	0.0%	0.0%	0.0%	0.0%	0.0%	32.3%	33.3%	33.3%
Russell 1000	50.0%	48.0%	52.8%	55.2%	61.5%	35.5%	33.3%	33.3%
Russell 1000 Value	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	8.4%	0.0%
Russell 2000	8.3%	12.0%	13.2%	13.5%	15.4%	24.2%	25.0%	25.0%
S&P 500	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.4%
	<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>

US Equity Benchmark	As of:					
	1/1/16	6/1/00	3/1/99	9/1/98	7/1/96	1/1/95
Russell 1000	85.7%	80.0%	52.0%	50.0%	50.0%	69.0%
Russell 1000 Value	0.0%	0.0%	12.0%	12.5%	0.0%	0.0%
Russell 2000	14.3%	20.0%	36.0%	37.5%	37.5%	14.0%
S & P 500	0.0%	0.0%	0.0%	0.0%	12.5%	17.0%
	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

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	6/1/00	3/1/99	7/1/96	
Barclays Aggregate	55.5%	50.0%	46.3%	50.0%	50.0%	58.6%	100.0%	83.3%	70.0%	
Barclays BA Intermediate HY	27.8%	25.0%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Barclays BBB	0.0%	0.0%	0.0%	0.0%	0.0%	7.3%	0.0%	0.0%	0.0%	
Barclays Credit BAA	0.0%	0.0%	0.0%	16.0%	15.0%	0.0%	0.0%	0.0%	0.0%	
Barclays Multiverse	16.7%	15.0%	18.8%	20.0%	20.0%	20.5%	0.0%	0.0%	0.0%	
Barclays TIPS	0.0%	10.0%	10.0%	14.0%	15.0%	13.6%	0.0%	0.0%	0.0%	
Citigroup non-US WGBI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%	30.0%	
	<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>	

US Fixed Income Benchmark	As of:						
	4/1/16	7/1/14	1/1/14	2/1/13	1/1/11	10/1/10	7/1/96
Barclays Aggregate	66.7%	58.8%	56.9%	62.5%	62.5%	73.7%	100.0%
Barclays BA Intermediate HY	33.3%	29.4%	30.8%	0.0%	0.0%	0.0%	0.0%
Barclays BBB	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%	0.0%
Barclays Credit BAA	0.0%	0.0%	0.0%	20.0%	18.8%	0.0%	0.0%
Barclays TIPS	0.0%	11.8%	12.3%	17.5%	18.8%	17.2%	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>	<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 Schedule

Period Ending: June 30, 2016

<u>Baillie Gifford</u>		<u>Brown Advisory</u>		<u>Mondrian Investment Partners</u>	
First \$25 million:	0.60% per annum	First \$50 million:	0.47% per annum	First \$50 million:	1.00% per annum
Next \$75 million:	0.50% per annum	Next \$50 million:	0.45% per annum	Next \$150 million:	0.19% per annum
Next \$300 million:	0.40% per annum	Next \$200 million:	0.40% per annum	Thereafter:	0.33% per annum
Thereafter:	0.30% per annum	Thereafter:	0.35% per annum		
<u>Barrow, Hanley, Mewhinney &amp; Strauss</u>		<u>Brown Brothers Harriman</u>		<u>Parametric</u>	
First \$15 million:	0.75% per annum	On All Assets:	0.15% per annum	On All Assets:	0.35% per annum
Next \$10 million:	0.55% per annum				
Next \$75 million:	0.45% per annum				
Next \$100 million:	0.35% per annum	<u>Chartwell Investment Partners</u>		<u>FIAM Bond</u>	
Next \$800 million:	0.25% per annum	On All Assets:	0.75% per annum	First \$50 million:	0.20% per annum
Thereafter:	0.15% per annum			Next \$50 million:	0.175% per annum
				Next \$100 million:	0.10% per annum
				Thereafter:	0.085% per annum
<u>BlackRock-Russell S&amp;P 500 Fund</u>		<u>Clifton Group</u>		<u>FIAM Equity</u>	
First \$250 million:	0.02% per annum	First \$50 million:	0.12% per annum	On All Assets:	0.90% per annum
Thereafter:	0.015% per annum	Next \$100 million:	0.10% per annum		
		Thereafter:	0.05% per annum		
		Plus monthly reporting fee of \$1500			
<u>BlackRock-EAFE Equity Index Fund</u>		<u>Franklin Templeton Investment</u>		<u>Western Asset Management</u>	
On All Assets:	0.05% per annum	First \$50 million:	0.45% per annum	On All Assets:	0.25% per annum
		Next \$50 million:	0.35% per annum	Performance Fee:	20%
		Thereafter:	0.30% per annum		
<u>The Boston Company Asset Management</u>					
First \$25 million:	0.90% per annum				
Thereafter:	0.80% per annum				

Name	Primary Benchmark	Rule 1	Rule 2	Rule 3
Barrow Hanley	Russell 1000 Value	<i>FB</i>	<i>FB</i>	<i>FB</i>
Brown Advisory	Russell 1000 Growth	--	--	--
DE Shaw	Russell 1000	✓	✓	✓
The Boston Co	Russell 2000 Value	✓	✓	✓
Chartwell	Russell 2000 Growth	<i>FB</i>	<i>FB</i>	<i>FB</i>
Baillie Gifford	MSCI ACWI ex US	--	--	--
FIAM Equity	MSCI ACWI ex US Small Cap Gross	--	--	--
Mondrian	MSCI ACWI ex USA Value Gross	✓	<i>FB</i>	✓
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	<i>FB</i>	<i>FB</i>	<i>FB</i>
Franklin Templeton	Barclays Multi-verse	✓	<i>FB</i>	<i>FB</i>

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	R	✓	R
Brown Advisory	Russell 1000 Growth	--	--	--
DE Shaw	Russell 1000	✓	✓	✓
The Boston Co	Russell 2000 Value	✓	✓	✓
Chartwell	Russell 2000 Growth	R	R	R
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	R
Franklin Templeton	Barclays Multi-verse	✓	R	R

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: June 30, 2016

	Apr	May	Jun	2nd Qtr. 2016	Difference	1st Qtr. 2016	Difference	4th Qtr. 2015	Difference	3rd Qtr. 2015	Difference	2nd Qtr. 2015	Difference
Verus	2.51%	1.24%	-2.02%	1.69%		-1.50%		5.41%		-8.68%		2.53%	
Barrow Hanley	2.51%	1.27%	-2.04%	1.69%	0.00%	-1.51%	0.01%	5.40%	0.01%	-8.69%	0.01%	2.51%	-0.01%
Russell 1000 Value Index	2.10%	1.55%	0.86%	4.58%		1.64%		5.64%		-8.40%		0.11%	
Verus	0.39%	1.80%	0.26%	2.46%		1.36%		7.05%		-6.43%		0.34%	
BlackRock S&P 500 Fund	0.39%	1.80%	0.26%	2.46%	-0.00%	1.37%	-0.01%	7.05%	0.00%	-6.43%	0.00%	0.34%	-0.00%
S&P 500 Index	0.39%	1.80%	0.26%	2.46%		1.34%		7.03%		-6.43%		0.28%	
Verus	0.33%	1.92%	-2.24%	-0.04%		-1.26%		7.68%		-4.87%		1.00%	
BrownAdvisory	0.34%	1.93%	-2.27%	-0.05%	0.00%	-1.26%	0.00%	7.68%	0.01%	-4.89%	0.02%	1.00%	-0.01%
Russell 1000 Growth Index	-0.91%	1.94%	-0.39%	0.61%		0.75%		7.33%		-5.28%		0.12%	
Verus	1.52%	2.82%	-0.10%	4.28%		0.75%		6.11%		-5.87%		0.49%	
D.E. Shaw	1.52%	2.82%	-0.09%	4.29%	-0.01%	0.76%	-0.01%	6.10%	0.00%	-5.86%	-0.01%	0.50%	0.00%
Russell 1000 Index	0.54%	1.75%	0.23%	2.54%		1.18%		6.51%		-6.83%		0.11%	
Verus	-0.28%	2.10%	0.65%	2.48%		4.38%		3.13%		-10.26%		0.69%	
The Boston Company	-0.28%	2.10%	0.65%	2.48%	0.01%	4.38%	0.00%	3.13%	0.00%	-10.26%	0.00%	0.68%	0.00%
Russell 2000 Value Index	2.12%	1.83%	0.30%	4.31%		1.70%		2.88%		-10.73%		-1.20%	
Verus	0.82%	-0.34%	-1.87%	-1.41%		-4.21%		5.09%		-13.15%		-1.48%	
Chartwell	0.80%	-0.34%	-1.87%	-1.42%	0.01%	-4.20%	-0.01%	5.09%	0.00%	-13.15%	0.00%	-1.48%	0.01%
Russell 2000 Growth Index	1.00%	2.69%	-0.46%	3.24%		-4.67%		4.33%		-13.07%		1.97%	
Verus	1.45%	0.01%	-1.64%	-0.20%		0.42%		7.59%		-11.60%		0.62%	
Baillie Gifford	1.45%	0.02%	-1.66%	-0.21%	0.01%	0.42%	0.00%	7.57%	0.02%	-11.54%	-0.06%	0.60%	-0.02%
MSCI ACWI ex US	2.72%	-1.59%	-1.47%	-0.40%		-0.26%		3.29%		-12.11%		0.73%	
MSCI ACWI ex US Growth	1.59%	-0.57%	-0.36%	0.64%		-0.24%		5.05%		-10.73%		0.75%	
Verus	2.99%	-0.80%	-3.33%	-1.24%		-2.90%		4.72%		-10.21%		0.78%	
BlackRock EAFE Equity	2.99%	-0.80%	-3.33%	-1.24%	-0.00%	-2.90%	-0.00%	4.72%	0.00%	-10.21%	0.00%	0.79%	-0.00%
MSCI EAFE (Net)	2.90%	-0.91%	-3.36%	-1.46%		-3.01%		4.71%		-10.24%		0.62%	
MSCI EAFE (Gross)	3.00%	-0.78%	-3.32%	-1.19%		-2.89%		4.75%		-10.19%		0.84%	



Manager Performance Comparison (Gross of Fees)

Period Ending: June 30, 2016

	Apr	May	Jun	2nd Qtr. 2016	Difference	1st Qtr. 2016	Difference	4th Qtr. 2015	Difference	3rd Qtr. 2015	Difference	2nd Qtr. 2015	Difference
Verus	1.27%	0.71%	-2.10%	-0.16%		1.12%		5.51%		-9.65%		4.31%	
FIAM Equity	1.27%	0.71%	-2.10%	-0.15%	-0.01%	1.11%	0.01%	5.51%	0.00%	-9.65%	0.00%	4.32%	-0.00%
MSCI ACWI -ex US Small Cap Index	2.84%	-0.59%	-2.89%	-0.72%		0.76%		5.34%		-9.95%		4.35%	
Verus	1.77%	-0.60%	-0.66%	0.49%		1.70%		2.33%		-10.72%		0.16%	
Mondrian	1.76%	-0.59%	-0.65%	0.50%	-0.01%	1.70%	-0.00%	2.33%	0.00%	-10.73%	0.01%	0.22%	0.00%
MSCI ACWI -ex US Value Index	3.89%	-2.62%	-2.60%	-1.46%		-0.29%		1.50%		-13.49%		0.72%	
MSCI ACWI -ex US	2.72%	-1.59%	-1.47%	-0.40%		-0.26%		3.29%		-12.11%		0.73%	
Verus	2.48%	-4.99%	4.14%	1.40%		8.88%		-0.97%		-11.81%			
Parametric Core	2.46%	-4.97%	4.16%	1.42%	-0.02%	8.91%	-0.03%	-0.97%	0.00%	-11.81%	0.00%		
MSCI EM Market Index	0.56%	-3.71%	4.10%	0.80%		5.74%		0.72%		-17.78%			
Verus	0.96%	-0.07%	1.86%	2.77%		3.28%		-0.39%		0.50%		-1.61%	
FIAM Bond	0.96%	-0.07%	1.86%	2.77%	0.00%	3.28%	0.00%	-0.39%	0.00%	0.50%	0.00%	-1.60%	-0.01%
BC Aggregate Index	0.38%	0.03%	1.80%	2.21%		3.02%		-0.58%		1.24%		-1.68%	
Verus	2.30%	-0.32%	0.63%	2.62%		-0.64%		0.63%		-1.01%			
Western TRU	2.30%	-0.32%	0.63%	2.62%	-0.01%	-0.63%	-0.01%	0.63%	0.00%	-1.00%	-0.01%		
3-Month Libor Total Return USD Index	0.05%	0.06%	0.05%	0.17%		0.13%		0.13%		0.08%			
BC Aggregate Index	0.38%	0.03%	1.80%	2.21%		3.04%		-0.58%		1.24%			
Verus (Net)				0.31%		0.70%		-0.57%		0.34%		5.90%	
Angelo Gordon Opportunistic				0.31%	0.00%	0.70%	0.00%		-0.57%	0.34%	0.34%	1.28%	0.00%
BC Aggregate Index				2.21%		0.92%		-0.57%		1.24%		-1.68%	
Verus (Net)				2.05%		-2.17%		-0.91%		1.22%		2.14%	
Angelo Gordon STAR Fund (Net)				2.05%	0.00%	-2.17%	0.00%		-0.91%	1.22%	1.22%	2.14%	0.00%
BC Aggregate Index				2.21%		0.92%		-0.57%		1.24%		-1.68%	
Verus	1.99%	1.47%	0.71%	4.23%		2.67%		-1.35%		-0.41%		2.32%	
Beach Point Select (Net)	1.91%	1.39%	0.63%	3.98%	0.26%	2.41%	0.26%	-1.35%	0.00%	-0.66%	0.25%	2.06%	0.08%
Barclays BA Intermediate HY	2.30%	0.35%	0.62%	3.29%		3.43%		0.01%		-3.00%		2.61%	

Manager Performance Comparison (Gross of Fees)

Period Ending: June 30, 2016

	Apr	May	Jun	2nd Qtr. 2016	Difference	1st Qtr. 2016	Difference	4th Qtr. 2015	Difference	3rd Qtr. 2015	Difference	2nd Qtr. 2015	Difference
Verus	5.86%	0.94%	1.57%	8.52%		3.29%		-6.30%		-5.87%		-0.55%	
Brigade Capital	5.84%	0.91%	1.57%	8.48%	0.05%	3.29%	0.00%	-6.30%	-0.01%	-5.87%	0.00%	-0.56%	-0.00%
Barclays BA Intermediate HY	2.30%	0.35%	0.62%	3.29%		3.43%		0.01%		-3.00%		2.61%	
Verus	0.59%	-0.42%	0.94%	1.11%		0.12%		2.22%		-6.66%		0.12%	
Franklin Templeton Investments	0.59%	-0.42%	0.94%	1.11%	0.00%	0.12%	0.00%	2.22%	0.00%	-6.66%	0.00%	0.11%	0.01%
BC Multiverse	1.45%	-1.30%	2.87%	3.00%		5.88%		-0.87%		0.49%		-1.04%	
Verus	0.55%	1.17%	6.16%	7.99%		8.22%		-0.50%		-3.78%		-5.34%	
PanAgora (Net)	0.55%	1.17%	6.16%	7.99%	0.00%	8.23%	-0.01%	-0.50%	0.00%	-3.78%	0.00%	-5.33%	-0.01%
60% R3000/ 40% BC Agg	0.53%	1.08%	0.84%	2.47%		1.89%		3.54%		-3.89%		-0.59%	
60% MSCI World/ 40% BC GlobalAgg	1.02%	0.51%	0.09%	1.62%		1.21%		3.37%		-4.60%			
Verus	1.51%	0.09%	4.13%	5.80%		4.65%		-2.87%		-7.67%		-2.66%	
AQR GRP, 10% Volatility (Net)	1.51%	0.09%	4.13%	5.80%	-0.00%	4.65%	0.00%	-2.87%	0.00%	-7.67%	0.00%	-2.67%	-0.00%
60% R3000/ 40% BC Agg	0.53%	1.08%	0.84%	2.47%		1.89%		3.54%		-3.89%		-0.59%	
60% MSCI World/ 40% BC GlobalAgg	1.02%	0.51%	0.09%	1.62%		1.21%		3.37%		-4.60%			
Verus	-2.30%	-0.68%	1.62%	-1.39%		-1.06%		2.54%		7.68%		-2.39%	
AQR DELTA XN	-2.30%	-0.68%	1.62%	-1.39%	-0.00%	-1.07%	0.01%	2.54%	0.00%	7.68%	0.00%	-2.39%	-0.00%
Libor + 4%	0.38%	0.37%	0.37%	1.13%		0.99%		1.09%		1.05%		1.06%	
Verus	0.16%	1.35%	-2.33%	-0.85%		-3.24%		0.00%		0.00%		0.00%	
Standard Life GARS	0.16%	1.35%	-2.33%	-0.85%	-0.01%	-3.25%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Libor + 4%	0.38%	0.37%	0.37%	1.13%		0.99%		0.00%		0.00%		0.00%	
Verus				3.64%		1.47%		2.44%		2.98%		5.31%	
INVESCO Real Estate				3.62%	0.02%	1.47%	0.00%	2.50%	-0.06%	2.96%	0.02%	5.26%	0.00%
NCREIF NFI ODCE Index				2.13%		2.18%		3.34%		3.68%		3.82%	
Verus				2.31%		-0.19%		0.00%		0.00%		0.00%	
Invesco US Val IV				2.31%	0.00%	-0.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
NCREIF NFI ODCE Index				2.13%		2.18%		3.34%		3.68%		3.82%	
NCREIF CEVA 1Q Lag - NET				2.54%		2.18%		0.00%		0.00%		0.00%	
Verus	0.35%	-0.76%	1.31%	0.90%		3.41%		-0.18%		-1.87%		0.06%	
Brown Brothers Harriman	0.35%	-0.75%	1.32%	0.91%	-0.02%	3.52%	-0.11%	-0.18%	-0.00%	-1.88%	0.01%	0.08%	-0.04%
BC U.S Tips	0.34%	-0.71%	2.08%	1.71%		4.46%		-0.64%		-1.14%		-1.07%	

**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
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
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.

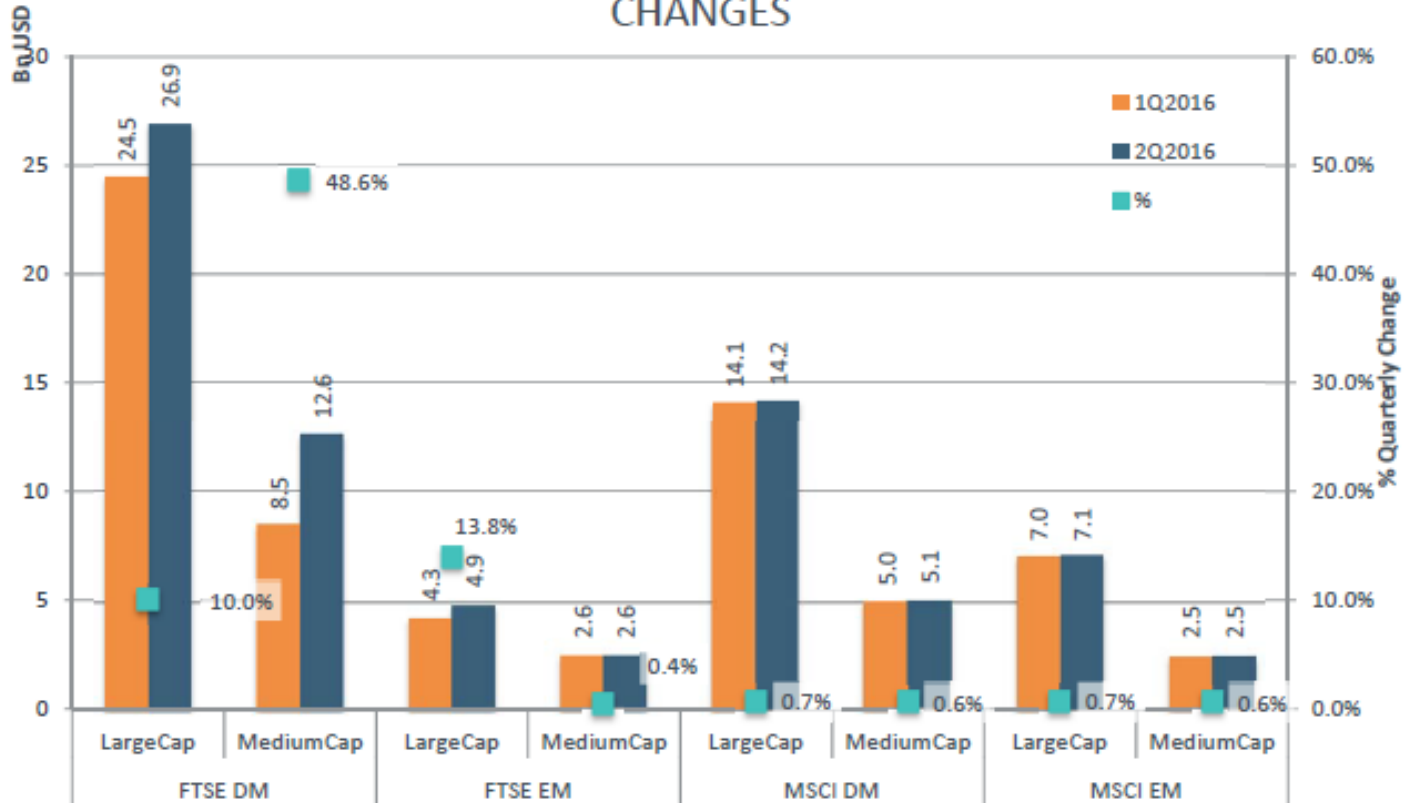
As Of	Large Cap	Medium Large Cap	Medium Cap	Medium Small Cap	Small Cap
6/30/2016	77.349	22.250	7.1432	2.444	0
3/31/2016	83.360	22.414	7.435	2.395	0
12/31/2015	90.075	24.308	8.141	2.936	0
9/30/2015	88.944	23.139	7.993	2.946	0
6/30/2015	92.87	25.07	8.797	3.352	0
3/31/2015	93.082	25.494	8.794	3.384	0
12/31/2014	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
12/31/2013	77.11	22.27	7.65	3.03	0

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

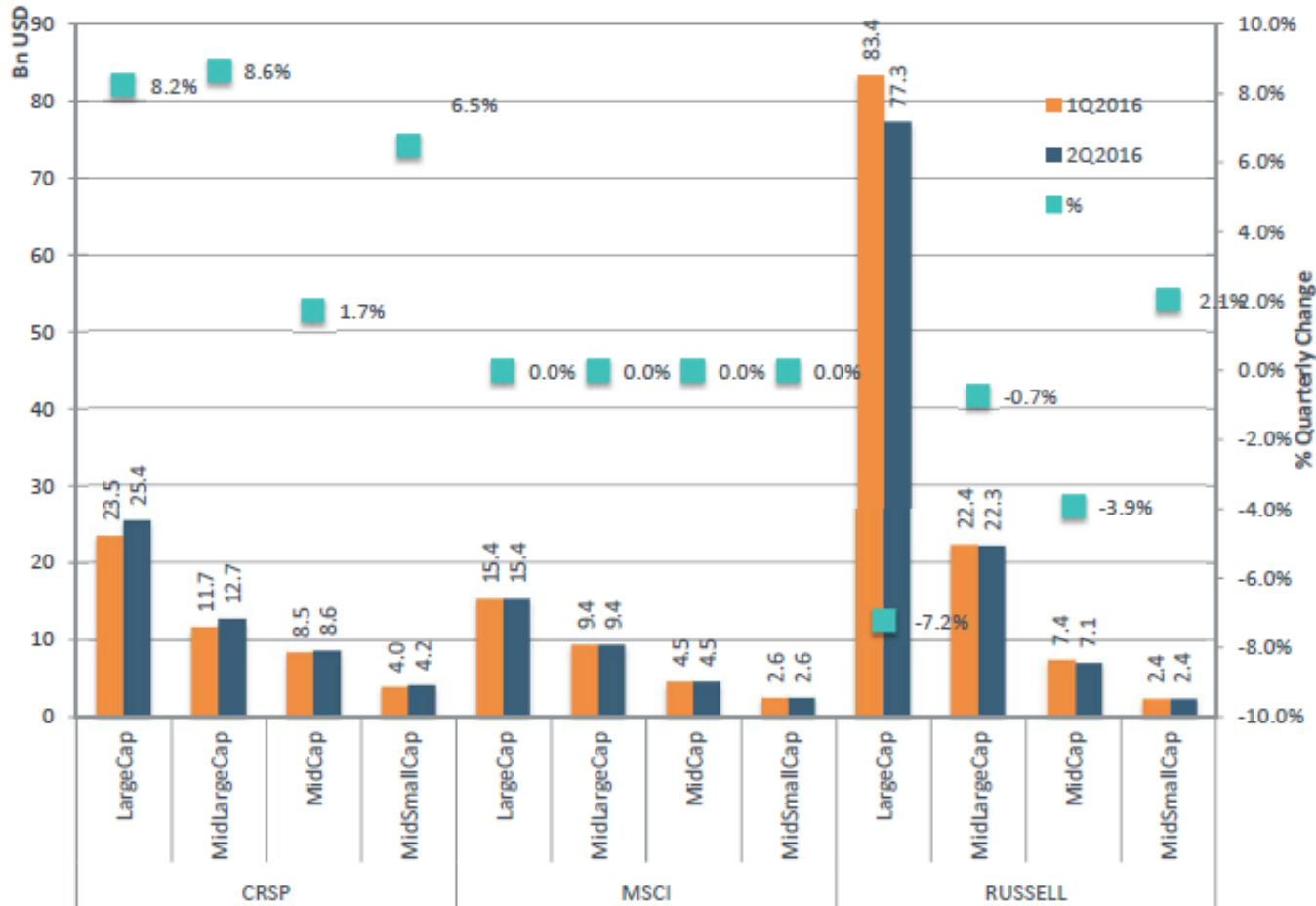
BREAKPOINT TRENDS

2Q2016 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. This could result in no change.*

2Q2016 US MARKET BREAKPOINT CHANGES



\* Represents US Market data from MSCI.



# 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:  $\text{excess return} / \text{tracking error}$ .

**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.



## Disclaimer

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

August 23, 2016

Agenda Item 6.3

**TO:** Board of Retirement

**FROM:** Doris Ng, Investment Analyst 

**SUBJECT:** Report on the Growth Equity Manager Annual Reviews

**Staff Recommendation**

Review the reports on the annual reviews of SamCERA's Growth Equity Managers.

**Background**

On July 7<sup>th</sup>, SamCERA staff held annual review meetings in SamCERA's office for our growth equity managers, Baillie Gifford and Brown Advisory.

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

**Discussion**

Baillie Gifford's ACWI ex-US Growth portfolio, which is a fundamental growth strategy organized by regional teams, was reviewed first. Two new partners were added and one retired as of May 2016.

Next, Brown Advisory's concentrated, bottom-up Large Cap Growth Equity strategy was reviewed. There was one industrial analyst departure in January 2015, who has recently been replaced.

There were no major concerns identified during the reviews. Meeting notes are attached to this memo summarizing the findings from these annual reviews.

**Attachments**

- A. Baillie Gifford Overseas ACWI ex-US Growth Annual Review Meeting Notes
- B. Brown Advisory Large Cap Growth Equity Annual Review Meeting Notes



*Date of meeting: 7/7/2016*

*Location: SamCERA Office*

Manager Representative(s)

Joe Faraday (Member of Portfolio Construction Group, Client Service), Eoin Anderson (Client Service)

Verus Representative(s)

Margaret Jadallah

Client Representative(s)

Mike Coultrip (CIO), Scott Hood (CEO), Lilibeth Dames (Analyst), Doris Ng (Analyst)

## Product Description

ACWI ex US Focus is a fundamental growth strategy. Research is organized by regional teams, and the strategy's Portfolio Construction Group (PCG) includes members from different regional teams. Four global sector groups also contribute to 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 the 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 compounded 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 60-90 stocks, with country and sector weights +/-10% relative to the index and stock weights +/- 5% relative to the index.

## Meeting Notes

### Organization

Baillie Gifford remains an independent partnership with no external owners. All operations are based in Edinburgh, Scotland with small marketing offices in New York and London. The firm has 41 full time partners. Over the past year, one partner retired and two were added. The retired partner was in client service. The new partners are Tim Garrett, a Director in Client Service, and John MacDougall, a Global Growth portfolio manager. Baillie Gifford replaced its Head of Trading over the past year with a tenured trader from Barings who will be joining at the end of the summer. The firm is a believer in internally built infrastructure as opposed to outsourcing. Baillie Gifford has a large IT staff and mostly internally built systems and controls. Along these lines, the firm has opted to buy its own disaster recovery space 35 kilometers from their office as opposed to renting space in an offsite facility. This office space houses two sizable floors of the building and can accommodate the majority of Baillie Gifford's employees.

At 3/31/16, firm assets under management were \$176 billion, which is a decrease of \$10 billion from last year. This is the first net decrease in assets in a number of years. The stated reasons for client departures over the past year were because of portfolio de-risking, a reduction in active equities, and corporate restructurings. There were not one or two very large client departures; rather there were a number of \$100-\$200 million accounts lost. Specific to the ACWI ex-US Focus strategy, assets held steady at \$10.6 billion compared to last year. Baillie Gifford has a history of closing products if they deem that capacity has been reached, but the strategy in which SamCERA is invested remains open.

Joe Faraday spoke about the impact of Brexit on Baillie Gifford's organization. The firm has 45 employees who are EU nationals, so they will need to work through that issue if and when Brexit is implemented.

### **Investment Team**

Turnover of investment staff remains low at about 6%, and there were no changes to the portfolio construction group (PCG) that oversees the ACWI ex US Focus strategy over the past year. The International Focus PCG contains a mix of portfolio managers from different regional investment backgrounds and with varying levels of experience by design. Diversity of opinions and debate are integral to the decision-making process. The PCG is comprised of veteran Baillie Gifford professionals Gerard Callahan, Joe Faraday and Iain Campbell and newer PCG additions Tom Walsh, Moritz Sitte and Sophie Earnshaw. The members of the PCG serve as both portfolio managers and research analysts. The PCG makes all decisions for the portfolio after debate and discussion as a team.

In total, there are approximately 95 investment professionals involved in Baillie Gifford's research "discovery" effort which is utilized across the firm. The PCG members propose their own ideas for the portfolio as well as work with the broader investment team to uncover additional compelling ideas.

### **Investment Strategy**

The investment philosophy and process remains unchanged. Baillie Gifford seeks to identify companies with strong long term growth prospects and take substantial positions in them. The investment horizon is typically 5 years.

Baillie Gifford summarizes their investment criteria with the following four questions:

Will this company be significantly larger in five years?

Are management sensible guardians of our clients' capital?

Why is this growth not reflected in the current share price?

What would make us sell?

Baillie Gifford's bottom up stock selection process looks for durable franchises, well managed companies, aligned management and good valuation. There is no minimum growth hurdle for purchase, and a portfolio typically holds stocks with a variety of growth ranges. Future growth/pre-profitability companies can be bought if they meet the buy criteria.

As a firm, Baillie Gifford will not own more than 15% of a company's outstanding stock. An assessment of management is part of the team's investment strategy, and holding big positions gives them good access to management. An additional liquidity requirement is that a maximum of 15% of the portfolio can be invested in stocks that take more than 10 days to trade in and out of. Approximately 8-9% of the ACWI ex US Focus portfolio is currently considered less liquid based on this definition.

Baillie Gifford will let its winners run as opposed to adding and trimming on valuation. The ACWI ex US Focus portfolio tends to have a lower weighted average market cap than that of the index. Currency hedging is not employed.

At the beginning of 2014, SamCERA converted from the EAFE Plus to the ACWI ex US strategy. This change allowed for additional emerging markets exposure. The portfolio has no direct exposure to stocks within frontier markets; however, they do hold some stocks with revenues derived from frontier markets (ex. Nestle).

## Performance & Positioning

As of 5/31/16, SamCERA had outperformed the MSCI ACWI ex-US Index over the 3 year and since inception period on a net of fee basis (inception date April 2012). Since inception, Baillie Gifford has added 220 bps in excess return over the benchmark (SamCERA 6.9% vs. MSCI ACWI ex-US 4.7%).

Much time was spent discussing the aftermath of the Brexit referendum and its implications on the markets and the SamCERA portfolio. At the time of our meeting, Theresa May was not yet U.K Prime Minister, so the lack of leadership was one area of uncertainty discussed. Baillie Gifford was not making wholesale changes to the SamCERA portfolio, but rather had reviewed each stock in the portfolio and its outlook in light of Brexit. Rightmove, an online U.K. real estate company, fell post-Brexit vote and the team was not adding to the position as the stock could potentially fundamentally decline with Brexit. The team was considering adding to a few names that may become beneficiaries in a post-Brexit world. (The fact that the PCG didn't actively change the portfolio post-Brexit is in line with their investment approach.) In essence, Baillie Gifford views business models as more important than GDP growth.

The SamCERA portfolio's largest sector weighting is in the consumer sector at 40%. Regarding Brexit, the SamCERA portfolio holds a number of fundamentally sound consumer staples names that the market could reward in a defensive environment. E-commerce at 19% is a big theme which has been implemented through different businesses and countries.

## Other Considerations

During the annual review meeting, Joe Faraday discussed that they can now invest in Taiwan since that market is now open for SamCERA but can still not invest directly in India. SamCERA and SamCERA's custodian are still working on opening account access to India. One additional market that Baillie Gifford is looking at is the China A Shares market and potentially China's Shenzhen Exchange.

In January 2016, Baillie Gifford experienced a system outage in Edinburgh which had a minor impact on business operations. It was discovered early in the morning and fixed in the afternoon. The problem related to an issue with software storage that resulted in a delay in their ability to access stored data. Data recovery procedures were ultimately successful, and Baillie Gifford enhanced its due diligence with its software supplier.

Over the past year, Baillie Gifford stopped using soft dollars ahead of future U.K. regulatory requirements which will require the disaggregation of execution and research costs.

Baillie Gifford continues to grow its governance team, and it continues to become more integrated into the overall investment process.

## Conclusion

Verus believes that Baillie Gifford is a top quality international growth manager. The manager is outperforming the MSCI ACWI ex US Index over the near term and since inception of the SamCERA relationship.

*Date of meeting: 7/7/2016*

*Location: SamCERA Office*

Manager Representative(s)

Ken Stuzin (PM), Nicole Nesbitt (Relationship Manager)

Verus Representative

Margaret Jadallah

Client Representative(s)

Mike Coultrip (CIO), Scott Hood (CEO), Lilibeth Dames (Investment Analyst), Doris Ng (Investment Analyst)

## Product Description

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 approach is team-based and collaborative, involving a long-term outlook, and fundamental research on a broad universe of stocks. Security selection is bottom-up with an emphasis on identifying companies with strong sustainable business models. Brown seeks to construct a portfolio of companies with high absolute growth rates and reasonable valuations.

## Meeting Notes

### Organization

Founded in 1993, Brown Advisory ("Brown") is a partnership based in Baltimore, MD. All employees own equity and the distribution is relatively equal with the firm's CEO owning less than 4% of the firm's stock. This enables Brown to repurchase shares of retiring employees easily from current cash flow. While small on a percentage basis, portfolio manager Ken Stuzin stated that a very meaningful amount of his net worth is tied up in Brown stock which is increased through stock granted as part of deferred compensation.

The firm has several offices, but headquarters remain in Baltimore. The client base is divided between institutional and private client. Brown Advisory is composed of several different teams managing their strategies independently from one another. But various investment strategies do share some common features. All the strategies are concentrated, fundamental and emphasize investing in companies with solid business models.

As of June 30, 2016, firm assets were approximately \$53 billion, with about \$21 billion in institutional assets. The Large Cap Growth strategy is the largest product offering at Brown with \$12 billion in fully discretionary AUM. The firm manages another \$3 billion in large cap growth mandates with social restrictions, mainly religious in nature. There were no new product offerings at Brown over the last year.

The Large Cap Growth strategy assets have continued to decline over the past year due to asset allocation changes, active mandates going passive, and plan closures. One large intermediary SEI reduced its exposure to Brown by about \$1 billion because of an asset allocation change. Brown continues to manage money for SEI in the Large Cap Growth strategy. This withdrawal comprised the majority of the asset loss over the last year. Brown "soft closed" its Large

Cap Growth product last year, but it remains open to select clients and consultants for separate accounts and in the mutual fund. Ken stated that it's risky to completely close the product because it's safer from a business standpoint to have different start dates given the vagaries of client withdrawals and performance.

### **Investment Team**

Ken Stuzin remains the sole portfolio manager for the Large Cap Growth strategy. There was one analyst change over the past year. In January 2015, an industrials analyst Nigel Frankson left the firm to join a hedge fund in NYC, and was replaced by Adi Padva recently who joined from Neuberger's growth team. It is worth noting that Brown Advisory has multiple analysts covering sectors; Simon Paterson, who has been with Brown since 2002, also covers industrials. Research analysts support all products, and research is shared across the organization. Twice a week there are group meetings that include portfolio managers across the firm's equity strategies and research analysts. Should anything happen to Ken Stuzin, Tim Hathaway, Head of Equity Research, would take over management of the portfolio.

### **Investment Strategy**

Brown Advisory uses a bottom up, fundamental investment approach. Eligible purchase candidates have double digit growth prospects (averaging 14%) over a full market cycle. Idea generation happens in several different ways. Portfolio managers can direct analysts to ideas they believe may be of interest; analysts themselves may generate ideas; and ideas can also come from elsewhere at the firm. Analysts take significant responsibility for what is in the portfolio and are also involved in position sizing.

Excessive valuation is avoided. The team develops one and three year risk/reward outlooks for each stock, and the team constructs the portfolio with the greatest upside and least downside. Portfolios are concentrated with 33 stocks. Position weights range between 1 ½ and 5 percent (this includes Apple). As a concentrated manager, assessment of management and visiting companies is an important part of their investment process. Concentration is maintained by a "one in, one out" rule to stock selection. All else being equal, Ken Stuzin will add to a position on weakness assuming that the fundamentals remain intact. Sectors with more attractive valuation have higher weights, and stocks with the most compelling fundamentals are chosen. Portfolios are benchmark aware, although sector differences between the portfolio and benchmark weightings can be meaningful at times.

### **Performance & Positioning**

Over the past year as of 5/31/16, Brown outperformed the Russell 1000 Growth Index on a net of fee basis by 57 bps (SamCERA 2.18% vs. 1.61% for the benchmark). Over annualized periods and since inception (inception date 4/29/13), Brown has lagged the benchmark. Healthcare (ex., Intuitive Surgical robotics and a lack of biotech) in 2013 and Energy (ex., Core Labs oil services) in 2014 caused longer term underperformance as did some other stock specific issues and stylistic headwinds. It is worth noting that Intuitive Surgical has done well in the portfolio post 2013 and continues to offer strong fundamental drivers and a tailwind in the robotics space.

As of 5/31/16, the SamCERA portfolio had a significant overweight to technology (41% v. 28% for the Russell 1000 Growth Index). Stock selection in IT on a year-to-date basis was a positive contributor to returns. The biggest detractor year-to-date was in consumer discretionary. Stock selection was detracting in this sector that was underweight vs.

the index (15% vs. 21% in the Russell 1000 Growth).

During the annual review, Ken Stuzin talked through a number of his holdings. Stuzin possesses a deep knowledge of the fundamental drivers of the businesses he owns. Trip Advisor in consumer discretionary has been hit recently with the increase in terrorism. Stuzin has added to the name because 1) the long term tailwind for online travel is strong and 2) Trip Advisor has adapted its business model such that the effectiveness of ads can be tracked better. Alexion Pharmaceuticals detracted year-to-date. This orphan drug company was impacted recently by currency issues, but patents are very long and there is little R&D to increase competition. A handful of stocks were sold recently. Stericycle medical waste made an acquisition that changed its business model beyond its core competency. Stuzin recently sold Charles Schwab and bought PayPal because Charles Schwab was being traded by the market as part of a generic interest rate play. PayPal was a holding better suited to their style of management.

### **Other Considerations**

Brown Advisory concluded a review of its trading activity. The study showed that their sell decisions were generally good, but the time frame for selling should have been accelerated. Clients would have had better long term results if Brown sold more quickly. Ken Stuzin will likely be exiting positions more quickly as a result.

### **Conclusion**

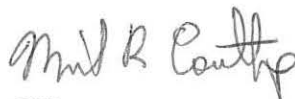
Brown Advisory has underperformed the Russell 1000 Growth Index for SamCERA over the relatively short time period that the large cap growth manager has been in the SamCERA portfolio (April 2013). Stylistic headwinds are a factor in Brown's underperformance, but there have been a few stock specific issues as well (ex. Whole Foods). Verus believes that Ken Stuzin is an experienced stock picker who will provide excess return for SamCERA. Moreover, Verus believes that Brown's concentrated, long term approach requires a longer time period over which to assess the manager. Over longer rolling 3-year periods, Brown has outperformed its benchmark 70% of the time going back to the product's inception in 1996. Over 5-year rolling periods, this percent increases to 90% outperformance. In short, we continue to believe that Brown is a strong large cap growth manager.

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

August 23, 2016

Agenda Item 6.4

**TO:** Board of Retirement



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

**SUBJECT:** Report on Asset-Liability Study: Asset Allocation Mixes (Continued)

**Background**

During the April Board retreat, Verus provided a session on our upcoming asset-liability study. They introduced the topic and provided an overview of the asset liability process. In May, Verus sent an enterprise risk tolerance survey to the Board and shared the results with the Board during the June meeting.

In July, Verus presented a range of asset allocation portfolios, and the Board provided feedback in terms of preferred risk tolerance levels and return/risk tradeoffs.

**Discussion**

Given the feedback provided by the Board in the July meeting, staff and consultant anticipated being able to present a more-refined set of asset allocation portfolios for Board review in August. However, staff and consultant need more time to effectively model various inflation scenarios to better determine various levels of inflation protection for Board discussion. Staff and consultant anticipate being able to review this information with the Board during the September meeting.

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

August 23, 2016

Agenda Item 6.5

**TO:** Board of Retirement

**FROM:** Doris Ng, Investment Analyst



**SUBJECT:** Presentation on the Volatility Risk Premium

**Staff Recommendation**

Review the attached presentation from Verus and staff regarding volatility risk premium and resulting potential investment opportunities.

**Background**

Volatility risk premium strategies have gained popularity in recent years as investors seek alternative sources of risk premia and strategies with potential, equity-like returns.

Staff (Doris Ng) and consultant from Verus (Joe Abdou) will provide a volatility risk premium overview, potential risks and returns and the role in the portfolio and investment opportunities in this space.

**Attachment**

Volatility Risk Premium Presentation





**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



AUGUST 2016

Volatility Risk Premium Presentation

**San Mateo County Employees' Retirement Association**

# Overview – What is Volatility Risk Premium

Option buyers pay option premiums to hedge negative returns and high equity volatility

- Risk is defined and have certainty in terms of costs
- Long-term expected return is negative

Option Sellers receive premiums to underwrite insurance for option buyers

- Risk is undefined and have uncertainty in terms of costs
- Long-term expected return is positive

# Overview – What is Volatility Risk Premium

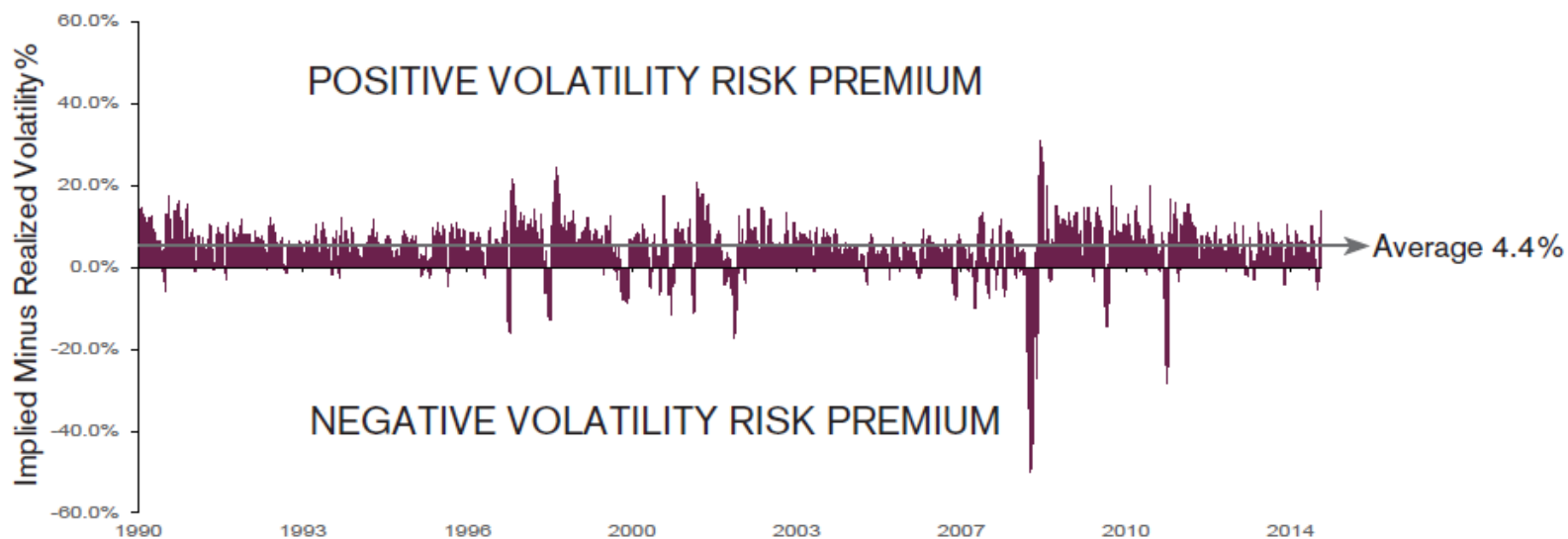
- Volatility Risk Premium (VRP) is compensation to option sellers for risk of losses during periods where volatility suddenly increases
- VRP is the difference between implied volatility of options vs. subsequently realized volatility
- Historically, implied volatility > realized volatility
- Implied volatility > realized volatility due to option sellers requiring premium to underwrite insurance and option buyers' risk preferences
- A different type of risk premium\* from the traditional (equity, interest rate, credit) and other non-traditional sources (value, trend/momentum, commodity)

\*Risk premium = expected return in excess of risk-free rate for holding risky asset

# Overview – What is Volatility Risk Premium

- Historically, implied volatility averaged 4.4% higher than realized volatility
- 85% of time, volatility risk premium has been positive
- Options priced above theoretical fair value due to higher implied volatility

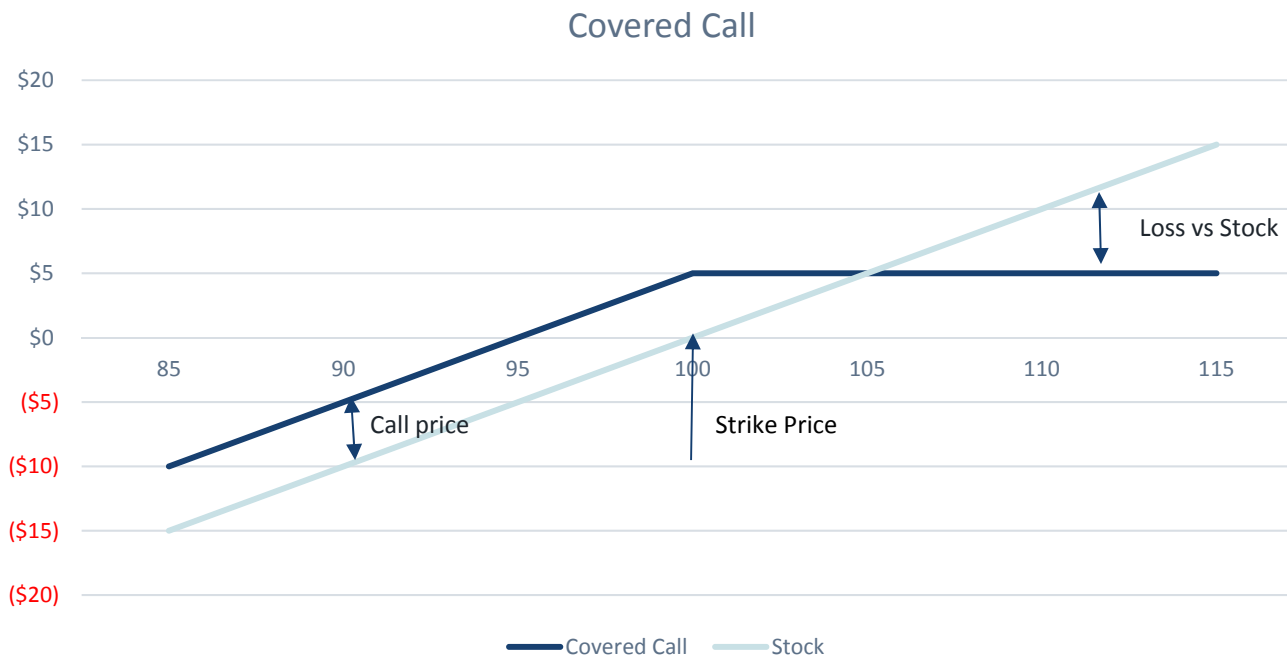
Figure 1: Implied Volatility vs. Average Realized Volatility for S&P 500 Index



Source: Parametric, CBOE (Jan 1990 – September 2014)<sup>4</sup>; Date: 10/24/2014.

# VRP - Options

- Call Options are options to purchase a security at a certain price
- A covered call limits upside potential of owning a security, but is paid the options price
- The Payout for selling a call option on a security owned is below



# VRP - Options

- Put Options are options to sell a security at a certain price
- If the price of the security falls the seller of the put owes the payment of the security to the buyer at the agreed upon price
- The Payout for selling a put is below



# VRP – Risk/Returns

- The strategy will show gains in stable markets, but will hurt during times of excess volatility (realized volatility, especially in relation to implied volatility).
- Limited up side potential (participation in stock appreciation or bull markets) from selling covered calls or puts
- Losses from selling puts can be large in cases where the underlying asset has large price drops

# VRP – Role in Portfolio

- VRP is compensation to option sellers for the risk of losses during periods where volatility suddenly increases
- VRP essentially exchanges equity risk for short volatility risk, and offers diversification and relative low correlations to equity risk
- VRP provides a different source of return stream
- VRP has low a correlation with equities and will provide portfolio diversification



# VRP - Types of Clients

- Role in portfolio varies between different clients: Alternatives/Absolute Return vs. Equity category
- Institutional Clients – Endowments, Foundations, Public Plans, Corporate Pension Plans

# VRP - Examples of VRP Strategies

## Low Beta to Equity Market

- Sell 100% put options collateralized by holding cash and equivalents
- Sell diversified basket of call and put options

## Beta of 0.5 to Equity Market

- Sell 50% put options / 50% call options, collateralized by holding cash and equivalents and long equity exposure in their respective amounts

## Beta of 1 to Equity Market

- Sell 100% call options as an overlay to long equity exposure

# VRP - Overview of Institutional Offerings

## Parametric Minneapolis

- Offer different products, which vary in risk/return profile and degree of VRP vs. equity risk premium exposure
- Sample of Product Offerings: Dynamic Put Selling, Liquid Alternative, Defensive Equity, Low Volatility Equity, and DeltaShift, all fully collateralized
- Offer systematic and disciplined approach to selling equity index options
- Sell short-dated, OTM options staggered over multiple strikes and expiration dates to reduce path dependency risk
- Portfolio rebalanced monthly back to target weights.

# VRP - Overview of Institutional Offerings

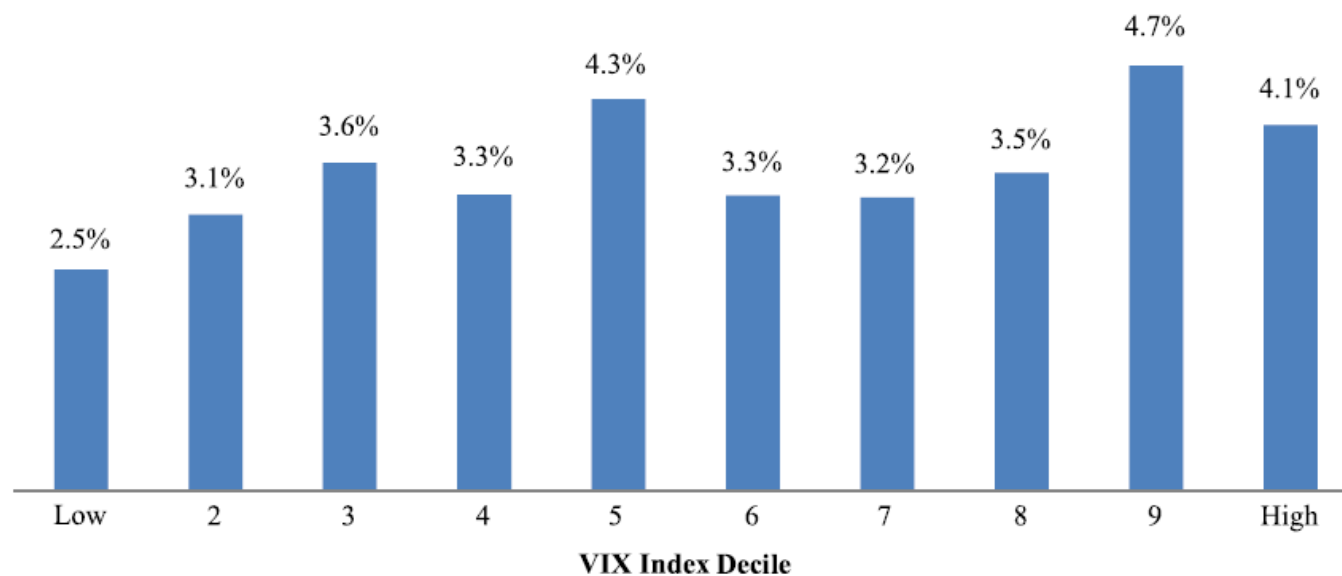
## AQR

- Offer different VRP strategy implementations, which vary in degree of VRP vs. equity risk premium exposure
- Sample of Product Offerings: Volatility Risk Premium, Covered Call, and Equity with Volatility Overlay
- May apply tactical signals to determine when attractive to sell options
- May include alpha from stock selection
- Beta-hedge (w/trading cost optimization) to control equity exposure
- May customize portfolio to target different stress-loss levels

# VRP - Perform in Different Volatility Regimes

Average Ex Post Volatility Risk Premium (Sorted by VIX Index Level)

Period: January 2, 1990 – June 30, 2014



Sources: AQR, Chicago Board Options Exchange, Standard and Poor's

# VRP - Perform in Different Market Cycles

- Losses tend to be more abrupt and sharp than gains
- Losses occur when there are surprise jumps in volatility (realized > implied volatility), typically during equity market drawdowns.
- However, if drawdown is long, gradual vs. sharp crash, loss may not occur.

# VRP - Perform in Different Market Cycles

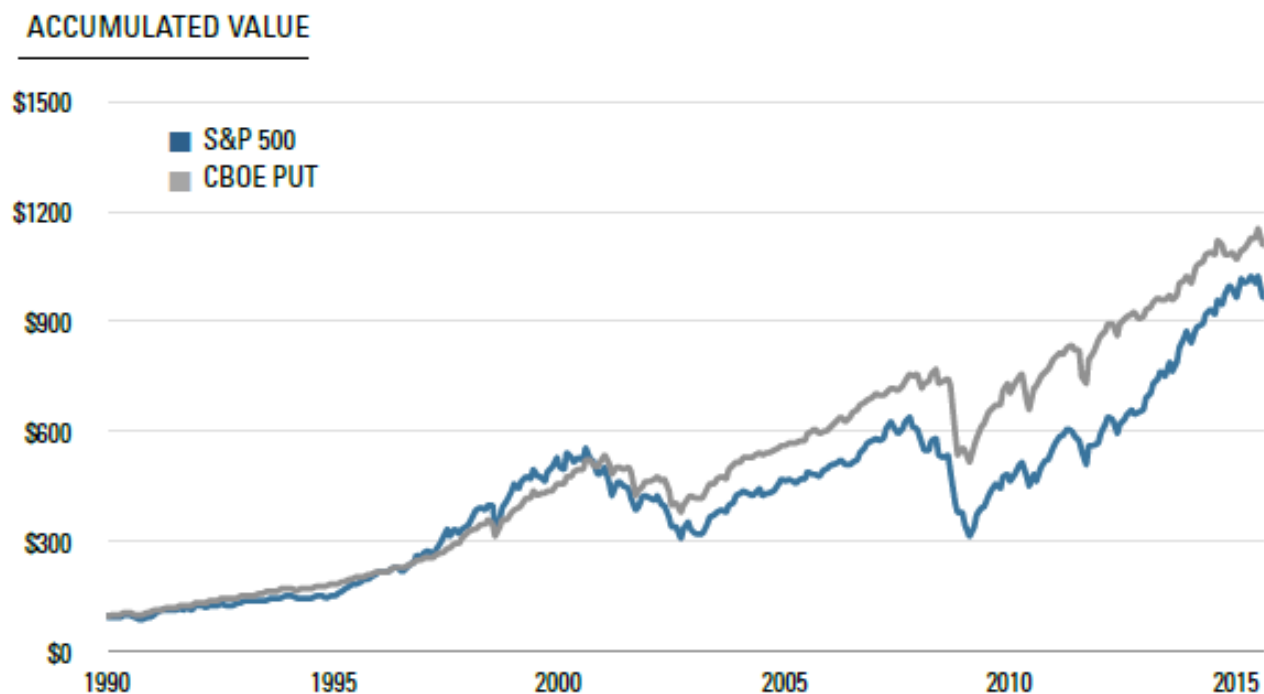
## Covered Call Strategy

Relative to broad equity market:

- Expect to outperform in bear or flat market
- Expect to keep up when market advancing modestly
- Expect to underperform in strong bull market

# CBOE PutWrite Index (PUT) vs. S&P 500 Index

Selling Insurance via Put Options  
(1 Month ATM against S&P 500, fully collateralized)



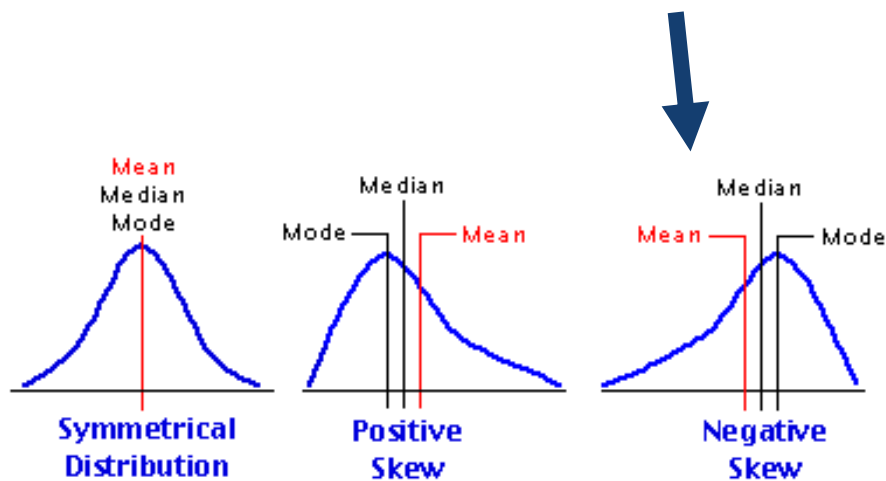
	S&P 500	PUT
Annualized Return (Geometric)	9.2%	9.8%
Volatility	14.6%	9.9%
Sharpe Ratio	0.48	0.70
Beta	1.00	0.56
Skewness	-0.61	-1.92
Max Drawdown	-51.0%	-32.7%
Max DD Start	10/1/07	5/1/08
Max DD End	2/1/09	2/1/09

Sources: Acadian Asset Management LLC, Bloomberg, Kenneth R. French Data Library, Standard & Poor's Financial Services LLC



# Questions?

# Appendix - Skewness



Source:

<http://analystnotes.com/graph/quant/SS02SBloso1.gif>

- Symmetric distribution – equal distribution of returns on either side of the mean
- Negative (Left) skew characterized by frequent small gains, but few extreme losses
- Positive (Right) skew characterized by frequent small losses, but few extreme gains

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

August 23, 2016

Agenda Item 7.1

**TO:** Board of Retirement

**FROM:** Chezelle Milan, Senior Accountant  
Lilibeth Dames, Investment Analyst  
Tat-Ling Chow, Finance Officer

**SUBJECT:** Preliminary Financial Statements for the Fiscal Year Ended June 30, 2016

**Staff Recommendation**

Accept the Preliminary Financial Statements for the Fiscal Year Ended June 30, 2016

**Background**

The preliminary financial statements provide financial information on SamCERA's financial position as of June 30, 2016, and its operating activity for the fiscal year ended June 30, 2016.

The *Statement of Fiduciary Net Position* (balance sheet) provides a snapshot of the account balance as of June 30, 2016. This Statement indicates the amount of fiduciary net position (total assets minus total liabilities) available in SamCERA to pay future pension benefits. Over time, increases and decreases in net position may serve as a useful indicator of whether the financial health of SamCERA is improving or declining. Other factors, such as market conditions, should also be considered in measuring SamCERA's overall financial health.

The Statement of Changes in Fiduciary Net Position (income statement) reports additions to, and deductions from, SamCERA's fiduciary net position for the fiscal year ended June 30, 2016. "Additions" consist of contributions from plan sponsors and members, investment income net of investment expenses (such as professional service fees), security lending income net of related expenses, and other additions. "Deductions" include pension benefits, member refunds, and administrative and other expenses.

**Summary**

**Review of Statement of Fiduciary Net Position**

The following page shows SamCERA's preliminary Statement of Fiduciary Net Position as of June 30, 2016, compared to its net position as of June 30, 2015. Over a year, SamCERA's net position increased by \$82 million, or 2%, to \$3.5 billion.

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

Statement of Fiduciary Net Position	Preliminary	Audited	Increase (Decrease)	
	June 30, 2016	June 30, 2015	Amount	Percentage
<b>ASSETS</b>				
Cash and Cash Equivalents	\$ 130,115,492	\$ 51,162,210	\$ 78,953,282	154%
Cash Management Overlay	26,249,148	26,273,301	(24,153)	0%
Securities Lending Cash Collateral	88,363,269	99,386,577	(11,023,308)	-11%
Total Cash, Cash Equivalents, and Short-Term Investments	<u>244,727,909</u>	<u>176,822,088</u>	<u>67,905,821</u>	38%
Receivables				
Contributions	7,812,557	6,151,530	1,661,027	27%
Due from Broker for Investments Sold	9,809,813	14,438,183	(4,628,370)	-32%
Investment Income	4,886,171	6,433,607	(1,547,436)	-24%
Securities Lending Income	26,788	37,582	(10,794)	-29%
Other Receivable	100,028	112,810	(12,782)	-11%
Total Receivables	<u>22,635,357</u>	<u>27,173,712</u>	<u>(4,538,355)</u>	-17%
Prepaid Expense	7,669	7,669	-	0%
Investments at Fair Value				
Fixed Income	612,917,117	601,260,090	11,657,027	2%
Equity	1,723,373,854	1,797,854,659	(74,480,805)	-4%
Alternatives	396,431,918	319,042,587	77,389,331	24%
Risk Parity	280,336,352	265,103,721	15,232,631	6%
Inflation Hedge	350,626,240	389,987,208	(39,360,968)	-10%
Total Investments at Fair Value	<u>3,363,685,481</u>	<u>3,373,248,265</u>	<u>(9,562,784)</u>	0%
Fixed Assets	5,162,123	3,206,047	1,956,076	61%
<b>Total Assets</b>	<u><b>3,636,218,539</b></u>	<u><b>3,580,457,781</b></u>	<u><b>55,760,758</b></u>	2%
<b>LIABILITIES</b>				
Payable - Investment Management Fees	1,803,507	2,042,596	(239,089)	-12%
Due to Broker for Investments Purchased	7,582,018	21,246,436	(13,664,418)	-64%
Securities Lending Collateral Due To Borrowers	88,363,269	99,386,577	(11,023,308)	-11%
Other	1,762,634	3,305,844	(1,543,210)	-47%
<b>Total Liabilities</b>	<u><b>99,511,428</b></u>	<u><b>125,981,453</b></u>	<u><b>(26,470,025)</b></u>	-21%
<b>NET POSITION RESTRICTED FOR PENSIONS</b>	<u><b>\$ 3,536,707,111</b></u>	<u><b>\$ 3,454,476,328</b></u>	<u><b>\$82,230,783</b></u>	2%

**Assets.** SamCERA's total assets increased by \$56 million, or 2%, due primarily to the following:

- Cash, cash equivalents increased by \$79 million. In the 4<sup>th</sup> quarter of fiscal year 2016, SamCERA liquidated its account with the commodities manager (SSARIS) for \$80 million in cash.
- Security lending cash collateral decreased by \$11 million due primarily to the decrease in the amount of securities on loan at June 30, 2016 compared the amount at June 30, 2015.
- Investments at fair value decreased by \$10 million. SamCERA's overall investments increased by \$70 million. However, with the liquidation of SamCEAR's commodities manager account, \$80 million in investment was converted to and reported under cash.
- Fixed assets increased by \$2 million as new purchases were made to support the new pension administration system.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

**Liabilities.** SamCERA's total liabilities decreased by \$26 million, or 21%, caused mainly by the following:

- Payables due to broker for investment purchased decreased by \$13 million. The decrease was mainly from the payoff of a sizeable payable of \$18 million due to Western Asset Management at June 30, 2015.
- Securities lending collateral due to borrowers decreased by \$11 million, which was triggered by the decline in the amount of securities on loan at June 30, 2016 compared to the amount at June 30, 2015.

**Review of Statement of Fiduciary Net Position**

Below is SamCERA's preliminary Statement of Changes in Fiduciary Net Position for the fiscal year ended June 30, 2016, with comparative information for the prior fiscal year. SamCERA's net position increased by \$82 million, or 2%, to \$3.5 billion.

Statement of Changes in Fiduciary Net Position	Preliminary	Audited	Increase (Decrease)	
	June 30, 2016	June 30, 2015	Amount	Percentage
<b>ADDITIONS</b>				
Contributions				
Employee Contribution	\$ 56,068,706	\$ 48,011,698	\$ 8,057,008	17%
Employer Contributions - Regular	116,113,636	108,107,406	8,006,230	7%
Employer Contributions - COLA	53,932,423	61,706,764	(7,774,341)	-13%
Employer Supplemental Contribution - CSCA	19,538,000	10,890,110	8,647,890	79%
Employer Supplemental Contribution - DSCA	1,510,429	-	1,510,429	--
Total Contributions	<u>247,163,194</u>	<u>228,715,978</u>	<u>18,447,216</u>	8%
Investment Income				
Interest and Dividends	40,406,763	44,433,648	(4,026,885)	-9%
Net Appreciation (Depreciation) in Fair Value of Investments	13,778,683	99,877,102	(86,098,419)	-86%
Less Investment Expense	(34,755,075)	(32,990,697)	(1,764,378)	5%
Net Investment Income	<u>19,430,371</u>	<u>111,320,053</u>	<u>(91,889,682)</u>	-83%
Securities Lending Income				
Securities Lending Income	445,845	396,746	49,099	12%
Less: Securities Lending Expenses	(168,065)	(87,101)	(80,964)	93%
Net Securities Lending Income	<u>277,780</u>	<u>309,645</u>	<u>(31,865)</u>	-10%
Other Additions	4,910,228	338	4,909,890	1452630%
<b>Total Additions</b>	<u><b>271,781,573</b></u>	<u><b>340,346,014</b></u>	<u><b>(68,564,441)</b></u>	-20%
<b>DEDUCTIONS</b>				
Member Benefits				
Service Retirement Allowance	157,513,099	147,266,945	10,246,154	7%
Disability Retirement Allowance	21,090,529	20,038,671	1,051,858	5%
Survivor, Death and Other Benefits	753,056	803,591	(50,535)	-6%
Total Member Benefits	<u>179,356,684</u>	<u>168,109,207</u>	<u>11,247,477</u>	7%
Member Refund	3,507,015	3,357,011	150,004	4%
Administrative Expenses	6,676,149	5,978,705	697,444	12%
Other Expenses	10,942	118,717	(107,775)	-91%
<b>Total Deductions</b>	<u><b>189,550,790</b></u>	<u><b>177,563,640</b></u>	<u><b>11,987,150</b></u>	7%
Net Increase (Decrease)	<b>82,230,783</b>	<b>162,782,374</b>	<b>(80,551,591)</b>	-49%
<b>NET POSITION RESTRICTED FOR PENSIONS</b>				
Beginning of Year	3,454,476,328	3,291,693,954	162,782,374	5%
End of Year	<u><b>\$ 3,536,707,111</b></u>	<u><b>\$ 3,454,476,328</b></u>	<u><b>\$82,230,783</b></u>	2%

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

**Additions.** Total additions to SamCERA's net position decreased by \$69 million, or 20%, during fiscal year 2016. SamCERA's primary sources of funding encompass employer and employee contributions as well as investment income net of related expenses. The increase is primarily attributed to the following:

- Employee contributions increased by \$8 million. The increase was due primarily to an agreement between the County and its general plan members in certain bargaining units under which the members are required to make contributions towards the Cost of Living Adjustment (COLA).
- Employer contributions for pension increased by \$8 million. Employer contributions are determined by applying the employer contribution rate to the pensionable payroll. In fiscal year 2016, the overall employer contribution rate declined slightly by 0.6% whereas the overall pensionable payroll increased by 8.6%. This resulted in a proportional increase in employer contributions.
- Employer contributions for COLA decreased by 8 million. Certain general plan members of the County agreed to share the County's COLA contribution to the Retirement Fund.
- Employer supplemental contributions increased by \$10 million. In fiscal year 2016, the County and the Mosquito and Vector Control District (the District) provided the Retirement Fund with supplemental contributions to accelerate the payoff of their unfunded liabilities. The County increased its supplemental contributions to \$19.5 million this year from \$10.9 million last year, and the District made a one-time supplemental contribution of \$1.5 million in October 2015.
- Net investment income decreased by \$92 million. The net appreciation of investments was lower than that of last fiscal year. The net return from SamCERA's investment was 0.7% for fiscal year 2016 whereas the net return was 3.5% for fiscal year 2015.
- Other Additions Increased by \$5 million. One of the general partners with Everstream Solar Infrastructure Fund Limited Partnership was in default. Its equity was distributed to the remaining general partners, including SamCERA. As a result, SamCERA recognized an unanticipated gain of \$4.5 million.

**Deductions.** Total deductions increased by \$12 million, or 7%, during fiscal year 2016. The increase was due mainly to a \$11 million (or 7%) increase in member benefits, which was triggered by an increase in the number of retirees with a higher average final compensation. The annual increase in member benefits in the past five years is within a one percent deviation.

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

August 23, 2016

Agenda Item 7.2

**TO:** Board of Retirement

**FROM:** Chezelle Milan, Senior Accountant  
Lilibeth Dames, Investment Analyst  
Tat-Ling Chow, Finance Officer

**SUBJECT:** Preliminary Report on Budget-to-Actual for the Fiscal Year Ended June 30, 2016

**Staff Recommendation**

Accept the Preliminary Report on Budget-to-Actual for the Fiscal Year Ended June 30, 2016.

**Background**

SamCERA's budget covers three different areas as follows:

1. Administrative Budget – covers personnel expenses (salaries and benefits) and administrative overhead (services and supplies). The administrative budget cannot exceed the mandated limit of 0.21% of the accrued actuarial liability of the retirement fund (Government Code §31580.2(a)).
2. Technology Budget – covers expenses for computer software, computer hardware, and computer technology consulting services in support of these computer products, and is not subject to the mandated limit of 0.21% discussed above (Government Code §31580.2(b)).
3. Professional Services Budget – covers costs for actuarial consulting services, custodial services, investment management, investment consulting services, and outside legal services. (Government Code §31596.1).

**Discussion**

The actual expenses reported on this report are preliminary until the annual audit is complete. While staff does not anticipate significant changes, staff will provide the Board with a revised budget-to-actual report, if any material adjustments are added to the actual expenses.

**Administrative Expenses.** For the fiscal year ended June 30, 2016, the total preliminary actual administrative expense totaled \$6.0 million, \$0.7 million (or 10%) below the budgeted amount. The following table summarizes all administrative expenses with explanations for the significant variances:

	<u>Adopted Budget</u>	<u>Preliminary Actual</u>	<u>% of Budget Used</u>	<u>Under (Above) Budget</u>	<u>% of Budget Remaining</u>
<b>Salaries and Benefits</b>					
Salaries	\$ 3,182,524	\$ 2,985,998	94%	\$ 196,526	6%
Benefits	1,663,793	1,540,018	93%	123,775	7%
<b>Total Salaries and Benefits</b>	<b><u>4,846,317</u></b>	<b><u>4,526,016</u></b>	<b>93%</b>	<b><u>320,301</u></b>	<b>7%</b>
<b>Services and Supplies</b>					
Board Expense	10,500	6,200	59%	4,300	41%
Insurance	80,000	64,200	80%	15,800	20%
Medical Evaluation	70,000	8,550	12%	61,450	88%
Member Education	55,000	62,172	113%	(7,172)	-13%
Education and Conference	140,800	107,136	76%	33,664	24%
Transportation and Lodging	192,500	83,141	43%	109,359	57%
Property and Equipment	32,500	25,739	79%	6,761	21%
General Office Supplies	45,000	23,644	53%	21,356	47%
Postage and Printing	90,000	50,347	56%	39,653	44%
Leased Facilities	571,305	568,044	99%	3,261	1%
County Services	368,663	381,080	103%	(12,417)	-3%
Audit Services	57,000	50,401	88%	6,599	12%
Other Administration	55,000	5,131	9%	49,869	91%
<b>Total Services and Supplies</b>	<b><u>1,768,268</u></b>	<b><u>1,435,786</u></b>	<b>81%</b>	<b><u>332,482</u></b>	<b>19%</b>
<b>Total</b>	<b><u>\$ 6,614,585</u></b>	<b><u>\$ 5,961,802</u></b>	<b>90%</b>	<b><u>\$ 652,783</u></b>	<b>10%</b>

*Salaries and Benefits* – Overall expenses were \$4.5 million, which was in line with the adopted budget.

*Services and Supplies* – Overall expenses were \$1.4 million, \$0.3 million (or 19%) less than anticipated. The significant changes include the following:

- Medical evaluation expenses were \$61,450 (or 88%) below the budget. Petitions for disability benefits that required independent medical examinations were much less than anticipated.
- Member education expenses were \$7,172 (or 13%) above the budget. SamCERA renewed its contract with the services provider at a higher contract price.
- Education and conference expenses for staff and trustees were \$33,664 (or 24%) below the budget. The budget was based on estimated costs of training and conferences requested, and not all training and conferences were attended.
- Transportation and lodging expenses for staff and trustees were \$109,359 (or 57%) below the budget. The budget was based on estimated costs of transportation and lodging for off-site training and conferences requested, and not all training and conferences were attended.
- General office supplies expenses were \$21,356 (or 47%) below the budget. The usage of office supplies for daily operations were less than estimated.



- Postage and printing expenses were \$39,653 (or 44%) below the budget due primarily to an increased use of online communication as well as the discontinued production of financial reports in paper format.
- County services expenses were \$12,417 (or 3%) above the budget. The number of disability cases requiring legal services from the County Counsel was higher this year than last year.
- Other administration expenses were \$49,869 (or 91%) below the budget. The preparation of a new Tax Determination Letter was no longer needed per the Internal Services Revenue.

**Technology Expenses.** For the fiscal year ended June 30, 2016, the preliminary actual technology expenses totaled \$2.7 million, \$2.6 million (or 49%) below the budget. Below is a summary of all technology expenses along with explanations for the significant variances.

	<u>Adopted Budget</u>	<u>Preliminary Actual</u>	<u>% of Budget Used</u>	<u>Under Budget</u>	<u>% of Budget Remaining</u>
Property and Equipment	\$ 100,000	\$ 30,580	31%	\$ 169,420	69%
IT Infrastructure	1,558,815	683,767	44%	775,048	56%
Research and Development	100,000	-	0%	100,000	100%
Capital Assets	<u>3,500,000</u>	<u>1,956,076</u>	56%	<u>1,543,924</u>	44%
<b>Total</b>	<b><u>\$ 5,258,815</u></b>	<b><u>\$ 2,670,423</u></b>	51%	<b><u>\$ 2,588,392</u></b>	49%

- Property and equipment expenses were \$169,420 (or 69%) below the budget due mainly to less need for purchases
- IT infrastructure expenses were \$775,048 (or 56%) below the budget caused primarily by deferring two major IT projects to fiscal year 2016-17. These projects are as follows:
  - Electronic Content Management. This project converts member documents from paper to electronic format.
  - Technology Infrastructure Upgrade. This project intends to support a robust business continuance and disaster recovery plan by increasing the capacities of existing infrastructure.
- Research and development expenses were \$100,00 (or 100%) below the budget. Plans to capitalize on new technologies were postponed mainly because IT resources (staff and time) were supporting the implementation of a new pension administration software system (PASS).
- Capital expenses were \$1.5 million (44%) below the budget. The amount budgeted for the PASS project was not fully utilized. The unspent amount was carried forward to fiscal year 2016-17 to cover the remaining project costs.

**Professional Services Expenses.** For the fiscal year ended June 30, 2016, the preliminary actual professional service expenses totaled \$21 million, or 56.1 basis points. Investment management fees are driven by contractual agreements and based on assets under management or the amount of capital committed.

Overall fees for fiscal year 2016 were in line with the estimated fees. Variances in individual asset classes were caused primarily by changes to the target asset allocation, unanticipated additions of investment managers, and under or over performance by investment managers.

<b>Investment Managers &amp; Other Professional Services (Combined)</b>			
<b>Service</b>	<b>Fee (bps)</b>	<b>Fee</b>	<b>Projected Fee FY 2015-16</b>
Investment Managers	53.8	\$ 19,753,552	\$ 19,671,150
Other Professional Services	2.3	861,316	888,000
<b>Total</b>	<b>56.1</b>	<b>\$ 20,614,868</b>	<b>\$ 20,559,150</b>

#### Investment Managers

<b>Investment Manager</b>	<b>Asset Class</b>	<b>Fee (bps)</b>	<b>Investment Management Fee</b>	<b>Projected Fee FY 2015-16</b>
Total Domestic Equity	Domestic Equity	29.9	\$ 3,315,305	\$ 3,949,250
Total International Equity	International Equity	36.2	2,553,662	3,265,900
Total Domestic Fixed Income	Domestic Fixed Income	N/A	2,031,422	2,649,750
Total Global Fixed Income	Global Fixed Income	34.7	344,506	366,000
Total Strategic Overlay	Strategic Overlay	N/A	150,647	105,000
Total Risk Parity	Risk Parity	33.7	963,317	1,111,000
Total Real Estate	Real Estate	N/A	1,381,996	950,000
Total Commodities	Commodities	47.4	379,279	514,250
Total Absolute Return/Hedge Funds	Hedge Funds	N/A	3,145,811	1,400,000
Total Private Equity	Private Equity	N/A	3,875,329	4,910,000
Total Private Real Assets	Private Real Assets	N/A	1,612,279	450,000
<b>Total</b>		<b>53.8</b>	<b>\$ 19,753,552</b>	<b>\$ 19,671,150</b>


#### Other Professional Services

<b>Contractor</b>	<b>Service</b>	<b>Fee (bps)</b>	<b>Professional Fee</b>	<b>Projected Fee FY 2015-16</b>
Milliman	Actuarial Consulting	0.2	\$ 86,000	\$ 88,000
Verus Investments	Investment Consulting	1.2	450,000	450,000
Northern Trust	Custodian	0.9	325,316	350,000
<b>Total</b>		<b>2.3</b>	<b>\$ 861,316</b>	<b>\$ 888,000</b>

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

August 23, 2016

Agenda Item 7.3

**To:** Board of Retirement  
**From:** Scott Hood, Chief Executive Officer   
**Subject:** Approval of Process and Questions for the Annual Review of Independent Auditor

**Staff Recommendation**

Approve staff's proposed process and "*Questions for the Annual Evaluation of SamCERA's Independent Auditor.*"

**Discussion**

The Board's annual review of SamCERA's independent auditor, Brown Armstrong Accountancy Corporation, has typically been scheduled for the October meeting, the same meeting that Brown Armstrong presents its Audit Report to the Board. Staff proposes to delay the annual review for one meeting so that the Board has sufficient time to receive and review Brown Armstrong's work product and presentation before providing input to the annual review. If the Board approves this process change, the annual review of Brown Armstrong will be scheduled for the December 6<sup>th</sup> Board meeting. Brown Armstrong will be present at the October meeting and also will be available by phone at the December meeting to answer any questions the Board may have.

Part of the annual review will be the result of a survey of trustees, staff and Brown Armstrong regarding its performance. Similar to last year, this year's survey will be in electronic form. After the October meeting, each Board member will receive an email with a link to complete the survey. If a Board member prefers a hard copy of the survey, please let us know.

Prior to the December meeting, staff will submit the attached questions to Brown Armstrong and provide its responses to the Board in the agenda packet along with the survey results.

**Attachment**

Proposed Questions for the Annual Evaluation of SamCERA's Independent Financial Auditor

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

**Questions for the Annual Evaluation of SamCERA's Independent Auditor - Fiscal Year 2015-16**

**A. Organizational Update**

- 1) Are there any significant changes in the past eighteen months to your ownership structure?
- 2) Are there any significant changes in the past eighteen months to your organizational structure? If so, provide an updated organizational structure chart.
- 3) Has there been any additions or deletions to the number of your public entity clients? If so, please list changes.
- 4) Has your firm or any of your employees been involved in regulatory or litigation actions in the past eighteen months?
- 5) Has a peer review been performed on any of your firm's audit products in the past three years? If yes, email the latest peer review report to [tchow@samcera.org](mailto:tchow@samcera.org).
- 6) Have there been any significant changes to your firm's written policy on ethics? If yes, please email the updated policy to [tchow@samcera.org](mailto:tchow@samcera.org).
- 7) Are any of your operations that provide services directly or indirectly to SamCERA outsourced? If yes, provide details regarding the firm(s) with which your firm has contracted.

**B. Audit Process**

- 8) What are the key components of your audit process?
- 9) What are the key procedures your firm use to assure SamCERA is in compliance with applicable regulations and professional standards?
- 10) Is your firm's system of quality control designed to consistently deliver quality audits in a dynamic and evolving environment? How does your firm's system of quality control work?
- 11) How would your firm convey information that has value to key stakeholders?

**C. Outlook**

- 12) How can SamCERA better prepare for the annual audit?
- 13) How can SamCERA better utilize your firm's capabilities?
- 14) What new or different audit services should SamCERA consider?
- 15) Are there any accounting and financial reporting issues that SamCERA should be aware of?
- 16) Are there any trends in the public pension industry that SamCERA should be aware of?

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

August 23, 2016

Agenda Item 7.4

**TO:** Board of Retirement

**FROM:** Tariq Ali, Chief Technology Officer



**SUBJECT:** Update on Progress of SamCERA's Information Technology Projects

**Discussion**

Staff will provide an update of SamCERA's technology projects, and the Project Manager for the PASS implementation Will Morrow will deliver an update on the Pension Administration Software System implementation project.

**IT Projects**

- PensionGold Web Member Services (WMS) Video Tutorials
- MySamCERA.org Domain
- PASS Penetration Testing
- Annual Member Statements
- Financial Knowledge Network classes loaded in county Learning Management System (LMS)

**PASS Implementation**

- Status
  - Phase 1 (Project Initiation) is 100% complete
  - Phase 2 (PASS Development) is 100% complete
  - Phase 3 (PASS Implementation) is 27% complete
  - Overall 79% complete
- Schedule
  - On schedule
  - Phase 1 complete
  - Phase 2 complete
  - Phase 3 (PASS Implementation) has started with planned go-live January 2017
- Data Conversion
  - No significant conversion issues
  - Data conversions to support each of the four Validation testing periods are complete
  - Data reconciliation has started
    - Person reconciliation nearing completion

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

- Member account reconciliation has started
- Budget
  - No budget variance
  - Vitech has invoiced \$5,019,231 (62%) of the \$8,097,560 project budget
  - Four contract amendments approved totaling \$644,688 (8.8% of original contract)
- Risks
  - We have identified and planned mitigation for project risks, including these top risks:
    - User Acceptance Tests are inadequate due to ineffective SamCERA planning and leadership
    - Workday daily file update is defective due to inadequate testing
    - Inadequate progress on building and testing reports, letters, and forms causes some of them not to be available at go-live
    - Member self-service retirement applications are not user friendly resulting in phone calls and low usage
    - Lack of SamCERA change management processes leading to user confusion about new business roles, processes, and procedures
- Other
  - Vendor system performance testing in progress
  - User acceptance testing will be performed from August 16 through November 30
  - Mosquito District has submitted a test employer work report file and will participate in UAT
  - Internal control testing will be integrated with UAT
  - Network and mobile app security testing will be performed during UAT

**Attachment**

LRWL PASS Project Update



*Moving Retirement Systems Forward*

# SamCERA PASS Project Update

August 23, 2016

# PASS Status Overview

Status as of August 1, 2016

ID	Task Name	Start	Finish	Duration	% Complete	2014				2015				2016			
						Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	<b>PASS Project</b>	4/14/2014	1/2/2017	142.2w	79.39%												
2	Phase 1: Initiate Project	4/14/2014	8/15/2014	18w	100%												
3	Phase 2: Develop PASS	7/7/2014	4/15/2016	93w	99.74%												
4	Validation 1: Demographics	7/7/2014	12/19/2014	24w	100%												
5	Validation 2: ECM, CRM, Employer, Pension	9/29/2014	6/19/2015	38w	100%												
6	Validation 3: Service Purchase, Benefit Calculation	3/2/2015	11/13/2015	37w	100%												
7	Validation 4: Payments, Finance, Self Service, Options	8/24/2015	4/15/2016	34w	99%												
8	Phase 3: Implement PASS	3/7/2016	1/2/2017	43.2w	27%												



# Budget Summary

Item	Contract	Invoiced	Remaining
Phase 1	\$590,372	\$590,372	\$0
Phase 2	\$3,585,208	\$3,500,208	\$85,000
Phase 3	\$1,557,585	\$0	\$1,557,585
Holdback	\$477,023	\$0	\$477,023
Options	\$1,040,500	\$213,205	\$827,295
Hardware	\$183,158	\$178,244	\$4,914
Software	\$636,589	\$502,413	\$134,176
Other	\$27,126	\$34,789	(\$7,664)
<b>TOTAL</b>	<b>\$8,097,560</b>	<b>\$5,019,231</b>	<b>\$3,078,329</b>

62% of contract value has been invoiced

# Risks

Risk (Value)	Actions
User Acceptance Tests are inadequate due to ineffective SamCERA planning and leadership (42)	SamCERA was primarily responsible for UAT Plan, which is now complete
Workday daily file update is defective due to inadequate testing (35)	File will be tested twice weekly during UAT
Inadequate progress on building and testing reports, letters, and forms causes some of them not to be available at go-live (32)	Validate status during UAT; prioritize remaining documents
Member self-service retirement applications are not user friendly resulting in phone calls and low usage (32)	Delay or abandon implementation of member self service retirement application until acceptable.
Lack of SamCERA change management leads to user confusion about new business roles, processes, and procedures (30)	Procedures manuals and processes to be tested and refined during UAT. Change Team will meet to discuss issues.

# Implementation Activities

- Implementation risk review
- Security assessments
  - Network
  - Mobile app
- Training plan
- Disaster recovery plan
- System performance testing
- Internal control audit
- Communications plan
- Data reconciliation
- Pre- and Post-Implementation Checklist

# System Testing

## ❑ Contractor system testing

- 290 test scripts
  - ✓ 267 passed
  - ✓ 8 failed (no critical or high severity)
  - ✓ 15 pending

## ❑ User acceptance testing

- August 16 through November 30
- Sample of test scripts
- Test cases for special scenarios
- Business process testing

# UAT Highlights

- Scan and process documents daily
- Processing Workday daily change file twice each week
- Processing Workday employer work reports each week (County and Mosquito)
- Processing benefit payroll in parallel with PensionGold each month in an isolated environment
- Test with security settings configured
- Scheduled weekly / bi-weekly test labs in training room to process documents received, perform special test cases, share issues, get help
- Member pilot testing of Member Self Service and Mobile App
- Mosquito testing of Employer Self Service
- Testing of external file interfaces (Great Plains, OFAS, bank, Small World, etc.)
- Test batches, letters, and reports