

# Notice of Public Meeting

## The Board of Retirement of the San Mateo County Employees' Retirement Association will meet on **Tuesday, December 5, 2017, at 10:00 A.M.**

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

- 1. Call to Order, Roll Call and Miscellaneous Business**
- 2. Oral Communications**
  - 2.1 Oral Communications from the Board
  - 2.2 Oral Communications from the Public
- 3. Approval of the Minutes**
  - 3.1 Approval of Regular Meeting Minutes from September 26, 2017
  - 3.2 Approval of Audit Committee Meeting Minutes from October 26, 2017
  - 3.3 Approval of Regular Board Meeting Minutes from October 31, 2017
- 4. Approval of the Consent Agenda\***

|  |                              |
|--|------------------------------|
| 4.1 Disability Retirements (2) <ul style="list-style-type: none"><li>• Andrew Allee</li><li>• Janet Hansen</li></ul> | 4.5 Deferred Retirements     |
| 4.2 Survivor Death Benefits  | 4.6 Member Account Refunds   |
| 4.3 Service Retirements  | 4.7 Member Account Rollovers |
| 4.4 Continuances   | 4.8 Member Account Redeposit |
|  | 4.9 Trustee Education Report |
- 5. Benefit & Actuarial Services**
  - 5.1 Consideration of Agenda Items, if any, removed from the Consent Agenda
- 6. Investment Services**
  - 6.1 Report on Preliminary Monthly Portfolio Performance for the Period Ended October 31, 2017
  - 6.2 Report on Quarterly Investment Performance for the Period Ended September 30, 2017
  - 6.3 Report on Absolute Return and Risk Parity Manager Annual Reviews
  - 6.4 Report on Opportunistic Credit Manager Annual Review
  - 6.5 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 Annual Review of SamCERA's Auditor, Brown Armstrong
  - 7.2 Approval of a Resolution Amending Education Policy
  - 7.3 Discussion of Board/ Staff Retreat Topics
- 8. Management Reports**
  - 8.1 Chief Executive Officer's Report
  - 8.2 Assistant Executive Officer's Report
  - 8.3 Chief Investment Officer's Report
  - 8.4 Chief Legal Counsel's Report

# Notice of Public Meeting

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

- C1 Consideration of Disability Items, if any, Removed from the Consent Agenda
- C2 Approval of Proposed Alternative Investment (Confidential Under Gov. Code §54956.81 and §6254.26 – see also item 6.5)
- C3 Public Employee Performance Evaluation, in accordance with Gov. Code § 54957, Title: Chief Executive Officer *Confidential Under Gov. Code §54957*)

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

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

|                  |                   |                  |
|------------------|-------------------|------------------|
| Radetich, Ronald | October 9, 2017   | Sheriff's        |
| Bell, Daniel     | October 14, 2017  | Public Works     |
| Grinnell, George | October 15, 2017  | Assessor's       |
| Beldi, Lino      | October 17, 2017  | Probation        |
| Linaja, Violeta  | November 2, 2017  | Medical Center   |
| Molinar, Adolfo  | November 3, 2017  | General Services |
| Simonson, Donald | November 8, 2017  | Health & Welfare |
| Lundquist, John  | November 11, 2017 | Assessor         |
| Flynn, Sharon    | November 11, 2017 | Health Dept      |



Scott Hood, Chief Executive Officer

Posted: November 29, 2017

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

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

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

**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**  
SEPTEMBER 26, 2017 – REGULAR BOARD MEETING MINUTES

1709.1 **Call to Order, Roll Call and Miscellaneous Business**

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

**Roll Call:**

*Present:* Mark Battey, Ben Bowler, Susan Lee (for Shirley Tourel), Alma Salas (for Paul Hackleman), and David Spinello.

*Excused:* Sandie Arnott, Albert David, Paul Hackleman, Kurt Hoefer, Eric Tashman and Shirley Tourel.

*Alternates present:* Susan Lee, Alma Salas.

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

*Consultants:* Margaret Jadallah (*Verus*).

1709.2.1 **Oral Communications from the Public:** None.

1709.2.2 **Oral Communications from the Board:** None.

1709.3.0 **Approval of Board Meeting Minutes:** Approval of minutes was continued to the October 31, 2017, Regular Board Meeting.

1709.4.0 **Approval of the Consent Agenda:** Mr. Battey asked if there were any items to be removed from the Consent Agenda. No items were requested to be removed.

**Action:** Mr. Bowler moved to approve the Consent Agenda, and the motion was seconded by Ms. Salas. The motion carried with a vote of 5-0, with trustees Battey, Bowler, Lee (for Tourel), Salas (for Hackleman) and Spinello, all in favor; none opposed.

1709.4.1 **Disability Retirements:**

- a) The Board found that Adriane Beckman is (1) permanently incapacitated for the performance of her usual and customary duties as a Probation Officer III, (2) found that her disability was the result of an injury arising out of and in the course of her employment and (3) granted her application for a service-connected disability retirement.
- b) The Board found that Gabriela Breton is (1) not permanently incapacitated for the performance of her usual and customary duties as a Marriage and Family Therapist II, and (2) denied her application for a service-connected disability retirement.
- c) The Board found that that Gloria Camacho is (1) permanently incapacitated from the performance of her usual and customary duties as a Food Service Worker II, (2) found that her disability was the result of an illness arising out of and in the course of her employment and (3) granted her application for a service-connected disability retirement.
- d) The Board found that Elvira Cruz is (1) permanently incapacitated for the performance of her usual and customary duties as a Hospital Unit Coordinator, (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.
- e) The Board found that Sonja White is (1) permanently incapacitated from the performance of her usual and customary duties as a Group Supervisor III, (2) found that her disability was not the result of an illness arising out of and in the course of her employment and (3) granted her application for a non-service-connected disability retirement.

1709.4.2 **Survivor Death Benefits:** The Board find that Thomas Ball, would have been entitled to a non-service-connected disability but has died, and Wendy Ball, the surviving spouse, has elected to receive an optional death allowance pursuant to Government Code § 31781.1.

1709.4.3 **Service Retirements:**

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

| <b>Member Name</b>    | <b>Effective Retirement Date</b> | <b>Department</b>        |
|-----------------------|----------------------------------|--------------------------|
| Adams, Anthony        | July 6, 2017                     | Sheriff's                |
| Burris, Larry         | July 25, 2017                    | Probation                |
| Clancy, Carol         | July 22, 2017                    | Correctional Health      |
| Dabich, Sandra        | July 15, 2017                    | Deferred from Courts     |
| Elie, Dolores         | July 28, 2017                    | Health                   |
| Escamilla, Mercedes   | August 1, 2017                   | H.S.A.                   |
| Gutierrez-Gil, Gloria | July 11, 2017                    | H.S.A.                   |
| Justice, Misti        | July 11, 2017                    | QDRO                     |
| Land, Yolanda         | July 6, 2017                     | Deferred                 |
| Lew-White, Lorraine   | July 29, 2017                    | Environmental Health     |
| Marengo, Edward       | July 8, 2017                     | Deferred Social Services |
| Nicholson, Shelly     | July 29, 2017                    | Human Services           |
| Reyes, Lesbya         | July 29, 2017                    | Probation                |
| Rodriguez, Fidel      | August 1, 2017                   | Probation                |
| Storme, Gregory       | July 6, 2017                     | Sheriff                  |

1709.4.4 **Continuances:**

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

| <b>Survivor's Name</b> | <b>Beneficiary of:</b> |
|------------------------|------------------------|
| Parry, Richard         | Parry, Cheryl          |
| Thompson, Shirlee      | Thompson, Charles      |

1709.4.5 **Deferred Retirements:**

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

| <b>Member Name</b>                  | <b>Retirement Plan Type</b>          |
|-------------------------------------|--------------------------------------|
| Albertson, Jason                    | G5, Vested – Reciprocity             |
| Bishop, Colin                       | G4, Vested – Reciprocity             |
| Cooper, Angela                      | G7, Non-vested – Reciprocity         |
| Dubroff, Melinda                    | G4, Vested – Reciprocity             |
| Gonzales, Richard                   | S5, Non-vested – Reciprocity         |
| He, Jie                             | G4, Vested - Reciprocity             |
| Leong, Ligi                         | G4, Vested                           |
| Levy, Glenn                         | G4, Vested – Reciprocity             |
| Madalena, Thomas                    | G4, Vested – Auto Defer – Code 31700 |
| Martinez, Patricia                  | G4, Vested – Reciprocity             |
| Moran, Maria Carmel                 | G4, Vested                           |
| Mughannam, Rita                     | G4, Vested – Reciprocity             |
| Parada, Christine                   | G7, Vested – Reciprocity             |
| Price, Jessica                      | G5, Vested – Auto Defer – code 31700 |
| Ruiz, Jessie                        | G4, Vested – Auto Defer – code 31700 |
| Sotel-Malaga, Lorena                | G7, Non-vested – Reciprocity         |
| Stavinskaya-Velasquez, Olga         | G7, Non-vested – Reciprocity         |
| Taylor, Stephanie                   | S5, Vested                           |
| <b>Deferred Retirements (cont):</b> |                                      |
| Tercero, Roberto Jose               | G4, Vested – Reciprocity             |

|                      |                              |
|----------------------|------------------------------|
| Thompson, Jenell     | G4, Vested                   |
| Tia, Queena          | G7, Non-vested - Reciprocity |
| Tseng, Margaret      | G5, Non-vested - Reciprocity |
| Widdel, Koren        | G4, Vested - Reciprocity     |
| Wiltron, Christopher | S5, Non-vested – Reciprocity |

1709.4.6 **Member Account Refunds:**

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

| <b>Member Name</b>      | <b>Retirement Plan Type</b> |
|-------------------------|-----------------------------|
| Castillo, Victor        | P4, Vested                  |
| Cooper, Dontice         | G7, Non-vested              |
| Hall, Andrew            | G7, Non-vested              |
| Kishan, Rosena          | G4, Vested                  |
| Manchia, Beverly (QDRO) | G2, Vested                  |
| Mascarenas, Malinda     | G7, Non-vested              |
| McLemore, DeFrance      | S5, Non-vested              |
| Williams, Rita          | G7, Non-vested              |
| Wray, Martin            | G5, Non-vested              |

1709.4.7 **Member Account Rollovers:**

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

| <b>Member Name</b> | <b>Retirement Plan Type</b> |
|--------------------|-----------------------------|
| Mednikov, Marianna | G4, Non-vested              |
| Williams, Davin    | P4, Vested                  |

1709.4.8 **Member Account Redeposit:** None.

1709.4.9 **Acceptance of Trustees’ Reports of Educational Activities:** The Board accepted the submitted report for the educational activity attended by trustee Susan Lee.

1709.4.10 **Reaffirmation of Board Procedures for Assessment and Determination of Whether an Element of Compensation Was Paid to Enhance a Member’s Pension Benefit:** The Board reaffirmed the “Board Procedures for Assessment and Determination of Whether an Element of Compensation Was Paid to Enhance a Member’s Pension Benefit.”

1709.4.11 **Reaffirmation of Board of Retirement Procedures for Auditing of Employer Data and Information to Determine Correctness of Member’s Retirement Benefits, Reportable Compensation, Enrollment in and Reinstatement to, the Retirement System:** The Board reaffirmed the “Board of Retirement Procedures for Auditing of Employer Data and Information to Determine Correctness of Member’s Retirement Benefits, Reportable Compensation, Enrollment in and Reinstatement to the Retirement System.”

1709.4.12 **Approval of Resolution Authorizing CEO to Amend Agreement with Vitech:** The Board approved a resolution authorizing the Chief Executive Officer to execute a seventh amendment to the agreement with Vitech Systems Group, Inc., and to execute any subsequent amendments and minor modifications in an amount not to exceed \$100,000 in aggregate.

1709.4.13 **Approval of Resolution Authorizing the CEO to Enter into an Agreement for Investment Consultant services with Verus Advisory, Inc.:** The Board approved a resolution authorizing the Chief Executive Officer to execute an agreement with Verus Advisory, Inc. for investment consulting services.

- 1709.5.1 **Consideration of Agenda Items, if any, removed from the Consent Agenda:** None.
- 1709.6.1 **Preliminary Monthly Portfolio Performance Report for the Period Ended August 31, 2017:** Mr. Coultrip discussed the preliminary monthly performance report with the Board. He reported that SamCERA's net preliminary return for August 2017 was 0.65%, while the preliminary trailing twelve-month return ending August 2017 was 11.8% net, effectively matching the return of the benchmark. The twelve-month net return is higher than SamCERA's Actuarial Assumed Earnings Rate of 6.75%. This item was informational and for discussion only, no action was taken.
- 1709.6.2 **Report on the Opportunist Credit Manager Reviews:** Ms. Dames reviewed the meeting notes from the annual reviews of SamCERA's Opportunistic Credit managers. Staff and consultant met at SamCERA's offices with Angelo Gordon on August 30, 2017; and with Beach Point Capital Management and Tennenbaum Capital Partners on August 31, 2017. Ms. Dames reported there were no significant concerns identified during the portfolio reviews. This item was informational and for discussion only, no action was taken.
- 1709.6.3 **Approval of Resolution Amending the Investment Policy Statement:** Mr. Coultrip reviewed the proposed changes to the Investment Policy Statement with the Board. The proposed changes memorialize discussions held by the Board at previous meetings.  
**Action:** Ms. Salas moved to approve the resolution amending the Investment Policy Statement and the motion was seconded by Mr. Bowler. The motion carried with a vote of 5-0, with trustees Battey, Bowler, Lee (for Tourel), Salas (for Hackleman) and Spinello, all in favor; none opposed.
- 1709.7.1 **Approval of Resolution Authorizing CEO to Amend the Agreement with Milliman, Inc. to Extend the Term for One Additional Year:** Mr. Hood stated that the current contract with Milliman, Inc. expires at the end of 2017. Staff has proposed to extend the contract one additional year, through the valuation in 2018.  
**Action:** Mr. Bowler moved to approve a resolution authorizing the CEO to amend and extend the agreement with Milliman, Inc.; the motion was seconded by Ms. Salas. The motion carried with a vote of 5-0, with trustees Battey, Bowler, Lee (for Tourel), Salas (for Hackleman) and Spinello, all in favor; none opposed.
- 1709.8.1 **Chief Executive Officer's Report:** Mr. Hood discussed the need for a special meeting in October. He intends to schedule a date that works for a majority of the Board. He stated he would be attending the CALAPRS Administrators Institute, September 27-29, 2017 in Carmel. Mr. Hood also stated next month's meeting agenda would include consideration of the 2018 schedule of Board meetings.
- 1709.8.2 **Assistant Executive Officer's Report:** Ms. Smith stated that Board members had received a survey via email evaluating the services Milliman, Inc. She will review the results of the survey at the October meeting.  
  
Ms. Perez reminded Board members about upcoming educational events.
- 1709.8.3 **Chief Investment Officer's Report:** Mr. Coultrip invited interested trustees to attend the upcoming annual manager reviews. State Street will have their review on October 5; and Panagora and AQR on October 12, 2017.
- 1709.8.4 **Chief Legal Counsel's Report:** Ms. Carlson gave an update on a trial court ruling in Orange County related to pension forfeiture.
- C1 **Consideration of Disability Items, if any, removed from the Consent Agenda:** None.

1709.9 **Report on Actions Taken in Closed Session:** None.

1709.10 **Adjournment:** Mr. Battey adjourned the meeting at 10:28 a.m. in memory of the deceased members listed below.

|                    |                   |                              |
|--------------------|-------------------|------------------------------|
| Aldrich, Mary      | August 4, 2017    | Chope Hospital               |
| Haken, Dinah       | August 5, 2017    | Chope Hospital               |
| Breitner, Marcelle | August 9, 2017    | Mental Health                |
| Robelet, Flora     | August 21, 2017   | District Attorney's          |
| Florea, Lois       | August 23, 2017   | Crystal Springs Rehab Center |
| Simpson, Ramona    | August 29, 2017   | Chope Hospital               |
| Ginilo, George     | September 3, 2017 | Agriculture                  |
| Wenneberg, Greg    | September 5, 2017 | Behavioral Health & Recovery |

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Scott Hood  
Chief Executive Officer

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Kristina Perez  
Retirement Executive Secretary

San Mateo County Employees' Retirement Association  
**Minutes of the Audit Committee Meeting of the Board of Retirement**

**October 26, 2017 – Audit Committee Meeting Minutes**

1. **Call to Order:** Chair Shirley Tourel called the meeting of the Audit Committee to order at 4:00 p.m.

**Roll Call:** *Present:* Kurt Hoefler, Susan Lee and Shirley Tourel.

*Excused:* Sandie Arnott.

*Staff:* Scott Hood, Brenda Carlson, Gladys Smith, Tat-Ling Chow and Kristina Perez.

*Consultants:* Ashley Casey, from Brown Armstrong (appeared via telephone).

2. **Oral Communications:** None.

3. **Review and Discussion of the Following Items:**

- 3.1 **Recommendation to the Board of Retirement to Accept Financial Audit Management Reports and Findings:**

Ms. Casey presented the audit report telephonically. She reviewed the financial audit management reports and findings with the Audit Committee. She stated that SamCERA received an unmodified (clean) opinion, that there were no problems or difficulties during the audit process, and that there were no significant issues or material weaknesses to be disclosed. Ms. Casey informed the Committee that five agreed-upon recommendations, that expand on best control practices, were given. The Audit Committee asked questions of Ms. Casey and Ms. Chow.

**Action:** Mr. Hoefler moved to recommend that Board of Retirement accept the financial audit management reports and findings, as prepared by Brown Armstrong. The motion was seconded by Ms. Lee and carried with a vote of 3-0, with trustees Hoefler, Lee and Tourel, all in favor; and none opposed.

- 3.2 **Recommendation to the Board of Retirement to Approve SamCERA's 2017 Comprehensive Annual Financial Report:**

Ms. Chow explained the elements of the CAFR, and reviewed highlights of the report including SamCERA's net position, liabilities, investment income returns and funding status. She stated that SamCERA's financial position has improved from 83.1% to 84.3%. The Audit Committee members asked questions and discussed the information provided.

**Action:** Ms. Lee moved to recommend that Board of Retirement approve SamCERA's 2017 Comprehensive Annual Financial Report. The motion was seconded by Mr. Hoefler and carried with a vote of 3-0, with trustees Hoefler, Lee and Tourel, all in favor; and none opposed.

4. **Finance Officer's Report:** Ms. Chow thanked Ms. Casey, and Brown Armstrong, for the smooth audit process.

5. **Adjournment:** With no further business, Ms. Tourel adjourned the meeting at 4:18 p.m.

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Scott Hood  
Chief Executive Officer

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Kristina Perez  
Retirement Executive Secretary



**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**  
OCTOBER 31, 2017 – REGULAR BOARD MEETING MINUTES

1710.1 **Call to Order, Roll Call and Miscellaneous Business**

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

**Roll Call:**

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

*Excused:* Sandie Arnott and Shirley Tourel.

*Alternates present:* Susan Lee.

*Alternates excused:* Alma Salas.

*Staff:* Scott Hood, Michael Coultrip, Brenda Carlson, Gladys Smith, Tat-Ling Chow, Elizabeth LeNguyen, Barbara Edwards, and Kristina Perez.

*Consultants:* Margaret Jadallah (*Verus*); Andrew Paulden (*Brown Armstrong*).

1710.2.1 **Oral Communications from the Public:** None.

1710.2.2 **Oral Communications from the Board:** None.

1710.3.0 **Approval of Board Meeting Minutes:** Mr. Battey asked if there were any changes or corrections to the three sets of minutes from the Board meetings held on August 22, September 26 and October 16, 2017. No corrections were noted. Trustees who missed all, or a portion of the meetings, abstained from approval of the respective minutes.

1710.3.1 **Action:** Mr. David moved to approve the minutes from the Regular Meeting on August 22, 2017. The motion was seconded by Mr. Spinello and carried with a vote of 5-0-2, with trustees David, Hoefler, Lee (for Tourel), Spinello, and Tashman, all in favor; none opposed; Battey and Hackleman, abstained.

1710.3.2 The approval of the minutes of September 26, 2017 will be continued to a future meeting. There was not a quorum of the trustees who were present at the September 26 meeting.

1710.3.3 **Action:** Mr. Hoefler moved to approve the minutes from the Special Meeting on October 16, 2017. The motion was seconded by Mr. Tashman and carried with a vote of 5-0-2, with trustees David, Hoefler, Lee (for Tourel), Spinello, and Tashman, all in favor; none opposed; and Battey and Hackleman abstained.

1710.4.0 **Approval of the Consent Agenda:** Mr. Battey asked if there were any items to be removed for discussion from the Consent Agenda. No items were removed.

**Action:** Mr. Hackleman moved to approve the items on the Consent Agenda, and the motion was seconded by Mr. Hoefler. The motion carried with a vote of 8-0, with trustees Battey, Bowler, David, Hackleman, Hoefler, Lee (for Tourel), Spinello, and Tashman, all in favor; none opposed.

1710.4.1 **Disability Retirements:**

- a) The Board found that Wanda Mafi is (1) permanently incapacitated from the performance of her usual and customary duties as an Administrative Assistant I, (2) found that her disability was not the result of an illness arising out of and in the course of her employment and (3) granted her application for a non-service-connected disability retirement.

- b) The Board found that Kathy Mochel is (1) permanently incapacitated from the performance of her usual and customary duties as a Deputy Court Clerk II, (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.
- c) The Board found that that Larry Moore is (1) permanently incapacitated from the performance of his usual and customary duties as a Road Worker II, (2) found that his disability was the result of an illness arising out of and in the course of his employment and (3) granted his application for a service-connected disability retirement.
- d) The Board found that Yolanda Munoz is (1) permanently incapacitated from the performance of her usual and customary duties as a Benefits Analyst II, (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.

1710.4.2 **Survivor Death Benefits:** None.

1710.4.3 **Service Retirements:**

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

| <b>Member Name</b> | <b>Effective Retirement Date</b> | <b>Department</b>        |
|--------------------|----------------------------------|--------------------------|
| Cid, Luis          | August 26, 2017                  | Aging and Adult Services |
| Lee, Gordon        | August 4, 2017                   | Deferred from Probation  |
| Mosekian, Michael  | September 1, 2017                | Public Works             |
| Musielak, Sandra   | September 1, 2017                | Probation                |
| Pantoja, Pablo     | August 26, 2017                  | Courts                   |
| Stone, Janet       | August 31, 2017                  | Deferred from Housing    |
| Ward, Joanne       | August 16, 2017                  | Human Resources          |

1710.4.4 **Continuances:** None.

1710.4.5 **Deferred Retirements:**

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

| <b>Member Name</b>  | <b>Retirement Plan Type</b>          |
|---------------------|--------------------------------------|
| Aguayo, Joel        | S5, Vested – Reciprocity             |
| Chu, Kimberly       | G7, Non-vested - Reciprocity         |
| Crockett, Ka Selah  | G7, Vested – Auto Defer - Code 31700 |
| Estrada, Eddy       | G4, Vested – Reciprocity             |
| Hertz, Mark         | G4, Vested – Reciprocity             |
| Ho, Yeuk Y          | G4, Vested – Reciprocity             |
| Hong, Richard       | S5, Vested – Auto Defer - Code 31700 |
| Kovesdi, Orsolya    | G7, Non-vested - Reciprocity         |
| O’Dell, Christopher | G4, Vested – Auto Defer - Code 31700 |
| Rosendahl, Sarah    | G4, Vested – Auto Defer - Code 31700 |
| Ruble, Matthew      | G5, Vested – Reciprocity             |
| Silva, Elenita      | G4, Vested – Reciprocity             |
| Tercero, Ursula     | G4, Vested – Auto Defer - Code 31700 |

1710.4.6 **Member Account Refunds:**

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

| <b>Member Name</b> | <b>Retirement Plan Type</b> |
|--------------------|-----------------------------|
| Barriga, Eliseo    | G4, Vested                  |
| Pike, Steven       | G7, Non-vested              |

1710.4.7 **Member Account Rollovers:**

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

| <b>Member Name</b> | <b>Retirement Plan Type</b> |
|--------------------|-----------------------------|
| Jernigan, Megan    | G7, Non-vested              |
| Mayfohrt, Lauren   | G7, Non-vested              |
| Selby, Jamila      | G7, Non-vested              |

1710.4.8 **Member Account Redeposit:** None.

1710.4.9 **Acceptance of Trustees' Reports of Educational Activities:** The Board accepted the submitted reports for the educational activities attended by trustees Arnott, Bowler, Hoefer, Lee and Tashman.

1710.5.1 **Consideration of Agenda Items, if any, removed from the Consent Agenda:** None.

1710.6.1 **Preliminary Monthly Portfolio Performance Report for the Period Ended September 30, 2017:**

Mr. Coultrip discussed the preliminary monthly performance report with the Board. He reported that SamCERA's net preliminary return for September 2017 was 1.1%, while the preliminary trailing twelve-month return ending September 2017 was 12.1% net. The twelve-month net return is higher than SamCERA's actuarial assumed earnings rate of 6.75%. This item was informational and for discussion only, no action was taken.

1710.6.2 **Report on Inflation Hedge Manager Annual Review – State Street Global Advisors:** Mr. Coultrip reviewed and discussed the meeting notes from the annual review of SamCERA's Inflation Hedge Manager, with the Board. Staff and consultant met with representatives from State Street Global Advisors on October 5, 2017, at SamCERA's office. Mr. Coultrip reported there were no significant concerns identified during the portfolio review. This item was informational and for discussion only, no action was taken.

1710.6.3 **Report on Alternative Manager Annual Review – Aberdeen Standard GARS:** Mr. Coultrip and Ms. Jadallah reviewed the meeting notes from the annual review of SamCERA's Alternative Manager, Aberdeen Standard. Staff and consultant met with representatives from Aberdeen Standard GARS on October 5, 2017, at SamCERA's office. Mr. Coultrip reported there were no significant concerns identified during the portfolio review. This item was informational and for discussion only, no action was taken.

1710.7.1 **Acceptance of Financial Audit Management Reports and Findings:** Andrew Paulden, from Brown Armstrong, reviewed the independent financial audit performed by Brown Armstrong for the fiscal year ended June 30, 2017. He outlined the process and outcome of the audit and stated that SamCERA received an unqualified (clean) opinion, and there were no instances of non-compliance. Mr. Hoefer reported that the Audit Committee had met on October 26, and reviewed the financial audit report and its findings. The Audit Committee recommends that the Board accept the audit report. With no objection, the financial audit report and findings were accepted by the Board.

1710.7.2 **Approval of SamCERA's 2017 Comprehensive Annual Financial Report (CAFR):** Ms. Chow provided an oral report on the highlights of the 2017 CAFR, noting that SamCERA's funded status has increased from 83.1% to 84.3%. Mr. Hoefer reported that the Audit Committee had met on October 26, and reviewed the CAFR. The Audit Committee recommends Board approval of the 2017 CAFR.

**Action:** Mr. Hackleman made a motion to approve the 2017 CAFR. The motion was seconded by Mr. David, and carried with a vote of 8-0, with trustees Battey, Bowler, David, Hackleman, Hoefer, Lee (for Tourel), Spinello, and Tashman, all in favor; none opposed.

- 1710.7.3 **Approval of SACRS Voting Delegate and Alternates for the SACRS Fall 2017 Business Meeting:** Mr. Hood went over staff's recommendation to designate Ben Bowler and Susan Lee as SamCERA's Voting Delegate and First Alternate Delegate to the SACRS Fall Conference, respectively. Mr. Hood will serve as the Second Alternate Delegate, if necessary. The Voting Delegate will be authorized to cast votes on behalf of SamCERA at the SACRS Business meeting scheduled for Friday, November 17, 2017.
- Action:** Mr. Hoefler made a motion to approve the voting delegates as proposed. The motion was seconded by Mr. Hackleman and carried with a vote of 8-0, with trustees Battey, Bowler, David, Hackleman, Hoefler, Lee (for Tourel), Spinello, and Tashman, all in favor; none opposed.
- 1710.7.4 **Discussion of SACRS Business Meeting Topics:** Mr. Hood and the Board discussed the topics of the upcoming SACRS business meeting, which will be held on Friday, November 17 at the SACRS Fall Conference in Burlingame. This item was informational, and for discussion only. No action was taken.
- 1710.7.5 **Approval of Board of Retirement Schedule for 2018:** Mr. Battey called attention to the proposed Board calendar and encouraged trustees to make note of the meeting dates. There were no changes to the proposed schedule of meetings for 2018.
- Action:** Mr. Hackleman made a motion to approve the Board of Retirement meeting schedule for 2018. The motion was seconded by Mr. David and carried with a vote of 8-0, with trustees Battey, Bowler, David, Hackleman, Hoefler, Lee (for Tourel), Spinello, and Tashman, all in favor; none opposed.
- Mr. Battey announced his appointments to the Ad Hoc CEO Evaluation Committee. He appointed Paul Hackleman, Kurt Hoefler and Shirley Tourel to serve on the committee; with Paul Hackleman, as the chair.
- 1710.8.1 **Chief Executive Officer's Report:** Mr. Hood discussed sexual harassment training for Board members and that it will be brought to the Board for its consideration at the December Board meeting as part of the Education Policy review. Mr. Hood stated that the Board of Supervisors is expected to approve the contributions rates at their meeting on December 6. He recognized and thanked all the staff members who worked on the CAFR this year.
- 1710.8.2 **Assistant Executive Officer's Report:** Ms. Smith notified Board members that they would be receiving a survey via email this week to evaluate the services of SamCERA's auditor, Brown Armstrong, and encouraged the Board's participation.
- Ms. Perez reminded Board members about the upcoming SACRS conference.
- 1710.8.3 **Chief Investment Officer's Report:** Mr. Coultrip noted that he will have a value-add infrastructure strategy for the Board's consideration on the December agenda.
- 1710.8.4 **Chief Legal Counsel's Report:** Ms. Carlson presented her legislative update report; and went over the chaptered, and un-chaptered, pension related legislation from this year. She reviewed the impacts of the legislation, if any, to SamCERA. A summary of the chaptered legislation was included in the Board's agenda packet.
- C1 **Consideration of Disability Items, if any, removed from the Consent Agenda:** None.
- 1710.9 **Report on Actions Taken in Closed Session:** None.
- 1710.10 **Adjournment:** Mr. Battey adjourned the meeting at 11:13 a.m. in memory of the deceased members listed below.

|                   |                    |                              |
|-------------------|--------------------|------------------------------|
| McBrowne, Lanetta | August 30, 2017    | Crystal Springs Rehab Center |
| Gudaitis, Donna   | September 3, 2017  | Courts                       |
| Berndt, Ted       | September 5, 2017  | Aging and Adult Services     |
| Young, Claire     | September 9, 2017  | Human Resources              |
| Woods, Clarence   | September 12, 2017 | General Services             |
| Brooke, Helen     | September 13, 2017 | Human Services Agency        |
| Bowen, Joyce      | September 22, 2017 | County Clerk                 |
| Spooner, Laura    | September 26, 2017 | Health & Welfare             |
| Klingner, Ruth    | October 1, 2017    | Mental Health                |
| Kwong, Brian      | October 18, 2017   | Probation                    |

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Scott Hood  
Chief Executive Officer

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Kristina Perez  
Retirement Executive Secretary

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

December 5, 2017

Agenda Items 4.1- 4.9

**TO:** Board of Retirement

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



**SUBJECT:** Approval of Consent Agenda Items 4.1 – 4.9

**4.1 Disability Retirements**

- a) The Board find that **Andrew Allee** is (1) permanently incapacitated from the performance of his usual and customary duties as an Information Technology Technician, (2) find that his disability was not the result of an illness arising out of and in the course of his employment and (3) grant his application for a non-service-connected disability retirement.
  
- b) The Board find that **Janet Hansen** is (1) permanently incapacitated from the performance of her usual and customary duties as a Correctional Officer, (2) find that her disability was not the result of an illness arising out of and in the course of her employment and (3) grant her application for a non-service-connected disability retirement.

**4.2 Survivor Death Benefits**

None.

**4.3 Service Retirements**

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

| <b>Member Name</b> | <b>Effective Retirement Date</b> | <b>Department</b>                  |
|--------------------|----------------------------------|------------------------------------|
| Ailand, Kathryn    | September 30, 2017               | Tax Collector's Office             |
| Bedolla, Maria     | September 30, 2017               | Fair Oaks Clinic                   |
| Bee, Michael       | September 1, 2017                | Deferred County Manager's Office   |
| Birnie, Greg       | September 9, 2017                | Public Works                       |
| Frank, Olivia      | September 9, 2017                | Courts                             |
| Garcia, Gustavo    | October 1, 2017                  | Hospital Food & Nutrition Services |
| Geary, Christopher | September 30, 2017               | Public Works                       |
| Halpern, Kent      | September 9, 2017                | Behavioral Health                  |
| Kaplan, Stephen    | September 30, 2017               | Behavioral Health                  |

|                          |                    |                               |
|--------------------------|--------------------|-------------------------------|
| Kohler, Terry            | September 9, 2017  | Deferred from Probation       |
| Lang, Hoa                | September 30, 2017 | Aging and Adult Services      |
| Mabie, Charles           | September 12, 2017 | Deferred from Probation       |
| Mauzey, Matthew          | September 14, 2017 | Retiree activating G3 pension |
| Oceguera, Rosamaria      | September 9, 2017  | Behavioral Health             |
| Parham-Malcolm, Victoria | September 9, 2017  | Courts                        |
| Rodriguez, Beatriz       | September 26, 2017 | Family Health Services        |
| Yoch, Owen               | September 27, 2017 | Sheriff's                     |

#### 4.4 Continuances

| Survivor's Name  | Beneficiary of: |
|------------------|-----------------|
| Ginilo, Janet    | Ginilo, George  |
| Gudaitis, George | Gudaitis, Donna |

#### 4.5 Deferred Retirements

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

| Member Name       | Retirement Plan Type                               |
|-------------------|--|
| Ahmed, Aiysha     | G7, Non-vested - Reciprocity                       |
| Brown, Veronica   | G7, Vested - Reciprocity                           |
| Chandler, Barry   | G5, Vested   |
| Diaz, Maria C.    | G4, Vested - Reciprocity                           |
| Forth, Rebecca    | G5, Vested - Reciprocity - Auto Defer - Code 31700 |
| Garner, Jessica   | G7, Non-vested - Reciprocity                       |
| Guillermo, Gemma  | G5, Non-vested - Reciprocity                       |
| Hernandez, Carlos | G4, Vested   |
| Ignacio, Mary     | G5, Non-vested - Reciprocity                       |
| Kryukova, Tatiana | G7, Non-vested - Reciprocity                       |
| Latu, Malene Kai  | P4, Vested   |

|                         |                                      |
|-------------------------|--------------------------------------|
| Magers, Jason           | G7, Non-vested - Reciprocity         |
| Martinez, Ginger        | G4, Vested                           |
| Melghem, Gladys         | G4, Vested - Auto Defer - Code 31700 |
| Murphy-Becerra, Marissa | G4, Vested - Reciprocity             |
| Nguyen, Loc             | G5, Vested                           |
| Perras, Mpho            | P4, Vested                           |
| Reyles-Derry, Rachelle  | G4, Vested                           |
| Rohrer, Jason           | G4, Vested - Auto Defer – Code 31700 |
| Saulog, Nylette         | G4, Vested                           |
| Shabatura, Sam          | S4, Vested                           |
| Sherman, Chonne         | G4, Vested                           |
| St. Pierre, Karla       | G7, Non-vested - Reciprocity         |
| Swaminathan, Meen       | G4, Vested - Reciprocity             |
| Tang, Gregory           | G7, Non-vested - Reciprocity         |
| Wemple, Jesse           | G4, Vested                           |
| Zahiri, Nayer           | G4, Vested - Reciprocity             |

#### 4.6 Member Account Refunds

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

| Member Name              | Retirement Plan Type |
|--------------------------|----------------------|
| Bottjer, Jeffrey         | G2, Vested           |
| Brown, Michelle (QDRO)   | S2, Vested           |
| Burns, Christian         | G4, Non-vested       |
| Craven, Jacqueline       | G7, Non-vested       |
| Garduno, Esteban         | G7, Non-vested       |
| Ortiz Soto, Xaviera      | G7, Non-vested       |
| Saucedo, Flor            | G7, Non-vested       |
| Umarhayat, Naseer        | G4, Non-vested       |
| Villela Rocha, Rosangela | G7, Non-vested       |
| Wilson, Sterling         | G5, Vested           |



#### 4.7 Member Account Rollovers

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

| <b>Member Name</b>  | <b>Retirement Plan Type</b> |
|---------------------|-----------------------------|
| Aoki, Ellen         | G7, Non-vested              |
| Beaver, Grace       | G7, Non-vested              |
| Contreras, Victoria | G7, Non-vested              |
| Hammill, Ashley     | G7, Non-vested              |
| Taillant, Paula     | G4, Non-vested              |
| Tumalan, Jacqueline | G4, Non-vested              |

#### 4.8 Member Account Redeposits

None.

#### 4.9 Acceptance of Trustees' Reports of Educational Activities

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

December 5, 2017

Agenda Item 4.9

**TO:** Board of Retirement

**FROM:** Kristina Perez, Executive Secretary



**SUBJECT:** Trustees' Reports of Educational Activities

**Recommendation**

Accept the following reports from Board of Retirement trustees who have recently attended educational events.

**Background**

SamCERA's Education Policy Section 1D states "Prior to the next regularly scheduled meeting of the Board following the Board member's participation in an educational activity, the Board member shall submit for inclusion on the Consent Agenda, a summary written report on the content of educational activities. The report shall substantially reflect the information contained in the attached sample report."

**Discussion**

SamCERA Trustees attended the following educational events, and their reports are attached:

IFEBP Annual Conference, Las Vegas, October 20-24, 2017  
Paul Hackleman

SACRS Fall Conference, Burlingame, November 14-17, 2017  
Ben Bowler  
Susan Lee  
David Spinello  
Eric Tashman

**Attachments**

Trustees' Education Proof of Participation Certificates and Summaries (5)

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



|   |  |   |
|---|--|---|
| <b>Trustee Name</b><br>Paul Hackleman   |  | <b>Date(s) of Event</b><br>October 20-25, 2017  |
| <b>Education Event Name</b><br>IFEBP 63rd Annual Employee Benefits Conference   |  |   |
| <b>Event Provider</b><br>International Foundation of Employee Benefit Plans   |  |   |
| <b>Type of Participation:</b><br>Attended Event <input checked="" type="checkbox"/><br>Listened to Audio/Watched Video <input type="checkbox"/> |  | <b>Eligible Credit:</b><br>Total hours for sessions you participated in: <b>15</b><br>(Staff may adjust hours if the provider issues an education certificate that reflects different hours.) |

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

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

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

**Summary Report**

What concepts or information did you learn about?

THE CONFERENCE COVERED PASSIVE VS ACTIVE STRATEGIES WITH MAJORITY OF PLANS USING MORE PASSIVE STRATEGIES ESPECIALLY FOR LARGE DOMESTIC FUNDS. MANY PRESENTERS WERE SUGGESTING HIGHER ALLOCATIONS TO PRIVATE EQUITY AND EMERGING MARKETS AND EVEN REAL ESTATE AS NON-CORRELATED STRATEGIES. ONE SESSION COVERED INFRASTRUCTURE (BURSTING ALTHOUGH CURRENT US POLICY ON (OVER))  
 Would you recommend this event to other trustees?

- Yes       No       Maybe

You may provide additional comments to SamCERA's CEO.

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

|  |                         |
|--|-------------------------|
| <b>Trustee Signature (print this form and sign)</b><br><i>Paul Hackleman</i> | <b>Date</b><br>10-30-17 |
|--|-------------------------|

**NOTE:** Please return this completed form to SamCERA's Executive Secretary prior to the mailing of the Board packet, so it can be included in that month's Consent Agenda.

INFRASTRUCTURE SUGGESTING WAITING UNTIL THERE IS MORE SENSE OF POLICY DIRECTION. I ATTENDED 12 OF 14 SESSIONS, INCLUDING THREE KEYNOTE PRESENTATIONS. A CERTIFICATE WILL BE SENT WHICH I WILL PROVIDE TO SANCERA.

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



|   |  |  |
|---|--|--|
| <b>Trustee Name</b><br>Ben Bowler   |  | <b>Date(s) of Event</b><br>November 14-17, 2017  |
| <b>Education Event Name</b><br>SACRS Fall Conference, Hyatt Regency, Burlingame   |  |  |
| <b>Event Provider</b><br>SACRS  |  |  |
| <b>Type of Participation:</b><br>Attended Event <input checked="" type="checkbox"/><br>Listened to Audio/Watched Video <input type="checkbox"/> |  | <b>Eligible Credit:</b><br>Total hours for sessions you participated in: <u>1</u><br>(Staff may adjust hours if the provider issues an education certificate that reflects different hours.) |

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

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

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

**Summary Report**

What concepts or information did you learn about?

GREATER UNDERSTANDING OF SACRS MEMBERS GOVERNANCE  
AND ADMINISTRATIVE ISSUES.

Would you recommend this event to other trustees?

- Yes       No       Maybe

You may provide additional comments to SamCERA's CEO.

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

|   |                         |
|---|-------------------------|
| <b>Trustee Signature</b> (print this form and sign)<br> | <b>Date</b><br>11/27/17 |
|---|-------------------------|

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



|  |  |  |
|--|--|--|
| Trustee Name<br><i>Susan Lee</i>   |  | Date(s) of Event<br>November 14-17, 2017 |
| Education Event Name<br>SACRS Fall Conference, Hyatt Regency, Burlingame   |  |  |
| Event Provider<br>SACRS  |  |  |
| Type of Participation:<br>Attended Event <input checked="" type="checkbox"/><br>Listened to Audio/Watched Video <input type="checkbox"/> | Eligible Credit:<br>Total hours for sessions you participated in: <u>11</u><br>(Staff may adjust hours if the provider issues an education certificate that reflects different hours.) |  |

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

Topic: (Check all that apply)

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

**Summary Report**

What concepts or information did you learn about?

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Would you recommend this event to other trustees?

- Yes       No       Maybe

You may provide additional comments to SamCERA's CEO.

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

|  |                         |
|--|-------------------------|
| Trustee Signature (print this form and sign)<br><i>Susan Lee</i> | Date<br><u>11-28-17</u> |
|--|-------------------------|

**NOTE:** Please return this completed form to SamCERA's Executive Secretary prior to the mailing of the Board packet, so it can be included in that month's Consent Agenda.

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



|   |  |  |
|---|--|--|
| <b>Trustee Name</b><br>David Spinello   |  | <b>Date(s) of Event</b><br>11/14 – 11/17/2017  |
| <b>Education Event Name</b><br>SACRS  |  |  |
| <b>Event Provider</b><br>SACRS  |  |  |
| <b>Type of Participation:</b><br>Attended Event <input checked="" type="checkbox"/><br>Listened to Audio/Watched Video <input type="checkbox"/> |  | <b>Eligible Credit:</b><br>Total hours for sessions you participated in: <u>  15  </u><br><i>(Staff may adjust hours if the provider issues an education certificate that reflects different hours.)</i> |

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

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

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

**Summary Report**

What concepts or information did you learn about? I learned a lot about pension investments.

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Would you recommend this event to other trustees?

- Yes                       No                       Maybe

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

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

|  |                           |
|--|---------------------------|
| <b>Trustee Signature</b> <i>(print this form and sign)</i><br>David Spinello | <b>Date</b><br>11/28/2017 |
|--|---------------------------|

**NOTE:** Please return this completed form to SamCERA’s Executive Secretary prior to the mailing of the Board packet, so it can be included in that month’s Consent Agenda.

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



|   |  |  |  |
|---|--|--|--|
| <b>Trustee Name</b><br>ERIC TASHMAN   |  | <b>Date(s) of Event</b><br>November 14-17, 2017  |  |
| <b>Education Event Name</b><br>SACRS Fall Conference, Hyatt Regency, Burlingame   |  |  |  |
| <b>Event Provider</b><br>SACRS  |  |  |  |
| <b>Type of Participation:</b><br>Attended Event <input checked="" type="checkbox"/><br>Listened to Audio/Watched Video <input type="checkbox"/> |  | <b>Eligible Credit:</b><br>Total hours for sessions you participated in: <u>6 1/2</u><br>(Staff may adjust hours if the provider issues an education certificate that reflects different hours.) |  |

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

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

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

**Summary Report**

What concepts or information did you learn about?

Trustee Bias; Artificial Intelligence

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Would you recommend this event to other trustees?

- Yes       No       Maybe

You may provide additional comments to SamCERA's CEO.

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

|   |                           |
|---|---------------------------|
| <b>Trustee Signature</b> (print this form and sign)<br> | <b>Date</b><br>11/27/2017 |
|---|---------------------------|

**NOTE:** Please return this completed form to SamCERA's Executive Secretary prior to the mailing of the Board packet, so it can be included in that month's Consent Agenda.



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

December 5, 2017

Agenda Item 6.1

**TO:** Board of Retirement *Michael Coultrip*  
**FROM:** Michael Coultrip, Chief Investment Officer  
**SUBJECT:** Preliminary Monthly Portfolio Performance Report for the Period Ended October 31, 2017

**Staff Recommendation**

Accept the preliminary performance report dated October 31, 2017.

**Background**

This preliminary report is intended to provide a high-level view of the portfolio and its trends. It is not intended to provide short-term performance upon which the Board would act. As discussed previously, preliminary performance estimates are now included for AQR Risk Parity, AQR Delta, PanAgora Risk Parity, and Beach Point Select. The quarterly performance metrics are not yet available for our private equity, private credit, 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 4-8) also shown.

**Discussion**

The fund's net preliminary return for October was 1.3%, bringing the preliminary trailing twelve-month return ending October 2017 to 14.7% net. The twelve-month net return is below SamCERA's Plan Benchmark return of 15.6%, but is higher than SamCERA's Actuarial Assumed Earnings Rate of 6.75%.

October was another good month for risk assets, with higher global equity prices, subdued market volatility, and tightening credit spreads producing generally positive returns. The broad U.S. equity market (as measured by the Russell 1000 Index) was up 2.3%, while developed international equity (as measured by MSCI EAFE) was up 1.5%. Emerging markets were also higher by 3.5%.

Real GDP growth grew at an annual rate of 3.0% in the third quarter, which was above expectations. Consumer confidence and the labor market remained healthy during the month, while manufacturing activity eased in October.

The general U.S. fixed income market was up 0.1% during the month, as tighter credit spreads were offset by higher interest rates. The 10-year U.S. Treasury yield increased by 4 basis points during the month, with the yield ending at 2.38% by month-end as the Federal Reserve began the slow

unwinding of their balance sheet. Credit spreads also tightened during the month, leading the high yield market higher by 0.4%.

**Attachments**

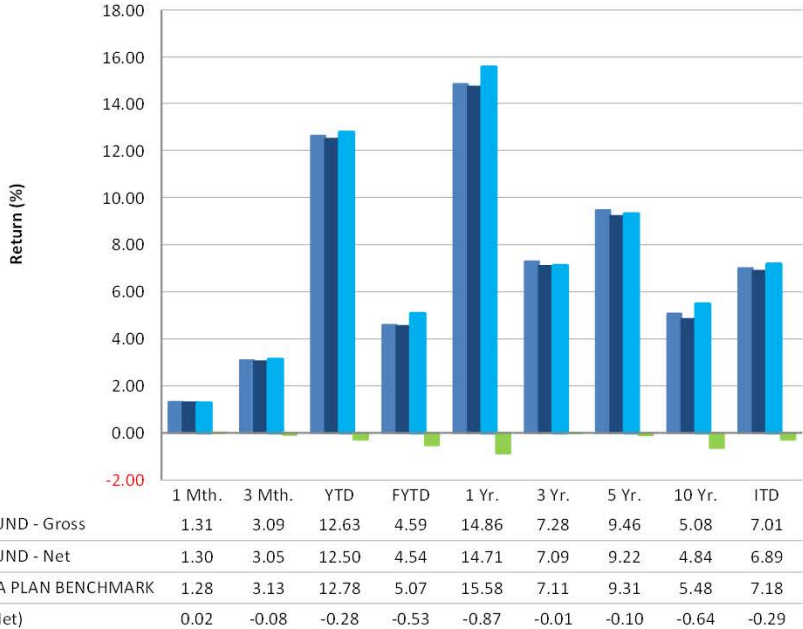
Northern Trust Performance Report  
Verus Capital Markets Update

# San Mateo County Total Fund Characteristics

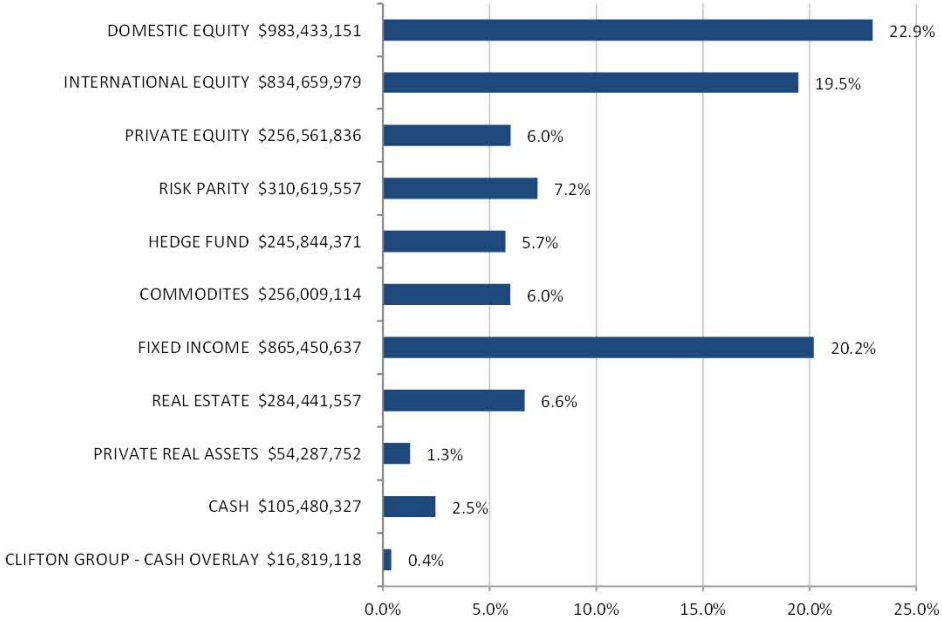


October 31, 2017

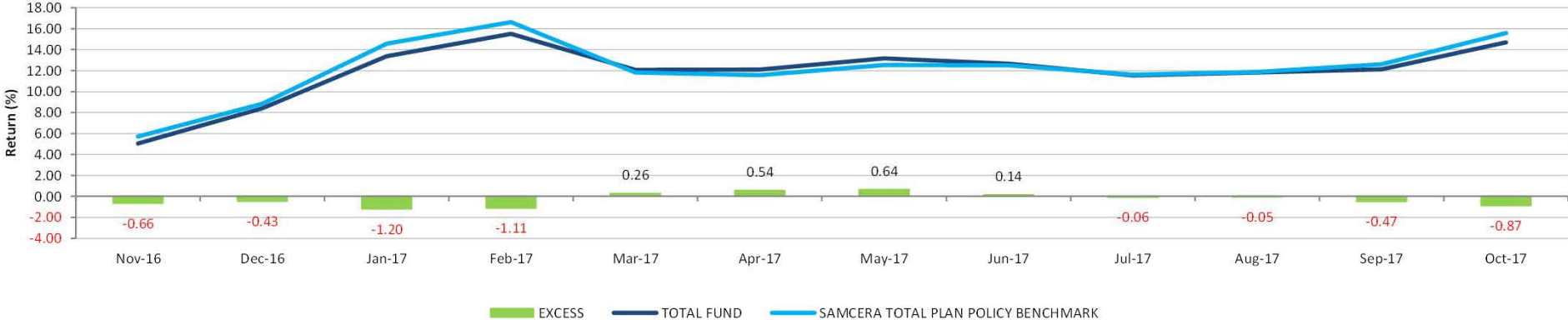
**Total Fund Performance**



**Asset Allocation**



**Rolling Month End Annual Returns**

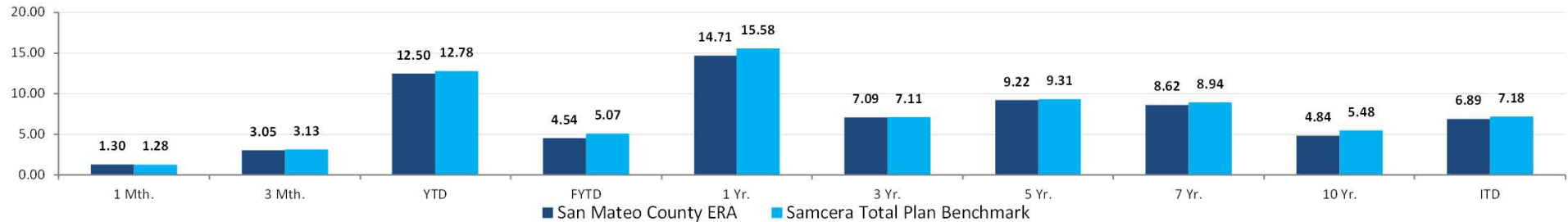


# San Mateo County Composite Return Summary



October 31, 2017

Return Comparison



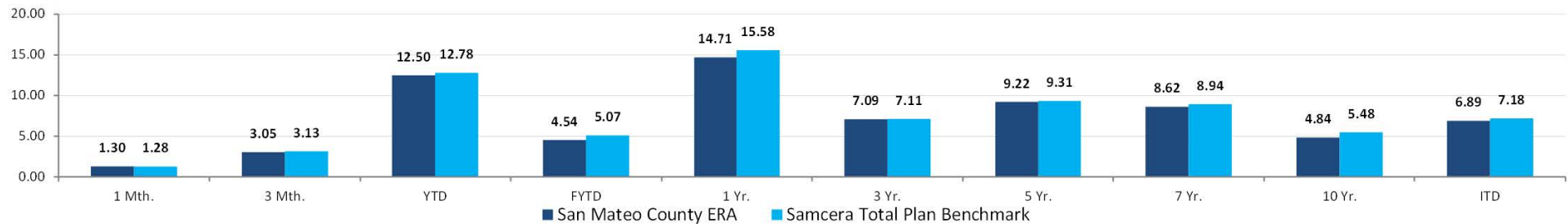
| Composite Returns (Net of Manager Fees) | Market Value (\$) | 1 Mth. | 3 Mth. | YTD   | FYTD  | 1 Yr. | 3 Yr. | 5 Yr. | 7 Yr. | 10 Yr. | ITD   |
|---|-------------------|--------|--------|-------|-------|-------|-------|-------|-------|--------|-------|
| San Mateo County ERA                    | 4,285,253,792     | 1.30   | 3.05   | 12.50 | 4.54  | 14.71 | 7.09  | 9.22  | 8.62  | 4.84   | 6.89  |
| Samcera Total Plan Benchmark            |                   | 1.28   | 3.13   | 12.78 | 5.07  | 15.58 | 7.11  | 9.31  | 8.94  | 5.48   | 7.18  |
| Excess                                  |                   | 0.02   | -0.08  | -0.28 | -0.53 | -0.87 | -0.01 | -0.10 | -0.31 | -0.64  | -0.29 |
| San Mateo Ex-Clifton Overlay            | 4,268,434,674     | 1.31   | 3.04   | 12.38 | 4.51  | 14.61 | 6.98  | 9.15  | 8.58  | 4.74   | 6.81  |
| Samcera Total Plan Benchmark            |                   | 1.28   | 3.13   | 12.78 | 5.07  | 15.58 | 7.11  | 9.31  | 8.94  | 5.48   | 7.18  |
| Excess                                  |                   | 0.04   | -0.09  | -0.41 | -0.56 | -0.97 | -0.13 | -0.16 | -0.36 | -0.74  | -0.37 |
| Total Equity                            | 1,818,093,130     | 1.92   | 4.61   | 20.45 | 7.14  | 24.16 | 9.16  | 12.38 | 10.68 | 4.80   | 7.95  |
| Samcera Total Equity Benchmark          |                   | 2.11   | 4.74   | 17.85 | 7.12  | 24.73 | 9.77  | 13.31 | 11.53 | 5.91   | 8.49  |
| Excess                                  |                   | -0.19  | -0.13  | 2.61  | 0.02  | -0.58 | -0.60 | -0.93 | -0.86 | -1.11  | -0.55 |
| Total Fixed Income                      | 865,450,637       | 0.02   | 0.89   | 5.58  | 1.27  | 5.68  | 3.80  | 3.76  | 4.83  | 5.36   | 5.67  |
| Samcera Fixed Income Benchmark          |                   | 0.05   | 0.56   | 4.52  | 1.30  | 2.64  | 3.00  | 2.14  | 3.26  | 4.49   | 5.12  |
| Excess                                  |                   | -0.04  | 0.34   | 1.06  | -0.03 | 3.04  | 0.80  | 1.62  | 1.58  | 0.87   | 0.56  |
| Total Risk Parity                       | 310,619,557       | 2.69   | 4.37   | 12.81 | 6.47  | 11.93 | 5.39  | 5.81  | --    | --     | 6.75  |
| Samcera Risk Parity Benchmark           |                   | 1.16   | 2.78   | 12.00 | 4.43  | 15.34 | 7.69  | 10.05 | --    | --     | 9.09  |
| Excess                                  |                   | 1.53   | 1.59   | 0.81  | 2.03  | -3.41 | -2.31 | -4.24 | --    | --     | -2.34 |

# San Mateo County Composite Return Summary



October 31, 2017

Return Comparison



| Composite Returns (Net of Manager Fees) | Market Value (\$) | 1 Mth. | 3 Mth. | YTD    | FYTD   | 1 Yr.  | 3 Yr. | 5 Yr. | 7 Yr. | 10 Yr. | ITD   |
|---|-------------------|--------|--------|--------|--------|--------|-------|-------|-------|--------|-------|
| Total Hedge Fund Composite              | 245,844,371       | 0.86   | 2.95   | 4.28   | 3.67   | 5.21   | 7.13  | 6.71  | --    | --     | 5.22  |
| Samcera LIBOR + 4%                      |                   | 0.43   | 1.29   | 4.18   | 1.72   | 4.95   | 4.52  | 4.39  | --    | --     | 4.35  |
| Excess                                  |                   | 0.43   | 1.66   | 0.09   | 1.95   | 0.25   | 2.61  | 2.33  | --    | --     | 0.87  |
| Total Private Real Assets               | 54,287,752        | -1.85  | -3.55  | -0.15  | -3.96  | 2.61   | --    | --    | --    | --     | 26.26 |
| SamCera Custom Real Asset Inde          |                   | 1.63   | 3.06   | 10.70  | 7.30   | 13.40  | --    | --    | --    | --     | 14.67 |
| Excess                                  |                   | -3.48  | -6.61  | -10.85 | -11.27 | -10.79 | --    | --    | --    | --     | 11.59 |
| Total Real Estate                       | 284,441,557       | 1.20   | 1.20   | 5.60   | 1.32   | 7.68   | --    | --    | --    | --     | 9.09  |
| Samcera NCREIF ODCE EW (gross)          |                   | 0.00   | 1.87   | 5.51   | 1.87   | 7.79   | --    | --    | --    | --     | 7.75  |
| Excess                                  |                   | 1.20   | -0.67  | 0.09   | -0.55  | -0.11  | --    | --    | --    | --     | 1.34  |
| Total Cash                              | 105,480,327       | 0.05   | 0.18   | 0.34   | 0.25   | 0.46   | 0.53  | 0.56  | 0.61  | 0.53   | 1.99  |
| Samcera Cash Benchmark                  |                   | 0.09   | 0.27   | 0.66   | 0.35   | 0.72   | 0.35  | 0.24  | 0.20  | 0.45   | 1.84  |
| Excess                                  |                   | -0.04  | -0.09  | -0.32  | -0.11  | -0.26  | 0.18  | 0.32  | 0.41  | 0.08   | 0.15  |

# San Mateo County Manager Return Summary



October 31, 2017

| Composite Returns (NET)        | Market Value (\$) | 1 Mth. | 3 Mth. | YTD   | FYTD  | 1 Yr. | 3 Yr. | 5 Yr. | 7 Yr. | 10 Yr. | ITD   |
|--------------------------------|-------------------|--------|--------|-------|-------|-------|-------|-------|-------|--------|-------|
| Total Equity                   | 1,818,093,130     | 1.92   | 4.61   | 20.45 | 7.14  | 24.16 | 9.16  | 12.38 | 10.68 | 4.80   | 7.95  |
| Samcera Total Equity Benchmark |                   | 2.11   | 4.74   | 17.85 | 7.12  | 24.73 | 9.77  | 13.31 | 11.53 | 5.91   | 8.49  |
| Excess                         |                   | -0.19  | -0.13  | 2.61  | 0.02  | -0.58 | -0.60 | -0.93 | -0.86 | -1.11  | -0.55 |
| Total Domestic Equity          | 983,433,151       | 2.10   | 5.27   | 17.93 | 7.23  | 24.90 | 10.63 | 14.69 | 13.33 | 6.84   | 8.70  |
| Samcera Dom. Equity Benchmark  |                   | 2.18   | 4.88   | 16.40 | 6.85  | 23.98 | 10.40 | 15.01 | 13.87 | 7.63   | 9.03  |
| Excess                         |                   | -0.08  | 0.39   | 1.54  | 0.38  | 0.92  | 0.23  | -0.32 | -0.54 | -0.79  | -0.33 |
| Total Large Cap Equity         | 845,573,751       | 2.32   | 5.21   | 19.14 | 7.35  | 24.92 | 11.48 | 15.31 | 13.72 | 7.07   | 9.45  |
| Russell 1000                   |                   | 2.29   | 4.80   | 16.78 | 6.87  | 23.67 | 10.58 | 15.18 | 14.10 | 7.61   | 9.75  |
| Excess                         |                   | 0.03   | 0.41   | 2.36  | 0.48  | 1.26  | 0.90  | 0.13  | -0.38 | -0.54  | -0.30 |
| Blackrock Russell 1000         | 690,010,650       | 2.29   | 4.80   | --    | 6.88  | --    | --    | --    | --    | --     | 15.17 |
| Russell 1000                   |                   | 2.29   | 4.80   | --    | 6.87  | --    | --    | --    | --    | --     | 14.92 |
| Excess                         |                   | 0.00   | 0.00   | --    | 0.00  | --    | --    | --    | --    | --     | 0.24  |
| DE Shaw Commingled Fund        | 155,563,101       | 2.44   | 7.17   | 20.22 | 9.61  | 24.52 | --    | --    | --    | --     | 12.81 |
| Russell 1000                   |                   | 2.29   | 4.80   | 16.78 | 6.87  | 23.67 | --    | --    | --    | --     | 10.31 |
| Excess                         |                   | 0.15   | 2.38   | 3.44  | 2.73  | 0.85  | --    | --    | --    | --     | 2.50  |
| Total Small Cap Equity         | 137,859,400       | 0.75   | 5.65   | 10.88 | 6.47  | 27.54 | 6.61  | 12.14 | 11.77 | 5.81   | 6.68  |
| Russell 2000                   |                   | 0.85   | 5.78   | 11.89 | 6.57  | 27.85 | 10.12 | 14.49 | 13.00 | 7.63   | 8.13  |
| Excess                         |                   | -0.10  | -0.13  | -1.01 | -0.10 | -0.30 | -3.52 | -2.35 | -1.23 | -1.83  | -1.44 |
| QMA US Small Cap               | 137,859,400       | 0.75   | 5.65   | 10.88 | 6.47  | 27.54 | --    | --    | --    | --     | 20.65 |
| Russell 2000                   |                   | 0.85   | 5.78   | 11.89 | 6.57  | 27.85 | --    | --    | --    | --     | 19.17 |
| Excess                         |                   | -0.10  | -0.13  | -1.01 | -0.10 | -0.30 | --    | --    | --    | --     | 1.47  |
| Total International Equity     | 834,659,979       | 1.72   | 3.82   | 23.65 | 7.06  | 22.21 | 6.53  | 7.89  | 5.25  | 0.50   | 5.80  |
| MS AC WldxUS IMI Nt            |                   | 1.88   | 4.44   | 23.75 | 8.27  | 23.79 | 6.23  | 7.65  | 5.27  | 1.22   | 5.37  |
| Excess                         |                   | -0.16  | -0.62  | -0.10 | -1.21 | -1.58 | 0.31  | 0.24  | -0.02 | -0.72  | 0.43  |
| Total Developed Markets Equity | 742,407,574       | 1.79   | 3.95   | 23.69 | 6.93  | 22.53 | 7.01  | 8.42  | 5.65  | 0.93   | 4.73  |
| MS AC WldxUS IMI Nt            |                   | 1.88   | 4.44   | 23.75 | 8.27  | 23.79 | 6.23  | 7.65  | 5.27  | 1.22   | 5.23  |
| Excess                         |                   | -0.09  | -0.49  | -0.06 | -1.34 | -1.26 | 0.78  | 0.77  | 0.38  | -0.29  | -0.50 |
| Baillie Gifford                | 249,410,848       | 2.45   | 4.61   | 28.64 | 7.61  | 24.04 | 8.95  | 10.15 | --    | --     | 9.63  |
| MSCI ACWI ex US Growth         |                   | 2.41   | 5.30   | 28.22 | 8.95  | 25.19 | 7.79  | 8.74  | --    | --     | 7.93  |
| Excess                         |                   | 0.04   | -0.69  | 0.42  | -1.35 | -1.15 | 1.16  | 1.41  | --    | --     | 1.71  |
| Blackrock EAFE Index Fund      | 241,424,211       | 1.53   | 4.05   | 22.21 | 7.07  | 23.90 | 6.43  | --    | --    | --     | 4.28  |
| MSCI EAFE ND                   |                   | 1.52   | 4.01   | 21.78 | 7.01  | 23.44 | 6.08  | --    | --    | --     | 3.95  |
| Excess                         |                   | 0.01   | 0.05   | 0.43  | 0.06  | 0.46  | 0.35  | --    | --    | --     | 0.33  |

# San Mateo County Manager Return Summary



October 31, 2017

| Composite Returns (NET)        | Market Value (\$) | 1 Mth. | 3 Mth. | YTD   | FYTD  | 1 Yr. | 3 Yr. | 5 Yr. | 7 Yr. | 10 Yr. | ITD   |
|--------------------------------|-------------------|--------|--------|-------|-------|-------|-------|-------|-------|--------|-------|
| Mondrian Investment Partners   | 251,572,516       | 1.38   | 3.40   | 19.85 | 6.41  | 21.03 | 5.04  | 7.07  | 5.31  | 1.30   | 5.92  |
| MSCI ACWI ex US Value          |                   | 1.37   | 3.47   | 19.87 | 7.57  | 23.20 | 4.54  | 6.75  | 4.72  | 0.79   | 5.78  |
| Excess                         |                   | 0.01   | -0.08  | -0.02 | -1.16 | -2.17 | 0.50  | 0.32  | 0.59  | 0.51   | 0.14  |
| Total Emerging Markets Equity  | 92,252,405        | 1.17   | 2.77   | 23.24 | 8.08  | 19.53 | 2.27  | 3.66  | --    | --     | 2.92  |
| MSCI Emerging Markets ND       |                   | 3.51   | 5.39   | 32.26 | 11.68 | 26.45 | 5.70  | 4.83  | --    | --     | 3.86  |
| Excess                         |                   | -2.34  | -2.62  | -9.02 | -3.60 | -6.92 | -3.43 | -1.17 | --    | --     | -0.94 |
| EV Parametric EM               | 92,252,405        | 1.17   | 2.77   | 23.24 | 8.08  | 19.53 | --    | --    | --    | --     | 9.99  |
| MSCI Emerging Markets GD       |                   | 3.51   | 5.46   | 32.64 | 11.83 | 26.91 | --    | --    | --    | --     | 13.00 |
| Excess                         |                   | -2.35  | -2.69  | -9.40 | -3.75 | -7.38 | --    | --    | --    | --     | -3.01 |
| Total Fixed Income             | 865,450,637       | 0.02   | 0.89   | 5.58  | 1.27  | 5.68  | 3.80  | 3.76  | 4.83  | 5.36   | 5.67  |
| Samcera Fixed Income Benchmark |                   | 0.05   | 0.56   | 4.52  | 1.30  | 2.64  | 3.00  | 2.14  | 3.26  | 4.49   | 5.12  |
| Excess                         |                   | -0.04  | 0.34   | 1.06  | -0.03 | 3.04  | 0.80  | 1.62  | 1.58  | 0.87   | 0.56  |
| Total Core Fixed Income        | 580,463,631       | 0.01   | 0.57   | 4.27  | 1.13  | 2.76  | 3.25  | 3.05  | 4.11  | 4.80   | 5.47  |
| BB Barclays U.S. Aggregate     |                   | 0.06   | 0.47   | 3.20  | 0.91  | 0.90  | 2.40  | 2.04  | 2.91  | 4.19   | 5.03  |
| Excess                         |                   | -0.05  | 0.09   | 1.07  | 0.23  | 1.86  | 0.85  | 1.01  | 1.20  | 0.61   | 0.43  |
| FIAM Core Bond                 | 247,507,367       | 0.09   | 0.57   | 3.71  | 1.19  | 1.50  | 2.94  | 2.67  | 3.68  | 4.96   | 4.81  |
| BB Barclays U.S. Aggregate     |                   | 0.06   | 0.47   | 3.20  | 0.91  | 0.90  | 2.40  | 2.04  | 2.91  | 4.19   | 4.34  |
| Excess                         |                   | 0.03   | 0.10   | 0.51  | 0.28  | 0.60  | 0.54  | 0.63  | 0.77  | 0.77   | 0.47  |
| Western Total Return           | 126,408,411       | 0.02   | 1.38   | 7.95  | 2.09  | 8.07  | --    | --    | --    | --     | 5.75  |
| BB Barclays U.S. Aggregate     |                   | 0.06   | 0.47   | 3.20  | 0.91  | 0.90  | --    | --    | --    | --     | 2.58  |
| Excess                         |                   | -0.03  | 0.91   | 4.75  | 1.18  | 7.17  | --    | --    | --    | --     | 3.17  |
| Blackrock Inter Gov            | 206,547,852       | -0.10  | -0.04  | --    | 0.29  | --    | --    | --    | --    | --     | 1.39  |
| BB Barclays U.S. Aggregate     |                   | 0.06   | 0.47   | --    | 0.91  | --    | --    | --    | --    | --     | 3.20  |
| Excess                         |                   | -0.16  | -0.52  | --    | -0.62 | --    | --    | --    | --    | --     | -1.82 |
| Total Opportunistic Credit     | 284,987,006       | 0.06   | 1.64   | 9.57  | 2.08  | 11.63 | 6.54  | 7.77  | 8.64  | --     | 9.83  |
| BB Barc BA Intermediate HY Ind |                   | 0.25   | 1.09   | 6.37  | 1.98  | 6.90  | 5.27  | 5.71  | 6.62  | --     | 7.88  |
| Excess                         |                   | -0.19  | 0.55   | 3.20  | 0.10  | 4.73  | 1.27  | 2.06  | 2.02  | --     | 1.95  |

# San Mateo County Manager Return Summary



October 31, 2017

| Composite Returns (NET)        | Market Value (\$) | 1 Mth. | 3 Mth. | YTD   | FYTD  | 1 Yr. | 3 Yr. | 5 Yr. | 7 Yr. | 10 Yr. | ITD   |
|--------------------------------|-------------------|--------|--------|-------|-------|-------|-------|-------|-------|--------|-------|
| AG Opportunistic Whole Loan    | 10,767,516        | 0.00   | 4.97   | 13.36 | 4.97  | 20.38 | 6.96  | --    | --    | --     | 5.34  |
| BB Barc BA Intermediate HY Ind |                   | 0.25   | 1.09   | 6.37  | 1.98  | 6.90  | 5.27  | --    | --    | --     | 5.15  |
| Excess                         |                   | -0.25  | 3.88   | 6.99  | 2.99  | 13.48 | 1.69  | --    | --    | --     | 0.19  |
| Angelo Gordon                  | 12,451,368        | 0.00   | 7.29   | 15.73 | 7.29  | 22.00 | 9.33  | --    | --    | --     | 10.63 |
| BB Barc BA Intermediate HY Ind |                   | 0.25   | 1.09   | 6.37  | 1.98  | 6.90  | 5.27  | --    | --    | --     | 5.66  |
| Excess                         |                   | -0.25  | 6.20   | 9.36  | 5.31  | 15.10 | 4.06  | --    | --    | --     | 4.97  |
| Beach Point Select Fund        | 47,569,341        | 0.15   | 2.07   | 8.86  | 2.07  | 11.49 | --    | --    | --    | --     | 9.31  |
| BB Barc BA Intermediate HY Ind |                   | 0.25   | 1.09   | 6.37  | 1.98  | 6.90  | --    | --    | --    | --     | 5.80  |
| Excess                         |                   | -0.10  | 0.99   | 2.49  | 0.09  | 4.59  | --    | --    | --    | --     | 3.51  |
| Brigade Cap Mngmt              | 75,109,597        | 0.05   | 0.42   | 9.53  | 1.40  | 9.03  | 5.16  | 5.72  | 6.79  | --     | 7.16  |
| BB Barc BA Intermediate HY Ind |                   | 0.25   | 1.09   | 6.37  | 1.98  | 6.90  | 5.27  | 5.71  | 6.62  | --     | 7.16  |
| Excess                         |                   | -0.21  | -0.67  | 3.16  | -0.58 | 2.13  | -0.11 | 0.01  | 0.18  | --     | 0.01  |
| SAMCERA - White Oak Yield Spec | 3,769,698         | 0.54   | -3.88  | --    | -3.88 | --    | --    | --    | --    | --     | --    |
| BB Barc BA Intermediate HY Ind |                   | 0.25   | 1.09   | --    | 1.98  | --    | --    | --    | --    | --     | --    |
| Excess                         |                   | 0.28   | -4.97  | --    | -5.86 | --    | --    | --    | --    | --     | --    |
| SAMCERA-PIMCO Div. Income Fund | 80,581,459        | 0.34   | 1.37   | --    | --    | --    | --    | --    | --    | --     | 1.37  |
| BB Barc BA Intermediate HY Ind |                   | 0.25   | 1.09   | --    | --    | --    | --    | --    | --    | --     | 1.09  |
| Excess                         |                   | 0.08   | 0.28   | --    | --    | --    | --    | --    | --    | --     | 0.28  |
| TCP Direct Lending VIII        | 13,441,371        | 0.00   | 1.06   | 6.45  | 1.06  | 6.45  | --    | --    | --    | --     | --    |
| BB Barc BA Intermediate HY Ind |                   | 0.25   | 1.09   | 6.37  | 1.98  | 6.90  | --    | --    | --    | --     | --    |
| Excess                         |                   | -0.25  | -0.03  | 0.08  | -0.93 | -0.45 | --    | --    | --    | --     | --    |
| Franklin Templeton             | 41,296,658        | -0.64  | 0.93   | 4.63  | 0.39  | 7.46  | 1.53  | 3.29  | --    | --     | 4.49  |
| BB Barclays Multiverse Index   |                   | -0.36  | -0.20  | 6.16  | 1.51  | 1.74  | 1.42  | 0.70  | --    | --     | 2.04  |
| Excess                         |                   | -0.28  | 1.12   | -1.54 | -1.12 | 5.73  | 0.11  | 2.59  | --    | --     | 2.45  |
| Total Risk Parity              | 310,619,557       | 2.69   | 4.37   | 12.81 | 6.47  | 11.93 | 5.39  | 5.81  | --    | --     | 6.75  |
| Samcera Risk Parity Benchmark  |                   | 1.16   | 2.78   | 12.00 | 4.43  | 15.34 | 7.69  | 10.05 | --    | --     | 9.09  |
| Excess                         |                   | 1.53   | 1.59   | 0.81  | 2.03  | -3.41 | -2.31 | -4.24 | --    | --     | -2.34 |
| AQR Global Risk III            | 145,454,858       | 2.22   | 3.93   | 13.31 | 6.79  | 13.13 | 3.17  | 4.20  | --    | --     | 5.52  |
| Samcera Risk Parity Benchmark  |                   | 1.16   | 2.78   | 12.00 | 4.43  | 15.34 | 7.69  | 10.05 | --    | --     | 9.09  |
| Excess                         |                   | 1.06   | 1.15   | 1.31  | 2.35  | -2.21 | -4.53 | -5.85 | --    | --     | -3.57 |



# San Mateo County Manager Return Summary



October 31, 2017

| Composite Returns (NET)        | Market Value (\$) | 1 Mth. | 3 Mth. | YTD   | FYTD  | 1 Yr. | 3 Yr. | 5 Yr. | 7 Yr.  | 10 Yr. | ITD    |
|--------------------------------|-------------------|--------|--------|-------|-------|-------|-------|-------|--------|--------|--------|
| Panagora                       | 165,164,699       | 3.11   | 4.75   | 12.37 | 6.18  | 10.90 | 7.51  | --    | --     | --     | 7.42   |
| Samcera Risk Parity Benchmark  |                   | 1.16   | 2.78   | 12.00 | 4.43  | 15.34 | 7.69  | --    | --     | --     | 7.58   |
| Excess                         |                   | 1.95   | 1.97   | 0.37  | 1.75  | -4.44 | -0.19 | --    | --     | --     | -0.16  |
| Total Alternatives             | 502,406,207       | 1.25   | 3.20   | 8.99  | 3.10  | 12.12 | 6.45  | 5.50  | -6.86  | -7.92  | -2.57  |
| Samcera Alternatives Benchmark |                   | 1.51   | 3.62   | 12.09 | 5.02  | 17.00 | 6.64  | 9.08  | 9.08   | 5.96   | 7.67   |
| Excess                         |                   | -0.25  | -0.42  | -3.10 | -1.92 | -4.88 | -0.19 | -3.57 | -15.94 | -13.88 | -10.24 |
| Total Private Equity           | 256,561,836       | 1.63   | 3.44   | 13.56 | 2.61  | 18.75 | 13.71 | 13.77 | -22.09 | --     | -22.09 |
| Samcera PE Benchmark           |                   | 2.43   | 5.64   | 19.26 | 7.89  | 27.63 | 13.73 | 18.48 | 17.35  | --     | 17.35  |
| Excess                         |                   | -0.80  | -2.20  | -5.70 | -5.28 | -8.89 | -0.02 | -4.71 | -39.44 | --     | -39.44 |
| Total Hedge Fund Composite     | 245,844,371       | 0.86   | 2.95   | 4.28  | 3.67  | 5.21  | 7.13  | 6.71  | --     | --     | 5.22   |
| Samcera LIBOR + 4%             |                   | 0.43   | 1.29   | 4.18  | 1.72  | 4.95  | 4.52  | 4.39  | --     | --     | 4.35   |
| Excess                         |                   | 0.43   | 1.66   | 0.09  | 1.95  | 0.25  | 2.61  | 2.33  | --     | --     | 0.87   |
| AQR Delta XN                   | 164,713,106       | 0.91   | 4.24   | 5.02  | 4.93  | 5.81  | 7.74  | 7.07  | --     | --     | 5.50   |
| Samcera LIBOR + 4%             |                   | 0.43   | 1.29   | 4.18  | 1.72  | 4.95  | 4.52  | 4.39  | --     | --     | 4.35   |
| Excess                         |                   | 0.48   | 2.95   | 0.84  | 3.21  | 0.86  | 3.22  | 2.69  | --     | --     | 1.15   |
| SamCERA-Aberdeen Std GARS      | 81,131,265        | 0.75   | 0.30   | 2.56  | 1.09  | 4.13  | --    | --    | --     | --     | 0.08   |
| Samcera LIBOR + 4%             |                   | 0.43   | 1.29   | 4.18  | 1.72  | 4.95  | --    | --    | --     | --     | 4.67   |
| Excess                         |                   | 0.32   | -0.98  | -1.62 | -0.63 | -0.83 | --    | --    | --     | --     | -4.59  |
| Total Inflation Hedge          | 666,384,816       | 1.00   | 1.47   | 6.02  | 2.91  | 7.83  | --    | --    | --     | --     | 11.12  |
| SamCERA Inflation Hedge Index  |                   | 0.74   | 2.24   | 7.33  | 4.14  | 9.11  | --    | --    | --     | --     | 8.92   |
| Excess                         |                   | 0.26   | -0.77  | -1.31 | -1.24 | -1.28 | --    | --    | --     | --     | 2.19   |
| Total TIPS                     | 71,646,393        | 0.27   | 0.59   | 1.47  | 0.99  | 0.69  | --    | --    | --     | --     | 1.86   |
| BBG Barclays US TIPS           |                   | 0.21   | 0.63   | 1.94  | 1.08  | -0.11 | --    | --    | --     | --     | 1.36   |
| Excess                         |                   | 0.05   | -0.05  | -0.47 | -0.09 | 0.80  | --    | --    | --     | --     | 0.50   |
| Brown Brothers Harriman        | 71,646,393        | 0.27   | 0.59   | 1.47  | 0.99  | 0.69  | 1.22  | -0.74 | 1.93   | --     | 2.54   |
| BBG Barclays US TIPS           |                   | 0.21   | 0.63   | 1.94  | 1.08  | -0.11 | 1.40  | -0.11 | 2.29   | --     | 2.90   |
| Excess                         |                   | 0.05   | -0.05  | -0.47 | -0.09 | 0.80  | -0.18 | -0.63 | -0.36  | --     | -0.36  |
| Total Real Estate              | 284,441,557       | 1.20   | 1.20   | 5.60  | 1.32  | 7.68  | --    | --    | --     | --     | 9.09   |
| Samcera NCREIF ODCE EW (gross) |                   | 0.00   | 1.87   | 5.51  | 1.87  | 7.79  | --    | --    | --     | --     | 7.75   |
| Excess                         |                   | 1.20   | -0.67  | 0.09  | -0.55 | -0.11 | --    | --    | --     | --     | 1.34   |
| Invesco Core Real Estate       | 249,718,596       | 1.37   | 1.37   | 5.72  | 1.37  | 7.93  | 10.79 | 11.51 | 12.10  | 4.90   | 7.85   |
| Samcera NCREIF ODCE EW (gross) |                   | 0.00   | 1.87   | 5.51  | 1.87  | 7.79  | 11.04 | 11.59 | 12.52  | 4.85   | 7.72   |
| Excess                         |                   | 1.37   | -0.50  | 0.22  | -0.50 | 0.14  | -0.25 | -0.08 | -0.42  | 0.05   | 0.14   |

# San Mateo County Manager Return Summary



October 31, 2017

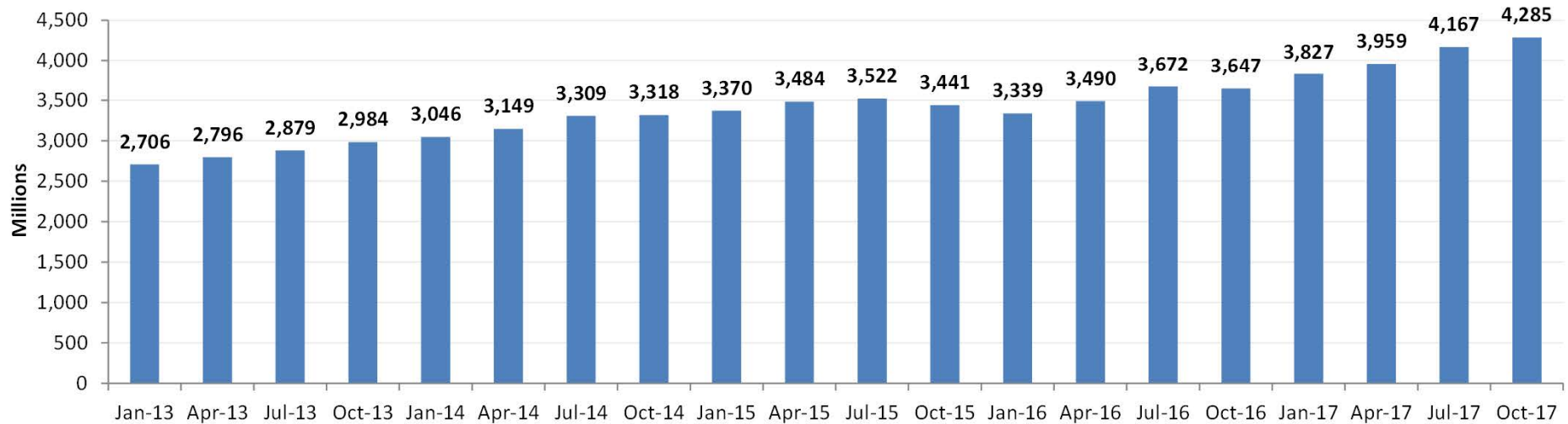
| Composite Returns (NET)         | Market Value (\$) | 1 Mth. | 3 Mth. | YTD    | FYTD   | 1 Yr.  | 3 Yr. | 5 Yr. | 7 Yr. | 10 Yr. | ITD   |
|---------------------------------|-------------------|--------|--------|--------|--------|--------|-------|-------|-------|--------|-------|
| Invesco US Val IV               | 18,983,489        | 0.00   | 0.00   | 4.95   | 1.65   | 4.96   | --    | --    | --    | --     | 10.79 |
| Samcera NCREIF ODCE EW (gross)  |                   | 0.00   | 1.87   | 5.51   | 1.87   | 7.79   | --    | --    | --    | --     | 9.61  |
| Excess                          |                   | 0.00   | -1.87  | -0.55  | -0.22  | -2.83  | --    | --    | --    | --     | 1.17  |
| PGIM Real Estate US Debt Fund   | 15,739,472        | 0.00   | 0.00   | --     | 0.00   | --     | --    | --    | --    | --     | 0.00  |
| Samcera NCREIF ODCE EW (gross)  |                   | 0.00   | 1.87   | --     | 1.87   | --     | --    | --    | --    | --     | 1.87  |
| Excess                          |                   | 0.00   | -1.87  | --     | -1.87  | --     | --    | --    | --    | --     | -1.87 |
| Liquid Real Assets              | 256,009,114       | 1.59   | 3.24   | 10.28  | 7.49   | 12.85  | --    | --    | --    | --     | --    |
| SamCera Custom Real Asset Index |                   | 1.63   | 3.06   | 10.70  | 7.30   | 13.40  | --    | --    | --    | --     | --    |
| Excess                          |                   | -0.05  | 0.18   | -0.42  | 0.19   | -0.55  | --    | --    | --    | --     | --    |
| SSGA CST REAL ASSET NL          | 256,009,114       | 1.59   | 3.24   | 10.28  | 7.49   | 12.85  | --    | --    | --    | --     | --    |
| SamCera Custom Real Asset Index |                   | 1.63   | 3.06   | 10.70  | 7.30   | 13.40  | --    | --    | --    | --     | --    |
| Excess                          |                   | -0.05  | 0.18   | -0.42  | 0.19   | -0.55  | --    | --    | --    | --     | --    |
| Total Private Real Assets       | 54,287,752        | -1.85  | -3.55  | -0.15  | -3.96  | 2.61   | --    | --    | --    | --     | 26.26 |
| SamCera Custom Real Asset Inde  |                   | 1.63   | 3.06   | 10.70  | 7.30   | 13.40  | --    | --    | --    | --     | 14.67 |
| Excess                          |                   | -3.48  | -6.61  | -10.85 | -11.27 | -10.79 | --    | --    | --    | --     | 11.59 |
| Total Cash                      | 105,480,327       | 0.05   | 0.18   | 0.34   | 0.25   | 0.46   | 0.53  | 0.56  | 0.61  | 0.53   | 1.99  |
| Samcera Cash Benchmark          |                   | 0.09   | 0.27   | 0.66   | 0.35   | 0.72   | 0.35  | 0.24  | 0.20  | 0.45   | 1.84  |
| Excess                          |                   | -0.04  | -0.09  | -0.32  | -0.11  | -0.26  | 0.18  | 0.32  | 0.41  | 0.08   | 0.15  |
| SamCera General Account         | 54,993,301        | 0.11   | 0.31   | 0.90   | 0.41   | 1.03   | 0.60  | 0.40  | 0.37  | 0.66   | 1.99  |
| County Treasury Pool            | 50,470,416        | -0.00  | -0.00  | -0.00  | -0.00  | -0.00  | -0.00 | 0.25  | 0.45  | 0.34   | 2.63  |
| San Mateo County ERA            | 4,285,253,792     | 1.30   | 3.05   | 12.50  | 4.54   | 14.71  | 7.09  | 9.22  | 8.62  | 4.84   | 6.89  |
| Samcera Total Plan Benchmark    |                   | 1.28   | 3.13   | 12.78  | 5.07   | 15.58  | 7.11  | 9.31  | 8.94  | 5.48   | 7.18  |
| Excess                          |                   | 0.02   | -0.08  | -0.28  | -0.53  | -0.87  | -0.01 | -0.10 | -0.31 | -0.64  | -0.29 |

October 31, 2017

**Record of Asset Growth**

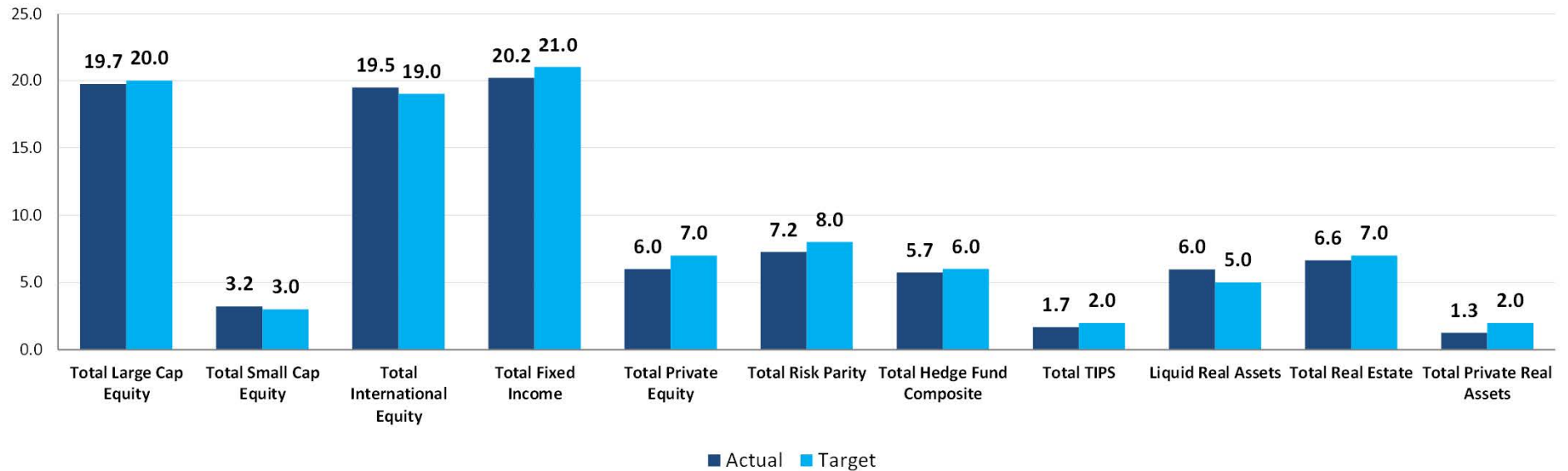
|                        | Three Months  | One Year       |
|------------------------|---------------|----------------|
| TOTAL FUND             |               |                |
| Beginning Market Value | 4,167,174,088 | 3,646,643,276  |
| Contributions          | 15,671,910    | 1,579,320,076  |
| Withdrawals            | -50,876,551   | -1,514,994,013 |
| Income Received        | 8,173,490     | 34,790,572     |
| Gain/Loss              | 120,357,962   | 514,466,176    |
| Ending Market Value    | 4,285,253,792 | 4,285,253,792  |

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



October 31, 2017

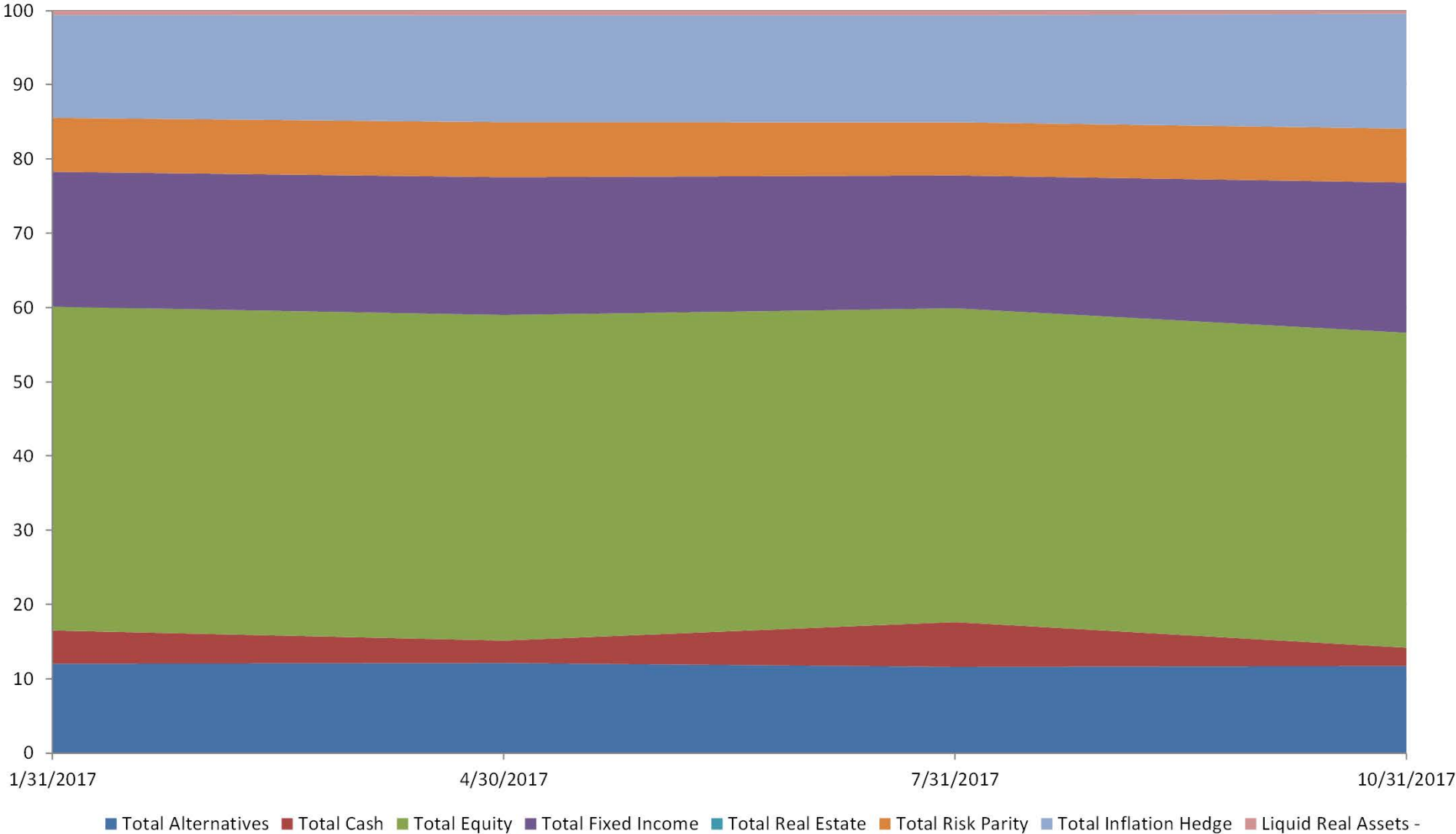
Actual vs Target Weights



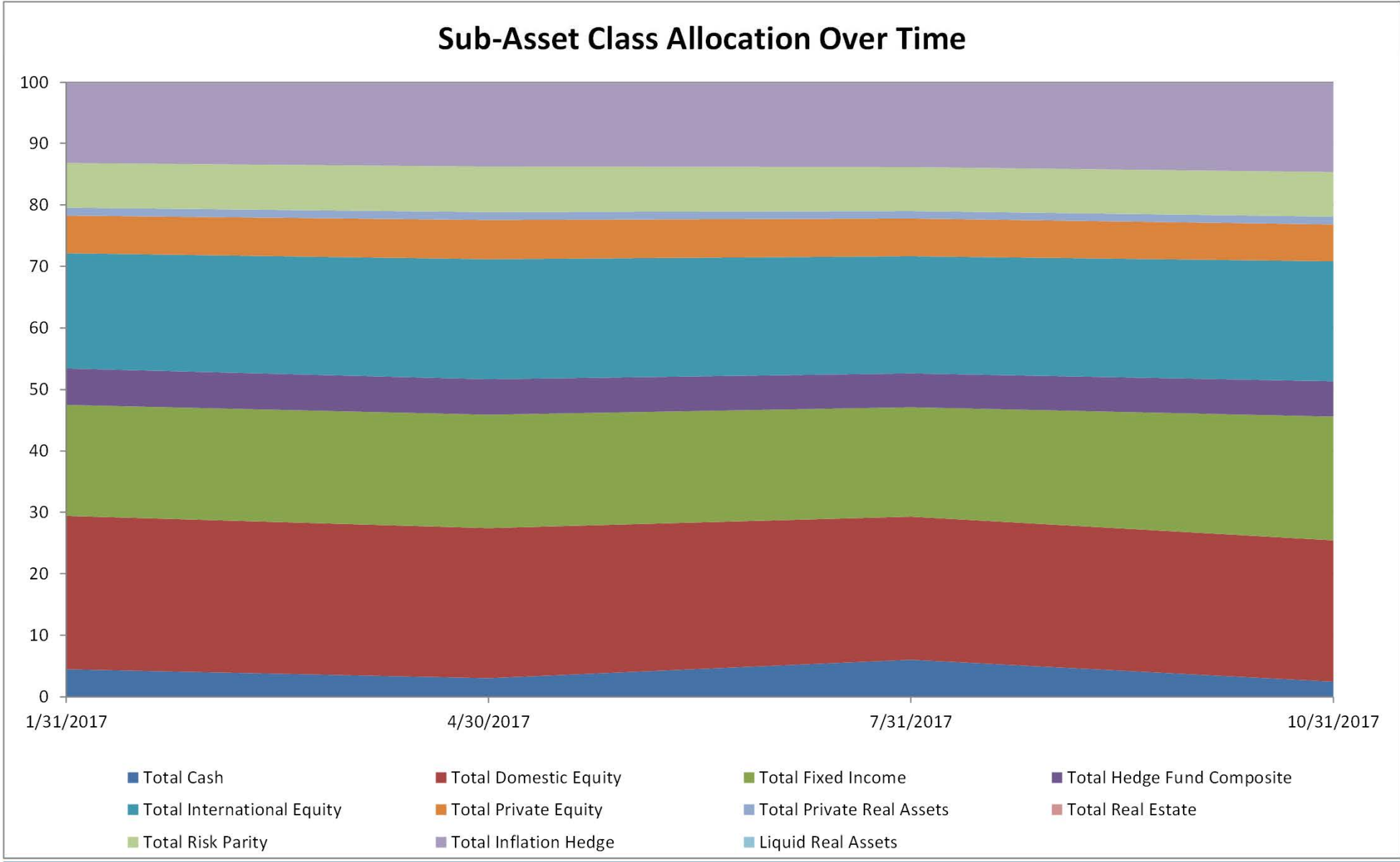
|                                   | Min  | Actual | Target | Deviation | Max  |
|-----------------------------------|------|--------|--------|-----------|------|
| <b>Total Large Cap Equity</b>     | 18.0 | 19.7   | 20.0   | -0.3      | 22.0 |
| <b>Total Small Cap Equity</b>     | 1.0  | 3.2    | 3.0    | 0.2       | 5.0  |
| <b>Total International Equity</b> | 17.0 | 19.5   | 19.0   | 0.5       | 21.0 |
| <b>Total Fixed Income</b>         | 19.0 | 20.2   | 21.0   | -0.8      | 23.0 |
| <b>Total Private Equity</b>       | 5.0  | 6.0    | 7.0    | -1.0      | 9.0  |
| <b>Total Risk Parity</b>          | 6.0  | 7.2    | 8.0    | -0.8      | 10.0 |
| <b>Total Hedge Fund Composite</b> | 4.0  | 5.7    | 6.0    | -0.3      | 8.0  |
| <b>Total TIPS</b>                 | 0.0  | 1.7    | 2.0    | -0.3      | 4.0  |
| <b>Liquid Real Assets</b>         | 3.0  | 6.0    | 5.0    | 1.0       | 7.0  |
| <b>Total Real Estate</b>          | 5.0  | 6.6    | 7.0    | -0.4      | 9.0  |
| <b>Total Private Real Assets</b>  | 0.0  | 1.3    | 2.0    | -0.7      | 4.0  |

October 31, 2017

Asset Allocation over Time



October 31, 2017



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**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**

OCTOBER 2017  
Capital Markets Update



# Market commentary

## ECONOMIC CLIMATE

- Real U.S. GDP grew 2.3% YoY in the third quarter (3.0% QoQ annualized), above the second quarter growth rate of 2.1% YoY (2.6% QoQ annualized). Consumer spending, government spending and exports provided a positive boost to Q3 growth.
- As of November 3<sup>rd</sup>, the Q4 Atlanta Fed GDPNow forecast for real U.S. GDP growth was 3.3% (QoQ annualized).
- The U.S. dollar potentially reversed its downward trend in October and appreciated by 1.6% against a basket of major currencies. The Bloomberg Dollar Spot index was down -7.5% year-to-date.
- The ISM Manufacturing index decreased in October from 60.8 to 58.7, below the consensus estimate of 59.5. Readings above 50 indicate general expansion in manufacturing. The inventories sub-index was a detractor – falling from 52.5 to 48.0 in the month.
- The Conference Board’s Consumer Confidence Index, a survey of consumers’ perception of economic conditions, increased in October from 120.6 to 125.9, above the consensus estimate of 121.0 and well above the 20-year average of 92.8.

## DOMESTIC EQUITIES

- Domestic equities experienced positive returns in October (S&P 500 +2.3%). Realized volatility of the index remained low at 4.4% (annualized) during the month, well below the 5-year trailing volatility of 12.0%
- As of November 10<sup>th</sup>, 91% of S&P 500 companies had reported third quarter earnings. According to FactSet, the blended Q3 earnings growth rate was 6.1% YoY, well above the September 30<sup>th</sup> estimate of 3.0%.

## DOMESTIC FIXED INCOME

- Domestic fixed income returns were flat in October as the Bloomberg Barclays U.S. Aggregate Index returned 0.1%.
- The U.S. Treasury yield curve flattened slightly as the 10-year minus 2-year spread contracted 8 bps to 0.78%. The 2-year Treasury yield experienced the largest change among tenors in the month, increasing 13 bps to 1.6%.
- Credit spreads remained compressed – the U.S. high yield and investment-grade option-adjusted spreads ended the month near cycle lows of 3.5% and 0.9%, respectively.

## INTERNATIONAL MARKETS

- International equities (MSCI ACWI ex U.S. +1.9%) underperformed domestic equities in October (S&P 500 +2.3%). The hedged MSCI ACWI ex U.S. returned 3.2% in the month.
- Eurozone unemployment fell to 8.9% in September, the lowest level since 2011. However, unemployment rates varied greatly among the member states, with Germany at 3.6% and Spain 16.7%.
- Eurozone real GDP grew 2.5% YoY (2.4% QoQ annualized) in the third quarter, above the prior quarter’s growth rate of 2.3% YoY (2.6% QoQ annualized) and the fastest YoY rate since 2011.
- The BOE raised interest rates for the first time in nearly ten years, increasing the benchmark rate from 0.25% to 0.50%. The move eliminated the rate cut that was applied shortly after Brexit. October inflation in the U.K. increased by 3.0% YoY, a full percentage point above the BOE’s target rate of 2.0%.

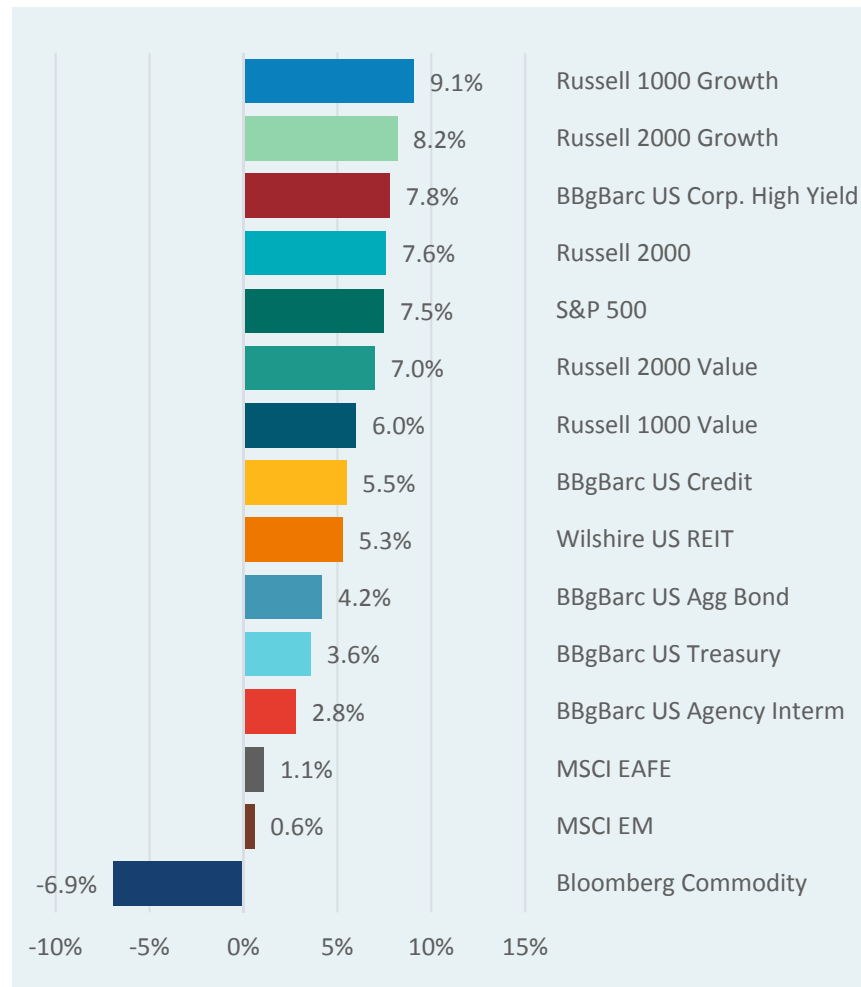
# Major asset class returns

ONE YEAR ENDING OCTOBER



Source: Morningstar, as of 10/31/17

TEN YEARS ENDING OCTOBER

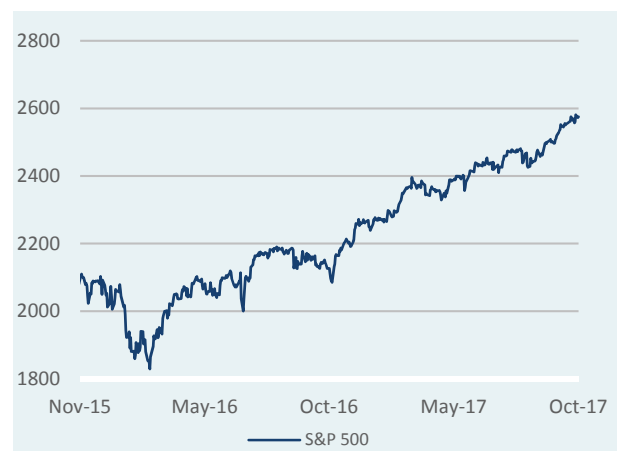


Source: Morningstar, as of 10/31/17

# U.S. large cap equities

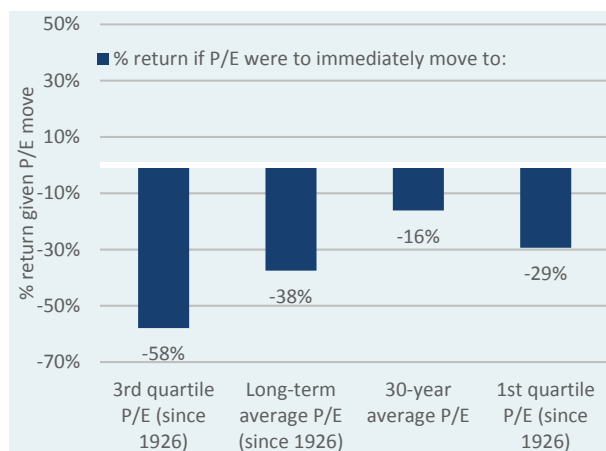
- Large cap equities posted a positive return for a 12<sup>th</sup> consecutive month (S&P 500 +2.3%). The index was up 16.9% year-to-date.
- The House and Senate have released initial versions of proposed tax reform legislation that could potentially lower the corporate tax rate to 20%. The outcome remains uncertain and will likely have a material impact on U.S. equity prices.
- According to FactSet, as of November 10<sup>th</sup>, the estimated Q3 earnings growth rate of the S&P 500 was 6.1% YoY, led by Energy and Information Technology. Revenue growth was 5.8% YoY, above the September 30<sup>th</sup> estimate of 4.9% led by Materials and Energy.
- U.S. companies with higher global revenue exposure (greater than 50%) experienced materially stronger earnings growth (13.4% versus 2.3%) and revenue growth (10.0% versus 4.2%) in the third quarter.

## U.S. LARGE CAP EQUITIES



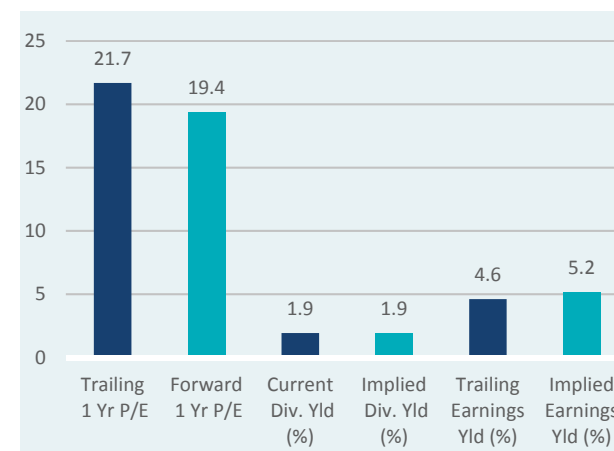
Source: Bloomberg, as of 10/31/17

## RETURNS IF TRAILING P/E MOVED TO HISTORIC AVERAGE



Source: Yale/Shiller, Verus, as of 10/31/17

## S&P 500 VALUATION SNAPSHOT

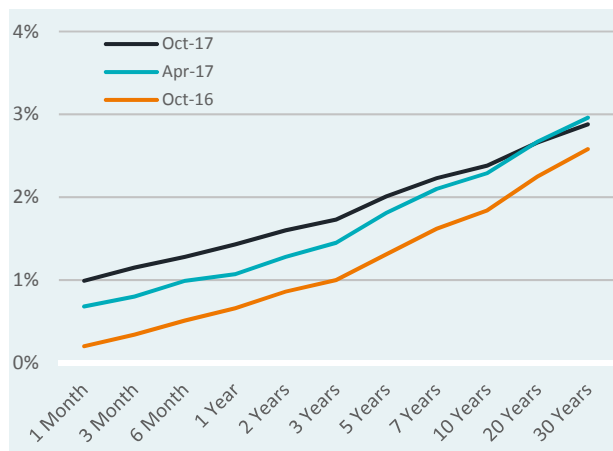


Source: Bloomberg, as of 10/31/17

# Fixed income

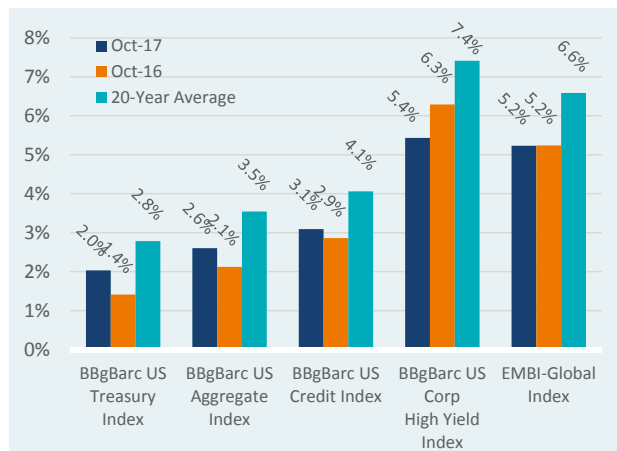
- The U.S. Treasury yield curve flattened slightly in October, as the 10-year minus 2-year spread fell 8 bps to 0.78%. The yield curve also rose across all maturities during the month and the Bloomberg Barclays U.S. Treasury Index experienced a negative return of -0.1%.
- The Bloomberg U.S. Aggregate Bond Index yield ended the month at 2.6%, above the yield 1-year prior of 2.1% but well below the 20-year average of 3.5%.
- On November 1<sup>st</sup>, the FOMC held the fed funds target rate unchanged at 1.00% - 1.25%. The market is expecting the next hike to occur in December, based on fed fund futures pricing.
- The fed balance sheet unwind began in October with a \$5.6 billion net decrease in Treasuries (-\$6 billion expected). Markets await evidence of an unwind in mortgage-backed securities (-\$4 billion expected), with a net increase of \$2.5 billion during the month.

**U.S. TREASURY YIELD CURVE**



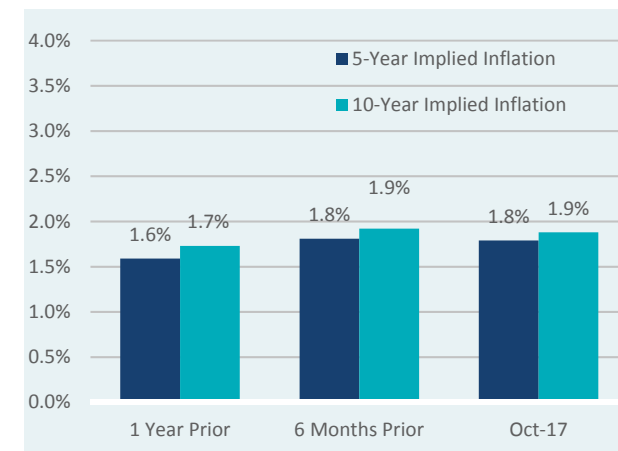
Source: Federal Reserve, as of 10/31/17

**NOMINAL FIXED INCOME YIELDS**



Source: Morningstar, as of 10/31/17

**IMPLIED INFLATION (TIPS BREAKEVEN)**

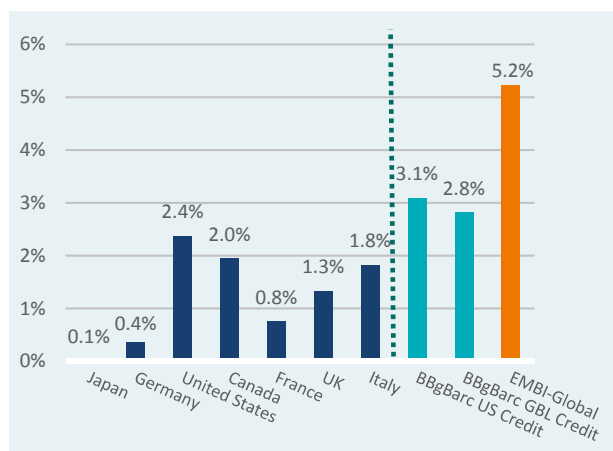


Source: Federal Reserve, as of 10/31/17

# Global markets

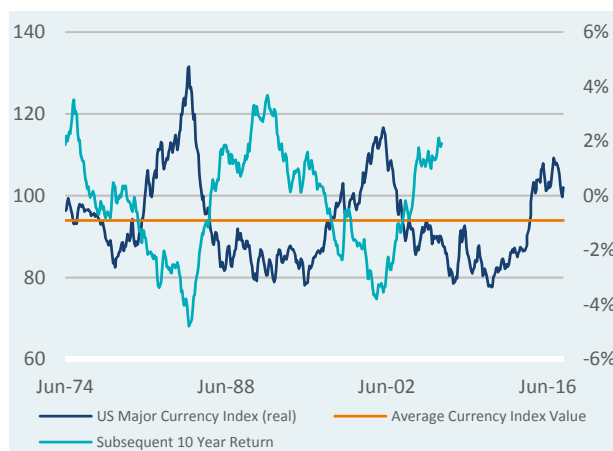
- The ECB announced it will continue its asset purchase program but at a reduced rate starting in 2018. The monthly purchases will be reduced from €60 billion to €30 billion and will remain in place through at least September of next year.
- Italian sovereign bonds rallied in October following a credit rating upgrade from Standard and Poor (BBB), the first upgrade in three decades. The Italian 10-year bond yield fell 28 bps to 1.83% while the price of a 10-year credit default swap decreased by -9.9%.
- Japanese equities (Nikkei 225 index +8.2%) outperformed international equities (MSCI ACWI ex U.S. index +1.9%) on an unhedged basis in October. As of November 13<sup>th</sup>, 91% of Nikkei 225 companies had reported third quarter financials. According to Bloomberg, Q3 earnings and revenue grew by 17.9% and 9.8% annualized, respectively.

**GLOBAL SOVEREIGN 10 YEAR INDEX YIELDS**



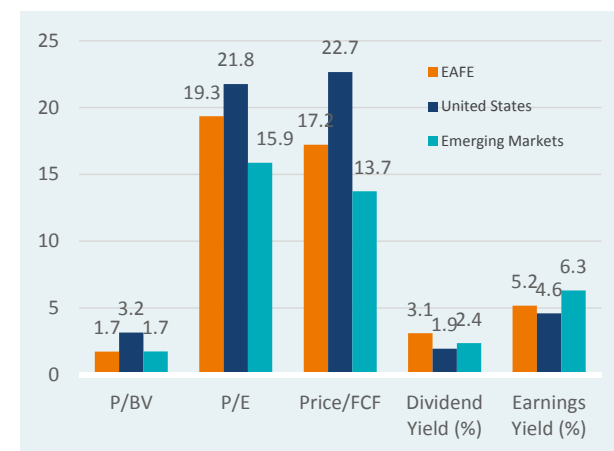
Source: Morningstar, as of 10/31/17

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



Source: Federal Reserve, as of 10/31/17

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

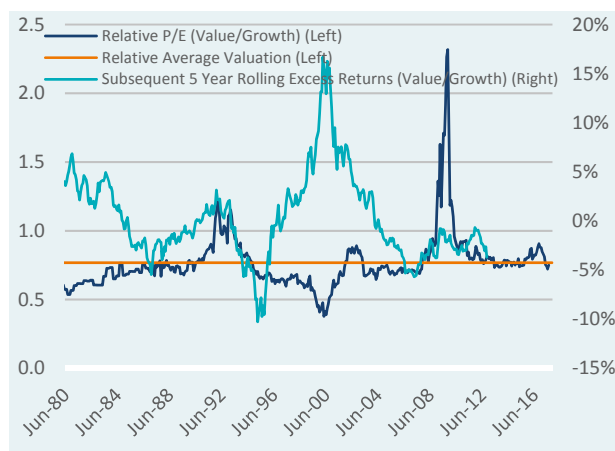


Source: Bloomberg, as of 10/31/17

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

- Growth equities outperformed value equities in October, as the Russell 1000 Growth and Russell 1000 Value returned 3.9% and 0.7%, respectively. Growth equities extended their outperformance YTD to 16.7%.
- Growth equities benefitted from a higher relative concentration to Technology companies. The Tech sub-index (approximately 40% of the Russell 1000 Growth) outperformed all other sectors and returned 7.9% over the month.
- The underperformance of value equities in October was partially attributable to heavy sector allocations in Health Care and Energy, which returned -0.8% and -0.7%, respectively.
- Both value and growth equities experienced low realized volatility during the month (4.8% and 6.3%, respectively) relative to their 5-year annualized averages (approximately 12.4%).

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



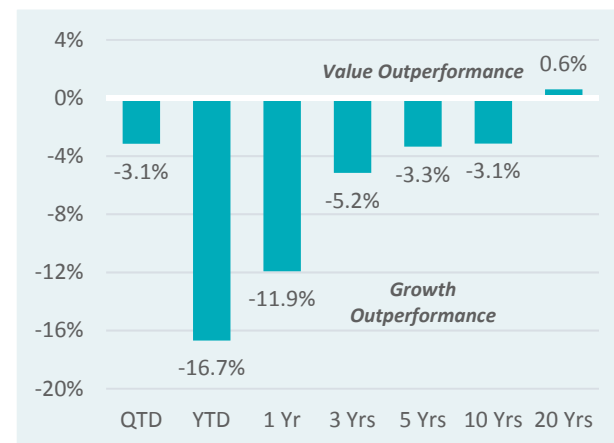
Source: Russell, Bloomberg, as of 10/31/17

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

|          | RUSSELL 1000 VALUE                 | RUSSELL 1000 GROWTH |
|----------|------------------------------------|---------------------|
|          | <b>ANNUALIZED RETURN TO DATE %</b> |                     |
| QTD      | 0.7                                | 3.9                 |
| YTD      | 8.7                                | 25.4                |
| 1 YEAR   | 17.8                               | 29.7                |
| 3 YEARS  | 8.0                                | 13.1                |
| 5 YEARS  | 13.5                               | 16.8                |
| 10 YEARS | 6.0                                | 9.1                 |
| 20 YEARS | 7.5                                | 6.9                 |
|          | <b>SHARPE RATIO</b>                |                     |
| 3 YEARS  | 0.76                               | 1.17                |
| 5 YEARS  | 1.31                               | 1.60                |
| 10 YEARS | 0.42                               | 0.62                |
| 20 YEARS | 0.43                               | 0.36                |

Source: Morningstar, as of 10/31/17

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

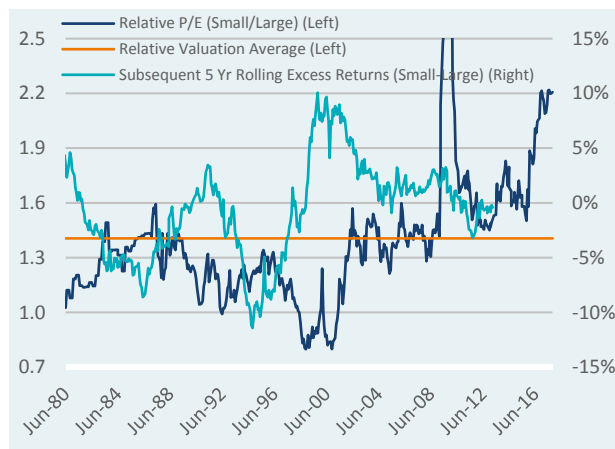


Source: Morningstar, as of 10/31/17

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

- U.S. large cap equities outperformed small cap equities, as the Russell 1000 index and Russell 2000 index returned 2.3% and 0.9%, respectively.
- Over all the time periods examined below, large cap equities have provided superior risk-adjusted returns (Sharpe Ratio) relative to small cap equities. Over the previous 5-year period, large cap equities have outperformed on an absolute basis by 0.7% per year with 3.4% less annualized standard deviation.
- The Technology sector experienced the largest performance differential between large and small cap companies. Large cap technology companies outperformed their small cap counterparts by over 4.0%. However, Tech companies within the Russell 1000 were far more concentrated, with the five largest companies (Apple, Microsoft, Intel, Facebook and Alphabet) contributing 56% to the sub-index total return, compared to 25% within the Russell 2000.

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



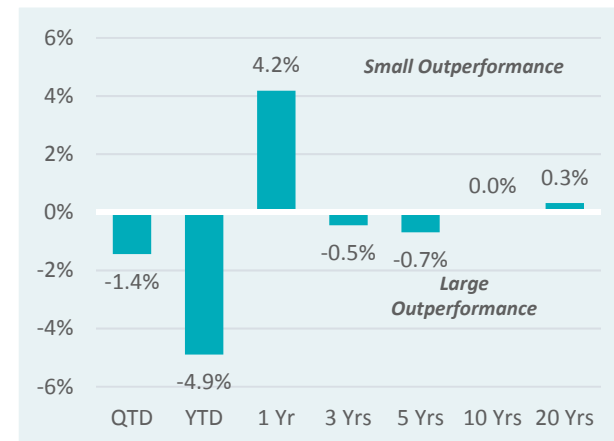
Source: Russell, Bloomberg, as of 10/31/17

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

|          | RUSSELL 1000 INDEX          | RUSSELL 2000 INDEX |
|----------|-----------------------------|--------------------|
|          | ANNUALIZED RETURN TO DATE % |                    |
| QTD      | 2.3                         | 0.9                |
| YTD      | 16.8                        | 11.9               |
| 1 YEAR   | 23.7                        | 27.8               |
| 3 YEARS  | 10.6                        | 10.1               |
| 5 YEARS  | 15.2                        | 14.5               |
| 10 YEARS | 7.6                         | 7.6                |
| 20 YEARS | 7.5                         | 7.8                |
|          | SHARPE RATIO                |                    |
| 3 YEARS  | 1.01                        | 0.73               |
| 5 YEARS  | 1.51                        | 1.03               |
| 10 YEARS | 0.53                        | 0.45               |
| 20 YEARS | 0.42                        | 0.38               |

Source: Morningstar, as of 10/31/17

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



Source: Morningstar, as of 10/31/17

# Commodities

- The broad Bloomberg Commodity Index increased in October by 2.1%. Industrial Metals (+5.8%), Energy (+2.5%), and Livestock (+10.6%) were the largest contributors during the month.
- The middle of the WTI crude oil futures curve was in backwardation in October — possibly influenced by expectations of demand exceeding supply – reducing the effect of negative roll yields seen in recent years. Backwardation is a state where spot prices are higher than prices for futures contracts. WTI crude oil spot

prices increased 4.8% and ended the month at \$54.11 per barrel.

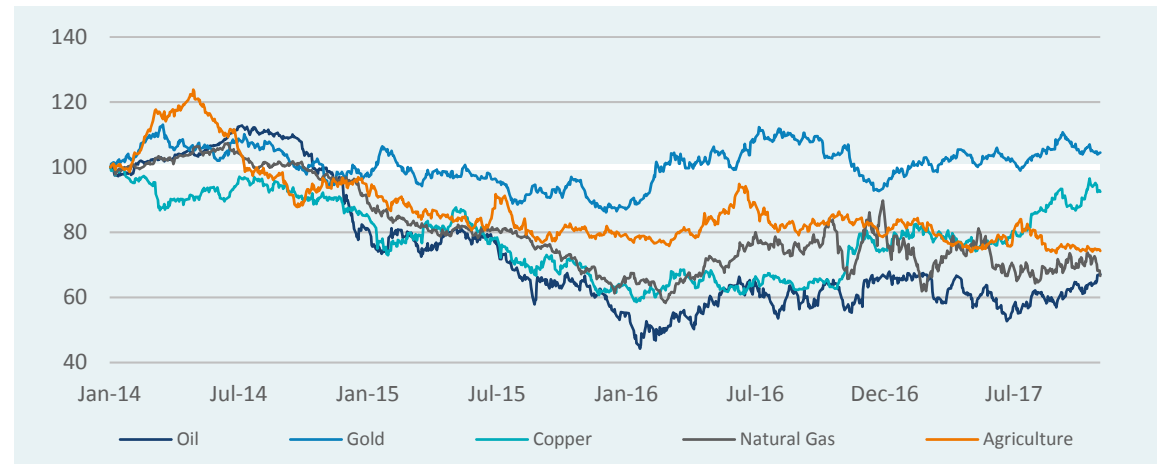
- The Industrial Metals sub-index increased by 5.8%, possibly due to favorable supply and demand fundamentals, led by the price appreciation of Copper (+5.0%) and Nickel (+16.7%).
- The Bloomberg Livestock sub-index returned 10.6% in October, led by Lean Hog futures, which increased 13.4% in the month.

## INDEX AND SECTOR PERFORMANCE

|                             | Month | QTD   | YTD    | 1 Year | 3 Year | 5 Year | 10 Year |
|-----------------------------|-------|-------|--------|--------|--------|--------|---------|
| Bloomberg Commodity         | 2.1   | 2.1   | (0.8)  | 2.3    | (9.5)  | (9.4)  | (6.9)   |
| Bloomberg Agriculture       | (0.9) | (0.9) | (10.1) | (14.6) | (9.1)  | (11.0) | (3.7)   |
| Bloomberg Energy            | 2.5   | 2.5   | (10.0) | 2.3    | (23.6) | (16.9) | (18.1)  |
| Bloomberg Grains            | (2.5) | (2.5) | (9.2)  | (12.0) | (11.1) | (14.0) | (5.6)   |
| Bloomberg Industrial Metals | 5.8   | 5.8   | 23.6   | 29.5   | 0.1    | (1.5)  | (4.4)   |
| Bloomberg Livestock         | 10.6  | 10.6  | 13.8   | 30.6   | (5.8)  | (0.9)  | (5.4)   |
| Bloomberg Petroleum         | 6.4   | 6.4   | 0.2    | 12.7   | (21.5) | (15.2) | (12.5)  |
| Bloomberg Precious Metals   | (0.7) | (0.7) | 7.9    | (2.8)  | 1.5    | (8.2)  | 3.3     |
| Bloomberg Softs             | 1.0   | 1.0   | (18.1) | (26.6) | (9.2)  | (9.2)  | (3.2)   |

Source: Morningstar, as of 10/31/17

## COMMODITY PERFORMANCE



Source: Bloomberg, as of 10/31/17



# Appendix

# Periodic table of returns

|                         | 1994 | 1995 | 1996 | 1997  | 1998  | 1999 | 2000  | 2001  | 2002  | 2003 | 2004 | 2005 | 2006 | 2007 | 2008  | 2009  | 2010 | 2011  | 2012 | 2013 | 2014  | 2015  | 2016 | YTD  | 5-Year | 10-Year |
|-------------------------|------|------|------|-------|-------|------|-------|-------|-------|------|------|------|------|------|-------|-------|------|-------|------|------|-------|-------|------|------|--------|---------|
| Emerging Markets Equity | 16.6 | 38.4 | 23.2 | 35.2  | 38.7  | 66.4 | 31.8  | 14.0  | 25.9  | 56.3 | 26.0 | 34.5 | 32.6 | 39.8 | 5.2   | 79.0  | 29.1 | 14.3  | 18.6 | 43.3 | 13.5  | 13.3  | 31.7 | 32.3 | 16.8   | 9.1     |
| Large Cap Growth        | 8.1  | 37.8 | 23.1 | 32.9  | 27.0  | 43.1 | 22.8  | 8.4   | 10.3  | 48.5 | 22.2 | 21.4 | 26.9 | 16.2 | 1.4   | 37.2  | 26.9 | 7.8   | 18.1 | 38.8 | 13.2  | 5.7   | 21.3 | 25.4 | 15.4   | 8.2     |
| International Equity    | 6.4  | 37.2 | 22.4 | 31.8  | 20.3  | 33.2 | 12.2  | 7.3   | 6.7   | 47.3 | 20.7 | 20.1 | 23.5 | 15.8 | -6.5  | 34.5  | 24.5 | 2.6   | 17.9 | 34.5 | 13.0  | 0.9   | 17.3 | 21.8 | 15.2   | 7.6     |
| Small Cap Growth        | 4.4  | 31.0 | 21.6 | 30.5  | 19.3  | 27.3 | 11.6  | 3.3   | 1.6   | 46.0 | 18.3 | 14.0 | 22.2 | 11.8 | -21.4 | 32.5  | 19.2 | 1.5   | 17.5 | 33.5 | 11.8  | 0.6   | 12.1 | 18.6 | 14.5   | 7.6     |
| Large Cap Equity        | 3.2  | 28.5 | 21.4 | 22.4  | 16.2  | 26.5 | 7.0   | 2.8   | 1.0   | 39.2 | 16.5 | 7.5  | 18.4 | 11.6 | -25.9 | 28.4  | 16.8 | 0.4   | 16.4 | 33.1 | 6.0   | 0.0   | 11.8 | 16.8 | 13.6   | 7.0     |
| 60/40 Global Portfolio  | 2.6  | 25.7 | 16.5 | 16.2  | 15.6  | 24.3 | 6.0   | 2.5   | -5.9  | 30.0 | 14.5 | 7.1  | 16.6 | 10.9 | -28.9 | 27.2  | 16.7 | 0.1   | 16.3 | 32.5 | 5.6   | -0.4  | 11.3 | 14.0 | 13.5   | 6.2     |
| Small Cap Equity        | 0.4  | 19.6 | 14.4 | 13.9  | 8.7   | 21.3 | 4.1   | -2.4  | -6.0  | 29.9 | 14.3 | 6.3  | 15.5 | 10.3 | -33.8 | 23.3  | 16.1 | -2.1  | 15.3 | 23.3 | 4.9   | -0.8  | 11.2 | 11.9 | 10.3   | 6.0     |
| Large Cap Value         | -1.5 | 18.5 | 11.3 | 12.9  | 4.9   | 20.9 | -3.0  | -5.6  | -11.4 | 29.7 | 12.9 | 5.3  | 15.1 | 7.0  | -35.6 | 20.6  | 15.5 | -2.9  | 14.6 | 12.1 | 4.2   | -1.4  | 8.0  | 8.7  | 8.5    | 4.2     |
| Hedge Funds of Funds    | -1.8 | 15.2 | 10.3 | 10.6  | 1.2   | 13.2 | -7.3  | -9.1  | -15.5 | 25.2 | 11.4 | 4.7  | 13.3 | 7.0  | -36.8 | 19.7  | 13.1 | -4.2  | 11.5 | 11.0 | 3.4   | -2.5  | 7.1  | 6.8  | 6.7    | 3.8     |
| Small Cap Value         | -2.0 | 11.6 | 9.9  | 9.7   | -2.5  | 11.4 | -7.8  | -9.2  | -15.7 | 23.9 | 9.1  | 4.6  | 10.4 | 5.8  | -37.6 | 18.9  | 10.2 | -5.5  | 10.5 | 9.0  | 2.8   | -3.8  | 5.7  | 5.8  | 4.8    | 1.1     |
| Real Estate             | -2.4 | 11.1 | 6.4  | 5.2   | -5.1  | 7.3  | -14.0 | -12.4 | -20.5 | 11.6 | 6.9  | 4.6  | 9.1  | 4.4  | -38.4 | 11.5  | 8.2  | -5.7  | 4.8  | 0.1  | 0.0   | -4.4  | 2.6  | 5.1  | 4.1    | 0.9     |
| US Bonds                | -2.9 | 7.5  | 6.0  | 2.1   | -6.5  | 4.8  | -22.4 | -19.5 | -21.7 | 9.0  | 6.3  | 4.2  | 4.8  | -0.2 | -38.5 | 5.9   | 6.5  | -11.7 | 4.2  | -2.0 | -1.8  | -7.5  | 1.0  | 3.2  | 2.0    | 0.6     |
| Cash                    | -3.5 | 5.7  | 5.1  | -3.4  | -25.3 | -0.8 | -22.4 | -20.4 | -27.9 | 4.1  | 4.3  | 3.2  | 4.3  | -1.6 | -43.1 | 0.2   | 5.7  | -13.3 | 0.1  | -2.3 | -4.5  | -14.9 | 0.5  | 0.7  | 0.2    | 0.3     |
| Commodities             | -7.3 | -5.2 | 3.6  | -11.6 | -27.0 | -1.5 | -30.6 | -21.2 | -30.3 | 1.0  | 1.4  | 2.4  | 2.1  | -9.8 | -53.2 | -16.9 | 0.1  | -18.2 | -1.1 | -9.5 | -17.0 | -24.7 | 0.3  | -0.8 | -9.4   | -6.9    |

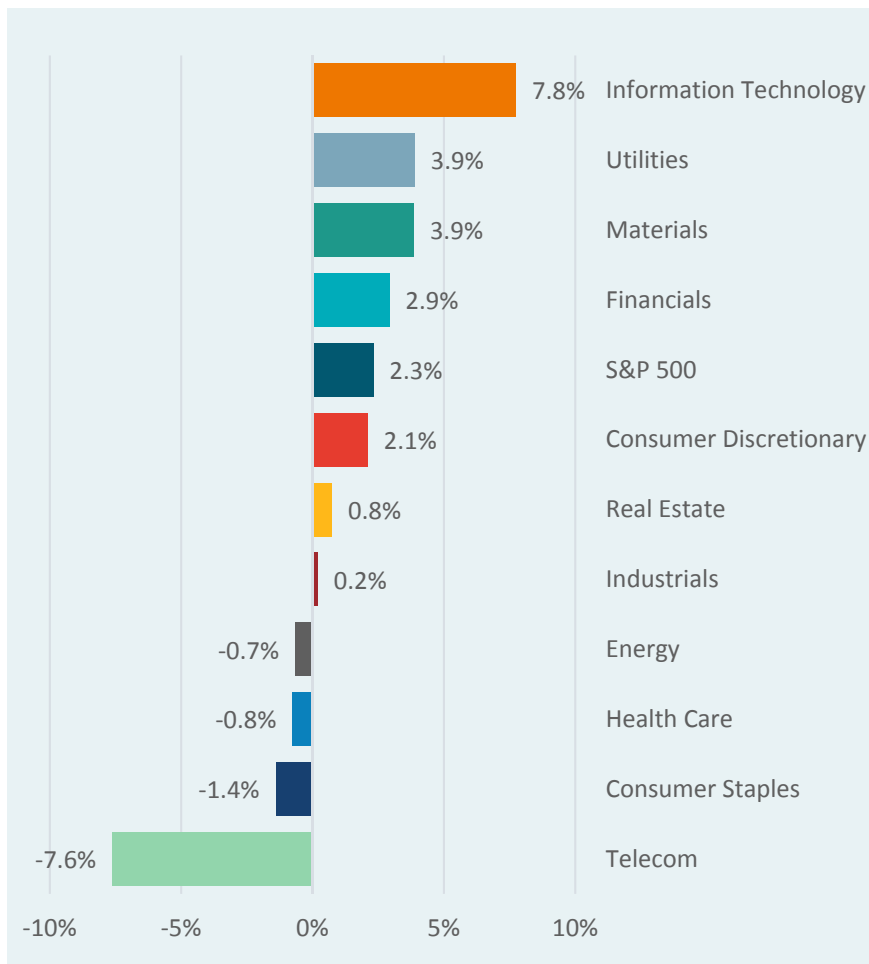
WORST

|   |  |  |
|---|--|--|
| <span style="color: #ADD8E6;">■</span> Large Cap Equity | <span style="color: #006400;">■</span> Small Cap Growth        | <span style="color: #8B4513;">■</span> Commodities                           |
| <span style="color: #00008B;">■</span> Large Cap Value  | <span style="color: #FFD700;">■</span> International Equity    | <span style="color: #4682B4;">■</span> Real Estate                           |
| <span style="color: #00008B;">■</span> Large Cap Growth | <span style="color: #FF8C00;">■</span> Emerging Markets Equity | <span style="color: #90EE90;">■</span> Hedge Funds of Funds                  |
| <span style="color: #7FFFD4;">■</span> Small Cap Equity | <span style="color: #696969;">■</span> US Bonds                | <span style="color: #FF0000;">■</span> 60% MSCI ACWI/40% BBgBarc Global Bond |
| <span style="color: #008080;">■</span> Small Cap Value  | <span style="color: #D3D3D3;">■</span> Cash                    |  |

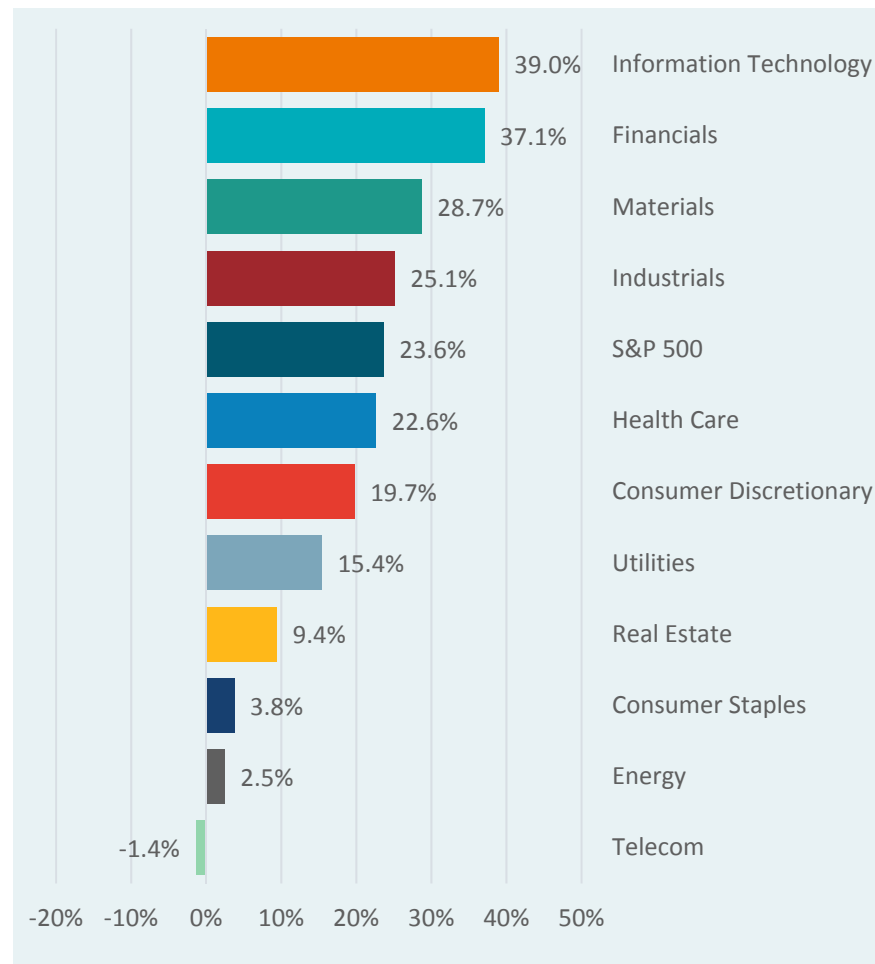
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 9/30/17.

# S&P 500 sector returns

QTD



ONE YEAR ENDING OCTOBER



Source: Morningstar, as of 10/31/17

Source: Morningstar, as of 10/31/17

# Detailed index returns

## DOMESTIC EQUITY

|                        | Month | QTD | YTD  | 1 Year | 3 Year | 5 Year | 10 Year |
|------------------------|-------|-----|------|--------|--------|--------|---------|
| <b>Core Index</b>      |       |     |      |        |        |        |         |
| S&P 500                | 2.3   | 2.3 | 16.9 | 23.6   | 10.8   | 15.2   | 7.5     |
| S&P 500 Equal Weighted | 1.1   | 1.1 | 13.2 | 20.4   | 9.4    | 15.5   | 8.9     |
| DJ Industrial Average  | 4.4   | 4.4 | 20.6 | 32.1   | 13.2   | 15.1   | 8.1     |
| Russell Top 200        | 2.5   | 2.5 | 18.1 | 24.7   | 11.2   | 15.3   | 7.4     |
| Russell 1000           | 2.3   | 2.3 | 16.8 | 23.7   | 10.6   | 15.2   | 7.6     |
| Russell 2000           | 0.9   | 0.9 | 11.9 | 27.8   | 10.1   | 14.5   | 7.6     |
| Russell 3000           | 2.2   | 2.2 | 16.4 | 24.0   | 10.5   | 15.1   | 7.6     |
| Russell Mid Cap        | 1.7   | 1.7 | 13.6 | 21.1   | 9.0    | 14.9   | 8.1     |
| <b>Style Index</b>     |       |     |      |        |        |        |         |
| Russell 1000 Growth    | 3.9   | 3.9 | 25.4 | 29.7   | 13.1   | 16.8   | 9.1     |
| Russell 1000 Value     | 0.7   | 0.7 | 8.7  | 17.8   | 8.0    | 13.5   | 6.0     |
| Russell 2000 Growth    | 1.5   | 1.5 | 18.6 | 31.0   | 10.5   | 15.4   | 8.2     |
| Russell 2000 Value     | 0.1   | 0.1 | 5.8  | 24.8   | 9.7    | 13.6   | 7.0     |

## INTERNATIONAL EQUITY

|                        | Month | QTD   | YTD  | 1 Year | 3 Year | 5 Year | 10 Year |
|------------------------|-------|-------|------|--------|--------|--------|---------|
| <b>Broad Index</b>     |       |       |      |        |        |        |         |
| MSCI ACWI              | 2.1   | 2.1   | 19.7 | 23.2   | 7.9    | 10.8   | 3.7     |
| MSCI ACWI ex US        | 1.9   | 1.9   | 23.4 | 23.6   | 5.7    | 7.3    | 0.9     |
| MSCI EAFE              | 1.5   | 1.5   | 21.8 | 23.4   | 6.1    | 8.5    | 1.1     |
| MSCI EM                | 3.5   | 3.5   | 32.3 | 26.5   | 5.7    | 4.8    | 0.6     |
| MSCI EAFE Small Cap    | 1.7   | 1.7   | 27.5 | 27.5   | 12.5   | 13.0   | 4.2     |
| <b>Style Index</b>     |       |       |      |        |        |        |         |
| MSCI EAFE Growth       | 2.3   | 2.3   | 25.2 | 23.6   | 7.6    | 9.3    | 1.9     |
| MSCI EAFE Value        | 0.8   | 0.8   | 18.5 | 23.2   | 4.5    | 7.7    | 0.2     |
| <b>Regional Index</b>  |       |       |      |        |        |        |         |
| MSCI UK                | 0.6   | 0.6   | 16.4 | 21.6   | 1.8    | 4.9    | 0.2     |
| MSCI Japan             | 4.6   | 4.6   | 19.6 | 17.8   | 9.9    | 12.0   | 2.2     |
| MSCI Euro              | 0.8   | 0.8   | 27.0 | 30.6   | 7.2    | 9.5    | (0.4)   |
| MSCI EM Asia           | 5.3   | 5.3   | 38.8 | 32.3   | 9.3    | 8.6    | 2.2     |
| MSCI EM Latin American | (3.6) | (3.6) | 22.2 | 10.1   | (1.5)  | (2.6)  | (2.2)   |

Source: Morningstar, as of 10/31/17

## FIXED INCOME

|                             | Month | QTD   | YTD | 1 Year | 3 Year | 5 Year | 10 Year |
|-----------------------------|-------|-------|-----|--------|--------|--------|---------|
| <b>Broad Index</b>          |       |       |     |        |        |        |         |
| BBgBarc US Treasury US TIPS | 0.2   | 0.2   | 1.9 | (0.1)  | 1.4    | (0.1)  | 3.8     |
| BBgBarc US Treasury Bills   | 0.1   | 0.1   | 0.7 | 0.7    | 0.4    | 0.3    | 0.5     |
| BBgBarc US Agg Bond         | 0.1   | 0.1   | 3.2 | 0.9    | 2.4    | 2.0    | 4.2     |
| <b>Duration</b>             |       |       |     |        |        |        |         |
| BBgBarc US Treasury 1-3 Yr  | (0.1) | (0.1) | 0.6 | 0.2    | 0.7    | 0.6    | 1.7     |
| BBgBarc US Treasury Long    | (0.1) | (0.1) | 5.9 | (2.4)  | 3.9    | 2.8    | 6.7     |
| BBgBarc US Treasury         | (0.1) | (0.1) | 2.1 | (0.7)  | 1.7    | 1.3    | 3.6     |
| <b>Issuer</b>               |       |       |     |        |        |        |         |
| BBgBarc US MBS              | (0.0) | (0.0) | 2.3 | 0.5    | 2.1    | 2.0    | 4.0     |
| BBgBarc US Corp. High Yield | 0.4   | 0.4   | 7.5 | 8.9    | 5.6    | 6.3    | 7.8     |
| BBgBarc US Agency Interm    | (0.0) | (0.0) | 1.4 | 0.4    | 1.3    | 1.1    | 2.8     |
| BBgBarc US Credit           | 0.3   | 0.3   | 5.4 | 3.2    | 3.6    | 3.1    | 5.5     |

## OTHER

|                        | Month | QTD   | YTD   | 1 Year | 3 Year | 5 Year | 10 Year |
|------------------------|-------|-------|-------|--------|--------|--------|---------|
| <b>Index</b>           |       |       |       |        |        |        |         |
| Bloomberg Commodity    | 2.1   | 2.1   | (0.8) | 2.3    | (9.5)  | (9.4)  | (6.9)   |
| Wilshire US REIT       | (0.9) | (0.9) | 1.5   | 5.1    | 5.7    | 9.5    | 5.3     |
| CS Leveraged Loans     | 0.7   | 0.7   | 3.7   | 5.2    | 4.1    | 4.5    | 4.4     |
| <b>Regional Index</b>  |       |       |       |        |        |        |         |
| JPM EMBI Global Div    | 0.4   | 0.4   | 9.4   | 6.3    | 6.0    | 4.8    | 7.2     |
| JPM GBI-EM Global Div  | (2.8) | (2.8) | 11.1  | 5.2    | (1.2)  | (1.6)  | 3.1     |
| <b>Hedge Funds</b>     |       |       |       |        |        |        |         |
| HFRI Composite         | 1.3   | 1.3   | 7.2   | 9.1    | 4.0    | 5.1    | 2.9     |
| HFRI FOF Composite     | 1.2   | 1.2   | 6.8   | 8.0    | 2.8    | 4.1    | 0.9     |
| <b>Currency (Spot)</b> |       |       |       |        |        |        |         |
| Euro                   | (1.5) | (1.5) | 10.4  | 6.3    | (2.4)  | (2.1)  | (2.1)   |
| Pound                  | (1.0) | (1.0) | 7.5   | 8.8    | (6.0)  | (3.8)  | (4.4)   |
| Yen                    | (0.9) | (0.9) | 2.6   | (7.5)  | (0.4)  | (6.8)  | 0.1     |

# Definitions

**Conference Board Consumer Confidence Index** – a barometer of the health of the U.S. economy from the perspective of the consumer. The index is based on consumers' perceptions of current business and employment conditions, as well as their expectations for six months hence regarding business conditions, employment, and income. ([www.conference-board.org](http://www.conference-board.org))

**ISM Manufacturing Index** – based on data compiled from purchasing and supply executives nationwide. Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured (New Orders, Backlog of Orders, New Export Orders, Imports, Production, Supplier Deliveries, Inventories, Customers' Inventories, Employment and Prices), this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction and the negative economic direction, and the diffusion index. ([www.instituteforsupplymanagement.org](http://www.instituteforsupplymanagement.org))

# Notices & disclosures

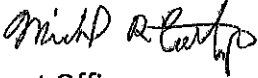
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**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**  
**Board of Retirement**

December 5, 2017

Agenda Item 6.2

**TO:** Board of Retirement



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

**SUBJECT:** Report on Quarterly Investment Performance Report for the Period Ended September 30, 2017

**Staff Recommendation**

Accept Verus Advisory's quarterly performance report for the period ended September 30, 2017.

**Discussion**

The 2nd quarter net total return for the SamCERA portfolio was +3.3%, which was 40 bps lower than the +3.7% policy benchmark return. As can be seen on Page 19 and 20, private equity and private real assets were the main detractors of relative performance during the quarter.

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

**Attachment**

Verus Quarterly Performance Report Ending 9/30/2017



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



**PERIOD ENDING: SEPTEMBER 30, 2017**

Investment Performance Review for

**San Mateo County Employees' Retirement Association**



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SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

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

## THE ECONOMIC CLIMATE

- Growth strengthened across developed and emerging economies. Business surveys suggest conditions are improving in both manufacturing and service industries.
- The U.S. job market tightened as unemployment dropped from 4.4 to 4.2%, despite disappointing job growth data. Unemployment has not been this low since March of 2001.
- An independence movement in Catalonia has received little attention from the financial community, and risk premiums may not reflect the negative possible knock-on effects on the EU.

## PORTFOLIO IMPACTS

- Improving economic growth, low inflation, low unemployment, and supportive monetary policy across most markets has created a positive environment for global risk assets, justifying a moderate overweight risk position.
- Within risk assets, we believe opportunities exist in emerging markets.

## THE INVESTMENT CLIMATE

- Global interest rates are still at historic lows, and very little monetary tightening is priced in across developed markets over the next few years. Even in the U.S., the market is only expecting two rate hikes through the end of next year.
- Valuations across global equities and credit are elevated, and have been so for the past few years. Further price appreciation through equity multiple expansion or credit spread contraction is unlikely.

## ASSET ALLOCATION ISSUES

- Equity performance remains strong. Year-to-date returns have been fundamentally driven, supported by earnings growth rather than valuation expansion.
- Equity volatility is near historic lows. Stable economic growth and inflation have likely contributed to the muted volatility environment. Investors should monitor leverage in strategies with a specific volatility target.

We believe a moderate overweight to risk is warranted

# U.S. economics summary

- U.S. real GDP grew 2.2% YoY in Q2, consistent with the trend of slow, but steady growth in the current expansion. Consumer spending and business investment were the primary drivers of growth.
- Purchasing manager indexes (PMIs) moved higher to above average levels, indicating a likely acceleration in economic growth over the coming quarters. The ISM Manufacturing and Services PMIs for September were 60.8 and 59.8, respectively.
- The economy added an average of 91,000 jobs per month to payrolls in the third quarter. The September employment data was heavily influenced by hurricanes Harvey and Irma, which resulted in a decline of 33,000 jobs from payrolls, the first drop since 2010. Due to the calculation methodology, a bounce back should be expected in October.
- The U3 unemployment rate (unaffected by the hurricanes) fell 0.2% to a 17-year low of 4.2% over the quarter. The broader U6 unemployment rate also tightened, dropping 0.3% to 8.3%.
- Year-over-year headline CPI accelerated from 1.6% in June to 2.2% in September, while the core inflation rate was unchanged over the quarter at 1.7%. Outside of volatile energy prices inflationary pressures still appear absent, and core inflation remains below the Fed's 2% target.
- The Fed paused from raising interest rates following three consecutive quarters with hikes. Core inflation that has persistently been below the Fed's 2% target was the primary reason given to delay further tightening. The market is expecting the Fed to raise interest rates again in December based on fed fund futures prices.

|   | Most Recent      | 12 Months Prior  |
|---|------------------|------------------|
| GDP (YoY)                               | 2.2%<br>6/30/17  | 1.2%<br>6/30/16  |
| Inflation<br>(CPI YoY, Headline)        | 2.2%<br>9/30/17  | 1.5%<br>9/30/16  |
| Expected Inflation<br>(5yr-5yr forward) | 2.0%<br>9/30/17  | 1.8%<br>9/30/16  |
| Fed Funds Rate                          | 1.25%<br>9/30/17 | 0.50%<br>9/30/16 |
| 10 Year Rate                            | 2.3%<br>9/30/17  | 1.6%<br>9/30/16  |
| U-3 Unemployment                        | 4.2%<br>9/30/17  | 4.9%<br>9/30/16  |
| U-6 Unemployment                        | 8.3%<br>9/30/17  | 9.7%<br>9/30/16  |

# International economics summary

- International economic growth advanced in the second quarter in both developed and emerging markets. PMIs are above 50 (indicating expansion) in nearly every country across the world, pointing towards a continuation in the recent global growth pickup.
- The IMF raised its projections for global GDP growth 0.1% for both 2017 and 2018 to 3.6% and 3.7%, respectively. For comparison, global GDP growth was 3.2% in 2016.
- Economic conditions in emerging markets have improved. Several countries, such as Brazil and Russia, are still at the beginning stages of a recovery. Lower inflation has allowed emerging central banks to pursue looser monetary policy, which should provide a tailwind to further economic growth.
- Inflation in developed countries has yet to see much pressure outside of the U.K., and remains well below central bank targets.
- Inflation in the U.K. (headline CPI) rose 3.0% YoY in September, driven partly by a weaker pound, while wages only increased by 2.2%. The Bank of England stated that a rate hike may be necessary before the end of the year to slow price increases.
- On October 1<sup>st</sup>, Catalonia passed a referendum to declare independence from Spain, which the Spanish government declared illegal. Although the Catalan prime minister accepted the vote as a mandate to declare independence, he immediately suspended this declaration with the goal of bringing the Spanish government to the negotiating table.

| Area           | GDP<br>(Real, YoY)     | Inflation<br>(CPI, YoY) | Unemployment            |
|----------------|------------------------|-------------------------|-------------------------|
| United States  | 2.2%<br><i>6/30/17</i> | 2.2%<br><i>9/30/17</i>  | 4.2%<br><i>9/30/17</i>  |
| Western Europe | 2.0%<br><i>6/30/17</i> | 1.5%<br><i>9/30/17</i>  | 7.9%<br><i>6/30/17</i>  |
| Japan          | 1.4%<br><i>6/30/17</i> | 0.7%<br><i>8/31/17</i>  | 2.8%<br><i>8/31/17</i>  |
| BRICS Nations  | 5.6%<br><i>6/30/17</i> | 2.0%<br><i>6/30/17</i>  | 5.8%<br><i>6/30/17</i>  |
| Brazil         | 0.3%<br><i>6/30/17</i> | 2.5%<br><i>9/30/17</i>  | 12.7%<br><i>9/30/17</i> |
| Russia         | 2.5%<br><i>6/30/17</i> | 3.0%<br><i>9/30/17</i>  | 4.9%<br><i>8/31/17</i>  |
| India          | 5.7%<br><i>6/30/17</i> | 3.3%<br><i>9/30/17</i>  | 8.4%<br><i>12/31/16</i> |
| China          | 6.9%<br><i>6/30/17</i> | 1.6%<br><i>9/30/17</i>  | 4.0%<br><i>6/30/17</i>  |

# Equity environment

- We maintain a moderate overweight to equities with a preference for emerging markets. Emerging markets have historically delivered outsized economic growth and performance during strong global growth environments. These markets remain attractively valued relative to developed markets, though valuations rose over the quarter.
- U.S. equities moved upward in Q3, setting record highs. Performance has been fueled by earnings growth.
- The possibility of U.S. corporate tax reform has led the market to price in greater expectations for future equity earnings growth. Significant uncertainty remains around the timing and nature of the reform, and the outcome will have a material impact on equity prices in the short-term.
- Equity volatility remains unusually low. Lower volatility has historically indicated less downside risk in equity markets.
- According to FactSet as of October 6th, the estimated Q3 earnings growth rate of the S&P 500 was 2.8% YoY, a materially weaker figure than the 7.5% which was expected as of June 30. Much of the weakness was caused by expected insurance industry losses due to hurricane damage. Excluding the insurance sector, earnings are expected to grow by 4.9% YoY.
- U.S. dollar weakness year-to-date has caused significant earnings differences between companies with greater international sales focus and companies that are more domestically-focused. Overall, U.S. dollar movement has acted as a tailwind to earnings growth.

|  | QTD TOTAL RETURN |          | YTD TOTAL RETURN |          | 1 YEAR TOTAL RETURN |          |
|--|------------------|----------|------------------|----------|---------------------|----------|
|  | (unhedged)       | (hedged) | (unhedged)       | (hedged) | (unhedged)          | (hedged) |
| US Large Cap (Russell 1000)              | 4.5%             |          | 14.2%            |          | 18.5%               |          |
| US Small Cap (Russell 2000)              | 5.7%             |          | 10.9%            |          | 20.7%               |          |
| US Large Value (Russell 1000 Value)      | 3.1%             |          | 7.9%             |          | 15.1%               |          |
| US Large Growth (Russell 1000 Growth)    | 5.9%             |          | 20.7%            |          | 21.9%               |          |
| International Large (MSCI EAFE)          | 5.4%             | 3.7%     | 20.0%            | 12.3%    | 19.1%               | 20.5%    |
| Eurozone (Euro Stoxx 50)                 | 8.5%             | 5.2%     | 25.2%            | 13.2%    | 29.2%               | 24.9%    |
| U.K. (FTSE 100)                          | 4.8%             | 2.1%     | 15.7%            | 7.2%     | 14.9%               | 11.9%    |
| Japan (NIKKEI 225)                       | 2.0%             | 2.7%     | 12.1%            | 9.4%     | 13.4%               | 27.0%    |
| Emerging Markets (MSCI Emerging Markets) | 7.9%             | 7.2%     | 27.8%            | 22.1%    | 22.5%               | 19.6%    |

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 9/30/17

# Domestic equity

U.S. equities moved upward over the quarter (S&P 500 +4.5%), reaching record highs, but underperformed international markets (MSCI EAFE +5.4%). Earnings growth remained the primary driver of robust equity performance, though Q3 earnings growth expectations have fallen due to hurricane-related insurance industry losses. The possibility of U.S. tax reform has likely contributed to a positive domestic equity outlook.

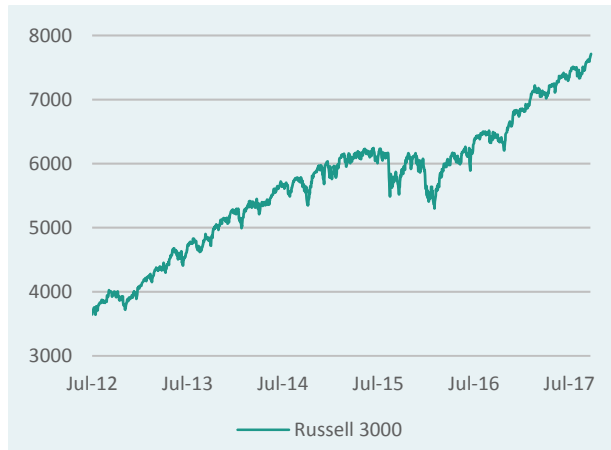
According to FactSet, as of October 6th the estimated Q3 earnings growth rate of the S&P 500 was 2.8% YoY, a

materially weaker figure than the 7.5% which was expected as of June 30. Most of the weakness was caused by insurance industry losses due to hurricane damage. Excluding this sector would result in a current estimate of 4.9% overall growth rather than 2.8%.

U.S. domestically-facing business in aggregate are expected to face flat sales and revenue growth, while externally-facing businesses are expected to produce strong growth. U.S. dollar depreciation and international growth have created a tailwind to the performance of externally-focused U.S. businesses.

We maintain a neutral weight to U.S. equities

## U.S. EQUITIES



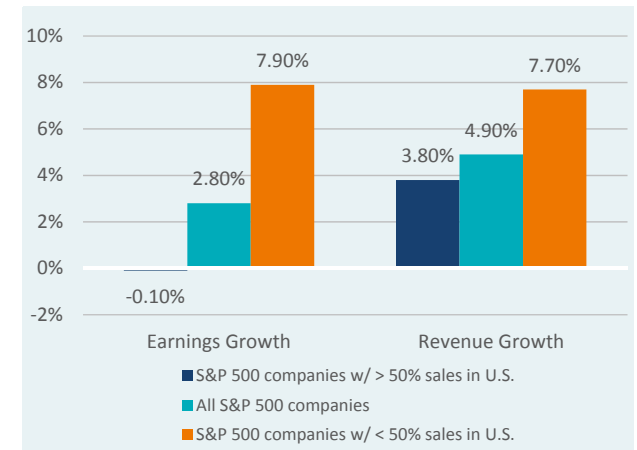
Source: Russell Investments, as of 9/29/17

## S&P 500 EPS GROWTH



Source: Bloomberg, as of 9/30/17

## Q3 EXPECTATIONS



Source: FactSet, as of 10/6/17

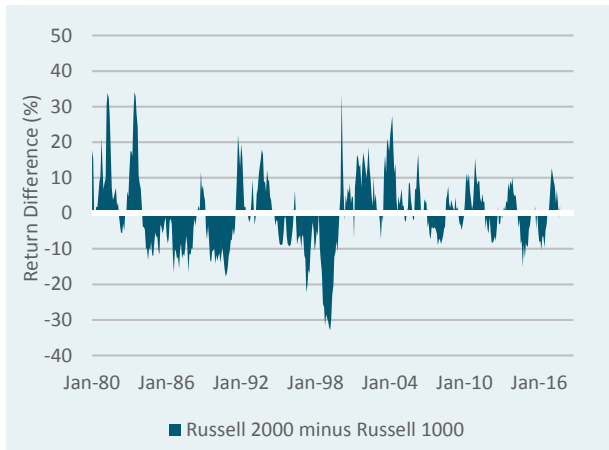
# Domestic equity size and style

Large cap equities led small cap equities through July and August. However, small cap equities rallied in September (+6.2% in the month) and outperformed large cap equities over the quarter. The move in September was partially attributed to an increased focus on U.S. tax reform. If passed, tax cuts will likely provide a greater marginal benefit to smaller companies. Expectations of lower taxes and deregulation have contributed to small cap price appreciation that has outpaced earnings. The relative P/E ratio between large and small companies is at its highest level since the financial crisis.

Large cap equities were led by the technology sector, from which the strongest contributors were semiconductor and internet software companies. The top three individual contributors were Apple, Facebook and Microsoft. Small cap equities were mainly driven by producer durables companies.

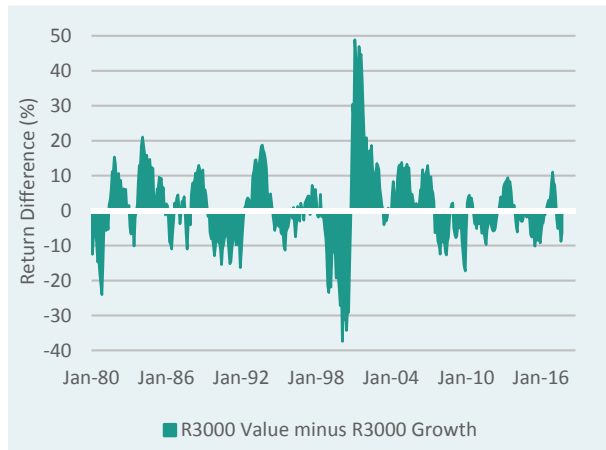
Growth outperformed value in Q3 due to a higher relative weighting to technology companies. Financial services, the most heavily weighted sector in value, returned a positive 5.0%, but still underperformed technology by 3.2%.

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



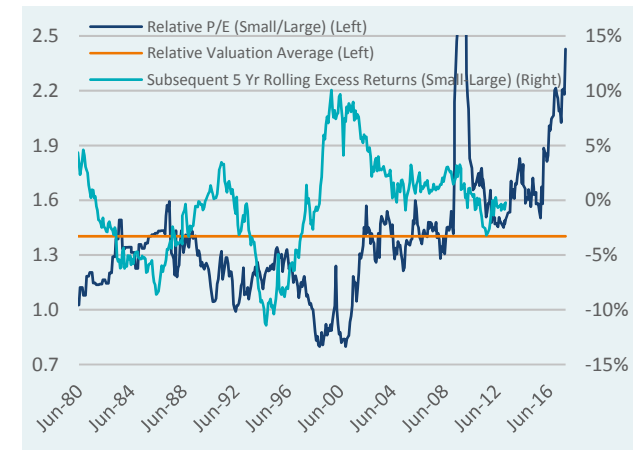
Source: Russell Investments, as of 9/30/17

**VALUE VS GROWTH (YOY)**



Source: Russell Investments, as of 9/30/17

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



Source: Russell, Bloomberg, as of 9/30/17

# International equity

International equities outperformed domestic equities during the third quarter. The MSCI ACWI ex U.S. returned 6.2% (+4.6% hedged) while the S&P 500 returned 4.5%. Consistent with the first half of 2017, emerging markets outperformed (MSCI EM +7.9% unhedged) both the EAFE Small Cap Index (+7.5%) and the broad EAFE Index (+5.4%).

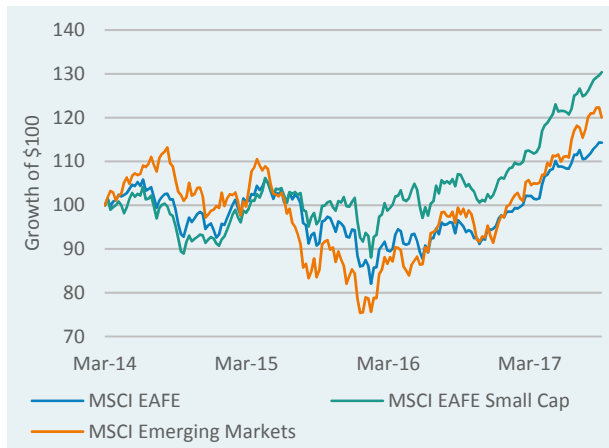
Japanese equities were the largest contributors to the EAFE index in Q3, particularly companies within the industrials and consumer discretionary sectors. Despite the positive moves, Japanese equity valuations based on earnings and

sales remain attractive relative to those in Europe and the United Kingdom.

MSCI EAFE valuations have remained relatively stable in 2017 as earnings and sales growth have kept pace with price appreciation.

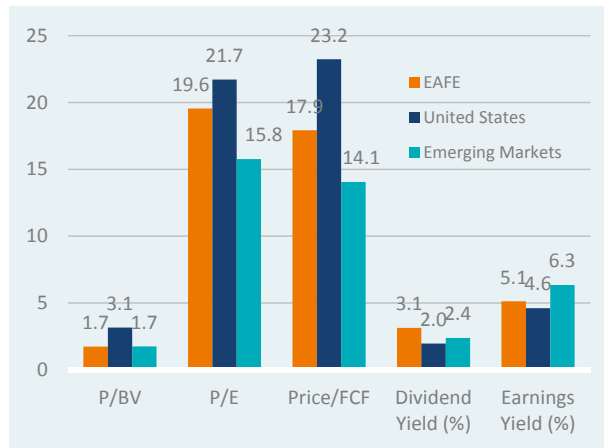
Currency effects added a positive 1.7% to the unhedged MSCI EAFE in Q3 (+7.6% year-to-date), as the U.S. dollar fell for a third consecutive quarter against a trade weighted basket of currencies.

## GLOBAL EQUITY PERFORMANCE



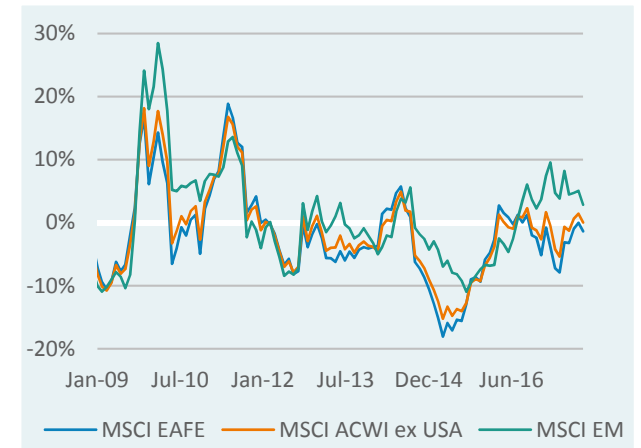
Source: Bloomberg, as of 9/30/17

## VALUATIONS



Source: Bloomberg, as of 9/30/17

## EFFECT OF CURRENCY (1 YEAR ROLLING)



Source: MSCI, as of 9/30/17



# Emerging market equity

We maintain an overweight to emerging market equities, which have historically delivered outsized economic growth and performance during stronger global growth environments.

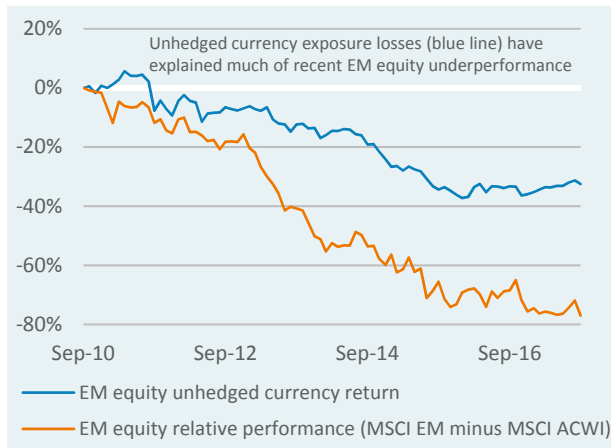
Emerging market equities have outperformed developed markets over the quarter (7.9% vs. 4.8%) and the past year (22.5% vs 18.2%), reversing an extended period of underperformance following the global financial crisis. Currency movement was a significant contributor to

emerging market underperformance during this time, and the recent reversal in currency trends has been additive to the outperformance of these markets.

Valuations have risen off of low levels, bolstering returns. These markets are no longer cheap relative to history though strong earnings growth and mean reversion of currencies could likely fuel further outsized equity gains.

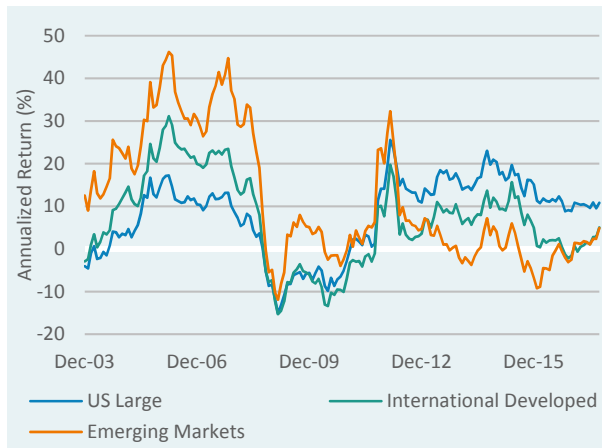
Accelerating global growth should have a positive effect on emerging economies

## EMERGING MARKET FX & RELATIVE PERFORMANCE (7YR CUMULATIVE)



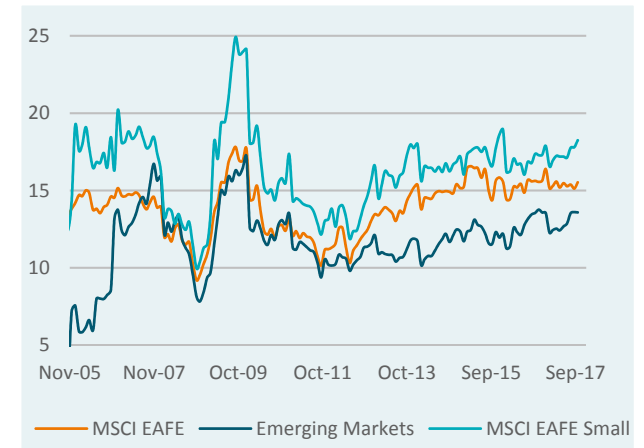
Source: MSCI, JP Morgan EM Currency Index, as of 9/30/17

## EQUITY PERFORMANCE (3YR ROLLING)



Source: Standard & Poor's, MSCI, as of 9/30/17

## FORWARD P/E RATIOS



Source: Bloomberg as of 9/30/17

# Interest rate environment

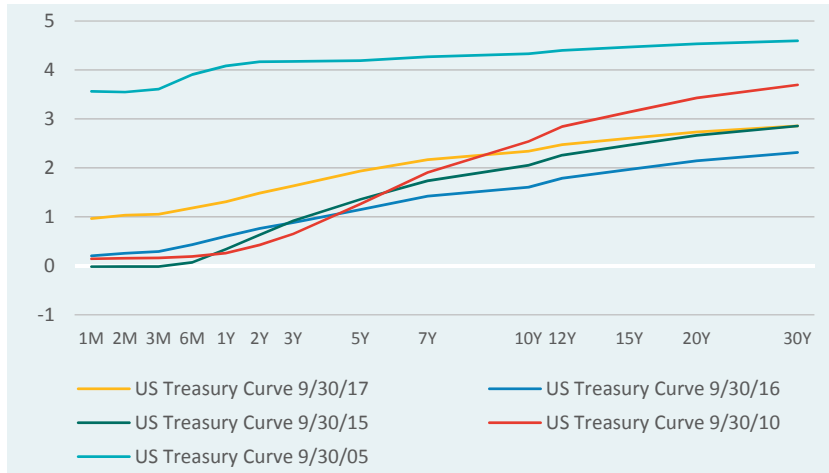
- After bottoming out to a post-election low of 2.04% on September 7<sup>th</sup> following increased tensions with North Korea, the U.S. 10-year rose to finish the quarter slightly higher at 2.33%.
- The Fed kept interest rates unchanged over the quarter, citing concerns over the lack of inflation. However, Fed officials have communicated that they believe recent low inflation is transitory. An additional rate hike in December appears likely based on market implied probabilities.
- The Fed will begin to reduce its balance sheet in October. The central bank's plan is to runoff \$6 billion of Treasuries and \$4 billion of mortgage-backed securities per month. This will be scaled up commensurately every 3 months to \$50 billion per month. At this pace it will take more than seven years to return the balance sheet to pre-crisis levels.
- U.K. sovereign yields experienced the biggest increase among developed countries after the Bank of England acknowledged that a rate hike may be necessary by the end of the year to slow inflation.
- Very little monetary tightening is priced into short-term developed market interest rates over the next few years. Although we expect central banks to be cautious, faster than expected increases in interest rates represents a potential risk.
- Our underweight position to both U.S. and developed sovereign rates (currency hedged) was unchanged over the quarter, primarily due to the low carry. However, Treasuries still play an important role in portfolios by offering equity risk diversification.

| Area          | Short Term (3M) | 10 Year |
|---------------|-----------------|---------|
| United States | 1.02%           | 2.33%   |
| Germany       | (0.70%)         | 0.46%   |
| France        | (0.59%)         | 0.74%   |
| Spain         | (0.45%)         | 1.60%   |
| Italy         | (0.39%)         | 2.11%   |
| Greece        | 2.02%           | 5.66%   |
| U.K.          | 0.28%           | 1.37%   |
| Japan         | (0.17%)         | 0.07%   |
| Australia     | 1.71%           | 2.84%   |
| China         | 3.04%           | 3.62%   |
| Brazil        | 7.46%           | 9.77%   |
| Russia        | 7.76%           | 7.66%   |

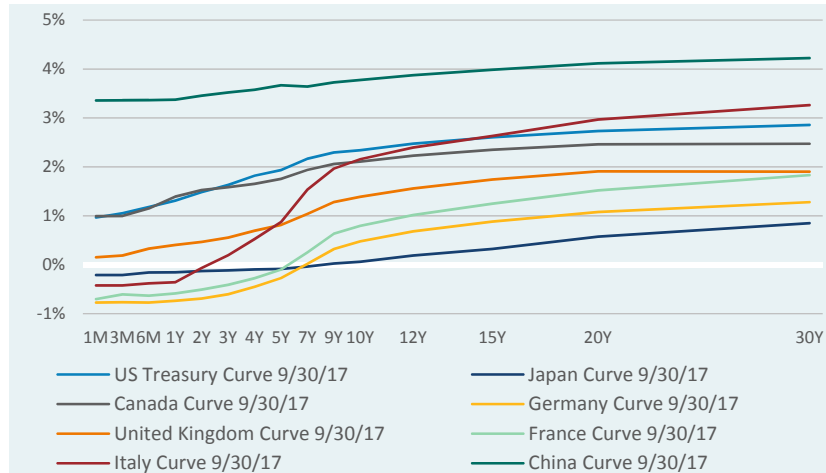
Source: Bloomberg, as of 9/30/17

# Yield environment

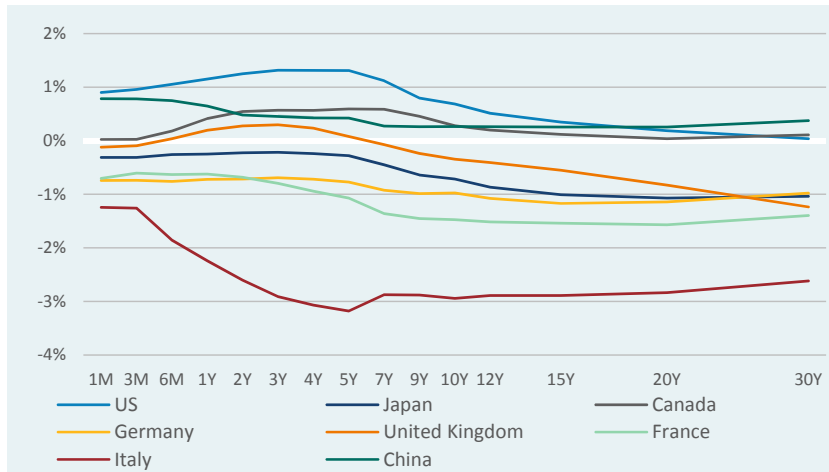
**U.S. YIELD CURVE**



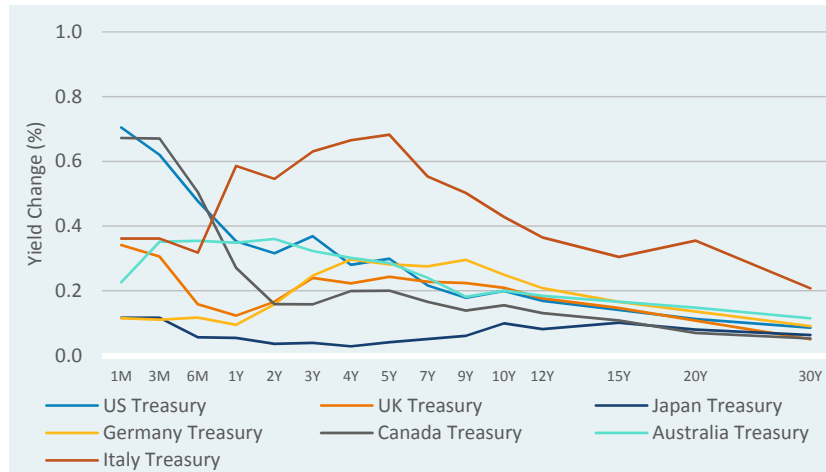
**GLOBAL GOVERNMENT YIELD CURVES**



**YIELD CURVE CHANGES OVER LAST FIVE YEARS**



**IMPLIED CHANGES OVER NEXT YEAR**



Source: Bloomberg, as of 9/30/17

# Currency

The U.S. dollar depreciated an additional 2.7% in Q3 against a trade weighted basket of developed currencies, which brought the year-to-date decline to 8.0%. The downward trend partially reversed in September after prospects of another interest rate hike in December from the Fed helped lead to the first month of dollar appreciation so far this year. The euro appreciated 3.4% against the dollar over the quarter, influenced by improving economic conditions and the possibility of ECB tightening monetary policy.

After several years of depreciation, emerging market

currencies have stabilized. Improved current account balances and economic growth conditions have provided a positive backdrop for these currencies moving forward. However, a quicker than expected rise in U.S. interest rates could represent a headwind to further appreciation.

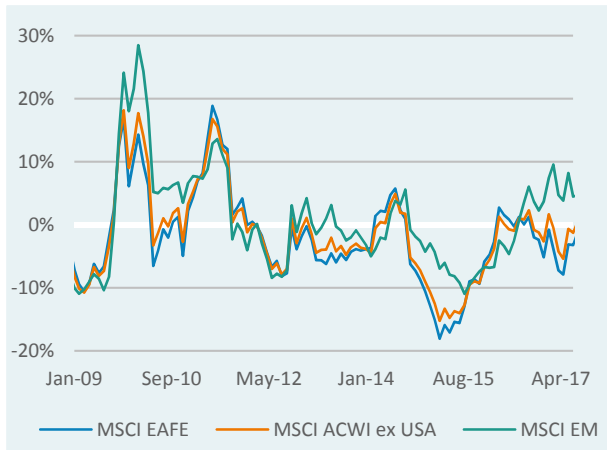
Currency losses from unhedged exposure to developed international equities has begun to reverse due to recent dollar weakness, although currency exposure has still resulted in materially higher volatility.

**U.S. DOLLAR TRADE WEIGHTED INDEX**



Source: Federal Reserve, as of 9/30/17

**EFFECT OF CURRENCY (1-YEAR ROLLING)**



Source: MPI, as of 9/30/17

**JPM EM CURRENCY INDEX**



Source: JPMorgan, as of 9/30/17

- The Total Fund, net of manager fees, returned 3.3% in the third quarter of 2017 and ranked 70<sup>th</sup> percentile among other public plans greater than \$1 billion (median of 3.5%). It lagged the policy index return of 3.7%. The Total Fund w/o Overlay was 3.2% for the quarter. The Total Fund one year return of 11.8% lagged the policy (12.6%, and ranked in 65<sup>th</sup> percentile of its peer universe. The three-year return of 7.1% (31<sup>st</sup> percentile) was above median among large public plans (6.6%).
  
- Third quarter results were enhanced by the following factors:
  1. DE Shaw gained 7.5 % beating the Russell 1000 (4.5%) and ranked in the 1<sup>st</sup> percentile of its peers. Event-driven and technical forecasts added to the excess return of the portfolio. Stock-specific exposures were the main drivers of outperformance for the quarter.
  2. AQR GRP gained 4.5% vs the risk parity index (3.2%). All four risk categories were positive for the quarter. Equities contributed 1.7%, inflation-sensitive assets contributed 1.5%, credit/currencies contributed 1.0%, and nominal bonds contributed 0.3%.
  3. Western TRU ranked in the 1<sup>st</sup> percentile of Core Fixed Income managers, gaining 1.9% versus the Barclays Aggregate (0.8%). Continuing the trend from the second quarter, risk assets did well this quarter, and macro strategies were strong contributors to performance. Spread sector performance also contributed to performance as corporate credit, structured products, and emerging markets outperformed.
  
- Third quarter results were hindered by the following factors:
  1. Baillie Gifford gained 5.0% trailing the MSCI ACWI ex US return of 6.3%, and ranked in the bottom quartile of its peer group. The portfolio lagged due to stock selection in Asia/Pacific markets.
  2. Parametric Core gained 6.8% while the MSCI Emerging Markets gained 8.0%. An underweight to Korea (which was up 8.41%) and overweight to Mexico (which was down -7.57%) detracted from relative performance.
  3. Mondrian trailed the MSCI ACWI ex US Value (5.0% vs 6.1%). Stock selection within Sweden and Netherlands held back performance.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: September 30, 2017

|   | 3 Mo (%)   | Rank*     | YTD (%)     | Rank      | 1 Yr (%)    | Rank      | 2 Yrs (%)   | Rank      | 3 Yrs (%)   | Rank      | 5 Yrs (%)   | Rank      | 10 Yrs (%) | Rank      |
|---|------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|------------|-----------|
| <b>Total Fund **</b>                                | <b>3.3</b> | <b>70</b> | <b>10.9</b> | <b>65</b> | <b>11.8</b> | <b>65</b> | <b>11.0</b> | <b>46</b> | <b>7.1</b>  | <b>31</b> | <b>8.8</b>  | <b>33</b> | <b>4.9</b> | <b>59</b> |
| <i>Policy Index<sup>1</sup></i>                     | 3.7        | 29        | 11.3        | 51        | 12.6        | 47        | 11.8        | 13        | 7.2         | 27        | 8.9         | 27        | 5.6        | 21        |
| <i>Allocation Index</i>                             | 3.7        | 36        | 11.2        | 57        | 12.4        | 53        | 11.6        | 22        | 7.0         | 40        | 8.8         | 31        | --         | --        |
| <i>InvestorForce Public DB &gt; \$1B Net Median</i> | 3.5        |           | 11.3        |           | 12.5        |           | 10.9        |           | 6.6         |           | 8.3         |           | 5.0        |           |
| <b>Total Fund ex Overlay</b>                        | <b>3.2</b> | <b>74</b> | <b>10.7</b> | <b>67</b> | <b>11.8</b> | <b>66</b> | <b>10.8</b> | <b>54</b> | <b>7.0</b>  | <b>43</b> | <b>8.7</b>  | <b>38</b> | <b>4.8</b> | <b>61</b> |
| <i>Policy Index<sup>1</sup></i>                     | 3.7        | 29        | 11.3        | 51        | 12.6        | 47        | 11.8        | 13        | 7.2         | 27        | 8.9         | 27        | 5.6        | 21        |
| <i>Allocation Index</i>                             | 3.7        | 36        | 11.2        | 57        | 12.4        | 53        | 11.6        | 22        | 7.0         | 40        | 8.8         | 31        | --         | --        |
| <i>InvestorForce Public DB &gt; \$1B Net Median</i> | 3.5        |           | 11.3        |           | 12.5        |           | 10.9        |           | 6.6         |           | 8.3         |           | 5.0        |           |
| <b>Public Equity</b>                                | <b>5.2</b> | <b>38</b> | <b>17.0</b> | <b>43</b> | <b>18.2</b> | <b>65</b> | <b>15.4</b> | <b>55</b> | <b>8.6</b>  | <b>52</b> | <b>11.6</b> | <b>55</b> | <b>4.8</b> | <b>68</b> |
| <i>Blended Public Equity Index<sup>2</sup></i>      | 5.4        | 21        | 17.4        | 37        | 19.7        | 24        | 16.3        | 21        | 8.9         | 43        | 11.8        | 49        | 5.6        | 41        |
| <i>InvestorForce All DB Total Eq Net Median</i>     | 5.0        |           | 16.4        |           | 18.7        |           | 15.5        |           | 8.7         |           | 11.7        |           | 5.4        |           |
| <b>US Equity</b>                                    | <b>5.1</b> | <b>17</b> | <b>13.7</b> | <b>50</b> | <b>18.3</b> | <b>58</b> | <b>15.9</b> | <b>63</b> | <b>10.3</b> | <b>56</b> | <b>13.7</b> | <b>57</b> | <b>6.7</b> | <b>79</b> |
| <i>Blended US Equity Index<sup>2</sup></i>          | 4.6        | 44        | 13.9        | 41        | 18.7        | 44        | 16.7        | 34        | 10.8        | 31        | 14.1        | 36        | 7.6        | 29        |
| <i>Russell 3000</i>                                 | 4.6        | 44        | 13.9        | 41        | 18.7        | 44        | 16.8        | 28        | 10.7        | 34        | 14.2        | 26        | 7.6        | 31        |
| <i>InvestorForce All DB US Eq Net Median</i>        | 4.5        |           | 13.6        |           | 18.6        |           | 16.3        |           | 10.4        |           | 13.8        |           | 7.3        |           |
| <b>Large Cap Equity</b>                             | <b>5.0</b> | <b>36</b> | <b>15.2</b> | <b>39</b> | <b>19.1</b> | <b>43</b> | <b>16.6</b> | <b>24</b> | <b>11.0</b> | <b>23</b> | <b>14.3</b> | <b>31</b> | <b>7.0</b> | <b>59</b> |
| <i>Russell 1000</i>                                 | 4.5        | 49        | 14.2        | 45        | 18.5        | 47        | 16.7        | 22        | 10.6        | 28        | 14.3        | 31        | 7.5        | 43        |
| <i>eA US Large Cap Equity Net Median</i>            | 4.5        |           | 13.6        |           | 18.2        |           | 15.1        |           | 9.4         |           | 13.4        |           | 7.3        |           |
| <i>BlackRock Russell 1000<sup>***</sup></i>         | 4.5        | 50        | --          | --        | --          | --        | --          | --        | --          | --        | --          | --        | --         | --        |
| <i>Russell 1000</i>                                 | 4.5        | 50        | 14.2        | 47        | 18.5        | 43        | 16.7        | 16        | 10.6        | 24        | 14.3        | 22        | 7.5        | 40        |
| <i>eA US Large Cap Core Equity Net Median</i>       | 4.5        |           | 14.1        |           | 18.0        |           | 14.9        |           | 9.6         |           | 13.2        |           | 7.3        |           |

\* 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.

\*\*\*Funded January 2017.

1. Effective 2/1/17, Policy Index is 23% Russell 3000/19% MSCI ACWI ex US IMI/ 12% BBgBarc Aggregate/ 2% BBgBarc TIPS/ 6% BBgBarc BA Intermediate HY / 3% BBgBarc Multi-verse/ 7% NCREIF NFI ODCE/ 7% Russell 3000 + 3% 8% (60% Russell 3000/40% BBgBarc Aggregate)/ 6% Labor +4%/ 7% (34% Bloomberg Roll Select Commodity/ 33% S&P Global Large-MidCap Commodity and Resources/ 33% S&P Global Infrastructure)

2. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: September 30, 2017

|   | 3 Mo (%)   | Rank      | YTD (%)     | Rank      | 1 Yr (%)    | Rank      | 2 Yrs (%)   | Rank      | 3 Yrs (%)  | Rank      | 5 Yrs (%)   | Rank      | 10 Yrs (%) | Rank      |
|---|------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|------------|-----------|-------------|-----------|------------|-----------|
| DE Shaw   | 7.5        | 1         | 17.9        | 8         | 22.1        | 11        | 19.3        | 3         | 13.1       | 3         | 16.0        | 3         | --         | --        |
| <i>Russell 1000</i>                                     | 4.5        | 50        | 14.2        | 47        | 18.5        | 43        | 16.7        | 16        | 10.6       | 24        | 14.3        | 22        | 7.5        | 40        |
| <i>eA US Large Cap Core Equity Net Median</i>           | 4.5        |           | 14.1        |           | 18.0        |           | 14.9        |           | 9.6        |           | 13.2        |           | 7.3        |           |
| <b>Small Cap Equity</b>                                 | <b>5.7</b> | <b>44</b> | <b>10.0</b> | <b>50</b> | <b>21.7</b> | <b>35</b> | <b>15.8</b> | <b>61</b> | <b>9.1</b> | <b>80</b> | <b>12.4</b> | <b>75</b> | <b>6.3</b> | <b>86</b> |
| <i>Russell 2000</i>                                     | 5.7        | 44        | 10.9        | 44        | 20.7        | 47        | 18.1        | 36        | 12.2       | 44        | 13.8        | 55        | 7.8        | 54        |
| <i>eA US Small Cap Equity Net Median</i>                | 5.3        |           | 10.0        |           | 20.5        |           | 16.8        |           | 11.8       |           | 14.0        |           | 8.0        |           |
| QMA US Small Cap *                                      | 5.7        | 43        | 10.0        | 51        | 21.8        | 33        | --          | --        | --         | --        | --          | --        | --         | --        |
| <i>Russell 2000</i>                                     | 5.7        | 43        | 10.9        | 38        | 20.7        | 47        | 18.1        | 35        | 12.2       | 49        | 13.8        | 59        | 7.8        | 59        |
| <i>eA US Small Cap Core Equity Net Median</i>           | 5.1        |           | 10.1        |           | 20.2        |           | 17.1        |           | 12.0       |           | 14.2        |           | 8.1        |           |
| <b>International Equity</b>                             | <b>5.2</b> | <b>84</b> | <b>21.5</b> | <b>72</b> | <b>17.3</b> | <b>86</b> | <b>14.4</b> | <b>54</b> | <b>5.6</b> | <b>46</b> | <b>7.6</b>  | <b>57</b> | <b>0.8</b> | <b>78</b> |
| <i>MSCI ACWI ex US IMI<sup>2</sup></i>                  | 6.4        | 41        | 21.9        | 64        | 20.1        | 47        | 15.1        | 37        | 5.6        | 46        | 7.7         | 54        | 1.9        | 44        |
| <i>MSCI EAFE Gross</i>                                  | 5.5        | 76        | 20.5        | 84        | 19.7        | 54        | 13.2        | 80        | 5.5        | 50        | 8.9         | 25        | 1.8        | 46        |
| <i>InvestorForce All DB ex-US Eq Net Median</i>         | 6.2        |           | 22.6        |           | 19.9        |           | 14.5        |           | 5.5        |           | 7.9         |           | 1.7        |           |
| <b>Developed Markets</b>                                | <b>5.0</b> | <b>77</b> | <b>21.5</b> | <b>42</b> | <b>17.1</b> | <b>78</b> | <b>14.1</b> | <b>35</b> | <b>6.0</b> | <b>45</b> | <b>8.2</b>  | <b>63</b> | <b>1.1</b> | <b>78</b> |
| <i>MSCI ACWI ex USA Gross</i>                           | 6.3        | 31        | 21.6        | 41        | 20.2        | 40        | 14.9        | 27        | 5.2        | 64        | 7.5         | 76        | 1.7        | 54        |
| <i>InvestorForce All DB Dev Mkt ex-US Eq Net Median</i> | 5.7        |           | 21.0        |           | 19.2        |           | 13.5        |           | 5.9        |           | 8.7         |           | 1.8        |           |
| Baillie Gifford   | 5.0        | 87        | 25.6        | 61        | 16.7        | 79        | 16.6        | 33        | 8.3        | 50        | 9.8         | 41        | --         | --        |
| <i>MSCI ACWI ex US<sup>2</sup></i>                      | 6.3        | 69        | 21.6        | 95        | 20.2        | 56        | 14.9        | 57        | 5.2        | 93        | 9.0         | 67        | --         | --        |
| <i>MSCI ACWI ex US Growth<sup>2</sup></i>               | 6.4        | 68        | 25.2        | 68        | 18.1        | 73        | 15.0        | 57        | 6.8        | 72        | 9.6         | 46        | --         | --        |
| <i>eA ACWI ex-US Growth Equity Net Median</i>           | 7.9        |           | 27.2        |           | 20.6        |           | 15.7        |           | 8.2        |           | 9.6         |           | 3.8        |           |
| BlackRock EAFE Index                                    | 5.5        | 69        | 20.4        | 67        | 19.6        | 55        | 13.1        | 51        | 5.4        | 72        | --          | --        | --         | --        |
| <i>MSCI EAFE</i>  | 5.4        | 71        | 20.0        | 71        | 19.1        | 58        | 12.6        | 56        | 5.0        | 76        | 8.4         | 70        | 1.3        | 83        |
| <i>MSCI EAFE Gross</i>                                  | 5.5        | 69        | 20.5        | 66        | 19.7        | 55        | 13.2        | 50        | 5.5        | 69        | 8.9         | 63        | 1.8        | 66        |
| <i>eA EAFE Core Equity Net Median</i>                   | 6.3        |           | 21.8        |           | 20.4        |           | 13.1        |           | 6.3        |           | 9.6         |           | 2.6        |           |

\* Funded August 2016.  
2. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: September 30, 2017

|   | 3 Mo (%)   | Rank      | YTD (%)     | Rank      | 1 Yr (%)    | Rank      | 2 Yrs (%)   | Rank      | 3 Yrs (%)  | Rank      | 5 Yrs (%)  | Rank      | 10 Yrs (%) | Rank      |
|---|------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|------------|-----------|------------|-----------|------------|-----------|
| Mondrian                                      | 5.0        | 63        | 18.2        | 68        | 16.9        | 69        | 12.5        | 63        | 3.9        | 80        | 6.9        | 88        | 1.6        | 53        |
| MSCI ACWI ex USA Value Gross                  | 6.1        | 31        | 18.3        | 68        | 22.2        | 43        | 14.7        | 46        | 3.5        | 82        | 6.6        | 89        | 1.2        | 89        |
| MSCI ACWI ex USA Gross                        | 6.3        | 30        | 21.6        | 34        | 20.2        | 58        | 14.9        | 45        | 5.2        | 67        | 7.5        | 83        | 1.7        | 44        |
| eA ACWI ex-US Value Equity Net Median         | 5.4        |           | 20.1        |           | 21.4        |           | 14.1        |           | 6.0        |           | 8.9        |           | 1.6        |           |
| <b>Emerging Markets</b>                       | <b>6.8</b> | <b>51</b> | <b>21.8</b> | <b>91</b> | <b>18.6</b> | <b>67</b> | <b>16.7</b> | <b>83</b> | <b>2.0</b> | <b>95</b> | <b>3.5</b> | <b>64</b> | <b>--</b>  | <b>--</b> |
| MSCI Emerging Markets Gross                   | 8.0        | 21        | 28.1        | 26        | 22.9        | 21        | 20.0        | 32        | 5.3        | 30        | 4.4        | 33        | 1.7        | 39        |
| InvestorForce All DB Emg Mkt Eq Net Median    | 6.8        |           | 26.0        |           | 20.2        |           | 18.6        |           | 4.4        |           | 4.0        |           | 1.5        |           |
| Parametric Core                               | 6.8        | 63        | 21.8        | 84        | 18.6        | 69        | 16.8        | 73        | --         | --        | --         | --        | --         | --        |
| MSCI Emerging Markets Gross                   | 8.0        | 45        | 28.1        | 52        | 22.9        | 42        | 20.0        | 43        | 5.3        | 51        | 4.4        | 70        | 1.7        | 68        |
| eA Emg Mkts Equity Net Median                 | 7.8        |           | 28.4        |           | 21.9        |           | 19.4        |           | 5.3        |           | 5.2        |           | 2.3        |           |
| <b>Fixed Income</b>                           | <b>1.2</b> | <b>57</b> | <b>5.1</b>  | <b>45</b> | <b>5.9</b>  | <b>6</b>  | <b>6.3</b>  | <b>26</b> | <b>4.0</b> | <b>31</b> | <b>3.8</b> | <b>24</b> | <b>5.4</b> | <b>42</b> |
| Blended Fixed Income Index <sup>2</sup>       | 1.2        | 49        | 4.5         | 54        | 2.0         | 52        | 4.7         | 50        | 3.4        | 42        | 2.2        | 72        | 4.6        | 66        |
| InvestorForce All DB Total Fix Inc Net Median | 1.2        |           | 4.7         |           | 2.1         |           | 4.7         |           | 3.1        |           | 2.7        |           | 5.1        |           |
| <b>US Fixed Income</b>                        | <b>1.2</b> | <b>38</b> | <b>5.1</b>  | <b>33</b> | <b>4.7</b>  | <b>9</b>  | <b>6.0</b>  | <b>25</b> | <b>4.3</b> | <b>28</b> | <b>3.8</b> | <b>27</b> | <b>5.4</b> | <b>37</b> |
| Blended US Fixed Index <sup>2</sup>           | 1.1        | 45        | 4.2         | 48        | 2.4         | 28        | 4.9         | 41        | 3.8        | 35        | 2.5        | 61        | 4.8        | 55        |
| InvestorForce All DB US Fix Inc Net Median    | 1.1        |           | 4.0         |           | 1.1         |           | 4.0         |           | 3.2        |           | 2.9        |           | 5.0        |           |
| <b>Core Fixed</b>                             | <b>1.1</b> | <b>--</b> | <b>4.1</b>  | <b>--</b> | <b>2.4</b>  | <b>--</b> | <b>4.4</b>  | <b>--</b> | <b>3.4</b> | <b>--</b> | <b>2.9</b> | <b>--</b> | <b>4.7</b> | <b>--</b> |
| BBgBarc US Aggregate TR                       | 0.8        | --        | 3.1         | --        | 0.1         | --        | 2.6         | --        | 2.7        | --        | 2.1        | --        | 4.3        | --        |
| BlackRock Intermediate Govt *                 | 0.4        | 98        | --          | --        | --          | --        | --          | --        | --         | --        | --         | --        | --         | --        |
| FIAM Bond                                     | 1.1        | 9         | 3.7         | 25        | 0.9         | 30        | 3.9         | 13        | 3.3        | 18        | 2.7        | 24        | 5.0        | 26        |
| Western TRU                                   | 1.9        | 1         | 7.4         | 1         | 8.3         | 1         | 6.7         | 1         | --         | --        | --         | --        | --         | --        |
| 3-Month Libor Total Return USD                | 0.3        | 99        | 0.9         | 99        | 1.2         | 19        | 0.9         | 99        | 0.7        | 99        | 0.5        | 99        | 0.9        | 99        |
| BBgBarc US Aggregate TR                       | 0.8        | 52        | 3.1         | 64        | 0.1         | 73        | 2.6         | 71        | 2.7        | 61        | 2.1        | 66        | 4.3        | 78        |
| eA US Core Fixed Inc Net Median               | 0.9        |           | 3.3         |           | 0.4         |           | 2.9         |           | 2.8        |           | 2.3        |           | 4.6        |           |

\* Funded January 2017.

2. See Appendix for Benchmark History.



Total Fund  
Performance Summary (Net of Fees)

Period Ending: September 30, 2017

|  | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 2 Yrs (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank |
|--|----------|------|---------|------|----------|------|-----------|------|-----------|------|-----------|------|------------|------|
| <b>Opportunistic Credit</b>                        | 1.7      | --   | 7.7     | --   | 10.5     | --   | 9.6       | --   | 6.4       | --   | 8.3       | --   | --         | --   |
| <i>BBgBarc BA Intermediate HY</i>                  | 1.7      | --   | 6.1     | --   | 6.8      | --   | 8.9       | --   | 5.9       | --   | 4.2       | --   | --         | --   |
| Angelo Gordon Opportunistic*                       | -0.6     | --   | 7.9     | --   | 10.6     | --   | 7.3       | --   | 5.2       | --   | --        | --   | --         | --   |
| Angelo Gordon STAR*                                | 5.0      | --   | 15.7    | --   | 17.9     | --   | 10.3      | --   | 9.6       | --   | --        | --   | --         | --   |
| <i>BBgBarc US Aggregate TR</i>                     | 0.8      | --   | 3.1     | --   | 0.1      | --   | 2.6       | --   | 2.7       | --   | 2.1       | --   | 4.3        | --   |
| Beach Point Select                                 | 2.1      | 26   | 6.6     | 47   | 10.4     | 10   | 10.3      | 20   | --        | --   | --        | --   | --         | --   |
| <i>BBgBarc BA Intermediate HY<sup>2</sup></i>      | 1.7      | 62   | 6.1     | 64   | 6.8      | 81   | 8.9       | 58   | 5.9       | 25   | 4.2       | 95   | --         | --   |
| <i>eA US High Yield Fixed Inc Net Median</i>       | 1.8      |      | 6.5     |      | 8.1      |      | 9.1       |      | 5.0       |      | 5.7       |      | 7.0        |      |
| Brigade Capital                                    | 1.4      | 81   | 7.2     | 19   | 9.9      | 15   | 11.0      | 8    | 4.6       | 68   | 5.5       | 63   | --         | --   |
| <i>BBgBarc BA Intermediate HY<sup>2</sup></i>      | 1.7      | 62   | 6.1     | 64   | 6.8      | 81   | 8.9       | 58   | 5.9       | 25   | 4.2       | 95   | --         | --   |
| <i>50% Barclays HY/ 50% Bank Loan</i>              | 1.5      | 77   | 5.0     | 83   | 7.1      | 73   | 8.1       | 76   | 4.9       | 56   | 5.4       | 67   | --         | --   |
| <i>eA US High Yield Fixed Inc Net Median</i>       | 1.8      |      | 6.5     |      | 8.1      |      | 9.1       |      | 5.0       |      | 5.7       |      | 7.0        |      |
| PIMCO Diversified**                                | --       | --   | --      | --   | --       | --   | --        | --   | --        | --   | --        | --   | --         | --   |
| <i>Blended PIMCO Diversified Index<sup>2</sup></i> | 1.9      | 50   | 6.5     | 53   | 4.7      | 95   | 8.3       | 71   | 5.3       | 36   | 5.0       | 81   | 6.8        | 61   |
| <i>BBgBarc BA Intermediate HY</i>                  | 1.7      | 62   | 6.1     | 64   | 6.8      | 81   | 8.9       | 58   | 5.9       | 25   | 4.2       | 95   | --         | --   |
| <i>eA US High Yield Fixed Inc Net Median</i>       | 1.8      |      | 6.5     |      | 8.1      |      | 9.1       |      | 5.0       |      | 5.7       |      | 7.0        |      |
| <b>Private Credit</b>                              | 0.8      | --   | 4.6     | --   | 5.4      | --   | --        | --   | --        | --   | --        | --   | --         | --   |
| <i>BBgBarc BA Intermediate HY</i>                  | 1.7      | --   | 6.1     | --   | 6.8      | --   | 8.9       | --   | 5.9       | --   | 4.2       | --   | --         | --   |
| TCP Direct Lending VIII* ***                       | 2.7      | 4    | 6.7     | 45   | 7.5      | 66   | --        | --   | --        | --   | --        | --   | --         | --   |
| White Oak Yield* ****                              | -4.6     | 99   | --      | --   | --       | --   | --        | --   | --        | --   | --        | --   | --         | --   |
| <i>BBgBarc BA Intermediate HY</i>                  | 1.7      | 62   | 6.1     | 64   | 6.8      | 81   | 8.9       | 58   | 5.9       | 25   | 4.2       | 95   | --         | --   |
| <i>eA US High Yield Fixed Inc Net Median</i>       | 1.8      |      | 6.5     |      | 8.1      |      | 9.1       |      | 5.0       |      | 5.7       |      | 7.0        |      |
| <b>Global Fixed Income</b>                         | 1.3      | 90   | 5.5     | 77   | 12.4     | 6    | 7.8       | 49   | 2.2       | 72   | 3.6       | 30   | --         | --   |
| <i>BBgBarc Multiverse TR</i>                       | 1.9      | 58   | 6.6     | 53   | -0.6     | 99   | 4.2       | 96   | 1.6       | 82   | 0.8       | 79   | 3.5        | 99   |
| <i>InvestorForce All DB Gbl Fix Inc Net Median</i> | 2.0      |      | 7.2     |      | 6.2      |      | 7.8       |      | 2.8       |      | 2.9       |      | 5.3        |      |

\* Preliminary return as of 09/30/2017.

\*\* Funded August 2017.

\*\*\* Funded September 2016.

\*\*\*\*Funded June 2017.

2. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: September 30, 2017

|  | 3 Mo (%)   | Rank      | YTD (%)     | Rank      | 1 Yr (%)    | Rank      | 2 Yrs (%)   | Rank      | 3 Yrs (%)   | Rank      | 5 Yrs (%)   | Rank      | 10 Yrs (%) | Rank      |
|--|------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|------------|-----------|
| Franklin Templeton                                 | 1.3        | 81        | 5.5         | 70        | 12.4        | 3         | 7.8         | 29        | 2.2         | 64        | 3.6         | 41        | --         | --        |
| <i>BBgBarc Multiverse TR</i>                       | 1.9        | 45        | 6.6         | 52        | -0.6        | 88        | 4.2         | 73        | 1.6         | 74        | 0.8         | 83        | 3.5        | 77        |
| <i>eA All Global Fixed Inc Net Median</i>          | 1.8        |           | 6.6         |           | 4.3         |           | 5.9         |           | 3.0         |           | 3.1         |           | 4.8        |           |
| <b>Risk Parity</b>                                 | <b>3.7</b> | <b>--</b> | <b>9.8</b>  | <b>--</b> | <b>5.6</b>  | <b>--</b> | <b>10.0</b> | <b>--</b> | <b>5.1</b>  | <b>--</b> | <b>4.9</b>  | <b>--</b> | <b>--</b>  | <b>--</b> |
| <i>Blended Risk Parity Index<sup>2</sup></i>       | 3.2        | --        | 10.3        | --        | 11.8        | --        | 11.5        | --        | 7.9         | --        | 9.5         | --        | --         | --        |
| AQR GRP, 10% Volatility                            | 4.5        | --        | 10.8        | --        | 8.2         | --        | 9.1         | --        | 2.9         | --        | 3.5         | --        | --         | --        |
| PanAgora   | 3.0        | --        | 9.0         | --        | 3.3         | --        | 10.8        | --        | 7.3         | --        | --          | --        | --         | --        |
| <i>Blended Risk Parity Index<sup>2</sup></i>       | 3.2        | --        | 10.3        | --        | 11.8        | --        | 11.5        | --        | 7.9         | --        | 9.5         | --        | --         | --        |
| <i>Blended RP Secondary Index</i>                  | 3.1        | --        | 9.5         | --        | 9.7         | --        | 9.7         | --        | 5.7         | --        | 7.7         | --        | --         | --        |
| <b>Alternatives</b>                                | <b>1.7</b> | <b>--</b> | <b>8.0</b>  | <b>--</b> | <b>12.1</b> | <b>--</b> | <b>8.0</b>  | <b>--</b> | <b>8.2</b>  | <b>--</b> | <b>6.0</b>  | <b>--</b> | <b>--</b>  | <b>--</b> |
| <i>Alternatives Allocation Index<sup>2</sup></i>   | 3.5        | --        | 10.0        | --        | 13.6        | --        | 11.2        | --        | 5.8         | --        | 6.4         | --        | --         | --        |
| <i>Blended Alternatives Index</i>                  | 3.6        | --        | 10.2        | --        | 14.0        | --        | 11.3        | --        | 6.4         | --        | 8.2         | --        | --         | --        |
| <b>Private Equity **</b>                           | <b>0.6</b> | <b>77</b> | <b>12.0</b> | <b>26</b> | <b>17.6</b> | <b>11</b> | <b>13.1</b> | <b>12</b> | <b>17.6</b> | <b>1</b>  | <b>15.2</b> | <b>6</b>  | <b>--</b>  | <b>--</b> |
| <i>Russell 3000 +3%</i>                            | 5.6        | 8         | 15.9        | 5         | 21.7        | 4         | 19.8        | 1         | 13.7        | 10        | 17.2        | 3         | 10.6       | 5         |
| <i>InvestorForce All DB Private Eq Net Median</i>  | 2.8        |           | 9.2         |           | 12.4        |           | 8.6         |           | 8.6         |           | 9.9         |           | 7.5        |           |
| <b>Hedge Fund/Absolute Return</b>                  | <b>2.8</b> | <b>21</b> | <b>3.5</b>  | <b>66</b> | <b>5.8</b>  | <b>61</b> | <b>3.3</b>  | <b>51</b> | <b>6.8</b>  | <b>4</b>  | <b>6.8</b>  | <b>13</b> | <b>--</b>  | <b>--</b> |
| <i>Libor 1 month +4%</i>                           | 1.2        | 74        | 3.7         | 62        | 4.9         | 75        | 4.6         | 35        | 4.5         | 18        | 4.4         | 62        | --         | --        |
| <i>InvestorForce All DB Hedge Funds Net Median</i> | 1.7        |           | 4.0         |           | 6.3         |           | 3.3         |           | 2.3         |           | 4.8         |           | 2.5        |           |
| AQR DELTA XN                                       | 4.0        | 26        | 4.2         | 59        | 6.7         | 49        | 4.2         | 58        | 7.5         | 30        | 7.2         | 43        | --         | --        |
| <i>Libor 1 month +4%</i>                           | 1.2        | 67        | 3.7         | 64        | 4.9         | 58        | 4.6         | 55        | 4.5         | 48        | 4.4         | 60        | --         | --        |
| <i>eV Alt All Multi-Strategy Median</i>            | 2.0        |           | 5.2         |           | 6.4         |           | 5.0         |           | 4.0         |           | 5.2         |           | 5.2        |           |
| Aberdeen Standard GARS                             | 0.3        | 80        | 1.7         | 79        | 3.6         | 68        | --          | --        | --          | --        | --          | --        | --         | --        |
| <i>Libor 1 month +4%</i>                           | 1.2        | 67        | 3.7         | 64        | 4.9         | 58        | 4.6         | 55        | 4.5         | 48        | 4.4         | 60        | --         | --        |
| <i>eV Alt All Multi-Strategy Median</i>            | 2.0        |           | 5.2         |           | 6.4         |           | 5.0         |           | 4.0         |           | 5.2         |           | 5.2        |           |
| <b>Inflation Hedge</b>                             | <b>2.4</b> | <b>--</b> | <b>5.6</b>  | <b>--</b> | <b>7.1</b>  | <b>--</b> | <b>--</b>   | <b>--</b> | <b>--</b>   | <b>--</b> | <b>--</b>   | <b>--</b> | <b>--</b>  | <b>--</b> |
| <i>Blended Inflation Pool Index<sup>2</sup></i>    | 3.2        | --        | 5.9         | --        | 7.0         | --        | --          | --        | --          | --        | --          | --        | --         | --        |

\*\* Returns are one-quarter lag.

2. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: September 30, 2017

|  | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 2 Yrs (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank |
|--|----------|------|---------|------|----------|------|-----------|------|-----------|------|-----------|------|------------|------|
| <b>Real Estate</b>                                     | 1.5      | 44   | 5.9     | 23   | 8.1      | 14   | 8.9       | 26   | 11.0      | 8    | 11.5      | 3    | 4.9        | 17   |
| <i>NCREIF ODCE</i>                                     | 1.9      | 23   | 5.4     | 30   | 7.7      | 18   | 8.9       | 26   | 10.8      | 14   | 11.6      | 3    | 5.6        | 5    |
| <i>InvestorForce All DB Real Estate Pub Net Median</i> | 1.4      |      | 4.6     |      | 6.1      |      | 7.9       |      | 9.1       |      | 9.9       |      | 4.1        |      |
| Invesco  | 1.4      | --   | 5.8     | --   | 8.0      | --   | 8.6       | --   | 10.9      | --   | 11.4      | --   | 4.8        | --   |
| <i>NCREIF ODCE</i>                                     | 1.9      | --   | 5.4     | --   | 7.7      | --   | 8.9       | --   | 10.8      | --   | 11.6      | --   | 5.6        | --   |
| Invesco US Val IV                                      | 5.3      | --   | 9.9     | --   | 11.0     | --   | --        | --   | --        | --   | --        | --   | --         | --   |
| <i>NCREIF ODCE</i>                                     | 1.9      | --   | 5.4     | --   | 7.7      | --   | 8.9       | --   | 10.8      | --   | 11.6      | --   | 5.6        | --   |
| <i>NCREIF CEVA 1Q Lag - NET</i>                        | 2.6      | --   | 6.9     | --   | 9.7      | --   | 11.6      | --   | 13.5      | --   | --        | --   | --         | --   |
| PGIM RE US Debt Fund***                                | --       | --   | --      | --   | --       | --   | --        | --   | --        | --   | --        | --   | --         | --   |
| <i>NCREIF ODCE</i>                                     | 1.9      | --   | 5.4     | --   | 7.7      | --   | 8.9       | --   | 10.8      | --   | 11.6      | --   | 5.6        | --   |
| <b>Private Real Asset **</b>                           | -3.1     | --   | -0.4    | --   | -0.4     | --   | 16.8      | --   | 11.6      | --   | --        | --   | --         | --   |
| <i>Blended Real Asset Index<sup>2</sup></i>            | 5.1      | --   | 7.8     | --   | 8.9      | --   | 7.8       | --   | 6.5       | --   | --        | --   | --         | --   |
| <b>Liquid Pool</b>                                     | 5.6      | --   | 9.0     | --   | --       | --   | --        | --   | --        | --   | --        | --   | --         | --   |
| <i>Blended Real Asset Index<sup>2</sup></i>            | 5.1      | --   | 7.8     | --   | 8.9      | --   | 7.8       | --   | 6.5       | --   | --        | --   | --         | --   |
| SSgA Custom Real Asset****                             | 5.6      | --   | 9.0     | --   | --       | --   | --        | --   | --        | --   | --        | --   | --         | --   |
| <i>Blended Real Asset Index</i>                        | 5.1      | --   | 7.8     | --   | 8.9      | --   | 7.8       | --   | 6.5       | --   | --        | --   | --         | --   |
| <b>TIPS</b>  | 0.7      | --   | 1.2     | --   | 0.6      | --   | 2.9       | --   | 1.3       | --   | -0.4      | --   | --         | --   |
| <i>BBgBarc US TIPS TR</i>                              | 0.9      | --   | 1.7     | --   | -0.7     | --   | 2.9       | --   | 1.6       | --   | 0.0       | --   | 3.9        | --   |
| Brown Brothers Harriman                                | 0.7      | 85   | 1.2     | 84   | 0.6      | 14   | 2.9       | 53   | 1.3       | 60   | -0.4      | 94   | --         | --   |
| <i>BBgBarc US TIPS TR</i>                              | 0.9      | 52   | 1.7     | 45   | -0.7     | 60   | 2.9       | 55   | 1.6       | 25   | 0.0       | 47   | 3.9        | 67   |
| <i>eA TIPS / Infl Indexed Fixed Inc Net Median</i>     | 0.9      |      | 1.7     |      | -0.7     |      | 2.9       |      | 1.4       |      | 0.0       |      | 4.0        |      |
| <b>Cash</b>  | 0.2      | --   | 0.7     | --   | 0.9      | --   | 1.1       | --   | 1.0       | --   | 0.8       | --   | 0.7        | --   |
| 91 Day T-Bills   | 0.3      | --   | 0.6     | --   | 0.7      | --   | 0.5       | --   | 0.3       | --   | 0.2       | --   | 0.4        | --   |
| General Account  | 0.5      | --   | 1.1     | --   | 1.3      | --   | 1.7       | --   | 1.4       | --   | 0.9       | --   | 1.0        | --   |
| Treasury & LAIF  | 0.3      | --   | 1.0     | --   | 0.7      | --   | 0.8       | --   | 0.9       | --   | 0.8       | --   | 0.7        | --   |
| 91 Day T-Bills   | 0.3      | --   | 0.6     | --   | 0.7      | --   | 0.5       | --   | 0.3       | --   | 0.2       | --   | 0.4        | --   |

\*\* Returns are one-quarter lag.

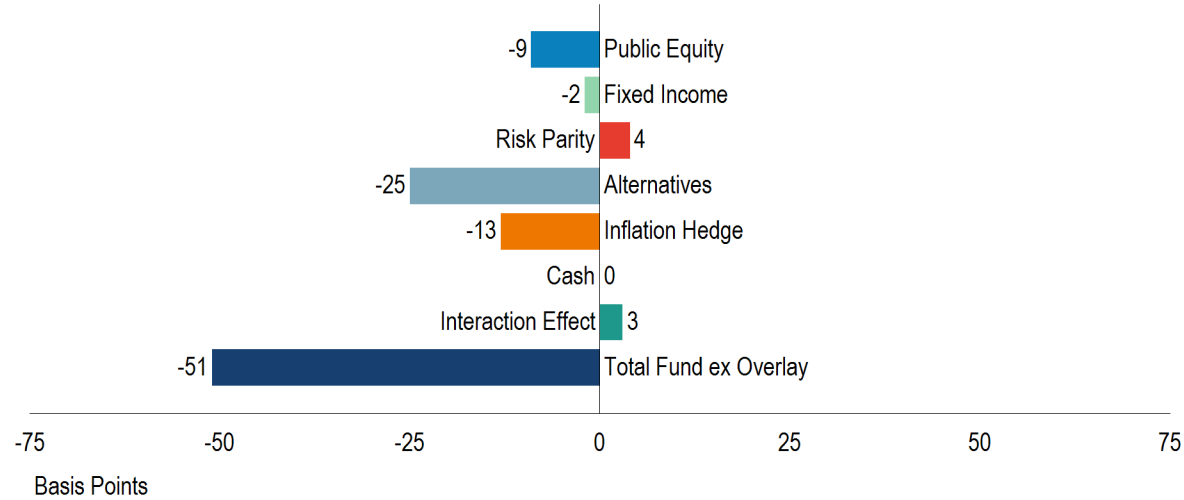
\*\*\* Funded July 2017.

\*\*\*\* Funded October 2016.

2. See Appendix for Benchmark History.

Total Fund ex Overlay  
Performance Attribution

Period Ending: September 30, 2017

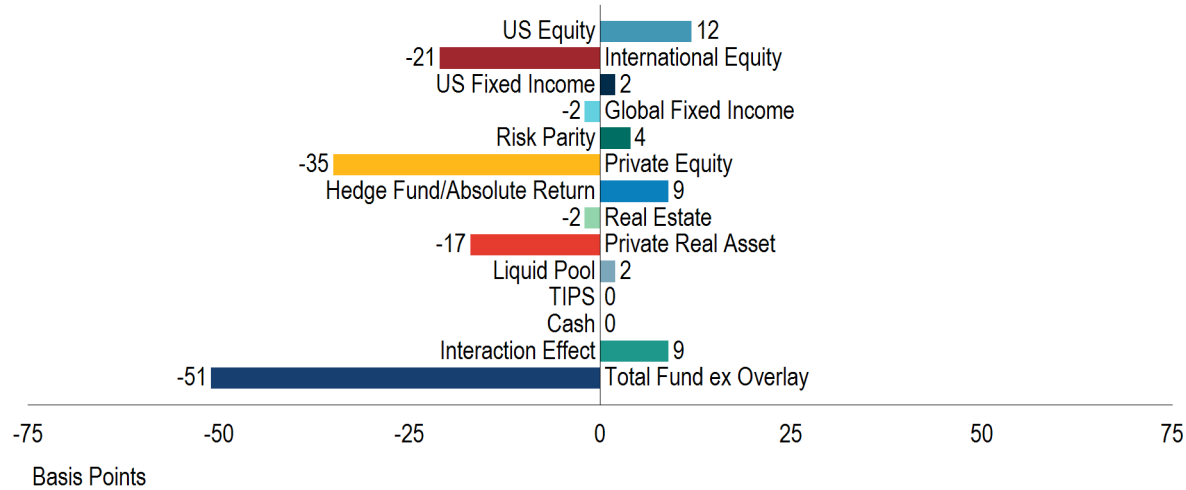


|                 | Wtd. Actual Return | Wtd. Index Return | Excess Return | Selection Effect | Allocation Effect | Interaction* | Total Effects |
|-----------------|--------------------|-------------------|---------------|------------------|-------------------|--------------|---------------|
| Public Equity   | 5.15%              | 5.38%             | -0.23%        | -0.09%           | 0.01%             | 0.00%        | -0.09%        |
| Fixed Income    | 1.16%              | 1.25%             | -0.08%        | -0.02%           | 0.04%             | 0.01%        | 0.03%         |
| Risk Parity     | 3.68%              | 3.21%             | 0.47%         | 0.04%            | 0.00%             | -0.01%       | 0.04%         |
| Alternatives    | 1.67%              | 3.58%             | -1.92%        | -0.25%           | 0.00%             | 0.02%        | -0.23%        |
| Inflation Hedge | 2.36%              | 3.19%             | -0.82%        | -0.13%           | 0.00%             | 0.01%        | -0.12%        |
| Cash            | 0.22%              | 0.26%             | -0.04%        | 0.00%            | -0.15%            | 0.00%        | -0.15%        |
| <b>Total</b>    | <b>3.23%</b>       | <b>3.75%</b>      | <b>-0.51%</b> | <b>-0.46%</b>    | <b>-0.09%</b>     | <b>0.03%</b> | <b>-0.51%</b> |

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

Total Fund ex Overlay  
Performance Attribution

Period Ending: September 30, 2017

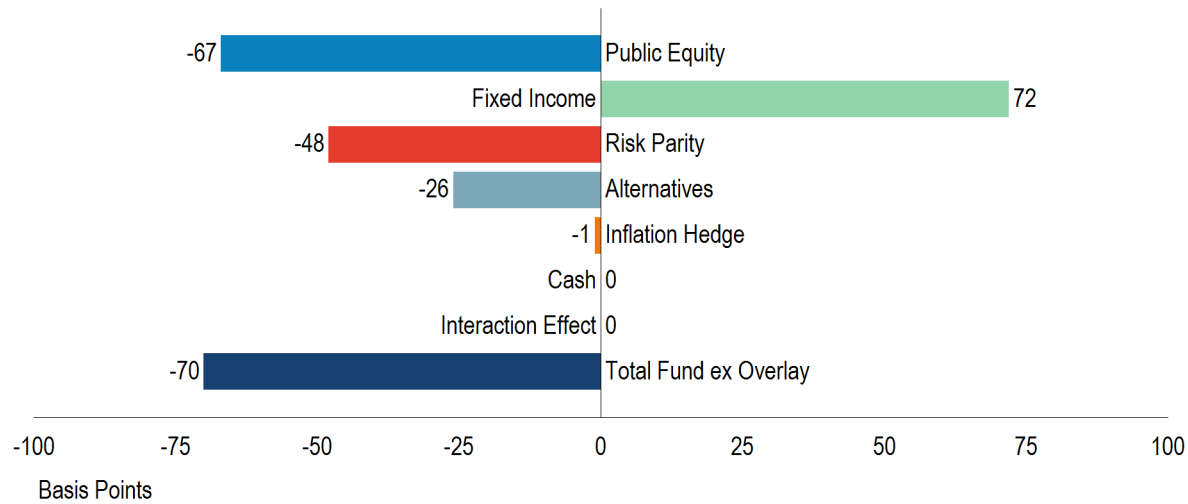


|                            | Wtd. Actual<br>Return | Wtd. Index<br>Return | Excess<br>Return | Selection<br>Effect | Allocation<br>Effect | Interaction*<br>Effects | Total<br>Effects |
|----------------------------|-----------------------|----------------------|------------------|---------------------|----------------------|-------------------------|------------------|
| US Equity                  | 5.10%                 | 4.57%                | 0.53%            | 0.12%               | 0.00%                | 0.00%                   | 0.13%            |
| International Equity       | 5.23%                 | 6.36%                | -1.13%           | -0.21%              | 0.01%                | 0.00%                   | -0.21%           |
| US Fixed Income            | 1.24%                 | 1.14%                | 0.10%            | 0.02%               | 0.04%                | 0.00%                   | 0.05%            |
| Global Fixed Income        | 1.25%                 | 1.88%                | -0.63%           | -0.02%              | 0.01%                | 0.00%                   | -0.01%           |
| Risk Parity                | 3.68%                 | 3.21%                | 0.47%            | 0.04%               | 0.00%                | -0.01%                  | 0.04%            |
| Private Equity             | 0.63%                 | 5.63%                | -5.00%           | -0.35%              | -0.02%               | 0.04%                   | -0.33%           |
| Hedge Fund/Absolute Return | 2.79%                 | 1.22%                | 1.57%            | 0.09%               | 0.01%                | -0.01%                  | 0.10%            |
| Real Estate                | 1.53%                 | 1.87%                | -0.34%           | -0.02%              | 0.01%                | 0.00%                   | -0.02%           |
| Private Real Asset         | -3.14%                | 5.14%                | -8.28%           | -0.17%              | -0.01%               | 0.06%                   | -0.12%           |
| Liquid Pool                | 5.60%                 | 5.14%                | 0.45%            | 0.02%               | -0.01%               | 0.00%                   | 0.01%            |
| TIPS                       | 0.72%                 | 0.86%                | -0.14%           | 0.00%               | 0.01%                | 0.00%                   | 0.00%            |
| Cash                       | 0.22%                 | 0.26%                | -0.04%           | 0.00%               | -0.15%               | 0.00%                   | -0.15%           |
| <b>Total</b>               | <b>3.24%</b>          | <b>3.75%</b>         | <b>-0.51%</b>    | <b>-0.48%</b>       | <b>-0.12%</b>        | <b>0.09%</b>            | <b>-0.51%</b>    |

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

Total Fund ex Overlay  
Performance Attribution (1 Year)

Period Ending: September 30, 2017

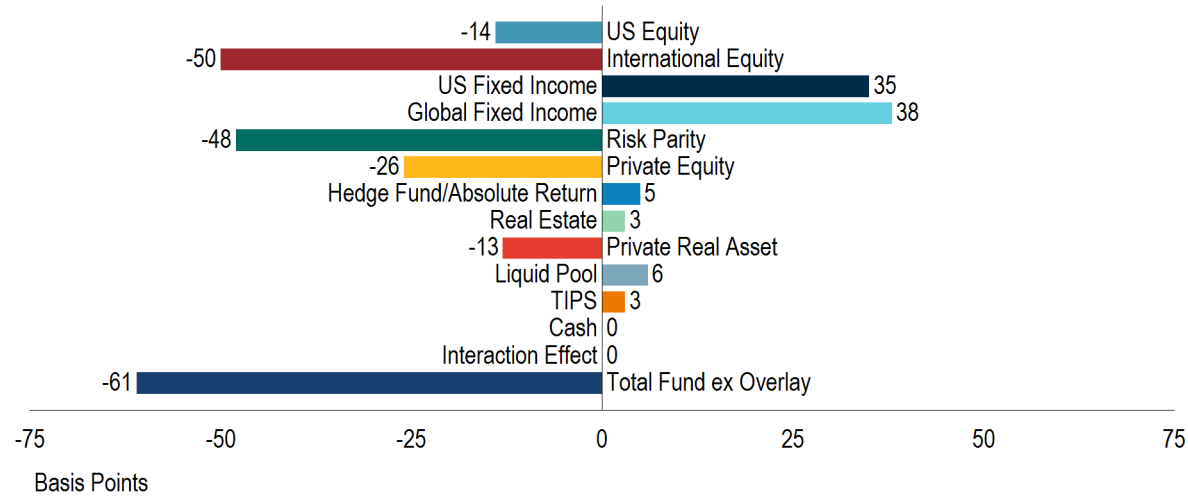


|                 | Wtd. Actual Return | Wtd. Index Return | Excess Return | Selection Effect | Allocation Effect | Interaction * | Total Effects |
|-----------------|--------------------|-------------------|---------------|------------------|-------------------|---------------|---------------|
| Public Equity   | 18.18%             | 19.66%            | -1.47%        | -0.67%           | 0.00%             | 0.00%         | -0.67%        |
| Fixed Income    | 5.89%              | 1.95%             | 3.93%         | 0.72%            | 0.00%             | 0.00%         | 0.72%         |
| Risk Parity     | 5.56%              | 11.79%            | -6.23%        | -0.48%           | 0.00%             | 0.00%         | -0.48%        |
| Alternatives    | 12.08%             | 13.96%            | -1.89%        | -0.26%           | 0.00%             | 0.00%         | -0.26%        |
| Inflation Hedge | 7.15%              | 6.97%             | 0.18%         | -0.01%           | 0.00%             | 0.00%         | -0.01%        |
| Cash            | 0.85%              | 0.72%             | 0.13%         | 0.00%            | 0.00%             | 0.00%         | 0.00%         |
| <b>Total</b>    | <b>11.90%</b>      | <b>12.61%</b>     | <b>-0.70%</b> | <b>-0.70%</b>    | <b>0.00%</b>      | <b>0.00%</b>  | <b>-0.70%</b> |

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

Total Fund ex Overlay  
Performance Attribution (1 Year)

Period Ending: September 30, 2017



|                            | Wtd. Actual Return | Wtd. Index Return | Excess Return | Selection Effect | Allocation Effect | Interaction* | Total Effects |
|----------------------------|--------------------|-------------------|---------------|------------------|-------------------|--------------|---------------|
| US Equity                  | 18.34%             | 18.71%            | -0.36%        | -0.14%           | 0.00%             | 0.00%        | -0.14%        |
| International Equity       | 17.27%             | 20.08%            | -2.81%        | -0.50%           | 0.00%             | 0.00%        | -0.50%        |
| US Fixed Income            | 4.73%              | 2.45%             | 2.28%         | 0.35%            | 0.00%             | 0.00%        | 0.35%         |
| Global Fixed Income        | 12.39%             | -0.56%            | 12.96%        | 0.38%            | 0.00%             | 0.00%        | 0.38%         |
| Risk Parity                | 5.56%              | 11.79%            | -6.23%        | -0.48%           | 0.00%             | 0.00%        | -0.48%        |
| Private Equity             | 17.63%             | 21.71%            | -4.08%        | -0.26%           | 0.00%             | 0.00%        | -0.26%        |
| Hedge Fund/Absolute Return | 5.82%              | 4.87%             | 0.96%         | 0.05%            | 0.00%             | 0.00%        | 0.05%         |
| Real Estate                | 8.06%              | 7.66%             | 0.40%         | 0.03%            | 0.00%             | 0.00%        | 0.03%         |
| Private Real Asset         | -0.38%             | 8.86%             | -9.24%        | -0.13%           | 0.00%             | 0.00%        | -0.13%        |
| Liquid Pool                | 11.66%             | 8.86%             | 2.80%         | 0.06%            | 0.00%             | 0.00%        | 0.06%         |
| TIPS                       | 0.61%              | -0.73%            | 1.33%         | 0.03%            | 0.00%             | 0.00%        | 0.03%         |
| Cash                       | 0.85%              | 0.72%             | 0.13%         | 0.00%            | 0.00%             | 0.00%        | 0.00%         |
| <b>Total</b>               | <b>11.94%</b>      | <b>12.56%</b>     | <b>-0.61%</b> | <b>-0.61%</b>    | <b>0.00%</b>      | <b>0.00%</b> | <b>-0.61%</b> |

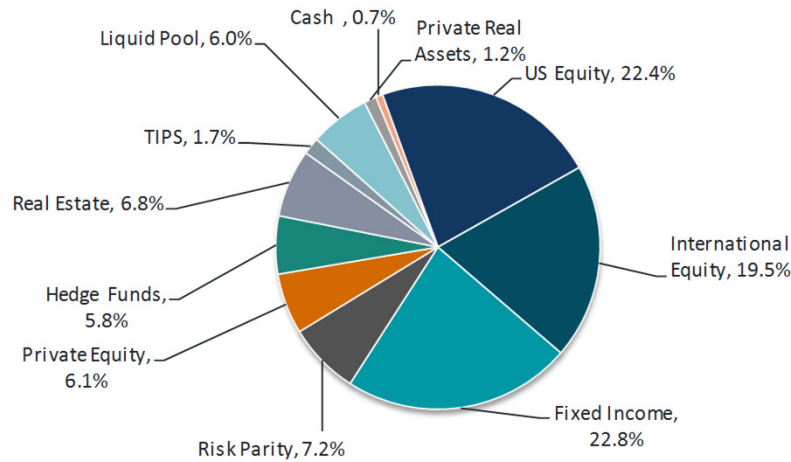
Attribution does not include the impact of the Parametric Minneapolis strategy.  
\* Interaction Effects include Residual Effects.

# Total Fund

## Asset Allocation Analysis

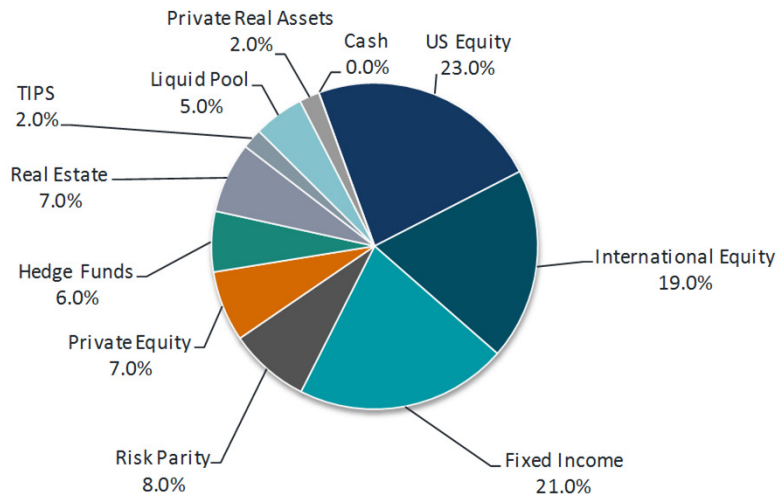
Period Ending: September 30, 2017

**Current w/Overlay**



| ASSET ALLOCATION     | MARKET VALUE         |               |               |
|----------------------|----------------------|---------------|---------------|
|                      | W/OVERLAY            | W/OVERLAY     | W/O OVERLAY   |
| US Equity            | 944,581,378          | 22.4%         | 22.9%         |
| International Equity | 821,621,528          | 19.5%         | 19.4%         |
| Fixed Income         | 960,995,526          | 22.8%         | 20.8%         |
| Risk Parity          | 302,479,596          | 7.2%          | 7.2%          |
| Private Equity       | 255,291,095          | 6.1%          | 6.1%          |
| Hedge Funds          | 243,755,086          | 5.8%          | 5.8%          |
| Real Estate          | 285,318,525          | 6.8%          | 6.8%          |
| TIPS                 | 71,456,823           | 1.7%          | 1.7%          |
| Liquid Pool          | 251,921,564          | 6.0%          | 6.0%          |
| Private Real Assets  | 51,735,386           | 1.2%          | 1.2%          |
| Cash                 | 29,053,438           | 0.7%          | 2.2%          |
| <b>TOTAL</b>         | <b>4,218,209,946</b> | <b>100.0%</b> | <b>100.0%</b> |

**Target**

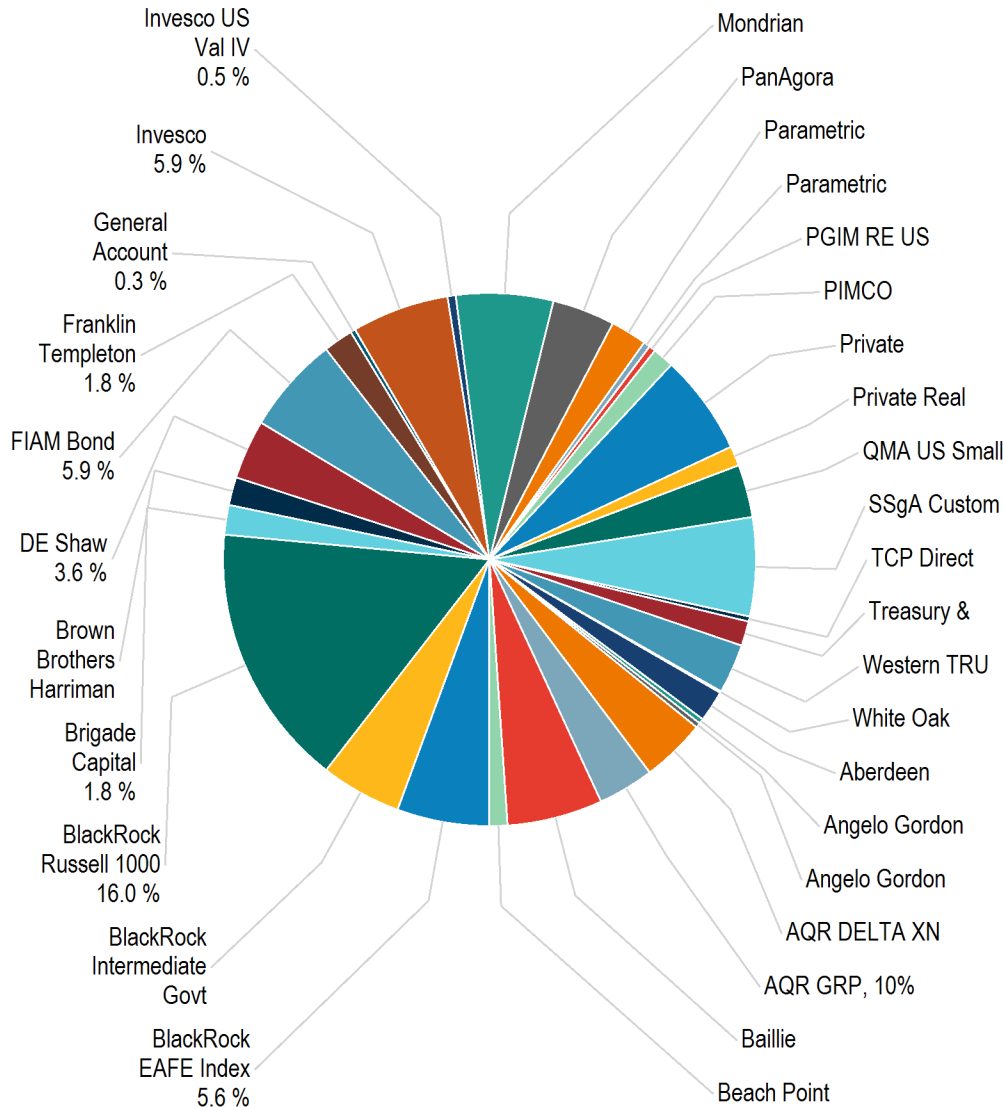


| ASSET ALLOCATION     | W/OVERLAY     | TARGET        | DIFF        |
|----------------------|---------------|---------------|-------------|
| US Equity            | 22.4%         | 23.0%         | -0.6%       |
| International Equity | 19.5%         | 19.0%         | 0.5%        |
| Fixed Income         | 22.8%         | 21.0%         | 1.8%        |
| Risk Parity          | 7.2%          | 8.0%          | -0.8%       |
| Private Equity       | 6.1%          | 7.0%          | -0.9%       |
| Hedge Funds          | 5.8%          | 6.0%          | -0.2%       |
| Real Estate          | 6.8%          | 7.0%          | -0.2%       |
| TIPS                 | 1.7%          | 2.0%          | -0.3%       |
| Liquid Pool          | 6.0%          | 5.0%          | 1.0%        |
| Private Real Assets  | 1.2%          | 2.0%          | -0.8%       |
| Cash                 | 0.7%          | 0.0%          | 0.7%        |
| <b>TOTAL</b>         | <b>100.0%</b> | <b>100.0%</b> | <b>0.0%</b> |



# Total Fund Manager Allocation Analysis

Period Ending: September 30, 2017



|                                | Actual                 | Actual      |
|--------------------------------|------------------------|-------------|
| Aberdeen Standard GARS         | \$80,530,334           | 2%          |
| Angelo Gordon Opportunistic    | \$11,306,000           | 0%          |
| Angelo Gordon STAR             | \$14,063,000           | 0%          |
| AQR DELTA XN                   | \$163,224,752          | 4%          |
| AQR GRP, 10% Volatility        | \$142,298,020          | 3%          |
| Baillie Gifford                | \$243,435,148          | 6%          |
| Beach Point Select             | \$47,569,341           | 1%          |
| BlackRock EAFE Index           | \$237,794,885          | 6%          |
| BlackRock Intermediate Govt    | \$206,758,791          | 5%          |
| BlackRock Russell 1000         | \$674,536,883          | 16%         |
| Brigade Capital                | \$75,109,597           | 2%          |
| Brown Brothers Harriman        | \$71,456,823           | 2%          |
| DE Shaw                        | \$152,567,859          | 4%          |
| FIAM Bond                      | \$247,292,190          | 6%          |
| Franklin Templeton             | \$76,587,252           | 2%          |
| General Account                | \$12,568,039           | 0%          |
| Invesco                        | \$249,718,795          | 6%          |
| Invesco US Val IV              | \$19,994,974           | 0%          |
| Mondrian                       | \$247,918,326          | 6%          |
| PanAgora                       | \$160,181,576          | 4%          |
| Parametric Core                | \$91,121,702           | 2%          |
| Parametric Minneapolis Overlay | \$17,234,536           | 0%          |
| PGIM RE US Debt Fund           | \$15,604,756           | 0%          |
| PIMCO Diversified              | \$55,333,249           | 1%          |
| Private Equity                 | \$255,291,095          | 6%          |
| Private Real Asset             | \$51,735,386           | 1%          |
| QMA US Small Cap               | \$136,829,297          | 3%          |
| SSgA Custom Real Asset         | \$251,921,564          | 6%          |
| TCP Direct Lending VIII        | \$13,567,663           | 0%          |
| Transition 3                   | \$18,559               | 0%          |
| Treasury & LAIF                | \$62,930,191           | 1%          |
| Western TRU                    | \$126,377,577          | 3%          |
| White Oak Yield                | \$5,331,786            | 0%          |
| <b>Total</b>                   | <b>\$4,218,209,946</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                                | 7.1%         | 31                | 6.0%                     | 62                            | 1.1          | 39                | -0.1              | 59                     | 1.1%           | 54                  |
| Policy Index                              | 7.2%         | 27                | 6.5%                     | 84                            | 1.1          | 51                | --                | --                     | 0.0%           | 1                   |
| InvestorForce Public DB > \$1B Net Median | 6.6%         | --                | 5.6%                     | --                            | 1.1          | --                | 0.0               | --                     | 1.1%           | --                  |

**Statistics Summary**

**5 Years**

|   | Anlzd Return | Anlzd Return Rank | Anlzd Standard Deviation | Anlzd Standard Deviation Rank | Sharpe Ratio | Sharpe Ratio Rank | Information Ratio | Information Ratio Rank | Tracking Error | Tracking Error Rank |
|---|--------------|-------------------|--------------------------|-------------------------------|--------------|-------------------|-------------------|------------------------|----------------|---------------------|
| Total Fund                                | 8.8%         | 33                | 6.0%                     | 69                            | 1.4          | 43                | -0.1              | 76                     | 0.9%           | 35                  |
| Policy Index                              | 8.9%         | 27                | 6.4%                     | 82                            | 1.4          | 51                | --                | --                     | 0.0%           | 1                   |
| InvestorForce Public DB > \$1B Net Median | 8.3%         | --                | 5.6%                     | --                            | 1.4          | --                | 0.1               | --                     | 1.1%           | --                  |

**Statistics Summary**

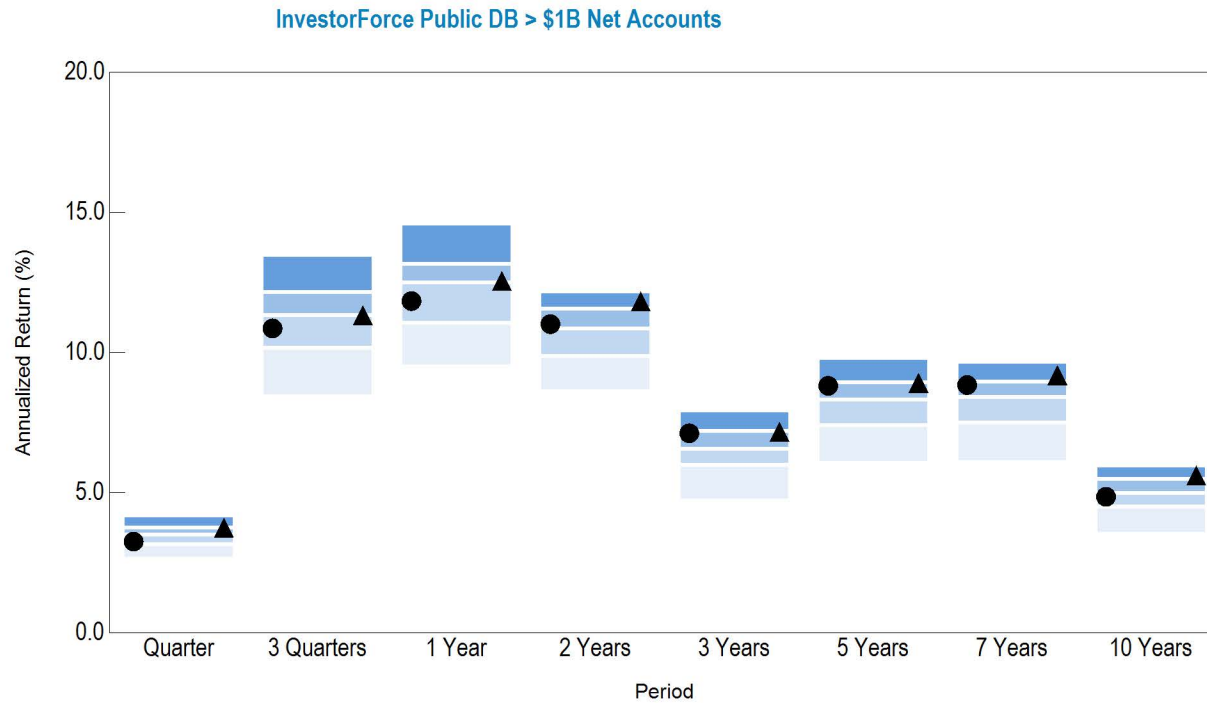
**3 Years**

|                 | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|-----------------|--------------|--------------------------|--------------|-------------------|----------------|
| Cash            | 1.0%         | 0.4%                     | 1.8          | 1.7               | 0.4%           |
| 91 Day T-Bills  | 0.3%         | 0.1%                     | 0.0          | --                | 0.0%           |
| General Account | 1.4%         | 0.6%                     | 1.9          | 1.9               | 0.6%           |
| 91 Day T-Bills  | 0.3%         | 0.1%                     | 0.0          | --                | 0.0%           |
| Treasury & LAIF | 0.9%         | 0.5%                     | 1.2          | 1.2               | 0.5%           |
| 91 Day T-Bills  | 0.3%         | 0.1%                     | 0.0          | --                | 0.0%           |

**Statistics Summary**

**5 Years**

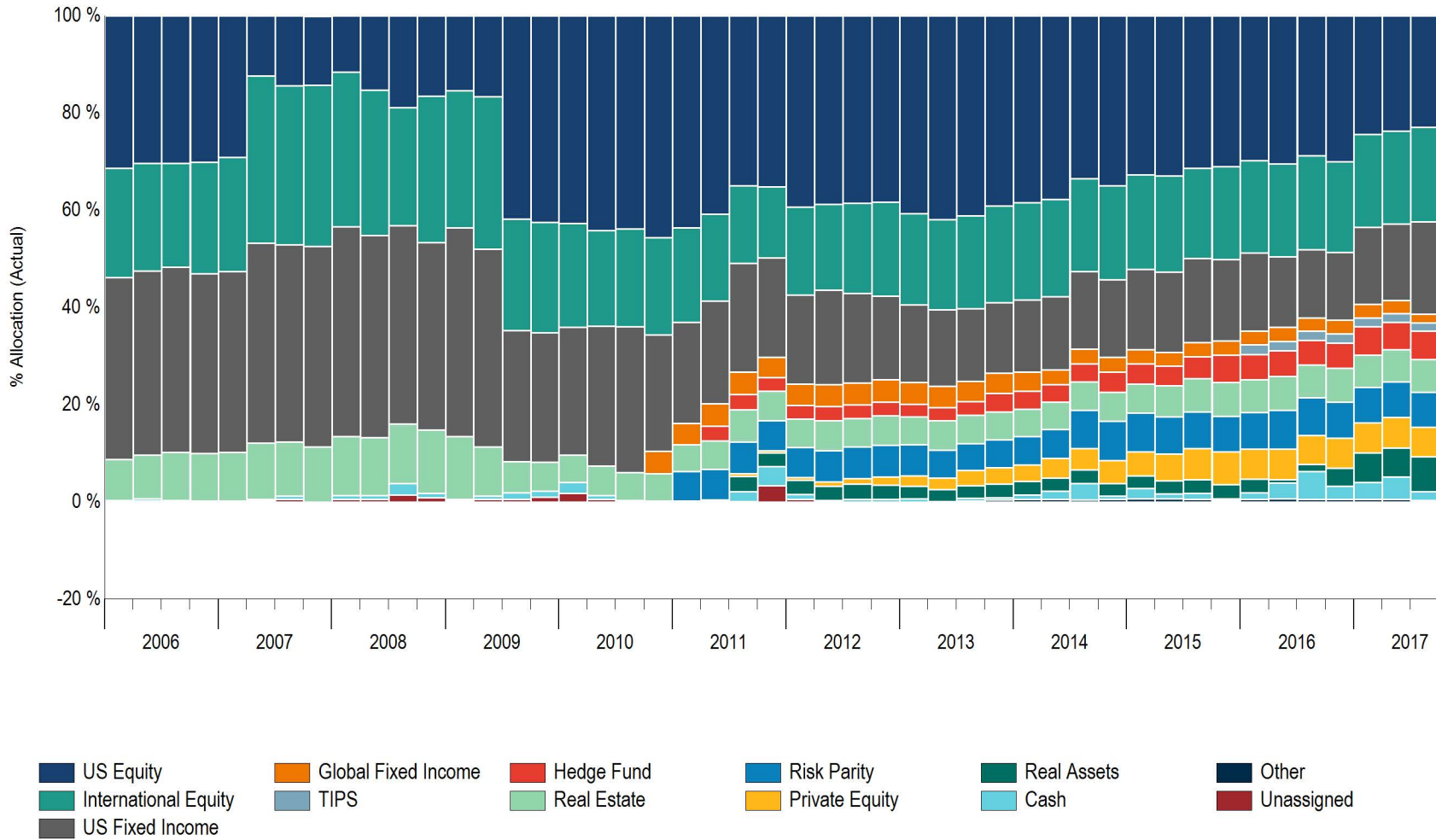
|                 | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|-----------------|--------------|--------------------------|--------------|-------------------|----------------|
| Cash            | 0.8%         | 0.3%                     | 1.8          | 1.8               | 0.3%           |
| 91 Day T-Bills  | 0.2%         | 0.1%                     | 0.0          | --                | 0.0%           |
| General Account | 0.9%         | 0.5%                     | 1.5          | 1.5               | 0.5%           |
| 91 Day T-Bills  | 0.2%         | 0.1%                     | 0.0          | --                | 0.0%           |
| Treasury & LAIF | 0.8%         | 0.4%                     | 1.5          | 1.5               | 0.4%           |
| 91 Day T-Bills  | 0.2%         | 0.1%                     | 0.0          | --                | 0.0%           |

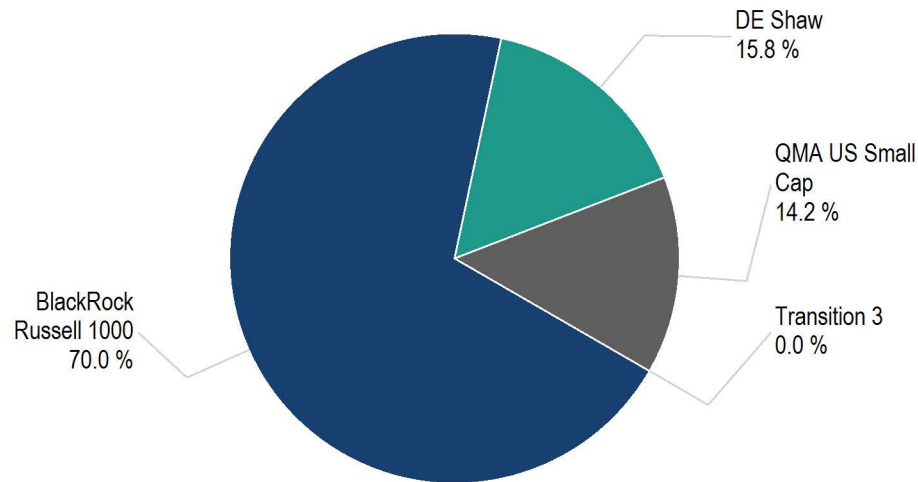


|                      | Quarter  | 3 Quarters | 1 Year    | 2 Years   | 3 Years  | 5 Years  | 7 Years  | 10 Years |
|----------------------|----------|------------|-----------|-----------|----------|----------|----------|----------|
| <b>Return (Rank)</b> |          |            |           |           |          |          |          |          |
| 5th Percentile       | 4.2      | 13.5       | 14.6      | 12.2      | 7.9      | 9.8      | 9.7      | 6.0      |
| 25th Percentile      | 3.8      | 12.2       | 13.2      | 11.6      | 7.2      | 9.0      | 9.0      | 5.5      |
| Median               | 3.5      | 11.3       | 12.5      | 10.9      | 6.6      | 8.3      | 8.4      | 5.0      |
| 75th Percentile      | 3.2      | 10.2       | 11.1      | 9.9       | 6.0      | 7.4      | 7.5      | 4.5      |
| 95th Percentile      | 2.7      | 8.4        | 9.5       | 8.6       | 4.7      | 6.1      | 6.1      | 3.5      |
| # of Portfolios      | 54       | 54         | 54        | 54        | 53       | 53       | 50       | 47       |
| ● Total Fund         | 3.3 (70) | 10.9 (65)  | 11.8 (65) | 11.0 (46) | 7.1 (31) | 8.8 (33) | 8.8 (34) | 4.9 (59) |
| ▲ Policy Index       | 3.7 (29) | 11.3 (51)  | 12.6 (47) | 11.8 (13) | 7.2 (27) | 8.9 (27) | 9.2 (18) | 5.6 (21) |

Total Fund  
Asset Allocation History

Period Ending: September 30, 2017





|                                     | Actual \$            | Actual %      | Manager Contribution to Excess Return % |
|-------------------------------------|----------------------|---------------|---|
| BlackRock Russell 1000              | \$674,536,883        | 70.0%         | 0.0%                                    |
| DE Shaw                             | \$152,567,859        | 15.8%         | 0.5%                                    |
| QMA US Small Cap                    | \$136,829,297        | 14.2%         | 0.0%                                    |
| Transition Account                  | \$18,559             | 0.0%          | 0.0%                                    |
| Actual vs. Policy Weight Difference |                      |               | 0.1%                                    |
| <b>Total</b>                        | <b>\$963,952,598</b> | <b>100.0%</b> | <b>0.5%</b>                             |

**Statistics Summary**

**3 Years**

|                         | Anlzd Return | Anlzd Standard<br>Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|-------------------------|--------------|-----------------------------|--------------|-------------------|----------------|
| US Equity               | 10.3%        | 10.2%                       | 1.0          | -0.6              | 0.8%           |
| Blended US Equity Index | 10.8%        | 10.3%                       | 1.0          | --                | 0.0%           |
| Russell 3000            | 10.7%        | 10.2%                       | 1.0          | -0.1              | 0.7%           |

**Statistics Summary**

**3 Years**

|                  | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|------------------|--------------|--------------------------|--------------|-------------------|----------------|
| Large Cap Equity | 11.0%        | 10.1%                    | 1.1          | 0.5               | 0.8%           |
| Russell 1000     | 10.6%        | 10.1%                    | 1.0          | --                | 0.0%           |
| DE Shaw          | 13.1%        | 10.5%                    | 1.2          | 1.0               | 2.4%           |
| Russell 1000     | 10.6%        | 10.1%                    | 1.0          | --                | 0.0%           |
| Small Cap Equity | 9.1%         | 14.0%                    | 0.6          | -1.1              | 2.8%           |
| Russell 2000     | 12.2%        | 14.5%                    | 0.8          | --                | 0.0%           |



**Statistics Summary**

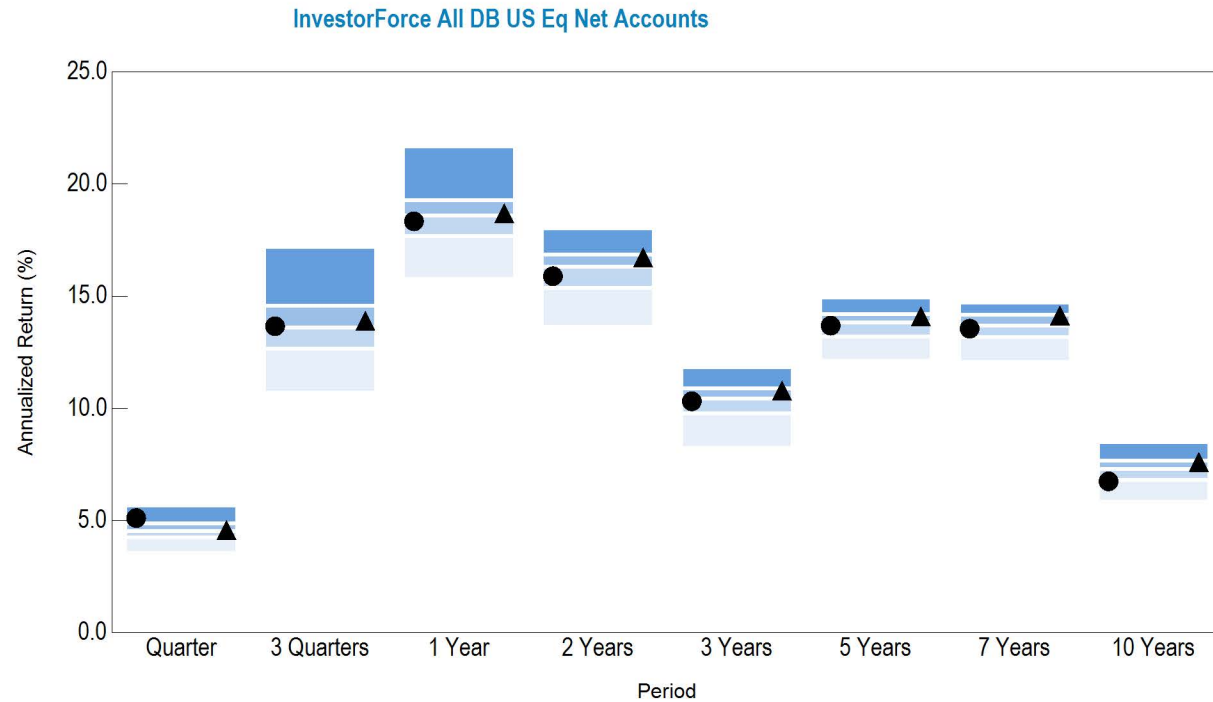
**5 Years**

|                         | Anlzd Return | Anlzd Standard<br>Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|-------------------------|--------------|-----------------------------|--------------|-------------------|----------------|
| US Equity               | 13.7%        | 9.8%                        | 1.4          | -0.5              | 0.8%           |
| Blended US Equity Index | 14.1%        | 10.0%                       | 1.4          | --                | 0.0%           |
| Russell 3000            | 14.2%        | 9.8%                        | 1.4          | 0.1               | 0.8%           |

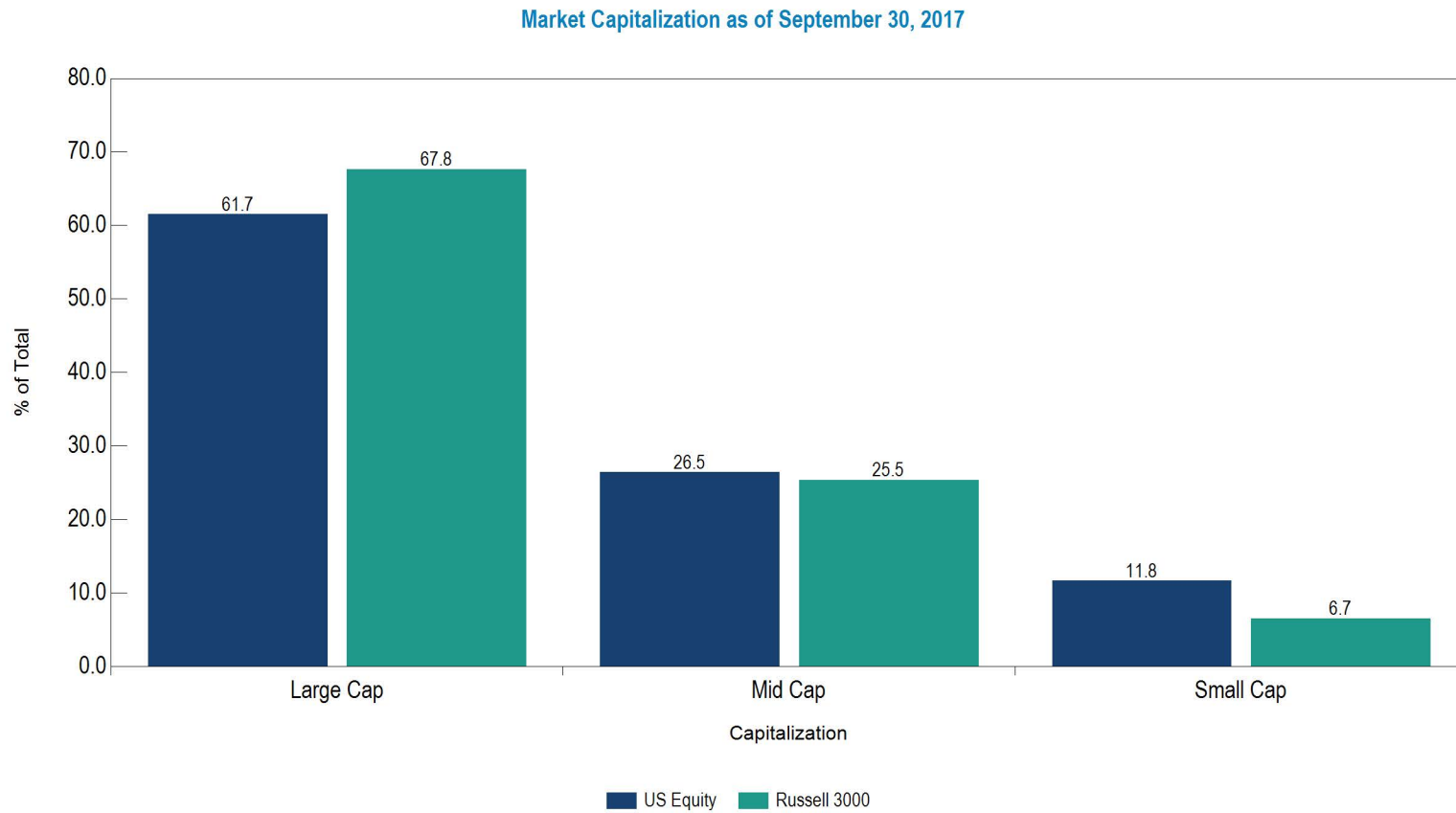
**Statistics Summary**

**5 Years**

|                  | Anlzd Return | Anlzd Standard<br>Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|------------------|--------------|-----------------------------|--------------|-------------------|----------------|
| Large Cap Equity | 14.3%        | 9.5%                        | 1.5          | 0.0               | 0.8%           |
| Russell 1000     | 14.3%        | 9.6%                        | 1.5          | --                | 0.0%           |
| DE Shaw          | 16.0%        | 10.0%                       | 1.6          | 0.8               | 2.2%           |
| Russell 1000     | 14.3%        | 9.6%                        | 1.5          | --                | 0.0%           |
| Small Cap Equity | 12.4%        | 13.5%                       | 0.9          | -0.5              | 2.8%           |
| Russell 2000     | 13.8%        | 14.0%                       | 1.0          | --                | 0.0%           |



|                           | Quarter  | 3 Quarters | 1 Year    | 2 Years   | 3 Years   | 5 Years   | 7 Years   | 10 Years |
|---------------------------|----------|------------|-----------|-----------|-----------|-----------|-----------|----------|
| <b>Return (Rank)</b>      |          |            |           |           |           |           |           |          |
| 5th Percentile            | 5.6      | 17.2       | 21.7      | 18.0      | 11.8      | 14.9      | 14.7      | 8.5      |
| 25th Percentile           | 4.9      | 14.6       | 19.3      | 16.9      | 10.9      | 14.2      | 14.2      | 7.7      |
| Median                    | 4.5      | 13.6       | 18.6      | 16.3      | 10.4      | 13.8      | 13.7      | 7.3      |
| 75th Percentile           | 4.2      | 12.7       | 17.7      | 15.4      | 9.8       | 13.2      | 13.2      | 6.8      |
| 95th Percentile           | 3.6      | 10.7       | 15.8      | 13.6      | 8.2       | 12.1      | 12.1      | 5.8      |
| # of Portfolios           | 669      | 664        | 659       | 649       | 629       | 552       | 458       | 364      |
| ● US Equity               | 5.1 (17) | 13.7 (50)  | 18.3 (58) | 15.9 (63) | 10.3 (56) | 13.7 (57) | 13.6 (58) | 6.7 (79) |
| ▲ Blended US Equity Index | 4.6 (44) | 13.9 (41)  | 18.7 (44) | 16.7 (34) | 10.8 (31) | 14.1 (36) | 14.1 (28) | 7.6 (29) |



See appendix for the market capitalization breakpoints.

Characteristics

|                                 | Portfolio | Russell 3000 |
|---------------------------------|-----------|--------------|
| Number of Holdings              | 2,554     | 2,981        |
| Weighted Avg. Market Cap. (\$B) | 123.0     | 135.9        |
| Median Market Cap. (\$B)        | 2.9       | 1.6          |
| Price To Earnings               | 25.2      | 25.1         |
| Price To Book                   | 4.8       | 4.4          |
| Price To Sales                  | 3.4       | 3.6          |
| Return on Equity (%)            | 20.2      | 17.2         |
| Yield (%)                       | 1.8       | 1.8          |
| Beta (holdings; domestic)       | 1.1       | 1.0          |

Top Holdings

|                        |      |
|------------------------|------|
| APPLE                  | 3.4% |
| MICROSOFT              | 1.6% |
| JOHNSON & JOHNSON      | 1.4% |
| FACEBOOK CLASS A       | 1.2% |
| AMAZON.COM             | 1.1% |
| ALPHABET 'C'           | 1.1% |
| JP MORGAN CHASE & CO.  | 1.1% |
| ALPHABET 'A'           | 1.0% |
| EXXON MOBIL            | 1.0% |
| BERKSHIRE HATHAWAY 'B' | 1.0% |

Best Performers

|                                 | Return % |
|---------------------------------|----------|
| DIMENSION THERAPEUTICS          | 313.8%   |
| MYOKARDIA (MYOK)                | 227.1%   |
| MIRATI THERAPEUTICS(NAS) (MRTX) | 220.5%   |
| XOMA (XOMA)                     | 181.1%   |
| ARROWHEAD PHARMS.               | 167.3%   |
| ZOGENIX                         | 141.7%   |
| DYNAVAX TECHNOLOGIES            | 122.8%   |
| ION GEOPHYSICAL (IO)            | 118.6%   |
| CELADON GROUP (CGI)             | 114.3%   |
| TRANSENTERIX                    | 101.4%   |

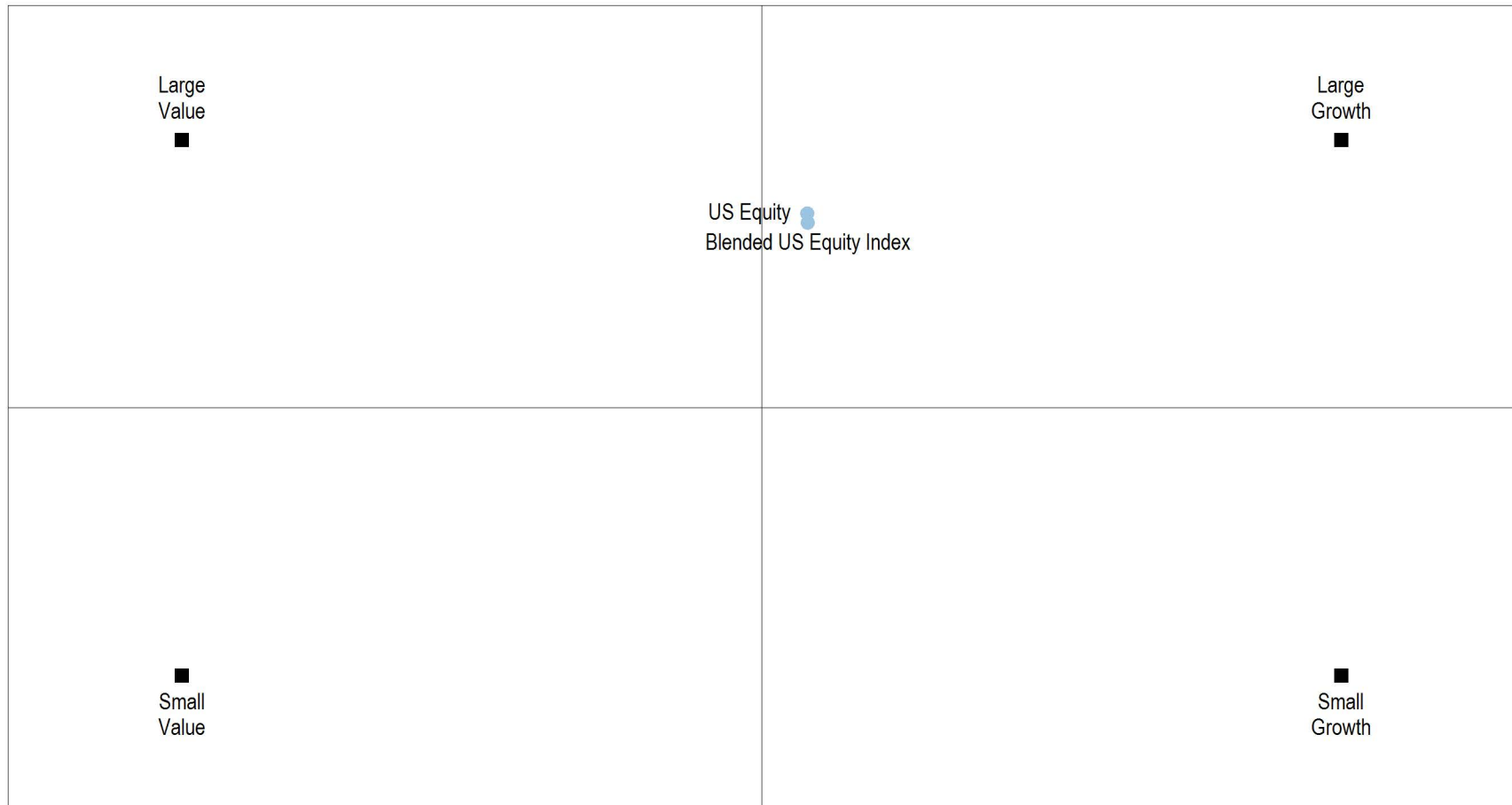
Worst Performers

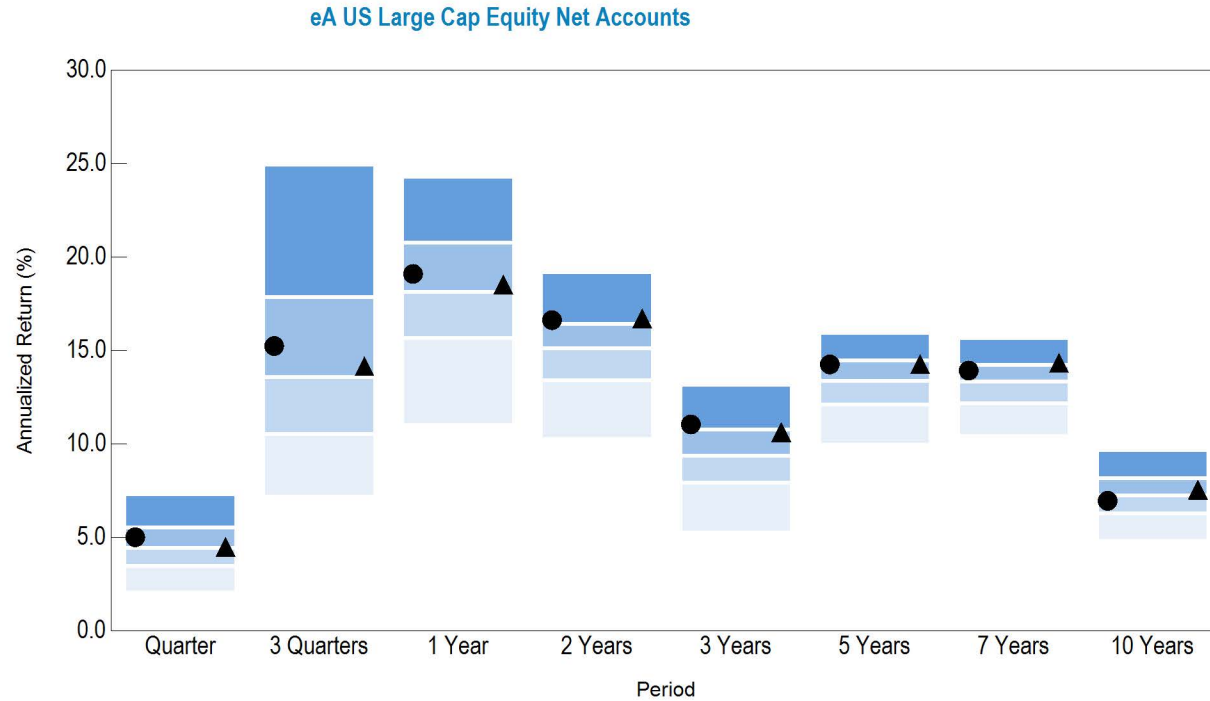
|                            | Return % |
|----------------------------|----------|
| VERSARTIS                  | -86.0%   |
| OTONOMY (OTIC)             | -82.8%   |
| GENOCEA BIOSCIENCES (GNCA) | -72.0%   |
| BABCOCK & WILCOX ENTS.     | -71.7%   |
| AXOVANT SCIENCES           | -70.3%   |
| RAIT FINANCIAL TRUST (RAS) | -64.9%   |
| RADISYS (RSYS)             | -63.6%   |
| BLACK BOX                  | -62.0%   |
| CHEROKEE (CHKE)            | -60.4%   |
| CPI CARD GROUP             | -58.6%   |

US Equity Performance Attribution vs. Russell 3000

|                            | Attribution Effects |                  |                   |                     | Returns     |           | Sector Weights |             |             |               |               |
|----------------------------|---------------------|------------------|-------------------|---------------------|-------------|-----------|----------------|-------------|-------------|---------------|---------------|
|                            | Total Effects       | Selection Effect | Allocation Effect | Interaction Effects | Portfolio   | Benchmark | Portfolio      | Benchmark   |             |               |               |
| Energy                     | 0.0%                | 0.0%             | 0.0%              | 0.0%                | 6.4%        | 6.8%      | 5.2%           | 5.7%        |             |               |               |
| Materials                  | 0.0%                | 0.0%             | 0.0%              | 0.0%                | 6.0%        | 5.3%      | 3.2%           | 2.8%        |             |               |               |
| Industrials                | 0.1%                | 0.1%             | 0.0%              | 0.0%                | 6.2%        | 5.1%      | 11.4%          | 10.9%       |             |               |               |
| Consumer Discretionary     | 0.0%                | 0.0%             | 0.0%              | 0.0%                | 1.2%        | 1.3%      | 12.4%          | 12.7%       |             |               |               |
| Consumer Staples           | 0.1%                | 0.0%             | 0.0%              | 0.0%                | -0.7%       | -1.2%     | 7.0%           | 7.8%        |             |               |               |
| Health Care                | 0.1%                | 0.1%             | 0.0%              | 0.0%                | 4.7%        | 3.7%      | 14.3%          | 14.1%       |             |               |               |
| Financials                 | 0.0%                | 0.0%             | 0.0%              | 0.0%                | 5.3%        | 5.2%      | 14.8%          | 15.1%       |             |               |               |
| Information Technology     | 0.2%                | 0.1%             | 0.0%              | 0.0%                | 9.0%        | 8.4%      | 22.6%          | 21.7%       |             |               |               |
| Telecommunication Services | 0.0%                | 0.0%             | 0.0%              | 0.0%                | 6.4%        | 6.3%      | 1.9%           | 2.0%        |             |               |               |
| Utilities                  | 0.0%                | 0.0%             | 0.0%              | 0.0%                | 2.7%        | 3.1%      | 2.9%           | 3.2%        |             |               |               |
| Real Estate                | 0.0%                | 0.0%             | 0.0%              | 0.0%                | 1.1%        | 1.1%      | 3.8%           | 4.1%        |             |               |               |
| Cash                       | 0.0%                | --               | --                | --                  | --          | --        | 0.0%           | 0.0%        |             |               |               |
| Unclassified               | 0.0%                | 0.0%             | 0.0%              | 0.0%                | 4.4%        | --        | 0.5%           | 0.0%        |             |               |               |
| <b>Portfolio</b>           | <b>0.5%</b>         | <b>=</b>         | <b>0.4%</b>       | <b>+</b>            | <b>0.1%</b> | <b>+</b>  | <b>0.0%</b>    | <b>5.1%</b> | <b>4.5%</b> | <b>100.0%</b> | <b>100.0%</b> |

U.S. Effective Style Map





|                      | Quarter  | 3 Quarters | 1 Year    | 2 Years   | 3 Years   | 5 Years   | 7 Years   | 10 Years |
|----------------------|----------|------------|-----------|-----------|-----------|-----------|-----------|----------|
| <b>Return (Rank)</b> |          |            |           |           |           |           |           |          |
| 5th Percentile       | 7.3      | 24.9       | 24.3      | 19.2      | 13.2      | 15.9      | 15.7      | 9.7      |
| 25th Percentile      | 5.6      | 17.9       | 20.8      | 16.4      | 10.8      | 14.5      | 14.2      | 8.2      |
| Median               | 4.5      | 13.6       | 18.2      | 15.1      | 9.4       | 13.4      | 13.4      | 7.3      |
| 75th Percentile      | 3.5      | 10.5       | 15.7      | 13.4      | 7.9       | 12.1      | 12.2      | 6.3      |
| 95th Percentile      | 2.1      | 7.2        | 11.0      | 10.3      | 5.3       | 10.0      | 10.4      | 4.8      |
| # of Portfolios      | 584      | 584        | 583       | 571       | 558       | 514       | 464       | 401      |
| ● Large Cap Equity   | 5.0 (36) | 15.2 (39)  | 19.1 (43) | 16.6 (24) | 11.0 (23) | 14.3 (31) | 13.9 (33) | 7.0 (59) |
| ▲ Russell 1000       | 4.5 (49) | 14.2 (45)  | 18.5 (47) | 16.7 (22) | 10.6 (28) | 14.3 (31) | 14.4 (23) | 7.5 (43) |



Characteristics

|                                 | Portfolio | Russell 1000 |
|---------------------------------|-----------|--------------|
| Number of Holdings              | 2,478     | 981          |
| Weighted Avg. Market Cap. (\$B) | 143.1     | 147.2        |
| Median Market Cap. (\$B)        | 3.6       | 9.4          |
| Price To Earnings               | 25.0      | 25.1         |
| Price To Book                   | 4.9       | 4.7          |
| Price To Sales                  | 3.6       | 3.6          |
| Return on Equity (%)            | 20.8      | 18.6         |
| Yield (%)                       | 1.9       | 1.9          |
| Beta (holdings; domestic)       | 1.0       | 1.0          |

Top Holdings

|                        |      |
|------------------------|------|
| APPLE                  | 3.9% |
| MICROSOFT              | 1.9% |
| JOHNSON & JOHNSON      | 1.7% |
| FACEBOOK CLASS A       | 1.4% |
| AMAZON.COM             | 1.3% |
| ALPHABET 'C'           | 1.3% |
| JP MORGAN CHASE & CO.  | 1.3% |
| ALPHABET 'A'           | 1.2% |
| EXXON MOBIL            | 1.2% |
| BERKSHIRE HATHAWAY 'B' | 1.2% |

Best Performers

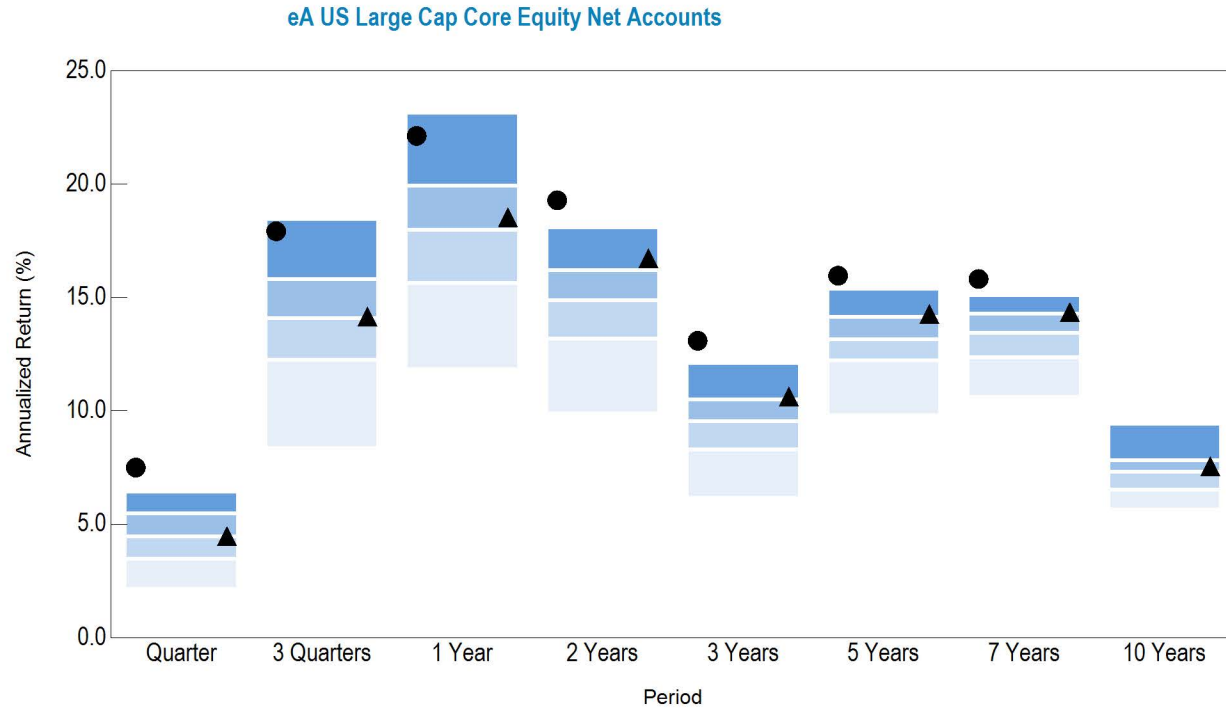
|                             | Return % |
|-----------------------------|----------|
| DIMENSION THERAPEUTICS      | 313.8%   |
| MYOKARDIA                   | 227.1%   |
| MIRATI THERAPEUTICS(NAS)    | 220.5%   |
| XOMA (XOMA)                 | 181.1%   |
| ARROWHEAD PHARMS.           | 167.3%   |
| ZOGENIX (ZGNX)              | 141.7%   |
| DYNAVAX TECHNOLOGIES (DVAX) | 122.8%   |
| ION GEOPHYSICAL (IO)        | 118.6%   |
| CELADON GROUP               | 114.3%   |
| TRANSENTERIX                | 101.4%   |

Worst Performers

|                             | Return % |
|-----------------------------|----------|
| VERSARTIS                   | -86.0%   |
| OTONOMY                     | -82.8%   |
| GENOCEA BIOSCIENCES (GNCA)  | -72.0%   |
| BABCOCK & WILCOX ENTS. (BW) | -71.7%   |
| AXOVANT SCIENCES            | -70.3%   |
| RAIT FINANCIAL TRUST (RAS)  | -64.9%   |
| RADISYS                     | -63.6%   |
| BLACK BOX                   | -62.0%   |
| CHEROKEE (CHKE)             | -60.4%   |
| CPI CARD GROUP              | -58.6%   |

Large Cap Equity Performance Attribution vs. Russell 1000

|                            | Attribution Effects |                  |                   |                     | Returns     |           | Sector Weights |             |             |               |               |
|----------------------------|---------------------|------------------|-------------------|---------------------|-------------|-----------|----------------|-------------|-------------|---------------|---------------|
|                            | Total Effects       | Selection Effect | Allocation Effect | Interaction Effects | Portfolio   | Benchmark | Portfolio      | Benchmark   |             |               |               |
| Energy                     | 0.0%                | 0.0%             | 0.0%              | 0.0%                | 6.8%        | 6.8%      | 5.6%           | 5.8%        |             |               |               |
| Materials                  | 0.0%                | 0.0%             | 0.0%              | 0.0%                | 5.5%        | 5.1%      | 3.0%           | 2.7%        |             |               |               |
| Industrials                | 0.1%                | 0.1%             | 0.0%              | 0.0%                | 5.7%        | 4.7%      | 10.9%          | 10.6%       |             |               |               |
| Consumer Discretionary     | 0.0%                | 0.0%             | 0.0%              | 0.0%                | 1.4%        | 1.2%      | 12.4%          | 12.7%       |             |               |               |
| Consumer Staples           | 0.0%                | 0.0%             | 0.0%              | 0.0%                | -1.2%       | -1.4%     | 7.7%           | 8.2%        |             |               |               |
| Health Care                | 0.1%                | 0.1%             | 0.0%              | 0.0%                | 3.9%        | 3.4%      | 14.3%          | 14.1%       |             |               |               |
| Financials                 | 0.0%                | 0.0%             | 0.0%              | 0.0%                | 5.2%        | 5.2%      | 14.0%          | 14.8%       |             |               |               |
| Information Technology     | 0.1%                | 0.1%             | 0.0%              | 0.0%                | 8.9%        | 8.6%      | 23.2%          | 22.0%       |             |               |               |
| Telecommunication Services | 0.0%                | 0.0%             | 0.0%              | 0.0%                | 6.6%        | 6.5%      | 2.2%           | 2.1%        |             |               |               |
| Utilities                  | 0.0%                | 0.0%             | 0.0%              | 0.0%                | 2.9%        | 2.9%      | 2.8%           | 3.2%        |             |               |               |
| Real Estate                | 0.0%                | 0.0%             | 0.0%              | 0.0%                | 0.8%        | 1.0%      | 3.4%           | 3.8%        |             |               |               |
| Cash                       | 0.0%                | --               | --                | --                  | --          | --        | 0.0%           | 0.0%        |             |               |               |
| Unclassified               | 0.0%                | 0.0%             | 0.0%              | 0.0%                | 4.4%        | --        | 0.6%           | 0.0%        |             |               |               |
| <b>Portfolio</b>           | <b>0.4%</b>         | <b>=</b>         | <b>0.3%</b>       | <b>+</b>            | <b>0.1%</b> | <b>+</b>  | <b>0.0%</b>    | <b>4.9%</b> | <b>4.5%</b> | <b>100.0%</b> | <b>100.0%</b> |



|                 | Return (Rank) |            |           |           |           |           |           |          |
|-----------------|---------------|------------|-----------|-----------|-----------|-----------|-----------|----------|
|                 | Quarter       | 3 Quarters | 1 Year    | 2 Years   | 3 Years   | 5 Years   | 7 Years   | 10 Years |
| 5th Percentile  | 6.4           | 18.4       | 23.1      | 18.1      | 12.1      | 15.4      | 15.1      | 9.4      |
| 25th Percentile | 5.5           | 15.8       | 20.0      | 16.2      | 10.5      | 14.2      | 14.3      | 7.8      |
| Median          | 4.5           | 14.1       | 18.0      | 14.9      | 9.6       | 13.2      | 13.4      | 7.3      |
| 75th Percentile | 3.5           | 12.3       | 15.7      | 13.2      | 8.3       | 12.2      | 12.4      | 6.5      |
| 95th Percentile | 2.2           | 8.4        | 11.8      | 9.9       | 6.2       | 9.8       | 10.6      | 5.7      |
| # of Portfolios | 185           | 185        | 184       | 179       | 176       | 158       | 142       | 126      |
| ● DE Shaw       | 7.5 (1)       | 17.9 (8)   | 22.1 (11) | 19.3 (3)  | 13.1 (3)  | 16.0 (3)  | 15.8 (2)  | -- (--)  |
| ▲ Russell 1000  | 4.5 (50)      | 14.2 (47)  | 18.5 (43) | 16.7 (16) | 10.6 (24) | 14.3 (22) | 14.4 (23) | 7.5 (40) |

Characteristics

|                                 | Portfolio | Russell 1000 |
|---------------------------------|-----------|--------------|
| Number of Holdings              | 979       | 981          |
| Weighted Avg. Market Cap. (\$B) | 147.2     | 147.2        |
| Median Market Cap. (\$B)        | 9.4       | 9.4          |
| Price To Earnings               | 25.5      | 25.1         |
| Price To Book                   | 5.4       | 4.7          |
| Price To Sales                  | 3.7       | 3.6          |
| Return on Equity (%)            | 20.5      | 18.6         |
| Yield (%)                       | 1.9       | 1.9          |
| Beta (holdings; domestic)       | 1.0       | 1.0          |

Top Holdings

|                        |      |
|------------------------|------|
| APPLE                  | 3.3% |
| MICROSOFT              | 2.3% |
| FACEBOOK CLASS A       | 1.7% |
| AMAZON.COM             | 1.6% |
| BERKSHIRE HATHAWAY 'B' | 1.5% |
| JOHNSON & JOHNSON      | 1.5% |
| EXXON MOBIL            | 1.4% |
| JP MORGAN CHASE & CO.  | 1.4% |
| ALPHABET 'C'           | 1.2% |
| ALPHABET 'A'           | 1.2% |

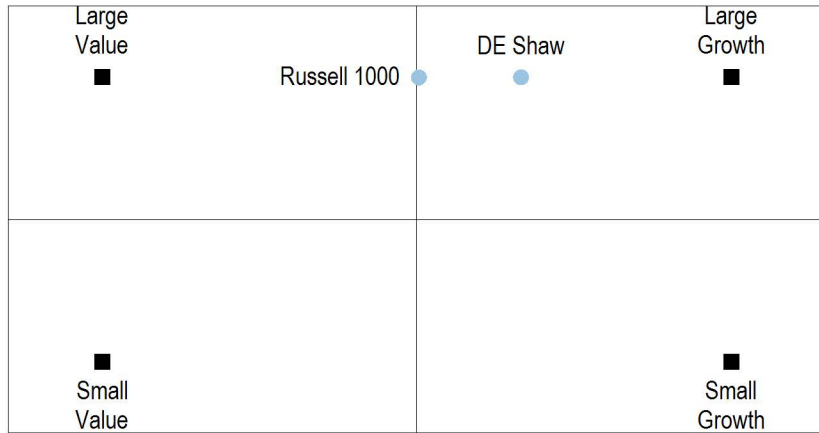
Best Performers

|                                | Return % |
|--------------------------------|----------|
| JUNO THERAPEUTICS              | 50.1%    |
| NRG ENERGY                     | 48.8%    |
| ALNYLAM PHARMACEUTICALS        | 47.3%    |
| ALCOA (AA)                     | 42.8%    |
| TAKE TWO INTACT.SFTW. (TTWO)   | 39.3%    |
| ORBITAL ATK                    | 35.8%    |
| INTERNATIONAL GAME TECH. (IGT) | 35.5%    |
| ACADIA PHARMACEUTICALS (ACAD)  | 35.1%    |
| SPIRIT AEROSYSTEMS CL.A        | 34.3%    |
| GAP (GPS)                      | 34.3%    |

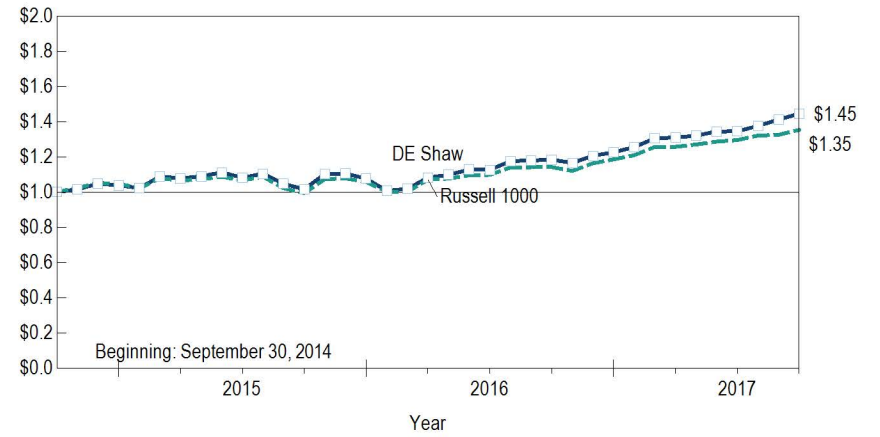
Worst Performers

|                       | Return % |
|-----------------------|----------|
| INTERCEPT PHARMS.     | -52.1%   |
| UNITI GROUP           | -39.3%   |
| TAHOE RESOURCES (NYS) | -38.6%   |
| SPIRIT AIRLINES       | -35.3%   |
| RITE AID (RAD)        | -33.6%   |
| DEXCOM                | -33.1%   |
| DICK'S SPORTING GOODS | -31.8%   |
| MEDNAX                | -28.6%   |
| ENVISION HEALTHCARE   | -28.3%   |
| FOOT LOCKER           | -28.1%   |

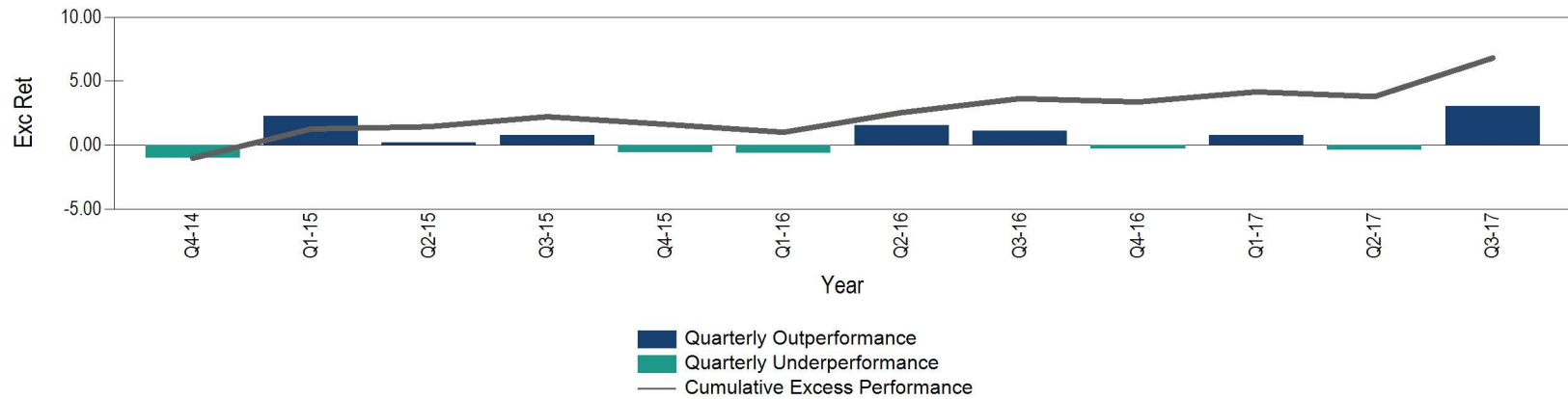
U.S. Effective Style Map

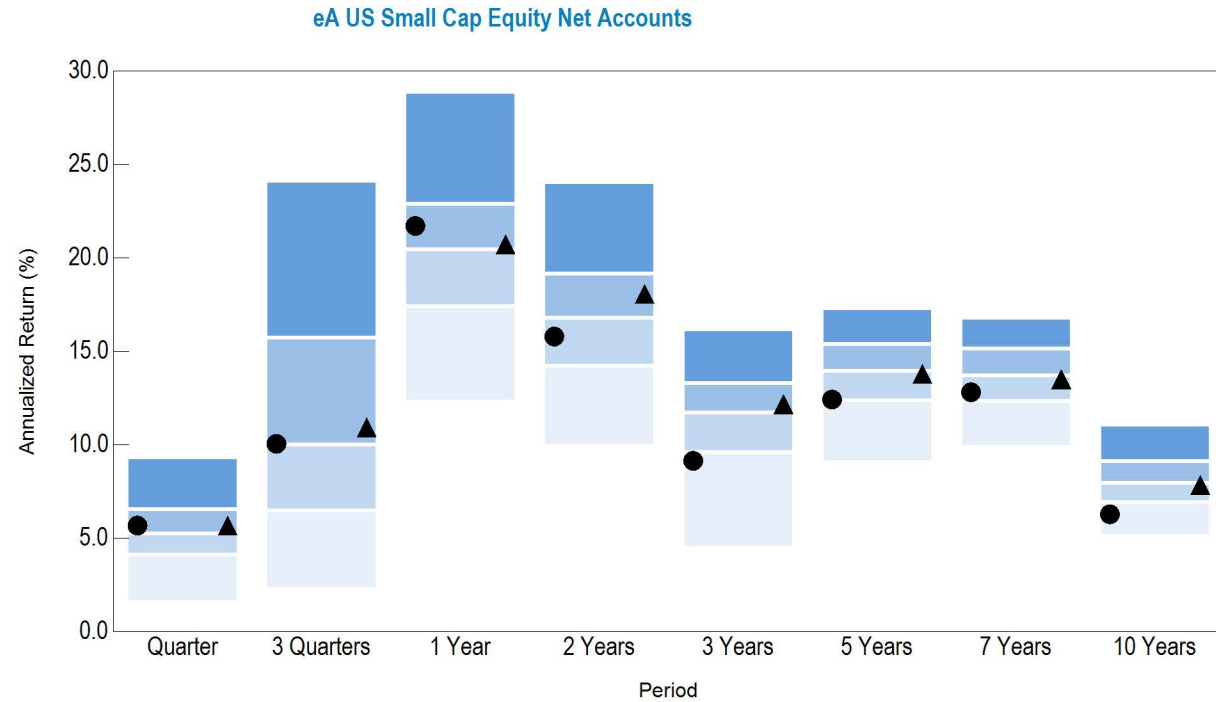


Growth of a Dollar



Quarterly and Cumulative Excess Performance





|                      | Quarter  | 3 Quarters | 1 Year    | 2 Years   | 3 Years   | 5 Years   | 7 Years   | 10 Years |
|----------------------|----------|------------|-----------|-----------|-----------|-----------|-----------|----------|
| <b>Return (Rank)</b> |          |            |           |           |           |           |           |          |
| 5th Percentile       | 9.3      | 24.1       | 28.9      | 24.0      | 16.2      | 17.3      | 16.8      | 11.1     |
| 25th Percentile      | 6.6      | 15.8       | 22.9      | 19.2      | 13.3      | 15.4      | 15.2      | 9.1      |
| Median               | 5.3      | 10.0       | 20.5      | 16.8      | 11.8      | 14.0      | 13.7      | 8.0      |
| 75th Percentile      | 4.2      | 6.5        | 17.4      | 14.2      | 9.6       | 12.4      | 12.4      | 7.0      |
| 95th Percentile      | 1.6      | 2.3        | 12.3      | 10.0      | 4.5       | 9.1       | 9.9       | 5.1      |
| # of Portfolios      | 390      | 389        | 388       | 376       | 362       | 340       | 317       | 270      |
| ● Small Cap Equity   | 5.7 (44) | 10.0 (50)  | 21.7 (35) | 15.8 (61) | 9.1 (80)  | 12.4 (75) | 12.8 (69) | 6.3 (86) |
| ▲ Russell 2000       | 5.7 (44) | 10.9 (44)  | 20.7 (47) | 18.1 (36) | 12.2 (44) | 13.8 (55) | 13.5 (55) | 7.8 (54) |

Characteristics

|                                 | Portfolio | Russell 2000 |
|---------------------------------|-----------|--------------|
| Number of Holdings              | 349       | 2,000        |
| Weighted Avg. Market Cap. (\$B) | 2.1       | 2.2          |
| Median Market Cap. (\$B)        | 1.2       | 0.8          |
| Price To Earnings               | 26.1      | 24.6         |
| Price To Book                   | 4.1       | 3.2          |
| Price To Sales                  | 2.4       | 3.0          |
| Return on Equity (%)            | 16.7      | 10.4         |
| Yield (%)                       | 1.3       | 1.1          |
| Beta (holdings; domestic)       | 1.3       | 1.3          |

Top Holdings

|                        |      |
|------------------------|------|
| BRINK'S                | 0.9% |
| GRAND CANYON EDUCATION | 0.9% |
| CORCEPT THERAPEUTICS   | 0.8% |
| SANDERSON FARMS        | 0.8% |
| ADVANCED ENERGY INDS.  | 0.8% |
| ENTEGRIS               | 0.8% |
| FIBROGEN               | 0.8% |
| LOUISIANA PACIFIC      | 0.8% |
| MGIC INVESTMENT        | 0.8% |
| BLUCORA                | 0.7% |

Best Performers

|                             | Return % |
|-----------------------------|----------|
| FIBROGEN (FGEN)             | 66.6%    |
| CORCEPT THERAPEUTICS (CORT) | 63.6%    |
| ULTRA CLEAN HOLDINGS        | 63.3%    |
| MATRIX SERVICE (MTRX)       | 62.6%    |
| QUIDEL (QDEL)               | 61.6%    |
| W&T OFFSHORE (WTI)          | 55.6%    |
| JOHNSON OUTDOORS 'A' (JOUT) | 52.3%    |
| CONN'S                      | 47.4%    |
| APPFOLIO CLASS A            | 47.1%    |
| IXYS (IXYS)                 | 44.1%    |

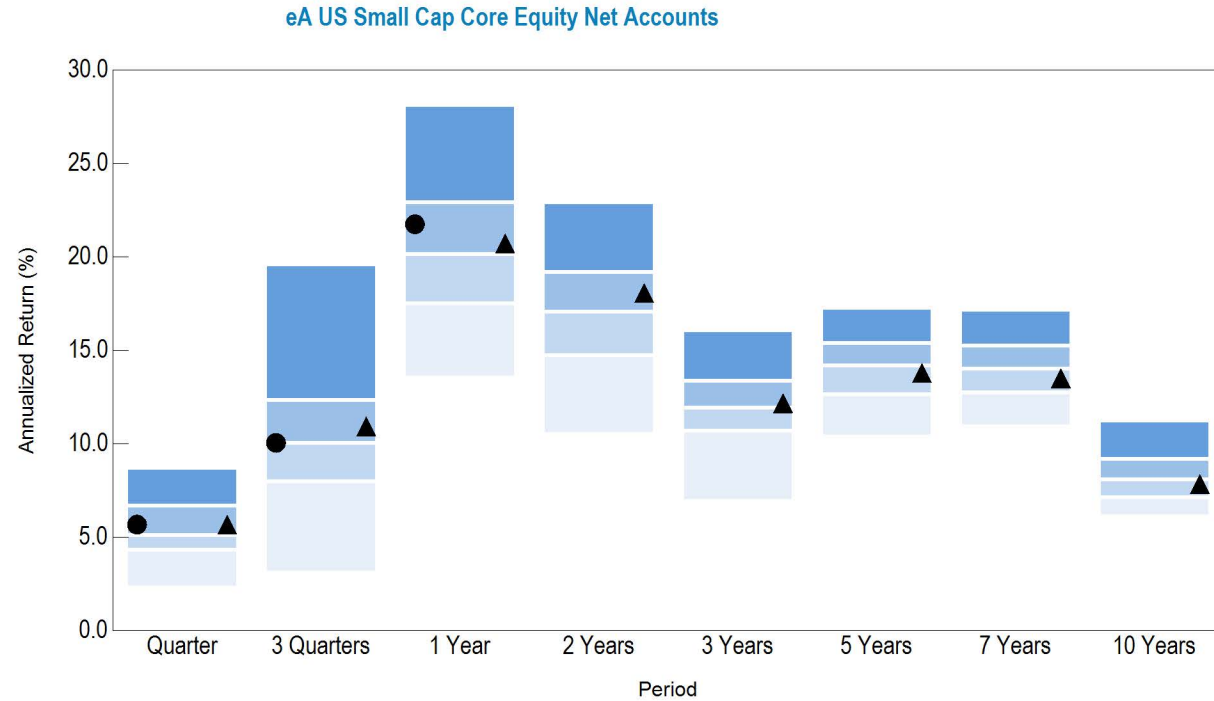
Worst Performers

|                             | Return % |
|-----------------------------|----------|
| AXOVANT SCIENCES (AXON)     | -70.3%   |
| RAIT FINANCIAL TRUST (RAS)  | -64.9%   |
| AVON PRODUCTS (AVP)         | -38.7%   |
| FTD COMPANIES (FTD)         | -34.8%   |
| MICROSTRATEGY (MSTR)        | -33.4%   |
| FRANCESCA'S HOLDINGS (FRAN) | -32.7%   |
| VERITIV (VRTV)              | -27.8%   |
| EAGLE PHARMACEUTICALS       | -24.4%   |
| CONTANGO OIL & GAS          | -24.2%   |
| SMART SAND                  | -23.9%   |

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

|                               | Total<br>Effects | Attribution Effects |                      |                        |             | Returns   |             | Sector Weights |             |               |               |
|-------------------------------|------------------|---------------------|----------------------|------------------------|-------------|-----------|-------------|----------------|-------------|---------------|---------------|
|                               |                  | Selection<br>Effect | Allocation<br>Effect | Interaction<br>Effects | Portfolio   | Benchmark | Portfolio   | Benchmark      |             |               |               |
| Energy                        | -0.2%            | -0.2%               | 0.0%                 | 0.0%                   | 0.7%        | 6.5%      | 2.6%        | 3.4%           |             |               |               |
| Materials                     | 0.1%             | 0.1%                | 0.0%                 | 0.0%                   | 8.0%        | 6.8%      | 4.7%        | 4.4%           |             |               |               |
| Industrials                   | 0.0%             | 0.0%                | 0.0%                 | 0.0%                   | 8.7%        | 8.6%      | 14.5%       | 14.6%          |             |               |               |
| Consumer Discretionary        | -0.4%            | -0.4%               | 0.0%                 | 0.0%                   | 0.2%        | 3.5%      | 13.2%       | 12.5%          |             |               |               |
| Consumer Staples              | 0.2%             | 0.2%                | 0.0%                 | -0.1%                  | 10.6%       | 2.7%      | 2.1%        | 2.7%           |             |               |               |
| Health Care                   | 0.2%             | 0.2%                | 0.0%                 | 0.0%                   | 9.3%        | 7.8%      | 14.7%       | 15.1%          |             |               |               |
| Financials                    | 0.1%             | 0.1%                | 0.0%                 | 0.0%                   | 5.9%        | 5.5%      | 19.5%       | 18.5%          |             |               |               |
| Information Technology        | 0.9%             | 0.9%                | 0.0%                 | 0.1%                   | 10.0%       | 4.9%      | 18.3%       | 17.1%          |             |               |               |
| Telecommunication<br>Services | 0.0%             | 0.0%                | 0.0%                 | 0.0%                   | -3.0%       | 0.7%      | 0.2%        | 0.9%           |             |               |               |
| Utilities                     | -0.1%            | -0.1%               | 0.0%                 | 0.0%                   | 1.2%        | 5.2%      | 3.0%        | 3.7%           |             |               |               |
| Real Estate                   | 0.0%             | 0.0%                | 0.0%                 | 0.0%                   | 1.9%        | 1.7%      | 6.8%        | 7.1%           |             |               |               |
| Cash                          | 0.0%             | 0.0%                | 0.0%                 | 0.0%                   | 0.3%        | --        | 0.5%        | 0.0%           |             |               |               |
| <b>Portfolio</b>              | <b>0.8%</b>      | <b>=</b>            | <b>0.7%</b>          | <b>+</b>               | <b>0.0%</b> | <b>+</b>  | <b>0.1%</b> | <b>6.4%</b>    | <b>5.6%</b> | <b>100.0%</b> | <b>100.0%</b> |





|                           | Quarter  | 3 Quarters | 1 Year    | 2 Years   | 3 Years   | 5 Years   | 7 Years   | 10 Years |
|---------------------------|----------|------------|-----------|-----------|-----------|-----------|-----------|----------|
| <b>5th Percentile</b>     | 8.7      | 19.6       | 28.1      | 22.9      | 16.1      | 17.3      | 17.2      | 11.2     |
| <b>25th Percentile</b>    | 6.7      | 12.4       | 23.0      | 19.2      | 13.4      | 15.4      | 15.3      | 9.2      |
| <b>Median</b>             | 5.1      | 10.1       | 20.2      | 17.1      | 12.0      | 14.2      | 14.1      | 8.1      |
| <b>75th Percentile</b>    | 4.4      | 8.0        | 17.5      | 14.8      | 10.7      | 12.7      | 12.8      | 7.2      |
| <b>95th Percentile</b>    | 2.3      | 3.1        | 13.6      | 10.6      | 7.0       | 10.4      | 11.0      | 6.1      |
| <b># of Portfolios</b>    | 103      | 102        | 102       | 101       | 99        | 92        | 84        | 64       |
| <b>● QMA US Small Cap</b> | 5.7 (43) | 10.0 (51)  | 21.8 (33) | -- (--)   | -- (--)   | -- (--)   | -- (--)   | -- (--)  |
| <b>▲ Russell 2000</b>     | 5.7 (43) | 10.9 (38)  | 20.7 (47) | 18.1 (35) | 12.2 (49) | 13.8 (59) | 13.5 (61) | 7.8 (59) |

Characteristics

|                                 | Portfolio | Russell 2000 |
|---------------------------------|-----------|--------------|
| Number of Holdings              | 349       | 2,000        |
| Weighted Avg. Market Cap. (\$B) | 2.1       | 2.2          |
| Median Market Cap. (\$B)        | 1.2       | 0.8          |
| Price To Earnings               | 26.1      | 24.6         |
| Price To Book                   | 4.1       | 3.2          |
| Price To Sales                  | 2.4       | 3.0          |
| Return on Equity (%)            | 16.7      | 10.4         |
| Yield (%)                       | 1.3       | 1.1          |
| Beta (holdings; domestic)       | 1.3       | 1.3          |

Top Holdings

|                        |      |
|------------------------|------|
| BRINK'S                | 0.9% |
| GRAND CANYON EDUCATION | 0.9% |
| CORCEPT THERAPEUTICS   | 0.8% |
| SANDERSON FARMS        | 0.8% |
| ADVANCED ENERGY INDS.  | 0.8% |
| ENTEGRIS               | 0.8% |
| FIBROGEN               | 0.8% |
| LOUISIANA PACIFIC      | 0.8% |
| MGIC INVESTMENT        | 0.8% |
| BLUCORA                | 0.7% |

Best Performers

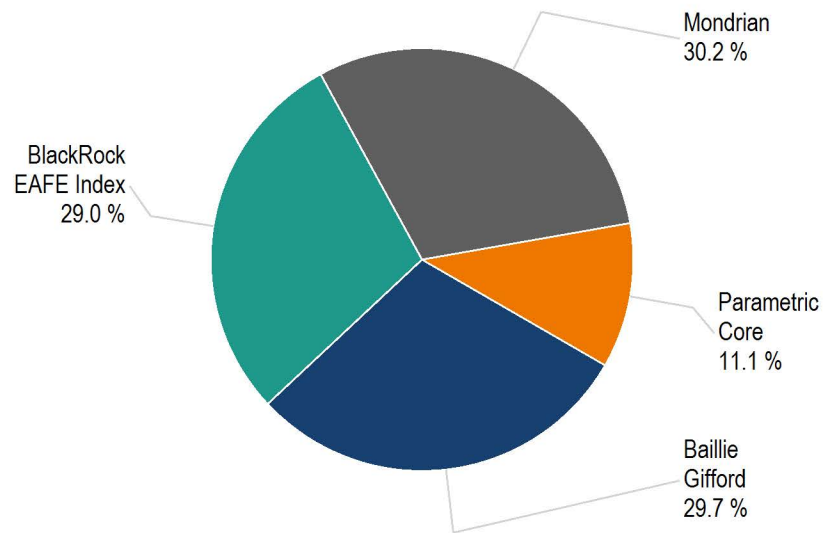
|                             | Return % |
|-----------------------------|----------|
| FIBROGEN                    | 66.6%    |
| CORCEPT THERAPEUTICS (CORT) | 63.6%    |
| ULTRA CLEAN HOLDINGS (UCTT) | 63.3%    |
| MATRIX SERVICE (MTRX)       | 62.6%    |
| QUIDEL (QDEL)               | 61.6%    |
| W&T OFFSHORE (WTI)          | 55.6%    |
| JOHNSON OUTDOORS 'A'        | 52.3%    |
| CONN'S                      | 47.4%    |
| APPFOLIO CLASS A            | 47.1%    |
| IXYS (IXYS)                 | 44.1%    |

Worst Performers

|                             | Return % |
|-----------------------------|----------|
| AXOVANT SCIENCES            | -70.3%   |
| RAIT FINANCIAL TRUST        | -64.9%   |
| AVON PRODUCTS (AVP)         | -38.7%   |
| FTD COMPANIES (FTD)         | -34.8%   |
| MICROSTRATEGY (MSTR)        | -33.4%   |
| FRANCESCA'S HOLDINGS (FRAN) | -32.7%   |
| VERITIV                     | -27.8%   |
| EAGLE PHARMACEUTICALS       | -24.4%   |
| CONTANGO OIL & GAS (MCF)    | -24.2%   |
| SMART SAND (SND)            | -23.9%   |

QMA US Small Cap Performance Attribution vs. Russell 2000

|                               | Total<br>Effects | Attribution Effects |                      |                        |             | Returns   |             | Sector Weights |             |               |               |
|-------------------------------|------------------|---------------------|----------------------|------------------------|-------------|-----------|-------------|----------------|-------------|---------------|---------------|
|                               |                  | Selection<br>Effect | Allocation<br>Effect | Interaction<br>Effects | Portfolio   | Benchmark | Portfolio   | Benchmark      |             |               |               |
| Energy                        | -0.2%            | -0.2%               | 0.0%                 | 0.0%                   | 0.7%        | 6.5%      | 2.6%        | 3.4%           |             |               |               |
| Materials                     | 0.1%             | 0.1%                | 0.0%                 | 0.0%                   | 8.0%        | 6.8%      | 4.7%        | 4.4%           |             |               |               |
| Industrials                   | 0.0%             | 0.0%                | 0.0%                 | 0.0%                   | 8.7%        | 8.6%      | 14.5%       | 14.6%          |             |               |               |
| Consumer Discretionary        | -0.4%            | -0.4%               | 0.0%                 | 0.0%                   | 0.2%        | 3.5%      | 13.2%       | 12.5%          |             |               |               |
| Consumer Staples              | 0.2%             | 0.2%                | 0.0%                 | -0.1%                  | 10.6%       | 2.7%      | 2.1%        | 2.7%           |             |               |               |
| Health Care                   | 0.2%             | 0.2%                | 0.0%                 | 0.0%                   | 9.3%        | 7.8%      | 14.7%       | 15.1%          |             |               |               |
| Financials                    | 0.1%             | 0.1%                | 0.0%                 | 0.0%                   | 5.9%        | 5.5%      | 19.5%       | 18.5%          |             |               |               |
| Information Technology        | 0.9%             | 0.9%                | 0.0%                 | 0.1%                   | 10.0%       | 4.9%      | 18.3%       | 17.1%          |             |               |               |
| Telecommunication<br>Services | 0.0%             | 0.0%                | 0.0%                 | 0.0%                   | -3.0%       | 0.7%      | 0.2%        | 0.9%           |             |               |               |
| Utilities                     | -0.1%            | -0.1%               | 0.0%                 | 0.0%                   | 1.2%        | 5.2%      | 3.0%        | 3.7%           |             |               |               |
| Real Estate                   | 0.0%             | 0.0%                | 0.0%                 | 0.0%                   | 1.9%        | 1.7%      | 6.8%        | 7.1%           |             |               |               |
| Cash                          | 0.0%             | 0.0%                | 0.0%                 | 0.0%                   | 0.3%        | --        | 0.5%        | 0.0%           |             |               |               |
| <b>Portfolio</b>              | <b>0.8%</b>      | <b>=</b>            | <b>0.7%</b>          | <b>+</b>               | <b>0.0%</b> | <b>+</b>  | <b>0.1%</b> | <b>6.4%</b>    | <b>5.6%</b> | <b>100.0%</b> | <b>100.0%</b> |



|                                     | Actual \$            | Actual %      | Manager Contribution to Excess Return % |
|-------------------------------------|----------------------|---------------|---|
| Baillie Gifford                     | \$243,435,148        | 29.7%         | -0.4%                                   |
| BlackRock EAFE Index                | \$237,794,885        | 29.0%         | 0.0%                                    |
| Mondrian                            | \$247,918,326        | 30.2%         | -0.4%                                   |
| Parametric Core                     | \$91,121,702         | 11.1%         | -0.1%                                   |
| Actual vs. Policy Weight Difference |                      |               | -0.2%                                   |
| <b>Total</b>                        | <b>\$820,270,060</b> | <b>100.0%</b> | <b>-1.1%</b>                            |

**Statistics Summary**

**3 Years**

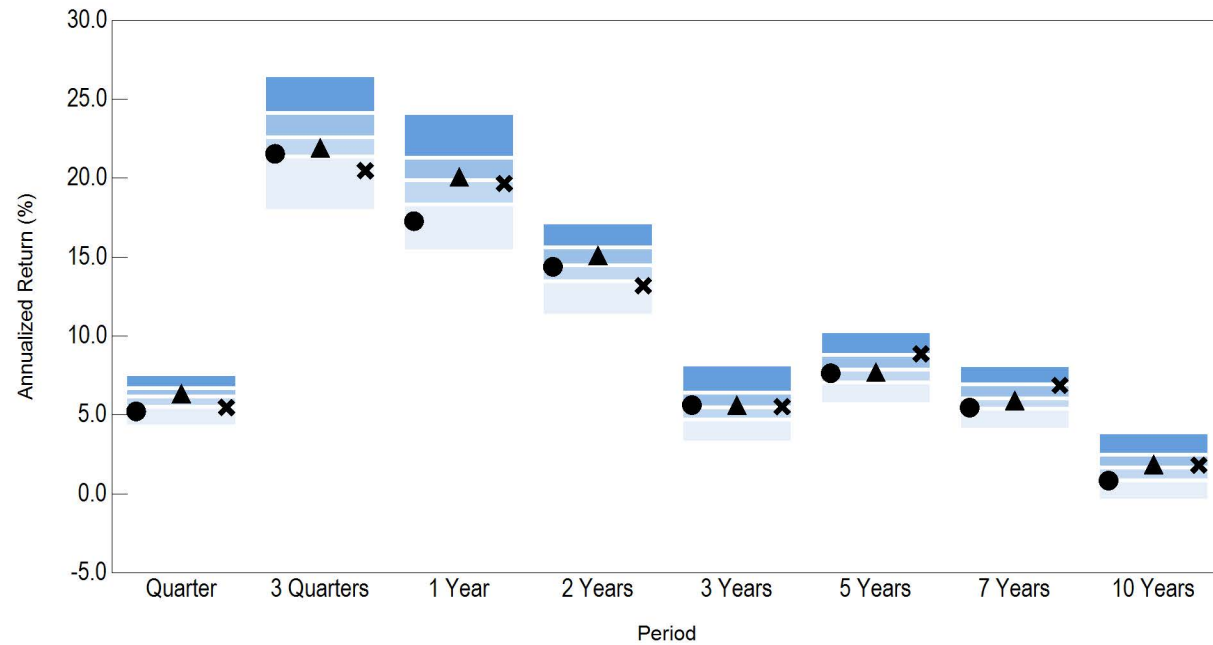
|                              | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|------------------------------|--------------|--------------------------|--------------|-------------------|----------------|
| International Equity         | 5.6%         | 11.9%                    | 0.4          | 0.0               | 1.9%           |
| MSCI ACWI ex US IMI          | 5.6%         | 12.1%                    | 0.4          | --                | 0.0%           |
| Developed Markets            | 6.0%         | 11.9%                    | 0.5          | 0.4               | 2.3%           |
| MSCI ACWI ex USA Gross       | 5.2%         | 12.3%                    | 0.4          | --                | 0.0%           |
| Baillie Gifford              | 8.3%         | 13.2%                    | 0.6          | 0.7               | 4.2%           |
| MSCI ACWI ex US              | 5.2%         | 12.3%                    | 0.4          | --                | 0.0%           |
| BlackRock EAFE Index         | 5.4%         | 12.3%                    | 0.4          | 2.8               | 0.1%           |
| MSCI EAFE                    | 5.0%         | 12.3%                    | 0.4          | --                | 0.0%           |
| Mondrian                     | 3.9%         | 11.6%                    | 0.3          | 0.1               | 5.4%           |
| MSCI ACWI ex USA Value Gross | 3.5%         | 13.2%                    | 0.2          | --                | 0.0%           |

**Statistics Summary**

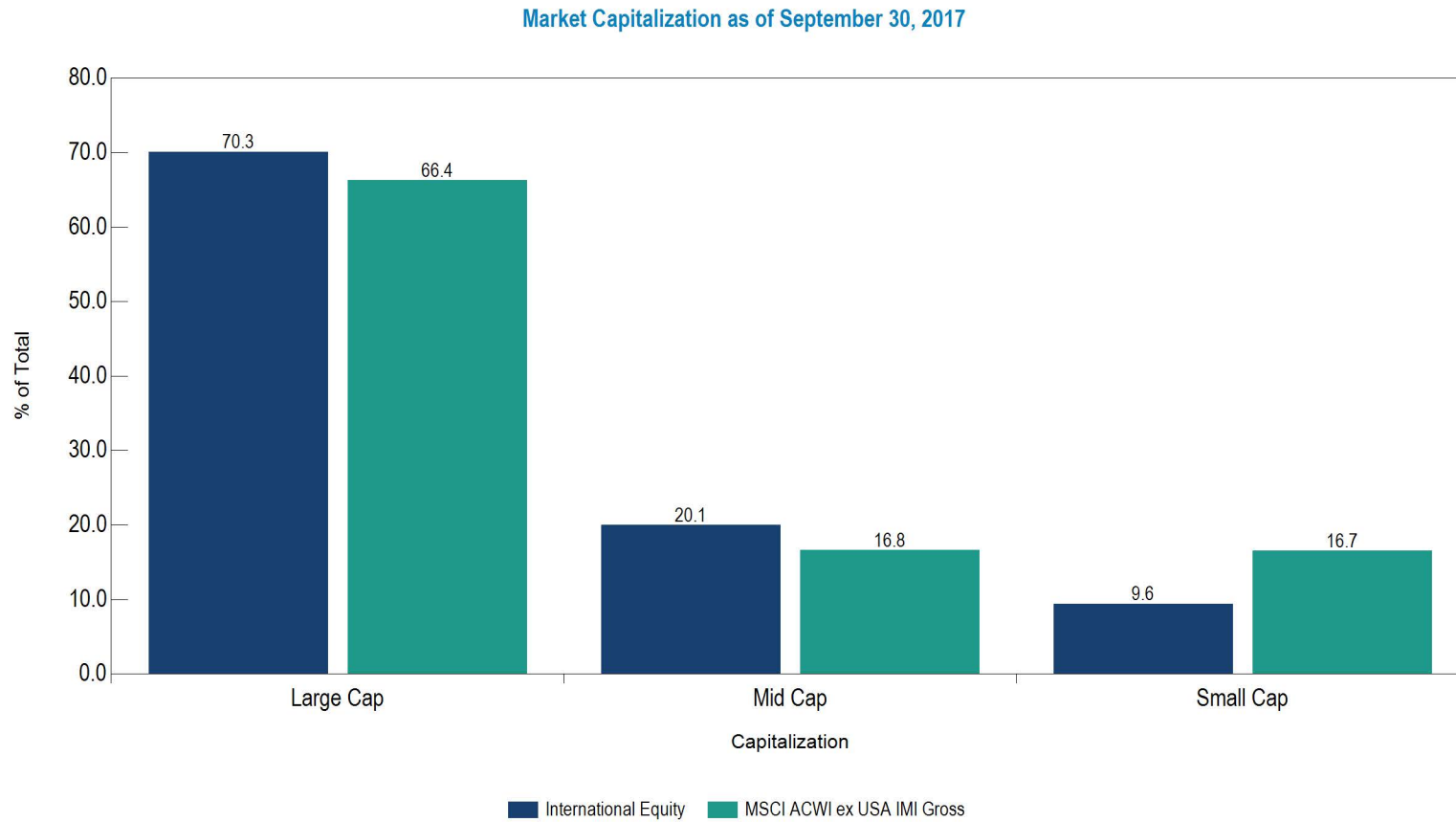
**5 Years**

|                              | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|------------------------------|--------------|--------------------------|--------------|-------------------|----------------|
| International Equity         | 7.6%         | 11.3%                    | 0.7          | 0.0               | 1.8%           |
| MSCI ACWI ex US IMI          | 7.7%         | 11.5%                    | 0.7          | --                | 0.0%           |
| Developed Markets            | 8.2%         | 11.3%                    | 0.7          | 0.3               | 2.2%           |
| MSCI ACWI ex USA Gross       | 7.5%         | 11.6%                    | 0.6          | --                | 0.0%           |
| Baillie Gifford              | 9.8%         | 12.4%                    | 0.8          | 0.2               | 4.1%           |
| MSCI ACWI ex US              | 9.0%         | 11.8%                    | 0.7          | --                | 0.0%           |
| Mondrian                     | 6.9%         | 11.2%                    | 0.6          | 0.1               | 4.6%           |
| MSCI ACWI ex USA Value Gross | 6.6%         | 12.5%                    | 0.5          | --                | 0.0%           |

InvestorForce All DB ex-US Eq Net Accounts



|                        | Quarter  | 3 Quarters | 1 Year    | 2 Years   | 3 Years  | 5 Years  | 7 Years  | 10 Years |
|------------------------|----------|------------|-----------|-----------|----------|----------|----------|----------|
| <b>Return (Rank)</b>   |          |            |           |           |          |          |          |          |
| 5th Percentile         | 7.6      | 26.5       | 24.1      | 17.2      | 8.2      | 10.3     | 8.1      | 3.9      |
| 25th Percentile        | 6.7      | 24.2       | 21.3      | 15.6      | 6.4      | 8.8      | 7.0      | 2.5      |
| Median                 | 6.2      | 22.6       | 19.9      | 14.5      | 5.5      | 7.9      | 6.1      | 1.7      |
| 75th Percentile        | 5.5      | 21.4       | 18.4      | 13.5      | 4.7      | 7.1      | 5.4      | 0.9      |
| 95th Percentile        | 4.3      | 18.0       | 15.4      | 11.3      | 3.3      | 5.7      | 4.1      | -0.4     |
| # of Portfolios        | 468      | 463        | 462       | 451       | 439      | 381      | 321      | 251      |
| ● International Equity | 5.2 (84) | 21.5 (72)  | 17.3 (86) | 14.4 (54) | 5.6 (46) | 7.6 (57) | 5.5 (74) | 0.8 (78) |
| ▲ MSCI ACWI ex US IMI  | 6.4 (41) | 21.9 (64)  | 20.1 (47) | 15.1 (37) | 5.6 (46) | 7.7 (54) | 5.9 (56) | 1.9 (44) |
| ✕ MSCI EAFE Gross      | 5.5 (76) | 20.5 (84)  | 19.7 (54) | 13.2 (80) | 5.5 (50) | 8.9 (25) | 6.9 (29) | 1.8 (46) |



See appendix for the market capitalization breakpoints.



Characteristics

|                                 | Portfolio | MSCI ACWI ex USA IMI Gross |
|---------------------------------|-----------|----------------------------|
| Number of Holdings              | 2,143     | 6,157                      |
| Weighted Avg. Market Cap. (\$B) | 49.3      | 54.3                       |
| Median Market Cap. (\$B)        | 6.8       | 1.5                        |
| Price To Earnings               | 23.1      | 21.0                       |
| Price To Book                   | 3.5       | 2.6                        |
| Price To Sales                  | 2.8       | 2.2                        |
| Return on Equity (%)            | 17.6      | 14.5                       |
| Yield (%)                       | 2.8       | 2.7                        |
| Beta (holdings; global)         | 1.1       | 1.0                        |

Top Holdings

|                      |      |
|----------------------|------|
| UNITED OVERSEAS BANK | 1.2% |
| SANOFI               | 1.1% |
| NOVARTIS 'R'         | 1.0% |
| NESTLE 'R'           | 1.0% |
| BP                   | 0.9% |
| HONDA MOTOR          | 0.9% |
| NASPERS              | 0.8% |
| IBERDROLA            | 0.8% |
| GLAXOSMITHKLINE      | 0.8% |
| ALLIANZ              | 0.8% |

Best Performers

|   | Return % |
|---|----------|
| CHULARAT HOSPITAL FB (Q:CUHF)                     | 353.9%   |
| VIA VAREJO UNITS (BR:VVU)                         | 122.5%   |
| ESTACIO PARTICIPACOES ON                          | 122.0%   |
| SUNAC CHINA HOLDINGS                              | 118.9%   |
| NATURALENDO TECH                                  | 99.8%    |
| CHINA EVERGRANDE                                  | 94.3%    |
| H & H INTL. HDG.                                  | 93.0%    |
| USINAS SIDERURGICAS DE MINAS GERAIS A PN (BR:US5) | 77.2%    |
| ALUMINUM CORP.OF CHINA 'H'                        | 75.2%    |
| FIAT CHRYSLER AUTOS. (I:FCA)                      | 71.0%    |

Worst Performers

|   | Return % |
|---|----------|
| PROVIDENT FINANCIAL (UKIR:PFG)          | -64.7%   |
| THAI AIRWAYS INTL.FB                    | -62.3%   |
| SUGIH ENERGY (ID:SUA)                   | -56.6%   |
| TEVA PHARM.INDS.ADR 1:1                 | -46.7%   |
| ORION HOLDINGS (KO:DGY)                 | -42.2%   |
| BUMI RESOURCES (ID:BMH)                 | -42.1%   |
| PAK SUZUKI MOTOR                        | -41.6%   |
| SIEMENS GAMESA RENEWABLE ENERGY (E:GAM) | -38.5%   |
| HONDA ATLAS CARS(PAK.)                  | -37.7%   |
| MATAHARI DEPARTMENT SOE. (ID:MDS)       | -35.3%   |

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                     | -0.1%               | 0.1%             | 0.0%              | -0.1%               | 13.1%        | 12.6%     | 4.9%           | 5.9%        |             |               |               |
| Materials                  | -0.1%               | 0.2%             | -0.1%             | -0.1%               | 11.8%        | 10.0%     | 5.1%           | 8.0%        |             |               |               |
| Industrials                | -0.1%               | -0.1%            | 0.0%              | 0.0%                | 5.3%         | 6.1%      | 13.3%          | 13.0%       |             |               |               |
| Consumer Discretionary     | -0.1%               | -0.1%            | 0.0%              | 0.0%                | 5.9%         | 6.9%      | 14.7%          | 11.9%       |             |               |               |
| Consumer Staples           | 0.2%                | 0.2%             | -0.1%             | 0.1%                | 3.7%         | 1.5%      | 12.5%          | 9.4%        |             |               |               |
| Health Care                | 0.1%                | 0.1%             | 0.0%              | 0.0%                | 3.1%         | 1.3%      | 9.1%           | 8.1%        |             |               |               |
| Financials                 | -0.4%               | -0.3%            | 0.0%              | -0.1%               | 4.2%         | 6.2%      | 17.6%          | 21.6%       |             |               |               |
| Information Technology     | -0.5%               | -0.5%            | 0.0%              | 0.0%                | 5.6%         | 10.0%     | 11.0%          | 11.0%       |             |               |               |
| Telecommunication Services | 0.0%                | 0.0%             | 0.0%              | 0.0%                | 2.7%         | 2.6%      | 4.8%           | 3.9%        |             |               |               |
| Utilities                  | 0.0%                | 0.0%             | 0.0%              | 0.0%                | 3.9%         | 4.6%      | 3.8%           | 3.1%        |             |               |               |
| Real Estate                | -0.1%               | -0.1%            | 0.0%              | 0.0%                | 4.0%         | 5.8%      | 2.6%           | 4.2%        |             |               |               |
| Cash                       | 0.0%                | 0.0%             | 0.0%              | 0.0%                | 0.3%         | --        | 0.7%           | 0.0%        |             |               |               |
| Unclassified               | 0.0%                | --               | 0.0%              | --                  | --           | 6.3%      | 0.0%           | 0.0%        |             |               |               |
| <b>Portfolio</b>           | <b>-1.0%</b>        | <b>=</b>         | <b>-0.5%</b>      | <b>+</b>            | <b>-0.4%</b> | <b>+</b>  | <b>-0.1%</b>   | <b>5.3%</b> | <b>6.3%</b> | <b>100.0%</b> | <b>100.0%</b> |

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

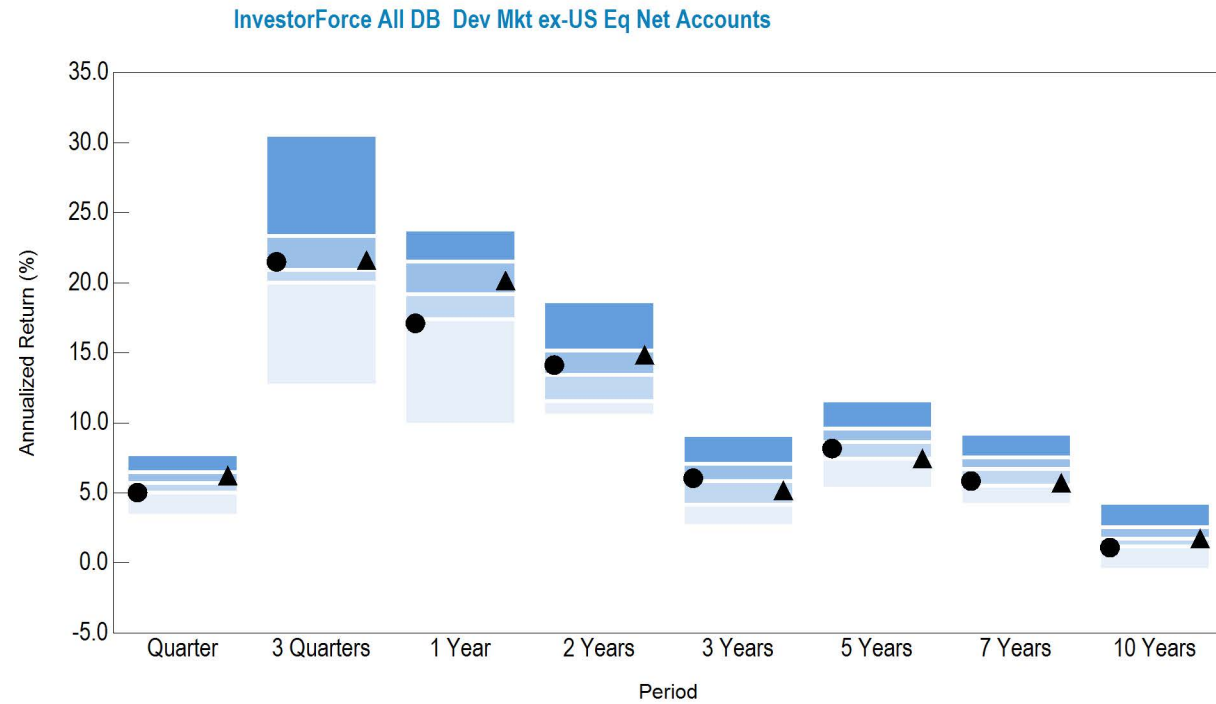
|                 | Returns and Weights |              |                |              | Attribution Effects |                   |                 |                    | Total Effects |
|-----------------|---------------------|--------------|----------------|--------------|---------------------|-------------------|-----------------|--------------------|---------------|
|                 | Manager Return      | Index Return | Manager Weight | Index Weight | Selection Effect    | Allocation Effect | Currency Effect | Interaction Effect |               |
| <b>Europe</b>   |                     |              |                |              |                     |                   |                 |                    |               |
| Austria         | 6.5%                | 10.3%        | 0.2%           | 0.2%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Belgium         | 9.1%                | 8.9%         | 0.3%           | 0.9%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Czech Republic* | 10.8%               | 9.8%         | 0.1%           | 0.0%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Denmark         | 9.2%                | 8.0%         | 2.3%           | 1.2%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.1%          |
| Finland         | 3.2%                | 3.8%         | 0.7%           | 0.8%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| France          | 7.7%                | 8.6%         | 4.8%           | 6.8%         | -0.1%               | 0.0%              | -0.1%           | 0.0%               | -0.1%         |
| Germany         | 9.3%                | 8.7%         | 6.5%           | 6.3%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Greece*         | -3.8%               | -8.7%        | 0.2%           | 0.1%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Hungary*        | 8.2%                | 9.4%         | 0.1%           | 0.1%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Ireland         | -4.6%               | 6.7%         | 0.1%           | 0.4%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Italy           | 14.3%               | 13.8%        | 1.9%           | 1.8%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Luxembourg      | -2.0%               | 6.3%         | 0.0%           | 0.0%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Netherlands     | 8.3%                | 9.6%         | 1.9%           | 2.3%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Norway          | 20.2%               | 18.5%        | 0.2%           | 0.5%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Poland*         | 10.0%               | 9.4%         | 0.4%           | 0.3%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Portugal        | 2.0%                | 11.1%        | 0.4%           | 0.1%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Russia*         | 17.7%               | 17.9%        | 1.0%           | 0.7%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Spain           | 1.4%                | 4.1%         | 3.0%           | 2.3%         | -0.1%               | 0.0%              | 0.0%            | 0.0%               | -0.1%         |
| Sweden          | 2.7%                | 5.1%         | 3.6%           | 2.3%         | -0.1%               | 0.0%              | 0.0%            | 0.0%               | -0.1%         |
| Switzerland     | 2.6%                | 2.1%         | 6.5%           | 5.6%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| United Kingdom  | 7.3%                | 5.8%         | 14.5%          | 12.4%        | 0.2%                | 0.0%              | 0.1%            | 0.0%               | 0.3%          |

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          | 2.0%                | 3.3%         | 3.9%           | 4.9%         | -0.1%               | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| China*             | 10.0%               | 14.5%        | 3.3%           | 6.3%         | -0.3%               | -0.3%             | 0.0%            | 0.1%               | -0.4%         |
| Hong Kong          | 5.6%                | 4.9%         | 3.2%           | 2.3%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| India*             | 2.7%                | 2.8%         | 2.4%           | 2.2%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Indonesia*         | -2.6%               | -1.6%        | 0.5%           | 0.6%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Japan              | 2.9%                | 4.4%         | 16.3%          | 17.1%        | -0.2%               | 0.0%              | 0.0%            | 0.0%               | -0.2%         |
| Korea*             | 0.7%                | 1.6%         | 3.2%           | 3.7%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Malaysia*          | 1.7%                | 1.9%         | 0.9%           | 0.6%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| New Zealand        | 0.3%                | 2.8%         | 0.0%           | 0.2%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Pakistan*          | -10.7%              | -12.1%       | 0.2%           | 0.1%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Philippines*       | 4.1%                | 2.8%         | 0.6%           | 0.3%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Singapore          | 2.7%                | 3.4%         | 3.3%           | 0.9%         | 0.0%                | -0.1%             | 0.0%            | 0.0%               | 0.0%          |
| Taiwan*            | 2.2%                | 2.5%         | 3.0%           | 3.1%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Thailand*          | 5.5%                | 10.2%        | 0.5%           | 0.6%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| <b>Americas</b>    |                     |              |                |              |                     |                   |                 |                    |               |
| Brazil*            | 17.5%               | 23.7%        | 1.6%           | 1.5%         | -0.1%               | 0.0%              | 0.0%            | 0.0%               | -0.1%         |
| Canada             | 9.6%                | 7.7%         | 0.4%           | 6.6%         | 0.2%                | 0.1%              | -0.3%           | -0.2%              | -0.2%         |
| Chile*             | 18.2%               | 17.3%        | 0.4%           | 0.3%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Colombia*          | 6.9%                | 6.7%         | 0.2%           | 0.1%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Mexico*            | -0.3%               | 1.3%         | 1.4%           | 0.8%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Peru*              | 14.3%               | 15.6%        | 0.3%           | 0.1%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| United States      | 3.7%                | 4.3%         | 1.0%           | 0.0%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |

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*                | 5.4%                | 3.4%         | 0.1%           | 0.0%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Israel                | -4.3%               | -8.6%        | 0.2%           | 0.6%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.1%          |
| Kazakhstan**          | 5.0%                | 3.3%         | 0.0%           | 0.0%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Kuwait**              | 17.8%               | 17.2%        | 0.2%           | 0.0%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Qatar*                | -5.3%               | -4.7%        | 0.3%           | 0.2%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Romania**             | 19.2%               | 4.1%         | 0.0%           | 0.0%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| South Africa*         | 6.1%                | 3.6%         | 2.3%           | 1.5%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.1%          |
| Turkey*               | 1.8%                | 0.6%         | 0.7%           | 0.3%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| United Arab Emirates* | 0.5%                | 3.8%         | 0.3%           | 0.2%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| <b>Totals</b>         |                     |              |                |               |                     |                   |                 |                    |               |
| Americas              | 9.0%                | 10.0%        | 5.2%           | 9.4%          | 0.1%                | -0.1%             | -0.3%           | 0.0%               | -0.3%         |
| Europe                | 6.8%                | 7.0%         | 48.6%          | 45.1%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Asia/Pacific          | 3.3%                | 5.2%         | 41.3%          | 42.9%         | -0.8%               | 0.0%              | 0.0%            | 0.0%               | -0.8%         |
| Other                 | 4.2%                | 0.3%         | 4.1%           | 2.7%          | 0.1%                | 0.0%              | 0.0%            | 0.1%               | 0.1%          |
| Cash                  | 0.3%                | --           | 0.7%           | 0.0%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| <b>Total</b>          | <b>5.3%</b>         | <b>6.3%</b>  | <b>100.0%</b>  | <b>100.0%</b> | <b>-0.7%</b>        | <b>-0.2%</b>      | <b>-0.2%</b>    | <b>0.0%</b>        | <b>-1.0%</b>  |
| <b>Totals</b>         |                     |              |                |               |                     |                   |                 |                    |               |
| Developed             | 5.3%                | 5.9%         | 75.1%          | 76.5%         | -0.3%               | 0.0%              | -0.2%           | 0.0%               | -0.5%         |
| Emerging*             | 5.4%                | 7.7%         | 23.9%          | 23.5%         | -0.5%               | 0.0%              | 0.0%            | 0.0%               | -0.5%         |
| Frontier**            | 16.5%               | --           | 0.2%           | 0.0%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Cash                  | 0.3%                | --           | 0.7%           | 0.0%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |



|                          | Quarter  | 3 Quarters | 1 Year    | 2 Years   | 3 Years  | 5 Years  | 7 Years  | 10 Years |
|--------------------------|----------|------------|-----------|-----------|----------|----------|----------|----------|
| <b>Return (Rank)</b>     |          |            |           |           |          |          |          |          |
| 5th Percentile           | 7.7      | 30.5       | 23.8      | 18.7      | 9.1      | 11.6     | 9.2      | 4.3      |
| 25th Percentile          | 6.5      | 23.4       | 21.5      | 15.2      | 7.1      | 9.6      | 7.6      | 2.6      |
| Median                   | 5.7      | 21.0       | 19.2      | 13.5      | 5.9      | 8.7      | 6.7      | 1.8      |
| 75th Percentile          | 5.1      | 20.0       | 17.4      | 11.6      | 4.2      | 7.5      | 5.5      | 1.2      |
| 95th Percentile          | 3.4      | 12.7       | 9.9       | 10.5      | 2.7      | 5.3      | 4.2      | -0.5     |
| # of Portfolios          | 168      | 168        | 163       | 160       | 151      | 130      | 102      | 68       |
| ● Developed Markets      | 5.0 (77) | 21.5 (42)  | 17.1 (78) | 14.1 (35) | 6.0 (45) | 8.2 (63) | 5.8 (69) | 1.1 (78) |
| ▲ MSCI ACWI ex USA Gross | 6.3 (31) | 21.6 (41)  | 20.2 (40) | 14.9 (27) | 5.2 (64) | 7.5 (76) | 5.7 (73) | 1.7 (54) |

Characteristics

|                                 | Portfolio | MSCI ACWI ex USA Gross |
|---------------------------------|-----------|------------------------|
| Number of Holdings              | 1,069     | 1,859                  |
| Weighted Avg. Market Cap. (\$B) | 52.6      | 62.9                   |
| Median Market Cap. (\$B)        | 11.3      | 8.0                    |
| Price To Earnings               | 23.4      | 21.1                   |
| Price To Book                   | 3.6       | 2.6                    |
| Price To Sales                  | 2.8       | 2.2                    |
| Return on Equity (%)            | 17.8      | 14.6                   |
| Yield (%)                       | 2.8       | 2.8                    |
| Beta (holdings: global)         | 1.1       | 1.1                    |

Top Holdings

|                       |      |
|-----------------------|------|
| UNITED OVERSEAS BANK  | 1.4% |
| SANOFI                | 1.2% |
| NOVARTIS 'R'          | 1.1% |
| NESTLE 'R'            | 1.1% |
| BP                    | 1.0% |
| HONDA MOTOR           | 1.0% |
| IBERDROLA             | 0.9% |
| GLAXOSMITHKLINE       | 0.9% |
| ALLIANZ               | 0.9% |
| TAKEDA PHARMACEUTICAL | 0.9% |

Best Performers

|  | Return % |
|--|----------|
| FIAT CHRYSLER AUTOS.                                   | 71.0%    |
| PROGRAMMED MAINT.SVS. SUSP -<br>SUSP.11/10/17 (A:PRGX) | 68.3%    |
| KAZ MINERALS (UKIR:KAZ)                                | 54.4%    |
| YASKAWA ELECTRIC                                       | 50.1%    |
| NEXT   | 46.5%    |
| LI & FUNG (K:FUNG)                                     | 42.2%    |
| YOOX NET-A-PORTER (I:YOOX)                             | 42.0%    |
| BROADLEAF (J:BDLF)                                     | 39.3%    |
| NCC GROUP (UKIR:NCC)                                   | 38.9%    |
| BAIDU 'A' ADR 10:1 (BIDU)                              | 38.5%    |

Worst Performers

|                                       | Return % |
|---------------------------------------|----------|
| PROVIDENT FINANCIAL                   | -64.7%   |
| TEVA PHARM.INDS.ADR 1:1 (TEVA)        | -46.7%   |
| ORION HOLDINGS (KO:DGY)               | -42.2%   |
| SIEMENS GAMESA RENEWABLE ENERGY       | -38.5%   |
| MESOBLAST (A:MSBX)                    | -31.9%   |
| PERMANENT TSB GHG. (LON) (UKIR:ILOAS) | -30.7%   |
| ORION 'B' (M:ORNB)                    | -27.2%   |
| KUDELSKI 'B' (S:KUD)                  | -26.7%   |
| DIXONS CARPHONE                       | -26.5%   |
| GEMALTO                               | -25.5%   |

Developed Markets Performance Attribution vs. MSCI ACWI ex USA Gross

|                               | Total<br>Effects | Attribution Effects |                      |                        | Returns      |           | Sector Weights |             |             |               |               |
|-------------------------------|------------------|---------------------|----------------------|------------------------|--------------|-----------|----------------|-------------|-------------|---------------|---------------|
|                               |                  | Selection<br>Effect | Allocation<br>Effect | Interaction<br>Effects | Portfolio    | Benchmark | Portfolio      | Benchmark   |             |               |               |
| Energy                        | -0.1%            | 0.0%                | -0.1%                | -0.1%                  | 13.4%        | 12.9%     | 4.5%           | 6.3%        |             |               |               |
| Materials                     | -0.1%            | 0.1%                | -0.1%                | -0.1%                  | 12.3%        | 10.6%     | 4.3%           | 7.5%        |             |               |               |
| Industrials                   | 0.0%             | 0.0%                | 0.0%                 | 0.0%                   | 5.3%         | 5.6%      | 13.8%          | 11.8%       |             |               |               |
| Consumer Discretionary        | -0.1%            | -0.1%               | 0.0%                 | 0.0%                   | 5.8%         | 7.0%      | 15.3%          | 11.3%       |             |               |               |
| Consumer Staples              | 0.2%             | 0.3%                | -0.1%                | 0.1%                   | 3.6%         | 1.3%      | 12.8%          | 9.9%        |             |               |               |
| Health Care                   | 0.1%             | 0.2%                | -0.1%                | 0.0%                   | 3.0%         | 1.0%      | 9.5%           | 8.3%        |             |               |               |
| Financials                    | -0.5%            | -0.4%               | 0.0%                 | -0.1%                  | 4.0%         | 6.1%      | 17.9%          | 23.3%       |             |               |               |
| Information Technology        | -0.5%            | -0.5%               | 0.0%                 | 0.0%                   | 5.5%         | 9.9%      | 11.2%          | 10.8%       |             |               |               |
| Telecommunication<br>Services | 0.0%             | -0.1%               | 0.0%                 | 0.0%                   | 1.9%         | 2.5%      | 4.2%           | 4.4%        |             |               |               |
| Utilities                     | 0.0%             | 0.0%                | 0.0%                 | 0.0%                   | 3.8%         | 4.6%      | 3.4%           | 3.1%        |             |               |               |
| Real Estate                   | -0.1%            | -0.1%               | 0.0%                 | 0.0%                   | 2.4%         | 6.2%      | 2.3%           | 3.2%        |             |               |               |
| Cash                          | 0.0%             | 0.0%                | 0.0%                 | 0.0%                   | 0.3%         | --        | 0.7%           | 0.0%        |             |               |               |
| Unclassified                  | 0.0%             | --                  | --                   | --                     | --           | --        | 0.0%           | 0.0%        |             |               |               |
| <b>Portfolio</b>              | <b>-1.1%</b>     | <b>=</b>            | <b>-0.7%</b>         | <b>+</b>               | <b>-0.4%</b> | <b>+</b>  | <b>0.0%</b>    | <b>5.1%</b> | <b>6.2%</b> | <b>100.0%</b> | <b>100.0%</b> |



Developed Markets Performance Attribution vs. MSCI ACWI ex USA Gross

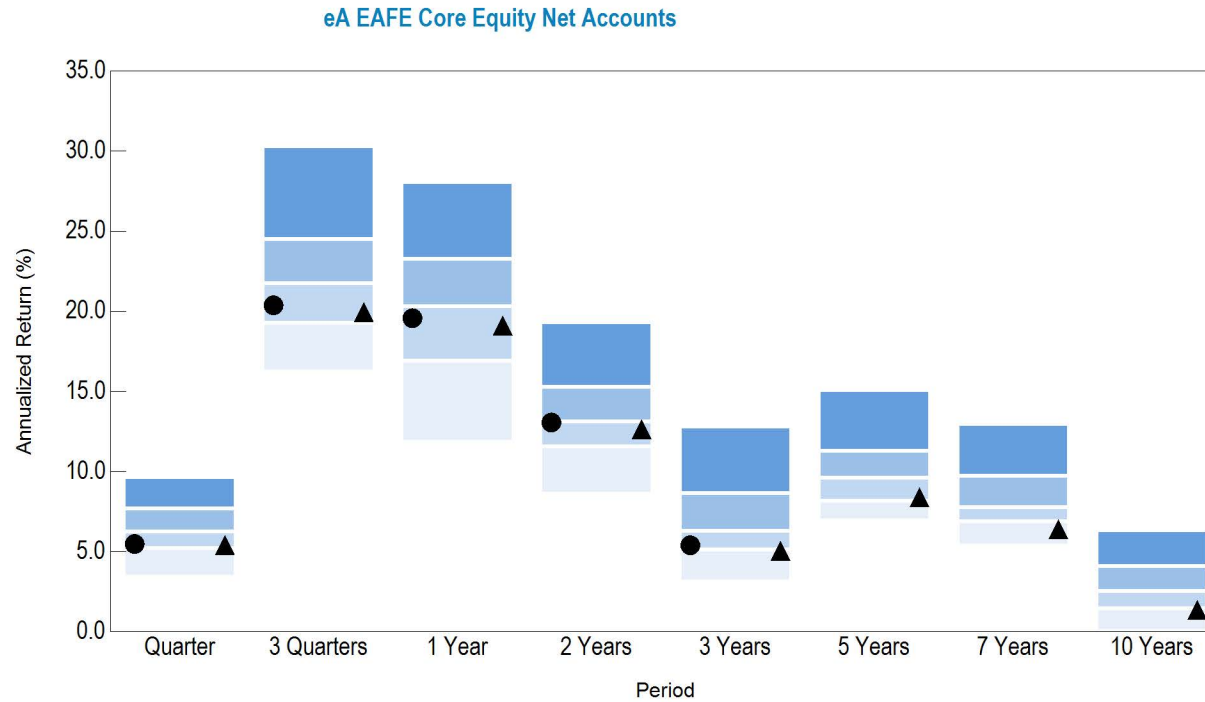
|                 | Returns and Weights |              |                |              | Attribution Effects |                   |                 |                    | Total Effects |
|-----------------|---------------------|--------------|----------------|--------------|---------------------|-------------------|-----------------|--------------------|---------------|
|                 | Manager Return      | Index Return | Manager Weight | Index Weight | Selection Effect    | Allocation Effect | Currency Effect | Interaction Effect |               |
| <b>Europe</b>   |                     |              |                |              |                     |                   |                 |                    |               |
| Austria         | 6.5%                | 12.8%        | 0.2%           | 0.2%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Belgium         | 9.1%                | 9.2%         | 0.3%           | 0.8%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Czech Republic* | --                  | 10.1%        | 0.0%           | 0.0%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Denmark         | 9.2%                | 7.8%         | 2.5%           | 1.2%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.1%          |
| Finland         | 3.2%                | 3.3%         | 0.8%           | 0.7%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| France          | 7.7%                | 8.5%         | 5.4%           | 7.3%         | -0.1%               | 0.0%              | -0.1%           | 0.0%               | -0.1%         |
| Germany         | 9.3%                | 7.8%         | 7.3%           | 6.6%         | 0.1%                | 0.0%              | 0.0%            | 0.0%               | 0.1%          |
| Greece*         | --                  | -12.0%       | 0.0%           | 0.1%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Hungary*        | --                  | 9.6%         | 0.0%           | 0.1%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Ireland         | -4.6%               | 6.2%         | 0.1%           | 0.3%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Italy           | 14.3%               | 13.9%        | 2.2%           | 1.6%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.1%          |
| Luxembourg      | -3.0%               | 6.2%         | 0.0%           | 0.0%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Netherlands     | 8.3%                | 9.5%         | 2.1%           | 2.5%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Norway          | 20.2%               | 19.3%        | 0.2%           | 0.4%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Poland*         | --                  | 9.6%         | 0.0%           | 0.3%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Portugal        | 2.0%                | 13.4%        | 0.4%           | 0.1%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Russia*         | 16.1%               | 18.1%        | 0.5%           | 0.8%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Spain           | 1.4%                | 4.2%         | 3.4%           | 2.4%         | -0.1%               | 0.0%              | 0.0%            | 0.0%               | -0.1%         |
| Sweden          | 2.7%                | 5.5%         | 4.1%           | 2.0%         | -0.1%               | 0.0%              | 0.1%            | -0.1%              | -0.1%         |
| Switzerland     | 2.6%                | 2.0%         | 7.3%           | 5.9%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| United Kingdom  | 7.4%                | 5.3%         | 16.2%          | 12.3%        | 0.2%                | -0.1%             | 0.1%            | 0.1%               | 0.4%          |

Developed Markets Performance Attribution vs. MSCI ACWI ex USA Gross

|                    | Returns and Weights |              |                |              | Attribution Effects |                   |                 |                    | Total Effects |
|--------------------|---------------------|--------------|----------------|--------------|---------------------|-------------------|-----------------|--------------------|---------------|
|                    | Manager Return      | Index Return | Manager Weight | Index Weight | Selection Effect    | Allocation Effect | Currency Effect | Interaction Effect |               |
| <b>AsiaPacific</b> |                     |              |                |              |                     |                   |                 |                    |               |
| Australia          | 2.0%                | 3.1%         | 4.4%           | 5.0%         | -0.1%               | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| China*             | 10.1%               | 14.7%        | 3.0%           | 6.6%         | -0.3%               | -0.4%             | 0.0%            | 0.2%               | -0.5%         |
| Hong Kong          | 2.1%                | 5.1%         | 2.8%           | 2.4%         | -0.1%               | 0.0%              | 0.0%            | 0.0%               | -0.1%         |
| India*             | 3.2%                | 3.0%         | 1.8%           | 2.1%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Indonesia*         | -0.9%               | -1.1%        | 0.1%           | 0.6%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Japan              | 2.9%                | 4.0%         | 18.4%          | 16.3%        | -0.2%               | 0.0%              | 0.0%            | 0.0%               | -0.2%         |
| Korea*             | 0.2%                | 2.5%         | 2.7%           | 3.7%         | -0.1%               | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Malaysia*          | 1.4%                | 1.9%         | 0.6%           | 0.6%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| New Zealand        | 0.3%                | 0.2%         | 0.0%           | 0.1%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Pakistan*          | --                  | -16.2%       | 0.0%           | 0.0%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Philippines*       | 5.6%                | 3.5%         | 0.2%           | 0.3%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Singapore          | 2.7%                | 3.1%         | 3.6%           | 0.9%         | 0.0%                | -0.1%             | 0.0%            | 0.0%               | -0.1%         |
| Taiwan*            | 2.5%                | 1.4%         | 2.5%           | 3.0%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Thailand*          | 3.5%                | 10.6%        | 0.2%           | 0.5%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| <b>Americas</b>    |                     |              |                |              |                     |                   |                 |                    |               |
| Brazil*            | 13.0%               | 22.9%        | 0.9%           | 1.6%         | -0.1%               | -0.1%             | 0.0%            | 0.1%               | -0.2%         |
| Canada             | 9.6%                | 8.1%         | 0.4%           | 6.6%         | 0.2%                | 0.0%              | -0.3%           | -0.2%              | -0.2%         |
| Chile*             | 16.9%               | 17.0%        | 0.0%           | 0.3%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Colombia*          | --                  | 6.5%         | 0.0%           | 0.1%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Mexico*            | -2.8%               | 1.5%         | 0.6%           | 0.9%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Peru*              | 14.3%               | 14.1%        | 0.1%           | 0.1%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| United States      | 2.5%                | 4.3%         | 1.0%           | 0.0%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |

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*                | --                  | 1.1%         | 0.0%           | 0.0%          | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Israel                | -4.3%               | -13.1%       | 0.2%           | 0.5%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.1%          |
| Kazakhstan**          | 5.0%                | 3.3%         | 0.0%           | 0.0%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Qatar*                | -4.9%               | -5.0%        | 0.1%           | 0.2%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Romania**             | 19.2%               | 4.1%         | 0.0%           | 0.0%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| South Africa*         | 7.4%                | 4.0%         | 1.8%           | 1.6%          | 0.1%                | 0.0%              | 0.0%            | 0.0%               | 0.1%          |
| Turkey*               | 0.9%                | 0.3%         | 0.3%           | 0.3%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| United Arab Emirates* | -2.4%               | 4.0%         | 0.1%           | 0.2%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| <b>Totals</b>         |                     |              |                |               |                     |                   |                 |                    |               |
| Americas              | 6.1%                | 10.2%        | 3.2%           | 9.5%          | -0.2%               | -0.1%             | -0.3%           | 0.1%               | -0.5%         |
| Europe                | 6.7%                | 6.7%         | 53.0%          | 45.7%         | 0.0%                | -0.1%             | 0.2%            | 0.0%               | 0.1%          |
| Asia/Pacific          | 3.1%                | 5.2%         | 40.4%          | 42.1%         | -0.9%               | 0.0%              | 0.0%            | 0.0%               | -0.9%         |
| Other                 | 4.4%                | 0.0%         | 2.7%           | 2.7%          | 0.1%                | 0.0%              | 0.0%            | 0.0%               | 0.1%          |
| Cash                  | 0.3%                | --           | 0.7%           | 0.0%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| <b>Total</b>          | <b>5.1%</b>         | <b>6.2%</b>  | <b>100.0%</b>  | <b>100.0%</b> | <b>-1.0%</b>        | <b>-0.2%</b>      | <b>-0.1%</b>    | <b>0.2%</b>        | <b>-1.1%</b>  |
| <b>Totals</b>         |                     |              |                |               |                     |                   |                 |                    |               |
| Developed             | 5.1%                | 5.7%         | 83.4%          | 76.3%         | -0.2%               | -0.1%             | 0.0%            | 0.0%               | -0.4%         |
| Emerging*             | 5.0%                | 8.0%         | 15.8%          | 23.7%         | -0.6%               | -0.3%             | -0.1%           | 0.2%               | -0.8%         |
| Frontier**            | 12.0%               | --           | 0.1%           | 0.0%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Cash                  | 0.3%                | --           | 0.7%           | 0.0%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |



|                               | Quarter  | 3 Quarters | 1 Year    | 2 Years   | 3 Years  | 5 Years  | 7 Years  | 10 Years |
|-------------------------------|----------|------------|-----------|-----------|----------|----------|----------|----------|
| <b>5th Percentile</b>         | 9.6      | 30.3       | 28.1      | 19.3      | 12.8     | 15.1     | 13.0     | 6.3      |
| <b>25th Percentile</b>        | 7.7      | 24.5       | 23.3      | 15.3      | 8.7      | 11.3     | 9.7      | 4.1      |
| <b>Median</b>                 | 6.3      | 21.8       | 20.4      | 13.1      | 6.3      | 9.6      | 7.8      | 2.6      |
| <b>75th Percentile</b>        | 5.2      | 19.3       | 16.9      | 11.6      | 5.1      | 8.2      | 6.9      | 1.5      |
| <b>95th Percentile</b>        | 3.4      | 16.3       | 11.9      | 8.6       | 3.1      | 7.0      | 5.4      | 0.1      |
| <b># of Portfolios</b>        | 128      | 128        | 128       | 121       | 113      | 95       | 83       | 67       |
| <b>● BlackRock EAFE Index</b> | 5.5 (69) | 20.4 (67)  | 19.6 (55) | 13.1 (51) | 5.4 (72) | -- (--)  | -- (--)  | -- (--)  |
| <b>▲ MSCI EAFE</b>            | 5.4 (71) | 20.0 (71)  | 19.1 (58) | 12.6 (56) | 5.0 (76) | 8.4 (70) | 6.4 (83) | 1.3 (83) |

Characteristics

|                                 | Portfolio | MSCI EAFE |
|---------------------------------|-----------|-----------|
| Number of Holdings              | 931       | 926       |
| Weighted Avg. Market Cap. (\$B) | 58.5      | 58.7      |
| Median Market Cap. (\$B)        | 10.8      | 10.9      |
| Price To Earnings               | 22.6      | 20.9      |
| Price To Book                   | 3.0       | 2.6       |
| Price To Sales                  | 2.4       | 2.1       |
| Return on Equity (%)            | 15.6      | 13.6      |
| Yield (%)                       | 3.0       | 3.0       |
| Beta (holdings; global)         | 1.1       | 1.1       |

Top Holdings

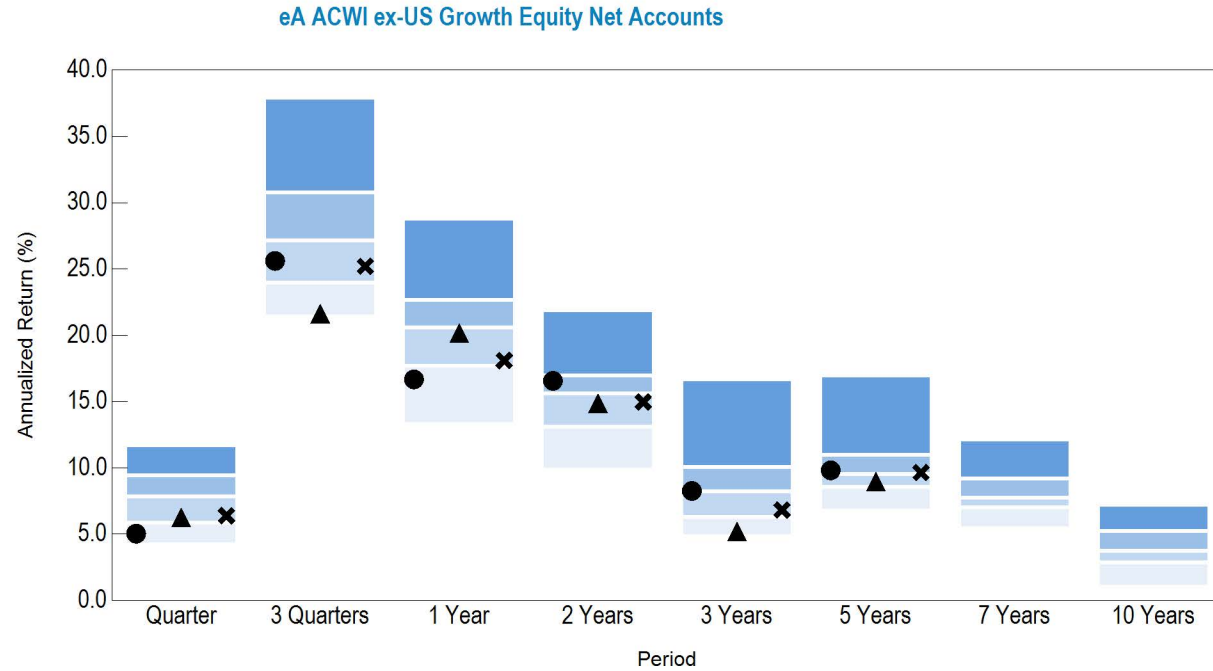
|                          |      |
|--------------------------|------|
| NESTLE 'R'               | 1.8% |
| HSBC HOLDINGS            | 1.4% |
| NOVARTIS 'R'             | 1.3% |
| ROCHE HOLDING            | 1.2% |
| TOYOTA MOTOR             | 1.1% |
| BRITISH AMERICAN TOBACCO | 1.0% |
| ROYAL DUTCH SHELL A      | 0.9% |
| TOTAL                    | 0.9% |
| BP                       | 0.9% |
| ROYAL DUTCH SHELL B      | 0.8% |

Best Performers

|                                  | Return % |
|----------------------------------|----------|
| FIAT CHRYSLER AUTOS. (I:FCA)     | 71.0%    |
| YASKAWA ELECTRIC                 | 50.1%    |
| NEXT                             | 46.5%    |
| LI & FUNG (K:FUNG)               | 42.2%    |
| SANTOS                           | 35.7%    |
| STMICROELECTRONICS (PAR) (F:STM) | 35.3%    |
| ANGLO AMERICAN (UKIR:AAL)        | 35.1%    |
| WORLDPAY GROUP                   | 33.8%    |
| RAIFFEISEN BANK INTL. (O:RAI)    | 33.0%    |
| NEXON (J:NXCL)                   | 32.0%    |

Worst Performers

|   | Return % |
|---|----------|
| PROVIDENT FINANCIAL (UKIR:PFG)          | -64.7%   |
| TEVA PHARM.INDS.ADR 1:1 (TEVA)          | -46.7%   |
| SIEMENS GAMESA RENEWABLE ENERGY (E:GAM) | -38.5%   |
| ORION 'B'                               | -27.2%   |
| DIXONS CARPHONE (UKIR:DC.)              | -26.5%   |
| GEMALTO                                 | -25.5%   |
| HEALTHSCOPE (A:HSOX)                    | -21.1%   |
| CARREFOUR (F:CRFR)                      | -20.0%   |
| ERICSSON 'B' (W:SL@G)                   | -19.8%   |
| ASICS                                   | -19.6%   |



|                          | Quarter  | 3 Quarters | 1 Year    | 2 Years   | 3 Years  | 5 Years  | 7 Years | 10 Years |
|--------------------------|----------|------------|-----------|-----------|----------|----------|---------|----------|
| <b>Return (Rank)</b>     |          |            |           |           |          |          |         |          |
| 5th Percentile           | 11.7     | 37.9       | 28.8      | 21.9      | 16.7     | 16.9     | 12.1    | 7.2      |
| 25th Percentile          | 9.5      | 30.8       | 22.7      | 17.0      | 10.1     | 11.0     | 9.2     | 5.3      |
| Median                   | 7.9      | 27.2       | 20.6      | 15.7      | 8.2      | 9.6      | 7.8     | 3.8      |
| 75th Percentile          | 5.9      | 24.0       | 17.7      | 13.1      | 6.3      | 8.6      | 7.0     | 2.9      |
| 95th Percentile          | 4.3      | 21.4       | 13.3      | 9.9       | 4.9      | 6.8      | 5.4     | 1.1      |
| # of Portfolios          | 73       | 73         | 73        | 70        | 62       | 56       | 48      | 38       |
| ● Baillie Gifford        | 5.0 (87) | 25.6 (61)  | 16.7 (79) | 16.6 (33) | 8.3 (50) | 9.8 (41) | -- (--) | -- (--)  |
| ▲ MSCI ACWI ex US        | 6.3 (69) | 21.6 (95)  | 20.2 (56) | 14.9 (57) | 5.2 (93) | 9.0 (67) | -- (--) | -- (--)  |
| ✕ MSCI ACWI ex US Growth | 6.4 (68) | 25.2 (68)  | 18.1 (73) | 15.0 (57) | 6.8 (72) | 9.6 (46) | -- (--) | -- (--)  |

Characteristics

|                                 | Portfolio | MSCI ACWI ex USA Gross |
|---------------------------------|-----------|------------------------|
| Number of Holdings              | 94        | 1,859                  |
| Weighted Avg. Market Cap. (\$B) | 45.5      | 62.9                   |
| Median Market Cap. (\$B)        | 12.8      | 8.0                    |
| Price To Earnings               | 29.5      | 21.1                   |
| Price To Book                   | 6.2       | 2.6                    |
| Price To Sales                  | 4.2       | 2.2                    |
| Return on Equity (%)            | 25.1      | 14.6                   |
| Yield (%)                       | 1.7       | 2.8                    |
| Beta (holdings: global)         | 1.2       | 1.1                    |

Top Holdings

|                                 |      |
|---------------------------------|------|
| TAIWAN SEMICON.SPN.ADR 1:5      | 2.7% |
| NASPERS                         | 2.6% |
| ATLAS COPCO 'B'                 | 2.4% |
| HARGREAVES LANSDOWN             | 2.2% |
| COCHLEAR                        | 2.1% |
| METTLER TOLEDO INTL.            | 2.0% |
| MS&AD INSURANCE GP.HDG.         | 2.0% |
| NOVO NORDISK 'B'                | 2.0% |
| BAIDU 'A' ADR 10:1              | 2.0% |
| ALIBABA GROUP HLDG.SPN. ADR 1:1 | 2.0% |

Best Performers

|  | Return % |
|--|----------|
| BAIDU 'A' ADR 10:1 (BIDU)              | 38.5%    |
| SHOPIFY 'A' (NYS) (SHOP)               | 34.1%    |
| JOHNSON MATTHEY (UKIR:JMAT)            | 23.0%    |
| INTERTEK GROUP (UKIR:ITRK)             | 22.6%    |
| ALIBABA GROUP HLDG.SPN. ADR 1:1 (BABA) | 22.6%    |
| PJSC MAGNIT GDR (REG S) (UKIR:MGNT)    | 21.6%    |
| DENSO (J:DE@N)                         | 21.1%    |
| FAIRFAX FINL.HDG.                      | 20.0%    |
| HARGREAVES LANSDOWN (UKIR:HL.)         | 19.0%    |
| WEIR GROUP (UKIR:WEIR)                 | 18.2%    |

Worst Performers

|   | Return % |
|---|----------|
| MESOBLAST (A:MSBX)                          | -31.9%   |
| PAX GLOBAL TECHNOLOGY (K:PGTL)              | -16.2%   |
| SHIMANO (J:SHMO)                            | -15.8%   |
| CAPITA (UKIR:CPI)                           | -15.6%   |
| MAKEMYTRIP (MMYT)                           | -14.3%   |
| TSINGTAO BREWERY 'H' (K:TSIN)               | -12.5%   |
| NAVER (KO:NHN)                              | -11.2%   |
| SURUGA BANK (J:SURB)                        | -10.6%   |
| KAKAKU.COM (J:KAKA)                         | -10.2%   |
| MAHINDRA & MAHINDRA GDR REG 'S' (UKIR:MHID) | -9.0%    |

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

|                               | Total<br>Effects | Attribution Effects |                      |                        | Returns      |           | Sector Weights |             |             |               |               |
|-------------------------------|------------------|---------------------|----------------------|------------------------|--------------|-----------|----------------|-------------|-------------|---------------|---------------|
|                               |                  | Selection<br>Effect | Allocation<br>Effect | Interaction<br>Effects | Portfolio    | Benchmark | Portfolio      | Benchmark   |             |               |               |
| Energy                        | -0.5%            | 0.0%                | -0.3%                | -0.2%                  | 11.4%        | 12.9%     | 0.5%           | 6.3%        |             |               |               |
| Materials                     | -0.1%            | 0.3%                | -0.2%                | -0.2%                  | 15.2%        | 10.7%     | 3.5%           | 7.5%        |             |               |               |
| Industrials                   | 0.0%             | 0.0%                | 0.0%                 | 0.0%                   | 5.6%         | 5.6%      | 14.3%          | 12.0%       |             |               |               |
| Consumer Discretionary        | -0.4%            | -0.3%               | 0.1%                 | -0.2%                  | 3.9%         | 6.9%      | 20.4%          | 11.2%       |             |               |               |
| Consumer Staples              | 0.0%             | 0.2%                | -0.5%                | 0.2%                   | 2.7%         | 1.4%      | 18.8%          | 9.9%        |             |               |               |
| Health Care                   | 0.3%             | 0.3%                | 0.0%                 | 0.0%                   | 4.7%         | 0.8%      | 8.2%           | 8.2%        |             |               |               |
| Financials                    | -0.5%            | -0.4%               | 0.0%                 | -0.1%                  | 3.8%         | 6.2%      | 16.4%          | 23.4%       |             |               |               |
| Information Technology        | 0.2%             | -0.1%               | 0.2%                 | 0.0%                   | 9.2%         | 10.0%     | 15.9%          | 10.8%       |             |               |               |
| Telecommunication<br>Services | 0.1%             | --                  | 0.2%                 | --                     | --           | 2.6%      | 0.0%           | 4.4%        |             |               |               |
| Utilities                     | 0.0%             | --                  | 0.1%                 | --                     | --           | 4.6%      | 0.0%           | 3.1%        |             |               |               |
| Real Estate                   | -0.1%            | --                  | 0.0%                 | --                     | --           | 6.1%      | 0.0%           | 3.2%        |             |               |               |
| Cash                          | -0.1%            | 0.0%                | -0.1%                | 0.0%                   | 0.3%         | --        | 1.9%           | 0.0%        |             |               |               |
| <b>Portfolio</b>              | <b>-1.1%</b>     | <b>=</b>            | <b>0.1%</b>          | <b>+</b>               | <b>-0.4%</b> | <b>+</b>  | <b>-0.7%</b>   | <b>5.2%</b> | <b>6.2%</b> | <b>100.0%</b> | <b>100.0%</b> |



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

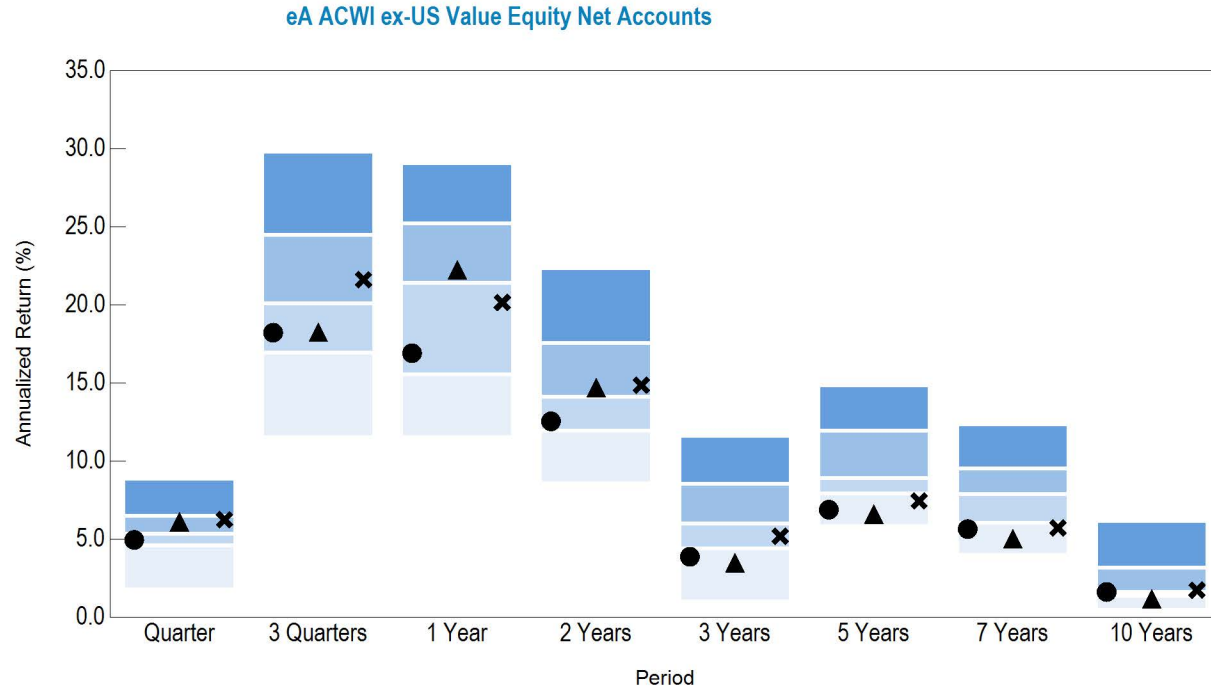
|                 | Returns and Weights |              |                |              | Attribution Effects |                   |                 |                    | Total Effects |
|-----------------|---------------------|--------------|----------------|--------------|---------------------|-------------------|-----------------|--------------------|---------------|
|                 | Manager Return      | Index Return | Manager Weight | Index Weight | Selection Effect    | Allocation Effect | Currency Effect | Interaction Effect |               |
| <b>Europe</b>   |                     |              |                |              |                     |                   |                 |                    |               |
| Austria         | --                  | 12.9%        | 0.0%           | 0.2%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Belgium         | --                  | 9.2%         | 0.0%           | 0.8%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Czech Republic* | --                  | 10.0%        | 0.0%           | 0.0%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Denmark         | 10.9%               | 7.7%         | 4.9%           | 1.2%         | 0.0%                | 0.0%              | 0.1%            | 0.1%               | 0.3%          |
| Finland         | 4.3%                | 3.3%         | 1.2%           | 0.7%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| France          | 3.4%                | 8.4%         | 1.0%           | 7.3%         | -0.4%               | 0.0%              | -0.2%           | 0.3%               | -0.3%         |
| Germany         | 13.5%               | 7.8%         | 4.6%           | 6.6%         | 0.4%                | 0.0%              | -0.1%           | -0.1%              | 0.2%          |
| Greece*         | --                  | -12.1%       | 0.0%           | 0.1%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Hungary*        | --                  | 9.6%         | 0.0%           | 0.1%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Ireland         | --                  | 6.1%         | 0.0%           | 0.3%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Italy           | --                  | 13.9%        | 0.0%           | 1.6%         | --                  | -0.1%             | -0.1%           | --                 | -0.1%         |
| Netherlands     | --                  | 9.6%         | 0.0%           | 2.5%         | --                  | 0.0%              | -0.1%           | --                 | -0.1%         |
| Norway          | --                  | 19.3%        | 0.0%           | 0.4%         | --                  | 0.0%              | 0.0%            | --                 | -0.1%         |
| Poland*         | --                  | 9.6%         | 0.0%           | 0.3%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Portugal        | 1.2%                | 13.4%        | 1.1%           | 0.1%         | 0.0%                | 0.0%              | 0.0%            | -0.1%              | 0.0%          |
| Russia*         | 21.6%               | 18.3%        | 0.5%           | 0.8%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Spain           | -2.1%               | 4.3%         | 2.3%           | 2.4%         | -0.2%               | 0.0%              | 0.0%            | 0.0%               | -0.1%         |
| Sweden          | 7.2%                | 5.5%         | 5.5%           | 2.0%         | 0.0%                | -0.1%             | 0.1%            | 0.1%               | 0.1%          |
| Switzerland     | 5.1%                | 2.0%         | 6.0%           | 5.9%         | 0.2%                | 0.0%              | 0.0%            | 0.0%               | 0.2%          |
| United Kingdom  | 9.6%                | 5.3%         | 14.9%          | 12.3%        | 0.5%                | -0.1%             | 0.1%            | 0.1%               | 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          | 2.4%                | 3.1%         | 5.6%           | 5.0%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | -0.1%         |
| China*             | 10.5%               | 14.7%        | 7.0%           | 6.6%         | -0.3%               | 0.1%              | 0.0%            | 0.0%               | -0.2%         |
| Hong Kong          | -2.6%               | 5.1%         | 1.9%           | 2.4%         | -0.2%               | 0.0%              | 0.0%            | 0.0%               | -0.2%         |
| India*             | -4.8%               | 3.0%         | 2.3%           | 2.1%         | -0.2%               | 0.0%              | 0.0%            | 0.0%               | -0.2%         |
| Indonesia*         | --                  | -1.0%        | 0.0%           | 0.6%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Japan              | -1.3%               | 4.0%         | 17.7%          | 16.3%        | -0.9%               | 0.0%              | 0.0%            | -0.1%              | -0.9%         |
| Korea*             | 2.2%                | 2.5%         | 4.0%           | 3.7%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Malaysia*          | 3.6%                | 1.9%         | 0.6%           | 0.6%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| New Zealand        | --                  | 0.3%         | 0.0%           | 0.1%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Pakistan*          | --                  | -16.4%       | 0.0%           | 0.0%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Philippines*       | 16.3%               | 3.5%         | 0.4%           | 0.3%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Singapore          | 3.0%                | 3.1%         | 4.5%           | 0.9%         | 0.0%                | -0.1%             | 0.0%            | 0.0%               | -0.1%         |
| Taiwan*            | 2.9%                | 1.4%         | 4.1%           | 3.0%         | 0.1%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Thailand*          | --                  | 10.6%        | 0.0%           | 0.5%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| <b>Americas</b>    |                     |              |                |              |                     |                   |                 |                    |               |
| Brazil*            | 12.3%               | 23.0%        | 1.0%           | 1.6%         | -0.1%               | -0.1%             | 0.0%            | 0.0%               | -0.2%         |
| Canada             | 23.1%               | 8.1%         | 0.2%           | 6.6%         | 1.2%                | 0.0%              | -0.3%           | -1.1%              | -0.1%         |
| Chile*             | --                  | 16.9%        | 0.0%           | 0.3%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Colombia*          | --                  | 6.5%         | 0.0%           | 0.1%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Mexico*            | -1.0%               | 1.6%         | 0.6%           | 0.9%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Peru*              | --                  | 14.0%        | 0.0%           | 0.1%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| United States      | 2.3%                | 4.3%         | 2.5%           | 0.0%         | 0.0%                | 0.0%              | 0.0%            | -0.1%              | -0.1%         |

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

|                       | Returns and Weights |              |                |               | Attribution Effects |                   |                 |                    | Total Effects |
|-----------------------|---------------------|--------------|----------------|---------------|---------------------|-------------------|-----------------|--------------------|---------------|
|                       | Manager Return      | Index Return | Manager Weight | Index Weight  | Selection Effect    | Allocation Effect | Currency Effect | Interaction Effect |               |
| <b>Other</b>          |                     |              |                |               |                     |                   |                 |                    |               |
| Egypt*                | --                  | 1.1%         | 0.0%           | 0.0%          | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Israel                | --                  | -12.6%       | 0.0%           | 0.5%          | --                  | 0.1%              | 0.0%            | --                 | 0.1%          |
| Qatar*                | --                  | -5.0%        | 0.0%           | 0.2%          | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| South Africa*         | 11.0%               | 4.0%         | 3.6%           | 1.6%          | 0.1%                | 0.1%              | -0.1%           | 0.1%               | 0.2%          |
| Turkey*               | --                  | 0.3%         | 0.0%           | 0.3%          | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| United Arab Emirates* | --                  | 4.0%         | 0.0%           | 0.2%          | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| <b>Totals</b>         |                     |              |                |               |                     |                   |                 |                    |               |
| Americas              | 7.3%                | 10.2%        | 4.4%           | 9.5%          | 0.0%                | -0.1%             | -0.3%           | 0.0%               | -0.4%         |
| Europe                | 8.3%                | 6.7%         | 42.0%          | 45.7%         | 0.8%                | 0.0%              | -0.2%           | -0.1%              | 0.6%          |
| Asia/Pacific          | 1.9%                | 5.2%         | 48.1%          | 42.2%         | -1.4%               | 0.0%              | 0.0%            | -0.2%              | -1.5%         |
| Other                 | 11.0%               | -0.1%        | 3.6%           | 2.7%          | 0.3%                | 0.0%              | -0.1%           | 0.1%               | 0.4%          |
| Cash                  | 0.3%                | --           | 1.9%           | 0.0%          | 0.0%                | -0.1%             | 0.0%            | 0.0%               | -0.1%         |
| <b>Total</b>          | <b>5.2%</b>         | <b>6.2%</b>  | <b>100.0%</b>  | <b>100.0%</b> | <b>-0.3%</b>        | <b>-0.1%</b>      | <b>-0.5%</b>    | <b>-0.1%</b>       | <b>-1.1%</b>  |
| <b>Totals</b>         |                     |              |                |               |                     |                   |                 |                    |               |
| Developed             | 4.9%                | 5.7%         | 73.9%          | 76.3%         | -0.3%               | 0.0%              | -0.3%           | 0.0%               | -0.6%         |
| Emerging*             | 6.4%                | 8.0%         | 24.2%          | 23.7%         | -0.2%               | 0.0%              | -0.1%           | 0.0%               | -0.4%         |
| Cash                  | 0.3%                | --           | 1.9%           | 0.0%          | 0.0%                | -0.1%             | 0.0%            | 0.0%               | -0.1%         |



|                                | Return (Rank) |            |           |           |          |          |          |          |
|--------------------------------|---------------|------------|-----------|-----------|----------|----------|----------|----------|
|                                | Quarter       | 3 Quarters | 1 Year    | 2 Years   | 3 Years  | 5 Years  | 7 Years  | 10 Years |
| 5th Percentile                 | 8.9           | 29.8       | 29.0      | 22.3      | 11.6     | 14.9     | 12.3     | 6.2      |
| 25th Percentile                | 6.5           | 24.5       | 25.2      | 17.6      | 8.6      | 12.0     | 9.6      | 3.2      |
| Median                         | 5.4           | 20.1       | 21.4      | 14.1      | 6.0      | 8.9      | 7.9      | 1.6      |
| 75th Percentile                | 4.6           | 17.0       | 15.6      | 12.0      | 4.4      | 8.0      | 6.1      | 1.4      |
| 95th Percentile                | 1.8           | 11.6       | 11.6      | 8.6       | 1.0      | 5.9      | 4.0      | 0.5      |
| # of Portfolios                | 37            | 37         | 37        | 33        | 33       | 28       | 23       | 19       |
| ● Mondrian                     | 5.0 (63)      | 18.2 (68)  | 16.9 (69) | 12.5 (63) | 3.9 (80) | 6.9 (88) | 5.6 (89) | 1.6 (53) |
| ▲ MSCI ACWI ex USA Value Gross | 6.1 (31)      | 18.3 (68)  | 22.2 (43) | 14.7 (46) | 3.5 (82) | 6.6 (89) | 5.0 (92) | 1.2 (89) |
| ✕ MSCI ACWI ex USA Gross       | 6.3 (30)      | 21.6 (34)  | 20.2 (58) | 14.9 (45) | 5.2 (67) | 7.5 (83) | 5.7 (88) | 1.7 (44) |

Characteristics

|                                 | Portfolio | MSCI ACWI ex USA Value Gross |
|---------------------------------|-----------|------------------------------|
| Number of Holdings              | 144       | 1,053                        |
| Weighted Avg. Market Cap. (\$B) | 53.9      | 59.1                         |
| Median Market Cap. (\$B)        | 17.9      | 7.5                          |
| Price To Earnings               | 18.8      | 15.2                         |
| Price To Book                   | 2.0       | 1.6                          |
| Price To Sales                  | 1.7       | 1.6                          |
| Return on Equity (%)            | 13.4      | 11.1                         |
| Yield (%)                       | 3.8       | 3.7                          |
| Beta (holdings: global)         | 1.0       | 1.1                          |

Top Holdings

|                       |      |
|-----------------------|------|
| SANOFI                | 2.8% |
| HONDA MOTOR           | 2.5% |
| IBERDROLA             | 2.5% |
| TAKEDA PHARMACEUTICAL | 2.4% |
| UNITED OVERSEAS BANK  | 2.3% |
| ENEL                  | 2.3% |
| TELIA COMPANY         | 2.3% |
| TESCO                 | 2.2% |
| ABB LTD N             | 2.2% |
| ENI                   | 2.2% |

Best Performers

|   | Return % |
|---|----------|
| NEXT (UKIR:NXT)                               | 46.5%    |
| CHINA BLUE CHEMICAL 'H'                       | 37.2%    |
| SUZANO BAHIA SUL PAPEL CELULOSE A PN (BR:BU5) | 34.5%    |
| ITAUSA INVESTIMENTOS ITAU PN                  | 29.1%    |
| ITAU UNIBANCO BANCO HLDG.ADR 1:1              | 25.4%    |
| VEDANTA                                       | 24.9%    |
| VEDANTA ADR 1:4                               | 24.7%    |
| EMBRAER SPNS ADR 1:4                          | 24.3%    |
| AMBEV SPONSORED ADR 1:1 (ABEV)                | 20.0%    |
| ROMGAZ GDR REGS (UKIR:SNGR)                   | 19.2%    |

Worst Performers

|  | Return % |
|--|----------|
| ERICSSON 'B'                           | -19.8%   |
| GOLDEN EAGLE RETAIL GP.                | -14.3%   |
| CHINA STE.CON.INTL.HDG.                | -13.7%   |
| HYUNDAI MOTOR PF.2 (KO:MOT)            | -12.1%   |
| QBE INSURANCE GROUP                    | -11.5%   |
| G4S                                    | -10.8%   |
| TONGDA GROUP HOLDINGS                  | -9.7%    |
| FIBRA UNO ADMINISTRACION REIT (MX:FUN) | -9.7%    |
| TURKIYE HALK BANKASI                   | -8.7%    |
| CHINA RES.POWER HDG.                   | -8.0%    |

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

|                            | Attribution Effects |                  |                   |                     | Returns      |           | Sector Weights |             |             |               |               |
|----------------------------|---------------------|------------------|-------------------|---------------------|--------------|-----------|----------------|-------------|-------------|---------------|---------------|
|                            | Total Effects       | Selection Effect | Allocation Effect | Interaction Effects | Portfolio    | Benchmark | Portfolio      | Benchmark   |             |               |               |
| Energy                     | 0.0%                | 0.0%             | 0.0%              | 0.0%                | 14.0%        | 14.2%     | 9.0%           | 9.1%        |             |               |               |
| Materials                  | -0.3%               | 0.6%             | -0.3%             | -0.6%               | 19.9%        | 12.5%     | 1.5%           | 6.6%        |             |               |               |
| Industrials                | -0.3%               | -0.3%            | 0.0%              | 0.0%                | 1.8%         | 5.0%      | 10.6%          | 8.9%        |             |               |               |
| Consumer Discretionary     | 0.4%                | 0.2%             | 0.0%              | 0.2%                | 8.4%         | 5.7%      | 12.1%          | 8.3%        |             |               |               |
| Consumer Staples           | 0.4%                | 0.2%             | -0.4%             | 0.6%                | 6.9%         | -1.8%     | 9.2%           | 2.8%        |             |               |               |
| Health Care                | 0.3%                | 0.3%             | -0.3%             | 0.3%                | 3.3%         | -1.5%     | 10.5%          | 6.2%        |             |               |               |
| Financials                 | -0.8%               | -0.4%            | 0.0%              | -0.4%               | 4.1%         | 6.3%      | 18.3%          | 37.8%       |             |               |               |
| Information Technology     | -0.3%               | -0.1%            | -0.1%             | 0.0%                | -0.7%        | 1.2%      | 9.5%           | 5.1%        |             |               |               |
| Telecommunication Services | -0.1%               | -0.1%            | -0.1%             | 0.1%                | 1.8%         | 2.5%      | 9.1%           | 6.1%        |             |               |               |
| Utilities                  | -0.1%               | -0.1%            | 0.0%              | 0.0%                | 3.9%         | 5.7%      | 7.4%           | 4.9%        |             |               |               |
| Real Estate                | -0.2%               | -0.3%            | 0.0%              | 0.1%                | -0.1%        | 7.1%      | 2.8%           | 4.3%        |             |               |               |
| Cash                       | 0.0%                | --               | --                | --                  | --           | --        | 0.0%           | 0.0%        |             |               |               |
| <b>Portfolio</b>           | <b>-1.2%</b>        | <b>=</b>         | <b>-0.2%</b>      | <b>+</b>            | <b>-1.3%</b> | <b>+</b>  | <b>0.3%</b>    | <b>4.9%</b> | <b>6.0%</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         | --                  | 15.4%        | 0.0%           | 0.3%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Belgium         | --                  | 10.5%        | 0.0%           | 0.4%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Czech Republic* | --                  | 12.7%        | 0.0%           | 0.0%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Denmark         | 2.5%                | 6.4%         | 0.8%           | 0.5%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Finland         | --                  | 3.2%         | 0.0%           | 1.0%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| France          | 7.6%                | 7.9%         | 6.1%           | 7.6%         | 0.0%                | 0.0%              | -0.1%           | 0.0%               | -0.1%         |
| Germany         | 7.9%                | 9.0%         | 8.2%           | 6.3%         | -0.1%               | 0.0%              | 0.1%            | 0.0%               | 0.0%          |
| Greece*         | --                  | -11.8%       | 0.0%           | 0.1%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Hungary*        | --                  | 14.6%        | 0.0%           | 0.1%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Ireland         | --                  | 4.1%         | 0.0%           | 0.0%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Italy           | 14.1%               | 12.0%        | 4.3%           | 2.4%         | 0.0%                | 0.1%              | 0.1%            | 0.0%               | 0.2%          |
| Netherlands     | 5.1%                | 10.7%        | 3.2%           | 1.2%         | -0.1%               | 0.1%              | 0.1%            | -0.1%              | -0.1%         |
| Norway          | --                  | 20.0%        | 0.0%           | 0.5%         | --                  | 0.0%              | 0.0%            | --                 | -0.1%         |
| Poland*         | --                  | 11.3%        | 0.0%           | 0.3%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Portugal        | --                  | 15.3%        | 0.0%           | 0.1%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Russia*         | 12.5%               | 15.2%        | 0.8%           | 0.8%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Spain           | 2.6%                | 5.8%         | 4.4%           | 3.6%         | -0.1%               | 0.0%              | 0.0%            | 0.0%               | -0.1%         |
| Sweden          | -6.1%               | 3.5%         | 3.8%           | 2.0%         | -0.2%               | -0.1%             | 0.0%            | -0.2%              | -0.4%         |
| Switzerland     | 1.2%                | 2.0%         | 7.9%           | 5.5%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | -0.1%         |
| United Kingdom  | 6.5%                | 7.3%         | 17.6%          | 13.7%        | -0.1%               | 0.0%              | 0.1%            | 0.0%               | 0.0%          |

Mondrian Performance Attribution vs. MSCI ACWI ex USA Value Gross

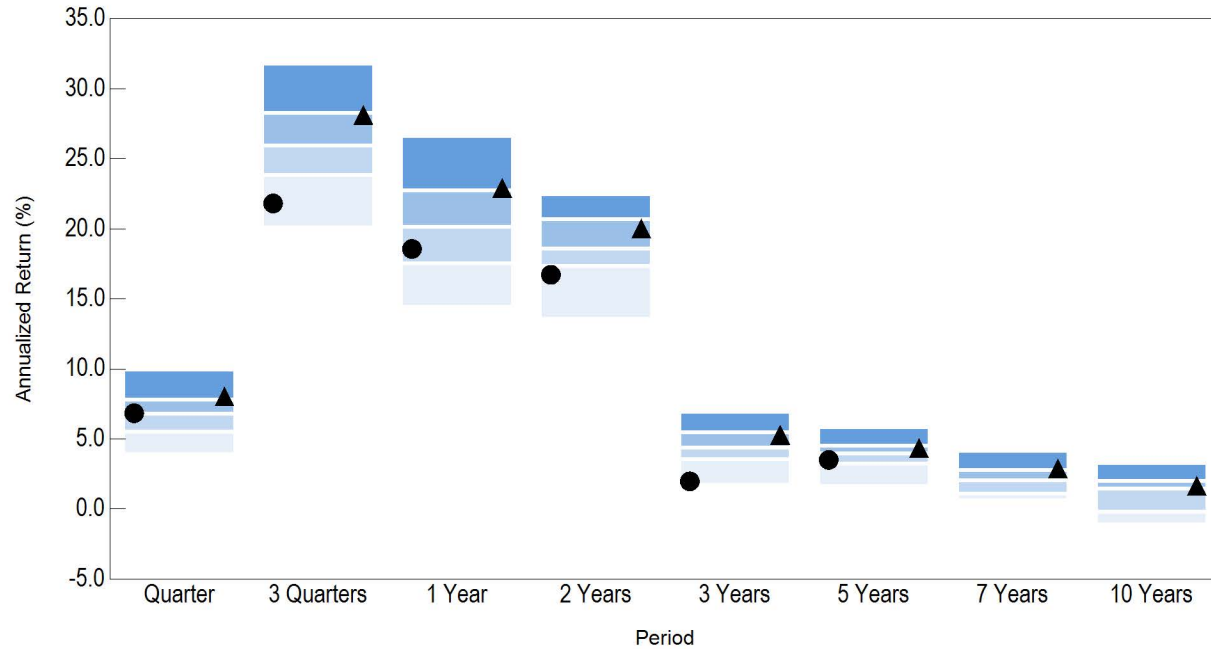
|                    | Returns and Weights |              |                |              | Attribution Effects |                   |                 |                    | Total Effects |
|--------------------|---------------------|--------------|----------------|--------------|---------------------|-------------------|-----------------|--------------------|---------------|
|                    | Manager Return      | Index Return | Manager Weight | Index Weight | Selection Effect    | Allocation Effect | Currency Effect | Interaction Effect |               |
| <b>AsiaPacific</b> |                     |              |                |              |                     |                   |                 |                    |               |
| Australia          | -11.5%              | 3.8%         | 0.9%           | 4.9%         | -0.7%               | 0.1%              | -0.1%           | 0.6%               | -0.1%         |
| China*             | 7.9%                | 8.7%         | 1.4%           | 6.2%         | -0.1%               | -0.2%             | 0.0%            | 0.1%               | -0.2%         |
| Hong Kong          | 2.3%                | 5.2%         | 2.6%           | 2.4%         | -0.1%               | 0.0%              | 0.0%            | 0.0%               | -0.1%         |
| India*             | 9.5%                | 3.9%         | 3.0%           | 2.0%         | 0.1%                | 0.0%              | 0.0%            | 0.1%               | 0.2%          |
| Indonesia*         | -0.9%               | -2.2%        | 0.4%           | 0.6%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Japan              | 6.6%                | 4.1%         | 14.5%          | 16.1%        | 0.4%                | 0.0%              | 0.0%            | 0.0%               | 0.4%          |
| Korea*             | 0.5%                | 0.6%         | 3.0%           | 3.6%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Malaysia*          | 0.2%                | 1.4%         | 1.2%           | 0.6%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| New Zealand        | --                  | 2.2%         | 0.0%           | 0.1%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Pakistan*          | --                  | -5.4%        | 0.0%           | 0.0%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Philippines*       | -7.1%               | 1.2%         | 0.3%           | 0.3%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Singapore          | 2.6%                | 3.9%         | 4.6%           | 1.0%         | 0.0%                | -0.1%             | 0.1%            | 0.0%               | -0.1%         |
| Taiwan*            | 2.1%                | -0.7%        | 2.9%           | 3.0%         | 0.1%                | 0.0%              | 0.0%            | 0.0%               | 0.1%          |
| Thailand*          | 3.5%                | 10.1%        | 0.6%           | 0.5%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| <b>Americas</b>    |                     |              |                |              |                     |                   |                 |                    |               |
| Brazil*            | 13.4%               | 24.6%        | 1.7%           | 1.5%         | -0.2%               | 0.0%              | 0.0%            | 0.0%               | -0.2%         |
| Canada             | 3.2%                | 9.2%         | 1.0%           | 6.6%         | -0.4%               | -0.1%             | -0.2%           | 0.3%               | -0.3%         |
| Chile*             | 16.9%               | 14.8%        | 0.1%           | 0.3%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Colombia*          | --                  | 7.2%         | 0.0%           | 0.1%         | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Mexico*            | -3.8%               | 5.2%         | 1.1%           | 0.9%         | -0.1%               | 0.0%              | 0.0%            | 0.0%               | -0.1%         |
| Peru*              | 14.3%               | 13.5%        | 0.3%           | 0.1%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |



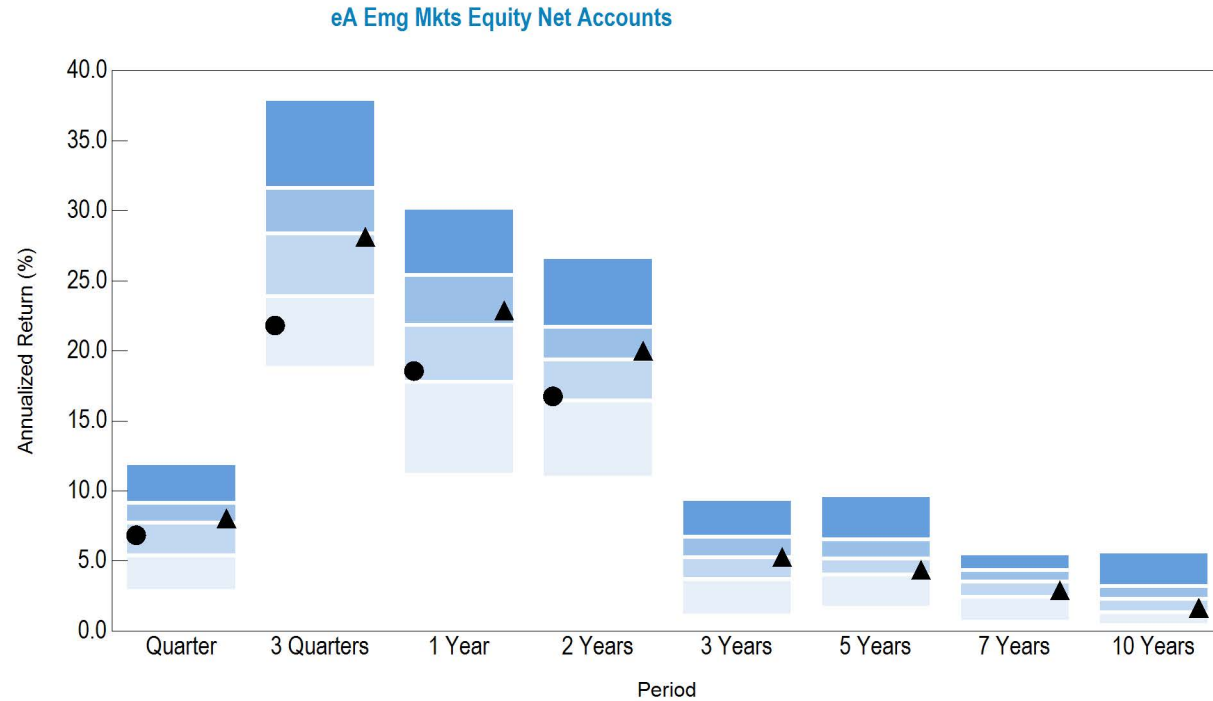
**Mondrian Performance Attribution vs. MSCI ACWI ex USA Value Gross**

|                       | Returns and Weights |              |                |               | Attribution Effects |                   |                 |                    | Total Effects |
|-----------------------|---------------------|--------------|----------------|---------------|---------------------|-------------------|-----------------|--------------------|---------------|
|                       | Manager Return      | Index Return | Manager Weight | Index Weight  | Selection Effect    | Allocation Effect | Currency Effect | Interaction Effect |               |
| <b>Other</b>          |                     |              |                |               |                     |                   |                 |                    |               |
| Egypt*                | --                  | 3.0%         | 0.0%           | 0.0%          | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| Israel                | --                  | -30.4%       | 0.0%           | 0.5%          | --                  | 0.2%              | 0.0%            | --                 | 0.2%          |
| Kazakhstan**          | 5.0%                | 6.0%         | 0.1%           | 0.0%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Qatar*                | -4.9%               | -2.2%        | 0.4%           | 0.2%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Romania**             | 19.2%               | 6.0%         | 0.1%           | 0.0%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| South Africa*         | -1.1%               | 0.7%         | 1.6%           | 1.6%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Turkey*               | 0.9%                | -0.6%        | 1.0%           | 0.3%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| United Arab Emirates* | -2.4%               | 3.7%         | 0.4%           | 0.2%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| <b>Totals</b>         |                     |              |                |               |                     |                   |                 |                    |               |
| Americas              | 6.5%                | 11.5%        | 4.2%           | 9.5%          | -0.4%               | -0.2%             | -0.3%           | 0.2%               | -0.6%         |
| Europe                | 5.5%                | 7.3%         | 57.1%          | 46.4%         | -0.8%               | 0.0%              | 0.2%            | -0.2%              | -0.7%         |
| Asia/Pacific          | 4.2%                | 4.0%         | 35.3%          | 41.3%         | 0.1%                | 0.0%              | 0.0%            | 0.0%               | 0.1%          |
| Other                 | -1.0%               | -4.8%        | 3.4%           | 2.7%          | 0.1%                | -0.1%             | 0.0%            | 0.0%               | 0.1%          |
| Cash                  | --                  | --           | 0.0%           | 0.0%          | --                  | 0.0%              | 0.0%            | --                 | 0.0%          |
| <b>Total</b>          | <b>4.9%</b>         | <b>6.0%</b>  | <b>100.0%</b>  | <b>100.0%</b> | <b>-0.9%</b>        | <b>-0.2%</b>      | <b>-0.1%</b>    | <b>0.0%</b>        | <b>-1.2%</b>  |
| <b>Totals</b>         |                     |              |                |               |                     |                   |                 |                    |               |
| Developed             | 5.1%                | 6.2%         | 79.8%          | 76.7%         | -0.7%               | 0.0%              | 0.0%            | 0.0%               | -0.8%         |
| Emerging*             | 3.8%                | 5.7%         | 20.1%          | 23.3%         | -0.4%               | 0.0%              | -0.1%           | 0.1%               | -0.4%         |
| Frontier**            | 12.0%               | --           | 0.2%           | 0.0%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |

InvestorForce All DB Emg Mkt Eq Net Accounts



|                               | Return (Rank) |            |           |           |          |          |          |          |
|-------------------------------|---------------|------------|-----------|-----------|----------|----------|----------|----------|
|                               | Quarter       | 3 Quarters | 1 Year    | 2 Years   | 3 Years  | 5 Years  | 7 Years  | 10 Years |
| 5th Percentile                | 9.9           | 31.8       | 26.6      | 22.5      | 6.9      | 5.8      | 4.1      | 3.3      |
| 25th Percentile               | 7.8           | 28.3       | 22.8      | 20.7      | 5.5      | 4.5      | 2.8      | 2.0      |
| Median                        | 6.8           | 26.0       | 20.2      | 18.6      | 4.4      | 4.0      | 2.1      | 1.5      |
| 75th Percentile               | 5.6           | 23.9       | 17.6      | 17.4      | 3.6      | 3.3      | 1.1      | -0.1     |
| 95th Percentile               | 3.9           | 20.1       | 14.5      | 13.6      | 1.8      | 1.7      | 0.7      | -1.1     |
| # of Portfolios               | 105           | 104        | 101       | 98        | 93       | 70       | 36       | 14       |
| ● Emerging Markets            | 6.8 (51)      | 21.8 (91)  | 18.6 (67) | 16.7 (83) | 2.0 (95) | 3.5 (64) | -- (--)  | -- (--)  |
| ▲ MSCI Emerging Markets Gross | 8.0 (21)      | 28.1 (26)  | 22.9 (21) | 20.0 (32) | 5.3 (30) | 4.4 (33) | 2.9 (23) | 1.7 (39) |



|                               | Return (Rank) |      | Return (Rank) |      | Return (Rank) |      | Return (Rank) |      | Return (Rank) |      | Return (Rank) |      | Return (Rank) |      |
|-------------------------------|---------------|------|---------------|------|---------------|------|---------------|------|---------------|------|---------------|------|---------------|------|
| 5th Percentile                | 11.9          | (63) | 37.9          | (84) | 30.2          | (69) | 26.7          | (73) | 9.4           | (--) | 9.7           | (--) | 5.5           | (--) |
| 25th Percentile               | 9.2           | (45) | 31.6          | (52) | 25.4          | (42) | 21.7          | (43) | 6.8           | (51) | 6.6           | (70) | 4.4           | (69) |
| Median                        | 7.8           |      | 28.4          |      | 21.9          |      | 19.4          |      | 5.3           |      | 5.2           |      | 3.6           |      |
| 75th Percentile               | 5.4           |      | 23.9          |      | 17.8          |      | 16.5          |      | 3.7           |      | 4.0           |      | 2.5           |      |
| 95th Percentile               | 2.9           |      | 18.8          |      | 11.2          |      | 10.9          |      | 1.1           |      | 1.7           |      | 0.7           |      |
| # of Portfolios               | 185           |      | 181           |      | 181           |      | 177           |      | 166           |      | 134           |      | 87            |      |
| ● Parametric Core             | 6.8           | (63) | 21.8          | (84) | 18.6          | (69) | 16.8          | (73) | --            | (--) | --            | (--) | --            | (--) |
| ▲ MSCI Emerging Markets Gross | 8.0           | (45) | 28.1          | (52) | 22.9          | (42) | 20.0          | (43) | 5.3           | (51) | 4.4           | (70) | 2.9           | (69) |

Characteristics

|                                 | Portfolio | MSCI Emerging Markets<br>Gross |
|---------------------------------|-----------|--------------------------------|
| Number of Holdings              | 1,151     | 839                            |
| Weighted Avg. Market Cap. (\$B) | 22.7      | 80.6                           |
| Median Market Cap. (\$B)        | 3.3       | 5.5                            |
| Price To Earnings               | 20.2      | 21.5                           |
| Price To Book                   | 3.1       | 2.8                            |
| Price To Sales                  | 2.6       | 2.2                            |
| Return on Equity (%)            | 16.2      | 17.4                           |
| Yield (%)                       | 2.8       | 2.3                            |
| Beta (holdings; global)         | 0.9       | 1.0                            |

Top Holdings

|  |      |
|--|------|
| SAMSUNG ELECTRONICS                      | 0.9% |
| AMERICA MOVIL SAB DE CV SPN.ADR 'L' 1:20 | 0.9% |
| SBERBANK OF RUSSIA                       | 0.9% |
| CHINA MOBILE                             | 0.8% |
| NASPERS                                  | 0.8% |
| SASOL                                    | 0.7% |
| CREDICORP                                | 0.6% |
| GRUPO TELEVISIA SPN.ADR 1:5              | 0.6% |
| MAGNIT                                   | 0.6% |
| OAO GAZPROM SPN.ADR 1:2                  | 0.5% |

Best Performers

|   | Return % |
|---|----------|
| CHULARAT HOSPITAL FB (Q:CUHF)                     | 353.9%   |
| VIA VAREJO UNITS (BR:VVU)                         | 122.5%   |
| ESTACIO PARTICIPACOES ON (BR:EST)                 | 122.0%   |
| SUNAC CHINA HOLDINGS (K:SCHL)                     | 118.9%   |
| NATURALENDO TECH                                  | 99.8%    |
| CHINA EVERGRANDE                                  | 94.3%    |
| H & H INTL. HDG. (K:BIHT)                         | 93.0%    |
| USINAS SIDERURGICAS DE MINAS GERAIS A PN (BR:US5) | 77.2%    |
| ALUMINUM CORP.OF CHINA 'H'                        | 75.2%    |
| EVRAZ (UKIR:EVR)                                  | 70.4%    |

Worst Performers

|                                   | Return % |
|-----------------------------------|----------|
| THAI AIRWAYS INTL.FB (Q:TAIF)     | -62.3%   |
| SUGIH ENERGY                      | -56.6%   |
| ORION HOLDINGS (KO:DGY)           | -42.2%   |
| BUMI RESOURCES                    | -42.1%   |
| PAK SUZUKI MOTOR (PK:PSM)         | -41.6%   |
| HONDA ATLAS CARS(PAK.)            | -37.7%   |
| MATAHARI DEPARTMENT SOE. (ID:MDS) | -35.3%   |
| HOUSING DEV.&.INFR. (IN:IHD)      | -34.3%   |
| GS RETAIL                         | -33.1%   |
| HABIB BANK                        | -32.1%   |

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

|                            | Attribution Effects |                  |                   |                     | Returns      |           | Sector Weights |             |             |               |               |
|----------------------------|---------------------|------------------|-------------------|---------------------|--------------|-----------|----------------|-------------|-------------|---------------|---------------|
|                            | Total Effects       | Selection Effect | Allocation Effect | Interaction Effects | Portfolio    | Benchmark | Portfolio      | Benchmark   |             |               |               |
| Energy                     | 0.0%                | 0.0%             | 0.1%              | 0.0%                | 12.1%        | 13.3%     | 8.6%           | 6.5%        |             |               |               |
| Materials                  | 0.1%                | 0.0%             | 0.1%              | 0.0%                | 10.3%        | 10.2%     | 12.1%          | 7.1%        |             |               |               |
| Industrials                | 0.1%                | 0.2%             | -0.2%             | 0.2%                | 5.2%         | 1.7%      | 9.6%           | 5.7%        |             |               |               |
| Consumer Discretionary     | 0.3%                | 0.1%             | 0.0%              | 0.1%                | 7.4%         | 5.0%      | 9.6%           | 10.5%       |             |               |               |
| Consumer Staples           | 0.1%                | 0.2%             | -0.2%             | 0.1%                | 4.8%         | 2.4%      | 9.5%           | 6.8%        |             |               |               |
| Health Care                | -0.1%               | 0.0%             | -0.1%             | 0.0%                | 3.9%         | 3.2%      | 5.5%           | 2.4%        |             |               |               |
| Financials                 | -0.2%               | -0.4%            | 0.1%              | 0.1%                | 6.1%         | 7.4%      | 15.0%          | 23.6%       |             |               |               |
| Information Technology     | -0.9%               | -1.2%            | -0.6%             | 0.8%                | 7.1%         | 11.0%     | 8.9%           | 26.8%       |             |               |               |
| Telecommunication Services | 0.1%                | 0.1%             | -0.1%             | 0.1%                | 5.9%         | 3.7%      | 9.0%           | 5.4%        |             |               |               |
| Utilities                  | -0.2%               | 0.0%             | -0.1%             | 0.0%                | 4.3%         | 6.6%      | 6.4%           | 2.6%        |             |               |               |
| Real Estate                | -0.2%               | -0.2%            | 0.3%              | -0.2%               | 9.9%         | 17.9%     | 5.2%           | 2.6%        |             |               |               |
| Cash                       | -0.1%               | 0.0%             | -0.1%             | 0.0%                | 0.3%         | --        | 0.7%           | 0.0%        |             |               |               |
| Unclassified               | 0.0%                | --               | --                | --                  | --           | --        | 0.0%           | 0.0%        |             |               |               |
| <b>Portfolio</b>           | <b>-0.9%</b>        | <b>=</b>         | <b>-1.3%</b>      | <b>+</b>            | <b>-0.9%</b> | <b>+</b>  | <b>1.2%</b>    | <b>7.0%</b> | <b>8.0%</b> | <b>100.0%</b> | <b>100.0%</b> |

Parametric Core Performance Attribution vs. MSCI Emerging Markets Gross

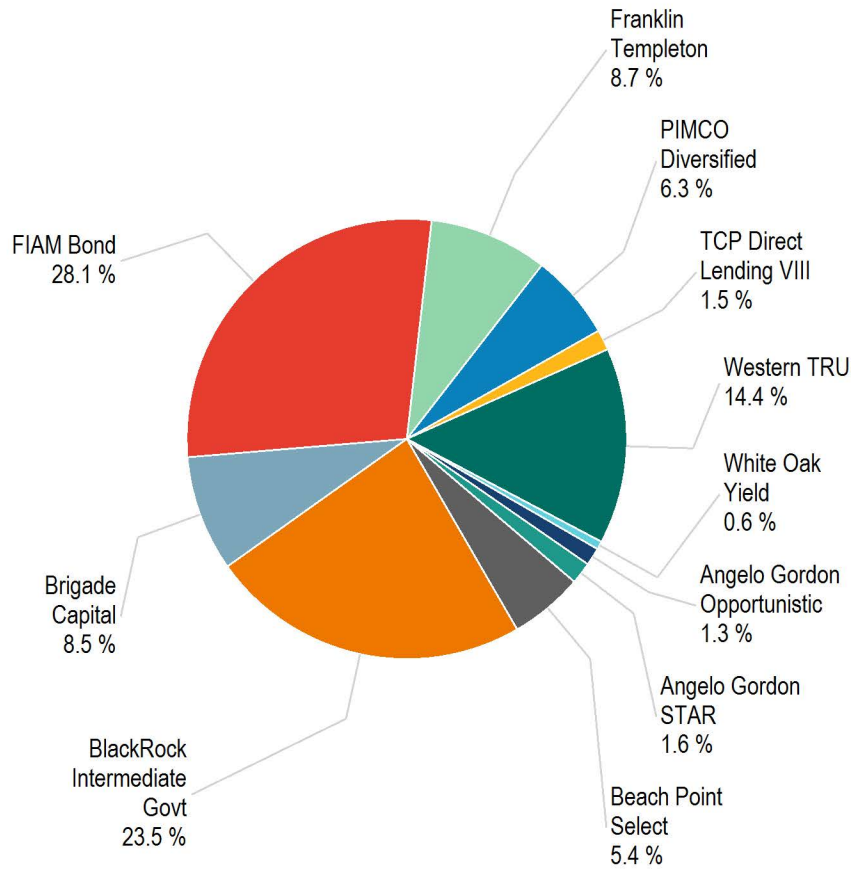
|                    | Returns and Weights |              |                |              | Attribution Effects |                   |                 |                    | Total Effects |
|--------------------|---------------------|--------------|----------------|--------------|---------------------|-------------------|-----------------|--------------------|---------------|
|                    | Manager Return      | Index Return | Manager Weight | Index Weight | Selection Effect    | Allocation Effect | Currency Effect | Interaction Effect |               |
| <b>Europe</b>      |                     |              |                |              |                     |                   |                 |                    |               |
| Czech Republic*    | 10.8%               | 10.1%        | 0.9%           | 0.2%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Greece*            | -3.8%               | -12.0%       | 1.6%           | 0.4%         | 0.0%                | -0.3%             | 0.0%            | 0.1%               | -0.1%         |
| Hungary*           | 8.2%                | 9.6%         | 1.0%           | 0.3%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Luxembourg         | 4.0%                | 8.0%         | 0.0%           | 0.0%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Netherlands        | 10.0%               | 9.3%         | 0.1%           | 0.0%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Poland*            | 10.0%               | 9.6%         | 3.9%           | 1.3%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.1%          |
| Russia*            | 18.9%               | 18.1%        | 5.2%           | 3.2%         | 0.1%                | 0.2%              | 0.0%            | 0.0%               | 0.3%          |
| United Kingdom     | 2.0%                | 5.2%         | 0.3%           | 0.0%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| <b>AsiaPacific</b> |                     |              |                |              |                     |                   |                 |                    |               |
| China*             | 9.9%                | 14.7%        | 5.7%           | 27.9%        | -1.3%               | -1.6%             | 0.0%            | 1.1%               | -1.8%         |
| Hong Kong          | 18.8%               | 5.1%         | 6.2%           | 0.0%         | 0.0%                | -0.2%             | 0.0%            | 0.9%               | 0.7%          |
| India*             | 1.4%                | 3.0%         | 6.7%           | 8.8%         | -0.2%               | 0.1%              | 0.0%            | 0.0%               | 0.0%          |
| Indonesia*         | -3.1%               | -1.1%        | 3.3%           | 2.5%         | -0.1%               | -0.1%             | 0.0%            | 0.0%               | -0.1%         |
| Korea*             | 2.1%                | 2.5%         | 7.2%           | 15.7%        | -0.1%               | 0.4%              | 0.0%            | 0.0%               | 0.4%          |
| Malaysia*          | 2.2%                | 1.9%         | 3.4%           | 2.4%         | 0.0%                | -0.1%             | 0.0%            | 0.0%               | 0.0%          |
| Pakistan*          | -10.7%              | -16.2%       | 1.5%           | 0.1%         | 0.0%                | -0.3%             | 0.0%            | 0.1%               | -0.2%         |
| Philippines*       | 3.3%                | 3.5%         | 3.5%           | 1.2%         | 0.0%                | -0.1%             | 0.0%            | 0.0%               | -0.1%         |
| Singapore          | 7.3%                | 3.1%         | 0.2%           | 0.0%         | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Taiwan*            | 1.5%                | 1.4%         | 7.8%           | 12.5%        | 0.0%                | 0.3%              | 0.0%            | 0.0%               | 0.3%          |
| Thailand*          | 6.5%                | 10.6%        | 3.3%           | 2.2%         | -0.1%               | 0.0%              | 0.0%            | 0.0%               | -0.1%         |
| <b>Americas</b>    |                     |              |                |              |                     |                   |                 |                    |               |
| Brazil*            | 22.9%               | 22.9%        | 6.6%           | 6.6%         | 0.0%                | 0.0%              | -0.1%           | 0.0%               | 0.0%          |
| Chile*             | 18.3%               | 17.0%        | 3.5%           | 1.1%         | 0.0%                | 0.1%              | 0.1%            | 0.0%               | 0.3%          |
| Colombia*          | 6.9%                | 6.5%         | 1.7%           | 0.5%         | 0.0%                | -0.1%             | 0.0%            | 0.0%               | 0.0%          |
| Mexico*            | 1.3%                | 1.5%         | 7.7%           | 3.7%         | 0.0%                | -0.2%             | 0.0%            | 0.0%               | -0.3%         |
| Peru*              | 14.2%               | 14.1%        | 1.4%           | 0.4%         | 0.0%                | 0.1%              | 0.0%            | 0.0%               | 0.1%          |
| United States      | 12.0%               | 4.3%         | 1.2%           | 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*                | 5.4%                | 1.1%         | 0.9%           | 0.1%          | 0.0%                | -0.1%             | 0.0%            | 0.0%               | 0.0%          |
| Kuwait**              | 17.8%               | 17.2%        | 1.6%           | 0.0%          | 0.0%                | 0.1%              | 0.0%            | 0.0%               | 0.2%          |
| Qatar*                | -5.6%               | -5.0%        | 1.5%           | 0.7%          | 0.0%                | -0.1%             | 0.0%            | 0.0%               | -0.1%         |
| South Africa*         | 3.2%                | 4.0%         | 6.2%           | 6.6%          | -0.1%               | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| Turkey*               | 2.5%                | 0.3%         | 3.7%           | 1.2%          | 0.0%                | -0.2%             | 0.0%            | 0.1%               | -0.1%         |
| United Arab Emirates* | 2.6%                | 4.0%         | 1.4%           | 0.7%          | 0.0%                | 0.0%              | 0.0%            | 0.0%               | 0.0%          |
| <b>Totals</b>         |                     |              |                |               |                     |                   |                 |                    |               |
| Americas              | 12.3%               | 15.1%        | 22.1%          | 12.2%         | -0.2%               | 0.4%              | 0.1%            | -0.2%              | 0.1%          |
| Europe                | 11.5%               | 13.1%        | 13.1%          | 5.4%          | -0.1%               | 0.2%              | 0.2%            | -0.1%              | 0.2%          |
| Asia/Pacific          | 4.6%                | 7.1%         | 48.8%          | 73.2%         | -1.9%               | 0.1%              | 0.1%            | 0.6%               | -1.1%         |
| Other                 | 3.8%                | 2.9%         | 15.3%          | 9.3%          | 0.0%                | -0.2%             | 0.0%            | 0.0%               | -0.2%         |
| Cash                  | 0.3%                | --           | 0.7%           | 0.0%          | 0.0%                | -0.1%             | 0.0%            | 0.0%               | -0.1%         |
| <b>Total</b>          | <b>7.0%</b>         | <b>8.0%</b>  | <b>100.0%</b>  | <b>100.0%</b> | <b>-2.1%</b>        | <b>0.5%</b>       | <b>0.3%</b>     | <b>0.4%</b>        | <b>-0.9%</b>  |
| <b>Totals</b>         |                     |              |                |               |                     |                   |                 |                    |               |
| Developed             | 16.7%               | --           | 8.0%           | 0.0%          | 0.0%                | 0.0%              | 0.0%            | 0.7%               | 0.7%          |
| Emerging*             | 6.0%                | 8.0%         | 89.7%          | 100.0%        | -2.3%               | 0.0%              | 0.3%            | 0.2%               | -1.8%         |
| Frontier**            | 17.8%               | --           | 1.6%           | 0.0%          | 0.0%                | 0.0%              | 0.0%            | 0.2%               | 0.2%          |
| Cash                  | 0.3%                | --           | 0.7%           | 0.0%          | 0.0%                | -0.1%             | 0.0%            | 0.0%               | -0.1%         |

Fixed Income  
 Manager Allocation Analysis

Period Ending: September 30, 2017



|                                     | Actual \$            | Actual %      | Manager Contribution to Excess Return % |
|-------------------------------------|----------------------|---------------|---|
| Angelo Gordon Opportunistic         | \$11,306,000         | 1.3%          | 0.0%                                    |
| Angelo Gordon STAR                  | \$14,063,000         | 1.6%          | 0.1%                                    |
| Beach Point Select                  | \$47,569,341         | 5.4%          | 0.0%                                    |
| BlackRock Intermediate Govt         | \$206,758,791        | 23.5%         | 0.0%                                    |
| Brigade Capital                     | \$75,109,597         | 8.5%          | 0.0%                                    |
| FIAM Bond                           | \$247,292,190        | 28.1%         | 0.2%                                    |
| Franklin Templeton                  | \$76,587,252         | 8.7%          | -0.1%                                   |
| PIMCO Diversified                   | \$55,333,249         | 6.3%          | 0.0%                                    |
| TCP Direct Lending VIII             | \$13,567,663         | 1.5%          | 0.0%                                    |
| Western Asset TRU                   | \$126,377,577        | 14.4%         | 0.2%                                    |
| White Oak Yield                     | \$5,331,786          | 0.6%          | 0.0%                                    |
| Actual vs. Policy Weight Difference |                      |               | -0.5%                                   |
| <b>Total</b>                        | <b>\$879,296,446</b> | <b>100.0%</b> | <b>-0.1%</b>                            |



Statistics Summary

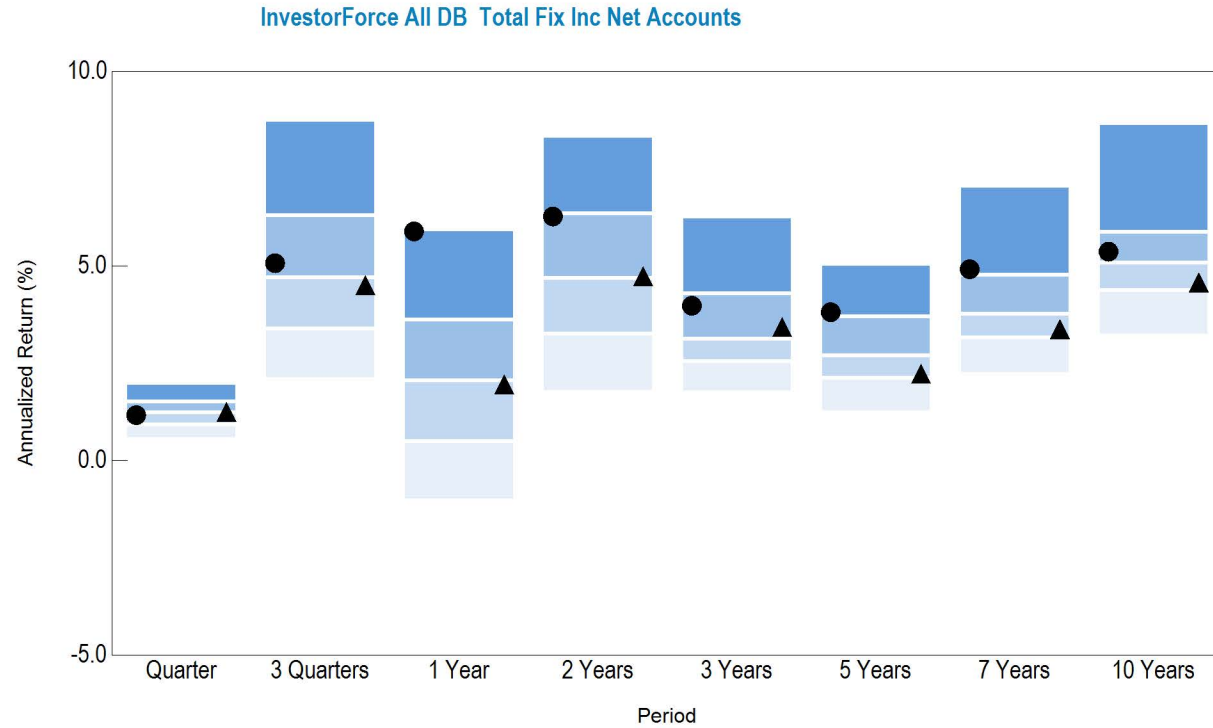
3 Years

|                             | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|-----------------------------|--------------|--------------------------|--------------|-------------------|----------------|
| Fixed Income                | 4.0%         | 2.9%                     | 1.3          | 0.3               | 2.1%           |
| Blended Fixed Income Index  | 3.4%         | 2.9%                     | 1.1          | --                | 0.0%           |
| US Fixed Income             | 4.3%         | 2.7%                     | 1.5          | 0.4               | 1.4%           |
| Blended US Fixed Index      | 3.8%         | 2.7%                     | 1.3          | --                | 0.0%           |
| FIAM Bond                   | 3.3%         | 3.0%                     | 1.0          | 0.6               | 0.9%           |
| BBgBarc US Aggregate TR     | 2.7%         | 2.9%                     | 0.8          | --                | 0.0%           |
| Angelo Gordon Opportunistic | 5.2%         | 4.6%                     | 1.0          | 0.4               | 5.9%           |
| BBgBarc US Aggregate TR     | 2.7%         | 2.9%                     | 0.8          | --                | 0.0%           |
| Angelo Gordon STAR          | 9.6%         | 5.8%                     | 1.6          | 1.0               | 6.9%           |
| BBgBarc US Aggregate TR     | 2.7%         | 2.9%                     | 0.8          | --                | 0.0%           |
| Brigade Capital             | 4.6%         | 7.4%                     | 0.6          | -0.3              | 4.7%           |
| BBgBarc BA Intermediate HY  | 5.9%         | 4.5%                     | 1.2          | --                | 0.0%           |
| Global Fixed Income         | 2.2%         | 6.6%                     | 0.3          | 0.1               | 8.4%           |
| BBgBarc Multiverse TR       | 1.6%         | 4.8%                     | 0.3          | --                | 0.0%           |
| Franklin Templeton          | 2.2%         | 6.6%                     | 0.3          | 0.1               | 8.4%           |
| BBgBarc Multiverse TR       | 1.6%         | 4.8%                     | 0.3          | --                | 0.0%           |

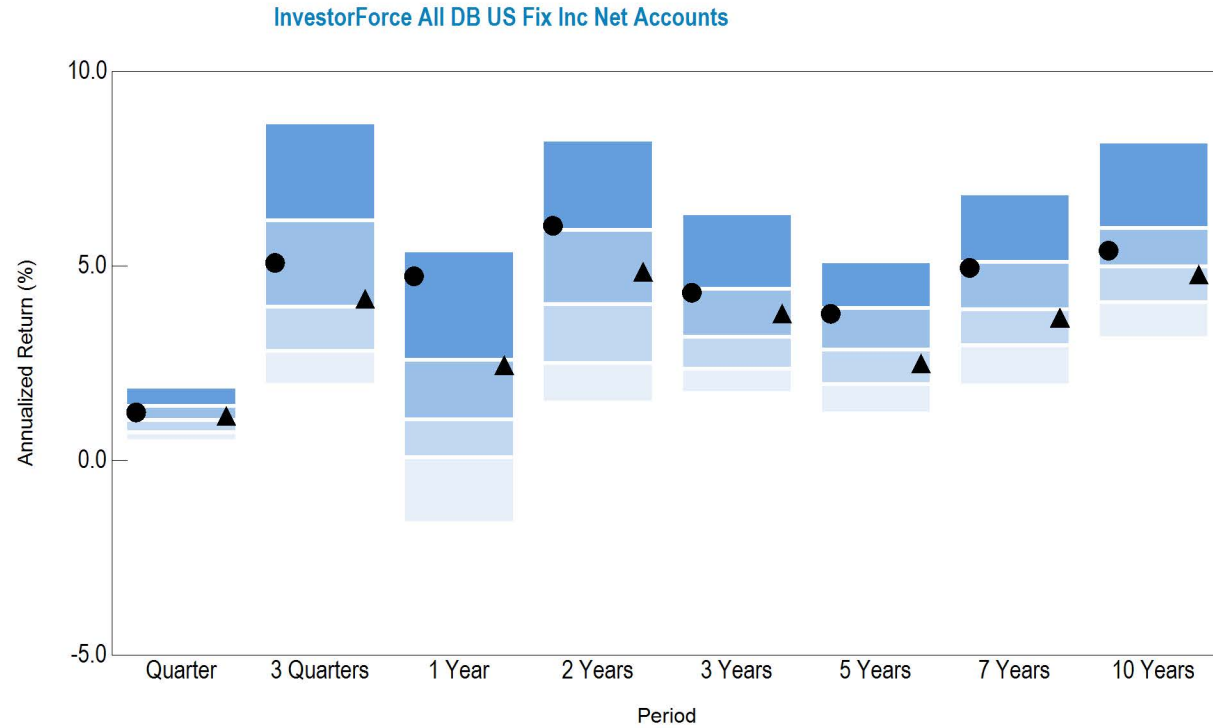
Statistics Summary

5 Years

|                            | Anlzd Return | Anlzd Standard<br>Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|----------------------------|--------------|-----------------------------|--------------|-------------------|----------------|
| Fixed Income               | 3.8%         | 3.1%                        | 1.2          | 0.8               | 1.9%           |
| Blended Fixed Income Index | 2.2%         | 3.2%                        | 0.6          | --                | 0.0%           |
| US Fixed Income            | 3.8%         | 2.9%                        | 1.2          | 1.0               | 1.3%           |
| Blended US Fixed Index     | 2.5%         | 3.1%                        | 0.7          | --                | 0.0%           |
| FIAM Bond                  | 2.7%         | 3.0%                        | 0.8          | 0.9               | 0.8%           |
| BBgBarc US Aggregate TR    | 2.1%         | 2.8%                        | 0.7          | --                | 0.0%           |
| Brigade Capital            | 5.5%         | 6.2%                        | 0.9          | 0.3               | 4.2%           |
| BBgBarc BA Intermediate HY | 4.2%         | 4.7%                        | 0.8          | --                | 0.0%           |
| Global Fixed Income        | 3.6%         | 6.2%                        | 0.5          | 0.4               | 7.1%           |
| BBgBarc Multiverse TR      | 0.8%         | 4.6%                        | 0.1          | --                | 0.0%           |
| Franklin Templeton         | 3.6%         | 6.2%                        | 0.5          | 0.4               | 7.1%           |
| BBgBarc Multiverse TR      | 0.8%         | 4.6%                        | 0.1          | --                | 0.0%           |



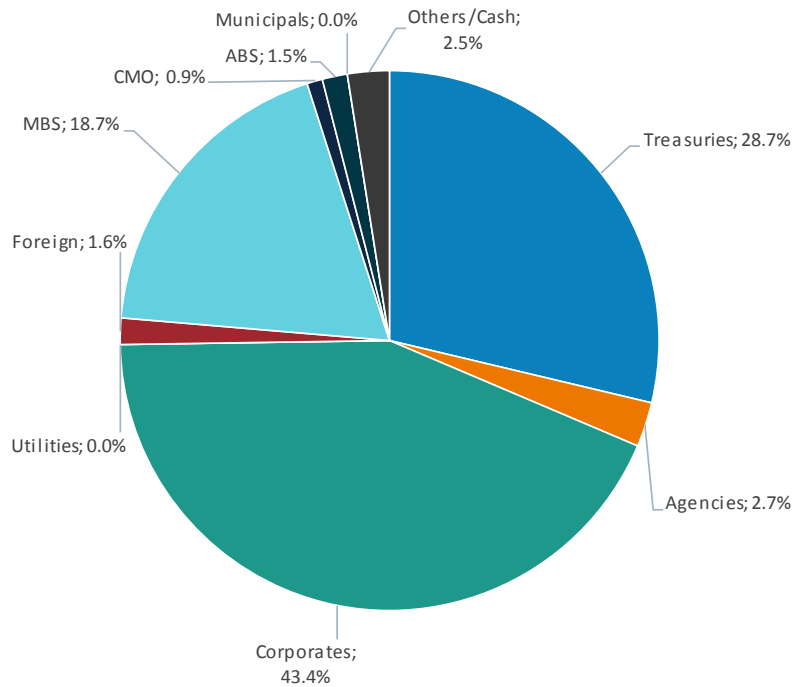
|                              | Return (Rank) |            |          |          |          |          |          |          |
|------------------------------|---------------|------------|----------|----------|----------|----------|----------|----------|
|                              | Quarter       | 3 Quarters | 1 Year   | 2 Years  | 3 Years  | 5 Years  | 7 Years  | 10 Years |
| 5th Percentile               | 2.0           | 8.7        | 5.9      | 8.3      | 6.3      | 5.0      | 7.0      | 8.7      |
| 25th Percentile              | 1.5           | 6.3        | 3.6      | 6.4      | 4.3      | 3.7      | 4.8      | 5.9      |
| Median                       | 1.2           | 4.7        | 2.1      | 4.7      | 3.1      | 2.7      | 3.8      | 5.1      |
| 75th Percentile              | 0.9           | 3.4        | 0.5      | 3.3      | 2.6      | 2.1      | 3.2      | 4.4      |
| 95th Percentile              | 0.6           | 2.1        | -1.0     | 1.8      | 1.7      | 1.3      | 2.2      | 3.2      |
| # of Portfolios              | 336           | 335        | 331      | 324      | 314      | 285      | 235      | 192      |
| ● Fixed Income               | 1.2 (57)      | 5.1 (45)   | 5.9 (6)  | 6.3 (26) | 4.0 (31) | 3.8 (24) | 4.9 (24) | 5.4 (42) |
| ▲ Blended Fixed Income Index | 1.2 (49)      | 4.5 (54)   | 2.0 (52) | 4.7 (50) | 3.4 (42) | 2.2 (72) | 3.4 (66) | 4.6 (66) |



|                          | Quarter  | 3 Quarters | 1 Year   | 2 Years  | 3 Years  | 5 Years  | 7 Years  | 10 Years |
|--------------------------|----------|------------|----------|----------|----------|----------|----------|----------|
| <b>Return (Rank)</b>     |          |            |          |          |          |          |          |          |
| 5th Percentile           | 1.9      | 8.7        | 5.4      | 8.2      | 6.3      | 5.1      | 6.9      | 8.2      |
| 25th Percentile          | 1.4      | 6.2        | 2.6      | 5.9      | 4.4      | 3.9      | 5.1      | 6.0      |
| Median                   | 1.1      | 4.0        | 1.1      | 4.0      | 3.2      | 2.9      | 3.9      | 5.0      |
| 75th Percentile          | 0.7      | 2.8        | 0.1      | 2.5      | 2.4      | 2.0      | 3.0      | 4.1      |
| 95th Percentile          | 0.5      | 2.0        | -1.6     | 1.5      | 1.7      | 1.2      | 1.9      | 3.2      |
| # of Portfolios          | 445      | 442        | 442      | 437      | 429      | 380      | 306      | 230      |
| ● US Fixed Income        | 1.2 (38) | 5.1 (33)   | 4.7 (9)  | 6.0 (25) | 4.3 (28) | 3.8 (27) | 4.9 (28) | 5.4 (37) |
| ▲ Blended US Fixed Index | 1.1 (45) | 4.2 (48)   | 2.4 (28) | 4.9 (41) | 3.8 (35) | 2.5 (61) | 3.7 (57) | 4.8 (55) |

US Fixed Income  
Bond Sector Allocation

Period Ending: September 30, 2017



| Sector*      | BBgBarc Aggregate |               |             |
|--------------|-------------------|---------------|-------------|
|              | Account Weight    | Weight        | Difference  |
| Treasuries   | 28.7%             | 37.0%         | -8.3%       |
| Agencies     | 2.7%              | 7.1%          | -4.4%       |
| Corporates   | 43.4%             | 25.4%         | 18.0%       |
| Utilities    | 0.0%              | 0.0%          | 0.0%        |
| Foreign      | 1.6%              | 0.0%          | 1.6%        |
| MBS          | 18.7%             | 28.1%         | -9.4%       |
| CMO          | 0.9%              | 0.0%          | 0.9%        |
| ABS          | 1.5%              | 2.4%          | -0.9%       |
| Municipals   | 0.0%              | 0.0%          | 0.0%        |
| Others/Cash  | 2.5%              | 0.0%          | 2.5%        |
| <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: September 30, 2017

| Portfolio Characteristics* |           |             |
|----------------------------|-----------|-------------|
|                            | Portfolio |             |
| Total Number of Securities |           |             |
| Total Market Value         | \$        | 580,428,559 |
| Current Coupon             |           | 2.44        |
| Yield to Maturity          |           | 2.90        |
| Average Life               |           | 8.20        |
| Duration                   |           | 4.99        |
| Quality                    |           | AA-         |

| BBgBarc Aggregate |      |
|-------------------|------|
|                   |      |
|                   | 3.14 |
|                   | 2.52 |
|                   | 8.02 |
|                   | 5.85 |
|                   | AA   |

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

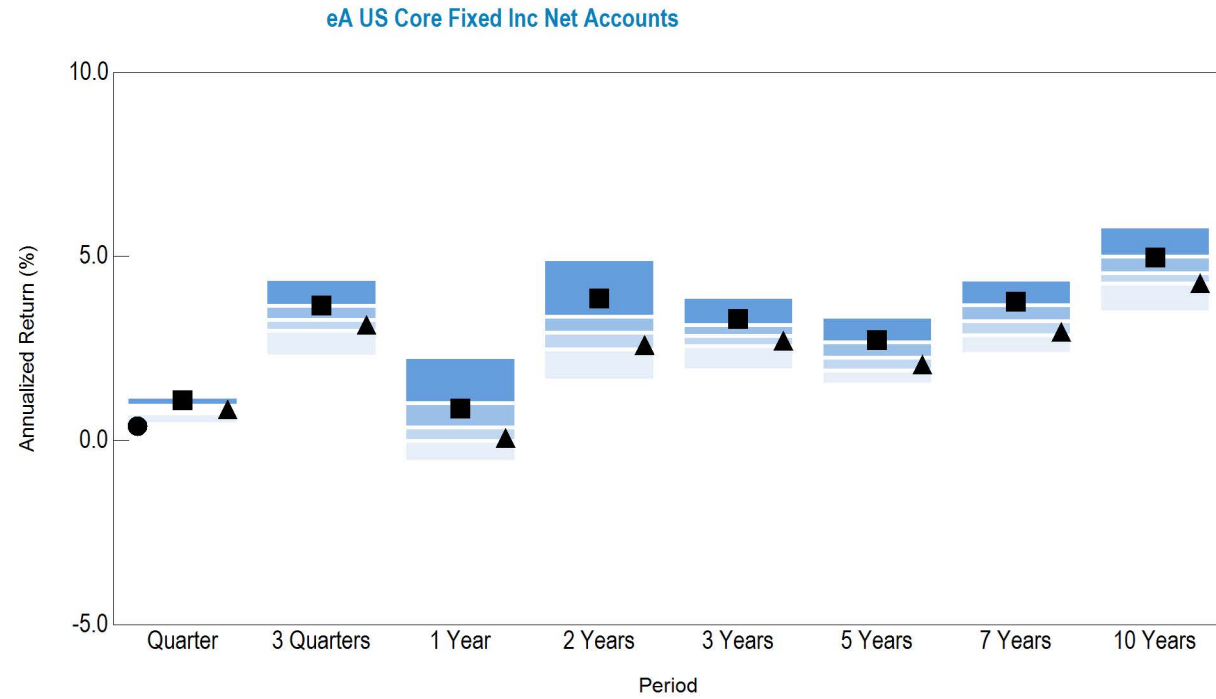
| Average Life |        |  |
|--------------|--------|--|
| Range        | % Held |  |
| 0.0 - 1.0    | n/a    |  |
| 1.0 - 3.0    | n/a    |  |
| 3.0 - 5.0    | n/a    |  |
| 5.0 - 10.0   | n/a    |  |
| 10.0 - 20.0  | n/a    |  |
| 20.0+        | n/a    |  |
| Unclassified | n/a    |  |

| Duration     |        |  |
|--------------|--------|--|
| Range        | % Held |  |
| 0.0 - 1.0    | 0.6    |  |
| 1.0 - 3.0    | 34.5   |  |
| 3.0 - 5.0    | 31.0   |  |
| 5.0 - 7.0    | 15.7   |  |
| 7.0 - 10.0   | 5.1    |  |
| 10.0+        | 13.1   |  |
| Unclassified | 0.0    |  |

| Quality         |        |  |
|-----------------|--------|--|
| Range           | % Held |  |
| Govt (10)       | 26.0   |  |
| Aaa (10)        | 25.8   |  |
| Aa (9)          | 1.8    |  |
| A (8)           | 30.6   |  |
| Baa (7)         | 12.8   |  |
| Below Baa (6-1) | 0.8    |  |
| Other           | 2.0    |  |

| Coupon       |        |  |
|--------------|--------|--|
| Range        | % Held |  |
| 0.0 - 5.0    | 92.8   |  |
| 5.0 - 7.0    | 4.1    |  |
| 7.0 - 9.0    | 0.9    |  |
| 9.0 - 11.0   | 0.0    |  |
| 11.0 - 13.0  | 0.0    |  |
| 13.0+        | 2.1    |  |
| Unclassified | 0.0    |  |

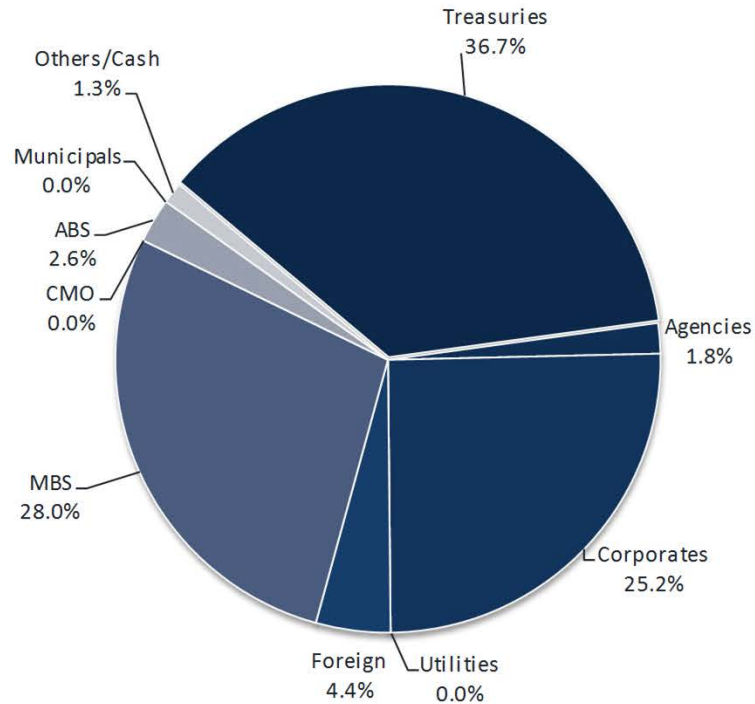
\* Characteristics excludes Opportunistic Credit Managers.



|                               | Return (Rank) |            |          |          |          |          |          |          |
|-------------------------------|---------------|------------|----------|----------|----------|----------|----------|----------|
|                               | Quarter       | 3 Quarters | 1 Year   | 2 Years  | 3 Years  | 5 Years  | 7 Years  | 10 Years |
| 5th Percentile                | 1.2           | 4.4        | 2.3      | 4.9      | 3.9      | 3.4      | 4.4      | 5.8      |
| 25th Percentile               | 1.0           | 3.7        | 1.0      | 3.4      | 3.2      | 2.7      | 3.7      | 5.0      |
| Median                        | 0.9           | 3.3        | 0.4      | 2.9      | 2.8      | 2.3      | 3.3      | 4.6      |
| 75th Percentile               | 0.8           | 3.0        | 0.0      | 2.5      | 2.6      | 1.9      | 2.9      | 4.3      |
| 95th Percentile               | 0.5           | 2.3        | -0.6     | 1.6      | 1.9      | 1.5      | 2.4      | 3.5      |
| # of Portfolios               | 139           | 136        | 136      | 133      | 133      | 130      | 122      | 107      |
| ● BlackRock Intermediate Govt | 0.4 (98)      | -- (--)    | -- (--)  | -- (--)  | -- (--)  | -- (--)  | -- (--)  | -- (--)  |
| ■ FIAM Bond                   | 1.1 (9)       | 3.7 (25)   | 0.9 (30) | 3.9 (13) | 3.3 (18) | 2.7 (24) | 3.8 (21) | 5.0 (26) |
| ▲ BBgBarc US Aggregate TR     | 0.8 (52)      | 3.1 (64)   | 0.1 (73) | 2.6 (71) | 2.7 (61) | 2.1 (66) | 3.0 (70) | 4.3 (78) |

BlackRock Intermediate Govt Market Duration Pool  
Bond Sector Allocation

Period Ending: September 30, 2017



| Sector       | Account Weight | BBgBarc Aggregate |             |
|--------------|----------------|-------------------|-------------|
|              |                | Weight            | Difference  |
| Treasuries   | 36.7%          | 37.0%             | -0.3%       |
| Agencies     | 1.8%           | 7.1%              | -5.3%       |
| Corporates   | 25.2%          | 25.4%             | -0.2%       |
| Utilities    | 0.0%           | 0.0%              | 0.0%        |
| Foreign      | 4.4%           | 0.0%              | 4.4%        |
| MBS          | 28.0%          | 28.1%             | -0.2%       |
| CMO          | 0.0%           | 0.0%              | 0.0%        |
| ABS          | 2.6%           | 2.4%              | 0.3%        |
| Municipals   | 0.0%           | 0.0%              | 0.0%        |
| Others/Cash  | 1.3%           | 0.0%              | 1.3%        |
| <b>TOTAL</b> | <b>100.0%</b>  | <b>100.0%</b>     | <b>0.0%</b> |



BlackRock Intermediate Govt Market Duration Pool  
 Bond Summary Statistics

Period Ending: September 30, 2017

| Portfolio Characteristics  |                |
|----------------------------|----------------|
|                            | Portfolio      |
| Total Number of Securities | 7,609          |
| Total Market Value         | \$ 206,758,791 |
| Current Coupon             | 3.16           |
| Yield to Maturity          | 2.53           |
| Average Life               | 8.02           |
| Duration                   | 5.71           |
| Quality                    | AA             |

| BBgBarc Aggregate |
|-------------------|
| 3.14              |
| 2.52              |
| 8.02              |
| 5.85              |
| AA                |

| Yield to Maturity |        |
|-------------------|--------|
| Range             | % Held |
| 0.0 - 5.0         | 99.0   |
| 5.0 - 7.0         | 1.0    |
| 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    |

| Average Life |        |
|--------------|--------|
| Range        | % Held |
| 0.0 - 1.0    | n/a    |
| 1.0 - 3.0    | n/a    |
| 3.0 - 5.0    | n/a    |
| 5.0 - 10.0   | n/a    |
| 10.0 - 20.0  | n/a    |
| 20.0+        | n/a    |
| Unclassified | n/a    |

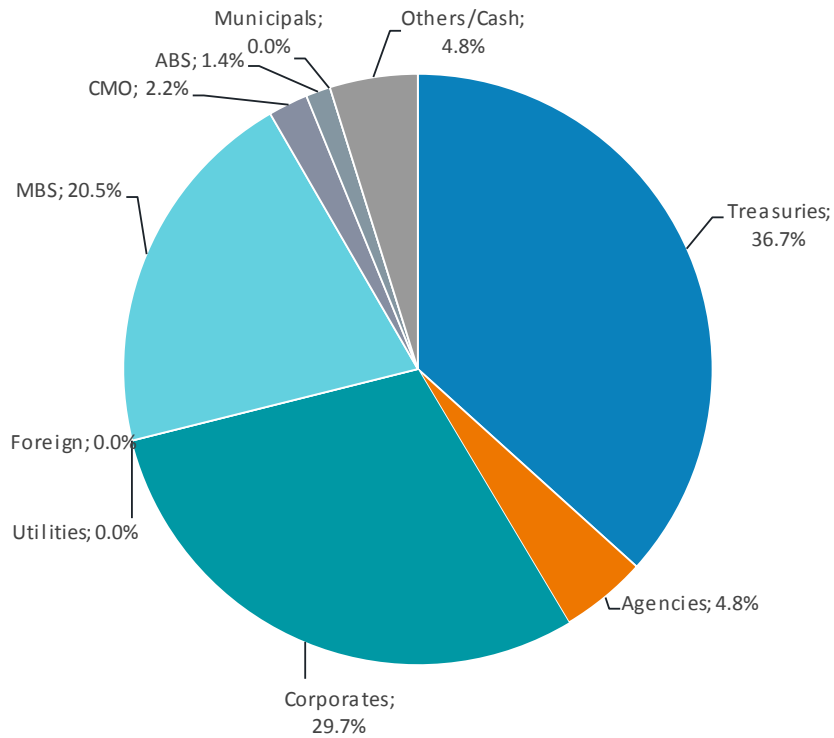
| Duration     |        |
|--------------|--------|
| Range        | % Held |
| < 1.0        | 0.0    |
| 1.0 - 3.0    | 24.9   |
| 3.0 - 5.0    | 34.5   |
| 5.0 - 7.0    | 18.1   |
| 7.0 - 10.0   | 8.2    |
| 10.0+        | 14.3   |
| Unclassified | 0.0    |

| Quality         |        |
|-----------------|--------|
| Range           | % Held |
| Govt (10)       | 0.0    |
| Aaa (10)        | 72.0   |
| Aa (9)          | 3.8    |
| A (8)           | 10.5   |
| Baa (7)         | 13.7   |
| 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    |

FIAM Bond Market Duration Pool  
Bond Sector Allocation

Period Ending: September 30, 2017



| Sector       | Account Weight | BBgBarc Aggregate |             |
|--------------|----------------|-------------------|-------------|
|              |                | Weight            | Difference  |
| Treasuries   | 36.7%          | 37.0%             | -0.4%       |
| Agencies     | 4.8%           | 7.1%              | -2.4%       |
| Corporates   | 29.7%          | 25.4%             | 4.3%        |
| Utilities    | 0.0%           | 0.0%              | 0.0%        |
| Foreign      | 0.0%           | 0.0%              | 0.0%        |
| MBS          | 20.5%          | 28.1%             | -7.6%       |
| CMO          | 2.2%           | 0.0%              | 2.2%        |
| ABS          | 1.4%           | 2.4%              | -1.0%       |
| Municipals   | 0.0%           | 0.0%              | 0.0%        |
| Others/Cash  | 4.8%           | 0.0%              | 4.8%        |
| <b>TOTAL</b> | <b>100.0%</b>  | <b>100.0%</b>     | <b>0.0%</b> |

FIAM Bond Market Duration Pool  
Bond Summary Statistics

Period Ending: September 30, 2017

| Portfolio Characteristics  |    | Portfolio   |
|----------------------------|----|-------------|
| Total Number of Securities |    | 848         |
| Total Market Value         | \$ | 247,292,190 |
| Current Coupon             |    | 3.08        |
| Yield to Maturity          |    | 2.57        |
| Average Life               |    | 7.85        |
| Duration                   |    | 5.67        |
| Quality                    |    | AA          |

| BBgBarc Aggregate |
|-------------------|
| 3.14              |
| 2.52              |
| 8.02              |
| 5.85              |
| AA                |

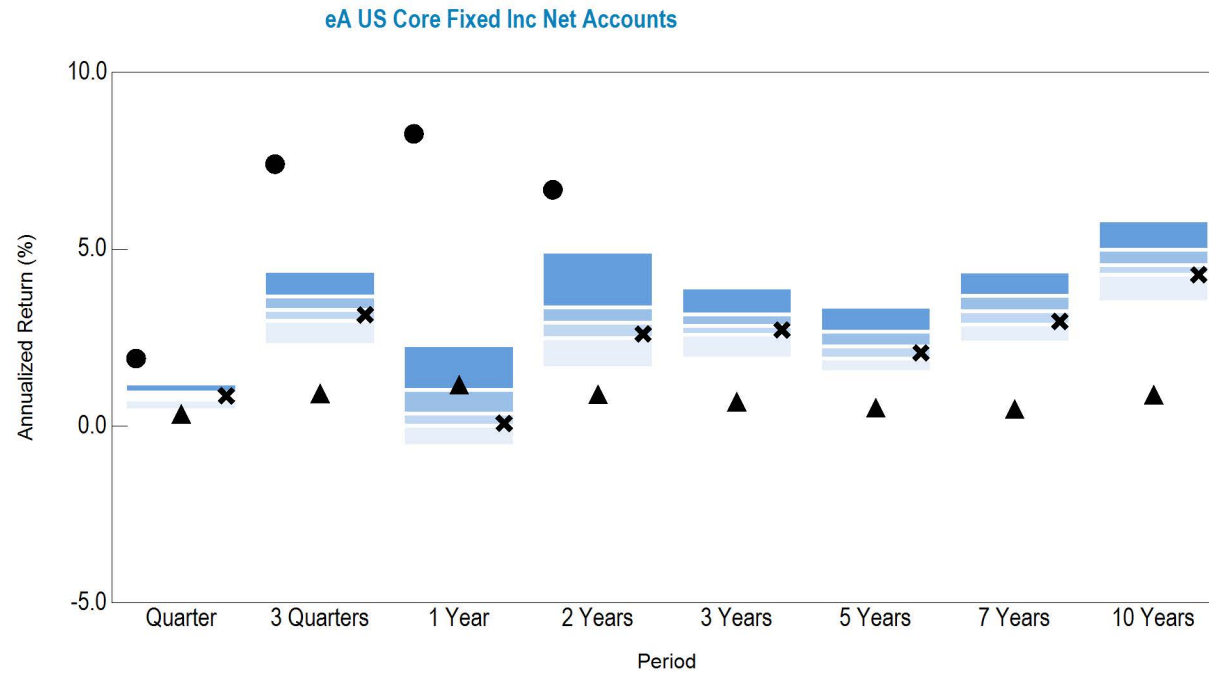
| Yield to Maturity |        |
|-------------------|--------|
| Range             | % Held |
| 0.0 - 5.0         | 98.1   |
| 5.0 - 7.0         | 2.3    |
| 7.0 - 9.0         | 0.1    |
| 9.0 - 11.0        | 0.1    |
| 11.0 - 13.0       | 0.0    |
| 13.0+             | -0.6   |
| Unclassified      | 0.0    |

| Average Life |        |
|--------------|--------|
| Range        | % Held |
| 0.0 - 1.0    | 1.4    |
| 1.0 - 3.0    | 8.6    |
| 3.0 - 5.0    | 30.8   |
| 5.0 - 10.0   | 38.5   |
| 10.0 - 20.0  | 3.9    |
| 20.0+        | 16.8   |
| Unclassified | 0.0    |

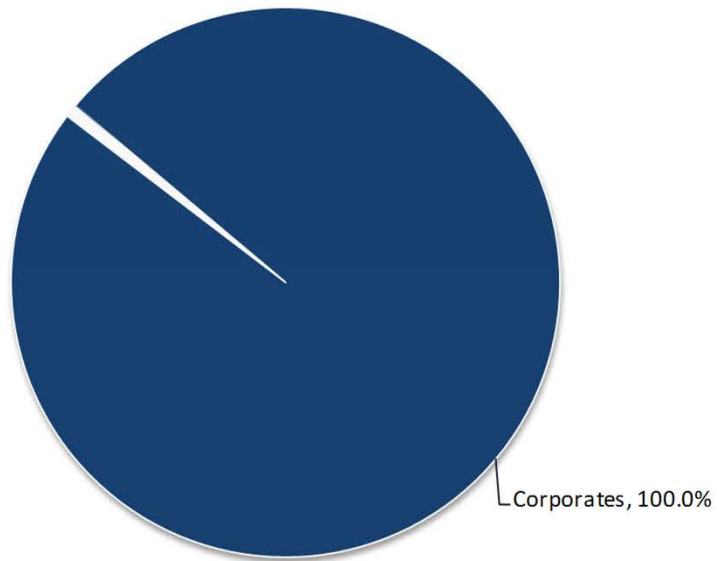
| Duration     |        |
|--------------|--------|
| Range        | % Held |
| 0.0 - 1.0    | 1.5    |
| 1.0 - 3.0    | 9.0    |
| 3.0 - 5.0    | 44.0   |
| 5.0 - 7.0    | 21.8   |
| 7.0 - 10.0   | 5.0    |
| 10.0+        | 18.8   |
| Unclassified | 0.0    |

| Quality         |        |
|-----------------|--------|
| Range           | % Held |
| Govt (10)       | 61.1   |
| Aaa (10)        | 0.4    |
| Aa (9)          | 1.1    |
| A (8)           | 12.1   |
| Baa (7)         | 18.6   |
| Below Baa (6-1) | 2.0    |
| Other           | 4.7    |

| Coupon       |        |
|--------------|--------|
| Range        | % Held |
| 0.0 - 5.0    | 83.1   |
| 5.0 - 7.0    | 9.7    |
| 7.0 - 9.0    | 2.1    |
| 9.0 - 11.0   | 0.1    |
| 11.0 - 13.0  | 0.0    |
| 13.0+        | 5.0    |
| Unclassified | 0.0    |



|                                  | Return (Rank) |            |          |          |          |          |          |          |
|----------------------------------|---------------|------------|----------|----------|----------|----------|----------|----------|
|                                  | Quarter       | 3 Quarters | 1 Year   | 2 Years  | 3 Years  | 5 Years  | 7 Years  | 10 Years |
| 5th Percentile                   | 1.2           | 4.4        | 2.3      | 4.9      | 3.9      | 3.4      | 4.4      | 5.8      |
| 25th Percentile                  | 1.0           | 3.7        | 1.0      | 3.4      | 3.2      | 2.7      | 3.7      | 5.0      |
| Median                           | 0.9           | 3.3        | 0.4      | 2.9      | 2.8      | 2.3      | 3.3      | 4.6      |
| 75th Percentile                  | 0.8           | 3.0        | 0.0      | 2.5      | 2.6      | 1.9      | 2.9      | 4.3      |
| 95th Percentile                  | 0.5           | 2.3        | -0.6     | 1.6      | 1.9      | 1.5      | 2.4      | 3.5      |
| # of Portfolios                  | 139           | 136        | 136      | 133      | 133      | 130      | 122      | 107      |
| ● Western TRU                    | 1.9 (1)       | 7.4 (1)    | 8.3 (1)  | 6.7 (1)  | -- (--)  | -- (--)  | -- (--)  | -- (--)  |
| ▲ 3-Month Libor Total Return USD | 0.3 (99)      | 0.9 (99)   | 1.2 (19) | 0.9 (99) | 0.7 (99) | 0.5 (99) | 0.5 (99) | 0.9 (99) |
| ✕ BBgBarc US Aggregate TR        | 0.8 (52)      | 3.1 (64)   | 0.1 (73) | 2.6 (71) | 2.7 (61) | 2.1 (66) | 3.0 (70) | 4.3 (78) |



| Sector       | Account Weight | BBgBarc Aggregate |             |
|--------------|----------------|-------------------|-------------|
|              |                | Weight            | Difference  |
| Treasuries   | 0.0%           | 37.0%             | -37.0%      |
| Agencies     | 0.0%           | 7.1%              | -7.1%       |
| Corporates   | 100.0%         | 25.4%             | 74.6%       |
| 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%           | 2.4%              | -2.4%       |
| Municipals   | 0.0%           | 0.0%              | 0.0%        |
| Others/Cash  | 0.0%           | 0.0%              | 0.0%        |
| <b>TOTAL</b> | <b>100.0%</b>  | <b>100.0%</b>     | <b>0.0%</b> |

| Portfolio Characteristics  |    | Portfolio   |
|----------------------------|----|-------------|
| Total Number of Securities |    | 1           |
| Total Market Value         | \$ | 126,377,577 |
| Current Coupon             |    | 0.00        |
| Yield to Maturity          |    | 4.14        |
| Average Life               |    | 9.19        |
| Duration                   |    | 2.47        |
| Quality                    |    | A-          |

| BBgBarc Aggregate |
|-------------------|
| 3.14              |
| 2.52              |
| 8.02              |
| 5.85              |
| AA                |

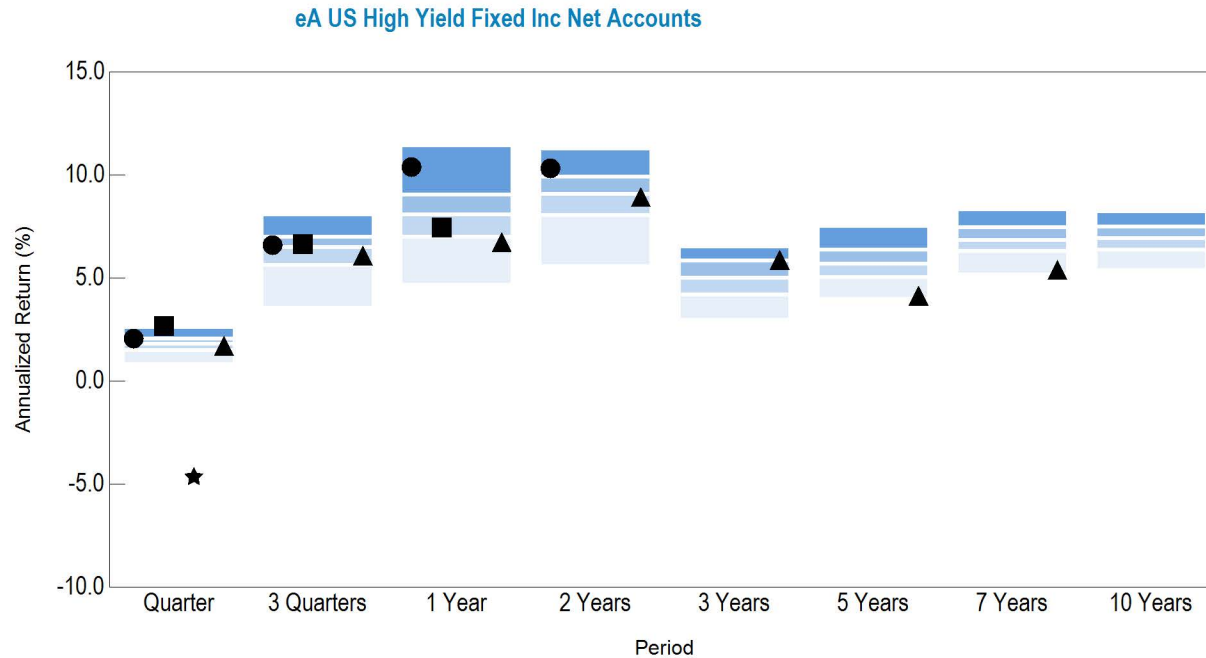
| Yield to Maturity |        |
|-------------------|--------|
| Range             | % Held |
| 0.0 - 5.0         | n/a    |
| 5.0 - 7.0         | n/a    |
| 7.0 - 9.0         | n/a    |
| 9.0 - 11.0        | n/a    |
| 11.0 - 13.0       | n/a    |
| 13.0+             | n/a    |
| Unclassified      |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

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

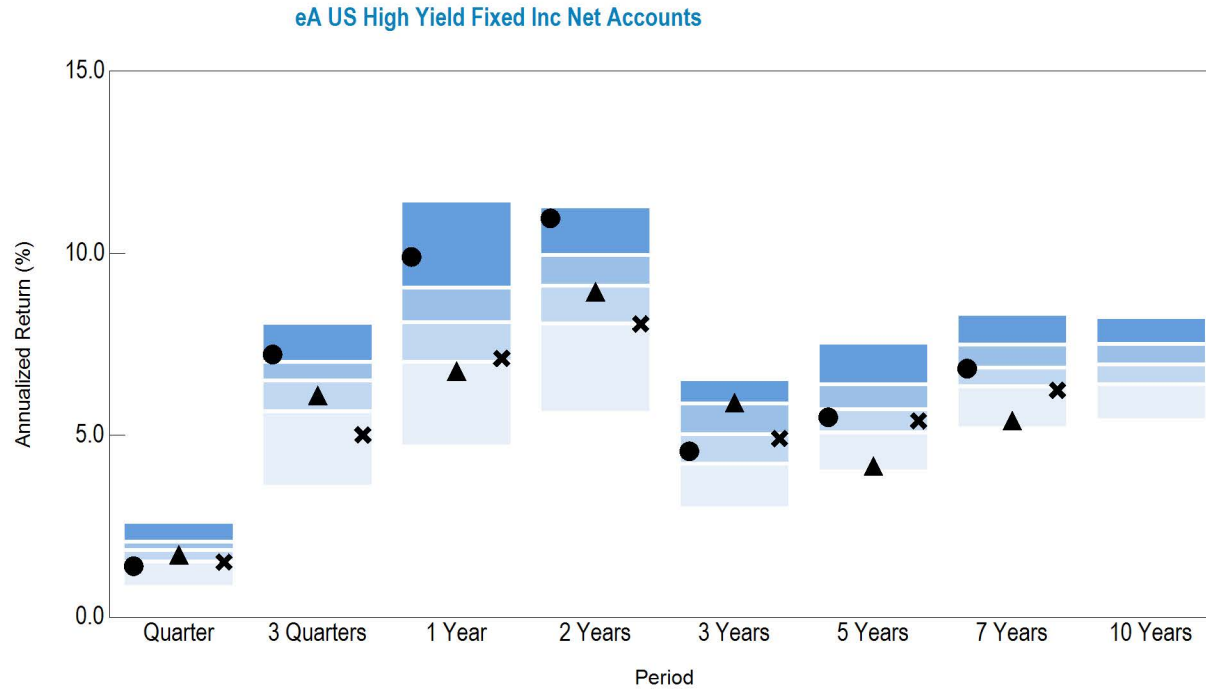
| Duration     |        |
|--------------|--------|
| Range        | % Held |
| < 1.0        | 0.0    |
| 1.0 - 3.0    | 100.0  |
| 3.0 - 5.0    | 0.0    |
| 5.0 - 7.0    | 0.0    |
| 7.0 - 10.0   | 0.0    |
| 10.0+        | 0.0    |
| Unclassified | 0.0    |

| Quality         |        |
|-----------------|--------|
| Range           | % Held |
| Govt (10)       | 0.0    |
| Aaa (10)        | 0.0    |
| Aa (9)          | 0.0    |
| A (8)           | 100.0  |
| Baa (7)         | 0.0    |
| 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    |

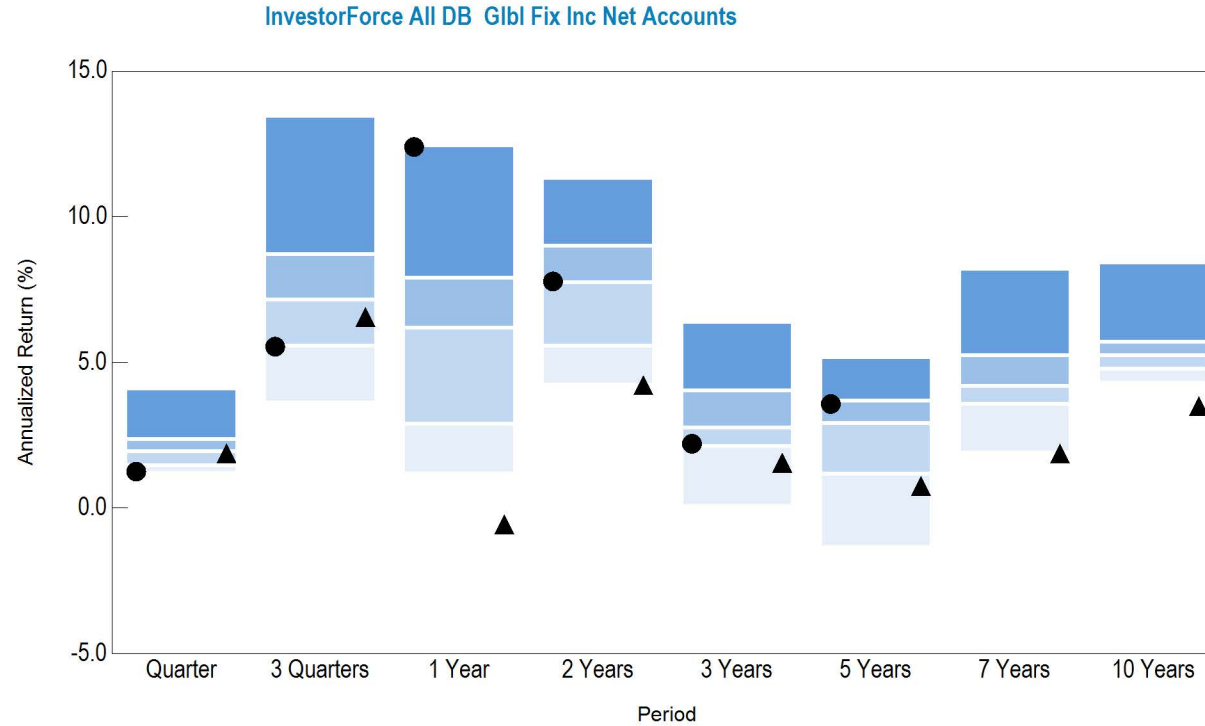


|                              | Return (Rank) |            |           |           |          |          |          |          |
|------------------------------|---------------|------------|-----------|-----------|----------|----------|----------|----------|
|                              | Quarter       | 3 Quarters | 1 Year    | 2 Years   | 3 Years  | 5 Years  | 7 Years  | 10 Years |
| 5th Percentile               | 2.6           | 8.1        | 11.4      | 11.3      | 6.5      | 7.5      | 8.3      | 8.2      |
| 25th Percentile              | 2.1           | 7.0        | 9.1       | 10.0      | 5.9      | 6.4      | 7.5      | 7.5      |
| Median                       | 1.8           | 6.5        | 8.1       | 9.1       | 5.0      | 5.7      | 6.9      | 7.0      |
| 75th Percentile              | 1.5           | 5.7        | 7.0       | 8.1       | 4.2      | 5.1      | 6.4      | 6.4      |
| 95th Percentile              | 0.8           | 3.6        | 4.7       | 5.6       | 3.0      | 4.0      | 5.2      | 5.4      |
| # of Portfolios              | 124           | 124        | 123       | 121       | 113      | 98       | 82       | 65       |
| ● Beach Point Select         | 2.1 (26)      | 6.6 (47)   | 10.4 (10) | 10.3 (20) | -- (--)  | -- (--)  | -- (--)  | -- (--)  |
| ■ TCP Direct Lending VIII    | 2.7 (4)       | 6.7 (45)   | 7.5 (66)  | -- (--)   | -- (--)  | -- (--)  | -- (--)  | -- (--)  |
| ★ White Oak Yield            | -4.6 (99)     | -- (--)    | -- (--)   | -- (--)   | -- (--)  | -- (--)  | -- (--)  | -- (--)  |
| ▲ BBgBarc BA Intermediate HY | 1.7 (62)      | 6.1 (64)   | 6.8 (81)  | 8.9 (58)  | 5.9 (25) | 4.2 (95) | 5.4 (94) | -- (--)  |

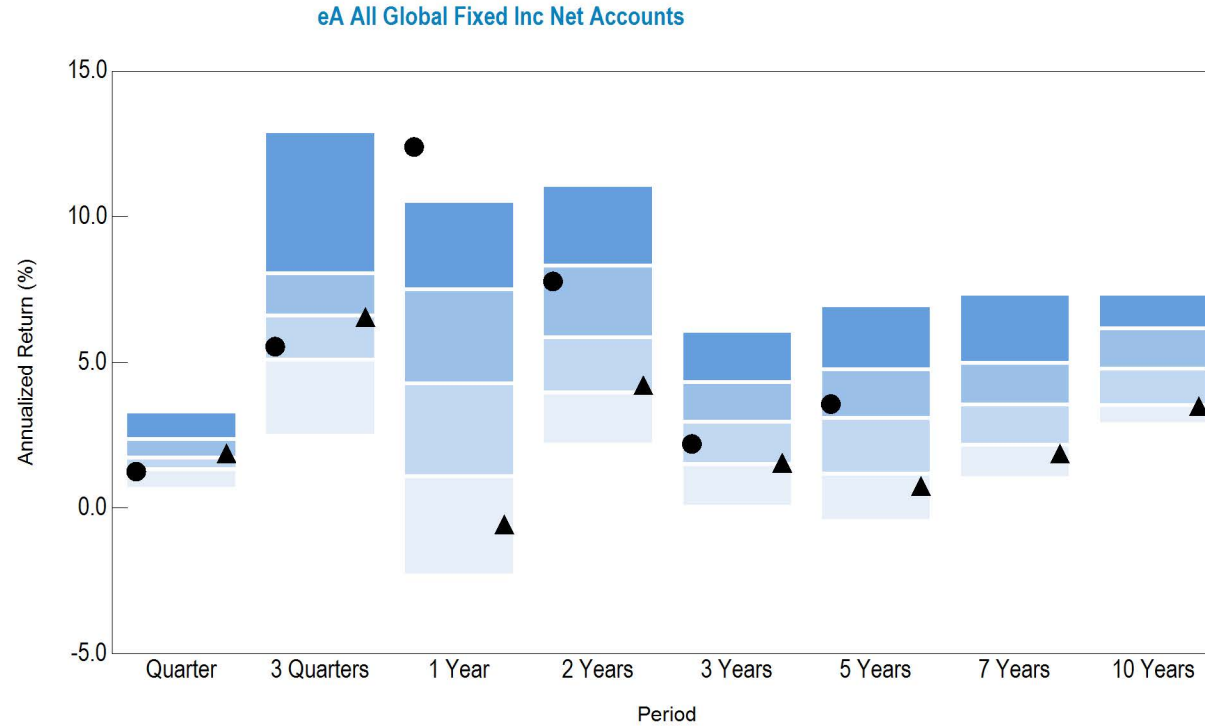


|                                  | Quarter  | 3 Quarters | 1 Year   | 2 Years  | 3 Years  | 5 Years  | 7 Years  | 10 Years |
|----------------------------------|----------|------------|----------|----------|----------|----------|----------|----------|
| <b>Return (Rank)</b>             |          |            |          |          |          |          |          |          |
| 5th Percentile                   | 2.6      | 8.1        | 11.4     | 11.3     | 6.5      | 7.5      | 8.3      | 8.2      |
| 25th Percentile                  | 2.1      | 7.0        | 9.1      | 10.0     | 5.9      | 6.4      | 7.5      | 7.5      |
| Median                           | 1.8      | 6.5        | 8.1      | 9.1      | 5.0      | 5.7      | 6.9      | 7.0      |
| 75th Percentile                  | 1.5      | 5.7        | 7.0      | 8.1      | 4.2      | 5.1      | 6.4      | 6.4      |
| 95th Percentile                  | 0.8      | 3.6        | 4.7      | 5.6      | 3.0      | 4.0      | 5.2      | 5.4      |
| # of Portfolios                  | 124      | 124        | 123      | 121      | 113      | 98       | 82       | 65       |
| ● Brigade Capital                | 1.4 (81) | 7.2 (19)   | 9.9 (15) | 11.0 (8) | 4.6 (68) | 5.5 (63) | 6.8 (55) | -- (--)  |
| ▲ BBgBarc BA Intermediate HY     | 1.7 (62) | 6.1 (64)   | 6.8 (81) | 8.9 (58) | 5.9 (25) | 4.2 (95) | 5.4 (94) | -- (--)  |
| ✕ 50% Barclays HY/ 50% Bank Loan | 1.5 (77) | 5.0 (83)   | 7.1 (73) | 8.1 (76) | 4.9 (56) | 5.4 (67) | 6.2 (80) | -- (--)  |





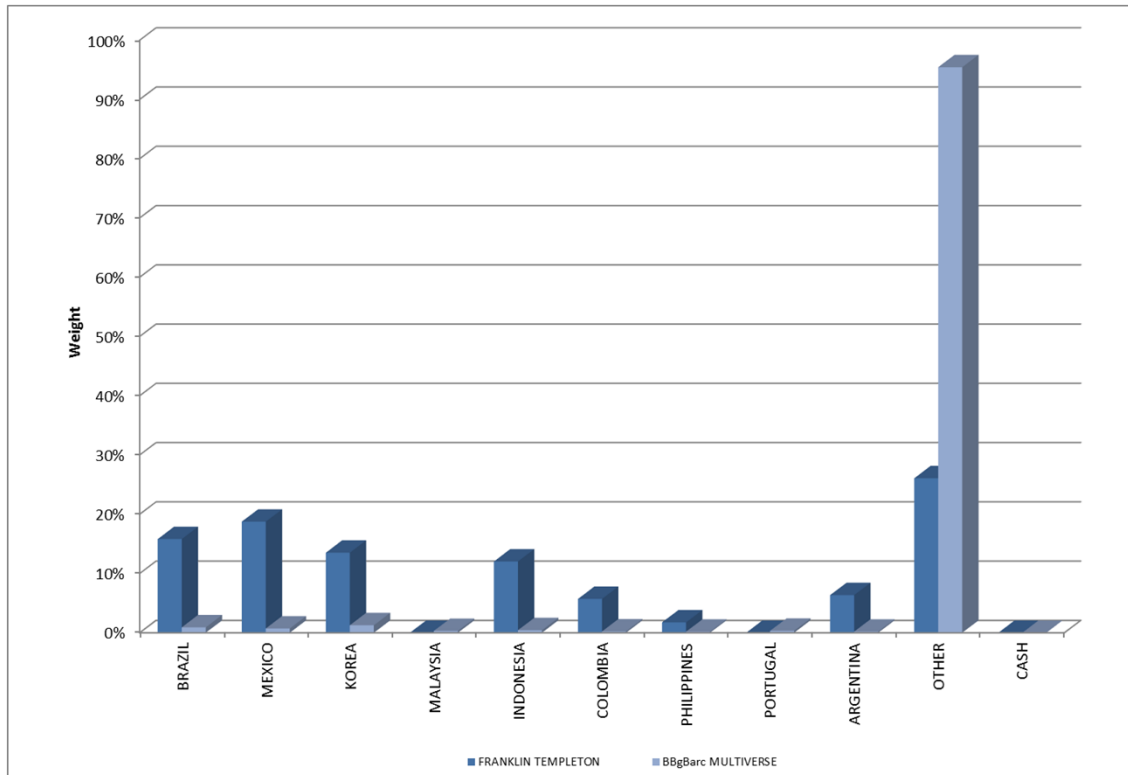
|                         | Return (Rank) |            |           |          |          |          |          |          |
|-------------------------|---------------|------------|-----------|----------|----------|----------|----------|----------|
|                         | Quarter       | 3 Quarters | 1 Year    | 2 Years  | 3 Years  | 5 Years  | 7 Years  | 10 Years |
| 5th Percentile          | 4.1           | 13.5       | 12.4      | 11.3     | 6.4      | 5.2      | 8.2      | 8.4      |
| 25th Percentile         | 2.4           | 8.7        | 7.9       | 9.0      | 4.1      | 3.7      | 5.3      | 5.7      |
| Median                  | 2.0           | 7.2        | 6.2       | 7.8      | 2.8      | 2.9      | 4.2      | 5.3      |
| 75th Percentile         | 1.5           | 5.6        | 2.9       | 5.6      | 2.1      | 1.2      | 3.6      | 4.8      |
| 95th Percentile         | 1.2           | 3.6        | 1.2       | 4.3      | 0.1      | -1.3     | 1.9      | 4.3      |
| # of Portfolios         | 40            | 39         | 39        | 38       | 36       | 28       | 19       | 13       |
| ● Global Fixed Income   | 1.3 (90)      | 5.5 (77)   | 12.4 (6)  | 7.8 (49) | 2.2 (72) | 3.6 (30) | -- (--)  | -- (--)  |
| ▲ BBgBarc Multiverse TR | 1.9 (58)      | 6.6 (53)   | -0.6 (99) | 4.2 (96) | 1.6 (82) | 0.8 (79) | 1.9 (96) | 3.5 (99) |



|                         | Return (Rank) |            |           |          |          |          |          |          |
|-------------------------|---------------|------------|-----------|----------|----------|----------|----------|----------|
|                         | Quarter       | 3 Quarters | 1 Year    | 2 Years  | 3 Years  | 5 Years  | 7 Years  | 10 Years |
| 5th Percentile          | 3.3           | 12.9       | 10.5      | 11.1     | 6.1      | 7.0      | 7.3      | 7.3      |
| 25th Percentile         | 2.4           | 8.1        | 7.5       | 8.3      | 4.3      | 4.8      | 5.0      | 6.2      |
| Median                  | 1.8           | 6.6        | 4.3       | 5.9      | 3.0      | 3.1      | 3.6      | 4.8      |
| 75th Percentile         | 1.4           | 5.1        | 1.1       | 4.0      | 1.5      | 1.2      | 2.2      | 3.5      |
| 95th Percentile         | 0.7           | 2.5        | -2.3      | 2.2      | 0.1      | -0.4     | 1.0      | 2.9      |
| # of Portfolios         | 220           | 219        | 214       | 204      | 191      | 168      | 129      | 90       |
| ● Franklin Templeton    | 1.3 (81)      | 5.5 (70)   | 12.4 (3)  | 7.8 (29) | 2.2 (64) | 3.6 (41) | -- (--)  | -- (--)  |
| ▲ BBgBarc Multiverse TR | 1.9 (45)      | 6.6 (52)   | -0.6 (88) | 4.2 (73) | 1.6 (74) | 0.8 (83) | 1.9 (81) | 3.5 (77) |

Franklin Templeton  
Portfolio Country Weights

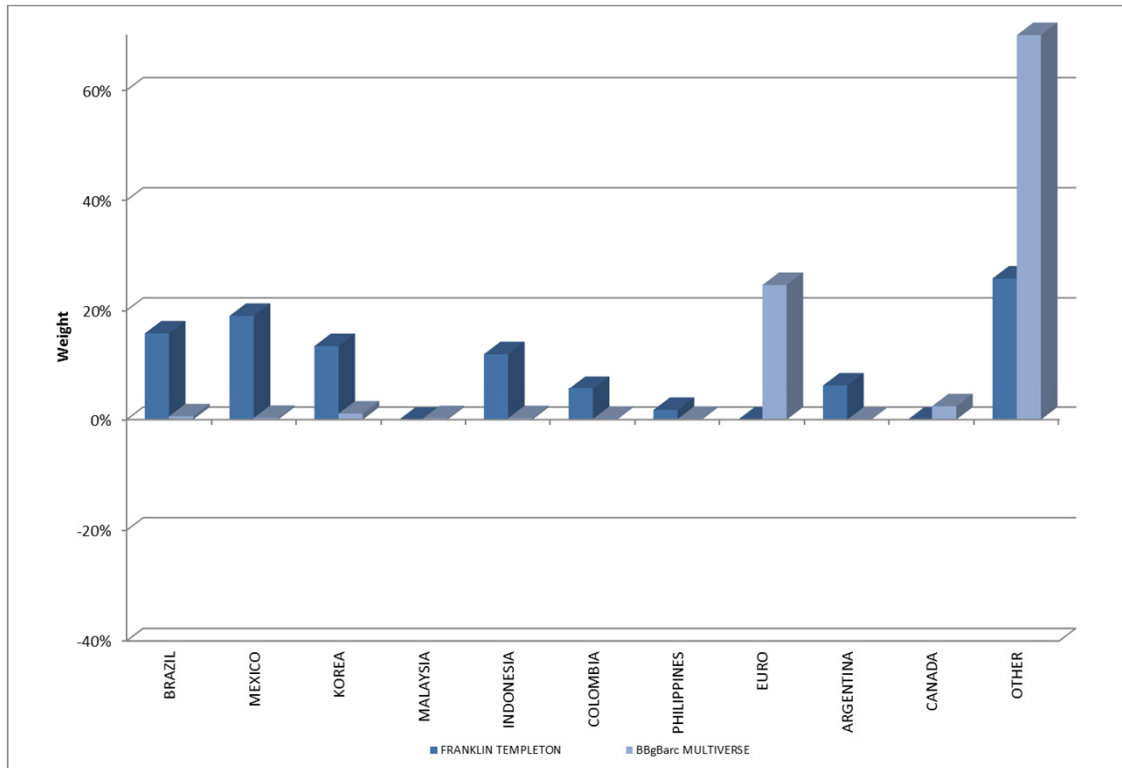
Period Ending: September 30, 2017



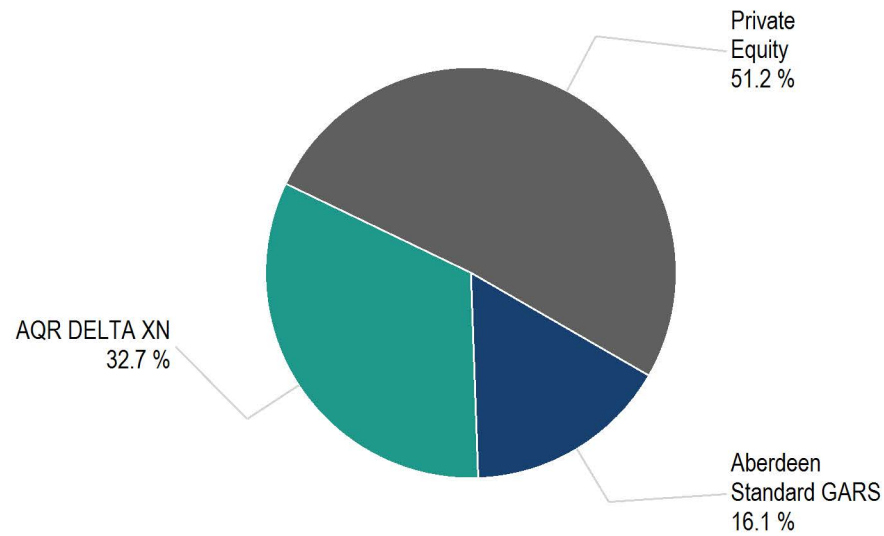
| COUNTRY     | MARKET VALUE | FRANKLIN TEMPLETON | BbgBarc MULTIVERSE | DIFF   |
|-------------|--------------|--------------------|--------------------|--------|
| BRAZIL      | \$ 12,109    | 15.8%              | 0.9%               | +14.9% |
| MEXICO      | \$ 14,361    | 18.8%              | 0.7%               | +18.0% |
| KOREA       | \$ 10,348    | 13.5%              | 1.3%               | +12.2% |
| MALAYSIA    | \$ -         | 0.0%               | 0.3%               | -0.3%  |
| INDONESIA   | \$ 9,216     | 12.0%              | 0.4%               | +11.6% |
| COLOMBIA    | \$ 4,377     | 5.7%               | 0.2%               | +5.5%  |
| PHILIPPINES | \$ 1,341     | 1.8%               | 0.2%               | +1.6%  |
| PORTUGAL    | \$ -         | 0.0%               | 0.3%               | -0.3%  |
| ARGENTINA   | \$ 4,869     | 6.4%               | 0.2%               | +6.2%  |
| OTHER       | \$ 19,966    | 26.1%              | 95.4%              | -69.4% |
| CASH        | \$ -         | 0.0%               | 0.0%               | 0.0%   |
|             | \$ 76,587    | 100.0%             | 100.0%             | 0.0%   |

Franklin Templeton  
Portfolio Currency Exposures

Period Ending: September 30, 2017



| CURRENCY    | MARKET VALUE | FRANKLIN TEMPLETON | BbgBarc MULTIVERSE | DIFF   |
|-------------|--------------|--------------------|--------------------|--------|
| BRAZIL      | \$ 12,109    | 15.8%              | 0.6%               | +15.2% |
| MEXICO      | \$ 14,550    | 19.0%              | 0.3%               | +18.7% |
| KOREA       | \$ 10,348    | 13.5%              | 1.1%               | +12.4% |
| MALAYSIA    | \$ -         | 0.0%               | 0.3%               | -0.3%  |
| INDONESIA   | \$ 9,216     | 12.0%              | 0.3%               | +11.8% |
| COLOMBIA    | \$ 4,377     | 5.7%               | 0.1%               | +5.6%  |
| PHILIPPINES | \$ 1,341     | 1.8%               | 0.1%               | +1.6%  |
| EURO        | \$ 21        | 0.0%               | 24.6%              | -24.6% |
| ARGENTINA   | \$ 4,869     | 6.4%               | 0.0%               | +6.4%  |
| CANADA      | \$ -         | 0.0%               | 2.4%               | -2.4%  |
| OTHER       | \$ 19,757    | 25.8%              | 70.3%              | -44.5% |
|             | \$ 76,587    | 100.0%             | 100.0%             | 0.0%   |



|                                     | Actual \$            | Actual %      | Manager Contribution to Excess Return % |
|-------------------------------------|----------------------|---------------|---|
| Aberdeen Standard GARS              | \$80,530,334         | 16.1%         | -0.2%                                   |
| AQR DELTA XN                        | \$163,224,752        | 32.7%         | 1.1%                                    |
| Private Equity                      | \$255,291,095        | 51.2%         | -3.1%                                   |
| Actual vs. Policy Weight Difference |                      |               | 0.4%                                    |
| <b>Total</b>                        | <b>\$499,046,181</b> | <b>100.0%</b> | <b>-1.8%</b>                            |

Statistics Summary

3 Years

|                               | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|-------------------------------|--------------|--------------------------|--------------|-------------------|----------------|
| Alternatives                  | 8.2%         | 5.1%                     | 1.5          | 0.3               | 6.7%           |
| Alternatives Allocation Index | 5.8%         | 5.6%                     | 1.0          | --                | 0.0%           |
| Private Equity                | 17.6%        | 9.7%                     | 1.8          | 0.3               | 13.6%          |
| Russell 3000 +3%              | 13.7%        | 10.0%                    | 1.3          | --                | 0.0%           |
| Hedge Fund/Absolute Return    | 6.8%         | 5.0%                     | 1.3          | 0.5               | 5.0%           |
| Libor 1 month +4%             | 4.5%         | 0.1%                     | 29.2         | --                | 0.0%           |
| AQR DELTA XN                  | 7.5%         | 5.3%                     | 1.3          | 0.6               | 5.4%           |
| Libor 1 month +4%             | 4.5%         | 0.1%                     | 29.2         | --                | 0.0%           |

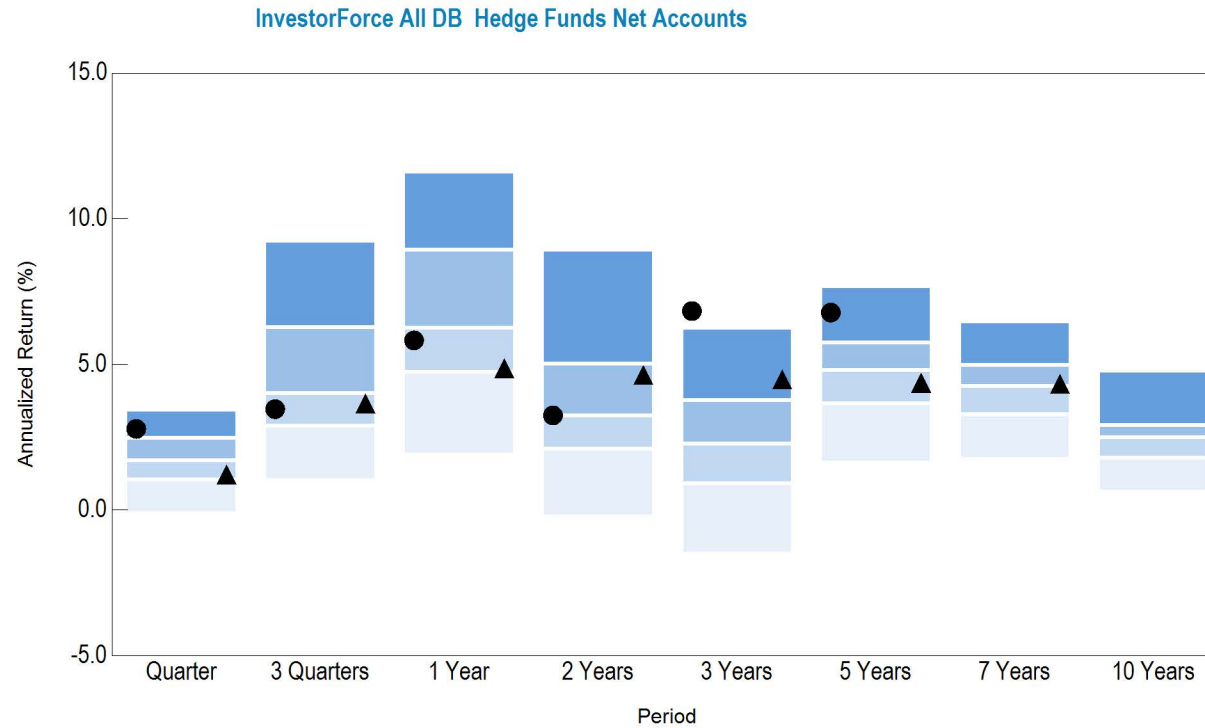
**Statistics Summary**

**5 Years**

|                               | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|-------------------------------|--------------|--------------------------|--------------|-------------------|----------------|
| Alternatives                  | 6.0%         | 5.1%                     | 1.1          | -0.1              | 6.0%           |
| Alternatives Allocation Index | 6.4%         | 5.4%                     | 1.1          | --                | 0.0%           |
| Private Equity                | 15.2%        | 9.0%                     | 1.7          | -0.2              | 12.8%          |
| Russell 3000 +3%              | 17.2%        | 9.6%                     | 1.8          | --                | 0.0%           |
| Hedge Fund/Absolute Return    | 6.8%         | 4.6%                     | 1.4          | 0.5               | 4.6%           |
| Libor 1 month +4%             | 4.4%         | 0.1%                     | 32.1         | --                | 0.0%           |
| AQR DELTA XN                  | 7.2%         | 4.9%                     | 1.4          | 0.6               | 4.9%           |
| Libor 1 month +4%             | 4.4%         | 0.1%                     | 32.1         | --                | 0.0%           |

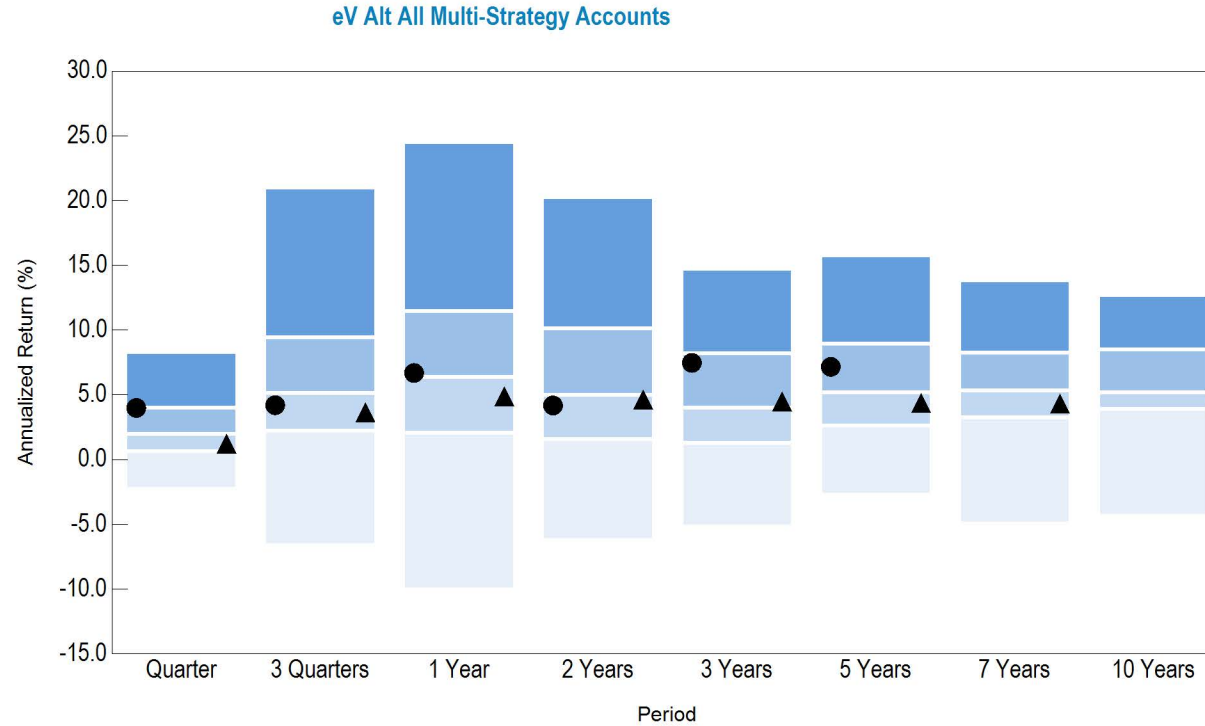
Hedge Fund/Absolute Return  
Peer Universe Comparison

Period Ending: September 30, 2017

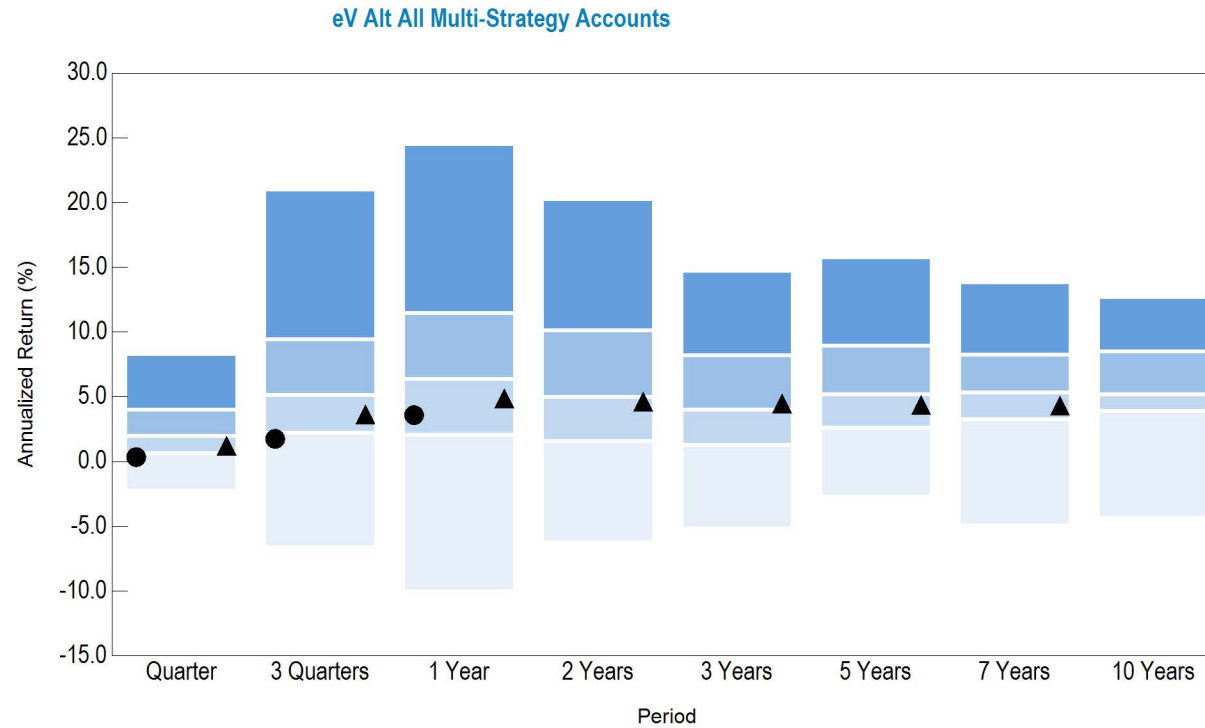


|                              | Return (Rank) |            |          |          |          |          |          |          |
|------------------------------|---------------|------------|----------|----------|----------|----------|----------|----------|
|                              | Quarter       | 3 Quarters | 1 Year   | 2 Years  | 3 Years  | 5 Years  | 7 Years  | 10 Years |
| 5th Percentile               | 3.4           | 9.2        | 11.6     | 8.9      | 6.2      | 7.7      | 6.5      | 4.8      |
| 25th Percentile              | 2.5           | 6.3        | 8.9      | 5.0      | 3.8      | 5.8      | 5.0      | 2.9      |
| Median                       | 1.7           | 4.0        | 6.3      | 3.3      | 2.3      | 4.8      | 4.3      | 2.5      |
| 75th Percentile              | 1.1           | 2.9        | 4.8      | 2.1      | 0.9      | 3.7      | 3.3      | 1.8      |
| 95th Percentile              | -0.1          | 1.0        | 1.9      | -0.2     | -1.5     | 1.6      | 1.8      | 0.7      |
| # of Portfolios              | 243           | 243        | 240      | 233      | 227      | 209      | 160      | 89       |
| ● Hedge Fund/Absolute Return | 2.8 (21)      | 3.5 (66)   | 5.8 (61) | 3.3 (51) | 6.8 (4)  | 6.8 (13) | -- (--)  | -- (--)  |
| ▲ Libor 1 month +4%          | 1.2 (74)      | 3.7 (62)   | 4.9 (75) | 4.6 (35) | 4.5 (18) | 4.4 (62) | 4.3 (46) | -- (--)  |

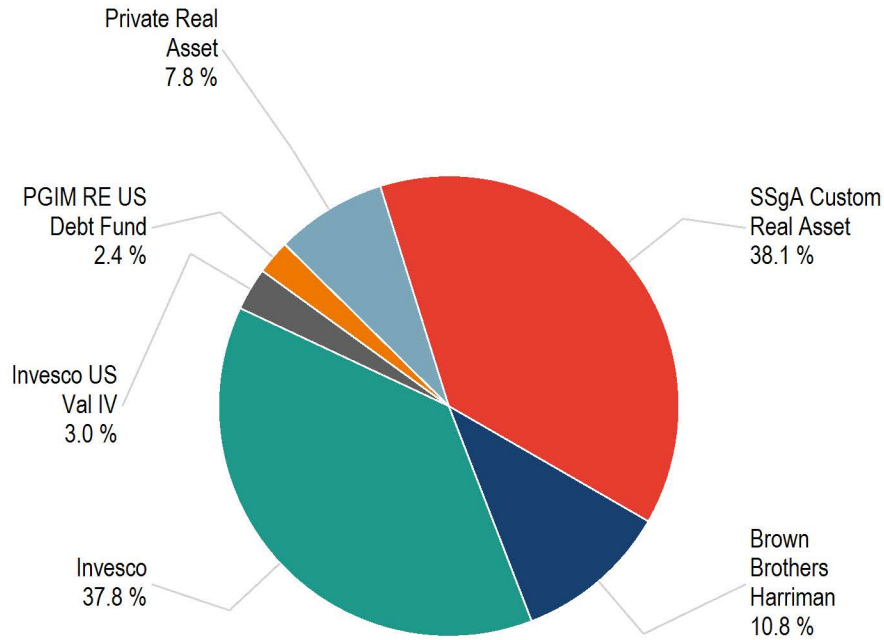




|                     | Return (Rank) |            |          |          |          |          |          |          |
|---------------------|---------------|------------|----------|----------|----------|----------|----------|----------|
|                     | Quarter       | 3 Quarters | 1 Year   | 2 Years  | 3 Years  | 5 Years  | 7 Years  | 10 Years |
| 5th Percentile      | 8.3           | 21.0       | 24.5     | 20.3     | 14.7     | 15.7     | 13.8     | 12.7     |
| 25th Percentile     | 4.0           | 9.5        | 11.5     | 10.2     | 8.2      | 9.0      | 8.3      | 8.6      |
| Median              | 2.0           | 5.2        | 6.4      | 5.0      | 4.0      | 5.2      | 5.4      | 5.2      |
| 75th Percentile     | 0.7           | 2.3        | 2.1      | 1.6      | 1.3      | 2.6      | 3.3      | 3.9      |
| 95th Percentile     | -2.2          | -6.6       | -10.0    | -6.2     | -5.2     | -2.7     | -4.9     | -4.3     |
| # of Portfolios     | 312           | 304        | 300      | 280      | 257      | 204      | 162      | 101      |
| ● AQR DELTA XN      | 4.0 (26)      | 4.2 (59)   | 6.7 (49) | 4.2 (58) | 7.5 (30) | 7.2 (43) | -- (--)  | -- (--)  |
| ▲ Libor 1 month +4% | 1.2 (67)      | 3.7 (64)   | 4.9 (58) | 4.6 (55) | 4.5 (48) | 4.4 (60) | 4.3 (63) | -- (--)  |



|                          | Return (Rank) |            |          |          |          |          |          |          |
|--------------------------|---------------|------------|----------|----------|----------|----------|----------|----------|
|                          | Quarter       | 3 Quarters | 1 Year   | 2 Years  | 3 Years  | 5 Years  | 7 Years  | 10 Years |
| 5th Percentile           | 8.3           | 21.0       | 24.5     | 20.3     | 14.7     | 15.7     | 13.8     | 12.7     |
| 25th Percentile          | 4.0           | 9.5        | 11.5     | 10.2     | 8.2      | 9.0      | 8.3      | 8.6      |
| Median                   | 2.0           | 5.2        | 6.4      | 5.0      | 4.0      | 5.2      | 5.4      | 5.2      |
| 75th Percentile          | 0.7           | 2.3        | 2.1      | 1.6      | 1.3      | 2.6      | 3.3      | 3.9      |
| 95th Percentile          | -2.2          | -6.6       | -10.0    | -6.2     | -5.2     | -2.7     | -4.9     | -4.3     |
| # of Portfolios          | 312           | 304        | 300      | 280      | 257      | 204      | 162      | 101      |
| ● Aberdeen Standard GARS | 0.3 (80)      | 1.7 (79)   | 3.6 (68) | -- (--)  | -- (--)  | -- (--)  | -- (--)  | -- (--)  |
| ▲ Libor 1 month +4%      | 1.2 (67)      | 3.7 (64)   | 4.9 (58) | 4.6 (55) | 4.5 (48) | 4.4 (60) | 4.3 (63) | -- (--)  |



|                                     | Actual \$            | Actual %      | Manager Contribution to Excess Return % |
|-------------------------------------|----------------------|---------------|---|
| Brown Brother Harriman              | \$71,456,823         | 10.8%         | 0.0%                                    |
| Invesco                             | \$249,718,795        | 37.8%         | -0.2%                                   |
| Invesco US Val IV                   | \$19,994,974         | 3.0%          | 0.1%                                    |
| PGIM RE US Debt Fund                | \$15,604,756         | 2.4%          | 0.0%                                    |
| Private Real Asset                  | \$51,735,386         | 7.8%          | -0.8%                                   |
| SSGA Custom Real Asset              | \$251,921,564        | 38.1%         | 0.2%                                    |
| Actual vs. Policy Weight Difference |                      |               | 0.0%                                    |
| <b>Total</b>                        | <b>\$660,432,299</b> | <b>100.0%</b> | <b>-0.8%</b>                            |

Statistics Summary

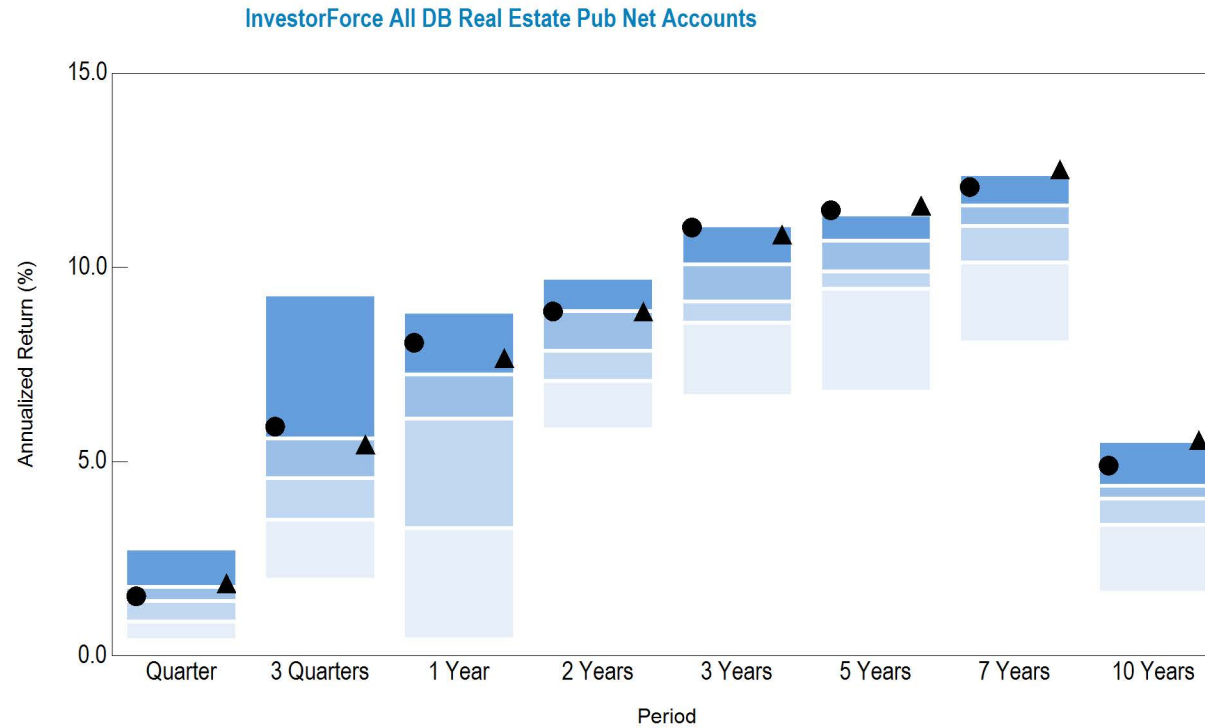
3 Years

|                          | Anlzd Return | Anlzd Standard<br>Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|--------------------------|--------------|-----------------------------|--------------|-------------------|----------------|
| Real Estate              | 11.02%       | 4.90%                       | 2.18         | 0.12              | 1.45%          |
| NCREIF ODCE              | 10.84%       | 4.60%                       | 2.29         | --                | 0.00%          |
| Invesco                  | 10.86%       | 4.85%                       | 2.17         | 0.01              | 1.54%          |
| NCREIF ODCE              | 10.84%       | 4.60%                       | 2.29         | --                | 0.00%          |
| Private Real Asset       | 11.59%       | 26.75%                      | 0.42         | 0.19              | 26.74%         |
| Blended Real Asset Index | 6.51%        | 3.30%                       | 1.88         | --                | 0.00%          |
| TIPS                     | 1.31%        | 2.61%                       | 0.38         | -0.20             | 1.49%          |
| BBgBarc US TIPS TR       | 1.62%        | 3.58%                       | 0.36         | --                | 0.00%          |
| Brown Brothers Harriman  | 1.31%        | 2.61%                       | 0.38         | -0.20             | 1.49%          |
| BBgBarc US TIPS TR       | 1.62%        | 3.58%                       | 0.36         | --                | 0.00%          |

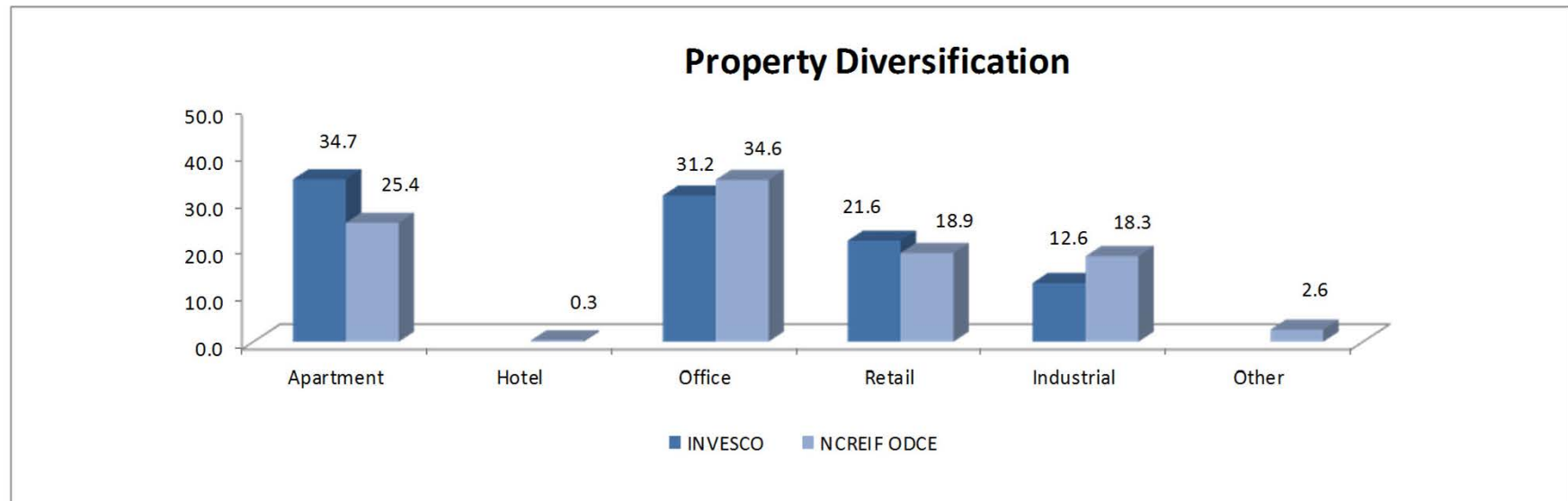
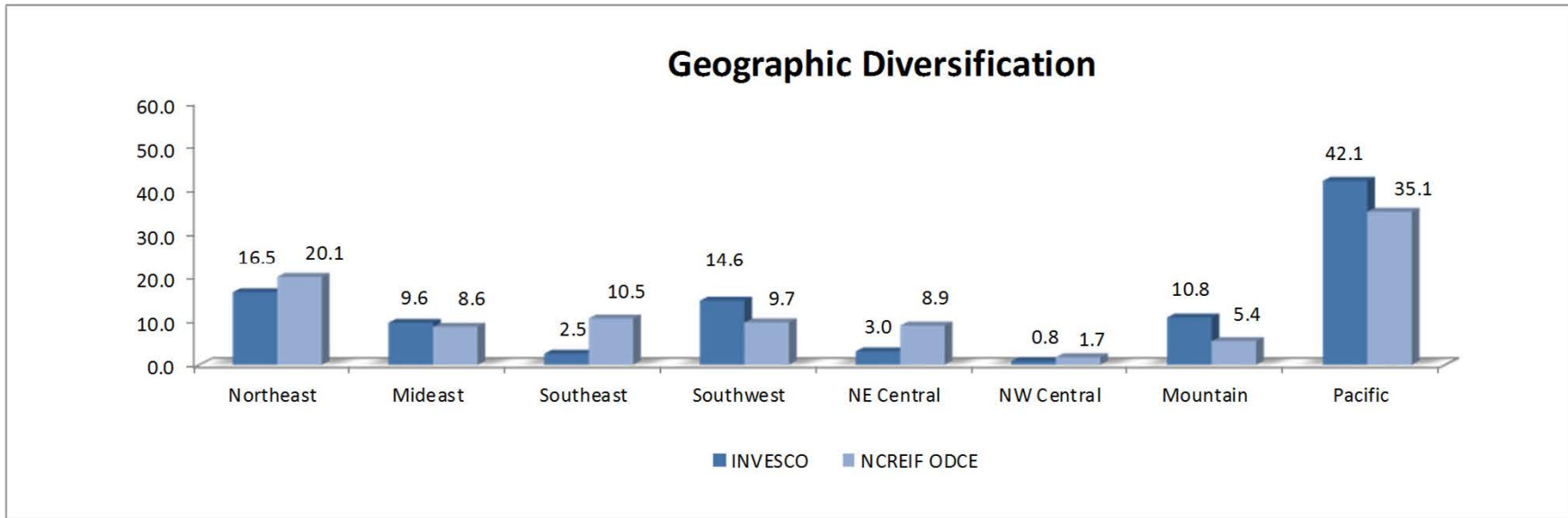
Statistics Summary

5 Years

|                         | Anlzd Return | Anlzd Standard<br>Deviation | Sharpe Ratio | Information Ratio | Tracking Error Rank |
|-------------------------|--------------|-----------------------------|--------------|-------------------|---------------------|
| Real Estate             | 11.47%       | 4.98%                       | 2.26         | -0.08             | 24                  |
| NCREIF ODCE             | 11.59%       | 4.80%                       | 2.37         | --                | 1                   |
| Invesco                 | 11.37%       | 4.95%                       | 2.25         | -0.15             | --                  |
| NCREIF ODCE             | 11.59%       | 4.80%                       | 2.37         | --                | --                  |
| TIPS                    | -0.43%       | 3.87%                       | -0.17        | -0.34             | --                  |
| BBgBarc US TIPS TR      | 0.02%        | 4.47%                       | -0.04        | --                | --                  |
| Brown Brothers Harriman | -0.43%       | 3.87%                       | -0.17        | -0.34             | 54                  |
| BBgBarc US TIPS TR      | 0.02%        | 4.47%                       | -0.04        | --                | 1                   |



|                 | Return (Rank) |            |          |          |           |          |           |          |
|-----------------|---------------|------------|----------|----------|-----------|----------|-----------|----------|
|                 | Quarter       | 3 Quarters | 1 Year   | 2 Years  | 3 Years   | 5 Years  | 7 Years   | 10 Years |
| 5th Percentile  | 2.7           | 9.3        | 8.8      | 9.7      | 11.1      | 11.4     | 12.4      | 5.5      |
| 25th Percentile | 1.8           | 5.6        | 7.2      | 8.9      | 10.1      | 10.7     | 11.6      | 4.4      |
| Median          | 1.4           | 4.6        | 6.1      | 7.9      | 9.1       | 9.9      | 11.1      | 4.1      |
| 75th Percentile | 0.9           | 3.5        | 3.3      | 7.1      | 8.6       | 9.5      | 10.1      | 3.4      |
| 95th Percentile | 0.4           | 2.0        | 0.4      | 5.8      | 6.7       | 6.8      | 8.1       | 1.6      |
| # of Portfolios | 86            | 83         | 83       | 81       | 79        | 70       | 65        | 40       |
| ● Real Estate   | 1.5 (44)      | 5.9 (23)   | 8.1 (14) | 8.9 (26) | 11.0 (8)  | 11.5 (3) | 12.1 (14) | 4.9 (17) |
| ▲ NCREIF ODCE   | 1.9 (23)      | 5.4 (30)   | 7.7 (18) | 8.9 (26) | 10.8 (14) | 11.6 (3) | 12.5 (2)  | 5.6 (5)  |



INVESCO Core Real Estate  
Real Estate Valuation Analysis

Period Ending: September 30, 2017

| 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 09/30/2017 2.87% |
|---|--------------------------|---------------------------|-----------------------------|------------------------|--------------------|---------------------|--|
| <b>APARTMENTS</b>                                 |                          |                           |                             |                        |                    |                     |  |
| Stoneridge Apartments                             | Pleasanton, CA           | \$234,000,000             | \$236,000,000               | \$236,000,000          | 4Q06               | September-17        | \$6,784,261                              |
| Instrata Pentagon City                            | Arlington, VA            | \$151,000,000             | \$152,000,000               | \$152,000,000          | 3Q10               | September-17        | \$4,369,524                              |
| Ladd Tower  | Portland, OR             | \$137,000,000             | \$137,000,000               | \$79,804,636           | 4Q10               | September-17        | \$2,294,134                              |
| Legacy Fountain Plaza                             | San Jose, CA             | \$155,962,259             | \$156,964,172               | \$156,964,172          | 1Q11               | September-17        | \$4,512,229                              |
| Instrata Gramercy (fka The Elektra)               | New York, NY             | \$176,900,000             | \$172,500,000               | \$99,479,943           | 1Q11               | September-17        | \$2,859,737                              |
| Instrata Brooklyn Heights (fka 75 Clinton Street) | Brooklyn, NY             | \$66,400,000              | \$67,300,000                | \$67,300,000           | 1Q12               | September-17        | \$1,934,664                              |
| The Artisan Laguna Beach                          | Orange County, CA        | \$164,000,000             | \$165,000,000               | \$103,102,794          | 3Q12               | September-17        | \$2,963,883                              |
| The GoodWynn                                      | Atlanta, GA              | \$97,500,000              | \$97,500,000                | \$97,500,000           | 4Q12               | September-17        | \$2,802,820                              |
| Instrata Hell's Kitchen                           | New York, NY             | \$188,000,000             | \$189,000,000               | \$189,000,000          | 1Q13               | September-17        | \$5,433,158                              |
| Sunset Vine Tower                                 | Los Angeles, CA          | \$96,300,000              | \$97,100,000                | \$97,100,000           | 2Q13               | September-17        | \$2,791,321                              |
| The Ashton  | Dallas, TX               | \$124,000,000             | \$123,000,000               | \$65,501,779           | 4Q13               | September-17        | \$1,882,971                              |
| The Pointe at Westchester                         | West Chester, PA         | \$58,800,000              | \$59,400,000                | \$59,400,000           | 4Q13               | September-17        | \$1,707,564                              |
| 206 Bell  | Seattle, WA              | \$48,000,000              | \$48,500,000                | \$48,500,000           | 4Q13               | September-17        | \$1,394,223                              |
| Cadence Union Station                             | Denver, CO               | \$90,000,000              | \$90,000,000                | \$52,669,499           | 1Q14               | September-17        | \$1,514,083                              |
| Joseph Arnold Lofts                               | Seattle, WA              | \$71,200,000              | \$71,600,000                | \$37,166,268           | 2Q14               | September-17        | \$1,068,414                              |
| Verve   | Denver, CO               | \$113,000,000             | \$113,000,000               | \$113,000,000          | 3Q14               | September-17        | \$3,248,396                              |
| Broadstone Little Italy                           | San Diego CA             | \$121,000,000             | \$121,000,000               | \$67,503,327           | 3Q14               | September-17        | \$1,940,509                              |
| 33 Tehama   | San Francisco, CA        | \$234,229,935             | \$260,917,747               | \$165,607,964          | 3Q14               | September-17        | \$4,760,711                              |
| The Parker  | Portland, OR             | \$67,000,000              | \$67,000,000                | \$34,686,981           | 1Q15               | September-17        | \$997,142                                |
| Legacy West Apartments                            | Plano, TX                | \$103,991,140             | \$111,520,438               | \$80,120,186           | 1Q15               | September-17        | \$2,303,205                              |
| Village at Park Place                             | Irvine, CA               | \$130,808,885             | \$146,729,082               | \$91,725,387           | 2Q15               | September-17        | \$2,636,818                              |
| Wheaton 121                                       | Wheaton, IL              | \$81,900,000              | \$81,400,000                | \$81,400,000           | 2Q15               | September-17        | \$2,339,995                              |
| Jefferson Marketplace                             | Washington, DC           | \$152,000,000             | \$153,000,000               | \$82,196,136           | 4Q15               | September-17        | \$2,362,882                              |
| Retreat at Park Meadows                           | Littleton, CO            | \$132,000,000             | \$137,000,000               | \$137,000,000          | 4Q15               | September-17        | \$3,938,321                              |
| North Water                                       | Chicago, IL              | \$263,000,000             | \$264,000,000               | \$264,000,000          | 1Q16               | September-17        | \$7,589,174                              |
| 2270 Broadway                                     | Oakland, CA              | \$23,105,355              | \$25,551,852                | \$25,551,852           | 1Q16               | September-17        | \$734,536                                |
| Runway at Playa Vista -Apartments                 | Playa Vista, CA          | \$163,770,000             | \$163,770,000               | \$100,296,108          | 1Q16               | September-17        | \$2,883,199                              |
| Clayton Lane Apartments                           | Denver, CO               | \$34,788,644              | \$35,564,159                | \$35,564,159           | 1Q16               | September-17        | \$1,022,358                              |
| Biscayne 27                                       | Miami, FL                | \$36,026,090              | \$42,307,897                | \$42,307,897           | 2Q16               | September-17        | \$1,216,220                              |
| Flats 8300  | Washington DC            | \$228,000,000             | \$231,000,000               | \$127,500,000          | 2Q16               | September-17        | \$3,665,226                              |
| 407 1st Ave                                       | New York, NY             | \$193,500,000             | \$194,000,000               | \$194,000,000          | 4Q16               | September-17        | \$5,576,893                              |
| 5250 Park   | Miami, FL                | \$8,711,262               | \$10,409,778                | \$10,042,677           | 2Q17               | September-17        | \$288,696                                |
| The Mason   | Pleasanton, CA           | \$0                       | \$99,625,000                | \$99,625,000           | 3Q17               | Acq 3Q17            | \$2,863,907                              |
|   |                          | <b>\$3,945,893,570</b>    | <b>\$4,120,660,125</b>      | <b>\$3,293,616,765</b> |                    |                     | <b>\$94,681,174</b>                      |
| <b>INDUSTRIAL</b>                                 |                          |                           |                             |                        |                    |                     |  |
| Arjons Industrial Park                            | San Diego CA             | \$40,900,000              | \$41,300,000                | \$41,300,000           | 2Q04               | September-17        | \$1,187,246                              |
| Gateway Business Park                             | Dallas TX                | \$13,500,000              | \$13,000,000                | \$13,000,000           | 2Q04               | September-17        | \$373,709                                |
| Hayward Industrial                                | Oakland CA               | \$183,000,000             | \$185,100,000               | \$185,100,000          | 3Q04-3Q07          | September-17        | \$5,321,046                              |
| Lackman Park                                      | Kansas City MO-KS        | \$25,100,000              | \$0                         | \$0                    | 2Q04               | Sold 3Q17           | \$0                                      |
| Crossroads Industrial                             | Kansas City MO-KS        | \$8,800,000               | \$0                         | \$0                    | 1Q06               | Sold 3Q17           | \$0                                      |
| Oakesdale Commerce Center                         | Seattle - Belle - Eve WA | \$53,100,000              | \$54,700,000                | \$54,700,000           | 1Q06               | September-17        | \$1,572,454                              |
| South Bay Industrial                              | Los Angeles, CA          | \$55,800,000              | \$56,200,000                | \$56,200,000           | 4Q06               | September-17        | \$1,615,574                              |
| Steeplechase 95 International Business Park       | Capitol Heights, MD      | \$96,400,000              | \$97,200,000                | \$97,200,000           | 1Q11               | September-17        | \$2,794,196                              |
| Airport Trade Center Portfolio                    | Dallas, TX               | \$126,800,000             | \$130,500,000               | \$130,500,000          | 1Q11               | September-17        | \$3,751,467                              |
| IE Logistics                                      | San Bernardino, CA       | \$132,700,000             | \$133,100,000               | \$133,100,000          | 3Q11               | September-17        | \$3,826,208                              |
| Railhead Drive Industrial                         | Dallas, TX               | \$62,500,000              | \$62,500,000                | \$62,500,000           | 4Q11               | September-17        | \$1,796,679                              |
| Empire Gateway aka Chino South Logistics Center   | Chino, CA                | \$257,000,000             | \$264,000,000               | \$264,000,000          | 4Q12               | September-17        | \$7,589,174                              |
| SFO Logistics Center                              | San Francisco, CA        | \$140,000,000             | \$141,000,000               | \$141,000,000          | 4Q13               | September-17        | \$4,053,309                              |
| Miami Industrial Portfolio                        | Various, FL              | \$114,495,190             | \$116,050,274               | \$85,322,327           | 1Q16               | September-17        | \$2,452,750                              |
| OMP Burbank                                       | Los Angeles, CA          | \$70,539,525              | \$73,788,384                | \$73,788,384           | 2Q16               | September-17        | \$2,121,185                              |
| Pacific Commons                                   | Freemont, CA             | \$122,661,267             | \$124,566,938               | \$124,566,938          | 1Q17               | September-17        | \$3,580,910                              |
|   |                          | <b>\$1,503,295,982</b>    | <b>\$1,493,005,596</b>      | <b>\$1,462,277,649</b> |                    |                     | <b>\$42,035,906</b>                      |



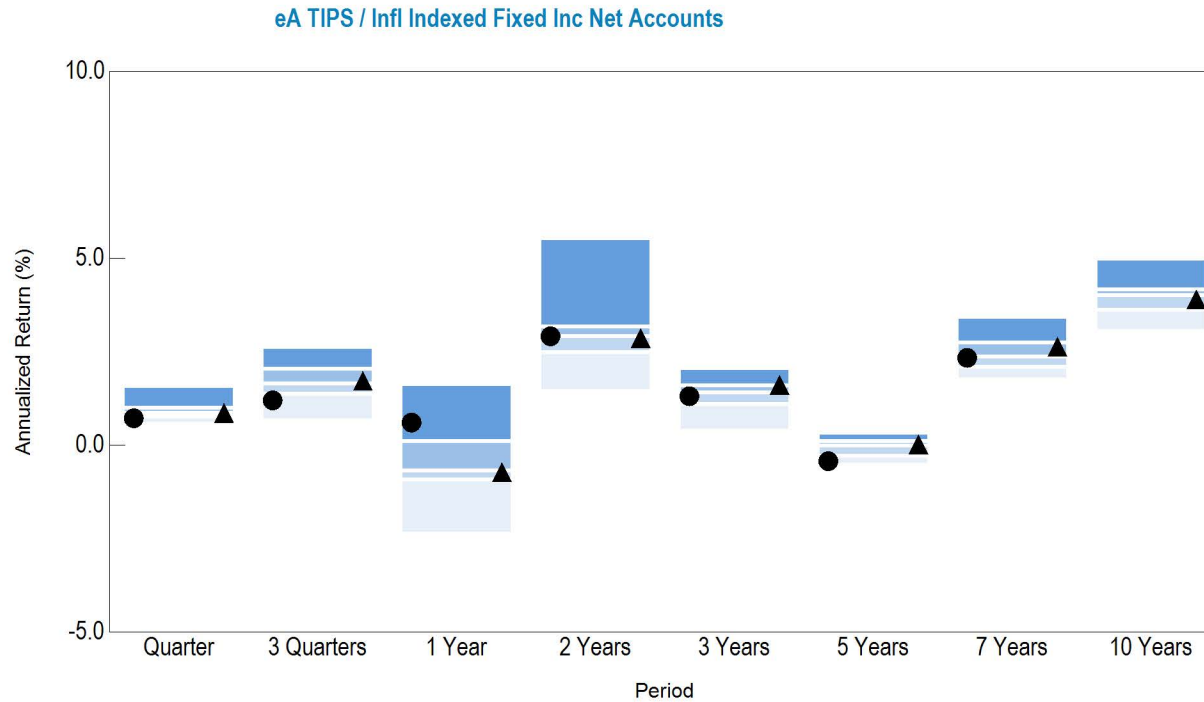
INVESCO Core Real Estate  
Real Estate Valuation Analysis

Period Ending: September 30, 2017

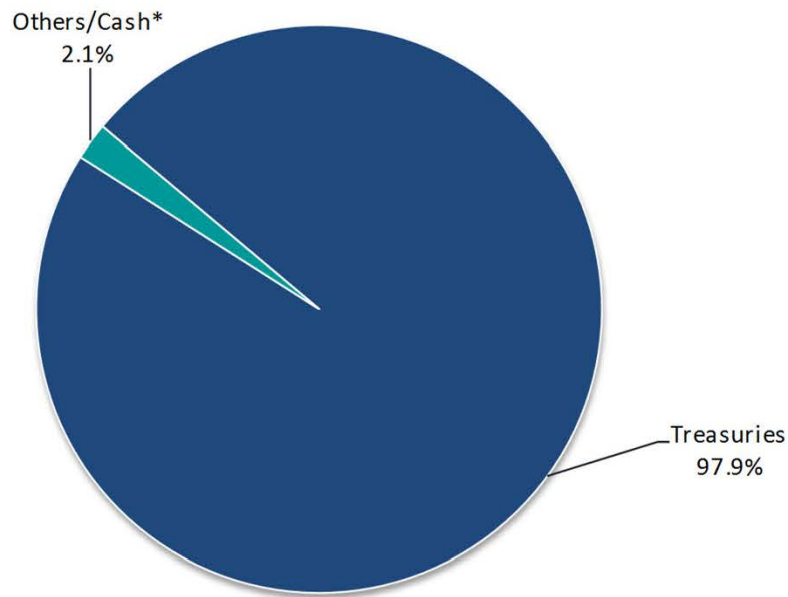
| OFFICE                         |                      |                         |                         |                         |      |              |                      |
|--------------------------------|----------------------|-------------------------|-------------------------|-------------------------|------|--------------|----------------------|
| 55 Cambridge Parkway           | Boston MA - NH       | \$285,000,000           | \$286,000,000           | \$286,000,000           | 4Q06 | September-17 | \$8,221,605          |
| 1111 Pennsylvania Avenue       | Washington, D.C.     | \$317,000,000           | \$322,000,000           | \$322,000,000           | 4Q10 | September-17 | \$9,256,492          |
| 1800 Larimer                   | Denver, CO           | \$328,000,000           | \$327,000,000           | \$327,000,000           | 1Q11 | September-17 | \$9,400,227          |
| Hillview Office                | San Jose, CA         | \$78,400,000            | \$79,500,000            | \$79,500,000            | 3Q12 | September-17 | \$2,285,376          |
| Williams Tower                 | Houston, TX          | \$590,000,000           | \$590,000,000           | \$405,828,766           | 1Q13 | September-17 | \$11,666,307         |
| Westlake Park Place            | Westlake Village, CA | \$112,000,000           | \$112,000,000           | \$112,000,000           | 4Q13 | September-17 | \$3,219,649          |
| 101 Second                     | San Francisco, CA    | \$394,000,000           | \$408,000,000           | \$408,000,000           | 1Q14 | September-17 | \$11,728,723         |
| Energy Crossing II             | Houston, TX          | \$108,000,000           | \$101,300,000           | \$101,300,000           | 2Q14 | September-17 | \$2,912,058          |
| 1776 Wilson Blvd.              | Arlington, VA        | \$94,600,000            | \$90,200,000            | \$90,200,000            | 3Q14 | September-17 | \$2,592,968          |
| 631 Howard                     | San Francisco, CA    | \$94,700,000            | \$90,600,000            | \$90,600,000            | 3Q14 | September-17 | \$2,604,466          |
| Barton Oaks                    | Austin, TX           | \$87,300,000            | \$88,600,000            | \$88,600,000            | 3Q14 | September-17 | \$2,546,973          |
| Hercules East and South Campus | Los Angeles, CA      | \$166,413,301           | \$168,308,406           | \$168,308,406           | 3Q14 | September-17 | \$4,838,340          |
| The Reserve                    | Playa Vista, CA      | \$367,470,065           | \$367,778,942           | \$367,778,942           | 1Q15 | September-17 | \$10,572,494         |
| Fort Point Portfolio           | Boston, MA           | \$223,120,254           | \$232,288,247           | \$232,288,247           | 2Q15 | September-17 | \$6,677,560          |
| Legacy West Office             | Plano, TX            | \$64,509,497            | \$76,634,009            | \$36,189,574            | 1Q15 | September-17 | \$1,040,337          |
| Summit IV                      | Aliso Viejo, CA      | \$123,000,000           | \$123,000,000           | \$84,522,336            | 2Q15 | September-17 | \$2,429,753          |
| 1101 Westlake                  | Seattle, WA          | \$106,000,000           | \$121,000,000           | \$121,000,000           | 3Q15 | September-17 | \$3,478,371          |
| PearlWest                      | Boulder, CO          | \$122,000,000           | \$121,000,000           | \$121,000,000           | 4Q16 | September-17 | \$3,478,371          |
|                                |                      | <b>\$3,661,513,117</b>  | <b>\$3,705,209,604</b>  | <b>\$3,442,116,271</b>  |      |              | <b>\$98,950,070</b>  |
| RETAIL                         |                      |                         |                         |                         |      |              |                      |
| Chandler Pavilion              | Phoenix - Mesa AZ    | \$24,000,000            | \$24,000,000            | \$24,000,000            | 2Q04 | September-17 | \$689,925            |
| Cityline at Tenley             | Washington, D.C.     | \$63,100,000            | \$63,700,000            | \$63,700,000            | 4Q05 | September-17 | \$1,831,176          |
| Ridgehaven Shopping Center     | Minnetonka, MN       | \$42,940,000            | \$42,300,000            | \$42,300,000            | 4Q05 | September-17 | \$1,215,993          |
| The Beacon Retail              | San Francisco, CA    | \$68,496,378            | \$68,430,894            | \$68,430,894            | 1Q06 | September-17 | \$1,967,174          |
| The Beacon Garage (units)      | San Francisco, CA    | \$36,103,622            | \$36,069,106            | \$36,069,106            | 1Q06 | September-17 | \$1,036,874          |
| The Beacon Office (210 King)   | San Francisco, CA    | \$25,000,000            | \$25,300,000            | \$25,300,000            | 1Q15 | September-17 | \$727,296            |
| Hawthorne Plaza                | Overland Park, KS    | \$52,925,000            | \$51,525,000            | \$51,525,000            | 4Q07 | September-17 | \$1,481,182          |
| The Loop                       | Boston MA - NH       | \$92,800,000            | \$89,000,000            | \$89,000,000            | 1Q08 | September-17 | \$2,558,471          |
| Westbank Market                | Austin, TX           | \$62,000,000            | \$62,000,000            | \$62,000,000            | 3Q10 | September-17 | \$1,782,306          |
| Lake Pointe Village            | Houston, TX          | \$79,650,000            | \$79,350,000            | \$79,350,000            | 4Q11 | September-17 | \$983,143            |
| Safeway Kapahulu               | Hawaii               | \$91,700,000            | \$91,400,000            | \$55,066,993            | 4Q11 | September-17 | \$1,583,004          |
| Safeway Burlingame             | San Francisco, CA    | \$58,600,000            | \$58,600,000            | \$35,770,092            | 4Q11 | September-17 | \$1,028,278          |
| Shamrock Plaza                 | Oakland, CA          | \$39,500,000            | \$39,600,000            | \$23,314,913            | 4Q11 | September-17 | \$670,231            |
| Pavilions Marketplace          | West Hollywood, CA   | \$67,600,000            | \$67,600,000            | \$42,819,336            | 1Q12 | September-17 | \$1,230,922          |
| 130 Prince                     | New York, NY         | \$219,700,000           | \$217,000,000           | \$217,000,000           | 2Q12 | September-17 | \$6,238,071          |
| Safeway Pleasanton             | Pleasanton, CA       | \$82,800,000            | \$82,800,000            | \$82,800,000            | 4Q12 | September-17 | \$2,380,241          |
| Liberty Wharf                  | Boston, MA           | \$94,900,000            | \$94,500,000            | \$64,442,969            | 4Q12 | September-17 | \$1,852,534          |
| Shops at Legacy                | Plano, TX            | \$110,690,478           | \$110,690,478           | \$110,690,478           | 3Q13 | September-17 | \$3,182,005          |
| Pasadena Commons               | Pasadena, CA         | \$58,800,000            | \$60,300,000            | \$60,300,000            | 4Q14 | September-17 | \$1,733,436          |
| Rush Street Retail             | Chicago, IL          | \$16,100,000            | \$16,400,000            | \$16,400,000            | 4Q14 | September-17 | \$471,449            |
| Legacy West Retail             | Plano, TX            | \$182,331,898           | \$188,811,999           | \$148,367,563           | 1Q15 | September-17 | \$4,265,103          |
| Legacy West Land               | Plano, TX            | \$917,188               | \$917,929               | \$917,929               | 2Q17 | September-17 | \$26,388             |
| 131-137 Spring Street          | New York, NY         | \$236,769,849           | \$237,294,192           | \$125,765,922           | 3Q15 | September-17 | \$3,615,377          |
| Runway at Playa Vista - Retail | Playa Vista, CA      | \$121,900,000           | \$122,430,000           | \$60,016,215            | 1Q16 | September-17 | \$1,725,278          |
| 139 Spring                     | New York, NY         | \$125,933,200           | \$126,924,800           | \$126,924,800           | 1Q16 | September-17 | \$3,648,691          |
| Clayton Lane                   | Denver, CO           | \$142,041,999           | \$142,088,956           | \$95,256,792            | 1Q16 | September-17 | \$2,738,335          |
| 4th & Colorado                 | Santa Monica, CA     | \$13,120,000            | \$13,280,000            | \$13,280,000            | 1Q16 | September-17 | \$381,758            |
| Shops at Crystals              | Las Vegas, NV        | \$290,000,000           | \$290,000,000           | \$152,193,491           | 2Q16 | September-17 | \$4,375,087          |
|                                |                      | <b>\$2,560,519,612</b>  | <b>\$2,563,547,726</b>  | <b>\$2,034,236,865</b>  |      |              | <b>\$57,979,185</b>  |
| <b>Portfolio Total</b>         |                      | <b>\$11,671,222,281</b> | <b>\$11,882,423,051</b> | <b>\$10,232,247,550</b> |      |              | <b>\$293,646,334</b> |

TIPS / Inflation Indexed Fixed Income  
Peer Universe Comparison

Period Ending: September 30, 2017



|                           | Return (Rank) |            |           |          |          |           |          |          |
|---------------------------|---------------|------------|-----------|----------|----------|-----------|----------|----------|
|                           | Quarter       | 3 Quarters | 1 Year    | 2 Years  | 3 Years  | 5 Years   | 7 Years  | 10 Years |
| 5th Percentile            | 1.6           | 2.6        | 1.6       | 5.5      | 2.1      | 0.3       | 3.4      | 5.0      |
| 25th Percentile           | 1.0           | 2.1        | 0.1       | 3.2      | 1.6      | 0.1       | 2.8      | 4.2      |
| Median                    | 0.9           | 1.7        | -0.7      | 2.9      | 1.4      | 0.0       | 2.4      | 4.0      |
| 75th Percentile           | 0.8           | 1.4        | -0.9      | 2.5      | 1.1      | -0.3      | 2.1      | 3.6      |
| 95th Percentile           | 0.6           | 0.7        | -2.4      | 1.5      | 0.4      | -0.5      | 1.8      | 3.1      |
| # of Portfolios           | 20            | 20         | 20        | 20       | 18       | 17        | 14       | 10       |
| ● Brown Brothers Harriman | 0.7 (85)      | 1.2 (84)   | 0.6 (14)  | 2.9 (53) | 1.3 (60) | -0.4 (94) | 2.3 (62) | -- (--)  |
| ▲ BBgBarc US TIPS TR      | 0.9 (52)      | 1.7 (45)   | -0.7 (60) | 2.9 (55) | 1.6 (25) | 0.0 (47)  | 2.6 (30) | 3.9 (67) |



| Sector       | Account Weight | BBgBarc TIPS  |             |
|--------------|----------------|---------------|-------------|
|              |                | Index         | Difference  |
| Treasuries   | 97.9%          | 100.0%        | -2.1%       |
| 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* | 2.1%           | 0.0%          | 2.1%        |
| <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 |    | 13         |
| Total Market Value         | \$ | 71,456,823 |
| Current Coupon             |    | 1.16       |
| Yield to Maturity          |    | 0.28       |
| Average Life               |    |            |
| Duration                   |    | 7.55       |
| Quality                    |    | GOV        |

| BBgBarc TIPS               |      |
|----------------------------|------|
|                            |      |
| Total Number of Securities | 38   |
| Total Market Value         | N/A  |
| Current Coupon             | 0.79 |
| Yield to Maturity          | 0.27 |
| Average Life               |      |
| Duration                   | 7.73 |
| Quality                    | AAA  |

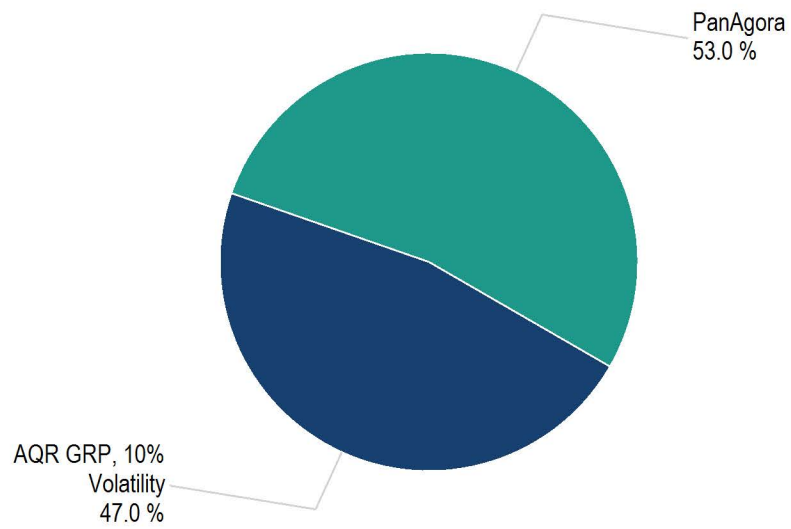
| Yield to Maturity |        |
|-------------------|--------|
| Range             | % Held |
| 0.0 - 5.0         | 100.0  |
| 5.0 - 7.0         | 0.0    |
| 7.0 - 9.0         | 0.0    |
| 9.0 - 11.0        | 0.0    |
| 11.0 - 13.0       | 0.0    |
| 13.0+             | 0.0    |
| Unclassified      |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

| Average Life |        |
|--------------|--------|
| Range        | % Held |
| 0.0 - 3.0    | 23.1   |
| 3.0 - 5.0    | 14.1   |
| 5.0 - 10.0   | 33.2   |
| 10.0- 15.0   | 16.1   |
| 15.0+        | 13.4   |
| Unclassified | 0.0    |

| Duration     |        |
|--------------|--------|
| Range        | % Held |
| 0.0 - 3.0    | 23.1   |
| 3.0 - 5.0    | 14.1   |
| 5.0 - 10.0   | 43.2   |
| 10.0- 15.0   | 6.2    |
| 15.0+        | 13.4   |
| Unclassified | 0.0    |

| Quality         |        |
|-----------------|--------|
| Range           | % Held |
| Govt (10)       | 97.9   |
| Aaa (10)        | 0.0    |
| Aa (9)          | 0.0    |
| A (8)           | 0.0    |
| Baa (7)         | 0.0    |
| Below Baa (6-1) | 0.0    |
| Other           | 2.1    |

| 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             | \$142,298,020        | 47.0%         | 0.6%                                    |
| PanAgora                            | \$160,181,576        | 53.0%         | -0.1%                                   |
| Actual vs. Policy Weight Difference |                      |               | 0.0%                                    |
| <b>Total</b>                        | <b>\$302,479,596</b> | <b>100.0%</b> | <b>0.5%</b>                             |

**Statistics Summary**

**3 Years**

|                           | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|---------------------------|--------------|--------------------------|--------------|-------------------|----------------|
| Risk Parity               | 5.1%         | 7.9%                     | 0.6          | -0.4              | 6.6%           |
| Blended Risk Parity Index | 7.9%         | 6.0%                     | 1.3          | --                | 0.0%           |
| AQR GRP, 10% Volatility   | 2.9%         | 7.8%                     | 0.3          | -0.8              | 6.4%           |
| Blended Risk Parity Index | 7.9%         | 6.0%                     | 1.3          | --                | 0.0%           |

**Statistics Summary**

**5 Years**

|                           | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|---------------------------|--------------|--------------------------|--------------|-------------------|----------------|
| Risk Parity               | 4.9%         | 8.6%                     | 0.5          | -0.7              | 6.8%           |
| Blended Risk Parity Index | 9.5%         | 5.9%                     | 1.6          | --                | 0.0%           |
| AQR GRP, 10% Volatility   | 3.5%         | 8.6%                     | 0.4          | -0.9              | 6.7%           |
| Blended Risk Parity Index | 9.5%         | 5.9%                     | 1.6          | --                | 0.0%           |

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: September 30, 2017

|                                    | 3 Mo<br>(%) | YTD<br>(%)  | 1 Yr<br>(%) | 2 Yrs<br>(%) | 3 Yrs<br>(%) | 5 Yrs<br>(%) | 10 Yrs<br>(%) |
|------------------------------------|-------------|-------------|-------------|--------------|--------------|--------------|---------------|
| <b>Total Fund</b>                  | <b>3.3</b>  | <b>11.0</b> | <b>12.1</b> | <b>11.3</b>  | <b>7.4</b>   | <b>9.1</b>   | <b>5.2</b>    |
| <i>Policy Index</i>                | 3.7         | 11.3        | 12.6        | 11.8         | 7.2          | 8.9          | 5.6           |
| <i>Allocation Index</i>            | 3.7         | 11.2        | 12.4        | 11.6         | 7.0          | 8.8          | --            |
| <b>Total Fund ex Overlay</b>       | <b>3.3</b>  | <b>10.9</b> | <b>12.0</b> | <b>11.1</b>  | <b>7.2</b>   | <b>9.0</b>   | <b>5.1</b>    |
| <i>Policy Index</i>                | 3.7         | 11.3        | 12.6        | 11.8         | 7.2          | 8.9          | 5.6           |
| <i>Allocation Index</i>            | 3.7         | 11.2        | 12.4        | 11.6         | 7.0          | 8.8          | --            |
| <b>Public Equity</b>               | <b>5.2</b>  | <b>17.2</b> | <b>18.5</b> | <b>15.8</b>  | <b>9.0</b>   | <b>12.0</b>  | <b>5.2</b>    |
| <i>Blended Public Equity Index</i> | 5.4         | 17.4        | 19.7        | 16.3         | 8.9          | 11.8         | 5.6           |
| <b>US Equity</b>                   | <b>5.2</b>  | <b>13.8</b> | <b>18.6</b> | <b>16.2</b>  | <b>10.6</b>  | <b>14.0</b>  | <b>7.1</b>    |
| <i>Blended US Equity Index</i>     | 4.6         | 13.9        | 18.7        | 16.7         | 10.8         | 14.1         | 7.6           |
| <i>Russell 3000</i>                | 4.6         | 13.9        | 18.7        | 16.8         | 10.7         | 14.2         | 7.6           |
| <b>Large Cap Equity</b>            | <b>5.0</b>  | <b>15.4</b> | <b>19.3</b> | <b>16.9</b>  | <b>11.3</b>  | <b>14.5</b>  | <b>7.2</b>    |
| <i>Russell 1000</i>                | 4.5         | 14.2        | 18.5        | 16.7         | 10.6         | 14.3         | 7.5           |
| BlackRock Russell 1000             | 4.5         | --          | --          | --           | --           | --           | --            |
| <i>Russell 1000</i>                | 4.5         | 14.2        | 18.5        | 16.7         | 10.6         | 14.3         | 7.5           |
| DE Shaw                            | 7.6         | 18.4        | 22.8        | 20.1         | 13.8         | 16.6         | --            |
| <i>Russell 1000</i>                | 4.5         | 14.2        | 18.5        | 16.7         | 10.6         | 14.3         | 7.5           |
| <b>Small Cap Equity</b>            | <b>5.9</b>  | <b>10.5</b> | <b>22.4</b> | <b>16.7</b>  | <b>10.0</b>  | <b>13.2</b>  | <b>7.1</b>    |
| <i>Russell 2000</i>                | 5.7         | 10.9        | 20.7        | 18.1         | 12.2         | 13.8         | 7.8           |
| QMA US Small Cap                   | 5.9         | 10.5        | 22.4        | --           | --           | --           | --            |
| <i>Russell 2000</i>                | 5.7         | 10.9        | 20.7        | 18.1         | 12.2         | 13.8         | 7.8           |
| <b>International Equity</b>        | <b>5.3</b>  | <b>21.9</b> | <b>17.7</b> | <b>14.8</b>  | <b>6.1</b>   | <b>8.0</b>   | <b>1.2</b>    |
| <i>MSCI ACWI ex US IMI</i>         | 6.4         | 21.9        | 20.1        | 15.1         | 5.6          | 7.7          | 1.9           |
| <i>MSCI EAFE Gross</i>             | 5.5         | 20.5        | 19.7        | 13.2         | 5.5          | 8.9          | 1.8           |
| <b>Developed Markets</b>           | <b>5.1</b>  | <b>21.8</b> | <b>17.6</b> | <b>14.6</b>  | <b>6.5</b>   | <b>8.6</b>   | <b>1.5</b>    |
| <i>MSCI ACWI ex USA Gross</i>      | 6.3         | 21.6        | 20.2        | 14.9         | 5.2          | 7.5          | 1.7           |
| Baillie Gifford                    | 5.1         | 26.0        | 17.2        | 17.1         | 8.7          | 10.3         | --            |
| <i>MSCI ACWI ex US</i>             | 6.3         | 21.6        | 20.2        | 14.9         | 5.2          | 9.0          | --            |
| <i>MSCI ACWI ex US Growth</i>      | 6.4         | 25.2        | 18.1        | 15.0         | 6.8          | 9.6          | --            |

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: September 30, 2017

|                                       | 3 Mo<br>(%) | YTD<br>(%)  | 1 Yr<br>(%) | 2 Yrs<br>(%) | 3 Yrs<br>(%) | 5 Yrs<br>(%) | 10 Yrs<br>(%) |
|---------------------------------------|-------------|-------------|-------------|--------------|--------------|--------------|---------------|
| BlackRock EAFE Index                  | 5.5         | 20.4        | 19.6        | 13.1         | 5.4          | --           | --            |
| <i>MSCI EAFE</i>                      | 5.4         | 20.0        | 19.1        | 12.6         | 5.0          | 8.4          | 1.3           |
| <i>MSCI EAFE Gross</i>                | 5.5         | 20.5        | 19.7        | 13.2         | 5.5          | 8.9          | 1.8           |
| Mondrian                              | 5.1         | 18.5        | 17.3        | 13.0         | 4.3          | 7.2          | 1.9           |
| <i>MSCI ACWI ex USA Value Gross</i>   | 6.1         | 18.3        | 22.2        | 14.7         | 3.5          | 6.6          | 1.2           |
| <i>MSCI ACWI ex USA Gross</i>         | 6.3         | 21.6        | 20.2        | 14.9         | 5.2          | 7.5          | 1.7           |
| <b>Emerging Markets</b>               | <b>6.9</b>  | <b>22.1</b> | <b>18.9</b> | <b>17.1</b>  | <b>2.5</b>   | <b>4.1</b>   | <b>--</b>     |
| <i>MSCI Emerging Markets Gross</i>    | 8.0         | 28.1        | 22.9        | 20.0         | 5.3          | 4.4          | 1.7           |
| Parametric Core                       | 6.9         | 22.1        | 18.9        | 17.1         | --           | --           | --            |
| <i>MSCI Emerging Markets Gross</i>    | 8.0         | 28.1        | 22.9        | 20.0         | 5.3          | 4.4          | 1.7           |
| <b>Fixed Income</b>                   | <b>1.2</b>  | <b>5.2</b>  | <b>6.2</b>  | <b>6.6</b>   | <b>4.3</b>   | <b>4.1</b>   | <b>5.6</b>    |
| <i>Blended Fixed Income Index</i>     | 1.2         | 4.5         | 2.0         | 4.7          | 3.4          | 2.2          | 4.6           |
| <b>US Fixed Income</b>                | <b>1.3</b>  | <b>5.2</b>  | <b>5.1</b>  | <b>6.4</b>   | <b>4.7</b>   | <b>4.1</b>   | <b>5.7</b>    |
| <i>Blended US Fixed Index</i>         | 1.1         | 4.2         | 2.4         | 4.9          | 3.8          | 2.5          | 4.8           |
| <b>Core Fixed</b>                     | <b>1.1</b>  | <b>4.3</b>  | <b>2.7</b>  | <b>4.6</b>   | <b>3.7</b>   | <b>3.1</b>   | <b>4.9</b>    |
| <i>BBgBarc US Aggregate TR</i>        | 0.8         | 3.1         | 0.1         | 2.6          | 2.7          | 2.1          | 4.3           |
| BlackRock Intermediate Govt           | 0.4         | --          | --          | --           | --           | --           | --            |
| FIAM Bond                             | 1.1         | 3.8         | 1.0         | 4.0          | 3.4          | 2.9          | 5.1           |
| Western TRU                           | 2.1         | 8.1         | 9.3         | 7.3          | --           | --           | --            |
| <i>3-Month Libor Total Return USD</i> | 0.3         | 0.9         | 1.2         | 0.9          | 0.7          | 0.5          | 0.9           |
| <i>BBgBarc US Aggregate TR</i>        | 0.8         | 3.1         | 0.1         | 2.6          | 2.7          | 2.1          | 4.3           |
| <b>Opportunistic Credit</b>           | <b>1.7</b>  | <b>7.7</b>  | <b>10.8</b> | <b>10.3</b>  | <b>7.2</b>   | <b>9.1</b>   | <b>--</b>     |
| <i>BBgBarc BA Intermediate HY</i>     | 1.7         | 6.1         | 6.8         | 8.9          | 5.9          | 4.2          | --            |
| Angelo Gordon Opportunistic           | -0.6        | 7.9         | 11.0        | 8.0          | 6.0          | --           | --            |
| Angelo Gordon STAR                    | 5.0         | 15.7        | 18.5        | 11.4         | 10.8         | --           | --            |
| <i>BBgBarc US Aggregate TR</i>        | 0.8         | 3.1         | 0.1         | 2.6          | 2.7          | 2.1          | 4.3           |
| Beach Point Select                    | 2.1         | 6.6         | 10.7        | 11.0         | --           | --           | --            |
| <i>BBgBarc BA Intermediate HY</i>     | 1.7         | 6.1         | 6.8         | 8.9          | 5.9          | 4.2          | --            |



Total Fund  
Performance Summary (Gross of Fees)

Period Ending: September 30, 2017

|  | 3 Mo<br>(%) | YTD<br>(%) | 1 Yr<br>(%) | 2 Yrs<br>(%) | 3 Yrs<br>(%) | 5 Yrs<br>(%) | 10 Yrs<br>(%) |
|--|-------------|------------|-------------|--------------|--------------|--------------|---------------|
| <b>Brigade Capital</b>                 | 1.4         | 7.2        | 10.1        | 11.5         | 5.2          | 6.0          | --            |
| <i>BBgBarc BA Intermediate HY</i>      | 1.7         | 6.1        | 6.8         | 8.9          | 5.9          | 4.2          | --            |
| <i>50% Barclays HY/ 50% Bank Loan</i>  | 1.5         | 5.0        | 7.1         | 8.1          | 4.9          | 5.4          | --            |
| <b>PIMCO Diversified</b>               | --          | --         | --          | --           | --           | --           | --            |
| <i>Blended PIMCO Diversified Index</i> | 1.9         | 6.5        | 4.7         | 8.3          | 5.3          | 5.0          | 6.8           |
| <i>BBgBarc BA Intermediate HY</i>      | 1.7         | 6.1        | 6.8         | 8.9          | 5.9          | 4.2          | --            |
| <b>Private Credit</b>                  | 0.8         | 4.6        | 5.4         | --           | --           | --           | --            |
| <i>BBgBarc BA Intermediate HY</i>      | 1.7         | 6.1        | 6.8         | 8.9          | 5.9          | 4.2          | --            |
| TCP Direct Lending VIII                | 2.7         | 6.7        | 7.5         | --           | --           | --           | --            |
| White Oak Yield                        | -4.6        | --         | --          | --           | --           | --           | --            |
| <i>BBgBarc BA Intermediate HY</i>      | 1.7         | 6.1        | 6.8         | 8.9          | 5.9          | 4.2          | --            |
| <b>Global Fixed Income</b>             | 1.3         | 5.5        | 12.4        | 7.8          | 2.2          | 3.7          | --            |
| <i>BBgBarc Multiverse TR</i>           | 1.9         | 6.6        | -0.6        | 4.2          | 1.6          | 0.8          | 3.5           |
| Franklin Templeton                     | 1.3         | 5.5        | 12.4        | 7.8          | 2.2          | 3.7          | --            |
| <i>BBgBarc Multiverse TR</i>           | 1.9         | 6.6        | -0.6        | 4.2          | 1.6          | 0.8          | 3.5           |
| <b>Risk Parity</b>                     | 3.7         | 9.8        | 5.6         | 10.0         | 5.1          | 5.0          | --            |
| <i>Blended Risk Parity Index</i>       | 3.2         | 10.3       | 11.8        | 11.5         | 7.9          | 9.5          | --            |
| AQR GRP, 10% Volatility                | 4.5         | 10.8       | 8.2         | 9.1          | 2.9          | 3.6          | --            |
| PanAgora                               | 3.0         | 9.0        | 3.3         | 10.8         | 7.3          | --           | --            |
| <i>Blended Risk Parity Index</i>       | 3.2         | 10.3       | 11.8        | 11.5         | 7.9          | 9.5          | --            |
| <i>Blended RP Secondary Index</i>      | 3.1         | 9.5        | 9.7         | 9.7          | 5.7          | 7.7          | --            |
| <b>Alternatives</b>                    | 1.7         | 8.0        | 12.1        | 8.0          | 8.2          | 6.1          | --            |
| <i>Alternatives Allocation Index</i>   | 3.5         | 10.0       | 13.6        | 11.2         | 5.8          | 6.4          | --            |
| <i>Blended Alternatives Index</i>      | 3.6         | 10.2       | 14.0        | 11.3         | 6.4          | 8.2          | --            |
| <b>Private Equity</b>                  | 0.6         | 12.0       | 17.6        | 13.1         | 17.6         | 15.2         | --            |
| <i>Russell 3000 +3%</i>                | 5.6         | 15.9       | 21.7        | 19.8         | 13.7         | 17.2         | 10.6          |
| <b>Hedge Fund/Absolute Return</b>      | 2.8         | 3.5        | 5.8         | 3.3          | 6.8          | 6.8          | --            |
| <i>Libor 1 month +4%</i>               | 1.2         | 3.7        | 4.9         | 4.6          | 4.5          | 4.4          | --            |

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: September 30, 2017

|                                     | 3 Mo<br>(%) | YTD<br>(%)  | 1 Yr<br>(%) | 2 Yrs<br>(%) | 3 Yrs<br>(%) | 5 Yrs<br>(%) | 10 Yrs<br>(%) |
|-------------------------------------|-------------|-------------|-------------|--------------|--------------|--------------|---------------|
| AQR DELTA XN                        | 4.0         | 4.2         | 6.7         | 4.2          | 7.5          | 7.2          | --            |
| <i>Libor 1 month +4%</i>            | 1.2         | 3.7         | 4.9         | 4.6          | 4.5          | 4.4          | --            |
| Aberdeen Standard GARS              | 0.3         | 1.7         | 3.6         | --           | --           | --           | --            |
| <i>Libor 1 month +4%</i>            | 1.2         | 3.7         | 4.9         | 4.6          | 4.5          | 4.4          | --            |
| <b>Inflation Hedge</b>              | <b>2.4</b>  | <b>5.8</b>  | <b>7.4</b>  | <b>--</b>    | <b>--</b>    | <b>--</b>    | <b>--</b>     |
| <i>Blended Inflation Pool Index</i> | 3.2         | 5.9         | 7.0         | --           | --           | --           | --            |
| <b>Real Estate</b>                  | <b>1.6</b>  | <b>6.2</b>  | <b>8.5</b>  | <b>9.2</b>   | <b>11.4</b>  | <b>11.9</b>  | <b>5.3</b>    |
| <i>NCREIF ODCE</i>                  | 1.9         | 5.4         | 7.7         | 8.9          | 10.8         | 11.6         | 5.6           |
| Invesco                             | 1.5         | 6.0         | 8.3         | 8.9          | 11.2         | 11.8         | 5.3           |
| <i>NCREIF ODCE</i>                  | 1.9         | 5.4         | 7.7         | 8.9          | 10.8         | 11.6         | 5.6           |
| Invesco US Val IV                   | 5.6         | 10.6        | 12.1        | --           | --           | --           | --            |
| <i>NCREIF ODCE</i>                  | 1.9         | 5.4         | 7.7         | 8.9          | 10.8         | 11.6         | 5.6           |
| <i>NCREIF CEVA 1Q Lag - NET</i>     | 2.6         | 6.9         | 9.7         | 11.6         | 13.5         | --           | --            |
| PGIM RE US Debt Fund                | --          | --          | --          | --           | --           | --           | --            |
| <i>NCREIF ODCE</i>                  | 1.9         | 5.4         | 7.7         | 8.9          | 10.8         | 11.6         | 5.6           |
| <b>Private Real Asset</b>           | <b>-3.1</b> | <b>-0.4</b> | <b>-0.4</b> | <b>17.8</b>  | <b>14.1</b>  | <b>--</b>    | <b>--</b>     |
| <i>Blended Real Asset Index</i>     | 5.1         | 7.8         | 8.9         | 7.8          | 6.5          | --           | --            |
| <b>Liquid Pool</b>                  | <b>5.6</b>  | <b>9.1</b>  | <b>--</b>   | <b>--</b>    | <b>--</b>    | <b>--</b>    | <b>--</b>     |
| <i>Blended Real Asset Index</i>     | 5.1         | 7.8         | 8.9         | 7.8          | 6.5          | --           | --            |
| SSgA Custom Real Asset              | 5.6         | 9.1         | --          | --           | --           | --           | --            |
| <i>Blended Real Asset Index</i>     | 5.1         | 7.8         | 8.9         | 7.8          | 6.5          | --           | --            |
| <b>TIPS</b>                         | <b>0.8</b>  | <b>1.3</b>  | <b>0.8</b>  | <b>3.1</b>   | <b>1.5</b>   | <b>-0.3</b>  | <b>--</b>     |
| <i>BBgBarc US TIPS TR</i>           | 0.9         | 1.7         | -0.7        | 2.9          | 1.6          | 0.0          | 3.9           |
| Brown Brothers Harriman             | 0.8         | 1.3         | 0.8         | 3.1          | 1.5          | -0.3         | --            |
| <i>BBgBarc US TIPS TR</i>           | 0.9         | 1.7         | -0.7        | 2.9          | 1.6          | 0.0          | 3.9           |
| <b>Cash</b>                         | <b>0.2</b>  | <b>0.7</b>  | <b>0.9</b>  | <b>1.1</b>   | <b>1.0</b>   | <b>0.8</b>   | <b>0.7</b>    |
| <i>91 Day T-Bills</i>               | 0.3         | 0.6         | 0.7         | 0.5          | 0.3          | 0.2          | 0.4           |
| General Account                     | 0.5         | 1.1         | 1.3         | 1.7          | 1.4          | 0.9          | 1.0           |
| Treasury & LAIF                     | 0.3         | 1.0         | 0.7         | 0.8          | 0.9          | 0.8          | 0.7           |
| <i>91 Day T-Bills</i>               | 0.3         | 0.6         | 0.7         | 0.5          | 0.3          | 0.2          | 0.4           |

## **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.

## **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 – Intermediate Government Index**

The Intermediate Government Index Fund seeks to track the results of an index composed of U.S. dollar-denominated government, government related, and investment grade U.S. corporate bonds with maturities between 1 and 10 years.

## **BlackRock – Russell 1000 Index**

The Russell 1000 Index Fund tracks large U.S. companies and achieve broad diversification with low costs by fully replicating the Russell 1000 Index.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## **PGIM RE Debt**

PGIM Real Estate US Debt Fund focuses on a loan origination strategy with a mix of 20% senior long duration loans on stable assets, 60% senior short/medium duration loans on stable and transitional assets, and 20% mezzanine mid/long duration debt.

## **PIMCO Diversified**

PIMCO Diversified Income Fund offers a broad and flexible multi-credit approach in a liquid and cost-effective format. The Diversified Income Fund seeks to produce consistent above benchmark performance using diversified sources of alpha from a universe that includes global credit as well as “non-core” credit sectors (ex., securitized, emerging markets).

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

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

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

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

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

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



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

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

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

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

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

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

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

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

## **White Oak - White Oak Yield Spectrum Fund**

The White Oak Yield Spectrum Fund's objective is to earn substantial current income by originating, extending, and/or investing in a diversified portfolio of primarily senior secured corporate credit and debt instruments consisting of term loans, asset based loans and equipment leases and loans issued by small to middle-market companies located primarily in the United States and Canada. It focuses on providing self-originated deals for predominantly non-sponsored, privately-held borrowers.

# Policy Index and Benchmark History

Period Ending: September 30, 2017

| Total Plan Policy Index                        | As of  |        |         |        |        |        |        |        |        |         |        |        |        |        |        |        |
|--|--------|--------|---------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|
|  | 2/1/17 | 1/1/17 | 10/1/16 | 9/1/16 | 1/1/16 | 7/1/14 | 1/1/14 | 2/1/13 | 1/1/11 | 10/1/10 | 1/1/09 | 5/1/07 | 6/1/00 | 3/1/99 | 9/1/98 | 7/1/96 |
| 10 Year Treasury +2%                           | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 8.0%   | 10.0%  | 10.0%  |
| 60/40 MSCI World/BBgBarc Global Aggregate (RP) | 8.0%   | 8.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   |
| 60/40 Russell 3000/BBgBarc US Aggregate (RP)   | 0.0%   | 0.0%   | 8.0%    | 8.0%   | 8.0%   | 8.0%   | 8.0%   | 6.0%   | 6.0%   | 6.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   |
| BBgBarc Aggregate                              | 12.0%  | 10.0%  | 10.0%   | 10.0%  | 10.0%  | 10.0%  | 9.3%   | 11.0%  | 11.0%  | 12.9%   | 27.0%  | 27.0%  | 29.0%  | 25.0%  | 21.0%  | 21.0%  |
| BBgBarc BA Intermediate HY                     | 6.0%   | 6.0%   | 6.0%    | 5.0%   | 5.0%   | 5.0%   | 5.0%   | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   |
| BBgBarc BBB                                    | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 1.6%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   |
| BBgBarc Credit BAA                             | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 3.5%   | 3.3%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   |
| BBgBarc Multiverse                             | 3.0%   | 3.0%   | 3.0%    | 3.0%   | 3.0%   | 3.0%   | 3.8%   | 4.4%   | 4.4%   | 4.5%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   |
| BBgBarc TIPS                                   | 2.0%   | 2.0%   | 2.0%    | 2.0%   | 2.0%   | 2.0%   | 2.0%   | 3.1%   | 3.3%   | 3.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   |
| Bloomberg Commodity                            | 0.0%   | 0.0%   | 0.0%    | 3.0%   | 3.0%   | 3.0%   | 3.0%   | 3.0%   | 3.0%   | 3.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   |
| Citigroup non-US WGBI                          | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 5.0%   | 9.0%   | 9.0%   |
| CPI + 5% (RA)                                  | 0.0%   | 0.0%   | 0.0%    | 2.0%   | 2.0%   | 2.0%   | 2.0%   | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   |
| Blended Real Asset                             | 7.0%   | 5.0%   | 5.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   |
| Libor +4% (HF)                                 | 6.0%   | 5.0%   | 5.0%    | 5.0%   | 5.0%   | 4.0%   | 4.0%   | 3.0%   | 3.0%   | 3.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   |
| MSCI ACWI ex-US                                | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 18.0%  | 18.0%  | 18.0%   | 21.0%  | 21.0%  | 15.0%  | 0.0%   | 0.0%   | 0.0%   |
| MSCI ACWI ex-US IMI                            | 19.0%  | 19.0%  | 19.0%   | 20.0%  | 20.0%  | 20.0%  | 20.0%  | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   |
| MSCI EAFE                                      | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 20.0%  | 20.0%  | 20.0%  |
| NCREIF ODCE                                    | 7.0%   | 7.0%   | 7.0%    | 7.0%   | 7.0%   | 6.0%   | 6.0%   | 5.0%   | 5.0%   | 5.0%    | 6.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   |
| NCREIF Property                                | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 6.0%   | 6.0%   | 0.0%   | 0.0%   | 0.0%   |
| Russell 1000                                   | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 24.0%  | 24.0%  | 24.0%  | 28.0%  | 28.0%  | 28.0%   | 37.0%  | 37.0%  | 40.0%  | 22.0%  | 20.0%  | 20.0%  |
| Russell 1000 Value                             | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 5.0%   | 5.0%   | 0.0%   |
| Russell 2000                                   | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 4.0%   | 6.0%   | 6.0%   | 7.0%   | 7.0%   | 7.0%    | 9.0%   | 9.0%   | 10.0%  | 15.0%  | 15.0%  | 15.0%  |
| Russell 3000                                   | 23.0%  | 28.0%  | 28.0%   | 28.0%  | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   |
| Russell 3000 +3% (PE)                          | 7.0%   | 7.0%   | 7.0%    | 7.0%   | 7.0%   | 7.0%   | 7.0%   | 8.0%   | 8.0%   | 8.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   |
| S&P 500  | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 5.0%   |
|  | 100.0% | 100.0% | 100.0%  | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0%  | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

# Policy Index and Benchmark History

Period Ending: September 30, 2017

| Total Equity Benchmark | As of: |         |        |        |        |         |        |        |        |        |        |
|------------------------|--------|---------|--------|--------|--------|---------|--------|--------|--------|--------|--------|
|                        | 2/1/17 | 10/1/16 | 9/1/16 | 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%    | 0.0%   | 0.0%   | 0.0%   | 34.0%   | 31.3%  | 23.1%  | 0.0%   | 0.0%   | 0.0%   |
| MSCI ACWI ex-US IMI    | 45.2%  | 40.4%   | 41.7%  | 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%   | 0.0%    | 0.0%   | 0.0%   | 32.3%  | 33.3%  | 33.3%  |
| Russell 1000           | 0.0%   | 0.0%    | 0.0%   | 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%   | 0.0%    | 0.0%   | 0.0%   | 8.0%   | 8.4%   | 0.0%   |
| Russell 2000           | 0.0%   | 0.0%    | 0.0%   | 8.3%   | 12.0%  | 13.2%   | 13.5%  | 15.4%  | 24.2%  | 25.0%  | 25.0%  |
| Russell 3000           | 54.8%  | 59.6%   | 58.3%  | 0.0%   | 0.0%   | 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%   | 8.4%   |
|                        | 100.0% | 100.0%  | 100.0% | 100.0% | 100.0% | 100.0%  | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

| US Equity Benchmark | As of: |        |        |        |        |        |        |
|---------------------|--------|--------|--------|--------|--------|--------|--------|
|                     | 9/1/16 | 1/1/16 | 6/1/00 | 3/1/99 | 9/1/98 | 7/1/96 | 1/1/95 |
| Russell 1000        | 0.0%   | 85.7%  | 80.0%  | 52.0%  | 50.0%  | 50.0%  | 69.0%  |
| Russell 1000 Value  | 0.0%   | 0.0%   | 0.0%   | 12.0%  | 12.5%  | 0.0%   | 0.0%   |
| Russell 2000        | 0.0%   | 14.3%  | 20.0%  | 36.0%  | 37.5%  | 37.5%  | 14.0%  |
| Russell 3000        | 100.0% | 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%   | 12.5%  | 17.0%  |
|                     | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

| 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% |
|                                | 100.0% | 100.0% | 100.0% |

| Total Fixed Income Benchmark | As of: |         |        |        |        |        |        |         |        |        |        |
|------------------------------|--------|---------|--------|--------|--------|--------|--------|---------|--------|--------|--------|
|                              | 2/1/17 | 10/1/16 | 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 |
| BBgBarc Aggregate            | 57.1%  | 52.6%   | 55.5%  | 50.0%  | 46.3%  | 50.0%  | 50.0%  | 58.6%   | 100.0% | 83.3%  | 70.0%  |
| BBgBarc BA Intermediate HY   | 28.6%  | 31.6%   | 27.8%  | 25.0%  | 25.0%  | 0.0%   | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   |
| BBgBarc BBB                  | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 7.3%    | 0.0%   | 0.0%   | 0.0%   |
| BBgBarc Credit BAA           | 0.0%   | 0.0%    | 0.0%   | 0.0%   | 0.0%   | 16.0%  | 15.0%  | 0.0%    | 0.0%   | 0.0%   | 0.0%   |
| BBgBarc Multiverse           | 14.3%  | 15.8%   | 16.7%  | 15.0%  | 18.8%  | 20.0%  | 20.0%  | 20.5%   | 0.0%   | 0.0%   | 0.0%   |
| BBgBarc TIPS                 | 0.0%   | 0.0%    | 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%   | 0.0%    | 0.0%   | 16.7%  | 30.0%  |
|                              | 100.0% | 100.0%  | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0%  | 100.0% | 100.0% | 100.0% |

| US Fixed Income Benchmark  | As of:        |               |               |               |               |               |               |               |               |  |
|----------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--|
|                            | 2/1/17        | 10/1/16       | 4/1/16        | 7/1/14        | 1/1/14        | 2/1/13        | 1/1/11        | 10/1/10       | 7/1/96        |  |
| BBgBarc Aggregate          | 66.7%         | 62.5%         | 66.7%         | 58.8%         | 56.9%         | 62.5%         | 62.5%         | 73.7%         | 100.0%        |  |
| BBgBarc BA Intermediate HY | 33.3%         | 37.5%         | 33.3%         | 29.4%         | 30.8%         | 0.0%          | 0.0%          | 0.0%          | 0.0%          |  |
| BBgBarc BBB                | 0.0%          | 0.0%          | 0.0%          | 0.0%          | 0.0%          | 0.0%          | 0.0%          | 9.1%          | 0.0%          |  |
| BBgBarc Credit BAA         | 0.0%          | 0.0%          | 0.0%          | 0.0%          | 0.0%          | 20.0%         | 18.8%         | 0.0%          | 0.0%          |  |
| BBgBarc TIPS               | 0.0%          | 0.0%          | 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> | <b>100.0%</b> | <b>100.0%</b> |  |

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

| Risk Parity Benchmark    | As of:        |               |
|--------------------------|---------------|---------------|
|                          | 1/1/17        | 10/1/10       |
| BBgBarc Aggregate        | 0.0%          | 40.0%         |
| BBgBarc Global Aggregate | 40.0%         | 0.0%          |
| MSCI World               | 60.0%         | 0.0%          |
| Russell 3000             | 0.0%          | 60.0%         |
|                          | <b>100.0%</b> | <b>100.0%</b> |

| Alternatives Benchmark                       | As of:        |               |               |               |               |
|--|---------------|---------------|---------------|---------------|---------------|
|  | 2/1/17        | 4/1/16        | 1/1/16        | 1/1/14        | 1/1/11        |
| 60/40 Russell 3000/BBgBarc US Aggregate (RP) | 0.0%          | 0.0%          | 0.0%          | 0.0%          | 30.0%         |
| Bloomberg Commodity                          | 0.0%          | 0.0%          | 17.7%         | 18.8%         | 15.0%         |
| CPI + 5% (RA)                                | 0.0%          | 0.0%          | 11.8%         | 12.5%         | 0.0%          |
| Libor +4% (HF)                               | 46.2%         | 41.7%         | 29.4%         | 25.0%         | 15.0%         |
| Russell 3000 +3% (PE)                        | 53.8%         | 58.3%         | 41.2%         | 43.8%         | 40.0%         |
|  | <b>100.0%</b> | <b>100.0%</b> | <b>100.0%</b> | <b>100.0%</b> | <b>100.0%</b> |

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

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

| Inflation Hedge                                | As of:        |               |               |
|--|---------------|---------------|---------------|
|  | 2/1/17        | 10/1/16       | 4/1/16        |
| BBgBarc TIPS                                   | 12.50%        | 14.3%         | 14.3%         |
| Bloomberg Commodity                            | 0.00%         | 0.0%          | 21.4%         |
| CPI + 5% (RA)                                  | 0.00%         | 0.0%          | 14.3%         |
| Bloomberg Roll Select Commodity                | 14.87%        | 12.1%         | 21.4%         |
| S&P Global Large-MidCap Commodity and Resource | 14.44%        | 11.8%         | 14.3%         |
| S&P Global Infrastructure                      | 14.44%        | 11.8%         | 0.0%          |
| NCREIF ODCE                                    | 43.75%        | 50.0%         | 50.0%         |
|  | <b>100.0%</b> | <b>100.0%</b> | <b>135.7%</b> |

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

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

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

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

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

| <b>AQR GRP, 10% Volatility</b> | <b>As of:</b> |               |
|--------------------------------|---------------|---------------|
|                                | <b>1/1/17</b> | <b>3/1/11</b> |
| BBgBarc Aggregate              | 0.0%          | 40.0%         |
| BBgBarc Global Aggregate       | 40.0%         | 0.0%          |
| MSCI World                     | 60.0%         | 0.0%          |
| Russell 3000                   | 0.0%          | 60.0%         |
|                                | <b>100.0%</b> | <b>100.0%</b> |

| <b>PanAgora</b>          | <b>As of:</b> |               |
|--------------------------|---------------|---------------|
|                          | <b>1/1/17</b> | <b>8/1/14</b> |
| BBgBarc Aggregate        | 0.0%          | 40.0%         |
| BBgBarc Global Aggregate | 40.0%         | 0.0%          |
| MSCI World               | 60.0%         | 0.0%          |
| Russell 3000             | 0.0%          | 60.0%         |
|                          | <b>100.0%</b> | <b>100.0%</b> |

| <b>PIMCO Diversified</b>           | <b>As of:</b> |  |
|------------------------------------|---------------|--|
|                                    | <b>9/1/17</b> |  |
| JPMorgan EMBI Global               | 33.3%         |  |
| BofAMLBB-BRatedDvlpdMktsHYHdgdUSD  | 33.3%         |  |
| Global Agg Credit Ex EM USD hedged | 33.4%         |  |
|                                    | <b>100.0%</b> |  |

# Fee Schedule

Period Ending: September 30, 2017

## **Baillie Gifford**

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

## **BlackRock-EAFE Equity Index Fund**

|                |                 |
|----------------|-----------------|
| On All Assets: | 0.05% per annum |
|----------------|-----------------|

## **BlackRock-Russell 1000 Index Fund**

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

## **BlackRock-Intermediate Govt Bond Index Fund**

|                |                 |
|----------------|-----------------|
| On All Assets: | 0.04% per annum |
|----------------|-----------------|

## **Brown Brothers Harriman**

|                |                 |
|----------------|-----------------|
| On All Assets: | 0.15% per annum |
|----------------|-----------------|

## **Clifton Group**

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

## **Franklin Templeton Investment**

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

## **FIAM Bond**

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

## **Parametric**

|                |                 |
|----------------|-----------------|
| On All Assets: | 0.30% per annum |
|----------------|-----------------|

## **QMA**

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

## **Western Asset Management**

|                  |                 |
|------------------|-----------------|
| On All Assets:   | 0.25% per annum |
| Performance Fee: | 20.00%          |

## **Mondrian Investment Partners**

### Assets Below \$190 million

|                     |                 |
|---------------------|-----------------|
| First \$20 million: | 1.00% per annum |
| Thereafter:         | 0.33% per annum |

### Assets Above \$190 million

|                     |                 |
|---------------------|-----------------|
| First \$50 million: | 1.00% per annum |
| Next \$150 million: | 0.19% per annum |
| Thereafter:         | 0.33% per annum |

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

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

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

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

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

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

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

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



Manager Performance Comparison (Gross of Fees)

Period Ending: September 30, 2017

|                              | Jul   | Aug    | Sep    | 3rd Qtr.<br>2017 | Difference | 2nd Qtr.<br>2017 | Difference | 1st Qtr.<br>2017 | Difference | 4th Qtr.<br>2016 | Difference | 3rd Qtr.<br>2016 | Difference |
|------------------------------|-------|--------|--------|------------------|------------|------------------|------------|------------------|------------|------------------|------------|------------------|------------|
| Verus                        | 1.98% | 0.31%  | 2.14%  | 4.49%            |            | 3.07%            |            |                  |            |                  |            |                  |            |
| BlackRock Russell 1000       | 1.98% | 0.31%  | 2.14%  | 4.49%            | 0.00%      | 3.07%            | 0.00%      |                  |            |                  |            |                  |            |
| Russell 1000 Index           | 1.98% | 0.31%  | 2.13%  | 4.48%            |            | 3.07%            |            |                  |            |                  |            |                  |            |
| Verus                        | 2.34% | 2.63%  | 2.44%  | 7.60%            |            | 2.79%            |            | 7.02%            |            | 3.76%            |            | 5.32%            |            |
| D.E. Shaw                    | 2.34% | 2.63%  | 2.45%  | 7.60%            | 0.00%      | 2.79%            | 0.00%      | 7.02%            | 0.00%      | 3.76%            | 0.00%      | 5.33%            | -0.01%     |
| Russell 1000 Index           | 1.98% | 0.31%  | 2.13%  | 4.48%            |            | 3.07%            |            | 6.02%            |            | 3.83%            |            | 4.03%            |            |
| Verus                        | 1.02% | -1.35% | 6.30%  | 5.94%            |            | 1.82%            |            | 2.46%            |            | 10.64%           |            |                  |            |
| QMA US Small Cap (Net)       | 1.03% | -1.35% | 6.30%  | 5.95%            | -0.01%     | 1.82%            | 0.00%      | 2.46%            | 0.00%      | 10.64%           | -0.01%     |                  |            |
| Russell 2000 Index           | 0.74% | -1.27% | 6.24%  | 5.67%            |            | 2.46%            |            | 2.47%            |            | 8.83%            |            |                  |            |
| Verus                        | 2.86% | 1.05%  | 1.15%  | 5.14%            |            | 8.83%            |            | 10.12%           |            | -7.01%           |            | 8.50%            |            |
| Baillie Gifford              | 2.93% | 0.99%  | 1.13%  | 5.12%            | 0.02%      | 8.80%            | 0.03%      | 10.07%           | 0.01%      | -7.01%           | 0.00%      | 8.55%            | -0.05%     |
| MSCI ACWI ex US              | 3.71% | 0.55%  | 1.89%  | 6.25%            |            | 5.99%            |            | 7.98%            |            | -1.20%           |            | 7.00%            |            |
| MSCI ACWI ex US Growth       | 3.47% | 1.02%  | 1.78%  | 6.39%            |            | 7.74%            |            | 9.22%            |            | -5.68%           |            | 6.11%            |            |
| Verus                        | 2.90% | -0.02% | 2.52%  | 5.47%            |            | 6.32%            |            | 7.38%            |            | -0.66%           |            | 6.49%            |            |
| BlackRock EAFE Equity        | 2.90% | -0.02% | 2.52%  | 5.47%            | 0.00%      | 6.32%            | 0.00%      | 7.38%            | 0.00%      | -0.65%           | -0.01%     | 6.49%            | 0.00%      |
| MSCI EAFE (Net)              | 2.88% | -0.04% | 2.49%  | 5.40%            |            | 6.12%            |            | 7.25%            |            | -0.71%           |            | 6.43%            |            |
| MSCI EAFE (Gross)            | 2.89% | -0.02% | 2.53%  | 5.47%            |            | 6.37%            |            | 7.39%            |            | -0.68%           |            | 6.51%            |            |
| Verus                        | 2.91% | -0.72% | 2.83%  | 5.05%            |            | 4.26%            |            | 8.23%            |            | -1.01%           |            | 3.99%            |            |
| Mondrian                     | 2.92% | -0.72% | 2.84%  | 5.08%            | -0.03%     | 4.29%            | -0.03%     | 8.23%            | 0.00%      | -0.97%           | -0.04%     | 4.00%            | -0.01%     |
| MSCI ACWI -ex US Value Index | 3.95% | 0.07%  | 2.01%  | 6.11%            |            | 4.33%            |            | 6.82%            |            | 3.36%            |            | 7.92%            |            |
| MSCI ACWI -ex US             | 3.71% | 0.55%  | 1.89%  | 6.25%            |            | 5.99%            |            | 7.98%            |            | -1.20%           |            | 7.00%            |            |
| Verus                        | 5.17% | 2.34%  | -0.67% | 6.91%            |            | 3.44%            |            | 10.39%           |            | -2.58%           |            | 5.41%            |            |
| Parametric Core              | 5.18% | 2.36%  | -0.65% | 6.96%            | -0.05%     | 3.47%            | -0.03%     | 10.44%           | 0.00%      | -2.54%           | -0.04%     | 5.47%            | -0.06%     |
| MSCI EM Market Index         | 6.04% | 2.27%  | -0.37% | 8.04%            |            | 6.38%            |            | 11.49%           |            | -4.08%           |            | 9.15%            |            |

Manager Performance Comparison (Gross of Fees)

Period Ending: September 30, 2017

|                                      | Jul   | Aug    | Sep    | 3rd Qtr.<br>2017 | Difference | 2nd Qtr.<br>2017 | Difference | 1st Qtr.<br>2017 | Difference | 4th Qtr.<br>2016 | Difference | 3rd Qtr.<br>2016 | Difference |
|--------------------------------------|-------|--------|--------|------------------|------------|------------------|------------|------------------|------------|------------------|------------|------------------|------------|
| Verus                                | 0.34% | 0.63%  | -0.56% | 0.40%            |            | 0.73%            |            |                  |            |                  |            |                  |            |
| BlackRock Intermediate Govt          | 0.34% | 0.63%  | -0.56% | 0.41%            | -0.01%     | 0.73%            | 0.00%      |                  |            |                  |            |                  |            |
| BBgBarc US Aggregate Index           | 0.43% | 0.90%  | -0.48% | 0.85%            |            | 1.45%            |            |                  |            |                  |            |                  |            |
| Verus                                | 0.62% | 0.91%  | -0.39% | 1.13%            |            | 1.36%            |            | 1.24%            |            | -2.66%           |            | 1.27%            |            |
| FIAM Bond                            | 0.62% | 0.90%  | -0.39% | 1.13%            | 0.00%      | 1.36%            | 0.00%      | 1.24%            | 0.00%      | -2.66%           | 0.00%      | 1.27%            | 0.00%      |
| BBgBarc US Aggregate Index           | 0.43% | 0.90%  | -0.48% | 0.85%            |            | 1.45%            |            | 0.82%            |            | -2.98%           |            | 0.46%            |            |
| Verus                                | 0.70% | 0.80%  | 0.58%  | 2.09%            |            | 3.54%            |            | 2.25%            |            | 1.09%            |            | 2.67%            |            |
| Western TRU                          | 0.70% | 0.80%  | 0.58%  | 2.09%            | 0.00%      | 3.54%            | 0.00%      | 2.25%            | 0.00%      | 1.09%            | 0.00%      | 2.67%            | 0.00%      |
| 3-Month Libor Total Return USD Index | 0.11% | 0.11%  | 0.11%  | 0.34%            |            | 0.31%            |            | 0.27%            |            | 0.24%            |            | 0.21%            |            |
| BBgBarc US Aggregate Index           | 0.43% | 0.90%  | -0.48% | 0.85%            |            | 1.45%            |            | 0.82%            |            | -2.98%           |            | 0.46%            |            |
| Verus (Net)                          |       |        |        | -0.59%           |            | 4.18%            |            | 4.34%            |            | 2.54%            |            | 5.38%            |            |
| Angelo Gordon Opportunistic          |       |        |        | -0.59%           | 0.00%      | 4.18%            | 0.00%      | 4.34%            | 0.00%      | 2.54%            | 0.00%      | 5.38%            | 0.00%      |
| BBgBarc US Aggregate Index           |       |        |        | 0.85%            |            | 1.45%            |            | 0.82%            |            | -2.98%           |            | -0.06%           |            |
| Verus (Net)                          |       |        |        | 4.96%            |            | 6.13%            |            | 4.58%            |            | 1.99%            |            | 5.17%            |            |
| Angelo Gordon STAR Fund (Net)        |       |        |        | 4.96%            | 0.00%      | 6.13%            | 0.00%      | 4.58%            | 0.00%      | 1.99%            | 0.00%      | 5.17%            | 0.00%      |
| BBgBarc US Aggregate Index           |       |        |        | 0.85%            |            | 1.45%            |            | 0.82%            |            | -2.98%           |            | -0.06%           |            |
| Verus                                | 0.80% | 0.47%  | 0.79%  | 2.07%            |            | 1.95%            |            | 2.45%            |            | 3.56%            |            | 5.50%            |            |
| Beach Point Select (Net)             | 0.80% | 0.47%  | 0.79%  | 2.07%            | 0.00%      | 1.95%            | 0.00%      | 2.45%            | 0.00%      | 3.56%            | 0.00%      | 5.25%            | 0.25%      |
| BBgBarc BA Intermediate HY           | 0.88% | 0.19%  | 0.64%  | 1.72%            |            | 2.50%            |            | 1.76%            |            | 0.63%            |            | 4.04%            |            |
| Verus                                | 0.98% | -0.26% | 0.69%  | 1.40%            |            | 1.83%            |            | 3.84%            |            | 2.50%            |            | 7.15%            |            |
| Brigade Capital (Net)                | 0.98% | -0.24% | 0.70%  | 1.44%            | -0.04%     | 1.77%            | 0.06%      | 3.77%            | 0.01%      | 2.50%            | 0.00%      | 7.09%            | 0.06%      |
| BBgBarc BA Intermediate HY           | 0.88% | 0.19%  | 0.64%  | 1.72%            |            | 2.50%            |            | 1.76%            |            | 0.63%            |            | 4.04%            |            |
| 50% BBgBarc HY/ 50% Bank Loan        | 0.95% | -0.09% | 0.65%  | 1.52%            |            | 1.46%            |            | 1.95%            |            | 2.00%            |            | 4.32%            |            |
| Verus                                |       |        |        | 2.69%            |            | 2.65%            |            | 2.06%            |            | 0.17%            |            |                  |            |
| TCP Direct Lending VIII              |       |        |        | 2.69%            | 0.00%      | 2.65%            | 0.00%      | 2.06%            | 0.00%      | 0.17%            | 0.00%      |                  |            |
| BBgBarc BA Intermediate HY           |       |        |        | 1.72%            |            | 2.50%            |            | 1.76%            |            | 0.63%            |            |                  |            |
| Verus                                |       |        |        | -4.64%           |            |                  |            |                  |            |                  |            |                  |            |
| White Oak Yield                      |       |        |        | -4.64%           | 0.00%      |                  |            |                  |            |                  |            |                  |            |
| BBgBarc BA Intermediate HY           |       |        |        | 1.72%            |            |                  |            |                  |            |                  |            |                  |            |

Manager Performance Comparison (Gross of Fees)

Period Ending: September 30, 2017

|                                 | Jul    | Aug    | Sep    | 3rd Qtr.<br>2017 | Difference | 2nd Qtr.<br>2017 | Difference | 1st Qtr.<br>2017 | Difference | 4th Qtr.<br>2016 | Difference | 3rd Qtr.<br>2016 | Difference |
|---------------------------------|--------|--------|--------|------------------|------------|------------------|------------|------------------|------------|------------------|------------|------------------|------------|
| Verus                           | -0.55% | -0.08% | 1.89%  | 1.25%            |            | -0.98%           |            | 5.27%            |            | 6.49%            |            | -0.13%           |            |
| Franklin Templeton Investments  | -0.55% | -0.08% | 1.89%  | 1.25%            | 0.00%      | -0.98%           | 0.00%      | 5.27%            | 0.00%      | 6.49%            | 0.00%      | -0.13%           | 0.00%      |
| BBgBarc Multiverse              | 1.71%  | 0.97%  | -0.80% | 1.88%            |            | 2.64%            |            | 1.90%            |            | -6.68%           |            | 1.05%            |            |
| Verus                           | 2.75%  | 1.89%  | -0.21% | 4.47%            |            | 1.46%            |            | 4.57%            |            | -2.38%           |            | 2.23%            |            |
| AQR GRP, 10% Volatility (Net)   | 2.75%  | 1.89%  | -0.21% | 4.47%            | 0.00%      | 1.46%            | 0.00%      | 4.57%            | 0.00%      | -2.39%           | 0.00%      | 2.24%            | -0.01%     |
| 60% R3000/ 40% BBgBarc Agg      | 1.57%  | 0.45%  | 1.16%  | 3.21%            |            | 2.39%            |            | 3.76%            |            | 1.34%            |            | 2.82%            |            |
| 60% MSCI World/ 40% BBgBarc Glb | 1.30%  | 0.47%  | 1.27%  | 3.08%            |            | 2.80%            |            | 3.98%            |            | 0.17%            |            | 3.13%            |            |
| Verus                           | 1.37%  | 2.64%  | -1.02% | 2.98%            |            | 1.60%            |            | 4.16%            |            | -5.19%           |            | 2.20%            |            |
| PanAgora (Net)                  | 1.37%  | 2.64%  | -1.02% | 2.98%            | 0.00%      | 1.60%            | 0.00%      | 4.16%            | 0.00%      | -5.19%           | 0.00%      | 2.20%            | 0.00%      |
| 60% R3000/ 40% BBgBarc Agg      | 1.57%  | 0.45%  | 1.16%  | 3.21%            |            | 2.39%            |            | 3.76%            |            | 1.34%            |            | 2.82%            |            |
| 60% MSCI World/ 40% BBgBarc Glb | 1.30%  | 0.47%  | 1.27%  | 3.08%            |            | 2.80%            |            | 3.98%            |            | 0.17%            |            | 3.13%            |            |
| Verus                           | 0.67%  | 1.34%  | 1.93%  | 3.99%            |            | -1.19%           |            | 1.42%            |            | 2.38%            |            | 1.69%            |            |
| AQR DELTA XN (Net)              | 0.67%  | 1.34%  | 1.93%  | 3.99%            | 0.00%      | -1.19%           | 0.00%      | 1.43%            | 0.00%      | 2.38%            | 0.00%      | 1.70%            | -0.01%     |
| Libor + 4%                      | 0.45%  | 0.32%  | 0.45%  | 1.22%            |            | 1.29%            |            | 1.11%            |            | 1.17%            |            | 1.14%            |            |
| Verus                           | 0.78%  | -0.15% | -0.29% | 0.34%            |            | 0.81%            |            | 0.59%            |            | 1.80%            |            | 0.42%            |            |
| Aberdeen Standard GARS (Net)    | 0.78%  | -0.15% | -0.29% | 0.34%            | 0.00%      | 0.81%            | 0.00%      | 0.59%            | 0.00%      | 1.80%            | 0.00%      | 0.42%            | 0.00%      |
| Libor + 4%                      | 0.45%  | 0.32%  | 0.45%  | 1.22%            |            | 1.29%            |            | 1.11%            |            | 1.17%            |            | 1.14%            |            |
| Verus                           |        |        |        | 1.48%            |            | 1.88%            |            | 2.55%            |            | 2.19%            |            | 1.68%            |            |
| INVESCO Real Estate             |        |        |        | 1.46%            | 0.02%      | 1.88%            | 0.00%      | 2.54%            | 0.00%      | 2.17%            | 0.02%      | 1.68%            | 0.00%      |
| NCREIF NFI ODCE Index           |        |        |        | 1.87%            |            | 1.70%            |            | 1.77%            |            | 2.11%            |            | 2.07%            |            |
| Verus                           |        |        |        | 5.56%            |            | 1.85%            |            | 2.90%            |            | 1.31%            |            | 3.82%            |            |
| Invesco US Val IV               |        |        |        | 5.56%            | 0.00%      | 1.85%            | 0.00%      | 2.90%            | 0.00%      | 1.31%            | 0.00%      | 3.82%            | 0.00%      |
| NCREIF NFI ODCE Index           |        |        |        | 1.87%            |            | 1.70%            |            | 1.77%            |            | 2.11%            |            | 2.07%            |            |
| NCREIF CEVA 1Q Lag - NET        |        |        |        | 2.61%            |            | 1.36%            |            | 2.75%            |            | 2.54%            |            | 2.17%            |            |
| Verus                           | 0.40%  | 0.67%  | -0.31% | 0.76%            |            | -0.58%           |            | 1.13%            |            | -0.55%           |            | 1.24%            |            |
| Brown Brothers Harriman         | 0.40%  | 0.68%  | -0.32% | 0.76%            | 0.00%      | -0.60%           | 0.02%      | 1.13%            | 0.00%      | -0.53%           | -0.02%     | 1.22%            | 0.02%      |
| BBgBarc U.S Tips                | 0.44%  | 1.06%  | -0.64% | 0.86%            |            | -0.40%           |            | 1.26%            |            | -2.41%           |            | 0.97%            |            |

1 MSCI

1.1 MSCI US MARKET BREAKPOINTS

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

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

| As Of      | Large Cap | Medium Large Cap | Medium Cap | Medium Small Cap | Small Cap |
|------------|-----------|------------------|------------|------------------|-----------|
| 9/30/2017  | 17.696    | 9.979            | 5.011      | 2.793            | 0         |
| 6/30/2017  | 15.834    | 9.267            | 4.517      | 2.573            | 0         |
| 3/31/2017  | 15.834    | 9.267            | 4.517      | 2.573            | 0         |
| 12/31/2016 | 15.239    | 9.375            | 4.416      | 2.520            | 0         |
| 9/30/2016  | 15.239    | 9.375            | 4.416      | 2.520            | 0         |
| 6/30/2016  | 15.358    | 9.43             | 4.548      | 2.591            | 0         |
| 3/31/2016  | 15.358    | 9.43             | 4.548      | 2.591            | 0         |
| 12/31/2015 | 16.507    | 9.968            | 5.069      | 2.917            | 0         |
| 9/30/2015  | 16.507    | 9.968            | 5.069      | 2.917            | 0         |
| 6/30/2015  | 15.288    | 9.09             | 4.506      | 2.596            | 0         |
| 3/31/2015  | 15.356    | 9.083            | 4.491      | 2.577            | 0         |
| 12/31/2014 | 15.356    | 9.083            | 4.491      | 2.577            | 0         |

Number in billion USD

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

1.2 MSCI DEVELOPED AND EMERGING MARKET BREAKPOINTS

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

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

\* Standard Index (Large+Mid)

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

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

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

| As Of      | Large Cap DM | Large Cap EM | Medium Cap DM | Medium Cap EM | Small Cap |
|------------|--------------|--------------|---------------|---------------|-----------|
| 9/30/2017  | 15.008       | 7.504        | 5.500         | 2.750         | 0         |
| 6/30/2017  | 15.008       | 7.504        | 5.500         | 2.750         | 0         |
| 3/31/2017  | 14.361       | 7.180        | 5.077         | 2.538         | 0         |
| 12/31/2016 | 14.361       | 7.180        | 5.077         | 2.538         | 0         |
| 9/30/2016  | 14.180       | 7.090        | 5.076         | 2.538         | 0         |
| 6/30/2016  | 14.180       | 7.090        | 5.076         | 2.538         | 0         |
| 3/31/2016  | 14.077       | 7.0385       | 5.046         | 2.523         | 0         |
| 12/31/2015 | 14.077       | 7.0385       | 5.046         | 2.5230        | 0         |
| 9/30/2015  | 14.883       | 7.4415       | 5.359         | 2.6795        | 0         |
| 6/30/2015  | 14.883       | 7.4415       | 5.359         | 2.6795        | 0         |
| 3/31/2015  | 13.368       | 6.684        | 4.781         | 2.3905        | 0         |
| 12/31/2014 | 13.368       | 6.684        | 4.781         | 2.3905        | 0         |

Number in billion USD

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

**2 RUSSELL US BREAKPOINTS**

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

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

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

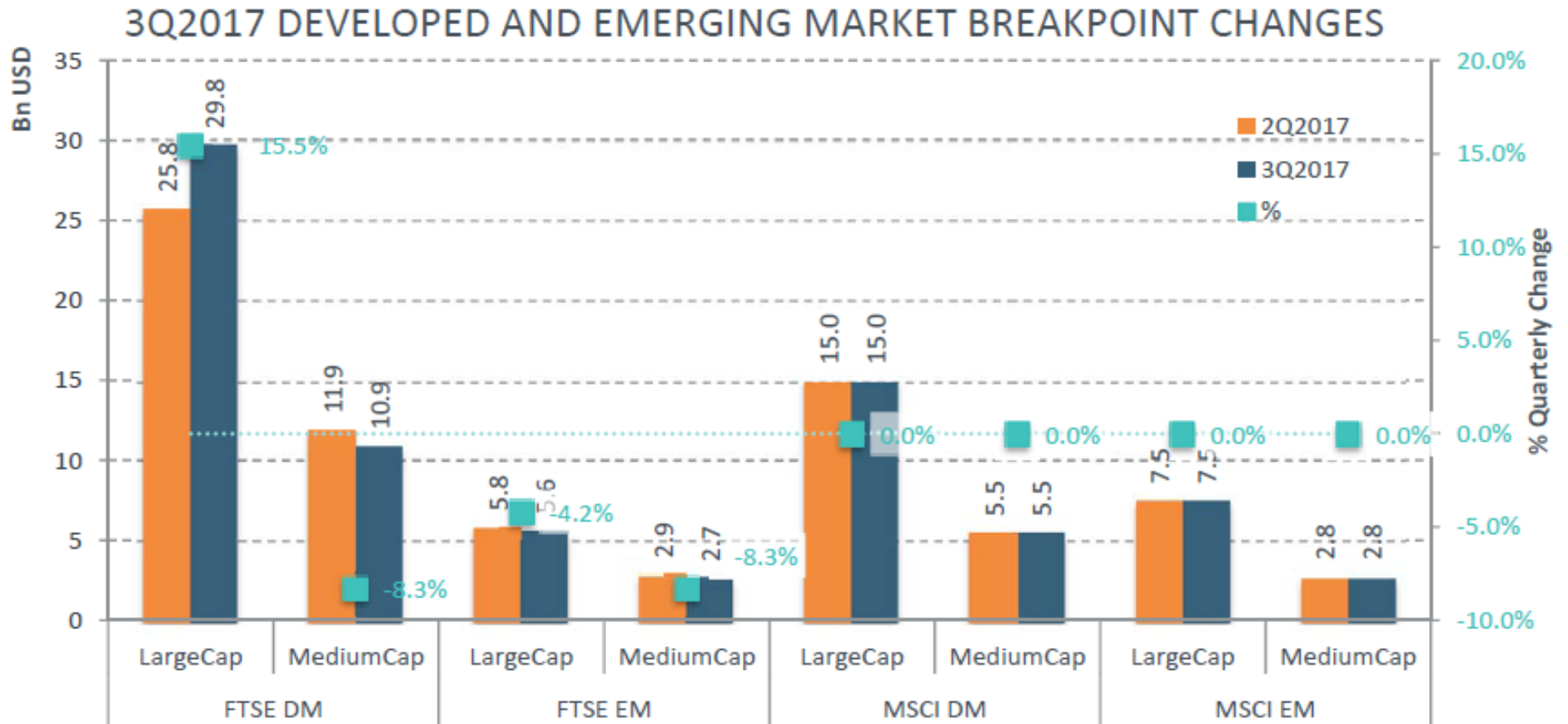
After the breakpoints are determined by the ranges above, new members are assigned on the basis of the breakpoints and existing members are reviewed to determine if they fall within a cumulative 5% market cap range around the new market capitalization breakpoints. If an existing securities market cap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

| As Of      | Large Cap | Medium Large Cap | Medium Cap | Medium Small Cap | Small Cap |
|------------|-----------|------------------|------------|------------------|-----------|
| 9/30/2017  | 93.539    | 24.882           | 8.344      | 2.935            | 0         |
| 6/30/2017  | 87.845    | 25.481           | 8.204      | 2.859            | 0         |
| 3/31/2017  | 89.968    | 25.293           | 8.241      | 2.737            | 0         |
| 12/31/2016 | 84.960    | 23.168           | 7.890      | 2.702            | 0         |
| 9/30/2016  | 78.745    | 23.385           | 7.394      | 2.533            | 0         |
| 6/30/2016  | 77.349    | 22.250           | 7.1432     | 2.444            | 0         |
| 3/31/2016  | 83.360    | 22.414           | 7.435      | 2.395            | 0         |
| 12/31/2015 | 90.075    | 24.308           | 8.141      | 2.936            | 0         |
| 9/30/2015  | 88.944    | 23.139           | 7.993      | 2.946            | 0         |
| 6/30/2015  | 92.87     | 25.07            | 8.797      | 3.352            | 0         |

| As Of      | Large Cap | Medium Large Cap | Medium Cap | Medium Small Cap | Small Cap |
|------------|-----------|------------------|------------|------------------|-----------|
| 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         |
| 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

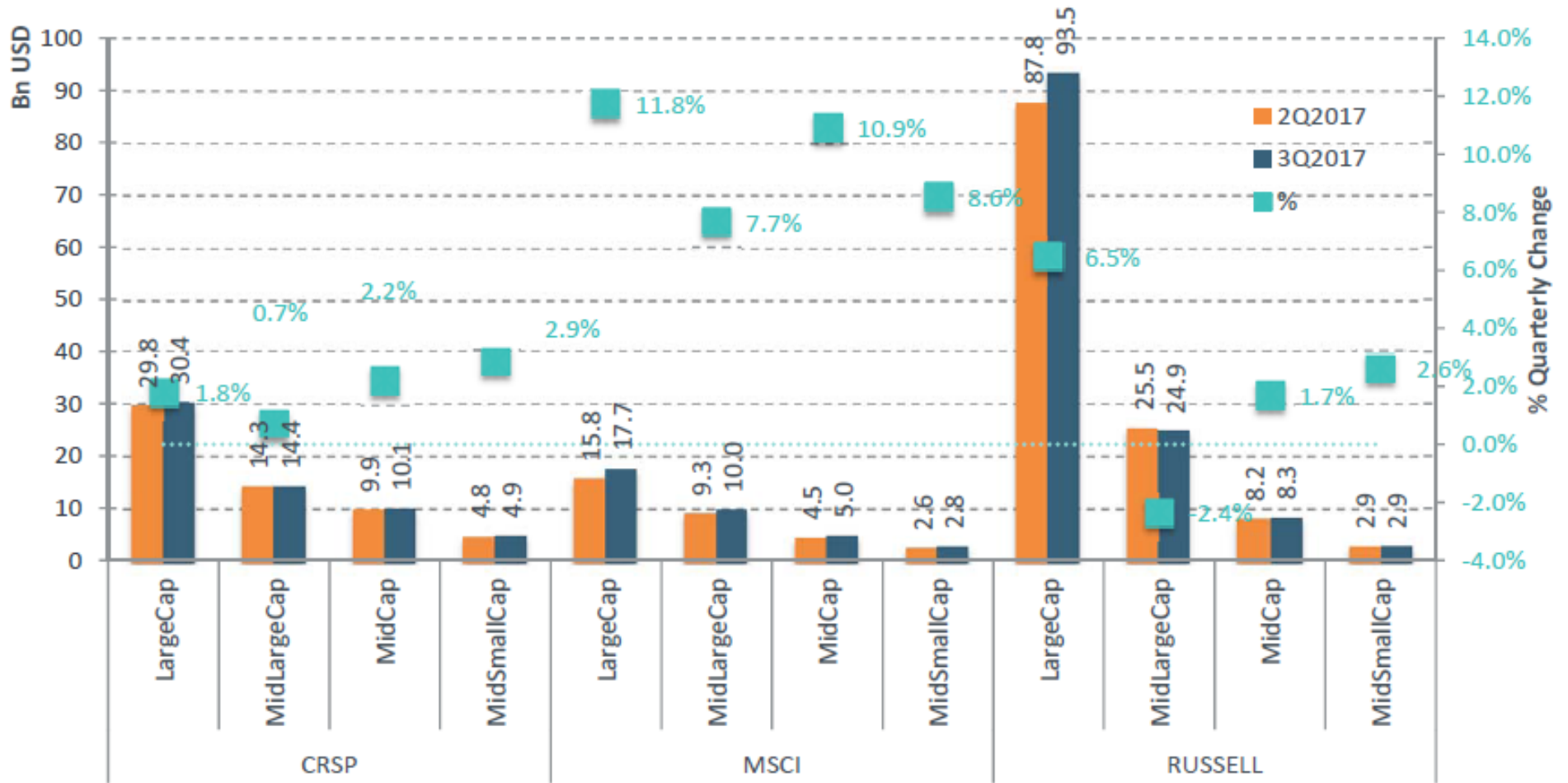
**BREAKPOINT TRENDS**



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



### 3Q2017 US MARKET BREAKPOINT CHANGES



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



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**

4<sup>TH</sup> QUARTER 2017  
Investment Landscape

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

## THE ECONOMIC CLIMATE

- Growth strengthened across developed and emerging economies. Business surveys suggest conditions are improving in both manufacturing and service industries. [p. 17](#)
- The U.S. job market tightened as unemployment dropped from 4.4 to 4.2%, despite disappointing job growth data. Unemployment has not been this low since March of 2001. [p. 9](#)
- An independence movement in Catalonia has received little attention from the financial community, and risk premiums may not reflect the negative possible knock-on effects on the EU. [p. 16](#)

## PORTFOLIO IMPACTS

- Improving economic growth, low inflation, low unemployment, and supportive monetary policy across most markets has created a positive environment for global risk assets, justifying a moderate overweight risk position. [p. 16](#)
- Within risk assets, we believe opportunities exist in emerging markets. [p. 33](#)

## THE INVESTMENT CLIMATE

- Global interest rates are still at historic lows, and very little monetary tightening is priced in across developed markets over the next few years. Even in the U.S., the market is only expecting two rate hikes through the end of next year. [p. 20](#)
- Valuations across global equities and credit are elevated, and have been so for the past few years. Further price appreciation through equity multiple expansion or credit spread contraction is unlikely. [p. 23 & 34](#)

## ASSET ALLOCATION ISSUES

- Equity performance remains strong. Year-to-date returns have been fundamentally driven, supported by earnings growth rather than valuation expansion. [p. 29](#)
- Equity volatility is near historic lows. Stable economic growth and inflation have likely contributed to the muted volatility environment. Investors should monitor leverage in strategies with a specific volatility target. [p. 35](#)

We believe a moderate overweight to risk is warranted

# What drove the market in Q3?

## “Traders keep bets on Fed rate hike in December after jobs report”

### DECEMBER RATE HIKE PROBABILITY BASED ON MARKET PRICING

| Apr 30 <sup>th</sup> | May 31 <sup>st</sup> | Jun 30 <sup>th</sup> | Jul 31 <sup>st</sup> | Aug 31 <sup>st</sup> | Oct 6 <sup>th</sup> |
|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------|
| 47%                  | 43%                  | 52%                  | 42%                  | 34%                  | 80%                 |

Article Source: Bloomberg, September 27<sup>th</sup> 2017

### DECEMBER RATE HIKE PROBABILITY



Source: Bloomberg, as of 10/6/17, based on Fed fund futures prices

## “U.S.-North Korea tensions fuel flight to safety”

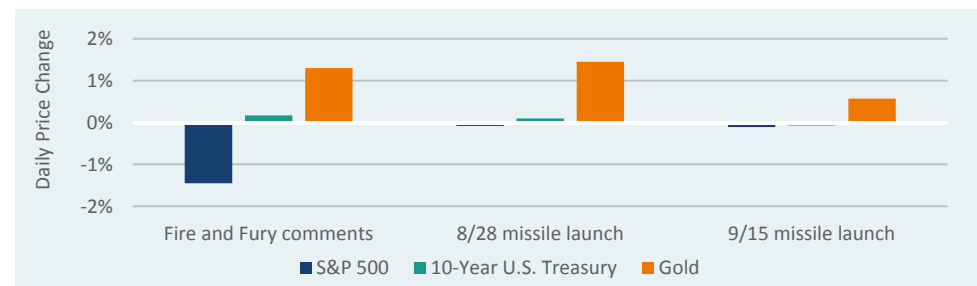
### DAILY PRICE REACTION DURING NORTH KOREA EVENTS

Fire & fury comments 8/28 missile launch 9/15 missile launch

| S&P 500 | Gold | S&P 500 | Gold | S&P 500 | Gold |
|---------|------|---------|------|---------|------|
| -1.5%   | 1.3% | -0.1%   | 1.5% | -0.1%   | 0.6% |

Article Source: Financial Times, August 9<sup>th</sup> 2017

### MARKET REACTION DURING NORTH KOREA EVENTS



Source: Bloomberg

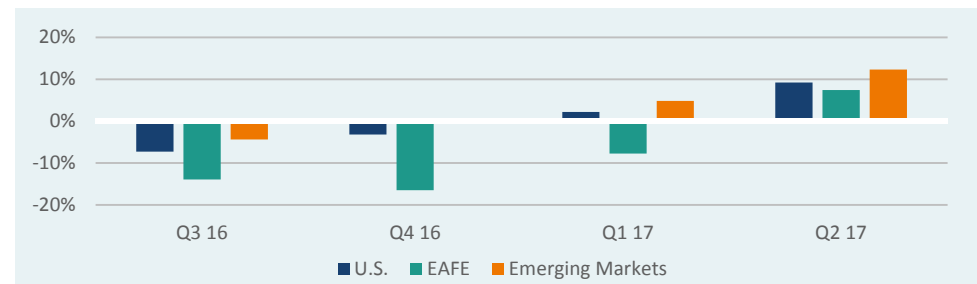
## “Strong earnings lift U.S. stocks”

### MSCI U.S. INDEX EARNINGS GROWTH (YOY)

| Q3 16 | Q4 16 | Q1 17 | Q2 17 |
|-------|-------|-------|-------|
| -7.3% | -3.2% | 2.2%  | 9.2%  |

Article Source: Wall Street Journal, July 25<sup>th</sup> 2017

### EQUITY EARNINGS GROWTH (YOY)



Source: Bloomberg, MSCI, as of 9/30/17

## “S&P 500 volatility hits 50-year low”

### S&P 500 30-DAY ANNUALIZED TRAILING VOLATILITY

| Apr 30 <sup>th</sup> | May 31 <sup>st</sup> | Jun 30 <sup>th</sup> | Jul 31 <sup>st</sup> | Aug 31 <sup>st</sup> | Sep 30 <sup>th</sup> |
|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 7.3%                 | 7.8%                 | 6.8%                 | 7.1%                 | 8.1%                 | 5.8%                 |

Article Source: Forbes, August 1<sup>st</sup> 2017

# Economic environment

# U.S. economics summary

- U.S. real GDP grew 2.2% YoY in Q2, consistent with the trend of slow, but steady growth in the current expansion. Consumer spending and business investment were the primary drivers of growth.
- Purchasing manager indexes (PMIs) moved higher to above average levels, indicating a likely acceleration in economic growth over the coming quarters. The ISM Manufacturing and Services PMIs for September were 60.8 and 59.8, respectively.
- The economy added an average of 91,000 jobs per month to payrolls in the third quarter. The September employment data was heavily influenced by hurricanes Harvey and Irma, which resulted in a decline of 33,000 jobs from payrolls, the first drop since 2010. Due to the calculation methodology, a bounce back should be expected in October.
- The U3 unemployment rate (unaffected by the hurricanes) fell 0.2% to a 17-year low of 4.2% over the quarter. The broader U6 unemployment rate also tightened, dropping 0.3% to 8.3%.
- Year-over-year headline CPI accelerated from 1.6% in June to 2.2% in September, while the core inflation rate was unchanged over the quarter at 1.7%. Outside of volatile energy prices inflationary pressures still appear absent, and core inflation remains below the Fed's 2% target.
- The Fed paused from raising interest rates following three consecutive quarters with hikes. Core inflation that has persistently been below the Fed's 2% target was the primary reason given to delay further tightening. The market is expecting the Fed to raise interest rates again in December based on fed fund futures prices.

|   | Most Recent      | 12 Months Prior  |
|---|------------------|------------------|
| GDP (YoY)                               | 2.2%<br>6/30/17  | 1.2%<br>6/30/16  |
| Inflation<br>(CPI YoY, Headline)        | 2.2%<br>9/30/17  | 1.5%<br>9/30/16  |
| Expected Inflation<br>(5yr-5yr forward) | 2.0%<br>9/30/17  | 1.8%<br>9/30/16  |
| Fed Funds Rate                          | 1.25%<br>9/30/17 | 0.50%<br>9/30/16 |
| 10 Year Rate                            | 2.3%<br>9/30/17  | 1.6%<br>9/30/16  |
| U-3 Unemployment                        | 4.2%<br>9/30/17  | 4.9%<br>9/30/16  |
| U-6 Unemployment                        | 8.3%<br>9/30/17  | 9.7%<br>9/30/16  |

# U.S. economics – GDP growth

Real GDP grew by 2.2% YoY in Q2 (3.1% quarterly annualized rate), the fastest pace of expansion since Q3 2015. The economic recovery is nearly in its eighth year, but the level of growth remains low relative to history. Despite the length of the expansion, we do not see many of the typical signs that the economy is overheating.

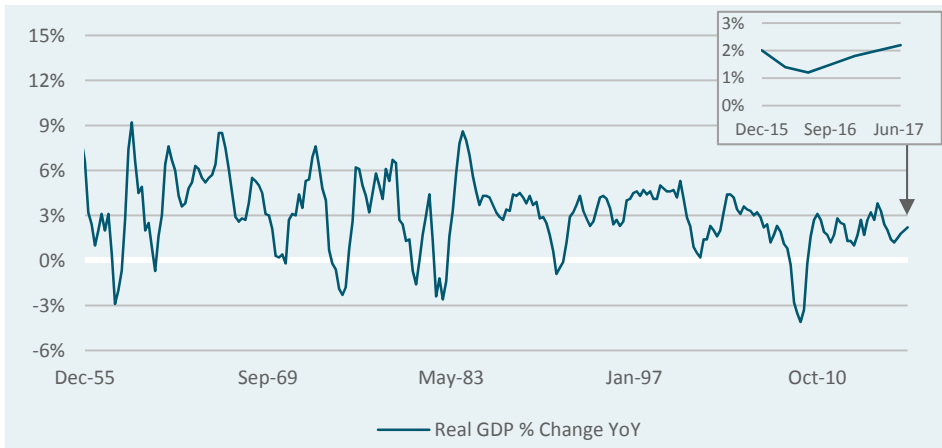
After slowing in the first quarter, consumer spending accelerated to 3.3%, and contributed 2.2% to the overall quarterly growth rate. A tight labor market and moderate wage gains should create a positive environment for consumer spending moving forward.

Business investment has picked up in recent quarters, and was the second largest contributor to GDP in Q2, while residential investment was a slight drag on growth. Trade also had a positive impact on growth, as exports increased at a quicker rate than imports.

Moderate growth is expected throughout the rest of the year – the Atlanta Fed GDP Now forecast for Q3 was 2.5% as of October 6<sup>th</sup>. Hurricanes Harvey and Irma disrupted growth in September, but the economy is likely to see a boost in Q4 once rebuilding begins.

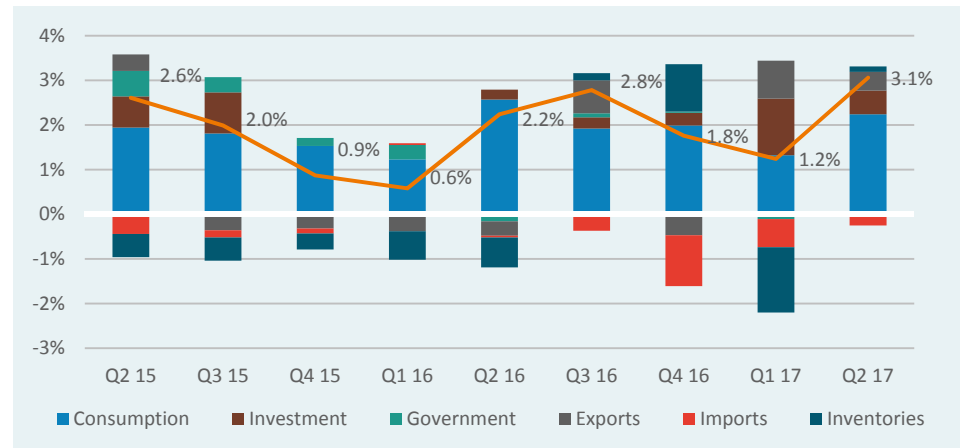
The economy experienced another quarter of moderate growth in Q2 with few signs of overheating

U.S. REAL GDP GROWTH (YOY)



Source: FRED, as of 6/30/17

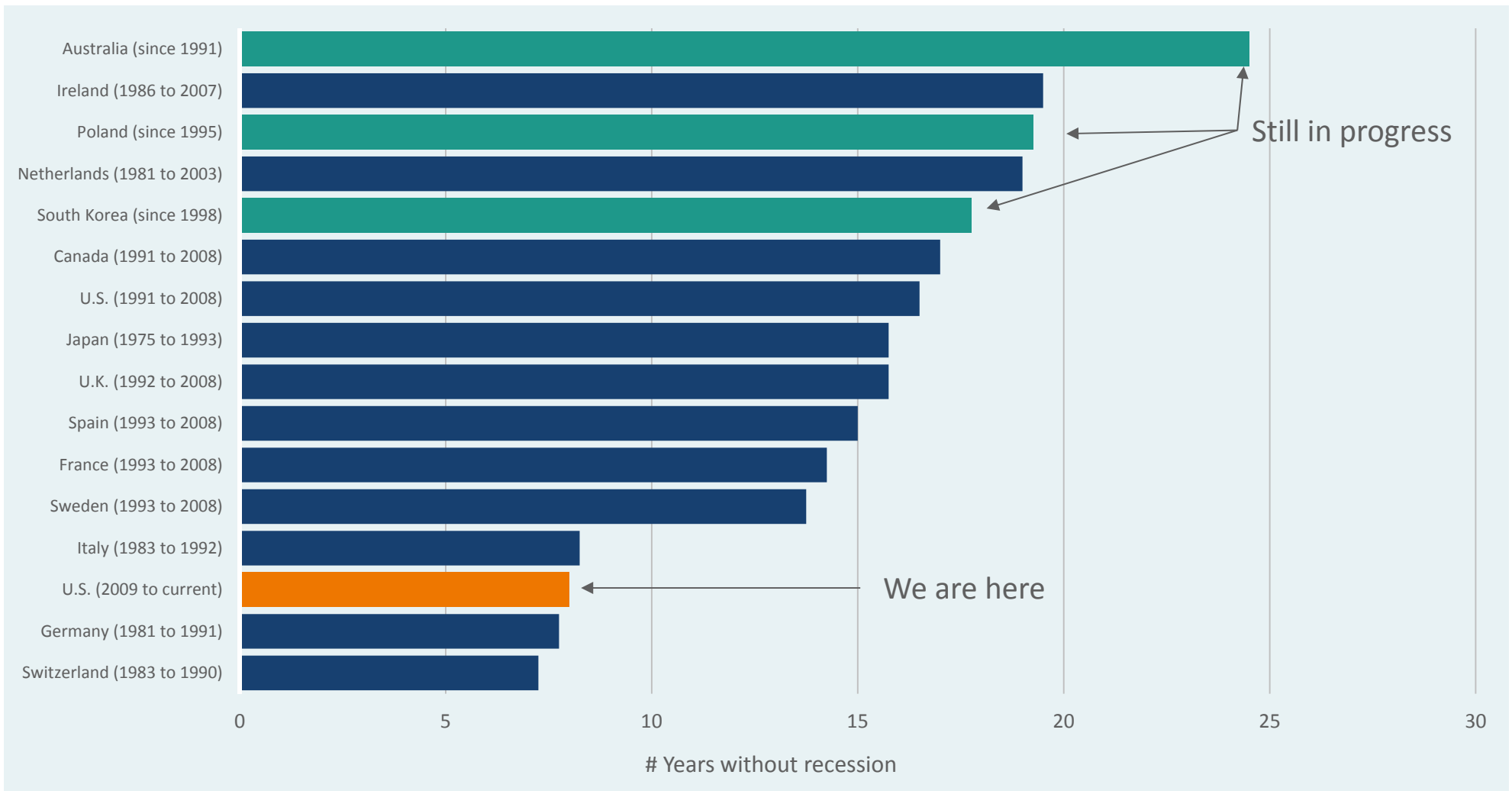
U.S. GDP COMPONENTS



Source: BEA, annualized quarterly rate, as of 6/30/17



# How long can expansions continue?



Source: Australia Trade and Investment Commission

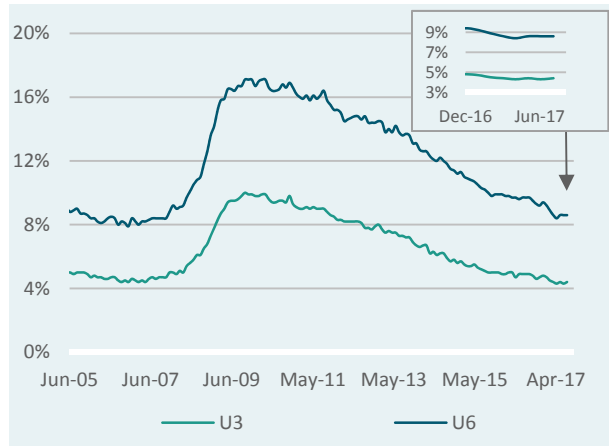
# U.S. economics – Labor market

The U.S. job market tightened as unemployment dropped from 4.4 to 4.2% - the lowest level since March of 2001. Job creation data disappointed in September, though this may largely be attributed to the effects of hurricanes Harvey and Irma.

Labor growth throughout the current U.S. expansion has tended to be tilted towards lower-skill and lower-pay jobs. It is reasonable to ask whether this indicates that the recovery is weak or unbalanced. To arrive at an answer it is

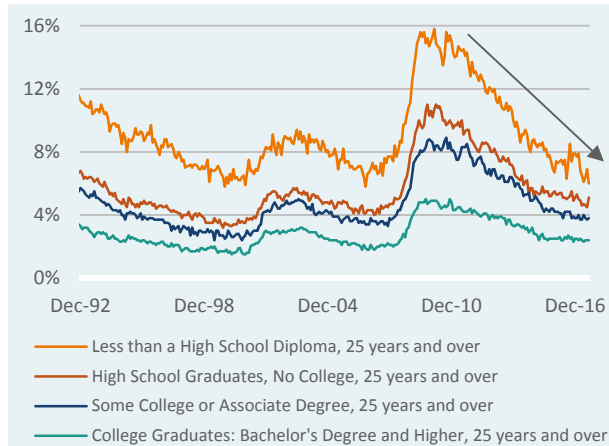
important to note that the types of jobs created during an economic recovery is partly a product of the types of jobs lost during the initial downturn. Examining unemployment by education level and age group suggests that the downturn disproportionately impacted the jobs of younger workers and those with less education. This implies that the job creation seen lately is natural and not necessarily an indication of weakness.

**U.S. UNEMPLOYMENT**



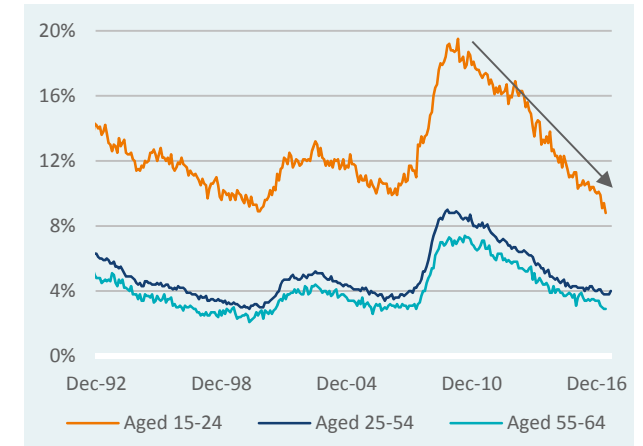
Source: FRED, as of 8/31/17

**UNEMPLOYMENT BY EDUCATION LEVEL**



Source: FRED, as of 8/31/17

**UNEMPLOYMENT BY AGE GROUP**



Source: FRED, as of 8/31/17

# U.S. economics – The consumer

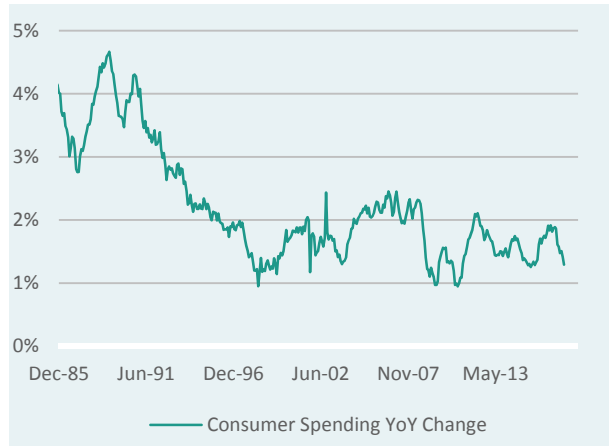
Consumer spending remained within a normal range. Savings rates, in aggregate, have declined over the past year and are now at levels consistent with past economic expansions. The fundamental picture for consumers is still positive. Low inflation, low unemployment, and moderate wage gains should provide a backdrop for further spending growth.

Total consumer debt has surpassed pre-crisis levels, fueled by student loans and auto loans. However, the

burden of debt is lower due to the lower interest rate environment.

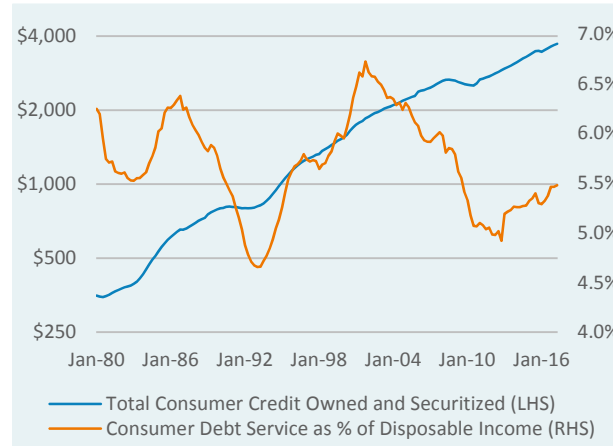
U.S. auto sales spiked in September, reversing a recent trend of weaker purchase activity. Hurricanes Irma and Harvey were estimated to have affected hundreds of thousands of vehicles, which contributed to buying activity throughout the month. However, the spike in sales will likely result in a drag on activity in future years.

**CONSUMER SPENDING (YOY GROWTH)**



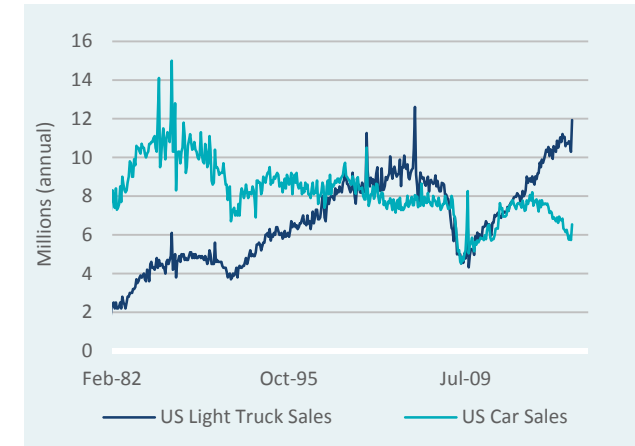
Source: Bloomberg, as of 8/31/17

**CONSUMER DEBT & DEBT BURDEN**



Source: FRED, as of 4/30/17

**U.S. AUTO SALES**



Source: Bloomberg, as of 9/30/17

# U.S. economics – Sentiment

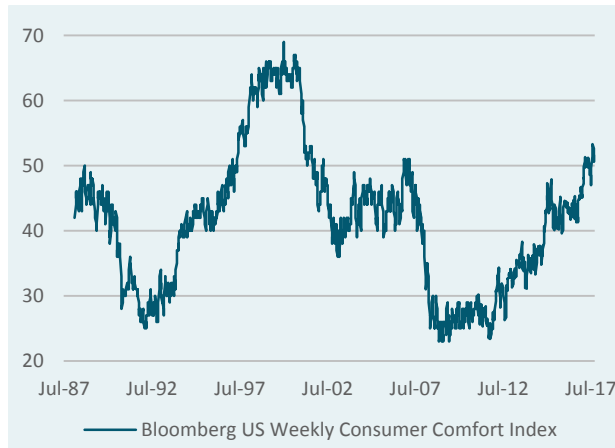
Consumer sentiment measures are above average, reflecting Americans' overall positive view of the economy. In the preliminary reading for October, The University of Michigan Consumer Sentiment Survey unexpectedly increased from 95.1 to 101.1, the highest level since 2004, which placed it in the 91<sup>st</sup> percentile since 1978. According to the survey, the elevated level of confidence is primarily due to consumers anticipating low unemployment, low inflation, small increases in interest rates, and moderate gains in income. Consumer sentiment has been high since the election last

November, but there has yet to be a material increase in consumer spending.

Other measures of sentiment, such as the NFIB Small Business Optimism Index, remain high by historical standards, but have dropped so far this year. Small businesses are still expecting to benefit from tax reform and deregulation, although significant uncertainty remains surrounding the timing and nature of these changes.

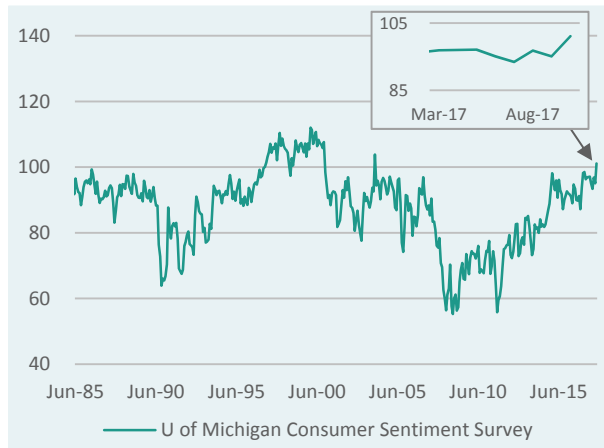
Consumers and small businesses have a positive outlook on the economy

**CONSUMER COMFORT INDEX**



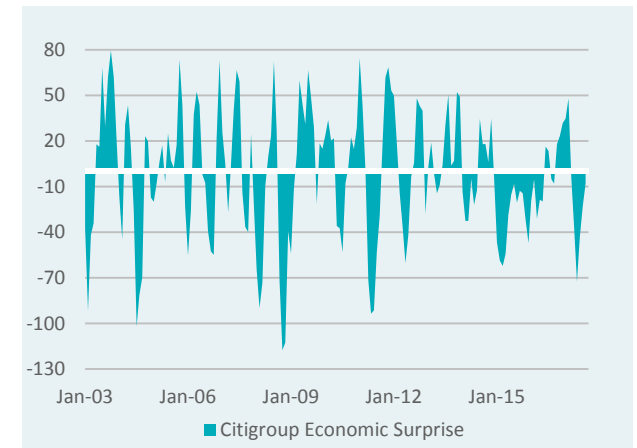
Source: Bloomberg, as of 9/24/17 (see Appendix)

**CONSUMER SENTIMENT**



Source: University of Michigan, as of 9/30/17 (see Appendix)

**U.S. ECONOMIC SURPRISE**



Source: Bloomberg, as of 9/29/17 (see Appendix for details)

# U.S. economics – Housing

U.S. home prices continued to climb higher with 5.9% growth YoY in July according to the S&P/Case-Shiller U.S. National Home Price Index. New and existing home sales have decelerated and are flat year-over-year, though not necessarily worrying given the volatility of sales activity. A surge in housing starts and permit applications is possible as areas of the south and southeast rebuild following hurricane damage.

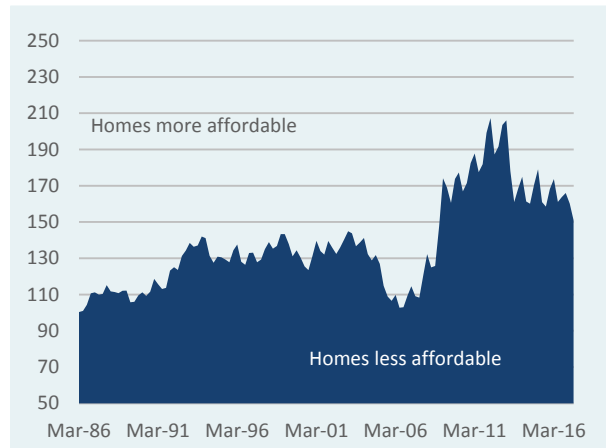
Owning a home remains affordable relative to history. A scenario of higher interest rates and further home price appreciation would result in affordability falling towards the historical average. Materially higher interest rates would make home ownership much more expensive, given the low current level of interest rates. A 1% rise in mortgage interest rates for a \$400,000 loan results in a roughly \$4,000 rise in annual cost for homeowners.

**CASE-SHILLER HOME PRICE INDEX**



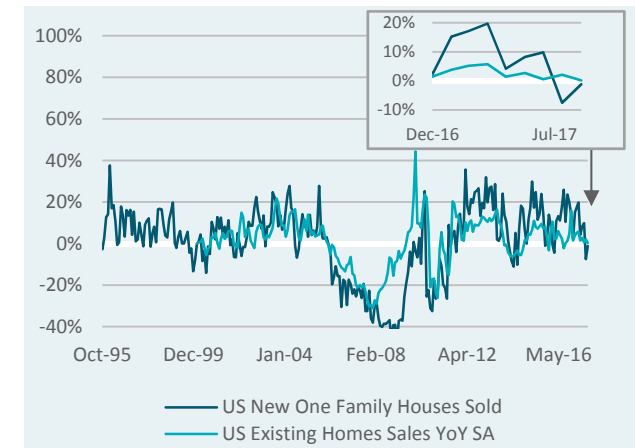
Source: FRED, as of 6/30/17

**HOME AFFORDABILITY**



Source: National Association of Realtors, as of 6/30/17 (see appendix) Source: Bloomberg, as of 8/31/17

**HOUSING SALES**



# U.S. economics – Inflation

Headline CPI inflation was 2.2% from the previous year in September, up from 1.6% in June, driven mainly by increases in gasoline prices following hurricanes Harvey and Irma. Core inflation was unchanged at 1.7%.

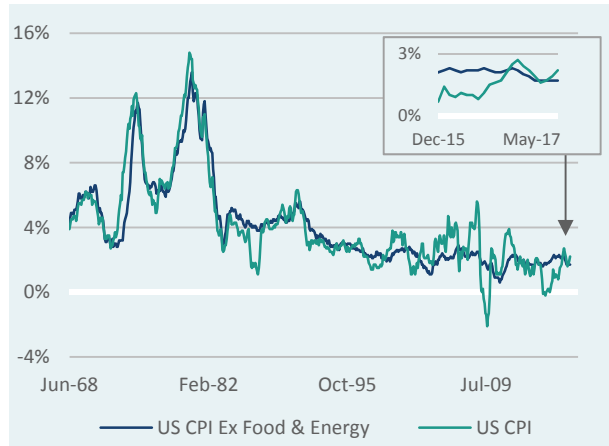
Although the Fed has belabored the “low inflation environment”, inflation measures are not extreme from a historical perspective. The perception of low inflation is likely being impacted by the long duration of the current economic expansion since rising inflation typically occurs in the late cycle. Although several Fed officials have stated they

believe below target inflation is transitory, continued softness in price levels may result in a slower pace of monetary tightening.

Market based inflation expectations increased modestly throughout the quarter with the 10-year TIPS breakeven inflation rate up 10 bps to 1.83%. Expectations are still low, and investors are receiving a low inflation premium on nominal Treasuries.

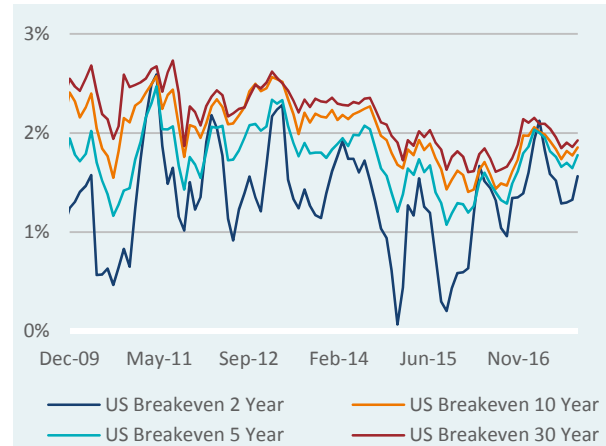
Pressures on core inflation are still low

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



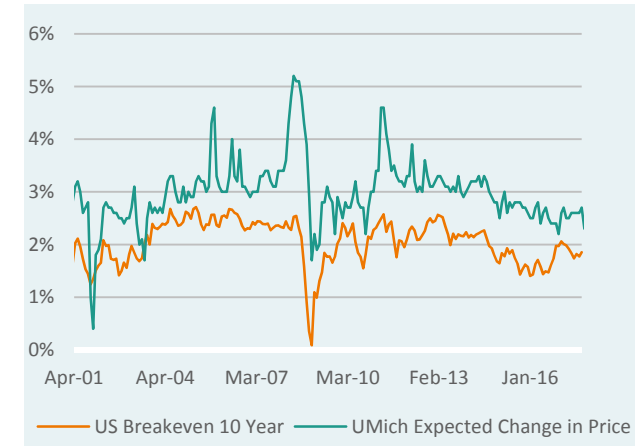
Source: FRED, as of 9/30/17

**U.S. TIPS BREAKEVEN RATES**



Source: FRED, as of 9/30/17

**INFLATION EXPECTATIONS**



Source: Bloomberg, as of 9/30/17

# Is geopolitical risk abnormally high?

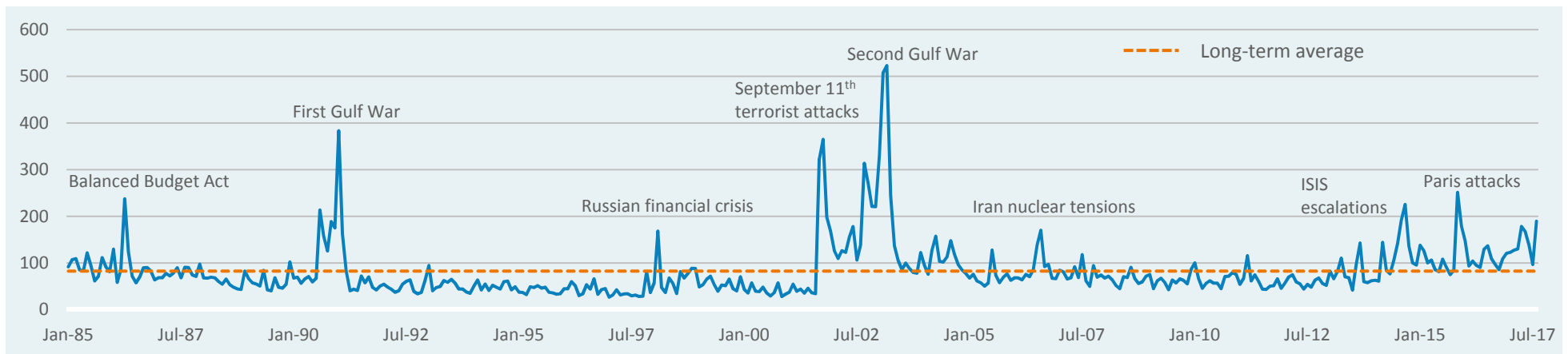
Several events over the quarter, especially increased tensions on the Korean peninsula, have led to heightened concerns over the impact of geopolitical risk on financial markets. The unique nature of each geopolitical event makes it difficult to determine whether the apparent risks are greater than past events.

The Geopolitical Risk Index (GPR) uses automated text-search results of 11 U.S. and international newspapers to give some indication of how the current environment relates to history. While the GPR is above average, it is not abnormally high. Further, given the unpredictability of

geopolitical risk and how it will affect financial markets, we do not recommend making any significant changes to portfolios.

While the concerns over a nuclear attack from North Korea have recently escalated, the threat is not a new one. Many political experts believe the probability of an attack by North Korea against the U.S. or its allies is low because it would jeopardize the existence of the current regime. Additionally, China's support of North Korea has waned in recent months after it agreed to two new rounds of sanctions through the United Nations Security Council.

## GEOPOLITICAL RISK INDEX



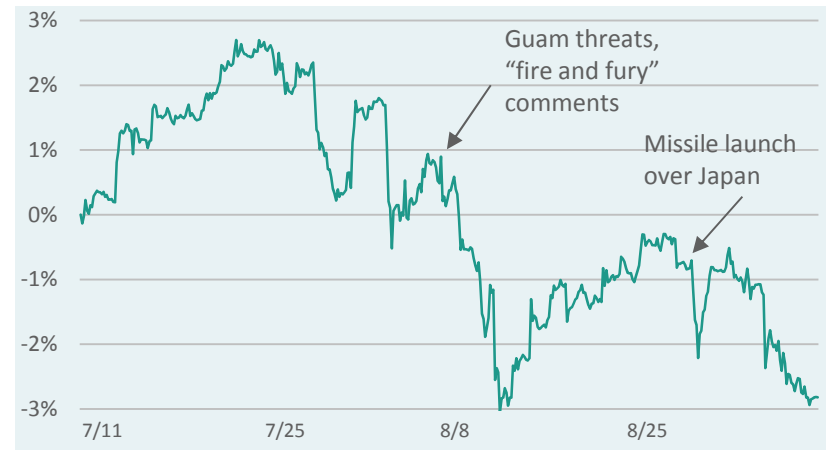
Source: *The Geopolitical Risk Index - Caldarra, Iacoviello, Federal Reserve Board, as of 8/31/17*

# North Korea – Market reactions

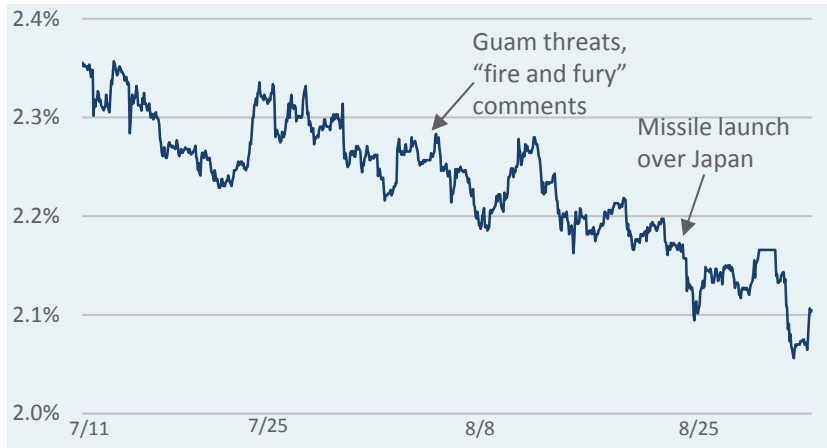
**U.S. EQUITY (CUMULATIVE PRICE MOVEMENT)**



**SOUTH KOREAN EQUITY (CUMULATIVE PRICE MOVEMENT)**



**U.S. 10-YEAR TREASURY YIELD**



**GOLD PRICES**



Source: Bloomberg, S&P 500, KOSPI, 7/11/17-9/6/17



# International economics summary

- International economic growth advanced in the second quarter in both developed and emerging markets. PMIs are above 50 (indicating expansion) in nearly every country across the world, pointing towards a continuation in the recent global growth pickup.
- The IMF raised its projections for global GDP growth 0.1% for both 2017 and 2018 to 3.6% and 3.7%, respectively. For comparison, global GDP growth was 3.2% in 2016.
- Economic conditions in emerging markets have improved. Several countries, such as Brazil and Russia, are still at the beginning stages of a recovery. Lower inflation has allowed emerging central banks to pursue looser monetary policy, which should provide a tailwind to further economic growth.
- Inflation in developed countries has yet to see much pressure outside of the U.K., and remains well below central bank targets.
- Inflation in the U.K. (headline CPI) rose 3.0% YoY in September, driven partly by a weaker pound, while wages only increased by 2.2%. The Bank of England stated that a rate hike may be necessary before the end of the year to slow price increases.
- On October 1<sup>st</sup>, Catalonia passed a referendum to declare independence from Spain, which the Spanish government declared illegal. Although the Catalan prime minister accepted the vote as a mandate to declare independence, he immediately suspended this declaration with the goal of bringing the Spanish government to the negotiating table.

| Area           | GDP<br>(Real, YoY)     | Inflation<br>(CPI, YoY) | Unemployment            |
|----------------|------------------------|-------------------------|-------------------------|
| United States  | 2.2%<br><i>6/30/17</i> | 2.2%<br><i>9/30/17</i>  | 4.2%<br><i>9/30/17</i>  |
| Western Europe | 2.0%<br><i>6/30/17</i> | 1.5%<br><i>9/30/17</i>  | 7.9%<br><i>6/30/17</i>  |
| Japan          | 1.4%<br><i>6/30/17</i> | 0.7%<br><i>8/31/17</i>  | 2.8%<br><i>8/31/17</i>  |
| BRICS Nations  | 5.6%<br><i>6/30/17</i> | 2.0%<br><i>6/30/17</i>  | 5.8%<br><i>6/30/17</i>  |
| Brazil         | 0.3%<br><i>6/30/17</i> | 2.5%<br><i>9/30/17</i>  | 12.7%<br><i>9/30/17</i> |
| Russia         | 2.5%<br><i>6/30/17</i> | 3.0%<br><i>9/30/17</i>  | 4.9%<br><i>8/31/17</i>  |
| India          | 5.7%<br><i>6/30/17</i> | 3.3%<br><i>9/30/17</i>  | 8.4%<br><i>12/31/16</i> |
| China          | 6.9%<br><i>6/30/17</i> | 1.6%<br><i>9/30/17</i>  | 4.0%<br><i>6/30/17</i>  |

# International economics

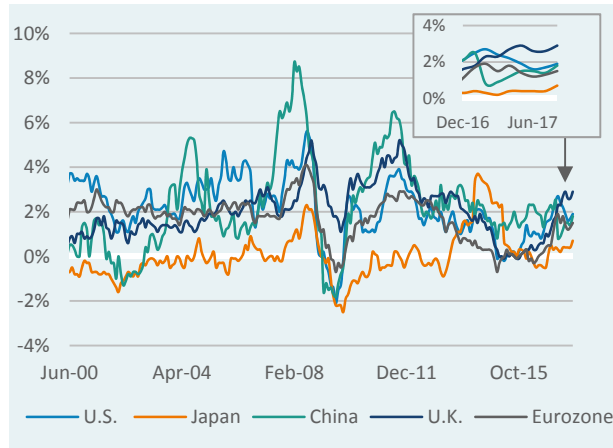
Global surveys indicate a synchronized rise in global growth which may have begun to materialize in Q2. Second quarter GDP growth improved across most countries, especially in Europe and emerging markets.

Real GDP in the Eurozone was 2.3% YoY in Q2, the fastest pace of growth in more than six years. While the ECB has discussed tapering monetary stimulus beginning next year, this will likely be a slow and delicate process. Eurozone financial conditions should continue to be supportive over the next few years. Monetary policy is not expected to change in Japan for the

foreseeable future, and will continue to be a tailwind for the Japanese economy.

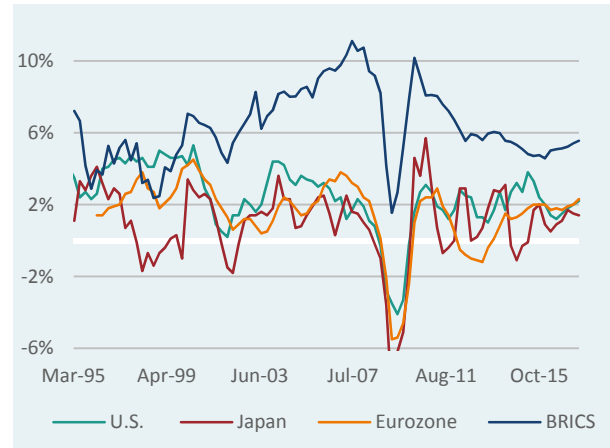
Developed market inflation remains low, with the exception of the U.K. The latest headline CPI reading for the Eurozone and Japan was 1.5% and 0.7%, respectively. Inflation in emerging economies has trended downwards, allowing central banks to cut interest rates to provide monetary stimulus. Many emerging markets are well behind developed markets in the current economic cycle.

## INFLATION (CPI)



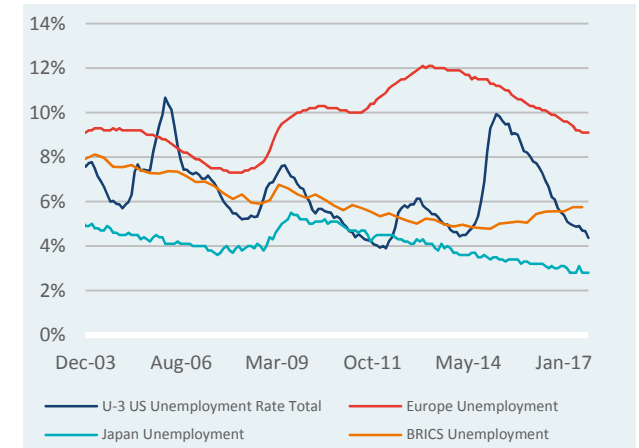
Source: Bloomberg, as of 8/31/17

## REAL GDP GROWTH (YOY)



Source: Bloomberg, as of 6/30/17

## UNEMPLOYMENT



Source: Bloomberg, as of 8/31/17 or most recent release

# Global PMIs

## PMI 1 YEAR (CROSS SECTION) – BLUE HIGH / ORANGE LOW

|                      | Oct-16 | Nov-16 | Dec-16 | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| <b>Manufacturing</b> |        |        |        |        |        |        |        |        |        |        |        |        |
| Global               | 52     | 52     | 53     | 53     | 53     | 53     | 53     | 53     | 53     | 53     | 53     | 53     |
| Developed            | 53     | 53     | 54     | 54     | 54     | 54     | 54     | 54     | 54     | 54     | 54     | 55     |
| US                   | 52     | 54     | 55     | 56     | 58     | 57     | 55     | 55     | 58     | 56     | 59     | 61     |
| UK                   | 54     | 53     | 56     | 55     | 55     | 54     | 57     | 56     | 54     | 55     | 57     | 56     |
| Eurozone             | 54     | 54     | 55     | 55     | 55     | 56     | 57     | 57     | 57     | 57     | 57     | 58     |
| Germany              | 55     | 54     | 56     | 56     | 57     | 58     | 58     | 60     | 60     | 58     | 59     | 61     |
| Japan                | 51     | 51     | 52     | 53     | 53     | 52     | 53     | 53     | 52     | 52     | 52     | 53     |
| EM                   | 51     | 51     | 51     | 51     | 51     | 52     | 51     | 51     | 51     | 51     | 52     | 51     |
| <b>Services</b>      |        |        |        |        |        |        |        |        |        |        |        |        |
| Global               | 53     | 53     | 53     | 54     | 53     | 54     | 54     | 54     | 54     | 54     | 54     | 54     |
| Developed            | 54     | 54     | 54     | 55     | 54     | 54     | 54     | 54     | 55     | 55     | 55     | 55     |
| US                   | 55     | 56     | 57     | 57     | 58     | 55     | 58     | 57     | 57     | 54     | 55     | 60     |
| UK                   | 55     | 55     | 56     | 55     | 53     | 55     | 56     | 54     | 53     | 54     | 53     | 54     |
| Eurozone             | 53     | 54     | 54     | 54     | 56     | 56     | 56     | 56     | 55     | 55     | 55     | 56     |
| Germany              | 54     | 55     | 54     | 53     | 54     | 56     | 55     | 55     | 54     | 53     | 54     | 56     |
| Japan                | 51     | 52     | 52     | 52     | 51     | 53     | 52     | 53     | 53     | 52     | 52     | 51     |
| EM                   | 53     | 54     | 54     | 54     | 56     | 56     | 56     | 56     | 55     | 55     | 55     | 56     |

Source: Bloomberg, as of 9/30/17 – PMIs are based on survey data compiled from purchasing and supply managers. Survey questions are asked about several different components of each sector, such as new orders, employment, prices, etc. The final PMI reading is based on the percentage of respondents with a positive view on the sector. A reading above 50 indicates expansion in the sector while a reading below 50 indicates contraction. Historically, PMIs have had a relatively strong positive relationship with actual economic activity.

# Fixed income rates & credit

# Interest rate environment

- After bottoming out to a post-election low of 2.04% on September 7<sup>th</sup> following increased tensions with North Korea, the U.S. 10-year rose to finish the quarter slightly higher at 2.33%.
- The Fed kept interest rates unchanged over the quarter, citing concerns over the lack of inflation. However, Fed officials have communicated that they believe recent low inflation is transitory. An additional rate hike in December appears likely based on market implied probabilities.
- The Fed will begin to reduce its balance sheet in October. The central bank's plan is to runoff \$6 billion of Treasuries and \$4 billion of mortgage-backed securities per month. This will be scaled up commensurately every 3 months to \$50 billion per month. At this pace it will take more than seven years to return the balance sheet to pre-crisis levels.
- U.K. sovereign yields experienced the biggest increase among developed countries after the Bank of England acknowledged that a rate hike may be necessary by the end of the year to slow inflation.
- Very little monetary tightening is priced into short-term developed market interest rates over the next few years. Although we expect central banks to be cautious, faster than expected increases in interest rates represents a potential risk.
- Our underweight position to both U.S. and developed sovereign rates (currency hedged) was unchanged over the quarter, primarily due to the low carry. However, Treasuries still play an important role in portfolios by offering equity risk diversification.

| Area          | Short Term (3M) | 10 Year |
|---------------|-----------------|---------|
| United States | 1.02%           | 2.33%   |
| Germany       | (0.70%)         | 0.46%   |
| France        | (0.59%)         | 0.74%   |
| Spain         | (0.45%)         | 1.60%   |
| Italy         | (0.39%)         | 2.11%   |
| Greece        | 2.02%           | 5.66%   |
| U.K.          | 0.28%           | 1.37%   |
| Japan         | (0.17%)         | 0.07%   |
| Australia     | 1.71%           | 2.84%   |
| China         | 3.04%           | 3.62%   |
| Brazil        | 7.46%           | 9.77%   |
| Russia        | 7.76%           | 7.66%   |

Source: Bloomberg, as of 9/30/17

# Fed monetary tightening

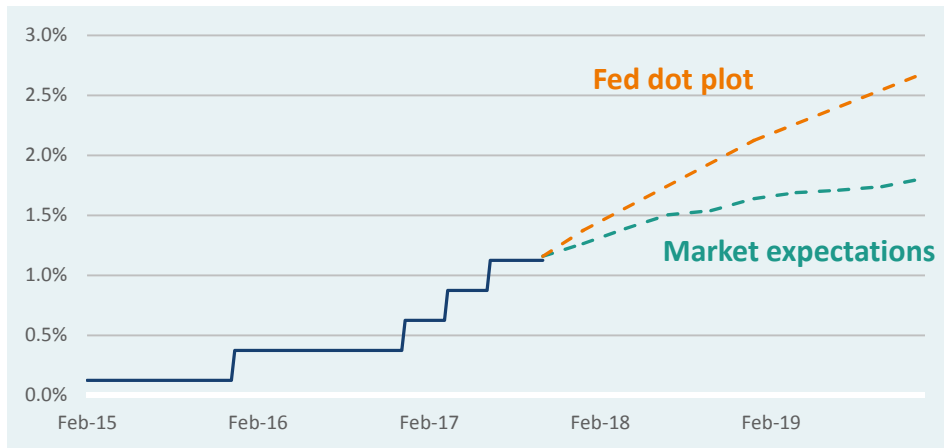
The market's expectation of a rate hike in December increased considerably throughout the quarter to 90%. Although core inflation remained below the official 2% target, several Fed officials have stated they believe the factors dampening inflation are transitory and prices should gradually increase along with wages. According to its own forecast, the Fed is expecting one additional hike this year, three hikes in 2018, and two more in 2019. However, market expectations are much more conservative, pricing in one more hike this year, and only two additional hikes through 2019.

During this tightening cycle the Fed has continually undelivered on projected rate increases. We believe it is reasonable to think this trend will continue since the risk of tightening too quickly outweighs the risk of moving too slowly.

Balance sheet reduction, which began in October also represents a form of gradual tightening. Based on the current plan, the balance sheet will fall by \$1.7 trillion to \$2.8 trillion at the end of 2020. According to the Fed, the runoff will continue as scheduled unless interest rates are brought back down to 0%.

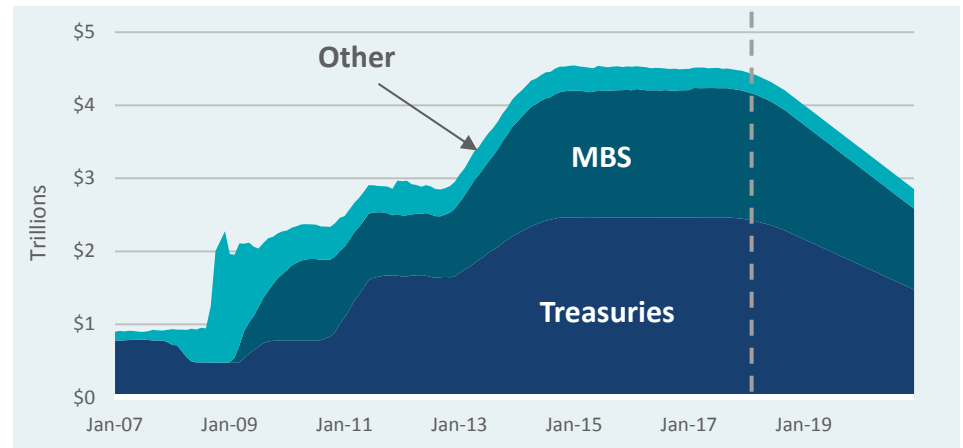
The market is expecting the Fed to move cautiously with further monetary tightening

**FED RATE HIKE EXPECTATIONS**



Source: Bloomberg, as of 10/6/17

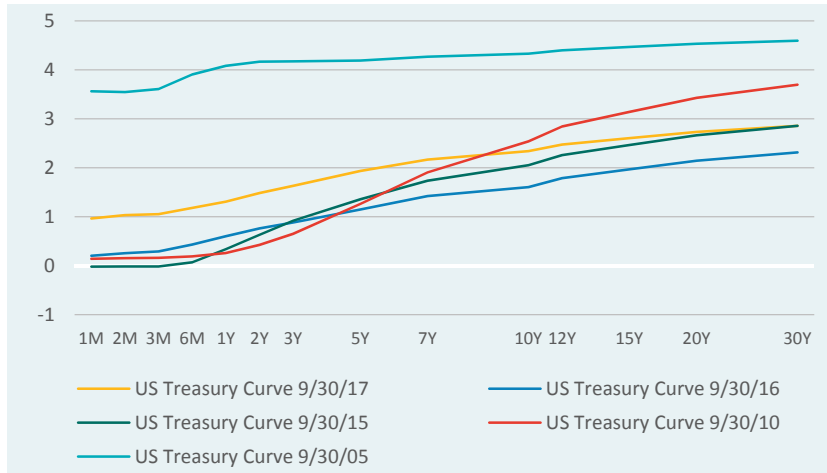
**FED BALANCE SHEET REDUCTION EXPECTATIONS**



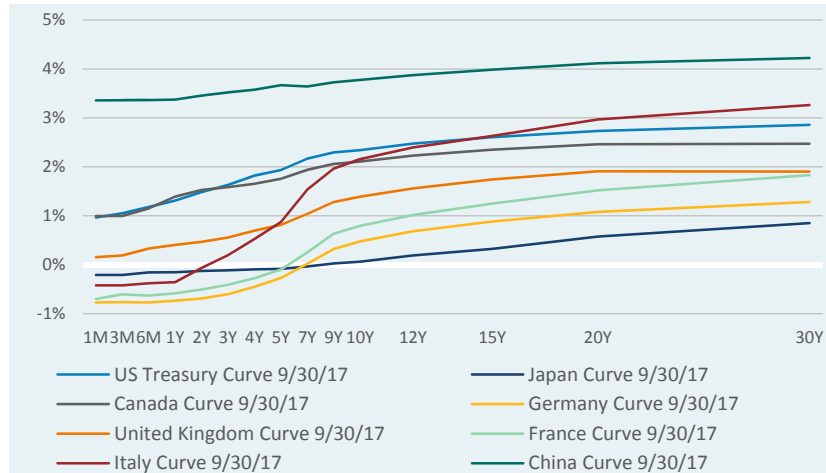
Source: Federal Reserve, as of 9/29/17, projections are based on the Fed's announced reduction plan

# Yield environment

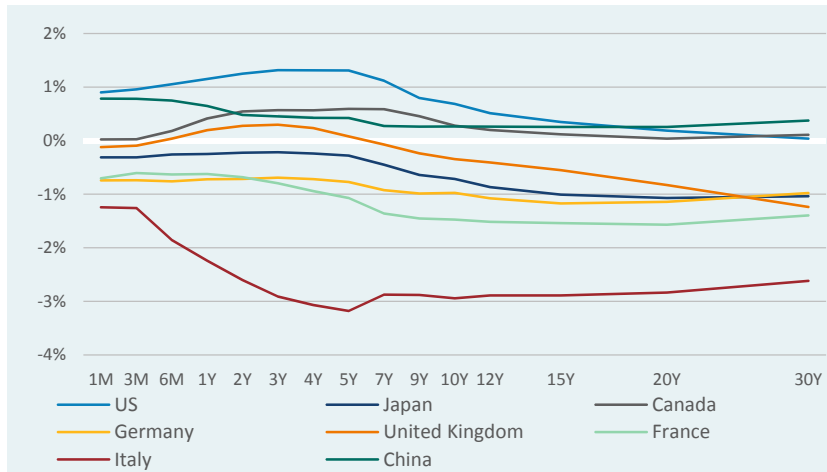
U.S. YIELD CURVE



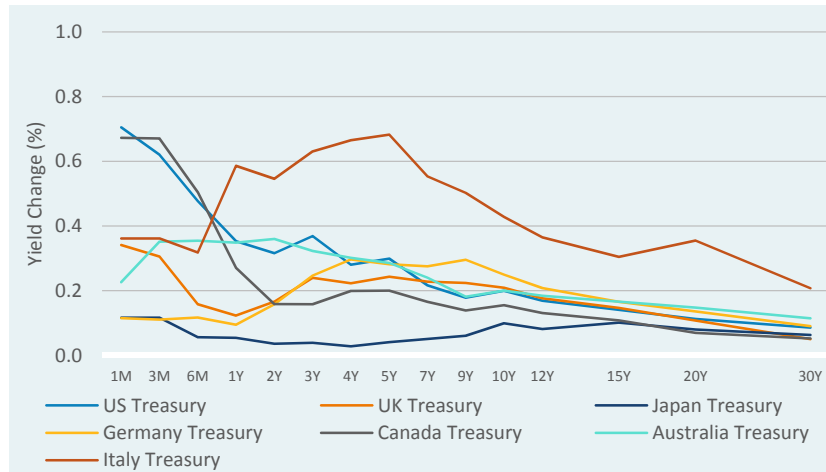
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 9/30/17

# Credit environment

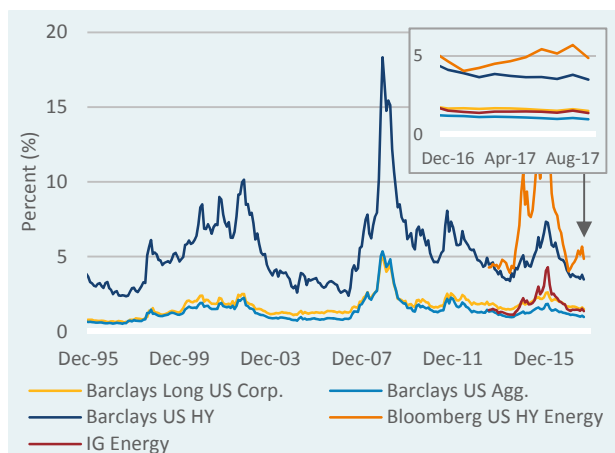
Credit spreads fell slightly over the quarter, remaining at low levels. U.S. high yield option-adjusted spreads compressed in the third quarter to 3.5%, and the asset class generated a 2.0% total return (BBgBarc U.S. Corp. High Yield Index). High yield spreads are tighter than those of bank loans on a duration neutral basis.

Credit spreads have continued to tighten close to multi-year lows, driven by strong corporate fundamentals and general macroeconomic improvement. The combination of tighter credit spreads and additional carry (greater yield) over Treasuries led credit to broadly outperform U.S. Treasuries in

Q3. High yield spreads began the year at 4.0% and have tightened by 51 bps year-to-date. Credit spreads have historically been a good indicator of future performance relative to Treasuries.

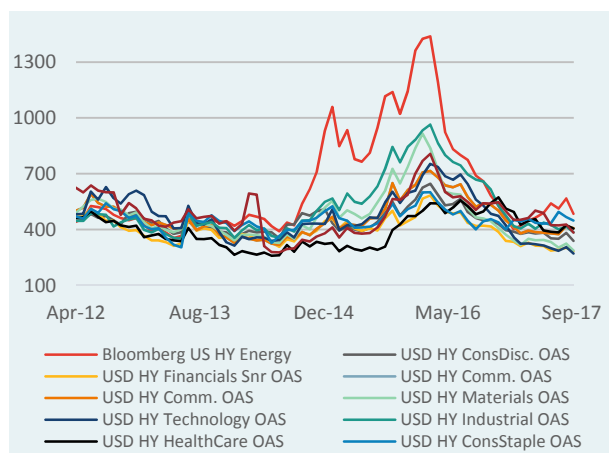
High yield energy spreads compressed over the quarter by 55 bps to 4.8% - a very moderate compression following the 2014 commodity drawdown. Year-to-date, the best performing sectors were financials and utilities. Industrials had weaker performance, most specifically consumer cyclical and the energy sector, which has been recovering from the recent commodity crisis.

## HIGH YIELD SECTOR SPREADS



Source: Barclays, Bloomberg, as of 9/30/17

## SPREADS



Source: Bloomberg, as of 9/30/17

| Market               | Credit Spread (9/30/17) | Credit Spread (1 Year Ago) |
|----------------------|-------------------------|----------------------------|
| Long US Corporate    | 1.5%                    | 2.0%                       |
| US Aggregate         | 1.0%                    | 1.4%                       |
| US High Yield        | 3.5%                    | 4.8%                       |
| US High Yield Energy | 4.4%                    | 6.1%                       |
| US Bank Loans        | 3.6%                    | 3.9%                       |

Source: Barclays, Credit Suisse, Bloomberg, as of 9/30/17



# Issuance and default

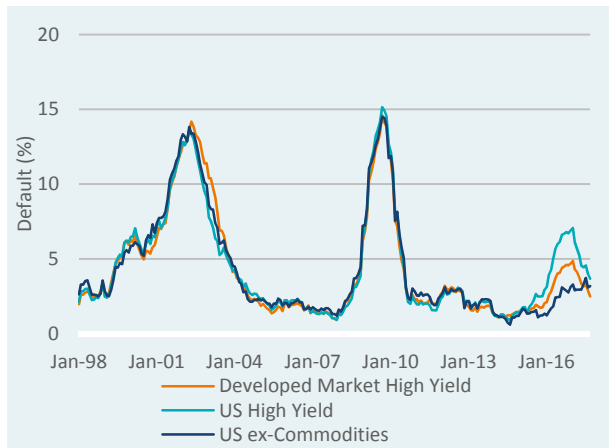
Default activity continued to stabilize in U.S. and international credit markets. Only one U.S. company defaulted in September, the third consecutive month with only one or no defaults, which was the first time this occurred since May 2011. Default volume in the third quarter was the lowest since Q4 2013.

Rolling default rates are currently running below long-term averages. Active management may offer value to investors in the high yield space.

The effects of commodity related defaults are subsiding

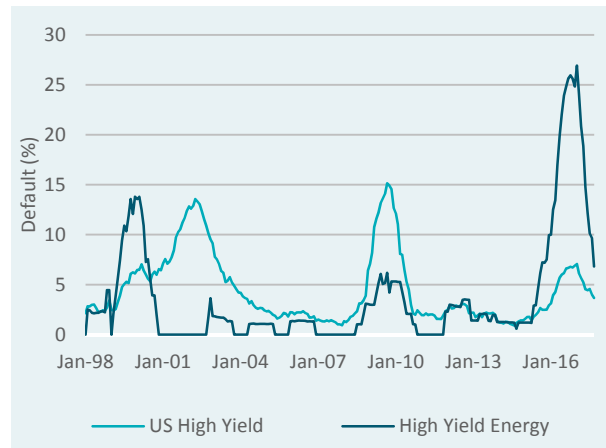
Senior loan and high yield markets stabilized further with the majority of par defaults last year coming from the energy and metals/mining sectors. The retail sector has accounted for the second most defaults.

**HY DEFAULT TRENDS (ROLLING 1 YEAR)**



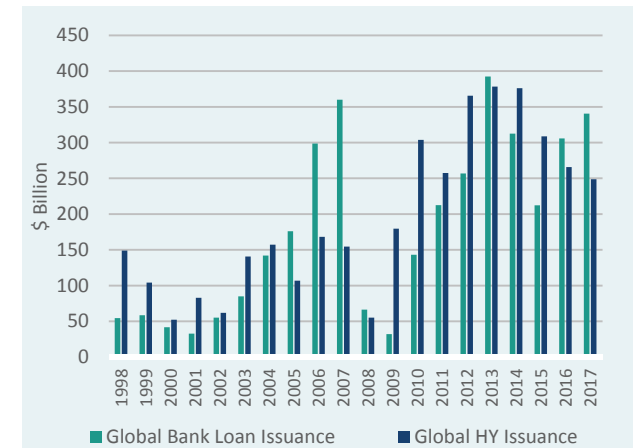
Source: BofA Merrill Lynch, as of 9/30/17

**ENERGY DEFAULT TRENDS**



Source: BofA Merrill Lynch, as of 9/30/17

**GLOBAL ISSUANCE**



Source: Bloomberg, BofA Merrill Lynch, as of 9/30/17

# Equity

# Equity environment

- We maintain a moderate overweight to equities with a preference for emerging markets. Emerging markets have historically delivered outsized economic growth and performance during strong global growth environments. These markets remain attractively valued relative to developed markets, though valuations rose over the quarter.
- U.S. equities moved upward in Q3, setting record highs. Performance has been fueled by earnings growth.
- The possibility of U.S. corporate tax reform has led the market to price in greater expectations for future equity earnings growth. Significant uncertainty remains around the timing and nature of the reform, and the outcome will have a material impact on equity prices in the short-term.
- Equity volatility remains unusually low. Lower volatility has historically indicated less downside risk in equity markets.
- According to FactSet as of October 6th, the estimated Q3 earnings growth rate of the S&P 500 was 2.8% YoY, a materially weaker figure than the 7.5% which was expected as of June 30. Much of the weakness was caused by expected insurance industry losses due to hurricane damage. Excluding the insurance sector, earnings are expected to grow by 4.9% YoY.
- U.S. dollar weakness year-to-date has caused significant earnings differences between companies with greater international sales focus and companies that are more domestically-focused. Overall, U.S. dollar movement has acted as a tailwind to earnings growth.

|  | QTD TOTAL RETURN |          | YTD TOTAL RETURN |          | 1 YEAR TOTAL RETURN |          |
|--|------------------|----------|------------------|----------|---------------------|----------|
|  | (unhedged)       | (hedged) | (unhedged)       | (hedged) | (unhedged)          | (hedged) |
| US Large Cap (Russell 1000)              | 4.5%             |          | 14.2%            |          | 18.5%               |          |
| US Small Cap (Russell 2000)              | 5.7%             |          | 10.9%            |          | 20.7%               |          |
| US Large Value (Russell 1000 Value)      | 3.1%             |          | 7.9%             |          | 15.1%               |          |
| US Large Growth (Russell 1000 Growth)    | 5.9%             |          | 20.7%            |          | 21.9%               |          |
| International Large (MSCI EAFE)          | 5.4%             | 3.7%     | 20.0%            | 12.3%    | 19.1%               | 20.5%    |
| Eurozone (Euro Stoxx 50)                 | 8.5%             | 5.2%     | 25.2%            | 13.2%    | 29.2%               | 24.9%    |
| U.K. (FTSE 100)                          | 4.8%             | 2.1%     | 15.7%            | 7.2%     | 14.9%               | 11.9%    |
| Japan (NIKKEI 225)                       | 2.0%             | 2.7%     | 12.1%            | 9.4%     | 13.4%               | 27.0%    |
| Emerging Markets (MSCI Emerging Markets) | 7.9%             | 7.2%     | 27.8%            | 22.1%    | 22.5%               | 19.6%    |

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 9/30/17

# Domestic equity

U.S. equities moved upward over the quarter (S&P 500 +4.5%), reaching record highs, but underperformed international markets (MSCI EAFE +5.4%). Earnings growth remained the primary driver of robust equity performance, though Q3 earnings growth expectations have fallen due to hurricane-related insurance industry losses. The possibility of U.S. tax reform has likely contributed to a positive domestic equity outlook.

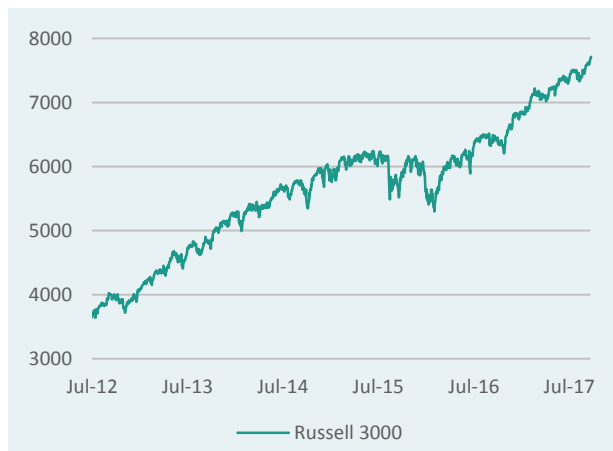
According to FactSet, as of October 6th the estimated Q3 earnings growth rate of the S&P 500 was 2.8% YoY, a

materially weaker figure than the 7.5% which was expected as of June 30. Most of the weakness was caused by insurance industry losses due to hurricane damage. Excluding this sector would result in a current estimate of 4.9% overall growth rather than 2.8%.

U.S. domestically-facing business in aggregate are expected to face flat sales and revenue growth, while externally-facing businesses are expected to produce strong growth. U.S. dollar depreciation and international growth have created a tailwind to the performance of externally-focused U.S. businesses.

We maintain a neutral weight to U.S. equities

## U.S. EQUITIES



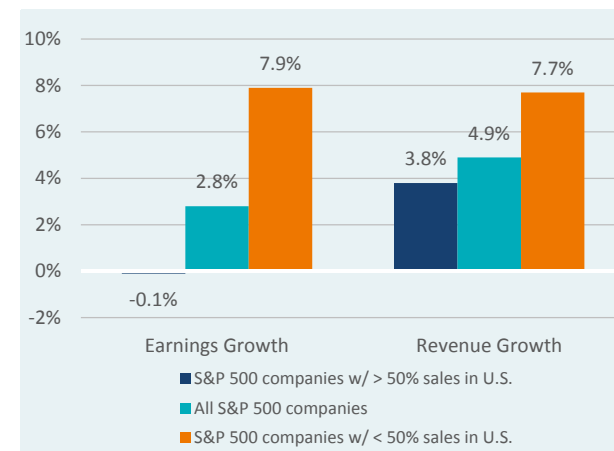
Source: Russell Investments, as of 9/29/17

## S&P 500 EPS GROWTH



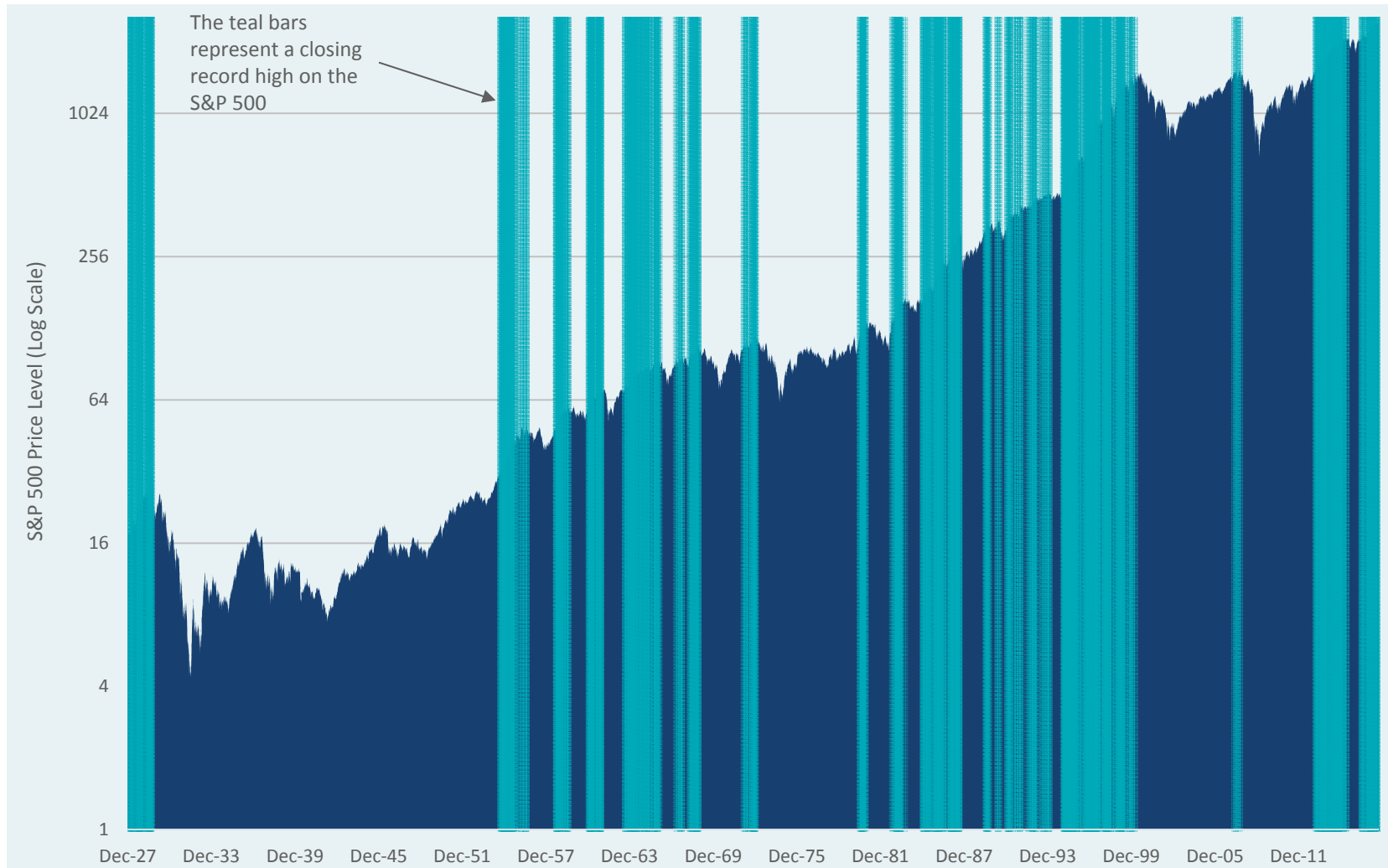
Source: Bloomberg, as of 9/30/17

## Q3 EXPECTATIONS



Source: FactSet, as of 10/6/17

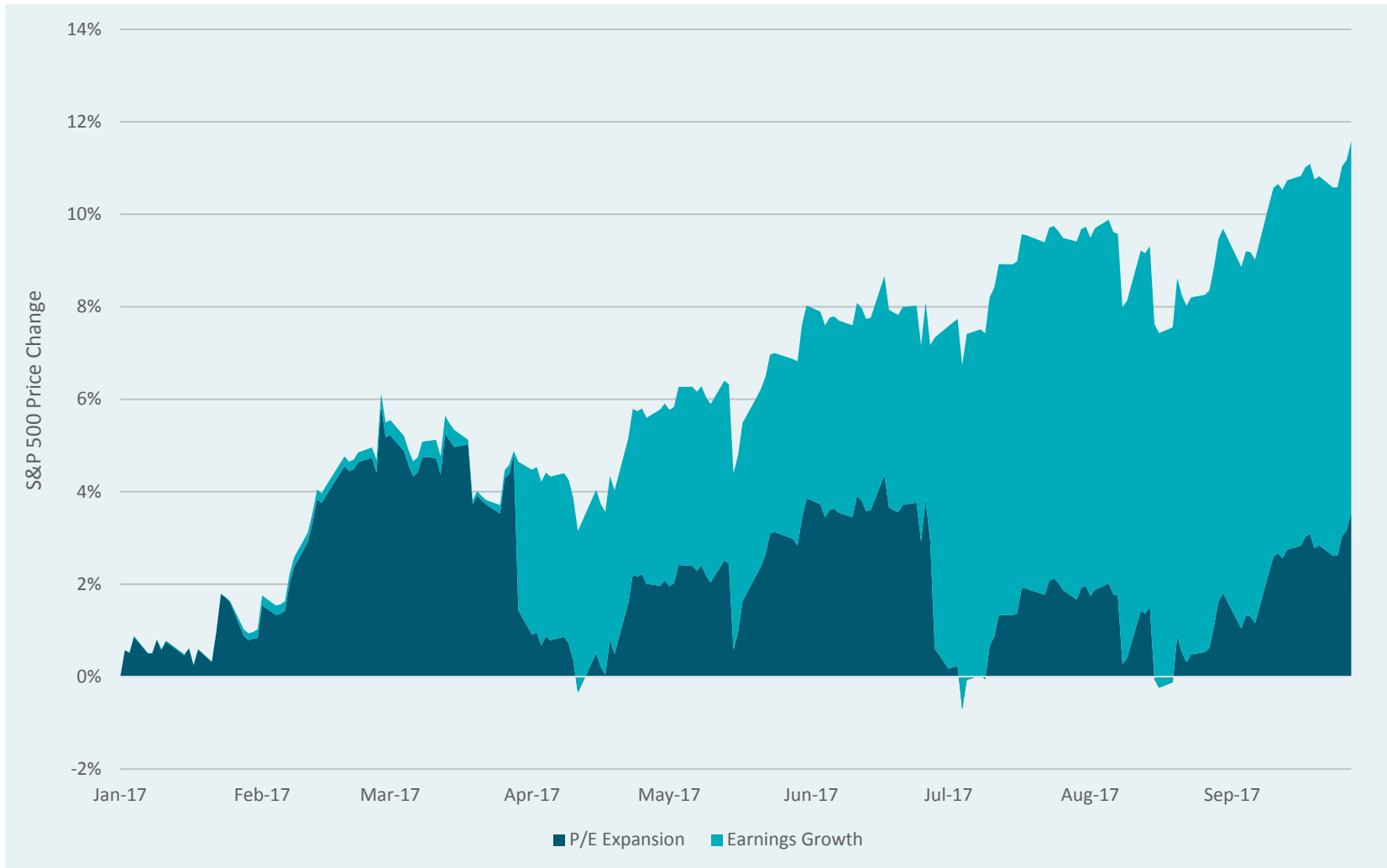
# Record highs



Equity market highs are reached on 5% of market trading days

Source: Verus, Bloomberg, as of 9/29/17, based on the closing price

# What is driving U.S. equities?



S&P 500 price appreciation has been driven by earnings growth so far this year

Source: Verus, Bloomberg, as of 9/29/17

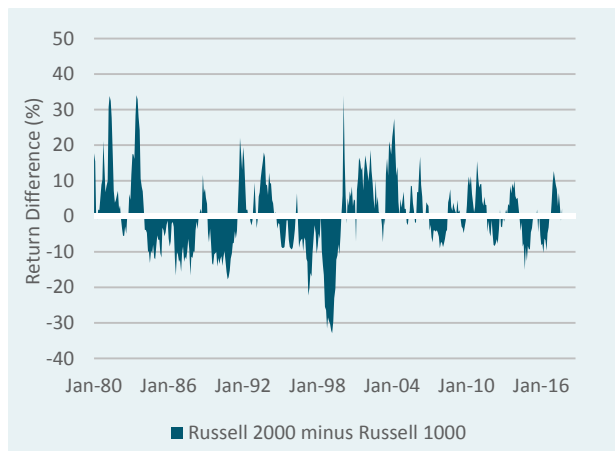
# Domestic equity size and style

Large cap equities led small cap equities through July and August. However, small cap equities rallied in September (+6.2% in the month) and outperformed large cap equities over the quarter. The move in September was partially attributed to an increased focus on U.S. tax reform. If passed, tax cuts will likely provide a greater marginal benefit to smaller companies. Expectations of lower taxes and deregulation have contributed to small cap price appreciation that has outpaced earnings. The relative P/E ratio between large and small companies is at its highest level since the financial crisis.

Large cap equities were led by the technology sector, from which the strongest contributors were semiconductor and internet software companies. The top three individual contributors were Apple, Facebook and Microsoft. Small cap equities were mainly driven by producer durables companies.

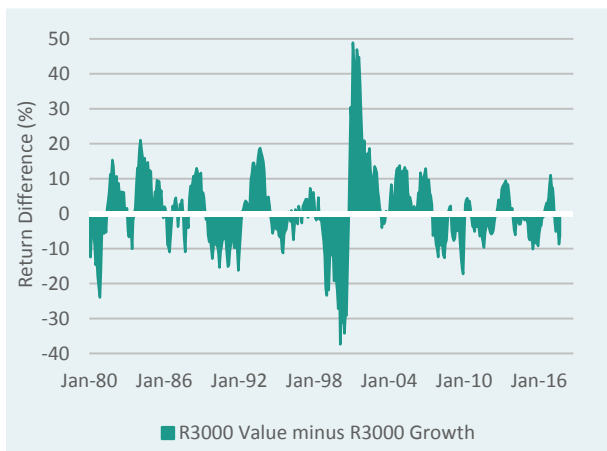
Growth outperformed value in Q3 due to a higher relative weighting to technology companies. Financial services, the most heavily weighted sector in value, returned a positive 5.0%, but still underperformed technology by 3.2%.

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



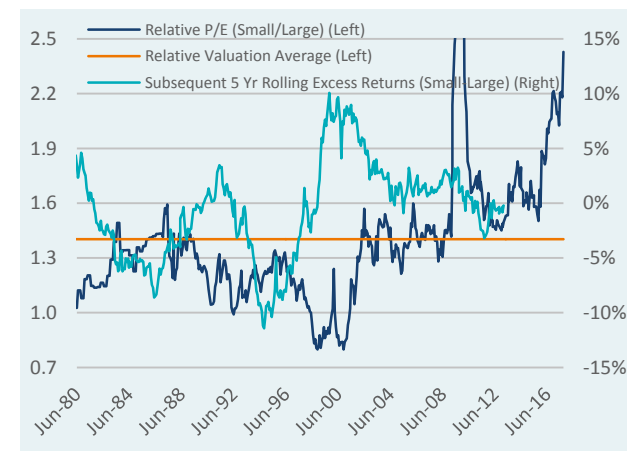
Source: Russell Investments, as of 9/30/17

**VALUE VS GROWTH (YOY)**



Source: Russell Investments, as of 9/30/17

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



Source: Russell, Bloomberg, as of 9/30/17

# International equity

International equities outperformed domestic equities during the third quarter. The MSCI ACWI ex U.S. returned 6.2% (+4.6% hedged) while the S&P 500 returned 4.5%. Consistent with the first half of 2017, emerging markets outperformed (MSCI EM +7.9% unhedged) both the EAFE Small Cap Index (+7.5%) and the broad EAFE Index (+5.4%).

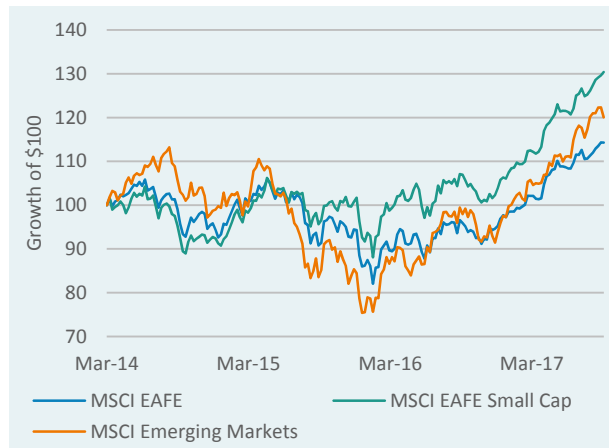
Japanese equities were the largest contributors to the EAFE index in Q3, particularly companies within the industrials and consumer discretionary sectors. Despite the positive moves, Japanese equity valuations based on earnings and

sales remain attractive relative to those in Europe and the United Kingdom.

MSCI EAFE valuations have remained relatively stable in 2017 as earnings and sales growth have kept pace with price appreciation.

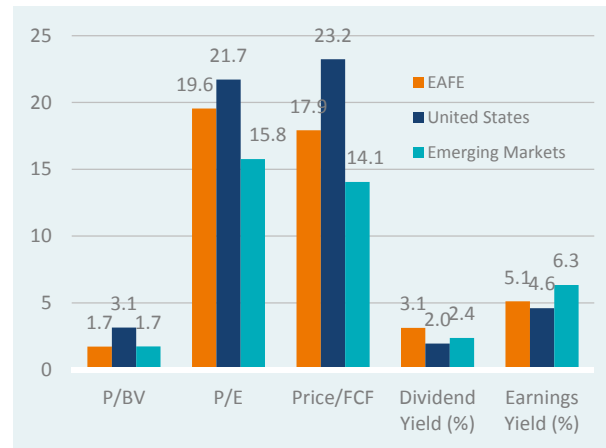
Currency effects added a positive 1.7% to the unhedged MSCI EAFE in Q3 (+7.6% year-to-date), as the U.S. dollar fell for a third consecutive quarter against a trade weighted basket of currencies.

## GLOBAL EQUITY PERFORMANCE



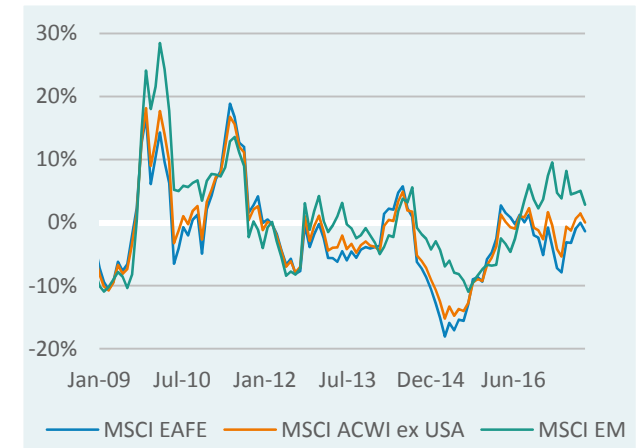
Source: Bloomberg, as of 9/30/17

## VALUATIONS



Source: Bloomberg, as of 9/30/17

## EFFECT OF CURRENCY (1 YEAR ROLLING)



Source: MSCI, as of 9/30/17



# Emerging market equity

We maintain an overweight to emerging market equities, which have historically delivered outsized economic growth and performance during stronger global growth environments.

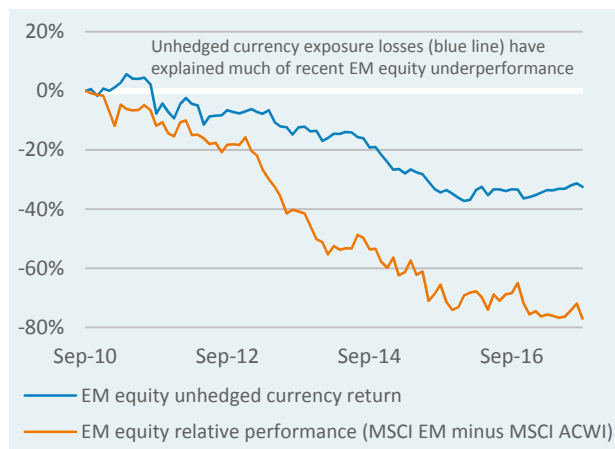
Emerging market equities have outperformed developed markets over the quarter (7.9% vs. 4.8%) and the past year (22.5% vs 18.2%), reversing an extended period of underperformance following the global financial crisis. Currency movement was a significant contributor to

emerging market underperformance during this time, and the recent reversal in currency trends has been additive to the outperformance of these markets.

Valuations have risen off of low levels, bolstering returns. These markets are no longer cheap relative to history though strong earnings growth and mean reversion of currencies could likely fuel further outsized equity gains.

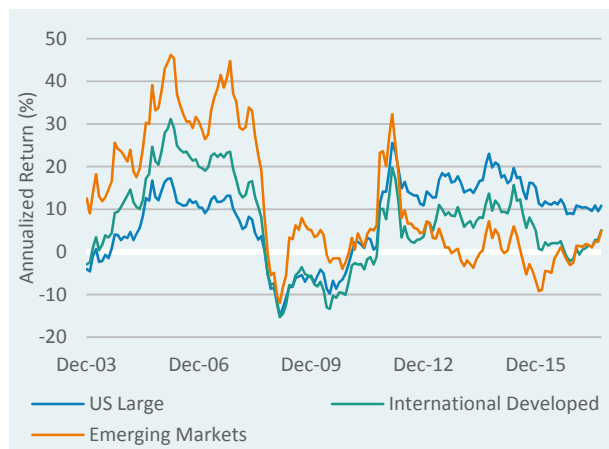
Accelerating global growth should have a positive effect on emerging economies

## EMERGING MARKET FX & RELATIVE PERFORMANCE (7YR CUMULATIVE)



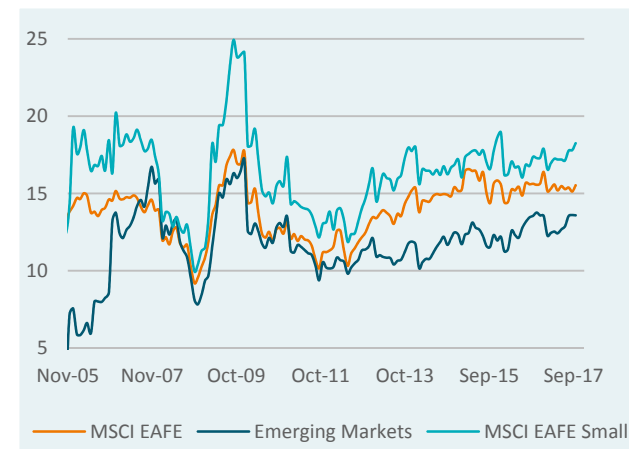
Source: MSCI, JP Morgan EM Currency Index, as of 9/30/17

## EQUITY PERFORMANCE (3YR ROLLING)



Source: Standard & Poor's, MSCI, as of 9/30/17

## FORWARD P/E RATIOS



Source: Bloomberg as of 9/30/17

# Emerging markets – High “growth beta”

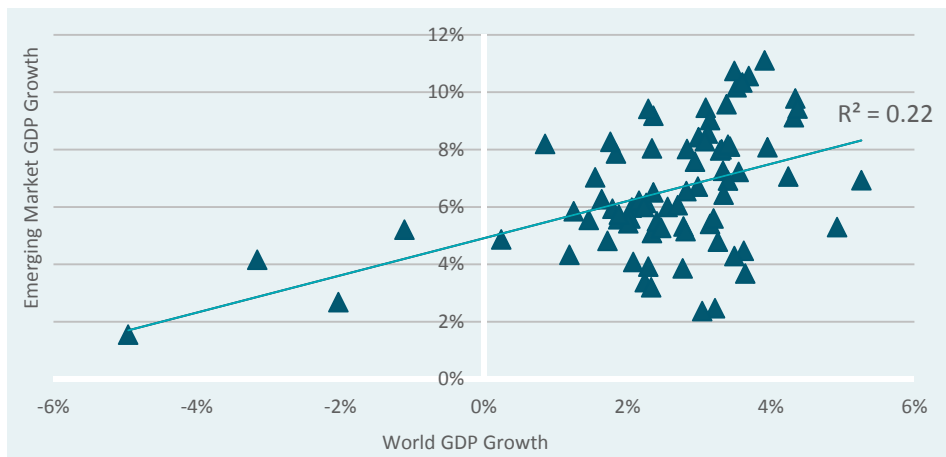
During Q3 the trend of coordinated global economic growth continued. Emerging market equities materially outperformed global equities over the quarter (7.9% MSCI EM vs. 5.2% MSCI ACWI) and year-to-date (27.8% vs. 17.3%).

Emerging markets have historically performed well during periods of global growth acceleration, in terms of both equity performance and underlying economic growth.

The relationship between emerging market equities and world economic growth has historically exhibited a beta of 9.6. This suggests that, on average, investors might expect a 1% improvement in global growth to result in emerging market equity outperformance of 9.6%.

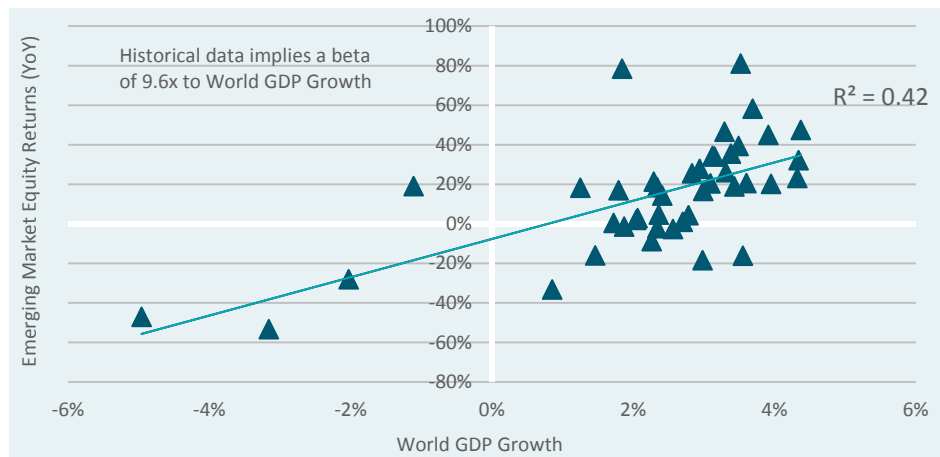
It is important to note that this relationship has also held on the downside, as emerging markets tend to produce poor returns during weak growth environments.

EM GROWTH RELATIONSHIP TO GLOBAL GROWTH



Source: Bloomberg, since 1996 – BRICS used to represent emerging market economic growth

EM EQUITY PERFORMANCE RELATIONSHIP TO GLOBAL GROWTH



Source: Bloomberg, since 1996 - MSCI

# Equity valuations

Equity valuations remain elevated compared to history, although recent price appreciation has been driven by earnings growth as opposed to multiple expansion. In international developed markets (EAFE), earnings growth over the past two quarters has outpaced price appreciation, leading to a slight decline in P/E ratios. The opposite has occurred in emerging markets where strong price gains have resulted in higher valuations. Relative to developed countries, emerging equities still appear attractive from a valuation perspective but are no longer considered cheap. Other valuation measures such as price-to-sales (P/S) ratios

also indicate equity prices are rich, especially in the U.S. The P/S ratio at the end of September was 2.1, the highest level since 2000. During this cycle, sales growth has lagged earnings growth (per share), influenced by expanding profit margins and an increase in equity buybacks.

Historically, higher valuations have led to lower future returns over the medium-term, on average. However, valuations can remain elevated for long periods of time and may be partially justified given the current environment of low interest rates and inflation.

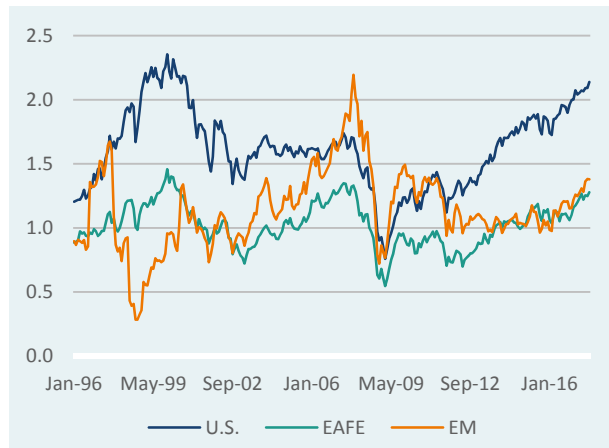
Valuations are elevated, but relative opportunities exist

## TRAILING P/E RATIOS



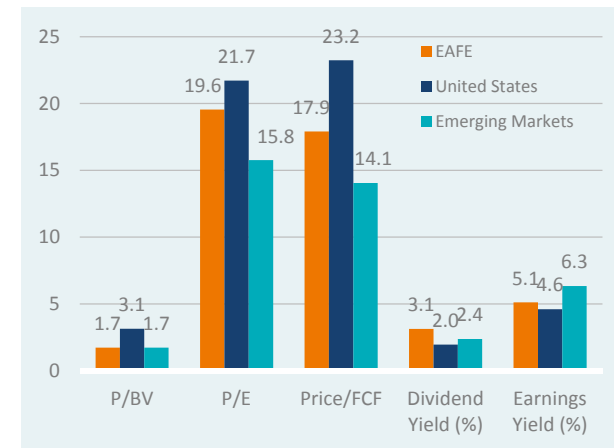
Source: Bloomberg, as of 9/30/17

## TRAILING PRICE-TO-SALES RATIOS



Source: Bloomberg, as of 9/30/17

## CURRENT VALUATION METRICS



Source: Bloomberg, as of 9/30/17

# Equity volatility

Despite a rise in geopolitical risks, including tensions on the Korean peninsula, realized volatility in equities over the quarter was extremely low, consistent with recent trends. In September, S&P 500 annualized volatility was 5%, the lowest level for a calendar month on record.

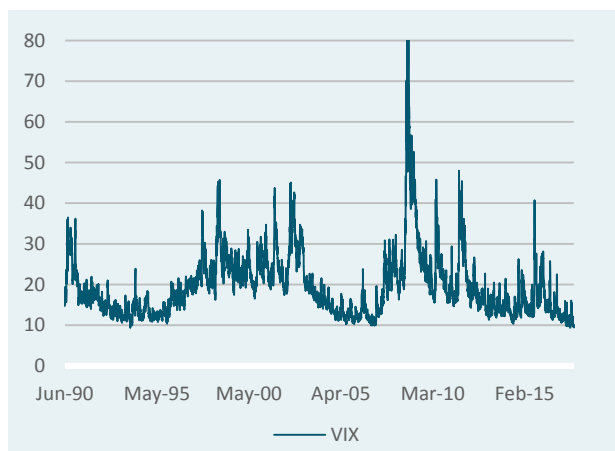
While many market participants have voiced concern over complacency, low volatility generally accompanies bull markets. We continue to watch volatility trends closely, but at this time do not view the current environment as a bearish signal. For investors in strategies with specific

volatility targets, such as risk parity, it is important to be aware of rising equity exposure and leverage. A spike in volatility may lead to forced equity selling during a downturn in order to maintain the risk target.

The CBOE Skew Index, which looks at the steepness of the volatility curve, is above its historical average. This indicates investors are still paying a premium for downside protection.

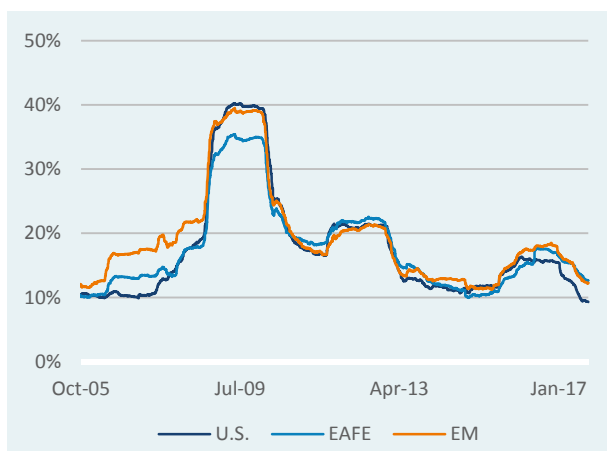
Equity volatility has trended downwards

**U.S. IMPLIED VOLATILITY**



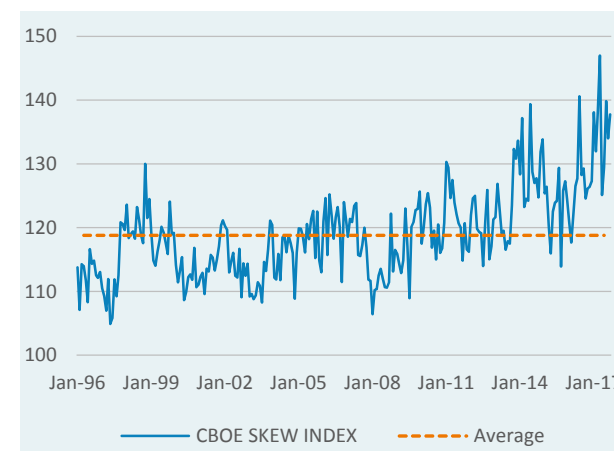
Source: CBOE, as of 9/30/17

**REALIZED 1-YEAR ROLLING VOLATILITY**



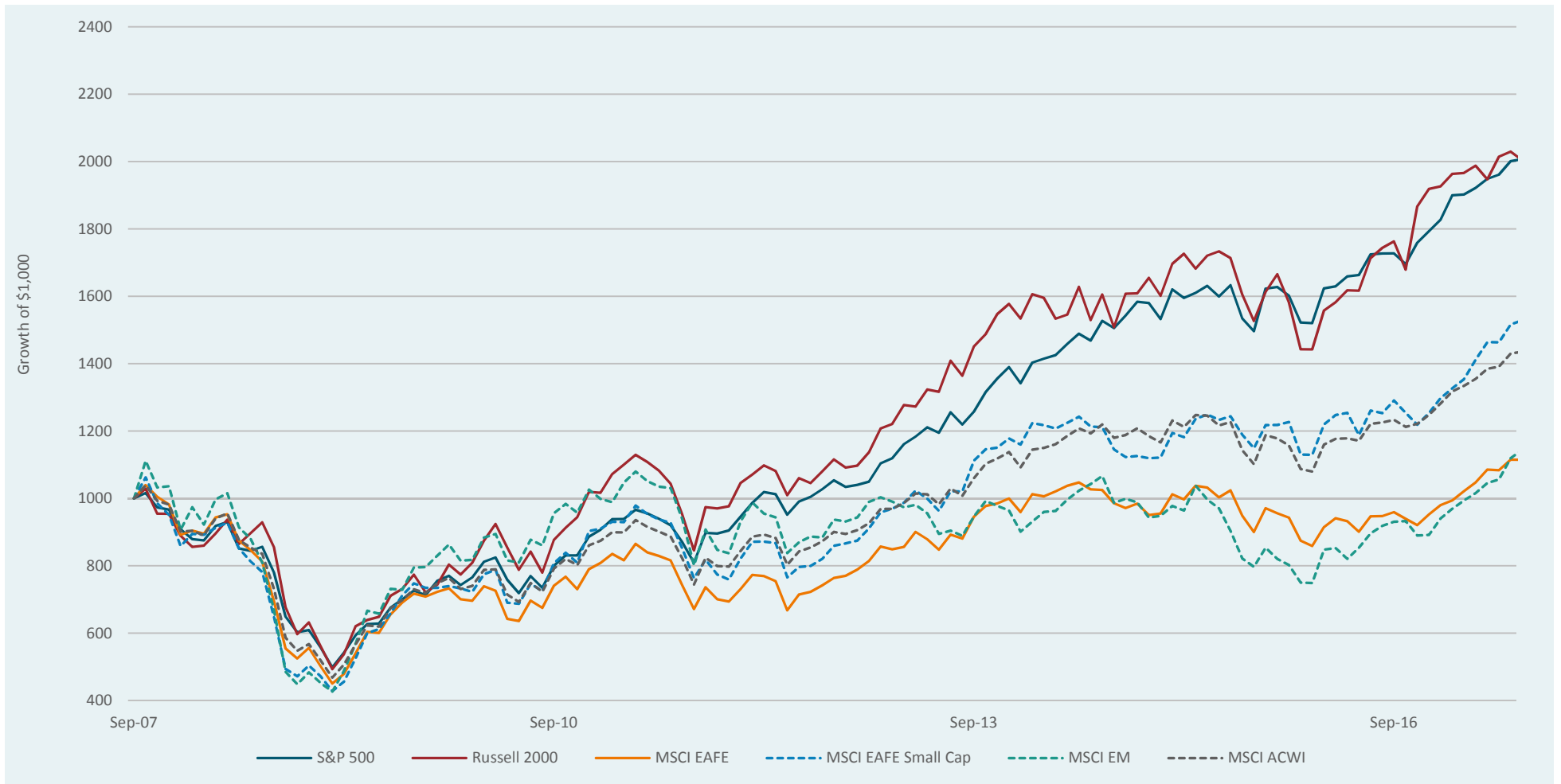
Source: Bloomberg, as of 9/30/17

**U.S. VOLATILITY SKEW**



Source: CBOE, as of 9/30/17

# Long-term equity performance



Source: MPI, as of 9/30/17

# Other assets

# Hedge funds

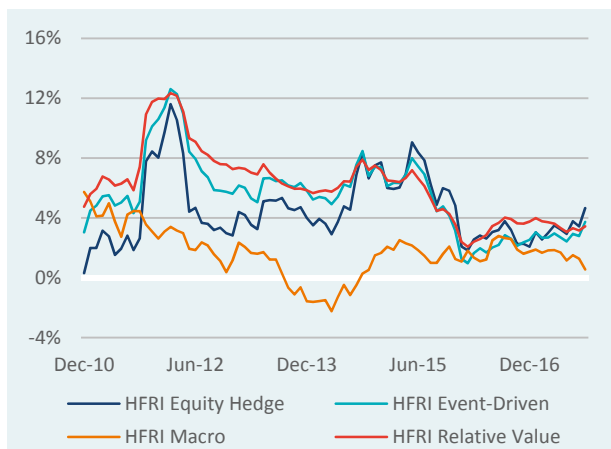
In aggregate, hedge funds returned 2.2% during Q3 and 5.5% year-to-date per HFRI. Equity hedge strategies were the top performer for both periods as they gained 3.5% and 9.6%, respectively. Short biased funds stood out as the only negative sub strategy during Q3, which is typical during equity rallies. Funds with greater net-long market exposure benefited from strong year-to-date equity market returns.

Emerging market hedge funds were notable winners this year as HFRI reported performance of 4.8% for Q3 and 14.7% year-to-date. Funds focused on Latin America (+10.2% for Q3,

16.5% YTD) were particularly strong performers. Those markets rallied due in part to a combination of pro-business politicians retaining power, improving economic growth prospects and stabilizing commodity markets.

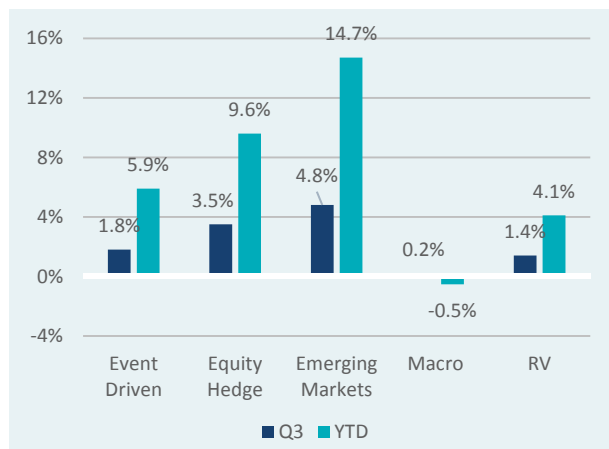
We are closely monitoring volatility levels because we understand that sudden changes in volatility regimes can negatively impact high gross leverage strategies. Our concerns are somewhat balanced due to more normal net leverage levels.

## 3-YEAR ROLLING STYLE PERFORMANCE



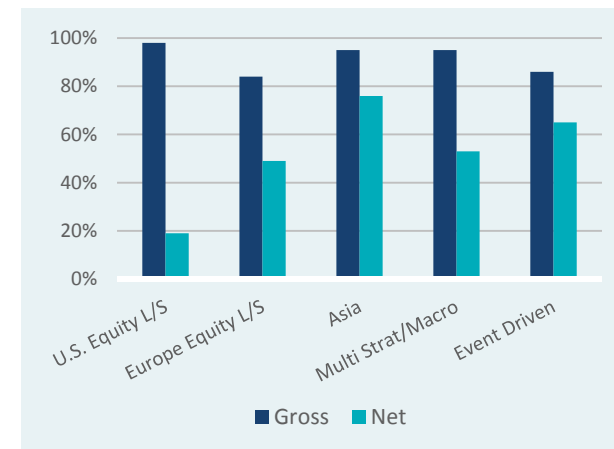
Source: HFRI, as of 9/30/17

## Q3 & YTD STYLE PERFORMANCE



Source: HFRI, as of 9/30/17

## LEVERAGE (PERCENTILE RANK SINCE 2010)



Source: Morgan Stanley, as of 9/30/17

# Currency

The U.S. dollar depreciated an additional 2.7% in Q3 against a trade weighted basket of developed currencies, which brought the year-to-date decline to 8.0%. The downward trend partially reversed in September after prospects of another interest rate hike in December from the Fed helped lead to the first month of dollar appreciation so far this year. The euro appreciated 3.4% against the dollar over the quarter, influenced by improving economic conditions and the possibility of ECB tightening monetary policy.

After several years of depreciation, emerging market

currencies have stabilized. Improved current account balances and economic growth conditions have provided a positive backdrop for these currencies moving forward. However, a quicker than expected rise in U.S. interest rates could represent a headwind to further appreciation.

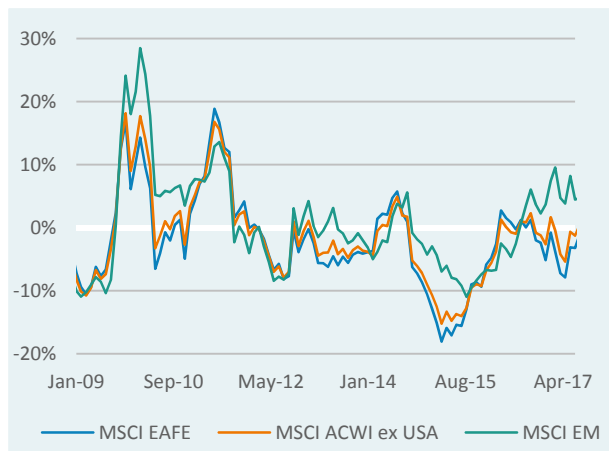
Currency losses from unhedged exposure to developed international equities has begun to reverse due to recent dollar weakness, although currency exposure has still resulted in materially higher volatility.

**U.S. DOLLAR TRADE WEIGHTED INDEX**



Source: Federal Reserve, as of 9/30/17

**EFFECT OF CURRENCY (1-YEAR ROLLING)**



Source: MPI, as of 9/30/17

**JPM EM CURRENCY INDEX**



Source: JPMorgan, as of 9/30/17



# Appendix

# Periodic table of returns

|                         | 1994 | 1995 | 1996 | 1997  | 1998  | 1999 | 2000  | 2001  | 2002  | 2003 | 2004 | 2005 | 2006 | 2007 | 2008  | 2009  | 2010 | 2011  | 2012 | 2013 | 2014  | 2015  | 2016 | YTD  | 5-Year | 10-Year |
|-------------------------|------|------|------|-------|-------|------|-------|-------|-------|------|------|------|------|------|-------|-------|------|-------|------|------|-------|-------|------|------|--------|---------|
| Emerging Markets Equity | 16.6 | 38.4 | 23.2 | 35.2  | 38.7  | 66.4 | 31.8  | 14.0  | 25.9  | 56.3 | 26.0 | 34.5 | 32.6 | 39.8 | 5.2   | 79.0  | 29.1 | 14.3  | 18.6 | 43.3 | 13.5  | 13.3  | 31.7 | 27.8 | 15.3   | 9.1     |
| Large Cap Growth        | 8.1  | 37.8 | 23.1 | 32.9  | 27.0  | 43.1 | 22.8  | 8.4   | 10.3  | 48.5 | 22.2 | 21.4 | 26.9 | 16.2 | 1.4   | 37.2  | 26.9 | 7.8   | 18.1 | 38.8 | 13.2  | 5.7   | 21.3 | 20.7 | 14.3   | 8.5     |
| International Equity    | 6.4  | 37.2 | 22.4 | 31.8  | 20.3  | 33.2 | 12.2  | 7.3   | 6.7   | 47.3 | 20.7 | 20.1 | 23.5 | 15.8 | -6.5  | 34.5  | 24.5 | 2.6   | 17.9 | 34.5 | 13.0  | 0.9   | 17.3 | 20.0 | 14.3   | 7.8     |
| Small Cap Growth        | 4.4  | 31.0 | 21.6 | 30.5  | 19.3  | 27.3 | 11.6  | 3.3   | 1.6   | 46.0 | 18.3 | 14.0 | 22.2 | 11.8 | -21.4 | 32.5  | 19.2 | 1.5   | 17.5 | 33.5 | 11.8  | 0.6   | 12.1 | 16.8 | 13.8   | 7.5     |
| Large Cap Equity        | 3.2  | 28.5 | 21.4 | 22.4  | 16.2  | 26.5 | 7.0   | 2.8   | 1.0   | 39.2 | 16.5 | 7.5  | 18.4 | 11.6 | -25.9 | 28.4  | 16.8 | 0.4   | 16.4 | 33.1 | 6.0   | 0.0   | 11.8 | 14.2 | 13.3   | 7.1     |
| 60/40 Global Portfolio  | 2.6  | 25.7 | 16.5 | 16.2  | 15.6  | 24.3 | 6.0   | 2.5   | -5.9  | 30.0 | 14.5 | 7.1  | 16.6 | 10.9 | -28.9 | 27.2  | 16.7 | 0.1   | 16.3 | 32.5 | 5.6   | -0.4  | 11.3 | 12.7 | 13.2   | 6.4     |
| Small Cap Equity        | 0.4  | 19.6 | 14.4 | 13.9  | 8.7   | 21.3 | 4.1   | -2.4  | -6.0  | 29.9 | 14.3 | 6.3  | 15.5 | 10.3 | -33.8 | 23.3  | 16.1 | -2.1  | 15.3 | 23.3 | 4.9   | -0.8  | 11.2 | 10.9 | 10.5   | 5.9     |
| Large Cap Value         | -1.5 | 18.5 | 11.3 | 12.9  | 4.9   | 20.9 | -3.0  | -5.6  | -11.4 | 29.7 | 12.9 | 5.3  | 15.1 | 7.0  | -35.6 | 20.6  | 15.5 | -2.9  | 14.6 | 12.1 | 4.2   | -1.4  | 8.0  | 7.9  | 8.4    | 4.3     |
| Small Cap Value         | -1.8 | 15.2 | 10.3 | 10.6  | 1.2   | 13.2 | -7.3  | -9.1  | -15.5 | 25.2 | 11.4 | 4.7  | 13.3 | 7.0  | -36.8 | 19.7  | 13.1 | -4.2  | 11.5 | 11.0 | 3.4   | -2.5  | 7.1  | 5.7  | 6.3    | 4.0     |
| Hedge Funds of Funds    | -2.0 | 11.6 | 9.9  | 9.7   | -2.5  | 11.4 | -7.8  | -9.2  | -15.7 | 23.9 | 9.1  | 4.6  | 10.4 | 5.8  | -37.6 | 18.9  | 10.2 | -5.5  | 10.5 | 9.0  | 2.8   | -3.8  | 5.7  | 5.5  | 4.0    | 1.3     |
| Real Estate             | -2.4 | 11.1 | 6.4  | 5.2   | -5.1  | 7.3  | -14.0 | -12.4 | -20.5 | 11.6 | 6.9  | 4.6  | 9.1  | 4.4  | -38.4 | 11.5  | 8.2  | -5.7  | 4.8  | 0.1  | 0.0   | -4.4  | 2.6  | 3.3  | 3.8    | 1.3     |
| US Bonds                | -2.9 | 7.5  | 6.0  | 2.1   | -6.5  | 4.8  | -22.4 | -19.5 | -21.7 | 9.0  | 6.3  | 4.2  | 4.8  | -0.2 | -38.5 | 5.9   | 6.5  | -11.7 | 4.2  | -2.0 | -1.8  | -7.5  | 1.0  | 3.1  | 2.1    | 1.1     |
| Cash                    | -3.5 | 5.7  | 5.1  | -3.4  | -25.3 | -0.8 | -22.4 | -20.4 | -27.9 | 4.1  | 4.3  | 3.2  | 4.3  | -1.6 | -43.1 | 0.2   | 5.7  | -13.3 | 0.1  | -2.3 | -4.5  | -14.9 | 0.5  | 0.6  | 0.2    | 0.4     |
| Commodities             | -7.3 | -5.2 | 3.6  | -11.6 | -27.0 | -1.5 | -30.6 | -21.2 | -30.3 | 1.0  | 1.4  | 2.4  | 2.1  | -9.8 | -53.2 | -16.9 | 0.1  | -18.2 | -1.1 | -9.5 | -17.0 | -24.7 | 0.3  | -2.9 | -10.5  | -6.8    |

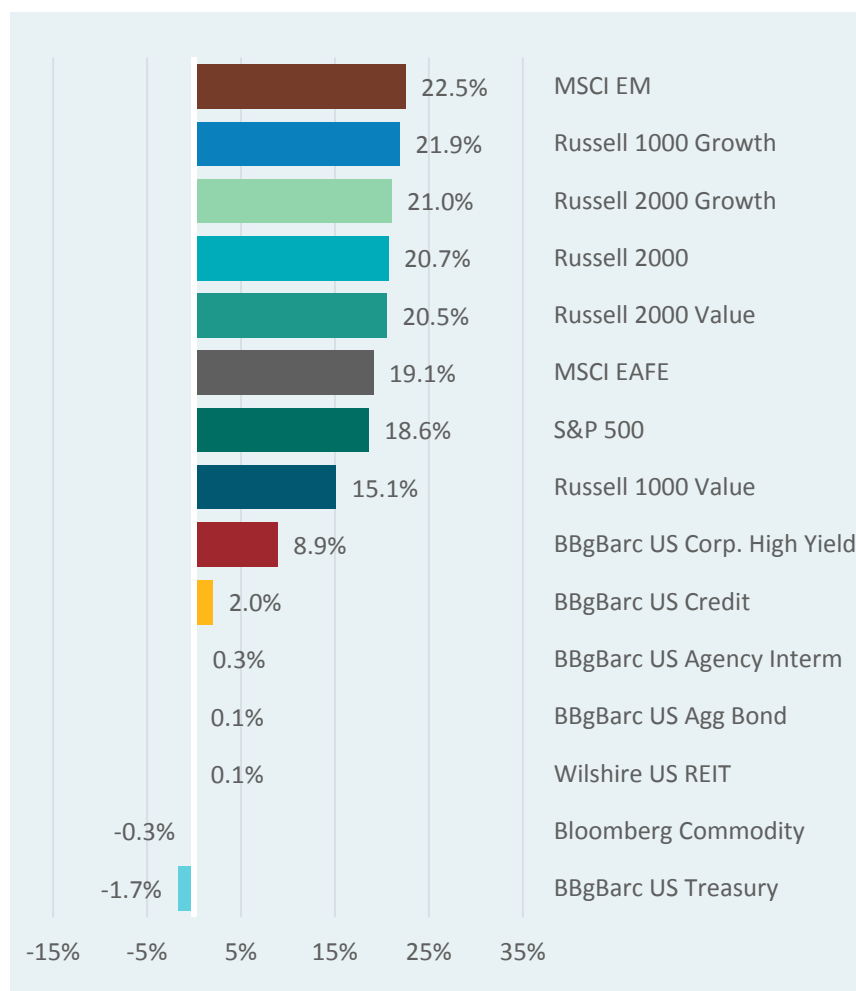
WORST

- 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% BBgBarc Global Bond
- Cash

Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 6/30/17.

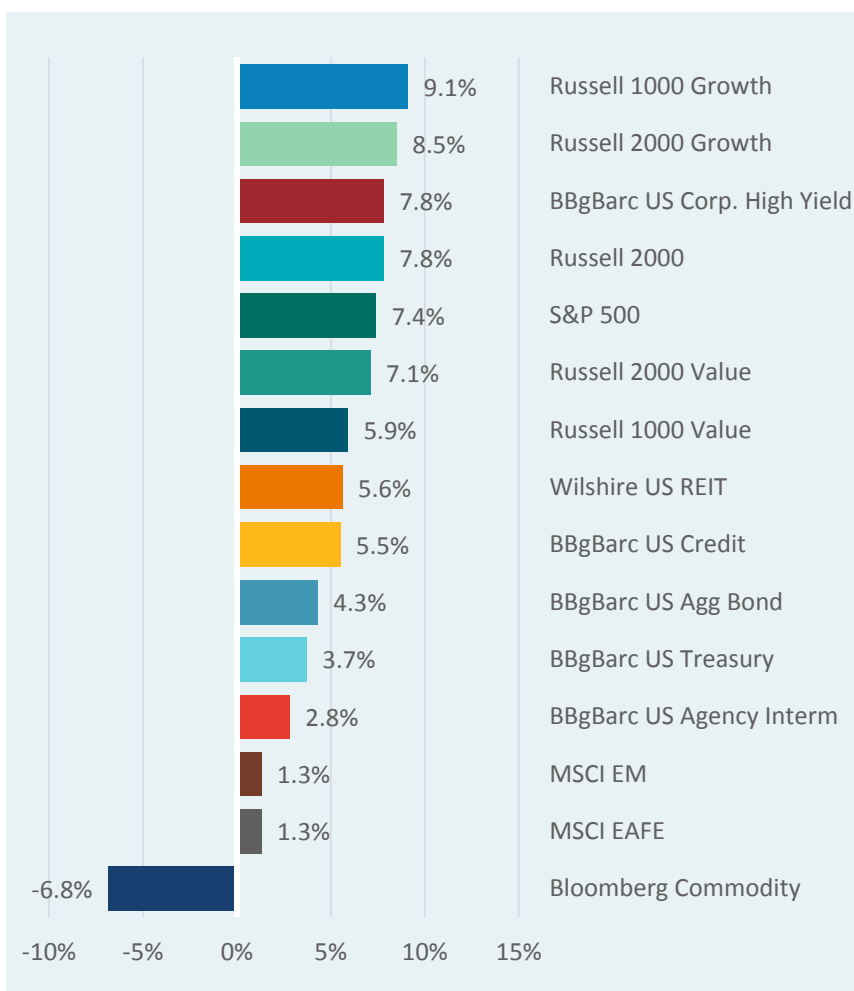
# Major asset class returns

ONE YEAR ENDING SEPTEMBER



Source: Morningstar, as of 9/30/17

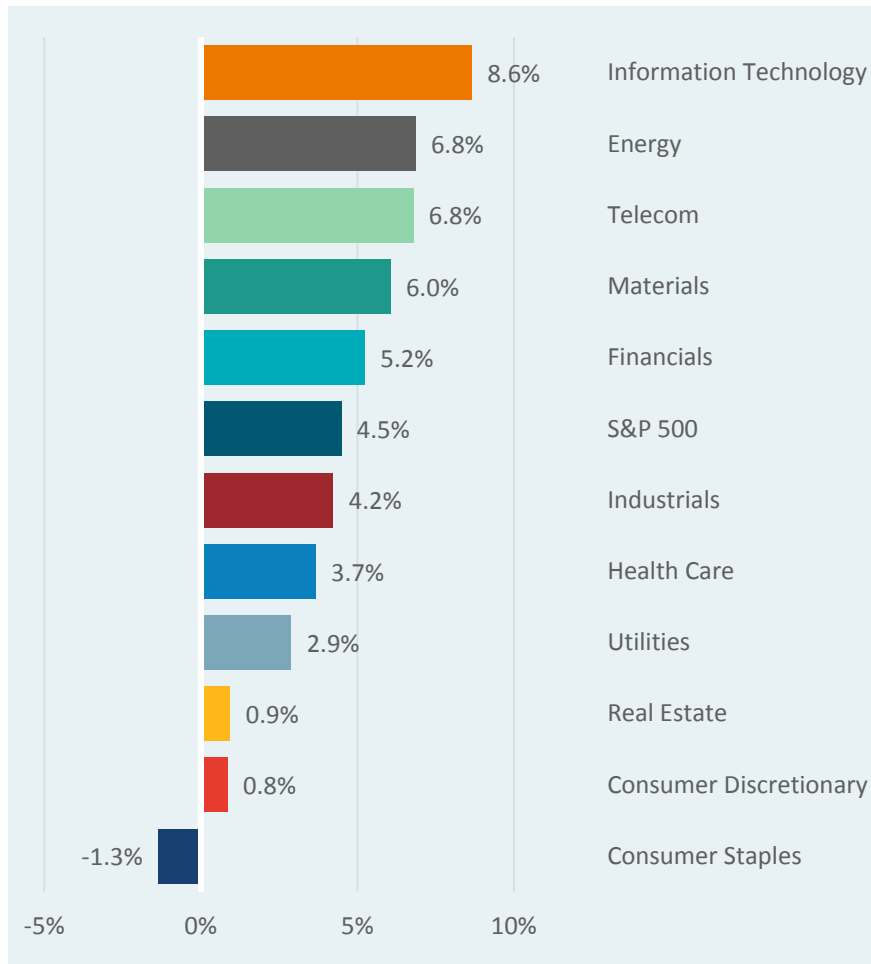
TEN YEARS ENDING SEPTEMBER



Source: Morningstar, as of 9/30/17

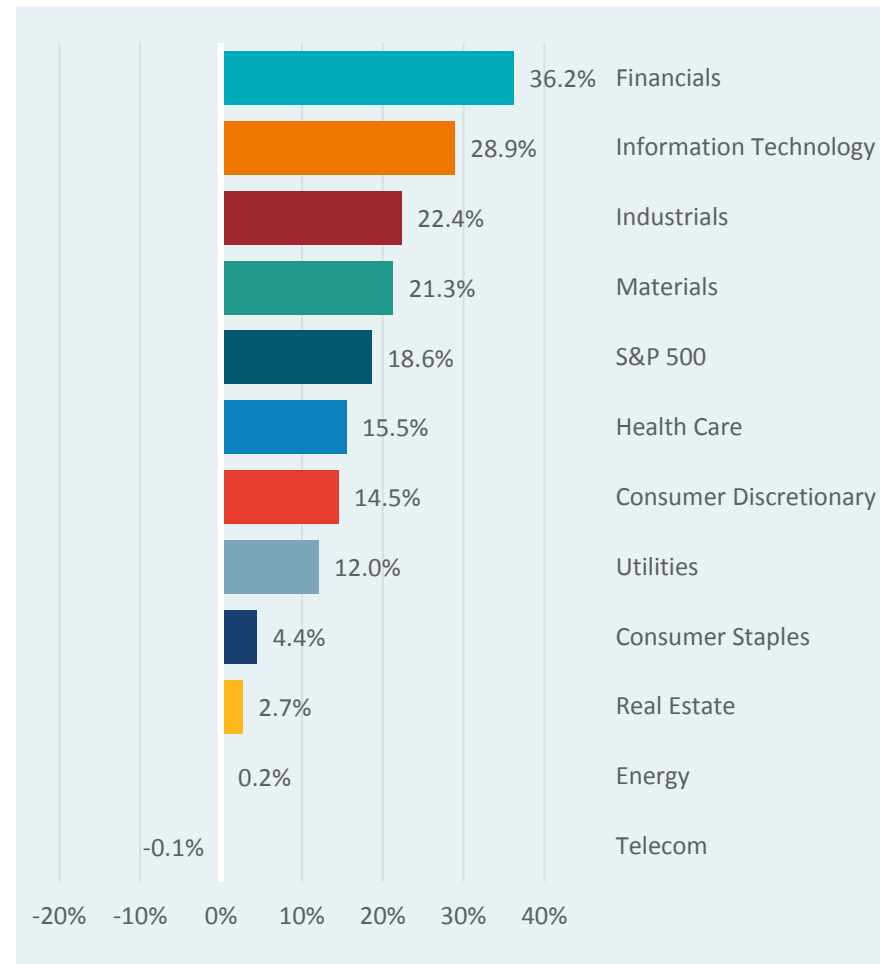
# S&P 500 sector returns

## 3<sup>RD</sup> QUARTER



Source: Morningstar, as of 9/30/17

## ONE YEAR ENDING SEPTEMBER



Source: Morningstar, as of 9/30/17

# Detailed index returns

## DOMESTIC EQUITY

|                        | Month | QTD | YTD  | 1 Year | 3 Year | 5 Year | 10 Year |
|------------------------|-------|-----|------|--------|--------|--------|---------|
| <b>Core Index</b>      |       |     |      |        |        |        |         |
| S&P 500                | 2.1   | 4.5 | 14.2 | 18.6   | 10.8   | 14.2   | 7.4     |
| S&P 500 Equal Weighted | 2.9   | 3.6 | 11.9 | 16.2   | 10.1   | 15.0   | 8.9     |
| DJ Industrial Average  | 2.2   | 5.6 | 15.5 | 25.5   | 12.3   | 13.6   | 7.7     |
| Russell Top 200        | 1.9   | 4.9 | 15.1 | 19.8   | 11.1   | 14.3   | 7.3     |
| Russell 1000           | 2.1   | 4.5 | 14.2 | 18.5   | 10.6   | 14.3   | 7.5     |
| Russell 2000           | 6.2   | 5.7 | 10.9 | 20.7   | 12.2   | 13.8   | 7.8     |
| Russell 3000           | 2.4   | 4.6 | 13.9 | 18.7   | 10.7   | 14.2   | 7.6     |
| Russell Mid Cap        | 2.8   | 3.5 | 11.7 | 15.3   | 9.5    | 14.3   | 8.1     |
| <b>Style Index</b>     |       |     |      |        |        |        |         |
| Russell 1000 Growth    | 1.3   | 5.9 | 20.7 | 21.9   | 12.7   | 15.3   | 9.1     |
| Russell 1000 Value     | 3.0   | 3.1 | 7.9  | 15.1   | 8.5    | 13.2   | 5.9     |
| Russell 2000 Growth    | 5.4   | 6.2 | 16.8 | 21.0   | 12.2   | 14.3   | 8.5     |
| Russell 2000 Value     | 7.1   | 5.1 | 5.7  | 20.5   | 12.1   | 13.3   | 7.1     |

## INTERNATIONAL EQUITY

|                        | Month | QTD  | YTD  | 1 Year | 3 Year | 5 Year | 10 Year |
|------------------------|-------|------|------|--------|--------|--------|---------|
| <b>Broad Index</b>     |       |      |      |        |        |        |         |
| MSCI ACWI              | 1.9   | 5.2  | 17.3 | 18.6   | 7.4    | 10.2   | 3.9     |
| MSCI ACWI ex US        | 1.9   | 6.2  | 21.1 | 19.6   | 4.7    | 7.0    | 1.3     |
| MSCI EAFE              | 2.5   | 5.4  | 20.0 | 19.1   | 5.0    | 8.4    | 1.3     |
| MSCI EM                | (0.4) | 7.9  | 27.8 | 22.5   | 4.9    | 4.0    | 1.3     |
| MSCI EAFE Small Cap    | 2.9   | 7.5  | 25.4 | 21.8   | 11.1   | 12.8   | 4.6     |
| <b>Style Index</b>     |       |      |      |        |        |        |         |
| MSCI EAFE Growth       | 1.9   | 4.9  | 22.4 | 15.7   | 6.5    | 8.9    | 2.1     |
| MSCI EAFE Value        | 3.1   | 5.9  | 17.6 | 22.5   | 3.5    | 7.8    | 0.5     |
| <b>Regional Index</b>  |       |      |      |        |        |        |         |
| MSCI UK                | 3.3   | 5.2  | 15.7 | 14.6   | 0.8    | 4.9    | 0.7     |
| MSCI Japan             | 2.0   | 4.0  | 14.3 | 14.1   | 7.7    | 10.6   | 1.7     |
| MSCI Euro              | 3.9   | 8.0  | 25.9 | 28.4   | 5.6    | 9.9    | (0.0)   |
| MSCI EM Asia           | (0.0) | 7.0  | 31.8 | 23.8   | 8.0    | 7.4    | 2.7     |
| MSCI EM Latin American | 1.6   | 15.1 | 26.7 | 25.6   | (0.3)  | (1.9)  | (0.8)   |

Source: Morningstar, as of 9/30/17

## FIXED INCOME

|                             | Month | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year |
|-----------------------------|-------|-----|-----|--------|--------|--------|---------|
| <b>Broad Index</b>          |       |     |     |        |        |        |         |
| BBgBarc US Treasury US TIPS | (0.6) | 0.9 | 1.7 | (0.7)  | 1.6    | 0.0    | 3.9     |
| BBgBarc US Treasury Bills   | 0.1   | 0.3 | 0.6 | 0.6    | 0.3    | 0.2    | 0.5     |
| BBgBarc US Agg Bond         | (0.5) | 0.8 | 3.1 | 0.1    | 2.7    | 2.1    | 4.3     |
| <b>Duration</b>             |       |     |     |        |        |        |         |
| BBgBarc US Treasury 1-3 Yr  | (0.2) | 0.2 | 0.7 | 0.2    | 0.8    | 0.6    | 1.7     |
| BBgBarc US Treasury Long    | (2.2) | 0.6 | 6.0 | (6.4)  | 4.9    | 2.8    | 6.9     |
| BBgBarc US Treasury         | (0.9) | 0.4 | 2.3 | (1.7)  | 2.0    | 1.2    | 3.7     |
| <b>Issuer</b>               |       |     |     |        |        |        |         |
| BBgBarc US MBS              | (0.2) | 1.0 | 2.3 | 0.3    | 2.4    | 2.0    | 4.1     |
| BBgBarc US Corp. High Yield | 0.9   | 2.0 | 7.0 | 8.9    | 5.8    | 6.4    | 7.8     |
| BBgBarc US Agency Interm    | (0.3) | 0.3 | 1.4 | 0.3    | 1.5    | 1.1    | 2.8     |
| BBgBarc US Credit           | (0.2) | 1.3 | 5.1 | 2.0    | 3.9    | 3.2    | 5.5     |

## OTHER

|                        | Month | QTD   | YTD   | 1 Year | 3 Year | 5 Year | 10 Year |
|------------------------|-------|-------|-------|--------|--------|--------|---------|
| <b>Index</b>           |       |       |       |        |        |        |         |
| Bloomberg Commodity    | (0.1) | 2.5   | (2.9) | (0.3)  | (10.4) | (10.5) | (6.8)   |
| Wilshire US REIT       | (0.1) | 0.6   | 2.4   | 0.1    | 9.7    | 9.5    | 5.6     |
| CS Leveraged Loans     | 0.4   | 1.1   | 3.0   | 5.4    | 4.0    | 4.4    | 4.4     |
| <b>Regional Index</b>  |       |       |       |        |        |        |         |
| JPM EMBI Global Div    | 0.0   | 2.6   | 9.0   | 4.6    | 6.5    | 4.9    | 7.5     |
| JPM GBI-EM Global Div  | (0.3) | 3.6   | 14.3  | 7.3    | 0.3    | (0.9)  | 3.8     |
| <b>Hedge Funds</b>     |       |       |       |        |        |        |         |
| HFRI Composite         | 0.5   | 2.1   | 5.7   | 6.9    | 3.3    | 4.7    | 3.1     |
| HFRI FOF Composite     | 0.4   | 2.2   | 5.5   | 6.4    | 2.2    | 3.8    | 1.1     |
| <b>Currency (Spot)</b> |       |       |       |        |        |        |         |
| Euro                   | (0.6) | 3.7   | 12.1  | 5.2    | (2.2)  | (1.7)  | (1.8)   |
| Pound                  | 4.1   | 3.3   | 8.6   | 3.3    | (6.1)  | (3.6)  | (4.1)   |
| Yen                    | (2.2) | (0.2) | 3.6   | (10.0) | (0.9)  | (7.1)  | 0.2     |

# Definitions

**Bloomberg US Weekly Consumer Comfort Index** - tracks the public's economic attitudes each week, providing a high-frequency read on consumer sentiment. The index, based on cell and landline telephone interviews with a random, representative national sample of U.S. adults, tracks Americans' ratings of the national economy, their personal finances and the buying climate on a weekly basis, with views of the economy's direction measured separately each month. ([www.lanqerresearch.com](http://www.lanqerresearch.com))

**University of Michigan Consumer Sentiment Index** - A survey of consumer attitudes concerning both the present situation as well as expectations regarding economic conditions conducted by the University of Michigan. For the preliminary release approximately three hundred consumers are surveyed while five hundred are interviewed for the final figure. The level of consumer sentiment is related to the strength of consumer spending. ([www.Bloomberg.com](http://www.Bloomberg.com))

**Citi Economic Surprise Index** - objective and quantitative measures of economic news. Defined as weighted historical standard deviations of data surprises (actual releases vs Bloomberg survey median). A positive reading of the Economic Surprise Index suggests that economic releases have on balance been beating consensus. The indices are calculated daily in a rolling three-month window. The weights of economic indicators are derived from relative high-frequency spot FX impacts of 1 standard deviation data surprises. The indices also employ a time decay function to replicate the limited memory of markets. ([www.Bloomberg.com](http://www.Bloomberg.com))

**NFIB Small Business Outlook** - Small Business Economic Trends (SBET) is a monthly assessment of the U.S. small-business economy and its near-term prospects. Its data are collected through mail surveys to random samples of the National Federal of Independent Business (NFIB) membership. The survey contains three broad question types: recent performance, near-term forecasts, and demographics. The topics addressed include: outlook, sales, earnings, employment, employee compensation, investment, inventories, credit conditions, and single most important problem. (<http://www.nfib-sbet.org/about/>)

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# Glossary

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**Allocation Effect:** An attribution effect that describes the amount attributable to the managers' asset allocation decisions, relative to the benchmark.

**Alpha:** The excess return of a portfolio after adjusting for market risk. This excess return is attributable to the selection skill of the portfolio manager. Alpha is calculated as: Portfolio Return - [Risk-free Rate + Portfolio Beta x (Market Return - Risk-free Rate)].

**Benchmark R-squared:** Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R-squared, the more appropriate the benchmark is for the manager.

**Beta:** A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

**Book-to-Market:** The ratio of book value per share to market price per share. Growth managers typically have low book-to-market ratios while value managers typically have high book-to-market ratios.

**Capture Ratio:** A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

**Correlation:** A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help maximize the benefits of diversification when constructing an investment portfolio.

**Excess Return:** A measure of the difference in appreciation or depreciation in the price of an investment compared to its benchmark, over a given time period. This is usually expressed as a percentage and may be annualized over a number of years or represent a single period.

**Information Ratio:** A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: excess return divided by tracking error.

**Interaction Effect:** An attribution effect that describes the portion of active management that is contributable to the cross interaction between the allocation and selection effect. This can also be explained as an effect that cannot be easily traced to a source.

**Portfolio Turnover:** The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

**Price-to-Earnings Ratio (P/E):** Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price-to-earnings ratios whereas value managers hold stocks with low price-to-earnings ratios.

**R-Squared:** Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another, i.e., the goodness of fit to a benchmark. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

**Selection Effect:** An attribution effect that describes the amount attributable to the managers' stock selection decisions, relative to the benchmark.

**Sharpe Ratio:** A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as: Portfolio Excess Return / Portfolio Standard Deviation.

**Sortino Ratio:** Measures the risk-adjusted return of an investment, portfolio, or strategy. It is a modification of the Sharpe Ratio, but penalizes only those returns falling below a specified benchmark. The Sortino Ratio uses downside deviation in the denominator rather than standard deviation, like the Sharpe Ratio.

**Standard Deviation:** A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

**Style Analysis:** A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds

**Style Map:** A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two-dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from -1 to 1 on each axis and are dependent on the Style Indices comprising the Map.

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



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

December 5, 2017

Agenda Item 6.3

**TO:** Board of Retirement

**FROM:** Lilibeth Dames, Investment Analyst *Lili Dames*

**SUBJECT:** Report on Absolute Return and Risk Parity Manager Annual Reviews

**Staff Recommendation**

Accept and review the report on the annual review of SamCERA's Absolute Return and Risk Parity managers.

**Background**

On October 12<sup>th</sup>, SamCERA staff and consultant held an annual review meeting in SamCERA's office for our absolute return manager (AQR) and risk parity managers (AQR and PanAgora). The review for SamCERA's other absolute return manager, Aberdeen Standard, was held earlier in October and subsequently reviewed at the October board meeting.

The 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**

On October 12<sup>th</sup>, AQR's Global Risk Premium fund, which is a strategy that balances risk among four main asset classes, was reviewed first. AQR's Delta Fund, a multi-strategy return fund that seeks to provide systematic exposure to a diversified set of hedge fund premia, was also reviewed. Lastly, SamCERA reviewed PanAgora's Diversified Risk Multi Asset fund, a complementary strategy to AQR's risk parity fund. PanAgora employs a strategic risk allocation between equities, nominal fixed income and inflation-protection.

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

**Attachments**

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

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

December 5, 2017

Agenda Item 6.4

**TO:** Board of Retirement

**FROM:** Lilibeth Dames, Investment Analyst *Lili Dames*

**SUBJECT:** Report on Opportunistic Credit Manager Annual Review

**Staff Recommendation**

Review the report on the annual review of SamCERA's Opportunistic Credit manager, Brigade Capital Management.

**Background**

The annual manager review for Brigade Capital Management occurred on October 18, 2017. The annual reviews for SamCERA's other opportunistic credit managers were held in September and discussed at the September board meeting. The meeting lasted approximately 1.5 hours and consisted of a firm/organizational update, an investment process review, and a review of performance and attribution. Their current positioning and market outlook were also discussed.

**Discussion**

Brigade Capital Management's Opportunistic Credit product 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.

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

**Attachment**

Brigade Capital Management Opportunistic Credit Annual Review Meeting Note (*Confidential*)

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

December 5, 2017

Agenda Item 7.1

**TO:** Board of Retirement

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



**SUBJECT:** Annual Review of Independent Auditor, Brown Armstrong

**Staff Recommendation**

Accept the annual performance report of Brown Armstrong Accountancy Corporation.

**Background**

Each year an evaluation is conducted of SamCERA's independent auditor. The evaluation consists of three parts: (1) A survey completed by trustees, staff and the auditor; (2) the auditor's responses to approved questions; and (3) a discussion at the Board meeting to present the results of the responses.

**Discussion**

This year's annual survey was completed by six Board members and five staff members. Once again, Brown Armstrong received above average ratings overall from both the Board and staff for the services they provided to SamCERA.

Andrew Paulden will highlight areas in Brown Armstrong's attached survey responses and will be available to respond to any questions or comments regarding his firm's audit services.

**Attachments**

Brown Armstrong Questionnaire Response  
Peer Review 2016

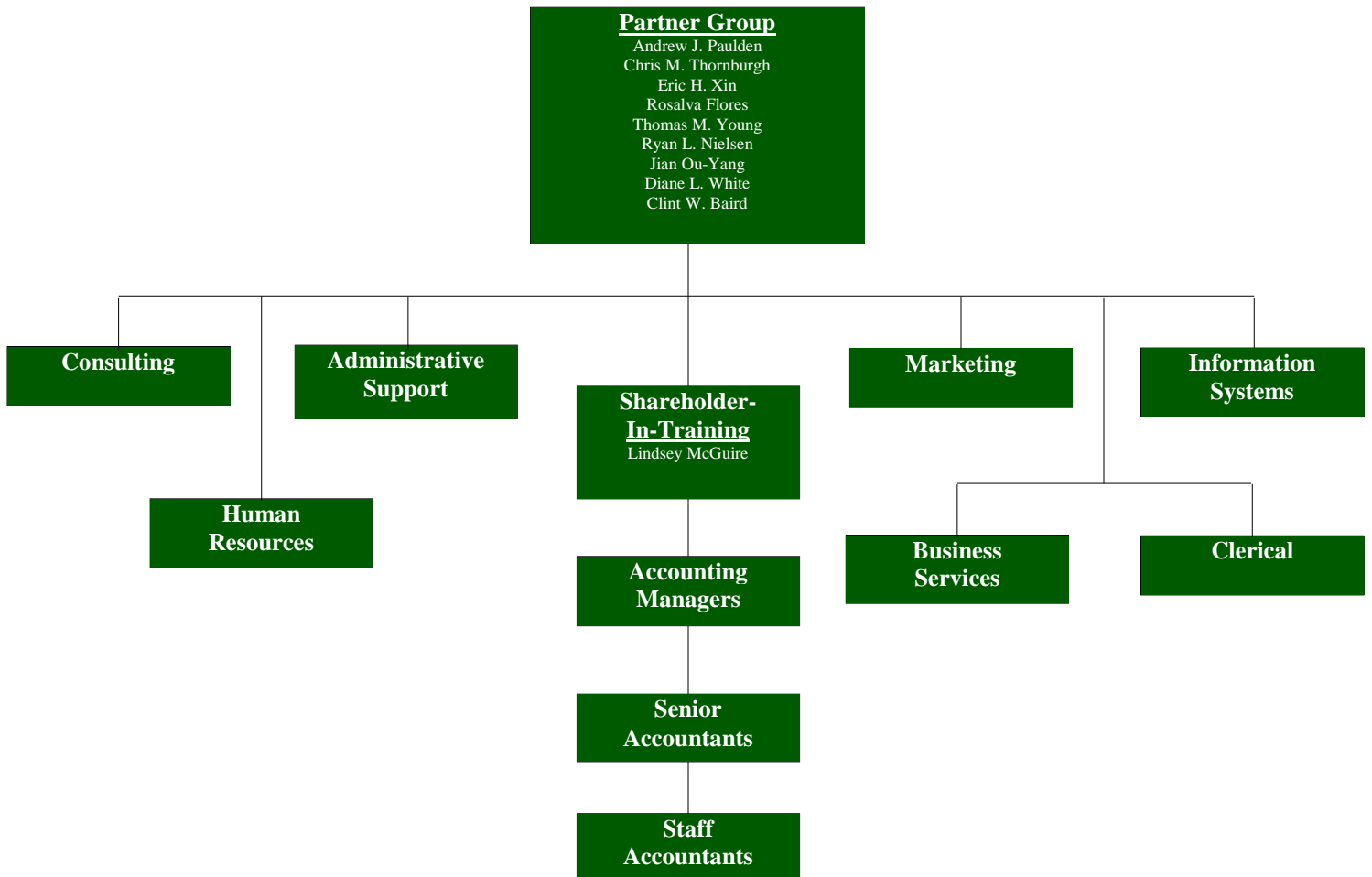
SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
**Board of Retirement**

**Questions for Annual Auditor Consultant Evaluation  
Calendar Year 2017**

**Organizational Update**

- 1) Provide an update on your firm's organization, with particular emphasis on changes to your management structure over the past twelve months. All significant changes should be accompanied by an explanation. An updated organizational chart should accompany this response.

[See organizational chart below.](#) During the year one shareholder-in-training was added to the Partner group as of January 2017 and Diana H. Branthoover departed choosing to peruse other opportunities.



- 2) Update all significant personnel changes or expected changes to the "SamCERA Team."

[No significant personnel changes to the SamCERA team this year nor any expected for next year.](#)

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

- 3) Has your firm or any of its employees been involved in regulatory or litigation actions related to your business in the past twelve months?

No. As mentioned in the prior year one claim was made against our firm by a City client due to an embezzlement scheme. Recently we have reached a settlement in which the parties agreed to end the claim without admitting fault.

- 4) Has a peer review been performed on any of your firm's audit products? If yes, discuss the review and the findings. Any material findings or recommendations must be accompanied by an explanation.

Previously provided to SamCERA Management was Brown Armstrong Accountancy Corporation's most recent external quality control review (peer review.) Please see attached peer review report. No material findings or recommendations.

- 5) Are any of your operations outsourced? If the answer is yes, provide details regarding the firm(s) with which your firm has contracted.

The only outsourcing we do is for Information Technology consultant. They will be utilized if your company falls under high risk for significant changes during the year.

- 6) Please describe how your firm monitors and manages cyber security risks as they relate to confidential SamCERA data/information.

Our policy is that all confidential information is exchanged via secured, encrypted communications (see <https://support.citrix.com/article/CTX208317> for more details on our file transfer service). Internally our client data is stored on servers in a locked server room with a discrete alarm system. Servers are kept updated and patched against security vulnerabilities and reside behind a network firewall with an Intrusion Protection System. Data on employee computers is protected by a full disk encryption system that will lock attackers out after a few incorrect password guesses (see <https://www.checkpoint.com/products/full-disk-encryption/> for more information about our endpoint encryption product). Employee passwords must comply with industry standard complexity requirements and change quarterly. Additionally, we do biennial security training for all employees to keep them up to date on the most recent attack vectors and exploits.

Has your firm experienced any problems with cyber security in the past 18 months? No

What is your cyber security breach policy? Currently we are in the process of establishing a cyber security breach policy.

What procedures do you have in place for a cyber security breach?

We will be following this outline of procedures:

- Make an initial assessment.
- Communicate the incident.

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

- Contain the damage and minimize the risk.
- Identify the type and severity of the compromise.
- Protect evidence.
- Notify external agencies, if appropriate.
- Recover systems.
- Compile and organize incident documentation.
- Assess incident damage and cost.
- Review the response and update policies.

**Client Update**

- 7) What is your firm's philosophy and current policy regarding new business?  
We engage only new clients that have the highest ethical standards, and only after we are certain we can provide high quality, timely service.
- 8) Please list all clients gained or lost in the past eighteen months.  
Over the past eighteen months, we have gained a total of 697 clients and lost 246.

**Outlook**

- 9) What issues are other clients concerned with in regards to products, services, education and governance that your staff has not addressed with SamCERA?  
Our other clients are concerned with obtaining training and implementation guidance relating to both new and proposed accounting/pension standards. See our recommendation at #13 in attending our future continuing education.
- 10) Are your clients making significant changes that SamCERA should be made aware?  
None noted.
- 11) Relative to your expertise, what trends are occurring in the retirement industry that SamCERA should be tracking?  
None noted.

**Conclusion**

- 12) How can SamCERA better assist you in accomplishing the goals it has established for your firm?  
We have a very good relationship with SamCERA and continued feedback will be helpful in accomplishing the goals established.
- 13) How can we better utilize your firm's capabilities?

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**Board of Retirement**

We provide continuing education for our clients and our staff about new Governmental Accounting Standards established. SamCERA could take advantage of the resources and training for a reduced cost of attending. We have continuing education schedule for January and May 2018. We will provide more information once the agenda has been established.

- 14) Is there any information that would be timely pursuant to SamCERA's annual review?

None noted.

- 15) What audit related changes should SamCERA consider that were not mentioned in your audit or audit presentation?

None noted, GASB 75 will not be applicable to SamCERA.



## System Review Report

To the Shareholders of  
Brown Armstrong Accountancy Corporation  
and the National Peer Review Committee of the AICPA

We have reviewed the system of quality control for the accounting and auditing practice of Brown Armstrong Accountancy Corporation (the firm) applicable to engagements not subject to PCAOB permanent inspection in effect for the year ended October 31, 2015. Our peer review was conducted in accordance with the Standards for Performing and Reporting on Peer Reviews established by the Peer Review Board of the American Institute of Certified Public Accountants. As part of our peer review, we considered reviews by regulatory entities, if applicable, in determining the nature and extent of our procedures. The firm is responsible for designing a system of quality control and complying with it to provide the firm with reasonable assurance of performing and reporting in conformity with applicable professional standards in all material respects. Our responsibility is to express an opinion on the design of the system of quality control and the firm's compliance therewith based upon our review. The nature, objectives, scope, limitations of, and the procedures performed in a System Review are described in the standards at [www.aicpa.org/prsummary](http://www.aicpa.org/prsummary).

As required by the standards, engagements selected for review included engagements performed under *Government Auditing Standards* and audits of employee benefit plans.

In our opinion, the system of quality control for the accounting and auditing practice of Brown Armstrong Accountancy Corporation applicable to engagements not subject to PCAOB permanent inspection in effect for the year ended October 31, 2015, has been suitably designed and complied with to provide the firm with reasonable assurance of performing and reporting in conformity with applicable professional standards in all material respects. Firms can receive a rating of *pass*, *pass with deficiency(ies)* or *fail*. Brown Armstrong Accountancy Corporation has received a peer review rating of *pass*.

*Weaver and Tidwell, LLP*  
WEAVER AND TIDWELL, L.L.P.

Dallas, Texas  
January 29, 2016

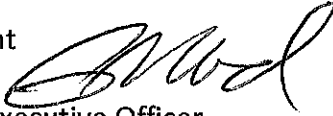


SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

December 5, 2017

Agenda Item 7.2

**TO:** Board of Retirement  
**FROM:** Scott Hood, Chief Executive Officer  
**SUBJECT:** Amendment to Education Policy



**Recommendation**

Approve a resolution amending the Education Policy to specify that within the 24 hours of Trustee training required every two years, two hours are to be Ethics Training, consistent with Government Code §53234, and two hours are to be Sexual Harassment Prevention Training, consistent with Government Code §52371.1.

**Background**

At its December 8, 2016 meeting, the Board approved the current Education Policy. The policy reflects the following core principles as stated by the Ad Hoc Education Policy Committee:

- **Fiduciary:** Education must be consistent with the Board's fiduciary responsibilities.
- **Prudent:** Exercising good judgment /decision making; understanding that the Board is entrusted with the Retirement Fund.
- **Relevant:** Education must be relevant to Trustee's responsibilities and to individual experience and background.
- **Focus:** Training/conference should focus on education not marketing.
- **Cost Effective:** The Board needs to apply the same discipline to Board travel/education as it does to all SamCERA expenses.
- **Optics/Perception:** Location and perception of luxury are important. Board member education should be obtained in a cost-efficient manner minimizing costs wherever possible, multiple education providers provide similar educational opportunities, and each Board member shall make every effort to obtain his or her education within California.

**Discussion**

The Policy authorizes each Trustee to attend all the following each fiscal year:

- Unlimited number of conferences and education programs within the Bay Area; and
- Any program sponsored by the State Association of County Retirement Systems (SACRS) and the California Association of Public Retirement Systems (CALAPRS) wherever located; and
- Up to two (2) approved out-of-Bay Area educational events requiring overnight stays.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

The two approved out of Bay Area educational events requiring overnight stays can be from the following list of providers:

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

This list is subject to annual review and revision by the Board. Requests to attend an event not on the above list can be made by a Trustee for Board approval. During 2017, attendance for one unlisted event was requested and it was granted by the Board.

In accordance with Government Code §31522.8, the Policy sets forth the approved educational topics and requires each Board member to receive 24 hours of training every two years. Staff recommends that the Policy be amended to specify that included within that 24 hours of training, two hours are to be Ethics Training, consistent with Government Code §53234, and two hours are to be Sexual Harassment Prevention Training, consistent with Government Code §52371.1. The proposed amended language would read:

“A. **Educational Topic Areas.** Appropriate topics for Board member education, shall include two hours of Ethics Training consistent with Government Code §53234 and two hours of Sexual Harassment Prevention Training consistent with Government Code §52371.1 in a manner approved by the Chief Legal Counsel and, in accordance with Government Code §31522.8, may include but is not limited to, the following topics: ...”

**Attachment**  
Resolution Amending Education Policy

**BOARD EDUCATION POLICY**

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

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

**SECTION 2 COST EFFECTIVE EDUCATION**

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

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

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

**A. Educational Topic Areas.** Appropriate topics for Board member education, shall include two hours of Ethics Training consistent with Government Code §53234 and two hours of Sexual Harassment Prevention Training consistent with Government Code §52371.1 in a manner approved by the Chief Legal Counsel and, in accordance with Government Code §31522.8, may include but is not limited to, the following topics:

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

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

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

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

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

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

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

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

RESOLUTION 2017-17

**RESOLUTION AMENDING EDUCATION POLICY**

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

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

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

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

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

**WHEREAS**, in accordance with Government Code §31522.8 which requires each Board member to receive 24 hours of training every two years, the Board desires that Education Policy be amended to specify that included within that 24 hours of training, two hours are to be Ethics Training, consistent with Government Code §53234, and two hours are to be Sexual Harassment Prevention Training, consistent with Government Code §52371.1; and

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

**NOW, THEREFORE, BE IT RESOLVED**, that the Board of Retirement hereby approves the attached amended Education Policy to be effective January 1, 2018 and that Board members receive the first two hours of Sexual Harassment Prevention Training no later than June 30, 2018.

\* \* \* \* \*

Regularly passed and adopted, by the San Mateo County Employees' Retirement Association, Board of Retirement, on December 5, 2017.

Ayes, Trustees:

Noes, Trustees:

Absent, Trustees:

Abstain, Trustees:


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David Spinello, Secretary, Board of Retirement

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

December 5, 2017

Agenda Item 7.3

**TO:** Board of Retirement  
**FROM:** Scott Hood, Chief Executive Officer   
**SUBJECT:** 2018-19 Board-Staff Retreat Topics

**Staff Recommendation**

Provide direction for staff regarding the topics and schedule for the April 24 and 25, 2018, Board-Staff Retreat.

**Background**

The annual Board retreat is scheduled for April 24 and 25, 2018. The Board assists in setting the topics to be addressed at the retreat and provides input regarding the proposed presenters. This agenda item gives the Board its first opportunity to discuss retreat topics. We will bring this back to Board again prior to finalizing the agenda.

**Discussion**

Attached is an initial list of potential topics. Staff believes this is a well-balanced list of topics that fits in with the amount of time planned for the retreat. Staff will also have a "team building" exercise for the Board. If you have additional topics or activities to suggest, please mention them during this agenda item.

The 2018 SamCERA Board-Staff Retreat is scheduled along the same lines as past retreats:

Days: 1 ½ to 2 consecutive days  
Timing: Leaves time in between speakers for discussion  
Location: In the SamCERA Boardroom  
Speakers: Draw speakers from outside professionals, as well as SamCERA's consultants and staff  
Regular Business: Conduct the Board's regular monthly business during the afternoon on Tuesday of the retreat  
Dates: **Tuesday, April 24, and Wednesday, April 25, 2018**

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

Proposed 2018 retreat topics:

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| <b>Actuarial Topics:</b> Led by Nick Collier, Milliman.  |
| <b>Deep Dive:</b><br>Led by Mike Coultrip. Assess longer-term manager performance and other characteristics vs indexes and peer groups.      |
| <b>Portfolio Risk:</b> Led by Verus  |
| <b>Global Economist:</b><br>Staff is identifying an economist to speak.  |
| <b>Strategic Planning:</b><br>e.g. Fund Management, Service and Support Management, Risk Management, Talent Management: - Led by facilitator |
| <b>Mandated Legal Training:</b> Led by Brenda Carlson.   |