



ND STATE INVESTMENT BOARD MEETING

Friday, February 24, 2017, 8:30 a.m.
Workforce Safety & Insurance
1600 E Century Avenue, Bismarck, ND

AGENDA

I. CALL TO ORDER AND ACCEPTANCE OF AGENDA

II. BOARD ACCEPTANCE OF MINUTES (January 27, 2017)

III. INVESTMENTS

- A. Asset and Performance Overview - Mr. Hunter (enclosed) *15 minutes*
- B. Callan Associates - Mr. Erlendson and Mr. Browning (enclosed) **Board Acceptance** *45 minutes*
 - 1. Market Update 4th Quarter 2016 (enclosed)
 - 2. Pension Trust Review Quarter Ending 12-31-16
 - 3. Insurance Trust Review Quarter Ending 12-31-16
 - 4. Legacy Trust Review Quarter Ending 12-31-16
- C. Invesco Real Estate Update - Mr. Michaels and Mr. Swango (enclosed) *25 minutes*

===== Break from 10:00 to 10:15 a.m. =====

- D. Callan Private Credit - Mr. Browning and Mr. Erlendson (enclosed) *25 minutes*
- E. Callan Fee Study - Mr. Hunter, Mr. Erlendson and Mr. Browning (enclosed) **Board Acceptance** *15 minutes*
- F. Workforce Safety & Insurance: Investment Policy - Mr. Hunter (enclosed) **Board Acceptance** *5 minutes*

IV. ADMINISTRATION (*45 minutes*)

- A. SIB Audit Committee - Ms. Miller Bowley **Board Acceptance**
 - 1. February 23, 2017, Meeting Report
 - 2. Executive Limitations Audit
- B. Appointment of Executive Review Committee - Lt. Governor Sanford (enclosed)
- C. Legislative Update - Mr. Hunter (enclosed)
- D. Callan College Onsite - Mr. Hunter (moved from March 24th to July 28th)

V. OTHER

Next Meetings: SIB meeting - March 24, 2017, 8:30 a.m. - Workforce Safety & Insurance
SIB Audit Committee meeting - May 25, 2017, 3:00 p.m. - Peace Garden Room, State Capitol

VI. ADJOURNMENT

**NORTH DAKOTA STATE INVESTMENT BOARD
MINUTES OF THE
JANUARY 27, 2017, BOARD MEETING**

MEMBERS PRESENT: Mike Sandal, Vice Chair
Lance Gaebe, Commissioner of Trust Lands (TLCF)
Mike Gessner, TFFR Board
Jon Godfread, Insurance Commissioner
Rob Lech, TFFR Board
Mel Olson, TFFR Board
Brent Sanford, Lt. Governor
Kelly Schmidt, State Treasurer
Troy Seibel, PERS Board
Yvonne Smith, PERS Board
Cindy Ternes, WSI Designee

STAFF PRESENT: Eric Chin, Investment Analyst
Connie Flanagan, Fiscal & Invt Ops Mgr
Bonnie Heit, Assist to the SIB
David Hunter, ED/CIO
Fay Kopp, Dep. ED/CRO
Terra Miller Bowley, Supvr Audit Services
Cody Schmidt, Compliance Officer
Darren Schulz, Dep CIO
Susan Walcker, Invt Acct

OTHERS PRESENT: Victoria Aparece, Ares
Jeff Engleson, Dept. of Trust Lands
Levi Erdmann, Dept. of Trust Lands
Mitch Goldstein, Ares
Jana Markowicz, Ares
Jan Murtha, Attorney General's Office

CALL TO ORDER:

Mr. Mike Sandal, Vice Chairman, called the State Investment Board (SIB) meeting to order at 8:30 a.m. on Friday, January 27, 2017, at Workforce Safety & Insurance, 1600 E Century Ave, Bismarck, ND.

AGENDA:

IT WAS MOVED BY MS. TERNES AND SECONDED BY MS. SMITH AND CARRIED ON A VOICE VOTE TO ACCEPT THE AGENDA FOR THE JANUARY 27, 2017, MEETING AS DISTRIBUTED.

AYES: MS. TERNES, MR. OLSON, COMMISSIONER GODFREAD, COMMISSIONER GAEBE, MR. SEIBEL, MR. LECH, MR. SANDAL, MS. SMITH, AND MR. GESSNER

NAYS: NONE

MOTION CARRIED

ABSENT: TREASURER SCHMIDT, LT. GOVERNOR SANFORD

MINUTES:

IT WAS MOVED BY MR. GESSNER AND SECONDED BY MR. OLSON AND CARRIED ON A VOICE VOTE TO ACCEPT THE NOVEMBER 18, 2016, MINUTES AS DISTRIBUTED.

AYES: MS. TERNES, COMMISSIONER GODFREAD, MR. OLSON, MR. SANDAL, MR. GESSNER, MS. SMITH, COMMISSIONER GAEBE, MR. LECH, AND MR. SEIBEL

NAYS: NONE

MOTION CARRIED

ABSENT: TREASURER SCHMIDT, LT. GOVERNOR SANFORD

Mr. Hunter introduced Lt. Governor Brent Sanford, Commissioner of Insurance Jon Godfread, and Mr. Troy Seibel, Attorney General Appointee representing the PERS Board.

INVESTMENTS:

Asset and Performance Review - Mr. Hunter highlighted the SIB clients' assets under management as of September 30, 2016, for the benefit of the new board members. The information was previously shared at the November 18, 2016, SIB meeting.

ELECTION OF CHAIR:

With the vacancy of Lt. Governor Wrigley as Chair, the SIB is required to fill the position at the first scheduled meeting following the vacancy. The officers of the SIB are a Chair and Vice Chair, one of which must be an appointed or elected member of the Teachers' Fund for Retirement (TFFR) or Public Employees Retirement System (PERS). The officers will be elected to a one-year term.

Mr. Gessner stated that whoever is Chair needs to attend the SIB meetings as much as possible. Mr. Gessner also stated the elected officials do not always attend the meetings and it is important that the elected officials come to every meeting. The Lt. Governor is the most visible person that the SIB has which can represent TFFR, PERS, and the Legacy Fund for the citizens of North Dakota.

IT WAS MOVED BY MR. GESSNER AND SECONDED BY MR. LECH TO NOMINATE LT. GOVERNOR SANFORD AS CHAIR OF THE STATE INVESTMENT BOARD FOR THE PERIOD OF JANUARY 27, 2017 - JUNE 30, 2017.

Vice Chair Sandal asked for any other nominations, hearing none a roll call vote was taken.

AYES: MR. LECH, MR. OLSON, COMMISSIONER GAEBE, MR. SEIBEL, MR. SANDAL, COMMISSIONER GODFREAD, MR. GESSNER, MS. SMITH, MS. TERNES, AND LT. GOVERNOR SANFORD

NAYS: NONE

MOTION CARRIED

ABSENT: TREASURER SCHMIDT

Lt. Governor Sanford reappointed Mr. Lech as Parliamentarian for the period of January 27, 2017 - June 30, 2017.

Improving Risk Adjusted Returns - Mr. Hunter stated RIO personnel has conducted due diligence on over a dozen investment firms which specialize in providing senior, secured loans directly to middle market companies - a lending market which has become increasingly underserved following the 2008 recession largely due to government regulation. RIO personnel are recommending the SIB international fixed income mandates be replaced with US centric debt mandates. RIO personnel is also recommending that the SIB's US centric debt mandates be tilted towards floating rate exposure noting the direct lending sector is predominately floating rate.

Fixed Income Restructuring Memo - Mr. Schulz reviewed the new fixed income manager framework which RIO personnel is proposing for the Pension Trust that is designed to generate higher risk-adjusted returns and greater diversification. The proposed structure explicitly segments the fixed income allocation according to the roles served within the portfolio by maintaining a principal allocation to US investment grade core fixed income and expanding the non-investment grade asset class to include other high yield/loan alternatives.

Fixed Income Manager Interview - Representatives from ARES Management, LP reviewed their direct lending product.

The Board recessed at 10:23 am and reconvened at 10:37 a.m.

Fixed Income Manager Recommendation - The SIB discussed moving into Executive Session to discuss confidential commercial and financial information and contract negotiations regarding the fixed income manager recommendation by RIO personnel.

IT WAS MOVED BY MR. SANDAL AND SECONDED BY MR. LECH AND CARRIED BY A ROLL CALL VOTE TO MOVE INTO EXECUTIVE SESSION PURSUANT TO NDCC §44-04-18.4(1), §44-04-19.1(9), & §44-04-19.2 TO DISCUSS CONFIDENTIAL COMMERCIAL AND FINANCIAL INFORMATION AND PROVIDE CONTRACT NEGOTIATING INSTRUCTIONS TO ITS ATTORNEY.

AYES: COMMISSIONER GODFREAD, COMMISSIONER GAEBE, MR. GESSNER, MS. SMITH, MR. SEIBEL, MR. SANDAL, MR. LECH, MR. OLSON, AND LT. GOVERNOR SANFORD

NAYS: NONE

MOTION CARRIED

ABSENT: MS. TERNES, TREASURER SCHMIDT

The SIB entered into Executive Session at 10:38 a.m. The SIB (Ms. Ternes and Treasurer Schmidt were absent), RIO personnel, and Ms. Murtha were present.

Ms. Ternes entered Executive Session at 10:44 a.m. and Treasurer Schmidt at 10:50 a.m.

The SIB exited Executive Session at 11:18 a.m.

IT WAS MOVED BY MR. GESSNER AND SECONDED BY MR. SANDAL AND CARRIED BY A ROLL CALL VOTE TO ACCEPT STAFF RECOMMENDATION AND CONTRACT WITH ARES MANAGEMENT LP TO IMPLEMENT AND MANAGE A CUSTOMIZED SENIOR MIDDLE MARKET DIRECT LENDING STRATEGY TO INCLUDE AN INITIAL MINIMUM EQUITY COMMITMENT OF \$200 MILLION FUNDED WITH ASSETS FROM THE PENSION TRUST AND LEGACY FUND CONTINGENT UPON FINALIZATION OF THE CONTRACT.

AYES: MR. GESSNER, COMMISSIONER GAEBE, MS. SMITH, TREASURER SCHMIDT, MR. LECH, COMMISSIONER GODFREAD, MR. OLSON, MR. SEIBEL, MR. SANDAL, MS. TERNES, AND LT. GOVERNOR SANFORD

NAYS: NONE

MOTION CARRIED

ADMINISTRATION:

Meeting Schedule - Mr. Hunter presented the SIB regular meeting schedule for the period of July 1, 2017 - June 30, 2018 for the board's acceptance.

Treasurer Schmidt requested a December meeting be included in the SIB schedule of meetings when the Legislative Assembly will be convening in January in the event the SIB would need to address any business.

IT WAS MOVED BY TREASURER SCHMIDT AND SECONDED BY MR. LECH AND CARRIED BY A VOICE VOTE TO ACCEPT THE PROPOSED SIB MEETING SCHEDULE FOR THE 2017-18 FISCAL YEAR.

AYES: MR. OLSON, MR. GESSNER, MR. SANDAL, MS. SMITH, MR. SEIBEL, MS. TERNES, COMMISSIONER GODFREAD, COMMISSIONER GAEBE, MR. LECH, TREASURER SCHMIDT, AND LT. GOVERNOR SANFORD

NAYS: NONE

MOTION CARRIED

Investment Policy Statements - Mr. Hunter presented revised Investment Policy Statements for the State Risk Management Fund and State Risk Management Workers Compensation Fund for the board's consideration and acceptance. The policies were revised to adopt language consistent with terminology used by other SIB clients.

IT WAS MOVED BY MS. TERNES AND SECONDED BY MS. SMITH AND CARRIED BY A ROLL CALL VOTE TO ACCEPT THE REVISED INVESTMENT POLICY STATEMENTS FOR THE STATE RISK MANAGEMENT FUND AND STATE RISK MANAGEMENT WORKERS COMPENSATION FUND.

AYES: TREASURER SCHMIDT, MR. GESSNER, COMMISSIONER GODFREAD, MS. TERNES, COMMISSIONER GAEBE, MS. SMITH, MR. LECH, MR. SANDAL, MR. SEIBEL, MR. OLSON, AND LT. GOVERNOR SANFORD

NAYS: NONE

MOTION CARRIED

Executive Director/Chief Investment Officer Effectiveness Survey - Ms. Miller Bowley reviewed the results of the Executive Director/CIO Effectiveness Survey. On an annual basis, the Audit Services Division conducts an organization wide employee opinion survey in an effort to gain insight into the relationship, which exists between the Executive Director/CIO and staff. Employees are given the opportunity to evaluate the effectiveness of the Executive Director/CIO in the areas of leadership, communication, and valuing employees.

Ms. Miller Bowley stated the Executive Director/CIO received an overall approval rating of 86 percent. Leadership received a rating of 93 percent. Communication received an overall rating of 74 percent. Consistent with prior years, the Executive Director/CIO received favorable responses in the area of valuing employees. Staff overwhelmingly agrees that the Executive Director/CIO shows genuine concern for staff and treats everyone with respect. Responses were received from all 18 employees.

Legacy and Budget Stabilization Advisory Board - Included in the board member's packets was the presentation given by Mr. Hunter on December 5, 2016, to the Legacy and Budget Stabilization Fund Advisory Board. Mr. Hunter stated the presentation was well received by the Advisory Board. The presentation was for informational purposes only.

Attorney General Opinion (Legacy Fund) and Litigation Update - Ms. Murtha reviewed the Attorney General Opinion requested by the State Treasurer and issued November 23, 2016, regarding the Legacy Fund earnings. The opinion states the principal and earnings of the Legacy Fund may not be expended until after June 30, 2017, and an expenditure of principal after that date requires a vote of at least two-thirds of the members elected to each house of the legislative assembly. Not more than 15 percent of the principal of the Legacy Fund may be expended during a biennium.

The State Investment Board shall invest the principal of the Legacy Fund. The State Treasurer shall transfer earnings of the Legacy Fund accruing after June 30, 2017, to the State's general fund at the end of each biennium. The opinion also states the Legacy Fund earnings accruing from inception through June 30, 2017, become part of the principal of the Legacy Fund and may only be expended by the Legislature with a two-thirds vote subject to the principal biennial limitation set forth in the North Dakota Constitution, while earnings accruing after June 30, 2017, must be transferred by the State Treasurer to the State's general fund at the end of each biennium.

Ms. Murtha informed the board the litigation regarding the Tribune bankruptcy has been dismissed by the district court judge. Pending appeal to the second circuit, the Tribune case has now concluded in favor of the State Investment Board along with all the other defendants. Ms. Murtha briefed the board on the history of the case.

Legislative Update - Mr. Hunter reviewed legislation affecting RIO and the SIB: HB 1022 RIO Budget, HB 1082 RIO Budget, HB 1175 SIB Membership, HB 1088 Data Breach Response and Remediation Costs, HB 1154 Budget Stabilization Fund, HB 1155 Transfers and Expenditures from Budget Stabilization Fund, and HB 1317 Transfer of Legacy Fund Earnings.

Discussion on HB 1175, SIB membership, took place. HB 1175 adds two members to the SIB, one selected by the House Majority Leader and one selected by the Senate Majority Leader, thereby increasing the number of SIB members to 13.

The bill was assigned to the Political Subdivisions Committee. The hearing was scheduled for 1/19, but was postponed since the "bill carrier" was unable to attend. Mr. Hunter attended the scheduled hearing and let Committee Chairman Lawrence Klemin know that he was available to address any SIB process questions, but did not intend to provide testimony either "for" or "against" HB 1175.

As of January 27, 2017, the Committee gave the bill a "do pass" recommendation. The bill now goes to the House. RIO personnel were unaware of the hearing.

A number of board members voiced their concerns. Board members felt the bill encroaches on the Executive Branch of State Government. Treasurer Schmidt reminded the SIB that the board speaks as one and only the Chair of the SIB speaks on behalf of the board. Treasurer Schmidt also stated it is the Chair's responsibility to protect the Executive Branch of State Government.

Contingency Request - Mr. Hunter requested the SIB approve the use of \$9,000 from RIO's contingency line item to purchase a new copier for the office. RIO personnel originally requested the capital expenditure in the 2017-19 budget, but given budget pressures RIO requested the purchase in the 2015-17 biennium in order to improve office efficiency.

IT WAS MOVED BY TREASURER SCHMIDT AND SECONDED BY MR. OLSON AND CARRIED BY A ROLL CALL VOTE TO AUTHORIZE RIO PERSONNEL TO UTILIZE CONTINGENCY LINE MONIES TO FUND THE PURCHASE OF A NEW COPIER FOR THE OFFICE IN THE 2015-17 BIENNIUM.

AYES: MS. SMITH, MR. SANDAL, MR. OLSON, MR. GESSNER, MR. LECH, MR. SEIBEL, MS. TERNES, COMMISSIONER GODFREAD, COMMISSIONER GAEBE, TREASURER SCHMIDT, AND LT. GOVERNOR SANFORD.

NAYS: NONE

MOTION CARRIED

QUARTERLY MONITORING:

Per Governance Policy, Board/Staff Relationship/Monitoring Executive Performance C-4, the following monitoring reports for the quarter ending December 30, 2016, were provided to the SIB for their consideration: Budget/Financial Conditions, Executive Limitations/Staff Relations, Investment Program, and Retirement Program.

An updated Watch List for the same period was also included. There are four firms currently on the Watch List - PIMCO (MBS & Unconstrained mandates), JP Morgan (MBS Strategy mandate) UBS (International Fixed Income mandate), and Adams Street Partners.

IT WAS MOVED BY MR. SANDAL AND SECONDED BY MS. SMITH AND CARRIED BY A VOICE VOTE TO ACCEPT THE MONITORING REPORTS FOR THE QUARTER ENDING DECEMBER 31, 2016.

AYES: TREASURER SCHMIDT, MR. SEIBEL, MR. OLSON, COMMISSIONER GAEBE, MR. LECH, MR. SANDAL, COMMISSIONER GODFREAD, MR. GESSNER, MS. SMITH, MS. TERNES, AND LT. GOVERNOR SANFORD

NAYS: NONE

MOTION CARRIED

OTHER:

The Board discussed HB 1175, (SIB Membership).

Ms. Murtha provided clarification of the bill.

The Board directed Mr. Hunter to take a neutral position on HB 1175. Even though Mr. Hunter could provide testimony against the bill if so directed by the SIB, the SIB felt it was in the best interest of the SIB and RIO that Mr. Hunter remains neutral during the process. The SIB felt it is the responsibility of the Governor's Office and Lt. Governor Sanford, as Chair of the SIB, to provide testimony against the bill since the SIB is an Executive Branch agency of State Government.

The Board also discussed HB 1317, Transfers of Legacy Fund Earnings. HB 1317 introduces a new section, NDCC 54-27, relating to the transfer of Legacy Fund earnings to the General Fund with the intent of the legislative assembly that earnings of the Legacy Fund be used for tax relief programs. Treasurer Schmidt stated this would be a "watch only" bill for the SIB, as it would be determined by the Governor's Office how much if any of the earnings would be used for tax relief purposes.

The next meeting of the SIB Audit Committee is scheduled for February 23, 2017, at 3:00 p.m. at Workforce Safety & Insurance, 1600 E Century Ave., Bismarck, ND.

The next meeting of the SIB is scheduled for February 24, 2017, at 8:30 a.m. at Workforce Safety & Insurance, 1600 E Century Ave., Bismarck, ND.

ADJOURNMENT :

With no further business to come before the SIB, Lt. Governor Sanford adjourned the meeting at 12:12 p.m.

Lt. Governor Sanford, Chair
State Investment Board

Bonnie Heit
Assistant to the Board

Asset and Performance Review

For the periods ended December 31, 2016

Dave Hunter, Executive Director / CIO

Darren Schulz, Deputy Chief Investment Officer

ND Retirement & Investment Office (RIO)

State Investment Board (SIB)

Overview of SIB Client Assets Under Management

<u>Fund Name</u>	<u>Market Values as of 12/31/16 ⁽¹⁾</u>	<u>Market Values as of 6/30/16 ⁽²⁾</u>	<u>Market Values as of 12/30/15 ⁽¹⁾</u>
Pension Trust Fund			
Public Employees Retirement System (PERS)	2,563,018,948	2,459,388,086	2,371,419,312
Teachers' Fund for Retirement (TFFR)	2,147,574,445	2,082,183,640	2,036,260,471
Job Service of North Dakota Pension			93,985,042
City of Bismarck Employees Pension	85,523,410	82,441,003	79,987,495
City of Grand Forks Employees Pension	58,008,561	57,975,758	55,321,141
City of Bismarck Police Pension	35,374,745	33,983,598	33,013,643
Grand Forks Park District	5,871,117	5,720,245	5,770,147
City of Fargo Employees Pension			1,512
Subtotal Pension Trust Fund	4,895,371,226	4,721,692,330	4,675,758,763
Insurance Trust Fund			
Workforce Safety & Insurance (WSI)	1,825,110,509	1,832,104,203	1,746,807,452
Budget Stabilization Fund	103,537,937	575,918,381	573,743,813
PERS Group Insurance Account	36,834,347	37,715,356	38,411,033
City of Fargo FargoDome Permanent Fund	33,312,203	38,782,721	38,489,674
State Fire and Tornado Fund	22,545,969	24,091,203	23,169,406
Petroleum Tank Release Compensation Fund	6,842,054	7,149,512	6,931,840
State Risk Management Fund	6,246,768	6,534,801	6,213,232
State Risk Management Workers Comp Fund	5,748,688	5,516,177	5,723,481
ND Association of Counties (NDACo) Fund	4,164,771	4,048,863	3,895,582
State Bonding Fund	3,292,172	3,296,372	3,187,067
ND Board of Medicine	2,258,841	2,208,667	2,156,260
Insurance Regulatory Trust Fund	1,477,615	1,085,836	1,057,824
Bismarck Deferred Sick Leave Account	661,093	642,265	615,610
Cultural Endowment Fund	406,389	386,452	372,713
Subtotal Insurance Trust Fund	2,052,439,356	2,539,480,809	2,450,774,987
Legacy Trust Fund			
Legacy Fund	4,189,334,992	3,809,485,177	3,522,475,430
PERS Retiree Insurance Credit Fund	106,879,605	101,623,224	96,046,927
Job Service of North Dakota Pension	95,685,427	96,588,333	
ND Tobacco Prevention and Control Trust Fund	50,509,542	54,366,538	46,438,466
Total Assets Under SIB Management	11,390,220,148	11,323,236,410	10,791,494,573

- ▶ SIB client assets grew by nearly \$600 million (or 5.5%) in the last year largely due to Legacy Fund tax deposits of \$365 million plus Legacy Fund net investment earnings of \$300+ million.
- ▶ The Pension Trust posted a net return of 7.06% in the last year. During the last 5-years, the Pension Trust generated a net annualized return of 8.48%, exceeding the performance benchmark of 7.86%.
- ▶ The Insurance Trust generated a net return of 6.05% in the last year. During the last 5-years, the Insurance Trust posted a net annualized return of 5.18%, exceeding the performance benchmark of 3.64%.
- ▶ The Legacy Fund generated a net investment gain of 8.15% for the year ended December 31, 2016, exceeding its performance benchmark. Since inception, the Legacy Fund has generated a net annualized return of 3.43% (over the last 5 ¼ years) exceeding the performance benchmark of 2.52%.
- ▶ SIB client assets totaled approximately \$11.4 billion as of December 31, 2016, based on unaudited valuations.

⁽¹⁾ 12/31/16 and 12/31/15 market values are unaudited and subject to change.

⁽²⁾ 6/30/16 market values as stated in the Comprehensive Annual Financial Report.

Legacy Fund – Actual Performance vs Policy Benchmark

Net Returns Exceed Policy Benchmark – Periods Ended 12/31/2016

The SIB Governance Manual states “SIB clients should receive investment returns consistent with their written investment policies and market variables. This “End” is evaluated based on comparison of each client’s (a) actual net investment return, (b) standard deviation and (c) risk adjusted excess return, to the client’s policy benchmark over 5 years.”

LEGACY FUND	Current	1 Yr Ended	3 Yrs Ended	5 Yrs Ended	Risk 5 Yrs Ended 12/31/2016	Risk Adj Excess Return 5 Yrs Ended 12/31/2016
	FYTD 12/31/2016	12/31/2016	12/31/2016	12/31/2016		
Net Investment Return	4.8%	8.15%	4.4%	3.6%	3.6%	0.70%
Policy Benchmark Return	3.5%	6.41%	3.6%	2.6%	3.2%	OK
Excess Return	1.3%	1.75%	0.8%	1.0%	111%	
Estimated Incremental Income:	Last 1-Year = \$60 million		Last 5-Years = \$100 million			

- For the 1-Year Ended 12/31/16, the Legacy Fund generated a **Net Return of 8.1%** exceeding the Policy Benchmark (of 6.4%) and creating **Excess Return of 1.7%**. Actual net returns exceed the Policy Benchmark by over **\$60 million** for the 1 year ended 12/31/16 (e.g. \$4 billion x 1.5%).
- For the 5-Years Ended 12/31/16, the Fund earned a **Net Return of 3.6%** exceeding the Policy Benchmark (of 2.6%) and creating **Excess Return of 1.0%**. Actual returns exceed the Policy Benchmark Return by **\$100 million** for the 5 years ended 12/31/16 (e.g. \$2 billion x 1% x 5 years).
- Returns achieved while adhering to stated investment guidelines for Risk (of no more than 115%) and generating **0.70%** of Risk Adjusted Excess Return over the last 5-years.

Note: Current Fiscal Year To Date and all returns as of December 31, 2016 are unaudited and subject to change.

Pension Trust Return & Risk Summary – Dec. 31, 2016

Returns: Every Pension client generated positive “Excess Return” for the 5-years ended 12/31/16 ranging from 0.67% for PERS to 1.75% for Job Service.

Risk: Excess Return was achieved while adhering to prescribed risk metrics (e.g. within 115% of the Policy Benchmark the last 5-years) and with positive Risk Adjusted Excess Returns.

	Current FYTD 12/31/2016	1 Yr Ended 12/31/2016	3 Yrs Ended 12/31/2016	5 Yrs Ended 12/31/2016	Risk 5 Yrs Ended 12/31/2016	Risk Adj Excess Return 5 Yrs Ended 12/31/2016
PERS - \$2.56 billion						
Total Fund Return - Net	4.19%	7.13%	4.50%	8.57%	5.6%	0.26%
Policy Benchmark Return	4.39%	7.19%	4.09%	7.90%	5.3%	
Excess Return	-0.19%	-0.06%	0.41%	0.67%	105%	
TFFR - \$2.15 billion						
Total Fund Return - Net	4.14%	6.99%	4.48%	8.61%	5.6%	0.32%
Policy Benchmark Return	4.17%	6.95%	4.04%	7.90%	5.3%	
Excess Return	-0.04%	0.04%	0.44%	0.71%	105%	

1. PERS & TFFR Returns approximated 7% for 1-year and 8.6% for the 5-years ended 12/31/16.
2. Active management enhanced PERS and TFFR income by over **\$100 million** for the 5-years ended 12/31/2016. This is based on average invested assets of \$4 billion x 0.50% of annual excess return = \$20 million/year x 5 years = \$100 million.

Pension Trust Return & Risk Summary – Dec. 31, 2016

	Current FYTD 12/31/2016	1 Yr Ended 12/31/2016	3 Yrs Ended 12/31/2016	5 Yrs Ended 12/31/2016	Risk 5 Yrs Ended 12/31/2016	Risk Adj Excess Return 5 Yrs Ended 12/31/2016
BISMARCK EMPLOYEES - \$86 million						
Net Investment Return	3.75%	7.72%	4.80%	8.21%	4.9%	0.59%
Policy Benchmark Return	3.59%	6.95%	4.08%	7.15%	4.6%	
Excess Return	0.16%	0.76%	0.72%	1.06%	106%	
BISMARCK POLICE - \$35 million						
Net Investment Return	4.11%	7.16%	4.46%	8.31%	5.3%	0.36%
Policy Benchmark Return	4.15%	7.28%	4.04%	7.49%	5.0%	
Excess Return	-0.04%	-0.12%	0.41%	0.82%	106%	
JOB SERVICE - \$96 million						
Net Investment Return	1.43%	6.80%	5.14%	8.26%	4.6%	0.89%
Policy Benchmark Return	3.27%	6.23%	4.06%	6.51%	4.1%	
Excess Return	-1.84%	0.57%	1.08%	1.75%	112%	
CITY OF GRAND FORKS - \$58 million						
Net Investment Return	4.45%	7.96%	4.64%	8.94%	5.8%	0.43%
Policy Benchmark Return	4.68%	7.83%	4.22%	8.13%	5.6%	
Excess Return	-0.23%	0.13%	0.42%	0.81%	104%	
GRAND FORKS PARK DISTRICT \$6 million						
Net Investment Return	4.37%	6.59%	4.68%	9.10%	5.8%	0.48%
Policy Benchmark Return	4.39%	6.88%	4.35%	8.29%	5.6%	
Excess Return	-0.02%	-0.29%	0.32%	0.81%	104%	

Risk Adjusted Excess Returns for the 5-years ended Dec. 31, 2016, were positive for all Pension Trust clients and generally exceeded 0.25%.

Risk Adjusted Excess Return measures actual portfolio results versus a benchmark adjusted by its risk relative to a benchmark portfolio. This metric is positive if excess returns are due to “smart” investment decisions or negative if driven by excess risk.

Non-Pension Trust Return & Risk Summary – Dec. 31, 2016

Note: Current year returns are unaudited and subject to change.

	Current FYTD <u>12/31/2016</u>	1 Yr Ended <u>12/31/2016</u>	3 Yrs Ended <u>12/31/2016</u>	5 Yrs Ended <u>12/31/2016</u>	Risk 5 Yrs Ended <u>12/31/2016</u>	Risk Adj Excess Return 5 Yrs Ended <u>12/31/2016</u>
WSI - \$1.8 billion						
Net Investment Return	2.51%	7.00%	5.06%	6.88%	3.5%	1.3%
Policy Benchmark Return	0.97%	4.84%	4.01%	4.86%	3.1%	
Excess Return	1.54%	2.15%	1.06%	2.02%	OK	
<i>Estimated Incremental Income: Last 1-Year = \$35 million</i>		<i>Last 5-Years = \$150 million</i>				
Budget Stabilization - \$103 million						
Net Investment Return	0.47%	2.36%	1.72%	1.90%	0.69%	0.8%
Policy Benchmark Return	-0.18%	1.20%	0.80%	0.62%	0.50%	
Excess Return	0.65%	1.16%	0.92%	1.28%	OK	
<i>Estimated Incremental Income: Last 1-Year = \$5 million</i>		<i>Last 5-Years = \$25 million</i>				

Returns and Risk: Every Non-Pension Trust client generated positive “Excess Return” for the 5-years ended 12/31/16, and all but two Non-Pension Trust client generated positive “Risk Adjusted Excess Return” for the 5-years ended 12/31/16 (if applicable). These returns were achieved while adhering to reasonable risk levels which were within 1% of policy levels. Risk Adjusted Excess Return measures a portfolio’s excess return adjusted by its risk relative to a benchmark portfolio. This metric is positive if returns are due to “smart” investment decisions or negative if driven by excess risk.

Non-Pension Trust Return & Risk Summary – Dec. 31, 2016

	Current FYTD 12/31/2016	1 Yr Ended 12/31/2016	3 Yrs Ended 12/31/2016	5 Yrs Ended 12/31/2016	Risk 5 Yrs Ended 12/31/2016	Risk Adj Excess Return 5 Yrs Ended 12/31/2016
FIRE & TORNADO - \$24 million						
Net Investment Return	3.54%	7.58%	4.77%	7.65%	4.3%	0.66%
Policy Benchmark Return	1.81%	5.31%	3.73%	5.64%	3.5%	
Excess Return	1.73%	2.26%	1.04%	2.01%	OK	
STATE BONDING - \$3.3 million						
Net Investment Return	-0.12%	3.25%	2.55%	2.90%	2.0%	1.2%
Policy Benchmark Return	-1.31%	1.62%	1.73%	1.29%	1.7%	
Excess Return	1.19%	1.64%	0.82%	1.62%	OK	
INSUR. REG. TRUST - \$1.1 million						
Net Investment Return	2.97%	5.61%	3.31%	5.77%	3.5%	0.36%
Policy Benchmark Return	1.85%	4.12%	2.72%	4.47%	2.9%	
Excess Return	1.11%	1.49%	0.58%	1.30%	OK	
PETROL.TANK RELEASE - \$7.1 million						
Net Investment Return	-0.10%	2.97%	2.32%	2.60%	1.8%	1.1%
Policy Benchmark Return	-1.18%	1.50%	1.59%	1.18%	1.6%	
Excess Return	1.08%	1.47%	0.73%	1.42%	OK	
STATE RISK MGMT - \$6.5 million						
Net Investment Return	3.33%	8.60%	5.76%	8.13%	3.9%	0.87%
Policy Benchmark Return	1.48%	6.11%	4.57%	5.88%	3.2%	
Excess Return	1.85%	2.49%	1.19%	2.25%	OK	

SIB Client Commentary:

The State Fire & Tornado Fund, State Bonding Fund, Insurance Regulatory Trust Fund, Petroleum Tank Release Compensation Fund, and State Risk Management Fund have all posted positive Risk Adjusted Excess Returns for the 5-years ended 12/31/16, including Excess Returns of 1.3% or more.

Non-Pension Trust Return & Risk Summary – Dec. 31, 2016

	Current FYTD 12/31/2016	1 Yr Ended 12/31/2016	3 Yrs Ended 12/31/2016	5 Yrs Ended 12/31/2016	Risk 5 Yrs Ended 12/31/2016	Risk Adj Excess Return 5 Yrs Ended 12/31/2016
STATE RISK MGMT W/C - \$5.5 million						
Net Investment Return	4.21%	9.46%	6.18%	9.00%	4.3%	0.88%
Policy Benchmark Return	2.34%	7.02%	5.01%	6.80%	3.7%	
Excess Return	1.87%	2.44%	1.16%	2.19%	OK	
ND Assoc. of Counties - \$4.1 million						
Net Investment Return	2.87%	6.82%	4.39%	6.92%	3.9%	0.63%
Policy Benchmark Return	1.24%	4.66%	3.37%	4.95%	3.1%	
Excess Return	1.63%	2.17%	1.02%	1.97%	OK	
BISMARCK DEF.SICK LEAVE < \$1 million						
Net Investment Return	2.97%	7.45%	4.85%	7.39%	4.1%	0.77%
Policy Benchmark Return	1.02%	4.86%	3.61%	5.13%	3.2%	
Excess Return	1.95%	2.60%	1.24%	2.26%	OK	
FARGODOME - \$39 million						
Net Investment Return	5.47%	9.13%	5.15%	9.10%	5.7%	0.81%
Policy Benchmark Return	3.80%	6.93%	4.15%	7.30%	5.1%	
Excess Return	1.67%	2.20%	1.00%	1.79%	OK	
CULTURAL ENDOWMENT < \$1 million						
Net Investment Return	6.08%	10.07%	6.28%	10.54%	5.8%	0.74%
Policy Benchmark Return	4.56%	8.08%	5.37%	8.71%	5.2%	
Excess Return	1.52%	1.99%	0.91%	1.82%	OK	

SIB Client Commentary:

The State Risk Management Workers Comp. Fund, North Dakota Association of Counties, City of Bismarck Deferred Sick Leave Account, FargoDome Permanent Fund and Cultural Endowment Fund have all posted positive Risk Adjusted Excess Returns for the 5-years ended 12/31/16, including Excess Returns of 1.7% or more.

Non-Pension Trust Return & Risk Summary – Dec. 31, 2016

	Current FYTD 12/31/2016	1 Yr Ended 12/31/2016	3 Yrs Ended 12/31/2016	5 Yrs Ended 12/31/2016	Risk 5 Yrs Ended 12/31/2016	Risk Adj Excess Return 5 Yrs Ended 12/31/2016
BOARD OF MED. EXAM. - \$2.2 million						
Net Investment Return	2.28%	4.77%				
Policy Benchmark Return	1.24%	3.14%				
Excess Return	1.05%	1.63%				
PERS RETIREE HEALTH - \$102 million						
Net Investment Return	-0.30%	8.51%	4.60%	8.71%	6.3%	-0.72%
Policy Benchmark Return	-1.00%	7.69%	4.96%	8.64%	5.7%	
Excess Return	0.70%	0.82%	-0.36%	0.07%	OK	
PERS GROUP INSUR. - \$28 million						
Net Investment Return	-0.49%	1.07%	0.34%	0.29%	0.56%	-0.01%
Policy Benchmark Return	-0.33%	1.18%	0.42%	0.29%	0.51%	
Excess Return	-0.17%	-0.11%	-0.09%	0.003%	OK	
TOBACCO CONTROL - \$54 million						
Net Investment Return	0.37%	1.68%				
Policy Benchmark Return	0.41%	1.71%				
Excess Return	-0.04%	-0.03%				

SIB Client Specific Commentary:

The **Board of Medical Examiners** became an SIB client less than two years ago noting they were previously investing in Certificates of Deposit.

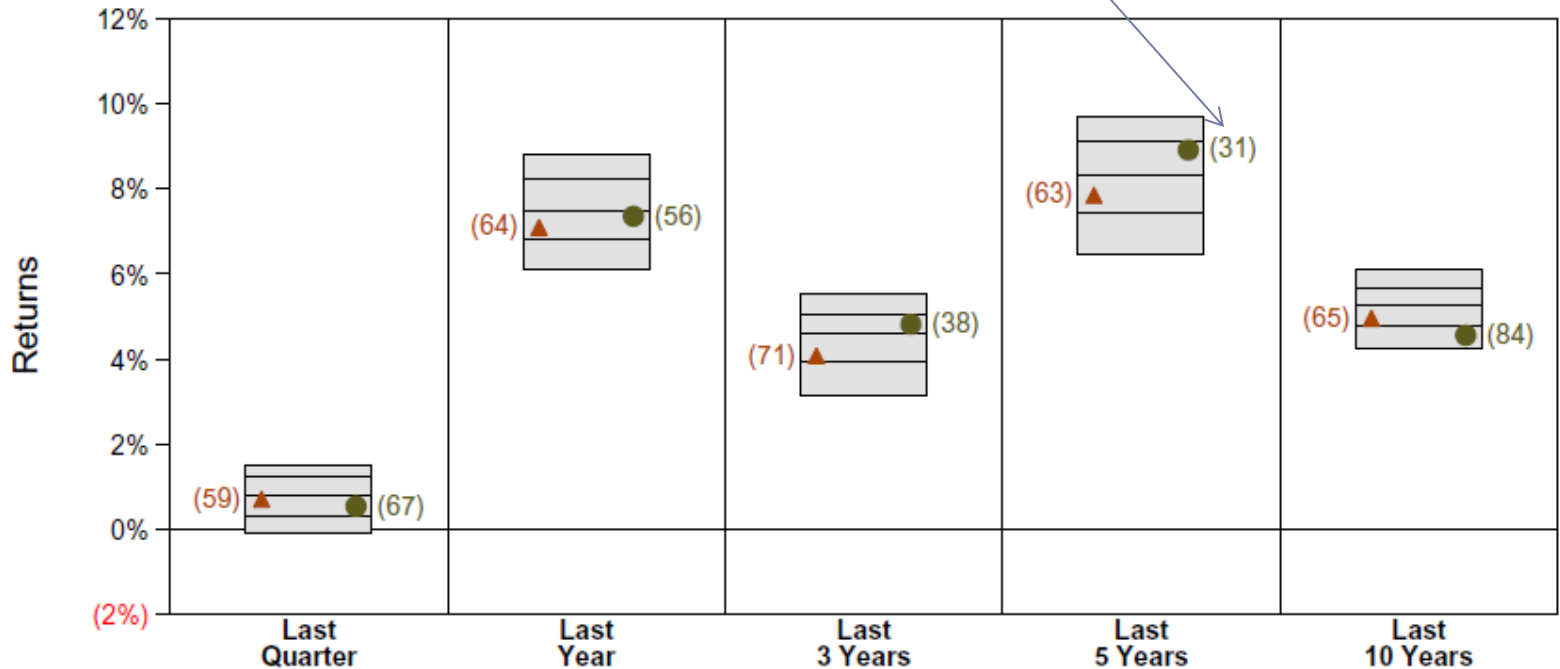
Absolute returns for the **PERS Retiree Health Insurance Credit Fund** have been reasonable the last 5-years (8.7%) **but disappointing on a risk adjusted basis.(-0.72%)**. We are re-examining SEI's benchmarks and risk and return profile.

RIO implemented a new asset allocation policy **for PERS Group Insurance** in late-2105 in attempt to enhance returns and lower fees.

The **Tobacco Prevention and Control Trust Fund** became an SIB client on 9/30/15. **One year returns of 1.68% are 0.03% below the Policy Benchmark**, but exceed their actual returns prior to becoming an SIB client (of 0.10% per annum).

Pension Trust gross returns were ranked in the 31st percentile for the 5-years ended Dec. 31, 2016, based on Callan's "Public Fund Sponsor Database".

CAI Public Fund Sponsor Database



	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	1.51	8.80	5.51	9.69	6.12
25th Percentile	1.22	8.24	5.05	9.13	5.66
Median	0.80	7.49	4.62	8.32	5.25
75th Percentile	0.31	6.82	3.93	7.45	4.79
90th Percentile	(0.09)	6.09	3.14	6.47	4.26
Total Fund ●	0.53	7.36	4.82	8.92	4.56
Policy Target ▲	0.70	7.10	4.07	7.86	4.96

* Current Quarter Target = 16.1% Russell 1000 Index, 16.0% MSCI World, 13.2% Blmbg Aggregate Idx, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 6.5% NDSIB PEN - Private Equity, 5.4% Blmbg GI Agg ex US, 5.0% CPI-W, 4.9% Russell 2000 Index, 4.6% Blmbg US HY Cor 2%C, 3.1% MSCI EM, 3.0% NCREIF Timberland Index and 0.5% 3-month Treasury Bill.



February 2017

**North Dakota
State Investment Board**

Performance Evaluation

as of December 31, 2016

Paul Erlendson
Senior Vice President

Alex Browning
Vice President

Agenda

- Review economic and market environment for periods ended December 31, 2016
- Pension Trust Quarterly Review
 - Results and Observations
- Insurance Trust Quarterly Review
 - Results and Observations



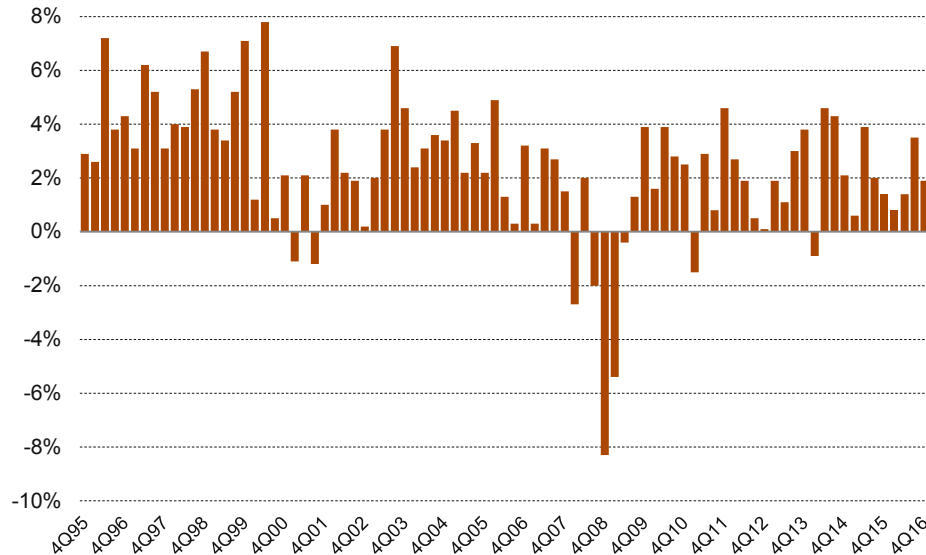
Review of Economic and Market Environment

- As of December 31, 2016

U.S. Economy

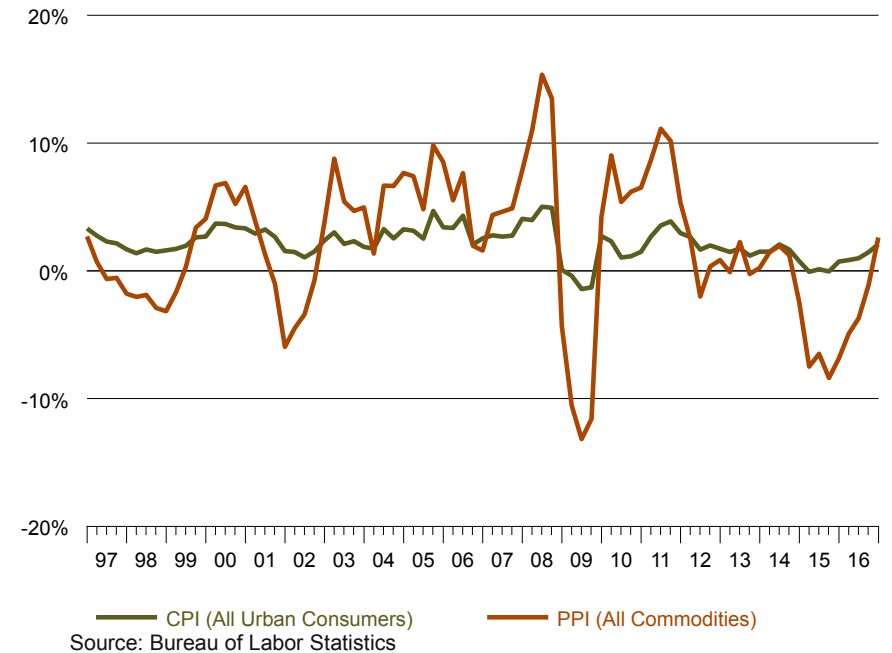
Periods Ending December 31, 2016

Quarterly Real GDP Growth (20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year




Source: Bureau of Labor Statistics

- The first estimate of 4th quarter GDP came out at 1.9%, lagging the 3rd quarter, up 3.5%.
- December headline inflation rose 2.1% over the trailing twelve months. Core CPI increased 2.2%.
- December unemployment was 4.7% (down 0.3% from September) and the labor force participation rate fell to 62.7% (down 0.2%).
- The Fed increased the target overnight rate to 0.50% - 0.75% on December 14.
- Post the U.S. presidential election, markets diverged – equities up, bonds down

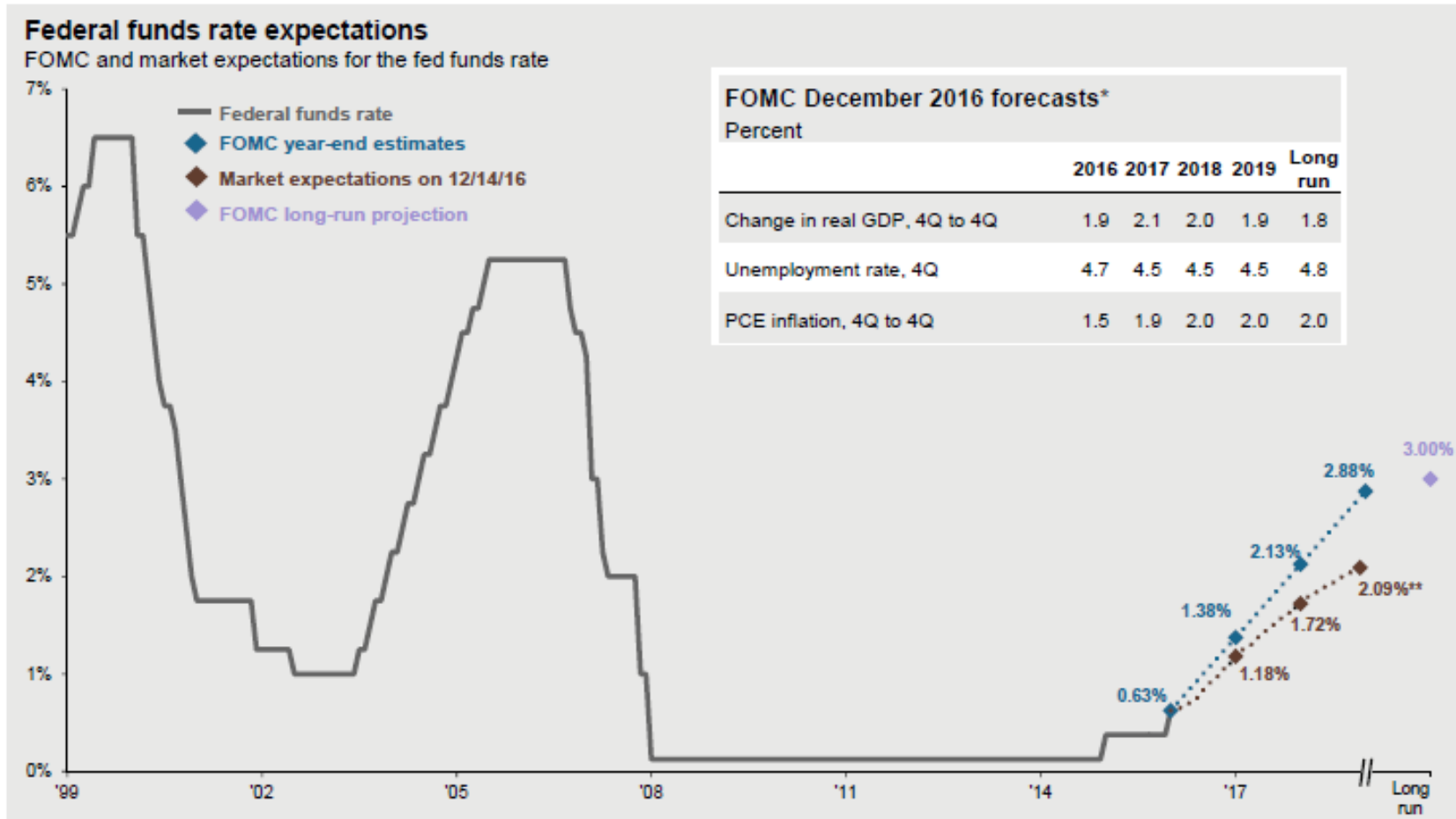
Asset Class Performance

Periodic Table of Investment Returns
for Periods Ended December 31, 2016



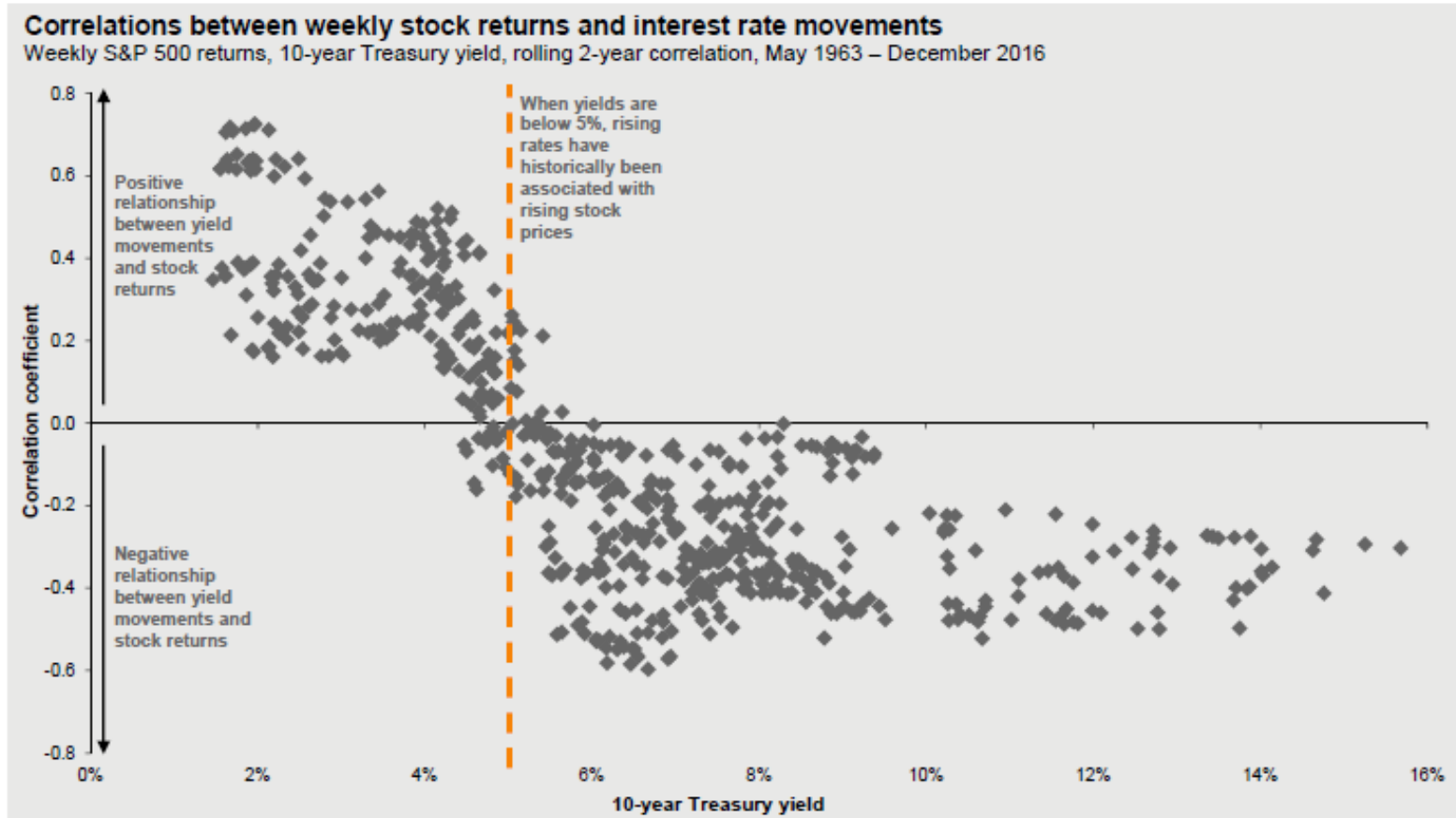
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
	Russell:2000 Index 8.8%	Russell:2000 Index 21.3%	S&P:500 8.9%	S&P:500 14.7%	Russell:2000 Index 7.1%
	S&P:500 3.8%	S&P:500 12.0%	Russell:2000 Index 6.7%	Russell:2000 Index 14.5%	S&P:500 6.9%
	Blmbg:Commodity Price Idx 2.5%	MSCI:EM Gross 11.6%	Blmbg:Aggregate Idx 3.0%	MSCI:EAFE 6.5%	Blmbg:Aggregate Idx 4.3%
	3 Month T-Bill 0.1%	Blmbg:Commodity Price Idx 11.4%	3 Month T-Bill 0.1%	Blmbg:Aggregate Idx 2.2%	MSCI:EM Gross 2.2%
	MSCI:EAFE (0.7%)	Blmbg:Aggregate Idx 2.6%	MSCI:EAFE (1.6%)	MSCI:EM Gross 1.6%	3 Month T-Bill 0.8%
	Blmbg:Aggregate Idx (3.0%)	MSCI:EAFE 1.0%	MSCI:EM Gross (2.2%)	3 Month T-Bill 0.1%	MSCI:EAFE 0.7%
	MSCI:EM Gross (4.1%)	3 Month T-Bill 0.3%	Blmbg:Commodity Price Idx (11.4%)	Blmbg:Commodity Price Idx (9.1%)	Blmbg:Commodity Price Idx (6.2%)

Fed Fund Rate Expectations



Source: FactSet, Federal Reserve, J.P. Morgan Asset Management.
Market expectations are the federal funds rates priced into the fed futures market as of the date of the December 2016 FOMC meeting. *Forecasts of 17 Federal Open Market Committee (FOMC) participants are median estimates. **Last futures market expectation is for November 2019 due to data availability.
Guide to the Markets – U.S. Data are as of December 31, 2016.

How Equities Respond to Interest Rate Movements

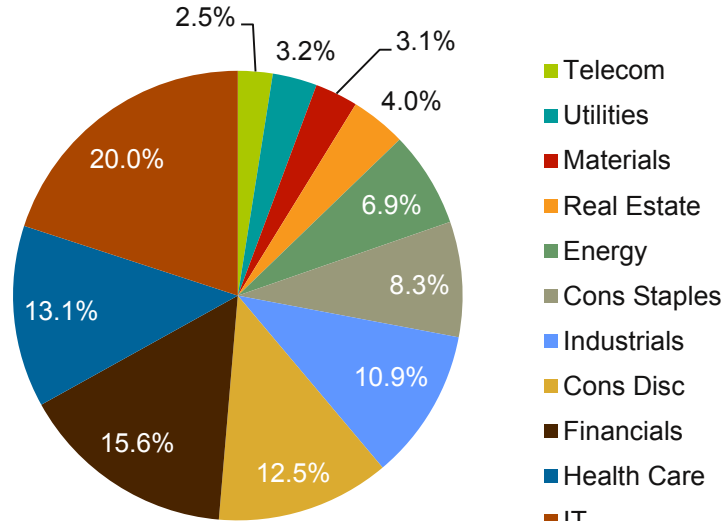


Source: FactSet, Standard & Poor's, FRB, J.P. Morgan Asset Management.
Returns are based on price index only and do not include dividends. Markers represent monthly 2-year correlations only.
Guide to the Markets – U.S. Data are as of December 31, 2016.

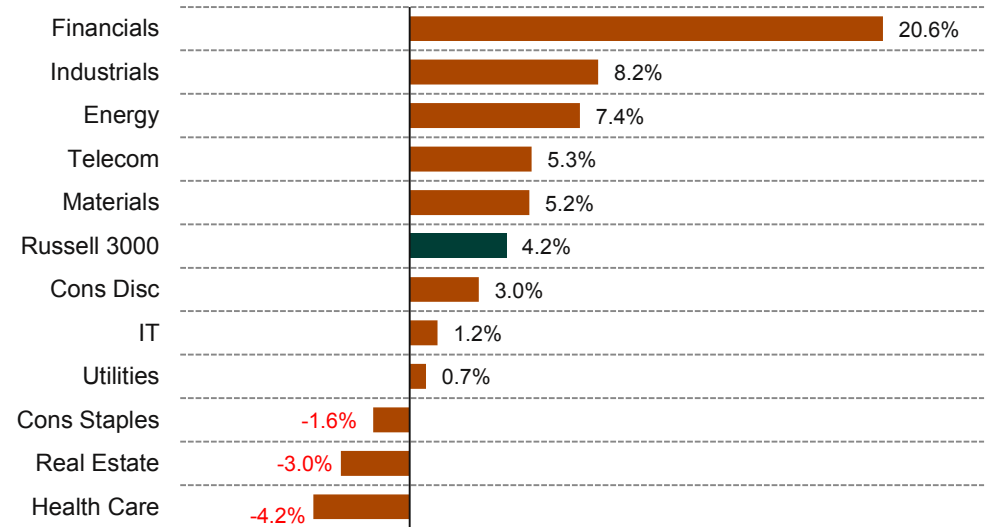
U.S. Equity Returns

Periods Ending December 31, 2016

Economic Sector Exposure (Russell 3000)



Russell 3000 Sector Returns

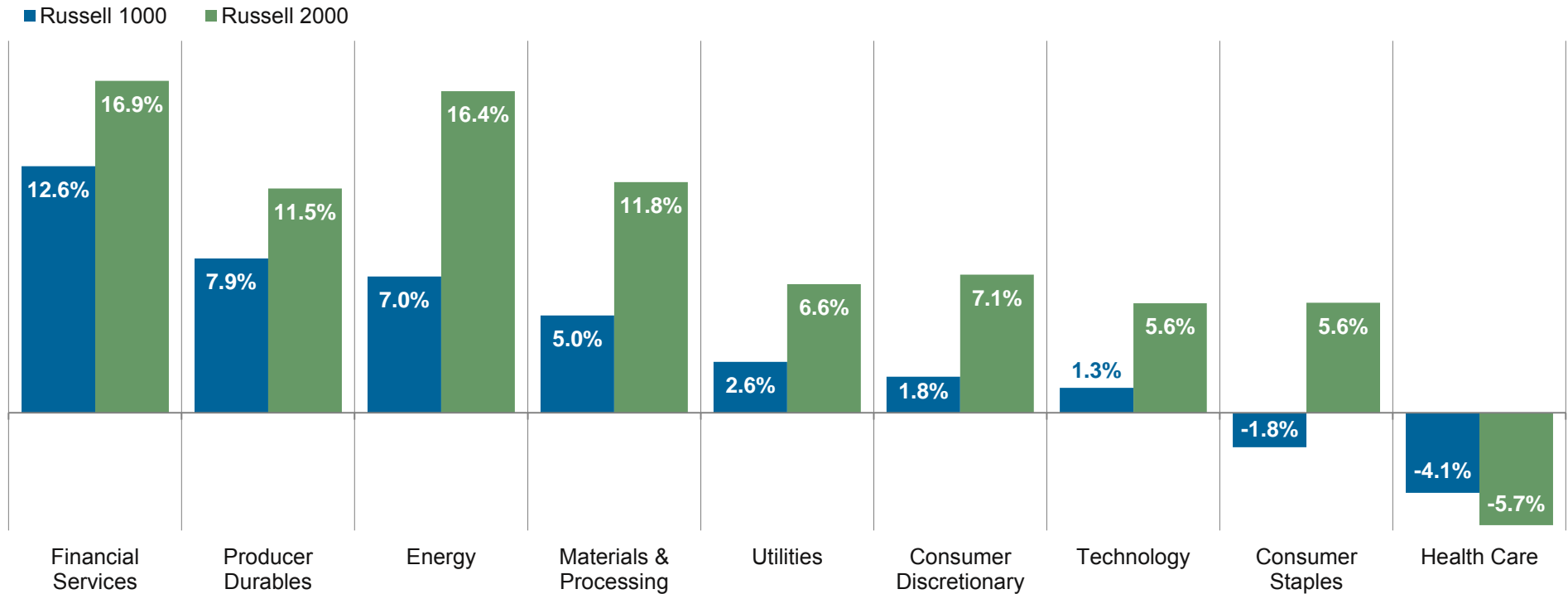


Source: Barrow Hanley Quarterly Benchmark Review

- The RU 1000 was up 3.8% - Financials (+20.3%) and Industrials (+7.7%) were the best performing sectors.
- The RU 2000 was up 8.7% - Financials (+23.3%) and Energy (+17.9%) were the best performing sectors.
- Some top performing sectors through June lagged in fourth quarter - Utilities (+0.7%); Consumer Staples (-1.6%), and REITS (-3.0%).

In U.S. Large Caps – Size and Sector Mattered

Quarter ended December 31, 2016






U.S. Equity Style Returns

Periods Ending December 31, 2016

		4Q 2016		
		Value	Core	Growth
Large		6.7%	3.8%	1.0%
Mid		5.5%	3.2%	0.5%
Small		14.1%	8.8%	3.6%

		Annualized 1 Year Returns		
		Value	Core	Growth
Large		17.3%	12.1%	7.1%
Mid		20.0%	13.8%	7.3%
Small		31.7%	21.3%	11.3%

-  Represents 3 best performing asset classes in time period
-  Represents 3 middle performing asset classes in time period
-  Represents 3 worst performing asset classes in time period

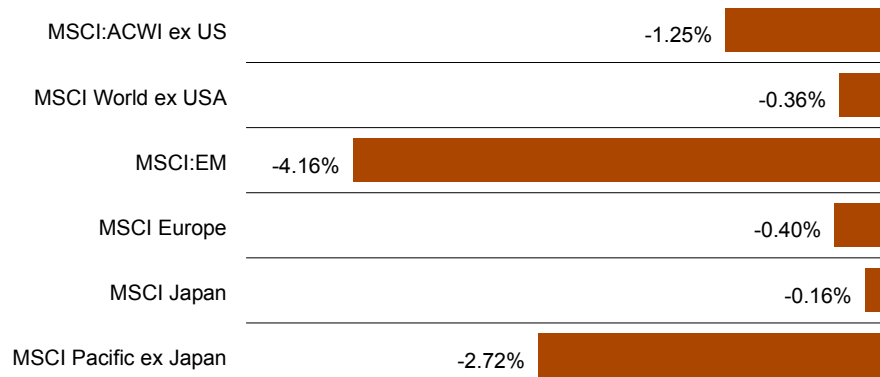
- Last Quarter: Small cap and value outperformed
- Last Year: Small cap outperformed; growth underperformed

Large Cap Core is represented by the Russell 1000 Index, Large Cap Value is represented by the Russell 1000 Value Index and Large Cap Growth is represented by the Russell 1000 Growth Index. Mid Cap Core is represented by the Russell Midcap Index, Mid Cap Value is represented by the Russell Midcap Value Index and Mid Cap Growth is represented by the Russell Midcap Growth Index. Small Cap Core is represented by the Russell 2000 Index, Small Cap Value is represented by the Russell 2000 Value Index and Small Cap Growth is represented by the Russell 2000 Growth Index.

International Equity Returns

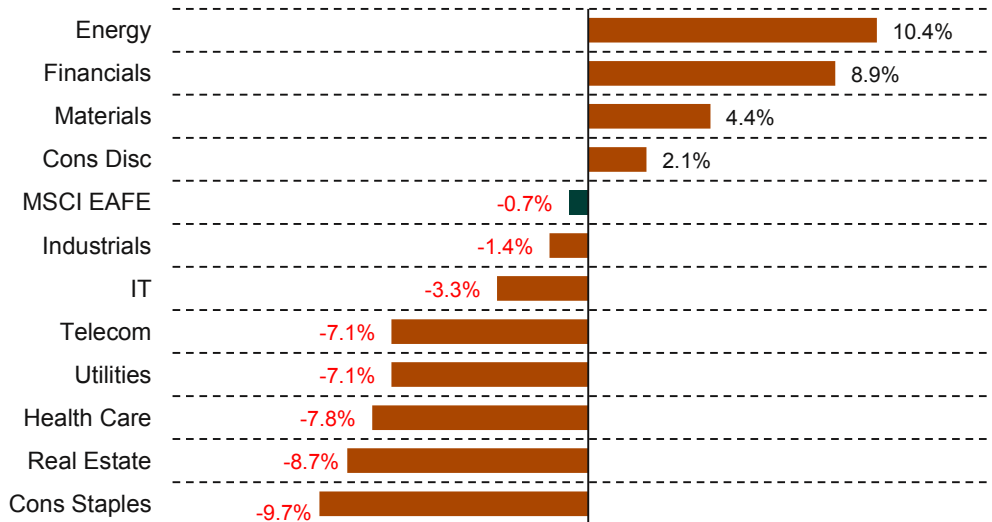
Periods Ending December 31, 2016

Regional Quarterly Performance (U.S. Dollar)



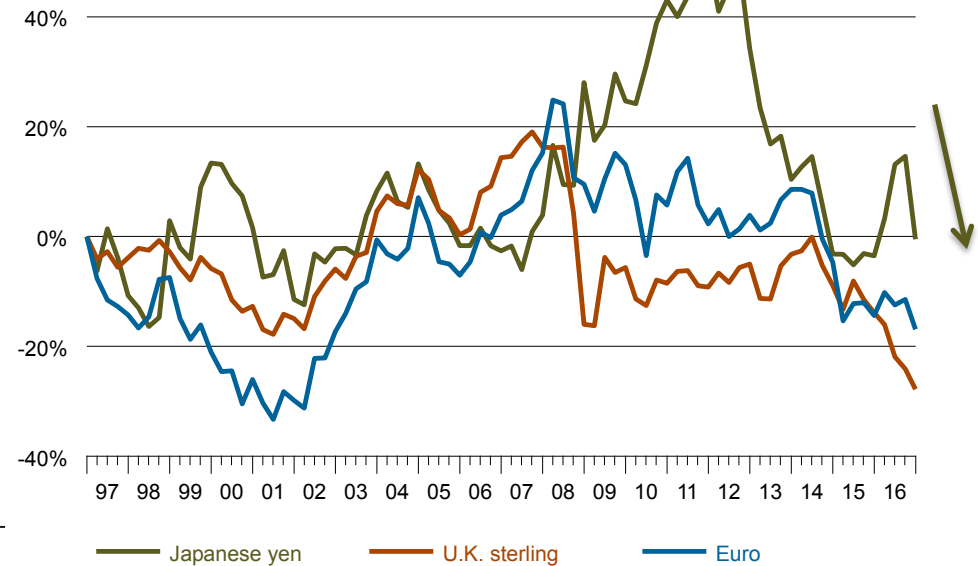
Source: MSCI

MSCI EAFE Sector Returns



Source: Barrow Hanley Quarterly Benchmark Review

Major Currencies' Cumulative Returns (vs. U.S. Dollar)



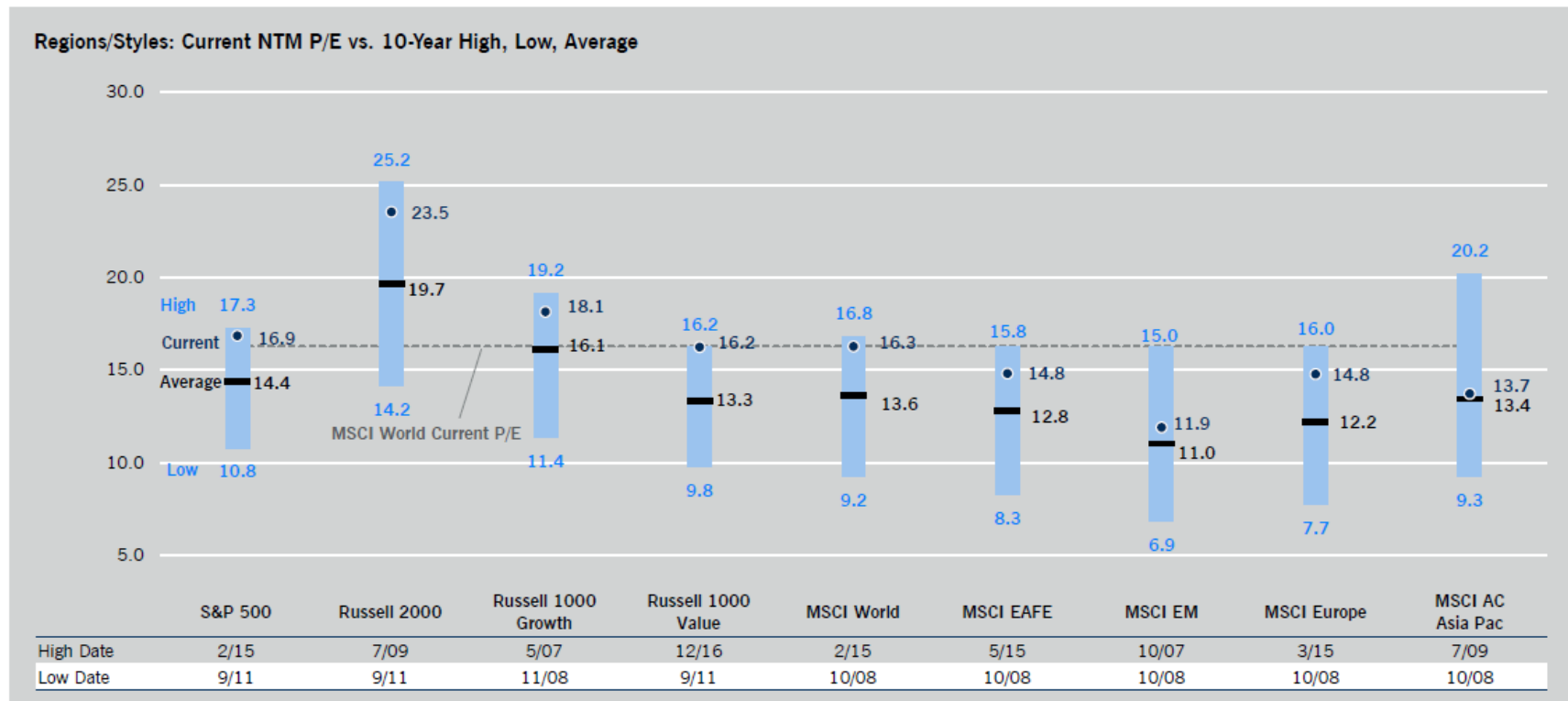
*Euro returns from 1Q99. German mark prior to 1Q99.

Source: MSCI

- Best performing region was Japan (-0.2%).
- Dollar strength hurt returns: yen (-13%), euro (-6%), and the pound (-5%).
- Energy and Financials were the top and Consumer Staples and REITS the worst performing sectors.

Many Equity Markets are Pricey

Valuation analysis



Source: FactSet as of 12/31/16. NTM P/E is market price per share divided by expected earnings per share over the next twelve months.

Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information.

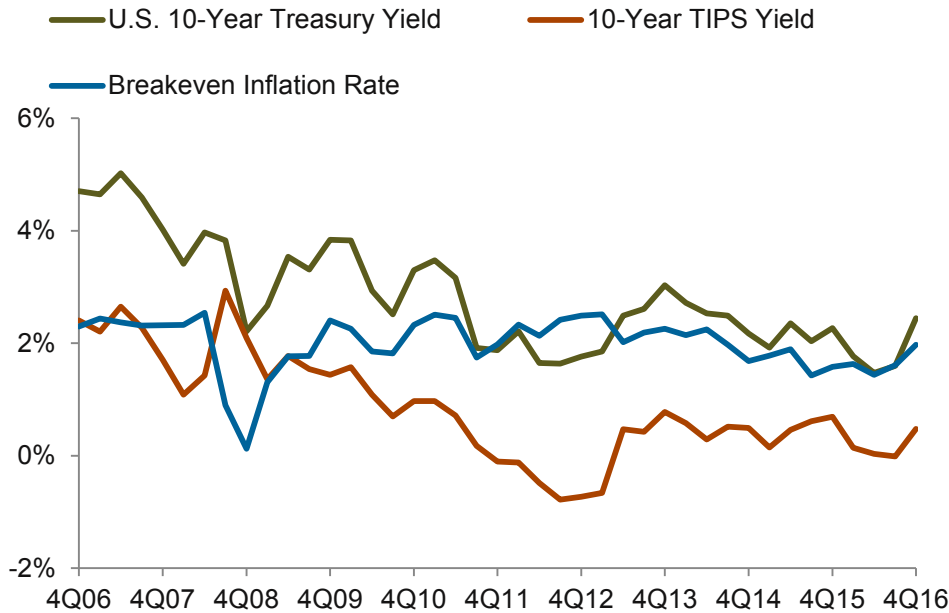
Source: January 2017 Eaton Vance Monthly Market Monitor

- P/E ratios in some markets are approaching 10-year highs.
- MSCI AC Asia Pac remains near its 10-year average.
- U.S. small cap is most expensive based on this measure.

Yield Curve Changes

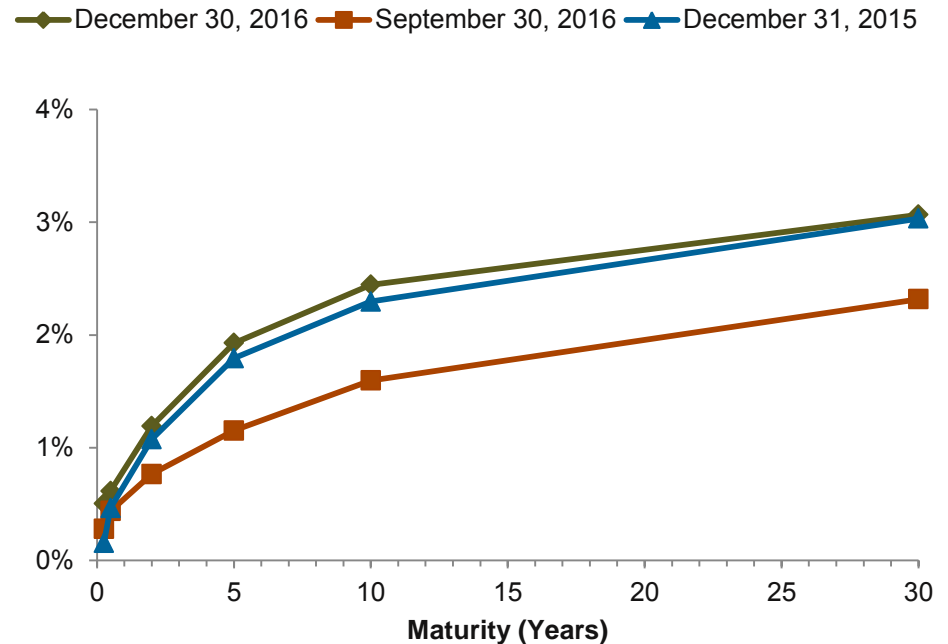
Periods Ending December 31, 2016

Historical 10-Year Yields



Source: Bloomberg

U.S. Treasury Yield Curves



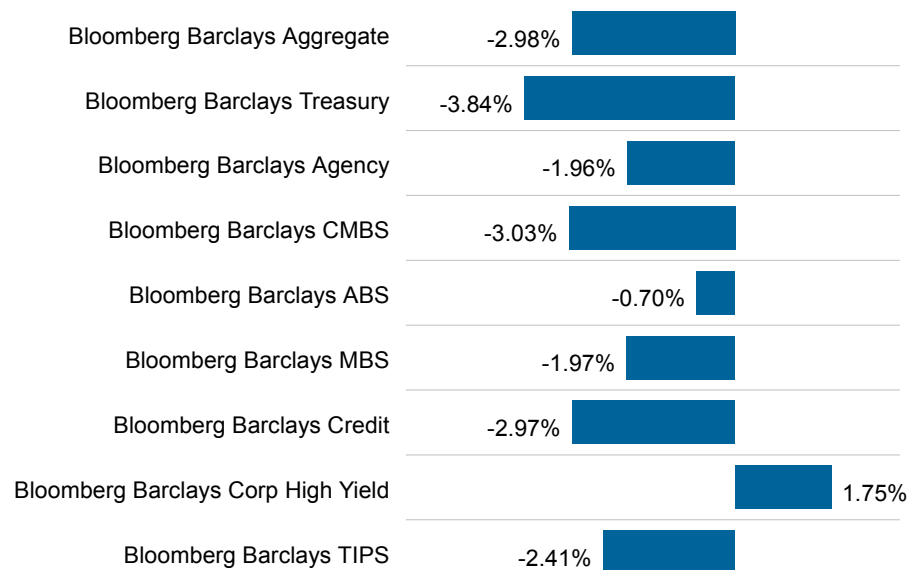
Source: U.S. Department of the Treasury

- Treasury yields rose across all segments of the curve, most notably near the middle and at the end where increases were greatest. The yield on the 10-year increased 85 bps and the 30-year increased 74 bps.
- Breakeven inflation edged higher on healthy core inflation figures and stable oil prices.
- Worldwide, rates still remain low.

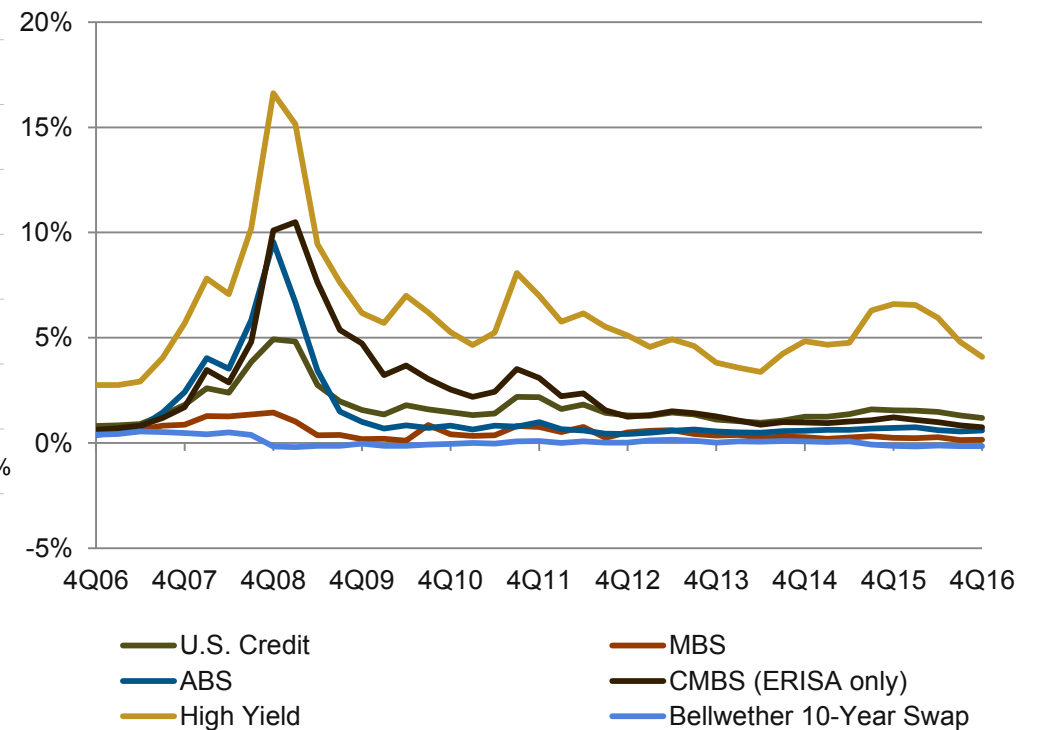
Total Rates of Return by Bond Sector

Periods Ending December 31, 2016

Total Returns



Effective Yield Over Treasuries

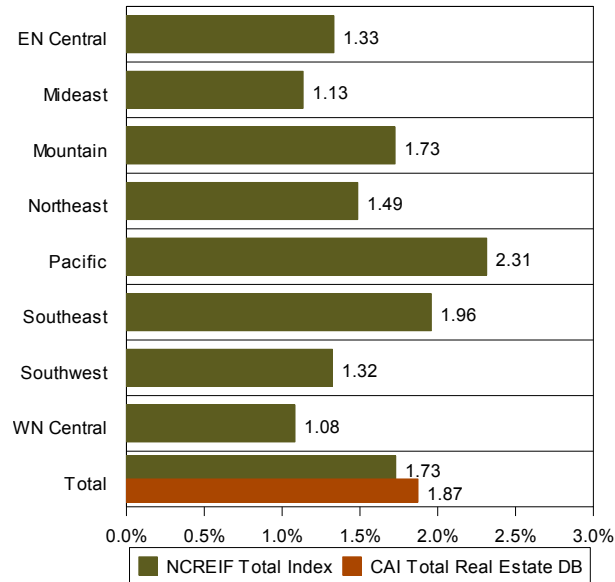


Source: Bloomberg Barclays

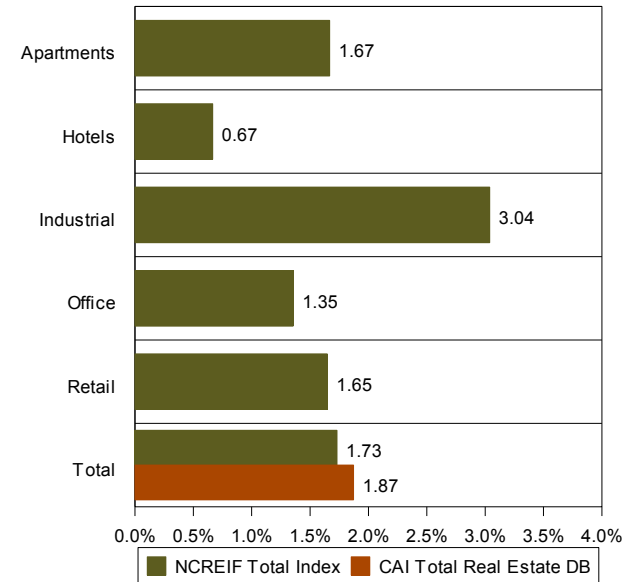
- Rising rates produced negative returns for all sectors except high yield.
- Worst performing sector of the Aggregate was Treasuries.
- Treasury Inflation Protected Securities (TIPS) outperformed Treasuries on rising inflation expectations (-2.4%).

Real Estate Overview

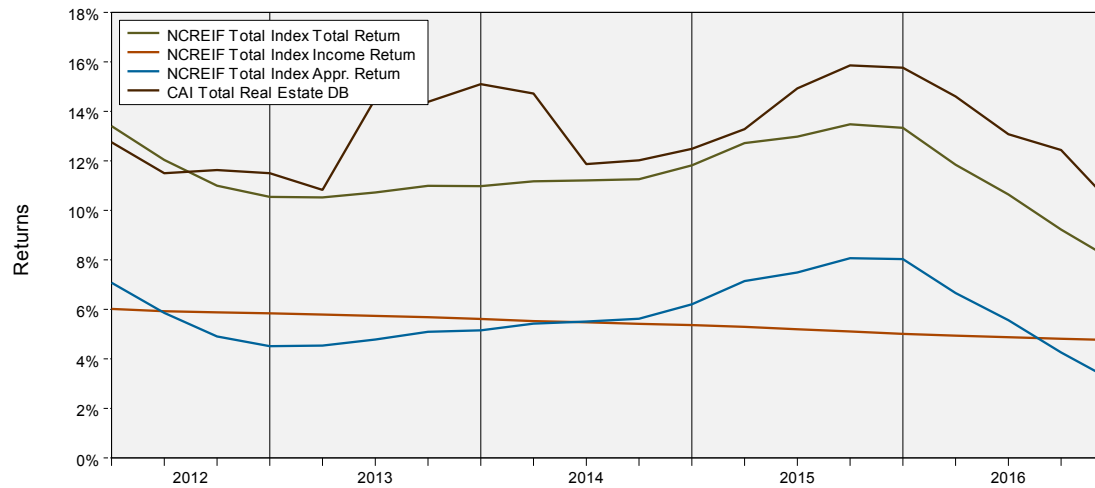
NCREIF Total Index Returns by Geographic Area
Quarter Ended December 31, 2016



NCREIF Total Index Returns by Property Type
Quarter Ended December 31, 2016

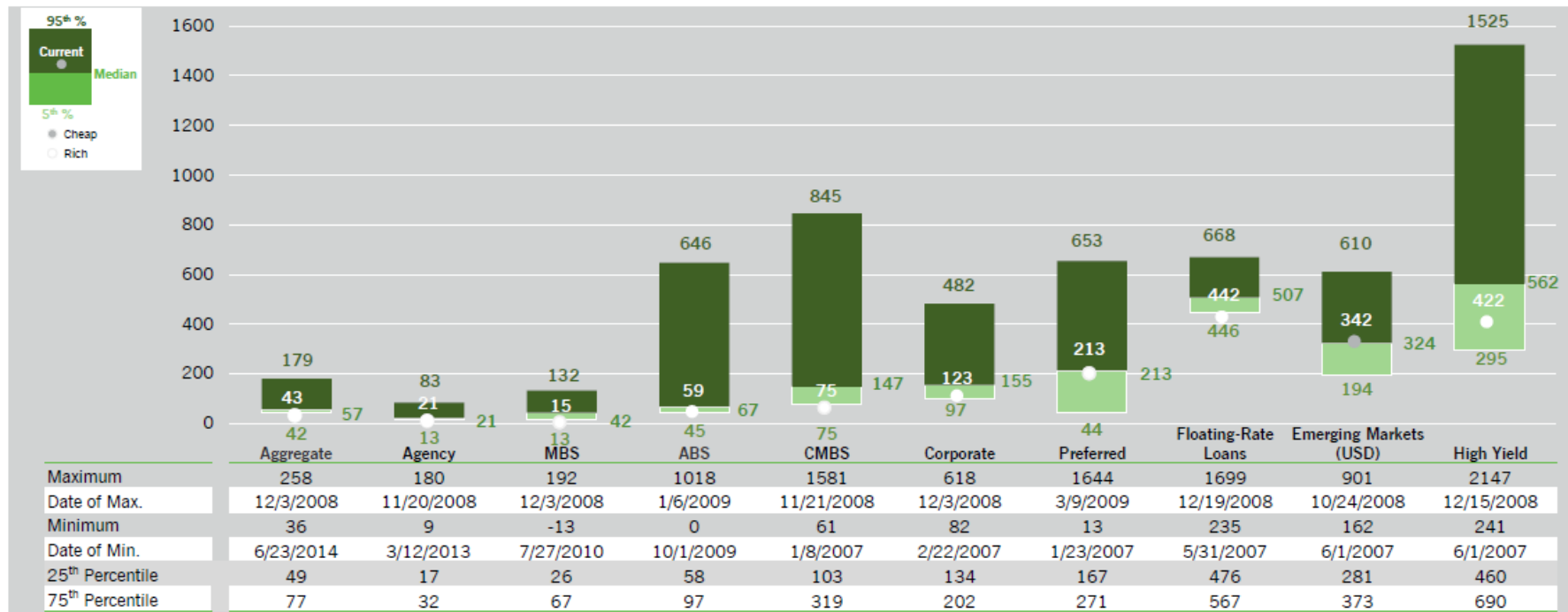


Rolling 1 Year Returns



Bonds Continue to be Expensive

Fixed income spread analysis (bps)



Source: Factset as of 12/31/16. Spread history measures past 10 years. Data provided is for informational use only. Past performance is no guarantee of future results. See end of report for important additional information. All spreads are in basis points and measure option-adjusted yield spread relative to comparable maturity U.S. Treasuries with the exception of floating-rate loans, which is the average discounted spread over Libor. Agency represented by Bloomberg Barclays U.S. Agency Index. MBS represented by Bloomberg Barclays U.S. Mortgage Backed Securities (MBS) Index. ABS represented by Bloomberg Barclays U.S. Asset Backed Securities (ABS) Index. CMBS represented by Bloomberg Barclays U.S. CMBS Investment Grade Index. Corporate represented by Bloomberg Barclays U.S. Corporate Investment Grade Index. Preferred represented by BofA Merrill Lynch Fixed Rate Preferred Securities Index. Floating-Rate Loans represented by S&P/LSTA Leveraged Loan Index. Emerging Markets(USD) represented by JPMorgan Emerging Markets Bond Index (EMBI) Global Diversified. High Yield represented by BofA Merrill Lynch US High Yield Index.

Source: January 2017 Eaton Vance Monthly Market Monitor

- Spreads are below median in all areas except for emerging market debt. Agencies are at median.
- High yield contracted the most this quarter followed by U.S. credit.



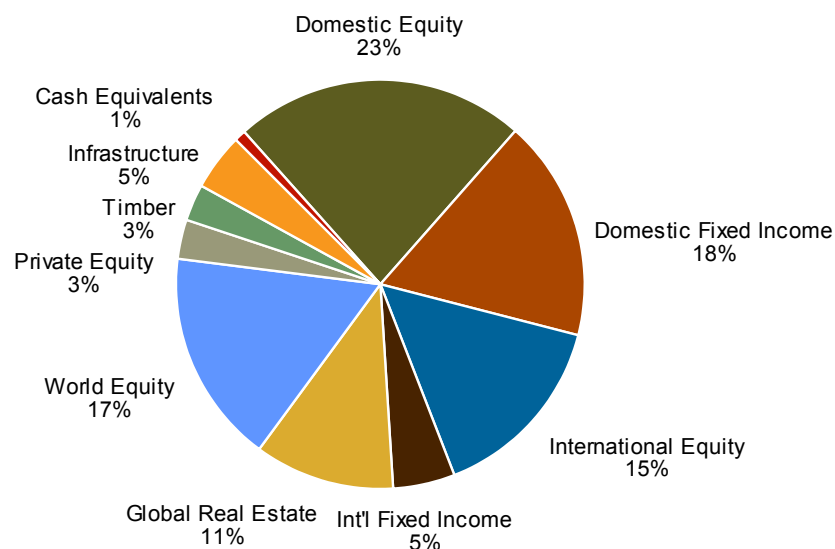
Consolidated Pension Trusts Quarterly Review

- Public Employees Retirement System
- Teachers' Fund for Retirement

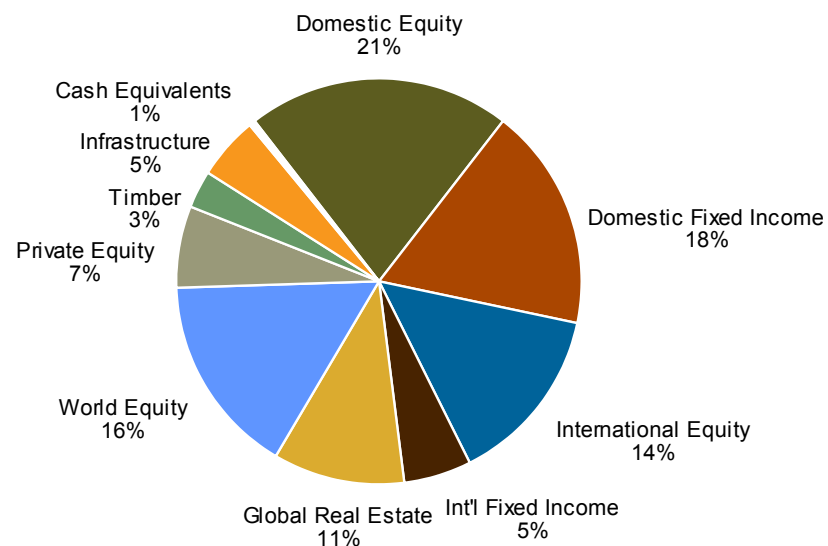
Consolidated Pension Trust Allocation

As of December 31, 2016

Actual Asset Allocation



Target Asset Allocation

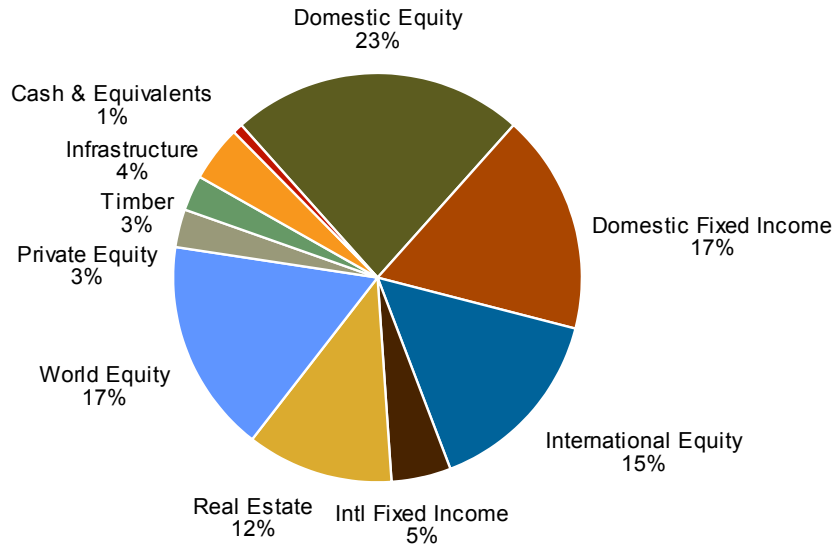


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	1,130,378	23.1%	21.0%	2.1%	102,350
Domestic Fixed Income	857,357	17.5%	17.8%	(0.3%)	(14,019)
International Equity	737,044	15.1%	14.3%	0.8%	37,006
Int'l Fixed Income	240,743	4.9%	5.4%	(0.5%)	(23,607)
Global Real Estate	545,176	11.1%	10.5%	0.6%	31,162
World Equity	825,970	16.9%	16.0%	0.9%	42,711
Private Equity	152,311	3.1%	6.5%	(3.4%)	(165,888)
Timber	142,891	2.9%	3.0%	(0.1%)	(3,970)
Infrastructure	220,642	4.5%	5.0%	(0.5%)	(24,127)
Cash Equivalents	42,857	0.9%	0.5%	0.4%	18,380
Total	4,895,371	100.0%	100.0%		

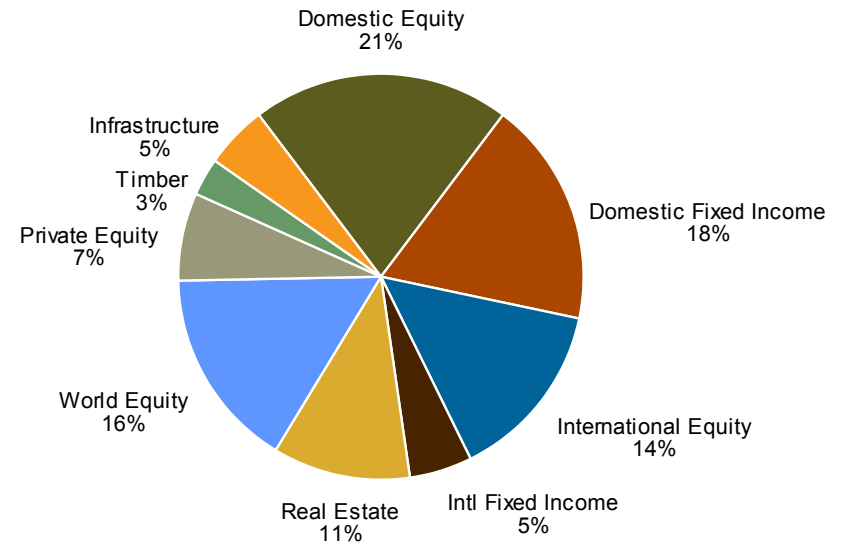
PERS Allocation

As of December 31, 2016

Actual Asset Allocation



Target Asset Allocation

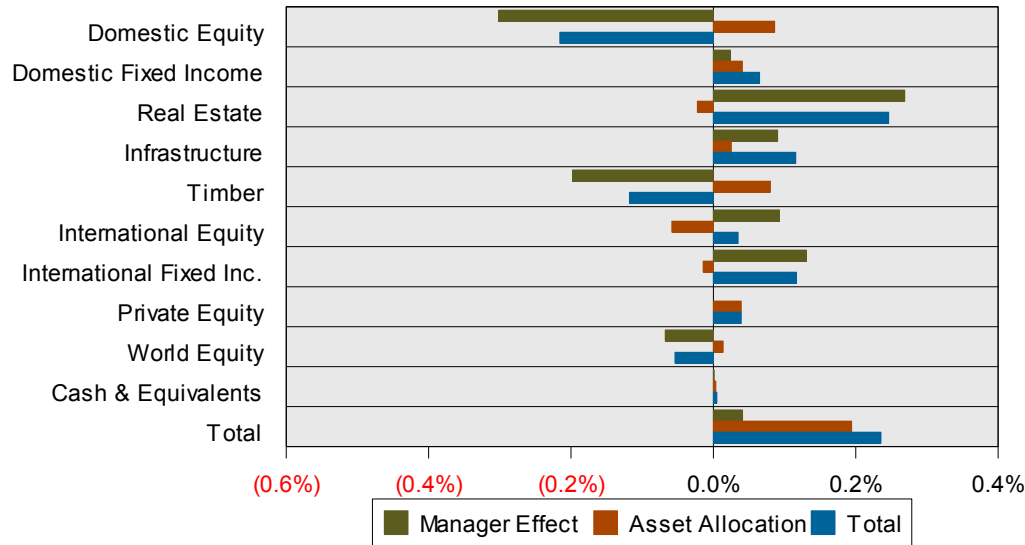


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	593,566	23.2%	20.6%	2.6%	65,584
Domestic Fixed Income	445,402	17.4%	18.0%	(0.6%)	(15,941)
International Equity	390,567	15.2%	14.4%	0.8%	21,493
Intl Fixed Income	120,232	4.7%	5.0%	(0.3%)	(7,919)
Real Estate	297,984	11.6%	11.0%	0.6%	16,052
World Equity	434,158	16.9%	16.0%	0.9%	24,075
Private Equity	76,412	3.0%	7.0%	(4.0%)	(102,999)
Timber	72,177	2.8%	3.0%	(0.2%)	(4,713)
Infrastructure	113,145	4.4%	5.0%	(0.6%)	(15,006)
Cash & Equivalents	19,375	0.8%	0.0%	0.8%	19,375
Total	2,563,019	100.0%	100.0%		

PERS Performance and Attribution

As of December 31, 2016

One Year Relative Attribution Effects



1 Year Ended 12/31/16
 Gross: 7.43%
 Net of fees: 7.13%
 Target: 7.19%
 Net Added: -0.06%

One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	22%	21%	12.85%	14.20%	(0.30%)	0.09%	(0.22%)
Domestic Fixed Income	18%	17%	6.86%	6.67%	0.02%	0.04%	0.06%
Real Estate	11%	10%	10.38%	7.97%	0.27%	(0.02%)	0.25%
Infrastructure	4%	5%	3.90%	1.99%	0.09%	0.03%	0.12%
Timber	3%	4%	(3.95%)	2.59%	(0.20%)	0.08%	(0.12%)
International Equity	15%	15%	4.25%	3.67%	0.09%	(0.06%)	0.03%
International Fixed Inc.	5%	5%	4.05%	1.49%	0.13%	(0.01%)	0.12%
Private Equity	3%	6%	0.30%	0.30%	0.00%	0.04%	0.04%
World Equity	16%	16%	7.06%	7.51%	(0.07%)	0.01%	(0.05%)
Cash & Equivalents	1%	1%	0.51%	0.40%	0.00%	0.00%	0.00%

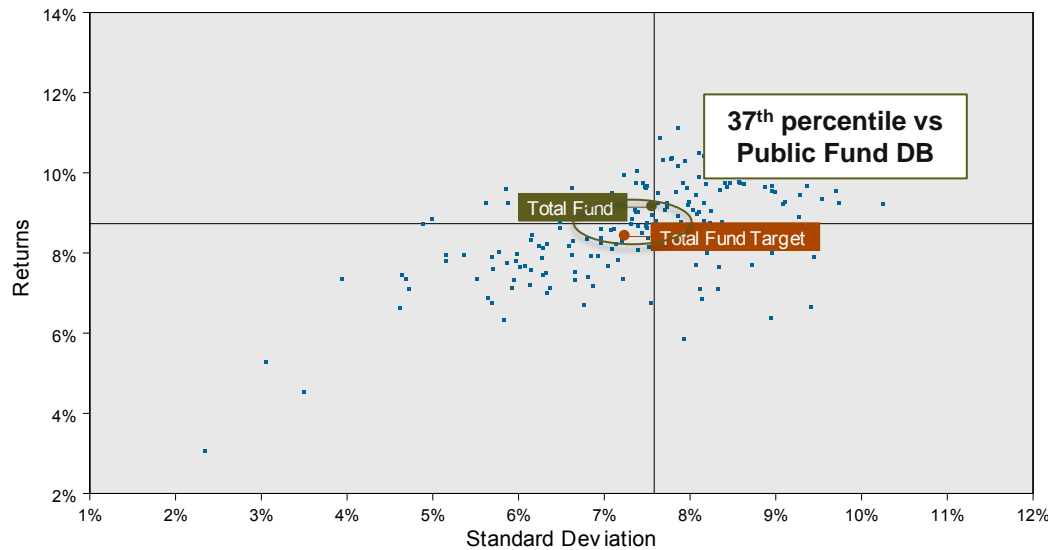
Total 7.42% = 7.19% + 0.04% + 0.19%

0.24%

PERS Performance and Attribution

As of December 31, 2016

Six and One-Half Year Annualized Risk vs Return



Squares represent membership of the CAI Public Fund Sponsor Database

6 ½ Years Ended 12/31/16

Gross: 9.14%
 Net of fees: 8.80%
 Target: 8.41%
 Net Added: 0.39%

Six and One-Half Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	27%	26%	15.35%	15.07%	0.02%	0.11%	0.12%
Domestic Fixed Income	20%	19%	5.97%	4.52%	0.24%	(0.04%)	0.20%
Real Estate	9%	9%	14.83%	11.96%	0.22%	0.01%	0.23%
Timber	4%	4%	-	-	(0.26%)	(0.04%)	(0.30%)
Infrastructure	3%	4%	-	-	0.15%	0.08%	0.23%
International Equity	16%	16%	6.65%	4.69%	0.30%	(0.06%)	0.23%
International Fixed Inc.	5%	5%	3.02%	0.96%	0.11%	(0.01%)	0.10%
Private Equity	4%	5%	3.22%	3.22%	0.00%	(0.04%)	(0.04%)
World Equity	11%	11%	-	-	(0.00%)	(0.04%)	(0.04%)
Cash & Equivalents	1%	1%	0.15%	0.13%	0.00%	(0.02%)	(0.02%)

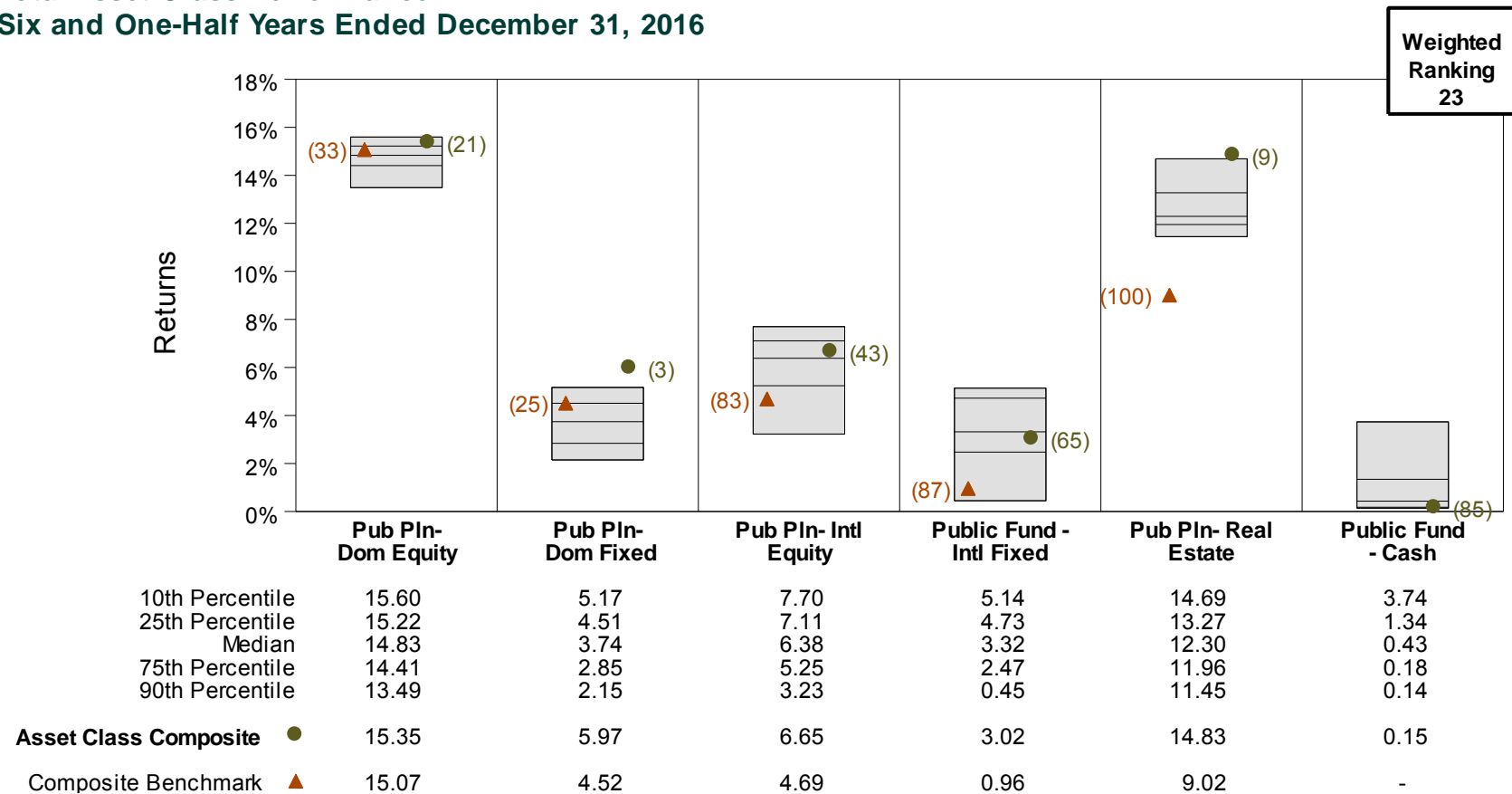
Total 9.14% = 8.41% + 0.78% + (0.05%)

0.73%

Asset class composite results

PERS' results vs other Public Funds

**Total Asset Class Performance
Six and One-Half Years Ended December 31, 2016**

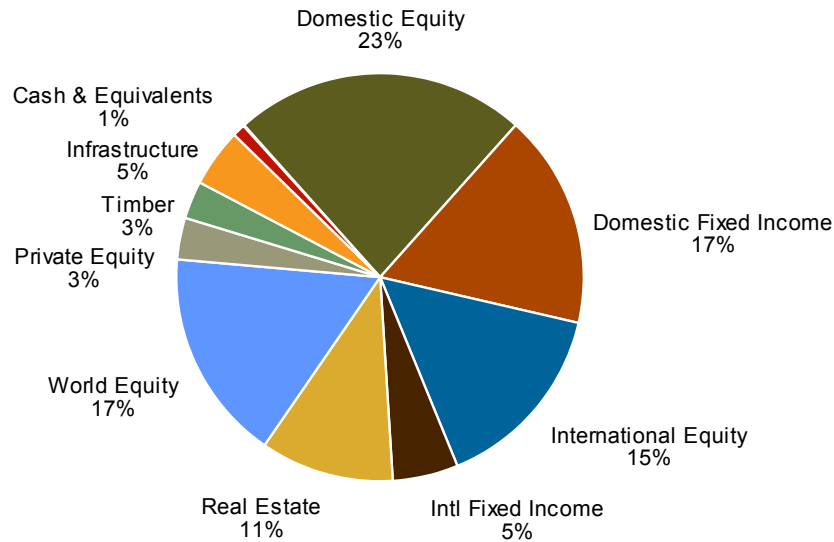


- Public market asset classes are all above their respective benchmarks except cash.
 - Many “cash” funds have exposure to higher return and risk strategies (i.e. credit and longer duration) than NDSIB does.
- U.S. equity and fixed income and real estate returns in top quartile.

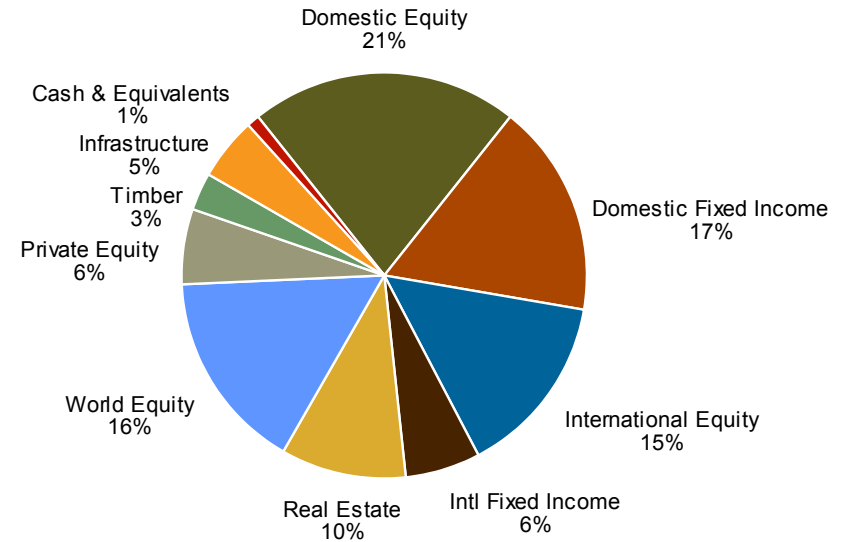
TFFR Allocation

As of December 31, 2016

Actual Asset Allocation



Target Asset Allocation

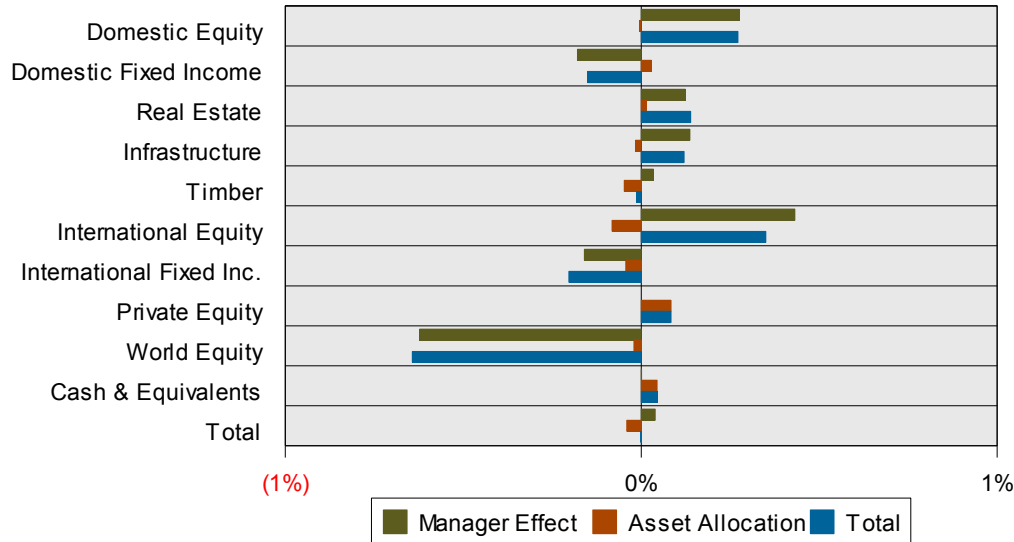


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	497,561	23.2%	21.4%	1.8%	37,981
Domestic Fixed Income	364,947	17.0%	17.0%	0.0%	(141)
International Equity	326,003	15.2%	14.6%	0.6%	12,457
Intl Fixed Income	112,731	5.2%	6.0%	(0.8%)	(16,123)
Real Estate	228,480	10.6%	10.0%	0.6%	13,722
World Equity	361,507	16.8%	16.0%	0.8%	17,896
Private Equity	70,138	3.3%	6.0%	(2.7%)	(58,717)
Timber	65,467	3.0%	3.0%	0.0%	1,040
Infrastructure	98,578	4.6%	5.0%	(0.4%)	(8,801)
Cash & Equivalents	22,163	1.0%	1.0%	0.0%	687
Total	2,147,574	100.0%	100.0%		

TFFR Performance and Attribution

As of December 31, 2016

One Year Relative Attribution Effects



1 Year Ended 12/31/16
 Gross: 7.28%
 Net of fees: 6.99%
 Target: 6.94%
 Net Added: 0.05%

One Year Relative Attribution Effects

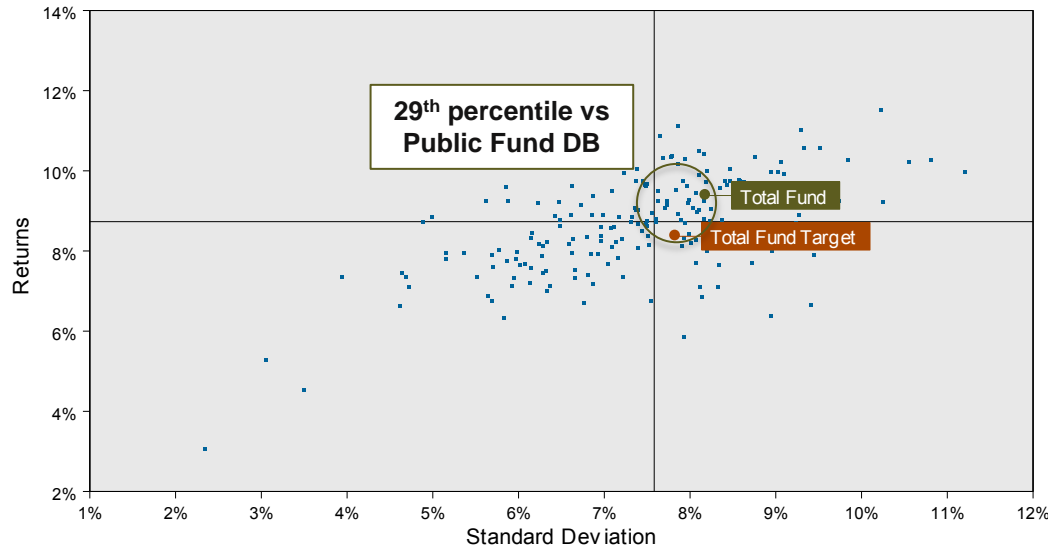
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	22%	21%	2.02%	0.73%	0.28%	(0.00%)	0.27%
Domestic Fixed Income	18%	17%	3.82%	4.83%	(0.18%)	0.03%	(0.15%)
Real Estate	11%	10%	11.96%	10.64%	0.12%	0.02%	0.14%
Infrastructure	5%	5%	3.65%	0.64%	0.14%	(0.02%)	0.12%
Timber	4%	5%	4.34%	3.49%	0.03%	(0.05%)	(0.01%)
International Equity	15%	15%	(7.71%)	(10.39%)	0.43%	(0.08%)	0.35%
International Fixed Inc.	5%	5%	7.88%	11.24%	(0.16%)	(0.04%)	(0.20%)
Private Equity	4%	5%	(7.19%)	(7.19%)	0.00%	0.08%	0.08%
World Equity	16%	16%	(6.53%)	(2.78%)	(0.62%)	(0.02%)	(0.64%)
Cash & Equivalents	1%	1%	0.29%	0.19%	0.00%	0.04%	0.05%

Total **0.61% = 0.61% + 0.04% + (0.04%)** **(0.00%)**

TFFR Performance and Attribution

As of December 31, 2016

Six and One-Half Year Annualized Risk vs Return



Squares represent membership of the CAI Public Fund Sponsor Database

6 ½ Years Ended 12/31/16

Gross: 9.39%
 Net of fees: 9.04%
 Target: 8.37%
 Net Added: 0.67%

Six and One-Half Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	27%	26%	15.35%	15.05%	0.03%	0.09%	0.12%
Domestic Fixed Income	18%	17%	5.96%	4.47%	0.25%	(0.02%)	0.23%
Real Estate	10%	10%	14.82%	11.96%	0.27%	0.03%	0.29%
Timber	4%	4%	-	-	(0.26%)	(0.00%)	(0.26%)
Infrastructure	3%	4%	-	-	0.15%	0.10%	0.25%
International Equity	17%	17%	6.82%	4.87%	0.36%	(0.03%)	0.34%
International Fixed Inc.	5%	5%	3.02%	0.96%	0.11%	(0.01%)	0.11%
Private Equity	5%	5%	3.25%	3.25%	0.00%	(0.02%)	(0.02%)
World Equity	11%	11%	-	-	0.00%	(0.04%)	(0.04%)
Cash & Equivalents	1%	1%	0.16%	0.12%	0.00%	(0.00%)	(0.00%)

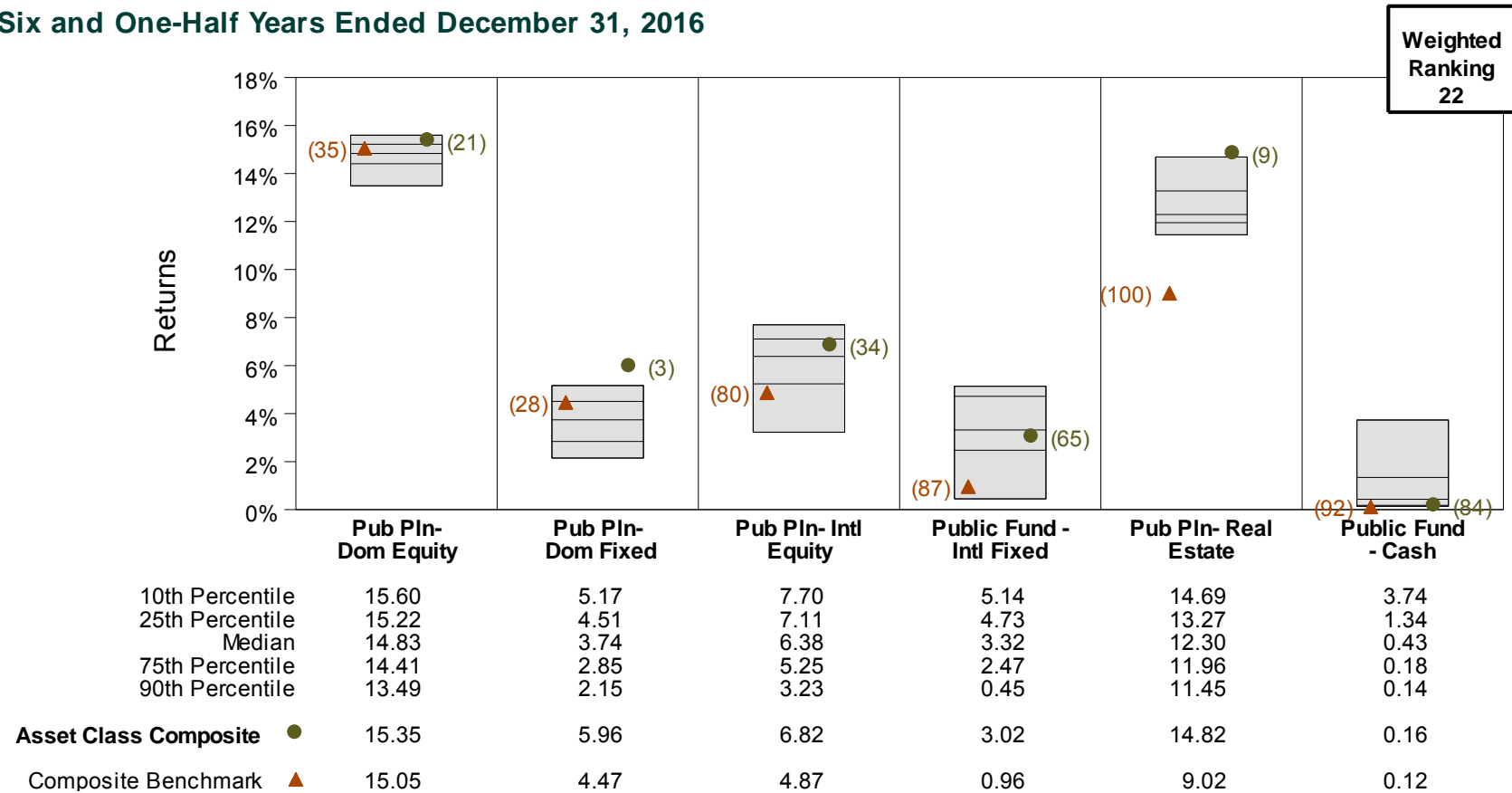
Total **9.39% = 8.37% + 0.93% + 0.09%**

1.02%

Asset Class Composite Results

TFFR's asset class results vs other Public Pension Funds

Total Asset Class Performance
Six and One-Half Years Ended December 31, 2016

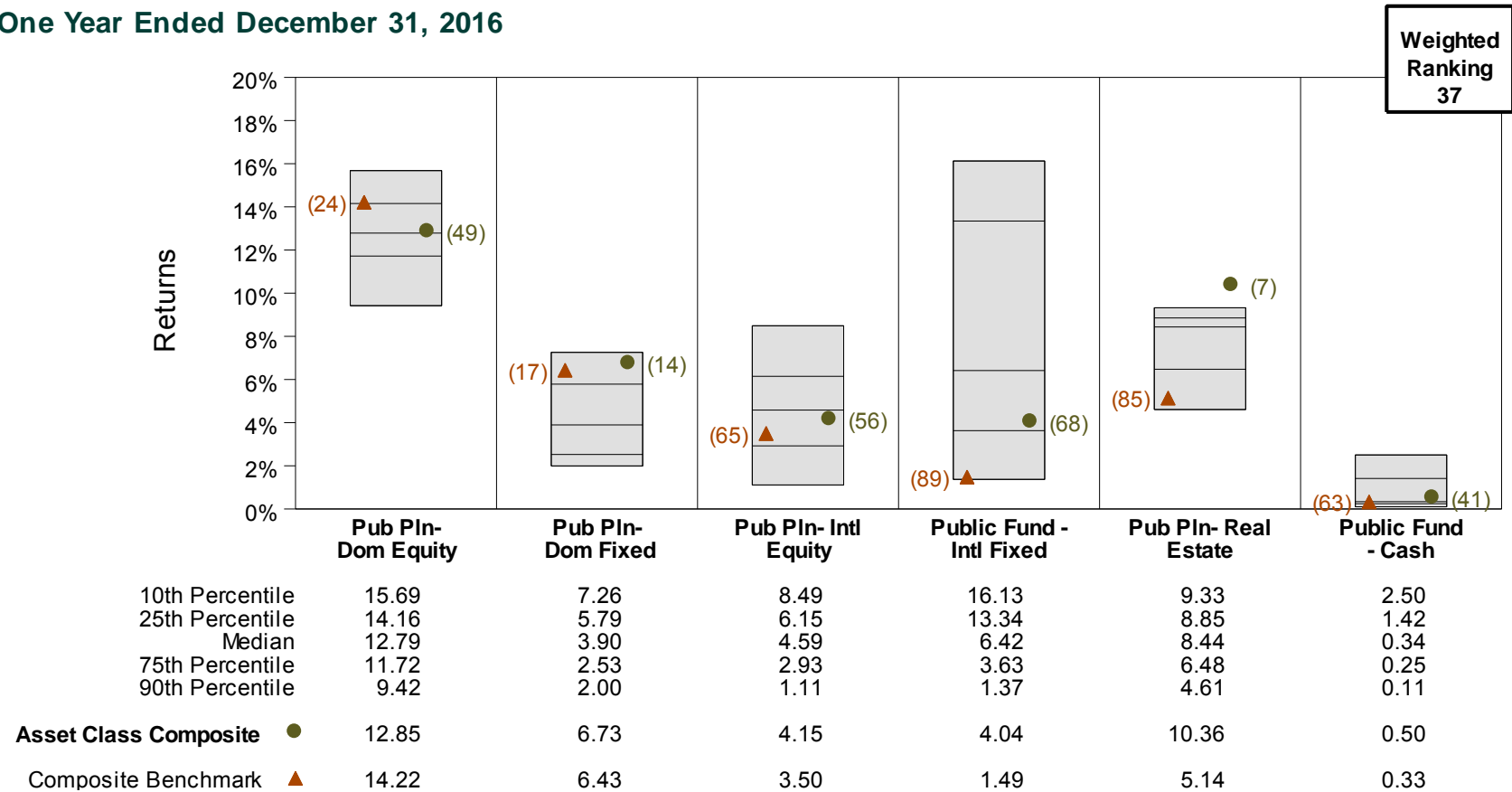


- Public market asset classes are all above their respective medians except international fixed income and cash.
- U.S. equity and fixed income, international equity and real estate returns in top quartile.

Asset Class Composite Results

Consolidated Pension Trust asset class results vs other Public Pension Funds

Total Asset Class Performance
One Year Ended December 31, 2016

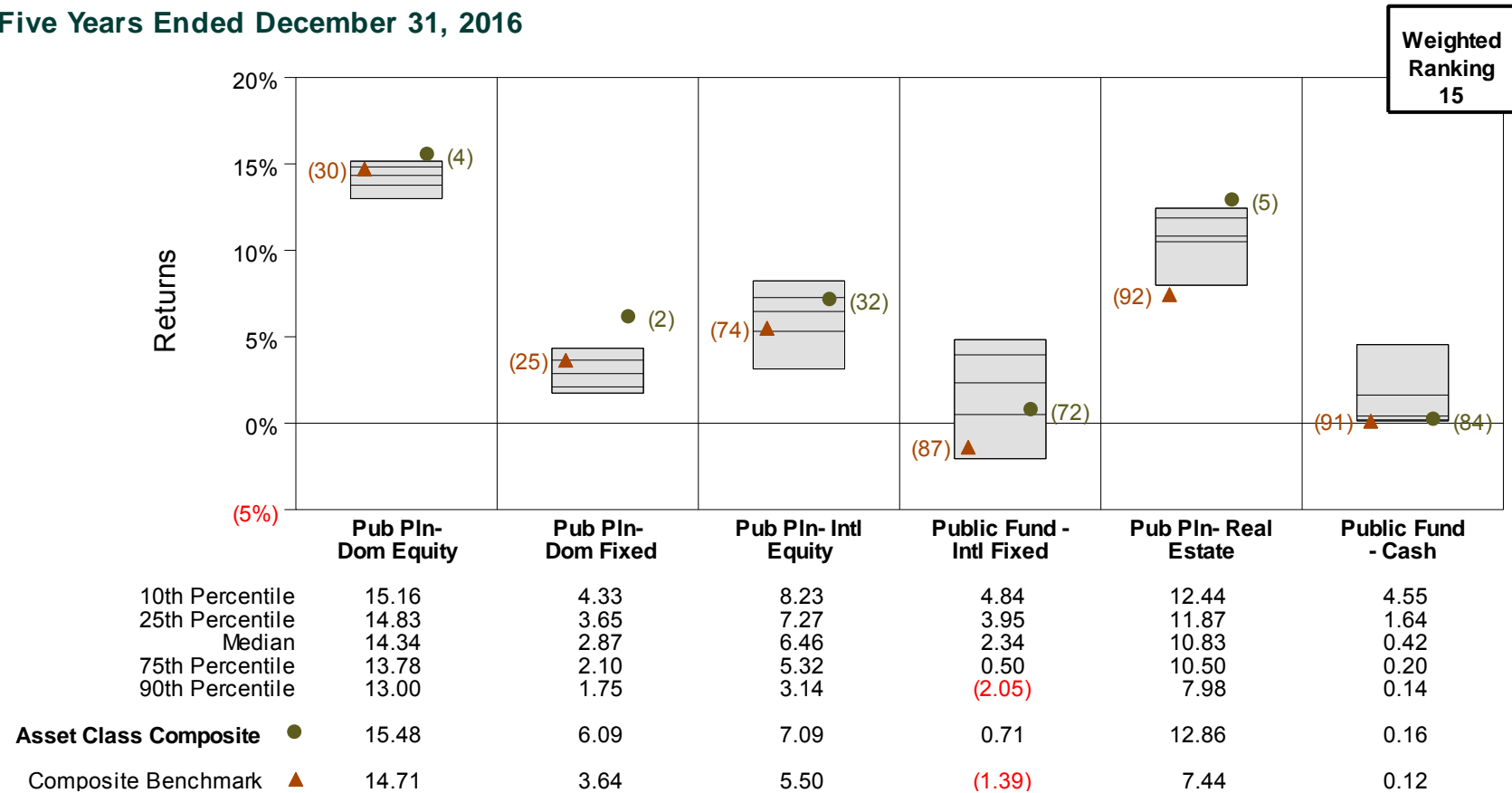


- Public market asset classes are all above their respective benchmarks except domestic equity.
- U.S. fixed income and real estate returns in top quartile.

Asset Class Composite Results

Consolidated Pension Trust asset class results vs other Public Pension Funds

Total Asset Class Performance
Five Years Ended December 31, 2016

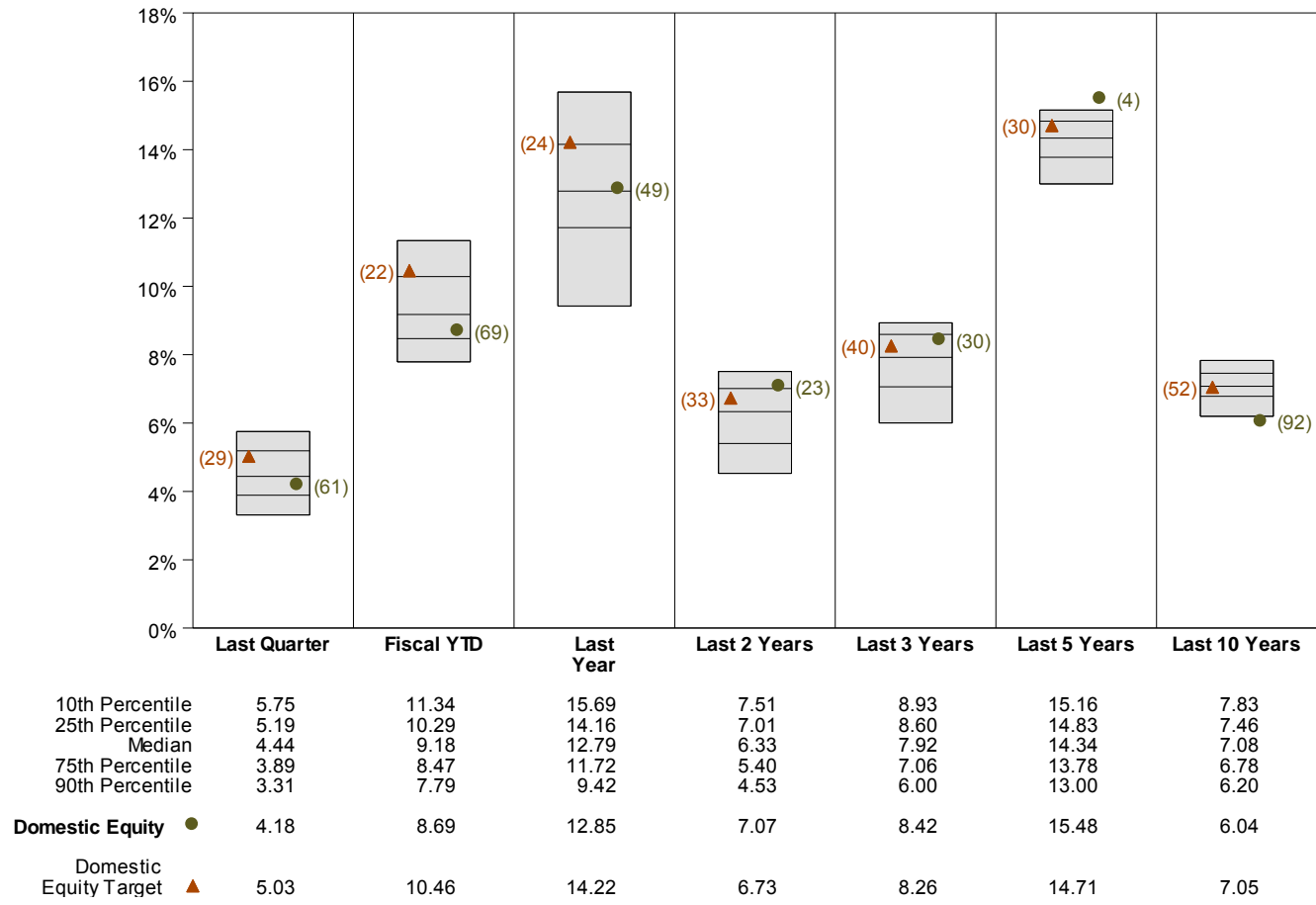


- Public market asset classes are all above their respective benchmarks.
- U.S. equity, U.S. fixed income and real estate returns in top decile.

Consolidated Pension Trust: U.S. Equity

As of December 31, 2016

Performance vs Pub Pln- Domestic Equity (Gross)



- The Domestic Equity returns are above median and the target index for the last 2, 3 and 5-year time frames ended December 31, 2016.

U.S. Equity

Quarter Ended December 31, 2016

Index	Return
Russell 300 Index	4.2%
Russell 3000 Value	1.2%
Russell 3000 Growth	7.2%

Style Exposure Matrix
Holdings as of December 31, 2016

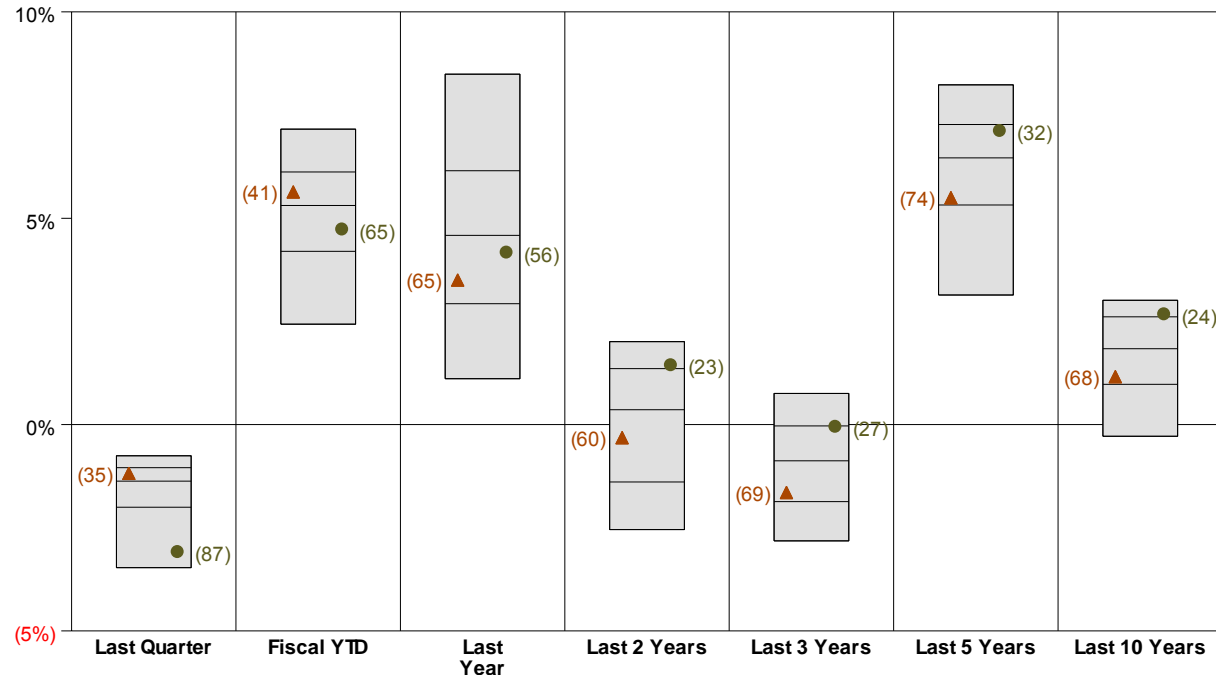
	Value	Core	Growth	Total
Large	17.7% (103)	21.4% (99)	11.7% (84)	50.8% (286)
	27.5% (102)	26.9% (101)	19.5% (91)	73.9% (294)
Mid	10.1% (134)	10.9% (142)	5.7% (98)	26.6% (374)
	5.5% (184)	6.4% (223)	5.5% (184)	17.4% (591)
Small	4.8% (308)	9.6% (430)	6.4% (336)	20.8% (1074)
	2.4% (356)	2.9% (460)	2.2% (370)	7.6% (1186)
Micro	0.5% (254)	0.8% (381)	0.6% (249)	1.9% (884)
	0.3% (254)	0.4% (385)	0.3% (250)	1.0% (889)
Total	33.0% (799)	42.7% (1052)	24.3% (767)	100.0% (2618)
	35.8% (896)	36.7% (1169)	27.5% (895)	100.0% (2960)

- For the quarter, the primary reason that the Consolidated Pension Trust's domestic equity allocation trailed its benchmark is due to the underweight to growth-oriented strategies.
- As noted in the table to the left, value stocks trailed growth stocks by 6.0% during the quarter.
- The red box in the matrix to the right shows that the Pension Trust's equity allocation had 24.3% of its allocation in "growth" stocks versus an index weight of 27.5%.

Consolidated Pension Trust: International Equity

As of December 31, 2016

Performance vs Pub Pln- International Equity (Gross)

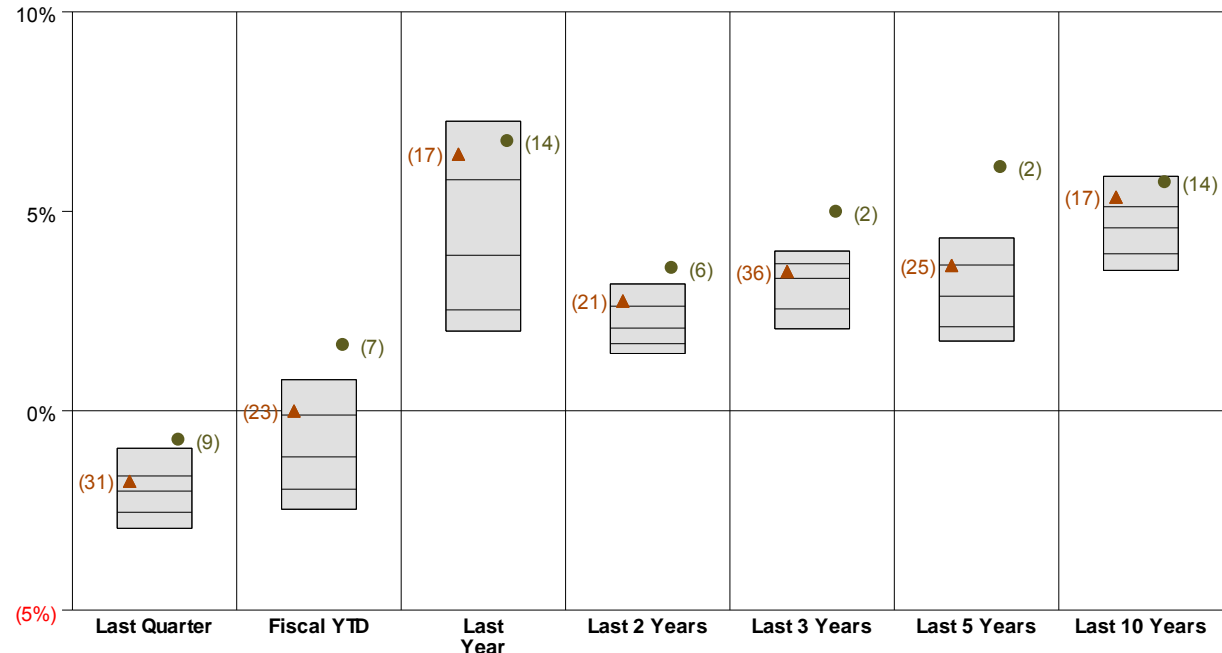


- The Consolidated Pension Trust's International Equity pool's returns are above both those of the target index over the one-, two-, three-, five- and 10-year periods ending December 31, 2016.

Consolidated Pension Trust: U.S. Fixed Income

As of December 31, 2016

Performance vs Pub Pln- Domestic Fixed (Gross)



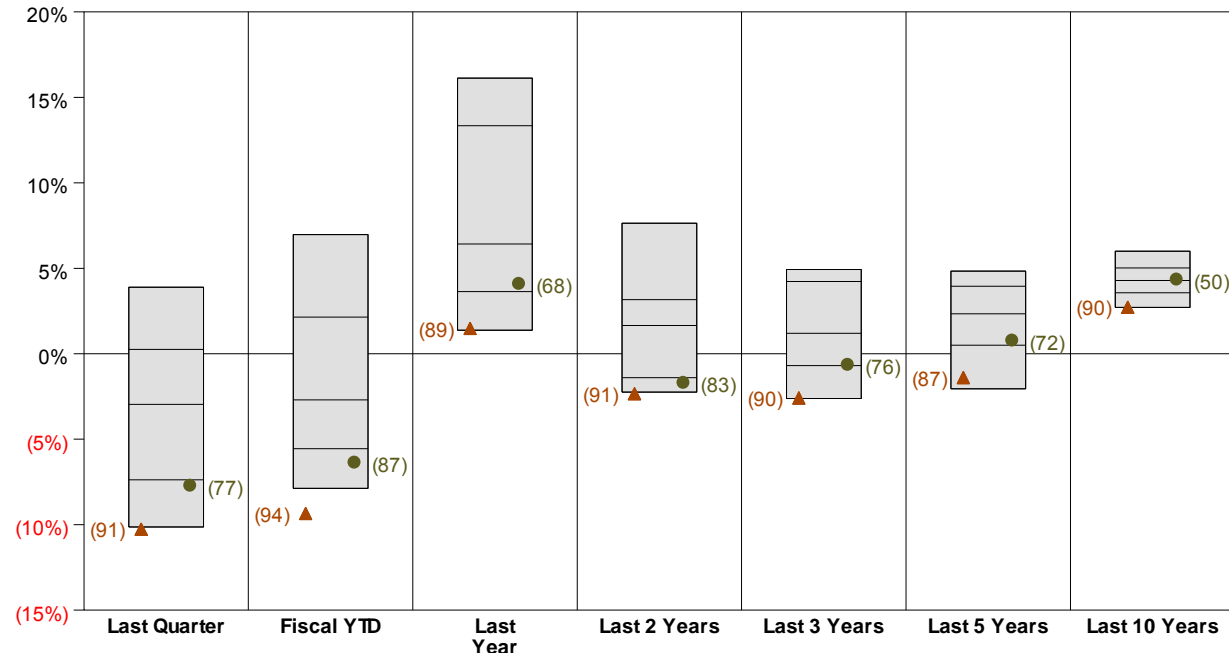
	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	(0.94)	0.78	7.26	3.18	4.00	4.33	5.88
25th Percentile	(1.64)	(0.11)	5.79	2.62	3.68	3.65	5.12
Median	(2.02)	(1.16)	3.90	2.07	3.32	2.87	4.59
75th Percentile	(2.54)	(1.97)	2.53	1.68	2.55	2.10	3.93
90th Percentile	(2.95)	(2.47)	2.00	1.43	2.05	1.75	3.52
Domestic Fixed Income ●	(0.75)	1.63	6.73	3.56	4.96	6.09	5.71
Domestic Fixed Income Target ▲	(1.77)	(0.01)	6.43	2.75	3.49	3.64	5.36

- The Consolidated Pension Trust's domestic fixed income program has outperformed the median manager and the benchmark for all of the provided time frames.

Consolidated Pension Trust: International Fixed Income

As of December 31, 2016

Performance vs Public Fund - International Fixed (Gross)



	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	3.89	6.97	16.13	7.64	4.93	4.84	6.00
25th Percentile	0.25	2.14	13.34	3.16	4.23	3.95	5.02
Median	(2.96)	(2.70)	6.42	1.65	1.20	2.34	4.28
75th Percentile	(7.37)	(5.56)	3.63	(1.40)	(0.69)	0.50	3.57
90th Percentile	(10.14)	(7.88)	1.37	(2.24)	(2.62)	(2.05)	2.71
International Fixed Income	● (7.77)	(6.42)	4.04	(1.77)	(0.71)	0.71	4.28
International Fixed Income Target	▲ (10.26)	(9.34)	1.49	(2.34)	(2.59)	(1.39)	2.72

- International Fixed Income consistently exceeds index for all time frames over the last 10 years.



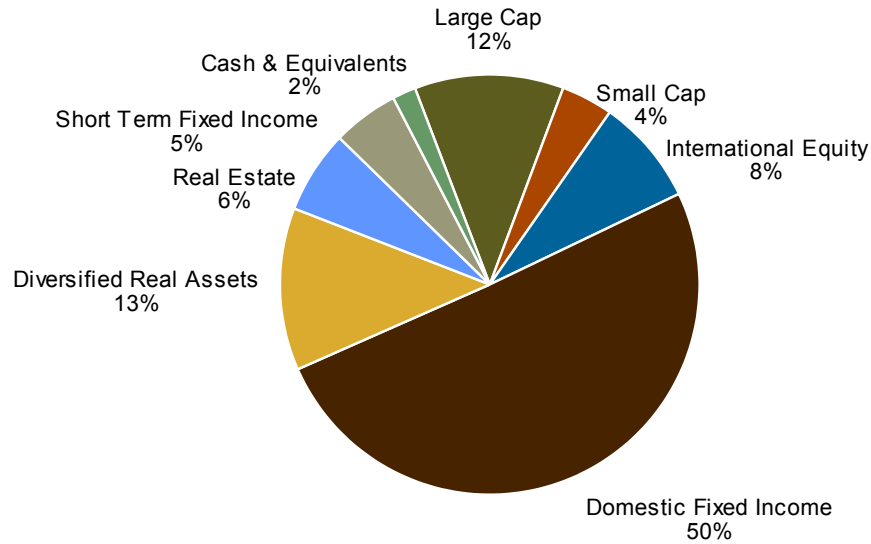
Consolidated Insurance Trust Quarterly Review

- Workforce Safety & Insurance Legacy Fund
- Budget Stabilization Fund

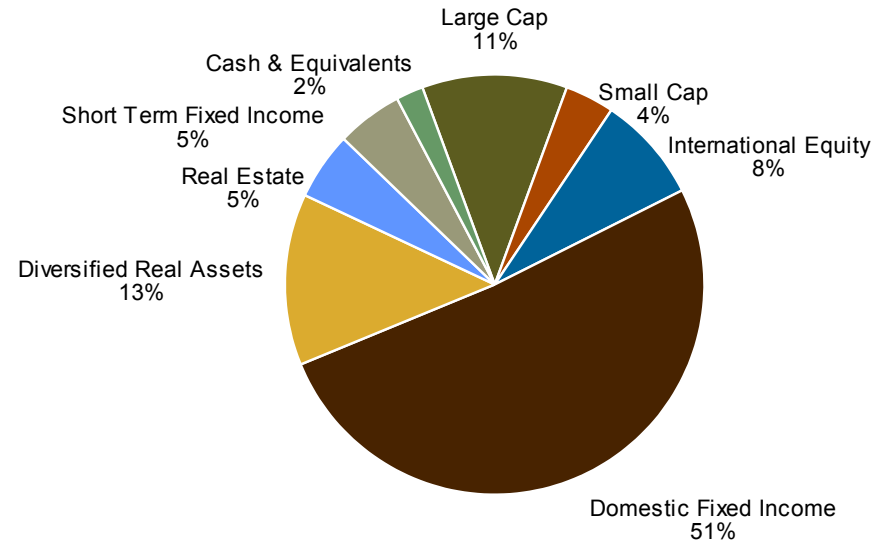
Consolidated Insurance Trust Allocation

As of December 31, 2016

Actual Asset Allocation



Target Asset Allocation

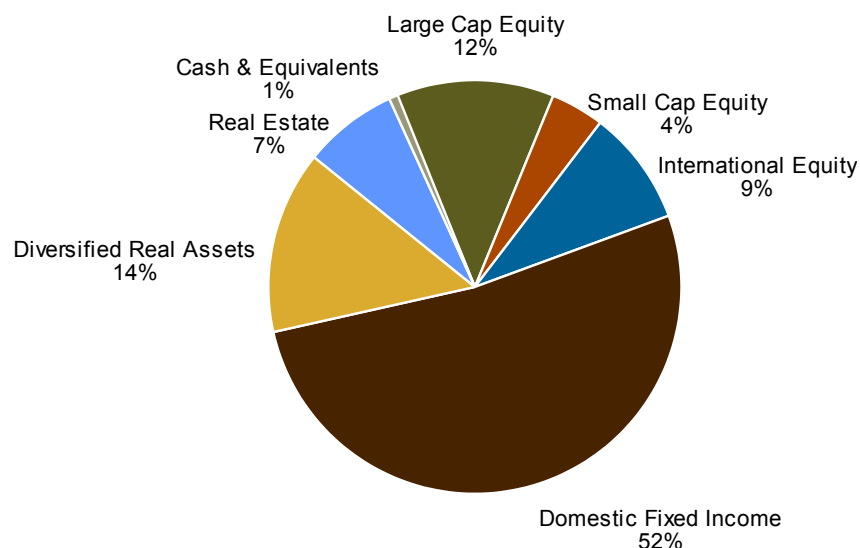


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap	241,681	11.5%	11.2%	0.3%	6,416
Small Cap	84,231	4.0%	3.8%	0.2%	4,409
International Equity	172,055	8.2%	8.2%	0.0%	(192)
Domestic Fixed Income	1,060,438	50.5%	51.2%	(0.7%)	(15,058)
Diversified Real Assets	263,547	12.5%	13.2%	(0.7%)	(13,729)
Real Estate	134,356	6.4%	5.2%	1.2%	25,126
Short Term Fixed Income	106,927	5.1%	5.1%	0.0%	(202)
Cash & Equivalents	37,341	1.8%	2.1%	(0.3%)	(6,771)
Total	2,100,577	100.0%	100.0%		

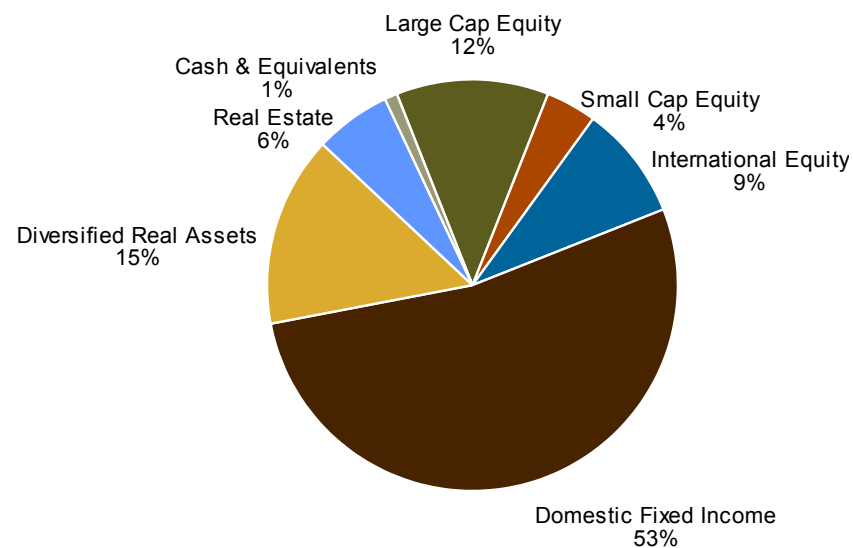
WSI Allocation

As of December 31, 2016

Actual Asset Allocation



Target Asset Allocation

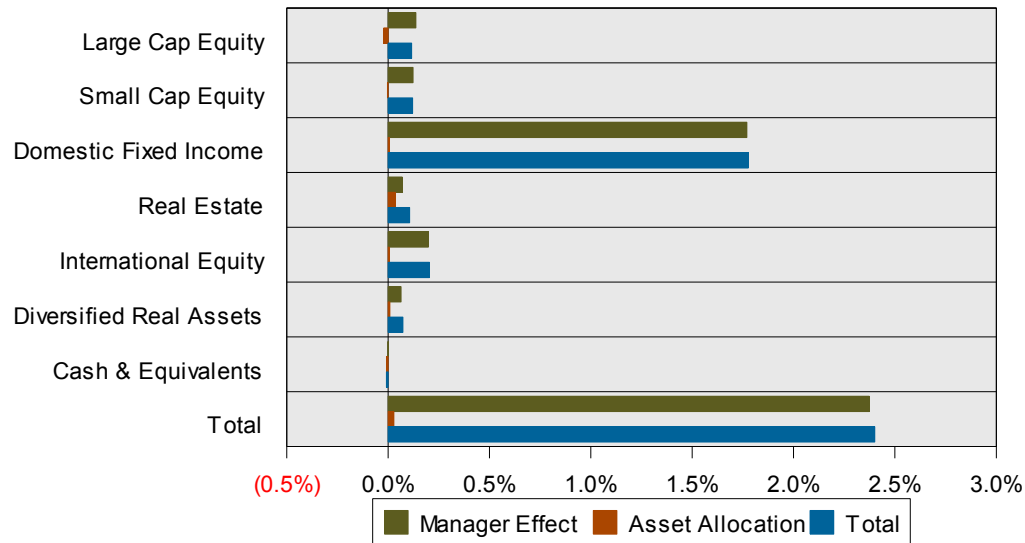


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap Equity	225,465	12.4%	12.0%	0.4%	6,452
Small Cap Equity	77,372	4.2%	4.0%	0.2%	4,367
International Equity	164,038	9.0%	9.0%	0.0%	(222)
Domestic Fixed Income	951,304	52.1%	53.0%	(0.9%)	(16,005)
Diversified Real Assets	260,226	14.3%	15.0%	(0.7%)	(13,540)
Real Estate	134,290	7.4%	6.0%	1.4%	24,784
Cash & Equivalents	12,415	0.7%	1.0%	(0.3%)	(5,836)
Total	1,825,111	100.0%	100.0%		

WSI Performance and Attribution

As of December 31, 2016

One Year Relative Attribution Effects



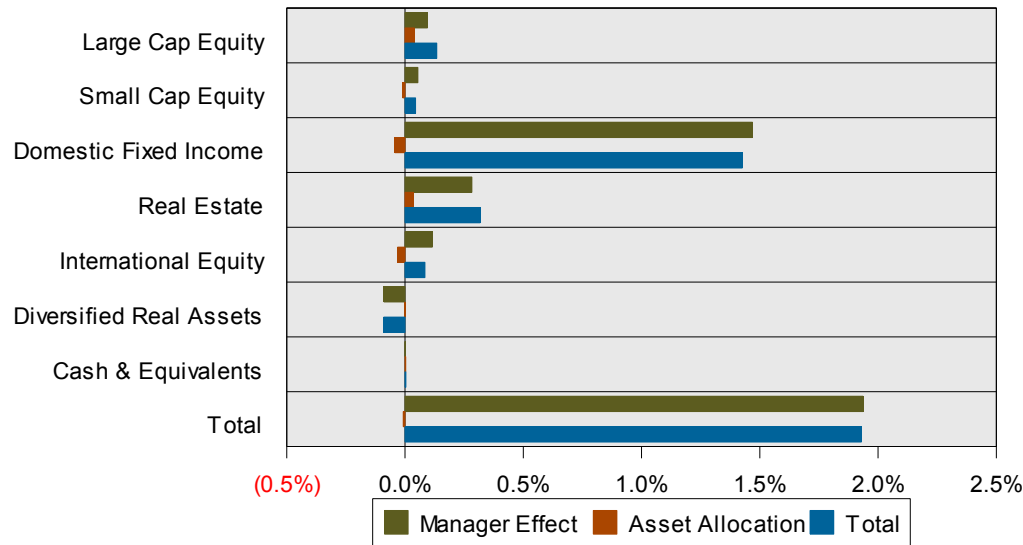
One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	12%	12%	13.25%	12.05%	0.14%	(0.02%)	0.12%
Small Cap Equity	4%	4%	24.97%	21.31%	0.12%	(0.00%)	0.12%
Domestic Fixed Income	53%	53%	6.01%	2.65%	1.77%	0.01%	1.78%
Real Estate	7%	6%	8.98%	7.97%	0.07%	0.04%	0.11%
International Equity	9%	9%	3.42%	1.22%	0.20%	0.01%	0.20%
Diversified Real Assets	15%	15%	3.46%	3.01%	0.06%	0.01%	0.07%
Cash & Equivalents	1%	1%	0.25%	0.33%	(0.00%)	(0.01%)	(0.01%)
Total			7.24%	4.84%	+ 2.37%	+ 0.03%	2.40%

WSI Performance and Attribution

As of December 31, 2016

Six and One-Half Year Annualized Relative Attribution Effects



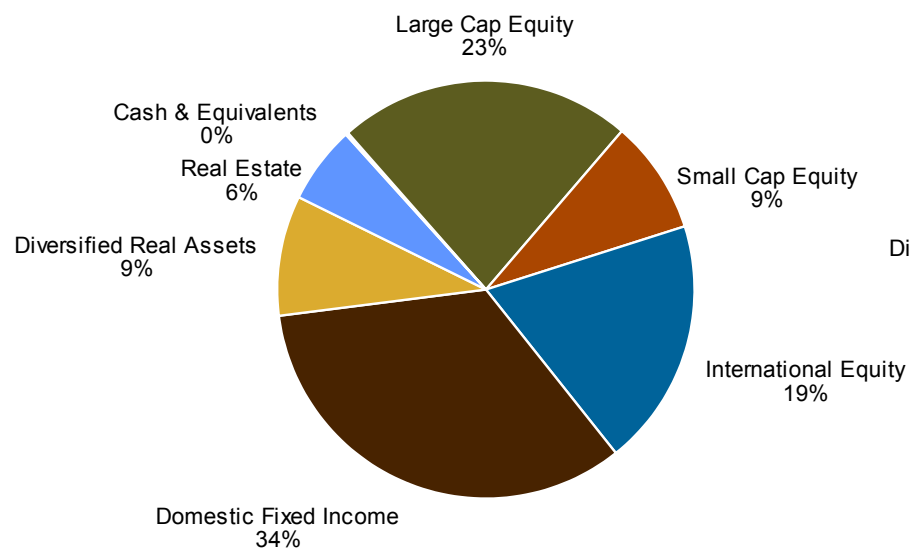
Six and One-Half Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	11%	11%	16.03%	15.13%	0.09%	0.04%	0.13%
Small Cap Equity	4%	4%	16.30%	14.68%	0.05%	(0.01%)	0.04%
Domestic Fixed Income	52%	52%	5.89%	3.08%	1.47%	(0.04%)	1.43%
Real Estate	6%	6%	16.79%	11.96%	0.28%	0.03%	0.32%
International Equity	8%	8%	7.06%	5.57%	0.12%	(0.03%)	0.08%
Diversified Real Assets	19%	19%	4.14%	4.58%	(0.09%)	(0.00%)	(0.09%)
Cash & Equivalents	1%	1%	0.17%	0.12%	0.00%	0.00%	0.00%
Total			7.74%	5.81%	1.94%	(0.01%)	1.93%

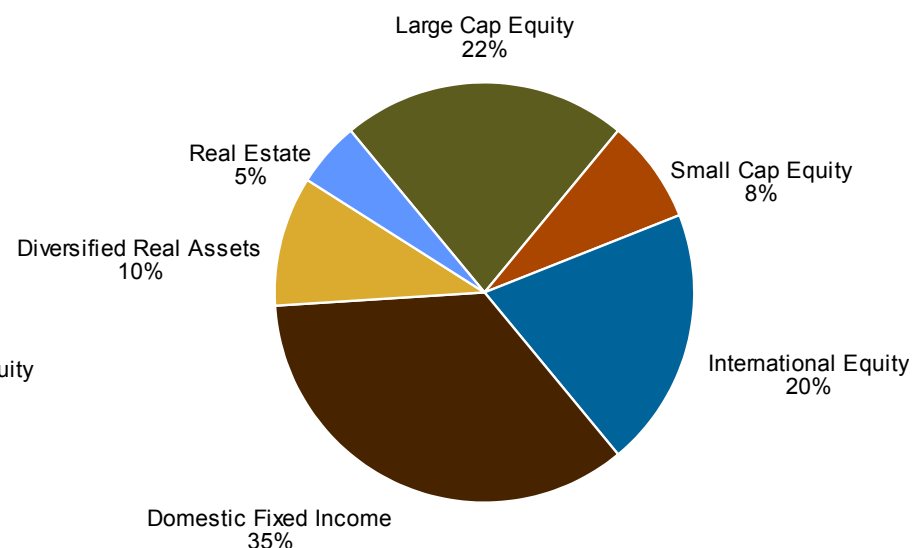
Legacy Fund Allocation

As of December 31, 2016

Actual Asset Allocation



Target Asset Allocation

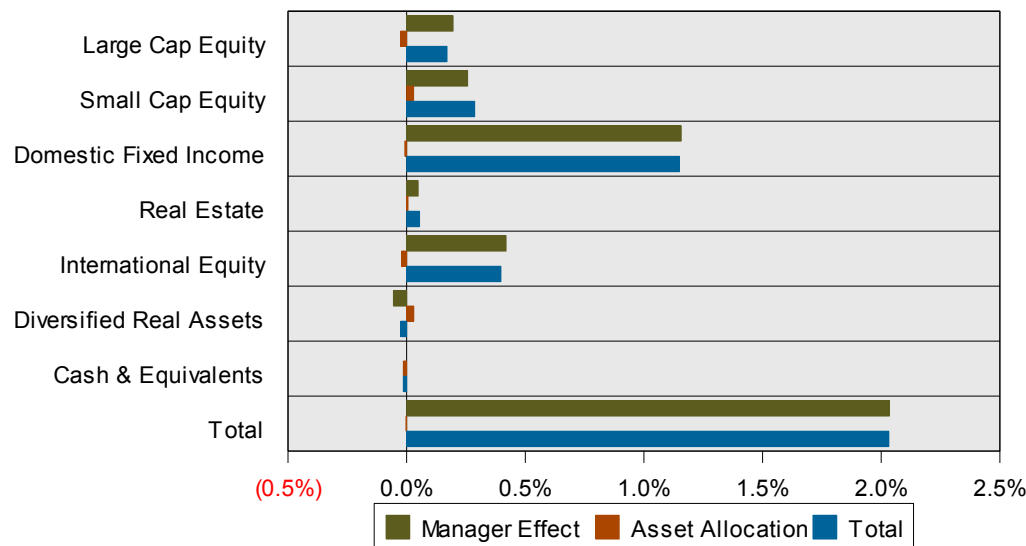


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap Equity	956,157	22.8%	22.0%	0.8%	34,503
Small Cap Equity	369,572	8.8%	8.0%	0.8%	34,425
International Equity	805,323	19.2%	20.0%	(0.8%)	(32,544)
Domestic Fixed Income	1,410,552	33.7%	35.0%	(1.3%)	(55,715)
Diversified Real Assets	390,428	9.3%	10.0%	(0.7%)	(28,506)
Real Estate	251,367	6.0%	5.0%	1.0%	41,901
Cash & Equivalents	5,936	0.1%	0.0%	0.1%	5,936
Total	4,189,336	100.0%	100.0%		

Legacy Fund Performance and Attribution

As of December 31, 2016

One Year Relative Attribution Effects



1 Year Ended 12/31/16
 Gross: 8.42%
 Net of fees: 8.15%
 Target: 6.39%
 Net Added: 1.76%

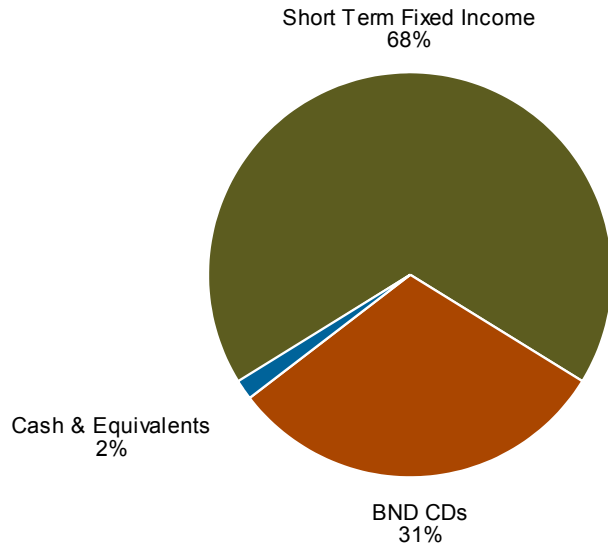
One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	22%	22%	13.01%	12.05%	0.20%	(0.03%)	0.17%
Small Cap Equity	8%	8%	25.11%	21.31%	0.26%	0.03%	0.29%
Domestic Fixed Income	35%	35%	5.97%	2.65%	1.16%	(0.01%)	1.15%
Real Estate	6%	5%	8.93%	7.97%	0.05%	0.01%	0.05%
International Equity	19%	20%	3.25%	1.22%	0.42%	(0.02%)	0.40%
Diversified Real Assets	10%	10%	2.84%	3.33%	(0.06%)	0.03%	(0.03%)
Cash & Equivalents	0%	0%	0.25%	0.25%	0.00%	(0.01%)	(0.01%)
Total			8.42%	6.39%	+ 2.04%	+ (0.00%)	2.03%

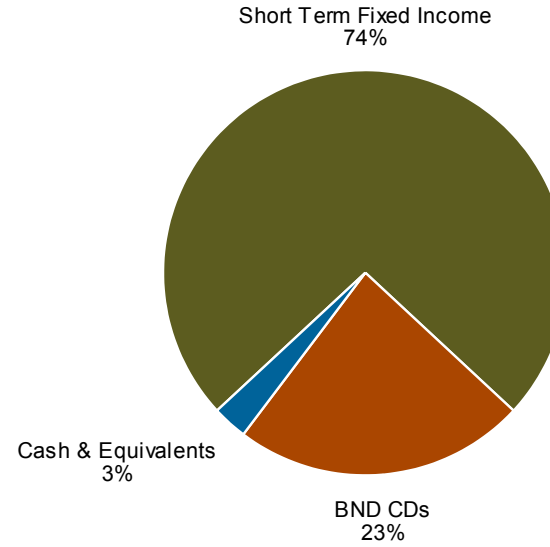
Budget Stabilization Fund Allocation

As of December 31, 2016

Actual Asset Allocation



Target Asset Allocation

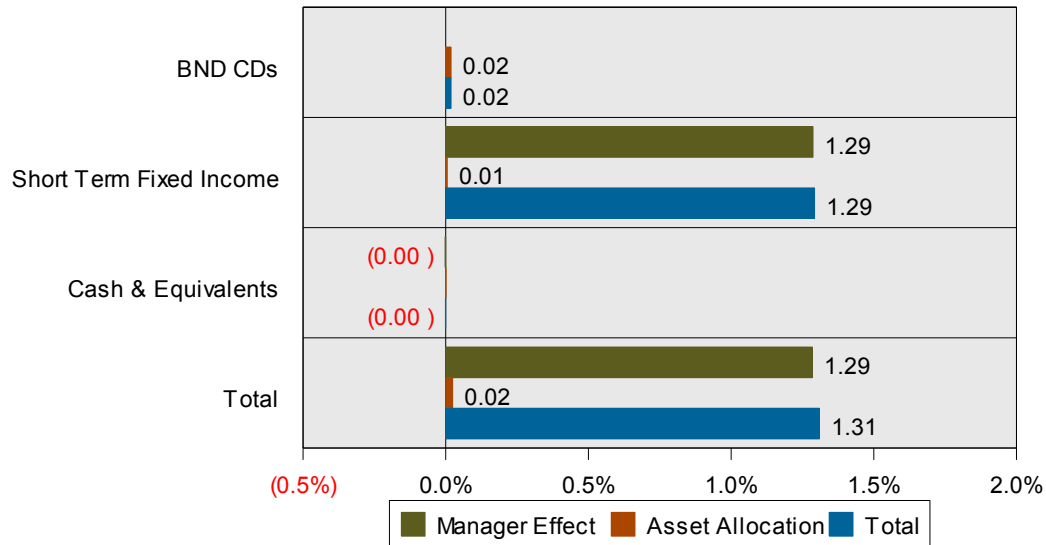


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Short Term Fixed Income	70,045	67.7%	73.8%	(6.1%)	(6,345)
BND CDs	31,857	30.8%	23.4%	7.3%	7,588
Cash & Equivalents	1,636	1.6%	2.8%	(1.2%)	(1,243)
Total	103,538	100.0%	100.0%		

Budget Stabilization Fund Overview

As of December 31, 2016

One Year Relative Attribution Effects



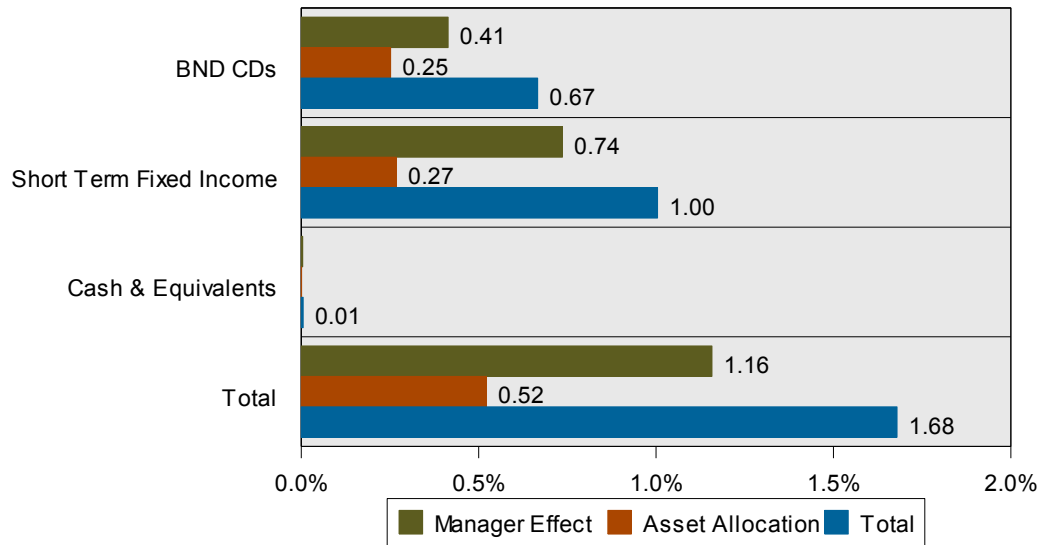
One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return		
BND CDs	17%	16%	2.68%	2.68%	0.00%	0.02%	0.02%		
Short Term Fixed Income	81%	82%	2.43%	0.87%	1.29%	0.01%	1.29%		
Cash & Equivalents	2%	2%	0.25%	0.33%	(0.00%)	0.00%	(0.00%)		
Total			2.50%	1.20%	+	1.29%	+	0.02%	1.31%

Budget Stabilization Fund Overview

As of December 31, 2016

Six and One-Half Year Annualized Relative Attribution Effects



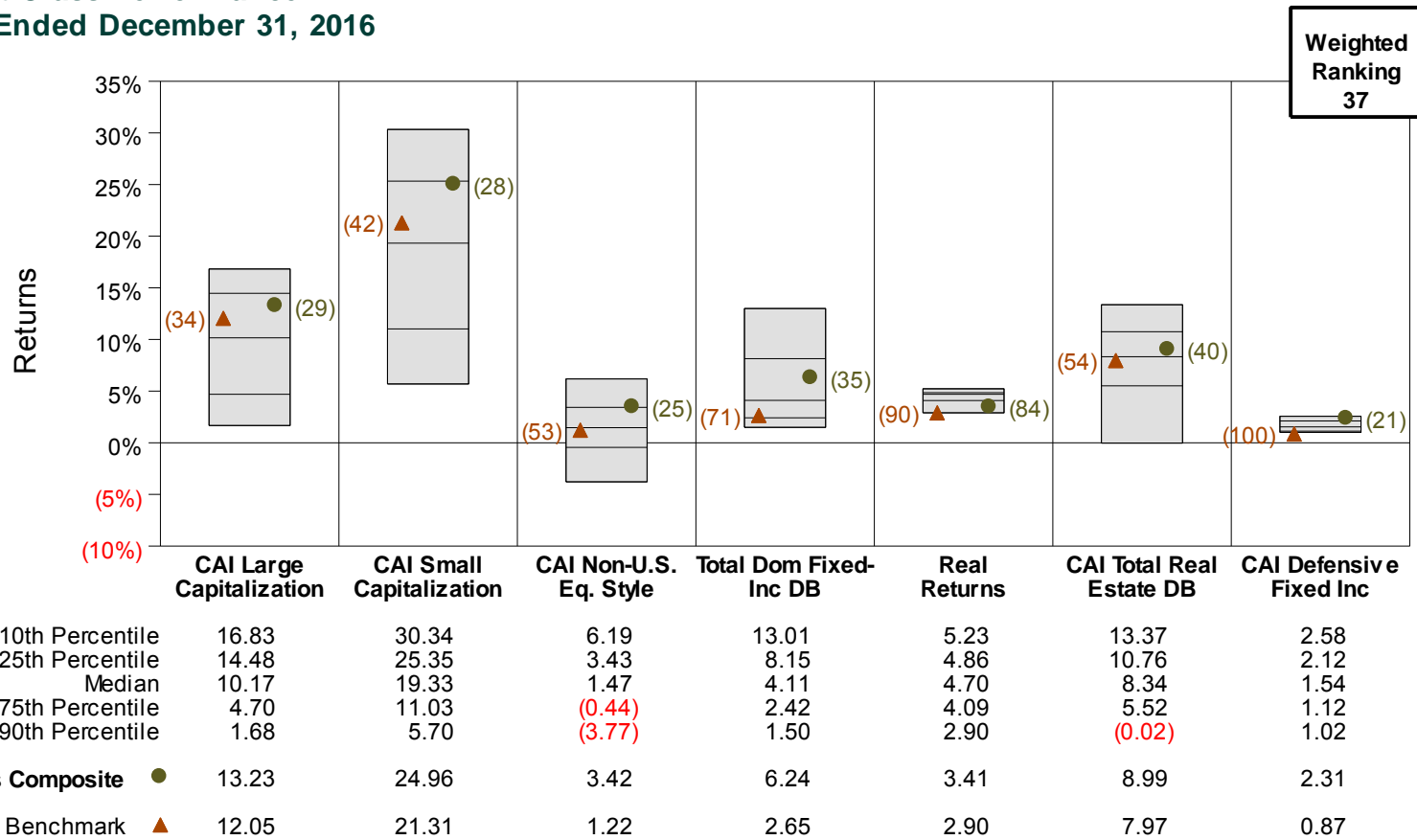
Six and One-Half Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
BND CDs	22%	16%	3.38%	1.48%	0.41%	0.25%	0.67%
Short Term Fixed Income	74%	63%	1.91%	0.96%	0.74%	0.27%	1.00%
Cash & Equivalents	4%	21%	0.17%	0.12%	0.00%	0.00%	0.01%
Total			2.21%		0.53%	1.16%	1.68%

Asset Class Composite Results

Consolidated Insurance Trust asset class results vs Callan Style Groups

Total Asset Class Performance
One Year Ended December 31, 2016

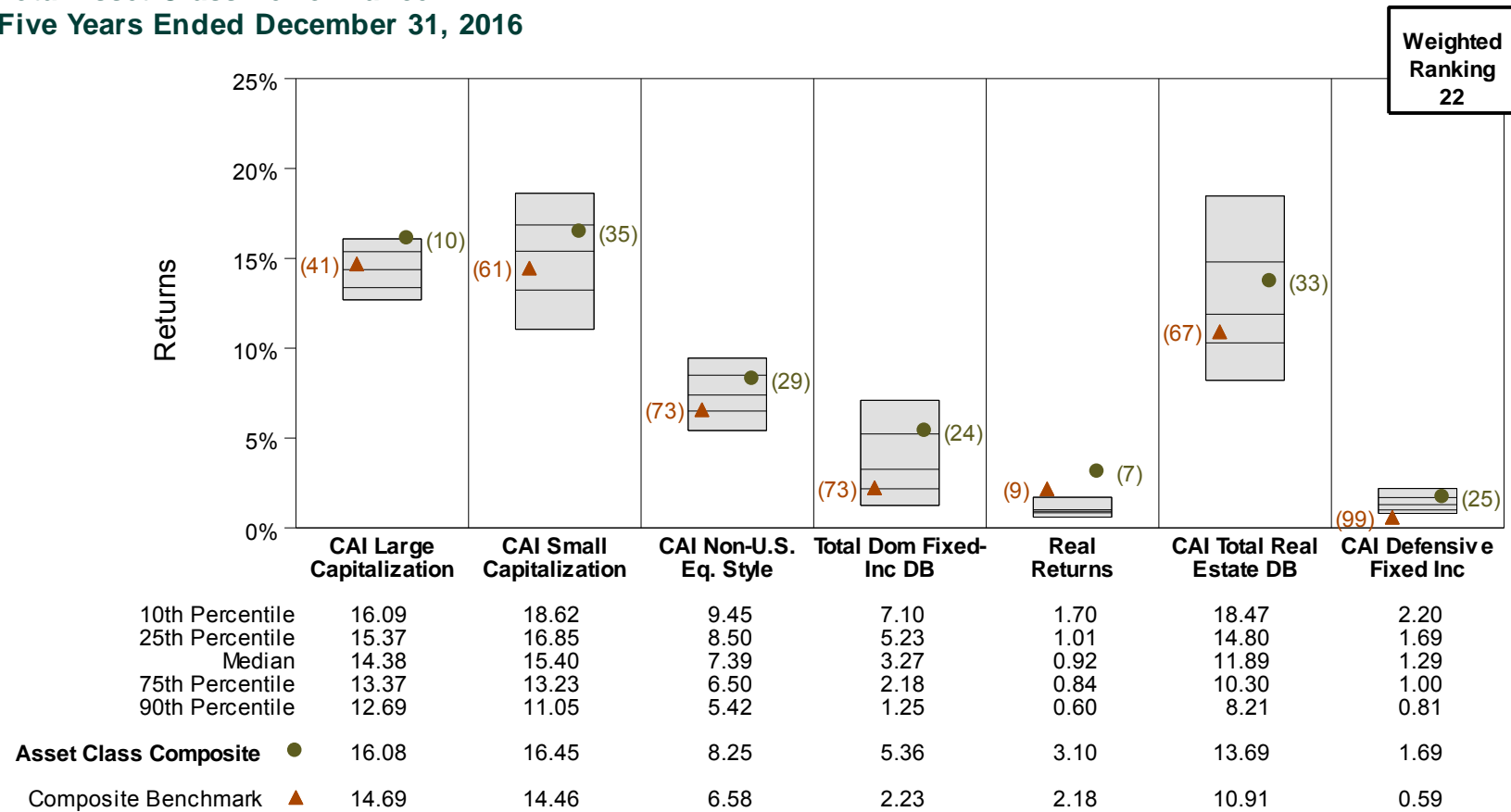


- All asset classes are above their respective benchmarks.
- Non-U.S. equity and defensive fixed income in top quartile.

Asset Class Composite Results

Consolidated Insurance Trust asset class results vs Callan Style Groups

Total Asset Class Performance
Five Years Ended December 31, 2016

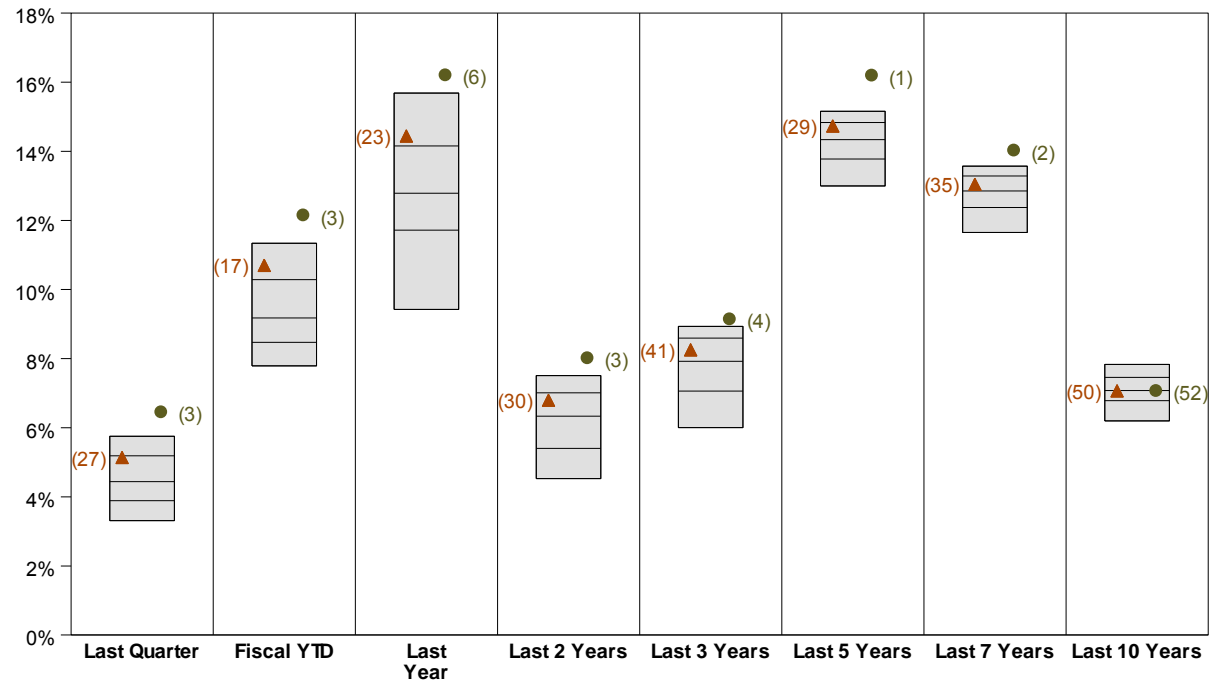


- All asset classes are above their respective benchmarks.
- Large cap equity and real return in the top decile.

Consolidated Insurance Trust: Domestic Equity

As of December 31, 2016

Performance vs Pub Pln- Domestic Equity (Gross)



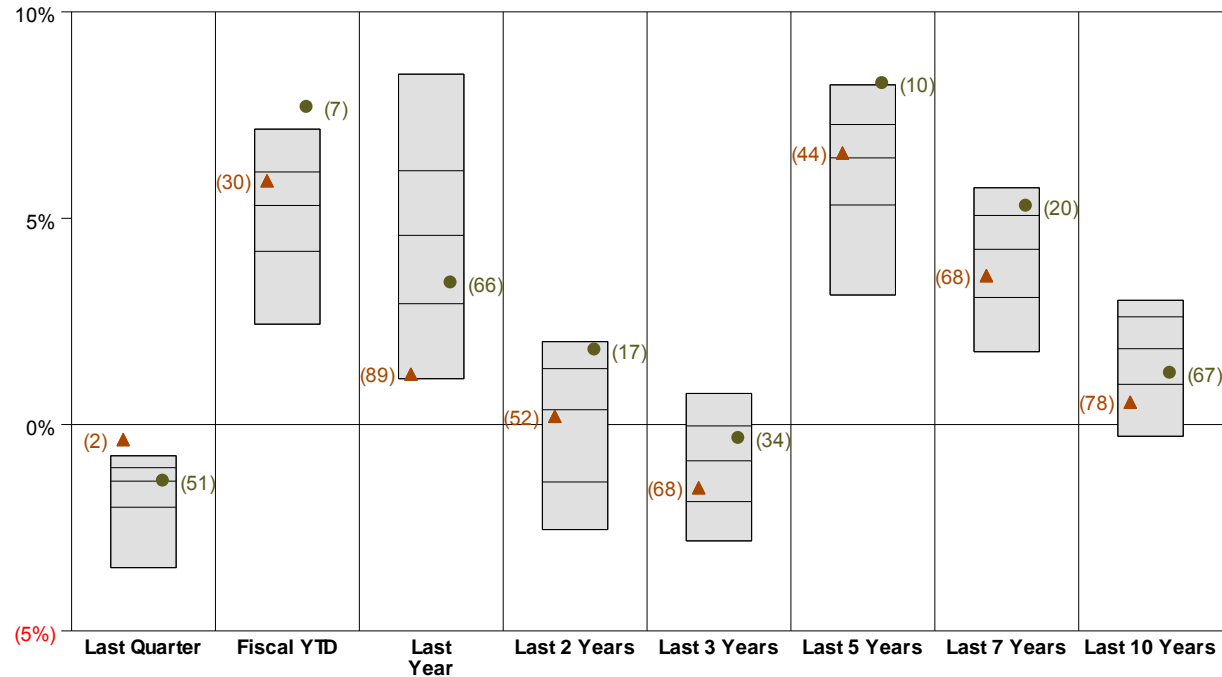
	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years
10th Percentile	5.75	11.34	15.69	7.51	8.93	15.16	13.57	7.83
25th Percentile	5.19	10.29	14.16	7.01	8.60	14.83	13.29	7.46
Median	4.44	9.18	12.79	6.33	7.92	14.34	12.85	7.08
75th Percentile	3.89	8.47	11.72	5.40	7.06	13.78	12.37	6.78
90th Percentile	3.31	7.79	9.42	4.53	6.00	13.00	11.65	6.20
Domestic Equity ●	6.42	12.12	16.17	7.98	9.12	16.16	13.99	7.04
Domestic Equity Target ▲	5.14	10.70	14.44	6.80	8.25	14.73	13.05	7.07

- The fund has outperformed the benchmark and placed above median for all time frames except the last 10 years.

Consolidated Insurance Trust: International Equity

As of December 31, 2016

Performance vs Pub Pln- International Equity (Gross)



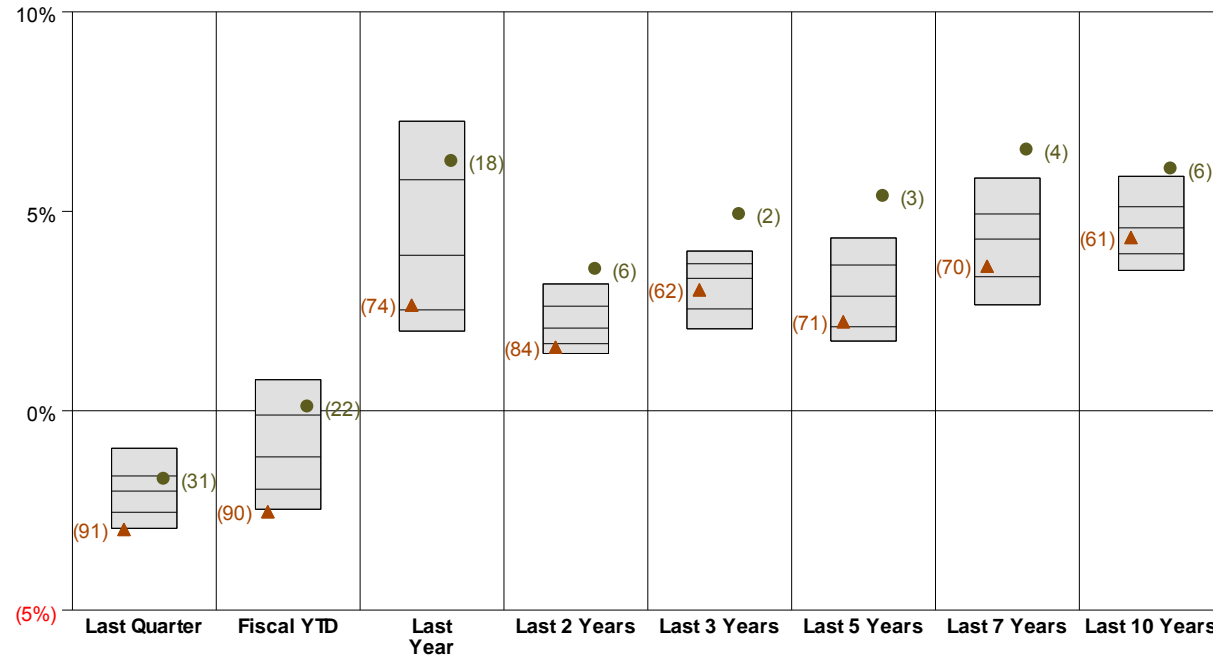
	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years
10th Percentile	(0.76)	7.16	8.49	2.01	0.75	8.23	5.74	3.01
25th Percentile	(1.04)	6.12	6.15	1.36	(0.03)	7.27	5.07	2.61
Median	(1.37)	5.31	4.59	0.36	(0.88)	6.46	4.25	1.84
75th Percentile	(2.00)	4.20	2.93	(1.39)	(1.87)	5.32	3.08	0.98
90th Percentile	(3.47)	2.43	1.11	(2.55)	(2.82)	3.14	1.77	(0.28)
International Equity ●	(1.38)	7.68	3.42	1.80	(0.35)	8.25	5.28	1.23
International Equity Target ▲	(0.36)	5.91	1.22	0.20	(1.53)	6.58	3.61	0.54

- The International Equity program has beaten the benchmark for all time frames except the last quarter.

Consolidated Insurance Trust: Domestic Fixed Income

As of December 31, 2016

Performance vs Pub Pln- Domestic Fixed (Gross)



	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years
10th Percentile	(0.94)	0.78	7.26	3.18	4.00	4.33	5.83	5.88
25th Percentile	(1.64)	(0.11)	5.79	2.62	3.68	3.65	4.93	5.12
Median	(2.02)	(1.16)	3.90	2.07	3.32	2.87	4.30	4.59
75th Percentile	(2.54)	(1.97)	2.53	1.68	2.55	2.10	3.36	3.93
90th Percentile	(2.95)	(2.47)	2.00	1.43	2.05	1.75	2.65	3.52
Domestic Fixed Income	● (1.73)	0.08	6.24	3.53	4.91	5.36	6.52	6.05
Domestic Fixed Inc. Target	▲ (2.98)	(2.53)	2.65	1.59	3.03	2.23	3.63	4.34

- Fixed Income has been an exceptionally well-performing asset in the Insurance Trust, outperforming the index and median managers for all time periods except the last quarter.

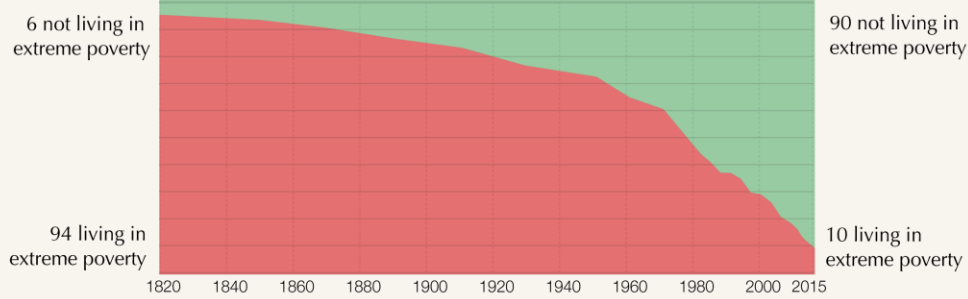
Watch List Managers

As of December 31, 2016

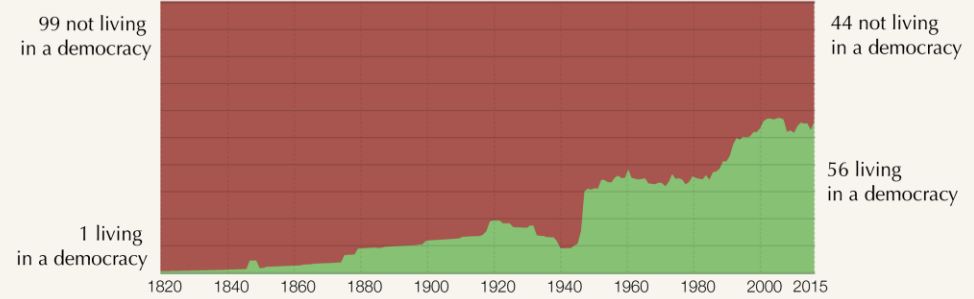
- PIMCO MBS
- PIMCO Unconstrained
- UBS Global Fixed Income
- JP Morgan MBS
- Adams Street Partners

The World as 100 People over the last two centuries

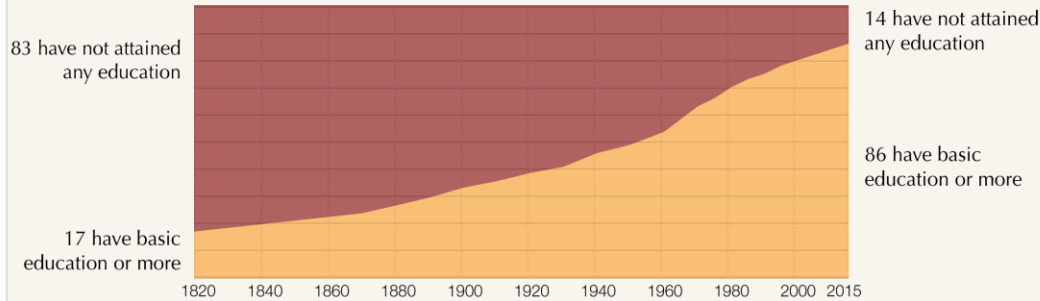
Extreme Poverty



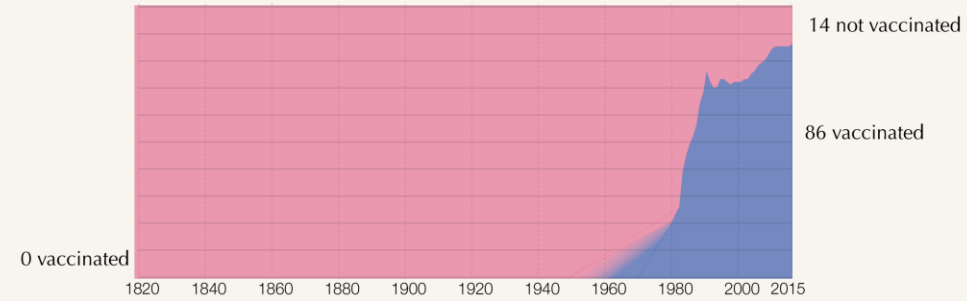
Democracy



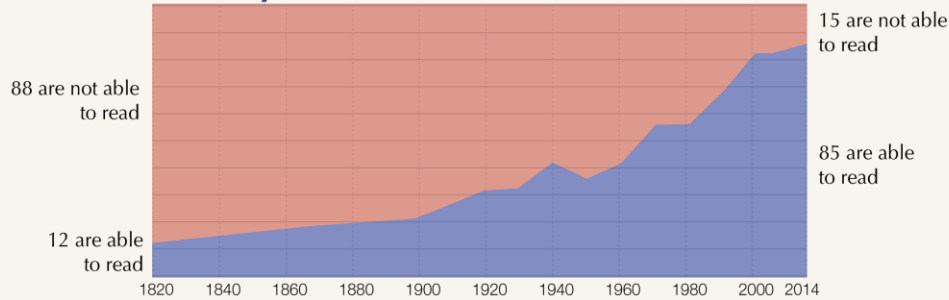
Basic Education



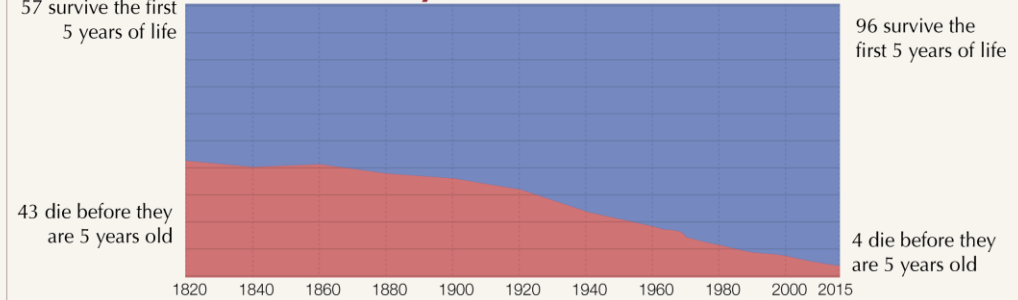
Vaccination against diphtheria, pertussis (whooping cough), and tetanus



Literacy



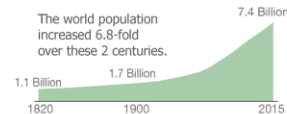
Child Mortality



Data sources:

Extreme Poverty: Bourguignon & Morrison (2002) up to 1970 – World Bank 1981 and later (2015 is a projection).
 Vaccination: WHO (Global data are available for 1980 to 2015 – the DPT3 vaccination was licenced in 1949)
 Education: OECD for the period 1820 to 1960. IIASA for the time thereafter.
 Literacy: OECD for the period 1820 to 1990. UNESCO for 2004 and later.

Democracy: Polity IV index (own calculation of global population share)
 Colonialism: Wimmer and Min (own calculation of global population share)
 Continent: HYDE database
 Child mortality: up to 1960 own calculations based on Gapminder; World Bank thereafter



All these visualizations are from OurWorldInData.org an online publication that presents the empirical evidence on how the world is changing.

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Four resource suggestions for the curious

Investment opportunities abound . . . as do risks

1. An informative magazine to stay current on business, culture, design, gear, science, security, technology and other developments that will drive the future:



<https://www.wired.com/>

2. TED Talks. 10 to 18-minute presentations on a wide variety of topics given by subject specialists. You can watch & listen on a computer or digital device: <http://www.ted.com/topics>.

Two broad monthly market overviews:

3. Eaton Vance, “Monthly Market Monitor”:
https://institutional.eatonvance.com/?asp_role=Institutional%20Investors
4. JP Morgan, “Guide to the Markets” (quarterly with monthly updates):
<https://am.jpmorgan.com/us/en/asset-management/gim/adv/insights/guide-to-the-markets/viewer>

The Callan Periodic Table of Investment Returns

Annual Returns for Key Indices Ranked in Order of Performance (1997–2016)

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
S&P 500 Growth 36.52%	S&P 500 Growth 42.16%	MSCI Emerging Markets 66.42%	Russell 2000 Value 22.83%	Russell 2000 Value 14.02%	Bloomberg Barclays Agg 10.26%	MSCI Emerging Markets 56.28%	MSCI Emerging Markets 25.95%	MSCI Emerging Markets 34.54%	MSCI Emerging Markets 32.59%	MSCI Emerging Markets 39.78%	Bloomberg Barclays Agg 5.24%	MSCI Emerging Markets 79.02%	Russell 2000 Growth 29.09%	Bloomberg Barclays Agg 7.84%	MSCI Emerging Markets 18.63%	Russell 2000 Growth 43.30%	S&P 500 Growth 14.89%	S&P 500 Growth 5.52%	Russell 2000 Value 31.74%
S&P 500 33.36%	S&P 500 28.58%	Russell 2000 Growth 43.09%	Bloomberg Barclays Agg 11.63%	Bloomberg Barclays Agg 8.43%	Bloomberg Barclays High Yield -1.41%	Russell 2000 Growth 48.54%	Russell 2000 Value 22.25%	MSCI EAFE 13.54%	MSCI EAFE 26.34%	MSCI EAFE 11.17%	Bloomberg Barclays High Yield -26.16%	Bloomberg Barclays High Yield 58.21%	Russell 2000 26.85%	Bloomberg Barclays High Yield 4.98%	Russell 2000 Value 18.05%	Russell 2000 38.82%	S&P 500 13.69%	S&P 500 1.38%	Russell 2000 21.31%
Russell 2000 Value 31.78%	MSCI EAFE 20.00%	S&P 500 Growth 28.24%	S&P 500 Value 6.08%	Bloomberg Barclays High Yield 5.28%	MSCI Emerging Markets -6.00%	Russell 2000 47.25%	MSCI EAFE 20.25%	S&P 500 Value 5.82%	Russell 2000 Value 23.48%	S&P 500 Growth 9.13%	Russell 2000 Value -28.92%	Russell 2000 Growth 34.47%	Russell 2000 Value 24.50%	S&P 500 Growth 4.65%	S&P 500 Value 17.68%	Russell 2000 Value 34.52%	S&P 500 Value 12.36%	Bloomberg Barclays Agg 0.55%	S&P 500 Value 17.40%
S&P 500 Value 29.98%	S&P 500 Value 14.69%	MSCI EAFE 26.96%	Russell 2000 -3.02%	Russell 2000 2.49%	Russell 2000 Value -11.43%	Russell 2000 Value 46.03%	Russell 2000 18.33%	S&P 500 4.91%	S&P 500 20.81%	Russell 2000 Growth 7.05%	Russell 2000 -33.79%	MSCI EAFE 31.78%	MSCI Emerging Markets 19.20%	S&P 500 2.11%	MSCI EAFE 17.32%	S&P 500 Growth 32.75%	Bloomberg Barclays Agg 5.97%	MSCI EAFE -0.81%	Bloomberg Barclays High Yield 17.13%
Russell 2000 22.36%	Bloomberg Barclays Agg 8.70%	Russell 2000 21.26%	Bloomberg Barclays High Yield -5.86%	MSCI Emerging Markets -2.37%	MSCI EAFE -15.94%	MSCI EAFE 38.59%	S&P 500 Value 15.71%	Russell 2000 Value 4.71%	Russell 2000 18.37%	Bloomberg Barclays Agg 6.97%	S&P 500 Growth -34.92%	S&P 500 Growth 31.57%	Bloomberg Barclays High Yield 15.12%	S&P 500 Value -0.48%	Russell 2000 16.35%	S&P 500 32.39%	Russell 2000 Growth 5.60%	Russell 2000 Growth -1.38%	S&P 500 11.96%
Russell 2000 Growth 12.95%	Bloomberg Barclays High Yield 1.87%	S&P 500 21.04%	S&P 500 -9.11%	Russell 2000 Growth -9.23%	Russell 2000 -20.48%	S&P 500 Value 31.79%	Russell 2000 Growth 14.31%	Russell 2000 4.55%	S&P 500 15.79%	S&P 500 5.49%	S&P 500 -37.00%	Russell 2000 27.17%	S&P 500 Value 15.10%	Russell 2000 Growth -2.91%	S&P 500 16.00%	S&P 500 Value 31.99%	Russell 2000 4.89%	S&P 500 Value -3.13%	MSCI Emerging Markets 11.60%
Bloomberg Barclays High Yield 12.76%	Russell 2000 Growth 1.23%	S&P 500 Value 12.73%	MSCI EAFE -14.17%	S&P 500 Value -11.71%	S&P 500 Value -20.85%	Bloomberg Barclays High Yield 28.97%	Bloomberg Barclays High Yield 11.13%	Russell 2000 Growth 4.15%	Russell 2000 Growth 13.35%	S&P 500 Value 1.99%	Russell 2000 Growth -38.54%	S&P 500 26.47%	S&P 500 15.06%	Russell 2000 -4.18%	Bloomberg Barclays High Yield 15.81%	MSCI EAFE 22.78%	Russell 2000 Value 4.22%	Russell 2000 -4.41%	Russell 2000 Growth 11.32%
Bloomberg Barclays Agg 9.64%	Russell 2000 -2.55%	Bloomberg Barclays High Yield 2.39%	S&P 500 Growth -22.08%	S&P 500 -11.89%	S&P 500 -22.10%	S&P 500 28.68%	S&P 500 10.88%	S&P 500 Growth 4.00%	Bloomberg Barclays High Yield 11.85%	Bloomberg Barclays High Yield 1.87%	S&P 500 Value -39.22%	S&P 500 Value 21.17%	S&P 500 Growth 15.05%	Russell 2000 Value -5.50%	S&P 500 Growth 14.61%	Bloomberg Barclays High Yield 7.44%	Bloomberg Barclays High Yield 2.45%	Bloomberg Barclays High Yield -4.47%	S&P 500 Growth 6.89%
MSCI EAFE 1.78%	Russell 2000 Value -6.45%	Bloomberg Barclays Agg -0.82%	Russell 2000 Growth -22.43%	S&P 500 Growth -12.73%	S&P 500 Growth -23.59%	S&P 500 Growth 25.66%	S&P 500 Growth 6.13%	Bloomberg Barclays High Yield 2.74%	S&P 500 Growth 11.01%	Russell 2000 -1.57%	MSCI EAFE -43.38%	Russell 2000 Value 20.58%	MSCI EAFE 7.75%	MSCI EAFE -12.14%	Russell 2000 Growth 14.59%	Bloomberg Barclays Agg -2.02%	MSCI Emerging Markets -1.82%	Russell 2000 Value -7.47%	Bloomberg Barclays Agg 2.65%
MSCI Emerging Markets -11.59%	MSCI Emerging Markets -25.34%	Russell 2000 Value -1.49%	MSCI Emerging Markets -30.61%	MSCI EAFE -21.44%	Russell 2000 Growth -30.26%	Bloomberg Barclays Agg 4.10%	Bloomberg Barclays Agg 4.34%	Bloomberg Barclays Agg 2.43%	Bloomberg Barclays Agg 4.33%	Russell 2000 Value -9.78%	MSCI Emerging Markets -53.18%	Bloomberg Barclays Agg 5.93%	Bloomberg Barclays Agg 6.54%	MSCI Emerging Markets -18.17%	Bloomberg Barclays Agg 4.21%	MSCI Emerging Markets -2.27%	MSCI EAFE -4.90%	MSCI Emerging Markets -14.60%	MSCI EAFE 1.00%

The Callan Periodic Table of Investment Returns conveys the strong *case for diversification* across asset classes (stocks vs. bonds), investment styles (growth vs. value), capitalizations (large vs. small), and equity markets (U.S. vs. non-U.S.). The Table highlights the uncertainty inherent in all capital markets. Rankings change every year. Also noteworthy is the difference between absolute and relative performance, as returns for the top-performing asset class span a wide range over the past 20 years.

A printable copy of The Callan Periodic Table of Investment Returns is available on our website at www.callan.com.

The Callan Periodic Table of Investment Returns 1997–2016

Callan's Periodic Table of Investment Returns depicts annual returns for 10 asset classes, ranked from best to worst performance for each calendar year. The asset classes are color-coded to enable easy tracking over time. We describe the well-known, industry-standard market indices that we use as proxies for each asset class in the text below.

- **Barclays Aggregate Bond Index** includes U.S. government, corporate, and mortgage-backed securities with maturities of at least one year.
- **Barclays High Yield Bond Index** measures the market of USD-denominated, non-investment grade, fixed-rate, taxable corporate bonds. Securities are classified as high yield if the middle rating of Moody's, Fitch, and S&P is Ba1/BB+/BB+ or below, excluding emerging market debt.
- **MSCI EAFE** is a Morgan Stanley Capital International Index that is designed to measure the performance of the developed stock markets of Europe, Australasia, and the Far East.
- **MSCI Emerging Markets** is a Morgan Stanley Capital International Index that is designed to measure the performance of equity markets in 23 emerging countries around the world.
- **Russell 2000** measures the performance of small capitalization U.S. stocks. The Russell 2000 is a market-value-weighted index of the 2,000 smallest stocks in the broad-market Russell 3000 Index.
- **Russell 2000 Value** and ● **Russell 2000 Growth** measure the performance of the growth and value styles of investing in small cap U.S. stocks. The indices are constructed by dividing the market capitalization of the Russell 2000 Index into Growth and Value indices, using style "factors" to make the assignment. The Value Index contains those Russell 2000 securities with a greater-than-average value orientation, while the Growth Index contains those securities with a greater-than-average growth orientation. Securities in the Value Index generally have lower price-to-book and price-earnings ratios than those in the Growth Index. The indices are market-capitalization-weighted. The constituent securities are not mutually exclusive.
- **S&P 500** measures the performance of large capitalization U.S. stocks. The S&P 500 is a market-value-weighted index of 500 stocks. The weightings make each company's influence on the Index performance directly proportional to that company's market value.
- **S&P 500 Growth** and ● **S&P 500 Value** measure the performance of the growth and value styles of investing in large cap U.S. stocks. The indices are constructed by dividing the market capitalization of the S&P 500 Index into Growth and Value indices, using style "factors" to make the assignment. The Value Index contains those S&P 500 securities with a greater-than-average value orientation, while the Growth Index contains those securities with a greater-than-average growth orientation. The indices are market-capitalization-weighted. The constituent securities are not mutually exclusive.

Callan

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December 31, 2016



North Dakota State Investment Board Pension Funds

Investment Measurement Service
Quarterly Review

The following report was prepared by Callan Associates Inc. ("CAI") using information from sources that include the following: fund trustee(s); fund custodian(s); investment manager(s); CAI computer software; CAI investment manager and fund sponsor database; third party data vendors; and other outside sources as directed by the client. CAI assumes no responsibility for the accuracy or completeness of the information provided, or methodologies employed, by any information providers external to CAI. Reasonable care has been taken to assure the accuracy of the CAI database and computer software. Callan does not provide advice regarding, nor shall Callan be responsible for, the purchase, sale, hedge or holding of individual securities, including, without limitation securities of the client (i.e., company stock) or derivatives in the client's accounts. In preparing the following report, CAI has not reviewed the risks of individual security holdings or the conformity of individual security holdings with the client's investment policies and guidelines, nor has it assumed any responsibility to do so. Advice pertaining to the merits of individual securities and derivatives should be discussed with a third party securities expert. Copyright 2017 by Callan Associates Inc.

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Disclosures

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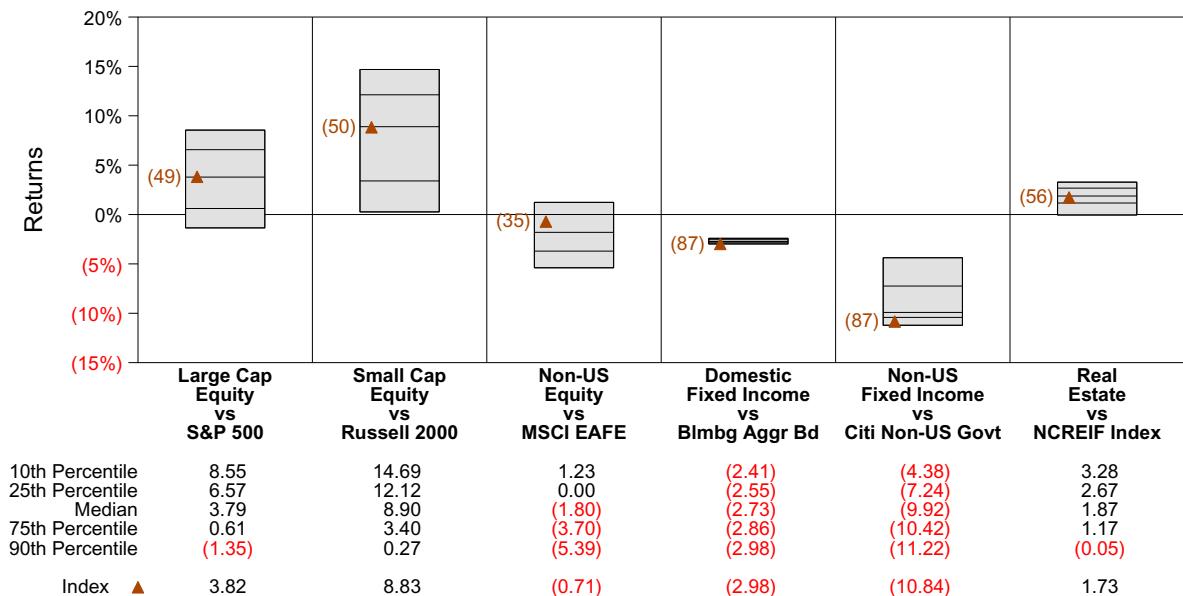
Market Overview

Active Management vs Index Returns

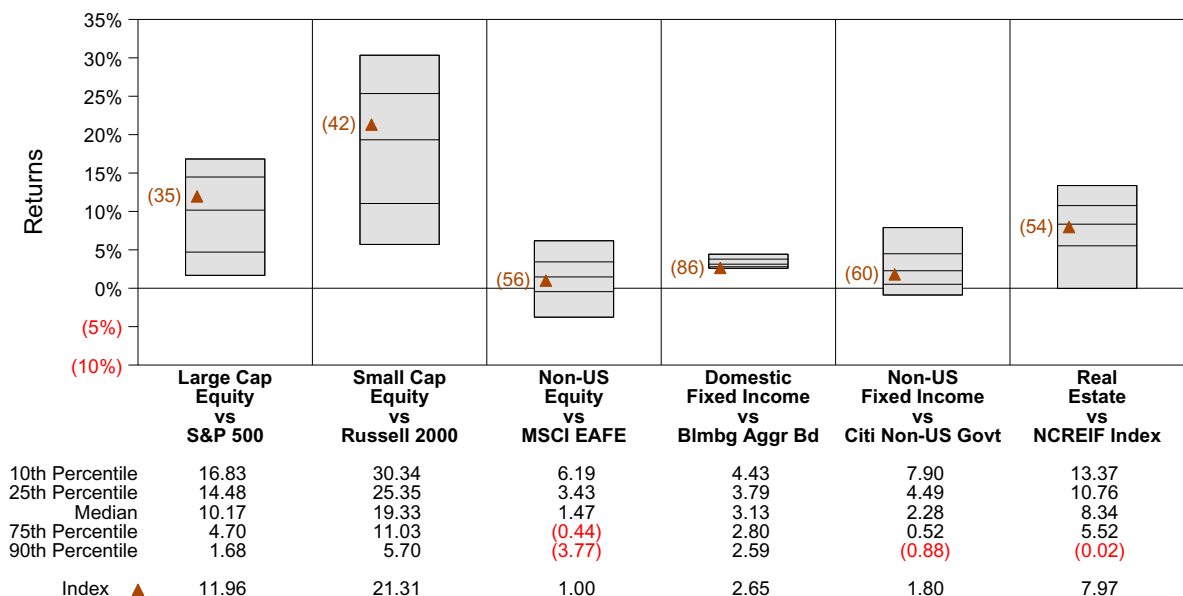
Market Overview

The charts below illustrate the range of returns across managers in Callan's Separate Account database over the most recent one quarter and one year time periods. The database is broken down by asset class to illustrate the difference in returns across those asset classes. An appropriate index is also shown for each asset class for comparison purposes. As an example, the first bar in the upper chart illustrates the range of returns for domestic equity managers over the last quarter. The triangle represents the S&P 500 return. The number next to the triangle represents the ranking of the S&P 500 in the Large Cap Equity manager database.

Range of Separate Account Manager Returns by Asset Class One Quarter Ended December 31, 2016



Range of Separate Account Manager Returns by Asset Class One Year Ended December 31, 2016





Fourth Quarter 2016

A Sentimental Journey

ECONOMY

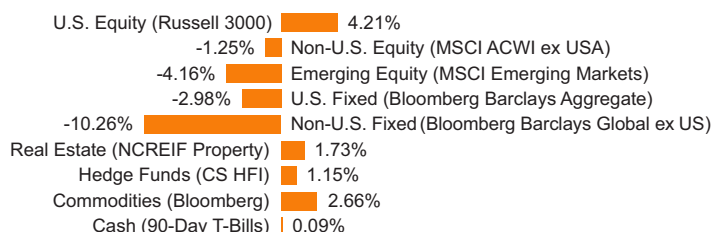
2 Real GDP grew 1.9% in the fourth quarter and **PAGE** 1.6% for the year. The dollar strengthened, raising the cost of exports. The unemployment rate stood at 4.7% at the end of the year, the lowest since August 2007.

Friends Mattered

FUND SPONSOR

4 Funds faced a tough **PAGE** fourth quarter. Taft-Hartley plans fared best, up 1.20%, while corporate funds had the weakest returns, falling 0.09%. Results stemmed primarily from how they chose “friends” in the securities markets.

Broad Market Quarterly Returns



Sources: Bloomberg Barclays, Bloomberg, Credit Suisse Hedge Index, Merrill Lynch, MSCI, NCREIF, Russell Investment Group

Election Rally

U.S. EQUITY

6 The **S&P 500 Index** hit **PAGE** an all-time high during the quarter and ended up 3.82% amid a bullish rally in the wake of the presidential election and a string of encouraging economic reports. Value dominated growth during the quarter, and small cap particularly benefited from Trump-fueled enthusiasm.

A Depressing Dollar

NON-U.S. EQUITY

9 The dollar's strength **PAGE** hampered returns for U.S. investors from non-U.S. equity markets in the fourth quarter; local investors fared better. For the year most world stock markets posted positive results, driven by economic improvements, accommodative central bank policies, and price hikes for commodities.

Treacherous Treasuries

U.S. FIXED INCOME

12 The **Bloomberg Barclays U.S. Aggregate Bond Index** **PAGE** fell 2.98% during the tumultuous quarter, but ended up 2.65% for the year. Rising yields sent returns across the fixed income sector down for the quarter, and spreads tightened as record new bond issuances met strong global demand.

Big-League Yields

NON-U.S. FIXED INCOME

15 Yields overseas **PAGE** increased and the dollar surged, weighing heavily on sovereign debt performance. The **Bloomberg Barclays Global Aggregate ex US** fell 10.26%. Geopolitical risk dominated the quarter, with the U.S. election, the Brexit vote, and a referendum in Italy.

Rates Trump Fundamentals

REAL ESTATE

17 The **NCREIF Property Index** again turned in **PAGE** its worst performance since the first quarter of 2010, and the **NCREIF Open End Diversified Core Equity Index** barely eclipsed the third quarter's five-year low return. U.S. REITs outperformed global REITs, but still posted negative returns.

Down but Far From Out

PRIVATE EQUITY

19 Company investments **PAGE** and exits trended down during the year and the quarter for both buyouts and venture capital, but activity continued at relatively high levels (except for IPOs). The one other anomaly was that the announced dollar volume for buyouts in 2016 reached an eight-year high.

Making Alpha Great Again

HEDGE FUNDS

20 The **Credit Suisse Hedge Fund Index** **PAGE** advanced 1.15% in the quarter, while the **Callan Hedge Fund-of-Funds Database**, a proxy for live portfolios, grew 1.33%. The best-performing strategy was *Global Macro* (+4.59%), while *Managed Futures* (-5.65%) took the worst hit.

A Case of the Jitters

DEFINED CONTRIBUTION

21 The average DC plan **PAGE** gained 3.92% in the third quarter, as measured by the Callan DC Index™, but trailed the Age 45 Target Date Fund's return of 4.53%. Plan balances grew 3.67%, although money flowed out of plans on a net basis at the highest level since the third quarter of 2006.

A Sentimental Journey

ECONOMY | Jay Kloepfer

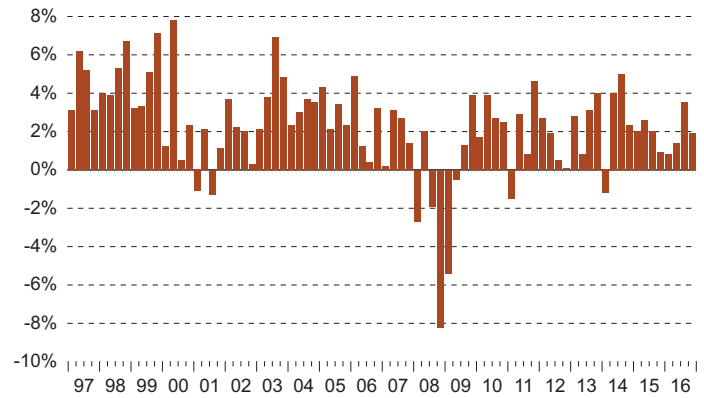
Last year turned out to be a tumultuous one, with two essentially non-economic events jolting the capital markets for reasons solely related to investor sentiment: the U.K. Brexit vote in June and the U.S. presidential election in November. In both instances, wild swings in sentiment and in confidence about the future moved markets around the globe without regard to the underlying economic data. Interest rates and the stock market were taken on a wild ride through the year, with stocks plunging through the summer and then surging following the U.S. election, and interest rates sliding while bonds rallied, only to see rates head back up in a hurry in November and December. This journey was driven almost entirely by sentiment rather than any sudden changes in economic fortune or financial fundamentals.

Real GDP growth in the U.S. came in at a modest 1.9% in the fourth quarter, down from the 3.5% gain in the third quarter. Combined with the weak growth in the first two quarters, total GDP growth for the year was 1.6%, down from the 2.6% gain in 2015. A sustained inventory correction that began in 2015 hung a black cloud over business sentiment during the first half of 2016, and the lingering effect of the bust in energy-sector investment spurred by the collapse in oil prices in 2015 held back economic growth for much of the year. The dollar strengthened over the course of the year, raising the cost of U.S. exports. The stronger dollar combined with anemic growth in Europe and Japan and slowing growth in developing markets held back demand for U.S. exports, while suppressing the cost of imports and driving demand for them higher. Imports are a negative in the GDP calculation and weigh on the measure of total GDP growth. As a result, net exports (exports minus imports) subtracted a hefty 1.7% from GDP growth during the fourth quarter, a reduction equal to the 1.7% gain provided by growth in consumption, which accounts for 70% of total GDP.

One bright spot in the fourth quarter GDP report was a rebound in fixed non-residential investment, which means capital spending: equipment, structures, and intellectual property. To give an

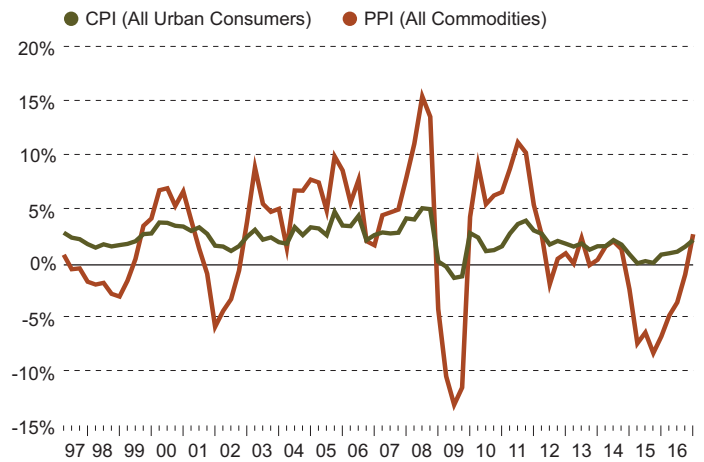
Quarterly Real GDP Growth

(20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

idea of just how depressed the domestic oil and gas industry got, the drilling rig count published by Baker Hughes dropped to a 71-year low of 404 in May 2016; the count rebounded to more than 650 by the end of the year, as energy prices appear to have moved off of a bottom. The downward pressure on capital spending from energy has therefore abated, and capital spending was further aided in the third and fourth quarters by a rebound in aircraft investment.

Consumption spending rose 2.5%, leading GDP gains, supported by gains in real disposable income and household net worth. As the year drew to a close, household finances appeared to be in great shape on an aggregate basis, helped by the post-election stock market rally, rising home prices, and almost a decade of restraint in consumer borrowing. Consumer sentiment indices took big hits in October as the U.S. election loomed, only to spike back up in November and December to levels last seen in 2004. The job market has cooperated, showing a strong 204,000 gain in November after a weak October report, and adding another 156,000 in December. The unemployment rate is now 4.7%, near a nine-year low and well below any target once articulated by policymakers as sufficient to handle a rise in interest rates.

With the economy at or near full employment, interest in inflation has perked up once again, although the measures of inflation remain relatively benign. The headline all-urban CPI was up 2.1% in December year-over-year, and core inflation (less food and energy) rose 2.2%, while the GDP deflator used by the Fed to target inflation was up 2.2%. Energy prices dragged down headline inflation until the second half of 2016, when the energy index increased for four consecutive months through December. Tight labor markets, confident consumers, and a potential for continued capital spending all point to the chance for inflation to move beyond the 1% to 2% range in which it has been bound for the past several years; countering this upward pressure is the strong U.S. dollar, which allows the U.S. to import deflationary pressure through falling import prices.

The Long-Term View

Index	2016 4th Qtr	Periods ended Dec. 31, 2016			
		1 Year	5 Yrs	10 Yrs	25 Yrs
U.S. Equity					
Russell 3000	4.21	12.74	14.67	7.07	9.29
S&P 500	3.82	11.96	14.66	6.95	9.15
Russell 2000	8.83	21.31	14.46	7.07	9.69
Non-U.S. Equity					
MSCI EAFE	-0.71	1.00	6.53	0.75	4.95
MSCI Emerging Markets	-4.16	11.19	1.28	1.84	-
S&P ex-U.S. Small Cap	-3.12	3.78	9.67	3.03	6.70
Fixed Income					
Bloomberg Barclays Agg	-2.98	2.65	2.23	4.34	5.63
90-Day T-Bills	0.09	0.33	0.12	0.80	2.71
Bloomberg Barclays Long G/C	-7.84	6.67	4.07	6.85	7.58
Bloomberg Barclays GI Agg ex US	-10.26	1.49	-1.39	2.44	4.73
Real Estate					
NCREIF Property	1.73	7.97	10.91	6.93	8.63
FTSE NAREIT Equity	-2.89	8.52	12.01	5.08	11.13
Alternatives					
CS Hedge Fund	1.15	1.25	4.34	3.75	-
Cambridge PE*	-	3.95	10.89	10.33	14.35
Bloomberg Commodity	2.66	11.77	-8.95	-5.57	2.55
Gold Spot Price	-12.56	8.63	-5.97	6.08	4.82
Inflation – CPI-U	0.00	2.07	1.36	1.81	2.26

*Private equity returns show pooled horizon IRRs for periods ended June 30, 2016. Most recent quarterly data not available.

Sources: Bloomberg Barclays, Bloomberg, Credit Suisse, FTSE, MSCI, NCREIF, Russell Investment Group, Standard & Poor's, Thomson/Cambridge, Bureau of Economic Analysis.

Recent Quarterly Economic Indicators

	4Q16	3Q16	2Q16	1Q16	4Q15	3Q15	2Q15	1Q15
Employment Cost–Total Compensation Growth	2.2%	2.3%	2.3%	1.9%	2.0%	2.0%	2.0%	2.6%
Nonfarm Business–Productivity Growth	-0.2%*	3.1%	-0.2%	-0.6%	-1.7%	2.0%	3.1%	-0.8%
GDP Growth	1.9%	3.5%	1.4%	0.8%	0.9%	2.0%	2.6%	2.0%
Manufacturing Capacity Utilization	74.8%	74.8%	74.9%	75.3%	75.4%	75.6%	75.5%	75.5%
Consumer Sentiment Index (1966=100)	93.2	90.3	92.4	91.5	91.3	90.8	94.2	95.5

*Estimate.

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, IHS Economics, Reuters/University of Michigan.

Friends Mattered

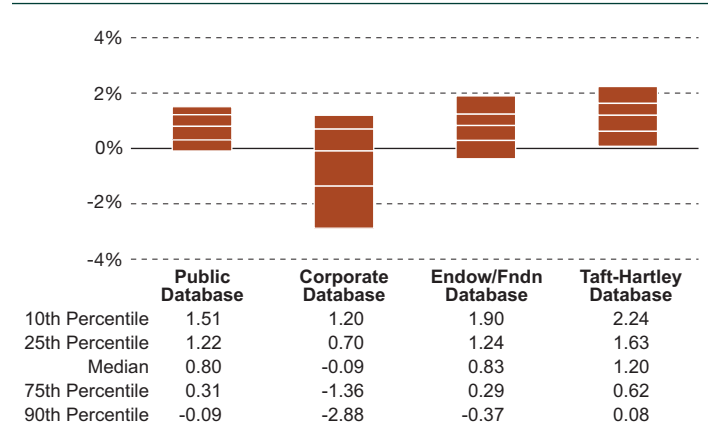
FUND SPONSOR | Kitty Lin

The surprising election results in the U.S.—and the unsurprising December interest rate hike—spurred a significant divergence in U.S. securities markets. Despite some predictions otherwise, U.S. stocks caught fire with the election of what investors saw as a pro-business president who will lower taxes and cut regulations. U.S. fixed income markets, on the other hand, were sharply lower as they prepared for higher interest rates in the future.

These events had a significant impact on the results of institutional funds tracked by Callan, as all types experienced weaker performance compared to the previous quarter. According to Callan’s database, the median return for all fund types was +0.65% in the fourth quarter, compared to +3.44% in the third. But how funds did depended on how well they chose their “friends” in the markets. Corporate plans performed the worst with a -0.09% return and Taft-Hartley plans the best at +1.20%.

Taft-Hartley plans saw better results because they had higher allocations to U.S. equity than other plan types, and the lowest among all types to non-U.S. equity. The **S&P 500 Index** jumped 3.82% for the quarter, while the **MSCI ACWI ex USA Index** dropped 1.25%. Although non-U.S. equities helped performance in the third quarter, major upcoming elections in Europe and Asia may have contributed to the shift in sentiment, contributing to the lackluster performance by stocks in the fourth quarter.

Callan Fund Sponsor Returns for the Quarter



Source: Callan

On the other end of the spectrum, the weak performance by corporate plans may have stemmed from their higher allocations to U.S. fixed income. While Taft-Hartley plans had an average of 25% of their portfolios allocated to U.S. fixed income, corporate plans had an average of 40%, and the lowest allocation to U.S. equity among the types of plans Callan tracks. The **Bloomberg Barclays U.S. Aggregate Index** was off 2.98% for the quarter, whereas the **Russell 2000 Index** jumped 8.83% and the **Russell 1000 Index** rose 3.83%. Although corporate plans had a tough fourth quarter, they topped all other institutional funds in the past year with a +7.88% return. In addition to their solid

Callan Database Median Returns* for Periods ended December 31, 2016

Fund Sponsor	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Public Funds	0.80	7.49	7.49	4.62	8.32	5.25	6.34
Corporate Funds	-0.09	7.88	7.88	4.70	8.02	5.36	6.37
Endowments/Foundations	0.83	7.09	7.09	3.59	7.84	4.94	6.13
Taft-Hartley	1.20	7.81	7.81	5.26	8.87	5.23	6.01

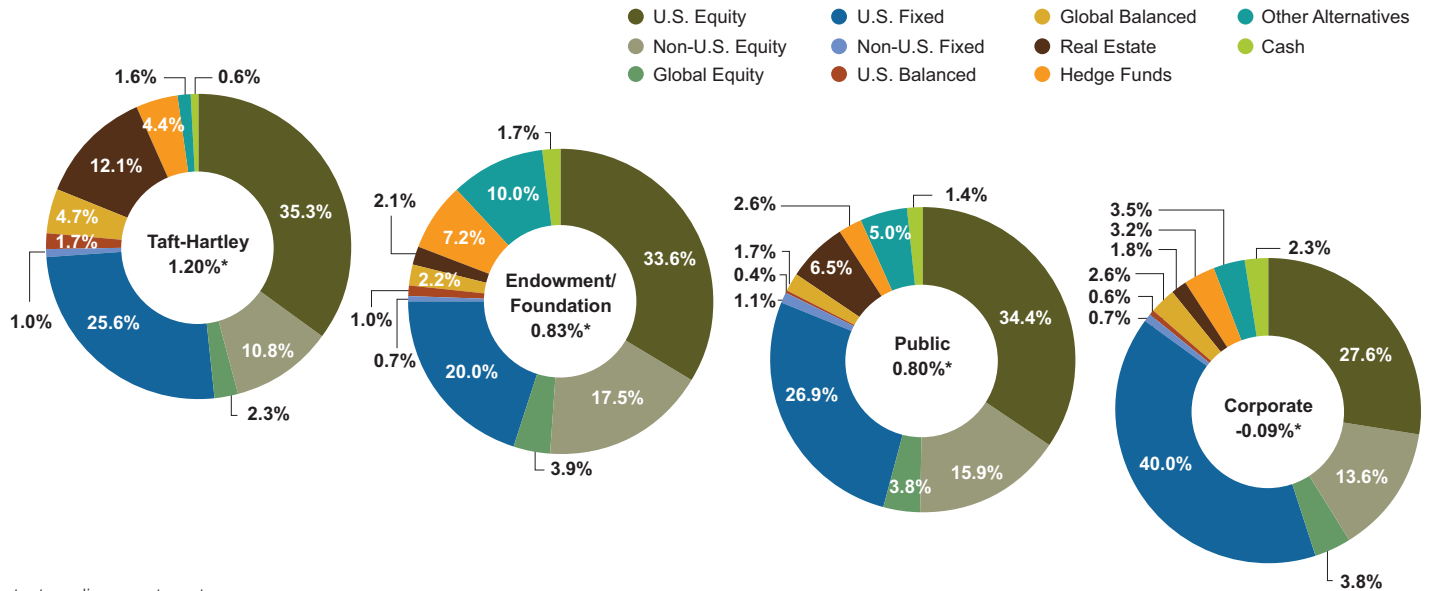
*Returns less than one year are not annualized.

Source: Callan. Callan’s database includes the following groups: public defined benefit, corporate defined benefit, endowments/foundations, and Taft-Hartley plans. Approximately 10% to 15% of the database constituents are Callan’s clients. All database group returns presented gross of fees. Past performance is no guarantee of future results. Reference to or inclusion in this report of any product, service, or entity should not be construed as a recommendation, approval, affiliation, or endorsement of such product, service, or entity by Callan.

performance this quarter, Taft-Hartley plans have performed well over the past one, three, and five years compared to other institutional funds.

By size, small funds led during the fourth quarter with a median return of +0.72% while large funds had the lowest return at +0.56%. On the other hand, large funds performed the best when looking at funds in the 10th percentile, up 1.82%.

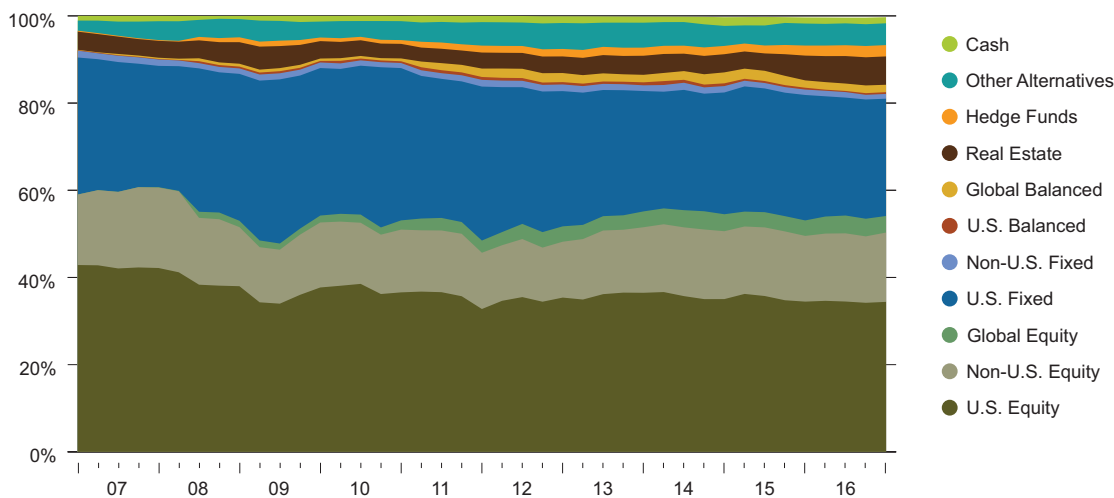
Callan Fund Sponsor Average Asset Allocation



*Latest median quarter return.
 Note: charts may not sum to 100% due to rounding.
 Source: Callan

Callan Public Fund Database Average Asset Allocation

(10 Years)



Source: Callan. Callan's database includes the following groups: public defined benefit, corporate defined benefit, endowments/foundations, and Taft-Hartley plans. Approximately 10% to 15% of the database constituents are Callan's clients. All database group returns presented gross of fees. Past performance is no guarantee of future results. Reference to or inclusion in this report of any product, service, or entity should not be construed as a recommendation, approval, affiliation, or endorsement of such product, service, or entity by Callan.

Election Rally

U.S. EQUITY | Lauren Mathias, CFA

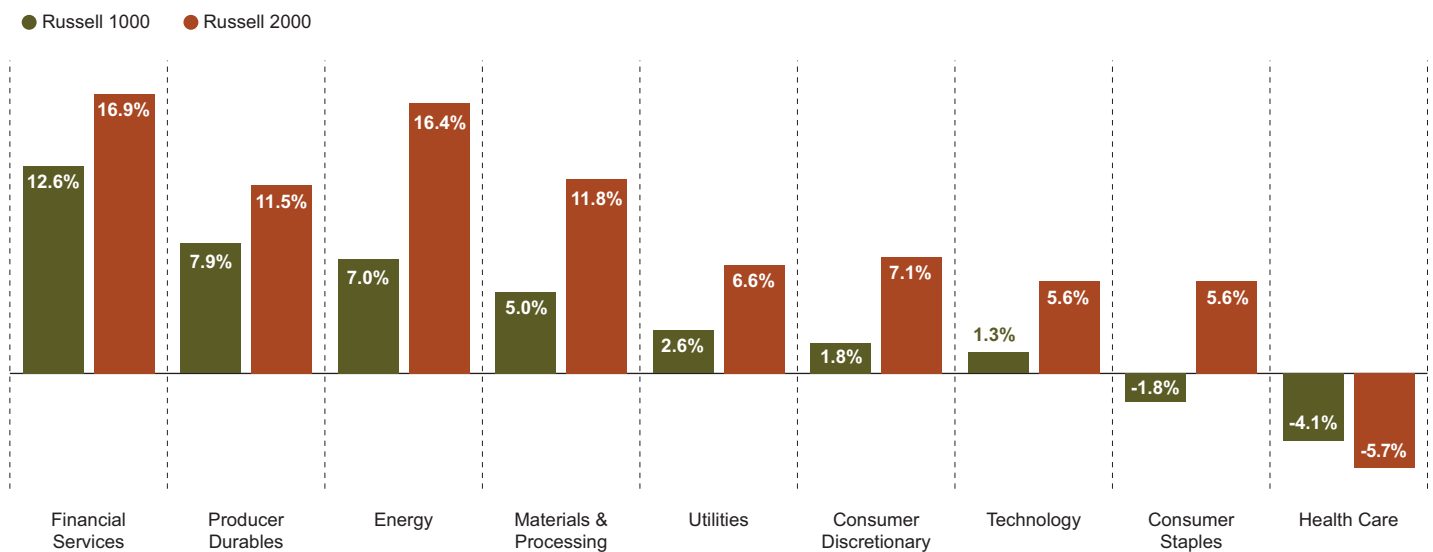
The **S&P 500 Index** notched a +3.82% return for the fourth quarter after reaching an all-time high (2,239) just days before the end of 2016. Even more impressive was the return from small-capitalization companies (**Russell 2000 Index**: +8.83%), as was the divergence between value and growth across the size spectrum (**Russell 1000 Value Index**: +6.68% vs. **Russell 1000 Growth Index**: +1.01%; **Russell 2000 Value Index**: +14.07% vs. **Russell 2000 Growth Index**: +3.57%).

The market in the fourth quarter was trumped by politics as the incoming administration promised to lower personal and corporate income taxes, decrease business and environmental regulation, and increase infrastructure spending. Investors appeared to approve; November saw the highest monthly return of the quarter (+3.70%). Other tailwinds furthered the frenzy, including upwardly revised third-quarter GDP (to +3.5%), subdued initial jobless claims, unemployment at the lowest level in nine years (4.6%), average wage growth of 2.9% in December,

and a surging U.S. dollar; home and automobile prices hit all-time highs, as did consumer confidence. In light of the progress, the Fed Funds rate was increased in December to a range of 0.50% to 0.75%. There are still pockets of uncertainty, however; across the pond the European Central Bank continued quantitative easing and back at home a Trump government could mean higher debt and subsequently inflation. Sentiment is nonetheless revved up, at least for now.

U.S. equity was the preferred market globally; small cap particularly benefited from Trump-fueled enthusiasm. Micro and small capitalization companies outpaced mid and large cap stocks (**Russell Microcap Index**: +10.05%, **Russell 2000 Index**: +8.83%, **Russell Midcap Index**: +3.21%, and **Russell 1000 Index**: +3.83%). Value regained its lead over growth in all capitalizations; the dispersion in style returns was broad across market capitalizations, with the widest (1,050 bps) in small cap (Russell 2000 Value minus Russell 2000 Growth)—the most since the technology bubble burst in 2001.

Economic Sector Quarterly Performance



Source: Russell Investment Group

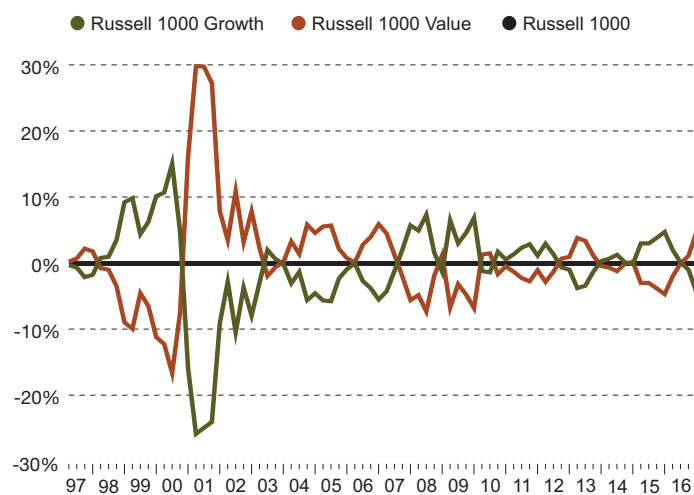
Note: As of the fourth quarter of 2015, the Capital Market Review reports sector-specific returns using the Russell Global Sectors (RGS) classification system rather than the Global Industry Classification Standard (GICS) system. RGS uses a three-tier classification system containing nine sectors; GICS uses a four-tier system containing 11 sectors.

Sector performance reflected the style shift; the best-performing sectors in the S&P 500 during the quarter were value-oriented, including Financials (+21.10%), Energy (+7.28%), and Materials (+4.70%). Within Financials, banks did especially well, benefiting from both an increase in interest rates and talk of deregulation. The Organization of Petroleum Exporting Countries (OPEC) agreed on oil production cuts in the quarter, boosting Energy stocks. In general, investors preferred companies with lower leverage and higher operating margins and return on equity. The growth-oriented, momentum areas of the market declined, including Health Care (-4.00%) and Consumer

Staples (-2.02%). The new Real Estate sector, representing 2.9% of the S&P 500, finished the quarter down 4.41% as these investments tend to move in the opposite direction of interest rates.

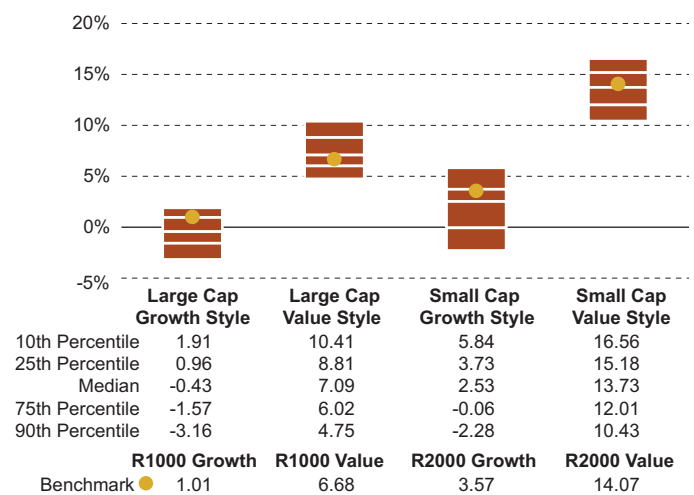
U.S. equity valuations were elevated; the S&P 500 Index Forward P/E was 16.9x at the end of the year versus the 25-year average of 15.9x. In this environment active managers were challenged; outflows from this group have totaled over \$1 trillion since 2005. However, a future with more volatility, lower returns, and higher interest rates should favor active management.

Rolling One-Year Relative Returns (vs. Russell 1000)



Source: Russell Investment Group

Callan Style Group Quarterly Returns



Sources: Callan, Russell Investment Group

U.S. Equity Index Characteristics as of December 31, 2016

	S&P 500	Rus 3000	Rus 1000	Rus Midcap	Rus 2500	Rus 2000
Number of Issues	505	2,972	994	793	2,473	1,978
Wtd Avg Mkt Cap (\$bn)	139.0	115.8	125.6	13.0	4.2	2.1
Price/Book Ratio	2.8	2.7	2.7	2.4	2.2	2.1
Forward P/E Ratio	17.1	17.6	17.4	18.9	20.0	21.1
Dividend Yield	2.1%	2.0%	2.0%	1.7%	1.5%	1.4%
5-Yr Earnings (forecasted)	12.3%	12.3%	12.2%	10.9%	11.8%	12.8%

Sources: Russell Investment Group, Standard & Poor's.

U.S. EQUITY (Continued)

Callan Style Median and Index Returns* for Periods ended December 31, 2016

Large Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Large Cap Core Style	3.83	10.40	10.40	8.30	14.44	7.22	7.26
Russell 3000	4.21	12.74	12.74	8.43	14.67	7.07	7.11
Russell 1000	3.83	12.05	12.05	8.59	14.69	7.08	7.00
S&P 500	3.82	11.96	11.96	8.87	14.66	6.95	6.69
Large Cap Growth Style	-0.43	3.42	3.42	7.31	13.98	8.18	6.55
Russell 1000 Growth	1.01	7.08	7.08	8.55	14.50	8.33	6.42
Large Cap Value Style	7.09	15.25	15.25	8.28	14.69	6.51	8.11
Russell 1000 Value	6.68	17.34	17.34	8.59	14.8	5.72	7.41
Mid Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Mid Cap Core Style	5.47	14.48	14.48	8.53	15.49	8.83	10.13
Russell Midcap	3.21	13.80	13.80	7.92	14.72	7.86	9.51
Mid Cap Growth Style	0.30	4.23	4.23	4.36	12.33	8.09	8.30
Russell Midcap Growth	0.46	7.33	7.33	6.23	13.51	7.83	7.96
Mid Cap Value Style	6.55	17.10	17.10	8.26	15.03	8.41	10.45
Russell Midcap Value	5.52	20.00	20.00	9.45	15.70	7.59	10.28
Small Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Small Cap Core Style	9.76	20.58	20.58	8.53	16.32	8.47	10.60
Russell 2000	8.83	21.31	21.31	6.74	14.46	7.07	8.49
Small Cap Growth Style	2.53	8.63	8.63	3.44	13.40	8.62	8.54
Russell 2000 Growth	3.57	11.32	11.32	5.05	13.74	7.76	7.48
Small Cap Value Style	13.73	27.75	27.75	9.13	16.43	8.61	11.17
Russell 2000 Value	14.07	31.74	31.74	8.31	15.07	6.26	9.22
Smid Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Smid Cap Core Style	5.56	16.00	16.00	6.84	15.17	9.47	-
Russell 2500	6.12	17.59	17.59	6.93	14.54	7.69	9.17
Smid Cap Growth Style	1.81	7.70	7.70	3.95	13.11	8.95	8.91
Russell 2500 Growth	2.60	9.73	9.73	5.45	13.88	8.24	8.03
Smid Cap Value Style	10.12	22.16	22.16	7.93	14.78	8.59	10.96
Russell 2500 Value	9.34	25.20	25.20	8.22	15.04	6.94	9.72
Russell 3000 Sectors	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Consumer Discretionary	2.22	6.85	6.85	6.90	16.75	10.79	-
Consumer Staples	-1.57	5.79	5.79	10.14	13.53	10.79	-
Energy	7.31	26.29	26.29	-4.45	2.64	3.40	-
Financial Services	13.04	17.96	17.96	10.65	18.18	1.41	-
Health Care	-4.22	-3.33	-3.33	9.10	17.25	10.15	-
Materials & Processing	5.95	23.09	23.09	5.65	11.94	6.42	-
Producer Durables	8.23	20.13	20.13	8.07	15.81	7.44	-
Technology	1.55	14.82	14.82	12.56	15.52	9.81	-
Utilities	2.87	20.49	20.49	11.26	11.34	6.41	-

*Returns less than one year are not annualized.

Sources: Callan, Russell Investment Group, Standard & Poor's.

A Depressing Dollar

NON-U.S. EQUITY | Irina Sushch

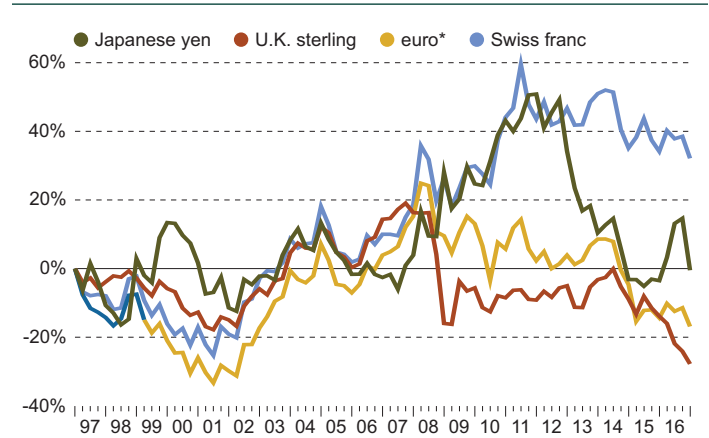
During the final quarter of 2016, foreign developed and emerging markets floundered in U.S. dollar terms despite hearty local returns. Donald Trump's election drove U.S. stocks to record highs, as investors reacted positively to his business-friendly stances on taxes, trade, and regulations. The U.S. dollar hit a multi-year high versus the euro and the yen and appreciated roughly 7% compared to a basket of currencies.

That broad-based dollar strength detracted from overseas returns for U.S. investors. The **MSCI ACWI ex USA Index** was down 1.25% for the quarter (but up 4.93% in local currency). As in the previous quarter, the defensive-oriented sectors dragged down returns (Consumer Staples: -10.09%, Health Care: -8.08%, REITs: -7.90%, Utilities: -7.19%). The interest rate-sensitive sectors helped limit the damage (Energy: +8.32%, Financials: +6.84%).

In dollar-denominated results, emerging markets (**MSCI Emerging Markets Index**: -4.16%) trailed their developed peers (**MSCI World ex USA Index**: -0.36%, **MSCI EAFE Index**: -0.71%). The **MSCI ACWI ex USA Value Index** (+3.29%) fared much better than the **MSCI ACWI ex USA Growth Index** (-5.72%). Small cap stocks joined growth and emerging market stocks at the bottom of the barrel (**MSCI ACWI ex USA Small Cap Index**: -3.52%). Despite multiple headwinds, the **MSCI ACWI ex USA Index** ended the year up 4.50%.

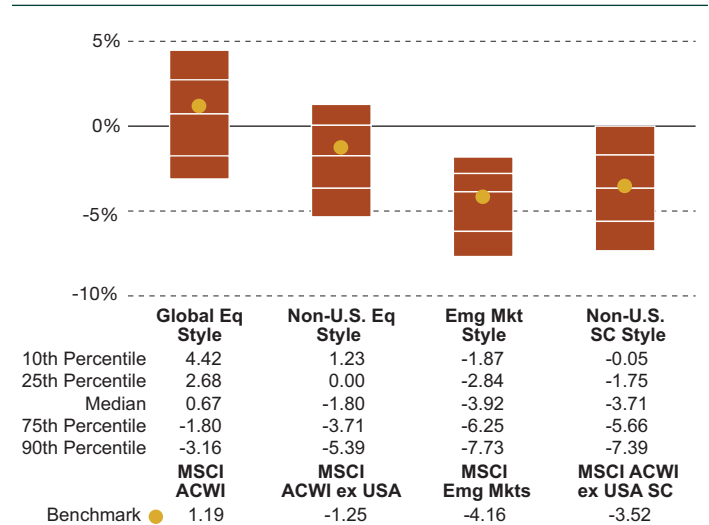
The European Central Bank announced that it would extend its bond purchase program, although it plans to lower investments from €80 billion to €60 billion per month. The unemployment rate in the euro zone declined to 9.8%, the lowest since July 2009. Consumer prices ticked up 0.6% year-over-year in November, and GDP was on track to increase at a 0.4% to 0.5% pace from 0.3% in the third quarter, based on early indications ahead of the release of the official figures in early 2017. Against this backdrop, the **MSCI Europe Index** rose 5.44% in the fourth quarter and 7.23% during the year for local investors; however, in U.S. dollar terms, the Index was essentially flat for the quarter

Major Currencies' Cumulative Returns (vs. U.S. Dollar)



* German mark returns before 1Q99
Source: MSCI

Callan Style Group Quarterly Returns



Sources: Callan, MSCI

and year (-0.40% for both periods). Italy (+10.75%) led the pack during the quarter, while Belgium (-11.80%) brought up the rear. Across the euro zone, economically sensitive Financial (+11.45%) and Energy (+11.16%) stocks posted healthy returns, while defensively oriented REIT (-9.96%) and Utility (-9.40%) stocks faltered.

NON-U.S. EQUITY (Continued)

In Southeast Asia and the Pacific, Japan's stimulus measures boosted returns for local investors (+14.99%). But the dollar hit a 14-year high versus the yen, hammering returns for U.S. investors (-0.16%). New Zealand had a rough quarter (-10.88%), although it closed out the year up 18.37%. Australia was the only country in the region to end the quarter in the black, up 0.69% (and +11.45% for the year), buoyed by rebounding commodity prices and higher interest rates. The **MSCI Pacific Index** slumped 1.03% for the quarter, but rose for the year (+4.18%).

Despite the MSCI Emerging Markets Index's decline during the quarter, it jumped a robust 11.19% during 2016, buttressed by strengthening commodity prices as well as reform efforts and accommodative monetary policies in several countries. Russia, up 18.56% in the quarter and 54.82% for the year, benefited richly from rising prices for oil and industrial commodities. China fell

during the quarter (-7.07%) but ended the year essentially flat (+0.90%). Most emerging Asian markets gained ground during the year (**MSCI EM Asia**: +6.14%), despite a rough fourth quarter (-6.06%), driven by economic reform and technology stocks. Mexico dropped 7.88% for the quarter and 9.16% for the year, hurt by peso weakness and Trump's election.

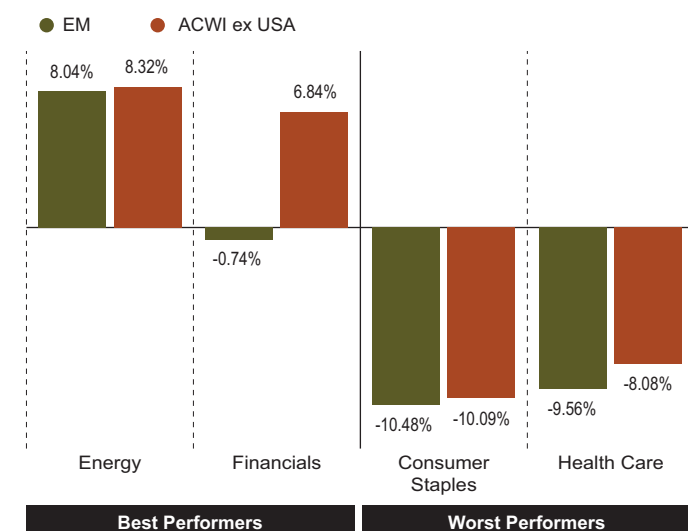
Quarterly Returns for Non-U.S. Developed Countries

Country	Equity Index			Weight*
	(US\$)	(Local Currency)	Local Currency	
Australia	0.69%	6.41%	-5.38%	5.20%
Austria	6.51%	13.48%	-6.14%	0.14%
Belgium	-11.80%	-6.03%	-6.14%	0.83%
Canada	3.26%	5.36%	-2.00%	7.05%
Denmark	-8.74%	-2.90%	-6.01%	1.16%
Finland	-4.40%	1.86%	-6.14%	0.68%
France	2.93%	9.67%	-6.14%	7.16%
Germany	1.45%	8.10%	-6.14%	6.53%
Hong Kong	-8.97%	-9.00%	0.04%	2.28%
Ireland	0.14%	6.69%	-6.14%	0.33%
Israel	-11.32%	-9.61%	-2.51%	0.48%
Italy	10.75%	18.01%	-6.14%	1.46%
Japan	-0.16%	14.99%	-13.18%	16.95%
Netherlands	-2.10%	3.72%	-6.14%	2.33%
New Zealand	-10.88%	-7.06%	-4.11%	0.13%
Norway	2.40%	10.29%	-7.15%	0.47%
Portugal	-2.92%	3.44%	-6.14%	0.11%
Singapore	-3.64%	2.02%	-5.62%	0.87%
Spain	2.24%	8.94%	-6.14%	2.21%
Sweden	-0.84%	5.15%	-5.69%	2.00%
Switzerland	-3.86%	0.80%	-4.62%	6.08%
U.K.	-0.90%	4.19%	-4.88%	12.89%

*Weight in the MSCI ACWI ex USA Index

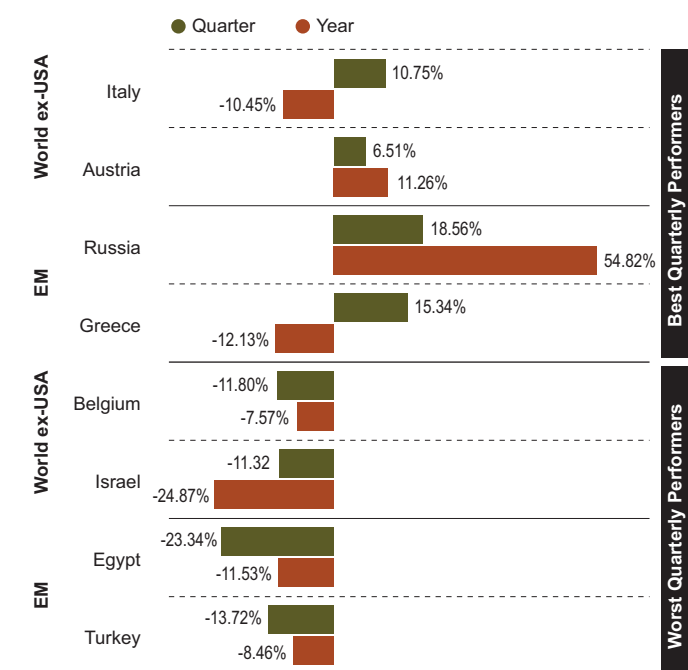
Sources: MSCI, Russell Investment Group, Standard & Poor's.

Quarterly Returns: Strong and Struggling Sectors



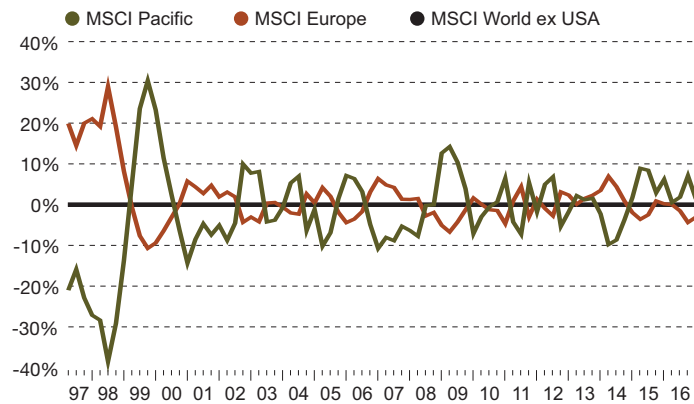
Source: MSCI

Quarterly and Annual Country Performance Snapshot



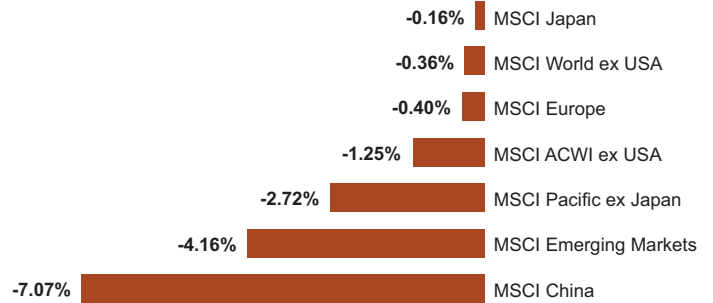
Source: MSCI

Rolling One-year Relative Returns (vs. MSCI World ex USA)



Source: MSCI

Regional Quarterly Performance (U.S. Dollar)



Source: MSCI

Callan Style Median and Index Returns* for Periods ended December 31, 2016

Global Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Global Equity Style	0.67	6.41	6.41	3.53	10.74	4.86	7.11
MSCI World	1.86	7.51	7.51	3.80	10.41	3.83	5.83
MSCI ACWI	1.19	7.86	7.86	3.13	9.36	3.56	5.92
Non-U.S. Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Non-U.S. Equity Style	-1.80	1.47	1.47	-0.55	7.39	2.01	7.00
MSCI World ex USA	-0.36	2.75	2.75	-1.59	6.07	0.86	5.45
MSCI ACWI ex USA	-1.25	4.50	4.50	-1.78	5.00	0.96	5.87
Regional Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
MSCI China	-7.07	0.90	0.90	0.14	5.02	3.76	11.62
MSCI Europe ex UK	-0.20	-0.56	-0.56	-2.62	7.41	0.36	5.22
MSCI Japan	-0.16	2.38	2.38	2.49	8.17	0.54	4.69
MSCI Japan (local)	14.99	-0.74	-0.74	6.11	17.56	0.32	3.88
MSCI Pacific	-1.03	4.18	4.18	1.43	7.15	1.62	6.05
MSCI Pacific (local)	10.16	2.26	2.26	5.34	14.46	1.24	4.70
MSCI Pacific ex Japan	-2.72	7.85	7.85	-0.59	5.24	3.94	9.45
MSCI Pacific ex Japan (local)	1.23	8.34	8.34	4.28	10.08	4.25	7.43
MSCI United Kingdom	-0.90	-0.10	-0.10	-4.40	3.97	0.32	4.51
MSCI United Kingdom (local)	4.19	19.16	19.16	5.41	8.85	5.05	5.66
Emerging/Frontier Markets	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Emerging Market Style	-3.92	11.66	11.66	-1.25	3.09	3.06	10.94
MSCI Emerging Markets	-4.16	11.19	11.19	-2.55	1.28	1.84	9.50
MSCI Emerging Markets (local)	-1.44	9.69	9.69	2.83	5.64	4.35	10.02
MSCI Frontier Markets	0.49	2.66	2.66	-2.10	5.16	-0.62	-
Global/Non-U.S. Small Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Non-U.S. Small Cap Style	-3.71	-0.17	-0.17	2.35	11.72	4.69	11.27
MSCI World Small Cap	2.74	12.71	12.71	4.62	12.21	5.59	9.40
MSCI ACWI Small Cap	1.76	11.59	11.59	3.97	11.29	5.66	9.66
MSCI World ex USA Small Cap	-2.74	4.32	4.32	1.36	8.96	2.69	9.26
MSCI ACWI ex USA Small Cap	-3.52	3.91	3.91	0.76	7.74	2.89	9.64

*Returns less than one year are not annualized.
Sources: Callan, MSCI.

Treacherous Treasuries

U.S. FIXED INCOME | Rufash Lama

The U.S. bond market experienced a tumultuous fourth quarter, triggered by the unexpected election results and strong economic data, among other factors. The **Bloomberg Barclays U.S. Aggregate Bond Index** dropped 2.98%, while the **Bloomberg Barclays High Yield Index** rose 1.75%. But the year ended on an upbeat note, with the Aggregate up 2.65% and the High Yield Index delivering equity-like returns at 17.13%.

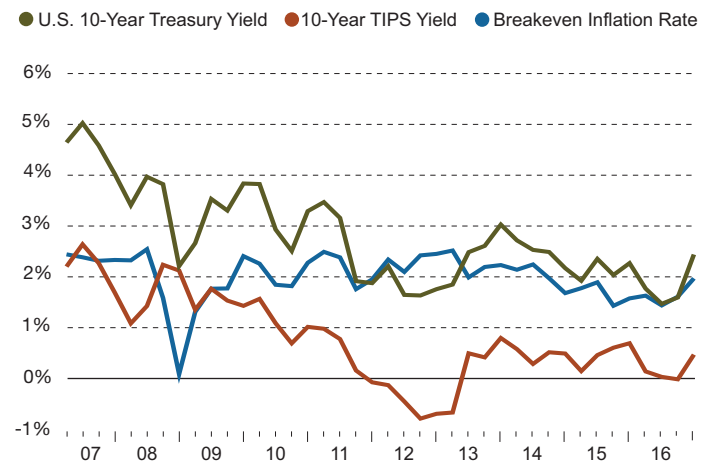
The yield curve rose following the presidential election and an upward revision for third-quarter GDP to 3.5%, the highest quarterly increase in two years. Yields rose across the maturity spectrum. The benchmark 10-year Treasury note showed the biggest change, ending the quarter at 2.45% (an increase of 85 bps). Yields on the 5-year and 30-year finished at 1.93% and 3.07%, respectively.

Markets entered 2016 expecting four rate hikes, but the Fed increased the Federal Funds rate only once, by 25 bps to a range of 0.50% to 0.75% in December. As a result of rising yields, returns across the broad fixed income sector were negative for the quarter. Tax-exempt municipal bonds and Treasuries dropped 3.62% and 3.84%, respectively. On a duration-adjusted

basis, Treasuries underperformed credit securities by 156 bps. Long Treasuries were hit particularly hard, falling 11.67%.

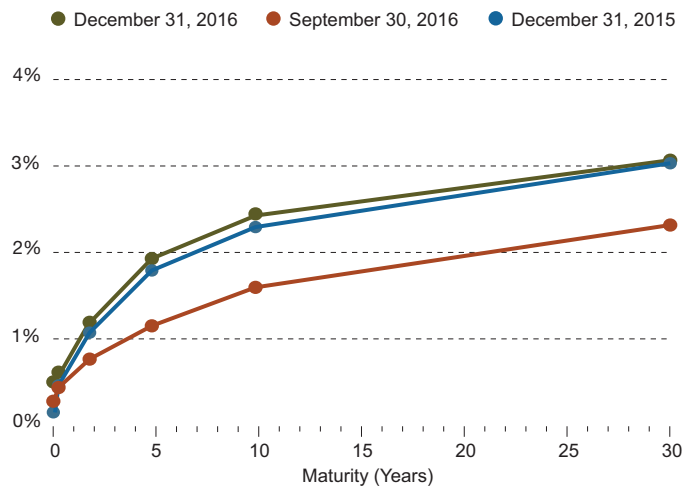
Spreads tightened during the quarter. Investment-grade corporate spreads over comparable Treasuries tightened 42 bps and ended the year at 123 bps—a stark contrast to the first half of the year, in which spreads had widened up to 214 bps in February.

Historical 10-Year Yields



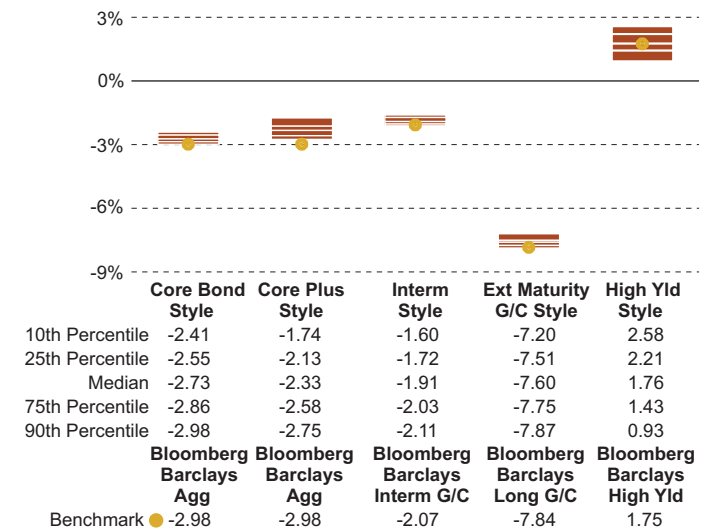
Source: Bloomberg

U.S. Treasury Yield Curves



Source: Bloomberg

Callan Style Group Quarterly Returns



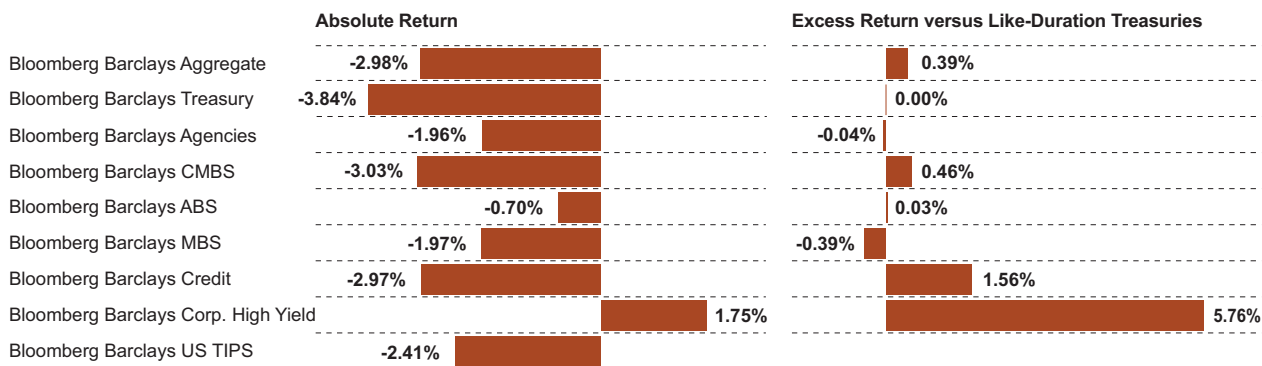
Sources: Bloomberg Barclays, Callan

Corporates declined 2.8% for the quarter, but generated a strong return (+6.11%) for the year. On a duration-adjusted basis, long credit outperformed intermediate credit by 330 bps. Despite a slow start, high yield corporates made a powerful comeback to end the year on a strong note; they delivered 407 bps of excess returns for the quarter. Mortgage-backed securities (MBS), plagued by rate volatility and elevated prepayment concerns, fell 1.97% for the quarter (but were up 1.67% for the year) and underperformed duration-matched Treasuries by 39 bps.

Asset-backed securities (ABS) were off 0.70% for the quarter but up 2.03% for the year. Commercial mortgage-backed securities (CMBS) experienced a similar divergence, falling 3.03% in the quarter but rising 3.32% over the year.

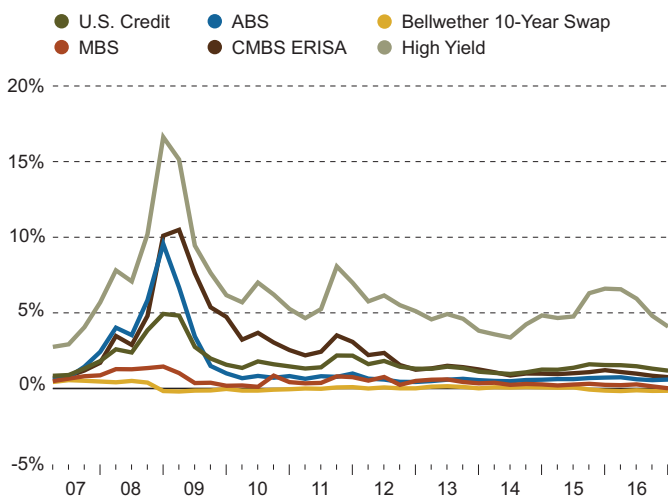
In 2016, U.S. corporations set a milestone with new high yield and investment-grade issuances that totaled \$1.5 trillion. The municipal bond market also set a record with new offerings totaling \$445 billion.

Fixed Income Index Quarterly Returns



Source: Bloomberg Barclays

Effective Yield Over Treasuries



Source: Bloomberg Barclays

U.S. Fixed Income Index Characteristics as of Dec. 31, 2016

Bloomberg Barclays Indices	Yield to Worst	Mod Adj Duration	Avg Maturity
Bloomberg Barclays Aggregate	2.61	5.89	8.19
Bloomberg Barclays Universal	2.99	5.69	7.97
Bloomberg Barclays Gov/Credit	2.51	6.45	8.74
1-3 Year	1.45	1.92	1.98
Intermediate	2.11	4.05	4.39
Long-Term	3.95	14.97	24.18
Bloomberg Barclays Long Credit	4.55	13.57	23.77
Bloomberg Barclays Corp High Yield	6.12	4.11	6.30
Bloomberg Barclays TIPS	2.20	4.87	8.25
Bloomberg Barclays Muni Bond 1-5 Year	1.76	2.69	3.17
Bloomberg Barclays Muni 1-10 Year	2.11	4.04	5.79
Bloomberg Barclays Municipal	2.65	6.24	12.82

Source: Bloomberg Barclays

U.S. FIXED INCOME (Continued)

Callan Style Median and Index Returns* for Periods ended December 31, 2016

Broad Fixed Income	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Core Bond Style	-2.73	3.13	3.13	3.39	2.86	4.90	5.05
Core Bond Plus Style	-2.33	4.67	4.67	3.54	3.72	5.35	5.67
Bloomberg Barclays Aggregate	-2.98	2.65	2.65	3.03	2.23	4.34	4.58
Bloomberg Barclays Universal	-2.61	3.91	3.91	3.27	2.78	4.57	4.92
Long-Term	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Extended Maturity Credit Style	-5.33	10.77	10.77	7.47	6.09	7.27	-
Bloomberg Barclays Long Credit	-5.40	10.22	10.22	6.98	5.20	6.87	7.15
Extended Maturity Gov/Credit Style	-7.60	7.28	7.28	7.33	4.64	7.45	7.46
Bloomberg Barclays Long Gov/Credit	-7.84	6.67	6.67	7.16	4.07	6.85	7.03
Intermediate-Term	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Intermediate Style	-1.91	2.33	2.33	2.31	2.27	4.27	4.50
Bloomberg Barclays Interm Gov/Credit	-2.07	2.08	2.08	2.09	1.85	3.84	4.07
Short-Term	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Defensive Style	-0.33	1.54	1.54	1.19	1.29	2.74	2.98
Bloomberg Barclays Gov/Credit 1-3 Yr	-0.39	1.28	1.28	0.90	0.92	2.44	2.72
Bank Loans	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Bank Loan Style	2.13	9.38	9.38	3.90	5.43	4.89	5.17
Credit Suisse Leveraged Loans	2.25	9.88	9.88	3.76	5.21	4.26	4.87
High Yield	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
High Yield Style	1.76	14.74	14.74	4.61	7.36	7.42	8.26
Bloomberg Barclays Corp High Yield	1.75	17.13	17.13	4.66	7.36	7.45	8.35
Unconstrained	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Unconstrained Fixed Style	0.79	5.07	5.07	2.34	3.89	4.59	6.33
90 Day T-Bill + 3%	0.82	3.33	3.33	3.14	3.12	3.80	4.34
Stable Value	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Stable Value Style	0.48	1.87	1.87	1.78	1.89	2.76	3.44
iMoneyNet Mutual Fund Avg	0.05	0.13	0.13	0.05	0.04	0.71	-
TIPS	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Inflation-Linked Style	-2.34	4.82	4.82	2.27	0.93	4.44	5.39
Bloomberg Barclays TIPS	-2.41	4.68	4.68	2.26	0.89	4.36	5.30
Municipal	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Short Municipal Style	-0.91	-0.10	-0.10	0.45	0.64	1.65	1.88
Bloomberg Barclays Municipal 1-5 Yr	-1.36	0.00	0.00	1.08	1.25	2.86	2.99
Intermediate Municipal Style	-3.47	-0.29	-0.29	2.84	2.35	3.47	3.77
Bloomberg Barclays Municipal 1-10 Yr	-2.62	-0.10	-0.10	2.32	2.03	3.69	3.87
Long Municipal Style	-3.50	0.50	0.50	4.32	3.60	4.54	4.97
Bloomberg Barclays Municipal	-3.62	0.25	0.25	4.14	3.28	4.25	4.67

*Returns for less than one year are not annualized.

Sources: Bloomberg Barclays, Callan, Credit Suisse, Merrill Lynch

Big-League Yields

NON-U.S. FIXED INCOME | Kyle Fekete

The U.S. dollar skyrocketed against a trade-weighted basket of currencies on the back of the November U.S. election and higher U.S. interest rates. Investment strategies with foreign currency exposure faced strong headwinds as the **Bloomberg Barclays Global Aggregate ex US** fell 10.26% (-1.86% on a hedged basis).

Continuing 2016's anti-establishment geopolitical theme, Italians voted against reforms proposed by the government, leading to Italian President Matteo Renzi's resignation. In December, European Central Bank President Mario Draghi announced the extension of its stimulus program out to December 2017; however, the bond buying will be dialed

Quarterly Returns for Non-U.S. Government Indices

Country	Country Debt (\$)	Country Debt	Local Currency	Weight*
Australia	-9.22%	-4.06%	-5.38%	2.45%
Austria	-8.58%	-2.60%	-6.14%	1.85%
Belgium	-9.47%	-3.54%	-6.14%	3.03%
Canada	-5.79%	-3.87%	-2.00%	2.55%
Denmark	-8.77%	-2.93%	-6.01%	0.77%
Finland	-8.12%	-2.11%	-6.14%	0.72%
France	-9.35%	-3.42%	-6.14%	11.80%
Germany	-8.47%	-2.48%	-6.14%	8.85%
Ireland	-7.81%	-1.77%	-6.14%	0.93%
Italy	-9.24%	-3.30%	-6.14%	11.41%
Japan	-14.72%	-1.78%	-13.18%	33.08%
Malaysia	-10.17%	-2.55%	-7.81%	0.52%
Mexico	-11.18%	-5.46%	-6.06%	0.94%
Netherlands	-8.70%	-2.73%	-6.14%	2.82%
Norway	-8.54%	-1.50%	-7.15%	0.33%
Poland	-10.13%	-1.98%	-8.31%	0.72%
Singapore	-8.91%	-3.49%	-5.62%	0.45%
South Africa	0.72%	0.16%	0.56%	0.64%
Spain	-8.80%	-2.83%	-6.14%	6.61%
Sweden	-7.73%	-2.16%	-5.69%	0.56%
Switzerland	-6.03%	-1.48%	-4.62%	0.29%
U.K.	-8.40%	-3.70%	-4.88%	8.69%

*Weight in the Citi Non-U.S. World Government Bond Index.
Source: Citigroup

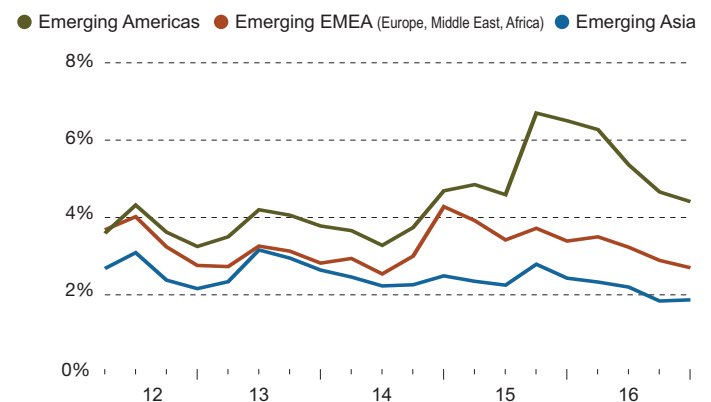
back to €60 billion per month, down from €80 billion. The quantitative easing program reached approximately €1.7 trillion in 2016, and should top €2.2 trillion by the end of 2017.

Yields on 10-year German government bonds increased to 0.21%, 224 bps below that of the 10-year Treasury. The U.S./German 10-year debt spread reached the widest it has been since 1990. The euro declined 6.14% against the dollar.

Ahead of the uncertainty surrounding the Brexit process, the Bank of England (BOE) elected to hold the benchmark rate at 0.25% and maintain the same rate of bond purchasing, saying the sterling's recent appreciation against the euro may curtail inflation. The U.K. 10-year yield jumped 49 bps to 1.24% and the sterling declined 4.9% against the dollar. Changes to Japan's monetary policy were also put on hold as the unemployment rate reached a healthy level and a weakened yen stood poised to boost potential earnings growth. The Bank of Japan upheld its pledge to keep the yield of 10-year Japanese debt near 0%; its yield settled at 0.05%.

Emerging market debt weakened and underperformed developed markets. The local currency-denominated **JP Morgan GBI-EM Global Diversified Index** fell 6.09%. The USD-denominated **JPM EM Global Diversified Index** fell 4.02%.

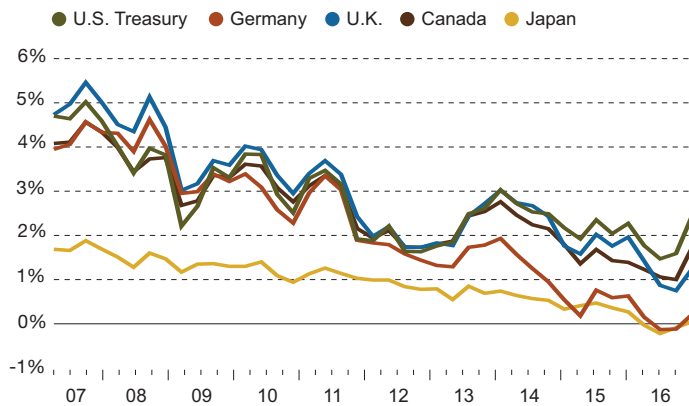
Emerging Spreads Over Developed (By Region)



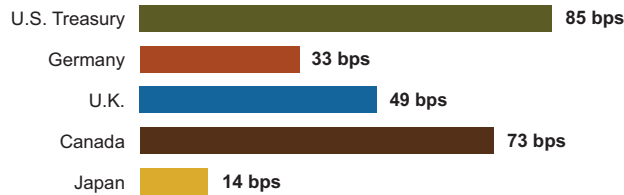
Source: Bloomberg Barclays

NON-U.S. FIXED INCOME (Continued)

10-Year Global Government Bond Yields



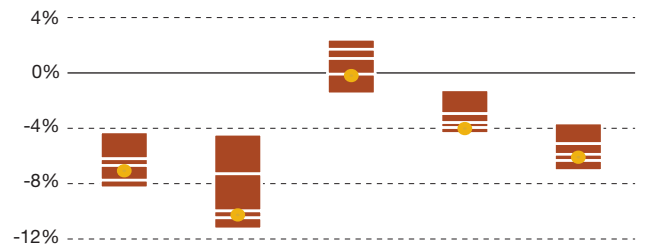
Change in 10-Year Yields from 3Q16 to 4Q16



Source: Bloomberg

Turkey and Mexico were among the worst performers in both indices. However, emerging market sovereign debt proved to be one of the strongest asset classes in 2016, gaining roughly 10% in both JP Morgan indices, benefiting from the tailwind of increased commodity prices.

Callan Style Group Quarterly Returns



	Global Fixed Style	Non-U.S. Fixed Style	Global High Yield	Em Debt USD DB	Em Debt Local
10th Percentile	-4.21	-4.38	2.48	-1.17	-3.57
25th Percentile	-6.15	-7.24	1.76	-2.89	-5.06
Median	-6.64	-9.92	1.09	-3.54	-5.83
75th Percentile	-7.70	-10.42	-0.04	-3.90	-6.28
90th Percentile	-8.25	-11.22	-1.46	-4.32	-7.00
Benchmark	-7.07	-10.26	-0.19	-4.02	-6.09

Sources: Bloomberg Barclays, Callan, JPMorgan Chase

Callan Style Median and Index Returns* for Periods ended December 31, 2016

Global Fixed Income	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Global Fixed Income Style	-6.64	2.23	2.23	0.08	0.69	3.77	5.69
Bloomberg Barclays Global Aggregate	-7.07	2.09	2.09	-0.19	0.21	3.29	4.79
Global Fixed Income Style (hedged)	-2.32	4.37	4.37	4.29	4.17	4.96	5.36
Bloomberg Barclays Global Aggregate (hedged)	-2.34	3.95	3.95	4.15	3.59	4.39	4.55
High Yield	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Global High Yield Style	1.09	14.82	14.82	3.10	6.43	6.76	9.15
Bloomberg Barclays Global High Yield	-0.19	14.27	14.27	3.60	7.37	7.35	9.18
Non-U.S. Fixed Income	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Non-U.S. Fixed Income Style	-9.92	2.28	2.28	-1.70	-0.15	3.48	5.70
Bloomberg Barclays Global Aggregate ex US	-10.26	1.49	1.49	-2.59	-1.39	2.44	4.96
Emerging Markets Fixed Income	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Emerging Debt Style (US\$)	-3.54	12.05	12.05	5.46	5.94	7.28	10.23
JPM EMBI Global Diversified	-4.02	10.15	10.15	6.19	5.91	6.89	9.02
Emerging Debt Style (local)	-5.83	9.97	9.97	-3.77	-0.93	3.64	7.04
JPM GBI-EM Global Diversified	-6.09	9.94	9.94	-4.10	-1.29	3.82	-
Emerging Debt Blend Style	-3.98	10.25	10.25	0.69	2.48	6.50	11.84
JPM EMBI GI Div/JPM GBI-EM GI Div	-5.06	10.24	10.24	1.05	2.36	5.44	-
Emerging Debt Corporate Style	-1.19	11.51	11.51	5.42	6.51	-	-
JPM CEMBI	-1.29	11.11	11.11	5.33	5.90	6.74	7.83

*Returns less than one year are not annualized.

Sources: Bloomberg Barclays, Callan, JPMorgan

Rates Trump Fundamentals

REAL ESTATE | Kevin Nagy

The **NCREIF Property Index** advanced 1.73% during the fourth quarter (1.14% from income and 0.59% from appreciation). This was the lowest return since 2010, eclipsing the third quarter's mark of 1.78%. Appreciation fell for the seventh consecutive quarter.

Industrial (+2.89%) was the best-performing sector for the third quarter in a row and Apartments (+1.67%) and Retail (+1.65%) also posted strong relative returns; Hotels (+0.37%) were the worst performers. The West region posted the strongest results (+2.22%), and the Midwest was the weakest (+1.29%). Transaction volume totaled \$14 billion, the highest on record, a 45% jump over the previous quarter, and a 24% increase over the same period in 2015. Appraisal capitalization rates fell to 4.43%, a new all-time low, undercutting the third quarter's 4.48%. Transaction capitalization rates fell sharply from 6.2% to 5.7% in the fourth quarter, tightening the spread between appraisal and transactional rates to 123 basis points.

Occupancy rates stayed steady at 93.22%, a 15-year high hit in the third quarter. For the second straight quarter Retail and Apartment occupancy rates fell slightly, and Industrial and Office rates increased.

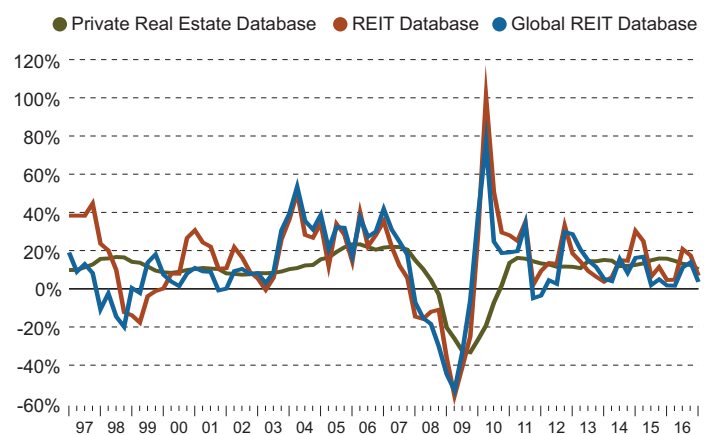
The **NCREIF Open End Diversified Core Equity Index** rose 1.88% (0.84% from income and 1.04% from appreciation). This marked a 5 bps increase over the third quarter return of 1.83%, which was the lowest for the Index since 2010. Income returns fell slightly, but appreciation bounced back from a five-year low in the third quarter.

Global real estate investment trusts (REITs), tracked by the **FTSE EPRA/NAREIT Developed REIT Index (USD)**, lagged behind their U.S. counterparts and dropped 5.39%. U.S. REITs, as measured by the **FTSE NAREIT Equity REITs Index**, lost 2.89% for the quarter.

In the U.S., REITs started the quarter with a sharp decline due to an increase in interest rates. Donald Trump's surprise victory in the presidential election sent rates even higher and further punished many REIT sectors, especially those that represent a higher weight in the Index. Health Care (-10.80%) was the worst performer, hammered by the possibility that the incoming Republican administration would repeal the Affordable Care Act. Retail (-10.73%) and Infrastructure (-6.95%) also suffered large losses. The biggest winner for the quarter was the Hotel sector, which skyrocketed 20.39% with the election of Donald Trump, a hotelier. Specialty (+6.67%) and Data Centers (+0.82%) were other strong-performing sectors for the quarter. Politics and interest rates drove some REIT valuations downward, despite generally strong fundamentals.

Political issues also impacted the European market. Fears of a hard Brexit slowed transaction volume in the U.K., despite strong economic data suggesting that the economy was still on track. On the continent, pricing and transactions were weighed down by fears of an Italian banking crisis and uncertainty concerning France's upcoming elections.

Rolling One-Year Returns

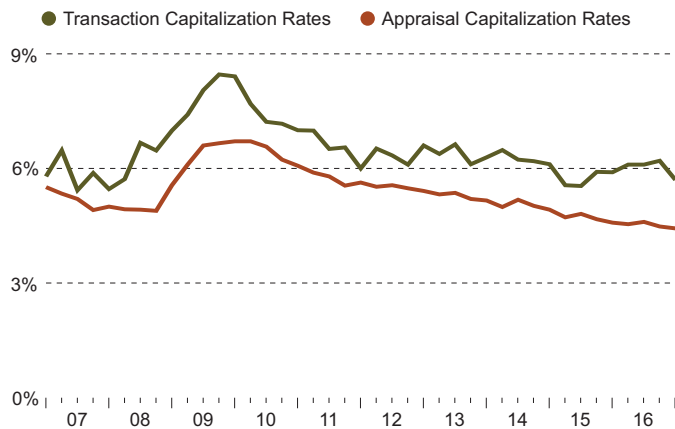


Source: Callan

*Index subreturns are calculated separately from index return and may not total.

REAL ESTATE (Continued)

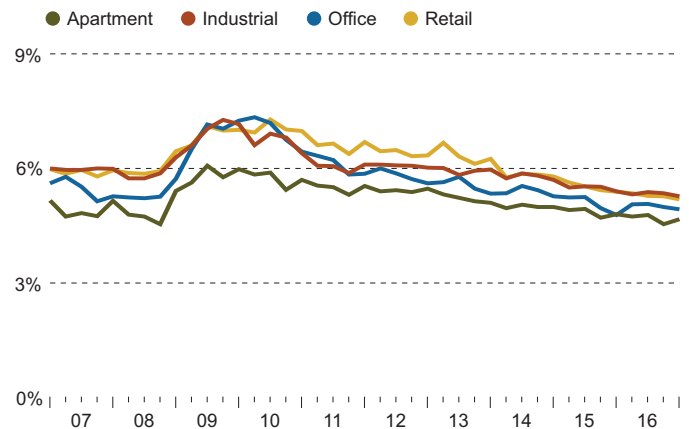
NCREIF Transaction and Appraisal Capitalization Rates



Source: NCREIF

Note: Transaction capitalization rate is equal weighted.

NCREIF Capitalization Rates by Property Type



Source: NCREIF

Note: Capitalization rates are appraisal-based.

Commercial mortgage-backed securities (CMBS) issuance for the quarter jumped 31% to \$26.0 billion from the \$19.8 billion in the third quarter. This also represented a 19.3% increase over the fourth quarter of 2015 (\$21.8 billion).

Callan Database Median and Index Returns* for Periods ended December 31, 2016

	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Private Real Estate							
Real Estate Database (net of fees)	1.87	8.34	8.34	11.89	11.89	4.56	7.57
NCREIF Property	1.73	7.97	7.97	11.02	10.91	6.93	9.00
NFI-ODCE (value wtd. net)	1.88	7.79	7.79	11.04	11.16	4.84	7.15
Public Real Estate							
REIT Database	-2.66	6.87	6.87	13.59	12.26	5.65	11.85
FTSE NAREIT Equity	-2.89	8.52	8.52	13.38	12.01	5.08	10.80
Global Public Real Estate							
Global REIT Database	-5.11	3.97	3.97	7.26	10.83	2.82	10.55
FTSE EPRA/NAREIT Developed REIT	-5.39	4.99	4.99	6.78	10.34	2.23	9.84
Global ex U.S. Public Real Estate							
Global ex-U.S. REIT Database	-7.77	0.48	0.48	1.13	8.95	-0.12	10.03
EPRA/NAREIT Dev REITs ex-U.S.	-7.68	1.97	1.97	0.61	8.42	0.12	9.24

*Returns for less than one year are not annualized.

All REIT returns are reported gross in USD.

Sources: Callan, NAREIT, NCREIF, The FTSE Group. NCREIF statistics are the product of direct queries and may fluctuate over time.

Down but Far From Out

PRIVATE EQUITY | Gary Robertson

Based on preliminary data, private equity funds raised \$281 billion in 2016, a moderate \$24.2 billion (9%) increase over 2015, and 783 partnerships were formed, up by 101 (15%) over the previous year, according to *Private Equity Analyst*.

In the fourth quarter, commitments totaled \$86.9 billion and 267 funds were created. The amount raised skyrocketed by 125% compared to the third quarter's \$38.6 billion, and the number of new funds jumped by 87% from the prior quarter's 143.

Private equity firms purchased 1,728 companies in 2016, down 14% from 2,006 in 2015, according to *Buyouts* newsletter. The year's announced dollar volume was \$163.2 billion, an eight-year high and up 39% from \$117.5 billion in 2015. The fourth quarter saw 322 transactions, down from 385 in the third quarter, and disclosed dollar volume totaled \$28.3 billion, down from \$39.0 billion.

The year produced 8,136 rounds of new investment in venture capital companies, down 22% from 2015's 10,468, according to the National Venture Capital Association. The announced volume of \$69.1 billion for the year was down 13% from \$79.3 billion in 2015. Fourth quarter VC investments totaled 1,744 rounds and \$12.7 billion of announced financing, down from 1,979 rounds and \$15.7 billion in the previous quarter.

Funds Closed January 1 to December 31, 2016

Strategy	No. of Funds	Amt (\$mm)	Percent
Venture Capital	401	41,060	15%
Buyouts	278	168,798	60%
Subordinated Debt	22	17,739	6%
Distressed Debt	20	21,972	8%
Secondary and Other	23	22,525	8%
Fund-of-funds	39	8,808	3%
Totals	783	280,902	100%

Source: Private Equity Analyst

Buyouts reports that 2016's 505 private M&A exits of buyout-backed companies was down 11% from the 567 in 2015. The year's aggregate disclosed M&A exit values of \$85.7 billion was down 35% from 2015's \$131.4 billion. In the fourth quarter, there were 105 M&A exits, and announced values totaled \$18.1 billion, down from 142 exits totaling \$27.5 billion in the third quarter. There were three buyout-backed IPOs, with a total value of \$2.0 billion, and eight for the full year, raising a total of \$4.1 billion.

Venture-backed M&A exits for the year totaled 687, down 22% from 884 in 2015, with announced values of \$43.9 billion, up 3.8% from \$42.3 billion in 2015. The quarter had 184 exits with announced values totaling \$7.52 billion, compared to 192 and \$13.4 billion in the third quarter. The year produced 39 venture-backed IPOs raising \$2.9 billion, down from the 77 IPOs in 2015 that raised \$8.1 billion.

Private Equity Performance Database (%)

(Pooled Horizon IRRs through June 30, 2016*)

Strategy	3 Months	Year	3 Years	5 Years	10 Years	15 Years	20 Years
All Venture	0.26	-0.09	19.18	13.63	10.38	5.66	20.65
Growth Equity	1.60	1.83	12.86	10.13	11.25	10.25	13.65
All Buyouts	2.85	6.29	12.91	10.81	10.40	12.32	12.62
Mezzanine	2.25	7.09	8.79	9.67	9.35	8.12	9.19
Distressed	2.34	1.41	7.34	8.73	9.26	10.50	10.55
All Private Equity	2.13	3.95	13.11	10.89	10.33	10.32	13.26
S&P 500	2.46	3.99	11.66	12.10	7.42	5.75	7.87
Russell 3000	2.63	2.14	11.13	11.60	7.40	6.09	7.96

*Most recent data available at time of publication.

Notes: Private equity returns are net of fees. Transaction count and dollar volume figures across all private equity measures are preliminary figures and are subject to update in subsequent versions of *Capital Market Review* and other Callan publications.

Sources: Russell Investment Group, Standard & Poor's, Thomson Reuters/Cambridge

Making Alpha Great Again

HEDGE FUNDS | Jim McKee

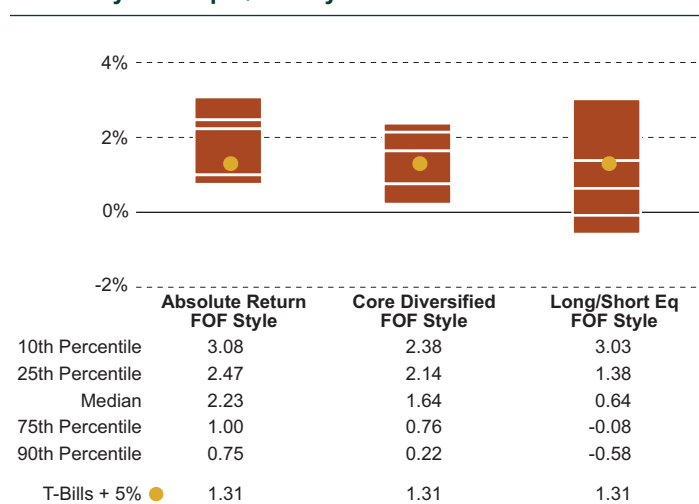
In the wake of the U.S. presidential election, the reflation trade exploded as U.S. stocks jumped and Treasuries were dumped. The dollar also strengthened dramatically. During this rapid market paradigm shift, the average hedge fund appeared to gain little over embedded betas, as most conservatively positioned their gross and net exposures going into the election. However, the hedge fund community will likely see a combination of more fiscal policy and less monetary policy as a better trading environment.

Representing the average fund's performance without implementation costs, the **Credit Suisse Hedge Fund Index (CS HFI)** rose 1.15% in the fourth quarter. As a proxy for live portfolios, the median manager in the **Callan Hedge Fund-of-Funds Database** advanced 1.26%, net of all fees.

Within CS HFI, the best-performing strategy was *Global Macro* (+4.59%), aided by a stronger dollar. *Distressed* gained 3.57%. The sharp reversals following the election across currencies, rates, and equities upset the trend-following mantra of *Managed Futures* (-5.65%). *Long/Short Equity* (-0.20%) was also caught flat-footed by the unexpected Trump effect.

Within Callan's Hedge Fund-of-Funds Database, market exposures marginally affected performance in the fourth quarter. Aided by tightening credits and supportive fundamentals, the median *Callan Absolute Return FoF* (+2.23%) outpaced the *Callan Long/Short Equity FoF* (+0.64%). With diversifying exposures to both non-directional and directional styles, the *Callan Core Diversified FoF* gained 1.64%.

Callan Style Group Quarterly Returns



Sources: Callan, Merrill Lynch

Callan Database Median and Index Returns* for Periods ended December 31, 2016

	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Hedge Fund-of-Funds Database	1.26	1.19	1.19	1.43	4.91	3.31	4.74
CS Hedge Fund Index	1.15	1.25	1.25	1.54	4.34	3.75	5.74
CS Equity Market Neutral	-2.65	-4.58	-4.58	-1.40	1.11	-2.93	0.47
CS Convertible Arbitrage	0.42	6.60	6.60	1.85	3.85	3.69	4.43
CS Fixed Income Arbitrage	1.85	4.29	4.29	3.07	4.76	3.42	4.25
CS Multi-Strategy	1.16	4.41	4.41	4.78	7.30	5.19	6.81
CS Distressed	3.57	6.38	6.38	1.09	6.02	3.96	6.94
CS Risk Arbitrage	0.77	5.89	5.89	1.62	2.51	3.33	3.66
CS Event-Driven Multi-Strategy	1.77	1.25	1.25	-1.50	3.95	3.67	6.07
CS Long/Short Equity	-0.20	-3.43	-3.43	1.82	6.10	4.03	6.00
CS Dedicated Short Bias	1.82	-16.87	-16.87	-7.04	-13.65	-9.95	-8.11
CS Global Macro	4.59	3.58	3.58	2.28	3.14	5.82	8.07
CS Managed Futures	-5.65	-6.84	-6.84	2.99	0.66	2.67	4.77
CS Emerging Markets	-0.27	4.47	4.47	1.91	4.89	3.68	7.97

*Returns less than one year are not annualized. Sources: Callan, Credit Suisse.

A Case of the Jitters

DEFINED CONTRIBUTION | Tom Szkwarla

The average defined contribution (DC) plan gained 3.92% in the third quarter of 2016, as measured by the Callan DC Index™. Still, the Index trailed the Age 45 Target Date Fund—the average of target date funds that would be selected by participants age 45 and retiring at age 65—which gained 4.53%. Since inception, the DC Index's annual return of 5.41% has trailed the Age 45 Target Date Fund by 74 basis points.

During the third quarter, DC plan balances grew by 3.67%, driven entirely by market returns. Participants appeared to be jittery; money flowed out of plans on a net basis, reducing total balance growth by 25 basis points. The quarter's outflows were the highest since the third quarter of 2006. And third quarter turnover (i.e., net transfer activity levels within DC plans) in the DC Index came in at 0.82%, its highest level since the third quarter of 2012.

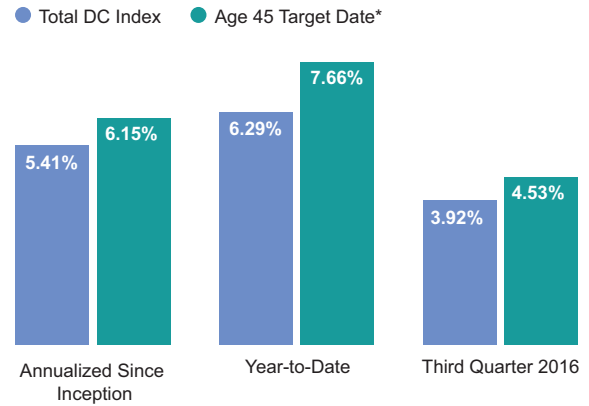
Stable value experienced its fifth quarter in a row of net inflows—and the highest of the five—during the period. Meanwhile, U.S. large, small, and mid cap equity saw significant outflows. Even non-U.S. equity experienced outflows, despite its exceptional performance during the quarter. Target date funds held fast; for the third quarter, over 55 cents of every dollar that moved within DC plans flowed to TDFs. Target date funds now make up 27.7% of the average DC plan.

The Callan DC Index's overall equity allocation ended the quarter at 68%, modestly above the Index's historical average (67%).

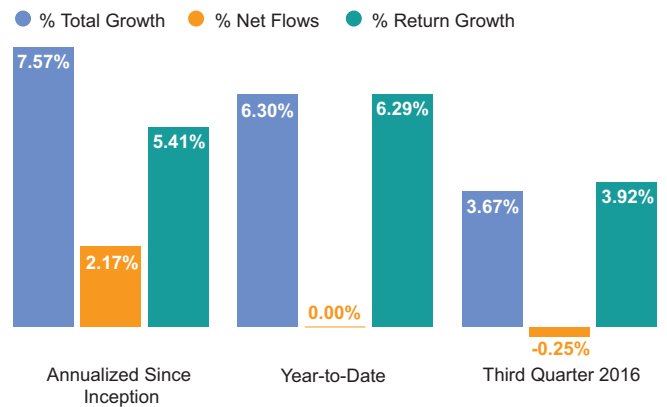
Target date funds are less prevalent than U.S. large cap equity; however, when target date funds are available in a DC plan, they hold a much greater portion of assets (32%) than U.S. large cap equity funds (23%).

The Callan DC Index is an equally weighted index tracking the cash flows and performance of nearly 90 plans, representing more than one million DC participants and over \$135 billion in assets. The Index is updated quarterly and is available on Callan's website, as is the quarterly DC Observer newsletter.

Investment Performance*



Growth Sources*



Net Cash Flow Analysis (Third Quarter 2016) (Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	55.31%
Stable Value	28.35%
Company Stock	-20.41%
U.S. Large Cap	-33.88%
Total Turnover**	0.82%

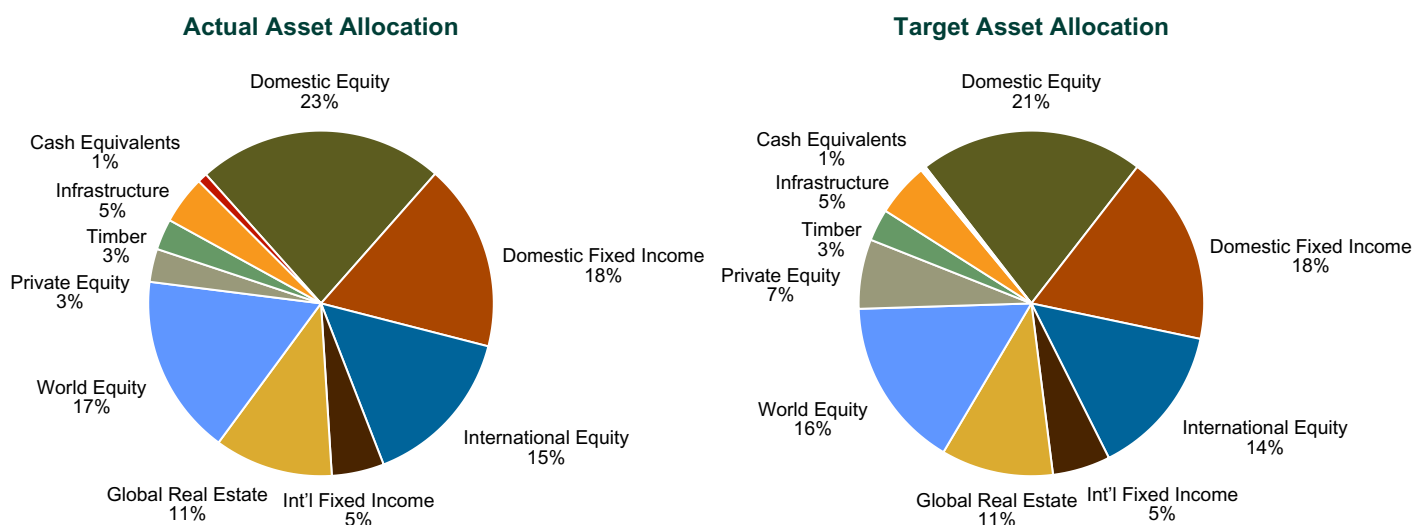
Source: Callan DC Index
Data provided here is the most recent available at time of publication.

* DC Index inception date is January 2006.

** Total Index "turnover" measures the percentage of total invested assets (transfers only, excluding contributions and withdrawals) that moved between asset classes.

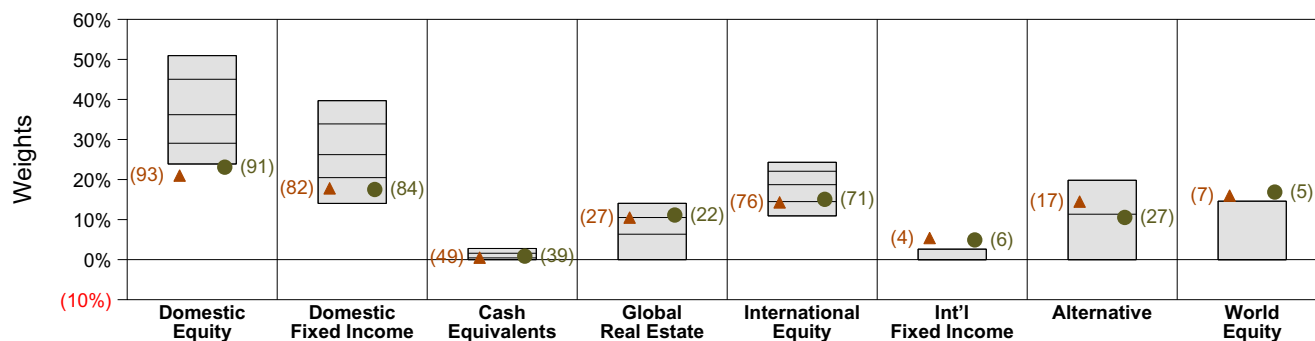
Actual vs Target Asset Allocation As of December 31, 2016

The top left chart shows the Fund's asset allocation as of December 31, 2016. The top right chart shows the Fund's target asset allocation as outlined in the investment policy statement. The bottom chart ranks the fund's asset allocation and the target allocation versus the CAI Public Fund Sponsor Database.



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	1,130,378	23.1%	21.0%	2.1%	102,350
Domestic Fixed Income	857,357	17.5%	17.8%	(0.3%)	(14,019)
International Equity	737,044	15.1%	14.3%	0.8%	37,006
Int'l Fixed Income	240,743	4.9%	5.4%	(0.5%)	(23,607)
Global Real Estate	545,176	11.1%	10.5%	0.6%	31,162
World Equity	825,970	16.9%	16.0%	0.9%	42,711
Private Equity	152,311	3.1%	6.5%	(3.4%)	(165,888)
Timber	142,891	2.9%	3.0%	(0.1%)	(3,970)
Infrastructure	220,642	4.5%	5.0%	(0.5%)	(24,127)
Cash Equivalents	42,857	0.9%	0.5%	0.4%	18,380
Total	4,895,371	100.0%	100.0%		

Asset Class Weights vs CAI Public Fund Sponsor Database



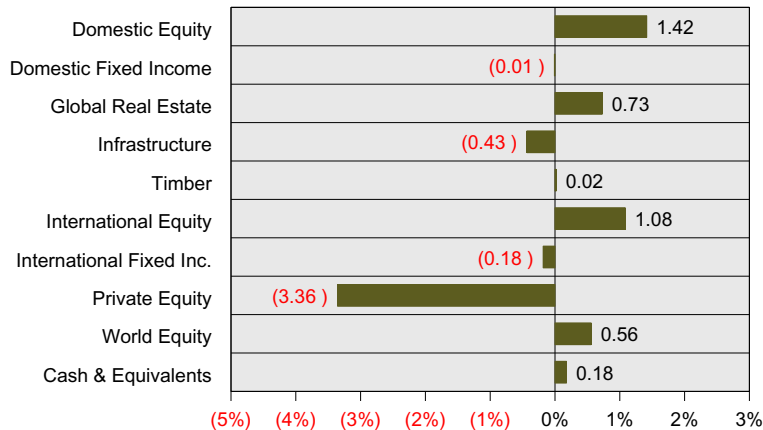
	Domestic Equity	Domestic Fixed Income	Cash Equivalents	Global Real Estate	International Equity	Int'l Fixed Income	Alternative	World Equity
10th Percentile	50.95	39.70	2.79	14.06	24.31	2.62	19.82	14.60
25th Percentile	45.04	33.89	1.59	10.52	22.07	0.00	11.35	0.00
Median	36.19	26.22	0.44	6.35	18.72	0.00	0.00	0.00
75th Percentile	29.06	20.48	0.00	0.00	14.49	0.00	0.00	0.00
90th Percentile	23.88	14.04	0.00	0.00	10.92	0.00	0.00	0.00
Fund	23.09	17.51	0.88	11.14	15.06	4.92	10.54	16.87
Target	21.00	17.80	0.50	10.50	14.30	5.40	14.50	16.00
% Group Invested	96.63%	97.75%	69.10%	62.92%	90.45%	12.92%	42.13%	20.79%

* Current Quarter Target = 16.1% Russell 1000 Index, 16.0% MSCI World, 13.2% Blmbg Aggregate Idx, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 6.5% NDSIB PEN - Private Equity, 5.4% Blmbg GI Agg ex US, 5.0% CPI-W, 4.9% Russell 2000 Index, 4.6% Blmbg US HY Cor 2% C, 3.1% MSCI EM, 3.0% NCREIF Timberland Index and 0.5% 3-month Treasury Bill.

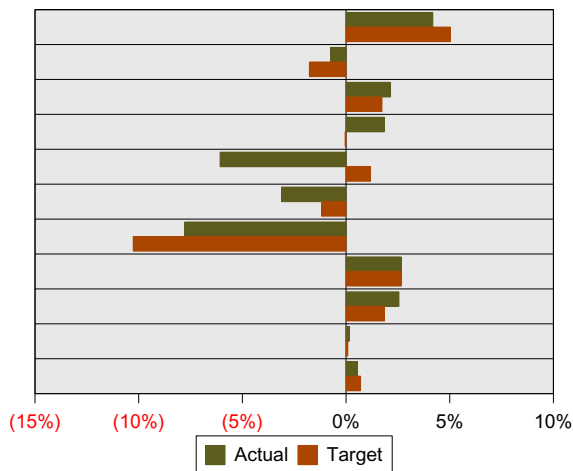
Quarterly Total Fund Relative Attribution - December 31, 2016

The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

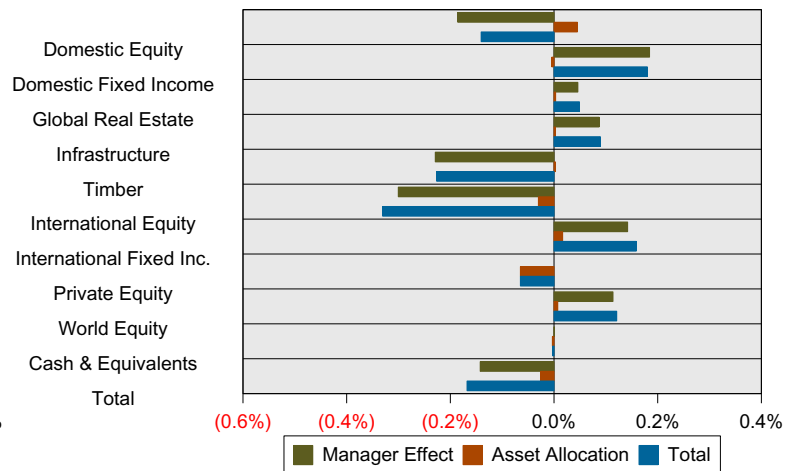
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended December 31, 2016

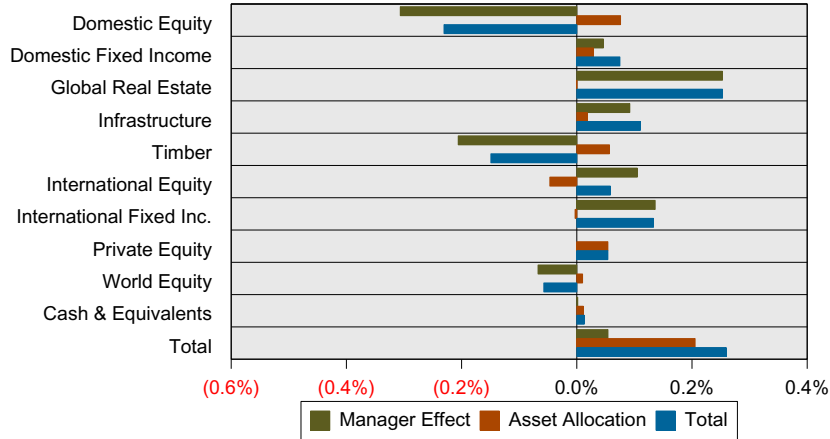
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	22%	21%	4.18%	5.03%	(0.19%)	0.05%	(0.14%)
Domestic Fixed Income	18%	18%	(0.75%)	(1.77%)	0.18%	(0.00%)	0.18%
Global Real Estate	11%	10%	2.15%	1.73%	0.05%	0.00%	0.05%
Infrastructure	5%	5%	1.85%	(0.04%)	0.09%	0.00%	0.09%
Timber	3%	3%	(6.07%)	1.18%	(0.23%)	0.00%	(0.23%)
International Equity	15%	14%	(3.11%)	(1.18%)	(0.30%)	(0.03%)	(0.33%)
International Fixed Inc.	5%	5%	(7.77%)	(10.26%)	0.14%	0.02%	0.16%
Private Equity	3%	6%	2.65%	2.65%	0.00%	(0.06%)	(0.06%)
World Equity	17%	16%	2.55%	1.86%	0.11%	0.01%	0.12%
Cash & Equivalents	1%	0%	0.16%	0.09%	0.00%	(0.00%)	(0.00%)
Total					0.53%	0.70%	(0.17%)

* Current Quarter Target = 16.1% Russell 1000 Index, 16.0% MSCI World, 13.2% Blmbg Aggregate Idx, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 6.5% NDSIB PEN - Private Equity, 5.4% Blmbg GI Agg ex US, 5.0% CPI-W, 4.9% Russell 2000 Index, 4.6% Blmbg US HY Cor 2% C, 3.1% MSCI EM, 3.0% NCREIF Timberland Index and 0.5% 3-month Treasury Bill.

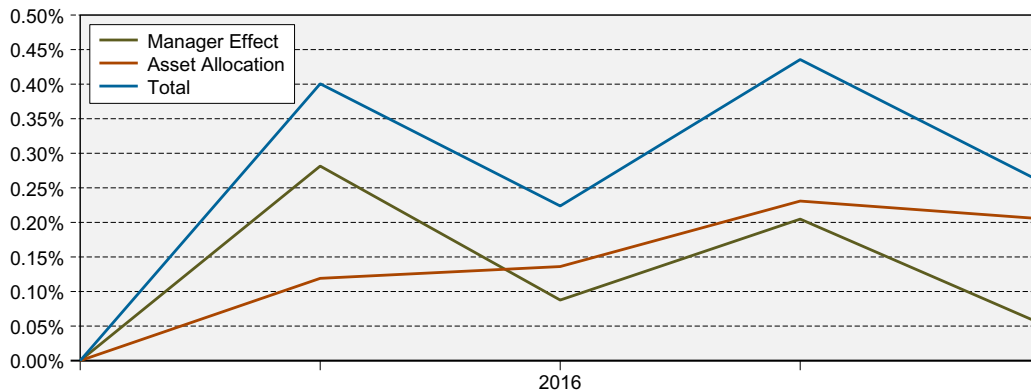
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

One Year Relative Attribution Effects



Cumulative Relative Attribution Effects



One Year Relative Attribution Effects

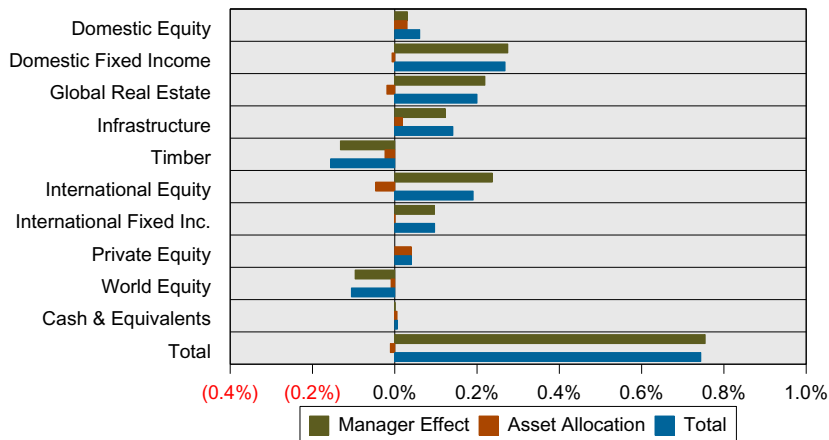
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	22%	21%	12.85%	14.22%	(0.31%)	0.08%	(0.23%)
Domestic Fixed Income	18%	17%	6.73%	6.43%	0.05%	0.03%	0.07%
Global Real Estate	11%	10%	10.36%	7.97%	0.25%	0.00%	0.25%
Infrastructure	5%	5%	3.90%	1.99%	0.09%	0.02%	0.11%
Timber	3%	4%	(3.95%)	2.59%	(0.21%)	0.06%	(0.15%)
International Equity	15%	14%	4.15%	3.50%	0.11%	(0.05%)	0.06%
International Fixed Inc.	5%	5%	4.04%	1.49%	0.14%	(0.00%)	0.13%
Private Equity	3%	6%	0.31%	0.31%	0.00%	0.05%	0.05%
World Equity	16%	16%	7.06%	7.51%	(0.07%)	0.01%	(0.06%)
Cash & Equivalents	1%	1%	0.50%	0.33%	0.00%	0.01%	0.01%
Total			7.36%	7.10%	+ 0.05%	+ 0.21%	0.26%

* Current Quarter Target = 16.1% Russell 1000 Index, 16.0% MSCI World, 13.2% Blmbg Aggregate Idx, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 6.5% NDSIB PEN - Private Equity, 5.4% Blmbg GI Agg ex US, 5.0% CPI-W, 4.9% Russell 2000 Index, 4.6% Blmbg US HY Cor 2%C, 3.1% MSCI EM, 3.0% NCREIF Timberland Index and 0.5% 3-month Treasury Bill.

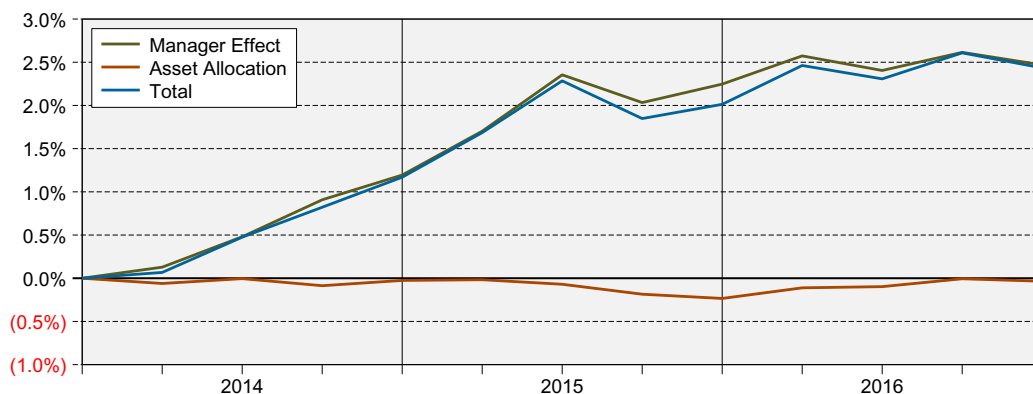
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Three Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Three Year Annualized Relative Attribution Effects

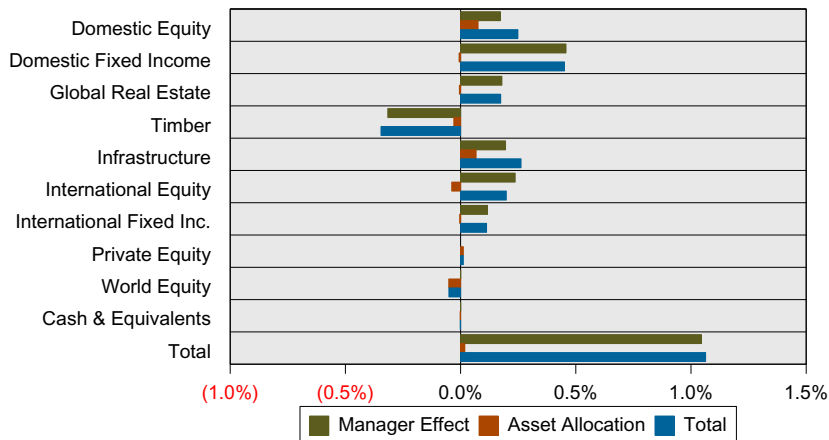
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	8.42%	8.26%	0.03%	0.03%	0.06%
Domestic Fixed Income	19%	18%	4.96%	3.49%	0.27%	(0.01%)	0.27%
Global Real Estate	10%	10%	13.42%	11.02%	0.22%	(0.02%)	0.20%
Infrastructure	4%	5%	3.86%	0.90%	0.12%	0.02%	0.14%
Timber	4%	5%	2.00%	5.96%	(0.13%)	(0.02%)	(0.16%)
International Equity	15%	14%	(0.08%)	(1.64%)	0.24%	(0.05%)	0.19%
International Fixed Inc.	5%	5%	(0.71%)	(2.59%)	0.10%	0.00%	0.10%
Private Equity	4%	5%	(1.76%)	(1.76%)	0.00%	0.04%	0.04%
World Equity	16%	16%	3.23%	3.80%	(0.10%)	(0.01%)	(0.11%)
Cash & Equivalents	1%	1%	0.22%	0.14%	0.00%	0.01%	0.01%
Total			4.82%	4.07%	+ 0.75%	+ (0.01%)	0.74%

* Current Quarter Target = 16.1% Russell 1000 Index, 16.0% MSCI World, 13.2% Blmbg Aggregate Idx, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 6.5% NDSIB PEN - Private Equity, 5.4% Blmbg GI Agg ex US, 5.0% CPI-W, 4.9% Russell 2000 Index, 4.6% Blmbg US HY Cor 2% C, 3.1% MSCI EM, 3.0% NCREIF Timberland Index and 0.5% 3-month Treasury Bill.

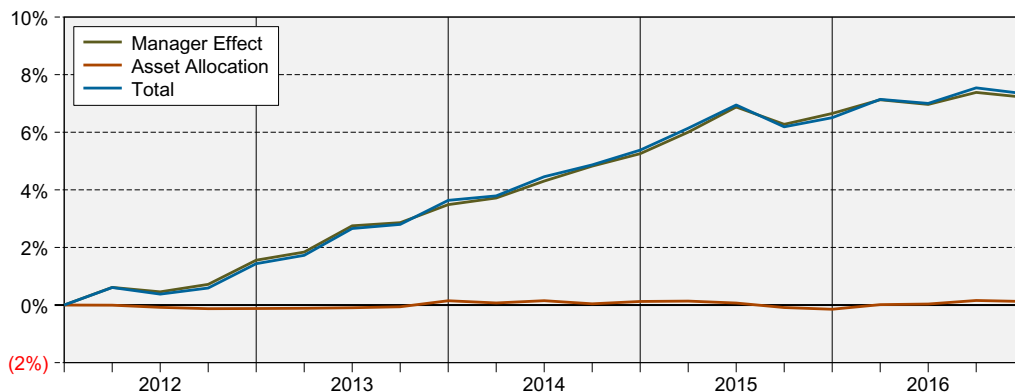
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Five Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Five Year Annualized Relative Attribution Effects

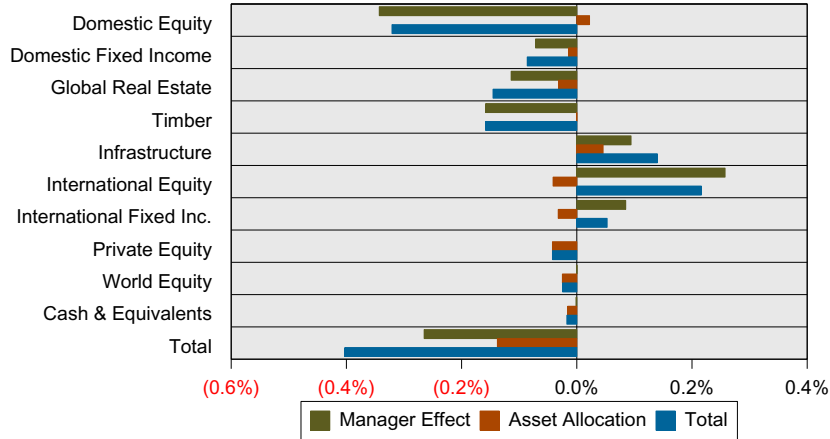
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	24%	23%	15.48%	14.71%	0.17%	0.08%	0.25%
Domestic Fixed Income	18%	18%	6.09%	3.64%	0.46%	(0.01%)	0.45%
Global Real Estate	10%	10%	12.86%	10.91%	0.18%	(0.01%)	0.17%
Timber	4%	5%	0.21%	7.05%	(0.32%)	(0.03%)	(0.35%)
Infrastructure	4%	5%	6.12%	1.16%	0.19%	0.07%	0.26%
International Equity	15%	15%	7.09%	5.50%	0.24%	(0.04%)	0.20%
International Fixed Inc.	5%	5%	0.71%	(1.39%)	0.12%	(0.00%)	0.11%
Private Equity	5%	5%	2.01%	2.01%	0.00%	0.01%	0.01%
World Equity	14%	14%	10.02%	10.41%	0.00%	(0.05%)	(0.05%)
Cash & Equivalents	1%	1%	0.16%	0.12%	0.00%	(0.00%)	(0.00%)
Total			8.92%	7.86%	+ 1.05%	+ 0.02%	1.06%

* Current Quarter Target = 16.1% Russell 1000 Index, 16.0% MSCI World, 13.2% Blmbg Aggregate Idx, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 6.5% NDSIB PEN - Private Equity, 5.4% Blmbg GI Agg ex US, 5.0% CPI-W, 4.9% Russell 2000 Index, 4.6% Blmbg US HY Cor 2%C, 3.1% MSCI EM, 3.0% NCREIF Timberland Index and 0.5% 3-month Treasury Bill.

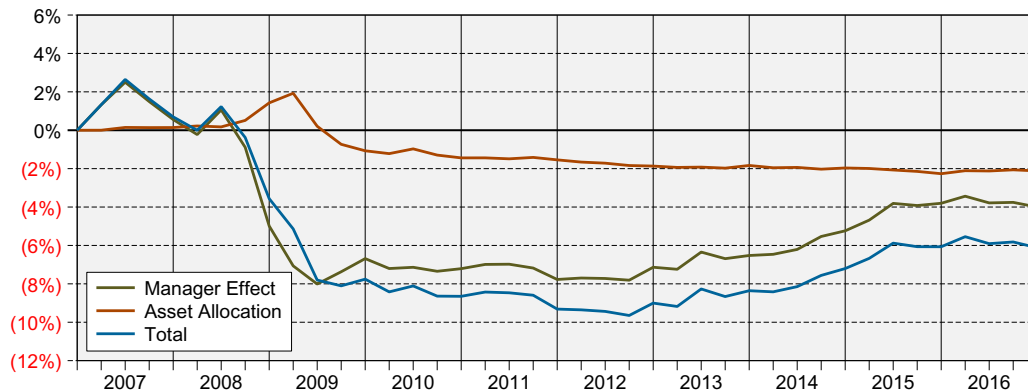
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Ten Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Ten Year Annualized Relative Attribution Effects

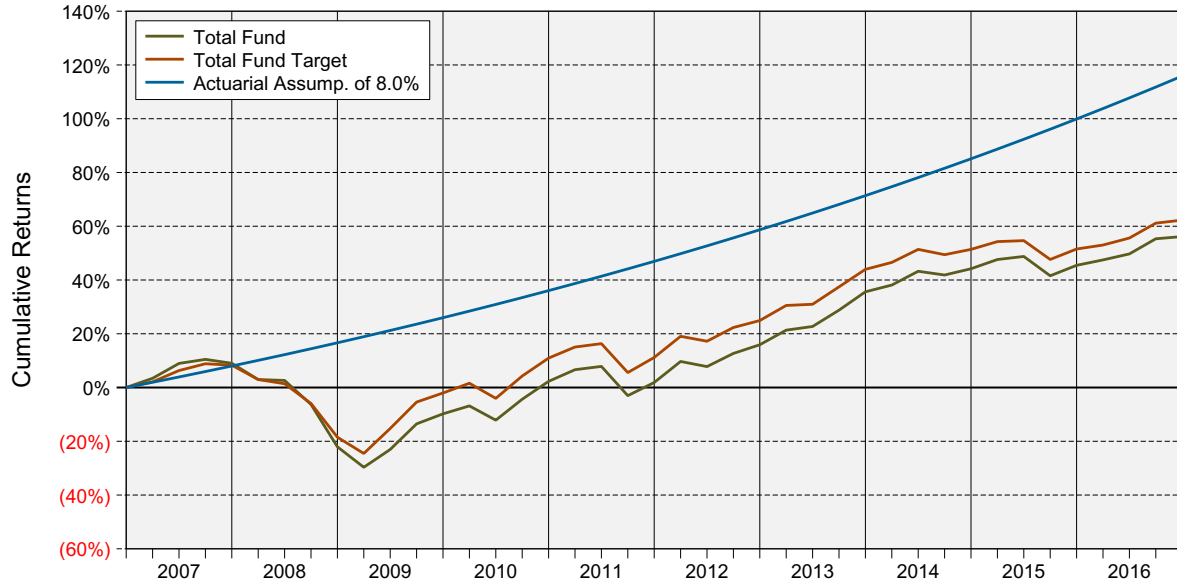
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	30%	31%	6.04%	7.05%	(0.34%)	0.02%	(0.32%)
Domestic Fixed Income	22%	21%	5.71%	5.36%	(0.07%)	(0.01%)	(0.09%)
Global Real Estate	9%	8%	5.55%	6.93%	(0.11%)	(0.03%)	(0.15%)
Timber	2%	3%	-	-	(0.16%)	(0.00%)	(0.16%)
Infrastructure	2%	3%	-	-	0.09%	0.05%	0.14%
International Equity	16%	17%	2.65%	1.16%	0.26%	(0.04%)	0.22%
International Fixed Inc.	5%	5%	4.28%	2.72%	0.08%	(0.03%)	0.05%
Private Equity	4%	5%	0.25%	0.25%	0.00%	(0.04%)	(0.04%)
World Equity	7%	7%	-	-	0.00%	(0.02%)	(0.02%)
Cash & Equivalents	1%	1%	0.56%	0.80%	(0.00%)	(0.02%)	(0.02%)
Total			4.56%	4.96%	(0.27%)	(0.14%)	(0.40%)

* Current Quarter Target = 16.1% Russell 1000 Index, 16.0% MSCI World, 13.2% Blmbg Aggregate Idx, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 6.5% NDSIB PEN - Private Equity, 5.4% Blmbg GI Agg ex US, 5.0% CPI-W, 4.9% Russell 2000 Index, 4.6% Blmbg US HY Cor 2%C, 3.1% MSCI EM, 3.0% NCREIF Timberland Index and 0.5% 3-month Treasury Bill.

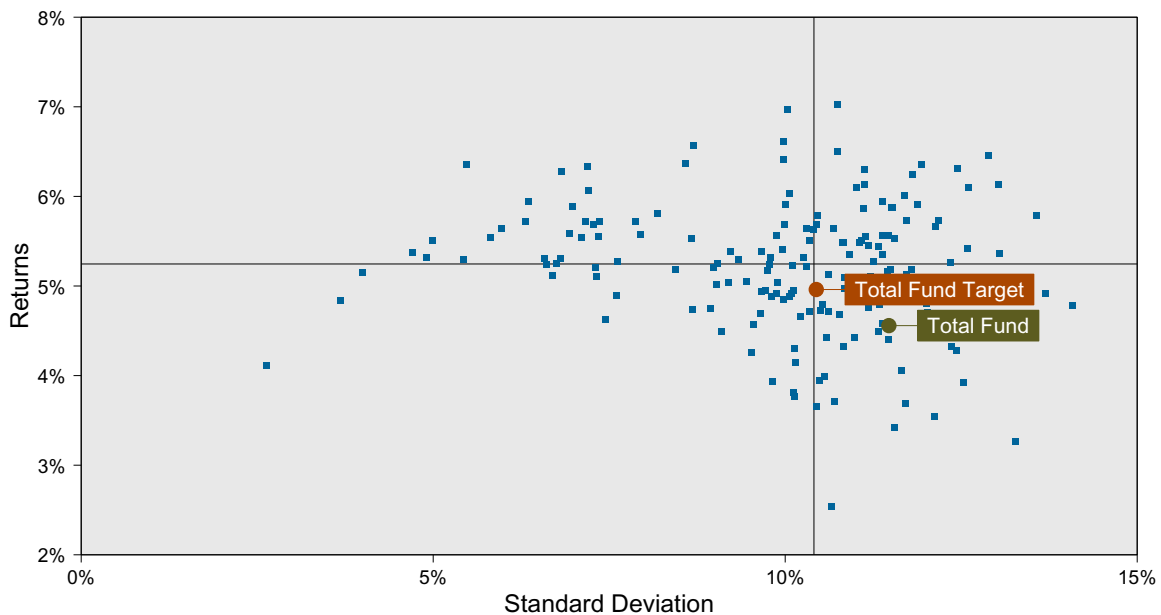
Cumulative Performance Relative to Target

The first chart below illustrates the cumulative performance of the Total Fund relative to the cumulative performance of the Fund's Target Asset Mix. The Target Mix is assumed to be rebalanced each quarter with no transaction costs. The second chart below shows the return and the risk of the Total Fund and the Target Mix, contrasted with the returns and risks of the funds in the CAI Public Fund Sponsor Database.

Cumulative Returns Actual vs Target



Ten Year Annualized Risk vs Return



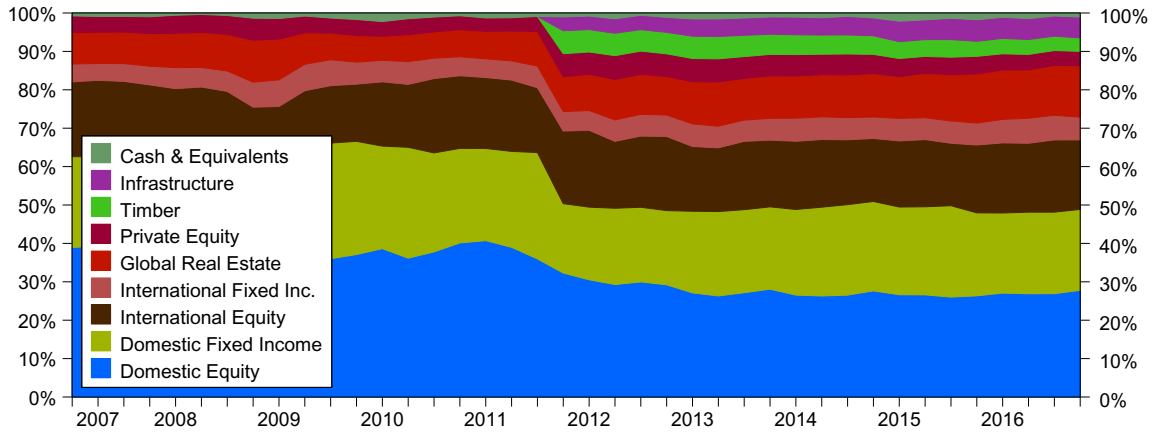
Squares represent membership of the CAI Public Fund Sponsor Database

* Current Quarter Target = 16.1% Russell 1000 Index, 16.0% MSCI World, 13.2% Blmbg Aggregate Idx, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 6.5% NDSIB PEN - Private Equity, 5.4% Blmbg GI Agg ex US, 5.0% CPI-W, 4.9% Russell 2000 Index, 4.6% Blmbg US HY Cor 2%C, 3.1% MSCI EM, 3.0% NCREIF Timberland Index and 0.5% 3-month Treasury Bill.

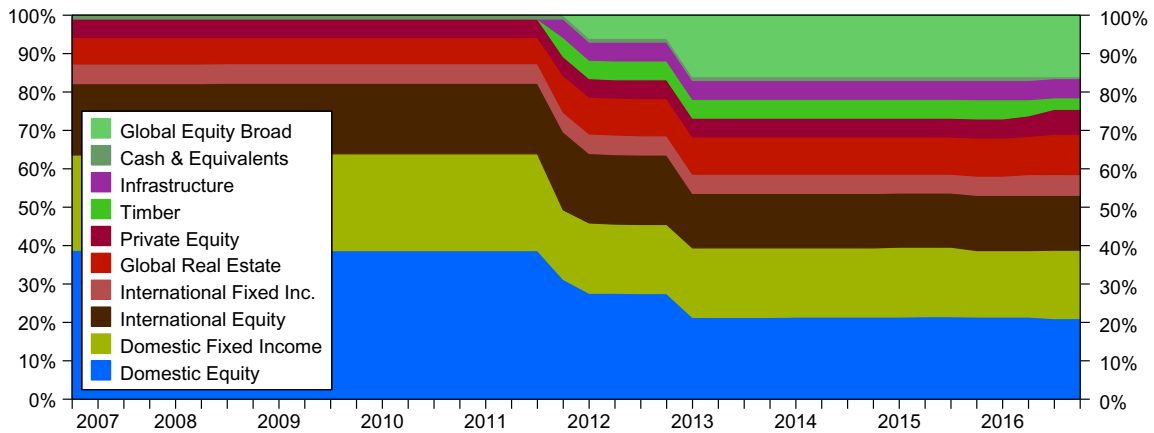
Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, the fund's historical target asset allocation, and the historical asset allocation of the average fund in the CAI Public Fund Sponsor Database.

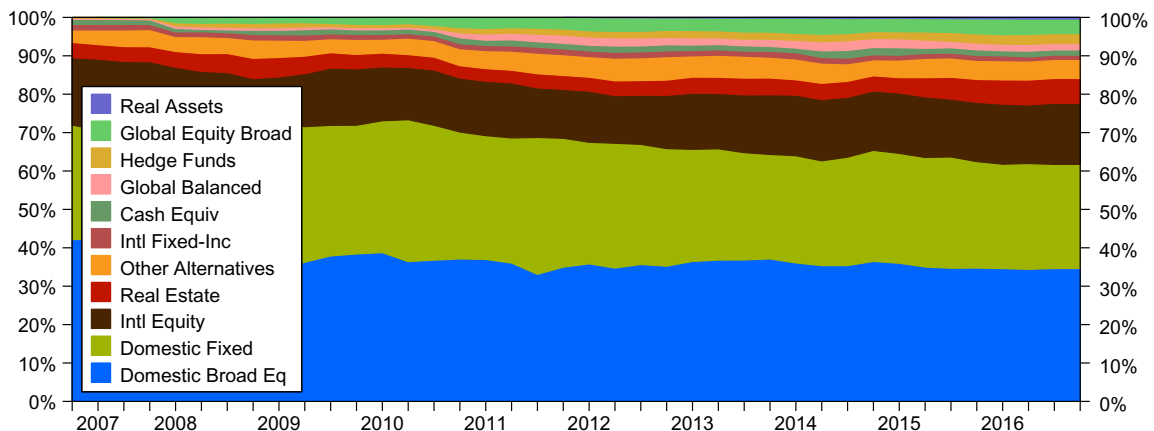
Actual Historical Asset Allocation



Target Historical Asset Allocation



Average CAI Public Fund Sponsor Database Historical Asset Allocation

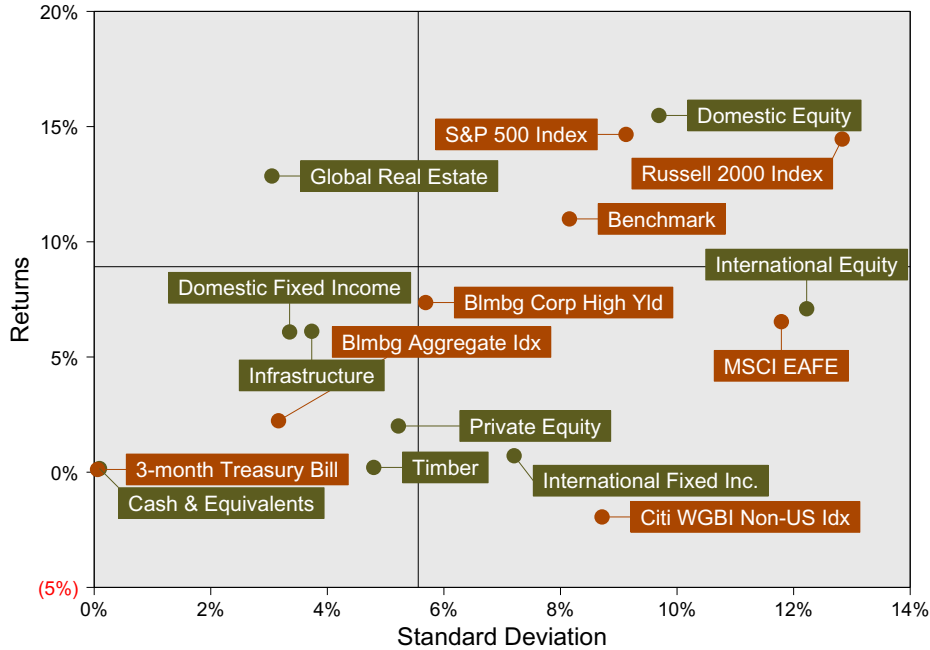


* Current Quarter Target = 16.1% Russell 1000 Index, 16.0% MSCI World, 13.2% Blmbg Aggregate Idx, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 6.5% NDSIB PEN - Private Equity, 5.4% Blmbg GI Agg ex US, 5.0% CPI-W, 4.9% Russell 2000 Index, 4.6% Blmbg US HY Cor 2%C, 3.1% MSCI EM, 3.0% NCREIF Timberland Index and 0.5% 3-month Treasury Bill.

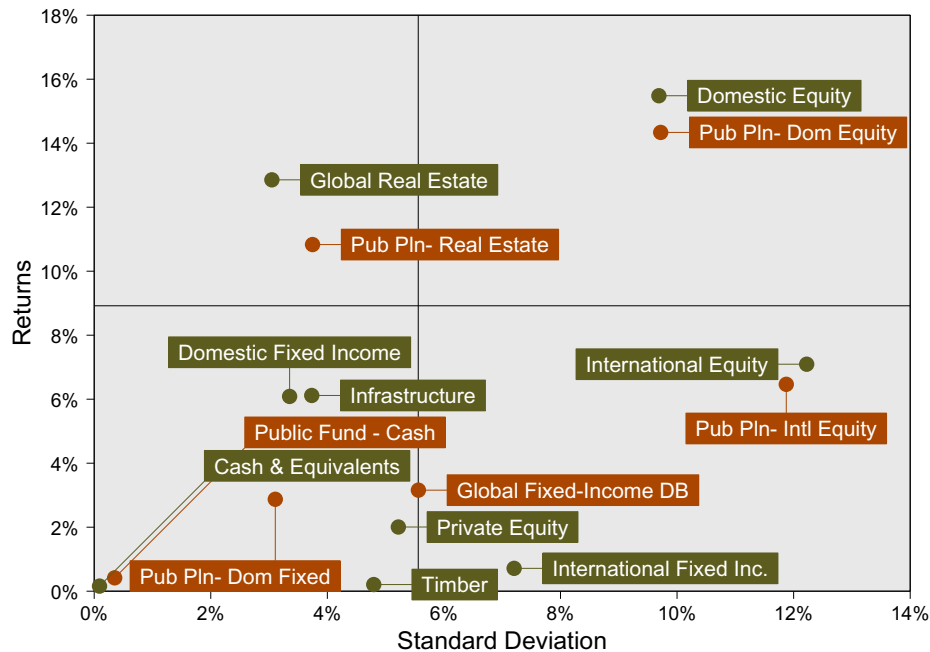
Asset Class Risk and Return

The charts below show the five year annualized risk and return for each asset class component of the Total Fund. The first graph contrasts these values with those of the appropriate index for each asset class. The second chart contrasts them with the risk and return of the median portfolio in each of the appropriate CAI comparative databases. In each case, the crosshairs on the chart represent the return and risk of the Total Fund.

Five Year Annualized Risk vs Return Asset Classes vs Benchmark Indices



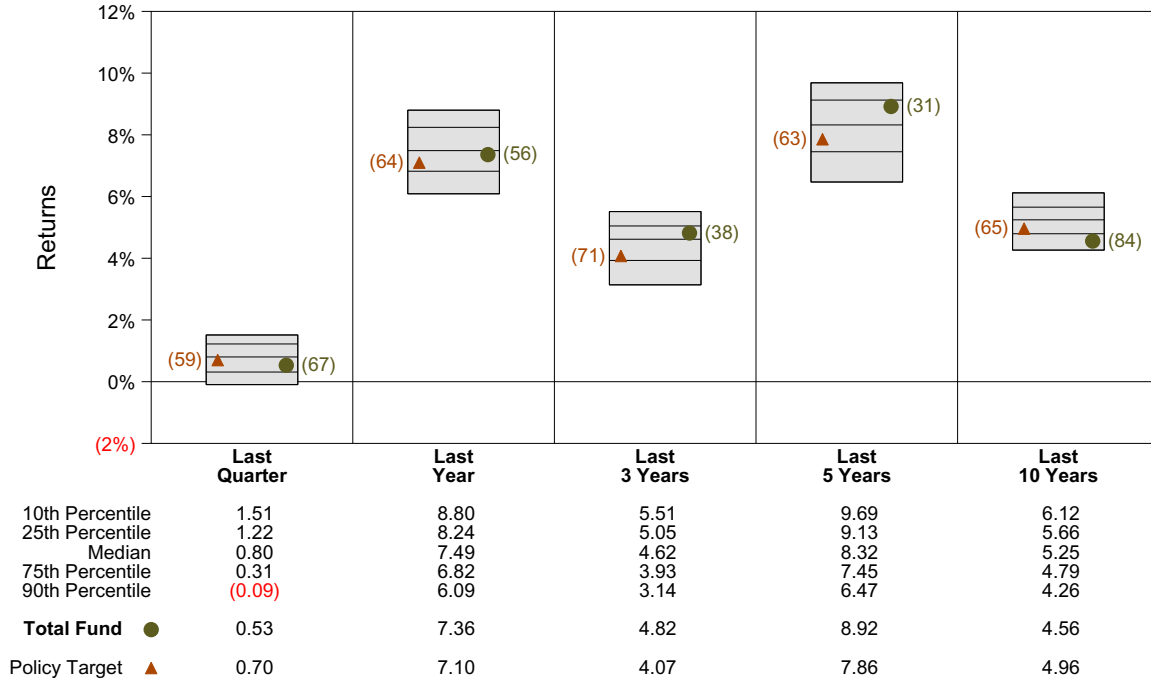
Five Year Annualized Risk vs Return Asset Classes vs Asset Class Median



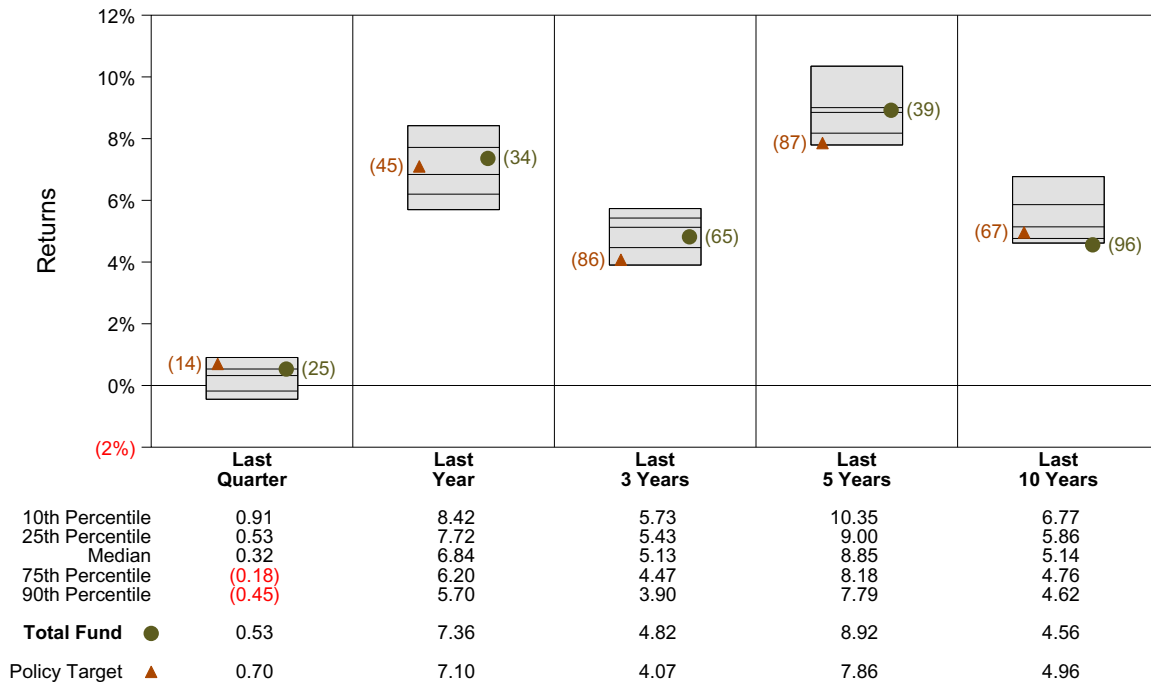
Total Fund Ranking

The first two charts show the ranking of the Total Fund's performance relative to that of the CAI Public Fund Sponsor Database for periods ended December 31, 2016. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation as that of the Total Fund.

CAI Public Fund Sponsor Database



Asset Allocation Adjusted Ranking

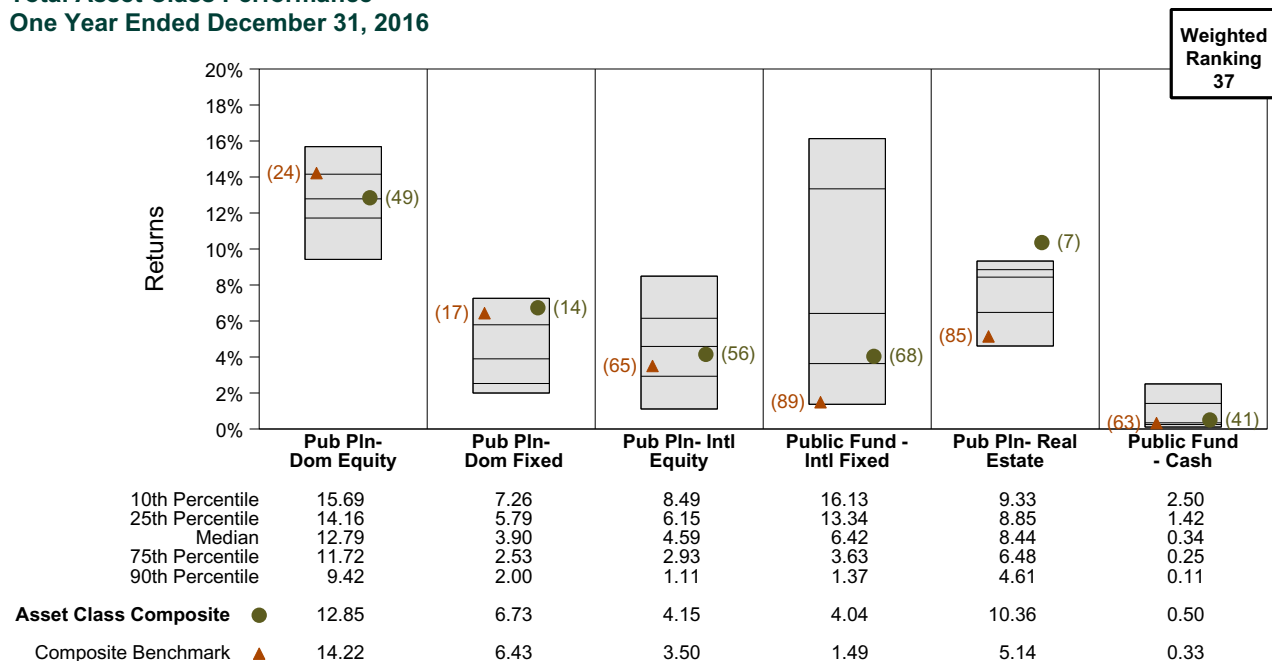


* Current Quarter Target = 16.1% Russell 1000 Index, 16.0% MSCI World, 13.2% Blmbg Aggregate Idx, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 6.5% NDSIB PEN - Private Equity, 5.4% Blmbg GI Agg ex US, 5.0% CPI-W, 4.9% Russell 2000 Index, 4.6% Blmbg US HY Cor 2% C, 3.1% MSCI EM, 3.0% NCREIF Timberland Index and 0.5% 3-month Treasury Bill.

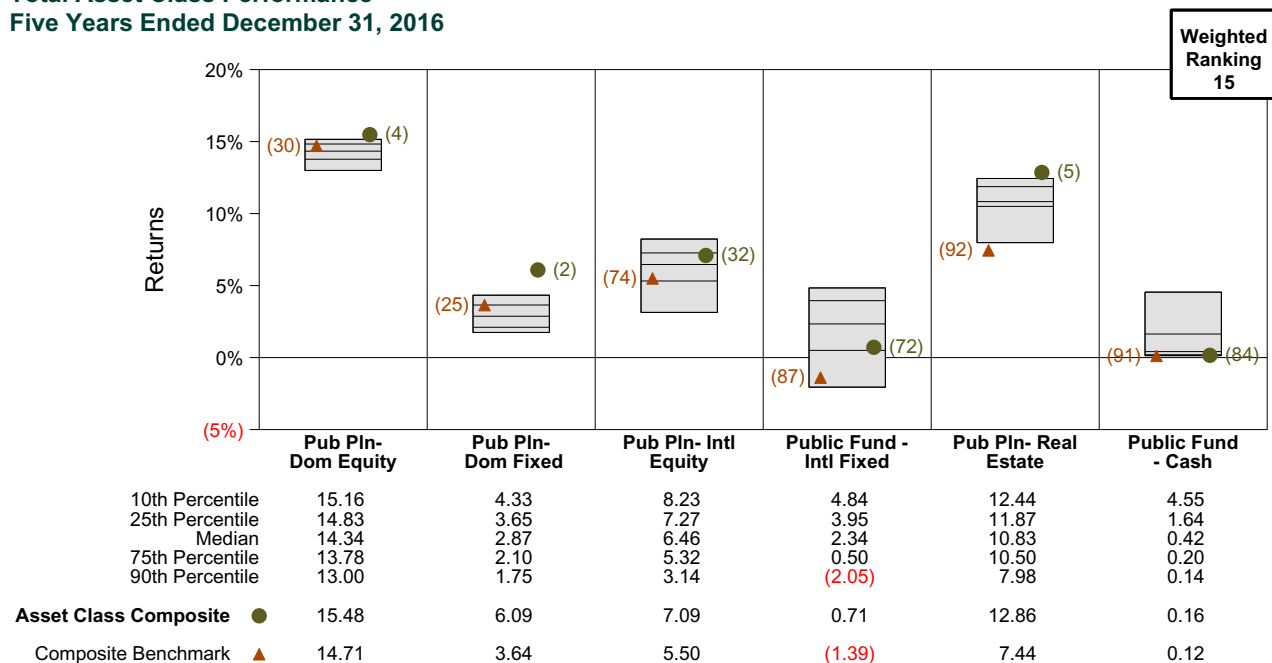
Asset Class Rankings

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.

Total Asset Class Performance One Year Ended December 31, 2016



Total Asset Class Performance Five Years Ended December 31, 2016



* Current Quarter Target = 16.1% Russell 1000 Index, 16.0% MSCI World, 13.2% Blmbg Aggregate Idx, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 6.5% NDSIB PEN - Private Equity, 5.4% Blmbg GI Agg ex US, 5.0% CPI-W, 4.9% Russell 2000 Index, 4.6% Blmbg US HY Cor 2% C, 3.1% MSCI EM, 3.0% NCREIF Timberland Index and 0.5% 3-month Treasury Bill.

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of December 31, 2016, with the distribution as of September 30, 2016. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

Asset Distribution Across Investment Managers

	December 31, 2016		Net New Inv.	Inv. Return	September 30, 2016	
	Market Value	Weight			Market Value	Weight
GLOBAL EQUITY	\$2,845,703,868	58.13%	\$(24,076,727)	\$46,084,412	\$2,823,696,183	57.89%
Domestic Equity	\$1,130,378,217	23.09%	\$(10,427,411)	\$45,300,311	\$1,095,505,317	22.46%
Large Cap Domestic Equity	\$855,480,934	17.48%	\$(10,216,138)	\$24,832,500	\$840,864,572	17.24%
L.A. Capital	323,055,323	6.60%	(165,881)	3,317,196	319,904,008	6.56%
LACM Enhanced Index	195,872,968	4.00%	(10,050,257)	8,450,973	197,472,253	4.05%
Northern Trust AM Enh S&P 500	156,141,055	3.19%	0	6,320,803	149,820,252	3.07%
Parametric Clifton Enh S&P 500	180,411,587	3.69%	0	6,743,528	173,668,059	3.56%
Small Cap Domestic Equity	\$274,897,283	5.62%	\$(211,273)	\$20,467,811	\$254,640,745	5.22%
Atlanta Capital	123,994,249	2.53%	(211,273)	8,357,132	115,848,391	2.37%
Parametric Clifton Enh Small Cap	150,903,033	3.08%	0	12,110,679	138,792,354	2.85%
International Equity	\$737,044,271	15.06%	\$(5,325,664)	\$(23,674,152)	\$766,044,087	15.70%
Developed Int'l Equity	\$559,722,843	11.43%	\$(325,664)	\$(11,702,115)	\$571,750,622	11.72%
Capital Group	0	0.00%	(335)	(7,110)	7,445	0.00%
DFA Int'l Small Cap	80,868,682	1.65%	0	1,363,350	79,505,332	1.63%
Northern Trust AM World Ex US	270,469,791	5.53%	(21,638)	(872,672)	271,364,101	5.56%
Wellington Management Co.	82,343,938	1.68%	(178,732)	(4,288,941)	86,811,610	1.78%
William Blair	126,040,433	2.57%	(124,959)	(7,896,742)	134,062,134	2.75%
Emerging Markets Equity	\$177,321,428	3.62%	\$(5,000,000)	\$(11,972,037)	\$194,293,465	3.98%
Axiom	130,393,959	2.66%	(5,000,000)	(9,020,543)	144,414,502	2.96%
DFA	46,927,469	0.96%	0	(2,951,494)	49,878,963	1.02%
World Equity	\$825,970,113	16.87%	\$(673,995)	\$20,518,377	\$806,125,731	16.53%
EPOCH Investment Partners	343,672,784	7.02%	(559,368)	(4,396,066)	348,628,218	7.15%
LSV Asset Management	482,297,329	9.85%	(114,627)	24,914,443	457,497,513	9.38%

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of December 31, 2016, with the distribution as of September 30, 2016. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

Asset Distribution Across Investment Managers

	December 31, 2016		Net New Inv.	Inv. Return	September 30, 2016	
	Market Value	Weight			Market Value	Weight
Private Equity	\$152,311,267	3.11%	\$(7,649,657)	\$3,939,876	\$156,021,048	3.20%
Adams Street Direct Co-Invest Fd	4,150,663	0.08%	(805,896)	315,870	4,640,689	0.10%
Adams Street Direct Fund 2010	1,161,269	0.02%	(146,225)	82,576	1,224,918	0.03%
Adams Street 1998 Partnership	125,184	0.00%	0	(199)	125,383	0.00%
Adams Street 1999 Partnership	332,735	0.01%	0	6,925	325,810	0.01%
Adams Street 2000 Partnership	944,036	0.02%	0	8,823	935,213	0.02%
Adams Street 2001 Partnership	1,320,551	0.03%	(276,539)	103,167	1,493,923	0.03%
Adams Street 2002 Partnership	330,659	0.01%	(469,888)	58,131	742,416	0.02%
Adams Street 2003 Partnership	322,069	0.01%	0	19,345	302,724	0.01%
Adams Street 2010 Partnership	5,941,796	0.12%	(71,834)	500,425	5,513,205	0.11%
Adams Street 2008 Fund	7,546,060	0.15%	(153,749)	481,676	7,218,133	0.15%
Adams Street 1999 Non-US	68,718	0.00%	0	5,722	62,996	0.00%
Adams Street 2000 Non-US	734,907	0.02%	0	1,277	733,630	0.02%
Adams Street 2001 Non-US	148,794	0.00%	0	(18,925)	167,719	0.00%
Adams Street 2002 Non-US	717,004	0.01%	(283,298)	(26,304)	1,026,606	0.02%
Adams Street 2003 Non-US	276,737	0.01%	(318,154)	13,868	581,023	0.01%
Adams Street 2004 Non-US	314,929	0.01%	(114,959)	10,591	419,297	0.01%
Adams Street 2010 Non-US	2,932,868	0.06%	99,468	243,333	2,590,067	0.05%
Adams Street 2010 Non-US Emg	1,373,284	0.03%	15,822	66,852	1,290,610	0.03%
Adams Street 2015 Global Fd	3,334,341	0.07%	0	743,179	2,591,162	0.05%
Adams Street 2016 Global Fd	750,000	0.02%	750,000	0	-	-
Adams Street BVCF IV Fund	3,886,264	0.08%	0	121,578	3,764,686	0.08%
Hearthstone Advisors MSII	10,742	0.00%	0	(2,050)	12,792	0.00%
Hearthstone Advisors MSIII	4,453,895	0.09%	0	32,453	4,421,442	0.09%
CorsAir III	14,231,501	0.29%	(82,672)	919,463	13,394,710	0.27%
ND Investors	1	0.00%	3,230	(3,230)	1	0.00%
CorsAir IV	20,941,339	0.43%	(3,486,306)	1,474,526	22,953,119	0.47%
Capital International V	5,651,475	0.12%	(944,741)	(1,001,659)	7,597,875	0.16%
Capital International VI	19,397,170	0.40%	(263,998)	200,705	19,460,463	0.40%
EIG Energy Fund XIV	4,557,240	0.09%	225,000	(827,050)	5,159,290	0.11%
Lewis & Clark, LP	1,329,909	0.03%	0	0	1,329,909	0.03%
Lewis & Clark II	8,935,935	0.18%	(677,212)	13	9,613,134	0.20%
Quantum Energy Partners	7,078,682	0.14%	(647,707)	47,972	7,678,417	0.16%
Quantum Resources	39,623	0.00%	0	(12,012)	51,635	0.00%
Matlin Patterson II	1,617,932	0.03%	0	(7,990)	1,625,922	0.03%
Matlin Patterson III	27,352,955	0.56%	0	380,826	26,972,129	0.55%

Investment Manager Asset Allocation

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Asset Distribution Across Investment Managers

	December 31, 2016		Net New Inv.	Inv. Return	September 30, 2016	
	Market Value	Weight			Market Value	Weight
GLOBAL FIXED INCOME	\$1,098,100,411	22.43%	\$(1,049,921)	\$(26,773,482)	\$1,125,923,815	23.08%
Domestic Fixed Income	\$857,357,432	17.51%	\$(818,958)	\$(6,479,473)	\$864,655,862	17.73%
Inv. Grade Fixed Income	\$615,610,220	12.58%	\$(212,614)	\$(10,423,887)	\$626,246,720	12.84%
Declaration Total Return	87,951,963	1.80%	0	(443,937)	88,395,900	1.81%
J. P. Morgan MBS	121,248,064	2.48%	(56,860)	(2,169,125)	123,474,049	2.53%
PIMCO DiSCO II	98,464,369	2.01%	0	2,944,926	95,519,443	1.96%
PIMCO MBS	180,755,902	3.69%	(77,145)	(3,604,476)	184,437,522	3.78%
PIMCO Unconstrained	64,666,853	1.32%	(71,315)	1,112,805	63,625,363	1.30%
SSgA Long US Treas Index	62,523,069	1.28%	(7,294)	(8,264,080)	70,794,443	1.45%
Below Inv. Grade Fixed Income	\$241,747,212	4.94%	\$(606,344)	\$3,944,414	\$238,409,143	4.89%
Goldman Sachs 2006 Offshore	288,019	0.01%	(371,141)	59,160	600,000	0.01%
Goldman Sachs Offshore V	2,663,755	0.05%	0	77,755	2,586,000	0.05%
Loomis Sayles	189,924,447	3.88%	(235,203)	2,018,808	188,140,843	3.86%
PIMCO Bravo II Fund	48,870,991	1.00%	0	1,788,691	47,082,300	0.97%
Internationall Fixed Income	\$240,742,980	4.92%	\$(230,963)	\$(20,294,009)	\$261,267,952	5.36%
Brandywine	140,965,008	2.88%	(142,772)	(8,579,838)	149,687,618	3.07%
UBS Global Asset Mgmt.	99,777,972	2.04%	(88,191)	(11,714,172)	111,580,334	2.29%
GLOBAL REAL ASSETS	\$908,709,793	18.56%	\$6,015,337	\$6,385,367	\$896,309,089	18.37%
Global Real Estate	\$545,176,463	11.14%	\$3,813,178	\$11,578,666	\$529,784,618	10.86%
Invesco Core Real Estate	250,585,232	5.12%	(2,053,276)	5,329,889	247,308,619	5.07%
Invesco Fund II	149,141	0.00%	(4,999,242)	(146,194)	5,294,577	0.11%
Invesco Fund III	29,876,804	0.61%	0	1,816,470	28,060,334	0.58%
Invesco Asia RE Feeder	82,099	0.00%	(821,000)	(139,583)	1,042,682	0.02%
Invesco Asia RE Fund III	19,432,715	0.40%	5,390,000	522,390	13,520,326	0.28%
Invesco Value Added Fd IV	29,675,117	0.61%	6,346,666	793,332	22,535,119	0.46%
JP Morgan	194,254,102	3.97%	0	4,140,467	190,113,635	3.90%
JP Morgan Alternative Fd	277,146	0.01%	(38,412)	3,355	312,204	0.01%
JP Morgan China Property Fd	11,832,864	0.24%	(3,816)	377,648	11,459,032	0.23%
JP Morgan Greater European Opp Fd	9,011,242	0.18%	(7,742)	(1,119,107)	10,138,090	0.21%
Timber	\$142,891,474	2.92%	\$(456,000)	\$(9,241,677)	\$152,589,151	3.13%
TIR Teredo	33,981,216	0.69%	0	160,438	33,820,778	0.69%
TIR Springbank	108,910,258	2.22%	(456,000)	(9,402,115)	118,768,373	2.43%
Infrastructure	\$220,641,856	4.51%	\$2,658,159	\$4,048,378	\$213,935,320	4.39%
JP Morgan Asian Infrastructure	29,229,463	0.60%	151,286	1,039,177	28,039,000	0.57%
JP Morgan IIF	151,788,821	3.10%	7,180,533	2,412,650	142,195,639	2.92%
Grosvenor Cust. Infrastructure	33,969,006	0.69%	(6,598,925)	584,288	39,983,644	0.82%
Grosvenor Cust. Infrastructure II	5,654,566	0.12%	1,925,265	12,264	3,717,037	0.08%
CASH & CASH EQUIVALENTS	\$42,857,158	0.88%	\$10,819,448	\$55,449	\$31,982,261	0.66%
Northern Trust Cash Account	32,842,281	0.67%	10,819,448	43,944	21,978,889	0.45%
Bank of ND	10,014,877	0.20%	0	11,505	10,003,372	0.21%
Securities Lending Income	\$0	0.00%	\$(83,912)	\$83,912	-	-
Total Fund	\$4,895,371,231	100.0%	\$(8,375,774)	\$25,835,658	\$4,877,911,347	100.0%

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended December 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Global Equity					
Gross	1.65%	8.09%	4.04%	10.86%	-
Net	1.60%	7.84%	3.71%	10.49%	-
Wtd Avg Global Equity Benchmark	2.37%	8.38%	3.66%	10.18%	-
Domestic Equity					
Gross	4.18%	12.85%	8.42%	15.48%	6.04%
Net	4.14%	12.61%	8.20%	15.21%	5.73%
Wtd Avg Domestic Equity Benchmark	5.03%	14.22%	8.26%	14.71%	7.05%
Large Cap Equity					
Gross	3.00%	11.20%	9.29%	15.69%	5.35%
Net	2.97%	11.04%	9.10%	15.48%	5.10%
Large Cap Benchmark (1)	3.83%	12.05%	8.59%	14.69%	6.96%
L.A. Capital - Gross	1.04%	8.77%	9.59%	15.74%	8.72%
L.A. Capital - Net	0.99%	8.54%	9.36%	15.50%	8.51%
Russell 1000 Growth Index	1.01%	7.08%	8.55%	14.50%	8.33%
LACM Enhanced Index - Gross	4.54%	13.48%	9.52%	15.74%	7.98%
LACM Enhanced Index - Net	4.52%	13.36%	9.39%	15.61%	7.83%
Russell 1000 Index	3.83%	12.05%	8.59%	14.69%	7.08%
Northern Tr AM Enh S&P500 - Gross	4.22%	11.83%	8.26%	14.89%	6.95%
Northern Tr AM Enh S&P500 - Net	4.22%	11.83%	7.93%	14.52%	6.76%
S&P 500 Index	3.82%	11.96%	8.87%	14.66%	6.95%
Parametric Clifton Enh S&P500 - Gross	3.88%	12.51%	9.36%	15.00%	-
Parametric Clifton Enh S&P500 - Net	3.88%	12.27%	9.28%	14.90%	-
S&P 500 Index	3.82%	11.96%	8.87%	14.66%	6.95%
Small Cap Equity					
Gross	8.05%	18.03%	5.31%	14.47%	7.72%
Net	7.95%	17.55%	4.98%	13.98%	7.19%
Russell 2000 Index	8.83%	21.31%	6.74%	14.46%	7.07%
Atlanta Capital - Gross	7.24%	-	-	-	-
Atlanta Capital - Net	7.03%	-	-	-	-
S&P 600 Small Cap Index	11.13%	26.56%	9.47%	16.62%	9.03%
Parametric Clifton Enh SmCap - Gross	8.73%	22.52%	7.99%	15.77%	-
Parametric Clifton Enh SmCap - Net	8.73%	21.99%	7.57%	15.27%	-
Russell 2000 Index	8.83%	21.31%	6.74%	14.46%	7.07%

(1) S&P 500 Index through 12/31/2011 and Russell 1000 Index thereafter.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended December 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
International Equity					
Gross	(3.11%)	4.15%	(0.08%)	7.09%	2.65%
Net	(3.15%)	3.96%	(0.29%)	6.76%	2.29%
Wtd Avg Int'l Equity Benchmark	(1.18%)	3.50%	(1.64%)	5.50%	1.16%
Developed Intl Equity					
Gross	(2.05%)	2.59%	(0.13%)	8.20%	1.88%
Net	(2.10%)	2.35%	(0.39%)	7.88%	1.56%
Benchmark(1)	(0.36%)	1.22%	(1.53%)	6.58%	0.54%
DFA Int'l Small Cap Value - Net	1.71%	8.00%	2.19%	11.55%	-
World ex US SC Value	(0.12%)	7.87%	0.86%	9.39%	2.84%
Northern Tr AM World ex US - Gross	(0.32%)	3.15%	(1.23%)	-	-
Northern Tr AM World ex US - Net	(0.33%)	3.11%	(1.26%)	-	-
MSCI World ex US	(0.36%)	2.75%	(1.59%)	6.07%	0.86%
Wellington Management - Gross	(4.94%)	(2.47%)	3.17%	13.01%	5.59%
Wellington Management - Net	(5.15%)	(3.30%)	2.30%	12.06%	4.69%
BMI, EPAC, <\$2 B	(3.15%)	3.92%	2.93%	9.67%	2.70%
William Blair - Gross	(5.89%)	-	-	-	-
William Blair - Net	(5.98%)	-	-	-	-
MSCI ACWI ex US	(1.25%)	4.50%	(1.78%)	5.00%	0.96%
Emerging Markets Equity					
Gross	(6.32%)	9.05%	(0.41%)	2.68%	3.52%
Net	(6.32%)	9.05%	(0.48%)	2.34%	3.06%
Emerging Mkts - Net	(4.16%)	11.19%	(2.55%)	1.28%	1.84%
Axiom - Net	(6.47%)	8.39%	-	-	-
Emerging Mkts - Net	(4.16%)	11.19%	(2.55%)	1.28%	1.84%
DFA - Net	(5.92%)	10.92%	1.42%	5.06%	4.94%
Emerging Mkts - Net	(4.16%)	11.19%	(2.55%)	1.28%	1.84%
World Equity					
Gross	2.55%	7.06%	3.23%	10.02%	-
Net	2.46%	6.65%	2.57%	9.33%	-
MSCI World Index	1.86%	7.51%	3.80%	10.41%	3.83%
EPOCH Investment - Gross(2)	(1.26%)	(0.59%)	1.15%	9.68%	-
EPOCH Investment - Net	(1.42%)	(1.23%)	0.49%	8.96%	-
MSCI World Index	1.86%	7.51%	3.80%	10.41%	3.83%
LSV Asset Management - Gross(3)	5.45%	13.21%	4.68%	-	-
LSV Asset Management - Net	5.42%	13.02%	4.01%	-	-
MSCI ACWI Idx	1.30%	8.48%	3.69%	9.96%	4.12%

(1) MSCI EAFE through 12/31/1996; 50% Hedged EAFE through 3/31/2011; MSCI EAFE again through 6/30/2016; MSCI World ex-US thereafter.

(2) EPOCH Investment was removed from the Domestic Equity Composite to the World Equity Composite as of 1/1/2012.

(3) LSV Asset Management was removed from the Domestic Equity and International Equity Composites to the World Equity Composite as of February 1, 2013.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended December 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Private Equity*					
Net	2.65%	0.30%	(1.78%)	1.96%	0.01%
Adams Street Direct Co-Invest Fd	7.53%	8.31%	17.84%	14.43%	6.60%
Adams Street Direct Fund 2010	6.82%	2.26%	14.16%	12.67%	-
Adams Street 1998 Partnership	(0.16%)	1.18%	1.39%	4.23%	1.04%
Adams Street 1999 Partnership	2.13%	3.06%	(1.15%)	3.75%	2.48%
Adams Street 2000 Partnership	0.94%	1.00%	(0.53%)	0.36%	3.30%
Adams Street 2001 Partnership	8.47%	7.68%	2.51%	6.53%	4.75%
Adams Street 2002 Partnership	15.92%	29.86%	5.64%	8.23%	5.49%
Adams Street 2003 Partnership	6.39%	7.01%	10.35%	10.72%	7.02%
Adams Street 2010 Partnership	9.20%	9.17%	15.54%	13.48%	-
Adams Street 2008 Fund	6.75%	9.74%	13.07%	10.66%	-
Adams Street 1999 Non-US	9.08%	(1.19%)	(0.32%)	5.45%	6.33%
Adams Street 2000 Non-US	0.17%	1.51%	0.16%	(2.80%)	2.73%
Adams Street 2001 Non-US	(11.28%)	(19.82%)	13.27%	12.64%	4.61%
Adams Street 2002 Non-US	(3.54%)	9.96%	6.39%	5.03%	3.91%
Adams Street 2003 Non-US	5.28%	24.39%	12.49%	14.94%	12.31%
Adams Street 2004 Non-US	3.48%	4.09%	8.19%	5.13%	5.39%
Adams Street 2010 Non-US	9.22%	12.25%	8.48%	8.95%	-
Adams Street 2010 Non-US Emg	5.16%	8.61%	14.33%	3.49%	-
Adams Street 2015 Global Fd	28.68%	52.01%	-	-	-
Adams Street BVCF IV Fund	3.23%	3.14%	18.80%	24.97%	27.48%
CorsAir III	6.91%	3.85%	7.45%	4.30%	-
CorsAir IV	7.17%	8.84%	14.67%	10.65%	-
Capital International V	(14.38%)	(14.84%)	(16.44%)	(11.23%)	-
Capital International VI	1.05%	11.61%	(7.27%)	(12.27%)	-
EIG Energy Fund XIV	(15.90%)	(66.56%)	(40.96%)	(27.42%)	-
Lewis & Clark, LP	0.00%	(51.19%)	(35.55%)	(19.69%)	(7.95%)
Lewis & Clark II	0.00%	1.88%	(6.77%)	(5.56%)	-
Quantum Energy Partners	0.62%	(5.58%)	(8.36%)	3.61%	(14.63%)
Matlin Patterson II	(0.49%)	0.22%	2.77%	(21.63%)	(23.85%)
Matlin Patterson III	1.41%	0.75%	0.24%	24.97%	-

* Corsair III and North Dakota Investors were taken out from the Private Equity Composite on July 1, 2009. They were then added back into the Private Equity Composite on October 1, 2011. At this time Corsair IV, Capital Intl and EIG were also added to this composite.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended December 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Global Fixed Income					
Gross	(2.38%)	6.07%	3.79%	4.94%	-
Net	(2.44%)	5.80%	3.53%	4.70%	-
Wtd Avg Global FI Benchmark	(3.76%)	5.33%	2.17%	2.55%	-
Domestic Fixed Income					
Gross	(0.75%)	6.73%	4.96%	6.09%	5.71%
Net	(0.80%)	6.49%	4.74%	5.87%	5.44%
Wtd Avg Domestic FI Benchmark	(1.77%)	6.43%	3.49%	3.64%	5.36%
Inv. Grade Fixed Income					
Gross	(1.66%)	3.82%	4.54%	4.87%	5.31%
Net	(1.70%)	3.66%	4.40%	4.74%	5.08%
Blmbg Aggregate Index	(2.98%)	2.65%	3.03%	2.23%	4.34%
Declaration Total Return - Net Libor-3 Month	(0.50%) 0.23%	3.92% 0.75%	4.21% 0.42%	- 0.40%	- 1.20%
J.P. Morgan MBS - Gross	(1.76%)	2.34%	-	-	-
J.P. Morgan MBS - Net	(1.80%)	2.12%	-	-	-
Blmbg Mortgage	(1.97%)	1.67%	3.07%	2.06%	4.28%
PIMCO Unconstrained - Gross(1)	1.75%	6.27%	2.73%	-	-
PIMCO Unconstrained - Net	1.64%	5.75%	2.38%	-	-
Blended Benchmark(2)	0.23%	0.75%	0.49%	-	-
PIMCO DiSCO II - Net	3.08%	10.00%	7.33%	15.09%	-
Blmbg Aggregate Index	(2.98%)	2.65%	3.03%	2.23%	4.34%
PIMCO MBS - Gross	(1.95%)	1.83%	3.07%	-	-
PIMCO MBS - Net	(2.00%)	1.61%	2.88%	-	-
Blmbg Mortgage	(1.97%)	1.67%	3.07%	2.06%	4.28%
SSgA Long US Treas Idx - Gross	(11.67%)	1.31%	7.76%	-	-
SSgA Long US Treas Idx - Net	(11.68%)	1.26%	7.72%	-	-
Blmbg Long Treas	(11.67%)	1.33%	7.78%	2.52%	6.68%
Below Inv. Grade Fixed Income					
Gross	1.66%	14.29%	5.91%	9.33%	6.35%
Net	1.56%	13.84%	5.46%	8.88%	5.96%
Blmbg HY Corp 2% Issue	1.75%	17.13%	4.67%	7.36%	7.55%
Goldman Sachs 2006 Offshore - Net	16.12%	13.98%	21.95%	14.96%	7.82%
Goldman Sachs Offshore V - Net	3.01%	(5.19%)	6.45%	11.33%	-
PIMCO Bravo II Fund - Net	3.80%	9.31%	15.03%	-	-
Blmbg HY Corp 2% Issue	1.75%	17.13%	4.67%	7.36%	7.55%
Loomis Sayles - Gross	1.07%	15.88%	5.21%	8.82%	7.45%
Loomis Sayles - Net	0.95%	15.30%	4.68%	8.31%	7.08%
Blmbg HY Corp 2% Issue	1.75%	17.13%	4.67%	7.36%	7.55%

(1) The product changed from Commingled Fund to Separate Account in March 2014.

(2) Libor-3 month through Feb. 28, 2014; Fund's performance through March 31, 2014; Libor-3 month thereafter.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended December 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
International Fixed Income					
Gross	(7.77%)	4.04%	(0.71%)	0.71%	4.28%
Net	(7.86%)	3.67%	(1.07%)	0.38%	4.04%
Wtd Avg Int'l FI Benchmark	(10.26%)	1.49%	(2.59%)	(1.39%)	2.72%
Brandywine - Gross	(5.74%)	5.72%	1.16%	2.89%	5.87%
Brandywine - Net	(5.83%)	5.31%	0.77%	2.55%	5.69%
Blmbg Global Aggregate	(7.07%)	2.09%	(0.19%)	0.21%	3.29%
UBS Global Asset Mgmt. - Gross	(10.50%)	1.64%	(2.72%)	(1.58%)	2.39%
UBS Global Asset Mgmt. - Net	(10.58%)	1.32%	(3.04%)	(1.90%)	2.09%
Blended Benchmark(1)	(10.26%)	1.49%	(2.59%)	(1.39%)	2.72%
Global Real Assets					
Gross	0.70%	6.24%	8.74%	8.13%	-
Net	0.60%	5.79%	8.30%	7.58%	-
Wtd Avg Global Real Assets Benchmark	1.14%	5.08%	7.13%	7.43%	-
Global Real Estate					
Gross	2.15%	10.36%	13.42%	12.86%	5.55%
Net	2.02%	9.82%	12.86%	11.37%	3.87%
NCREIF Total Index	1.73%	7.97%	11.02%	10.91%	6.93%
Invesco Core Real Estate - Gross	2.17%	9.23%	12.08%	11.79%	6.00%
Invesco Core Real Estate - Net	2.08%	8.85%	11.68%	11.37%	5.53%
Invesco Fund II - Net	(2.76%)	(2.62%)	6.24%	11.90%	-
Invesco Fund III - Net	6.47%	19.13%	17.09%	-	-
Invesco Asia RE Feeder - Net	(31.45%)	7.74%	22.57%	14.22%	-
Invesco Asia RE Fund III - Net	3.46%	1.80%	-	-	-
Invesco Value Added Fd IV - Net	2.59%	9.47%	-	-	-
JP Morgan - Gross	2.18%	8.89%	12.49%	13.27%	6.25%
JP Morgan - Net	1.95%	7.88%	11.37%	12.17%	5.13%
JP Morgan Alternative Fd - Net	1.07%	3.90%	(10.24%)	0.70%	(5.53%)
JP Morgan China Property Fd - Net	3.30%	20.76%	24.73%	16.39%	-
JPM Greater European Opp Fd - Net	(11.05%)	19.04%	25.94%	(20.00%)	-
NCREIF Total Index	1.73%	7.97%	11.02%	10.91%	6.93%
Timber					
Net	(6.07%)	(3.95%)	2.00%	0.21%	-
TIR Teredo	0.47%	7.51%	11.88%	6.86%	10.33%
TIR Springbank	(7.94%)	(7.04%)	(2.24%)	(2.85%)	0.79%
NCREIF Timberland Index	1.18%	2.59%	5.96%	7.06%	5.83%
Infrastructure					
Gross	1.85%	3.90%	3.86%	6.12%	-
Net	1.73%	3.30%	3.29%	5.47%	-
JP Morgan Asian Infrastructure - Net	3.69%	(1.32%)	(0.55%)	2.85%	-
JP Morgan IIF - Gross	1.62%	4.07%	3.30%	5.85%	-
JP Morgan IIF - Net	1.45%	3.16%	2.42%	4.87%	-
Grosvenor Cust. Infrastructure - Net	1.64%	8.44%	8.47%	10.42%	-
Grosvenor Cust. Infrastructure II - Net	0.27%	(5.61%)	-	-	-
CPI-W	(0.04%)	1.99%	0.90%	1.16%	1.79%
Cash & Cash Equivalents - Net					
Cash Account - Net	0.16%	0.50%	0.22%	0.16%	0.56%
Bank of ND - Net	0.17%	0.52%	0.22%	0.16%	0.56%
Bank of ND - Net	0.12%	-	-	-	-
3-month Treasury Bill	0.09%	0.33%	0.14%	0.12%	0.80%
Total Fund					
Gross	0.53%	7.36%	4.82%	8.92%	4.56%
Net	0.47%	7.06%	4.49%	8.48%	4.08%
Target*	0.70%	7.10%	4.07%	7.86%	4.96%

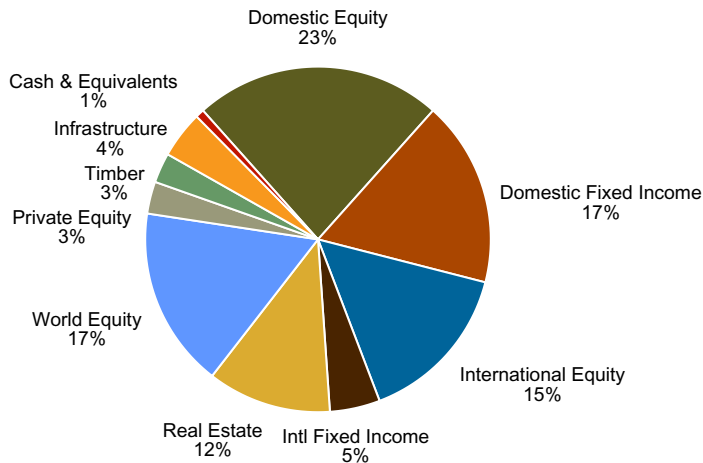
* Current Quarter Target = 16.1% Russell 1000 Index, 16.0% MSCI World, 13.2% Blmbg Aggregate Idx, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 6.5% NDSIB PEN - Private Equity, 5.4% Blmbg GI Agg ex US, 5.0% CPI-W, 4.9% Russell 2000 Index, 4.6% Blmbg US HY Cor 2%C, 3.1% MSCI EM, 3.0% NCREIF Timberland Index and 0.5% 3-month Treasury Bill.

(1) Citigroup Non-US Govt through 12/31/2009 and the BB Barclays Global Aggregate Index ex US thereafter.

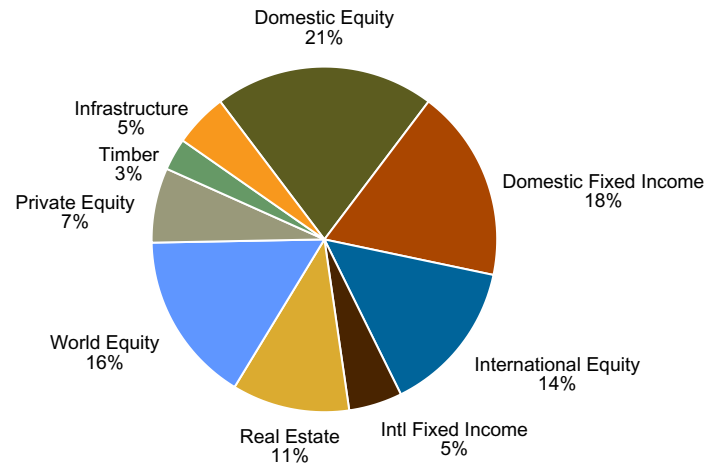
Actual vs Target Asset Allocation As of December 31, 2016

The top left chart shows the Fund's asset allocation as of December 31, 2016. The top right chart shows the Fund's target asset allocation as outlined in the investment policy statement. The bottom chart ranks the fund's asset allocation and the target allocation versus the CAI Public Fund Sponsor Database.

Actual Asset Allocation

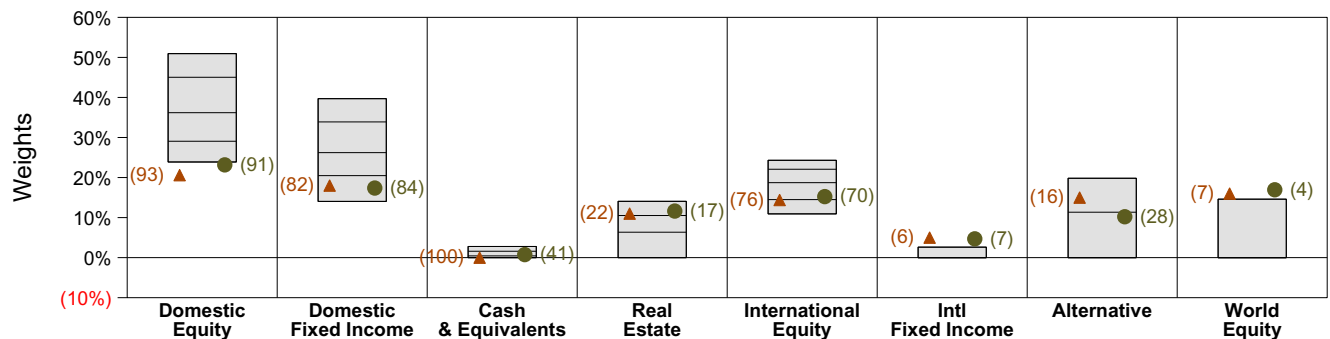


Target Asset Allocation



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	593,566	23.2%	20.6%	2.6%	65,584
Domestic Fixed Income	445,402	17.4%	18.0%	(0.6%)	(15,941)
International Equity	390,567	15.2%	14.4%	0.8%	21,493
Intl Fixed Income	120,232	4.7%	5.0%	(0.3%)	(7,919)
Real Estate	297,984	11.6%	11.0%	0.6%	16,052
World Equity	434,158	16.9%	16.0%	0.9%	24,075
Private Equity	76,412	3.0%	7.0%	(4.0%)	(102,999)
Timber	72,177	2.8%	3.0%	(0.2%)	(4,713)
Infrastructure	113,145	4.4%	5.0%	(0.6%)	(15,006)
Cash & Equivalents	19,375	0.8%	0.0%	0.8%	19,375
Total	2,563,019	100.0%	100.0%		

Asset Class Weights vs CAI Public Fund Sponsor Database



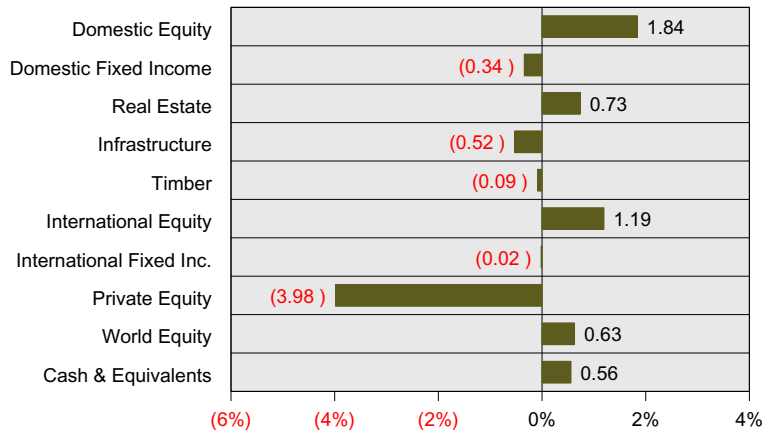
10th Percentile	50.95	39.70	2.79	14.06	24.31	2.62	19.82	14.60
25th Percentile	45.04	33.89	1.59	10.52	22.07	0.00	11.35	0.00
Median	36.19	26.22	0.44	6.35	18.72	0.00	0.00	0.00
75th Percentile	29.06	20.48	0.00	0.00	14.49	0.00	0.00	0.00
90th Percentile	23.88	14.04	0.00	0.00	10.92	0.00	0.00	0.00
Fund	● 23.16	17.38	0.76	11.63	15.24	4.69	10.21	16.94
Target	▲ 20.60	18.00	0.00	11.00	14.40	5.00	15.00	16.00
% Group Invested	96.63%	97.75%	69.10%	62.92%	90.45%	12.92%	42.13%	20.79%

* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% Blmbg Aggregate Idx, 11.0% MSCI World ex US, 11.0% NCREIF Total Index, 7.0% NDSIB PERS - Private Equity, 5.0% CPI-W, 5.0% Blmbg US HY Cor 2% C, 5.0% Blmbg GI Agg ex US, 4.8% Russell 2000 Index, 3.4% MSCI EM and 3.0% NCREIF Timberland Index.

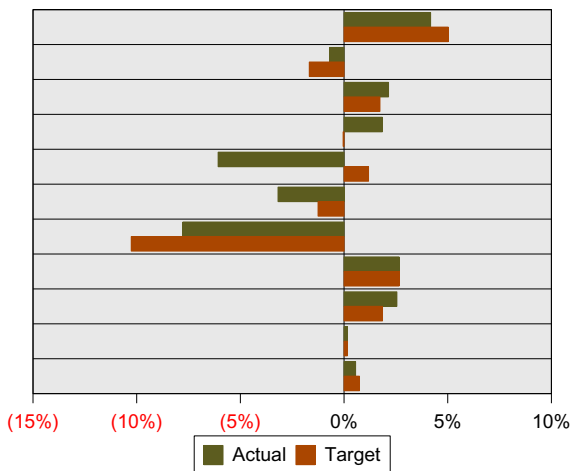
Quarterly Total Fund Relative Attribution - December 31, 2016

The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

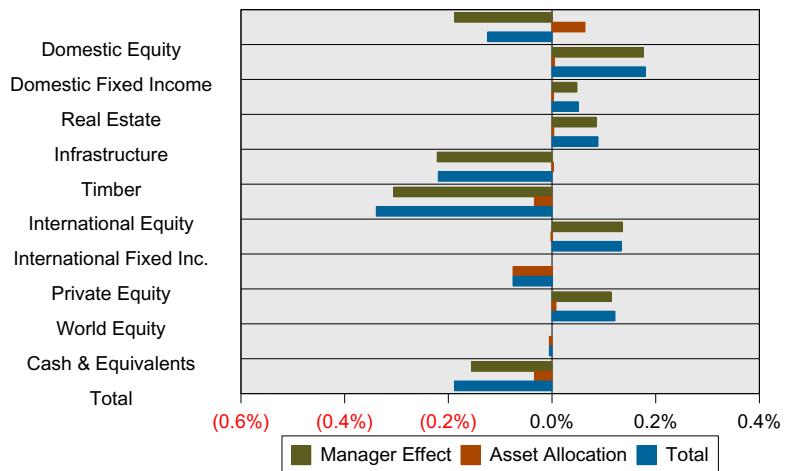
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended December 31, 2016

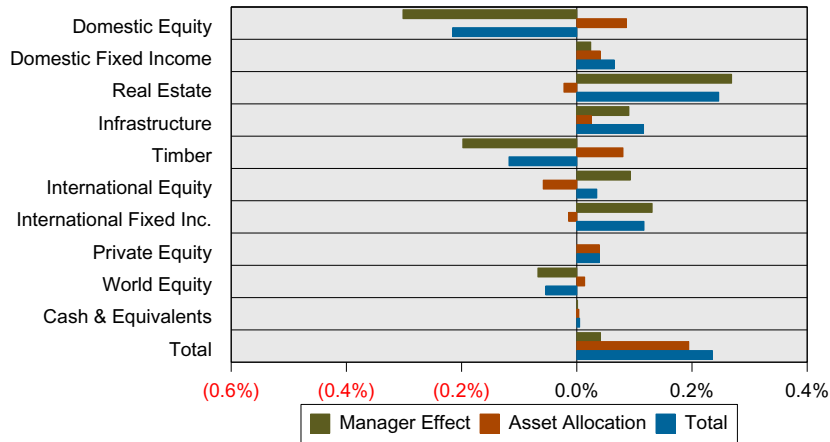
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	22%	21%	4.17%	5.03%	(0.19%)	0.06%	(0.12%)
Domestic Fixed Income	18%	18%	(0.69%)	(1.68%)	0.18%	0.00%	0.18%
Real Estate	12%	11%	2.14%	1.73%	0.05%	0.00%	0.05%
Infrastructure	4%	5%	1.85%	(0.04%)	0.09%	0.00%	0.09%
Timber	3%	3%	(6.07%)	1.18%	(0.22%)	0.00%	(0.22%)
International Equity	16%	14%	(3.18%)	(1.25%)	(0.31%)	(0.03%)	(0.34%)
International Fixed Inc.	5%	5%	(7.77%)	(10.26%)	0.14%	(0.00%)	0.13%
Private Equity	3%	7%	2.65%	2.65%	0.00%	(0.08%)	(0.08%)
World Equity	17%	16%	2.55%	1.86%	0.11%	0.01%	0.12%
Cash & Equivalents	1%	0%	0.16%	0.16%	0.00%	(0.01%)	(0.01%)
Total					0.56%	0.74%	(0.19%)

* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% Blmbg Aggregate Idx, 11.0% MSCI World ex US, 11.0% NCREIF Total Index, 7.0% NDSIB PERS - Private Equity, 5.0% CPI-W, 5.0% Blmbg US HY Cor 2% C, 5.0% Blmbg GI Agg ex US, 4.8% Russell 2000 Index, 3.4% MSCI EM and 3.0% NCREIF Timberland Index.

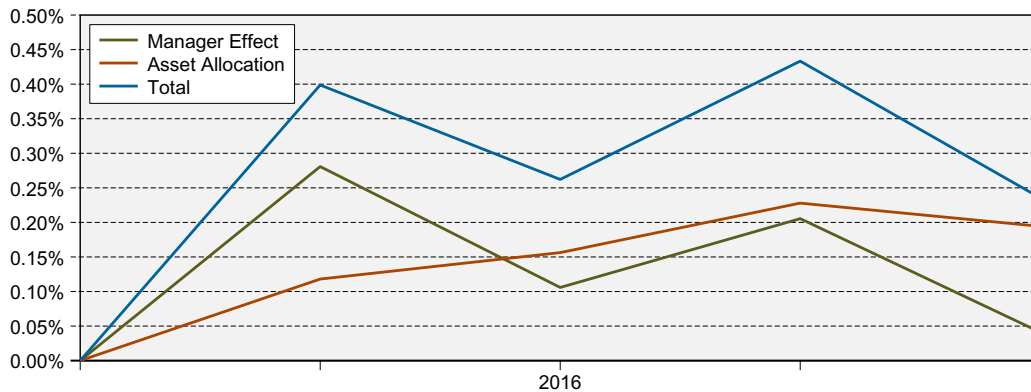
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

One Year Relative Attribution Effects



Cumulative Relative Attribution Effects



One Year Relative Attribution Effects

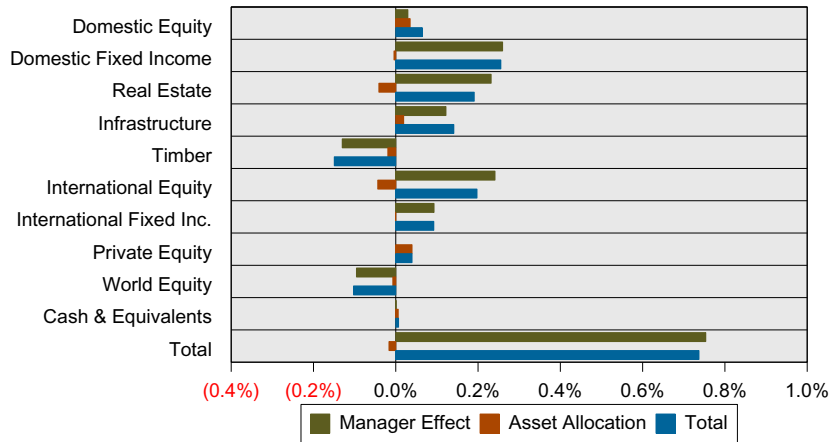
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	22%	21%	12.85%	14.20%	(0.30%)	0.09%	(0.22%)
Domestic Fixed Income	18%	17%	6.86%	6.67%	0.02%	0.04%	0.06%
Real Estate	11%	10%	10.38%	7.97%	0.27%	(0.02%)	0.25%
Infrastructure	4%	5%	3.90%	1.99%	0.09%	0.03%	0.12%
Timber	3%	4%	(3.95%)	2.59%	(0.20%)	0.08%	(0.12%)
International Equity	15%	15%	4.25%	3.67%	0.09%	(0.06%)	0.03%
International Fixed Inc.	5%	5%	4.05%	1.49%	0.13%	(0.01%)	0.12%
Private Equity	3%	6%	0.30%	0.30%	0.00%	0.04%	0.04%
World Equity	16%	16%	7.06%	7.51%	(0.07%)	0.01%	(0.05%)
Cash & Equivalents	1%	1%	0.51%	0.40%	0.00%	0.00%	0.00%
Total			7.42%	7.19%	+ 0.04%	+ 0.19%	0.24%

* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% Blmbg Aggregate Idx, 11.0% MSCI World ex US, 11.0% NCREIF Total Index, 7.0% NDSIB PERS - Private Equity, 5.0% CPI-W, 5.0% Blmbg US HY Cor 2%C, 5.0% Blmbg GI Agg ex US, 4.8% Russell 2000 Index, 3.4% MSCI EM and 3.0% NCREIF Timberland Index.

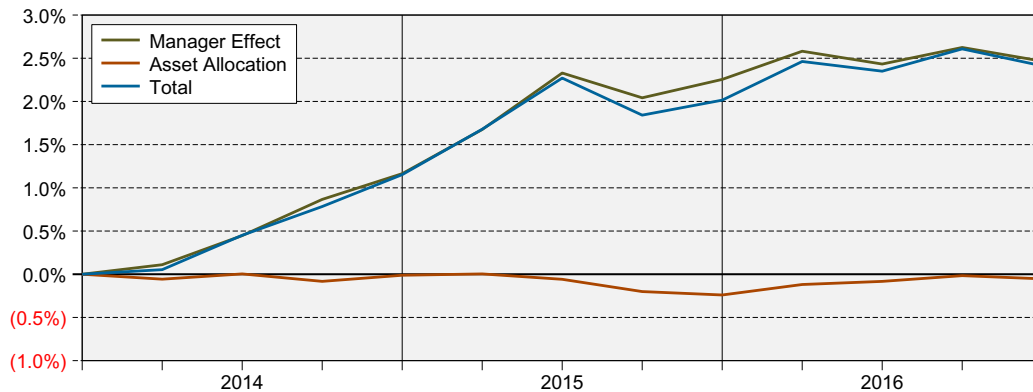
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Three Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Three Year Annualized Relative Attribution Effects

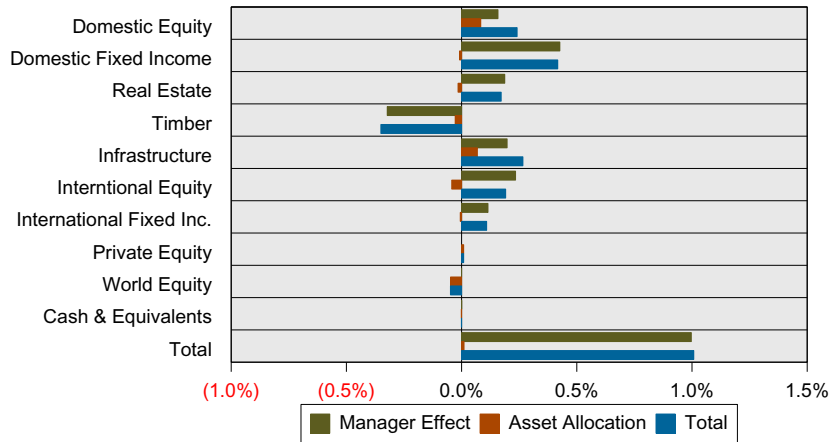
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	8.42%	8.27%	0.03%	0.03%	0.06%
Domestic Fixed Income	18%	17%	4.98%	3.52%	0.26%	(0.00%)	0.26%
Real Estate	10%	10%	13.49%	11.02%	0.23%	(0.04%)	0.19%
Infrastructure	4%	5%	3.86%	0.90%	0.12%	0.02%	0.14%
Timber	4%	5%	2.01%	5.96%	(0.13%)	(0.02%)	(0.15%)
International Equity	15%	15%	(0.10%)	(1.67%)	0.24%	(0.04%)	0.20%
International Fixed Inc.	5%	5%	(0.71%)	(2.59%)	0.09%	(0.00%)	0.09%
Private Equity	4%	5%	(1.76%)	(1.76%)	0.00%	0.04%	0.04%
World Equity	16%	16%	3.24%	3.80%	(0.10%)	(0.01%)	(0.10%)
Cash & Equivalents	1%	1%	0.22%	0.16%	0.00%	0.01%	0.01%
Total			4.82%	4.08%	+ 0.75%	+ (0.02%)	0.74%

* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% Blmbg Aggregate Idx, 11.0% MSCI World ex US, 11.0% NCREIF Total Index, 7.0% NDSIB PERS - Private Equity, 5.0% CPI-W, 5.0% Blmbg US HY Cor 2% C, 5.0% Blmbg GI Agg ex US, 4.8% Russell 2000 Index, 3.4% MSCI EM and 3.0% NCREIF Timberland Index.

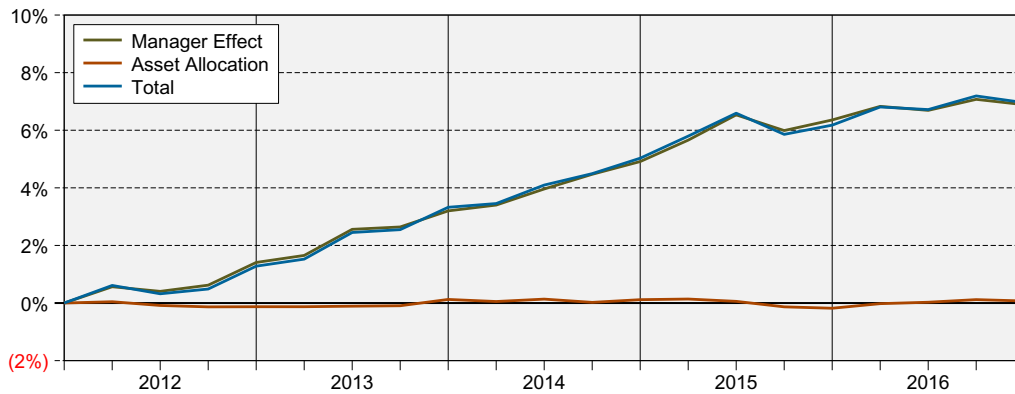
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Five Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Five Year Annualized Relative Attribution Effects

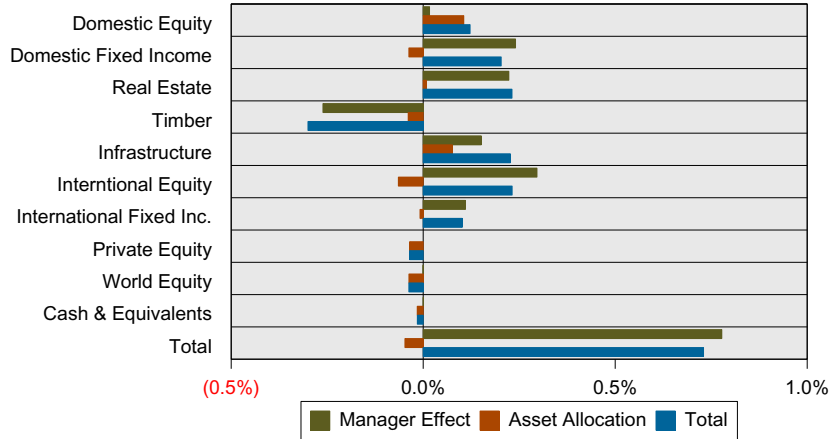
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	24%	23%	15.42%	14.71%	0.16%	0.08%	0.24%
Domestic Fixed Income	18%	17%	6.14%	3.73%	0.43%	(0.01%)	0.42%
Real Estate	10%	10%	12.89%	10.91%	0.19%	(0.02%)	0.17%
Timber	4%	5%	0.21%	7.05%	(0.32%)	(0.03%)	(0.35%)
Infrastructure	4%	5%	6.14%	1.16%	0.20%	0.07%	0.27%
International Equity	16%	15%	6.94%	5.39%	0.23%	(0.04%)	0.19%
International Fixed Inc.	5%	5%	0.72%	(1.39%)	0.11%	(0.01%)	0.11%
Private Equity	5%	5%	1.97%	1.97%	0.00%	0.01%	0.01%
World Equity	14%	14%	10.02%	10.41%	(0.00%)	(0.05%)	(0.05%)
Cash & Equivalents	1%	1%	0.16%	0.13%	0.00%	(0.00%)	(0.00%)
Total			8.91%	7.90%	+ 1.00%	+ 0.01%	1.01%

* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% Blmbg Aggregate Idx, 11.0% MSCI World ex US, 11.0% NCREIF Total Index, 7.0% NDSIB PERS - Private Equity, 5.0% CPI-W, 5.0% Blmbg US HY Cor 2% C, 5.0% Blmbg GI Agg ex US, 4.8% Russell 2000 Index, 3.4% MSCI EM and 3.0% NCREIF Timberland Index.

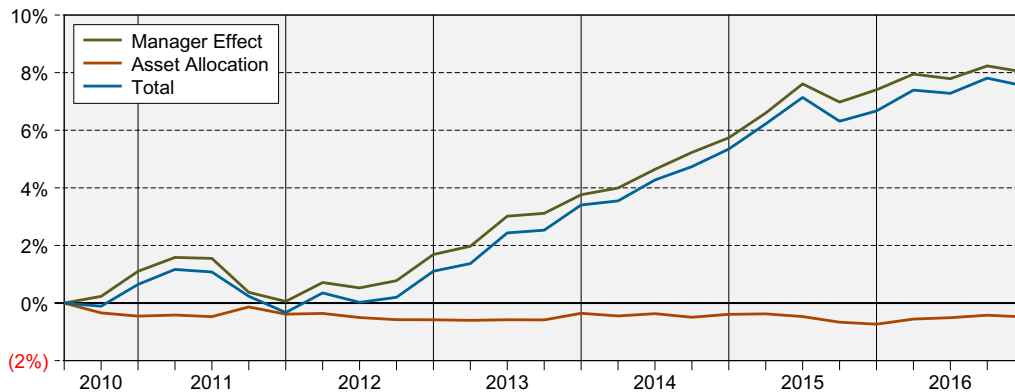
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Six and One-Half Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Six and One-Half Year Annualized Relative Attribution Effects

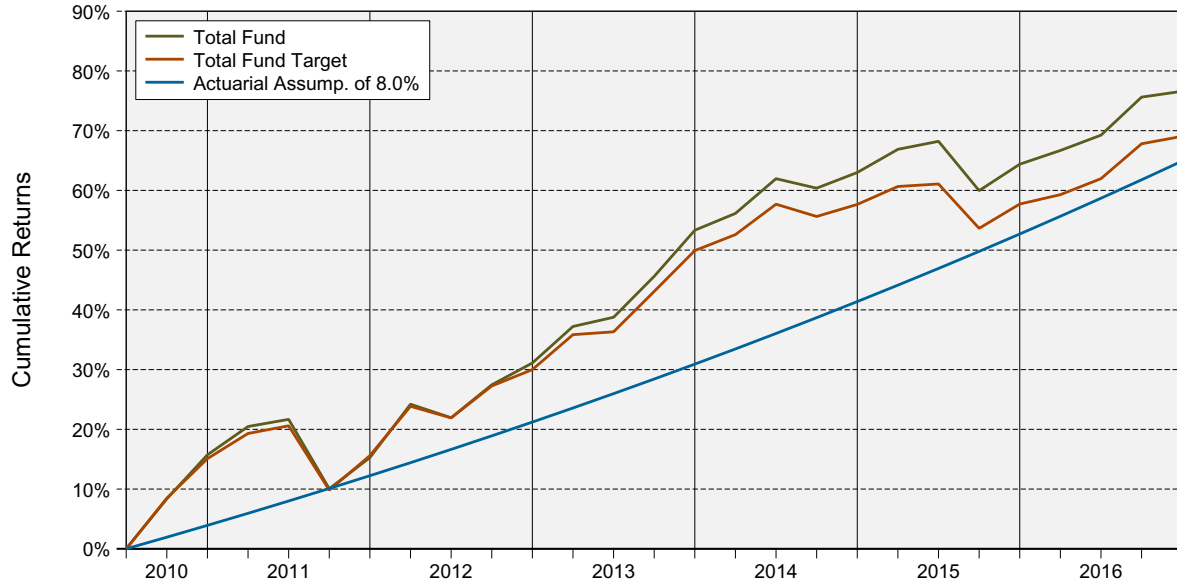
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	27%	26%	15.35%	15.07%	0.02%	0.11%	0.12%
Domestic Fixed Income	20%	19%	5.97%	4.52%	0.24%	(0.04%)	0.20%
Real Estate	9%	9%	14.83%	11.96%	0.22%	0.01%	0.23%
Timber	4%	4%	-	-	(0.26%)	(0.04%)	(0.30%)
Infrastructure	3%	4%	-	-	0.15%	0.08%	0.23%
International Equity	16%	16%	6.65%	4.69%	0.30%	(0.06%)	0.23%
International Fixed Inc.	5%	5%	3.02%	0.96%	0.11%	(0.01%)	0.10%
Private Equity	4%	5%	3.22%	3.22%	0.00%	(0.04%)	(0.04%)
World Equity	11%	11%	-	-	(0.00%)	(0.04%)	(0.04%)
Cash & Equivalents	1%	1%	0.15%	0.13%	0.00%	(0.02%)	(0.02%)
Total			9.14%	8.41%	+ 0.78%	+ (0.05%)	0.73%

* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% Blmbg Aggregate Idx, 11.0% MSCI World ex US, 11.0% NCREIF Total Index, 7.0% NDSIB PERS - Private Equity, 5.0% CPI-W, 5.0% Blmbg US HY Cor 2%C, 5.0% Blmbg GI Agg ex US, 4.8% Russell 2000 Index, 3.4% MSCI EM and 3.0% NCREIF Timberland Index.

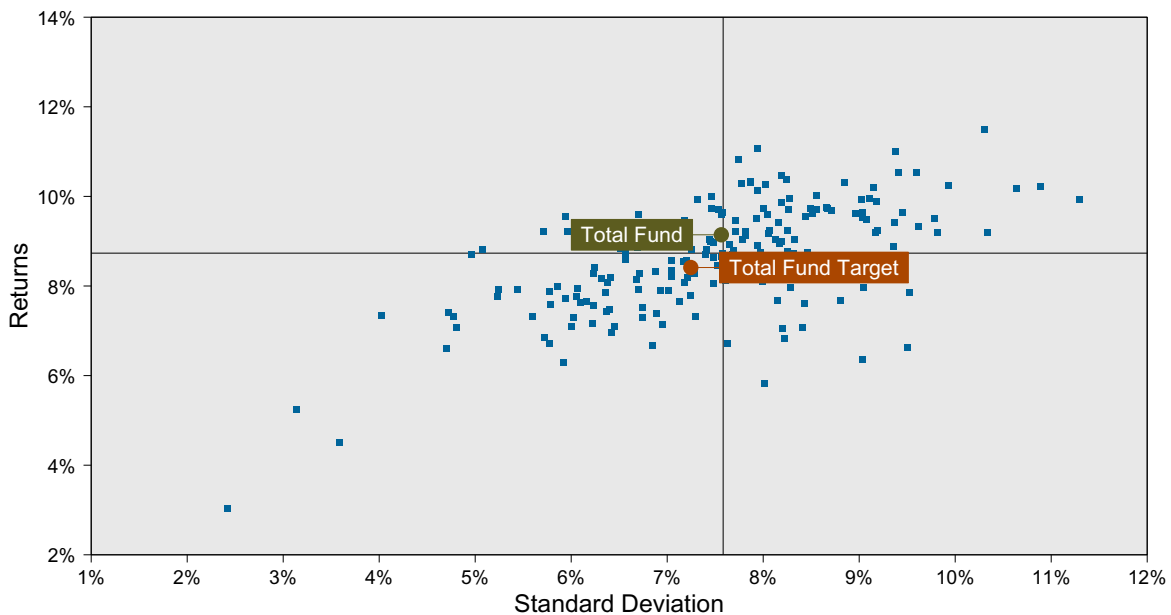
Cumulative Performance Relative to Target

The first chart below illustrates the cumulative performance of the Total Fund relative to the cumulative performance of the Fund's Target Asset Mix. The Target Mix is assumed to be rebalanced each quarter with no transaction costs. The second chart below shows the return and the risk of the Total Fund and the Target Mix, contrasted with the returns and risks of the funds in the CAI Public Fund Sponsor Database.

Cumulative Returns Actual vs Target



Six and One-Half Year Annualized Risk vs Return



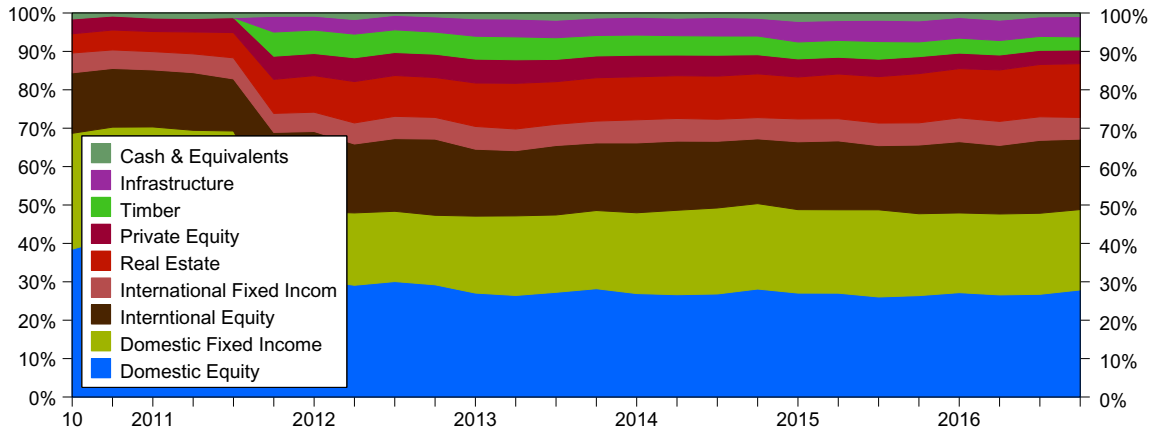
Squares represent membership of the CAI Public Fund Sponsor Database

* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% Blmbg Aggregate Idx, 11.0% MSCI World ex US, 11.0% NCREIF Total Index, 7.0% NDSIB PERS - Private Equity, 5.0% CPI-W, 5.0% Blmbg US HY Cor 2%C, 5.0% Blmbg GI Agg ex US, 4.8% Russell 2000 Index, 3.4% MSCI EM and 3.0% NCREIF Timberland Index.

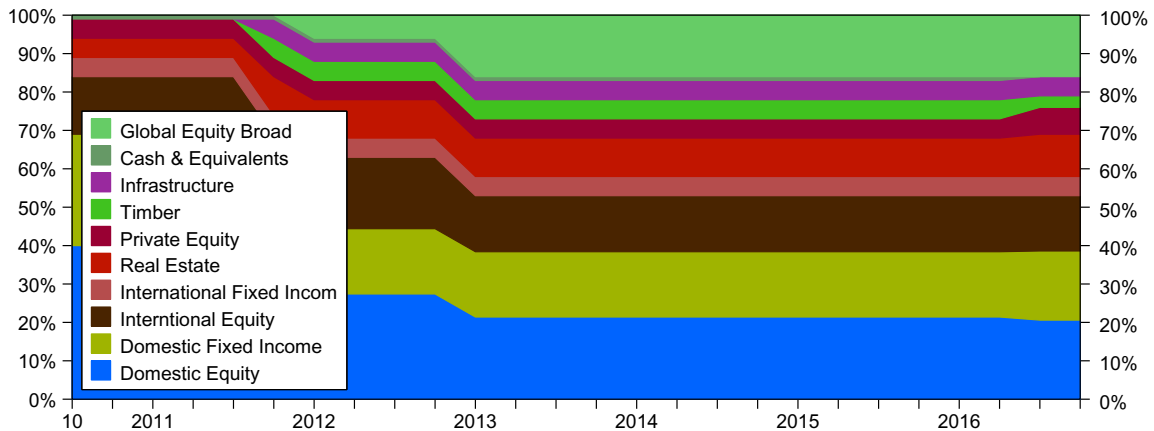
Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, the fund's historical target asset allocation, and the historical asset allocation of the average fund in the CAI Public Fund Sponsor Database.

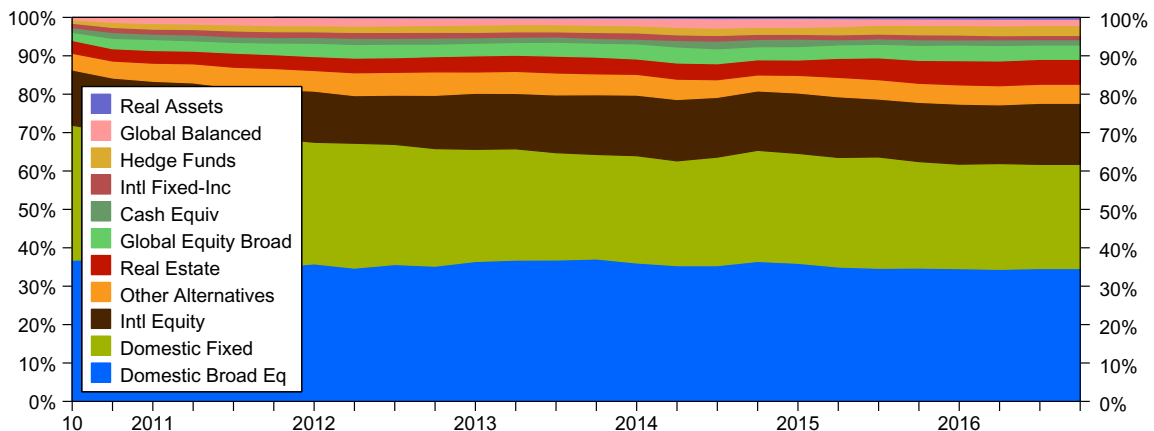
Actual Historical Asset Allocation



Target Historical Asset Allocation



Average CAI Public Fund Sponsor Database Historical Asset Allocation

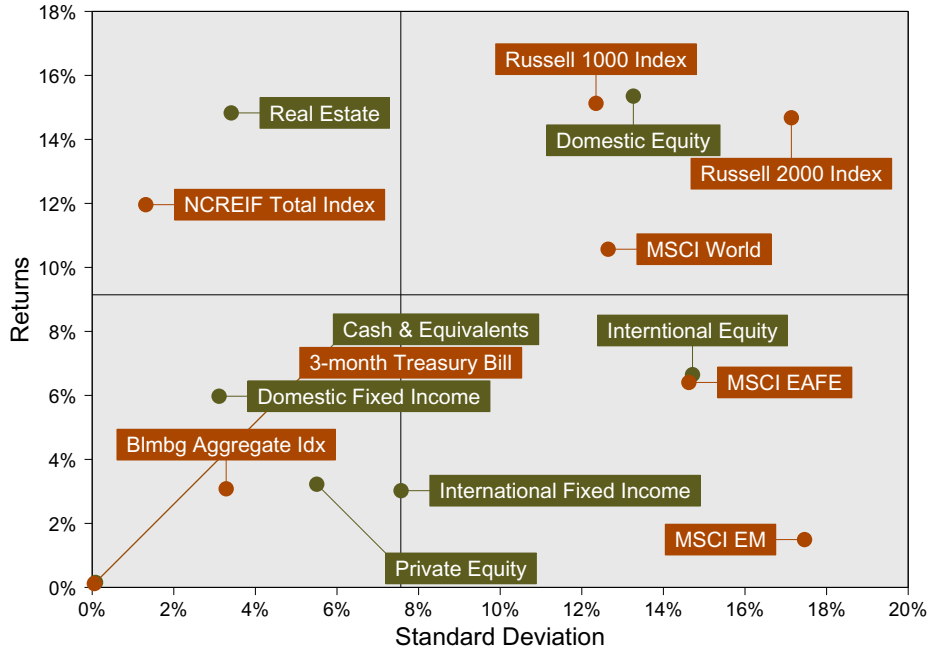


* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% Blmbg Aggregate Idx, 11.0% MSCI World ex US, 11.0% NCREIF Total Index, 7.0% NDSIB PERS - Private Equity, 5.0% CPI-W, 5.0% Blmbg US HY Cor 2% C, 5.0% Blmbg GI Agg ex US, 4.8% Russell 2000 Index, 3.4% MSCI EM and 3.0% NCREIF Timberland Index.

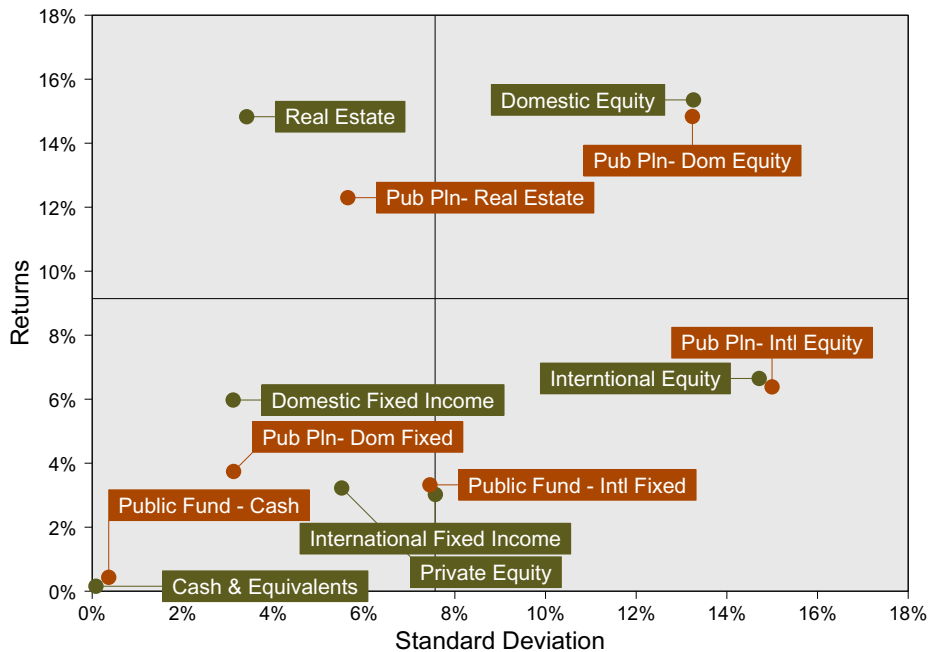
Asset Class Risk and Return

The charts below show the six and one-half year annualized risk and return for each asset class component of the Total Fund. The first graph contrasts these values with those of the appropriate index for each asset class. The second chart contrasts them with the risk and return of the median portfolio in each of the appropriate CAI comparative databases. In each case, the crosshairs on the chart represent the return and risk of the Total Fund.

**Six and One-Half Year Annualized Risk vs Return
Asset Classes vs Benchmark Indices**



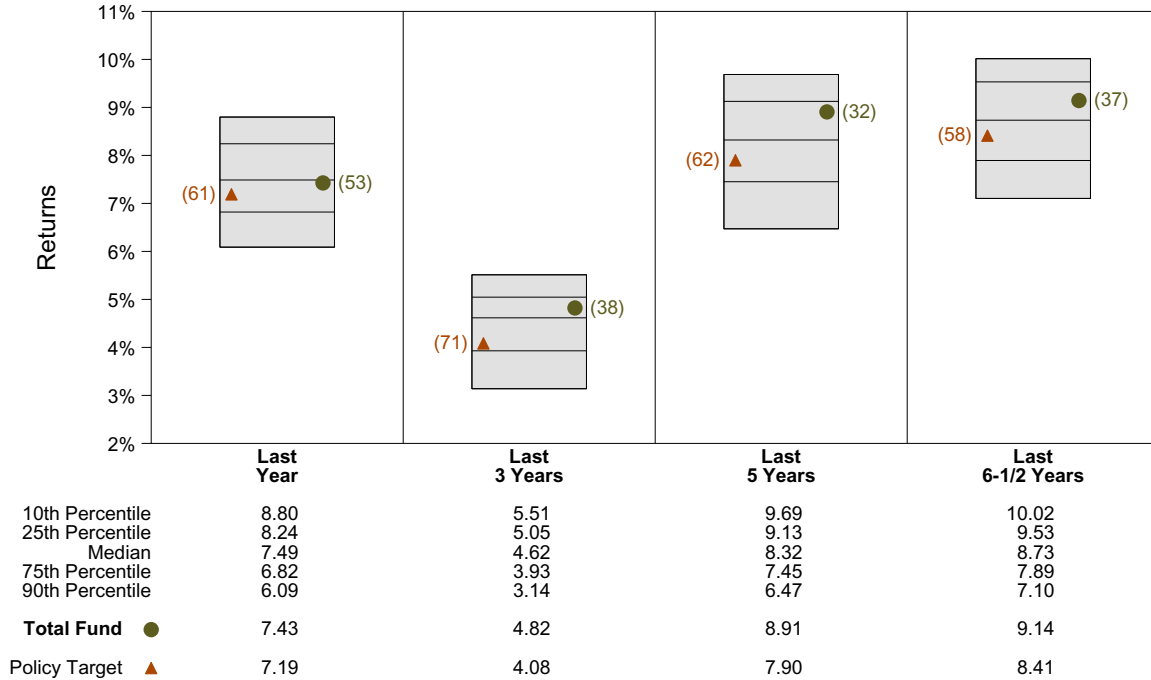
**Six and One-Half Year Annualized Risk vs Return
Asset Classes vs Asset Class Median**



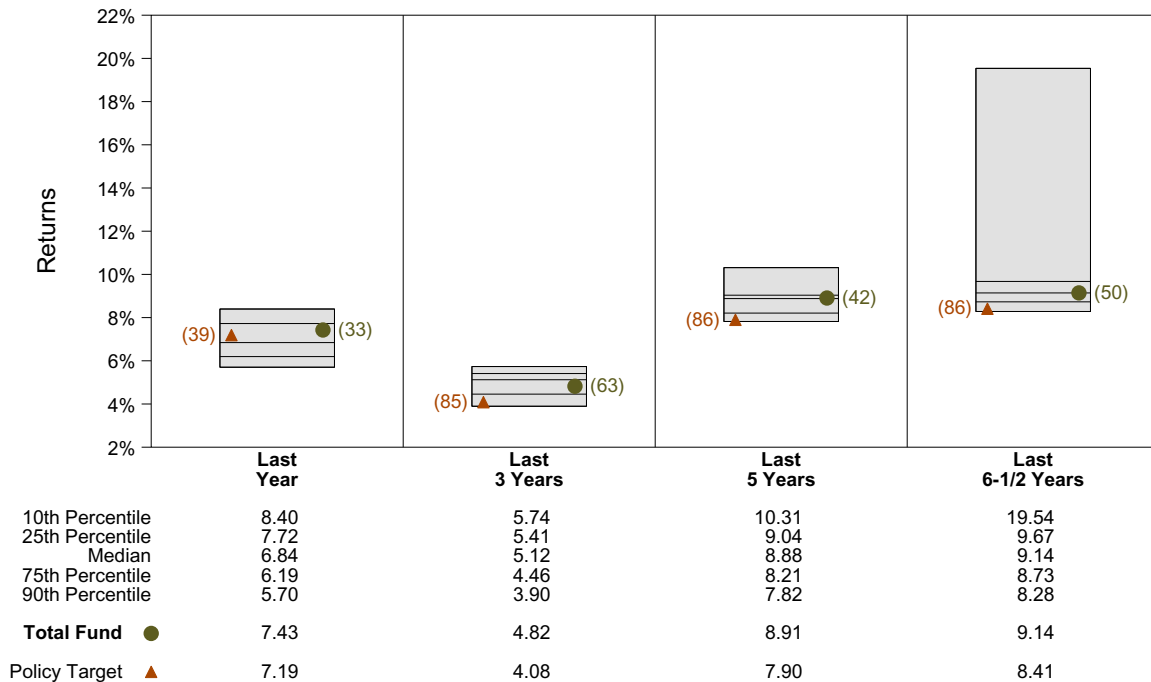
Total Fund Ranking

The first two charts show the ranking of the Total Fund's performance relative to that of the CAI Public Fund Sponsor Database for periods ended December 31, 2016. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation as that of the Total Fund.

CAI Public Fund Sponsor Database



Asset Allocation Adjusted Ranking

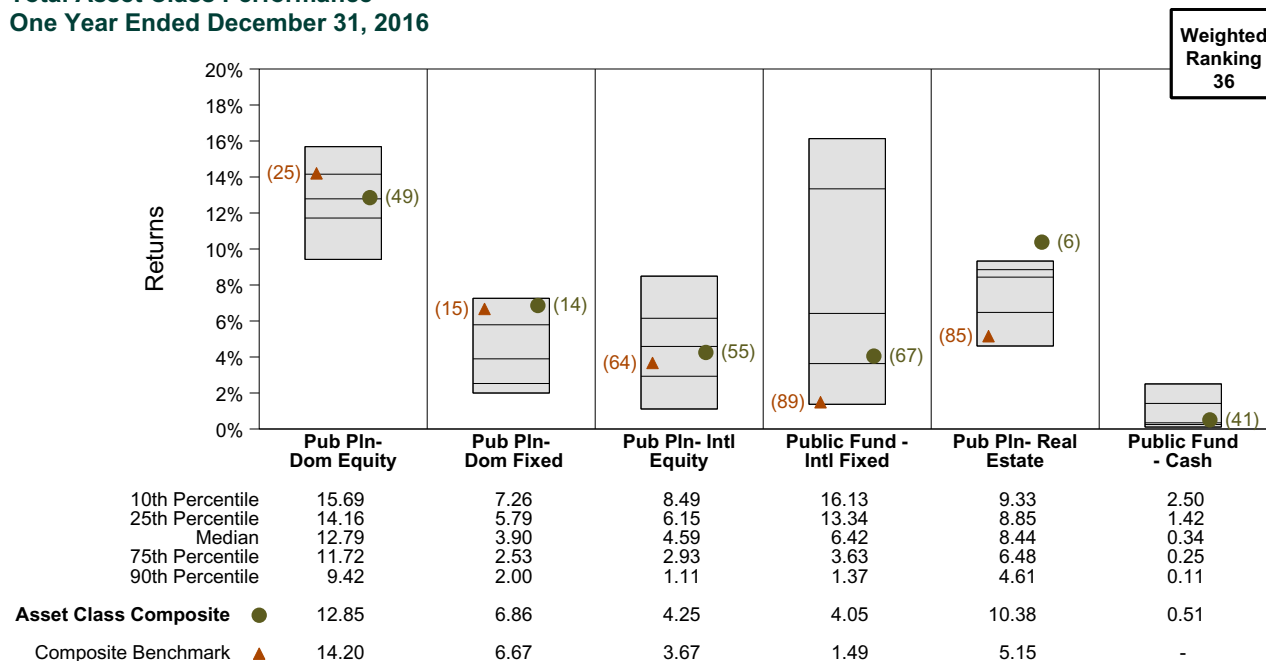


* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% Blmbg Aggregate Idx, 11.0% MSCI World ex US, 11.0% NCREIF Total Index, 7.0% NDSIB PERS - Private Equity, 5.0% CPI-W, 5.0% Blmbg US HY Cor 2%C, 5.0% Blmbg GI Agg ex US, 4.8% Russell 2000 Index, 3.4% MSCI EM and 3.0% NCREIF Timberland Index.

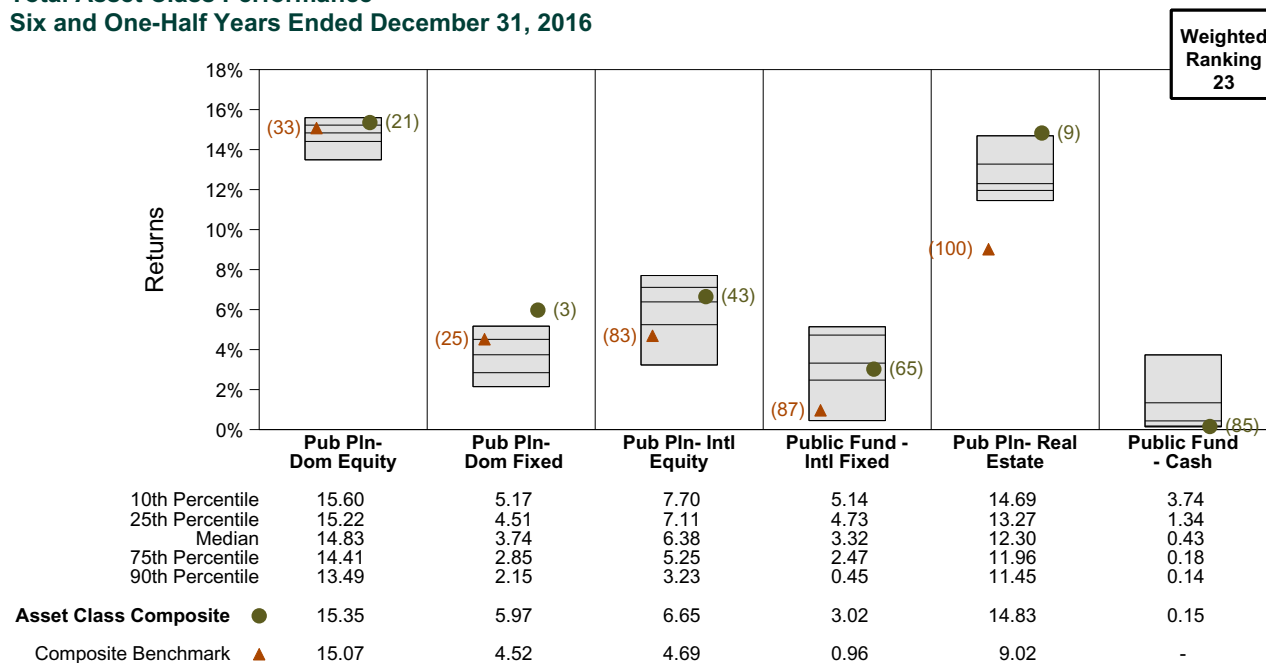
Asset Class Rankings

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.

Total Asset Class Performance One Year Ended December 31, 2016



Total Asset Class Performance Six and One-Half Years Ended December 31, 2016



* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% Blmbg Aggregate Idx, 11.0% MSCI World ex US, 11.0% NCREIF Total Index, 7.0% NDSIB PERS - Private Equity, 5.0% CPI-W, 5.0% Blmbg US HY Cor 2% C, 5.0% Blmbg GI Agg ex US, 4.8% Russell 2000 Index, 3.4% MSCI EM and 3.0% NCREIF Timberland Index.

Asset Class Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of December 31, 2016, with the distribution as of September 30, 2016. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

Asset Class Allocation

	December 31, 2016		Net New Inv.	Inv. Return	September 30, 2016	
	Market Value	Weight			Market Value	Weight
GLOBAL EQUITY	\$1,494,703,175	58.32%	\$(2,288,840)	\$23,623,596	\$1,473,368,419	57.82%
Domestic Equity	\$593,565,537	23.16%	\$1,471,370	\$23,724,427	\$568,369,740	22.30%
Large Cap	449,094,059	17.52%	731,750	13,030,252	435,332,058	17.08%
Small Cap	144,471,478	5.64%	739,620	10,694,176	133,037,682	5.22%
International Equity	\$390,567,334	15.24%	\$(68,636)	\$(12,850,508)	\$403,486,478	15.83%
Developed Intl Equity	289,928,807	11.31%	(68,636)	(6,057,025)	296,054,467	11.62%
Emerging Markets	100,638,527	3.93%	0	(6,793,484)	107,432,011	4.22%
World Equity	\$434,158,030	16.94%	\$146,134	\$10,773,110	\$423,238,786	16.61%
Private Equity	\$76,412,275	2.98%	\$(3,837,708)	\$1,976,567	\$78,273,416	3.07%
GLOBAL FIXED INCOME	\$565,634,712	22.07%	\$(1,482)	\$(13,249,533)	\$578,885,727	22.72%
Domestic Fixed Income	\$445,402,470	17.38%	\$98,852	\$(3,115,476)	\$448,419,094	17.60%
Inv. Grade Fixed Income	312,422,123	12.19%	207,176	(5,284,277)	317,499,224	12.46%
Below Inv. Grade Fixed Income	132,980,347	5.19%	(108,324)	2,168,801	130,919,870	5.14%
International Fixed Income	\$120,232,242	4.69%	\$(100,334)	\$(10,134,057)	\$130,466,633	5.12%
GLOBAL REAL ASSETS	\$483,306,480	18.86%	\$4,696,062	\$3,735,591	\$474,874,827	18.63%
Real Estate	297,984,177	11.63%	2,084,218	6,328,702	289,571,257	11.36%
Timber	72,177,248	2.82%	(230,334)	(4,668,150)	77,075,733	3.02%
Infrastructure	113,145,054	4.41%	2,842,178	2,075,039	108,227,837	4.25%
Cash & Equivalents	\$19,374,583	0.76%	\$(1,936,313)	\$23,645	\$21,287,252	0.84%
Securities Lending Income	\$0	0.00%	\$(44,355)	\$44,355	-	-
Total Fund	\$2,563,018,950	100.0%	\$425,071	\$14,177,654	\$2,548,416,225	100.0%

PLEASE REFER TO PAGES 36-38 FOR INVESTMENT MANAGER LEVEL ASSET ALLOCATION.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended December 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6-1/2 Years
Global Equity					
Gross	1.61%	8.13%	4.02%	10.76%	-
Net	1.56%	7.87%	3.70%	10.42%	-
Wtd Avg Global Equity Benchmark	2.36%	8.39%	3.53%	10.00%	-
Domestic Equity					
Gross	4.17%	12.85%	8.42%	15.42%	15.35%
Net	4.13%	12.62%	8.22%	15.19%	15.09%
Wtd Avg Domestci Equity Benchmark	5.03%	14.20%	8.27%	14.71%	15.07%
Large Cap Equity					
Gross	2.99%	11.18%	9.27%	15.66%	15.53%
Net	2.97%	11.02%	9.09%	15.46%	15.28%
Benchmark(1)	3.83%	12.05%	8.59%	14.69%	15.12%
Small Cap Equity					
Gross	8.04%	18.00%	5.25%	14.37%	14.59%
Net	7.95%	17.54%	4.98%	14.08%	14.31%
Russell 2000 Index	8.83%	21.31%	6.74%	14.46%	14.68%
International Equity					
Gross	(3.18%)	4.25%	(0.10%)	6.94%	6.65%
Net	(3.23%)	4.07%	(0.30%)	6.66%	6.33%
Wtd Avg Intl Equity Benchmark	(1.25%)	3.67%	(1.67%)	5.39%	4.69%
Developed Intl Equity					
Gross	(2.05%)	2.61%	(0.14%)	8.13%	7.48%
Net	(2.10%)	2.37%	(0.38%)	7.84%	7.16%
Benchmark(2)	(0.36%)	1.22%	(1.53%)	6.58%	5.57%
Emerging Markets					
Gross	(6.32%)	9.05%	(0.51%)	2.59%	3.58%
Net	(6.32%)	9.05%	(0.57%)	2.34%	3.27%
Benchmark(3)	(4.16%)	11.19%	(2.55%)	1.28%	1.54%
World Equity					
Gross	2.55%	7.06%	3.24%	10.02%	-
Net	2.46%	6.66%	2.57%	9.26%	-
MSCI World Index	1.86%	7.51%	3.80%	10.41%	10.57%
Private Equity					
Net	2.65%	0.30%	(1.78%)	1.93%	3.14%

(1) S&P 500 Index through 12/31/2011 and the Russell 1000 Index thereafter.

(2) 50% Hedged EAFE through 3/31/2011, MSCI EAFE through 6/30/2016; MSCI World ex-US thereafter.

(3) MSCI Emerging Mkts Idx (Gross) through 6/30/2011 and MSCI Emerging Mkts Idx Net thereafter.

PLEASE REFER TO PAGES 39-43 FOR INVESTMENT MANAGER LEVEL RETURNS.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended December 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6-1/2 Years
Global Fixed Income					
Gross	(2.29%)	6.25%	3.79%	4.95%	-
Net	(2.35%)	5.98%	3.53%	4.70%	-
Wtd Avg Global Fixed Income Benchmark	(3.61%)	5.60%	2.16%	2.59%	-
Domestic Fixed Income					
Gross	(0.69%)	6.86%	4.98%	6.14%	5.97%
Net	(0.75%)	6.62%	4.76%	5.92%	5.73%
Wtd Avg Domestic FI Benchmark	(1.68%)	6.67%	3.52%	3.73%	4.52%
Inv. Grade Fixed Income					
Gross	(1.66%)	3.82%	4.54%	4.87%	4.88%
Net	(1.70%)	3.66%	4.41%	4.74%	4.71%
Blmbg Aggregate Index	(2.98%)	2.65%	3.03%	2.23%	3.08%
Below Inv. Grade Fixed Income					
Gross	1.66%	14.24%	5.89%	9.32%	8.89%
Net	1.56%	13.79%	5.45%	8.85%	8.44%
Blmbg HY Corp 2% Issue	1.75%	17.13%	4.67%	7.36%	7.99%
International Fixed Income					
Gross	(7.77%)	4.05%	(0.71%)	0.72%	3.02%
Net	(7.86%)	3.68%	(1.06%)	0.36%	2.66%
Wtd Avg Intl Fixed Income Benchmark	(10.26%)	1.49%	(2.59%)	(1.39%)	0.96%
Global Real Assets					
Gross	0.77%	6.46%	8.86%	8.19%	-
Net	0.67%	5.99%	8.42%	7.76%	-
Wtd Avg Global Real Assets Benchmark	1.15%	5.10%	7.15%	7.45%	-
Real Estate					
Gross	2.14%	10.38%	13.49%	12.89%	14.83%
Net	2.02%	9.85%	12.93%	12.35%	14.26%
NCREIF Total Index	1.73%	7.97%	11.02%	10.91%	11.96%
Timber					
Net	(6.07%)	(3.95%)	2.01%	0.21%	-
NCREIF Timberland Index	1.18%	2.59%	5.96%	7.06%	5.49%
Infrastructure					
Gross	1.85%	3.90%	3.86%	6.14%	-
Net	1.73%	3.30%	3.29%	5.47%	-
CPI-W	(0.04%)	1.99%	0.90%	1.16%	1.49%
Cash & Equivalents - Net					
3-month Treasury Bill	0.16%	0.51%	0.22%	0.16%	0.15%
	0.09%	0.33%	0.14%	0.12%	0.12%
Total Fund					
Gross	0.56%	7.43%	4.82%	8.91%	9.14%
Net	0.49%	7.13%	4.50%	8.57%	8.80%
Target*	0.74%	7.19%	4.08%	7.90%	8.41%

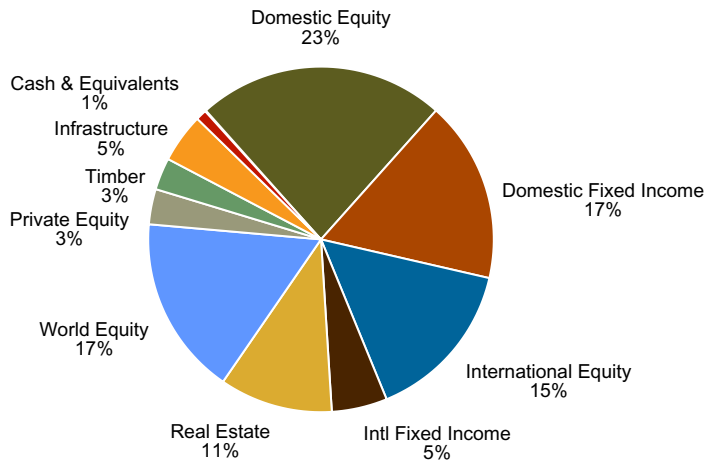
* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% Blmbg Aggregate Idx, 11.0% MSCI World ex US, 11.0% NCREIF Total Index, 7.0% NDSIB PERS - Private Equity, 5.0% CPI-W, 5.0% Blmbg US HY Cor 2%C, 5.0% Blmbg GI Agg ex US, 4.8% Russell 2000 Index, 3.4% MSCI EM and 3.0% NCREIF Timberland Index.

PLEASE REFER TO PAGES 39-43 FOR INVESTMENT MANAGER LEVEL RETURNS.

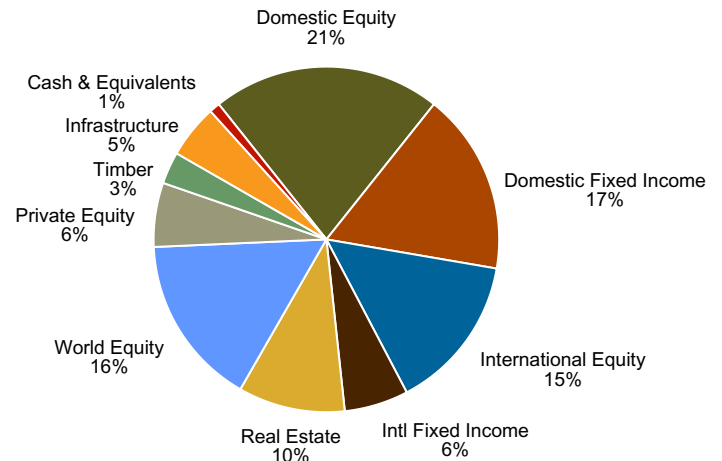
Actual vs Target Asset Allocation As of December 31, 2016

The top left chart shows the Fund's asset allocation as of December 31, 2016. The top right chart shows the Fund's target asset allocation as outlined in the investment policy statement. The bottom chart ranks the fund's asset allocation and the target allocation versus the CAI Public Fund Sponsor Database.

Actual Asset Allocation

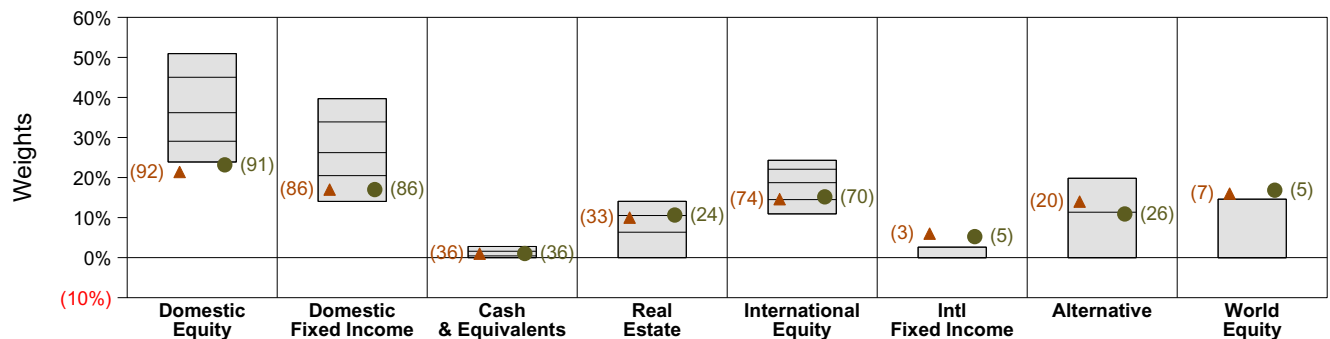


Target Asset Allocation



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	497,561	23.2%	21.4%	1.8%	37,981
Domestic Fixed Income	364,947	17.0%	17.0%	0.0%	(141)
International Equity	326,003	15.2%	14.6%	0.6%	12,457
Intl Fixed Income	112,731	5.2%	6.0%	(0.8%)	(16,123)
Real Estate	228,480	10.6%	10.0%	0.6%	13,722
World Equity	361,507	16.8%	16.0%	0.8%	17,896
Private Equity	70,138	3.3%	6.0%	(2.7%)	(58,717)
Timber	65,467	3.0%	3.0%	0.0%	1,040
Infrastructure	98,578	4.6%	5.0%	(0.4%)	(8,801)
Cash & Equivalents	22,163	1.0%	1.0%	0.0%	687
Total	2,147,574	100.0%	100.0%		

Asset Class Weights vs CAI Public Fund Sponsor Database



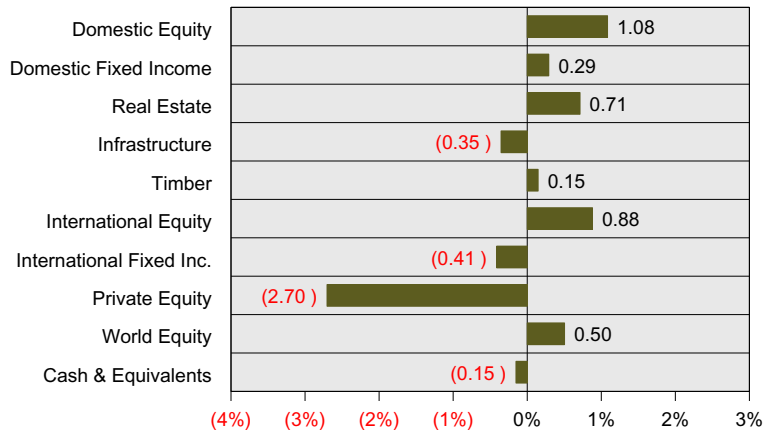
10th Percentile	50.95	39.70	2.79	14.06	24.31	2.62	19.82	14.60
25th Percentile	45.04	33.89	1.59	10.52	22.07	0.00	11.35	0.00
Median	36.19	26.22	0.44	6.35	18.72	0.00	0.00	0.00
75th Percentile	29.06	20.48	0.00	0.00	14.49	0.00	0.00	0.00
90th Percentile	23.88	14.04	0.00	0.00	10.92	0.00	0.00	0.00
Fund	23.17	16.99	1.03	10.64	15.18	5.25	10.90	16.83
Target	21.40	17.00	1.00	10.00	14.60	6.00	14.00	16.00
% Group Invested	96.63%	97.75%	69.10%	62.92%	90.45%	12.92%	42.13%	20.79%

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 13.0% Blmbg Aggregate Idx, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 6.0% NDSIB TFFR - Private Equity, 6.0% Blmbg GI Agg ex US, 5.0% CPI-W, 4.8% Russell 2000 Index, 4.0% Blmbg US HY Cor 2% C, 3.0% NCREIF Timberland Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

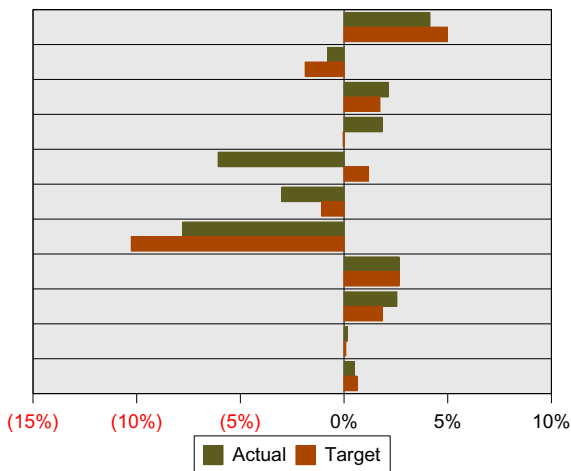
Quarterly Total Fund Relative Attribution - December 31, 2016

The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

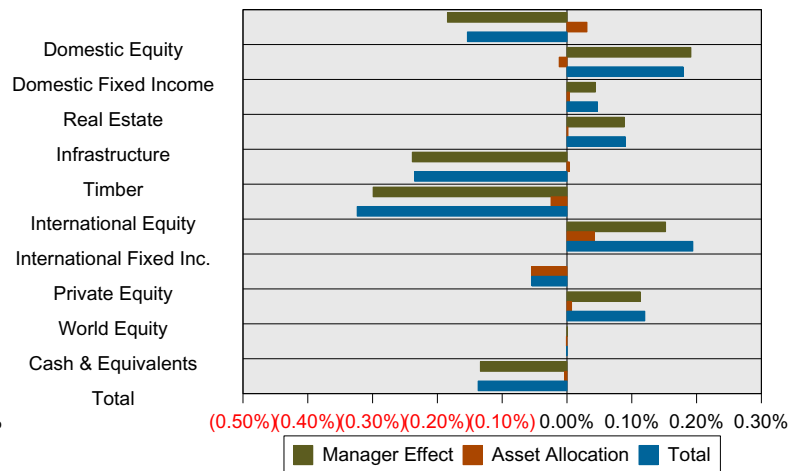
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended December 31, 2016

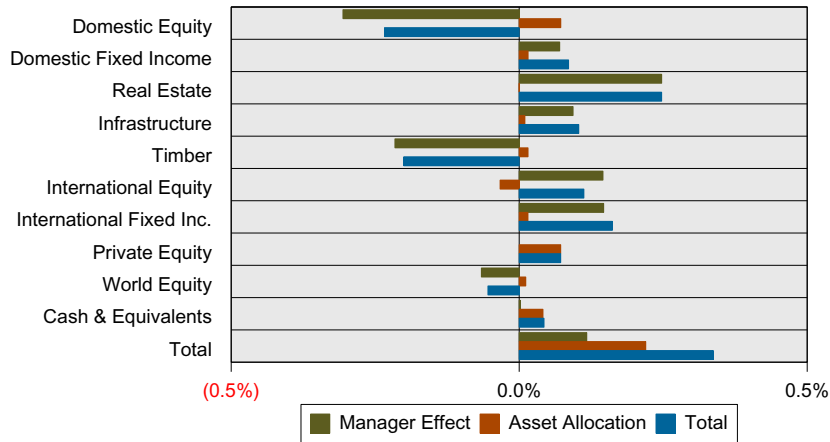
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return	
Domestic Equity	22%	21%	4.14%	4.98%	(0.18%)	0.03%	(0.15%)	
Domestic Fixed Income	17%	17%	(0.79%)	(1.88%)	0.19%	(0.01%)	0.18%	
Real Estate	11%	10%	2.14%	1.73%	0.04%	0.00%	0.05%	
Infrastructure	5%	5%	1.85%	(0.04%)	0.09%	0.00%	0.09%	
Timber	3%	3%	(6.07%)	1.18%	(0.24%)	0.00%	(0.24%)	
International Equity	15%	15%	(3.00%)	(1.09%)	(0.30%)	(0.02%)	(0.32%)	
International Fixed Inc.	6%	6%	(7.77%)	(10.26%)	0.15%	0.04%	0.19%	
Private Equity	3%	6%	2.65%	2.65%	0.00%	(0.05%)	(0.05%)	
World Equity	17%	16%	2.55%	1.86%	0.11%	0.01%	0.12%	
Cash & Equivalents	1%	1%	0.16%	0.09%	0.00%	(0.00%)	(0.00%)	
Total					0.49%	0.63%	(0.13%) + (0.00%)	(0.14%)

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 13.0% Blmbg Aggregate Idx, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 6.0% NDSIB TFFR - Private Equity, 6.0% Blmbg GI Agg ex US, 5.0% CPI-W, 4.8% Russell 2000 Index, 4.0% Blmbg US HY Cor 2% C, 3.0% NCREIF Timberland Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

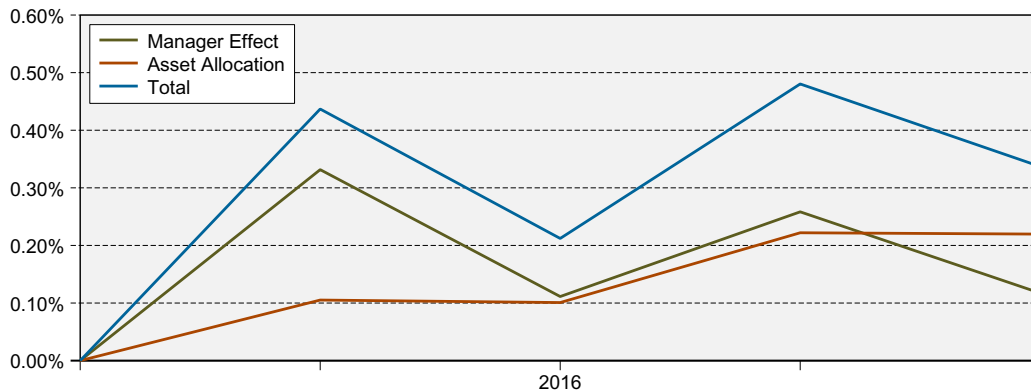
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

One Year Relative Attribution Effects



Cumulative Relative Attribution Effects



One Year Relative Attribution Effects

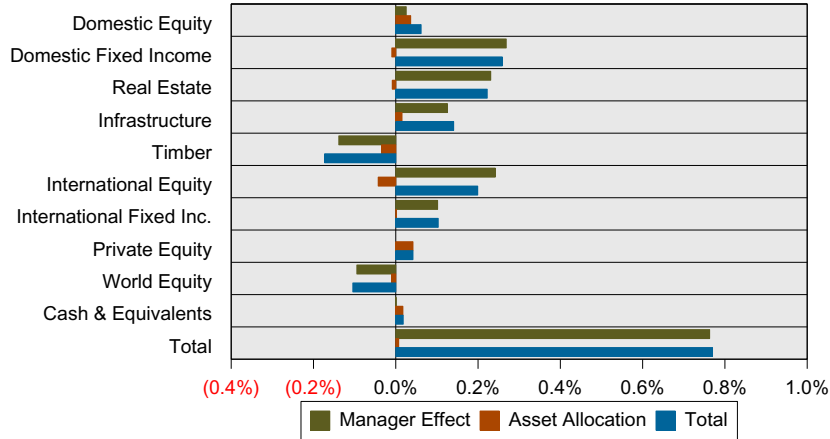
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	12.79%	14.14%	(0.31%)	0.07%	(0.23%)
Domestic Fixed Income	17%	17%	6.67%	6.21%	0.07%	0.02%	0.09%
Real Estate	11%	10%	10.38%	7.97%	0.25%	(0.00%)	0.25%
Infrastructure	5%	5%	3.90%	1.99%	0.09%	0.01%	0.10%
Timber	3%	4%	(3.95%)	2.59%	(0.22%)	0.02%	(0.20%)
International Equity	15%	15%	4.05%	3.17%	0.15%	(0.03%)	0.11%
International Fixed Inc.	5%	6%	4.05%	1.49%	0.15%	0.02%	0.16%
Private Equity	4%	6%	0.30%	0.30%	0.00%	0.07%	0.07%
World Equity	16%	16%	7.06%	7.51%	(0.07%)	0.01%	(0.05%)
Cash & Equivalents	1%	1%	0.51%	0.33%	0.00%	0.04%	0.04%
Total			7.28%	6.94%	+ 0.12%	+ 0.22%	0.34%

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 13.0% Blmbg Aggregate Idx, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 6.0% NDSIB TFFR - Private Equity, 6.0% Blmbg GI Agg ex US, 5.0% CPI-W, 4.8% Russell 2000 Index, 4.0% Blmbg US HY Cor 2%C, 3.0% NCREIF Timberland Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

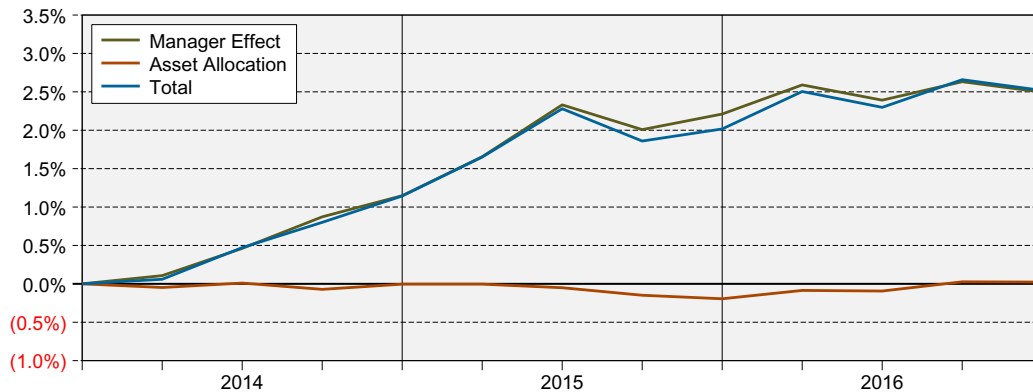
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Three Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Three Year Annualized Relative Attribution Effects

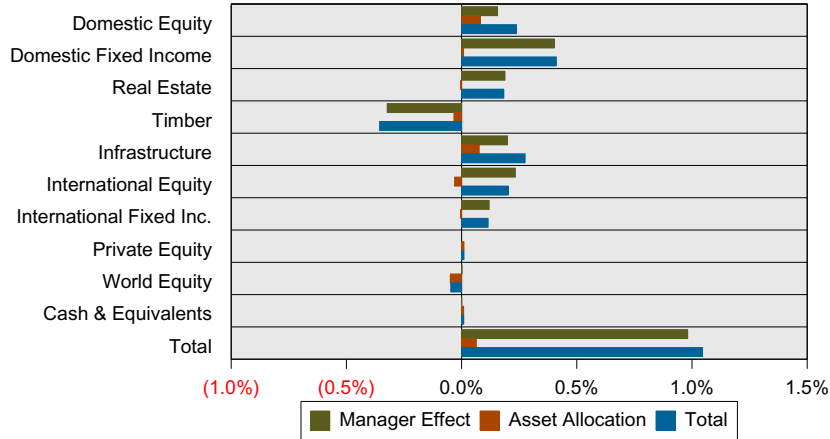
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	8.41%	8.25%	0.03%	0.04%	0.06%
Domestic Fixed Income	18%	17%	4.90%	3.37%	0.27%	(0.01)%	0.26%
Real Estate	10%	10%	13.49%	11.02%	0.23%	(0.01)%	0.22%
Infrastructure	4%	5%	3.86%	0.90%	0.13%	0.02%	0.14%
Timber	4%	5%	2.01%	5.96%	(0.14)%	(0.03)%	(0.17)%
International Equity	15%	15%	(0.09)%	(1.64)%	0.24%	(0.04)%	0.20%
International Fixed Inc.	5%	5%	(0.71)%	(2.59)%	0.10%	0.00%	0.10%
Private Equity	4%	5%	(1.76)%	(1.76)%	0.00%	0.04%	0.04%
World Equity	16%	16%	3.24%	3.80%	(0.09)%	(0.01)%	(0.10)%
Cash & Equivalents	1%	1%	0.22%	0.14%	0.00%	0.02%	0.02%
Total			4.80%	4.03%	+ 0.76%	+ 0.01%	0.77%

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 13.0% Blmbg Aggregate Idx, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 6.0% NDSIB TFFR - Private Equity, 6.0% Blmbg GI Agg ex US, 5.0% CPI-W, 4.8% Russell 2000 Index, 4.0% Blmbg US HY Cor 2% C, 3.0% NCREIF Timberland Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

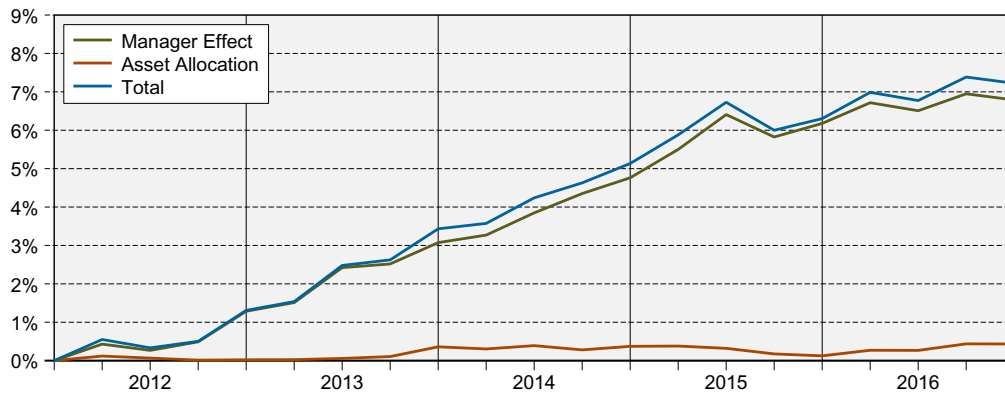
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Five Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Five Year Annualized Relative Attribution Effects

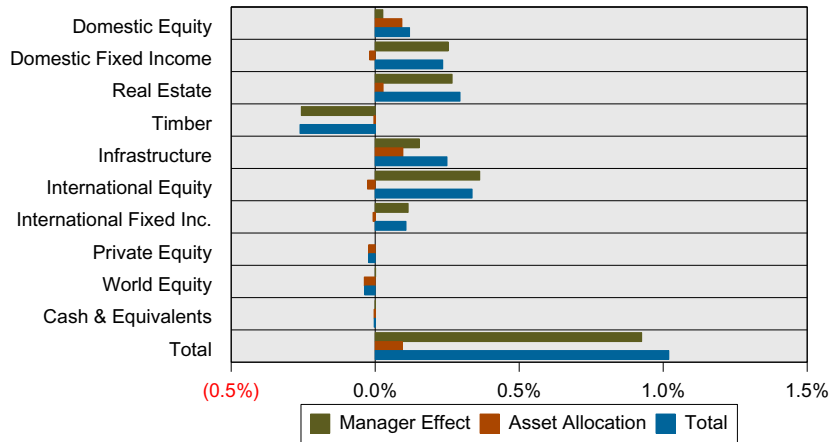
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	24%	23%	15.41%	14.70%	0.16%	0.08%	0.24%
Domestic Fixed Income	17%	17%	5.95%	3.64%	0.40%	0.01%	0.41%
Real Estate	10%	10%	12.89%	10.91%	0.19%	(0.00%)	0.18%
Timber	4%	5%	0.21%	7.05%	(0.32%)	(0.03%)	(0.36%)
Infrastructure	4%	5%	6.14%	1.16%	0.20%	0.08%	0.28%
International Equity	16%	15%	7.17%	5.63%	0.23%	(0.03%)	0.20%
International Fixed Inc.	5%	5%	0.72%	(1.39%)	0.12%	(0.00%)	0.12%
Private Equity	5%	5%	1.98%	1.98%	0.00%	0.01%	0.01%
World Equity	14%	14%	10.02%	10.41%	0.00%	(0.05%)	(0.05%)
Cash & Equivalents	1%	1%	0.16%	0.12%	0.00%	0.01%	0.01%
Total			8.94%	7.90%	+ 0.98%	+ 0.06%	1.05%

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 13.0% Blmbg Aggregate Idx, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 6.0% NDSIB TFFR - Private Equity, 6.0% Blmbg GI Agg ex US, 5.0% CPI-W, 4.8% Russell 2000 Index, 4.0% Blmbg US HY Cor 2% C, 3.0% NCREIF Timberland Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

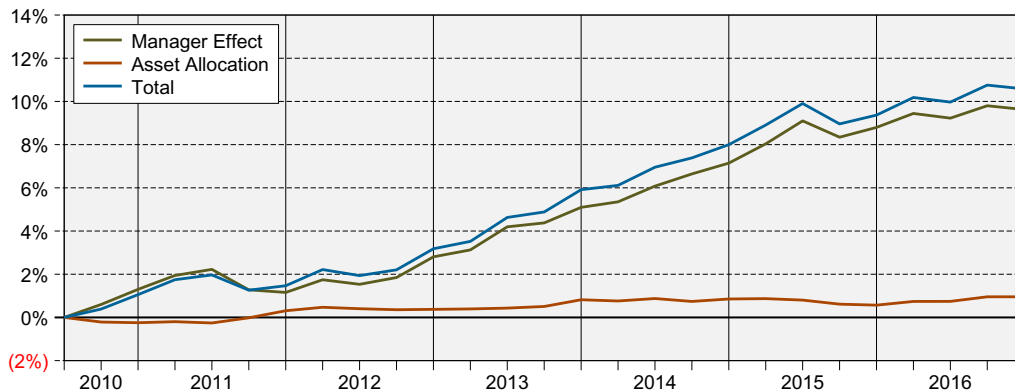
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Six and One-Half Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Six and One-Half Year Annualized Relative Attribution Effects

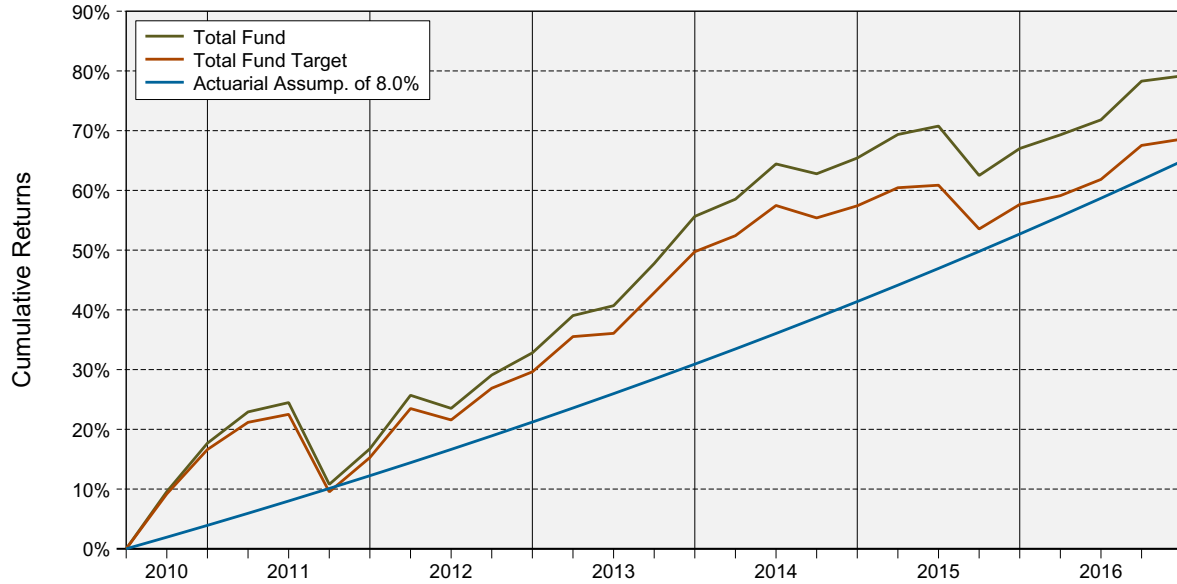
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	27%	26%	15.35%	15.05%	0.03%	0.09%	0.12%
Domestic Fixed Income	18%	17%	5.96%	4.47%	0.25%	(0.02%)	0.23%
Real Estate	10%	10%	14.82%	11.96%	0.27%	0.03%	0.29%
Timber	4%	4%	-	-	(0.26%)	(0.00%)	(0.26%)
Infrastructure	3%	4%	-	-	0.15%	0.10%	0.25%
International Equity	17%	17%	6.82%	4.87%	0.36%	(0.03%)	0.34%
International Fixed Inc.	5%	5%	3.02%	0.96%	0.11%	(0.01%)	0.11%
Private Equity	5%	5%	3.25%	3.25%	0.00%	(0.02%)	(0.02%)
World Equity	11%	11%	-	-	0.00%	(0.04%)	(0.04%)
Cash & Equivalents	1%	1%	0.16%	0.12%	0.00%	(0.00%)	(0.00%)
Total			9.39%	8.37%	+ 0.93%	+ 0.09%	1.02%

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 13.0% Blmbg Aggregate Idx, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 6.0% NDSIB TFFR - Private Equity, 6.0% Blmbg GI Agg ex US, 5.0% CPI-W, 4.8% Russell 2000 Index, 4.0% Blmbg US HY Cor 2% C, 3.0% NCREIF Timberland Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

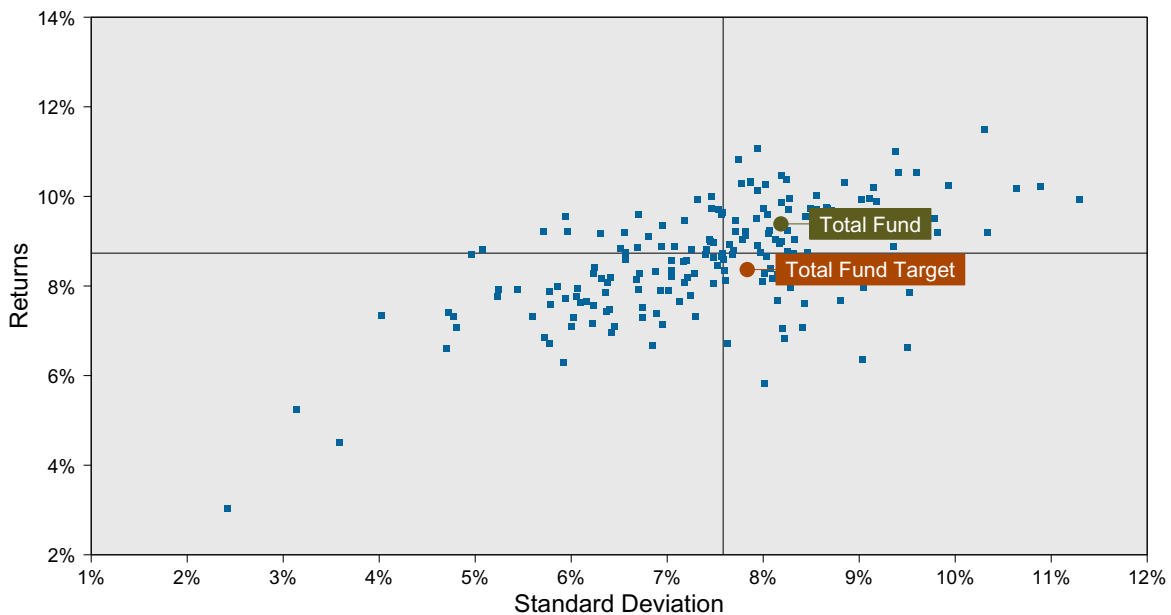
Cumulative Performance Relative to Target

The first chart below illustrates the cumulative performance of the Total Fund relative to the cumulative performance of the Fund's Target Asset Mix. The Target Mix is assumed to be rebalanced each quarter with no transaction costs. The second chart below shows the return and the risk of the Total Fund and the Target Mix, contrasted with the returns and risks of the funds in the CAI Public Fund Sponsor Database.

Cumulative Returns Actual vs Target



Six and One-Half Year Annualized Risk vs Return



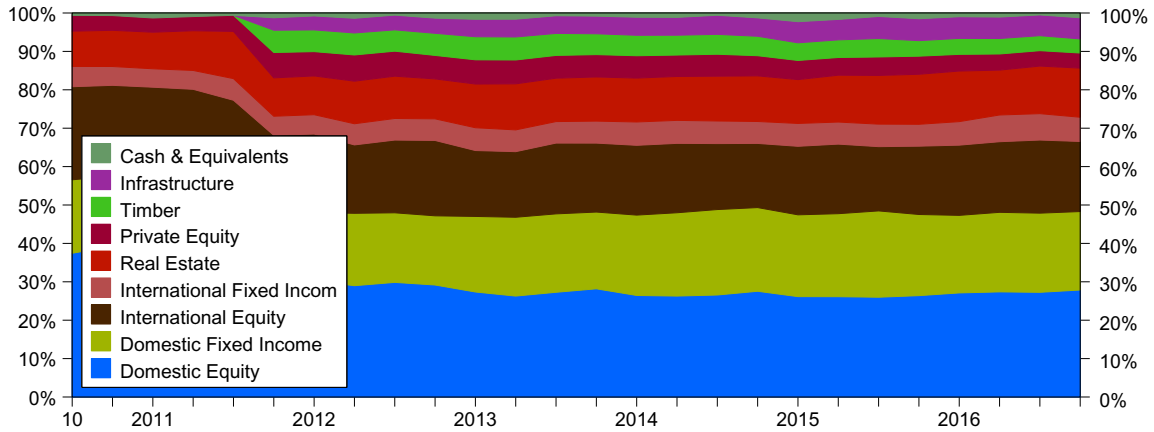
Squares represent membership of the CAI Public Fund Sponsor Database

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 13.0% Blmbg Aggregate Idx, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 6.0% NDSIB TFFR - Private Equity, 6.0% Blmbg GI Agg ex US, 5.0% CPI-W, 4.8% Russell 2000 Index, 4.0% Blmbg US HY Cor 2%C, 3.0% NCREIF Timberland Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

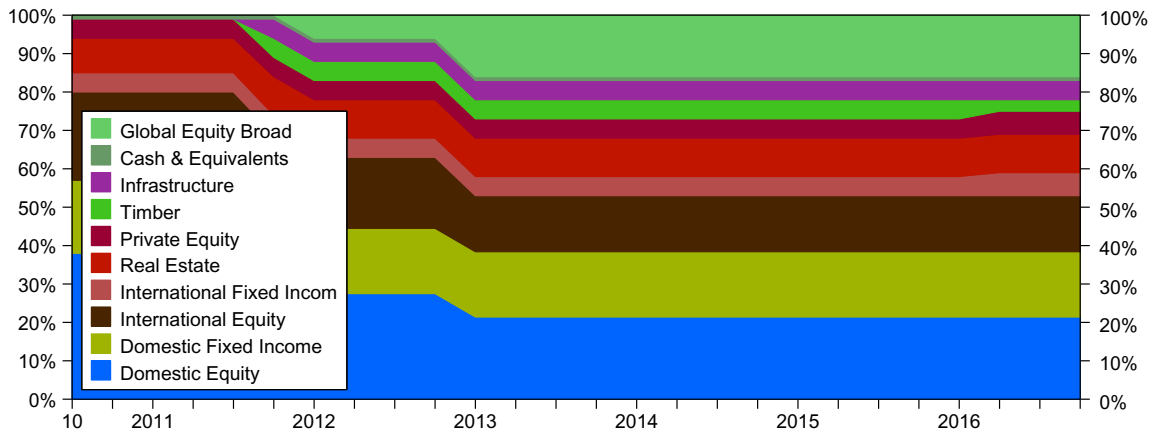
Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, the fund's historical target asset allocation, and the historical asset allocation of the average fund in the CAI Public Fund Sponsor Database.

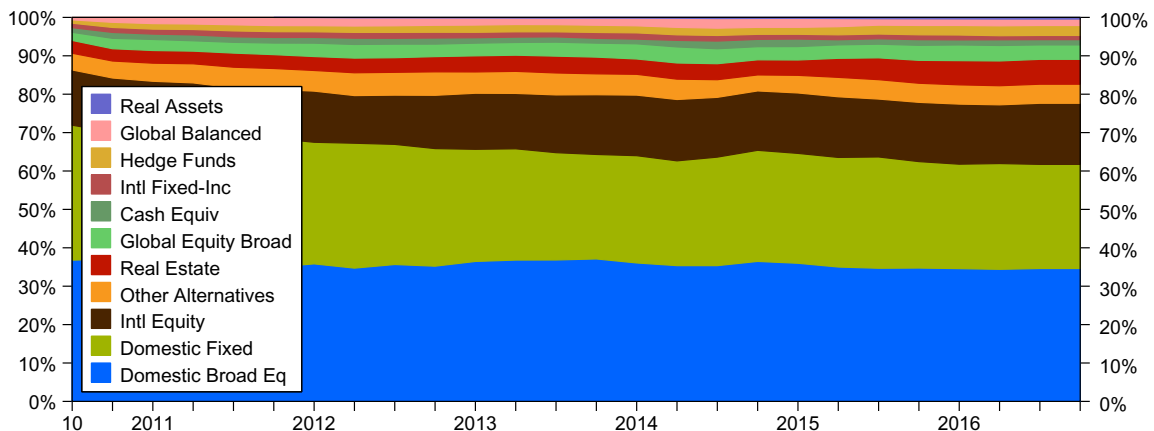
Actual Historical Asset Allocation



Target Historical Asset Allocation



Average CAI Public Fund Sponsor Database Historical Asset Allocation

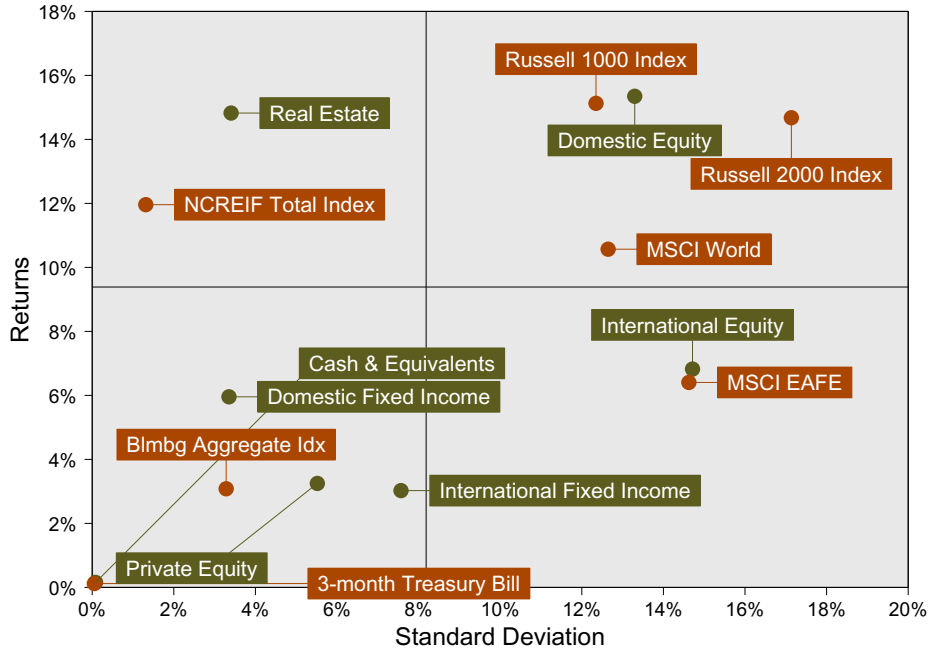


* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 13.0% Blmbg Aggregate Idx, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 6.0% NDSIB TFFR - Private Equity, 6.0% Blmbg GI Agg ex US, 5.0% CPI-W, 4.8% Russell 2000 Index, 4.0% Blmbg US HY Cor 2% C, 3.0% NCREIF Timberland Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

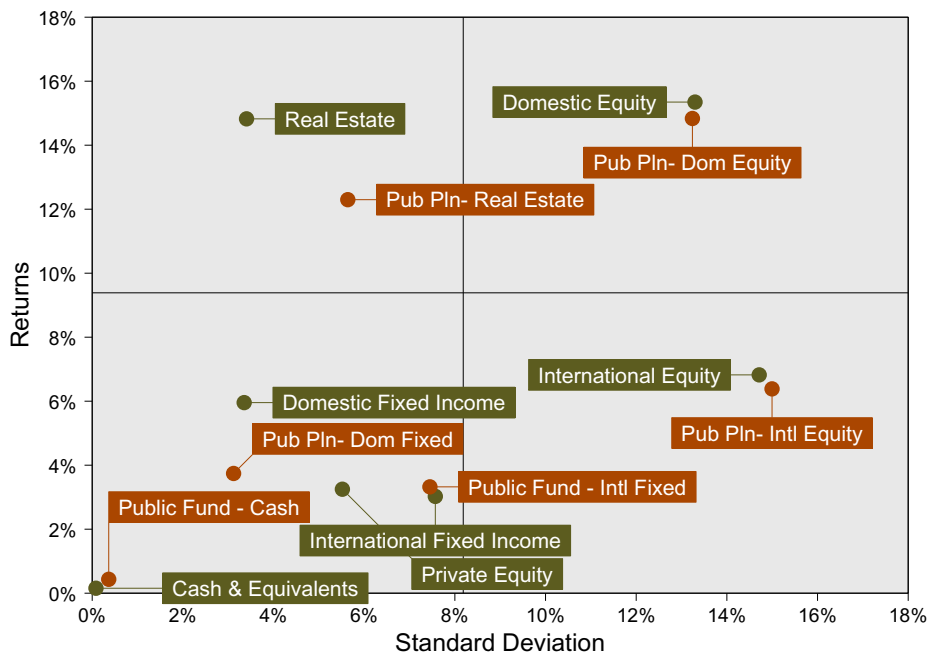
Asset Class Risk and Return

The charts below show the six and one-half year annualized risk and return for each asset class component of the Total Fund. The first graph contrasts these values with those of the appropriate index for each asset class. The second chart contrasts them with the risk and return of the median portfolio in each of the appropriate CAI comparative databases. In each case, the crosshairs on the chart represent the return and risk of the Total Fund.

**Six and One-Half Year Annualized Risk vs Return
Asset Classes vs Benchmark Indices**



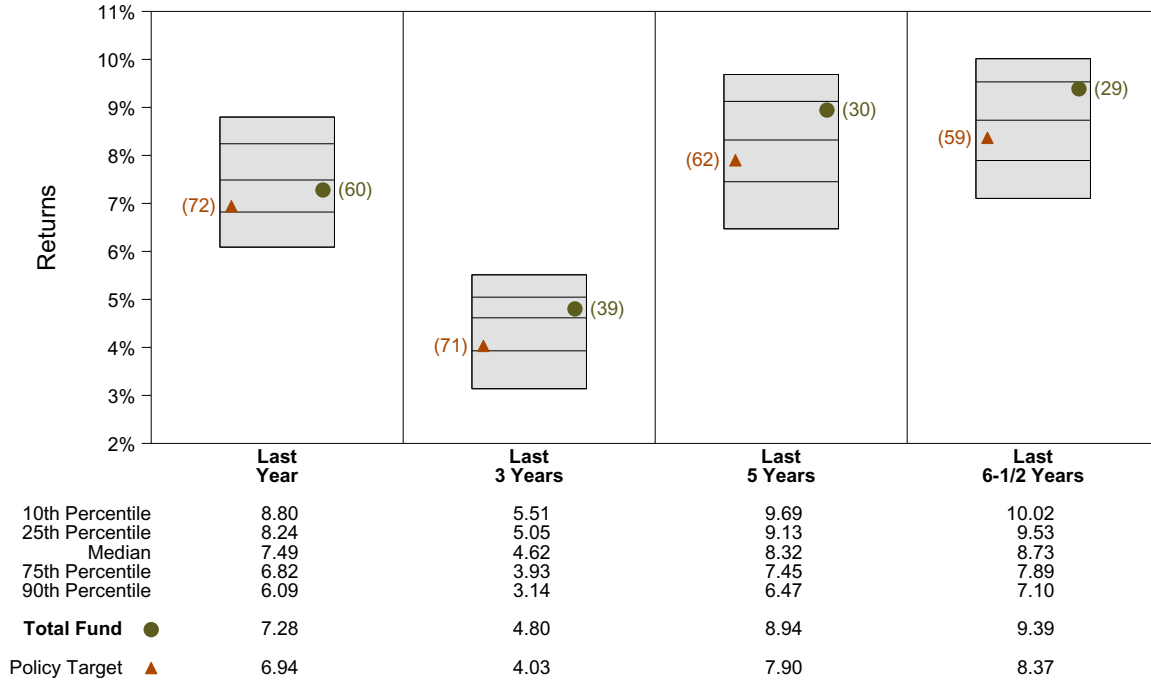
**Six and One-Half Year Annualized Risk vs Return
Asset Classes vs Asset Class Median**



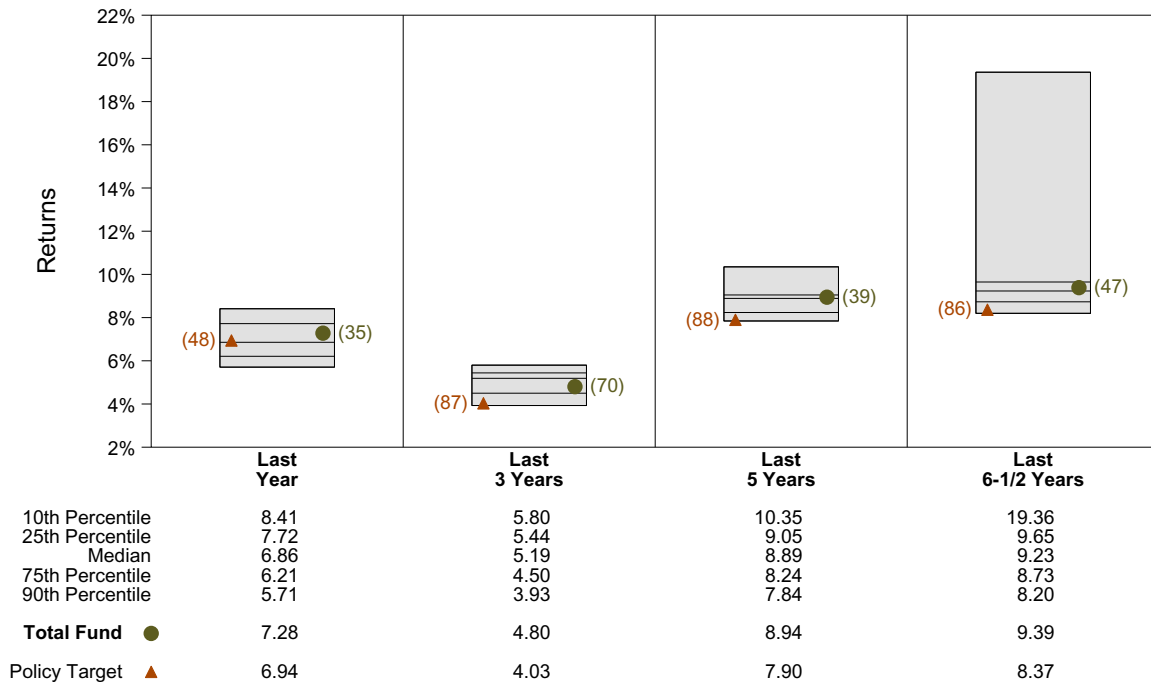
Total Fund Ranking

The first two charts show the ranking of the Total Fund's performance relative to that of the CAI Public Fund Sponsor Database for periods ended December 31, 2016. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation as that of the Total Fund.

CAI Public Fund Sponsor Database



Asset Allocation Adjusted Ranking

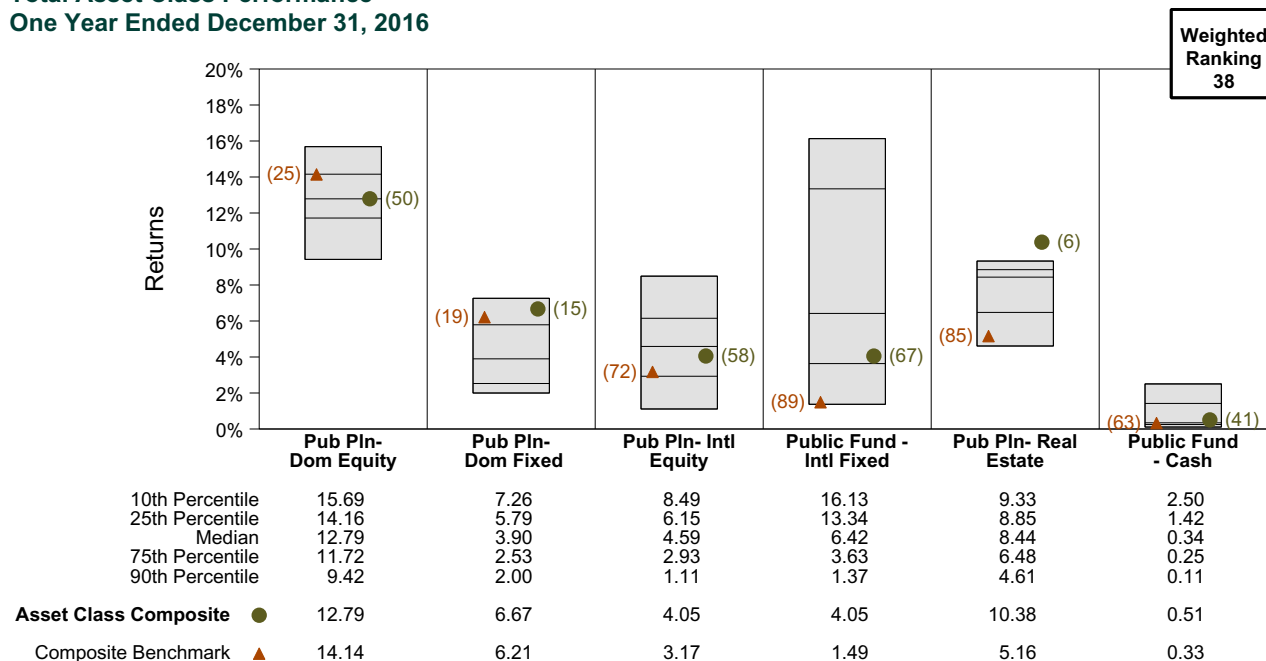


* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 13.0% Blmbg Aggregate Idx, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 6.0% NDSIB TFFR - Private Equity, 6.0% Blmbg GI Agg ex US, 5.0% CPI-W, 4.8% Russell 2000 Index, 4.0% Blmbg US HY Cor 2%C, 3.0% NCREIF Timberland Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

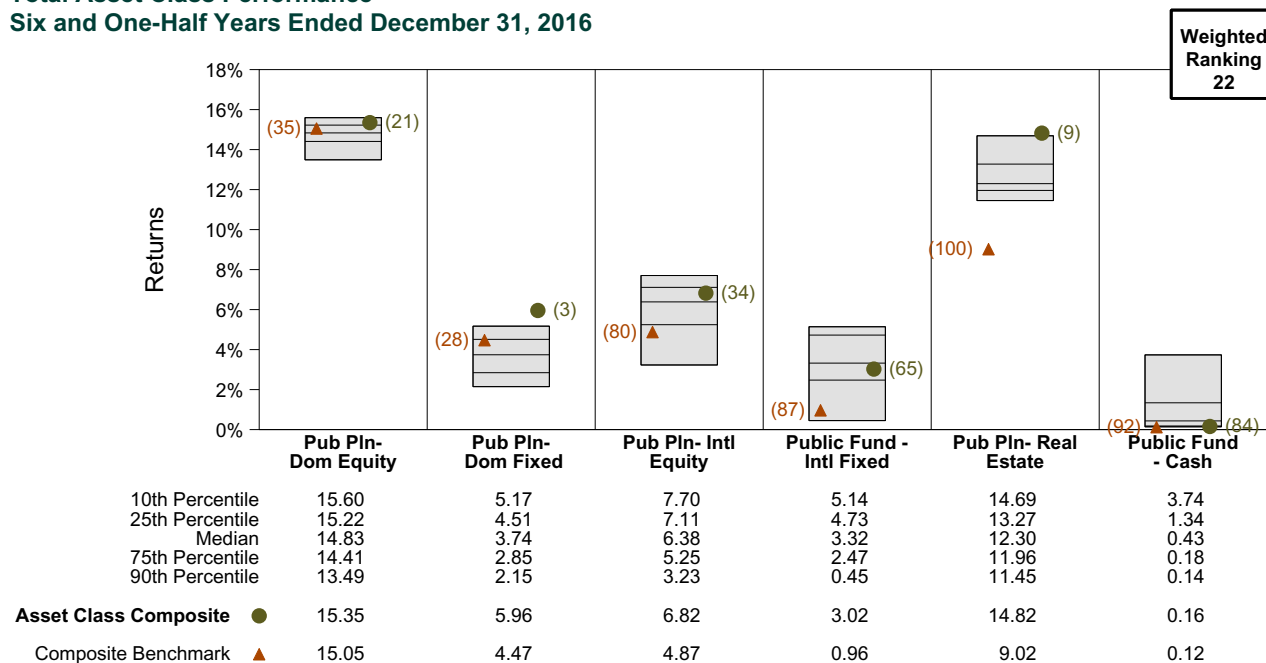
Asset Class Rankings

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.

Total Asset Class Performance One Year Ended December 31, 2016



Total Asset Class Performance Six and One-Half Years Ended December 31, 2016



* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 13.0% Blmbg Aggregate Idx, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 6.0% NDSIB TFFR - Private Equity, 6.0% Blmbg GI Agg ex US, 5.0% CPI-W, 4.8% Russell 2000 Index, 4.0% Blmbg US HY Cor 2% C, 3.0% NCREIF Timberland Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

Asset Class Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of December 31, 2016, with the distribution as of September 30, 2016. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

Asset Class Allocation

	December 31, 2016		Net New Inv.	Inv. Return	September 30, 2016	
	Market Value	Weight			Market Value	Weight
GLOBAL EQUITY	\$1,255,209,365	58.45%	\$(19,717,931)	\$20,471,607	\$1,254,455,689	58.50%
Domestic Equity	\$497,561,440	23.17%	\$(10,651,430)	\$19,767,257	\$488,445,613	22.78%
Large Cap	380,127,361	17.70%	(10,436,080)	11,017,655	379,545,786	17.70%
Small Cap	117,434,079	5.47%	(215,350)	8,749,602	108,899,827	5.08%
International Equity	\$326,002,762	15.18%	\$(5,098,801)	\$(10,090,477)	\$341,192,040	15.91%
Developed Intl Equity	255,746,378	11.91%	(98,801)	(5,345,738)	261,190,917	12.18%
Emerging Markets	70,256,384	3.27%	(5,000,000)	(4,744,739)	80,001,123	3.73%
World Equity	\$361,507,417	16.83%	\$(445,113)	\$8,980,555	\$352,971,975	16.46%
Private Equity	\$70,137,746	3.27%	\$(3,522,587)	\$1,814,272	\$71,846,061	3.35%
GLOBAL FIXED INCOME	\$477,677,688	22.24%	\$(2,053,709)	\$(12,470,715)	\$492,202,113	22.95%
Fixed Income Comp	\$364,946,580	16.99%	\$(1,344,982)	\$(2,917,230)	\$369,208,792	17.22%
Investment Grade Fixed	266,217,605	12.40%	(1,162,353)	(4,527,629)	271,907,587	12.68%
Below Inv. Grade Fixed Income	98,728,975	4.60%	(182,629)	1,610,399	97,301,205	4.54%
International Fixed Income	\$112,731,109	5.25%	\$(708,727)	\$(9,553,485)	\$122,993,321	5.74%
GLOBAL REAL ASSETS	\$392,524,518	18.28%	\$1,255,865	\$2,427,954	\$388,840,698	18.13%
Real Estate	228,479,546	10.64%	1,598,075	4,852,536	222,028,935	10.35%
Timber	65,467,202	3.05%	(208,921)	(4,234,170)	69,910,293	3.26%
Infrastructure	98,577,769	4.59%	(133,289)	1,809,587	96,901,471	4.52%
Cash & Equivalents	\$22,162,877	1.03%	\$13,107,862	\$29,982	\$9,025,033	0.42%
Securities Lending Income	\$0	0.00%	\$(36,401)	\$36,401	-	-
Total Fund	\$2,147,574,448	100.0%	\$(7,444,315)	\$10,495,229	\$2,144,523,533	100.0%

PLEASE REFER TO PAGES 36-38 FOR INVESTMENT MANAGER LEVEL ASSET ALLOCATION.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended December 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6-1/2 Years
Global Equity					
Gross	1.67%	8.05%	3.99%	10.80%	-
Net	1.61%	7.79%	3.67%	10.45%	-
Wtd Avg Global Equity Benchmark	2.37%	8.16%	3.50%	10.06%	-
Domestic Equity					
Gross	4.14%	12.79%	8.41%	15.41%	15.35%
Net	4.10%	12.56%	8.20%	15.18%	15.09%
Wtd Avg Domestic Equity Benchmark	4.98%	14.14%	8.25%	14.70%	15.05%
Large Cap Equity					
Gross	2.99%	11.18%	9.27%	15.64%	15.52%
Net	2.97%	11.02%	9.09%	15.43%	15.27%
Benchmark(1)	3.83%	12.05%	8.59%	14.69%	15.12%
Small Cap Equity					
Gross	8.04%	18.00%	5.25%	14.37%	14.62%
Net	7.95%	17.54%	4.98%	14.08%	14.33%
Russell 2000 Index	8.83%	21.31%	6.74%	14.46%	14.68%
International Equity					
Gross	(3.00%)	4.05%	(0.09%)	7.17%	6.82%
Net	(3.04%)	3.86%	(0.30%)	6.88%	6.51%
Wtd Avg Intl Equity Benchmark	(1.09%)	3.17%	(1.64%)	5.63%	4.87%
Developed Intl Equity					
Gross	(2.05%)	2.61%	(0.14%)	8.14%	7.53%
Net	(2.10%)	2.37%	(0.38%)	7.85%	7.21%
Benchmark(2)	(0.36%)	1.22%	(1.53%)	6.58%	5.57%
Emerging Markets					
Gross	(6.32%)	9.05%	(0.51%)	2.59%	3.54%
Net	(6.32%)	9.05%	(0.56%)	2.34%	3.23%
Benchmark(3)	(4.16%)	11.19%	(2.55%)	1.28%	1.54%
World Equity					
Gross	2.55%	7.06%	3.24%	10.02%	-
Net	2.46%	6.66%	2.57%	9.26%	-
MSCI World Index	1.86%	7.51%	3.80%	10.41%	10.57%
Private Equity					
Net	2.65%	0.30%	(1.78%)	1.93%	3.17%

(1) S&P 500 Index through 12/31/2011 and the Russell 1000 Index thereafter.

(2) 50% Hedged EAFE through 3/31/2011; MSCI EAFE through 6/30/16; MSCI World ex-US thereafter.

(3) MSCI Emerging Mkts Idx (Gross) through 6/30/2011 and MSCI Emerging Mkts Idx Net thereafter.

PLEASE REFER TO PAGES 39-43 FOR INVESTMENT MANAGER LEVEL RETURNS.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended December 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6-1/2 Years
Global Fixed Income					
Gross	(2.53%)	5.91%	3.63%	4.75%	-
Net	(2.59%)	5.64%	3.38%	4.61%	-
Wtd Avg Global Fixed Inc. Benchmark	(4.11%)	4.91%	1.94%	2.45%	-
Domestic Fixed Income					
Gross	(0.79%)	6.67%	4.90%	5.95%	5.96%
Net	(0.84%)	6.43%	4.67%	5.87%	5.82%
Wtd Avg Domestic FI Benchmark	(1.88%)	6.21%	3.37%	3.64%	4.47%
Inv. Grade Fixed Income					
Gross	(1.66%)	3.82%	4.54%	4.87%	4.89%
Net	(1.70%)	3.66%	4.40%	4.74%	4.72%
Blmbg Aggregate Index	(2.98%)	2.65%	3.03%	2.23%	3.08%
Below Inv. Grade Fixed Income					
Gross	1.66%	14.24%	5.89%	9.32%	8.88%
Net	1.56%	13.79%	5.45%	8.85%	8.44%
Blmbg HY Corp 2% Issue	1.75%	17.13%	4.67%	7.36%	7.99%
International Fixed Income					
Gross	(7.77%)	4.05%	(0.71%)	0.72%	3.02%
Net	(7.86%)	3.68%	(1.06%)	0.36%	2.66%
Wtd Avg Intl Fixed Income Benchmark	(10.26%)	1.49%	(2.59%)	(1.39%)	0.96%
Global Real Assets					
Gross	0.62%	6.03%	8.73%	8.16%	-
Net	0.52%	5.58%	8.29%	7.73%	-
Wtd Avg Global Real Assets Benchmark	1.14%	5.16%	7.17%	7.46%	-
Real Estate					
Gross	2.14%	10.38%	13.49%	12.89%	14.82%
Net	2.02%	9.84%	12.93%	12.35%	14.25%
NCREIF Total Index	1.73%	7.97%	11.02%	10.91%	11.96%
Timber					
Net	(6.07%)	(3.95%)	2.01%	0.21%	-
NCREIF Timberland Index	1.18%	2.59%	5.96%	7.06%	5.49%
Infrastructure					
Gross	1.85%	3.90%	3.86%	6.14%	-
Net	1.73%	3.30%	3.29%	5.47%	-
CPI-W	(0.04%)	1.99%	0.90%	1.16%	1.49%
Cash & Equivalents - Net					
3-month Treasury Bill	0.16%	0.51%	0.22%	0.16%	0.16%
	0.09%	0.33%	0.14%	0.12%	0.12%
Total Fund					
Gross	0.49%	7.28%	4.80%	8.94%	9.39%
Net	0.43%	6.99%	4.48%	8.61%	9.04%
Target*	0.63%	6.94%	4.03%	7.90%	8.37%

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 13.0% Blmbg Aggregate Idx, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 6.0% NDSIB TFFR - Private Equity, 6.0% Blmbg GI Agg ex US, 5.0% CPI-W, 4.8% Russell 2000 Index, 4.0% Blmbg US HY Cor 2%C, 3.0% NCREIF Timberland Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

PLEASE REFER TO PAGES 39-43 FOR INVESTMENT MANAGER LEVEL RETURNS.

L.A. Capital Period Ended December 31, 2016

Investment Philosophy

The LA Capital Structured portfolio is a large growth portfolio benchmarked to the Russell 1000 Growth Index. It is an active assignment meaning that it targets a 2% alpha and constrains its risk budget (tracking error) to 4% relative to the benchmark. LA Capital believes that investment results are driven by Investor Preferences and thus recognize that when preferences shift a different posture related to that factor is warranted.

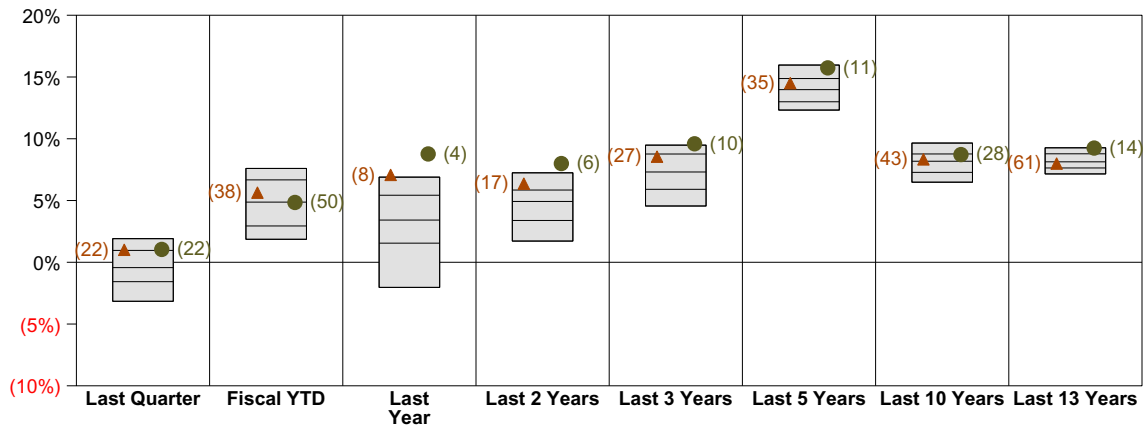
Quarterly Summary and Highlights

- L.A. Capital's portfolio posted a 1.04% return for the quarter placing it in the 22 percentile of the CAI Large Cap Growth group for the quarter and in the 4 percentile for the last year.
- L.A. Capital's portfolio outperformed the Russell 1000 Growth Index by 0.03% for the quarter and outperformed the Russell 1000 Growth Index for the year by 1.69%.

Quarterly Asset Growth

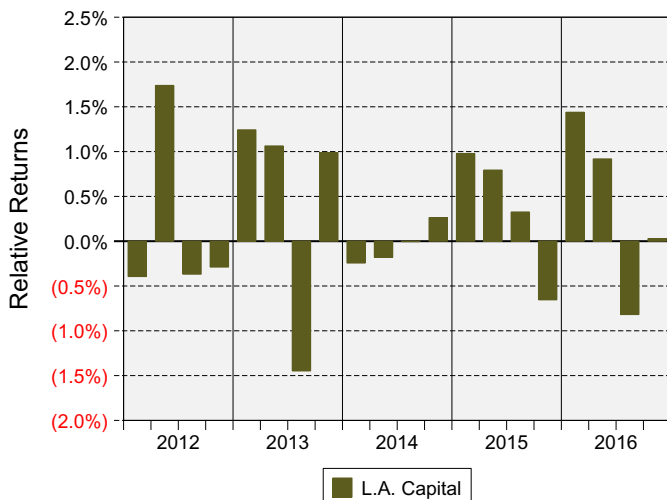
Beginning Market Value	\$319,904,008
Net New Investment	\$-165,881
Investment Gains/(Losses)	\$3,317,196
Ending Market Value	\$323,055,323

Performance vs CAI Large Cap Growth (Gross)

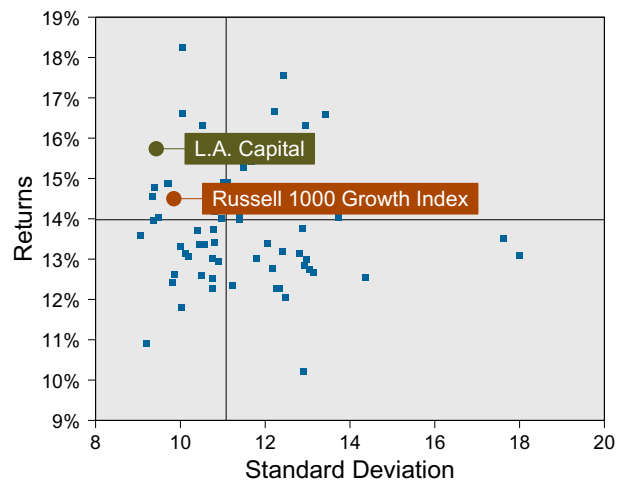


10th Percentile	1.91	7.60	6.89	7.24	9.48	15.97	9.65	9.27
25th Percentile	0.96	6.67	5.43	5.85	8.76	14.88	8.77	8.78
Median	(0.43)	4.87	3.42	4.92	7.31	13.98	8.18	8.13
75th Percentile	(1.57)	2.94	1.55	3.39	5.91	12.99	7.28	7.64
90th Percentile	(3.16)	1.86	(2.03)	1.72	4.55	12.32	6.48	7.15
L.A. Capital	● 1.04	4.84	8.77	7.99	9.59	15.74	8.72	9.25
Russell 1000 Growth Index	▲ 1.01	5.64	7.08	6.37	8.55	14.50	8.33	7.99

Relative Return vs Russell 1000 Growth Index



CAI Large Cap Growth (Gross) Annualized Five Year Risk vs Return



L.A. Capital Management Enhanced Index Period Ended December 31, 2016

Investment Philosophy

The LA Capital Enhanced portfolio is a large core portfolio benchmarked to the Russell 1000 Index. Characterized as an enhanced index assignment, its objective is to track the benchmark with lower variability. The pension portfolio began in August of 2000 and the insurance portfolio was initiated in April of 2004. Since October of 2006 a small portion of each of the two core accounts was allocated into the Large Cap Alpha Fund with intent to add incremental alpha to the assignment given that the information ratio was expected to be higher.

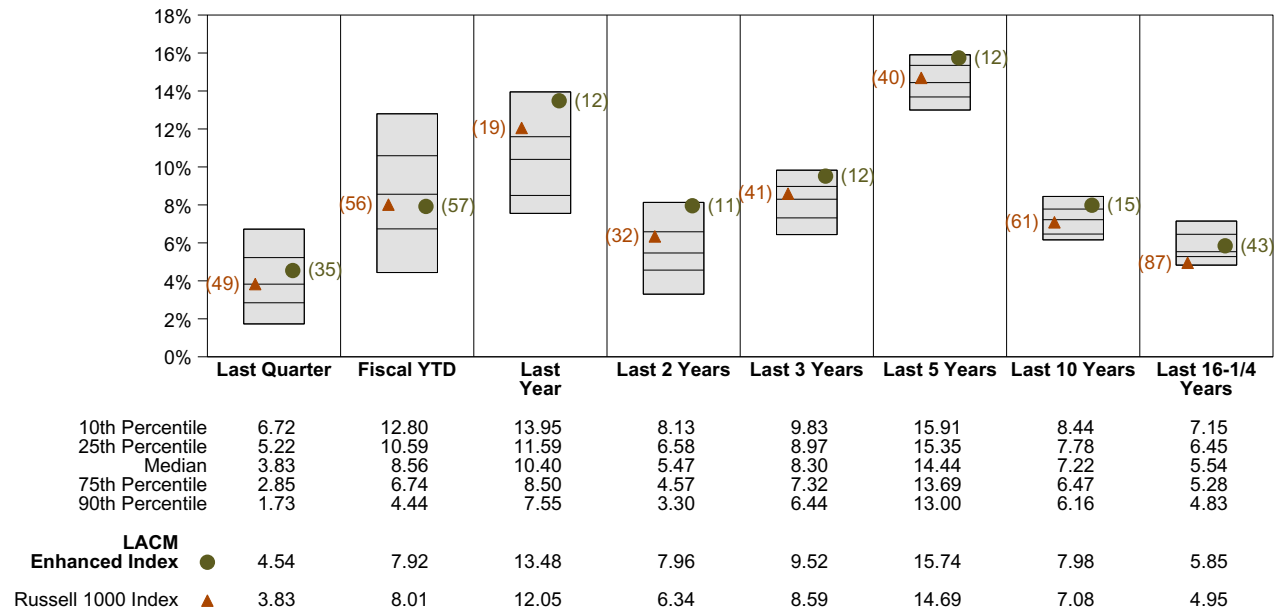
Quarterly Summary and Highlights

- LACM Enhanced Index's portfolio posted a 4.54% return for the quarter placing it in the 35 percentile of the CAI Large Cap Core group for the quarter and in the 12 percentile for the last year.
- LACM Enhanced Index's portfolio outperformed the Russell 1000 Index by 0.71% for the quarter and outperformed the Russell 1000 Index for the year by 1.43%.

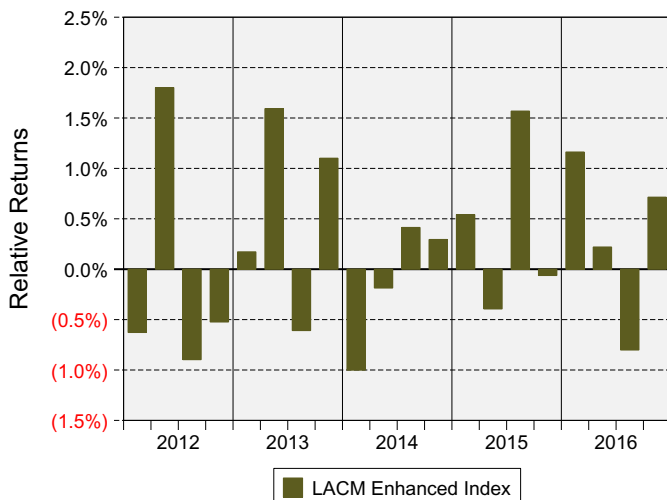
Quarterly Asset Growth

Beginning Market Value	\$197,472,253
Net New Investment	\$-10,050,257
Investment Gains/(Losses)	\$8,450,973
Ending Market Value	\$195,872,968

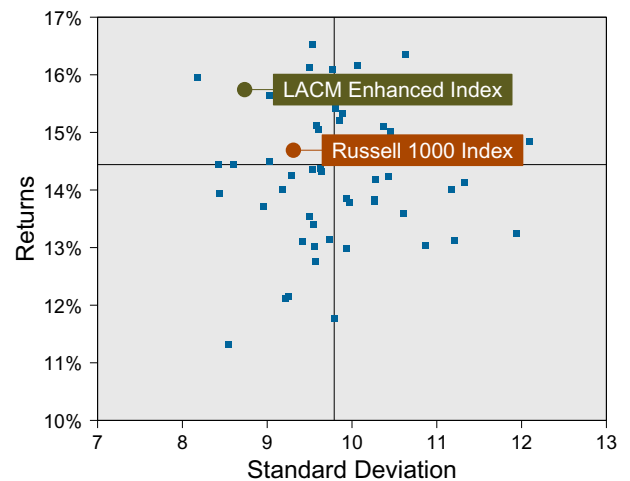
Performance vs CAI Large Cap Core (Gross)



Relative Return vs Russell 1000 Index



CAI Large Cap Core (Gross) Annualized Five Year Risk vs Return



Northern Trust AM Enh S&P500 Period Ended December 31, 2016

Investment Philosophy

Northern Trust AM Enhanced S&P 500 employs a quantitative investment approach, focusing on the stock selection process as the principal source of value added. The account invests primarily in a broadly diversified portfolio of equity securities that include securities convertible into equity securities (including common stock), warrants, rights and units or shares in trusts, exchange traded funds and investment companies. The Investment Manager intends to use futures and options to manage market risk associated with the account's investments.

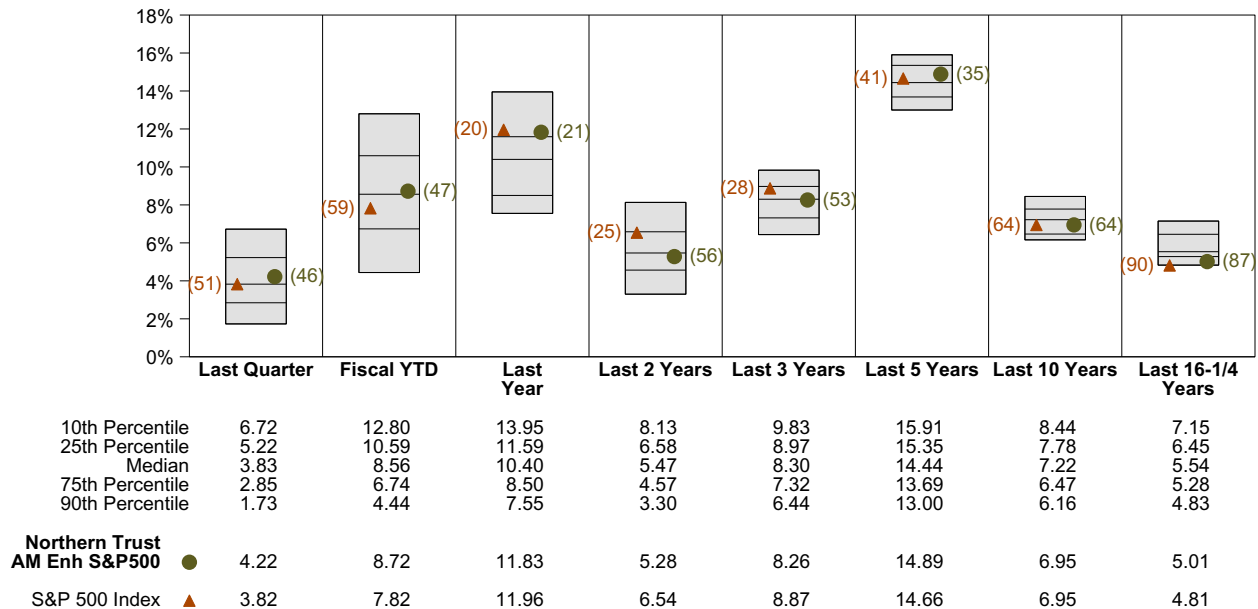
Quarterly Summary and Highlights

- Northern Trust AM Enh S&P500's portfolio posted a 4.22% return for the quarter placing it in the 46 percentile of the CAI Large Cap Core group for the quarter and in the 21 percentile for the last year.
- Northern Trust AM Enh S&P500's portfolio outperformed the S&P 500 Index by 0.39% for the quarter and underperformed the S&P 500 Index for the year by 0.13%.

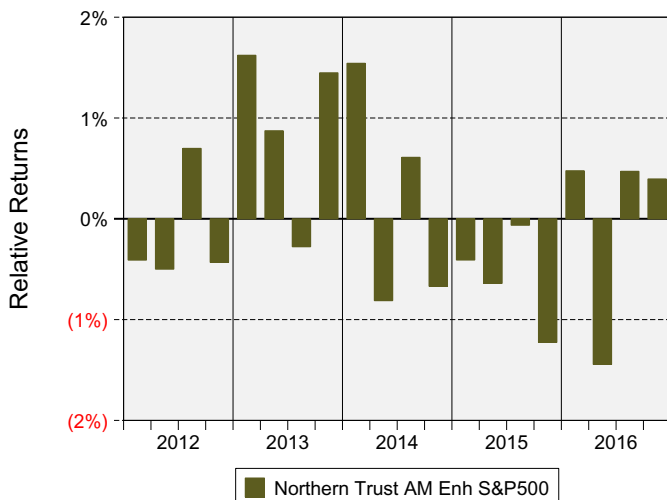
Quarterly Asset Growth

Beginning Market Value	\$149,820,252
Net New Investment	\$0
Investment Gains/(Losses)	\$6,320,803
Ending Market Value	\$156,141,055

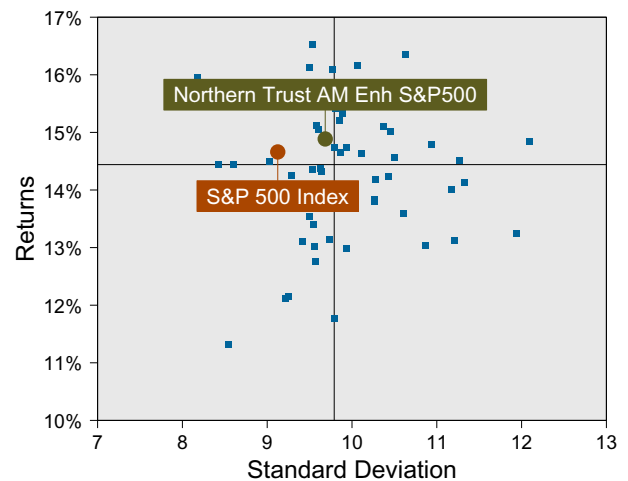
Performance vs CAI Large Cap Core (Gross)



Relative Return vs S&P 500 Index



CAI Large Cap Core (Gross) Annualized Five Year Risk vs Return



Parametric Clifton Enh S&P Period Ended December 31, 2016

Investment Philosophy

Parametric Clifton utilizes equity futures to gain benchmark exposure in constructing the portfolio it believes provides the greatest likelihood of outperforming the index. In this construction the underlying cash portfolio is invested in a liquid, high quality short duration fixed income portfolio. Over market cycles excess return generated by the short duration portfolio, when added to the performance of futures is expected to allow the strategy to achieve 0.50% to 1.00% of gross excess annual performance.

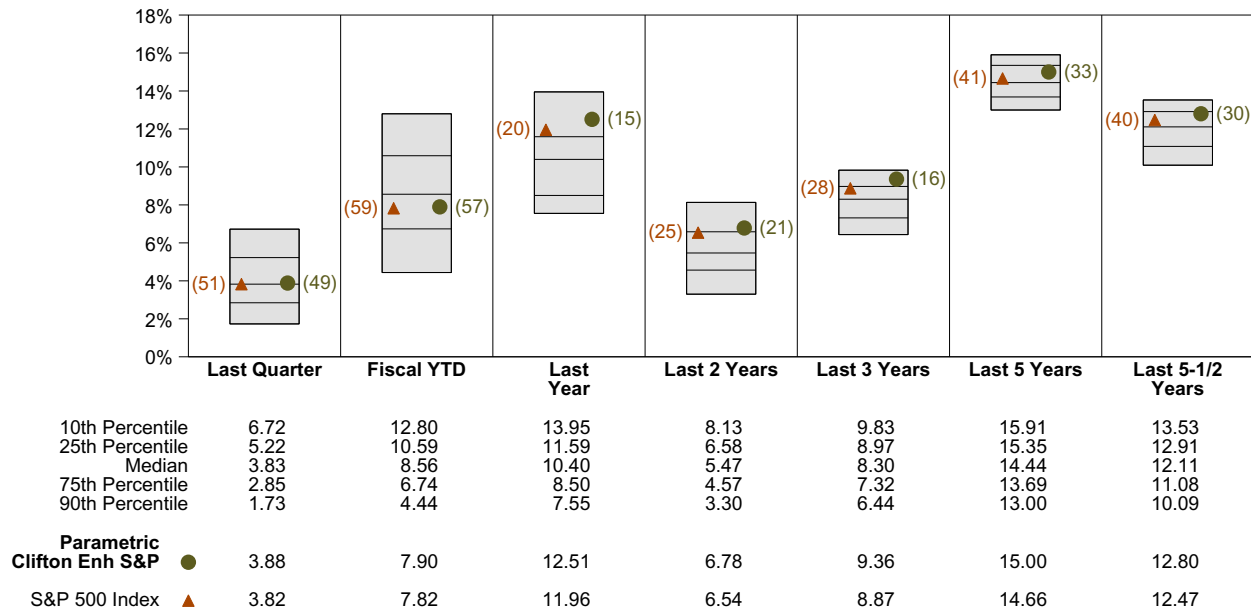
Quarterly Summary and Highlights

- Parametric Clifton Enh S&P's portfolio posted a 3.88% return for the quarter placing it in the 49 percentile of the CAI Large Cap Core group for the quarter and in the 15 percentile for the last year.
- Parametric Clifton Enh S&P's portfolio outperformed the S&P 500 Index by 0.06% for the quarter and outperformed the S&P 500 Index for the year by 0.55%.

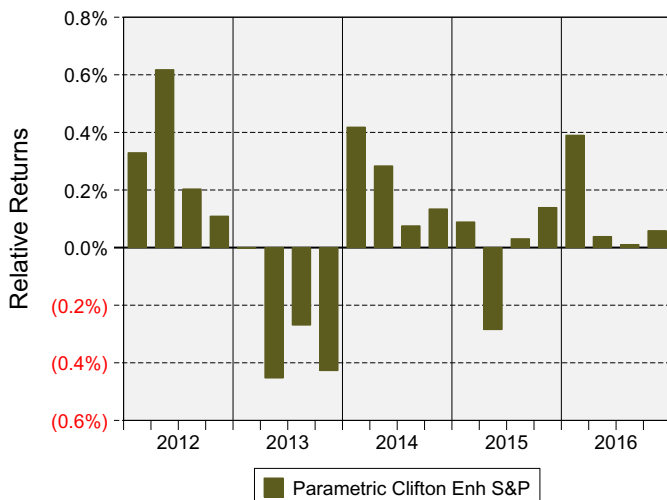
Quarterly Asset Growth

Beginning Market Value	\$173,668,059
Net New Investment	\$0
Investment Gains/(Losses)	\$6,743,528
Ending Market Value	\$180,411,587

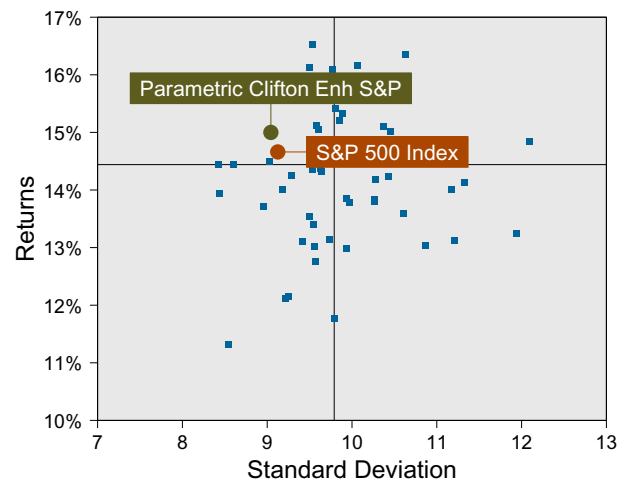
Performance vs CAI Large Cap Core (Gross)



Relative Return vs S&P 500 Index



CAI Large Cap Core (Gross) Annualized Five Year Risk vs Return



Atlanta Capital Period Ended December 31, 2016

Investment Philosophy

Atlanta believes that high quality companies produce consistently increasing earnings and dividends, thereby providing attractive returns with moderate risk over the long-term.

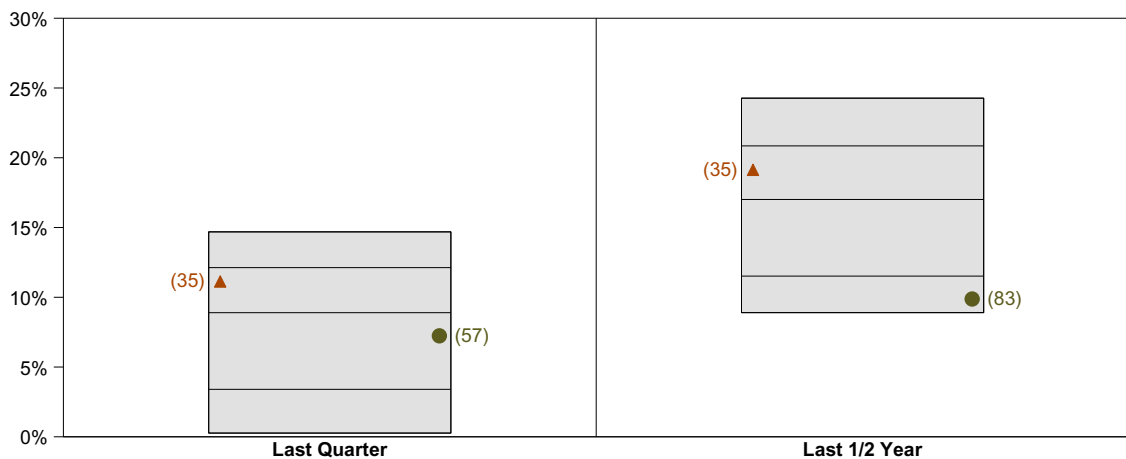
Quarterly Summary and Highlights

- Atlanta Capital's portfolio posted a 7.24% return for the quarter placing it in the 57 percentile of the CAI Small Capitalization group for the quarter and in the 83 percentile for the last one-half year.
- Atlanta Capital's portfolio underperformed the S&P 600 Small Cap Index by 3.90% for the quarter and underperformed the S&P 600 Small Cap Index for the one-half year by 9.26%.

Quarterly Asset Growth

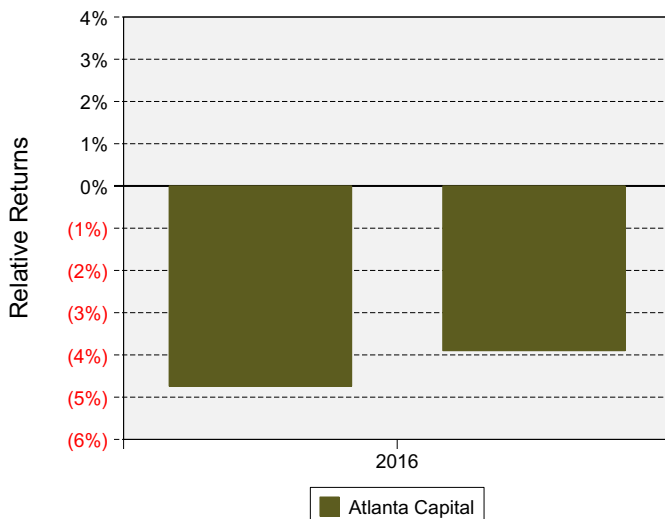
Beginning Market Value	\$115,848,391
Net New Investment	\$-211,273
Investment Gains/(Losses)	\$8,357,132
Ending Market Value	\$123,994,249

Performance vs CAI Small Capitalization (Gross)

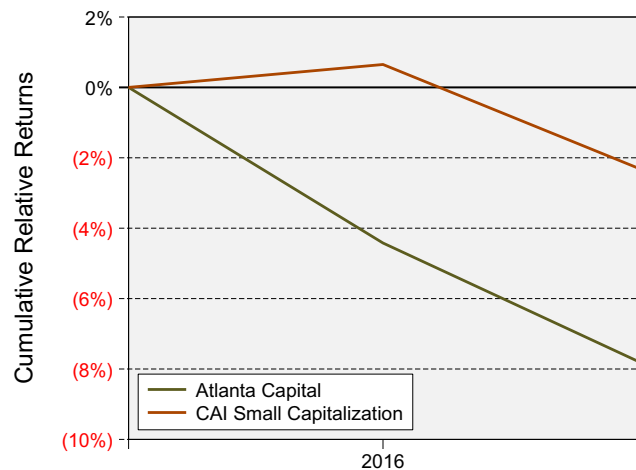


10th Percentile	14.69	24.27
25th Percentile	12.12	20.85
Median	8.90	17.01
75th Percentile	3.40	11.52
90th Percentile	0.27	8.90
Atlanta Capital	7.24	9.88
S&P 600 Small Cap Index	11.13	19.14

Relative Return vs S&P 600 Small Cap Index



Cumulative Returns vs S&P 600 Small Cap Index



Parametric Clifton Enh SmCap Period Ended December 31, 2016

Investment Philosophy

Parametric Clifton utilizes equity futures to gain benchmark exposure in constructing the portfolio it believes provides the greatest likelihood of outperforming the index. In this construction the underlying cash portfolio is invested in a liquid, high quality short duration fixed income portfolio. Over market cycles excess return generated by the short duration portfolio, when added to the performance of futures is expected to allow the strategy to achieve 0.50% to 1.00% of gross excess annual performance.

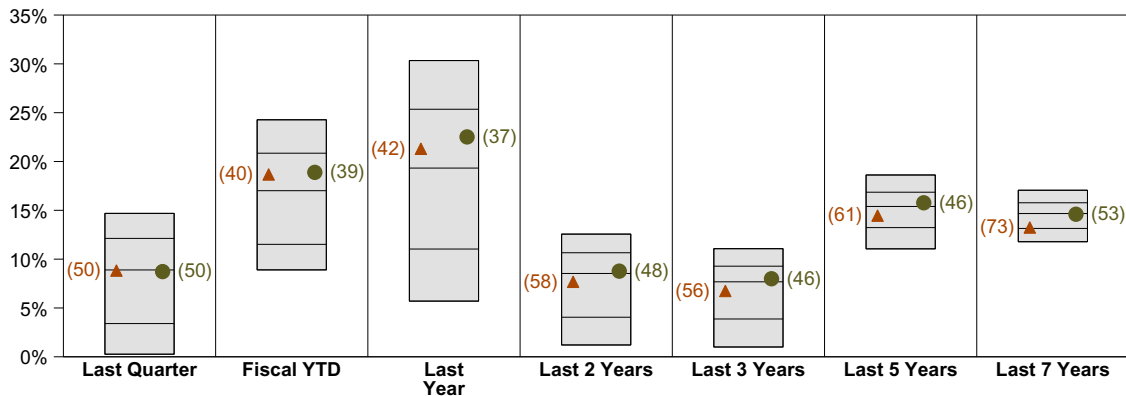
Quarterly Summary and Highlights

- Parametric Clifton Enh SmCap's portfolio posted a 8.73% return for the quarter placing it in the 50 percentile of the CAI Small Capitalization group for the quarter and in the 37 percentile for the last year.
- Parametric Clifton Enh SmCap's portfolio underperformed the Russell 2000 Index by 0.11% for the quarter and outperformed the Russell 2000 Index for the year by 1.21%.

Quarterly Asset Growth

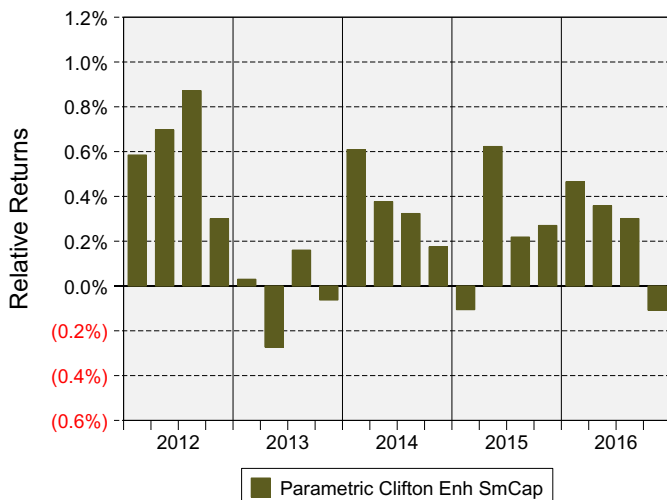
Beginning Market Value	\$138,792,354
Net New Investment	\$0
Investment Gains/(Losses)	\$12,110,679
Ending Market Value	\$150,903,033

Performance vs CAI Small Capitalization (Gross)

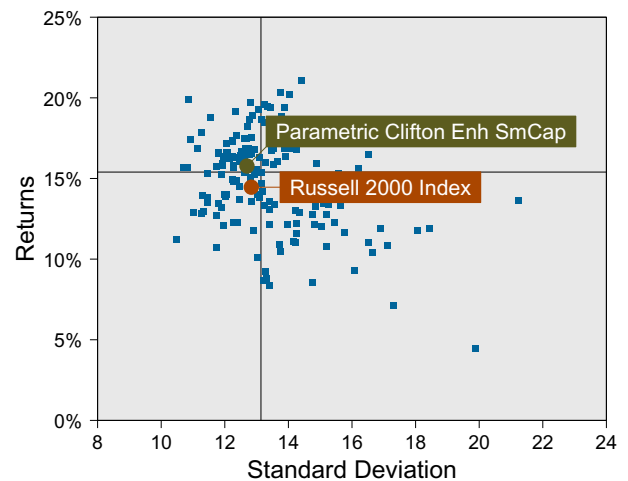


10th Percentile	14.69	24.27	30.34	12.57	11.07	18.62	17.06
25th Percentile	12.12	20.85	25.35	10.66	9.28	16.85	15.77
Median	8.90	17.01	19.33	8.54	7.68	15.40	14.67
75th Percentile	3.40	11.52	11.03	4.05	3.87	13.23	13.15
90th Percentile	0.27	8.90	5.70	1.21	1.00	11.05	11.78
Parametric Clifton Enh SmCap ●	8.73	18.89	22.52	8.77	7.99	15.77	14.60
Russell 2000 Index ▲	8.83	18.68	21.31	7.68	6.74	14.46	13.24

Relative Return vs Russell 2000 Index



CAI Small Capitalization (Gross) Annualized Five Year Risk vs Return



DFA International Small Cap Value Fund

Period Ended December 31, 2016

Investment Philosophy

The International Small Cap Value Portfolio invests in the stocks of small, non-US developed markets companies that Dimensional believes to be value stocks at the time of purchase. Specifically, it looks at companies that fall within the smallest 8-10% of each country's market capitalization, and who's shares have a high book value in relation to their market value (BtM). It does not invest in emerging markets.

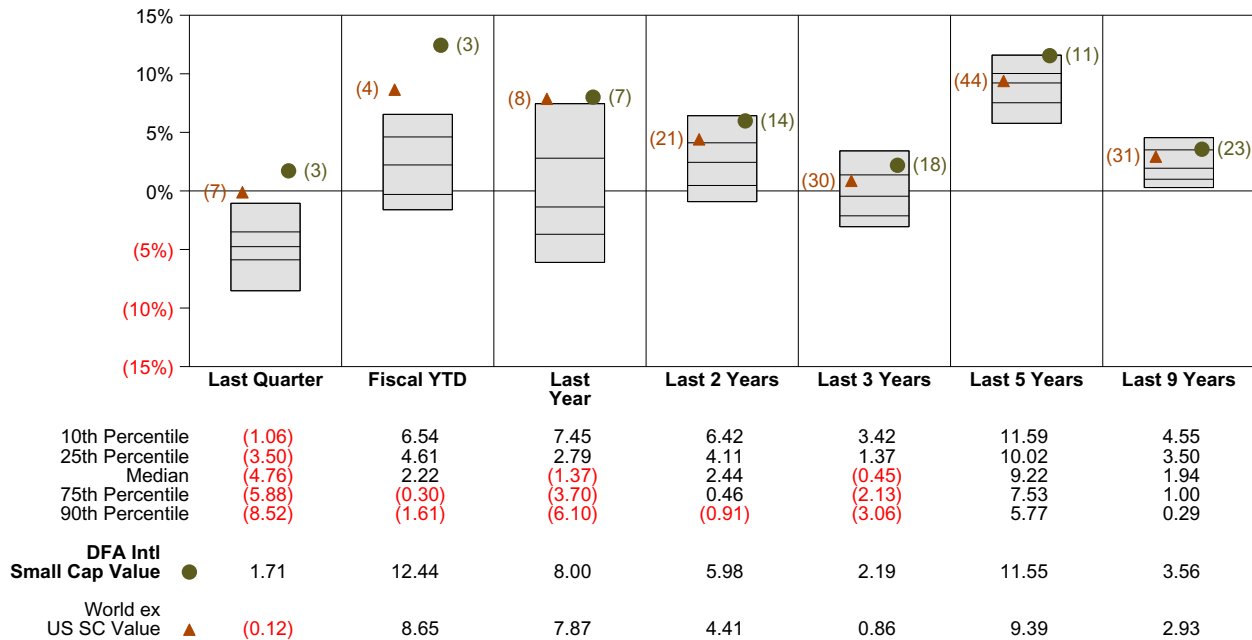
Quarterly Summary and Highlights

- DFA Intl Small Cap Value's portfolio posted a 1.71% return for the quarter placing it in the 3 percentile of the CAI International Small Cap Mut Funds group for the quarter and in the 7 percentile for the last year.
- DFA Intl Small Cap Value's portfolio outperformed the World ex US SC Value by 1.83% for the quarter and outperformed the World ex US SC Value for the year by 0.14%.

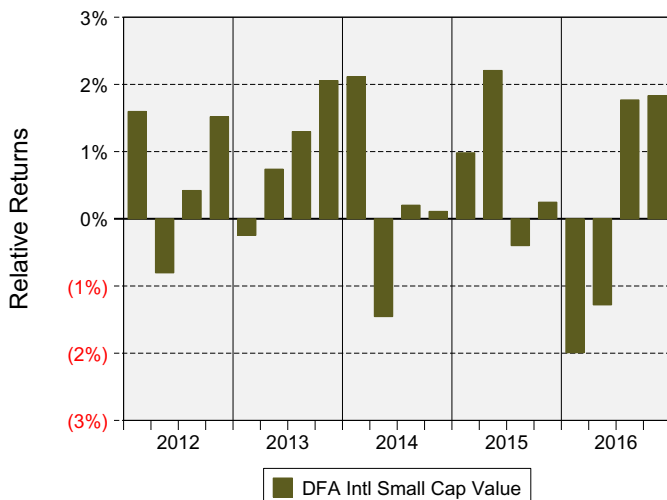
Quarterly Asset Growth

Beginning Market Value	\$79,505,332
Net New Investment	\$0
Investment Gains/(Losses)	\$1,363,350
Ending Market Value	\$80,868,682

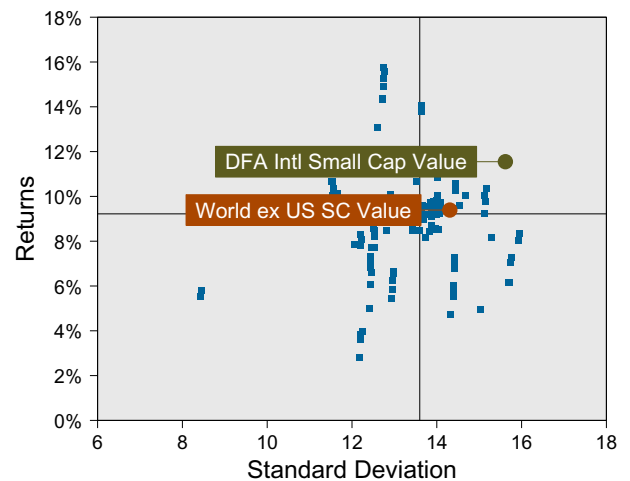
Performance vs CAI International Small Cap Mut Funds (Net)



Relative Return vs World ex US SC Value



CAI International Small Cap Mut Funds (Net) Annualized Five Year Risk vs Return



Northern Tr AM Wrld ex US Period Ended December 31, 2016

Investment Philosophy

The Fund's objective is to provide investment results that approximate the overall performance of the MSCI World ex-US Equity Index.

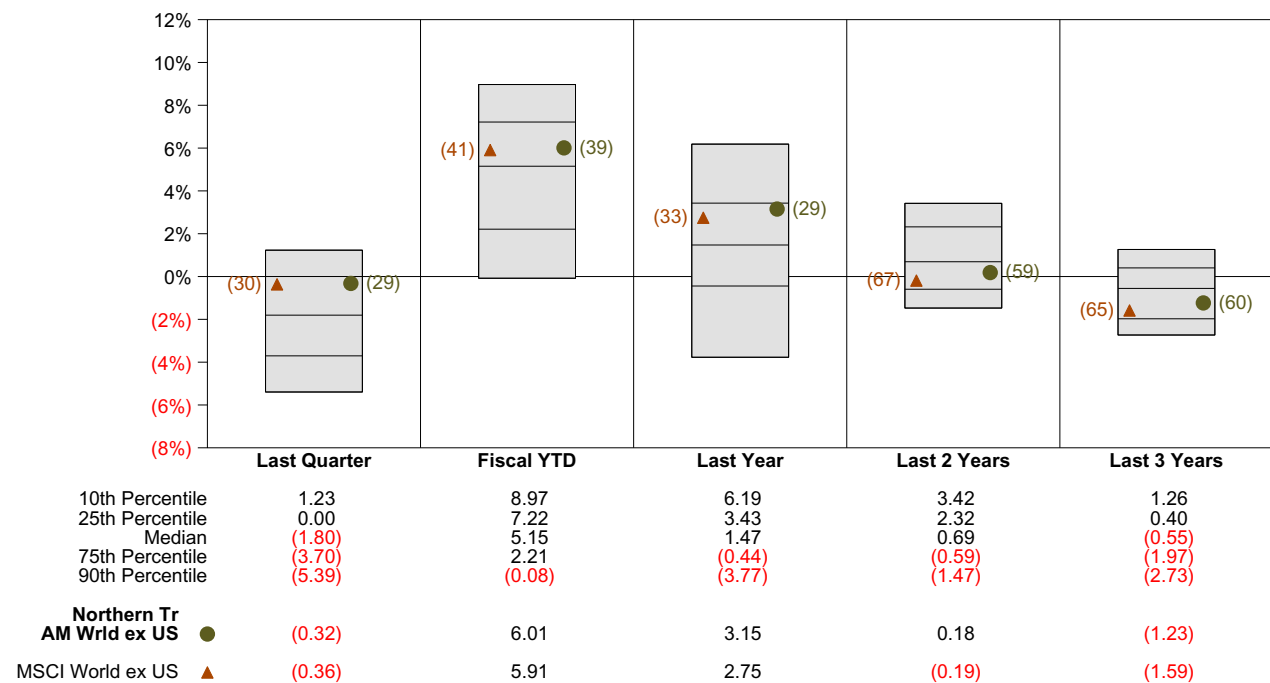
Quarterly Summary and Highlights

- Northern Tr AM Wrld ex US's portfolio posted a (0.32)% return for the quarter placing it in the 29 percentile of the CAI Non-U.S. Equity Style group for the quarter and in the 29 percentile for the last year.
- Northern Tr AM Wrld ex US's portfolio outperformed the MSCI World ex US by 0.04% for the quarter and outperformed the MSCI World ex US for the year by 0.40%.

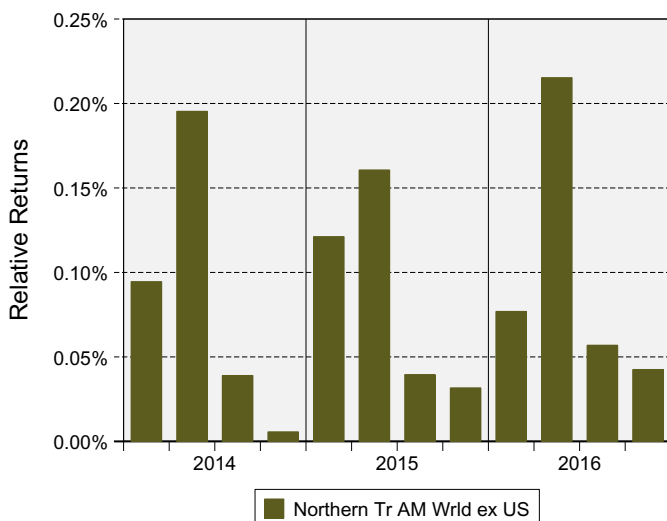
Quarterly Asset Growth

Beginning Market Value	\$271,364,101
Net New Investment	\$-21,638
Investment Gains/(Losses)	\$-872,672
Ending Market Value	\$270,469,791

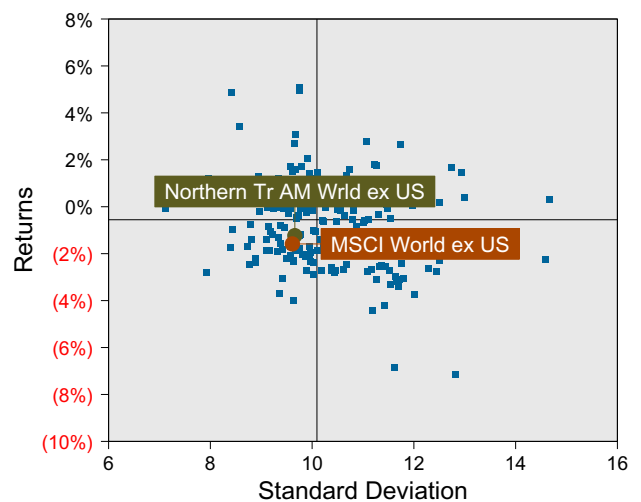
Performance vs CAI Non-U.S. Equity Style (Gross)



Relative Return vs MSCI World ex US



CAI Non-U.S. Equity Style (Gross) Annualized Three Year Risk vs Return



Wellington Management Period Ended December 31, 2016

Investment Philosophy

The International Small Cap Opportunities investment approach is bottom-up focused, and leverages the global research resources at Wellington Management. In implementing purchase decisions, consideration is given to the size, liquidity, and volatility of these prospects. Sell decisions are based on changing fundamentals or valuations, or on finding better opportunities elsewhere. The assets are not hedged.

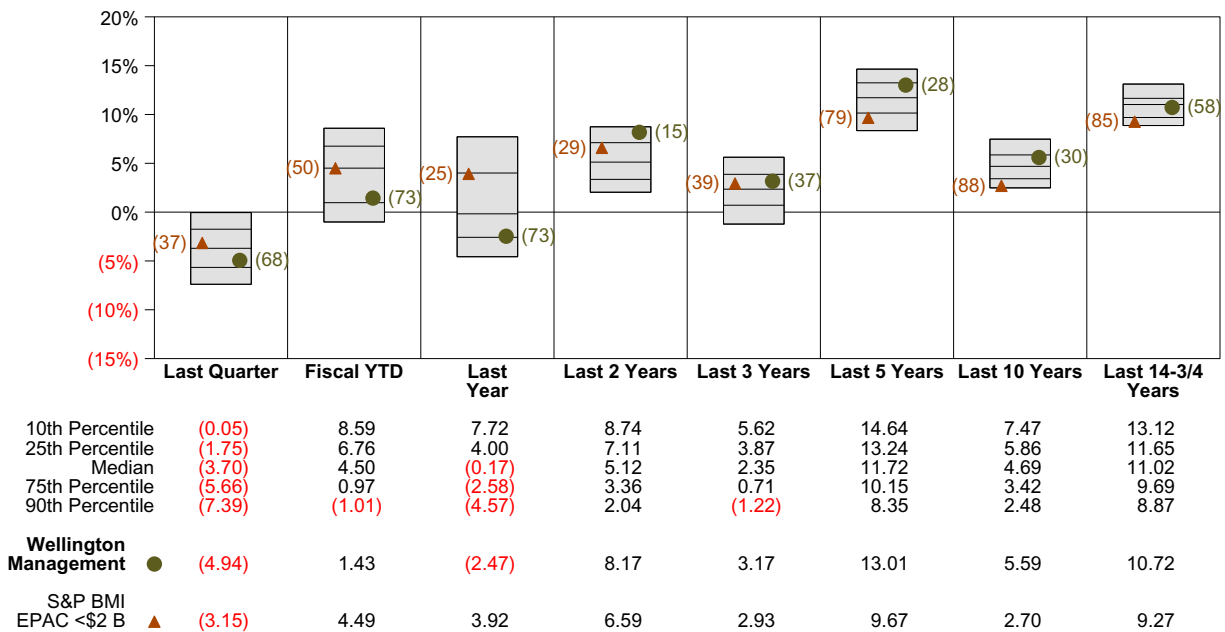
Quarterly Summary and Highlights

- Wellington Management's portfolio posted a (4.94)% return for the quarter placing it in the 68 percentile of the CAI International Small Cap group for the quarter and in the 73 percentile for the last year.
- Wellington Management's portfolio underperformed the S&P BMI EPAC <\$2 B by 1.79% for the quarter and underperformed the S&P BMI EPAC <\$2 B for the year by 6.39%.

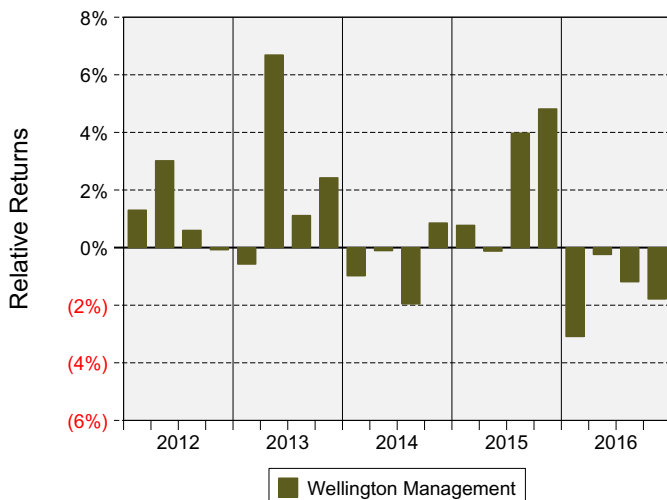
Quarterly Asset Growth

Beginning Market Value	\$86,811,610
Net New Investment	\$-178,732
Investment Gains/(Losses)	\$-4,288,941
Ending Market Value	\$82,343,938

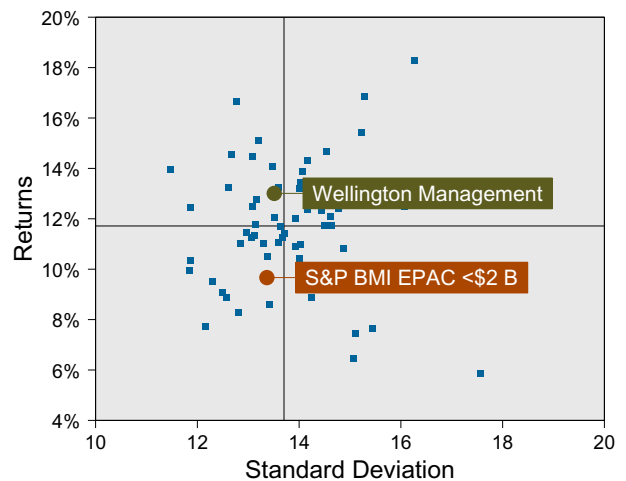
Performance vs CAI International Small Cap (Gross)



Relative Return vs S&P BMI EPAC <\$2 B



CAI International Small Cap (Gross) Annualized Five Year Risk vs Return



William Blair

Period Ended December 31, 2016

Investment Philosophy

One of the basic investment tenets of William Blair & Company has been its focus on quality growth companies. They believe that investing in quality growth companies will generate above average results with generally less risk than the market. This opportunity exists because they believe the market underestimates the durability and rate of growth in companies that have the following characteristics: strong management with a unique vision, competitive advantages that prolong the duration and size of earnings growth, and conservative financing. Internationally, they believe that this philosophy can be combined with strategic flexibility in managing geographic exposure, capitalization, sector emphasis, and relative growth and valuation at the portfolio level in order to provide an appropriate degree of adaptability to cyclical conditions.

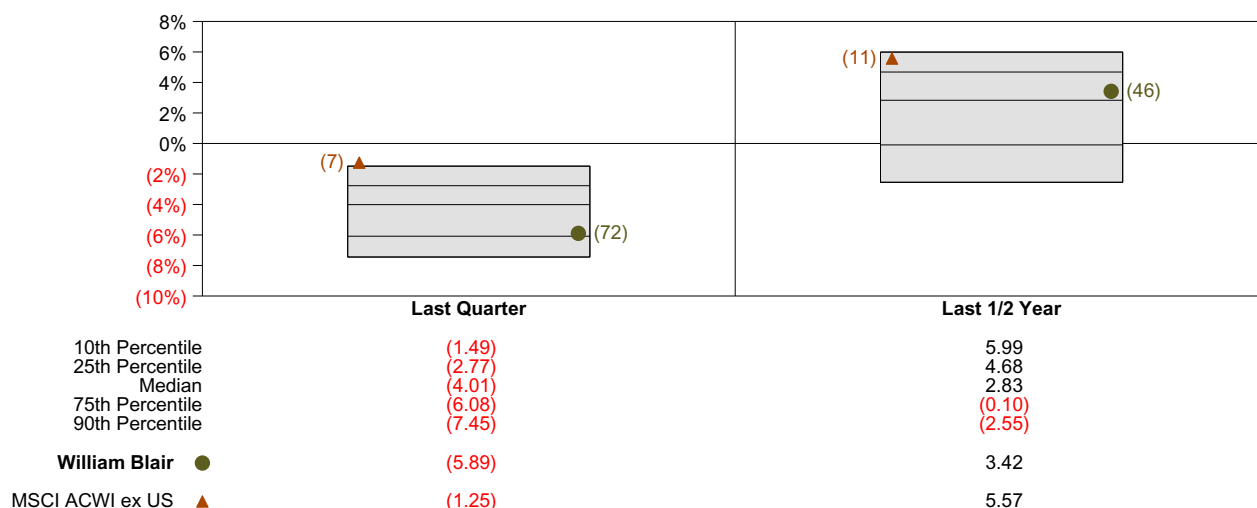
Quarterly Summary and Highlights

- William Blair's portfolio posted a (5.89)% return for the quarter placing it in the 72 percentile of the CAI Core+ Growth Int'l Eq Style group for the quarter and in the 46 percentile for the last one-half year.
- William Blair's portfolio underperformed the MSCI ACWI ex US by 4.64% for the quarter and underperformed the MSCI ACWI ex US for the one-half year by 2.15%.

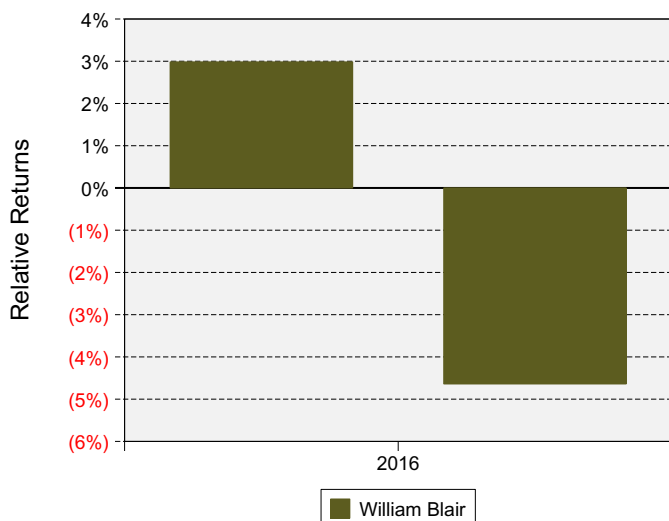
Quarterly Asset Growth

Beginning Market Value	\$134,062,134
Net New Investment	\$-124,959
Investment Gains/(Losses)	\$-7,896,742
Ending Market Value	\$126,040,433

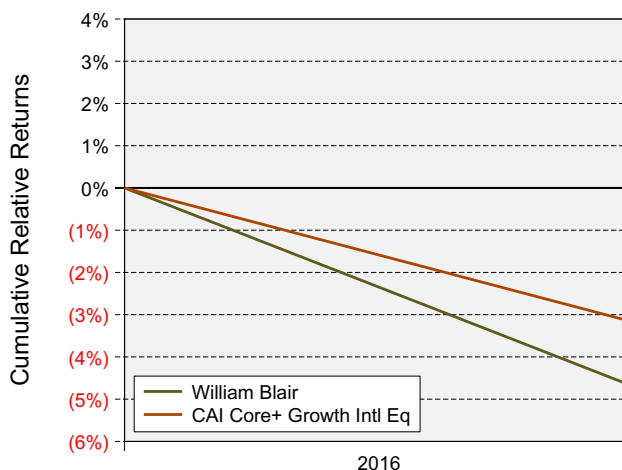
Performance vs CAI Core+ Growth Int'l Eq Style (Gross)



Relative Return vs MSCI ACWI ex US



Cumulative Returns vs MSCI ACWI ex US



Axiom Emerging Markets

Period Ended December 31, 2016

Investment Philosophy

The Emerging Markets Equity strategy seeks to invest in emerging market securities issued by companies whose key business drivers are both improving and exceeding expectations, as determined by Axiom's stock selection techniques focused on fundamental company analysis. The strategy considers companies either (i) located in countries that are not included in the MSCI Developed Markets Index series or (ii) that derive a majority of their revenues or assets from a country or countries not included in the MSCI Developed Markets Index series, in each case at the time of investment. Although the Manager generally expects the strategy's investment portfolio to be geographically diverse, there are no prescribed limits on geographic distribution of the strategy's investments and the strategy has the authority to invest in securities traded in securities markets or any country in the world.

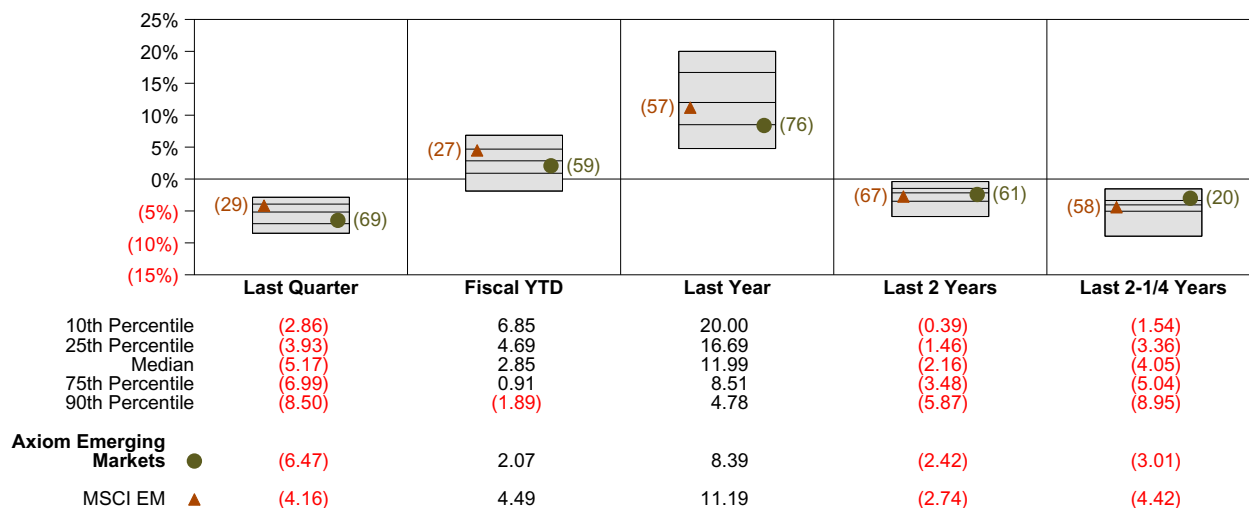
Quarterly Summary and Highlights

- Axiom Emerging Markets's portfolio posted a (6.47)% return for the quarter placing it in the 69 percentile of the CAI Emerging Markets Equity Mut Funds group for the quarter and in the 76 percentile for the last year.
- Axiom Emerging Markets's portfolio underperformed the MSCI EM by 2.30% for the quarter and underperformed the MSCI EM for the year by 2.80%.

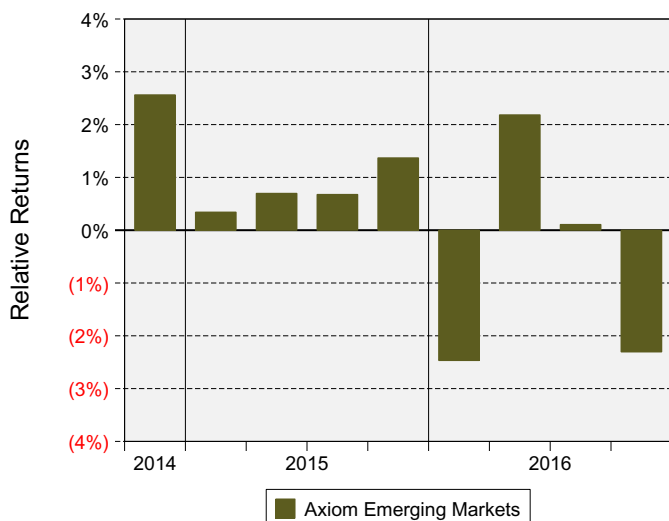
Quarterly Asset Growth

Beginning Market Value	\$144,414,502
Net New Investment	\$-5,000,000
Investment Gains/(Losses)	\$-9,020,543
Ending Market Value	\$130,393,959

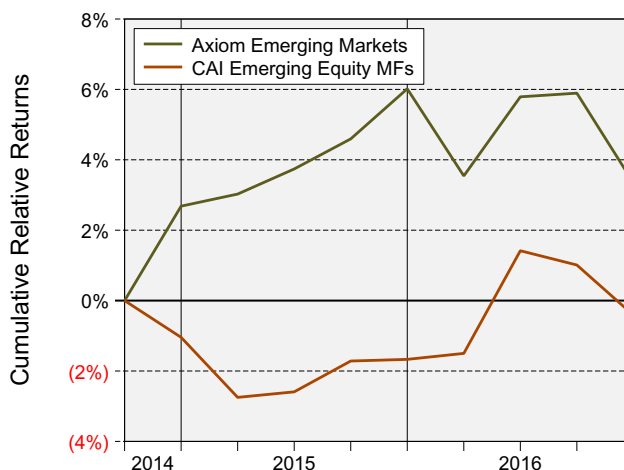
Performance vs CAI Emerging Markets Equity Mut Funds (Net)



Relative Return vs MSCI EM



Cumulative Returns vs MSCI EM



DFA Emerging Markets Period Ended December 31, 2016

Investment Philosophy

The Emerging Markets Small Cap Portfolio invests in small cap emerging markets companies. Presently, this means investment in companies whose market capitalization is less than \$2.3 billion at the time of purchase. Dimensional considers, among other things, information disseminated by the International Finance Corporation in determining and approving emerging market countries.

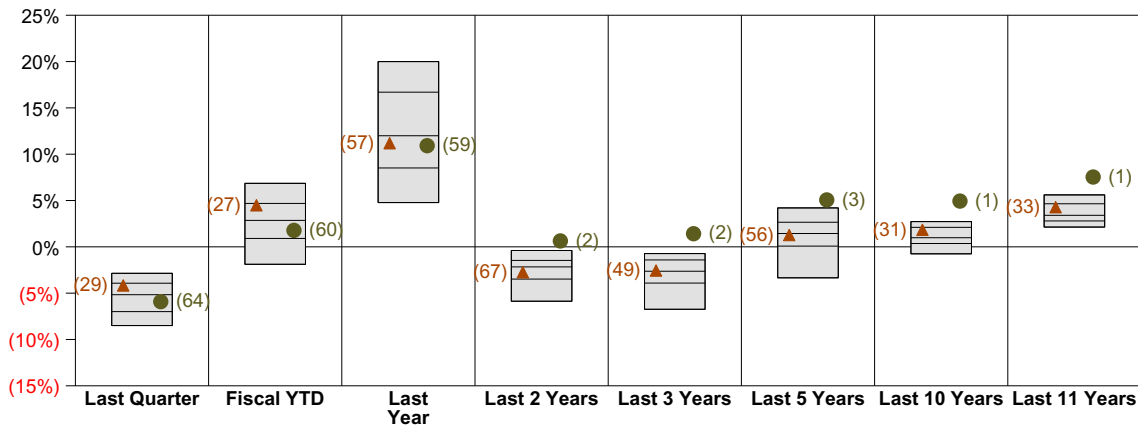
Quarterly Summary and Highlights

- DFA Emerging Markets's portfolio posted a (5.92)% return for the quarter placing it in the 64 percentile of the CAI Emerging Markets Equity Mut Funds group for the quarter and in the 59 percentile for the last year.
- DFA Emerging Markets's portfolio underperformed the MSCI EM by 1.75% for the quarter and underperformed the MSCI EM for the year by 0.27%.

Quarterly Asset Growth

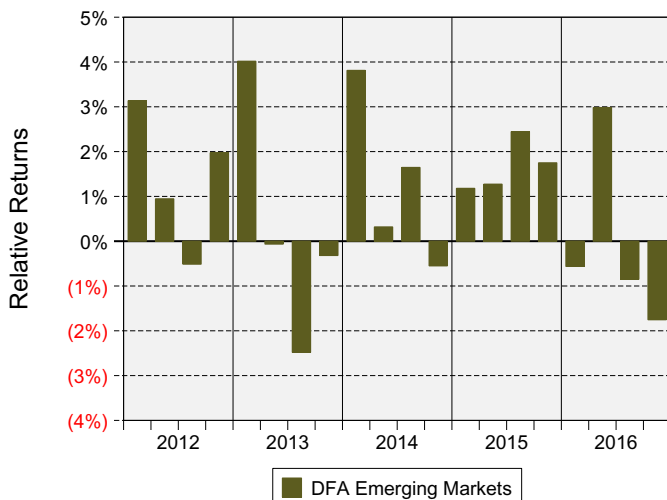
Beginning Market Value	\$49,878,963
Net New Investment	\$0
Investment Gains/(Losses)	\$-2,951,494
Ending Market Value	\$46,927,469

Performance vs CAI Emerging Markets Equity Mut Funds (Net)

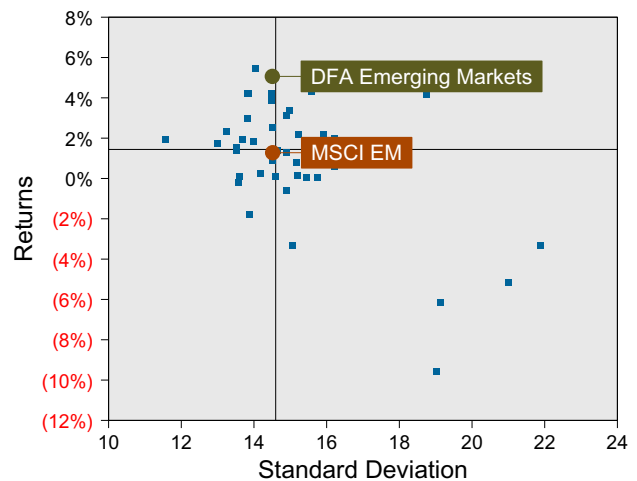


10th Percentile	(2.86)	6.85	20.00	(0.39)	(0.72)	4.20	2.73	5.61
25th Percentile	(3.93)	4.69	16.69	(1.46)	(1.41)	2.65	2.10	4.65
Median	(5.17)	2.85	11.99	(2.16)	(2.63)	1.44	0.98	3.40
75th Percentile	(6.99)	0.91	8.51	(3.48)	(3.91)	0.08	0.36	2.80
90th Percentile	(8.50)	(1.89)	4.78	(5.87)	(6.74)	(3.34)	(0.75)	2.13
DFA Emerging Markets	● (5.92)	1.78	10.92	0.63	1.42	5.06	4.94	7.53
MSCI EM	▲ (4.16)	4.49	11.19	(2.74)	(2.55)	1.28	1.84	4.28

Relative Return vs MSCI EM



CAI Emerging Markets Equity Mut Funds (Net) Annualized Five Year Risk vs Return



EPOCH Investment Period Ended December 31, 2016

Investment Philosophy

Epoch seeks to produce superior risk adjusted returns by building portfolios of businesses with outstanding risk/reward profiles without running a high degree of capital risk. They analyze businesses in the same manner private investors would in looking to purchase the entire company. The strategy only invests in businesses that are understood and where they have confidence in the financial statements. They seek businesses that generate "free cash flow" and securities that have unrecognized potential yet possess a combination of above average yield, above average free cash flow growth, and/or below average valuation. Global Choice is a "best ideas" portfolio at Epoch with every stock held in other strategies managed by the firm. **The EPOCH Blended Benchmark consists of the S&P 500 Index through 12/31/2011 and the MSCI World Index thereafter.**

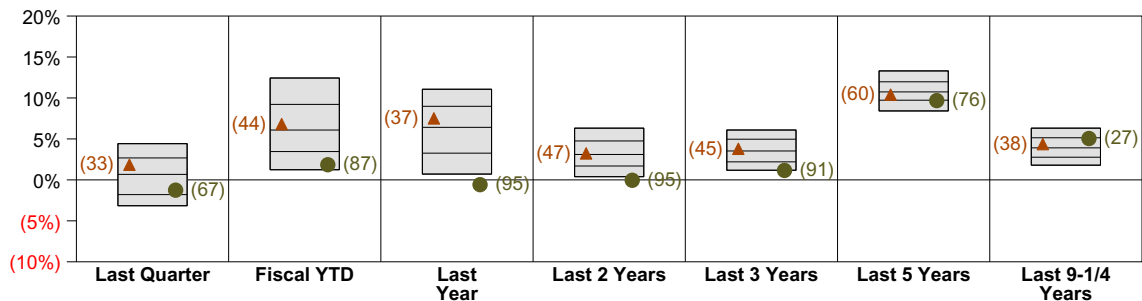
Quarterly Summary and Highlights

- EPOCH Investment's portfolio posted a (1.26)% return for the quarter placing it in the 67 percentile of the CAI Global Equity Broad Style group for the quarter and in the 95 percentile for the last year.
- EPOCH Investment's portfolio underperformed the EPOCH Blended Benchmark by 3.11% for the quarter and underperformed the EPOCH Blended Benchmark for the year by 8.10%.

Quarterly Asset Growth

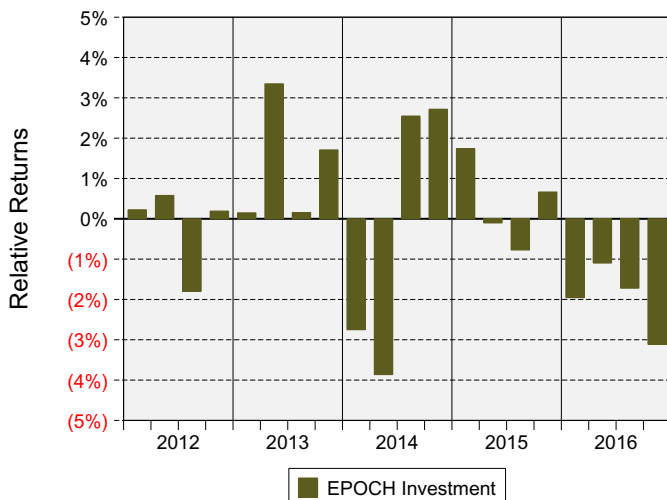
Beginning Market Value	\$348,628,218
Net New Investment	\$-559,368
Investment Gains/(Losses)	\$-4,396,066
Ending Market Value	\$343,672,784

Performance vs CAI Global Equity Broad Style (Gross)

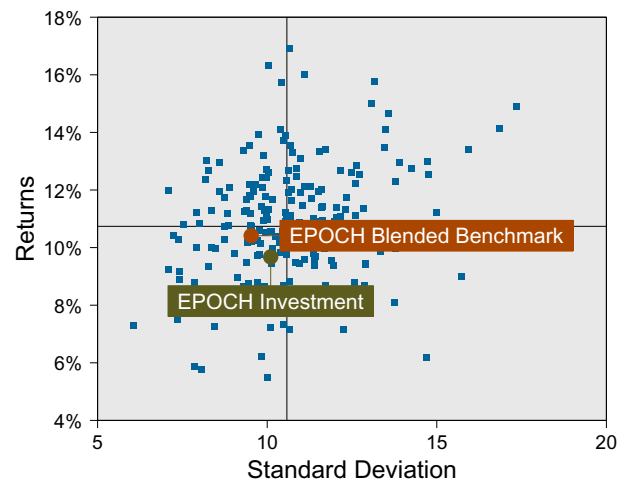


Percentile	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 9-1/4 Years
10th Percentile	4.42	12.44	11.07	6.32	6.09	13.30	6.31
25th Percentile	2.68	9.22	8.98	4.75	4.96	11.97	5.14
Median	0.67	6.09	6.41	3.10	3.53	10.74	3.91
75th Percentile	(1.80)	3.46	3.26	1.69	2.20	9.73	2.77
90th Percentile	(3.16)	1.24	0.71	0.39	1.18	8.42	1.79
EPOCH Investment	(1.26)	1.85	(0.59)	(0.05)	1.15	9.68	5.05
EPOCH Blended Benchmark	1.86	6.81	7.51	3.23	3.80	10.41	4.37

Relative Returns vs EPOCH Blended Benchmark



CAI Global Equity Broad Style (Gross) Annualized Five Year Risk vs Return



LSV Asset Management Period Ended December 31, 2016

Investment Philosophy

The Global Value (ACWI) Equity strategy is managed using quantitative techniques to select individual securities in a risk-controlled, bottom-up approach. Value factors and security selection dominate sector/industry factors as explainers of performance.

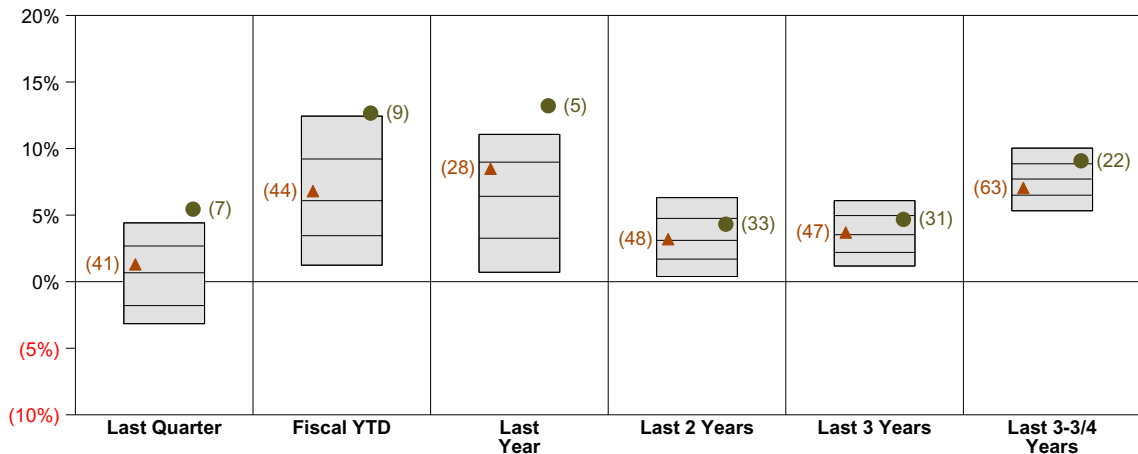
Quarterly Summary and Highlights

- LSV Asset Management's portfolio posted a 5.45% return for the quarter placing it in the 7 percentile of the CAI Global Equity Broad Style group for the quarter and in the 5 percentile for the last year.
- LSV Asset Management's portfolio outperformed the MSCI ACWI Gross by 4.14% for the quarter and outperformed the MSCI ACWI Gross for the year by 4.73%.

Quarterly Asset Growth

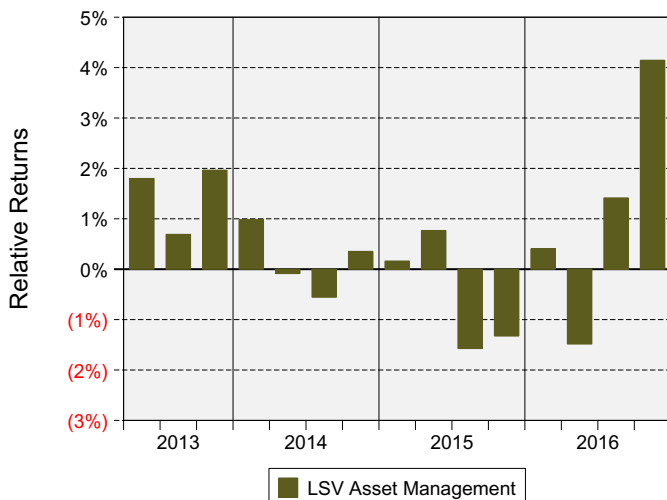
Beginning Market Value	\$457,497,513
Net New Investment	\$-114,627
Investment Gains/(Losses)	\$24,914,443
Ending Market Value	\$482,297,329

Performance vs CAI Global Equity Broad Style (Gross)

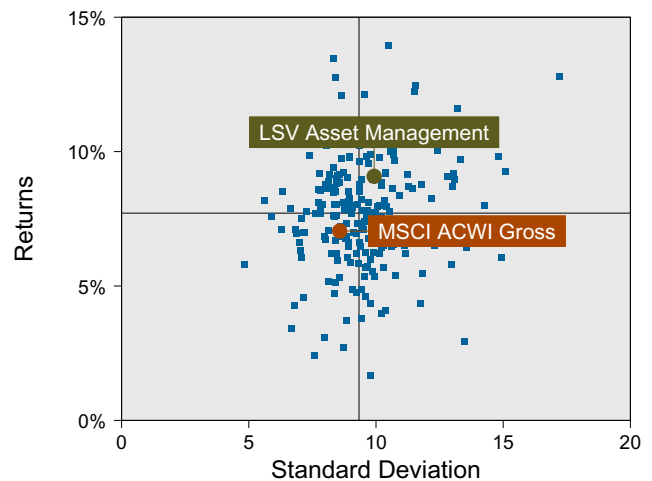


10th Percentile	4.42	12.44	11.07	6.32	6.09	10.03
25th Percentile	2.68	9.22	8.98	4.75	4.96	8.86
Median	0.67	6.09	6.41	3.10	3.53	7.71
75th Percentile	(1.80)	3.46	3.26	1.69	2.20	6.50
90th Percentile	(3.16)	1.24	0.71	0.39	1.18	5.33
LSV Asset Management ●	5.45	12.66	13.21	4.32	4.68	9.08
MSCI ACWI Gross ▲	1.30	6.80	8.48	3.19	3.69	7.04

Relative Return vs MSCI ACWI Gross



CAI Global Equity Broad Style (Gross) Annualized Three and Three-Quarter Year Risk vs Return



Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended December 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 16 Years
Private Equity	2.65%	0.30%	(1.78%)	1.96%	2.05%
Adams Street Direct Co-Invest Fd	7.53%	8.31%	17.84%	14.43%	-
Adams Street Direct Fd 2010	6.82%	2.26%	14.16%	12.67%	-
Adams Street 1998 Partnership	(0.16%)	1.18%	1.39%	4.23%	1.70%
Adams Street 1999 Partnership	2.13%	3.06%	(1.15%)	3.75%	2.74%
Adams Street 2000 Partnership	0.94%	1.00%	(0.53%)	0.36%	3.16%
Adams Street 2001 Partnership	8.47%	7.68%	2.51%	6.53%	3.78%
Adams Street 2002 Partnership	15.92%	29.86%	5.64%	8.23%	-
Adams Street 2003 Partnership	6.39%	7.01%	10.35%	10.72%	-
Adams Street 2010 Partnership	9.20%	9.17%	15.54%	13.48%	-
Adams Street 2008 Fund	6.75%	9.74%	13.07%	10.66%	-
Adams Street 1999 Non-US	9.08%	(1.19%)	(0.32%)	5.45%	6.33%
Adams Street 2000 Non-US	0.17%	1.51%	0.16%	(2.80%)	2.68%
Adams Street 2001 Non-US	(11.28%)	(19.82%)	13.27%	12.64%	-
Adams Street 2002 Non-US	(3.54%)	9.96%	6.39%	5.03%	-
Adams Street 2003 Non-US	5.28%	24.39%	12.49%	14.94%	-
Adams Street 2004 Non-US	3.48%	4.09%	8.19%	5.13%	-
Adams Street 2010 Non-US	9.22%	12.25%	8.48%	8.95%	-
Adams Street 2010 NonUS Emg	5.16%	8.61%	14.33%	3.49%	-
Adams Street 2015 Global Fd	28.68%	52.01%	-	-	-
Adams Street BVCF IV Fund	3.23%	3.14%	18.80%	24.97%	18.20%
CorsAir III	6.91%	3.85%	7.45%	4.30%	-
CorsAir IV	7.17%	8.84%	14.67%	10.65%	-
Capital International V	(14.38%)	(14.84%)	(16.44%)	(11.23%)	-
Capital International VI	1.05%	11.61%	(7.27%)	(12.27%)	-
EIG Energy Fund XIV	(15.90%)	(66.56%)	(40.96%)	(27.42%)	-
Lewis & Clark	0.00%	(51.19%)	(35.55%)	(19.69%)	-
Lewis & Clark II	0.00%	1.88%	(6.77%)	(5.56%)	-
Quantum Energy Partners	0.62%	(5.58%)	(8.36%)	3.61%	-
Matlin Patterson II	(0.49%)	0.22%	2.77%	(21.63%)	-
Matlin Patterson III	1.41%	0.75%	0.24%	24.97%	-
Russell 1000 Index	3.83%	12.05%	8.59%	14.69%	5.66%
Russell 2000 Index	8.83%	21.31%	6.74%	14.46%	8.10%

Declaration Total Return Period Ended December 31, 2016

Investment Philosophy

The Fund's portfolio holdings consist primarily of RMBS issued by private sector companies (Non-Agency RMBS) and government agencies (Agency MBS) and CMBS issued by private sector companies. Agency MBS includes securities issued by the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac) and the Government National Mortgage Association (Ginnie Mae). Portfolio holdings may range from short tenure senior classes to stressed issues or subordinated securities with substantial risk of non-payment and correspondingly higher yields. Smaller portfolio allocations may include consumer asset-backed securities (ABS), or other structured credit securities and corporate bonds. As a diversification strategy and a potential hedge to credit risk, the Fund may invest in securities which tend to benefit from slow mortgage prepayments and economic growth, such as interest only (IO) MBS.

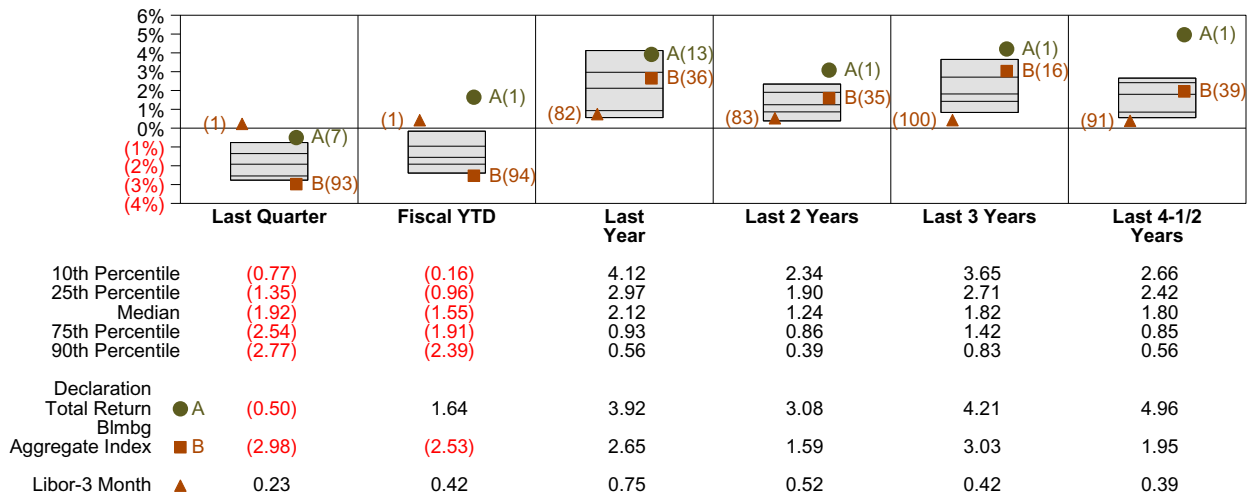
Quarterly Summary and Highlights

- Declaration Total Return's portfolio posted a (0.50)% return for the quarter placing it in the 7 percentile of the CAI Intermediate Fixed Income Mut Funds group for the quarter and in the 13 percentile for the last year.
- Declaration Total Return's portfolio underperformed the Libor-3 Month by 0.73% for the quarter and outperformed the Libor-3 Month for the year by 3.17%.

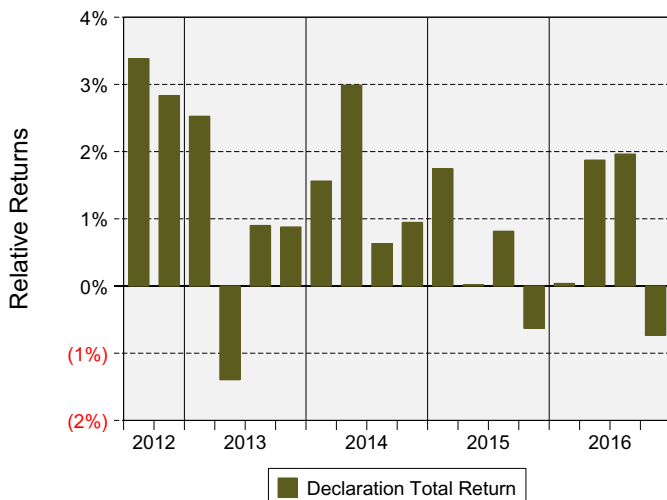
Quarterly Asset Growth

Beginning Market Value	\$88,395,900
Net New Investment	\$0
Investment Gains/(Losses)	\$-443,937
Ending Market Value	\$87,951,963

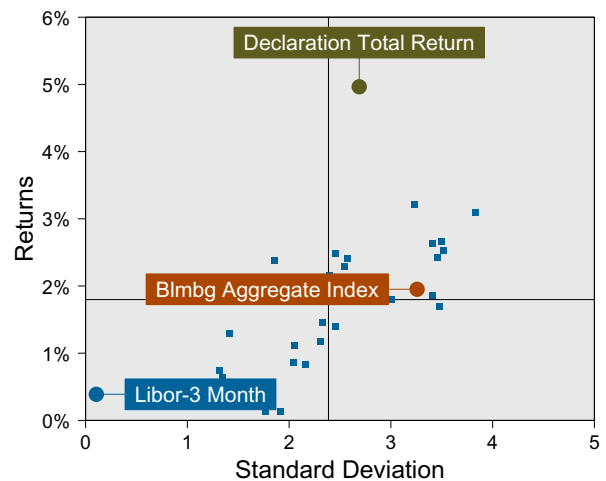
Performance vs CAI Intermediate Fixed Income Mut Funds (Net)



Relative Return vs Libor-3 Month



CAI Intermediate Fixed Income Mut Funds (Net) Annualized Four and One-Half Year Risk vs Return



J.P. Morgan MBS

Period Ended December 31, 2016

Investment Philosophy

JP Morgan seeks to outperform the benchmark over longer horizons regardless of the market environment.

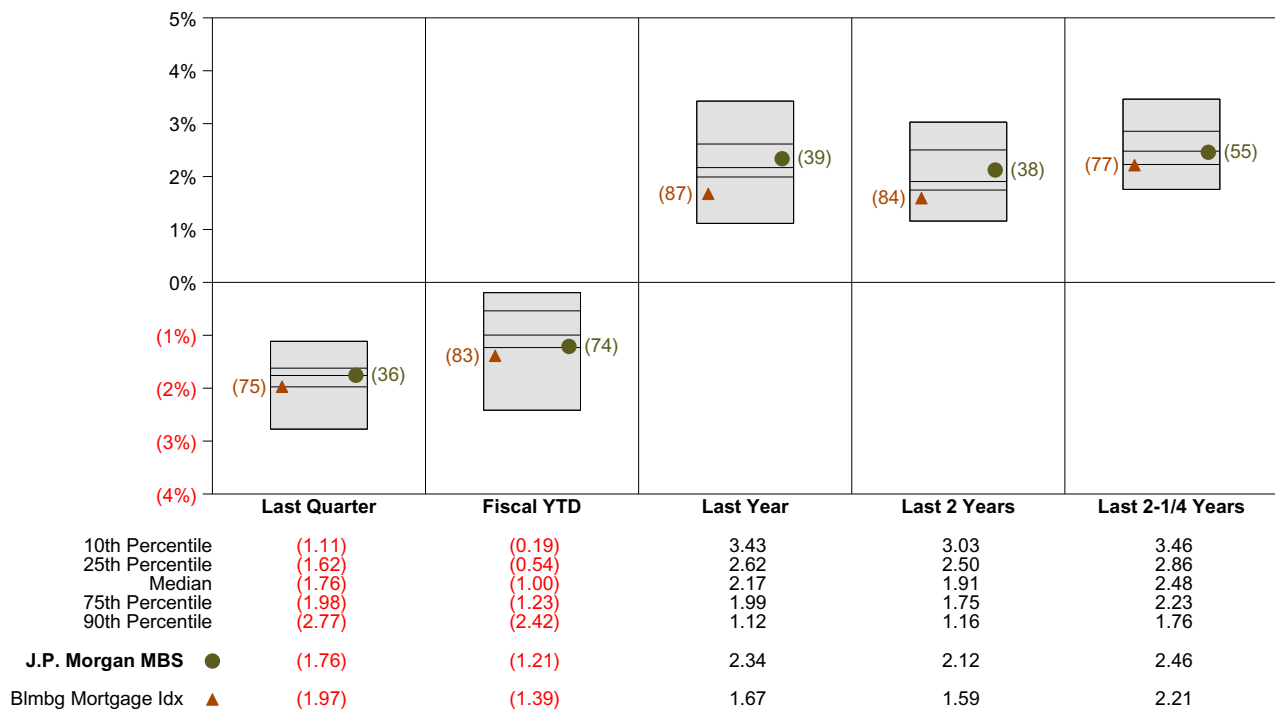
Quarterly Summary and Highlights

- J.P. Morgan MBS's portfolio posted a (1.76)% return for the quarter placing it in the 36 percentile of the CAI Mortgage Backed Fixed Income group for the quarter and in the 39 percentile for the last year.
- J.P. Morgan MBS's portfolio outperformed the Blmbg Mortgage Idx by 0.22% for the quarter and outperformed the Blmbg Mortgage Idx for the year by 0.66%.

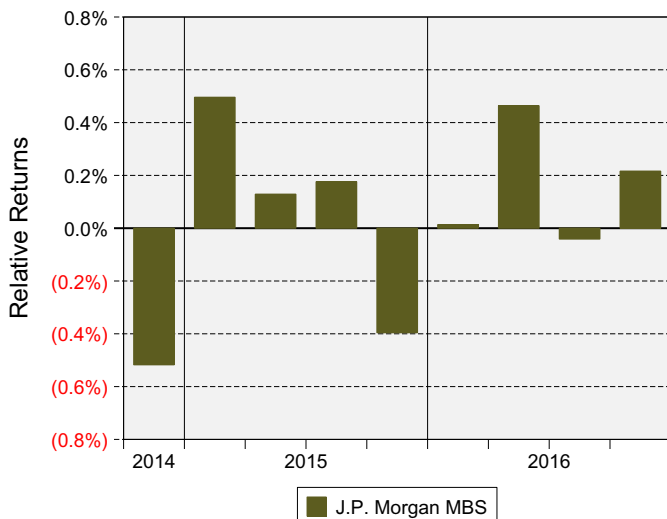
Quarterly Asset Growth

Beginning Market Value	\$123,474,049
Net New Investment	\$-56,860
Investment Gains/(Losses)	\$-2,169,125
Ending Market Value	\$121,248,064

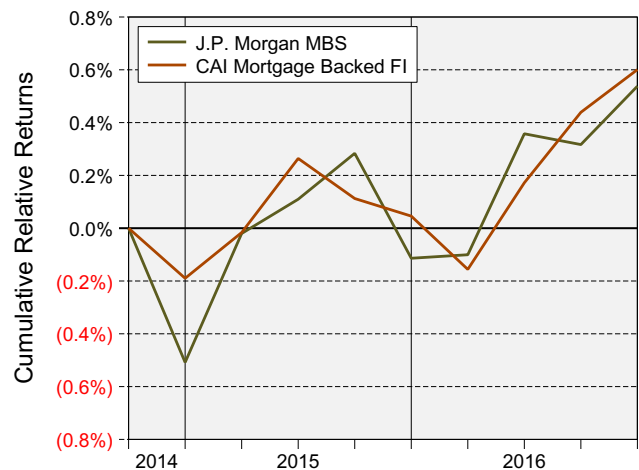
Performance vs CAI Mortgage Backed Fixed Income (Gross)



Relative Return vs Blmbg Mortgage Idx



Cumulative Returns vs Blmbg Mortgage Idx



PIMCO DiSCO II

Period Ended December 31, 2016

Investment Philosophy

The PIMCO Distressed Senior Credit Opportunities Fund is an opportunistic private-equity style Fund which seeks to provide investors enhanced returns principally through long-biased investments in undervalued senior and super senior structured credit securities that are expected to produce attractive levels of current income and that may also appreciate in value over the long term. The fund will look to capitalize on forced sales by liquidity constrained investors.

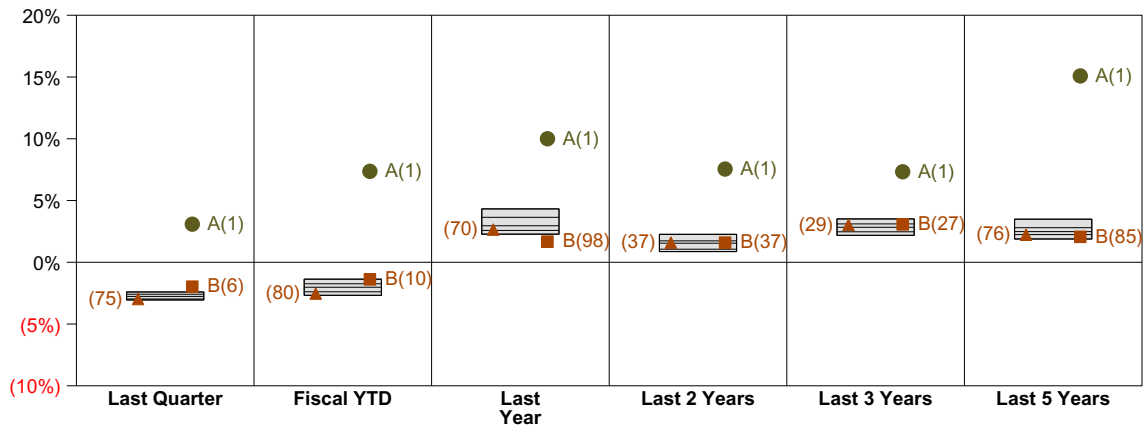
Quarterly Summary and Highlights

- PIMCO DiSCO II's portfolio posted a 3.08% return for the quarter placing it in the 1 percentile of the CAI Core Bond Mutual Funds group for the quarter and in the 1 percentile for the last year.
- PIMCO DiSCO II's portfolio outperformed the Blmbg Aggregate Idx by 6.06% for the quarter and outperformed the Blmbg Aggregate Idx for the year by 7.35%.

Quarterly Asset Growth

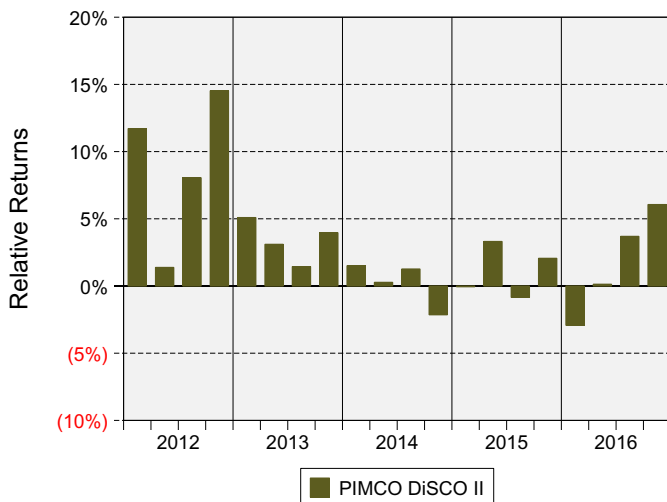
Beginning Market Value	\$95,519,443
Net New Investment	\$0
Investment Gains/(Losses)	\$2,944,926
Ending Market Value	\$98,464,369

Performance vs CAI Core Bond Mutual Funds (Net)

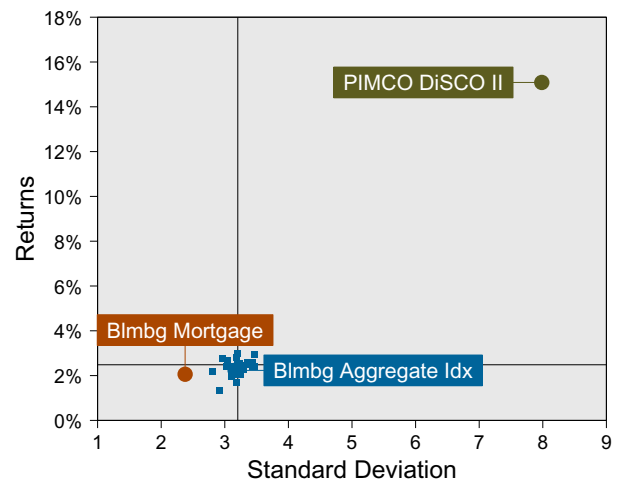


10th Percentile	(2.40)	(1.37)	4.32	2.26	3.51	3.49
25th Percentile	(2.59)	(1.74)	3.64	1.73	3.11	2.80
Median	(2.76)	(2.02)	2.96	1.54	2.83	2.48
75th Percentile	(2.97)	(2.39)	2.58	1.06	2.47	2.24
90th Percentile	(3.05)	(2.68)	2.28	0.87	2.18	1.89
PIMCO DiSCO II	● A	3.08	7.36	10.00	7.33	15.09
Blmbg Mortgage	■ B	(1.97)	(1.39)	1.67	3.07	2.06
Blmbg Aggregate Idx	▲	(2.98)	(2.53)	2.65	1.59	3.03

Relative Return vs Blmbg Aggregate Idx



CAI Core Bond Mutual Funds (Net) Annualized Five Year Risk vs Return



PIMCO MBS

Period Ended December 31, 2016

Investment Philosophy

The PIMCO Mortgage-Backed Securities Strategy is an actively managed bond portfolio that invests in high quality, short to intermediate duration mortgage-backed securities. The fund invests primarily in securities that are highly rated, such as US Government guaranteed Ginnie Mae securities and Agency-guaranteed Fannie Mae and Freddie Mac mortgage-backed securities.

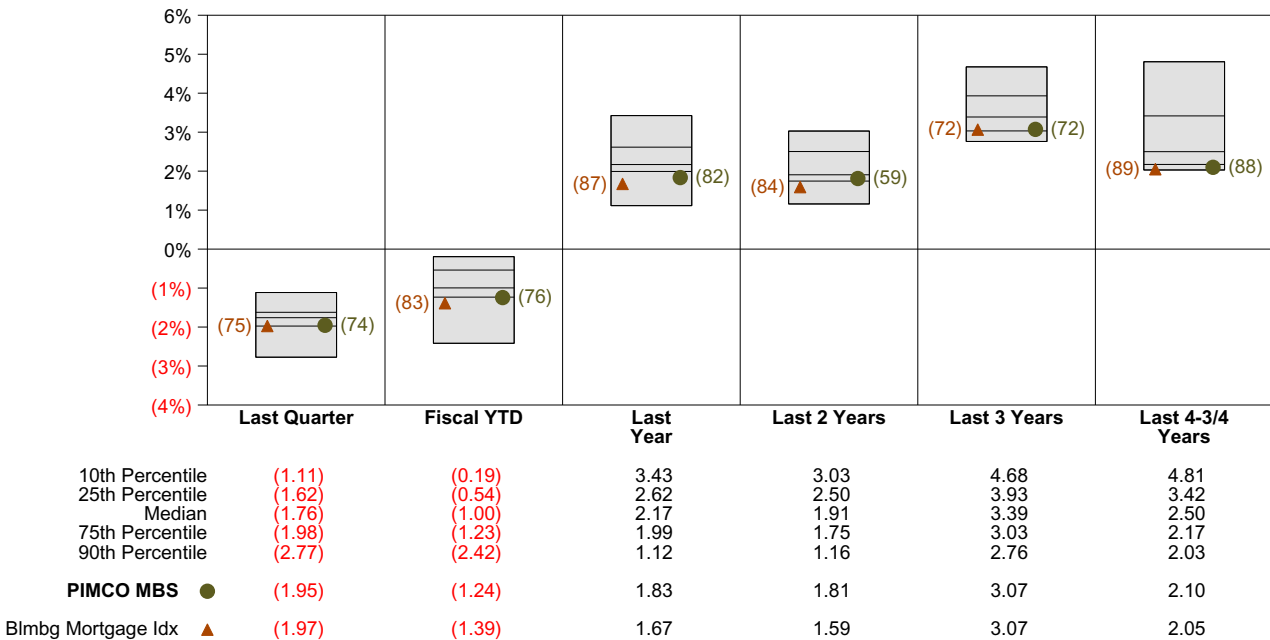
Quarterly Summary and Highlights

- PIMCO MBS's portfolio posted a (1.95)% return for the quarter placing it in the 74 percentile of the CAI Mortgage Backed Fixed Income group for the quarter and in the 82 percentile for the last year.
- PIMCO MBS's portfolio outperformed the Blmbg Mortgage Idx by 0.02% for the quarter and outperformed the Blmbg Mortgage Idx for the year by 0.16%.

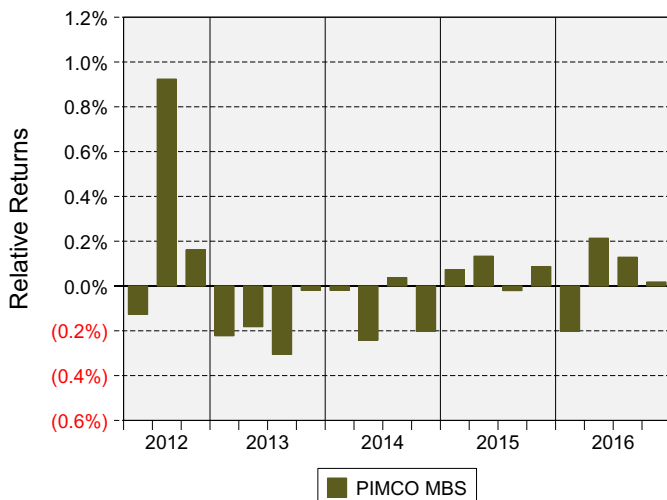
Quarterly Asset Growth

Beginning Market Value	\$184,437,522
Net New Investment	\$-77,145
Investment Gains/(Losses)	\$-3,604,476
Ending Market Value	\$180,755,902

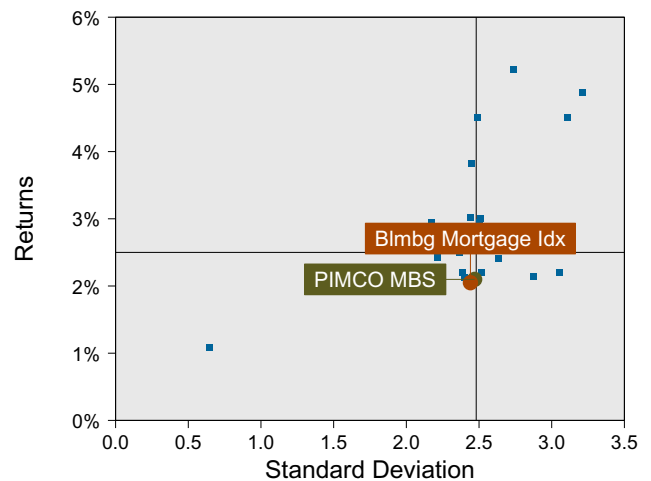
Performance vs CAI Mortgage Backed Fixed Income (Gross)



Relative Return vs Blmbg Mortgage Idx



CAI Mortgage Backed Fixed Income (Gross) Annualized Four and Three-Quarter Year Risk vs Return



PIMCO Unconstrained Period Ended December 31, 2016

Investment Philosophy

The PIMCO Unconstrained Bond Strategy is an absolute return-oriented, investment grade quality fixed income strategy that leverages PIMCO's secular thinking, global themes, and integrated investment process without the constraints of a benchmark or significant sector/instrument limitations. The strategy focuses on long-term economic, social and political trends. Over shorter cyclical time frames, the unconstrained nature of the strategy allows PIMCO to take on more risk when tactical opportunities are identified, and it allows for reduction and diversification of risk at times when the outlook may be more challenging for traditional fixed income benchmarks. **The product changed from Commingled Fund to Separate Account in March 2014. *Libor-3 month through February 28, 2014; Fund's performance through March 31, 2014; Libor-3 month thereafter.**

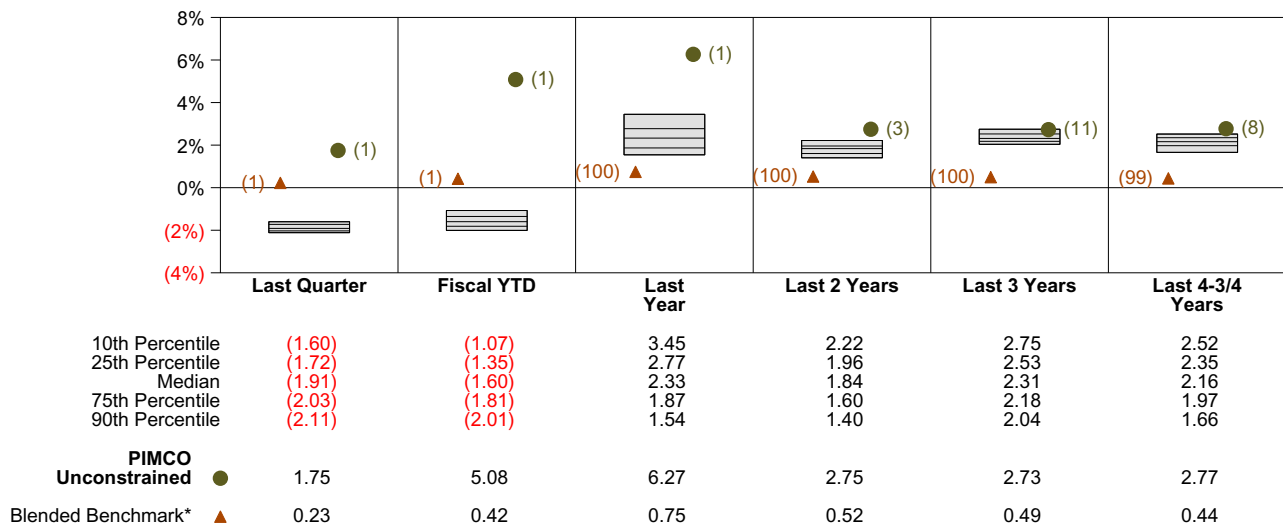
Quarterly Summary and Highlights

- PIMCO Unconstrained's portfolio posted a 1.75% return for the quarter placing it in the 1 percentile of the CAI Intermediate Fixed Income group for the quarter and in the 1 percentile for the last year.
- PIMCO Unconstrained's portfolio outperformed the Blended Benchmark* by 1.52% for the quarter and outperformed the Blended Benchmark* for the year by 5.52%.

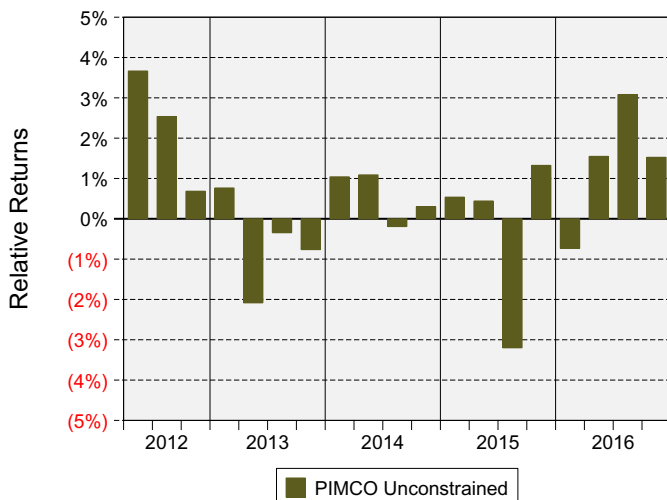
Quarterly Asset Growth

Beginning Market Value	\$63,625,363
Net New Investment	-\$71,315
Investment Gains/(Losses)	\$1,112,805
Ending Market Value	\$64,666,853

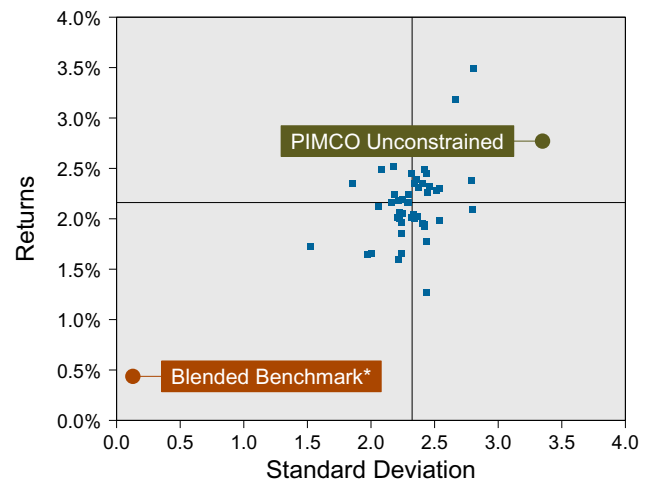
Performance vs CAI Intermediate Fixed Income (Gross)



Relative Return vs Blended Benchmark*



CAI Intermediate Fixed Income (Gross) Annualized Four and Three-Quarter Year Risk vs Return



SSgA Long US Treas Index Period Ended December 31, 2016

Investment Philosophy

The Fund seeks an investment return that approximates as closely as practicable, before expenses, the performance of the Barclays Capital U.S. Long Treasury Bond Index over the long term.

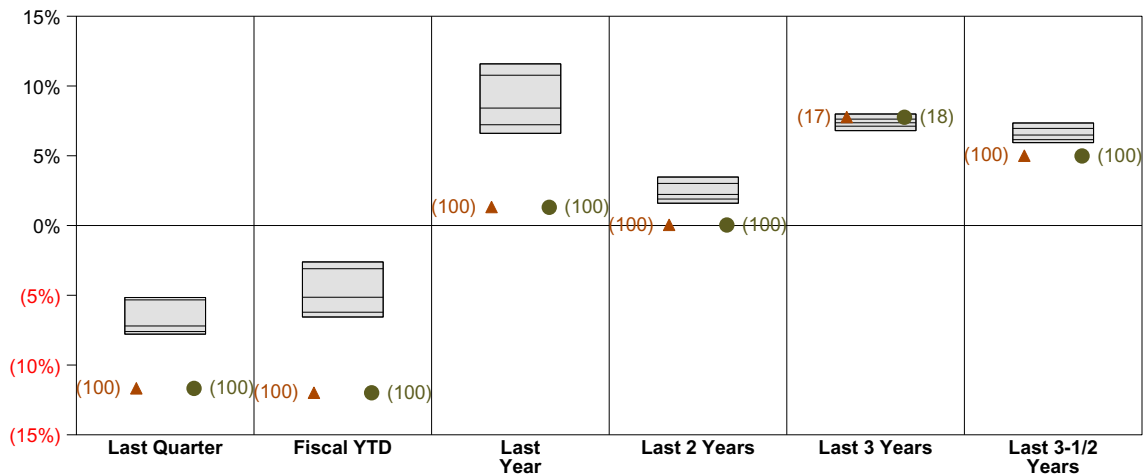
Quarterly Summary and Highlights

- SSgA Long US Treas Index's portfolio posted a (11.67)% return for the quarter placing it in the 100 percentile of the CAI Extended Maturity Fixed Income group for the quarter and in the 100 percentile for the last year.
- SSgA Long US Treas Index's portfolio underperformed the Blmbg Treasury Long by 0.01% for the quarter and underperformed the Blmbg Treasury Long for the year by 0.02%.

Quarterly Asset Growth

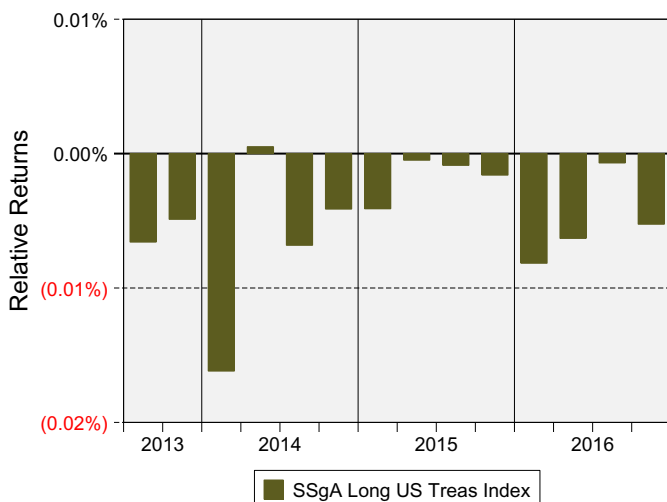
Beginning Market Value	\$70,794,443
Net New Investment	\$-7,294
Investment Gains/(Losses)	\$-8,264,080
Ending Market Value	\$62,523,069

Performance vs CAI Extended Maturity Fixed Income (Gross)

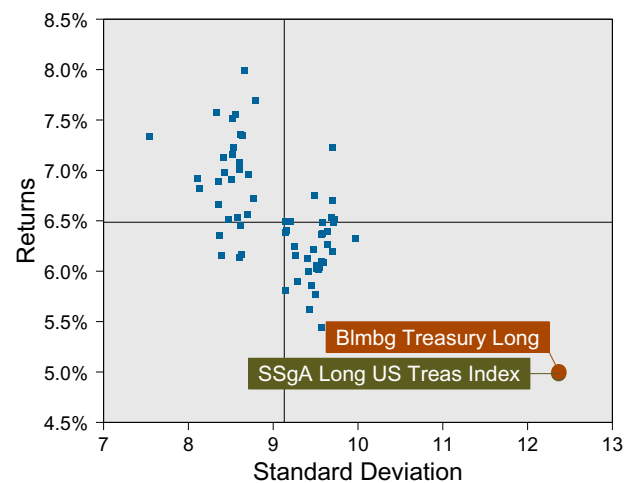


10th Percentile	(5.16)	(2.61)	11.59	3.47	7.99	7.35
25th Percentile	(5.33)	(3.10)	10.77	3.02	7.63	6.96
Median	(7.20)	(5.14)	8.42	2.23	7.36	6.49
75th Percentile	(7.60)	(6.21)	7.22	1.90	7.12	6.15
90th Percentile	(7.79)	(6.56)	6.61	1.60	6.80	5.94
SSgA Long US Treas Index	● (11.67)	(11.99)	1.31	0.04	7.76	4.98
Blmbg Treasury Long	▲ (11.67)	(11.98)	1.33	0.05	7.78	5.00

Relative Return vs Blmbg Treasury Long



CAI Extended Maturity Fixed Income (Gross) Annualized Three and One-Half Year Risk vs Return



Goldman Sachs 2006 Offshore Period Ended December 31, 2016

Investment Philosophy

GS Mezzanine Partners seeks large-sized mezzanine investments comprised generally of fixed income securities and an associated equity component. They focus on providing "private high yield" capital for mid- to large-sized leveraged and management buyout transactions, recapitalizations, financings, re-financings, acquisitions and restructurings for private equity firms, private family companies and corporate issuers.

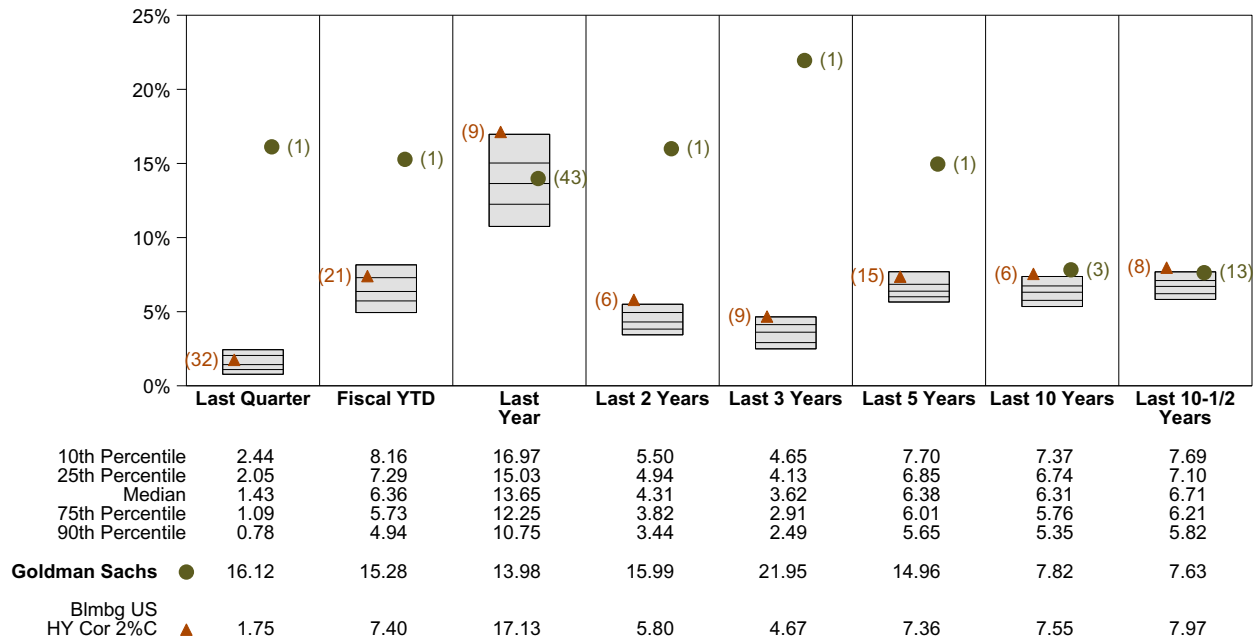
Quarterly Summary and Highlights

- Goldman Sachs's portfolio posted a 16.12% return for the quarter placing it in the 1 percentile of the CAI High Yield Mutual Funds group for the quarter and in the 43 percentile for the last year.
- Goldman Sachs's portfolio outperformed the Blmbg US HY Cor 2%C by 14.37% for the quarter and underperformed the Blmbg US HY Cor 2%C for the year by 3.15%.

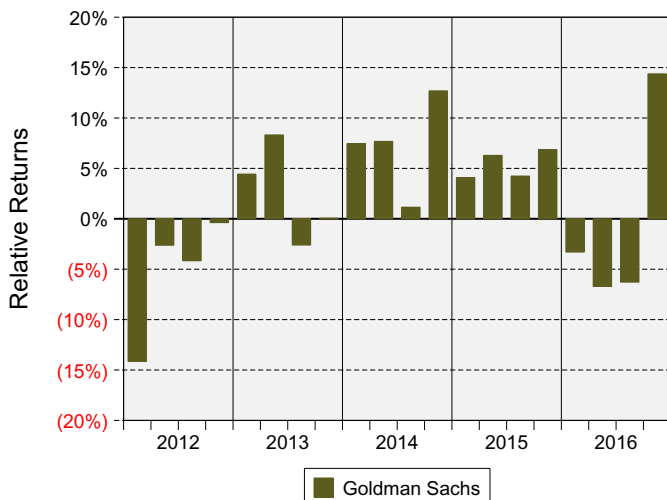
Quarterly Asset Growth

Beginning Market Value	\$600,000
Net New Investment	\$-371,141
Investment Gains/(Losses)	\$59,160
Ending Market Value	\$288,019

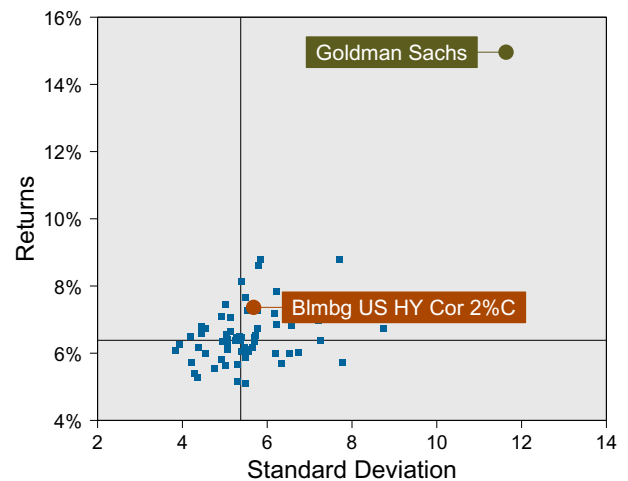
Performance vs CAI High Yield Mutual Funds (Net)



Relative Return vs Blmbg US HY Cor 2%C



CAI High Yield Mutual Funds (Net) Annualized Five Year Risk vs Return



Goldman Sachs Offshore Fund V Period Ended December 31, 2016

Investment Philosophy

GS Mezzanine Partners seeks large-sized mezzanine investments comprised generally of fixed income securities and an associated equity component. They focus on providing "private high yield" capital for mid- to large-sized leveraged and management buyout transactions, recapitalizations, financings, re-financings, acquisitions and restructurings for private equity firms, private family companies and corporate issuers.

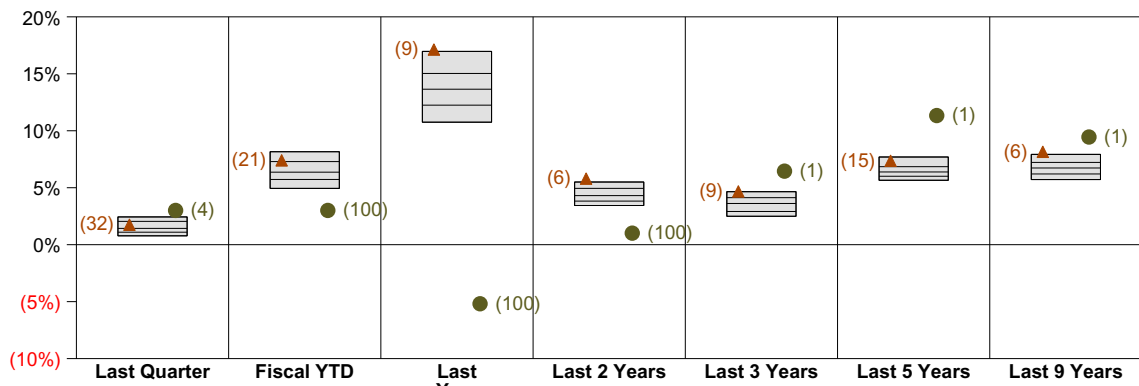
Quarterly Summary and Highlights

- Goldman Sachs Offshore V's portfolio posted a 3.01% return for the quarter placing it in the 4 percentile of the CAI High Yield Mutual Funds group for the quarter and in the 100 percentile for the last year.
- Goldman Sachs Offshore V's portfolio outperformed the Blmbg US HY Cor 2%C by 1.25% for the quarter and underperformed the Blmbg US HY Cor 2%C for the year by 22.32%.

Quarterly Asset Growth

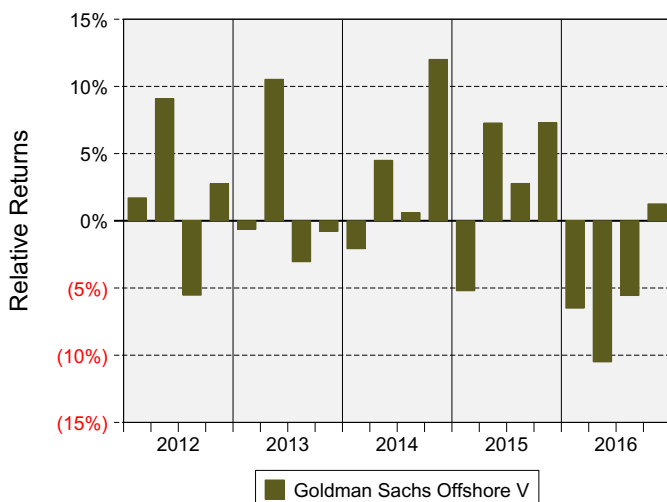
Beginning Market Value	\$2,586,000
Net New Investment	\$0
Investment Gains/(Losses)	\$77,755
Ending Market Value	\$2,663,755

Performance vs CAI High Yield Mutual Funds (Net)

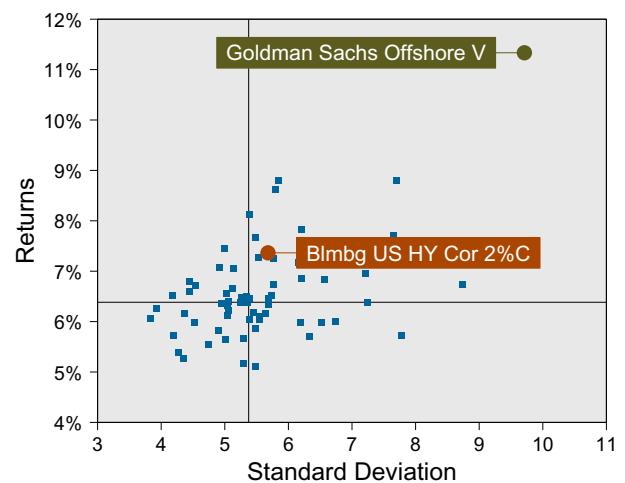


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 9 Years
10th Percentile	2.44	8.16	16.97	5.50	4.65	7.70	7.93
25th Percentile	2.05	7.29	15.03	4.94	4.13	6.85	7.22
Median	1.43	6.36	13.65	4.31	3.62	6.38	6.73
75th Percentile	1.09	5.73	12.25	3.82	2.91	6.01	6.21
90th Percentile	0.78	4.94	10.75	3.44	2.49	5.65	5.72
Goldman Sachs Offshore V	3.01	3.01	(5.19)	1.01	6.45	11.33	9.45
Blmbg US HY Cor 2%C	1.75	7.40	17.13	5.80	4.67	7.36	8.16

Relative Return vs Blmbg US HY Cor 2%C



CAI High Yield Mutual Funds (Net) Annualized Five Year Risk vs Return



Loomis Sayles

Period Ended December 31, 2016

Investment Philosophy

The High Yield Full Discretion Strategy seeks to identify attractive sectors and specific investment opportunities primarily within the global fixed income market through a global economic and interest rate framework. Portfolio managers incorporate a long-term macroeconomic view along with a stringent bottom-up investment evaluation process that drives security selection and resulting sector allocations. Opportunistic investments in non-benchmark sectors including investment grade corporate, emerging market, and non-US dollar debt and convertible bonds help to manage overall portfolio risk and enhance total return potential.

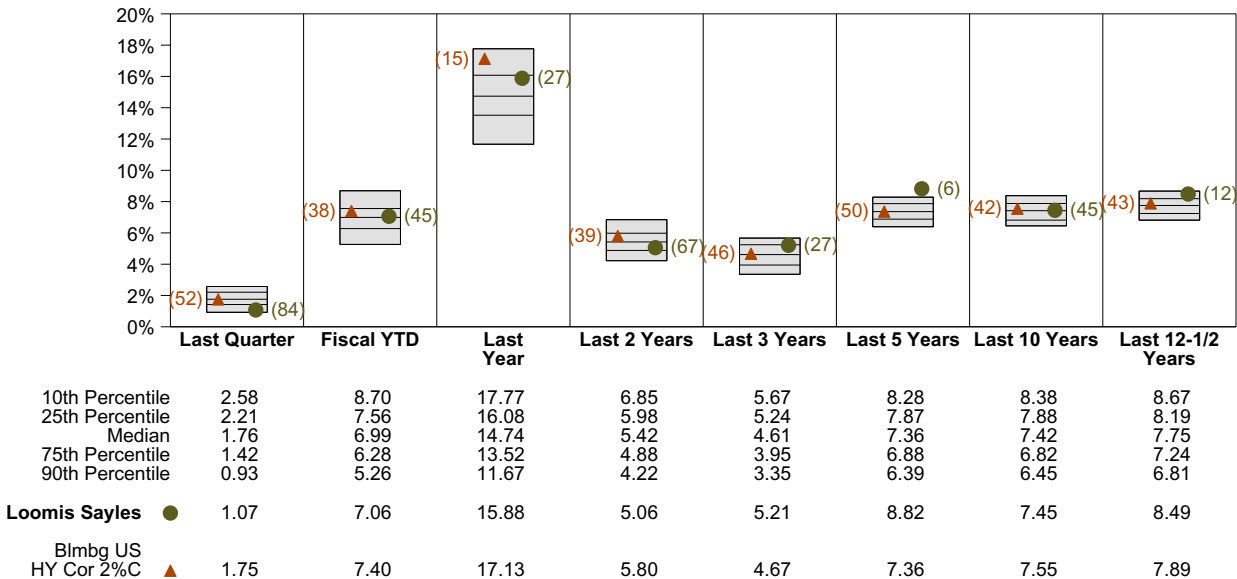
Quarterly Summary and Highlights

- Loomis Sayles's portfolio posted a 1.07% return for the quarter placing it in the 84 percentile of the CAI High Yield Fixed Income group for the quarter and in the 27 percentile for the last year.
- Loomis Sayles's portfolio underperformed the Blmbg US HY Cor 2%C by 0.68% for the quarter and underperformed the Blmbg US HY Cor 2%C for the year by 1.25%.

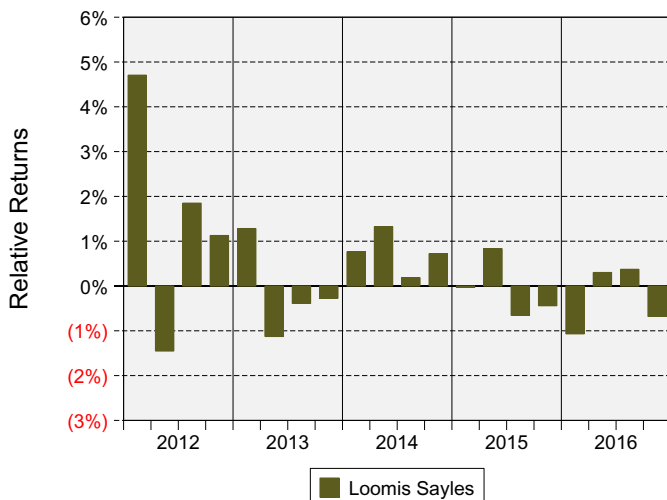
Quarterly Asset Growth

Beginning Market Value	\$188,140,843
Net New Investment	\$-235,203
Investment Gains/(Losses)	\$2,018,808
Ending Market Value	\$189,924,447

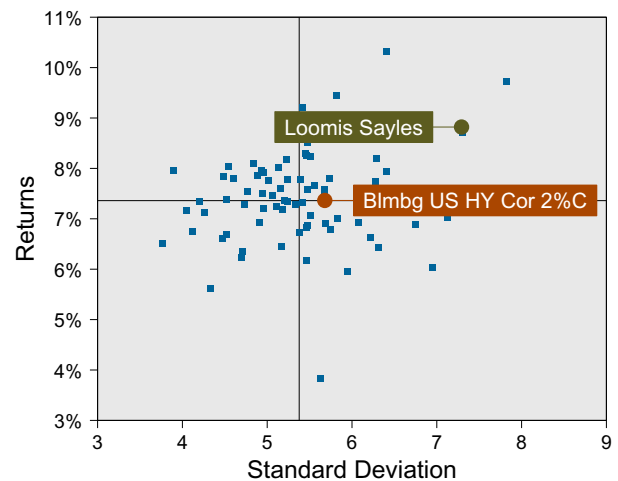
Performance vs CAI High Yield Fixed Income (Gross)



Relative Return vs Blmbg US HY Cor 2%C



CAI High Yield Fixed Income (Gross) Annualized Five Year Risk vs Return



PIMCO Bravo II Fund

Period Ended December 31, 2016

Investment Philosophy

The BRAVO II Fund is a private equity style fund targeting an annualized IRR of 15-20% and multiple of 1.8-2x, net of fees and carried interest with an initial 5-year term. The fund will seek to capitalize on non-economic asset sale decisions by global financial institutions. The fund will have the flexibility to acquire attractively discounted, less liquid loans, structured credit and other assets tied to residential or commercial real estate markets in the U.S. and Europe.

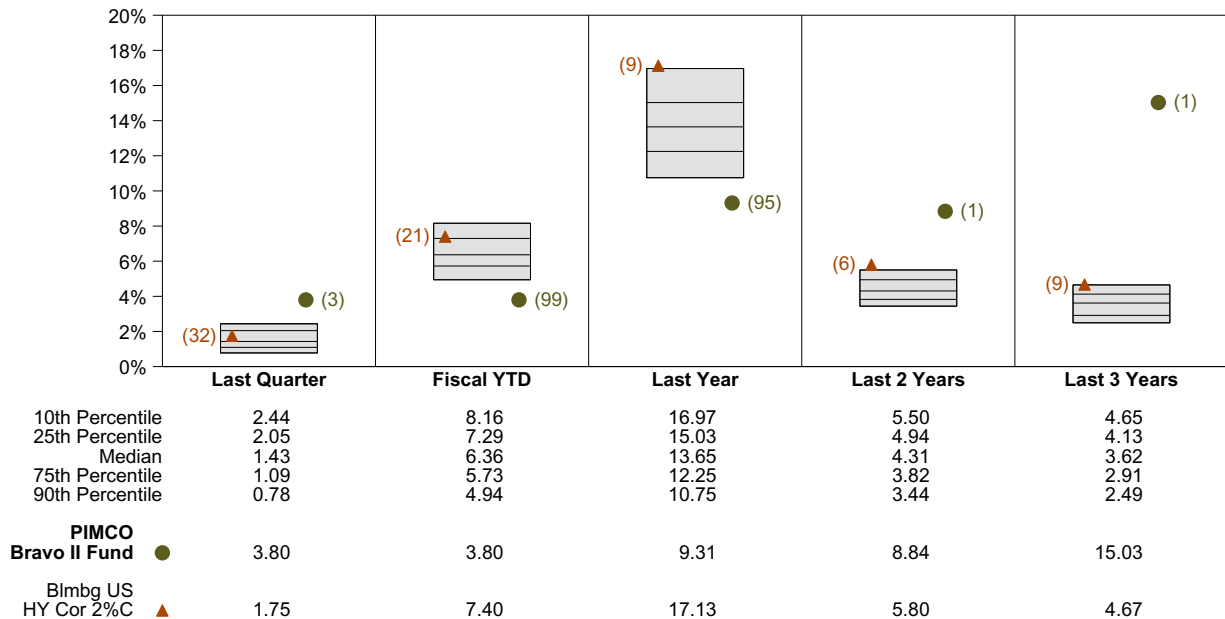
Quarterly Summary and Highlights

- PIMCO Bravo II Fund's portfolio posted a 3.80% return for the quarter placing it in the 3 percentile of the CAI High Yield Mutual Funds group for the quarter and in the 95 percentile for the last year.
- PIMCO Bravo II Fund's portfolio outperformed the Blmbg US HY Cor 2%C by 2.05% for the quarter and underperformed the Blmbg US HY Cor 2%C for the year by 7.82%.

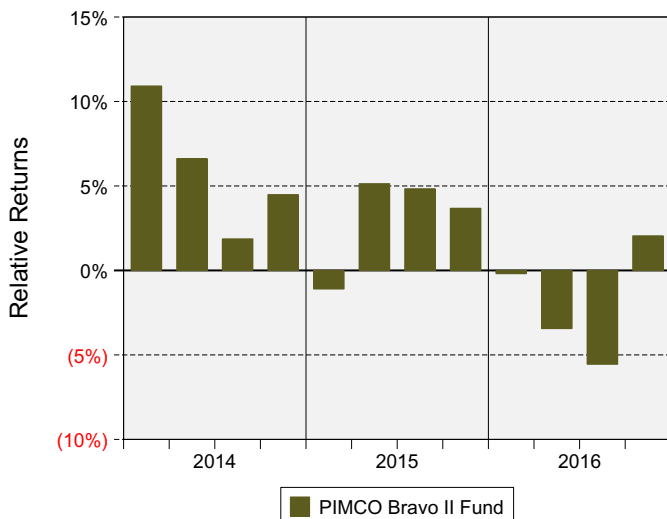
Quarterly Asset Growth

Beginning Market Value	\$47,082,300
Net New Investment	\$0
Investment Gains/(Losses)	\$1,788,691
Ending Market Value	\$48,870,991

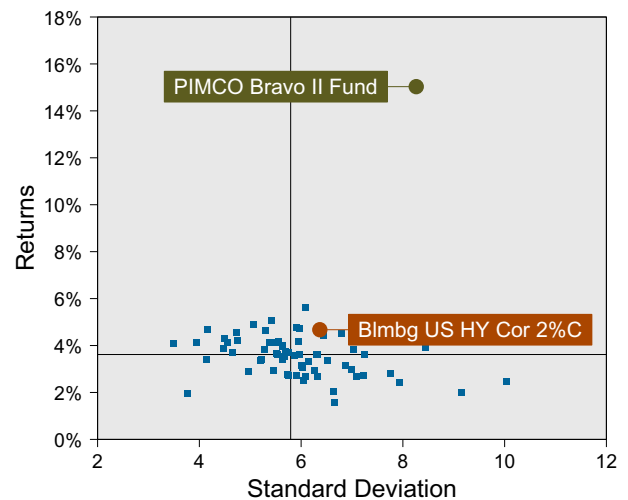
Performance vs CAI High Yield Mutual Funds (Net)



Relative Return vs Blmbg US HY Cor 2%C



CAI High Yield Mutual Funds (Net) Annualized Three Year Risk vs Return



Brandywine Asset Management Period Ended December 31, 2016

Investment Philosophy

Brandywine engages in a disciplined, active, value-driven, strategic approach. Their investment strategy concentrates on top-down analysis of macro-economic conditions in order to determine where the most attractive valuations exist. Specifically, they invest in bonds with the highest real yields globally. They manage currency to protect principal and increase returns, patiently rotated among countries and attempt to control risk by purchasing undervalued securities.

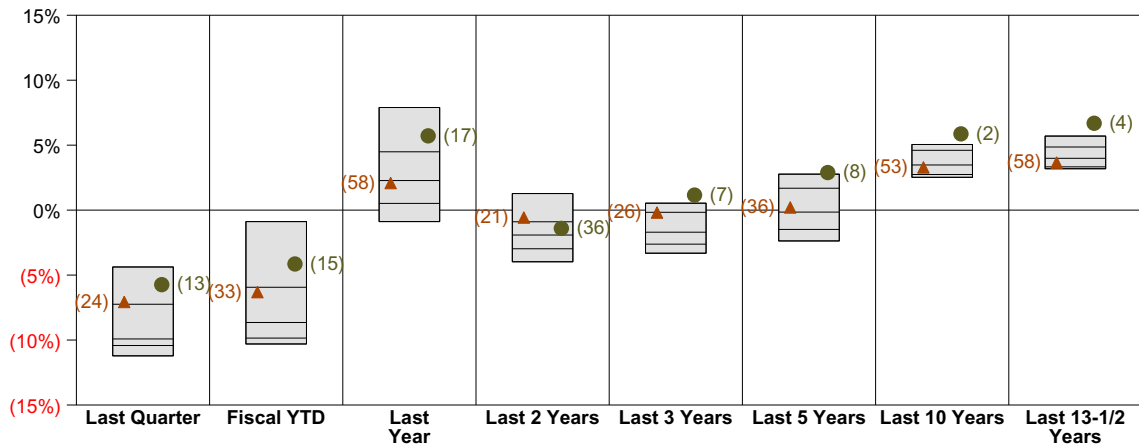
Quarterly Summary and Highlights

- Brandywine's portfolio posted a (5.74)% return for the quarter placing it in the 13 percentile of the CAI Non US Fixed Income (Unhedged) group for the quarter and in the 17 percentile for the last year.
- Brandywine's portfolio outperformed the Blmbg Glb Aggregate by 1.33% for the quarter and outperformed the Blmbg Glb Aggregate for the year by 3.63%.

Quarterly Asset Growth

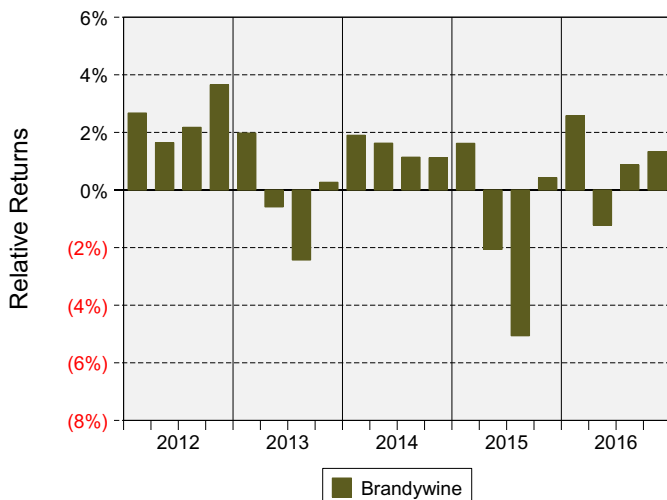
Beginning Market Value	\$149,687,618
Net New Investment	\$-142,772
Investment Gains/(Losses)	\$-8,579,838
Ending Market Value	\$140,965,008

Performance vs CAI Non US Fixed Income (Unhedged) (Gross)

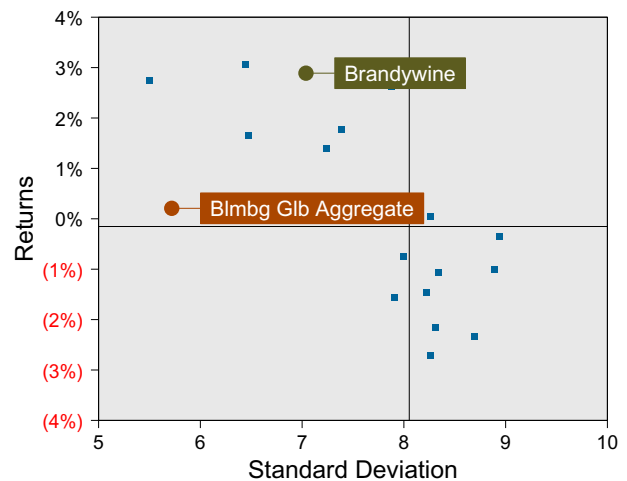


10th Percentile	(4.38)	(0.88)	7.90	1.28	0.53	2.77	5.05	5.70
25th Percentile	(7.24)	(5.94)	4.49	(0.90)	(0.17)	1.69	4.60	4.86
Median	(9.92)	(8.65)	2.28	(1.92)	(1.70)	(0.15)	3.48	3.99
75th Percentile	(10.42)	(9.85)	0.52	(2.97)	(2.62)	(1.49)	2.74	3.33
90th Percentile	(11.22)	(10.30)	(0.88)	(3.98)	(3.32)	(2.37)	2.52	3.18
Brandywine	● (5.74)	(4.15)	5.72	(1.41)	1.16	2.89	5.87	6.69
Blmbg Glb Aggregate	▲ (7.07)	(6.31)	2.09	(0.57)	(0.19)	0.21	3.29	3.66

Relative Return vs Blmbg Glb Aggregate



CAI Non US Fixed Income (Unhedged) (Gross) Annualized Five Year Risk vs Return



UBS Global Asset Management Period Ended December 31, 2016

Investment Philosophy

UBS Global Asset Management's non-US fixed income portfolio's assets are invested in emerging markets debt on an opportunistic basis up to the stated maximum allocation of 5%. The account's non-US fixed income assets will be fully-invested at all times, but such assets may be invested in the UBS US Cash Management Prime Collective Fund for operational and risk management purposes. *Citigroup Non-US Govt Index through 12/31/2009; Bloomberg Aggregate ex-US Index thereafter.

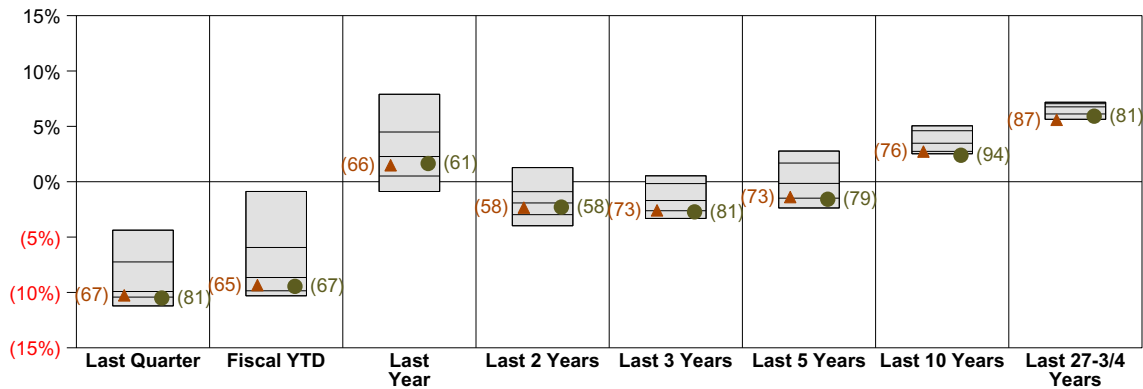
Quarterly Summary and Highlights

- UBS Global Asset Management's portfolio posted a (10.50)% return for the quarter placing it in the 81 percentile of the CAI Non US Fixed Income (Unhedged) group for the quarter and in the 61 percentile for the last year.
- UBS Global Asset Management's portfolio underperformed the Blended Benchmark* by 0.24% for the quarter and outperformed the Blended Benchmark* for the year by 0.16%.

Quarterly Asset Growth

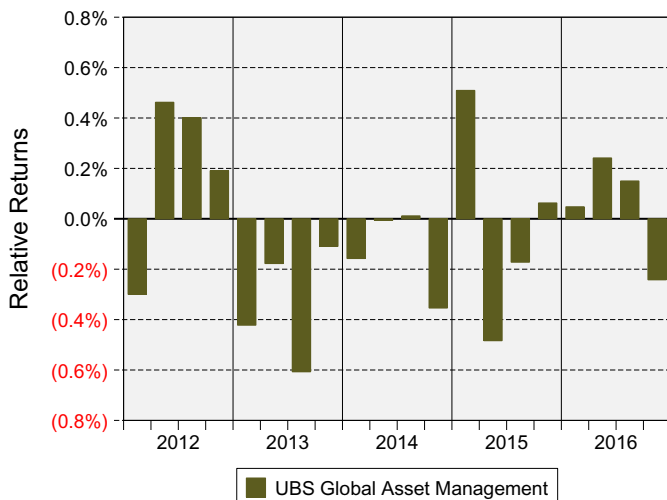
Beginning Market Value	\$111,580,334
Net New Investment	\$-88,191
Investment Gains/(Losses)	\$-11,714,172
Ending Market Value	\$99,777,972

Performance vs CAI Non US Fixed Income (Unhedged) (Gross)

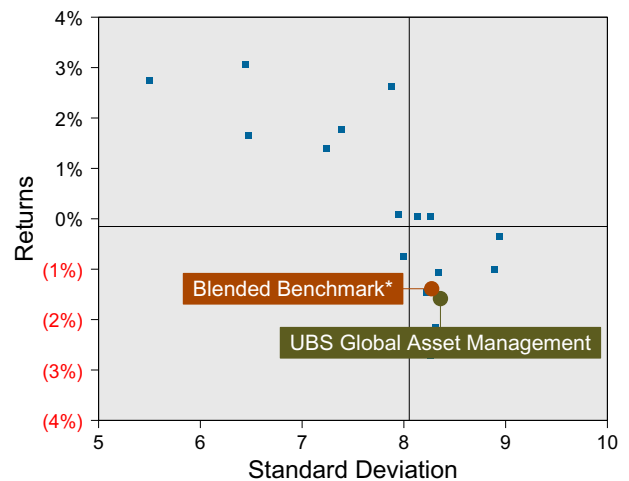


10th Percentile	(4.38)	(0.88)	7.90	1.28	0.53	2.77	5.05	7.18
25th Percentile	(7.24)	(5.94)	4.49	(0.90)	(0.17)	1.69	4.60	7.05
Median	(9.92)	(8.65)	2.28	(1.92)	(1.70)	(0.15)	3.48	6.76
75th Percentile	(10.42)	(9.85)	0.52	(2.97)	(2.62)	(1.49)	2.74	6.12
90th Percentile	(11.22)	(10.30)	(0.88)	(3.98)	(3.32)	(2.37)	2.52	5.64
UBS Global Asset Management	● (10.50)	(9.45)	1.64	(2.29)	(2.72)	(1.58)	2.39	5.92
Blended Benchmark*	▲ (10.26)	(9.34)	1.49	(2.34)	(2.59)	(1.39)	2.72	5.59

Relative Return vs Blended Benchmark*



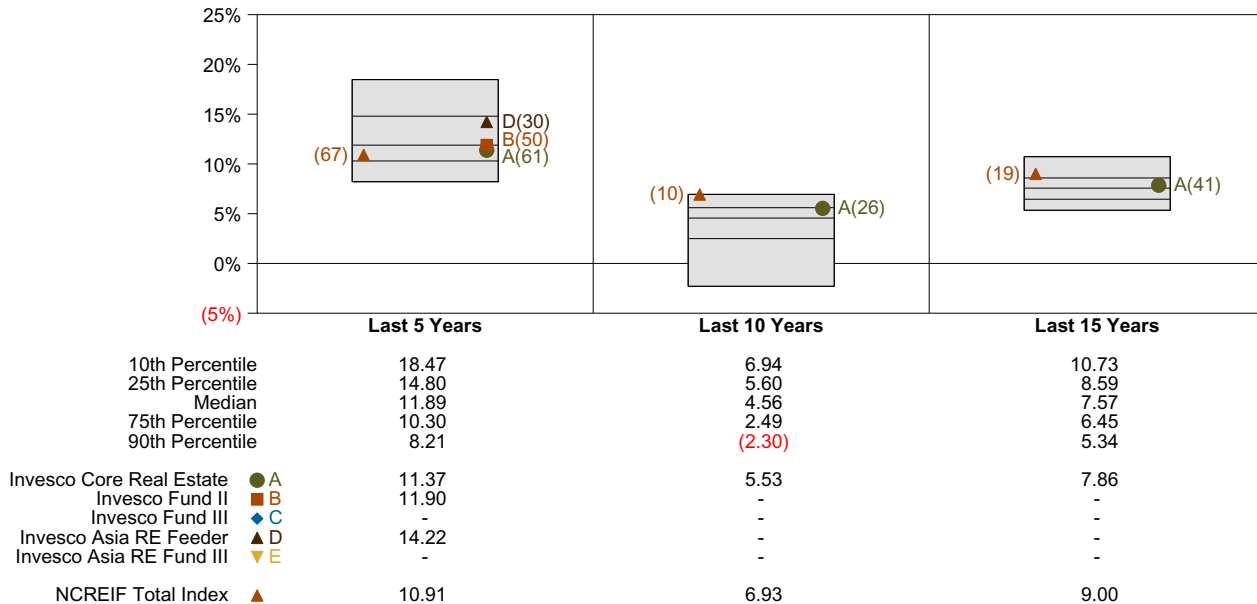
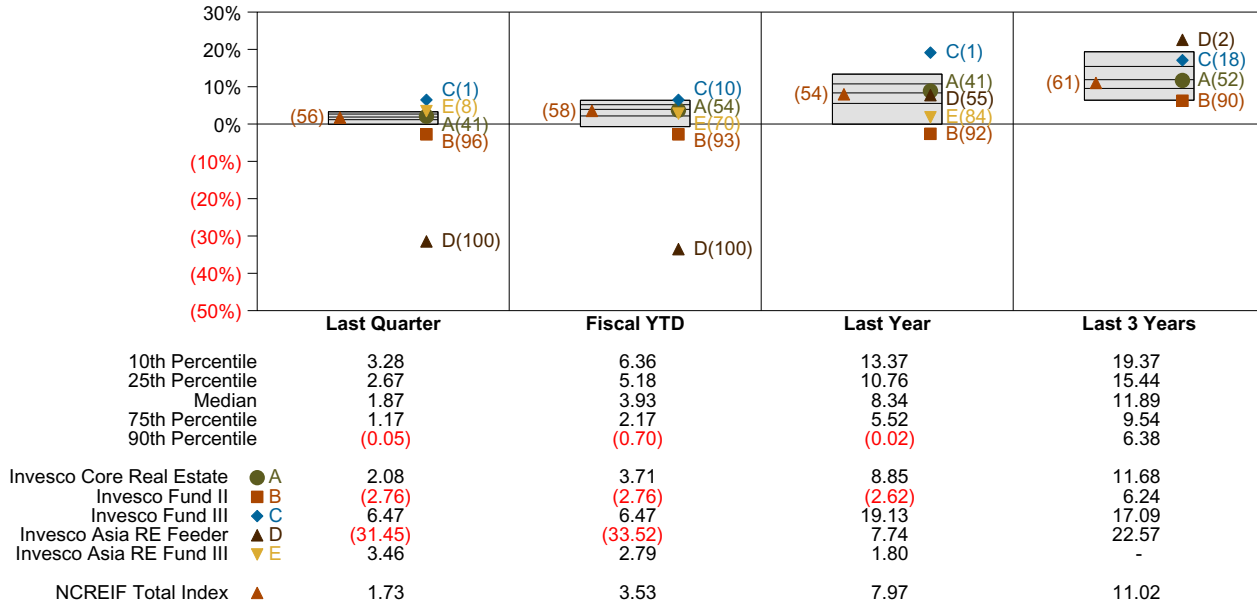
CAI Non US Fixed Income (Unhedged) (Gross) Annualized Five Year Risk vs Return



North Dakota State Investment Board Pension Funds Performance vs CAI Total Real Estate Database Periods Ended December 31, 2016

Return Ranking

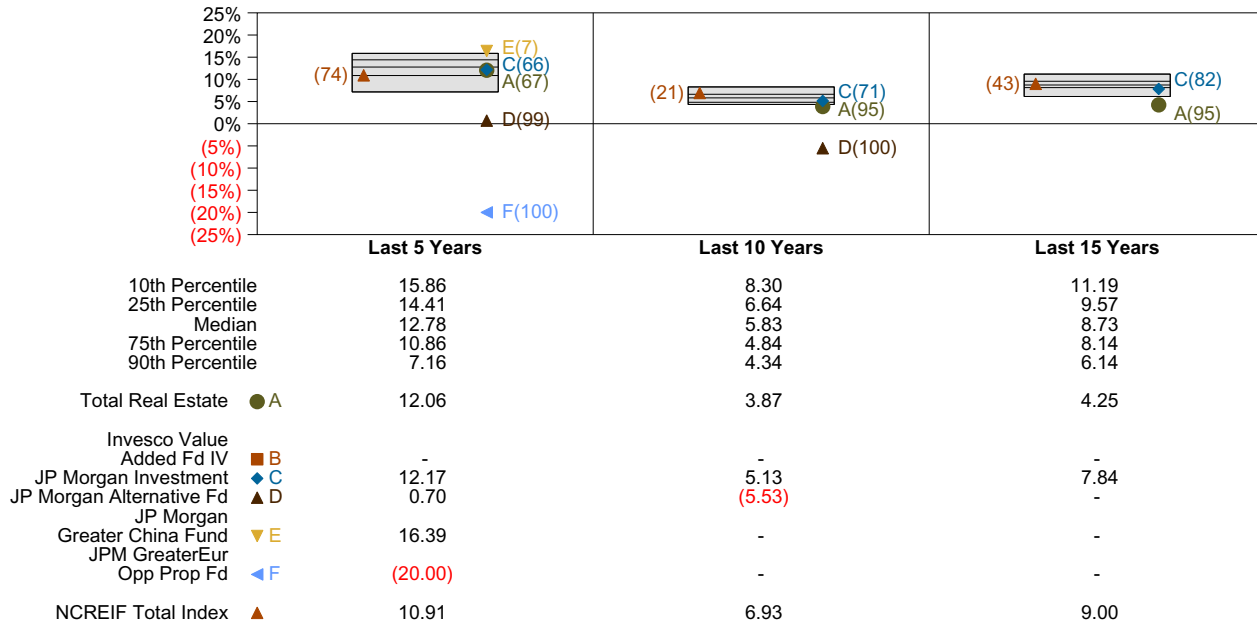
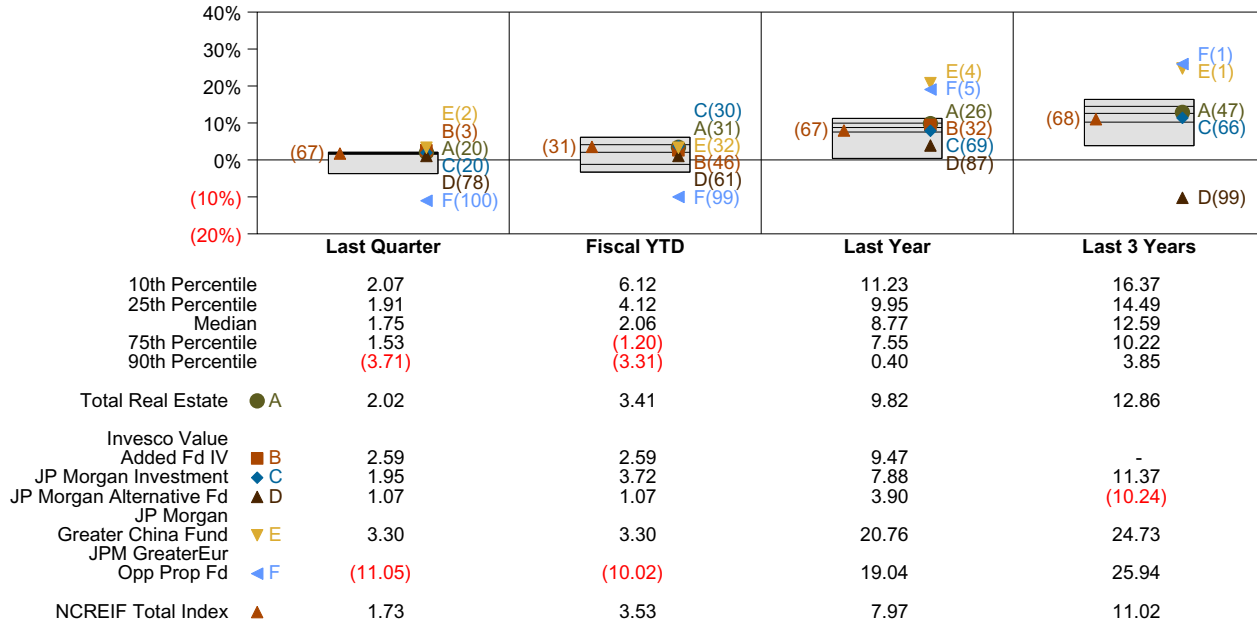
The chart below illustrates fund rankings over various periods versus the CAI Total Real Estate Database. The bars represent the range of returns from the 10th percentile to the 90th percentile for each period for all funds in the CAI Total Real Estate Database. The numbers to the right of the bar represent the percentile rankings of the funds being analyzed. The table below the chart details the rates of return plotted in the graph above.



North Dakota State Investment Board Pension Funds Performance vs CAI Total Real Estate Database Periods Ended December 31, 2016

Return Ranking

The chart below illustrates fund rankings over various periods versus the CAI Total Real Estate Database. The bars represent the range of returns from the 10th percentile to the 90th percentile for each period for all funds in the CAI Total Real Estate Database. The numbers to the right of the bar represent the percentile rankings of the funds being analyzed. The table below the chart details the rates of return plotted in the graph above.



TIR Teredo

Period Ended December 31, 2016

Investment Philosophy

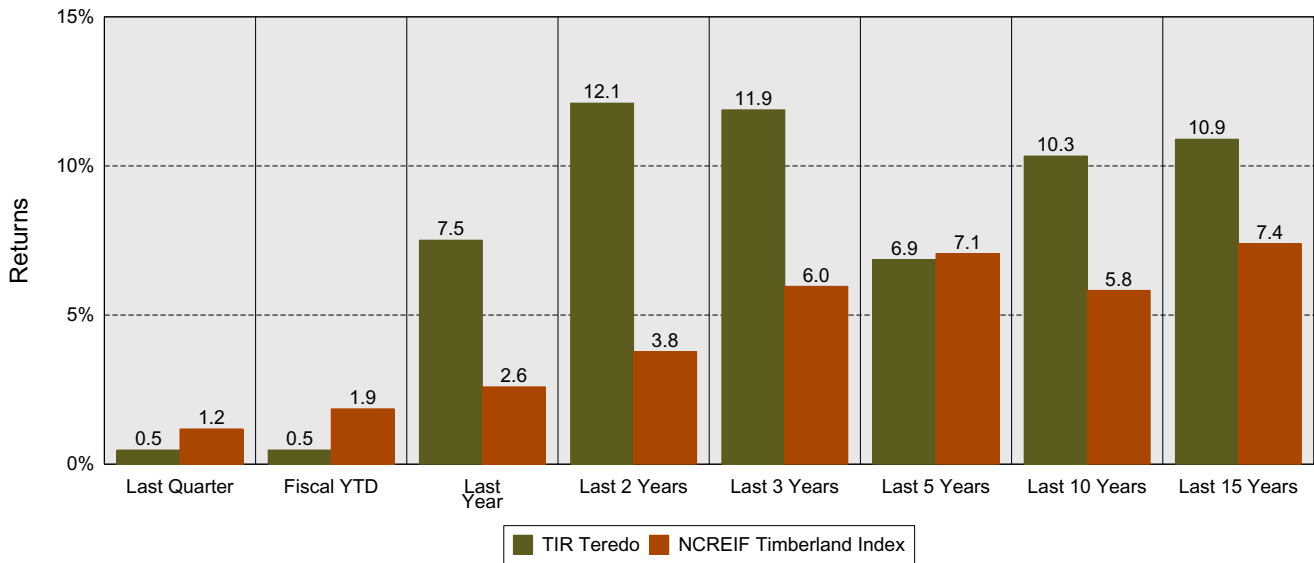
Teredo Timber LLC - The investment objective of Teredo is to provide competitive investment returns from increasing saw timber production through the 20 year term of the partnership. TIR's management strategy is to maximize saw timber volume by applying intensive forest management techniques which accelerate growth through the diameter class distribution. Periodic cash flows are produced from thinning and final harvests of the individual timber stands.

Quarterly Summary and Highlights

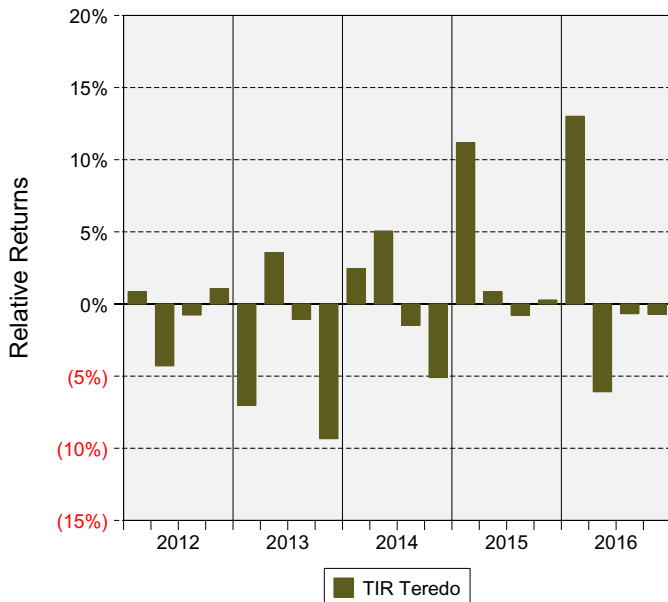
- TIR Teredo's portfolio underperformed the NCREIF Timberland Index by 0.71% for the quarter and outperformed the NCREIF Timberland Index for the year by 4.92%.

Quarterly Asset Growth

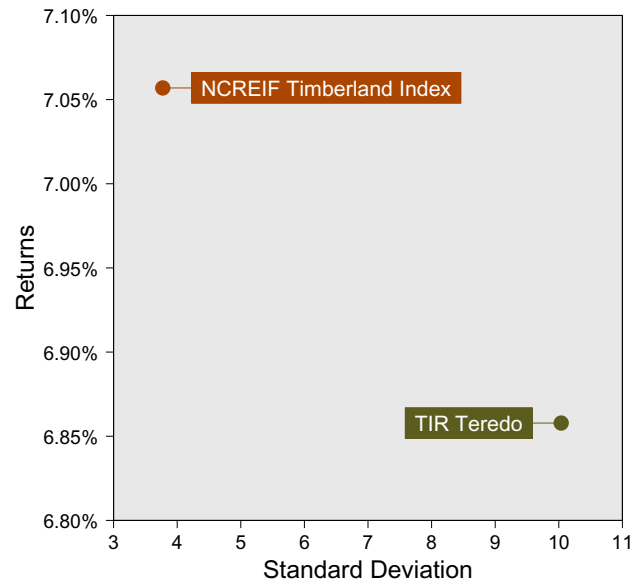
Beginning Market Value	\$33,820,778
Net New Investment	\$0
Investment Gains/(Losses)	\$160,438
Ending Market Value	\$33,981,216



Relative Return vs NCREIF Timberland Index



Annualized Five Year Risk vs Return



TIR Springbank

Period Ended December 31, 2016

Investment Philosophy

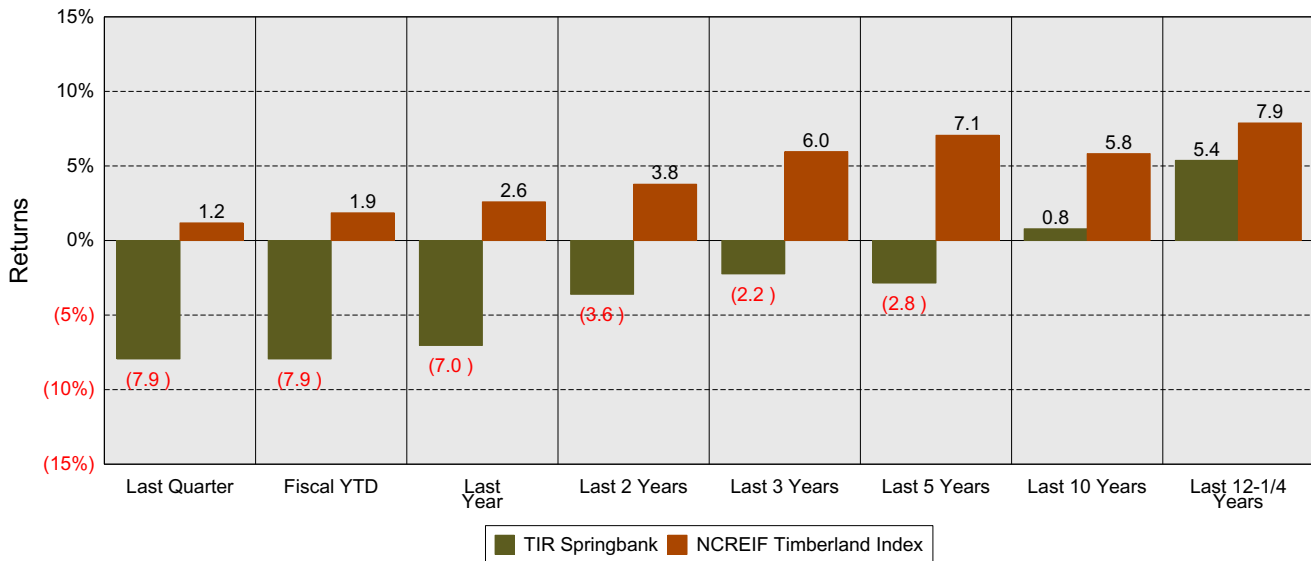
Springbank LLC - The investment objective of Springbank is to maximize long-term investment potential by means of the formation of a dedicated land management group, intensive timber management to increase timber production, the coordination of timber harvesting with land management activities and direct marketing and selective real estate partnerships.

Quarterly Summary and Highlights

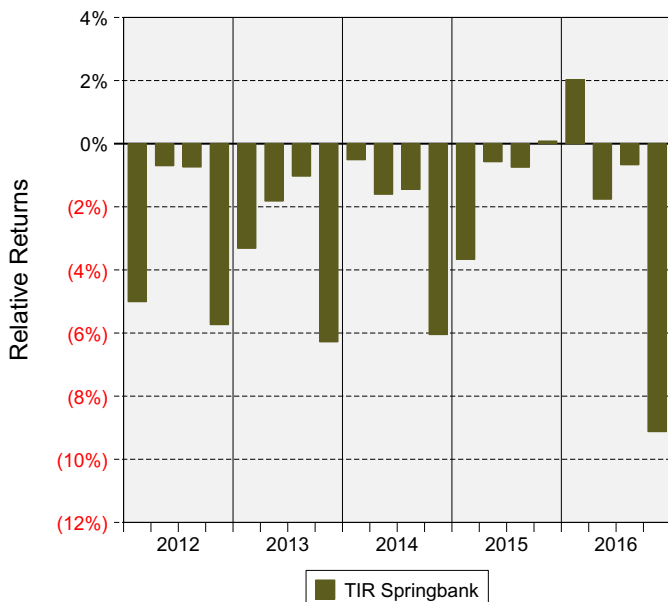
- TIR Springbank's portfolio underperformed the NCREIF Timberland Index by 9.12% for the quarter and underperformed the NCREIF Timberland Index for the year by 9.63%.

Quarterly Asset Growth

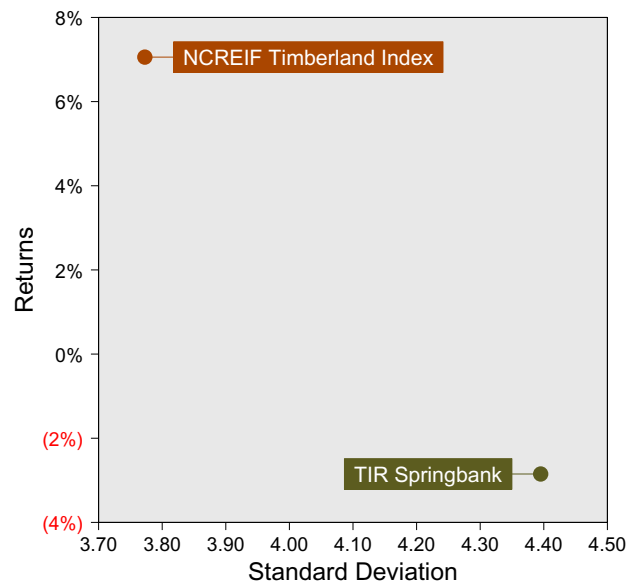
Beginning Market Value	\$118,768,373
Net New Investment	\$-456,000
Investment Gains/(Losses)	\$-9,402,115
Ending Market Value	\$108,910,258



Relative Return vs NCREIF Timberland Index



Annualized Five Year Risk vs Return



JP Morgan Asian Infrastructure Period Ended December 31, 2016

Investment Philosophy

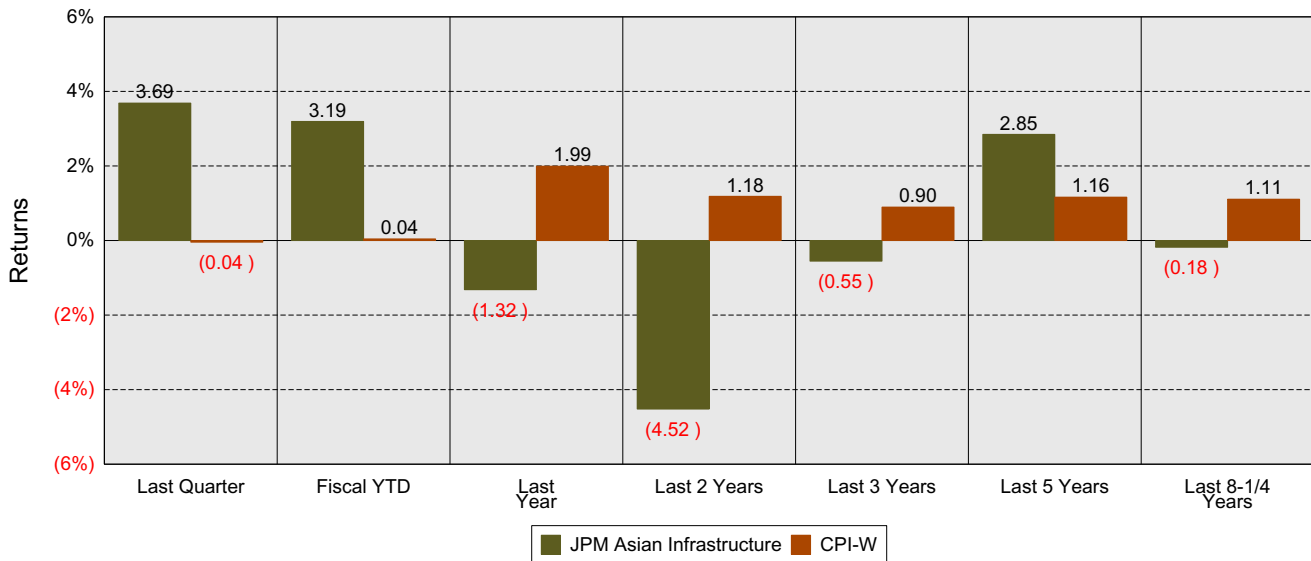
The JPMorgan Asian Infrastructure & Related Resources Opportunity ("AIRRO") Fund seeks to invest in infrastructure and related resources opportunities across the greater Asia Pacific region. The Fund seeks to invest in a broad range of assets, including: core infrastructure, power both from conventional and renewable sources, communications, water and waste-water, public works, urban development and other "social" infrastructure assets and related resources.

Quarterly Summary and Highlights

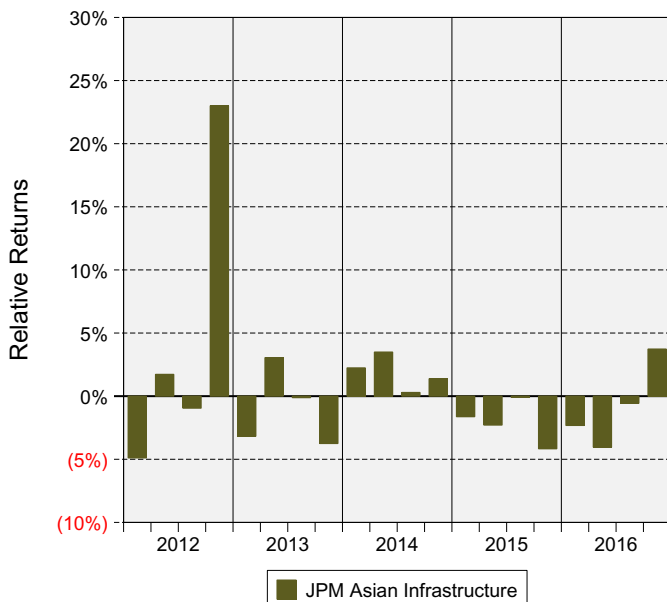
- JPM Asian Infrastructure's portfolio outperformed the CPI-W by 3.73% for the quarter and underperformed the CPI-W for the year by 3.31%.

Quarterly Asset Growth

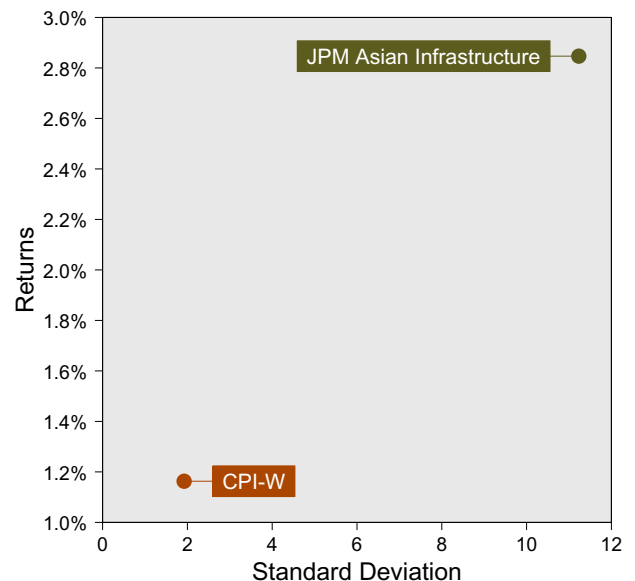
Beginning Market Value	\$28,039,000
Net New Investment	\$151,286
Investment Gains/(Losses)	\$1,039,177
Ending Market Value	\$29,229,463



Relative Return vs CPI-W



Annualized Five Year Risk vs Return



JPM Infrastructure Fund

Period Ended December 31, 2016

Investment Philosophy

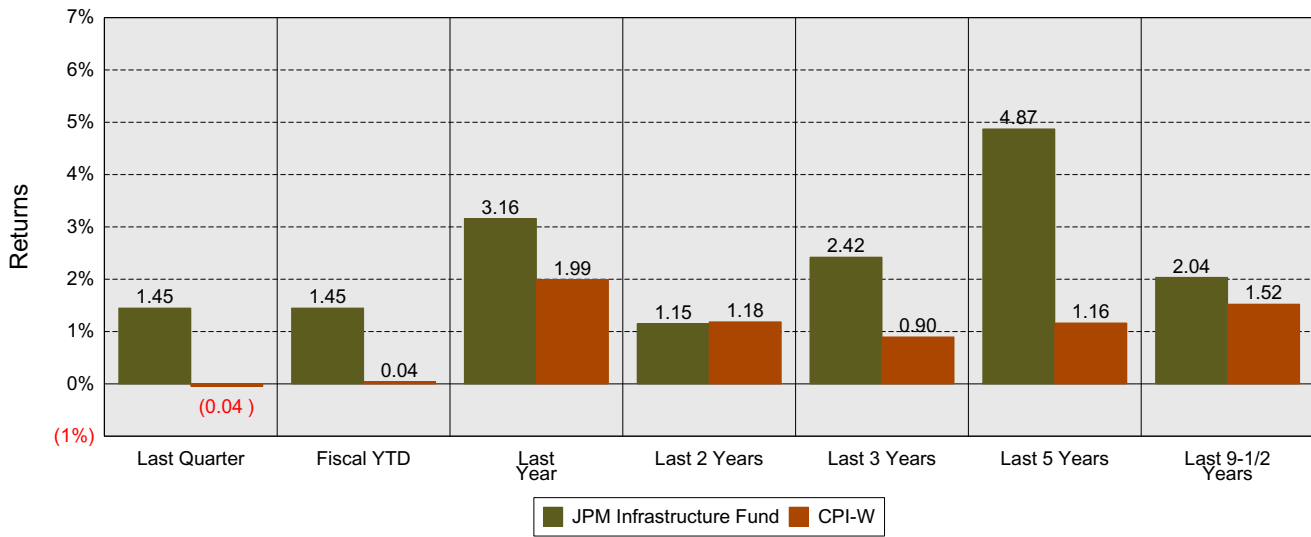
The only open-ended private commingled infrastructure fund in the U.S, the JPMorgan Infrastructure Investments Fund invests in stabilized assets in OECD countries with selected value-added opportunities, across infrastructure industry sub-sectors, including: toll roads, bridges and tunnels; oil and gas pipelines; electricity transmission and distribution facilities; contracted power generation assets; water distribution; waste-water collection and processing; railway lines and rapid rail links; and seaports and airports.

Quarterly Summary and Highlights

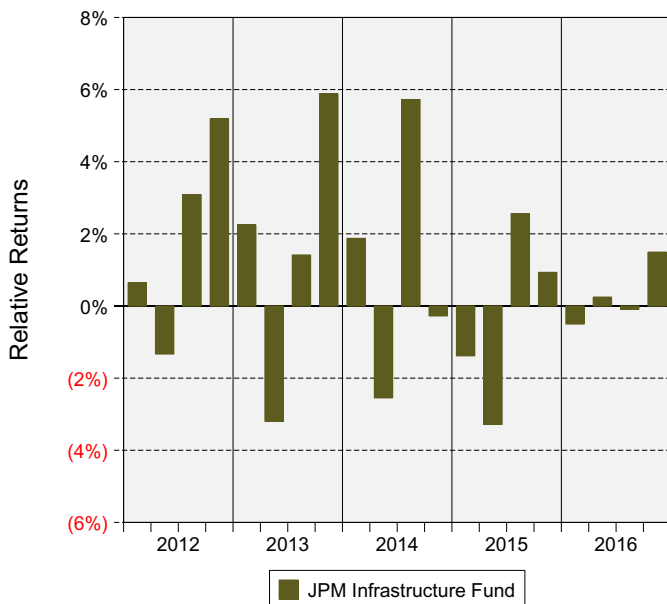
- JPM Infrastructure Fund's portfolio outperformed the CPI-W by 1.49% for the quarter and outperformed the CPI-W for the year by 1.17%.

Quarterly Asset Growth

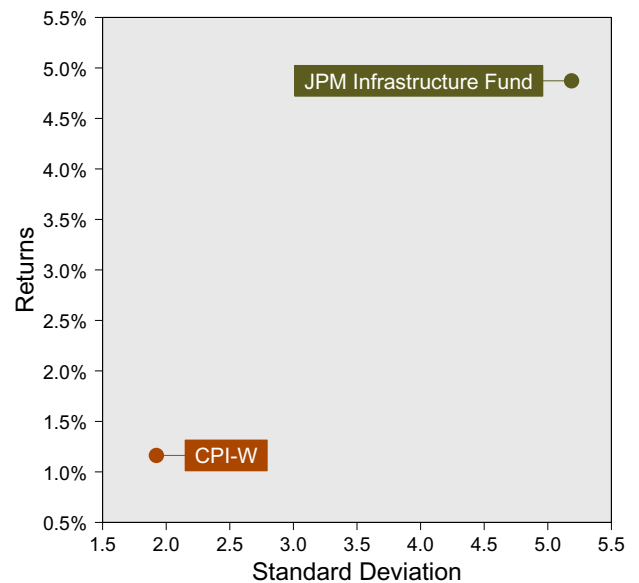
Beginning Market Value	\$142,195,639
Net New Investment	\$7,433,492
Investment Gains/(Losses)	\$2,159,691
Ending Market Value	\$151,788,821



Relative Return vs CPI-W



Annualized Five Year Risk vs Return



Grosvenor Cust. Infrastructure Period Ended December 31, 2016

Investment Philosophy

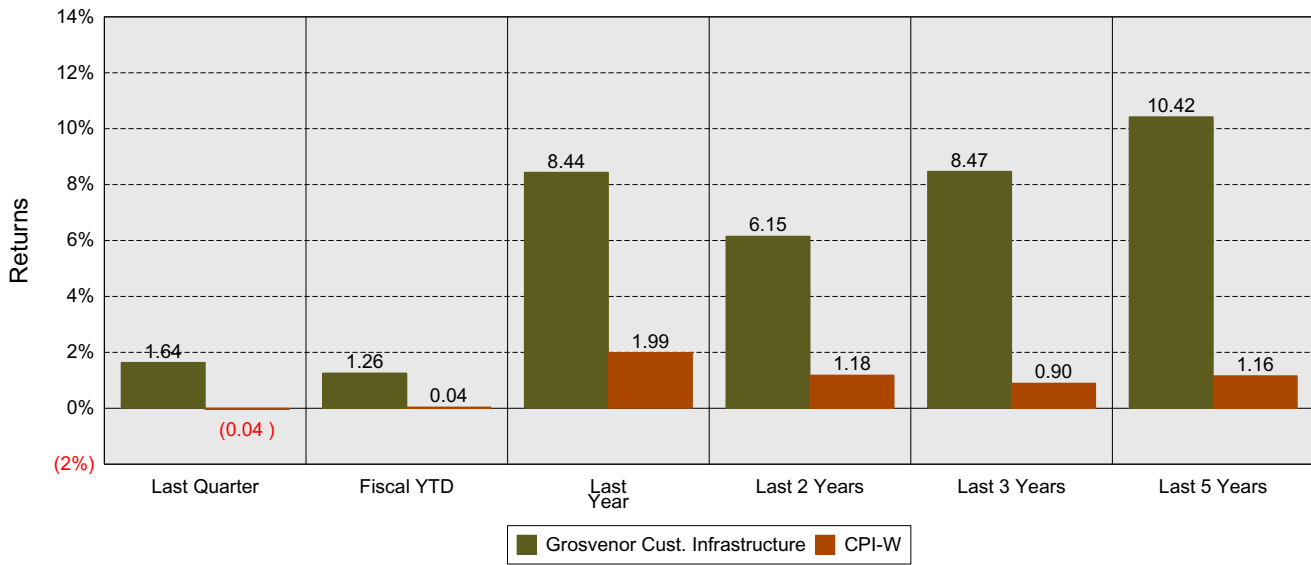
The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified portfolio of primary core and core plus infrastructure funds (30%), co-investments (40%) and opportunistic secondary fund purchases (30%).

Quarterly Summary and Highlights

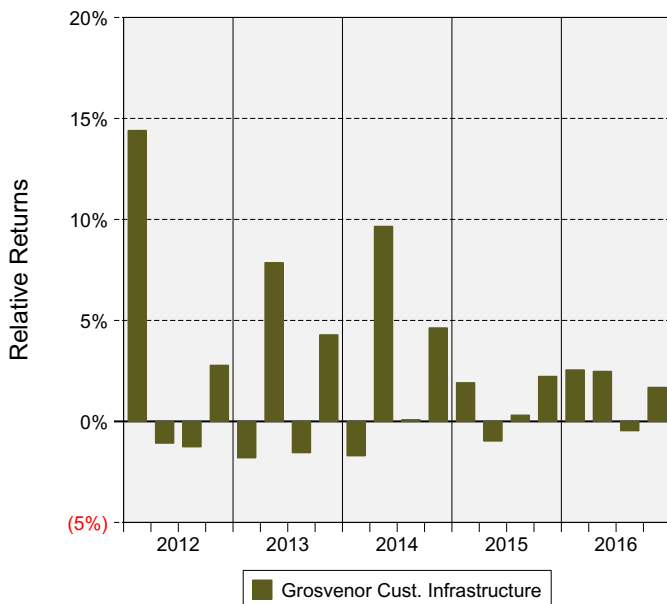
- Grosvenor Cust. Infrastructure's portfolio outperformed the CPI-W by 1.69% for the quarter and outperformed the CPI-W for the year by 6.45%.

Quarterly Asset Growth

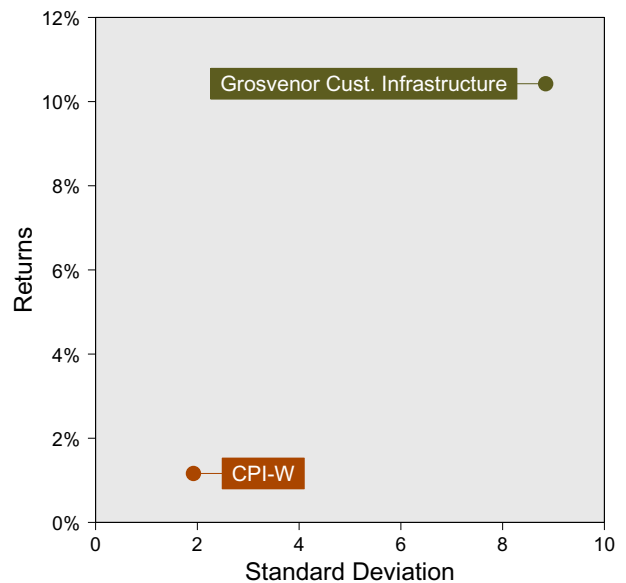
Beginning Market Value	\$39,983,644
Net New Investment	\$-6,598,925
Investment Gains/(Losses)	\$584,288
Ending Market Value	\$33,969,006



Relative Return vs CPI-W



Annualized Five Year Risk vs Return



Grosvenor Cust. Infrastructure II Period Ended December 31, 2016

Investment Philosophy

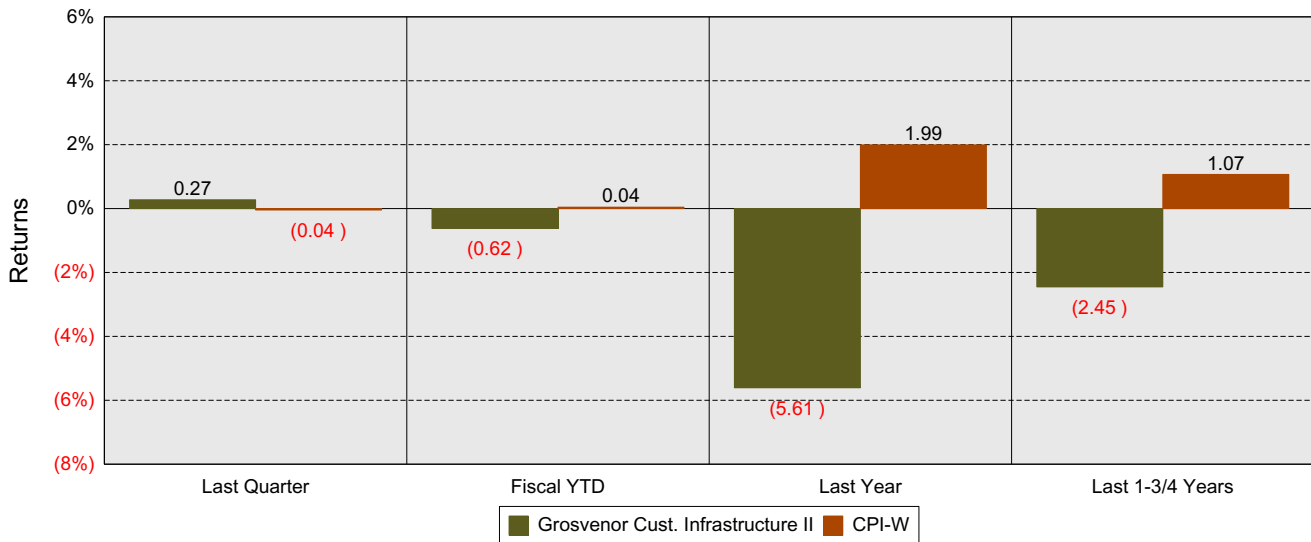
The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified portfolio of primary core and core plus infrastructure funds (30%), co-investments (40%) and opportunistic secondary fund purchases (30%).

Quarterly Summary and Highlights

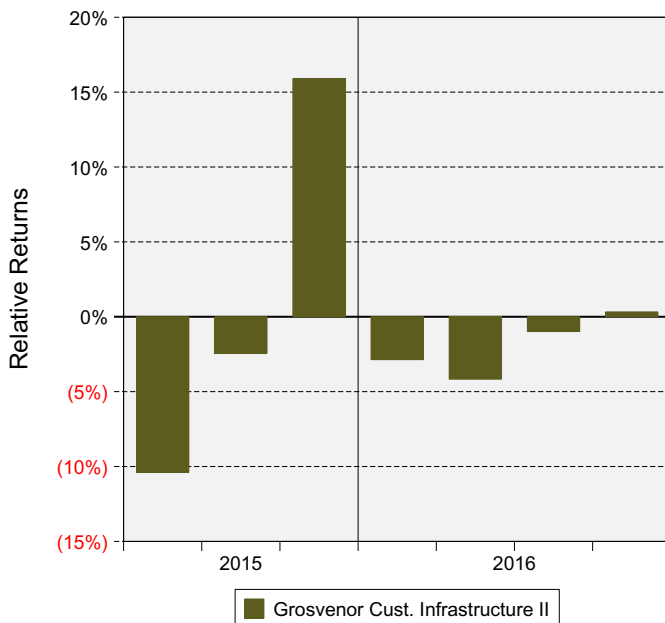
- Grosvenor Cust. Infrastructure II's portfolio outperformed the CPI-W by 0.32% for the quarter and underperformed the CPI-W for the year by 7.60%.

Quarterly Asset Growth

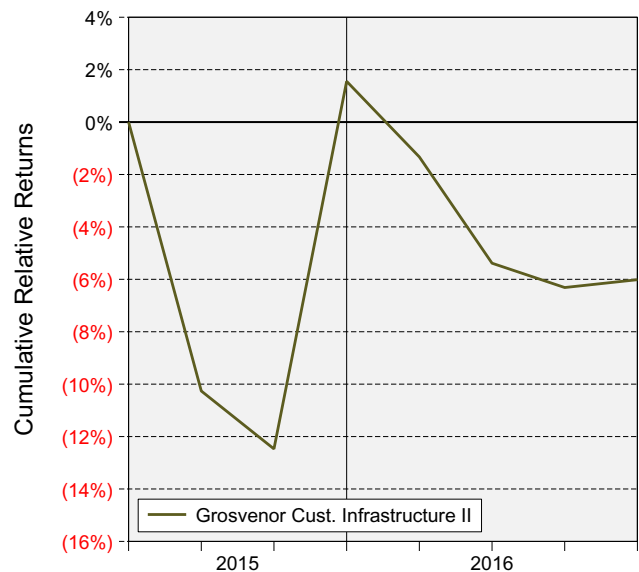
Beginning Market Value	\$3,717,037
Net New Investment	\$1,925,265
Investment Gains/(Losses)	\$12,264
Ending Market Value	\$5,654,566



Relative Return vs CPI-W



Cumulative Returns vs CPI-W



Research and Educational Programs

The Callan Institute provides research that updates clients on the latest industry trends while helping them learn through carefully structured educational programs. Visit www.callan.com/research to see all of our publications, or for more information contact Anna West at 415.974.5060 / institute@callan.com.

New Research from Callan's Experts

2017 Defined Contribution Trends Survey | Callan's 10th Annual DC Trends Survey highlights plan sponsors' key themes from 2016 and expectations for 2017.

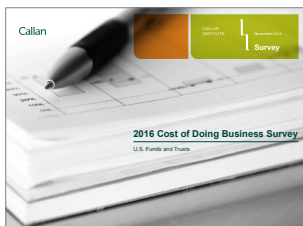
ESG Factors: U.S. Investor Usage Crystallizes | This charticle looks at environmental, social, and governance (ESG) factors from the perspectives of U.S. asset owners and global investment managers, revealing the growing incorporation of ESG factors in investment decision making.



Fixed Income: A Macroeconomic Lightning Rod | Callan's October 2016 Regional Workshop addressed alternative fixed income strategies to deal with the shifting market and economic environment investors face, as the extended period of low yields in the wake of the Global Financial Crisis appears to be ending.

ESG Interest and Implementation Survey | Callan's fourth annual survey on the status of ESG factor integration in the U.S. institutional market reflects responses from 84 funds representing approximately \$843 billion in assets.

2016 Cost of Doing Business Survey | In this survey, Callan compares the costs of administering and operating



funds and trusts across all types of tax-exempt and tax-qualified organizations in the U.S. We identify practices and trends to help institutional investors manage expenses.

ESG and Investors: What, Why, and Who | In this video, Mark Wood, CFA, of Callan's Global Manager Research group explains ESG investing principles and how asset managers can implement them.

Momentum: The Trend Is Your Friend | Callan's director of Hedge Fund Research, Jim McKee, explores the advantages of momentum-based investing strategies, which profit from market trends in whichever direction. He discusses the rationale behind them, how they are defined and harnessed for different diversification needs, and whether they are appropriate for fund sponsors.

Periodicals

Private Markets Trends, Fall 2016 | Gary Robertson, manager of Callan's Private Equity Research group, discusses the steady performance of private markets in 2016, with year-to-date figures tracking very close to 2015's levels.

DC Observer, 3rd Quarter 2016 | This quarter's cover story is "Merging DC Plans: Making the Transition Smooth."

Hedge Fund Monitor, 3rd Quarter 2016 | This quarter's cover story is "Musketeers or Mercenaries..." on the growing appeal of the multi-strategy hedge fund category.

Capital Market Review, 3rd Quarter 2016 | A quarterly macroeconomic newsletter providing thoughtful insights on the economy and recent performance in equity, fixed income, alternatives, international, real estate, and other capital markets.

Events

Miss out on a Callan conference or workshop? Event summaries and speakers' presentations are available on our website: <https://www.callan.com/education/CII/>

Mark your calendars for our **National Conference**, January 23–25, 2017, at the Palace Hotel in San Francisco.

For more information about events, please contact Barb Gerraty: 415.274.3093 / gerraty@callan.com

The Center for Investment Training Educational Sessions

The Center for Investment Training, better known as the “Callan College,” provides a foundation of knowledge for industry professionals who are involved in the investment decision-making process. It was founded in 1994 to provide clients and non-clients alike with basic- to intermediate-level instruction. Our next sessions are:

Introduction to Investments

San Francisco, April 18-19, 2017

San Francisco, July 25-26, 2017

Chicago, October 24-25, 2017

This program familiarizes fund sponsor trustees, staff, and asset management advisors with basic investment theory, terminology, and practices. It lasts one-and-a-half days and is designed for individuals who have less than two years of experience with asset-management oversight and/or support responsibilities. Tuition for the Introductory “Callan College” session is \$2,350 per person. Tuition includes instruction, all materials, breakfast and lunch on each day, and dinner on the first evening with the instructors.

Customized Sessions

The “Callan College” is equipped to customize a curriculum to meet the training and educational needs of a specific organization. These tailored sessions range from basic to advanced and can take place anywhere—even at your office.

Learn more at <https://www.callan.com/education/college/> or contact Kathleen Cunnie: 415.274.3029 / cunnie@callan.com

Education: By the Numbers

500 Attendees (on average) of the Institute's annual National Conference

50+ Unique pieces of research the Institute generates each year

3,500 Total attendees of the “Callan College” since 1994

1980 Year the Callan Institute was founded



“We think the best way to learn something is to teach it. Entrusting client education to our consultants and specialists ensures that they have a total command of their subject matter. This is one reason why education and research have been cornerstones of our firm for more than 40 years.”

Ron Peyton, Chairman and CEO

List of Callan's Investment Manager Clients

Confidential – For Callan Client Use Only

Callan takes its fiduciary and disclosure responsibilities to clients very seriously. We recognize that there are numerous potential conflicts of interest encountered in the investment consulting industry and that it is our responsibility to manage those conflicts effectively and in the best interest of our clients. At Callan, we employ a robust process to identify, manage, monitor and disclose potential conflicts on an on-going basis.

The list below is an important component of our conflicts management and disclosure process. It identifies those investment managers that pay Callan fees for educational, consulting, software, database or reporting products and services. We update the list quarterly because we believe that our fund sponsor clients should know the investment managers that do business with Callan, particularly those investment manager clients that the fund sponsor clients may be using or considering using. Please refer to Callan's ADV Part 2A for a more detailed description of the services and products that Callan makes available to investment manager clients through our Institutional Consulting Group, Independent Adviser Group and Fund Sponsor Consulting Group. Due to the complex corporate and organizational ownership structures of many investment management firms, parent and affiliate firm relationships are not indicated on our list.

Fund sponsor clients may request a copy of the most currently available list at any time. Fund sponsor clients may also request specific information regarding the fees paid to Callan by particular fund manager clients. Per company policy, information requests regarding fees are handled exclusively by Callan's Compliance Department.

Manager Name
1607 Capital Partners, LLC
Aberdeen Asset Management PLC
Acadian Asset Management LLC
AEGON USA Investment Management
Affiliated Managers Group, Inc.
AllianceBernstein
Allianz Global Investors
Allianz Life Insurance Company of North America
American Century Investment Management
Amundi Smith Breeden LLC
Analytic Investors
Angelo, Gordon & Co.
Apollo Global Management
AQR Capital Management
Ares Management LLC
Ariel Investments, LLC
Aristotle Capital Management, LLC
Artisan Holdings
Atlanta Capital Management Co., LLC
Aviva Investors Americas
AXA Investment Managers
Babson Capital Management
Baillie Gifford Overseas Limited
Baird Advisors
Bank of America
Baring Asset Management
Barings LLC
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC
BlackRock
BMO Global Asset Management
BNP Paribas Investment Partners
BNY Mellon Asset Management
Boston Partners
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC
Brown Brothers Harriman & Company

Manager Name
Cambiar Investors, LLC
Capital Group
CastleArk Management, LLC
Causeway Capital Management
Channing Capital Management, LLC
Chartwell Investment Partners
ClearBridge Investments, LLC
Cohen & Steers Capital Management, Inc.
Columbia Management Investment Advisers, LLC
Columbia Threadneedle Investments
Columbus Circle Investors
Corbin Capital Partners, L.P.
Cornerstone Capital Management
Cramer Rosenthal McGlynn, LLC
Credit Suisse Asset Management
Crestline Investors, Inc.
D.E. Shaw Investment Management, L.L.C.
Delaware Investments
DePrince, Race & Zollo, Inc.
Deutsche Asset Management
Diamond Hill Capital Management, Inc.
Duff & Phelps Investment Mgmt. Co.
Eagle Asset Management, Inc.
EARNEST Partners, LLC
Eaton Vance Management
Epoch Investment Partners, Inc.
Fayez Sarofim & Company
Federated Investors
Fidelity Institutional Asset Management
Fiera Capital Global Asset Management
First Eagle Investment Management, LLC
First Hawaiian Bank Wealth Management Division
First Quadrant L.P.
Fisher Investments
Fort Washington Investment Advisors, Inc.
Franklin Templeton Institutional
Fred Alger Management, Inc.

Manager Name
Fuller & Thaler Asset Management, Inc.
GAM (USA) Inc.
GE Asset Management
GMO
Goldman Sachs Asset Management
Guggenheim Investments
GW&K Investment Management
Harbor Capital Group Trust
Hartford Funds
Hartford Investment Management Co.
Henderson Global Investors
Holland Capital Management
Hotchkis & Wiley Capital Management, LLC
HSBC Global Asset Management
Income Research + Management, Inc.
Insight Investment Management Limited
Institutional Capital LLC
INTECH Investment Management, LLC
Invesco
Investec Asset Management
Ivy Investments
Janus Capital Management, LLC
Jennison Associates LLC
Jensen Investment Management
J.P. Morgan Asset Management
KeyCorp
Lazard Asset Management
Legal & General Investment Management America
Lincoln National Corporation
LMCG Investments, LLC
Logan Capital Management
Logan Circle Partners, L.P.
Longview Partners
Loomis, Sayles & Company, L.P.
Lord Abbett & Company
Los Angeles Capital Management
LSV Asset Management
MacKay Shields LLC
Man Investments Inc.
Manning & Napier Advisors, LLC
Manulife Asset Management
Martin Currie Inc.
Mellon Capital Management
MFS Investment Management
MidFirst Bank
Mondrian Investment Partners Limited
Montag & Caldwell, LLC
Morgan Stanley Investment Management
Mountain Lake Investment Management LLC
MUFG Union Bank, N.A.
Neuberger Berman
Newton Investment Management (fka Newton Capital Management)
Nicholas Investment Partners
Nikko Asset Management Co., Ltd.
Northern Trust Asset Management
Nuveen Investments, Inc.
OFI Global Asset Management
Old Mutual Asset Management

Manager Name
Opus Capital Management Inc.
Pacific Investment Management Company
Parametric Portfolio Associates
Peregrine Capital Management, Inc.
PGIM
PGIM Fixed Income
Pictet Asset Management Ltd.
PineBridge Investments
Pinnacle Asset Management L.P.
Pioneer Investments
PNC Capital Advisors, LLC
Principal Global Investors
Private Advisors, LLC
Putnam Investments, LLC
QMA (Quantitative Management Associates)
RBC Global Asset Management
Regions Financial Corporation
RidgeWorth Capital Management, Inc.
Rockefeller & Co., Inc.
Rothschild Asset Management, Inc.
Russell Investments
Santander Global Facilities
Schroder Investment Management North America Inc.
Scout Investments
SEI Investments
Smith, Graham & Co. Investment Advisors, L.P.
Smith Group Asset Management
Standard Life Investments Limited
Standish
State Street Global Advisors
Stone Harbor Investment Partners, L.P.
Systematic Financial Management
T. Rowe Price Associates, Inc.
Taplin, Canida & Habacht
The Boston Company Asset Management, LLC
The Davis Companies
The Hartford
The London Company
The TCW Group, Inc.
Thompson, Siegel & Walmsley LLC
Timberland Investment Resources, LLC
Tri-Star Trust Bank
UBS Asset Management
Van Eck Global
Versus Capital Group
Victory Capital Management Inc.
Vontobel Asset Management, Inc.
Voya Financial
Voya Investment Management (fka ING)
Waddell & Reed Asset Management Group
WCM Investment Management
WEDGE Capital Management
Wellington Management Company, LLP
Wells Capital Management
Western Asset Management Company
William Blair & Company
Windham Capital Management, LLC

December 31, 2016



North Dakota State Investment Board Insurance Trust

Investment Measurement Service
Quarterly Review

The following report was prepared by Callan Associates Inc. ("CAI") using information from sources that include the following: fund trustee(s); fund custodian(s); investment manager(s); CAI computer software; CAI investment manager and fund sponsor database; third party data vendors; and other outside sources as directed by the client. CAI assumes no responsibility for the accuracy or completeness of the information provided, or methodologies employed, by any information providers external to CAI. Reasonable care has been taken to assure the accuracy of the CAI database and computer software. Callan does not provide advice regarding, nor shall Callan be responsible for, the purchase, sale, hedge or holding of individual securities, including, without limitation securities of the client (i.e., company stock) or derivatives in the client's accounts. In preparing the following report, CAI has not reviewed the risks of individual security holdings or the conformity of individual security holdings with the client's investment policies and guidelines, nor has it assumed any responsibility to do so. Advice pertaining to the merits of individual securities and derivatives should be discussed with a third party securities expert. Copyright 2017 by Callan Associates Inc.

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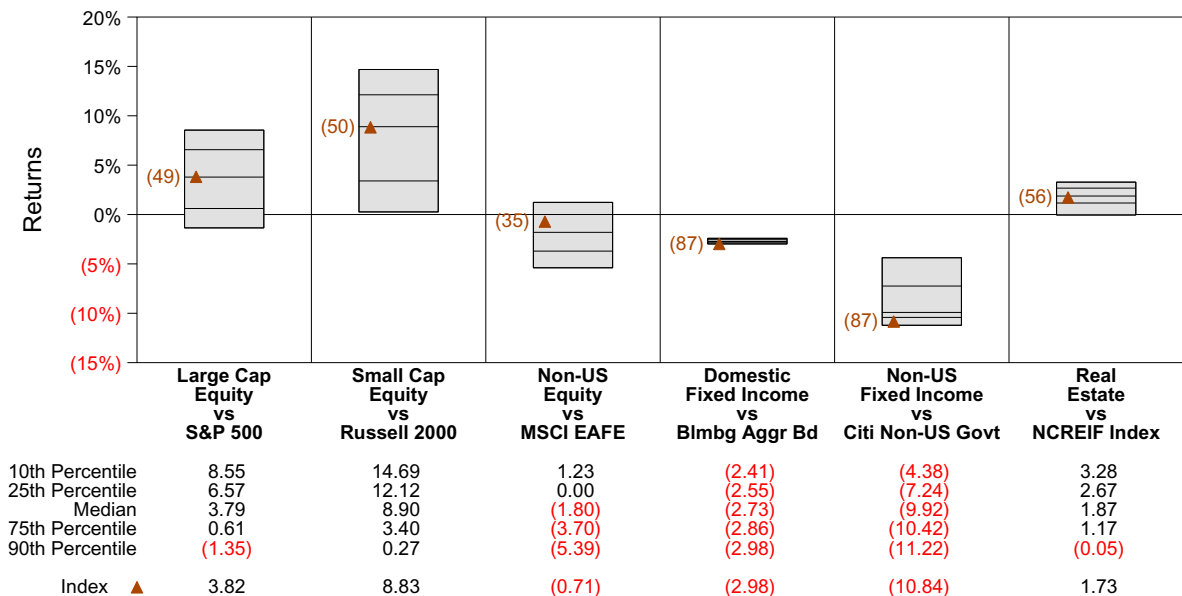
Market Overview

Active Management vs Index Returns

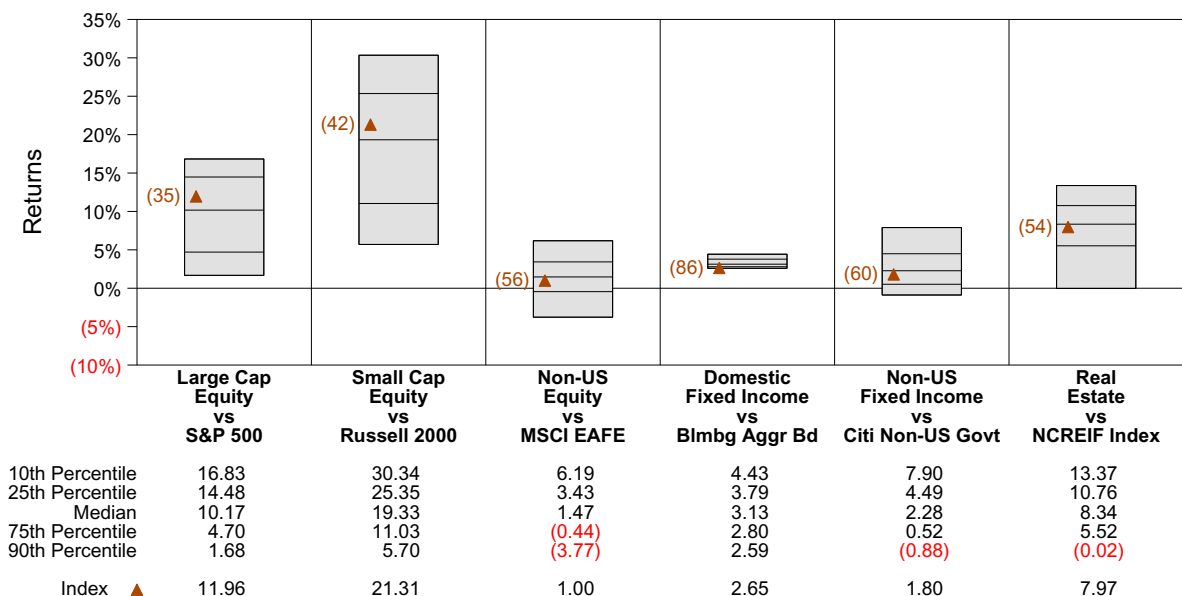
Market Overview

The charts below illustrate the range of returns across managers in Callan's Separate Account database over the most recent one quarter and one year time periods. The database is broken down by asset class to illustrate the difference in returns across those asset classes. An appropriate index is also shown for each asset class for comparison purposes. As an example, the first bar in the upper chart illustrates the range of returns for domestic equity managers over the last quarter. The triangle represents the S&P 500 return. The number next to the triangle represents the ranking of the S&P 500 in the Large Cap Equity manager database.

Range of Separate Account Manager Returns by Asset Class One Quarter Ended December 31, 2016



Range of Separate Account Manager Returns by Asset Class One Year Ended December 31, 2016





Fourth Quarter 2016

A Sentimental Journey

ECONOMY

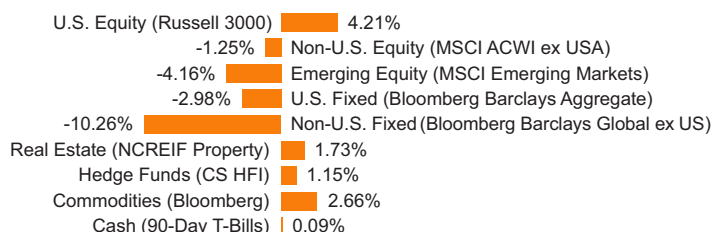
2 Real GDP grew 1.9% in the fourth quarter and **PAGE** 1.6% for the year. The dollar strengthened, raising the cost of exports. The unemployment rate stood at 4.7% at the end of the year, the lowest since August 2007.

Friends Mattered

FUND SPONSOR

4 Funds faced a tough **PAGE** fourth quarter. Taft-Hartley plans fared best, up 1.20%, while corporate funds had the weakest returns, falling 0.09%. Results stemmed primarily from how they chose “friends” in the securities markets.

Broad Market Quarterly Returns



Sources: Bloomberg Barclays, Bloomberg, Credit Suisse Hedge Index, Merrill Lynch, MSCI, NCREIF, Russell Investment Group

Election Rally

U.S. EQUITY

6 The **S&P 500 Index** hit **PAGE** an all-time high during the quarter and ended up 3.82% amid a bullish rally in the wake of the presidential election and a string of encouraging economic reports. Value dominated growth during the quarter, and small cap particularly benefited from Trump-fueled enthusiasm.

A Depressing Dollar

NON-U.S. EQUITY

9 The dollar's strength **PAGE** hampered returns for U.S. investors from non-U.S. equity markets in the fourth quarter; local investors fared better. For the year most world stock markets posted positive results, driven by economic improvements, accommodative central bank policies, and price hikes for commodities.

Treacherous Treasuries

U.S. FIXED INCOME

12 The **Bloomberg Barclays U.S. Aggregate Bond Index** **PAGE** fell 2.98% during the tumultuous quarter, but ended up 2.65% for the year. Rising yields sent returns across the fixed income sector down for the quarter, and spreads tightened as record new bond issuances met strong global demand.

Big-League Yields

NON-U.S. FIXED INCOME

15 Yields overseas **PAGE** increased and the dollar surged, weighing heavily on sovereign debt performance. The **Bloomberg Barclays Global Aggregate ex US** fell 10.26%. Geopolitical risk dominated the quarter, with the U.S. election, the Brexit vote, and a referendum in Italy.

Rates Trump Fundamentals

REAL ESTATE

17 The **NCREIF Property Index** again turned in **PAGE** its worst performance since the first quarter of 2010, and the **NCREIF Open End Diversified Core Equity Index** barely eclipsed the third quarter's five-year low return. U.S. REITs outperformed global REITs, but still posted negative returns.

Down but Far From Out

PRIVATE EQUITY

19 Company investments **PAGE** and exits trended down during the year and the quarter for both buyouts and venture capital, but activity continued at relatively high levels (except for IPOs). The one other anomaly was that the announced dollar volume for buyouts in 2016 reached an eight-year high.

Making Alpha Great Again

HEDGE FUNDS

20 The **Credit Suisse Hedge Fund Index** **PAGE** advanced 1.15% in the quarter, while the **Callan Hedge Fund-of-Funds Database**, a proxy for live portfolios, grew 1.33%. The best-performing strategy was *Global Macro* (+4.59%), while *Managed Futures* (-5.65%) took the worst hit.

A Case of the Jitters

DEFINED CONTRIBUTION

21 The average DC plan **PAGE** gained 3.92% in the third quarter, as measured by the Callan DC Index™, but trailed the Age 45 Target Date Fund's return of 4.53%. Plan balances grew 3.67%, although money flowed out of plans on a net basis at the highest level since the third quarter of 2006.

A Sentimental Journey

ECONOMY | Jay Kloepfer

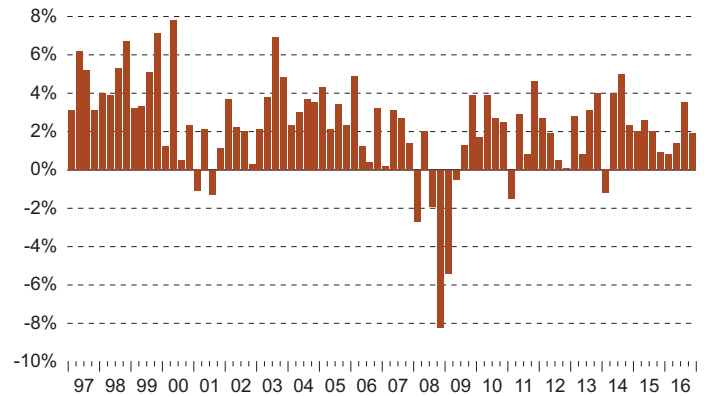
Last year turned out to be a tumultuous one, with two essentially non-economic events jolting the capital markets for reasons solely related to investor sentiment: the U.K. Brexit vote in June and the U.S. presidential election in November. In both instances, wild swings in sentiment and in confidence about the future moved markets around the globe without regard to the underlying economic data. Interest rates and the stock market were taken on a wild ride through the year, with stocks plunging through the summer and then surging following the U.S. election, and interest rates sliding while bonds rallied, only to see rates head back up in a hurry in November and December. This journey was driven almost entirely by sentiment rather than any sudden changes in economic fortune or financial fundamentals.

Real GDP growth in the U.S. came in at a modest 1.9% in the fourth quarter, down from the 3.5% gain in the third quarter. Combined with the weak growth in the first two quarters, total GDP growth for the year was 1.6%, down from the 2.6% gain in 2015. A sustained inventory correction that began in 2015 hung a black cloud over business sentiment during the first half of 2016, and the lingering effect of the bust in energy-sector investment spurred by the collapse in oil prices in 2015 held back economic growth for much of the year. The dollar strengthened over the course of the year, raising the cost of U.S. exports. The stronger dollar combined with anemic growth in Europe and Japan and slowing growth in developing markets held back demand for U.S. exports, while suppressing the cost of imports and driving demand for them higher. Imports are a negative in the GDP calculation and weigh on the measure of total GDP growth. As a result, net exports (exports minus imports) subtracted a hefty 1.7% from GDP growth during the fourth quarter, a reduction equal to the 1.7% gain provided by growth in consumption, which accounts for 70% of total GDP.

One bright spot in the fourth quarter GDP report was a rebound in fixed non-residential investment, which means capital spending: equipment, structures, and intellectual property. To give an

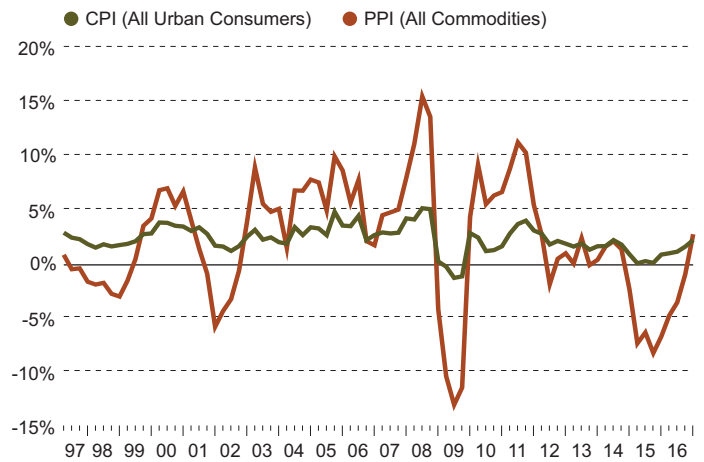
Quarterly Real GDP Growth

(20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

idea of just how depressed the domestic oil and gas industry got, the drilling rig count published by Baker Hughes dropped to a 71-year low of 404 in May 2016; the count rebounded to more than 650 by the end of the year, as energy prices appear to have moved off of a bottom. The downward pressure on capital spending from energy has therefore abated, and capital spending was further aided in the third and fourth quarters by a rebound in aircraft investment.

Consumption spending rose 2.5%, leading GDP gains, supported by gains in real disposable income and household net worth. As the year drew to a close, household finances appeared to be in great shape on an aggregate basis, helped by the post-election stock market rally, rising home prices, and almost a decade of restraint in consumer borrowing. Consumer sentiment indices took big hits in October as the U.S. election loomed, only to spike back up in November and December to levels last seen in 2004. The job market has cooperated, showing a strong 204,000 gain in November after a weak October report, and adding another 156,000 in December. The unemployment rate is now 4.7%, near a nine-year low and well below any target once articulated by policymakers as sufficient to handle a rise in interest rates.

With the economy at or near full employment, interest in inflation has perked up once again, although the measures of inflation remain relatively benign. The headline all-urban CPI was up 2.1% in December year-over-year, and core inflation (less food and energy) rose 2.2%, while the GDP deflator used by the Fed to target inflation was up 2.2%. Energy prices dragged down headline inflation until the second half of 2016, when the energy index increased for four consecutive months through December. Tight labor markets, confident consumers, and a potential for continued capital spending all point to the chance for inflation to move beyond the 1% to 2% range in which it has been bound for the past several years; countering this upward pressure is the strong U.S. dollar, which allows the U.S. to import deflationary pressure through falling import prices.

The Long-Term View

Index	2016 4th Qtr	Periods ended Dec. 31, 2016			
		1 Year	5 Yrs	10 Yrs	25 Yrs
U.S. Equity					
Russell 3000	4.21	12.74	14.67	7.07	9.29
S&P 500	3.82	11.96	14.66	6.95	9.15
Russell 2000	8.83	21.31	14.46	7.07	9.69
Non-U.S. Equity					
MSCI EAFE	-0.71	1.00	6.53	0.75	4.95
MSCI Emerging Markets	-4.16	11.19	1.28	1.84	-
S&P ex-U.S. Small Cap	-3.12	3.78	9.67	3.03	6.70
Fixed Income					
Bloomberg Barclays Agg	-2.98	2.65	2.23	4.34	5.63
90-Day T-Bills	0.09	0.33	0.12	0.80	2.71
Bloomberg Barclays Long G/C	-7.84	6.67	4.07	6.85	7.58
Bloomberg Barclays GI Agg ex US	-10.26	1.49	-1.39	2.44	4.73
Real Estate					
NCREIF Property	1.73	7.97	10.91	6.93	8.63
FTSE NAREIT Equity	-2.89	8.52	12.01	5.08	11.13
Alternatives					
CS Hedge Fund	1.15	1.25	4.34	3.75	-
Cambridge PE*	-	3.95	10.89	10.33	14.35
Bloomberg Commodity	2.66	11.77	-8.95	-5.57	2.55
Gold Spot Price	-12.56	8.63	-5.97	6.08	4.82
Inflation – CPI-U	0.00	2.07	1.36	1.81	2.26

*Private equity returns show pooled horizon IRRs for periods ended June 30, 2016. Most recent quarterly data not available.

Sources: Bloomberg Barclays, Bloomberg, Credit Suisse, FTSE, MSCI, NCREIF, Russell Investment Group, Standard & Poor's, Thomson/Cambridge, Bureau of Economic Analysis.

Recent Quarterly Economic Indicators

	4Q16	3Q16	2Q16	1Q16	4Q15	3Q15	2Q15	1Q15
Employment Cost–Total Compensation Growth	2.2%	2.3%	2.3%	1.9%	2.0%	2.0%	2.0%	2.6%
Nonfarm Business–Productivity Growth	-0.2%*	3.1%	-0.2%	-0.6%	-1.7%	2.0%	3.1%	-0.8%
GDP Growth	1.9%	3.5%	1.4%	0.8%	0.9%	2.0%	2.6%	2.0%
Manufacturing Capacity Utilization	74.8%	74.8%	74.9%	75.3%	75.4%	75.6%	75.5%	75.5%
Consumer Sentiment Index (1966=100)	93.2	90.3	92.4	91.5	91.3	90.8	94.2	95.5

*Estimate.

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, IHS Economics, Reuters/University of Michigan.

Friends Mattered

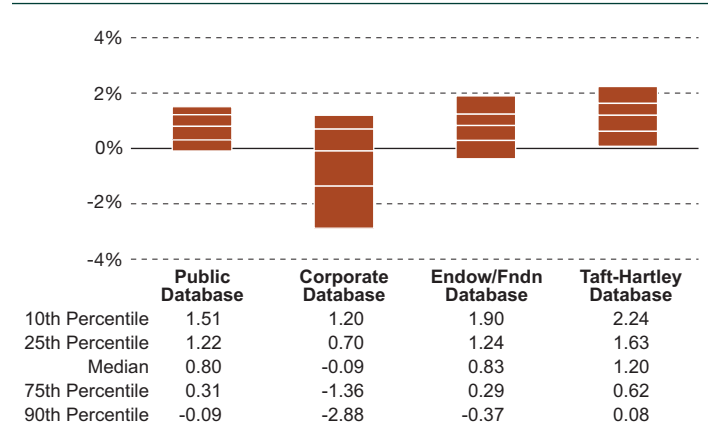
FUND SPONSOR | Kitty Lin

The surprising election results in the U.S.—and the unsurprising December interest rate hike—spurred a significant divergence in U.S. securities markets. Despite some predictions otherwise, U.S. stocks caught fire with the election of what investors saw as a pro-business president who will lower taxes and cut regulations. U.S. fixed income markets, on the other hand, were sharply lower as they prepared for higher interest rates in the future.

These events had a significant impact on the results of institutional funds tracked by Callan, as all types experienced weaker performance compared to the previous quarter. According to Callan’s database, the median return for all fund types was +0.65% in the fourth quarter, compared to +3.44% in the third. But how funds did depended on how well they chose their “friends” in the markets. Corporate plans performed the worst with a -0.09% return and Taft-Hartley plans the best at +1.20%.

Taft-Hartley plans saw better results because they had higher allocations to U.S. equity than other plan types, and the lowest among all types to non-U.S. equity. The **S&P 500 Index** jumped 3.82% for the quarter, while the **MSCI ACWI ex USA Index** dropped 1.25%. Although non-U.S. equities helped performance in the third quarter, major upcoming elections in Europe and Asia may have contributed to the shift in sentiment, contributing to the lackluster performance by stocks in the fourth quarter.

Callan Fund Sponsor Returns for the Quarter



Source: Callan

On the other end of the spectrum, the weak performance by corporate plans may have stemmed from their higher allocations to U.S. fixed income. While Taft-Hartley plans had an average of 25% of their portfolios allocated to U.S. fixed income, corporate plans had an average of 40%, and the lowest allocation to U.S. equity among the types of plans Callan tracks. The **Bloomberg Barclays U.S. Aggregate Index** was off 2.98% for the quarter, whereas the **Russell 2000 Index** jumped 8.83% and the **Russell 1000 Index** rose 3.83%. Although corporate plans had a tough fourth quarter, they topped all other institutional funds in the past year with a +7.88% return. In addition to their solid

Callan Database Median Returns* for Periods ended December 31, 2016

Fund Sponsor	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Public Funds	0.80	7.49	7.49	4.62	8.32	5.25	6.34
Corporate Funds	-0.09	7.88	7.88	4.70	8.02	5.36	6.37
Endowments/Foundations	0.83	7.09	7.09	3.59	7.84	4.94	6.13
Taft-Hartley	1.20	7.81	7.81	5.26	8.87	5.23	6.01

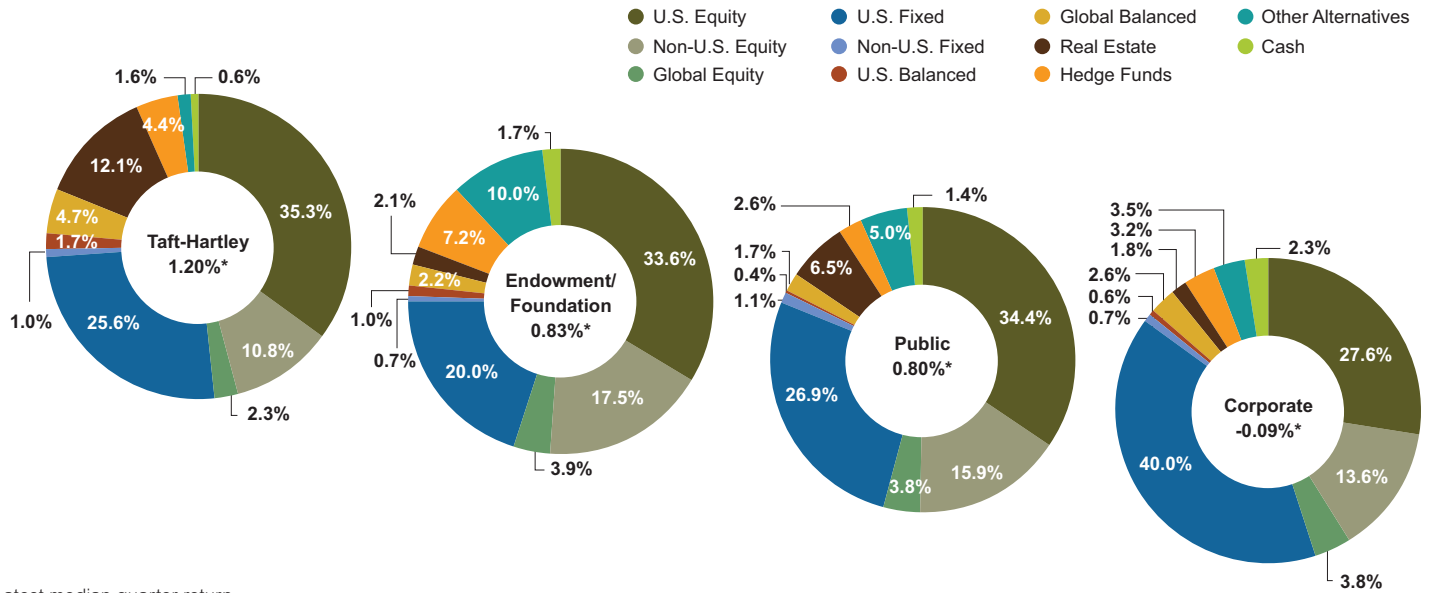
*Returns less than one year are not annualized.

Source: Callan. Callan’s database includes the following groups: public defined benefit, corporate defined benefit, endowments/foundations, and Taft-Hartley plans. Approximately 10% to 15% of the database constituents are Callan’s clients. All database group returns presented gross of fees. Past performance is no guarantee of future results. Reference to or inclusion in this report of any product, service, or entity should not be construed as a recommendation, approval, affiliation, or endorsement of such product, service, or entity by Callan.

performance this quarter, Taft-Hartley plans have performed well over the past one, three, and five years compared to other institutional funds.

By size, small funds led during the fourth quarter with a median return of +0.72% while large funds had the lowest return at +0.56%. On the other hand, large funds performed the best when looking at funds in the 10th percentile, up 1.82%.

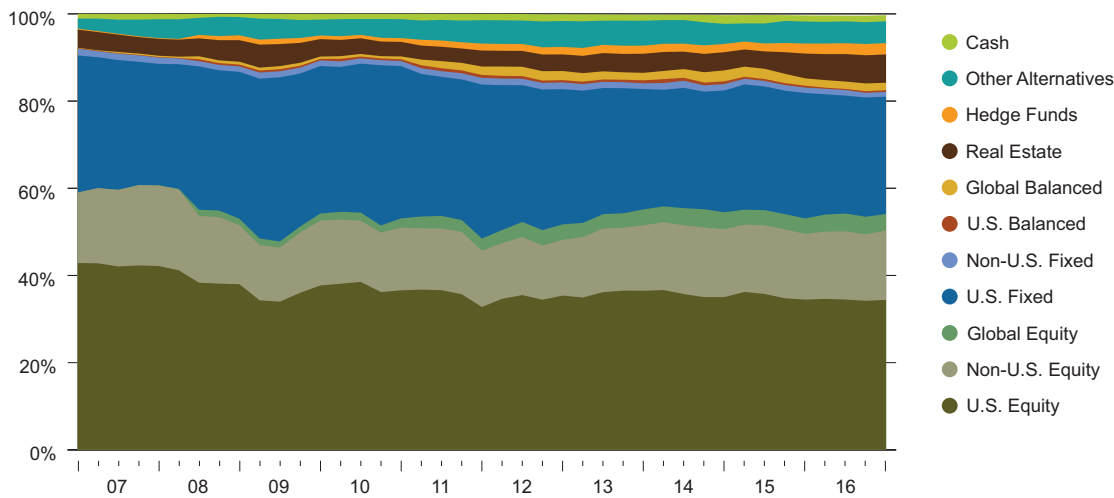
Callan Fund Sponsor Average Asset Allocation



*Latest median quarter return.
 Note: charts may not sum to 100% due to rounding.
 Source: Callan

Callan Public Fund Database Average Asset Allocation

(10 Years)



Source: Callan. Callan's database includes the following groups: public defined benefit, corporate defined benefit, endowments/foundations, and Taft-Hartley plans. Approximately 10% to 15% of the database constituents are Callan's clients. All database group returns presented gross of fees. Past performance is no guarantee of future results. Reference to or inclusion in this report of any product, service, or entity should not be construed as a recommendation, approval, affiliation, or endorsement of such product, service, or entity by Callan.

Election Rally

U.S. EQUITY | Lauren Mathias, CFA

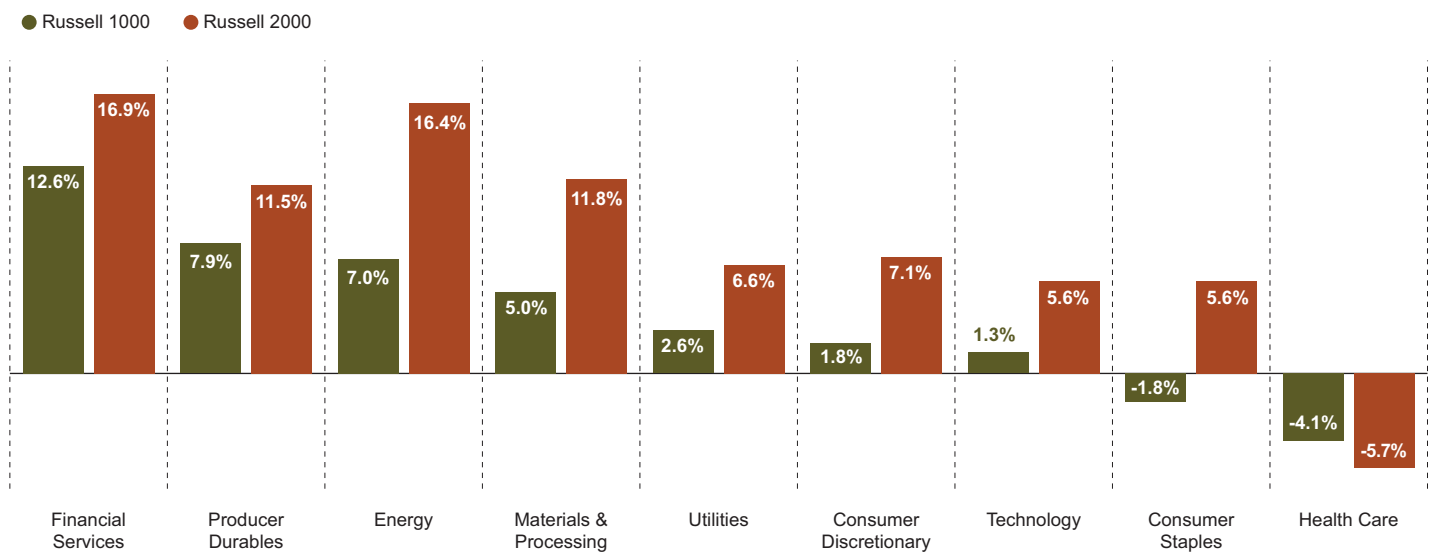
The **S&P 500 Index** notched a +3.82% return for the fourth quarter after reaching an all-time high (2,239) just days before the end of 2016. Even more impressive was the return from small-capitalization companies (**Russell 2000 Index**: +8.83%), as was the divergence between value and growth across the size spectrum (**Russell 1000 Value Index**: +6.68% vs. **Russell 1000 Growth Index**: +1.01%; **Russell 2000 Value Index**: +14.07% vs. **Russell 2000 Growth Index**: +3.57%).

The market in the fourth quarter was trumped by politics as the incoming administration promised to lower personal and corporate income taxes, decrease business and environmental regulation, and increase infrastructure spending. Investors appeared to approve; November saw the highest monthly return of the quarter (+3.70%). Other tailwinds furthered the frenzy, including upwardly revised third-quarter GDP (to +3.5%), subdued initial jobless claims, unemployment at the lowest level in nine years (4.6%), average wage growth of 2.9% in December,

and a surging U.S. dollar; home and automobile prices hit all-time highs, as did consumer confidence. In light of the progress, the Fed Funds rate was increased in December to a range of 0.50% to 0.75%. There are still pockets of uncertainty, however; across the pond the European Central Bank continued quantitative easing and back at home a Trump government could mean higher debt and subsequently inflation. Sentiment is nonetheless revved up, at least for now.

U.S. equity was the preferred market globally; small cap particularly benefited from Trump-fueled enthusiasm. Micro and small capitalization companies outpaced mid and large cap stocks (**Russell Microcap Index**: +10.05%, **Russell 2000 Index**: +8.83%, **Russell Midcap Index**: +3.21%, and **Russell 1000 Index**: +3.83%). Value regained its lead over growth in all capitalizations; the dispersion in style returns was broad across market capitalizations, with the widest (1,050 bps) in small cap (Russell 2000 Value minus Russell 2000 Growth)—the most since the technology bubble burst in 2001.

Economic Sector Quarterly Performance



Source: Russell Investment Group

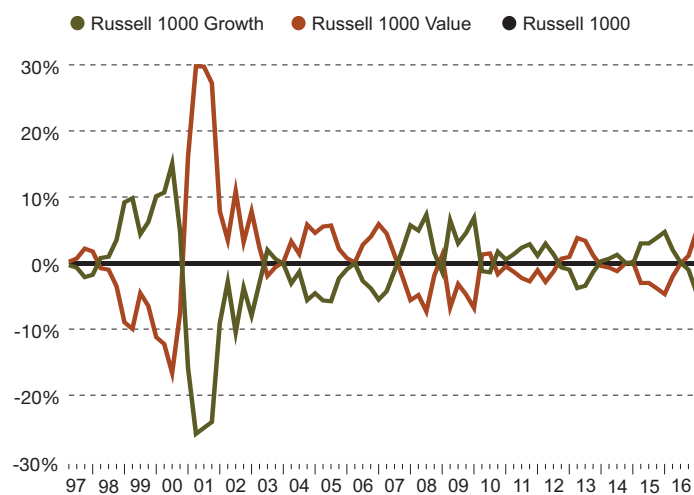
Note: As of the fourth quarter of 2015, the Capital Market Review reports sector-specific returns using the Russell Global Sectors (RGS) classification system rather than the Global Industry Classification Standard (GICS) system. RGS uses a three-tier classification system containing nine sectors; GICS uses a four-tier system containing 11 sectors.

Sector performance reflected the style shift; the best-performing sectors in the S&P 500 during the quarter were value-oriented, including Financials (+21.10%), Energy (+7.28%), and Materials (+4.70%). Within Financials, banks did especially well, benefiting from both an increase in interest rates and talk of deregulation. The Organization of Petroleum Exporting Countries (OPEC) agreed on oil production cuts in the quarter, boosting Energy stocks. In general, investors preferred companies with lower leverage and higher operating margins and return on equity. The growth-oriented, momentum areas of the market declined, including Health Care (-4.00%) and Consumer

Staples (-2.02%). The new Real Estate sector, representing 2.9% of the S&P 500, finished the quarter down 4.41% as these investments tend to move in the opposite direction of interest rates.

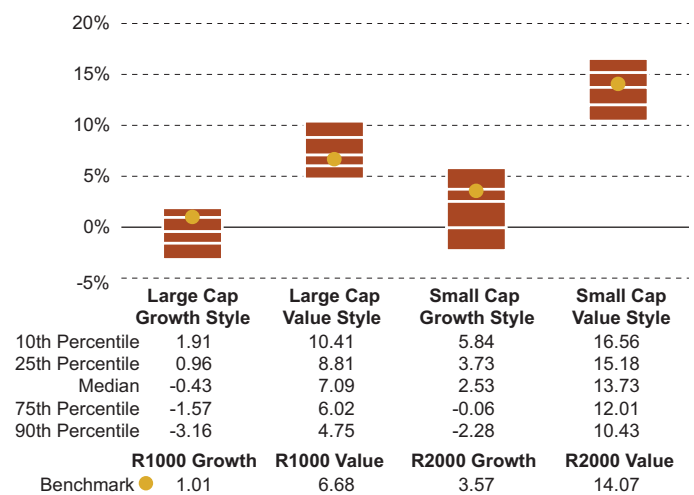
U.S. equity valuations were elevated; the S&P 500 Index Forward P/E was 16.9x at the end of the year versus the 25-year average of 15.9x. In this environment active managers were challenged; outflows from this group have totaled over \$1 trillion since 2005. However, a future with more volatility, lower returns, and higher interest rates should favor active management.

Rolling One-Year Relative Returns (vs. Russell 1000)



Source: Russell Investment Group

Callan Style Group Quarterly Returns



Sources: Callan, Russell Investment Group

U.S. Equity Index Characteristics as of December 31, 2016

	S&P 500	Rus 3000	Rus 1000	Rus Midcap	Rus 2500	Rus 2000
Number of Issues	505	2,972	994	793	2,473	1,978
Wtd Avg Mkt Cap (\$bn)	139.0	115.8	125.6	13.0	4.2	2.1
Price/Book Ratio	2.8	2.7	2.7	2.4	2.2	2.1
Forward P/E Ratio	17.1	17.6	17.4	18.9	20.0	21.1
Dividend Yield	2.1%	2.0%	2.0%	1.7%	1.5%	1.4%
5-Yr Earnings (forecasted)	12.3%	12.3%	12.2%	10.9%	11.8%	12.8%

Sources: Russell Investment Group, Standard & Poor's.

U.S. EQUITY (Continued)

Callan Style Median and Index Returns* for Periods ended December 31, 2016

Large Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Large Cap Core Style	3.83	10.40	10.40	8.30	14.44	7.22	7.26
Russell 3000	4.21	12.74	12.74	8.43	14.67	7.07	7.11
Russell 1000	3.83	12.05	12.05	8.59	14.69	7.08	7.00
S&P 500	3.82	11.96	11.96	8.87	14.66	6.95	6.69
Large Cap Growth Style	-0.43	3.42	3.42	7.31	13.98	8.18	6.55
Russell 1000 Growth	1.01	7.08	7.08	8.55	14.50	8.33	6.42
Large Cap Value Style	7.09	15.25	15.25	8.28	14.69	6.51	8.11
Russell 1000 Value	6.68	17.34	17.34	8.59	14.8	5.72	7.41
Mid Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Mid Cap Core Style	5.47	14.48	14.48	8.53	15.49	8.83	10.13
Russell Midcap	3.21	13.80	13.80	7.92	14.72	7.86	9.51
Mid Cap Growth Style	0.30	4.23	4.23	4.36	12.33	8.09	8.30
Russell Midcap Growth	0.46	7.33	7.33	6.23	13.51	7.83	7.96
Mid Cap Value Style	6.55	17.10	17.10	8.26	15.03	8.41	10.45
Russell Midcap Value	5.52	20.00	20.00	9.45	15.70	7.59	10.28
Small Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Small Cap Core Style	9.76	20.58	20.58	8.53	16.32	8.47	10.60
Russell 2000	8.83	21.31	21.31	6.74	14.46	7.07	8.49
Small Cap Growth Style	2.53	8.63	8.63	3.44	13.40	8.62	8.54
Russell 2000 Growth	3.57	11.32	11.32	5.05	13.74	7.76	7.48
Small Cap Value Style	13.73	27.75	27.75	9.13	16.43	8.61	11.17
Russell 2000 Value	14.07	31.74	31.74	8.31	15.07	6.26	9.22
Smid Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Smid Cap Core Style	5.56	16.00	16.00	6.84	15.17	9.47	-
Russell 2500	6.12	17.59	17.59	6.93	14.54	7.69	9.17
Smid Cap Growth Style	1.81	7.70	7.70	3.95	13.11	8.95	8.91
Russell 2500 Growth	2.60	9.73	9.73	5.45	13.88	8.24	8.03
Smid Cap Value Style	10.12	22.16	22.16	7.93	14.78	8.59	10.96
Russell 2500 Value	9.34	25.20	25.20	8.22	15.04	6.94	9.72
Russell 3000 Sectors	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Consumer Discretionary	2.22	6.85	6.85	6.90	16.75	10.79	-
Consumer Staples	-1.57	5.79	5.79	10.14	13.53	10.79	-
Energy	7.31	26.29	26.29	-4.45	2.64	3.40	-
Financial Services	13.04	17.96	17.96	10.65	18.18	1.41	-
Health Care	-4.22	-3.33	-3.33	9.10	17.25	10.15	-
Materials & Processing	5.95	23.09	23.09	5.65	11.94	6.42	-
Producer Durables	8.23	20.13	20.13	8.07	15.81	7.44	-
Technology	1.55	14.82	14.82	12.56	15.52	9.81	-
Utilities	2.87	20.49	20.49	11.26	11.34	6.41	-

*Returns less than one year are not annualized.

Sources: Callan, Russell Investment Group, Standard & Poor's.

A Depressing Dollar

NON-U.S. EQUITY | Irina Sushch

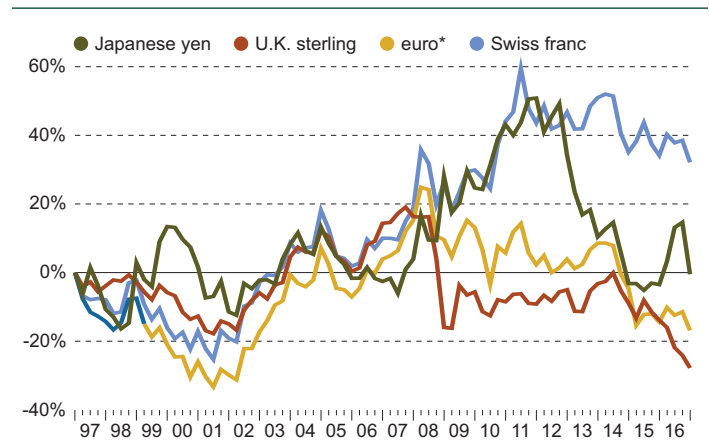
During the final quarter of 2016, foreign developed and emerging markets floundered in U.S. dollar terms despite hearty local returns. Donald Trump's election drove U.S. stocks to record highs, as investors reacted positively to his business-friendly stances on taxes, trade, and regulations. The U.S. dollar hit a multi-year high versus the euro and the yen and appreciated roughly 7% compared to a basket of currencies.

That broad-based dollar strength detracted from overseas returns for U.S. investors. The **MSCI ACWI ex USA Index** was down 1.25% for the quarter (but up 4.93% in local currency). As in the previous quarter, the defensive-oriented sectors dragged down returns (Consumer Staples: -10.09%, Health Care: -8.08%, REITs: -7.90%, Utilities: -7.19%). The interest rate-sensitive sectors helped limit the damage (Energy: +8.32%, Financials: +6.84%).

In dollar-denominated results, emerging markets (**MSCI Emerging Markets Index**: -4.16%) trailed their developed peers (**MSCI World ex USA Index**: -0.36%, **MSCI EAFE Index**: -0.71%). The **MSCI ACWI ex USA Value Index** (+3.29%) fared much better than the **MSCI ACWI ex USA Growth Index** (-5.72%). Small cap stocks joined growth and emerging market stocks at the bottom of the barrel (**MSCI ACWI ex USA Small Cap Index**: -3.52%). Despite multiple headwinds, the **MSCI ACWI ex USA Index** ended the year up 4.50%.

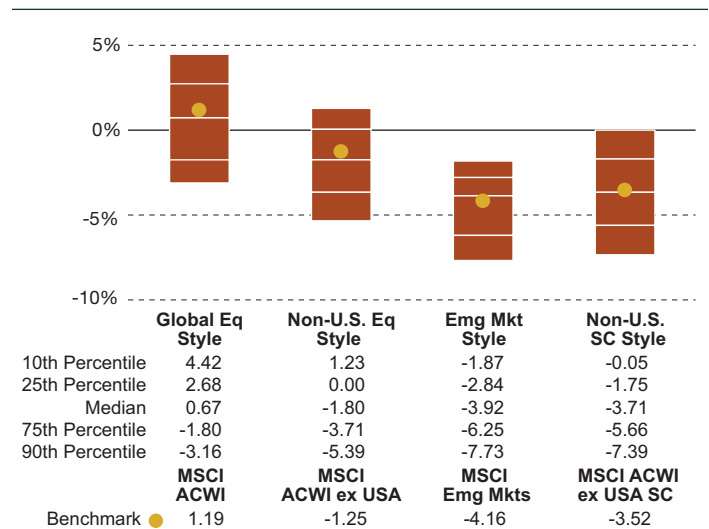
The European Central Bank announced that it would extend its bond purchase program, although it plans to lower investments from €80 billion to €60 billion per month. The unemployment rate in the euro zone declined to 9.8%, the lowest since July 2009. Consumer prices ticked up 0.6% year-over-year in November, and GDP was on track to increase at a 0.4% to 0.5% pace from 0.3% in the third quarter, based on early indications ahead of the release of the official figures in early 2017. Against this backdrop, the **MSCI Europe Index** rose 5.44% in the fourth quarter and 7.23% during the year for local investors; however, in U.S. dollar terms, the Index was essentially flat for the quarter

Major Currencies' Cumulative Returns (vs. U.S. Dollar)



* German mark returns before 1Q99
Source: MSCI

Callan Style Group Quarterly Returns



Sources: Callan, MSCI

and year (-0.40% for both periods). Italy (+10.75%) led the pack during the quarter, while Belgium (-11.80%) brought up the rear. Across the euro zone, economically sensitive Financial (+11.45%) and Energy (+11.16%) stocks posted healthy returns, while defensively oriented REIT (-9.96%) and Utility (-9.40%) stocks faltered.

NON-U.S. EQUITY (Continued)

In Southeast Asia and the Pacific, Japan's stimulus measures boosted returns for local investors (+14.99%). But the dollar hit a 14-year high versus the yen, hammering returns for U.S. investors (-0.16%). New Zealand had a rough quarter (-10.88%), although it closed out the year up 18.37%. Australia was the only country in the region to end the quarter in the black, up 0.69% (and +11.45% for the year), buoyed by rebounding commodity prices and higher interest rates. The **MSCI Pacific Index** slumped 1.03% for the quarter, but rose for the year (+4.18%).

Despite the MSCI Emerging Markets Index's decline during the quarter, it jumped a robust 11.19% during 2016, buttressed by strengthening commodity prices as well as reform efforts and accommodative monetary policies in several countries. Russia, up 18.56% in the quarter and 54.82% for the year, benefited richly from rising prices for oil and industrial commodities. China fell

during the quarter (-7.07%) but ended the year essentially flat (+0.90%). Most emerging Asian markets gained ground during the year (**MSCI EM Asia**: +6.14%), despite a rough fourth quarter (-6.06%), driven by economic reform and technology stocks. Mexico dropped 7.88% for the quarter and 9.16% for the year, hurt by peso weakness and Trump's election.

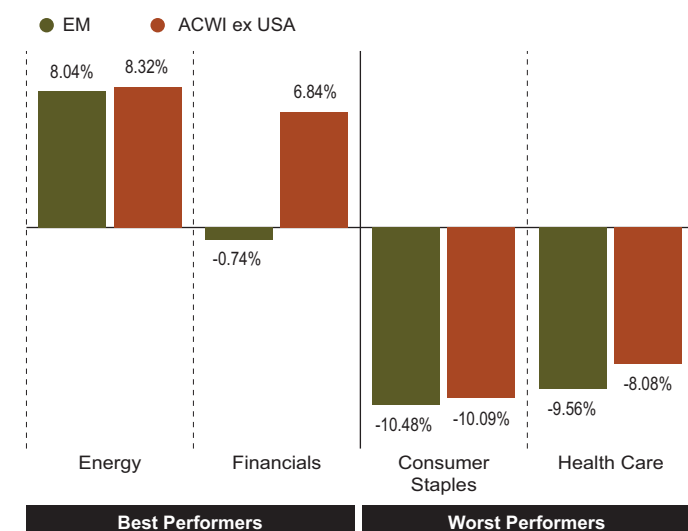
Quarterly Returns for Non-U.S. Developed Countries

Country	Equity Index			Weight*
	(US\$)	(Local Currency)	Local Currency	
Australia	0.69%	6.41%	-5.38%	5.20%
Austria	6.51%	13.48%	-6.14%	0.14%
Belgium	-11.80%	-6.03%	-6.14%	0.83%
Canada	3.26%	5.36%	-2.00%	7.05%
Denmark	-8.74%	-2.90%	-6.01%	1.16%
Finland	-4.40%	1.86%	-6.14%	0.68%
France	2.93%	9.67%	-6.14%	7.16%
Germany	1.45%	8.10%	-6.14%	6.53%
Hong Kong	-8.97%	-9.00%	0.04%	2.28%
Ireland	0.14%	6.69%	-6.14%	0.33%
Israel	-11.32%	-9.61%	-2.51%	0.48%
Italy	10.75%	18.01%	-6.14%	1.46%
Japan	-0.16%	14.99%	-13.18%	16.95%
Netherlands	-2.10%	3.72%	-6.14%	2.33%
New Zealand	-10.88%	-7.06%	-4.11%	0.13%
Norway	2.40%	10.29%	-7.15%	0.47%
Portugal	-2.92%	3.44%	-6.14%	0.11%
Singapore	-3.64%	2.02%	-5.62%	0.87%
Spain	2.24%	8.94%	-6.14%	2.21%
Sweden	-0.84%	5.15%	-5.69%	2.00%
Switzerland	-3.86%	0.80%	-4.62%	6.08%
U.K.	-0.90%	4.19%	-4.88%	12.89%

*Weight in the MSCI ACWI ex USA Index

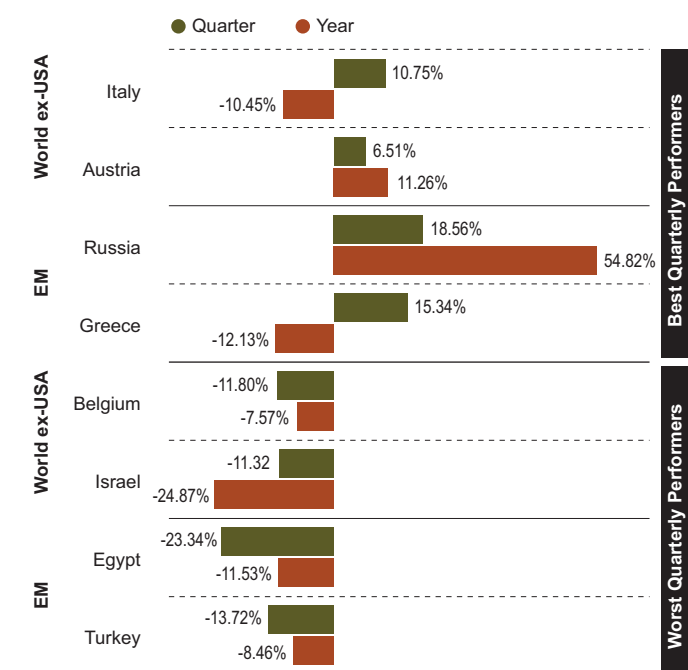
Sources: MSCI, Russell Investment Group, Standard & Poor's.

Quarterly Returns: Strong and Struggling Sectors



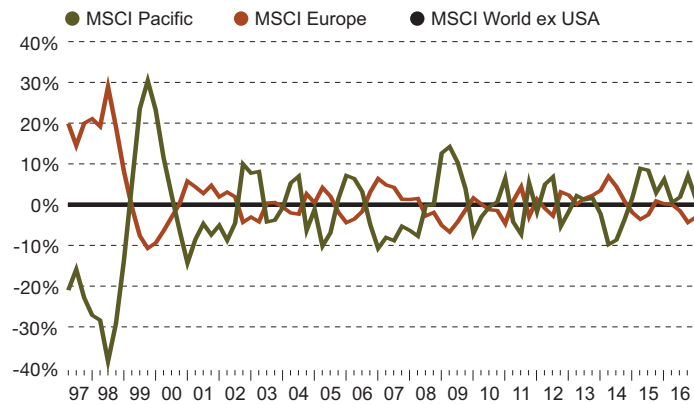
Source: MSCI

Quarterly and Annual Country Performance Snapshot



Source: MSCI

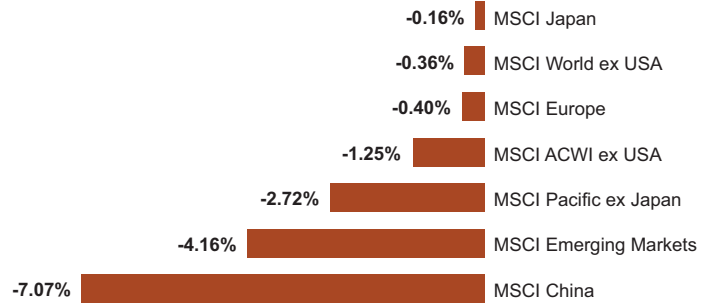
Rolling One-year Relative Returns (vs. MSCI World ex USA)



Source: MSCI

Regional Quarterly Performance

(U.S. Dollar)



Source: MSCI

Callan Style Median and Index Returns* for Periods ended December 31, 2016

Global Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Global Equity Style	0.67	6.41	6.41	3.53	10.74	4.86	7.11
MSCI World	1.86	7.51	7.51	3.80	10.41	3.83	5.83
MSCI ACWI	1.19	7.86	7.86	3.13	9.36	3.56	5.92
Non-U.S. Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Non-U.S. Equity Style	-1.80	1.47	1.47	-0.55	7.39	2.01	7.00
MSCI World ex USA	-0.36	2.75	2.75	-1.59	6.07	0.86	5.45
MSCI ACWI ex USA	-1.25	4.50	4.50	-1.78	5.00	0.96	5.87
Regional Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
MSCI China	-7.07	0.90	0.90	0.14	5.02	3.76	11.62
MSCI Europe ex UK	-0.20	-0.56	-0.56	-2.62	7.41	0.36	5.22
MSCI Japan	-0.16	2.38	2.38	2.49	8.17	0.54	4.69
MSCI Japan (local)	14.99	-0.74	-0.74	6.11	17.56	0.32	3.88
MSCI Pacific	-1.03	4.18	4.18	1.43	7.15	1.62	6.05
MSCI Pacific (local)	10.16	2.26	2.26	5.34	14.46	1.24	4.70
MSCI Pacific ex Japan	-2.72	7.85	7.85	-0.59	5.24	3.94	9.45
MSCI Pacific ex Japan (local)	1.23	8.34	8.34	4.28	10.08	4.25	7.43
MSCI United Kingdom	-0.90	-0.10	-0.10	-4.40	3.97	0.32	4.51
MSCI United Kingdom (local)	4.19	19.16	19.16	5.41	8.85	5.05	5.66
Emerging/Frontier Markets	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Emerging Market Style	-3.92	11.66	11.66	-1.25	3.09	3.06	10.94
MSCI Emerging Markets	-4.16	11.19	11.19	-2.55	1.28	1.84	9.50
MSCI Emerging Markets (local)	-1.44	9.69	9.69	2.83	5.64	4.35	10.02
MSCI Frontier Markets	0.49	2.66	2.66	-2.10	5.16	-0.62	-
Global/Non-U.S. Small Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Non-U.S. Small Cap Style	-3.71	-0.17	-0.17	2.35	11.72	4.69	11.27
MSCI World Small Cap	2.74	12.71	12.71	4.62	12.21	5.59	9.40
MSCI ACWI Small Cap	1.76	11.59	11.59	3.97	11.29	5.66	9.66
MSCI World ex USA Small Cap	-2.74	4.32	4.32	1.36	8.96	2.69	9.26
MSCI ACWI ex USA Small Cap	-3.52	3.91	3.91	0.76	7.74	2.89	9.64

*Returns less than one year are not annualized.
Sources: Callan, MSCI.

Treacherous Treasuries

U.S. FIXED INCOME | Rufash Lama

The U.S. bond market experienced a tumultuous fourth quarter, triggered by the unexpected election results and strong economic data, among other factors. The **Bloomberg Barclays U.S. Aggregate Bond Index** dropped 2.98%, while the **Bloomberg Barclays High Yield Index** rose 1.75%. But the year ended on an upbeat note, with the Aggregate up 2.65% and the High Yield Index delivering equity-like returns at 17.13%.

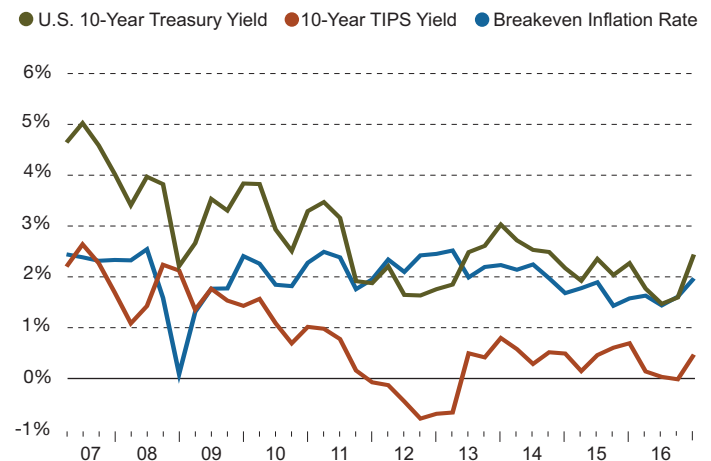
The yield curve rose following the presidential election and an upward revision for third-quarter GDP to 3.5%, the highest quarterly increase in two years. Yields rose across the maturity spectrum. The benchmark 10-year Treasury note showed the biggest change, ending the quarter at 2.45% (an increase of 85 bps). Yields on the 5-year and 30-year finished at 1.93% and 3.07%, respectively.

Markets entered 2016 expecting four rate hikes, but the Fed increased the Federal Funds rate only once, by 25 bps to a range of 0.50% to 0.75% in December. As a result of rising yields, returns across the broad fixed income sector were negative for the quarter. Tax-exempt municipal bonds and Treasuries dropped 3.62% and 3.84%, respectively. On a duration-adjusted

basis, Treasuries underperformed credit securities by 156 bps. Long Treasuries were hit particularly hard, falling 11.67%.

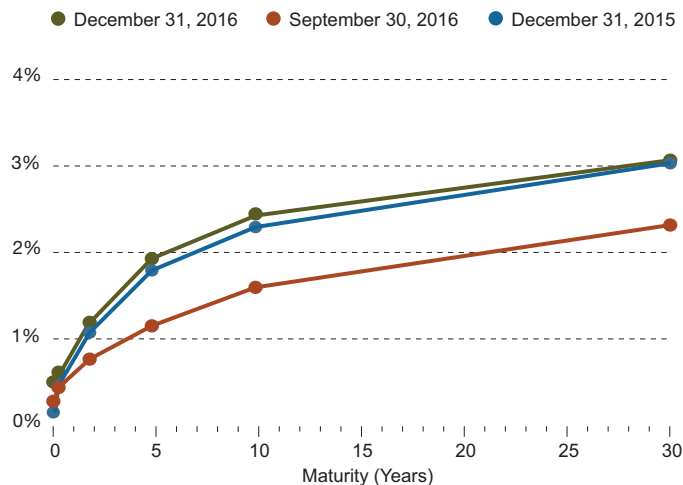
Spreads tightened during the quarter. Investment-grade corporate spreads over comparable Treasuries tightened 42 bps and ended the year at 123 bps—a stark contrast to the first half of the year, in which spreads had widened up to 214 bps in February.

Historical 10-Year Yields



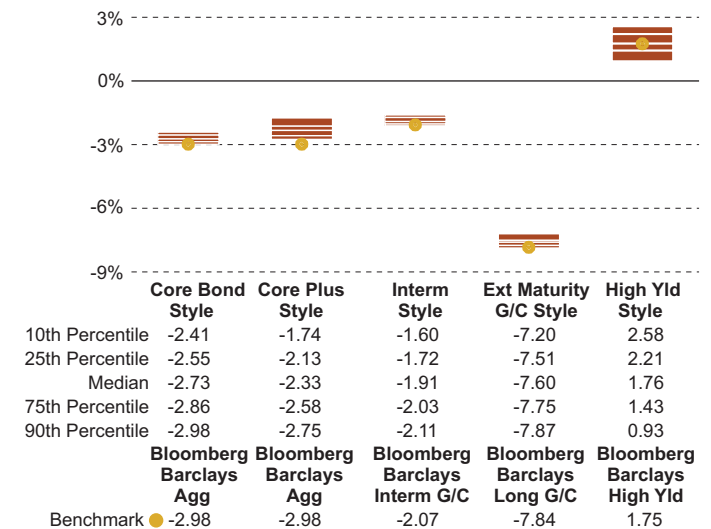
Source: Bloomberg

U.S. Treasury Yield Curves



Source: Bloomberg

Callan Style Group Quarterly Returns



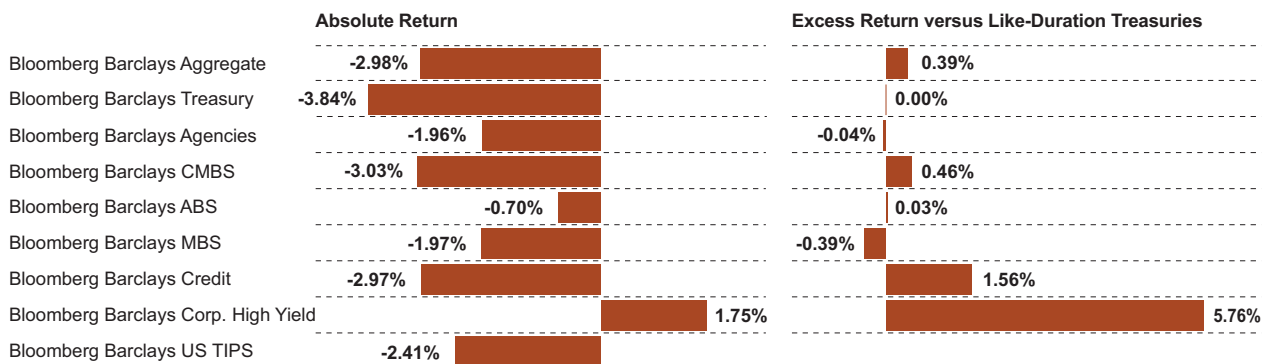
Sources: Bloomberg Barclays, Callan

Corporates declined 2.8% for the quarter, but generated a strong return (+6.11%) for the year. On a duration-adjusted basis, long credit outperformed intermediate credit by 330 bps. Despite a slow start, high yield corporates made a powerful comeback to end the year on a strong note; they delivered 407 bps of excess returns for the quarter. Mortgage-backed securities (MBS), plagued by rate volatility and elevated prepayment concerns, fell 1.97% for the quarter (but were up 1.67% for the year) and underperformed duration-matched Treasuries by 39 bps.

Asset-backed securities (ABS) were off 0.70% for the quarter but up 2.03% for the year. Commercial mortgage-backed securities (CMBS) experienced a similar divergence, falling 3.03% in the quarter but rising 3.32% over the year.

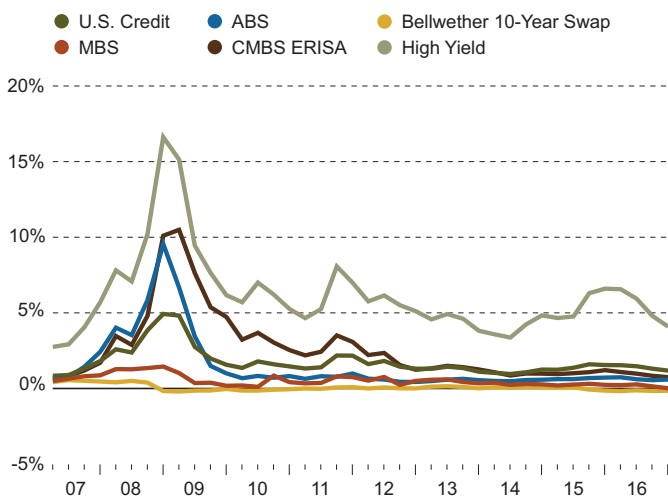
In 2016, U.S. corporations set a milestone with new high yield and investment-grade issuances that totaled \$1.5 trillion. The municipal bond market also set a record with new offerings totaling \$445 billion.

Fixed Income Index Quarterly Returns



Source: Bloomberg Barclays

Effective Yield Over Treasuries



Source: Bloomberg Barclays

U.S. Fixed Income Index Characteristics as of Dec. 31, 2016

Bloomberg Barclays Indices	Yield to Worst	Mod Adj Duration	Avg Maturity
Bloomberg Barclays Aggregate	2.61	5.89	8.19
Bloomberg Barclays Universal	2.99	5.69	7.97
Bloomberg Barclays Gov/Credit	2.51	6.45	8.74
1-3 Year	1.45	1.92	1.98
Intermediate	2.11	4.05	4.39
Long-Term	3.95	14.97	24.18
Bloomberg Barclays Long Credit	4.55	13.57	23.77
Bloomberg Barclays Corp High Yield	6.12	4.11	6.30
Bloomberg Barclays TIPS	2.20	4.87	8.25
Bloomberg Barclays Muni Bond 1-5 Year	1.76	2.69	3.17
Bloomberg Barclays Muni 1-10 Year	2.11	4.04	5.79
Bloomberg Barclays Municipal	2.65	6.24	12.82

Source: Bloomberg Barclays

U.S. FIXED INCOME (Continued)

Callan Style Median and Index Returns* for Periods ended December 31, 2016

	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Broad Fixed Income							
Core Bond Style	-2.73	3.13	3.13	3.39	2.86	4.90	5.05
Core Bond Plus Style	-2.33	4.67	4.67	3.54	3.72	5.35	5.67
Bloomberg Barclays Aggregate	-2.98	2.65	2.65	3.03	2.23	4.34	4.58
Bloomberg Barclays Universal	-2.61	3.91	3.91	3.27	2.78	4.57	4.92
Long-Term							
Extended Maturity Credit Style	-5.33	10.77	10.77	7.47	6.09	7.27	-
Bloomberg Barclays Long Credit	-5.40	10.22	10.22	6.98	5.20	6.87	7.15
Extended Maturity Gov/Credit Style	-7.60	7.28	7.28	7.33	4.64	7.45	7.46
Bloomberg Barclays Long Gov/Credit	-7.84	6.67	6.67	7.16	4.07	6.85	7.03
Intermediate-Term							
Intermediate Style	-1.91	2.33	2.33	2.31	2.27	4.27	4.50
Bloomberg Barclays Interm Gov/Credit	-2.07	2.08	2.08	2.09	1.85	3.84	4.07
Short-Term							
Defensive Style	-0.33	1.54	1.54	1.19	1.29	2.74	2.98
Bloomberg Barclays Gov/Credit 1-3 Yr	-0.39	1.28	1.28	0.90	0.92	2.44	2.72
Bank Loans							
Bank Loan Style	2.13	9.38	9.38	3.90	5.43	4.89	5.17
Credit Suisse Leveraged Loans	2.25	9.88	9.88	3.76	5.21	4.26	4.87
High Yield							
High Yield Style	1.76	14.74	14.74	4.61	7.36	7.42	8.26
Bloomberg Barclays Corp High Yield	1.75	17.13	17.13	4.66	7.36	7.45	8.35
Unconstrained							
Unconstrained Fixed Style	0.79	5.07	5.07	2.34	3.89	4.59	6.33
90 Day T-Bill + 3%	0.82	3.33	3.33	3.14	3.12	3.80	4.34
Stable Value							
Stable Value Style	0.48	1.87	1.87	1.78	1.89	2.76	3.44
iMoneyNet Mutual Fund Avg	0.05	0.13	0.13	0.05	0.04	0.71	-
TIPS							
Inflation-Linked Style	-2.34	4.82	4.82	2.27	0.93	4.44	5.39
Bloomberg Barclays TIPS	-2.41	4.68	4.68	2.26	0.89	4.36	5.30
Municipal							
Short Municipal Style	-0.91	-0.10	-0.10	0.45	0.64	1.65	1.88
Bloomberg Barclays Municipal 1-5 Yr	-1.36	0.00	0.00	1.08	1.25	2.86	2.99
Intermediate Municipal Style	-3.47	-0.29	-0.29	2.84	2.35	3.47	3.77
Bloomberg Barclays Municipal 1-10 Yr	-2.62	-0.10	-0.10	2.32	2.03	3.69	3.87
Long Municipal Style	-3.50	0.50	0.50	4.32	3.60	4.54	4.97
Bloomberg Barclays Municipal	-3.62	0.25	0.25	4.14	3.28	4.25	4.67

*Returns for less than one year are not annualized.

Sources: Bloomberg Barclays, Callan, Credit Suisse, Merrill Lynch

Big-League Yields

NON-U.S. FIXED INCOME | Kyle Fekete

The U.S. dollar skyrocketed against a trade-weighted basket of currencies on the back of the November U.S. election and higher U.S. interest rates. Investment strategies with foreign currency exposure faced strong headwinds as the **Bloomberg Barclays Global Aggregate ex US** fell 10.26% (-1.86% on a hedged basis).

Continuing 2016's anti-establishment geopolitical theme, Italians voted against reforms proposed by the government, leading to Italian President Matteo Renzi's resignation. In December, European Central Bank President Mario Draghi announced the extension of its stimulus program out to December 2017; however, the bond buying will be dialed

Quarterly Returns for Non-U.S. Government Indices

Country	Country Debt (\$)	Country Debt	Local Currency	Weight*
Australia	-9.22%	-4.06%	-5.38%	2.45%
Austria	-8.58%	-2.60%	-6.14%	1.85%
Belgium	-9.47%	-3.54%	-6.14%	3.03%
Canada	-5.79%	-3.87%	-2.00%	2.55%
Denmark	-8.77%	-2.93%	-6.01%	0.77%
Finland	-8.12%	-2.11%	-6.14%	0.72%
France	-9.35%	-3.42%	-6.14%	11.80%
Germany	-8.47%	-2.48%	-6.14%	8.85%
Ireland	-7.81%	-1.77%	-6.14%	0.93%
Italy	-9.24%	-3.30%	-6.14%	11.41%
Japan	-14.72%	-1.78%	-13.18%	33.08%
Malaysia	-10.17%	-2.55%	-7.81%	0.52%
Mexico	-11.18%	-5.46%	-6.06%	0.94%
Netherlands	-8.70%	-2.73%	-6.14%	2.82%
Norway	-8.54%	-1.50%	-7.15%	0.33%
Poland	-10.13%	-1.98%	-8.31%	0.72%
Singapore	-8.91%	-3.49%	-5.62%	0.45%
South Africa	0.72%	0.16%	0.56%	0.64%
Spain	-8.80%	-2.83%	-6.14%	6.61%
Sweden	-7.73%	-2.16%	-5.69%	0.56%
Switzerland	-6.03%	-1.48%	-4.62%	0.29%
U.K.	-8.40%	-3.70%	-4.88%	8.69%

*Weight in the Citi Non-U.S. World Government Bond Index.
Source: Citigroup

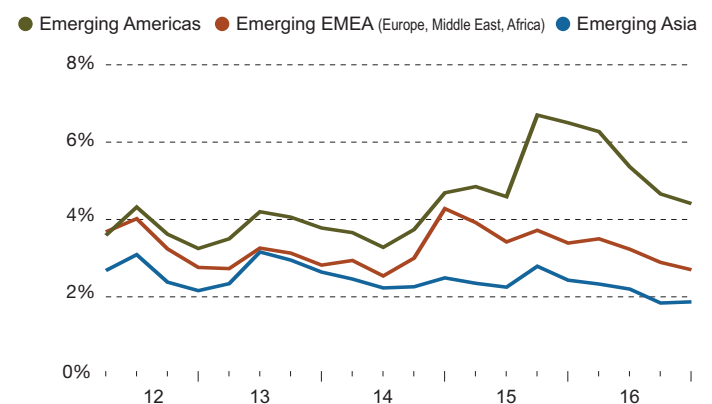
back to €60 billion per month, down from €80 billion. The quantitative easing program reached approximately €1.7 trillion in 2016, and should top €2.2 trillion by the end of 2017.

Yields on 10-year German government bonds increased to 0.21%, 224 bps below that of the 10-year Treasury. The U.S./German 10-year debt spread reached the widest it has been since 1990. The euro declined 6.14% against the dollar.

Ahead of the uncertainty surrounding the Brexit process, the Bank of England (BOE) elected to hold the benchmark rate at 0.25% and maintain the same rate of bond purchasing, saying the sterling's recent appreciation against the euro may curtail inflation. The U.K. 10-year yield jumped 49 bps to 1.24% and the sterling declined 4.9% against the dollar. Changes to Japan's monetary policy were also put on hold as the unemployment rate reached a healthy level and a weakened yen stood poised to boost potential earnings growth. The Bank of Japan upheld its pledge to keep the yield of 10-year Japanese debt near 0%; its yield settled at 0.05%.

Emerging market debt weakened and underperformed developed markets. The local currency-denominated **JP Morgan GBI-EM Global Diversified Index** fell 6.09%. The USD-denominated **JPM EM Global Diversified Index** fell 4.02%.

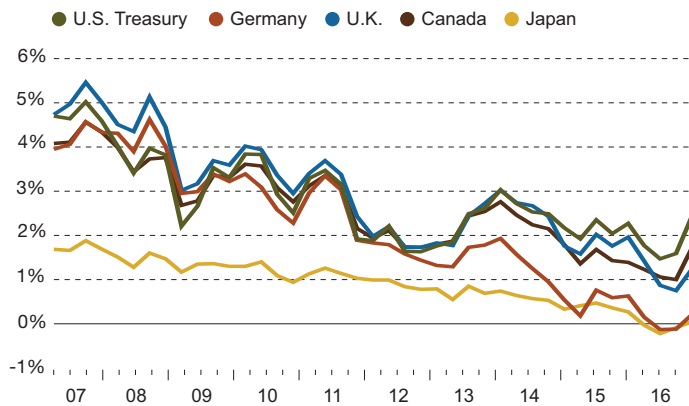
Emerging Spreads Over Developed (By Region)



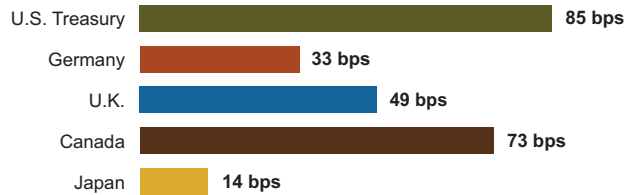
Source: Bloomberg Barclays

NON-U.S. FIXED INCOME (Continued)

10-Year Global Government Bond Yields



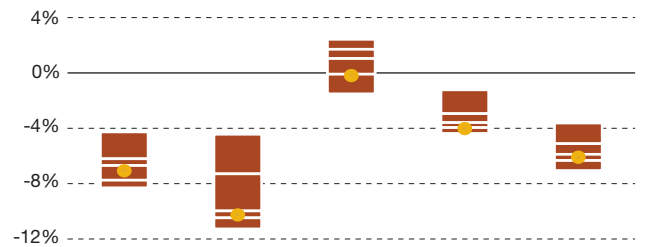
Change in 10-Year Yields from 3Q16 to 4Q16



Source: Bloomberg

Turkey and Mexico were among the worst performers in both indices. However, emerging market sovereign debt proved to be one of the strongest asset classes in 2016, gaining roughly 10% in both JP Morgan indices, benefiting from the tailwind of increased commodity prices.

Callan Style Group Quarterly Returns



	Global Fixed Style	Non-U.S. Fixed Style	Global High Yield	Em Debt USD DB	Em Debt Local
10th Percentile	-4.21	-4.38	2.48	-1.17	-3.57
25th Percentile	-6.15	-7.24	1.76	-2.89	-5.06
Median	-6.64	-9.92	1.09	-3.54	-5.83
75th Percentile	-7.70	-10.42	-0.04	-3.90	-6.28
90th Percentile	-8.25	-11.22	-1.46	-4.32	-7.00
Benchmark	-7.07	-10.26	-0.19	-4.02	-6.09

Sources: Bloomberg Barclays, Callan, JPMorgan Chase

Callan Style Median and Index Returns* for Periods ended December 31, 2016

Global Fixed Income	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Global Fixed Income Style	-6.64	2.23	2.23	0.08	0.69	3.77	5.69
Bloomberg Barclays Global Aggregate	-7.07	2.09	2.09	-0.19	0.21	3.29	4.79
Global Fixed Income Style (hedged)	-2.32	4.37	4.37	4.29	4.17	4.96	5.36
Bloomberg Barclays Global Aggregate (hedged)	-2.34	3.95	3.95	4.15	3.59	4.39	4.55
High Yield	1.09	14.82	14.82	3.10	6.43	6.76	9.15
Bloomberg Barclays Global High Yield	-0.19	14.27	14.27	3.60	7.37	7.35	9.18
Non-U.S. Fixed Income	-9.92	2.28	2.28	-1.70	-0.15	3.48	5.70
Bloomberg Barclays Global Aggregate ex US	-10.26	1.49	1.49	-2.59	-1.39	2.44	4.96
Emerging Markets Fixed Income	-3.54	12.05	12.05	5.46	5.94	7.28	10.23
JPM EMBI Global Diversified	-4.02	10.15	10.15	6.19	5.91	6.89	9.02
Emerging Debt Style (local)	-5.83	9.97	9.97	-3.77	-0.93	3.64	7.04
JPM GBI-EM Global Diversified	-6.09	9.94	9.94	-4.10	-1.29	3.82	-
Emerging Debt Blend Style	-3.98	10.25	10.25	0.69	2.48	6.50	11.84
JPM EMBI GI Div/JPM GBI-EM GI Div	-5.06	10.24	10.24	1.05	2.36	5.44	-
Emerging Debt Corporate Style	-1.19	11.51	11.51	5.42	6.51	-	-
JPM CEMBI	-1.29	11.11	11.11	5.33	5.90	6.74	7.83

*Returns less than one year are not annualized.

Sources: Bloomberg Barclays, Callan, JPMorgan

Rates Trump Fundamentals

REAL ESTATE | Kevin Nagy

The **NCREIF Property Index** advanced 1.73% during the fourth quarter (1.14% from income and 0.59% from appreciation). This was the lowest return since 2010, eclipsing the third quarter's mark of 1.78%. Appreciation fell for the seventh consecutive quarter.

Industrial (+2.89%) was the best-performing sector for the third quarter in a row and Apartments (+1.67%) and Retail (+1.65%) also posted strong relative returns; Hotels (+0.37%) were the worst performers. The West region posted the strongest results (+2.22%), and the Midwest was the weakest (+1.29%). Transaction volume totaled \$14 billion, the highest on record, a 45% jump over the previous quarter, and a 24% increase over the same period in 2015. Appraisal capitalization rates fell to 4.43%, a new all-time low, undercutting the third quarter's 4.48%. Transaction capitalization rates fell sharply from 6.2% to 5.7% in the fourth quarter, tightening the spread between appraisal and transactional rates to 123 basis points.

Occupancy rates stayed steady at 93.22%, a 15-year high hit in the third quarter. For the second straight quarter Retail and Apartment occupancy rates fell slightly, and Industrial and Office rates increased.

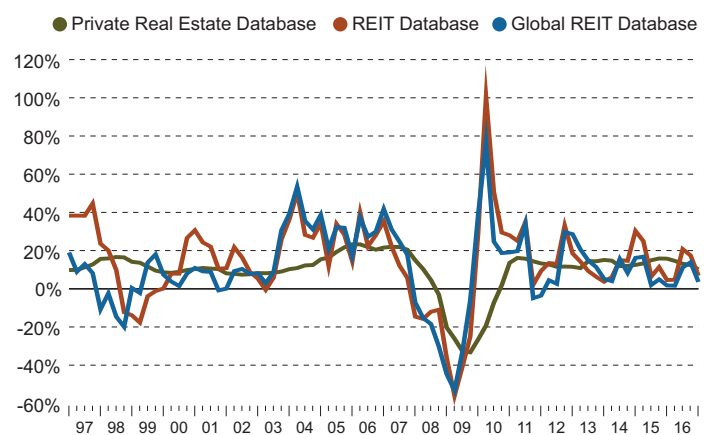
The **NCREIF Open End Diversified Core Equity Index** rose 1.88% (0.84% from income and 1.04% from appreciation). This marked a 5 bps increase over the third quarter return of 1.83%, which was the lowest for the Index since 2010. Income returns fell slightly, but appreciation bounced back from a five-year low in the third quarter.

Global real estate investment trusts (REITs), tracked by the **FTSE EPRA/NAREIT Developed REIT Index (USD)**, lagged behind their U.S. counterparts and dropped 5.39%. U.S. REITs, as measured by the **FTSE NAREIT Equity REITs Index**, lost 2.89% for the quarter.

In the U.S., REITs started the quarter with a sharp decline due to an increase in interest rates. Donald Trump's surprise victory in the presidential election sent rates even higher and further punished many REIT sectors, especially those that represent a higher weight in the Index. Health Care (-10.80%) was the worst performer, hammered by the possibility that the incoming Republican administration would repeal the Affordable Care Act. Retail (-10.73%) and Infrastructure (-6.95%) also suffered large losses. The biggest winner for the quarter was the Hotel sector, which skyrocketed 20.39% with the election of Donald Trump, a hotelier. Specialty (+6.67%) and Data Centers (+0.82%) were other strong-performing sectors for the quarter. Politics and interest rates drove some REIT valuations downward, despite generally strong fundamentals.

Political issues also impacted the European market. Fears of a hard Brexit slowed transaction volume in the U.K., despite strong economic data suggesting that the economy was still on track. On the continent, pricing and transactions were weighed down by fears of an Italian banking crisis and uncertainty concerning France's upcoming elections.

Rolling One-Year Returns

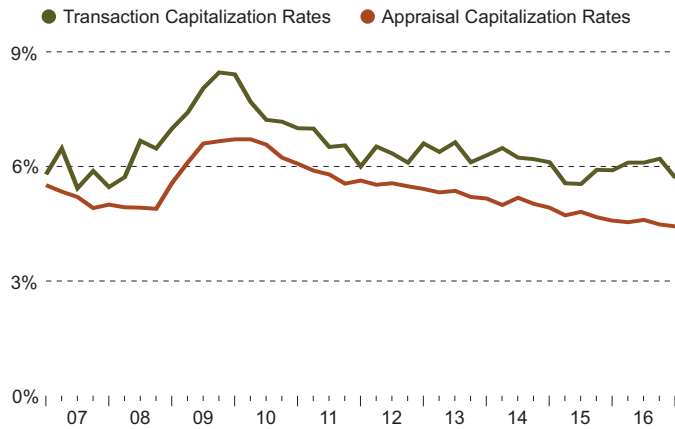


Source: Callan

*Index subreturns are calculated separately from index return and may not total.

REAL ESTATE (Continued)

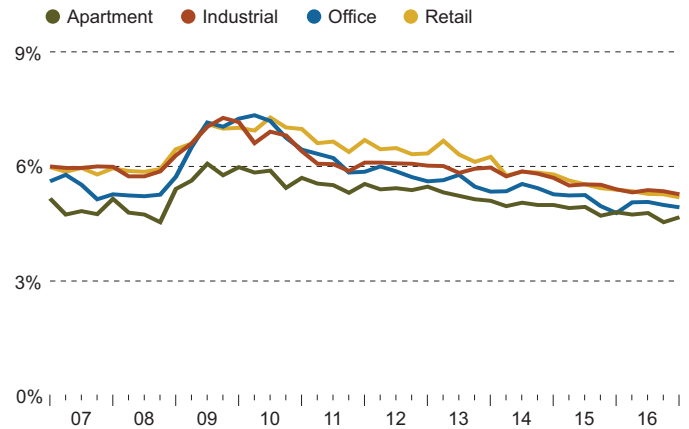
NCREIF Transaction and Appraisal Capitalization Rates



Source: NCREIF

Note: Transaction capitalization rate is equal weighted.

NCREIF Capitalization Rates by Property Type



Source: NCREIF

Note: Capitalization rates are appraisal-based.

Commercial mortgage-backed securities (CMBS) issuance for the quarter jumped 31% to \$26.0 billion from the \$19.8 billion in the third quarter. This also represented a 19.3% increase over the fourth quarter of 2015 (\$21.8 billion).

Callan Database Median and Index Returns* for Periods ended December 31, 2016

	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Private Real Estate							
Real Estate Database (net of fees)	1.87	8.34	8.34	11.89	11.89	4.56	7.57
NCREIF Property	1.73	7.97	7.97	11.02	10.91	6.93	9.00
NFI-ODCE (value wtd. net)	1.88	7.79	7.79	11.04	11.16	4.84	7.15
Public Real Estate							
REIT Database	-2.66	6.87	6.87	13.59	12.26	5.65	11.85
FTSE NAREIT Equity	-2.89	8.52	8.52	13.38	12.01	5.08	10.80
Global Public Real Estate							
Global REIT Database	-5.11	3.97	3.97	7.26	10.83	2.82	10.55
FTSE EPRA/NAREIT Developed REIT	-5.39	4.99	4.99	6.78	10.34	2.23	9.84
Global ex U.S. Public Real Estate							
Global ex-U.S. REIT Database	-7.77	0.48	0.48	1.13	8.95	-0.12	10.03
EPRA/NAREIT Dev REITs ex-U.S.	-7.68	1.97	1.97	0.61	8.42	0.12	9.24

*Returns for less than one year are not annualized.

All REIT returns are reported gross in USD.

Sources: Callan, NAREIT, NCREIF, The FTSE Group. NCREIF statistics are the product of direct queries and may fluctuate over time.

Down but Far From Out

PRIVATE EQUITY | Gary Robertson

Based on preliminary data, private equity funds raised \$281 billion in 2016, a moderate \$24.2 billion (9%) increase over 2015, and 783 partnerships were formed, up by 101 (15%) over the previous year, according to *Private Equity Analyst*.

In the fourth quarter, commitments totaled \$86.9 billion and 267 funds were created. The amount raised skyrocketed by 125% compared to the third quarter's \$38.6 billion, and the number of new funds jumped by 87% from the prior quarter's 143.

Private equity firms purchased 1,728 companies in 2016, down 14% from 2,006 in 2015, according to *Buyouts* newsletter. The year's announced dollar volume was \$163.2 billion, an eight-year high and up 39% from \$117.5 billion in 2015. The fourth quarter saw 322 transactions, down from 385 in the third quarter, and disclosed dollar volume totaled \$28.3 billion, down from \$39.0 billion.

The year produced 8,136 rounds of new investment in venture capital companies, down 22% from 2015's 10,468, according to the National Venture Capital Association. The announced volume of \$69.1 billion for the year was down 13% from \$79.3 billion in 2015. Fourth quarter VC investments totaled 1,744 rounds and \$12.7 billion of announced financing, down from 1,979 rounds and \$15.7 billion in the previous quarter.

Funds Closed January 1 to December 31, 2016

Strategy	No. of Funds	Amt (\$mm)	Percent
Venture Capital	401	41,060	15%
Buyouts	278	168,798	60%
Subordinated Debt	22	17,739	6%
Distressed Debt	20	21,972	8%
Secondary and Other	23	22,525	8%
Fund-of-funds	39	8,808	3%
Totals	783	280,902	100%

Source: Private Equity Analyst

Buyouts reports that 2016's 505 private M&A exits of buyout-backed companies was down 11% from the 567 in 2015. The year's aggregate disclosed M&A exit values of \$85.7 billion was down 35% from 2015's \$131.4 billion. In the fourth quarter, there were 105 M&A exits, and announced values totaled \$18.1 billion, down from 142 exits totaling \$27.5 billion in the third quarter. There were three buyout-backed IPOs, with a total value of \$2.0 billion, and eight for the full year, raising a total of \$4.1 billion.

Venture-backed M&A exits for the year totaled 687, down 22% from 884 in 2015, with announced values of \$43.9 billion, up 3.8% from \$42.3 billion in 2015. The quarter had 184 exits with announced values totaling \$7.52 billion, compared to 192 and \$13.4 billion in the third quarter. The year produced 39 venture-backed IPOs raising \$2.9 billion, down from the 77 IPOs in 2015 that raised \$8.1 billion.

Private Equity Performance Database (%)

(Pooled Horizon IRRs through June 30, 2016*)

Strategy	3 Months	Year	3 Years	5 Years	10 Years	15 Years	20 Years
All Venture	0.26	-0.09	19.18	13.63	10.38	5.66	20.65
Growth Equity	1.60	1.83	12.86	10.13	11.25	10.25	13.65
All Buyouts	2.85	6.29	12.91	10.81	10.40	12.32	12.62
Mezzanine	2.25	7.09	8.79	9.67	9.35	8.12	9.19
Distressed	2.34	1.41	7.34	8.73	9.26	10.50	10.55
All Private Equity	2.13	3.95	13.11	10.89	10.33	10.32	13.26
S&P 500	2.46	3.99	11.66	12.10	7.42	5.75	7.87
Russell 3000	2.63	2.14	11.13	11.60	7.40	6.09	7.96

*Most recent data available at time of publication.

Notes: Private equity returns are net of fees. Transaction count and dollar volume figures across all private equity measures are preliminary figures and are subject to update in subsequent versions of *Capital Market Review* and other Callan publications.

Sources: Russell Investment Group, Standard & Poor's, Thomson Reuters/Cambridge

Making Alpha Great Again

HEDGE FUNDS | Jim McKee

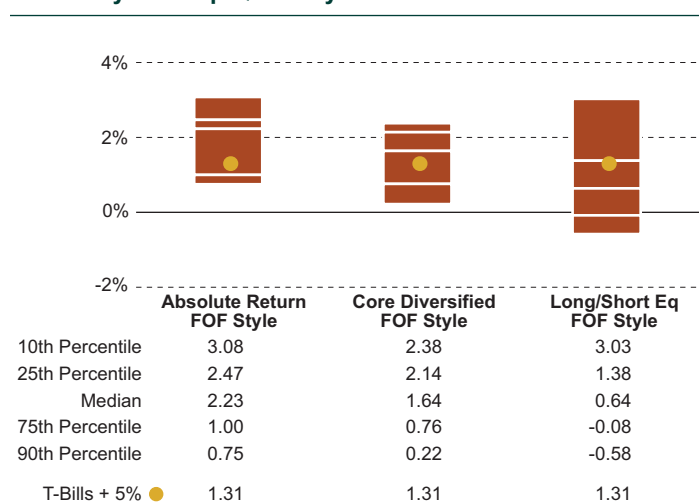
In the wake of the U.S. presidential election, the reflation trade exploded as U.S. stocks jumped and Treasuries were dumped. The dollar also strengthened dramatically. During this rapid market paradigm shift, the average hedge fund appeared to gain little over embedded betas, as most conservatively positioned their gross and net exposures going into the election. However, the hedge fund community will likely see a combination of more fiscal policy and less monetary policy as a better trading environment.

Representing the average fund's performance without implementation costs, the **Credit Suisse Hedge Fund Index (CS HFI)** rose 1.15% in the fourth quarter. As a proxy for live portfolios, the median manager in the **Callan Hedge Fund-of-Funds Database** advanced 1.26%, net of all fees.

Within CS HFI, the best-performing strategy was *Global Macro* (+4.59%), aided by a stronger dollar. *Distressed* gained 3.57%. The sharp reversals following the election across currencies, rates, and equities upset the trend-following mantra of *Managed Futures* (-5.65%). *Long/Short Equity* (-0.20%) was also caught flat-footed by the unexpected Trump effect.

Within Callan's Hedge Fund-of-Funds Database, market exposures marginally affected performance in the fourth quarter. Aided by tightening credits and supportive fundamentals, the median *Callan Absolute Return FoF* (+2.23%) outpaced the *Callan Long/Short Equity FoF* (+0.64%). With diversifying exposures to both non-directional and directional styles, the *Callan Core Diversified FoF* gained 1.64%.

Callan Style Group Quarterly Returns



Sources: Callan, Merrill Lynch

Callan Database Median and Index Returns* for Periods ended December 31, 2016

	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Hedge Fund-of-Funds Database	1.26	1.19	1.19	1.43	4.91	3.31	4.74
CS Hedge Fund Index	1.15	1.25	1.25	1.54	4.34	3.75	5.74
CS Equity Market Neutral	-2.65	-4.58	-4.58	-1.40	1.11	-2.93	0.47
CS Convertible Arbitrage	0.42	6.60	6.60	1.85	3.85	3.69	4.43
CS Fixed Income Arbitrage	1.85	4.29	4.29	3.07	4.76	3.42	4.25
CS Multi-Strategy	1.16	4.41	4.41	4.78	7.30	5.19	6.81
CS Distressed	3.57	6.38	6.38	1.09	6.02	3.96	6.94
CS Risk Arbitrage	0.77	5.89	5.89	1.62	2.51	3.33	3.66
CS Event-Driven Multi-Strategy	1.77	1.25	1.25	-1.50	3.95	3.67	6.07
CS Long/Short Equity	-0.20	-3.43	-3.43	1.82	6.10	4.03	6.00
CS Dedicated Short Bias	1.82	-16.87	-16.87	-7.04	-13.65	-9.95	-8.11
CS Global Macro	4.59	3.58	3.58	2.28	3.14	5.82	8.07
CS Managed Futures	-5.65	-6.84	-6.84	2.99	0.66	2.67	4.77
CS Emerging Markets	-0.27	4.47	4.47	1.91	4.89	3.68	7.97

*Returns less than one year are not annualized. Sources: Callan, Credit Suisse.

A Case of the Jitters

DEFINED CONTRIBUTION | Tom Szkwarla

The average defined contribution (DC) plan gained 3.92% in the third quarter of 2016, as measured by the Callan DC Index™. Still, the Index trailed the Age 45 Target Date Fund—the average of target date funds that would be selected by participants age 45 and retiring at age 65—which gained 4.53%. Since inception, the DC Index's annual return of 5.41% has trailed the Age 45 Target Date Fund by 74 basis points.

During the third quarter, DC plan balances grew by 3.67%, driven entirely by market returns. Participants appeared to be jittery; money flowed out of plans on a net basis, reducing total balance growth by 25 basis points. The quarter's outflows were the highest since the third quarter of 2006. And third quarter turnover (i.e., net transfer activity levels within DC plans) in the DC Index came in at 0.82%, its highest level since the third quarter of 2012.

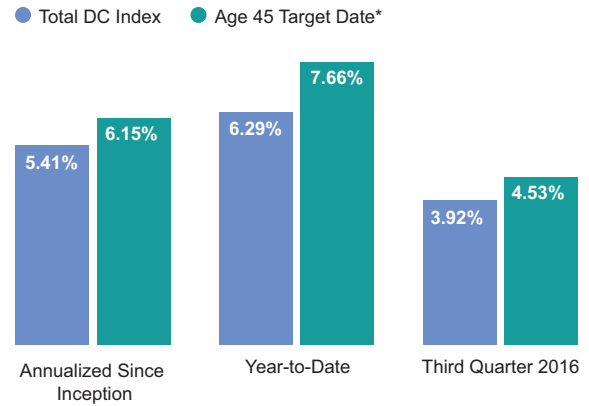
Stable value experienced its fifth quarter in a row of net inflows—and the highest of the five—during the period. Meanwhile, U.S. large, small, and mid cap equity saw significant outflows. Even non-U.S. equity experienced outflows, despite its exceptional performance during the quarter. Target date funds held fast; for the third quarter, over 55 cents of every dollar that moved within DC plans flowed to TDFs. Target date funds now make up 27.7% of the average DC plan.

The Callan DC Index's overall equity allocation ended the quarter at 68%, modestly above the Index's historical average (67%).

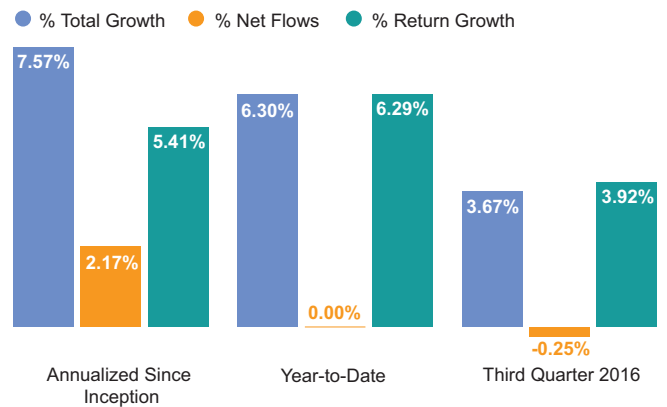
Target date funds are less prevalent than U.S. large cap equity; however, when target date funds are available in a DC plan, they hold a much greater portion of assets (32%) than U.S. large cap equity funds (23%).

The Callan DC Index is an equally weighted index tracking the cash flows and performance of nearly 90 plans, representing more than one million DC participants and over \$135 billion in assets. The Index is updated quarterly and is available on Callan's website, as is the quarterly DC Observer newsletter.

Investment Performance*



Growth Sources*



Net Cash Flow Analysis (Third Quarter 2016) (Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	55.31%
Stable Value	28.35%
Company Stock	-20.41%
U.S. Large Cap	-33.88%
Total Turnover**	0.82%

Source: Callan DC Index
Data provided here is the most recent available at time of publication.

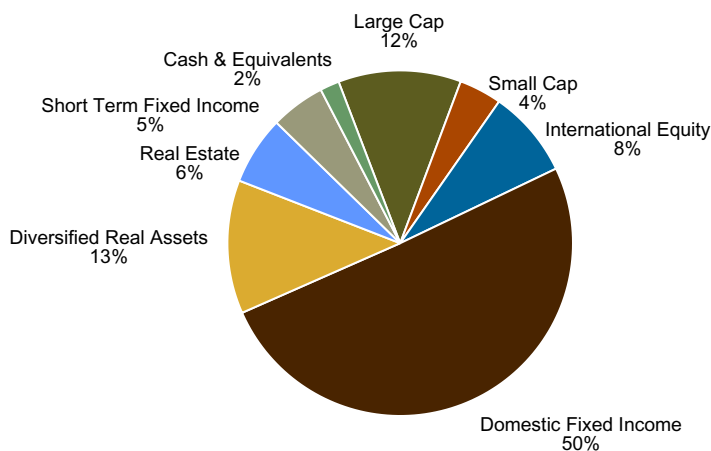
* DC Index inception date is January 2006.

** Total Index "turnover" measures the percentage of total invested assets (transfers only, excluding contributions and withdrawals) that moved between asset classes.

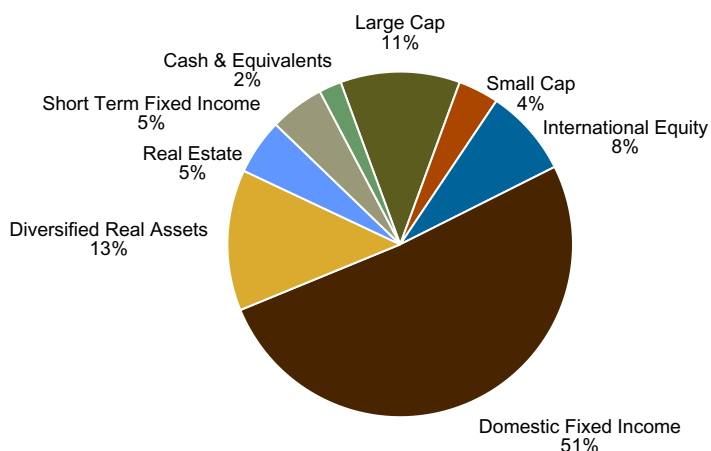
Actual vs Target Asset Allocation As of December 31, 2016

The first chart below shows the Fund's asset allocation as of December 31, 2016. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

Actual Asset Allocation



Target Asset Allocation



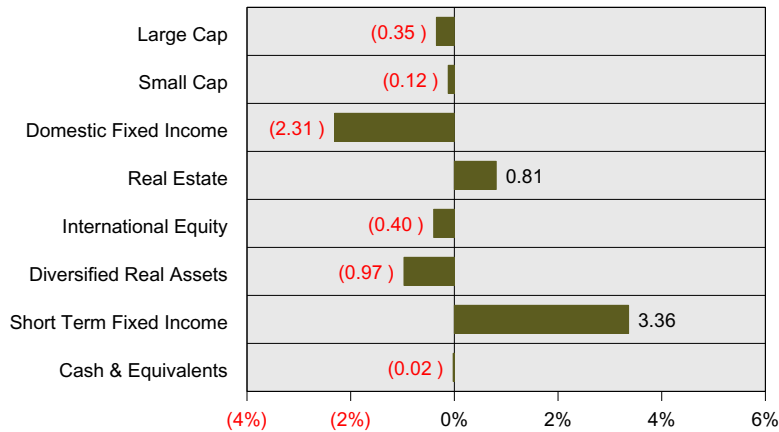
Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap	241,681	11.5%	11.2%	0.3%	6,416
Small Cap	84,231	4.0%	3.8%	0.2%	4,409
International Equity	172,055	8.2%	8.2%	0.0%	(192)
Domestic Fixed Income	1,060,438	50.5%	51.2%	(0.7%)	(15,058)
Diversified Real Assets	263,547	12.5%	13.2%	(0.7%)	(13,729)
Real Estate	134,356	6.4%	5.2%	1.2%	25,126
Short Term Fixed Income	106,927	5.1%	5.1%	0.0%	(202)
Cash & Equivalents	37,341	1.8%	2.1%	(0.3%)	(6,771)
Total	2,100,577	100.0%	100.0%		

* Current Quarter Target = 51.2% Blmbg Aggregate Idx, 13.2% NDSIB INS DRA Weighted Benchmark, 11.2% Russell 1000 Index, 8.2% MSCI World ex US, 5.2% NCREIF Total Index, 5.1% Blmbg Gov 1-3 Yr, 3.8% Russell 2000 Index and 2.1% 3-month Treasury Bill.

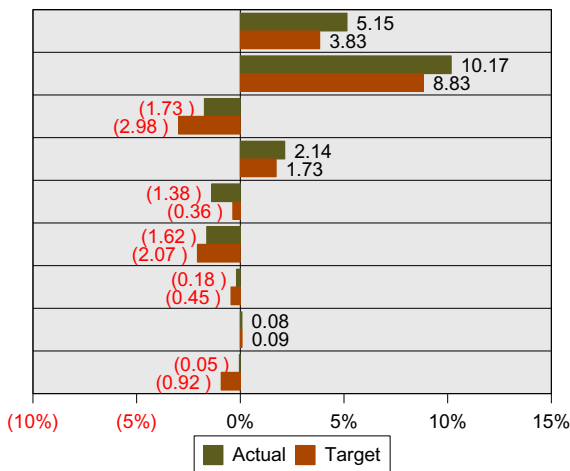
Quarterly Total Fund Relative Attribution - December 31, 2016

The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

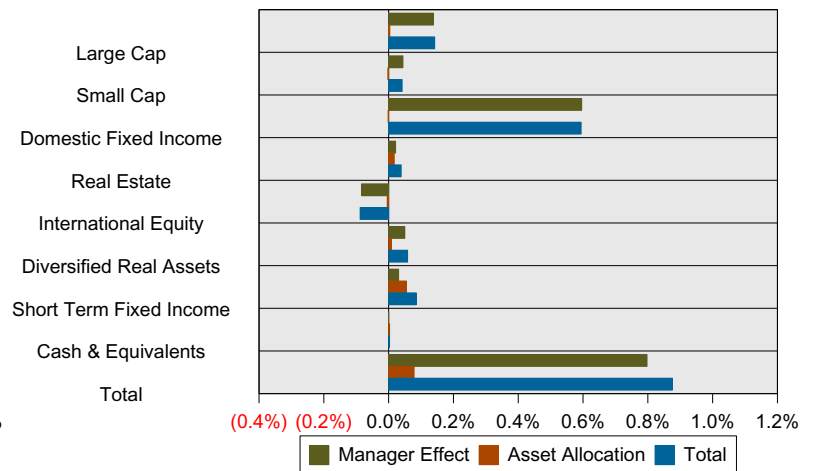
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended December 31, 2016

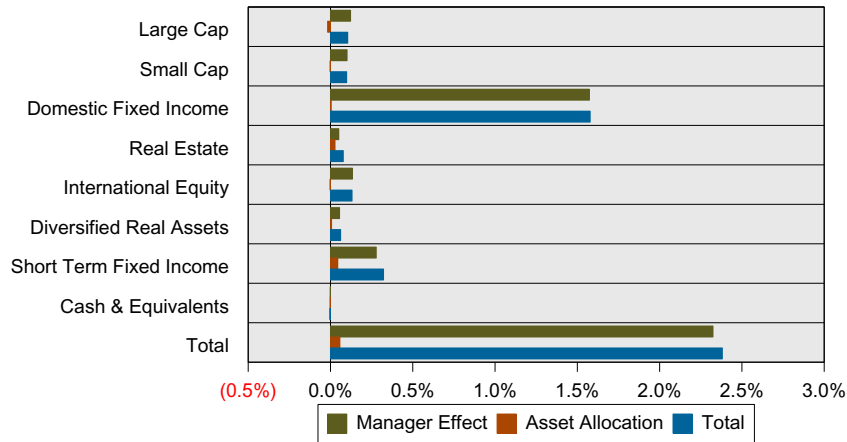
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	11%	11%	5.15%	3.83%	0.14%	0.00%	0.14%
Small Cap	4%	4%	10.17%	8.83%	0.04%	(0.00%)	0.04%
Domestic Fixed Income	47%	50%	(1.73%)	(2.98%)	0.60%	(0.00%)	0.59%
Real Estate	6%	5%	2.14%	1.73%	0.02%	0.02%	0.04%
International Equity	8%	8%	(1.38%)	(0.36%)	(0.08%)	(0.00%)	(0.09%)
Diversified Real Assets	12%	13%	(1.62%)	(2.07%)	0.05%	0.01%	0.06%
Short Term Fixed Income	11%	7%	(0.18%)	(0.45%)	0.03%	0.05%	0.09%
Cash & Equivalents	2%	2%	0.08%	0.09%	(0.00%)	0.00%	0.00%
Total					0.80%	(0.05%)	0.88%

* Current Quarter Target = 51.2% Bimbg Aggregate Idx, 13.2% NDSIB INS DRA Weighted Benchmark, 11.2% Russell 1000 Index, 8.2% MSCI World ex US, 5.2% NCREIF Total Index, 5.1% Bimbg Gov 1-3 Yr, 3.8% Russell 2000 Index and 2.1% 3-month Treasury Bill.

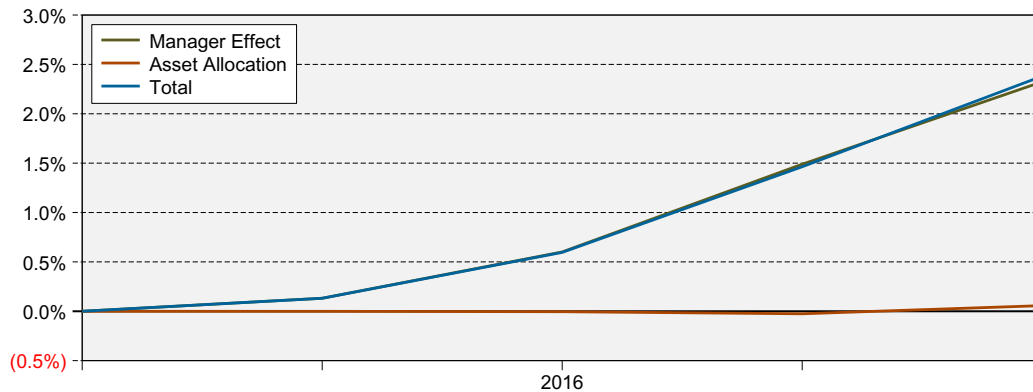
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

One Year Relative Attribution Effects



Cumulative Relative Attribution Effects



One Year Relative Attribution Effects

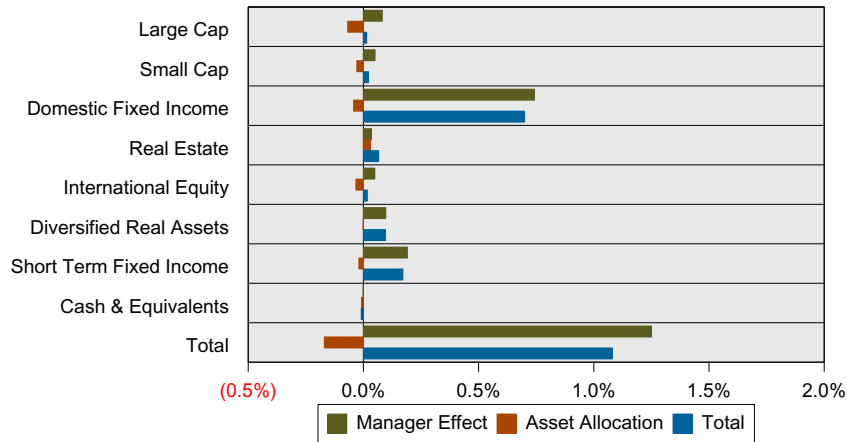
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	10%	10%	13.23%	12.05%	0.12%	(0.02%)	0.10%
Small Cap	3%	3%	24.96%	21.31%	0.10%	(0.00%)	0.10%
Domestic Fixed Income	43%	44%	6.24%	2.65%	1.57%	0.00%	1.58%
Real Estate	5%	4%	8.99%	7.97%	0.05%	0.03%	0.08%
International Equity	7%	7%	3.42%	1.22%	0.13%	(0.00%)	0.13%
Diversified Real Assets	11%	11%	3.41%	2.90%	0.06%	0.01%	0.06%
Short Term Fixed Income	18%	17%	2.31%	0.87%	0.28%	0.04%	0.32%
Cash & Equivalents	2%	2%	0.25%	0.33%	(0.00%)	(0.00%)	(0.00%)
Total			6.26%	3.88%	+ 2.32%	+ 0.06%	2.38%

* Current Quarter Target = 51.2% Blmbg Aggregate Idx, 13.2% NDSIB INS DRA Weighted Benchmark, 11.2% Russell 1000 Index, 8.2% MSCI World ex US, 5.2% NCREIF Total Index, 5.1% Blmbg Gov 1-3 Yr, 3.8% Russell 2000 Index and 2.1% 3-month Treasury Bill.

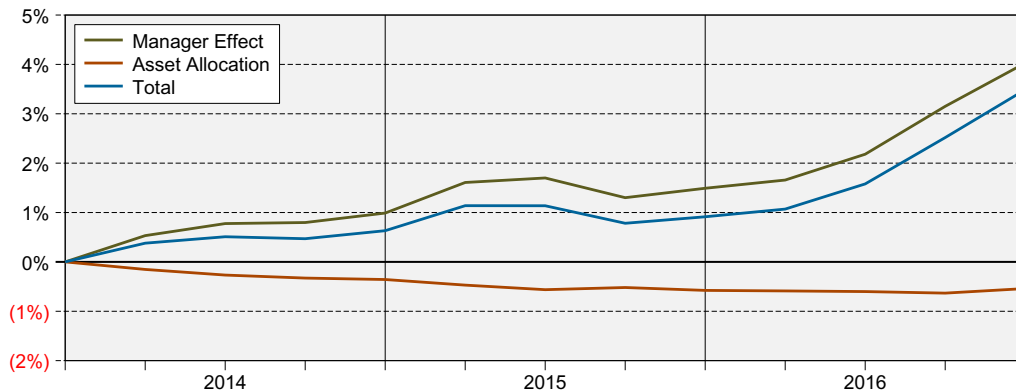
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Three Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Three Year Annualized Relative Attribution Effects

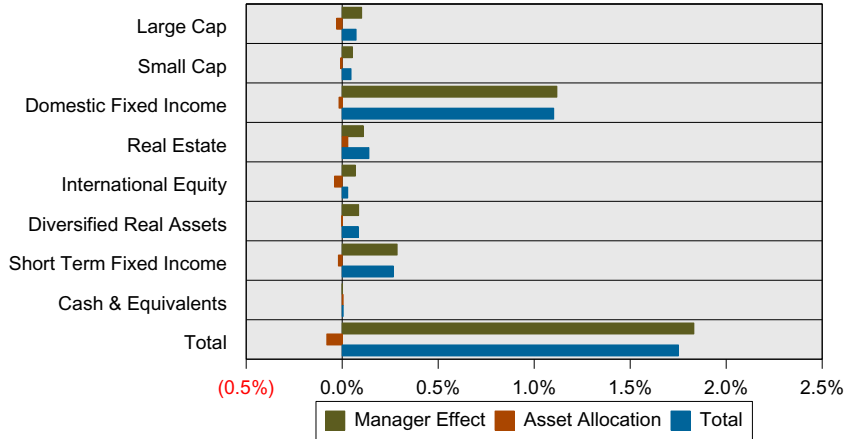
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	12%	12%	9.45%	8.59%	0.08%	(0.07%)	0.01%
Small Cap	4%	4%	8.24%	6.74%	0.05%	(0.03%)	0.02%
Domestic Fixed Income	40%	40%	4.91%	3.03%	0.74%	(0.04%)	0.70%
Real Estate	5%	5%	11.54%	11.02%	0.04%	0.03%	0.07%
International Equity	8%	9%	(0.35%)	(1.53%)	0.05%	(0.03%)	0.02%
Diversified Real Assets	10%	10%	3.14%	2.13%	0.10%	(0.00%)	0.10%
Short Term Fixed Income	19%	18%	1.65%	0.69%	0.19%	(0.02%)	0.17%
Cash & Equivalents	3%	2%	0.09%	0.14%	(0.00%)	(0.01%)	(0.01%)
Total			4.24%	3.16%	1.25%	(0.17%)	1.08%

* Current Quarter Target = 51.2% Blmbg Aggregate Idx, 13.2% NDSIB INS DRA Weighted Benchmark, 11.2% Russell 1000 Index, 8.2% MSCI World ex US, 5.2% NCREIF Total Index, 5.1% Blmbg Gov 1-3 Yr, 3.8% Russell 2000 Index and 2.1% 3-month Treasury Bill.

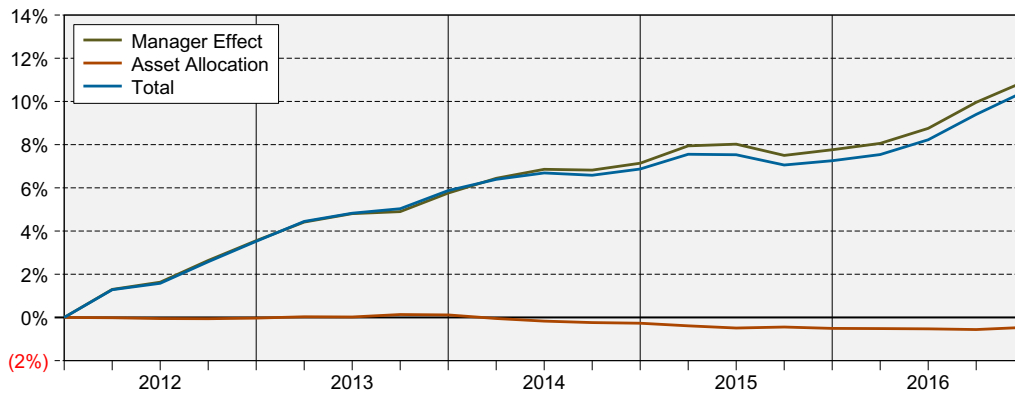
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Five Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Five Year Annualized Relative Attribution Effects

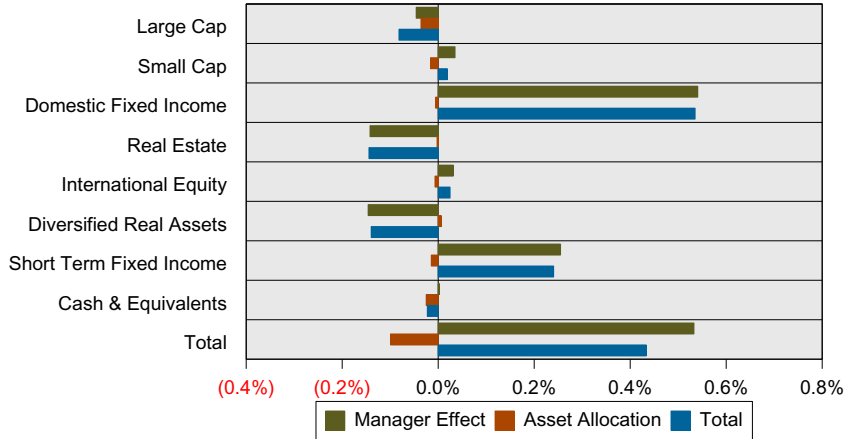
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	10%	10%	16.08%	14.69%	0.10%	(0.03%)	0.07%
Small Cap	3%	3%	16.45%	14.46%	0.05%	(0.01%)	0.05%
Domestic Fixed Income	36%	36%	5.36%	2.23%	1.12%	(0.02%)	1.10%
Real Estate	5%	4%	13.69%	10.91%	0.11%	0.03%	0.14%
International Equity	7%	7%	8.25%	6.58%	0.07%	(0.04%)	0.03%
Diversified Real Assets	11%	11%	3.10%	2.18%	0.09%	(0.00%)	0.08%
Short Term Fixed Income	26%	26%	1.69%	0.59%	0.29%	(0.02%)	0.27%
Cash & Equivalents	3%	2%	0.14%	0.12%	0.00%	0.00%	0.01%
Total			5.39%	3.64%	+ 1.83%	+ (0.08%)	1.75%

* Current Quarter Target = 51.2% Blmbg Aggregate Idx, 13.2% NDSIB INS DRA Weighted Benchmark, 11.2% Russell 1000 Index, 8.2% MSCI World ex US, 5.2% NCREIF Total Index, 5.1% Blmbg Gov 1-3 Yr, 3.8% Russell 2000 Index and 2.1% 3-month Treasury Bill.

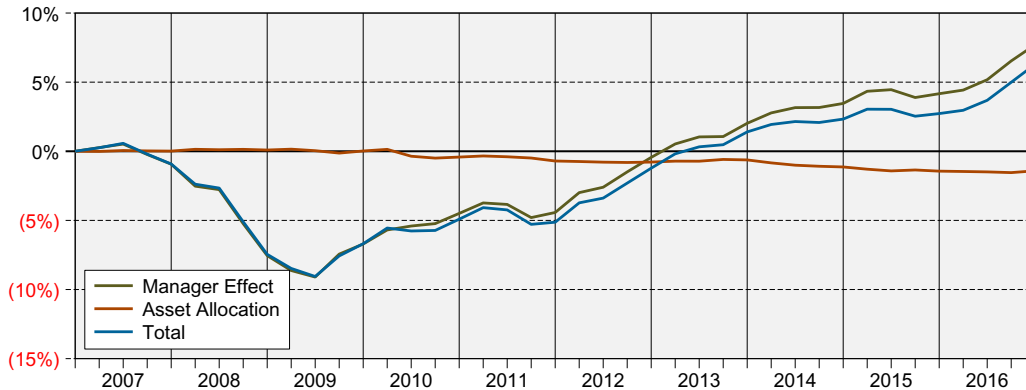
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Ten Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Ten Year Annualized Relative Attribution Effects

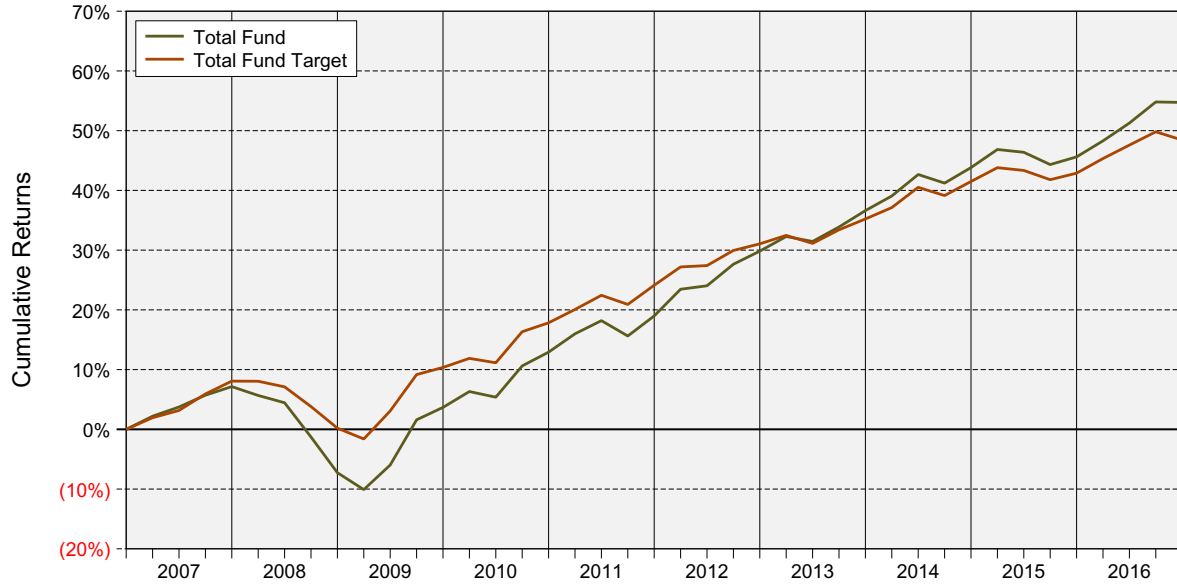
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	10%	10%	6.66%	6.96%	(0.05%)	(0.04%)	(0.08%)
Small Cap	3%	3%	8.10%	7.07%	0.04%	(0.02%)	0.02%
Domestic Fixed Income	41%	41%	6.05%	4.34%	0.54%	(0.01%)	0.54%
Real Estate	5%	5%	3.40%	6.93%	(0.14%)	(0.00%)	(0.14%)
International Equity	7%	7%	1.23%	0.54%	0.03%	(0.01%)	0.02%
Diversified Real Assets	15%	15%	3.92%	4.39%	(0.15%)	0.01%	(0.14%)
Short Term Fixed Income	16%	16%	-	-	0.25%	(0.01%)	0.24%
Cash & Equivalents	4%	3%	0.85%	0.80%	0.00%	(0.02%)	(0.02%)
Total			4.46%	4.03%	+ 0.53%	+ (0.10%)	0.43%

* Current Quarter Target = 51.2% Blmbg Aggregate Idx, 13.2% NDSIB INS DRA Weighted Benchmark, 11.2% Russell 1000 Index, 8.2% MSCI World ex US, 5.2% NCREIF Total Index, 5.1% Blmbg Gov 1-3 Yr, 3.8% Russell 2000 Index and 2.1% 3-month Treasury Bill.

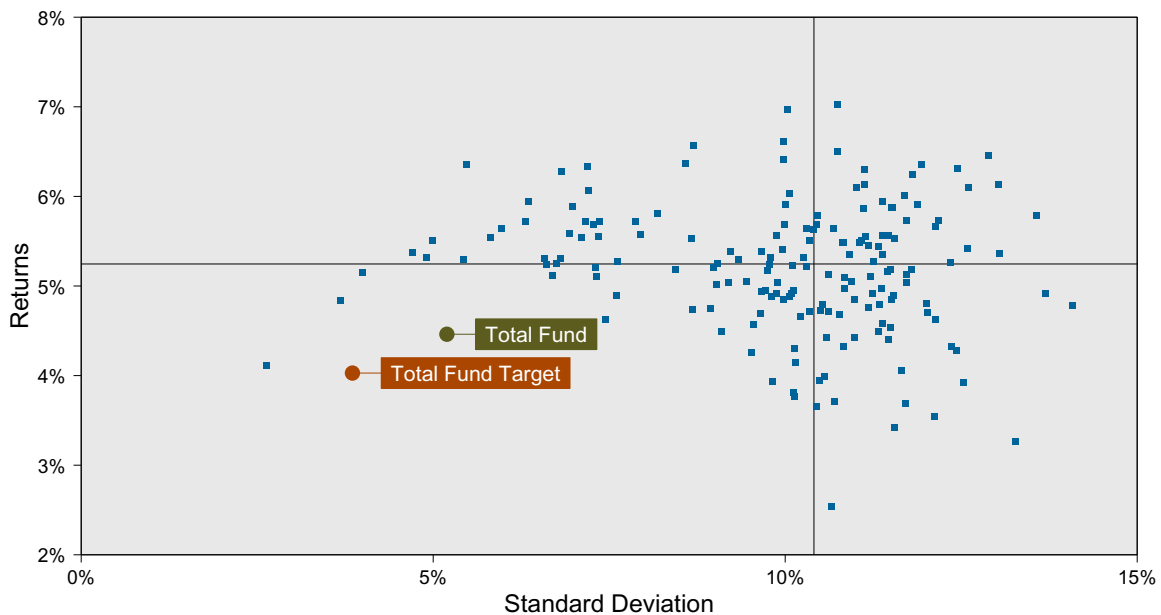
Cumulative Performance Relative to Target

The first chart below illustrates the cumulative performance of the Total Fund relative to the cumulative performance of the Fund's Target Asset Mix. The Target Mix is assumed to be rebalanced each quarter with no transaction costs. The second chart below shows the return and the risk of the Total Fund and the Target Mix, contrasted with the returns and risks of the funds in the CAI Public Fund Sponsor Database.

Cumulative Returns Actual vs Target



Ten Year Annualized Risk vs Return



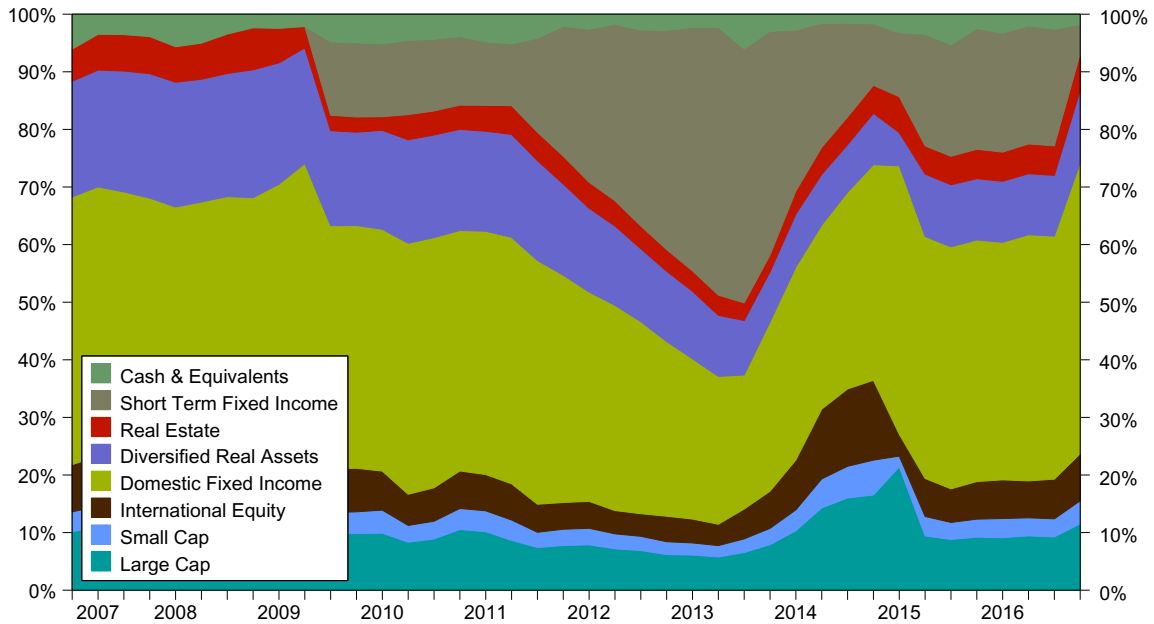
Squares represent membership of the CAI Public Fund Sponsor Database

* Current Quarter Target = 51.2% Bimbg Aggregate Idx, 13.2% NDSIB INS DRA Weighted Benchmark, 11.2% Russell 1000 Index, 8.2% MSCI World ex US, 5.2% NCREIF Total Index, 5.1% Bimbg Gov 1-3 Yr, 3.8% Russell 2000 Index and 2.1% 3-month Treasury Bill.

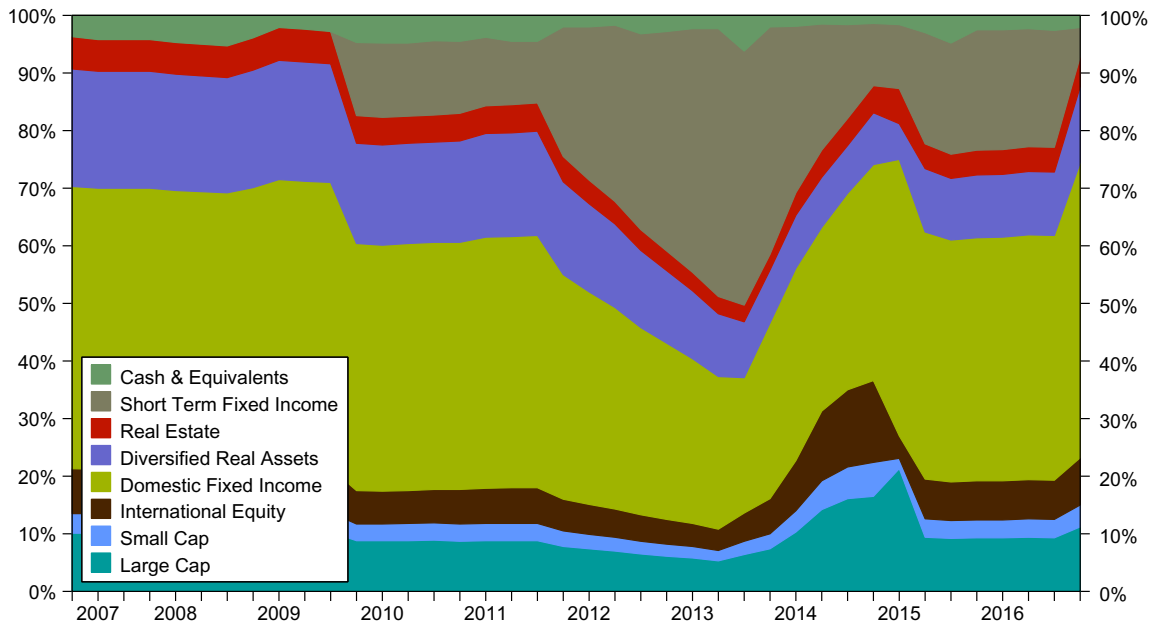
Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, and the fund's historical target asset allocation.

Actual Historical Asset Allocation



Target Historical Asset Allocation

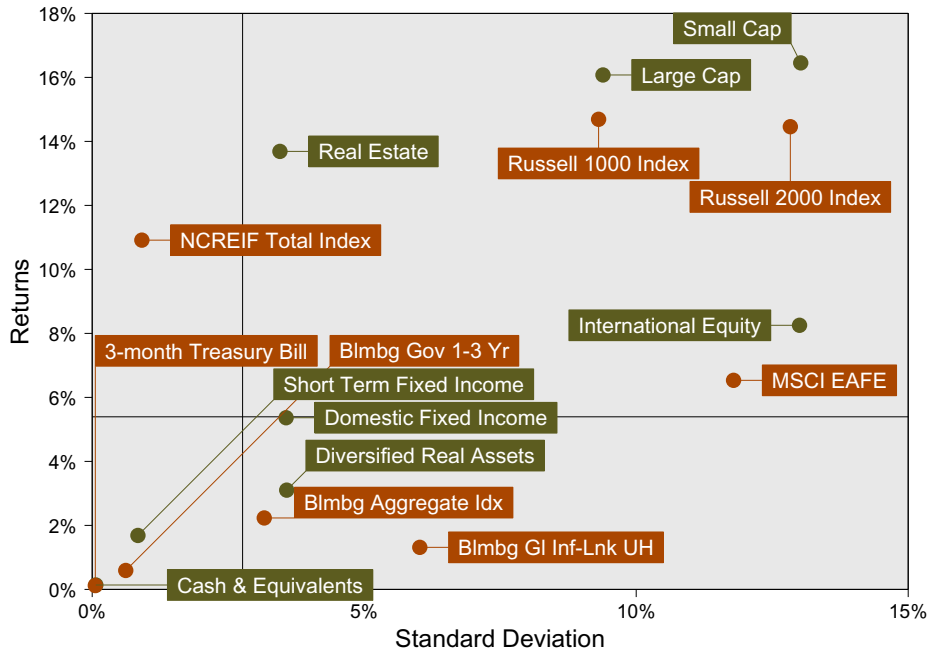


* Current Quarter Target = 51.2% Blmbg Aggregate Idx, 13.2% NDSIB INS DRA Weighted Benchmark, 11.2% Russell 1000 Index, 8.2% MSCI World ex US, 5.2% NCREIF Total Index, 5.1% Blmbg Gov 1-3 Yr, 3.8% Russell 2000 Index and 2.1% 3-month Treasury Bill.

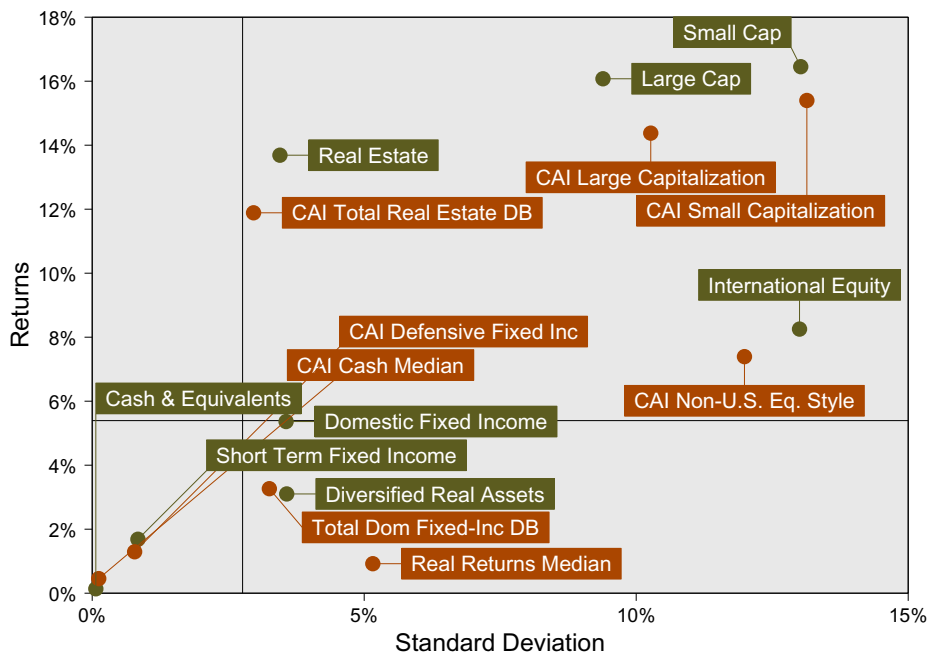
Asset Class Risk and Return

The charts below show the five year annualized risk and return for each asset class component of the Total Fund. The first graph contrasts these values with those of the appropriate index for each asset class. The second chart contrasts them with the risk and return of the median portfolio in each of the appropriate CAI comparative databases. In each case, the crosshairs on the chart represent the return and risk of the Total Fund.

Five Year Annualized Risk vs Return Asset Classes vs Benchmark Indices



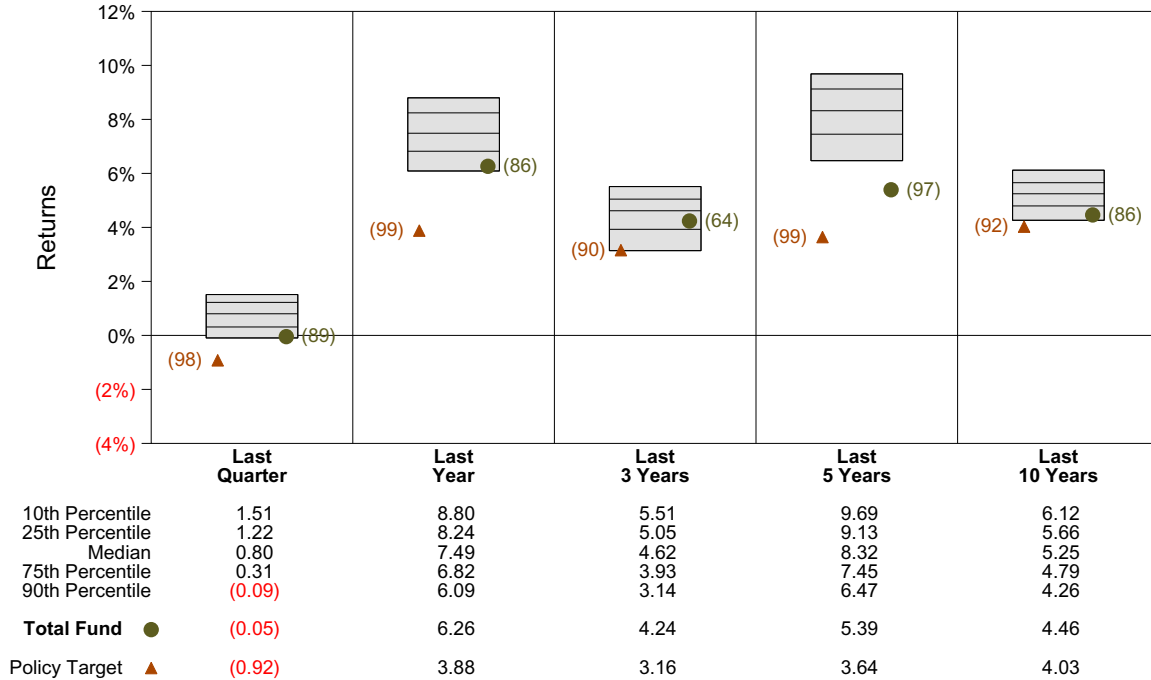
Five Year Annualized Risk vs Return Asset Classes vs Asset Class Median



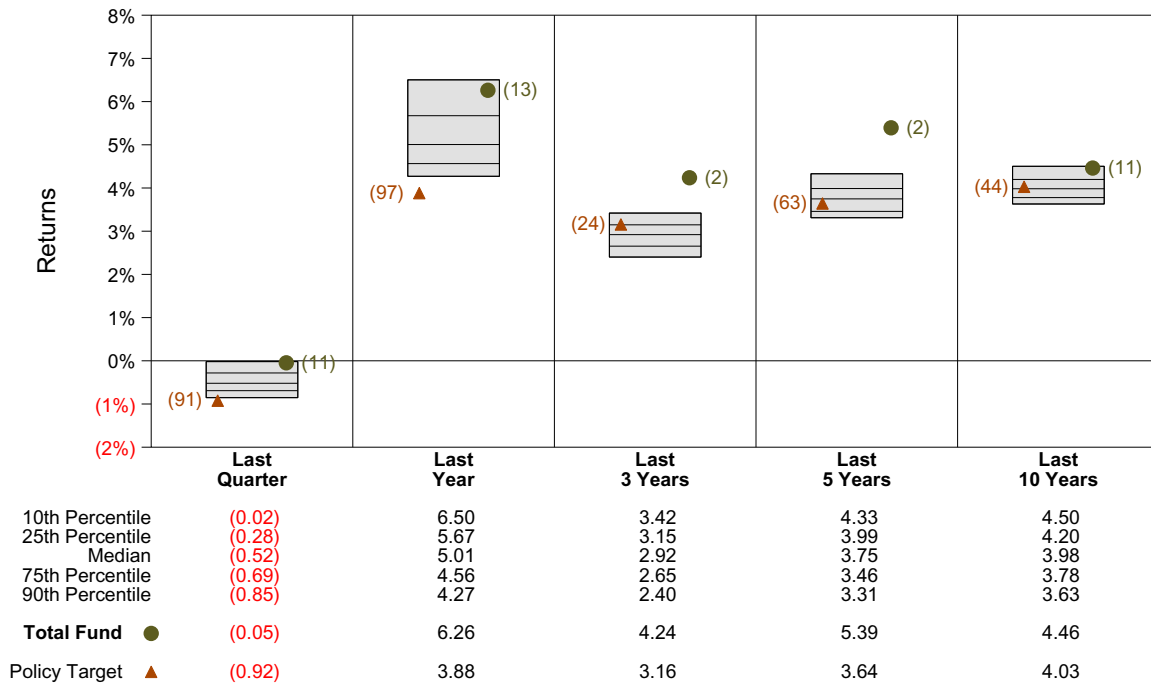
Total Fund Ranking

The first two charts show the ranking of the Total Fund's performance relative to that of the CAI Public Fund Sponsor Database for periods ended December 31, 2016. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation as that of the Total Fund.

CAI Public Fund Sponsor Database



Asset Allocation Adjusted Ranking

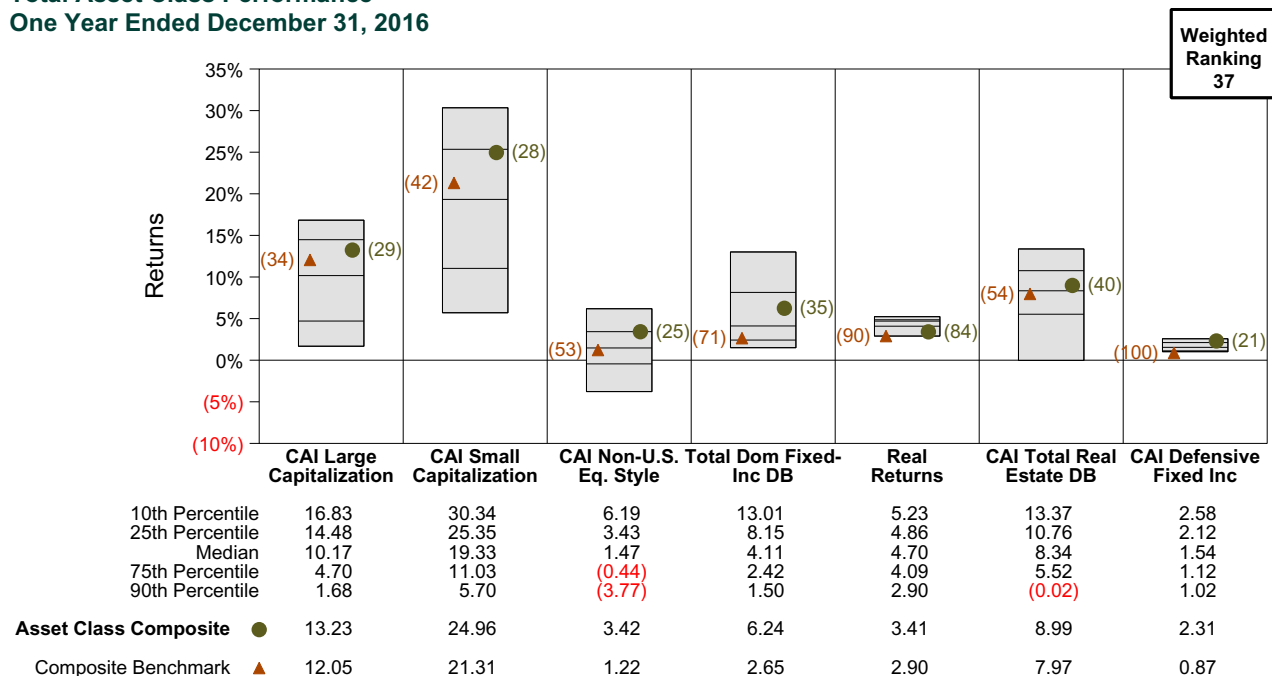


* Current Quarter Target = 51.2% BImbg Aggregate Idx, 13.2% NDSIB INS DRA Weighted Benchmark, 11.2% Russell 1000 Index, 8.2% MSCI World ex US, 5.2% NCREIF Total Index, 5.1% BImbg Gov 1-3 Yr, 3.8% Russell 2000 Index and 2.1% 3-month Treasury Bill.

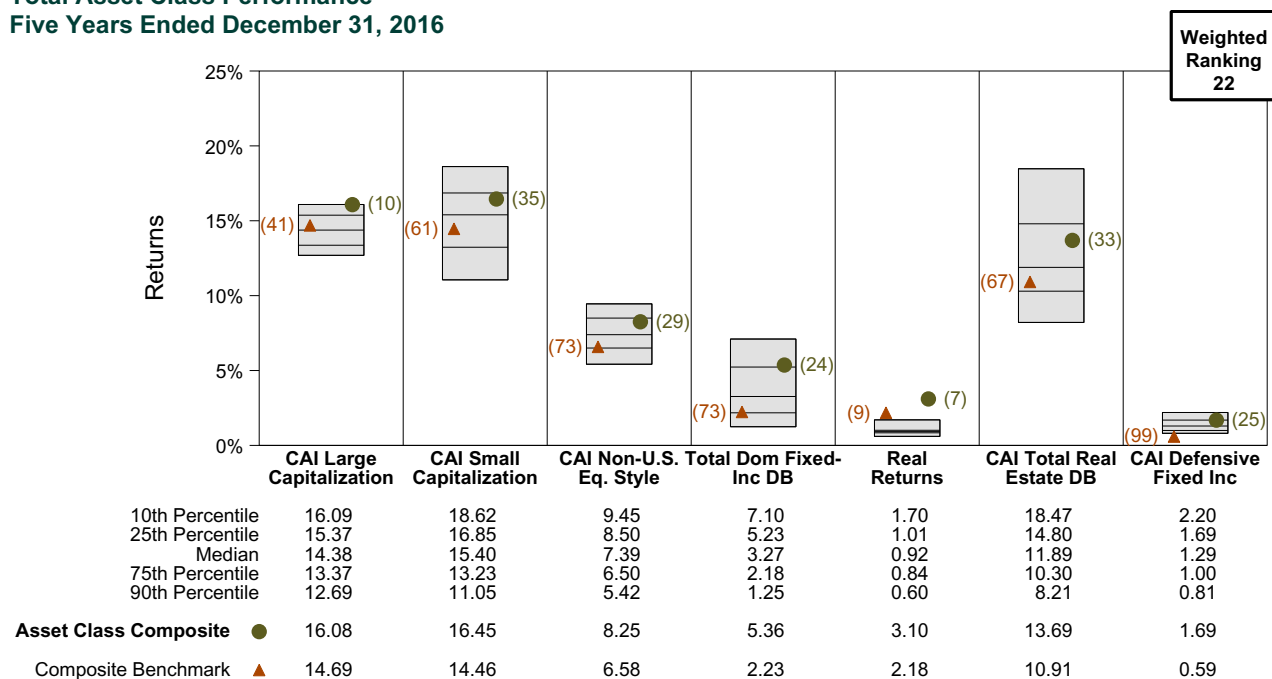
Asset Class Rankings

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.

Total Asset Class Performance One Year Ended December 31, 2016



Total Asset Class Performance Five Years Ended December 31, 2016



* Current Quarter Target = 51.2% Blmbg Aggregate Idx, 13.2% NDSIB INS DRA Weighted Benchmark, 11.2% Russell 1000 Index, 8.2% MSCI World ex US, 5.2% NCREIF Total Index, 5.1% Blmbg Gov 1-3 Yr, 3.8% Russell 2000 Index and 2.1% 3-month Treasury Bill.

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of December 31, 2016, with the distribution as of September 30, 2016. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

Asset Distribution Across Investment Managers

	December 31, 2016			Inv. Return	September 30, 2016	
	Market Value	Weight	Net New Inv.		Market Value	Weight
Domestic Equity	\$325,912,127	15.52%	\$(14,132,592)	\$20,571,719	\$319,473,000	12.39%
Large Cap	\$241,680,853	11.51%	\$(9,109,440)	\$12,324,304	\$238,465,989	9.25%
Parametric Clifton Large Cap	47,737,961	2.27%	(2,000,000)	1,826,613	47,911,347	1.86%
L.A. Capital Large Cap Growth	72,033,028	3.43%	(37,689)	830,415	71,240,303	2.76%
L.A. Capital Enhanced	48,050,604	2.29%	(2,016,557)	2,257,765	47,809,396	1.85%
LSV Large Cap Value	73,859,259	3.52%	(5,055,194)	7,409,511	71,504,942	2.77%
Small Cap	\$84,231,274	4.01%	\$(5,023,151)	\$8,247,414	\$81,007,010	3.14%
Parametric Clifton Small Cap	43,930,947	2.09%	(5,000,000)	3,969,148	44,961,799	1.74%
PIMCO RAE	40,300,326	1.92%	(23,151)	4,278,266	36,045,212	1.40%
International Equity	\$172,055,437	8.19%	\$(3,142,658)	\$(2,430,689)	\$177,628,784	6.89%
Capital Group	115	0.00%	(3,647)	151	3,611	0.00%
DFA Int'l Small Cap Value	18,972,166	0.90%	0	319,848	18,652,318	0.72%
LSV Intl Value	74,008,894	3.52%	(3,073,990)	1,868,252	75,214,632	2.92%
Vanguard Intl Explorer Fund	18,052,193	0.86%	0	(779,787)	18,831,980	0.73%
William Blair	61,022,068	2.91%	(65,020)	(3,839,153)	64,926,242	2.52%
Domestic Fixed Income	\$1,060,437,623	50.48%	\$(9,191,009)	\$(18,845,933)	\$1,088,474,565	42.20%
Declaration Total Return	81,322,803	3.87%	0	(410,476)	81,733,279	3.17%
PIMCO DiSCO II	88,519,817	4.21%	0	2,647,499	85,872,318	3.33%
PIMCO Bravo II Fund	48,870,991	2.33%	0	1,788,691	47,082,300	1.83%
Prudential	107,620,681	5.12%	(74,109)	(3,382,685)	111,077,475	4.31%
SSgA US Govt Credit Bd Idx	136,109,187	6.48%	(12,314)	(4,780,446)	140,901,947	5.46%
Wells Capital	298,958,824	14.23%	(5,000,000)	(6,809,850)	310,768,674	12.05%
Western Asset Management	299,035,320	14.24%	(4,104,585)	(7,898,666)	311,038,572	12.06%
Diversified Real Assets	\$263,546,817	12.55%	\$(3,842,591)	\$(4,386,040)	\$271,775,448	10.54%
Western Asset Management	110,179,493	5.25%	(44,994)	(6,594,982)	116,819,469	4.53%
JP Morgan Infrastructure	81,434,382	3.88%	4,830,503	1,278,061	75,325,818	2.92%
Eastern Timber Opportunities	54,948,496	2.62%	(5,328,638)	638,786	59,638,348	2.31%
Grosvenor Cust. Infrastructure	16,984,446	0.81%	(3,299,463)	292,095	19,991,813	0.78%
Real Estate	\$134,356,465	6.40%	\$(740,078)	\$2,826,054	\$132,270,489	5.13%
Invesco Core Real Estate	63,717,366	3.03%	(522,076)	1,355,234	62,884,208	2.44%
JP Morgan RE	70,639,099	3.36%	(218,001)	1,470,819	69,386,281	2.69%
Short Term Fixed Income	\$106,927,244	5.09%	\$(415,093,525)	\$(266,072)	\$522,286,841	20.25%
JP Morgan Short Term Bonds	70,852,396	3.37%	(205,500,000)	(744,918)	277,097,315	10.74%
Barings Short Term Bonds	36,074,847	1.72%	(209,593,525)	478,846	245,189,526	9.51%
Cash & Equivalents	\$37,340,945	1.78%	\$(29,891,212)	\$50,966	\$67,181,191	2.60%
Northern Trust Cash Account	12,296,937	0.59%	(24,891,212)	17,074	37,171,075	1.44%
Bank of ND	25,044,008	1.19%	(5,000,000)	33,892	30,010,116	1.16%
Securities Lending Income	\$0	0.00%	\$(32,784)	\$32,784	-	-
Total Fund	\$2,100,576,658	100.0%	\$(476,066,447)	\$(2,447,212)	\$2,579,090,317	100.0%

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended December 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Domestic Equity					
Gross	6.42%	16.17%	9.12%	16.16%	7.04%
Net	6.38%	15.86%	8.86%	15.88%	6.67%
Large Cap Equity					
Gross	5.15%	13.23%	9.45%	16.08%	6.66%
Net	5.10%	12.99%	9.24%	15.85%	6.34%
Benchmark(1)	3.83%	12.05%	8.59%	14.69%	6.96%
Parametric Clifton Large Cap - Gross	3.82%	12.45%	9.50%	15.13%	-
Parametric Clifton Large Cap - Net	3.82%	12.24%	9.39%	14.99%	-
S&P 500 Index	3.82%	11.96%	8.87%	14.66%	6.95%
L.A. Capital - Gross	1.17%	9.35%	9.47%	15.72%	8.89%
L.A. Capital - Net	1.11%	9.12%	9.26%	15.50%	8.70%
Russell 1000 Growth Index	1.01%	7.08%	8.55%	14.50%	8.33%
L.A. Capital Enhanced - Gross	4.70%	14.02%	9.55%	15.77%	8.43%
L.A. Capital Enhanced - Net	4.66%	13.86%	9.41%	15.62%	8.27%
Russell 1000 Index	3.83%	12.05%	8.59%	14.69%	7.08%
LSV Asset Management - Gross	10.27%	17.01%	9.21%	17.15%	7.10%
LSV Asset Management - Net	10.19%	16.65%	8.91%	16.82%	6.79%
Russell 1000 Value Index	6.68%	17.34%	8.59%	14.80%	5.72%
Small Cap Equity					
Gross	10.17%	24.96%	8.24%	16.45%	8.10%
Net	10.14%	24.45%	7.85%	16.00%	7.59%
Russell 2000 Index	8.83%	21.31%	6.74%	14.46%	7.07%
Parametric Clifton Small Cap - Gross	8.85%	22.76%	8.33%	15.92%	-
Parametric Clifton SmallCap - Net	8.85%	22.12%	7.89%	15.45%	-
Russell 2000 Index	8.83%	21.31%	6.74%	14.46%	7.07%
PIMCO RAE - Gross	11.88%	28.03%	7.99%	16.82%	-
PIMCO RAE - Net	11.80%	27.69%	7.68%	16.41%	-
Russell 2000	8.83%	21.31%	6.74%	14.46%	7.07%
International Equity					
Gross	(1.38%)	3.42%	(0.35%)	8.25%	1.23%
Net	(1.46%)	3.11%	(0.68%)	7.88%	0.96%
Benchmark(2)	(0.36%)	1.22%	(1.53%)	6.58%	0.54%
DFA Intl Small Cap Value - Net	1.71%	8.00%	2.19%	11.55%	-
World ex US SC Va	(0.12%)	7.87%	0.86%	9.39%	2.84%
LSV Asset Management - Gross	2.59%	4.88%	0.29%	8.40%	0.42%
LSV Asset Management - Net	2.49%	4.47%	(0.11%)	7.94%	0.12%
Benchmark(3)	(0.71%)	1.00%	(1.60%)	6.53%	0.52%
Vanguard Intl Explorer Fund - Net	(4.14%)	(1.77%)	1.19%	9.74%	2.60%
BMI, EPAC, <\$2 B	(3.15%)	3.92%	2.93%	9.67%	2.70%
William Blair - Gross	(5.92%)	-	-	-	-
William Blair - Net	(6.01%)	-	-	-	-
MSCI ACWI ex US	(1.25%)	4.50%	(1.78%)	5.00%	0.96%

(1) S&P 500 Index through 12/31/2011 and Russell 1000 Index thereafter.

(2) MSCI EAFE through 9/30/2000; 50% Hedged EAFE through 3/31/2011; MSCI EAFE again through 6/30/2016; MSCI World ex-US thereafter.

(3) MSCI EAFE through 9/30/2000; 50% Hedged EAFE through 3/31/2011; MSCI EAFE again thereafter.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended December 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Domestic Fixed Income					
Gross	(1.73%)	6.24%	4.91%	5.36%	6.05%
Net	(1.75%)	6.13%	4.77%	5.22%	5.87%
Blmbg Aggregate Index	(2.98%)	2.65%	3.03%	2.23%	4.34%
Declaration Total Return - Net	(0.50%)	3.92%	4.11%	-	-
Libor-3 Month	0.23%	0.75%	0.42%	0.40%	1.20%
PIMCO DiSCO II - Net	3.08%	10.00%	7.33%	14.95%	-
PIMCO Bravo II Fund - Net	3.80%	9.31%	15.03%	-	-
Blmbg Aggregate Index	(2.98%)	2.65%	3.03%	2.23%	4.34%
Prudential - Gross	(3.05%)	5.34%	4.24%	4.32%	6.12%
Prudential - Net	(3.11%)	5.05%	3.96%	4.08%	5.99%
Blmbg Aggregate Index	(2.98%)	2.65%	3.03%	2.23%	4.34%
Wells Capital - Gross	(2.21%)	8.39%	5.18%	5.26%	7.05%
Wells Capital - Net	(2.21%)	8.25%	5.00%	5.06%	6.83%
Blmbg Baa Credit 3%	(2.74%)	7.92%	4.37%	4.38%	6.15%
Western Asset - Gross	(2.54%)	4.99%	4.61%	4.29%	5.32%
Western Asset - Net	(2.57%)	4.84%	4.47%	4.14%	5.14%
Blmbg Aggregate	(2.98%)	2.65%	3.03%	2.23%	4.34%
SSgA US Govt Cr Bd Idx - Gross	(3.39%)	3.03%	3.04%	-	-
SSgA US Govt Cr Bd Idx - Net	(3.40%)	3.00%	3.00%	-	-
Blmbg Govt/Credit Bd	(3.39%)	3.05%	3.04%	2.29%	4.40%
Diversified Real Assets					
Gross	(1.62%)	3.41%	3.14%	3.10%	3.92%
Net	(1.68%)	3.09%	2.85%	2.79%	3.62%
Weighted Benchmark	(2.07%)	2.90%	2.13%	2.18%	4.39%
Western TIPS - Gross	(5.65%)	2.87%	1.31%	1.01%	3.38%
Western TIPS - Net	(5.68%)	2.73%	1.18%	0.86%	3.21%
Blmbg Gbl Inftn-Linked(1)	(5.35%)	3.91%	0.70%	1.31%	3.94%
JP Morgan Infrastructure - Gross	1.60%	4.05%	2.92%	5.64%	-
JP Morgan Infrastructure - Net	1.43%	3.15%	2.00%	4.61%	-
CPI-W	(0.04%)	1.99%	0.90%	1.16%	1.79%
Eastern Timber Opportunities - Net	1.16%	2.03%	6.10%	4.44%	-
NCREIF Timberland Index	1.18%	2.59%	5.96%	7.06%	5.83%
Grosvenor Cust. Infrastructure - Net	1.64%	8.44%	8.47%	10.42%	-
CPI-W	(0.04%)	1.99%	0.90%	1.16%	1.79%

(1) Blmbg US TIPS through 12/31/2009 and Blmbg Global Inflation-Linked thereafter.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended December 31, 2016

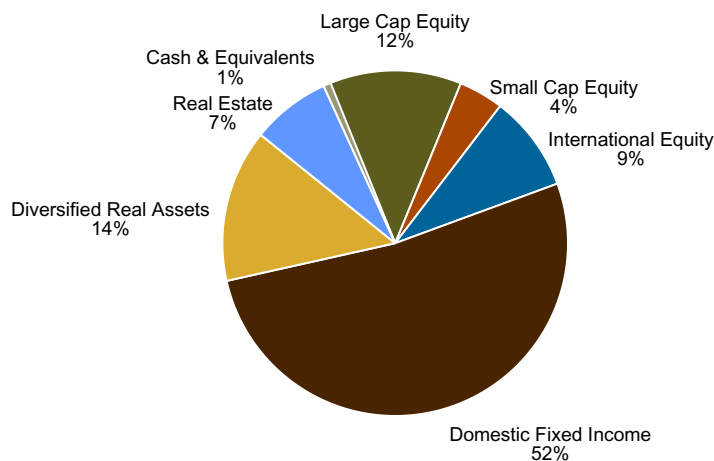
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Real Estate					
Gross	2.14%	8.99%	11.54%	13.69%	3.40%
Net	1.96%	8.18%	10.73%	12.72%	2.30%
NCREIF Total Index	1.73%	7.97%	11.02%	10.91%	6.93%
Invesco Core Real Estate - Gross	2.17%	9.23%	12.08%	-	-
Invesco Core Real Estate - Net	2.08%	8.85%	11.68%	-	-
NCREIF Total Index	1.73%	7.97%	11.02%	10.91%	6.93%
JP Morgan - Gross	2.12%	8.76%	11.17%	14.21%	3.64%
JP Morgan - Net	1.86%	7.59%	10.05%	12.92%	2.40%
NCREIF Total Index	1.73%	7.97%	11.02%	10.91%	6.93%
Short Term Fixed Income					
Gross	(0.18%)	2.31%	1.65%	1.69%	-
Net	(0.24%)	2.15%	1.48%	1.55%	-
Blmbg Gov 1-3 Yr	(0.45%)	0.87%	0.69%	0.59%	2.18%
Barings Short Term Bonds - Gross	0.33%	3.56%	2.29%	2.31%	-
Barings Short Term Bonds - Net	0.20%	3.29%	2.09%	2.13%	-
Blmbg Gov 1-3 Yr	(0.45%)	0.87%	0.69%	0.59%	2.18%
JP Morgan Short Term Bds - Gross	(0.59%)	1.27%	1.07%	1.10%	-
JP Morgan Short Term Bds - Net	(0.59%)	1.18%	0.97%	1.00%	-
Blmbg Gov/Credit 1-3 Y	(0.39%)	1.28%	0.90%	0.92%	2.44%
Cash & Equivalents - Net					
Cash Account- Net	0.08%	0.25%	0.09%	0.14%	0.85%
Cash Account- Net	0.05%	0.21%	0.08%	0.13%	0.85%
Bank of ND - Net	0.11%	-	-	-	-
90 Day Treasury Bills	0.09%	0.33%	0.14%	0.12%	0.80%
Total Fund					
Gross	(0.05%)	6.26%	4.24%	5.39%	4.46%
Net	(0.09%)	6.05%	4.02%	5.18%	4.21%
Target*	(0.92%)	3.88%	3.16%	3.64%	4.03%

* Current Quarter Target = 51.2% Blmbg Aggregate Idx, 13.2% NDSIB INS DRA Weighted Benchmark, 11.2% Russell 1000 Index, 8.2% MSCI World ex US, 5.2% NCREIF Total Index, 5.1% Blmbg Gov 1-3 Yr, 3.8% Russell 2000 Index and 2.1% 3-month Treasury Bill.

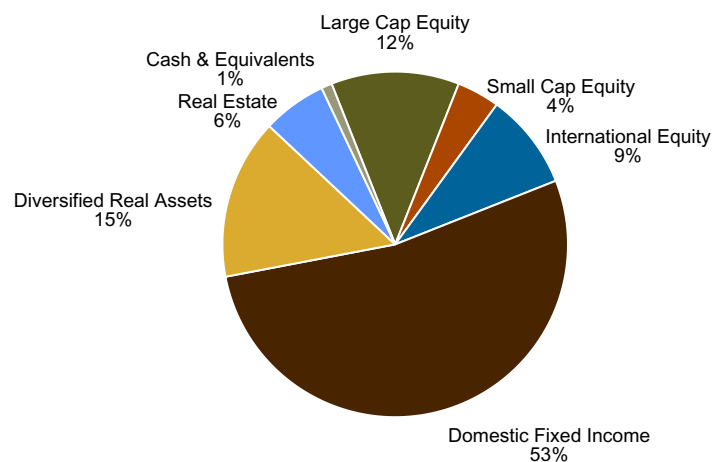
Actual vs Target Asset Allocation As of December 31, 2016

The first chart below shows the Fund's asset allocation as of December 31, 2016. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

Actual Asset Allocation



Target Asset Allocation



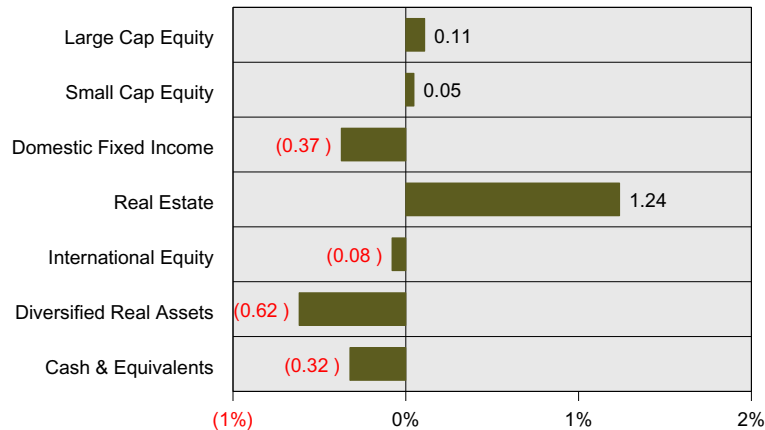
Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap Equity	225,465	12.4%	12.0%	0.4%	6,452
Small Cap Equity	77,372	4.2%	4.0%	0.2%	4,367
International Equity	164,038	9.0%	9.0%	0.0%	(222)
Domestic Fixed Income	951,304	52.1%	53.0%	(0.9%)	(16,005)
Diversified Real Assets	260,226	14.3%	15.0%	(0.7%)	(13,540)
Real Estate	134,290	7.4%	6.0%	1.4%	24,784
Cash & Equivalents	12,415	0.7%	1.0%	(0.3%)	(5,836)
Total	1,825,111	100.0%	100.0%		

* Current Quarter Target = 53.0% Blmbg Aggregate Idx, 15.0% NDSIB WSI DRA Weighted Benchmark, 12.0% Russell 1000 Index, 9.0% MSCI World ex US, 6.0% NCREIF Total Index, 4.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

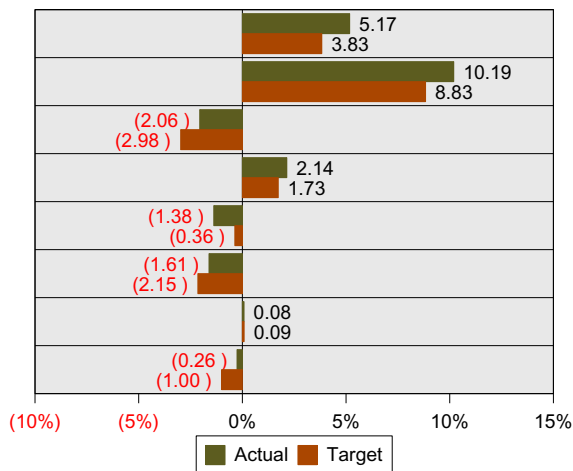
Quarterly Total Fund Relative Attribution - December 31, 2016

The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

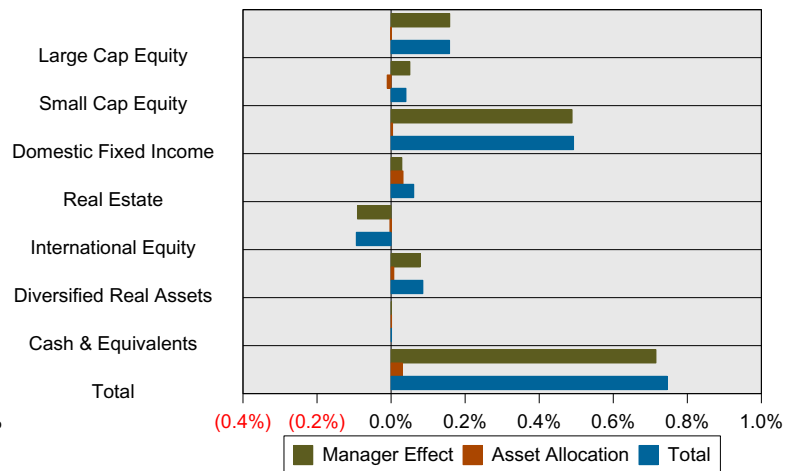
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended December 31, 2016

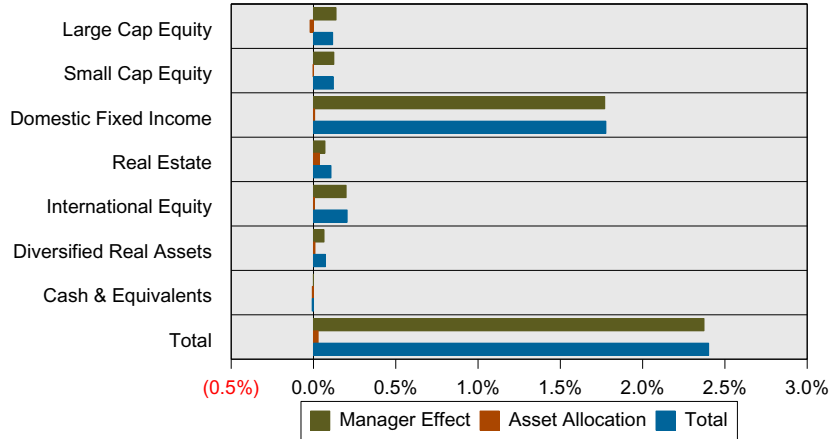
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	12%	12%	5.17%	3.83%	0.16%	(0.00%)	0.16%
Small Cap Equity	4%	4%	10.19%	8.83%	0.05%	(0.01%)	0.04%
Domestic Fixed Income	53%	53%	(2.06%)	(2.98%)	0.49%	0.00%	0.49%
Real Estate	7%	6%	2.14%	1.73%	0.03%	0.03%	0.06%
International Equity	9%	9%	(1.38%)	(0.36%)	(0.09%)	(0.00%)	(0.09%)
Diversified Real Assets	14%	15%	(1.61%)	(2.15%)	0.08%	0.01%	0.09%
Cash & Equivalents	1%	1%	0.08%	0.09%	(0.00%)	0.00%	0.00%
Total			(0.26%)	(1.00%)	0.72%	0.03%	0.75%

* Current Quarter Target = 53.0% Blmbg Aggregate Idx, 15.0% NDSIB WSI DRA Weighted Benchmark, 12.0% Russell 1000 Index, 9.0% MSCI World ex US, 6.0% NCREIF Total Index, 4.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

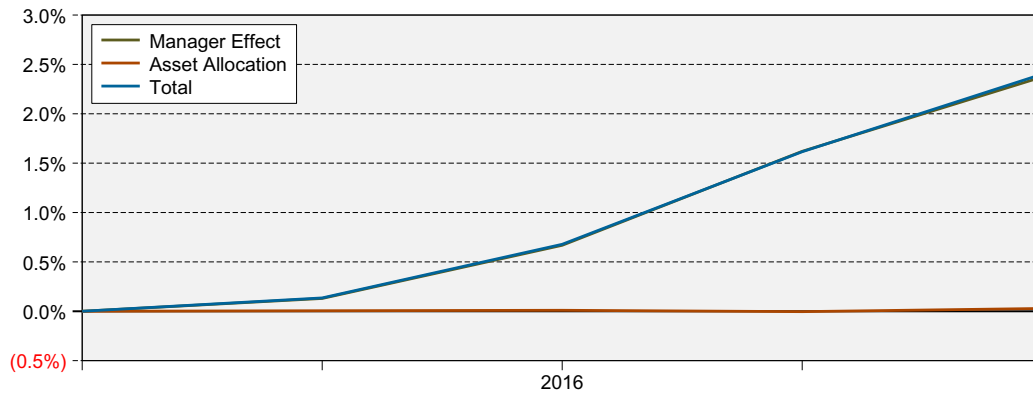
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

One Year Relative Attribution Effects



Cumulative Relative Attribution Effects



One Year Relative Attribution Effects

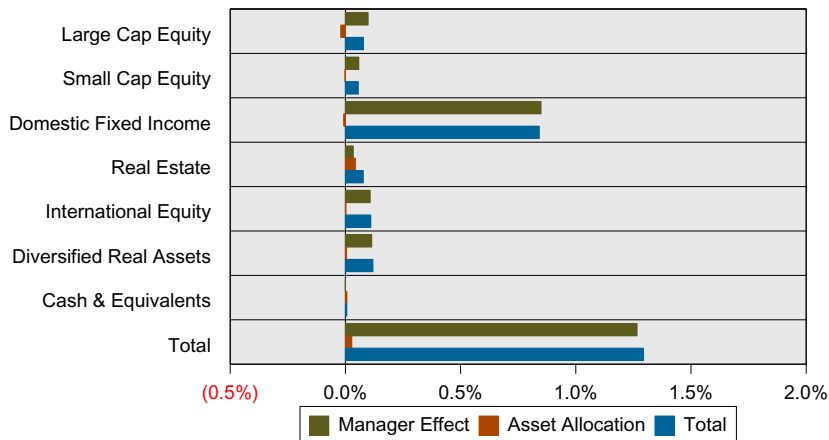
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	12%	12%	13.25%	12.05%	0.14%	(0.02%)	0.12%
Small Cap Equity	4%	4%	24.97%	21.31%	0.12%	(0.00%)	0.12%
Domestic Fixed Income	53%	53%	6.01%	2.65%	1.77%	0.01%	1.78%
Real Estate	7%	6%	8.98%	7.97%	0.07%	0.04%	0.11%
International Equity	9%	9%	3.42%	1.22%	0.20%	0.01%	0.20%
Diversified Real Assets	15%	15%	3.46%	3.01%	0.06%	0.01%	0.07%
Cash & Equivalents	1%	1%	0.25%	0.33%	(0.00%)	(0.01%)	(0.01%)
Total			7.24%	4.84%	+ 2.37%	+ 0.03%	2.40%

* Current Quarter Target = 53.0% Blmbg Aggregate Idx, 15.0% NDSIB WSI DRA Weighted Benchmark, 12.0% Russell 1000 Index, 9.0% MSCI World ex US, 6.0% NCREIF Total Index, 4.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

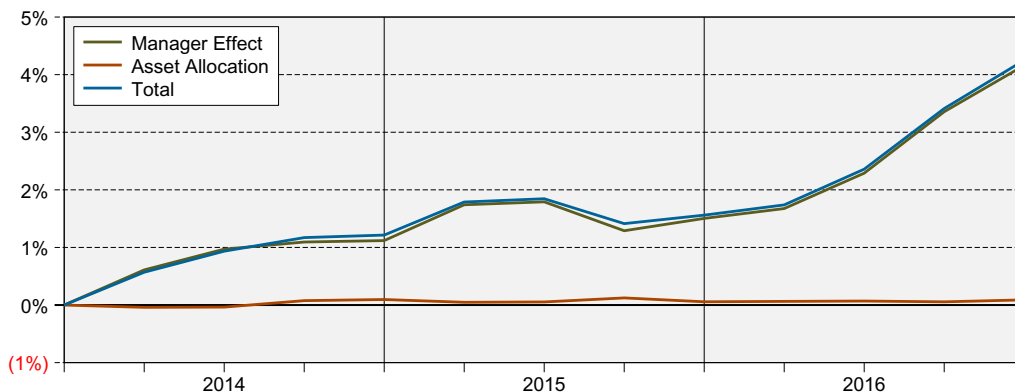
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Three Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Three Year Annualized Relative Attribution Effects

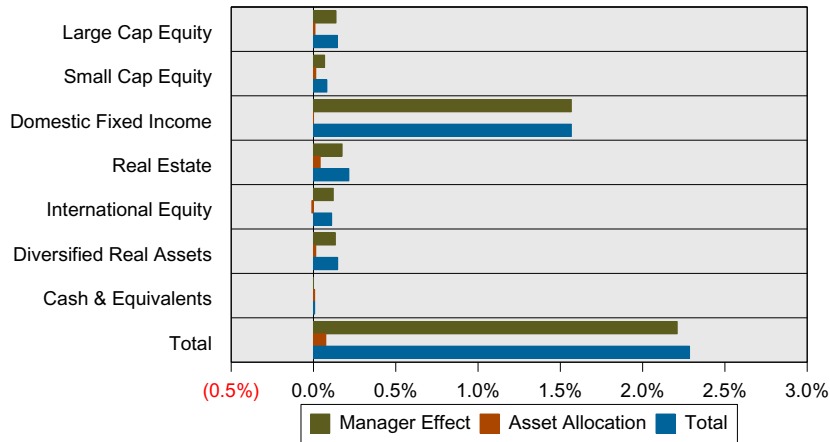
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	12%	12%	9.45%	8.59%	0.10%	(0.02%)	0.08%
Small Cap Equity	4%	4%	8.30%	6.74%	0.06%	(0.00%)	0.06%
Domestic Fixed Income	52%	53%	4.68%	3.03%	0.85%	(0.01%)	0.84%
Real Estate	7%	6%	11.53%	11.02%	0.03%	0.04%	0.08%
International Equity	8%	9%	(0.39%)	(1.53%)	0.11%	0.00%	0.11%
Diversified Real Assets	16%	16%	3.45%	2.82%	0.11%	0.01%	0.12%
Cash & Equivalents	1%	1%	0.09%	0.14%	(0.00%)	0.01%	0.01%
Total			5.30%	4.01%	+ 1.27%	+ 0.03%	1.29%

* Current Quarter Target = 53.0% Blmbg Aggregate Idx, 15.0% NDSIB WSI DRA Weighted Benchmark, 12.0% Russell 1000 Index, 9.0% MSCI World ex US, 6.0% NCREIF Total Index, 4.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

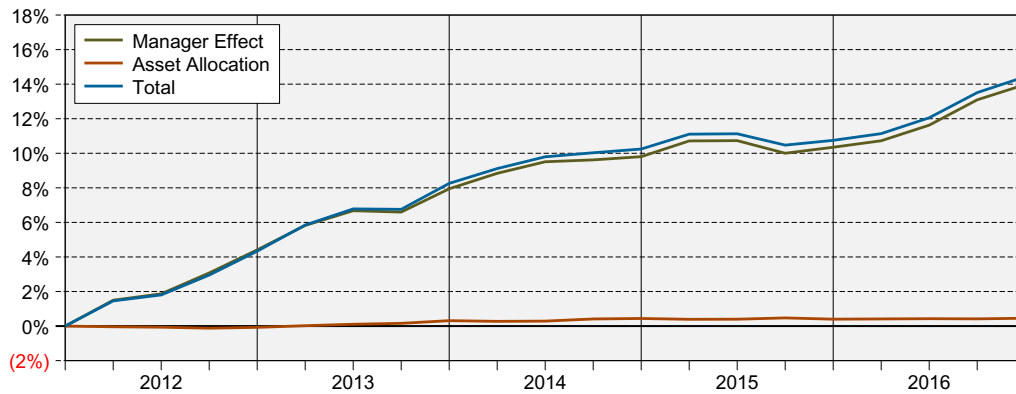
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Five Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Five Year Annualized Relative Attribution Effects

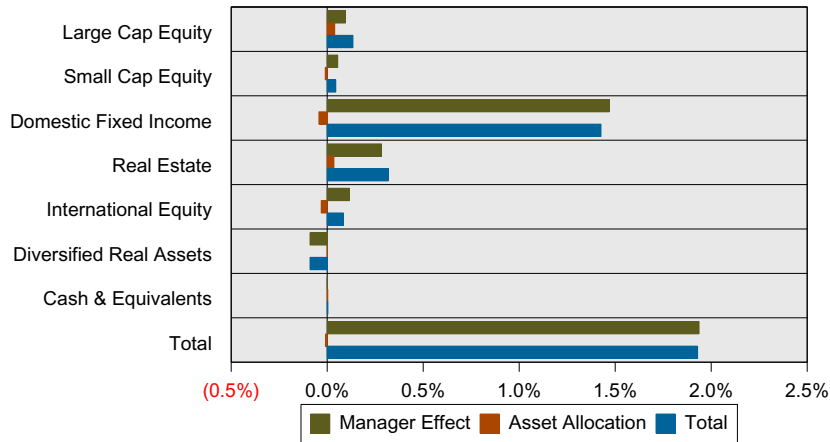
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	11%	11%	16.04%	14.69%	0.14%	0.01%	0.15%
Small Cap Equity	4%	4%	16.47%	14.46%	0.07%	0.01%	0.08%
Domestic Fixed Income	52%	52%	5.24%	2.23%	1.57%	0.00%	1.57%
Real Estate	7%	6%	13.67%	10.91%	0.17%	0.04%	0.21%
International Equity	8%	8%	8.14%	6.58%	0.12%	(0.01%)	0.11%
Diversified Real Assets	18%	19%	3.29%	2.59%	0.13%	0.01%	0.15%
Cash & Equivalents	1%	1%	0.14%	0.12%	0.00%	0.01%	0.01%
Total			7.15%	4.86%	+ 2.21%	+ 0.07%	2.29%

* Current Quarter Target = 53.0% Blmbg Aggregate Idx, 15.0% NDSIB WSI DRA Weighted Benchmark, 12.0% Russell 1000 Index, 9.0% MSCI World ex US, 6.0% NCREIF Total Index, 4.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

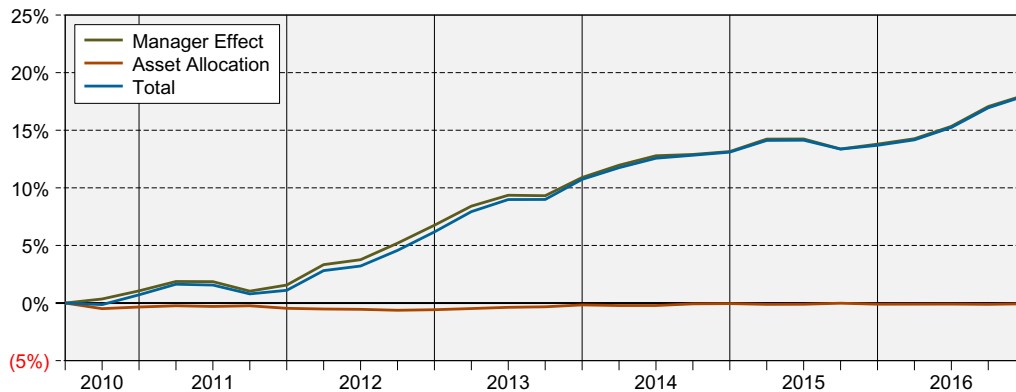
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Six and One-Half Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects

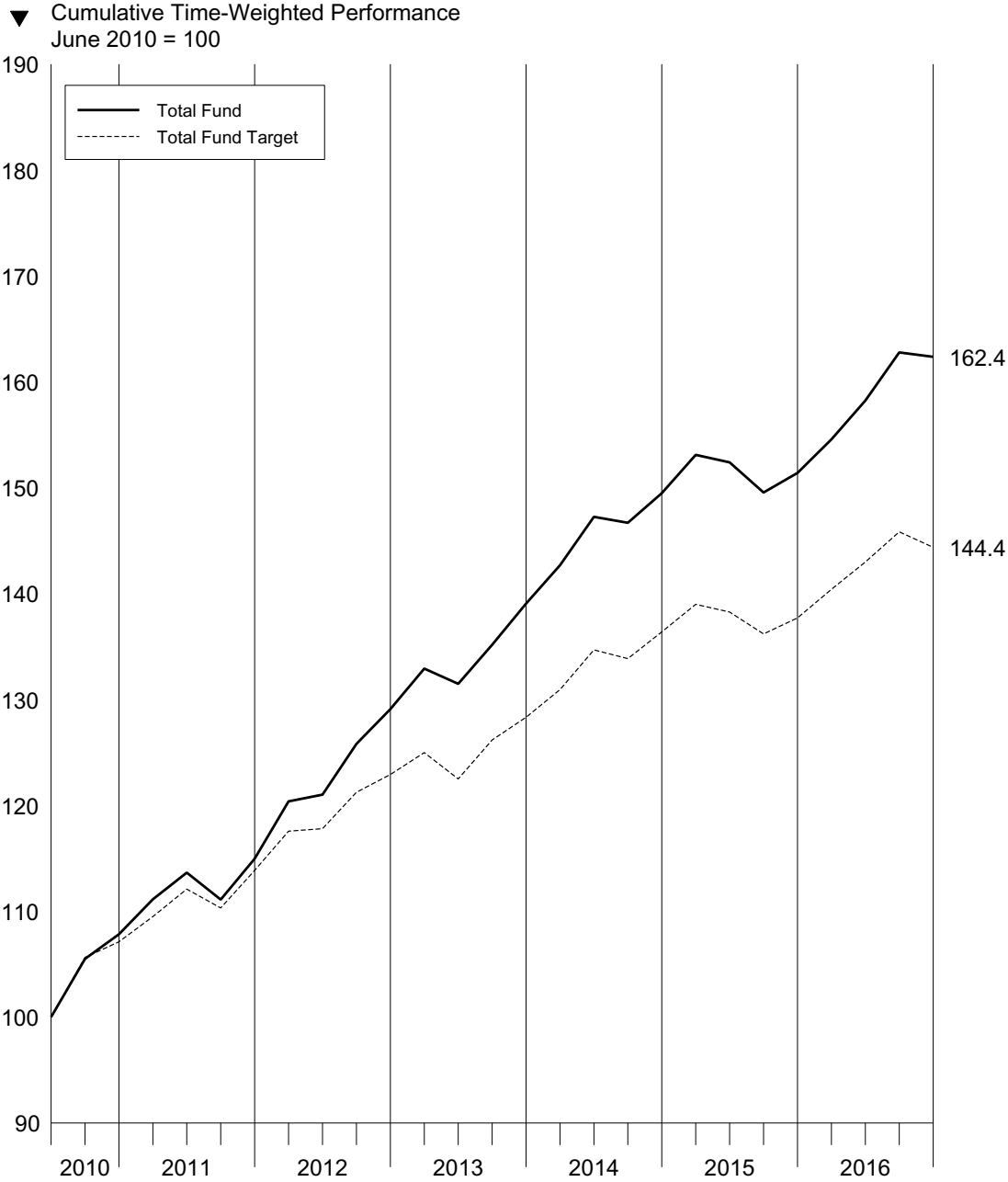


Six and One-Half Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	11%	11%	16.03%	15.13%	0.09%	0.04%	0.13%
Small Cap Equity	4%	4%	16.30%	14.68%	0.05%	(0.01%)	0.04%
Domestic Fixed Income	52%	52%	5.89%	3.08%	1.47%	(0.04%)	1.43%
Real Estate	6%	6%	16.79%	11.96%	0.28%	0.03%	0.32%
International Equity	8%	8%	7.06%	5.57%	0.12%	(0.03%)	0.08%
Diversified Real Assets	19%	19%	4.14%	4.58%	(0.09%)	(0.00%)	(0.09%)
Cash & Equivalents	1%	1%	0.17%	0.12%	0.00%	0.00%	0.00%
Total			7.74%	5.81%	+ 1.94%	(0.01%)	1.93%

* Current Quarter Target = 53.0% Blmbg Aggregate Idx, 15.0% NDSIB WSI DRA Weighted Benchmark, 12.0% Russell 1000 Index, 9.0% MSCI World ex US, 6.0% NCREIF Total Index, 4.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

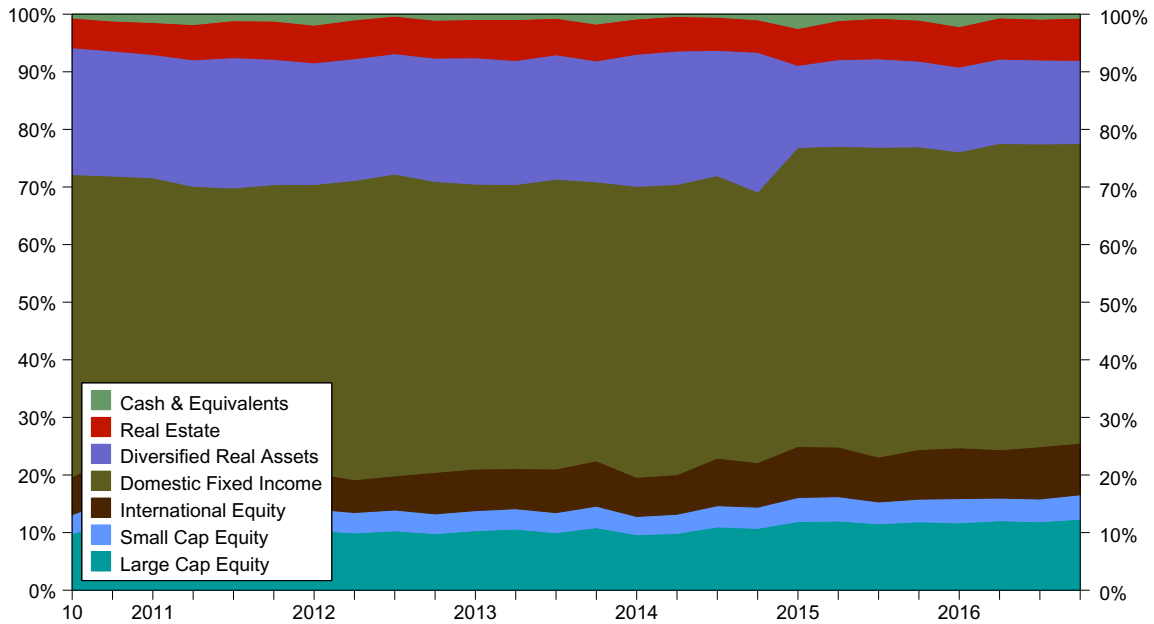
**NDSIB - Workforce Safety & Insurance
Cumulative Results**



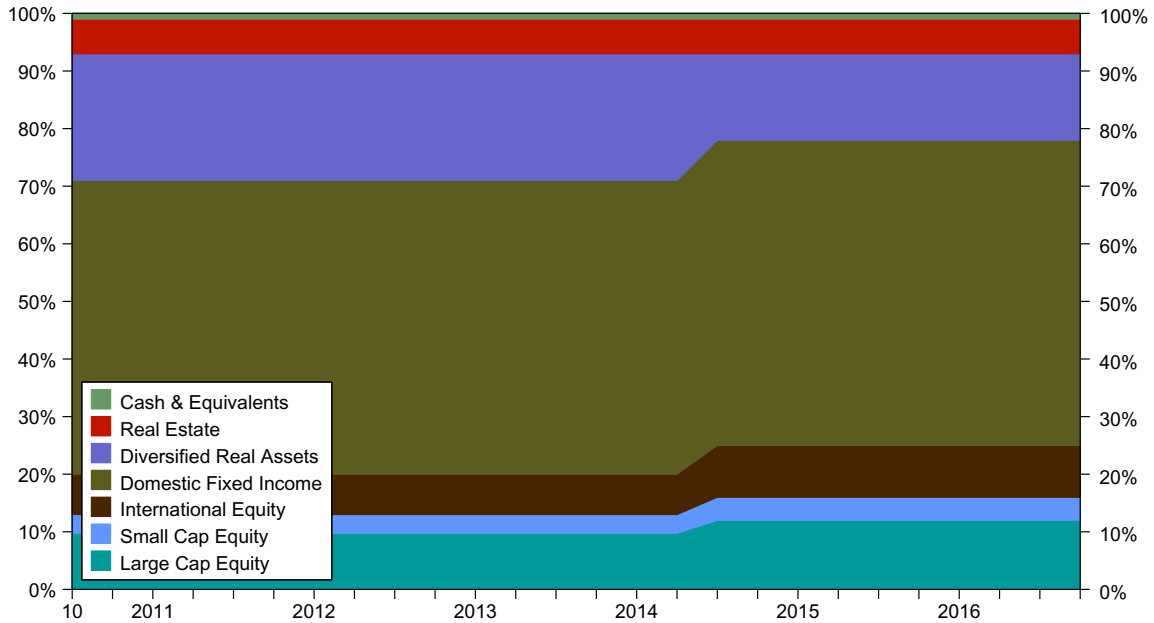
Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, and the fund's historical target asset allocation.

Actual Historical Asset Allocation



Target Historical Asset Allocation

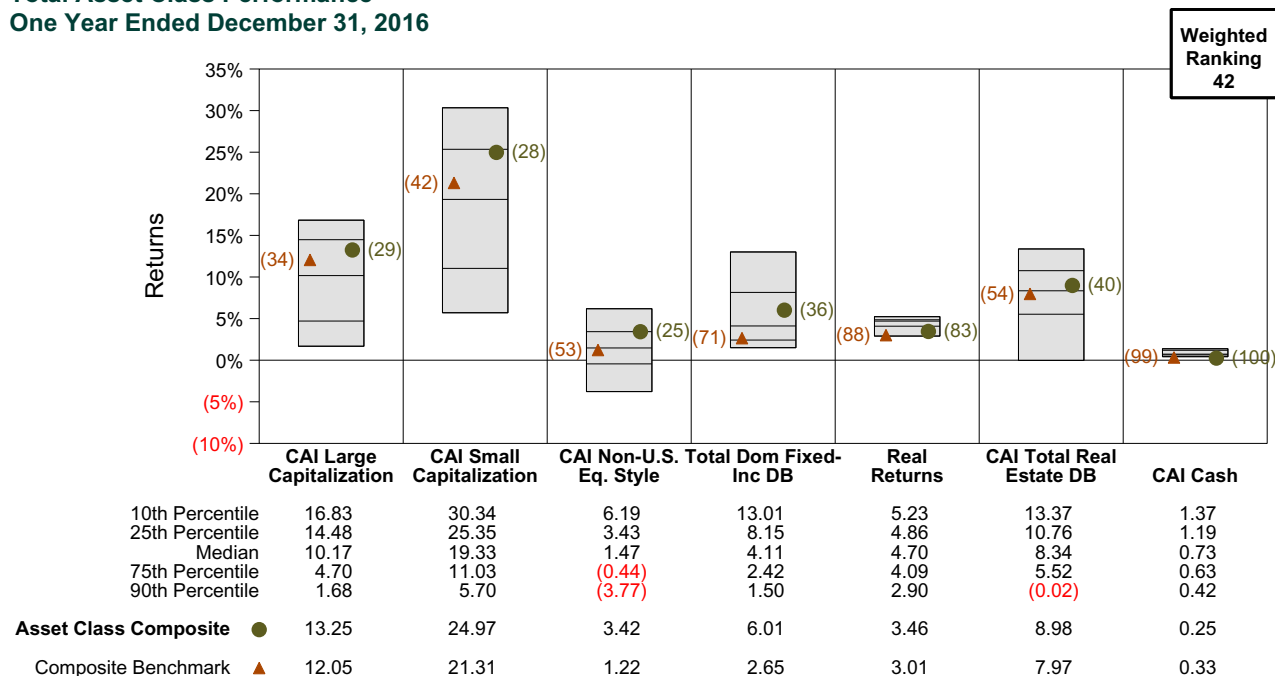


* Current Quarter Target = 53.0% Blmbg Aggregate Idx, 15.0% NDSIB WSI DRA Weighted Benchmark, 12.0% Russell 1000 Index, 9.0% MSCI World ex US, 6.0% NCREIF Total Index, 4.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

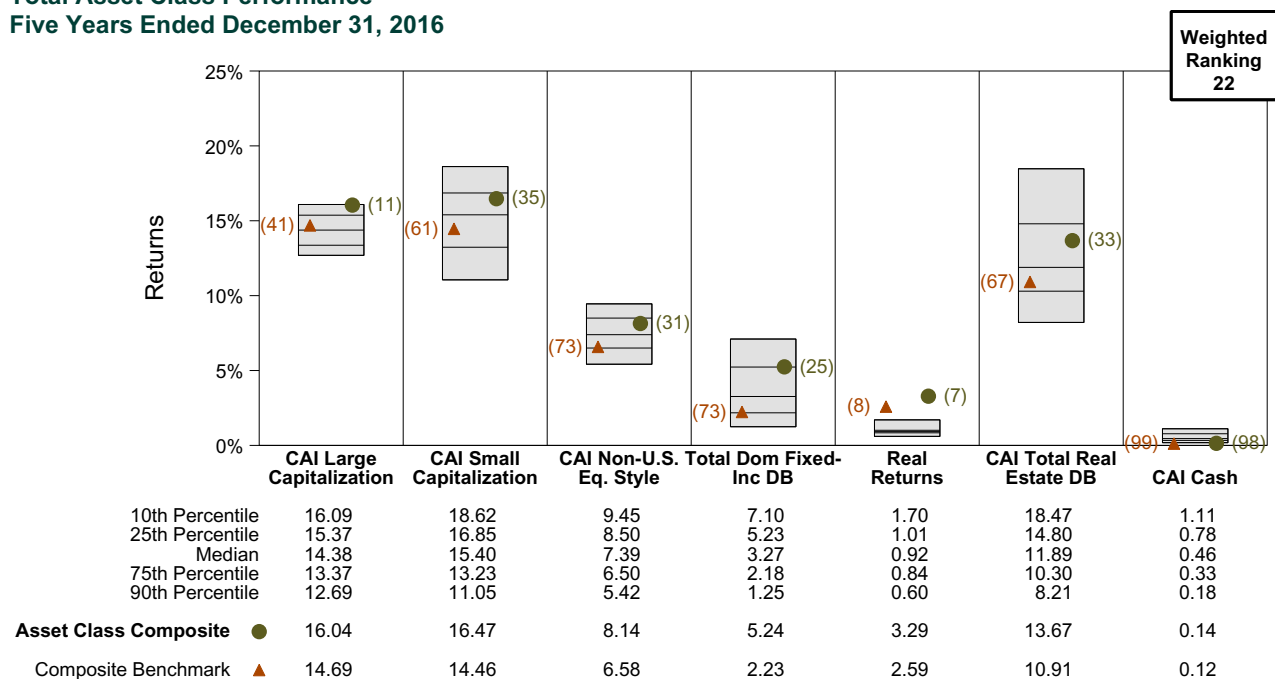
Asset Class Rankings

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.

Total Asset Class Performance One Year Ended December 31, 2016



Total Asset Class Performance Five Years Ended December 31, 2016



* Current Quarter Target = 53.0% Blmbg Aggregate Idx, 15.0% NDSIB WSI DRA Weighted Benchmark, 12.0% Russell 1000 Index, 9.0% MSCI World ex US, 6.0% NCREIF Total Index, 4.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

Asset Class Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of December 31, 2016, with the distribution as of September 30, 2016. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

Asset Class Allocation

	December 31, 2016		Net New Inv.	Inv. Return	September 30, 2016	
	Market Value	Weight			Market Value	Weight
Large Cap Equity	\$225,464,947	12.35%	\$(7,296,202)	\$11,448,165	\$221,312,984	11.90%
Small Cap Equity	\$77,371,601	4.24%	\$(3,860,639)	\$7,492,929	\$73,739,311	3.96%
International Equity	\$164,038,073	8.99%	\$(2,666,348)	\$(2,308,043)	\$169,012,464	9.09%
Domestic Fixed Income	\$951,303,882	52.12%	\$(8,144,807)	\$(20,126,083)	\$979,574,772	52.66%
Diversified Real Assets	\$260,226,463	14.26%	\$(3,728,691)	\$(4,301,007)	\$268,256,161	14.42%
Real Estate	\$134,290,267	7.36%	\$(739,713)	\$2,824,661	\$132,205,319	7.11%
Cash & Equivalents	\$12,415,279	0.68%	\$(3,516,220)	\$9,032	\$15,922,467	0.86%
Securities Lending Income	\$0	0.00%	\$(29,913)	\$29,913	-	-
Total Fund	\$1,825,110,511	100.0%	\$(29,982,533)	\$(4,930,434)	\$1,860,023,478	100.0%

PLEASE REFER TO PAGE 36 FOR INVESTMENT MANAGER LEVEL ASSET ALLOCATION.

Asset Class Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended December 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6-1/2 Years
Large Cap Equity					
Gross	5.17%	13.25%	9.45%	16.04%	16.03%
Net	5.13%	13.00%	9.25%	15.82%	15.76%
Benchmark(1)	3.83%	12.05%	8.59%	14.69%	15.12%
Small Cap Equity					
Gross	10.19%	24.97%	8.30%	16.47%	16.30%
Net	10.16%	24.47%	7.91%	16.02%	15.68%
Russell 2000	8.83%	21.31%	6.74%	14.46%	14.68%
International Equity					
Gross	(1.38%)	3.42%	(0.39%)	8.14%	7.06%
Net	(1.46%)	3.11%	(0.71%)	7.77%	6.67%
Benchmark(2)	(0.36%)	1.22%	(1.53%)	6.58%	5.57%
Domestic Fixed Income					
Gross	(2.06%)	6.01%	4.68%	5.24%	5.89%
Net	(2.08%)	5.89%	4.54%	5.09%	5.72%
Blmbg Aggregate	(2.98%)	2.65%	3.03%	2.23%	3.08%
Diversified Real Assets					
Gross	(1.61%)	3.46%	3.45%	3.29%	4.14%
Net	(1.67%)	3.14%	3.13%	2.96%	3.79%
Weighted Benchmark	(2.15%)	3.01%	2.82%	2.59%	4.58%
Real Estate					
Gross	2.14%	8.98%	11.53%	13.67%	16.79%
Net	1.96%	8.18%	10.74%	12.72%	15.76%
NCREIF Total Index	1.73%	7.97%	11.02%	10.91%	11.96%
Cash & Equivalents - Net	0.08%	0.25%	0.09%	0.14%	0.17%
90 Day Treasury Bills	0.09%	0.33%	0.14%	0.12%	0.12%
Total Fund					
Gross	(0.26%)	7.24%	5.30%	7.15%	7.74%
Net	(0.30%)	7.00%	5.06%	6.88%	7.45%
Target*	(1.00%)	4.84%	4.01%	4.86%	5.81%

* Current Quarter Target = 53.0% Blmbg Aggregate Idx, 15.0% NDSIB WSI DRA Weighted Benchmark, 12.0% Russell 1000 Index, 9.0% MSCI World ex US, 6.0% NCREIF Total Index, 4.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

(1) S&P 500 Index through 12/31/2011 and Russell 1000 Index thereafter.

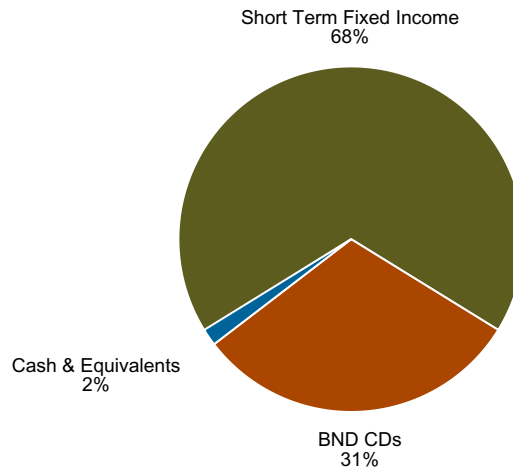
(2) MSCI EAFE through 9/30/2000; 50% Hedged EAFE through 3/31/2011; MSCI EAFE again through 6/30/2016; MSCI World ex-US thereafter.

PLEASE REFER TO PAGE 37-39 FOR INVESTMENT MANAGER LEVEL RETURNS.

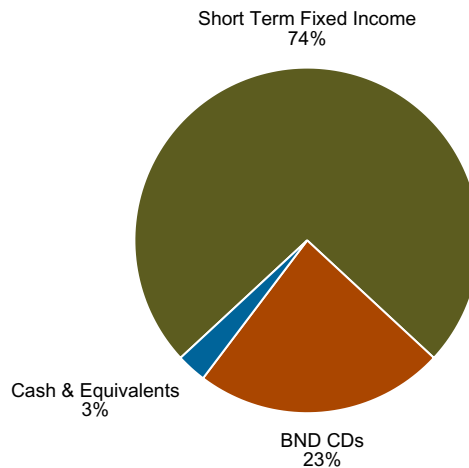
Actual vs Target Asset Allocation As of December 31, 2016

The first chart below shows the Fund's asset allocation as of December 31, 2016. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

Actual Asset Allocation



Target Asset Allocation



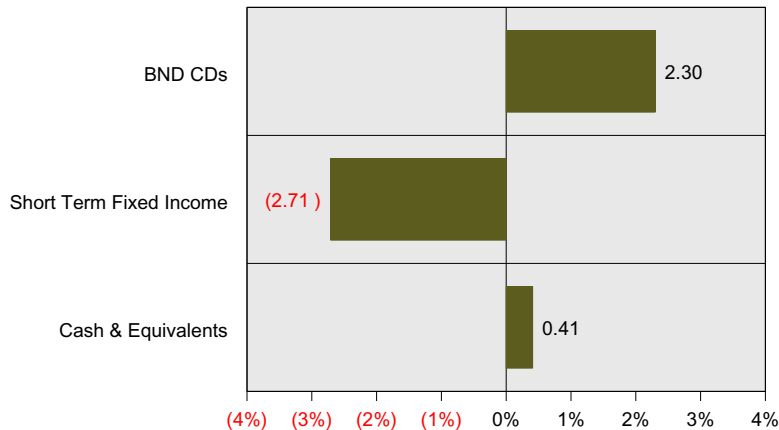
Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Short Term Fixed Income	70,045	67.7%	73.8%	(6.1%)	(6,345)
BND CDs	31,857	30.8%	23.4%	7.3%	7,588
Cash & Equivalents	1,636	1.6%	2.8%	(1.2%)	(1,243)
Total	103,538	100.0%	100.0%		

* Current Quarter Target = 73.8% Blmbg Gov 1-3 Yr, 23.4% NDSIB Budget - Bond CDs and 2.8% 3-month Treasury Bill.

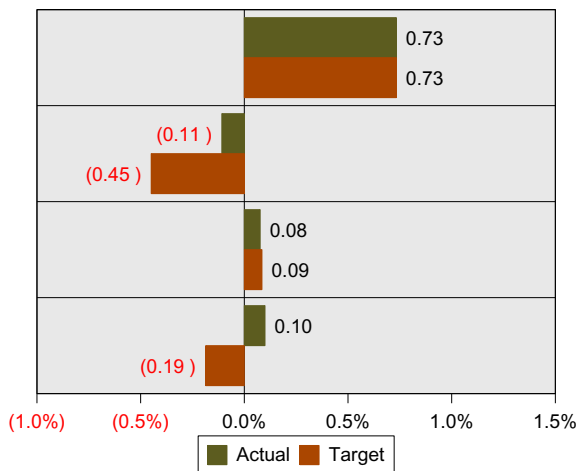
Quarterly Total Fund Relative Attribution - December 31, 2016

The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

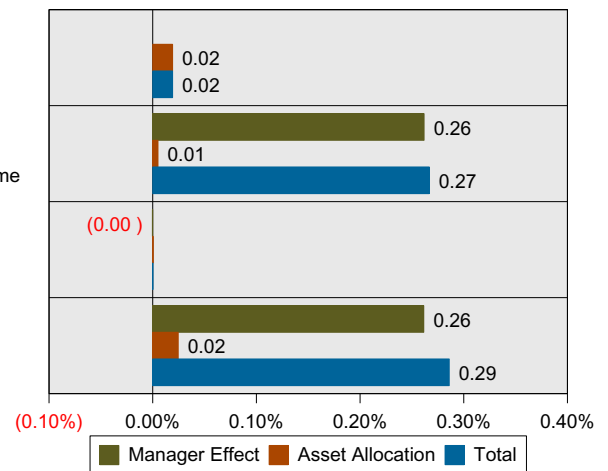
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended December 31, 2016

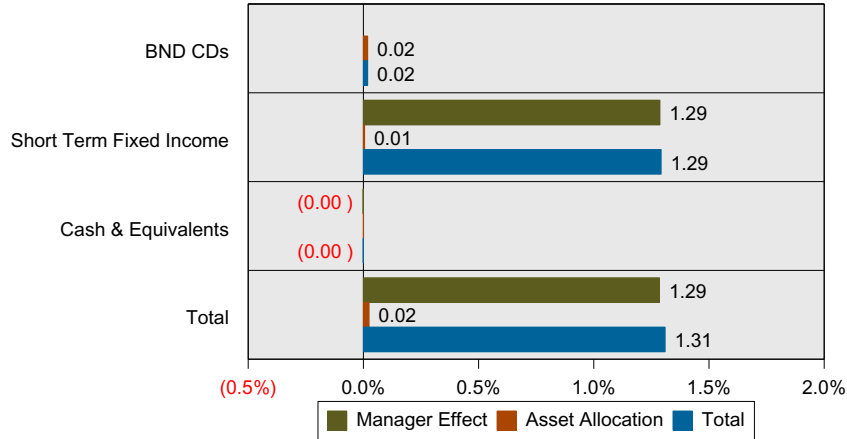
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
BND CDs	22%	20%	0.73%	0.73%	0.00%	0.02%	0.02%
Short Term Fixed Income	74%	77%	(0.11%)	(0.45%)	0.26%	0.01%	0.27%
Cash & Equivalents	3%	3%	0.08%	0.09%	(0.00%)	0.00%	0.00%
Total			0.10%		(0.19%)	0.26%	0.29%

* Current Quarter Target = 73.8% Blmbg Gov 1-3 Yr, 23.4% NDSIB Budget - Bond CDs and 2.8% 3-month Treasury Bill.

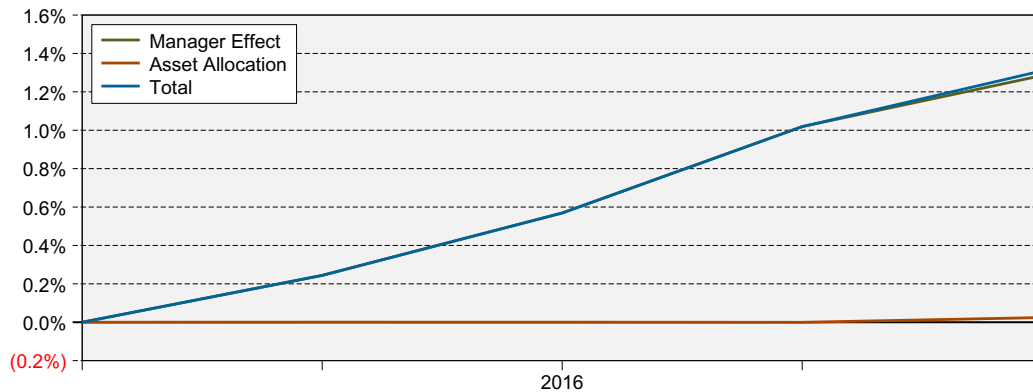
Cumulative Total Fund Relative Attribution - December 31, 2016

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One Year Relative Attribution Effects



Cumulative Relative Attribution Effects



One Year Relative Attribution Effects

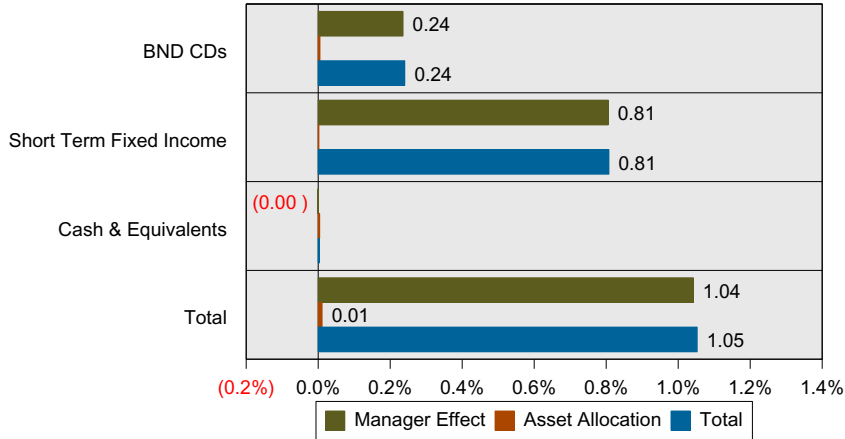
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
BND CDs	17%	16%	2.68%	2.68%	0.00%	0.02%	0.02%
Short Term Fixed Income	81%	82%	2.43%	0.87%	1.29%	0.01%	1.29%
Cash & Equivalents	2%	2%	0.25%	0.33%	(0.00%)	0.00%	(0.00%)
Total			2.50%	1.20%	+ 1.29%	+ 0.02%	1.31%

* Current Quarter Target = 73.8% Blmbg Gov 1-3 Yr, 23.4% NDSIB Budget - Bond CDs and 2.8% 3-month Treasury Bill.

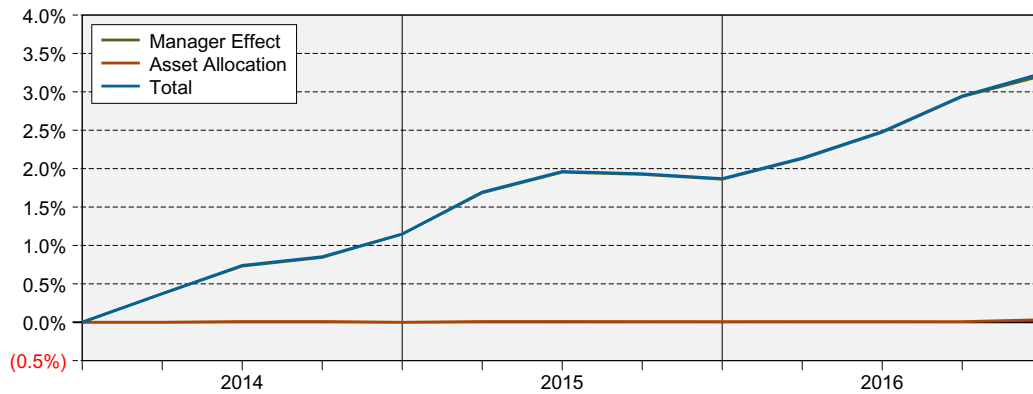
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Three Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Three Year Annualized Relative Attribution Effects

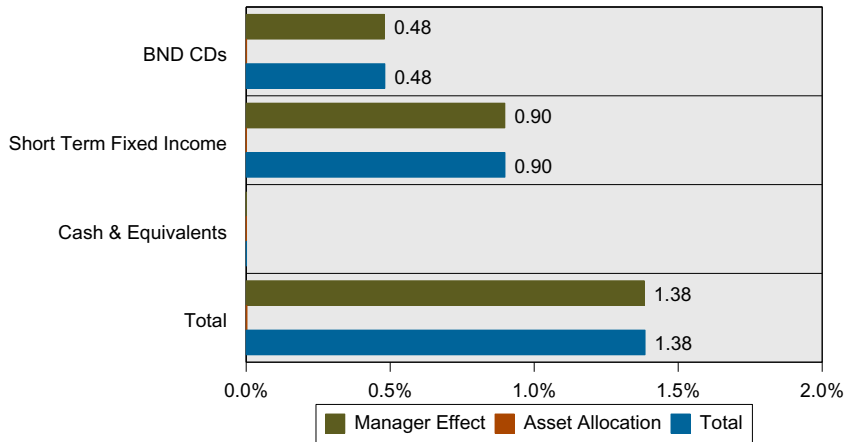
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
BND CDs	17%	17%	2.68%	1.34%	0.24%	0.00%	0.24%
Short Term Fixed Income	81%	81%	1.69%	0.69%	0.81%	0.00%	0.81%
Cash & Equivalents	2%	2%	0.09%	0.14%	(0.00%)	0.00%	0.00%
Total			1.84%	0.79%	+ 1.04%	+ 0.01%	1.05%

* Current Quarter Target = 73.8% Blmbg Gov 1-3 Yr, 23.4% NDSIB Budget - Bond CDs and 2.8% 3-month Treasury Bill.

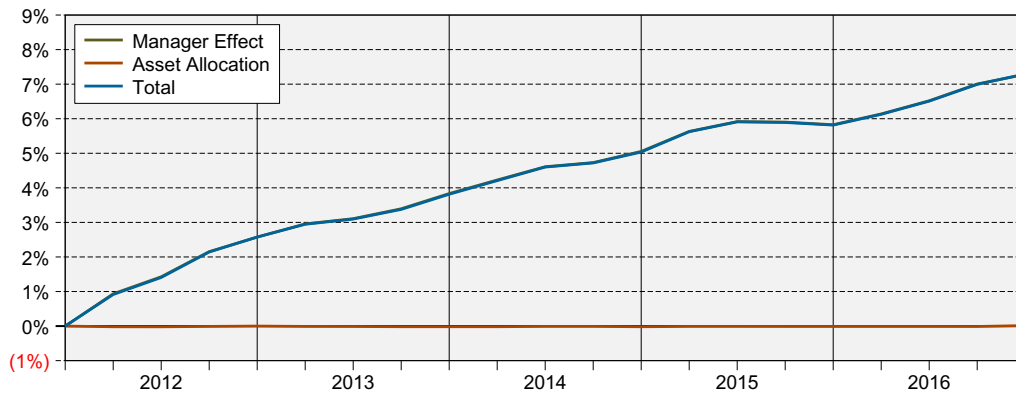
Cumulative Total Fund Relative Attribution - December 31, 2016

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Five Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Five Year Annualized Relative Attribution Effects

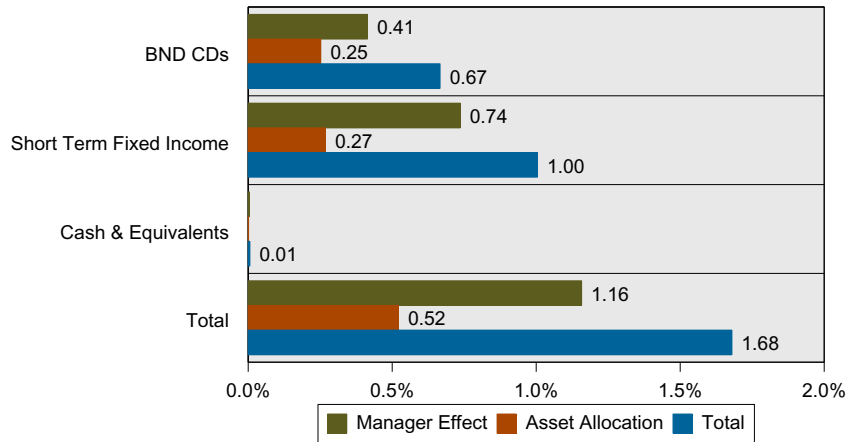
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
BND CDs	20%	20%	3.06%	0.84%	0.48%	0.00%	0.48%
Short Term Fixed Income	78%	78%	1.75%	0.59%	0.90%	0.00%	0.90%
Cash & Equivalents	2%	2%	0.14%	0.12%	0.00%	0.00%	0.00%
Total			2.00%	0.62%	+ 1.38%	+ 0.00%	1.38%

* Current Quarter Target = 73.8% Blmbg Gov 1-3 Yr, 23.4% NDSIB Budget - Bond CDs and 2.8% 3-month Treasury Bill.

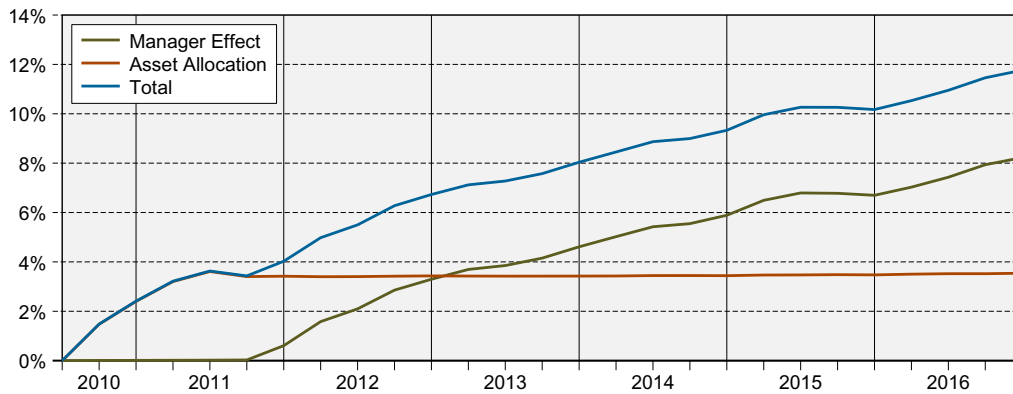
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Six and One-Half Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects

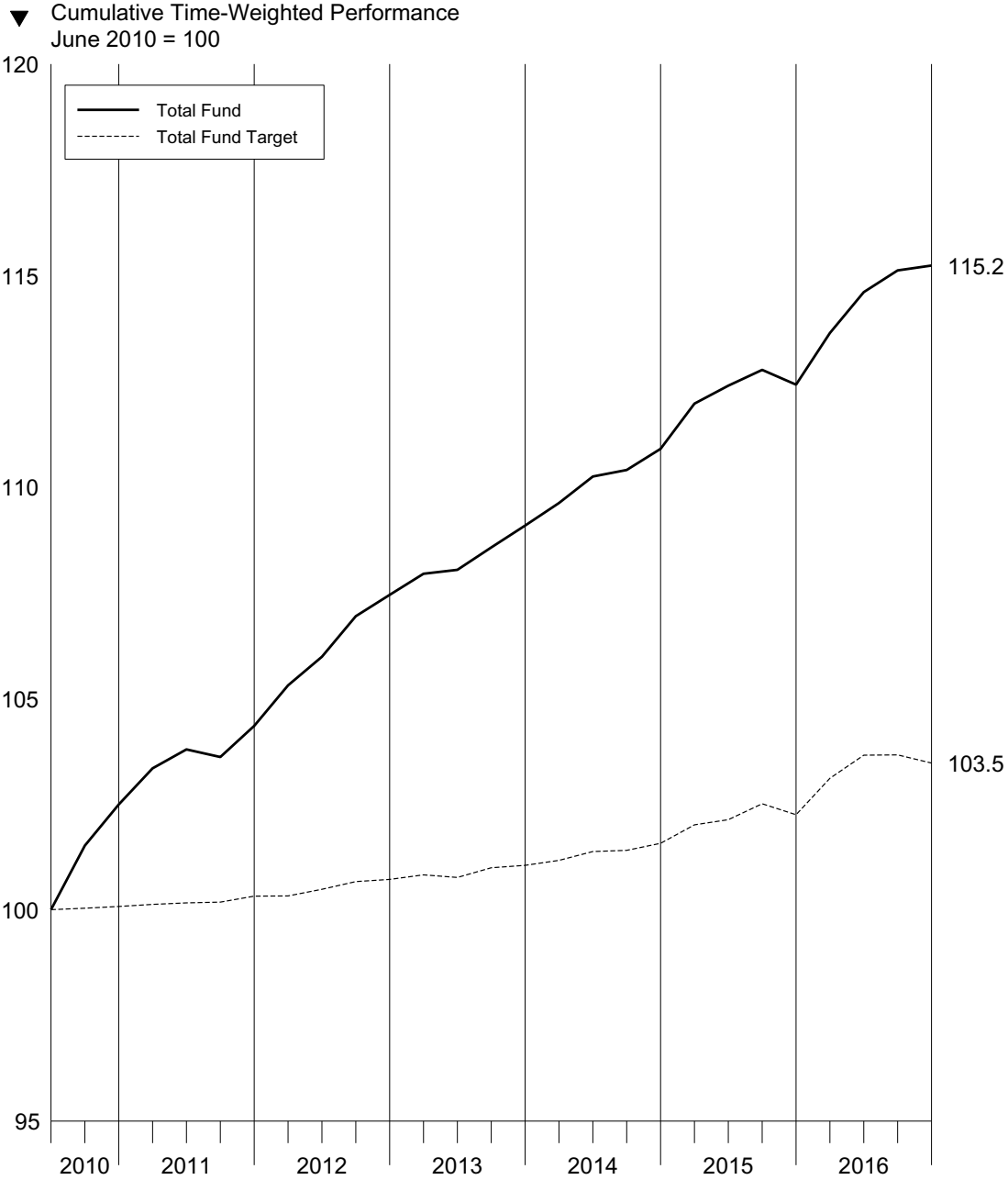


Six and One-Half Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
BND CDs	22%	16%	3.38%	1.48%	0.41%	0.25%	0.67%
Short Term Fixed Income	74%	63%	1.91%	0.96%	0.74%	0.27%	1.00%
Cash & Equivalents	4%	21%	0.17%	0.12%	0.00%	0.00%	0.01%
Total			2.21%	0.53%	+ 1.16%	+ 0.52%	1.68%

* Current Quarter Target = 73.8% Blmbg Gov 1-3 Yr, 23.4% NDSIB Budget - Bond CDs and 2.8% 3-month Treasury Bill.

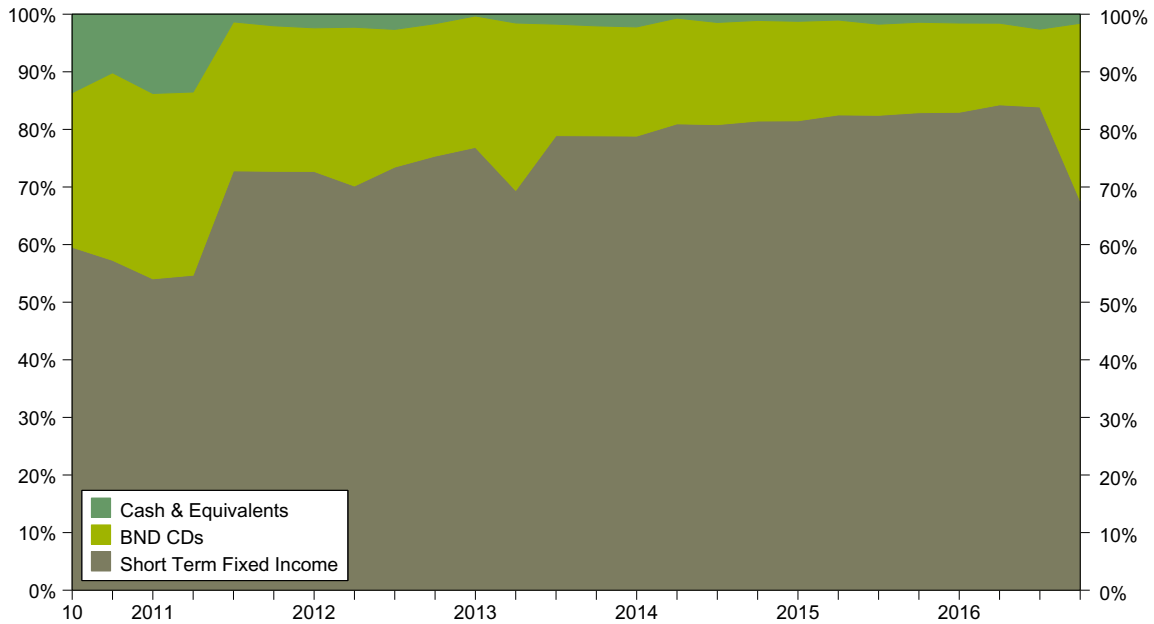
**NDSIB - Budget Stabilization Fund
Cumulative Results**



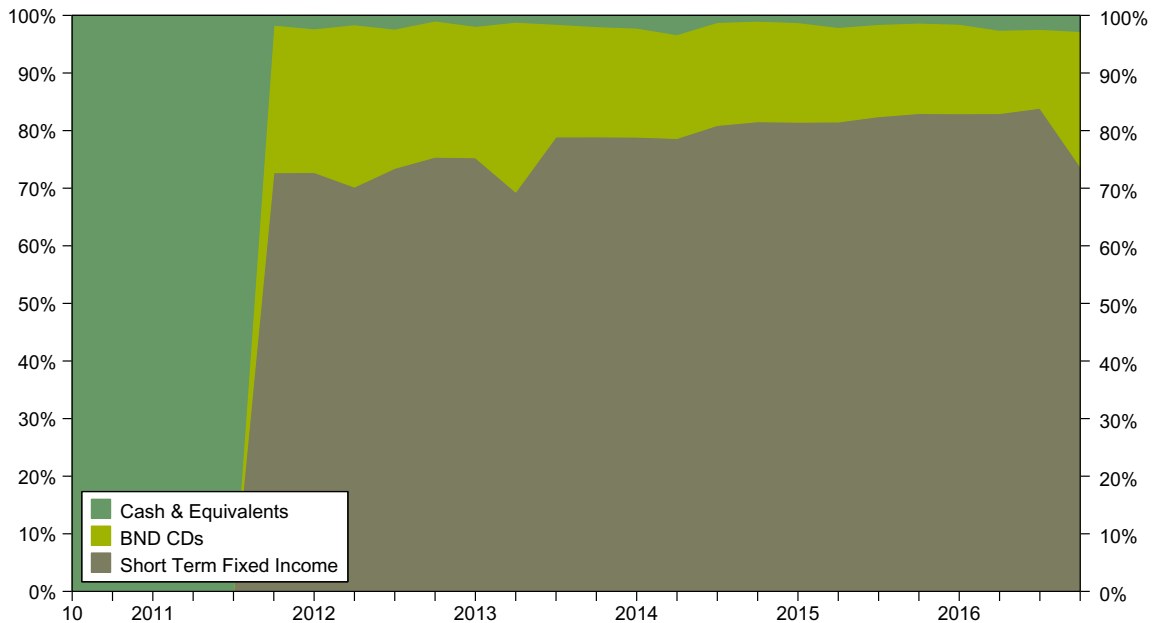
Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, and the fund's historical target asset allocation.

Actual Historical Asset Allocation



Target Historical Asset Allocation



* Current Quarter Target = 73.8% Blmbg Gov 1-3 Yr, 23.4% NDSIB Budget - Bond CDs and 2.8% 3-month Treasury Bill.

Asset Class Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of December 31, 2016, with the distribution as of September 30, 2016. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

Asset Class Allocation

	December 31, 2016		Net New Inv.	Inv. Return	September 30, 2016	
	Market Value	Weight			Market Value	Weight
Short Term Fixed Income	\$70,045,163	67.65%	\$(415,113,380)	\$(42,369)	\$485,200,912	83.90%
BND CDs	\$31,857,189	30.77%	\$(46,649,144)	\$408,492	\$78,097,841	13.50%
Cash & Equivalents	\$1,635,585	1.58%	\$(13,385,327)	\$10,133	\$15,010,779	2.60%
Securities Lending Income	\$0	0.00%	\$(700)	\$700	-	-
Total Fund	\$103,537,937	100.0%	\$(475,148,551)	\$376,957	\$578,309,532	100.0%

PLEASE REFER TO PAGE 36 FOR INVESTMENT MANAGER LEVEL ASSET ALLOCATION.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended December 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6-1/2 Years
Short Term Fixed Income					
Gross	(0.11%)	2.43%	1.69%	1.75%	1.91%
Net	(0.18%)	2.26%	1.53%	1.61%	1.78%
Blmbg Gov 1-3 Yr	(0.45%)	0.87%	0.69%	0.59%	0.77%
BND CDs - Net	0.73%	2.68%	2.68%	3.06%	3.38%
Cash & Equivalents - Net	0.08%	0.25%	0.09%	0.14%	0.17%
3-month Treasury Bill	0.09%	0.33%	0.14%	0.12%	0.12%
Total Fund					
Gross	0.10%	2.51%	1.84%	2.00%	2.21%
Net	0.05%	2.36%	1.72%	1.90%	2.11%
Target*	(0.19%)	1.20%	0.79%	0.62%	0.53%

* Current Quarter Target = 73.8% Blmbg Gov 1-3 Yr, 23.4% NDSIB Budget - Bond CDs and 2.8% 3-month Treasury Bill.

PLEASE REFER TO PAGES 37-39 FOR INVESTMENT MANAGER LEVEL RETURNS.

Parametric Clifton Large Cap Period Ended December 31, 2016

Investment Philosophy

Parametric Clifton utilizes equity futures to gain benchmark exposure in constructing the portfolio it believes provides the greatest likelihood of outperforming the index. In this construction the underlying cash portfolio is invested in a liquid, high quality short duration fixed income portfolio. Over market cycles excess return generated by the short duration portfolio, when added to the performance of futures is expected to allow the strategy to achieve 0.50% to 1.00% of gross excess annual performance.

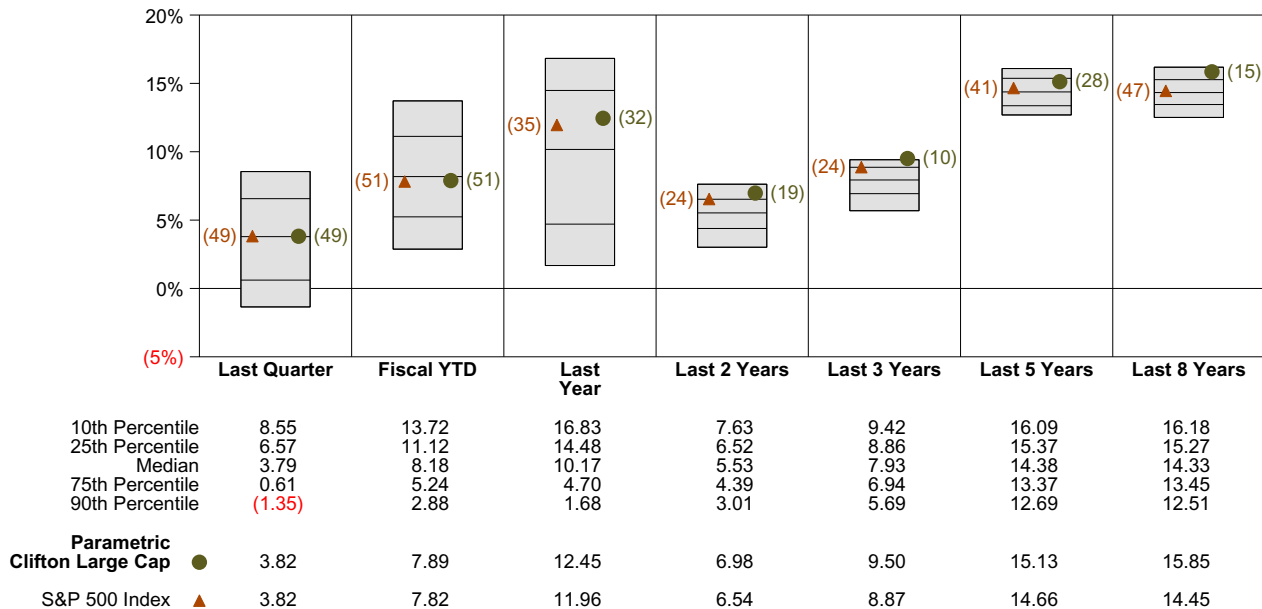
Quarterly Summary and Highlights

- Parametric Clifton Large Cap's portfolio posted a 3.82% return for the quarter placing it in the 49 percentile of the CAI Large Capitalization group for the quarter and in the 32 percentile for the last year.
- Parametric Clifton Large Cap's portfolio underperformed the S&P 500 Index by 0.01% for the quarter and outperformed the S&P 500 Index for the year by 0.49%.

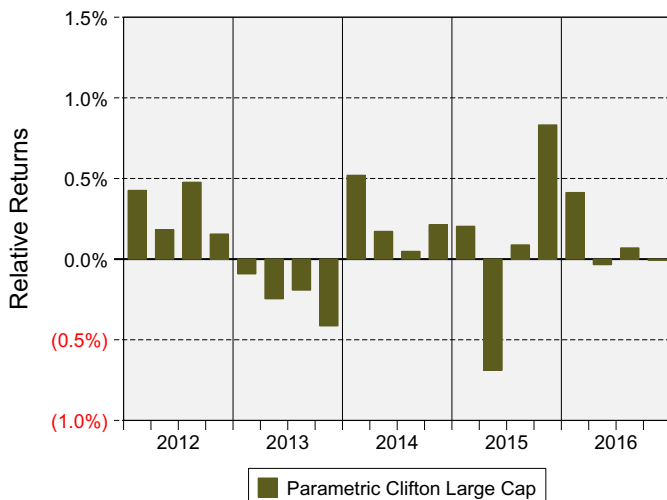
Quarterly Asset Growth

Beginning Market Value	\$47,911,347
Net New Investment	\$-2,000,000
Investment Gains/(Losses)	\$1,826,613
Ending Market Value	\$47,737,961

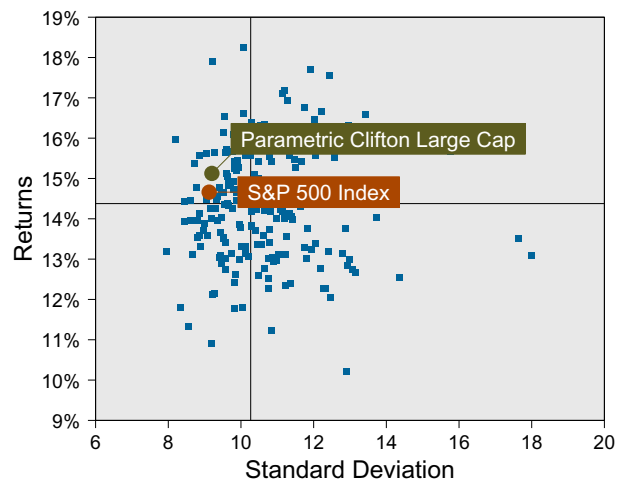
Performance vs CAI Large Capitalization (Gross)



Relative Return vs S&P 500 Index



CAI Large Capitalization (Gross) Annualized Five Year Risk vs Return



L.A. Capital Period Ended December 31, 2016

Investment Philosophy

The LA Capital Structured portfolio is a large growth portfolio benchmarked to the Russell 1000 Growth Index. It is an active assignment meaning that it targets a 2% alpha and constrains its risk budget (tracking error) to 4% relative to the benchmark. LA Capital believes that investment results are driven by Investor Preferences and thus recognize that when preferences shift a different posture related to that factor is warranted.

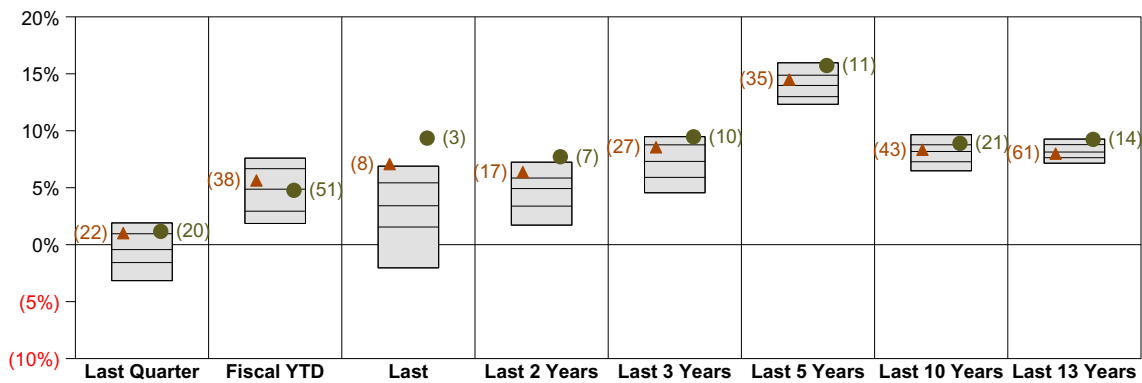
Quarterly Summary and Highlights

- L.A. Capital Large Cap Growth's portfolio posted a 1.17% return for the quarter placing it in the 20 percentile of the CAI Large Cap Growth group for the quarter and in the 3 percentile for the last year.
- L.A. Capital Large Cap Growth's portfolio outperformed the Russell 1000 Growth Index by 0.16% for the quarter and outperformed the Russell 1000 Growth Index for the year by 2.28%.

Quarterly Asset Growth

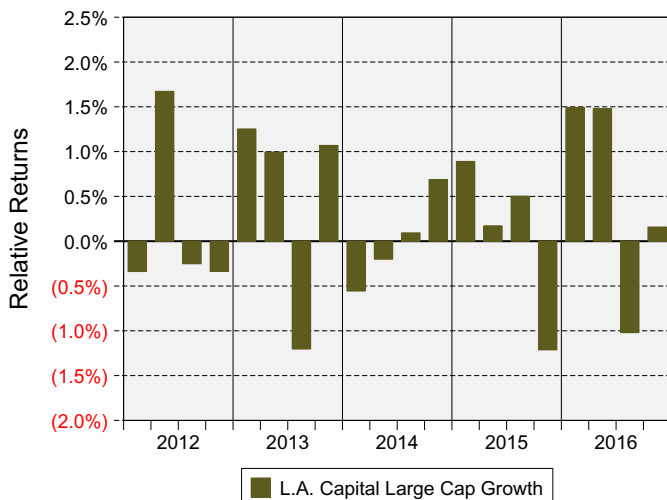
Beginning Market Value	\$71,240,303
Net New Investment	\$-37,689
Investment Gains/(Losses)	\$830,415
Ending Market Value	\$72,033,028

Performance vs CAI Large Cap Growth (Gross)

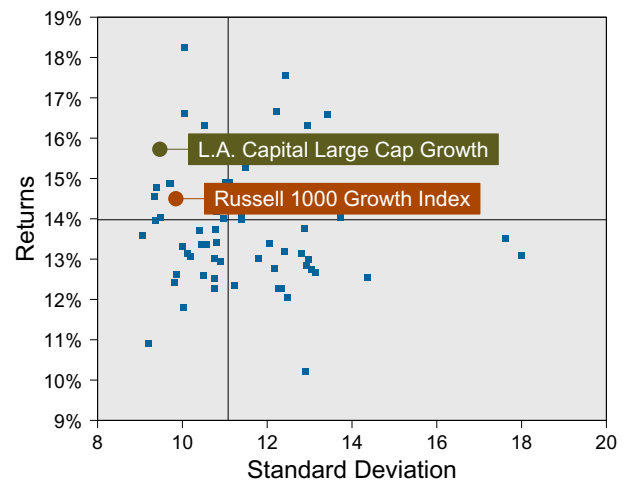


10th Percentile	1.91	7.60	6.89	7.24	9.48	15.97	9.65	9.27
25th Percentile	0.96	6.67	5.43	5.85	8.76	14.88	8.77	8.78
Median	(0.43)	4.87	3.42	4.92	7.31	13.98	8.18	8.13
75th Percentile	(1.57)	2.94	1.55	3.39	5.91	12.99	7.28	7.64
90th Percentile	(3.16)	1.86	(2.03)	1.72	4.55	12.32	6.48	7.15
L.A. Capital Large Cap Growth	● 1.17	4.77	9.35	7.72	9.47	15.72	8.89	9.25
Russell 1000 Growth Index	▲ 1.01	5.64	7.08	6.37	8.55	14.50	8.33	7.99

Relative Return vs Russell 1000 Growth Index



CAI Large Cap Growth (Gross) Annualized Five Year Risk vs Return



L.A. Capital Enhanced Period Ended December 31, 2016

Investment Philosophy

The LA Capital Enhanced portfolio is a large core portfolio benchmarked to the Russell 1000 Index. Characterized as an enhanced index assignment, its objective is to track the benchmark with lower variability. The pension portfolio began in August of 2000 and the insurance portfolio was initiated in April of 2004. Since October of 2006 a small portion of each of the two core accounts was allocated into the Large Cap Alpha Fund with intent to add incremental alpha to the assignment given that the information ratio was expected to be higher.

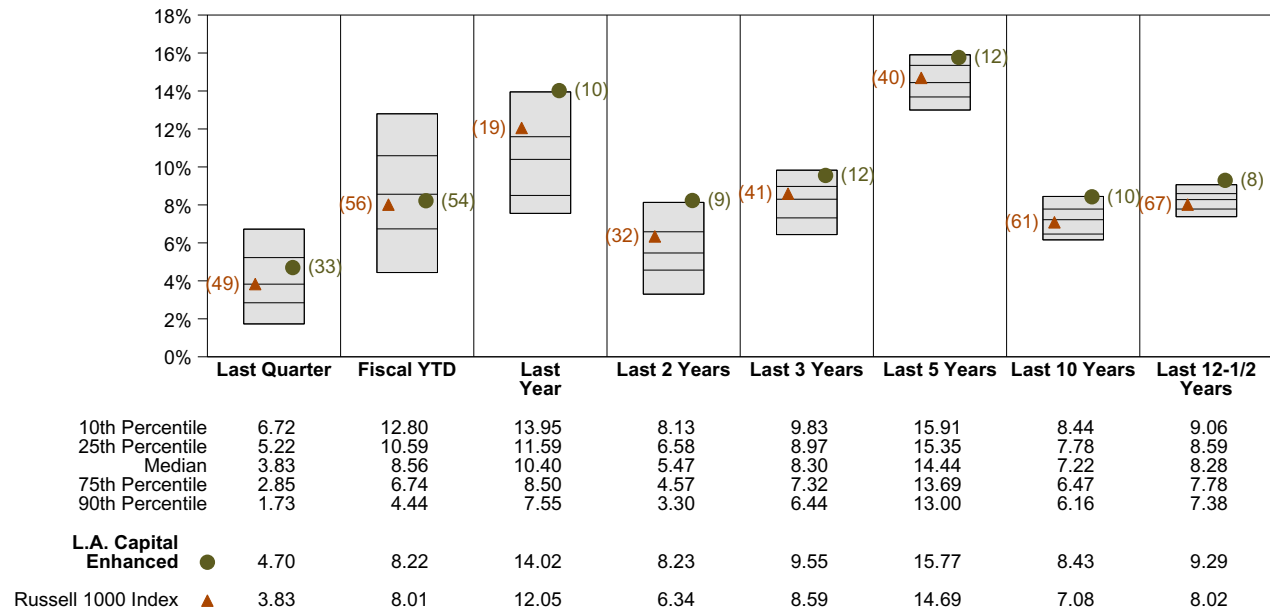
Quarterly Summary and Highlights

- L.A. Capital Enhanced's portfolio posted a 4.70% return for the quarter placing it in the 33 percentile of the CAI Large Cap Core group for the quarter and in the 10 percentile for the last year.
- L.A. Capital Enhanced's portfolio outperformed the Russell 1000 Index by 0.87% for the quarter and outperformed the Russell 1000 Index for the year by 1.97%.

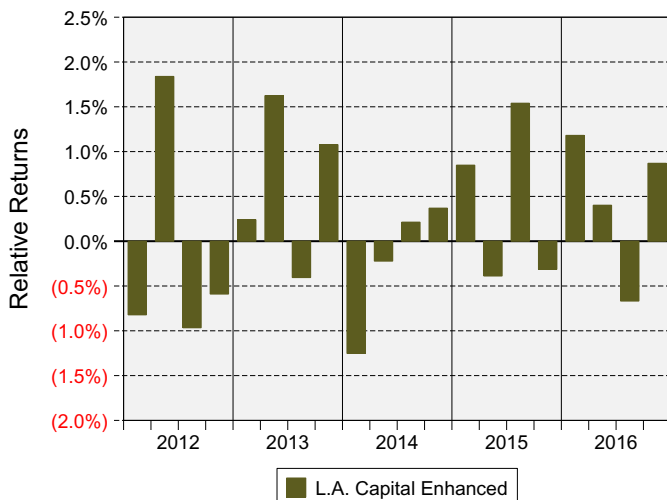
Quarterly Asset Growth

Beginning Market Value	\$47,809,396
Net New Investment	\$-2,016,557
Investment Gains/(Losses)	\$2,257,765
Ending Market Value	\$48,050,604

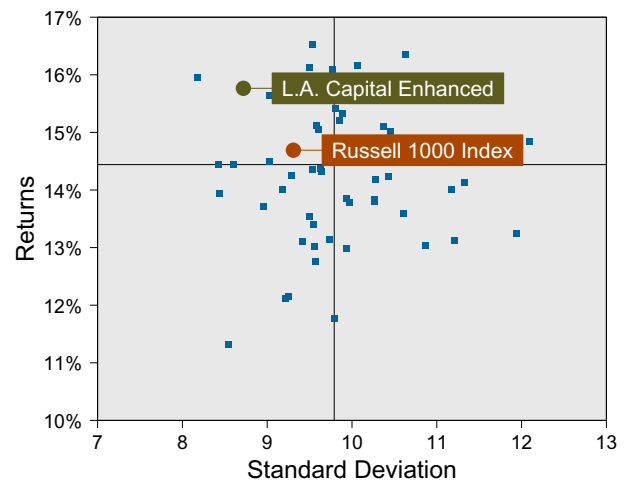
Performance vs CAI Large Cap Core (Gross)



Relative Return vs Russell 1000 Index



CAI Large Cap Core (Gross) Annualized Five Year Risk vs Return



LSV Asset Management

Period Ended December 31, 2016

Investment Philosophy

The objective of LSV Asset Management's Large Cap Value Equity (U.S.) strategy is to outperform the Russell 1000 Value by at least 200 basis points (gross of fees) per annum over a 3-5 year period with a tracking error of approximately 4%. Their stock selection process is a quantitative approach that ranks a broad universe of stocks on a combination of value and momentum factors and seeks to invest approximately 100 stocks in the most attractive securities possible within strict risk parameters to control the portfolio's tracking error relative to the benchmark. The resulting portfolio is broadly diversified across industry groups and fully invested.

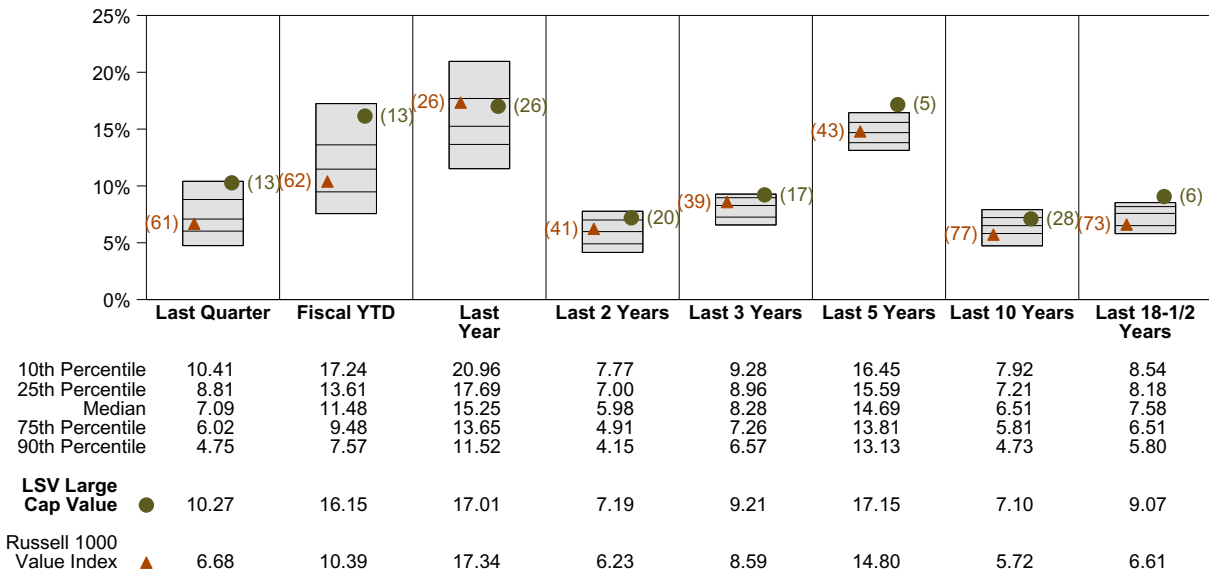
Quarterly Summary and Highlights

- LSV Large Cap Value's portfolio posted a 10.27% return for the quarter placing it in the 13 percentile of the CAI Large Cap Value group for the quarter and in the 26 percentile for the last year.
- LSV Large Cap Value's portfolio outperformed the Russell 1000 Value Index by 3.60% for the quarter and underperformed the Russell 1000 Value Index for the year by 0.33%.

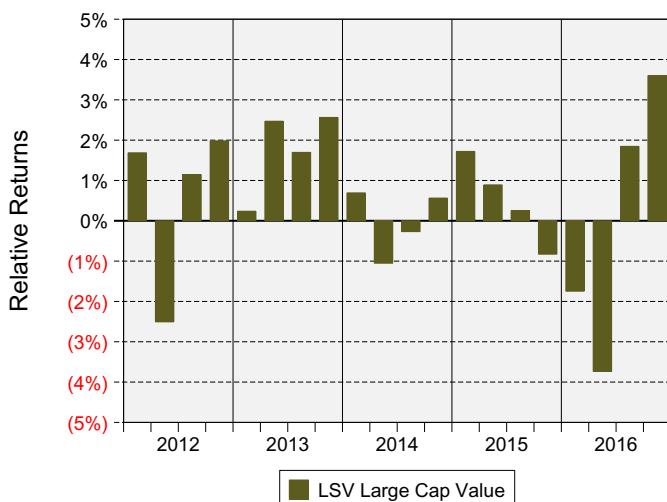
Quarterly Asset Growth

Beginning Market Value	\$71,504,942
Net New Investment	\$-5,055,194
Investment Gains/(Losses)	\$7,409,511
Ending Market Value	\$73,859,259

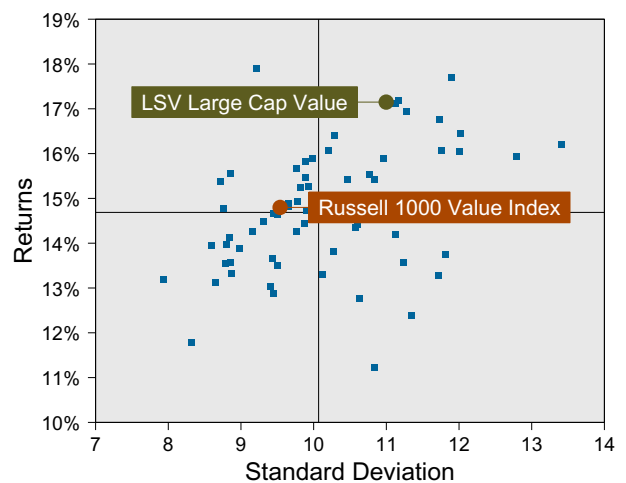
Performance vs CAI Large Cap Value (Gross)



Relative Return vs Russell 1000 Value Index



CAI Large Cap Value (Gross) Annualized Five Year Risk vs Return



Parametric Clifton SmallCap Period Ended December 31, 2016

Investment Philosophy

Parametric Clifton utilizes equity futures to gain benchmark exposure in constructing the portfolio it believes provides the greatest likelihood of outperforming the index. In this construction the underlying cash portfolio is invested in a liquid, high quality short duration fixed income portfolio. Over market cycles excess return generated by the short duration portfolio, when added to the performance of futures is expected to allow the strategy to achieve 0.50% to 1.00% of gross excess annual performance.

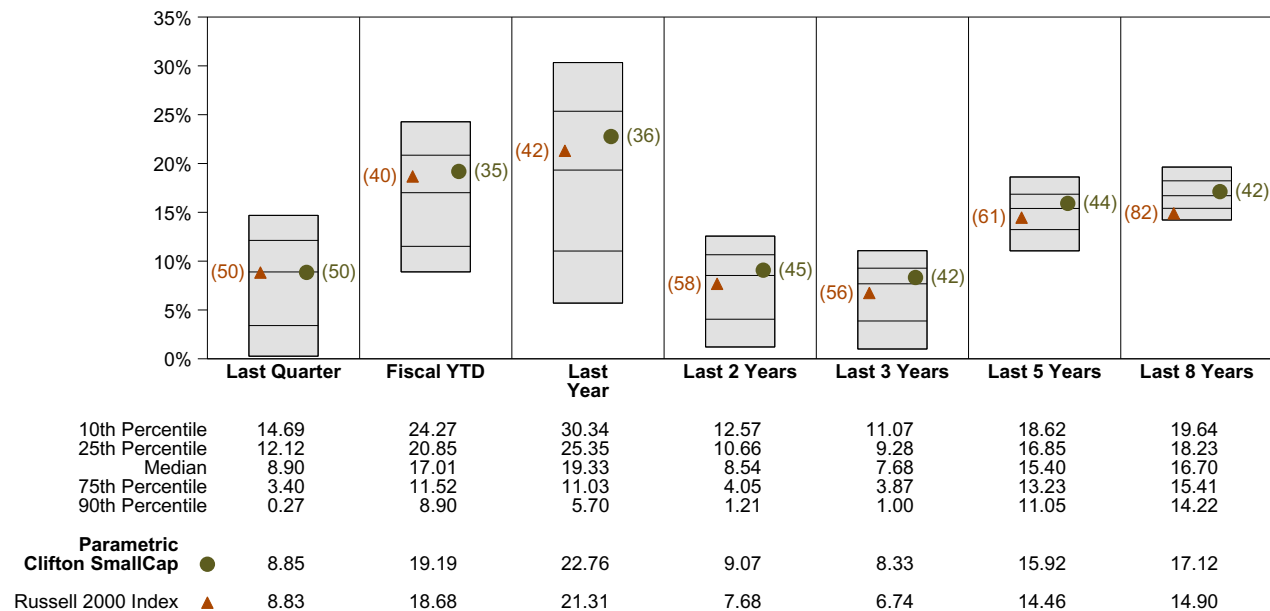
Quarterly Summary and Highlights

- Parametric Clifton SmallCap's portfolio posted a 8.85% return for the quarter placing it in the 50 percentile of the CAI Small Capitalization group for the quarter and in the 36 percentile for the last year.
- Parametric Clifton SmallCap's portfolio outperformed the Russell 2000 Index by 0.01% for the quarter and outperformed the Russell 2000 Index for the year by 1.45%.

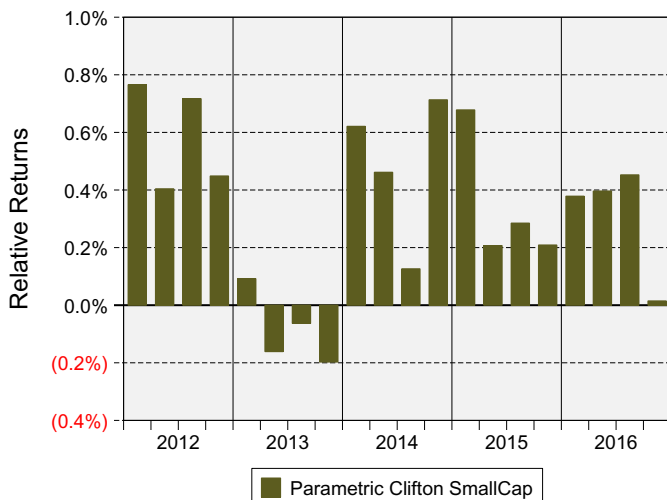
Quarterly Asset Growth

Beginning Market Value	\$44,961,799
Net New Investment	\$-5,000,000
Investment Gains/(Losses)	\$3,969,148
Ending Market Value	\$43,930,947

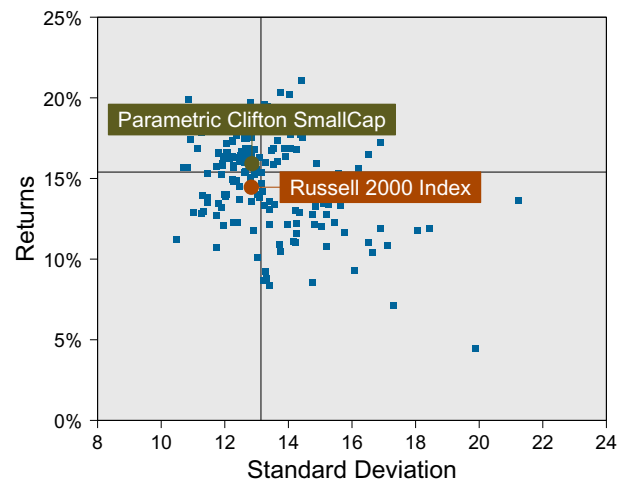
Performance vs CAI Small Capitalization (Gross)



Relative Return vs Russell 2000 Index



CAI Small Capitalization (Gross) Annualized Five Year Risk vs Return



PIMCO RAE Period Ended December 31, 2016

Investment Philosophy

Small company value equity portfolio utilizing the index strategy and philosophy described as the Enhanced RAFI US Small strategy which relies on portfolio weights derived from firm fundamentals (free cash flow, book equity value, total sales and gross dividend), instead of market capitalization. Additionally, the enhanced portfolio strategy uses a quality of earnings screening and a financial distress screening to augment portfolio returns and reduce portfolio volatility.

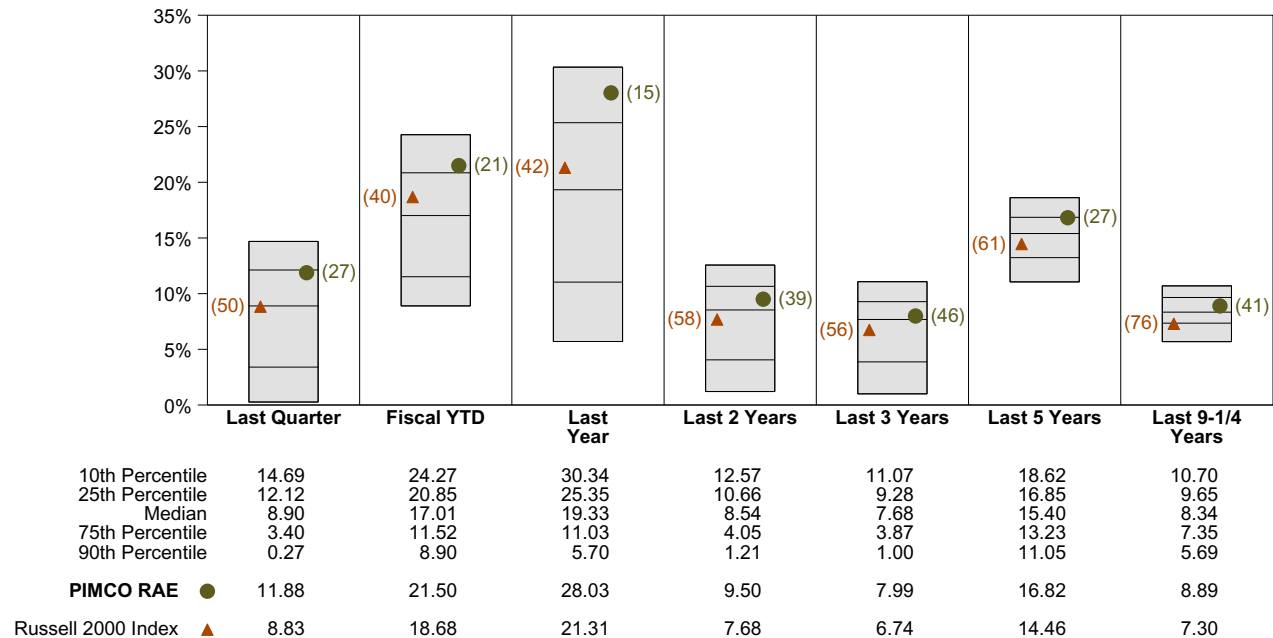
Quarterly Summary and Highlights

- PIMCO RAE's portfolio posted a 11.88% return for the quarter placing it in the 27 percentile of the CAI Small Capitalization group for the quarter and in the 15 percentile for the last year.
- PIMCO RAE's portfolio outperformed the Russell 2000 Index by 3.04% for the quarter and outperformed the Russell 2000 Index for the year by 6.72%.

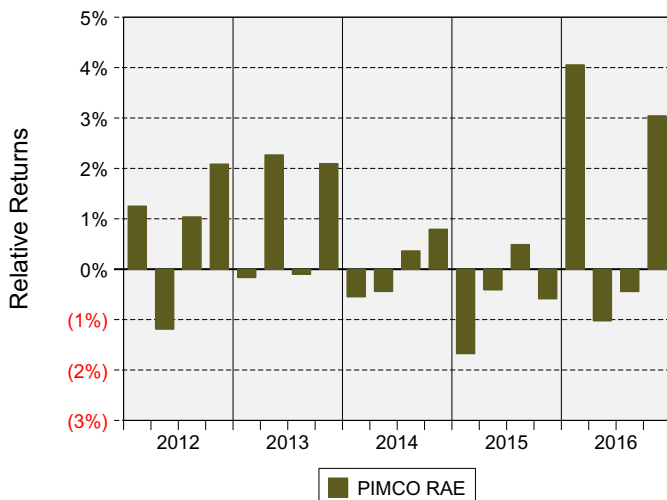
Quarterly Asset Growth

Beginning Market Value	\$36,045,212
Net New Investment	\$-23,151
Investment Gains/(Losses)	\$4,278,266
Ending Market Value	\$40,300,326

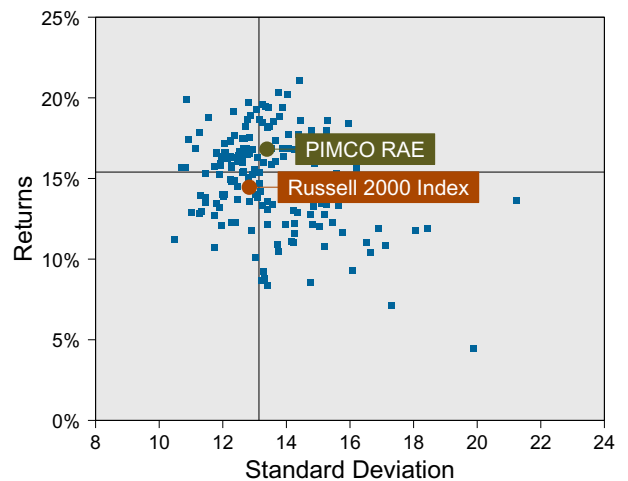
Performance vs CAI Small Capitalization (Gross)



Relative Return vs Russell 2000 Index



CAI Small Capitalization (Gross) Annualized Five Year Risk vs Return



DFA Intl Small Cap Value Period Ended December 31, 2016

Investment Philosophy

The International Small Cap Value Portfolio invests in the stocks of small, non-US developed markets companies that Dimensional believes to be value stocks at the time of purchase. Specifically, it looks at companies that fall within the smallest 8-10% of each country's market capitalization, and who's shares have a high book value in relation to their market value (BtM). It does not invest in emerging markets.

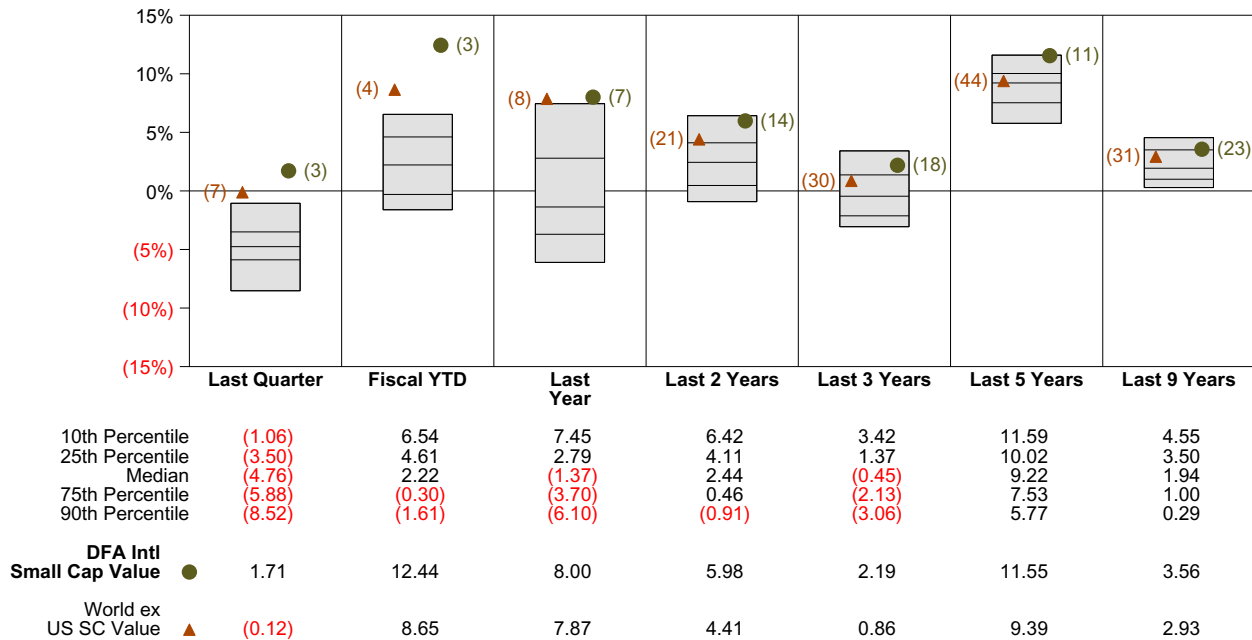
Quarterly Summary and Highlights

- DFA Intl Small Cap Value's portfolio posted a 1.71% return for the quarter placing it in the 3 percentile of the CAI International Small Cap Mut Funds group for the quarter and in the 7 percentile for the last year.
- DFA Intl Small Cap Value's portfolio outperformed the World ex US SC Value by 1.83% for the quarter and outperformed the World ex US SC Value for the year by 0.14%.

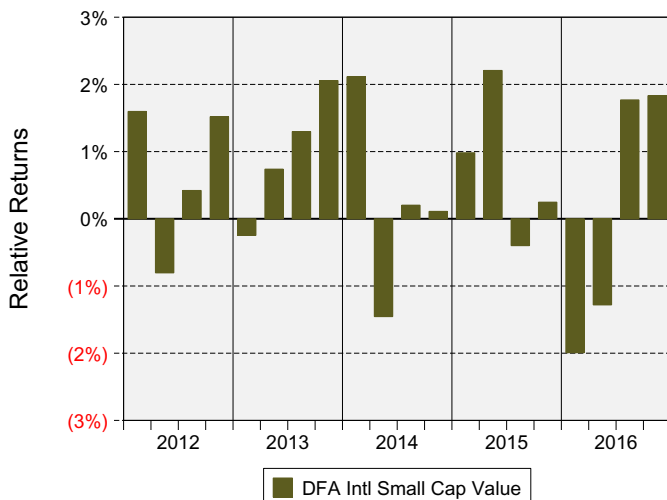
Quarterly Asset Growth

Beginning Market Value	\$18,652,318
Net New Investment	\$0
Investment Gains/(Losses)	\$319,848
Ending Market Value	\$18,972,166

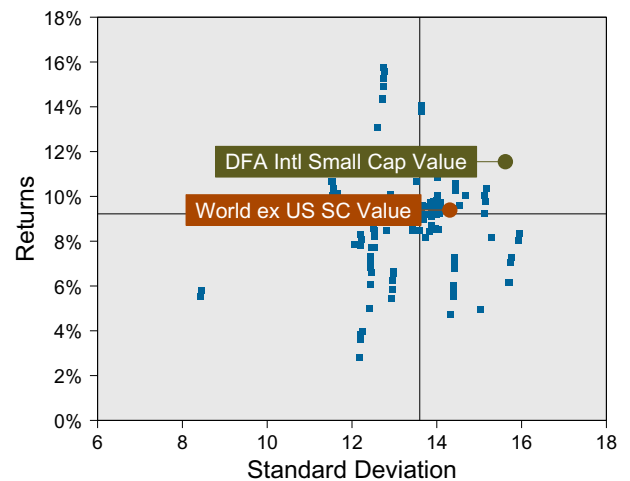
Performance vs CAI International Small Cap Mut Funds (Net)



Relative Return vs World ex US SC Value



CAI International Small Cap Mut Funds (Net) Annualized Five Year Risk vs Return



LSV Intl Value

Period Ended December 31, 2016

Investment Philosophy

The objective of LSV Asset Management's International Large Cap Value strategy is to outperform the MSCI EAFE Index by at least 250 basis points (gross of fees) per annum over an annualized 3-5 year period with a tracking error of approximately 5-6%. Their stock selection process is a quantitative approach that ranks a broad universe of stocks on a combination of value and momentum factors and seeks to invest approximately 150 stocks in the most attractive securities possible within strict risk parameters to control the portfolio's tracking error relative to the benchmark. The resulting portfolio is broadly diversified across industry groups and fully invested. LSV weights countries at a neutral weight relative to the benchmark country weights. 50% of the portfolio is US dollar hedged. ***MSCI EAFE through 9/30/2000, 50% Hedged EAFE through 3/31/2011 and MSCI EAFE again thereafter.**

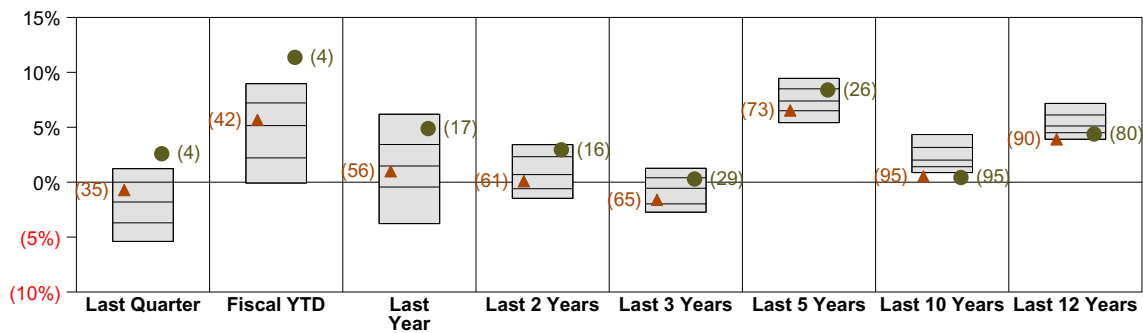
Quarterly Summary and Highlights

- LSV Intl Value's portfolio posted a 2.59% return for the quarter placing it in the 4 percentile of the CAI Non-U.S. Equity Style group for the quarter and in the 17 percentile for the last year.
- LSV Intl Value's portfolio outperformed the Benchmark by 3.30% for the quarter and outperformed the Benchmark for the year by 3.88%.

Quarterly Asset Growth

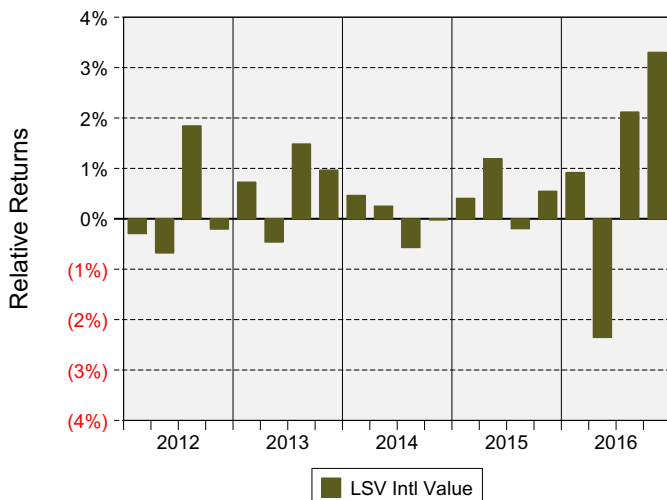
Beginning Market Value	\$75,214,632
Net New Investment	\$-3,073,990
Investment Gains/(Losses)	\$1,868,252
Ending Market Value	\$74,008,894

Performance vs CAI Non-U.S. Equity Style (Gross)

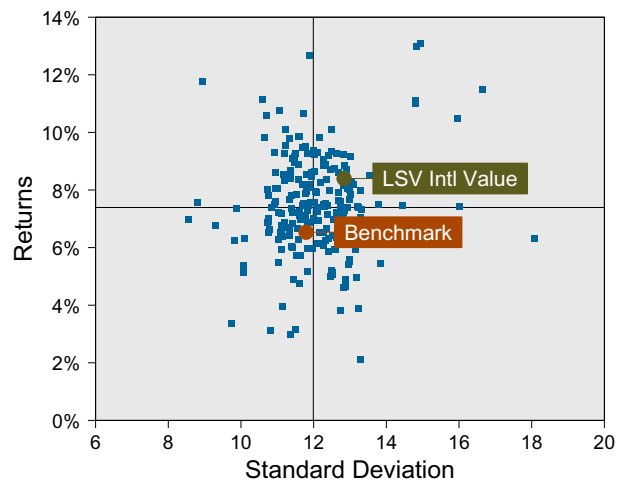


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 12 Years
10th Percentile	1.23	8.97	6.19	3.42	1.26	9.45	4.34	7.17
25th Percentile	0.00	7.22	3.43	2.32	0.40	8.50	3.16	6.12
Median	(1.80)	5.15	1.47	0.69	(0.55)	7.39	2.01	5.12
75th Percentile	(3.70)	2.21	(0.44)	(0.59)	(1.97)	6.50	1.41	4.50
90th Percentile	(5.39)	(0.08)	(3.77)	(1.47)	(2.73)	5.42	0.87	3.91
LSV Intl Value	2.59	11.37	4.88	2.95	0.29	8.40	0.42	4.39
Benchmark	(0.71)	5.67	1.00	0.09	(1.60)	6.53	0.52	3.90

Relative Return vs Benchmark



CAI Non-U.S. Equity Style (Gross) Annualized Five Year Risk vs Return



Vanguard Intl Explorer Fund

Period Ended December 31, 2016

Investment Philosophy

Vanguard International Explorer Fund invests primarily in the equity securities of small-capitalization companies located outside the United States that the advisor believes offer the potential for long-term capital appreciation. The advisor considers, among other things, whether a company is likely to have above-average earnings growth, whether the company's securities are attractively valued, and whether the company has any proprietary advantages.

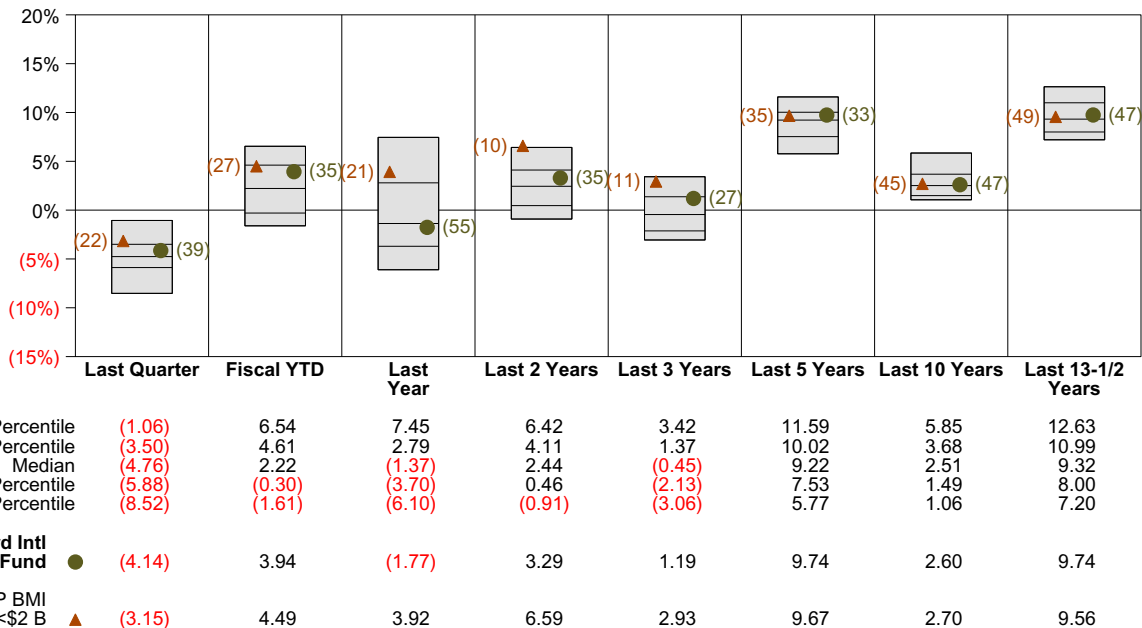
Quarterly Summary and Highlights

- Vanguard Intl Explorer Fund's portfolio posted a (4.14)% return for the quarter placing it in the 39 percentile of the CAI International Small Cap Mut Funds group for the quarter and in the 55 percentile for the last year.
- Vanguard Intl Explorer Fund's portfolio underperformed the S&P BMI EPAC <\$2 B by 0.99% for the quarter and underperformed the S&P BMI EPAC <\$2 B for the year by 5.69%.

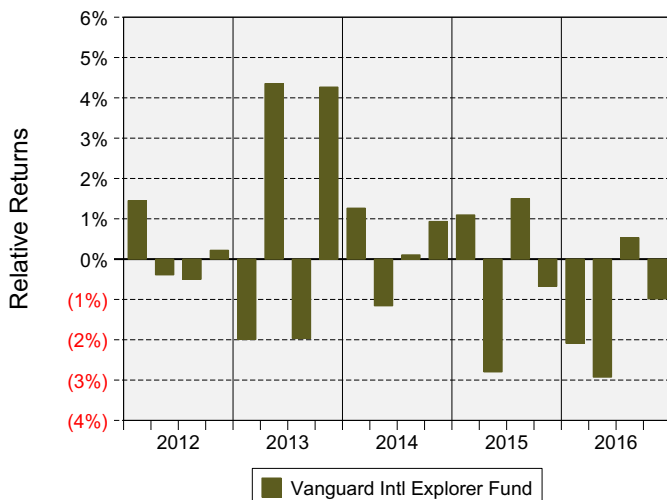
Quarterly Asset Growth

Beginning Market Value	\$18,831,980
Net New Investment	\$0
Investment Gains/(Losses)	\$-779,787
Ending Market Value	\$18,052,193

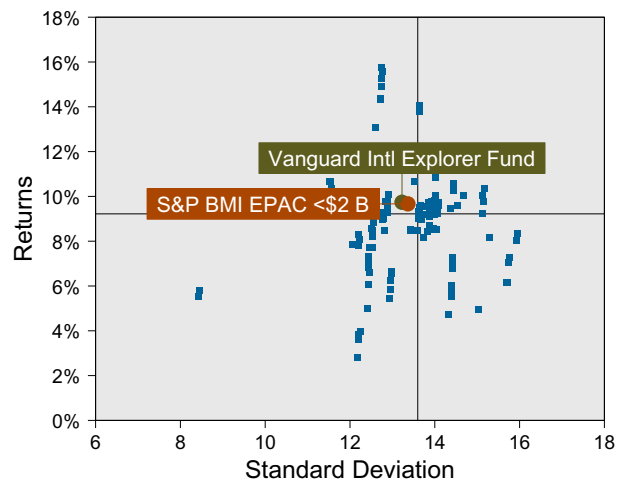
Performance vs CAI International Small Cap Mut Funds (Net)



Relative Return vs S&P BMI EPAC <\$2 B



CAI International Small Cap Mut Funds (Net) Annualized Five Year Risk vs Return



William Blair

Period Ended December 31, 2016

Investment Philosophy

One of the basic investment tenets of William Blair & Company has been its focus on quality growth companies. They believe that investing in quality growth companies will generate above average results with generally less risk than the market. This opportunity exists because they believe the market underestimates the durability and rate of growth in companies that have the following characteristics: strong management with a unique vision, competitive advantages that prolong the duration and size of earnings growth, and conservative financing. Internationally, they believe that this philosophy can be combined with strategic flexibility in managing geographic exposure, capitalization, sector emphasis, and relative growth and valuation at the portfolio level in order to provide an appropriate degree of adaptability to cyclical conditions.

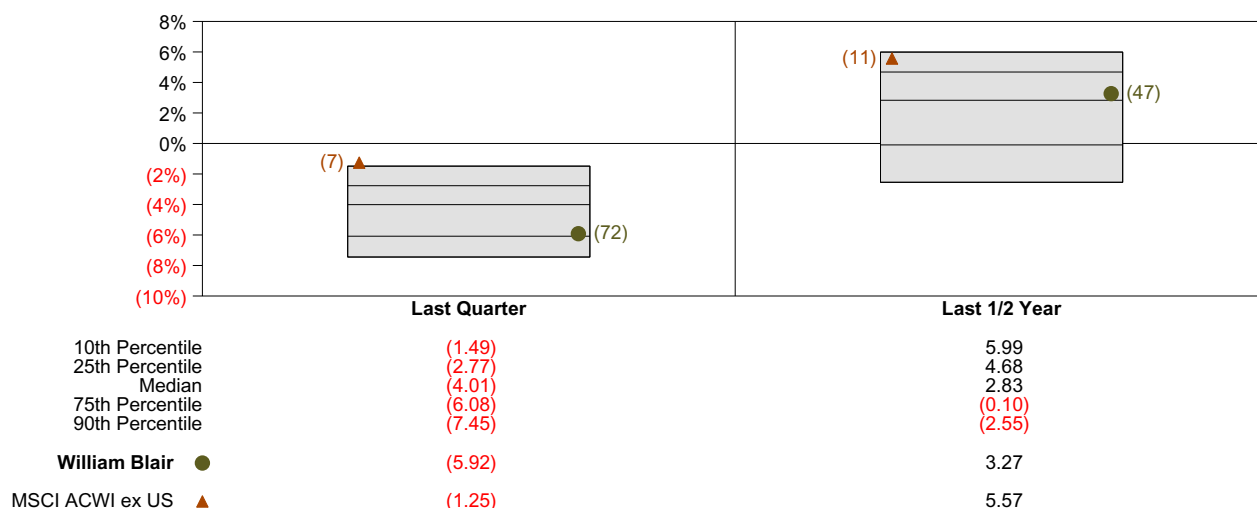
Quarterly Summary and Highlights

- William Blair's portfolio posted a (5.92)% return for the quarter placing it in the 72 percentile of the CAI Core+ Growth Int'l Eq Style group for the quarter and in the 47 percentile for the last one-half year.
- William Blair's portfolio underperformed the MSCI ACWI ex US by 4.66% for the quarter and underperformed the MSCI ACWI ex US for the one-half year by 2.30%.

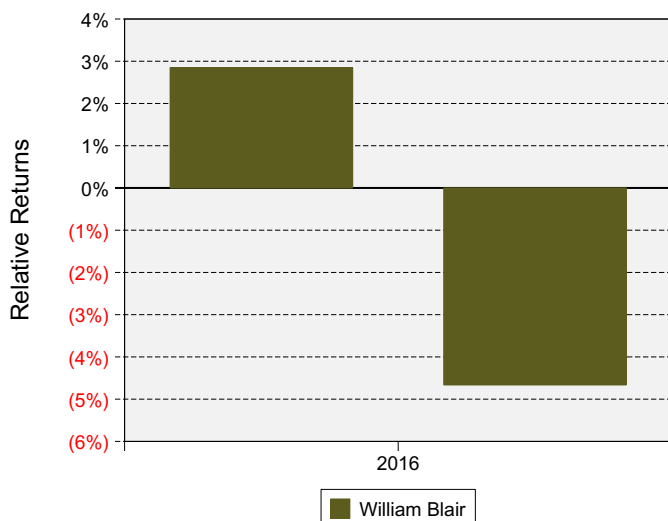
Quarterly Asset Growth

Beginning Market Value	\$64,926,242
Net New Investment	\$-65,020
Investment Gains/(Losses)	\$-3,839,153
Ending Market Value	\$61,022,068

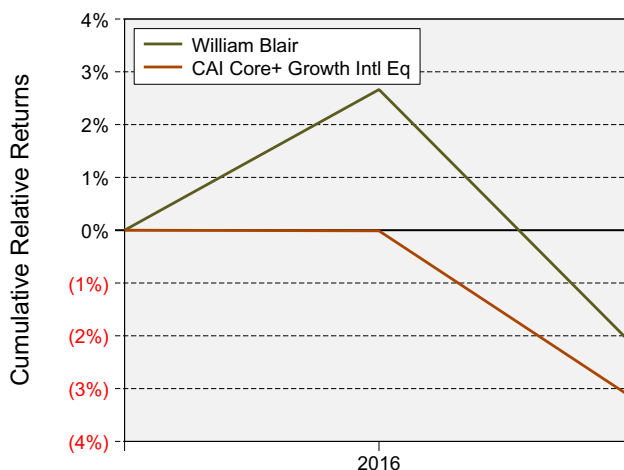
Performance vs CAI Core+ Growth Int'l Eq Style (Gross)



Relative Return vs MSCI ACWI ex US



Cumulative Returns vs MSCI ACWI ex US



Declaration Total Return Period Ended December 31, 2016

Investment Philosophy

The Fund's portfolio holdings consist primarily of RMBS issued by private sector companies (Non-Agency RMBS) and government agencies (Agency MBS) and CMBS issued by private sector companies. Agency MBS includes securities issued by the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac) and the Government National Mortgage Association (Ginnie Mae). Portfolio holdings may range from short tenure senior classes to stressed issues or subordinated securities with substantial risk of non-payment and correspondingly higher yields. Smaller portfolio allocations may include consumer asset-backed securities (ABS), or other structured credit securities and corporate bonds. As a diversification strategy and a potential hedge to credit risk, the Fund may invest in securities which tend to benefit from slow mortgage prepayments and economic growth, such as interest only (IO) MBS.

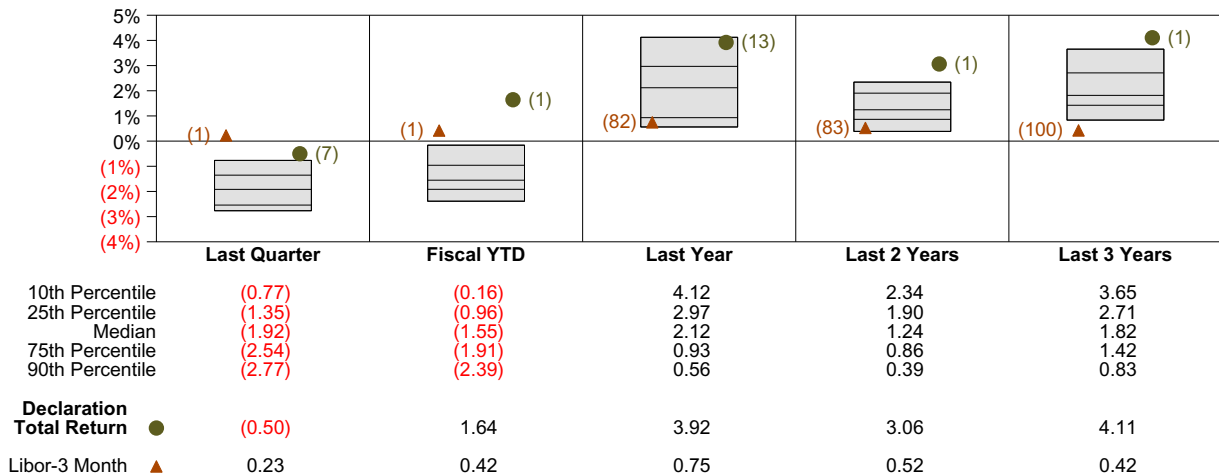
Quarterly Summary and Highlights

- Declaration Total Return's portfolio posted a (0.50)% return for the quarter placing it in the 7 percentile of the CAI Intermediate Fixed Income Mut Funds group for the quarter and in the 13 percentile for the last year.
- Declaration Total Return's portfolio underperformed the Libor-3 Month by 0.73% for the quarter and outperformed the Libor-3 Month for the year by 3.17%.

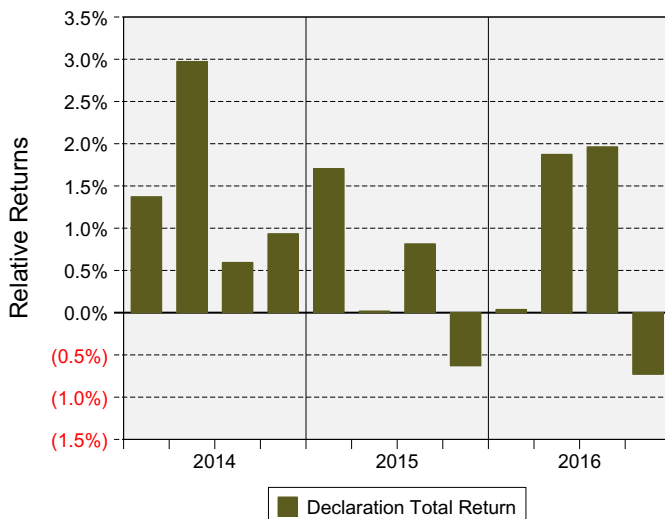
Quarterly Asset Growth

Beginning Market Value	\$81,733,279
Net New Investment	\$0
Investment Gains/(Losses)	\$-410,476
Ending Market Value	\$81,322,803

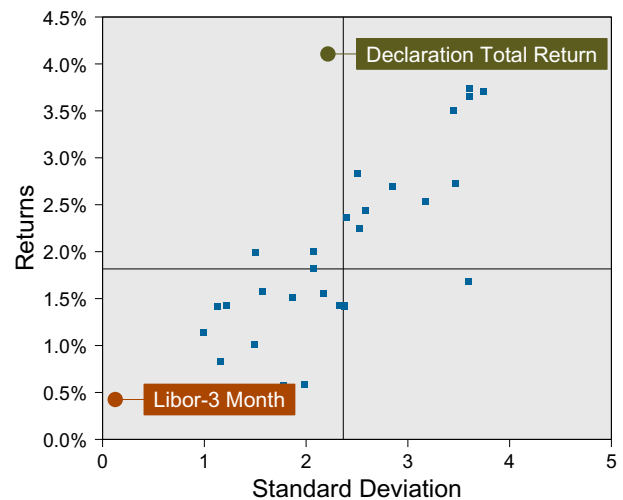
Performance vs CAI Intermediate Fixed Income Mut Funds (Net)



Relative Return vs Libor-3 Month



CAI Intermediate Fixed Income Mut Funds (Net) Annualized Three Year Risk vs Return



PIMCO DiSCO II

Period Ended December 31, 2016

Investment Philosophy

The PIMCO Distressed Senior Credit Opportunities Fund is an opportunistic private-equity style Fund which seeks to provide investors enhanced returns principally through long-biased investments in undervalued senior and super senior structured credit securities that are expected to produce attractive levels of current income and that may also appreciate in value over the long term. The fund will look to capitalize on forced sales by liquidity constrained investors.

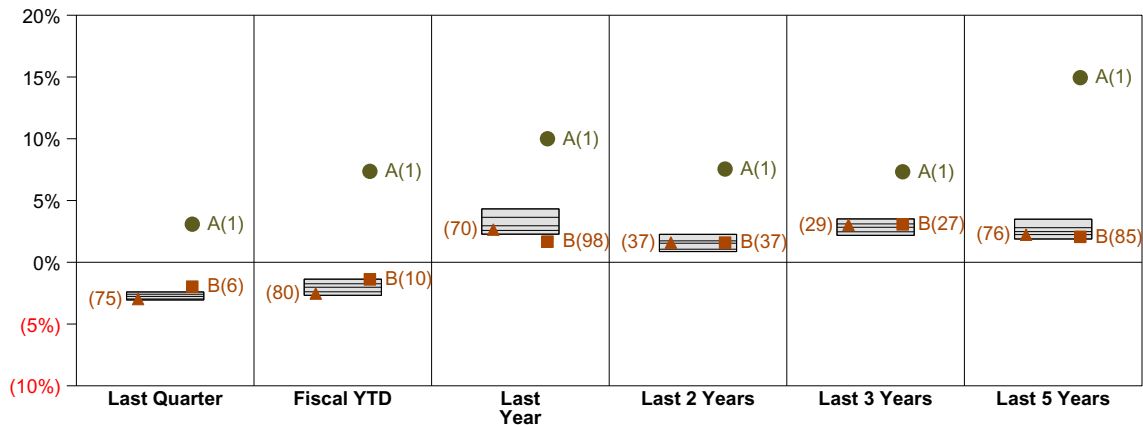
Quarterly Summary and Highlights

- PIMCO DiSCO II's portfolio posted a 3.08% return for the quarter placing it in the 1 percentile of the CAI Core Bond Mutual Funds group for the quarter and in the 1 percentile for the last year.
- PIMCO DiSCO II's portfolio outperformed the Blmbg Aggregate Idx by 6.06% for the quarter and outperformed the Blmbg Aggregate Idx for the year by 7.35%.

Quarterly Asset Growth

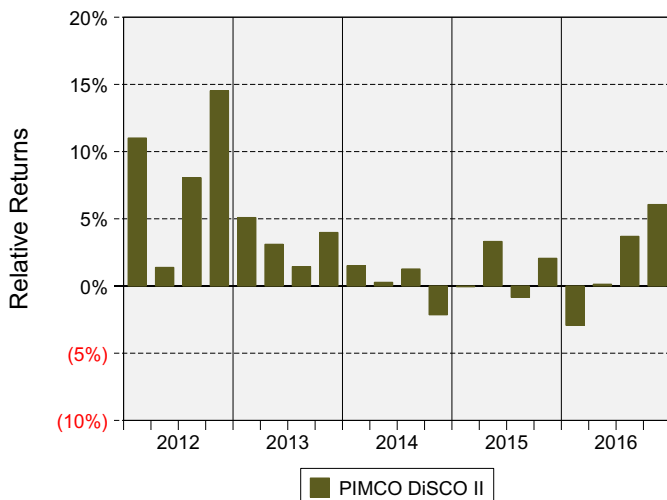
Beginning Market Value	\$85,872,318
Net New Investment	\$0
Investment Gains/(Losses)	\$2,647,499
Ending Market Value	\$88,519,817

Performance vs CAI Core Bond Mutual Funds (Net)

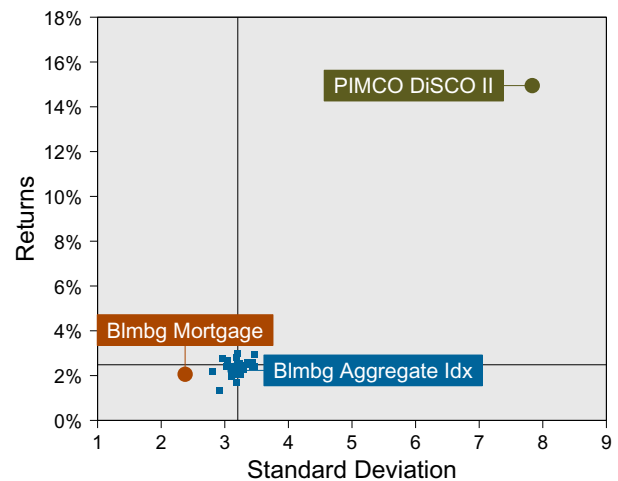


10th Percentile	(2.40)	(1.37)	4.32	2.26	3.51	3.49
25th Percentile	(2.59)	(1.74)	3.64	1.73	3.11	2.80
Median	(2.76)	(2.02)	2.96	1.54	2.83	2.48
75th Percentile	(2.97)	(2.39)	2.58	1.06	2.47	2.24
90th Percentile	(3.05)	(2.68)	2.28	0.87	2.18	1.89
PIMCO DiSCO II	● A	3.08	7.36	10.00	7.33	14.95
Blmbg Mortgage	■ B	(1.97)	(1.39)	1.67	3.07	2.06
Blmbg Aggregate Idx	▲	(2.98)	(2.53)	2.65	1.59	3.03

Relative Return vs Blmbg Aggregate Idx



CAI Core Bond Mutual Funds (Net) Annualized Five Year Risk vs Return



PIMCO Bravo II Fund

Period Ended December 31, 2016

Investment Philosophy

The BRAVO II Fund is a private equity style fund targeting an annualized IRR of 15-20% and multiple of 1.8-2x, net of fees and carried interest with an initial 5-year term. The fund will seek to capitalize on non-economic asset sale decisions by global financial institutions. The fund will have the flexibility to acquire attractively discounted, less liquid loans, structured credit and other assets tied to residential or commercial real estate markets in the U.S. and Europe.

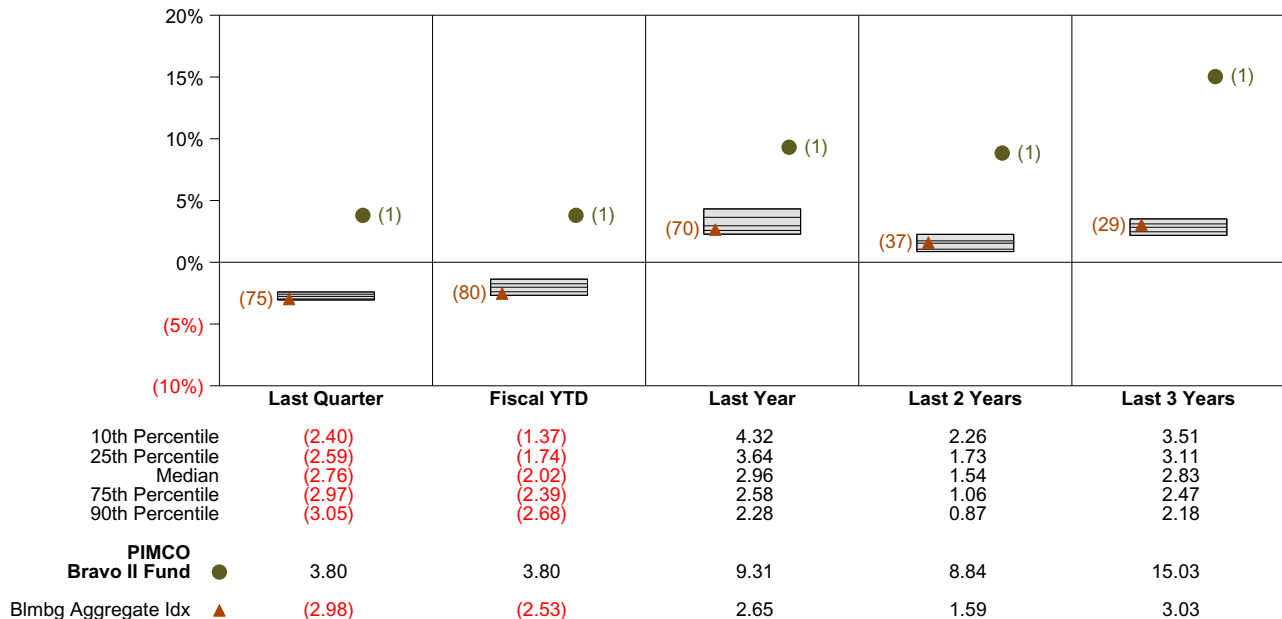
Quarterly Summary and Highlights

- PIMCO Bravo II Fund's portfolio posted a 3.80% return for the quarter placing it in the 1 percentile of the CAI Core Bond Mutual Funds group for the quarter and in the 1 percentile for the last year.
- PIMCO Bravo II Fund's portfolio outperformed the Blmbg Aggregate Idx by 6.77% for the quarter and outperformed the Blmbg Aggregate Idx for the year by 6.67%.

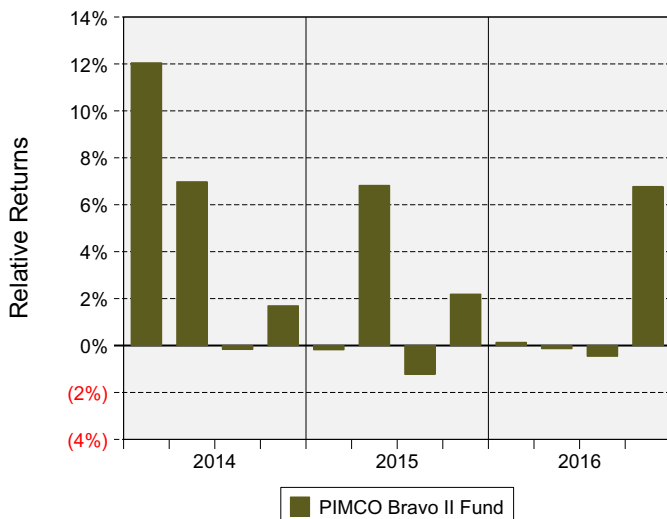
Quarterly Asset Growth

Beginning Market Value	\$47,082,300
Net New Investment	\$0
Investment Gains/(Losses)	\$1,788,691
Ending Market Value	\$48,870,991

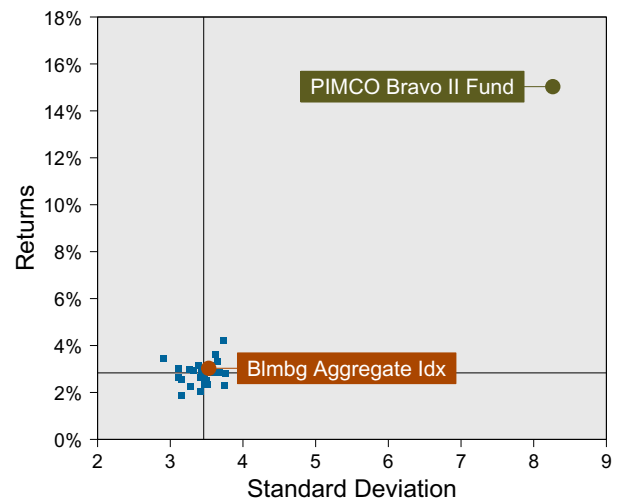
Performance vs CAI Core Bond Mutual Funds (Net)



Relative Return vs Blmbg Aggregate Idx



CAI Core Bond Mutual Funds (Net) Annualized Three Year Risk vs Return



Prudential Period Ended December 31, 2016

Investment Philosophy

The core plus fixed income account is a multi-sector strategy that is diversified across a broad range of fixed income sectors, including Treasuries, agencies, mortgage-backed securities, structured product (asset-backed securities, commercial mortgage-backed securities), investment grade corporate bonds, high yield bonds, bank loans and international debt. The primary sources of excess return are sector allocation and security selection, with duration and yield curve less of a focus.

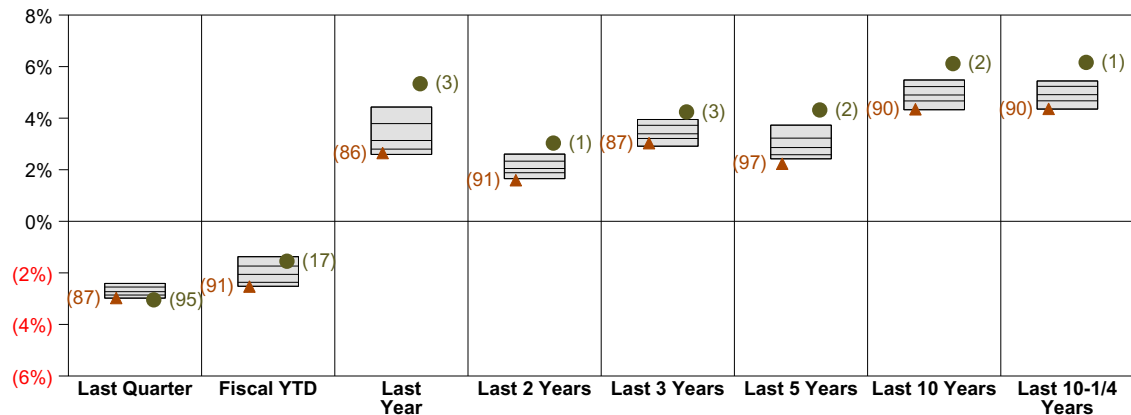
Quarterly Summary and Highlights

- Prudential's portfolio posted a (3.05)% return for the quarter placing it in the 95 percentile of the CAI Core Bond Fixed Income group for the quarter and in the 3 percentile for the last year.
- Prudential's portfolio underperformed the Blmbg Aggregate Idx by 0.07% for the quarter and outperformed the Blmbg Aggregate Idx for the year by 2.69%.

Quarterly Asset Growth

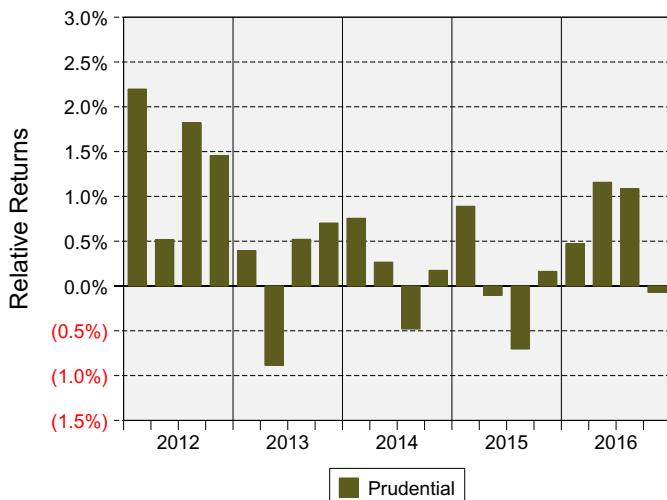
Beginning Market Value	\$111,077,475
Net New Investment	\$-74,109
Investment Gains/(Losses)	\$-3,382,685
Ending Market Value	\$107,620,681

Performance vs CAI Core Bond Fixed Income (Gross)

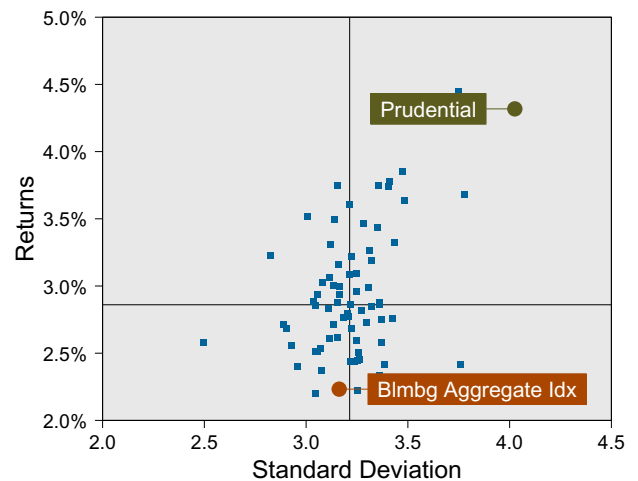


10th Percentile	(2.41)	(1.37)	4.43	2.61	3.95	3.73	5.48	5.44
25th Percentile	(2.55)	(1.74)	3.79	2.33	3.72	3.23	5.23	5.23
Median	(2.73)	(2.06)	3.13	2.05	3.39	2.86	4.90	4.91
75th Percentile	(2.86)	(2.37)	2.80	1.88	3.21	2.58	4.67	4.67
90th Percentile	(2.98)	(2.52)	2.59	1.65	2.91	2.42	4.33	4.35
Prudential	● (3.05)	(1.55)	5.34	3.03	4.24	4.32	6.12	6.16
Blmbg Aggregate Idx	▲ (2.98)	(2.53)	2.65	1.59	3.03	2.23	4.34	4.36

Relative Return vs Blmbg Aggregate Idx



CAI Core Bond Fixed Income (Gross) Annualized Five Year Risk vs Return



SSgA US Govt Cr Bd Index Period Ended December 31, 2016

Investment Philosophy

The Fund seeks an investment return that approximates as closely as practicable, before expenses, the performance of the Barclays Capital U.S. Government/Credit Bond Index over the long term.

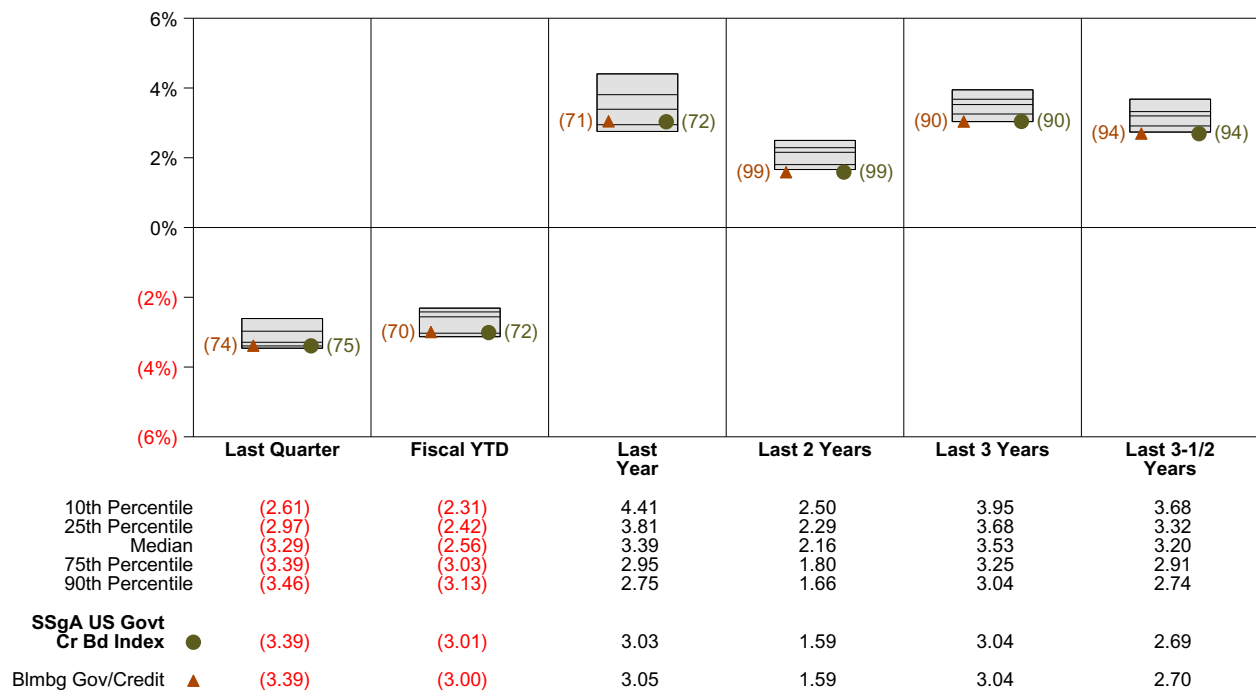
Quarterly Summary and Highlights

- SSgA US Govt Cr Bd Index's portfolio posted a (3.39)% return for the quarter placing it in the 75 percentile of the CAI Government/Credit group for the quarter and in the 72 percentile for the last year.
- SSgA US Govt Cr Bd Index's portfolio underperformed the Blmbg Gov/Credit by 0.01% for the quarter and underperformed the Blmbg Gov/Credit for the year by 0.01%.

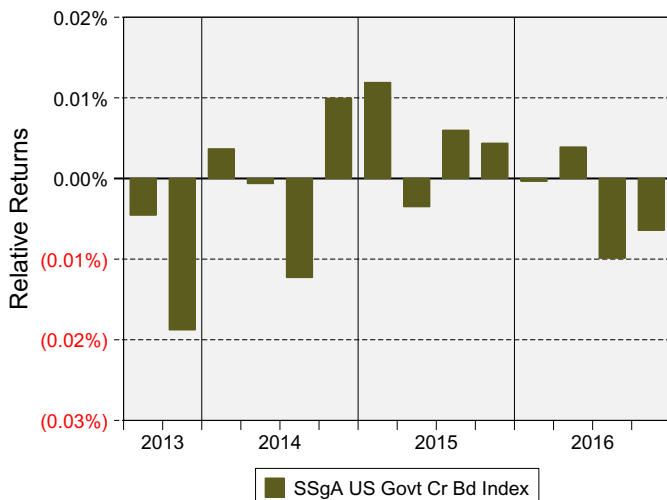
Quarterly Asset Growth

Beginning Market Value	\$140,901,947
Net New Investment	\$-12,314
Investment Gains/(Losses)	\$-4,780,446
Ending Market Value	\$136,109,187

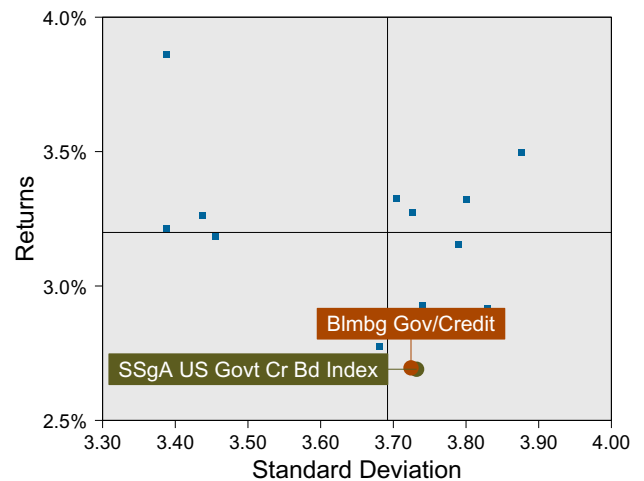
Performance vs CAI Government/Credit (Gross)



Relative Return vs Blmbg Gov/Credit



CAI Government/Credit (Gross) Annualized Three and One-Half Year Risk vs Return



Wells Capital Period Ended December 31, 2016

Investment Philosophy

The Medium Quality Credit fixed income strategy is designed to maximize total return from the high-grade corporate bond market while maintaining a strategic allocation to the BBB portion of the high yield market. The investment process for this fund starts with a "top-down" strategy. Security selection is determined by in-depth credit research, holding that in-depth knowledge of industries, companies, and their management teams can help identify credit trends that can lead to investment opportunities. Furthermore, a disciplined relative value framework is applied to help determine the optimal position to invest within an industry and within an individual issuer's capital structure.

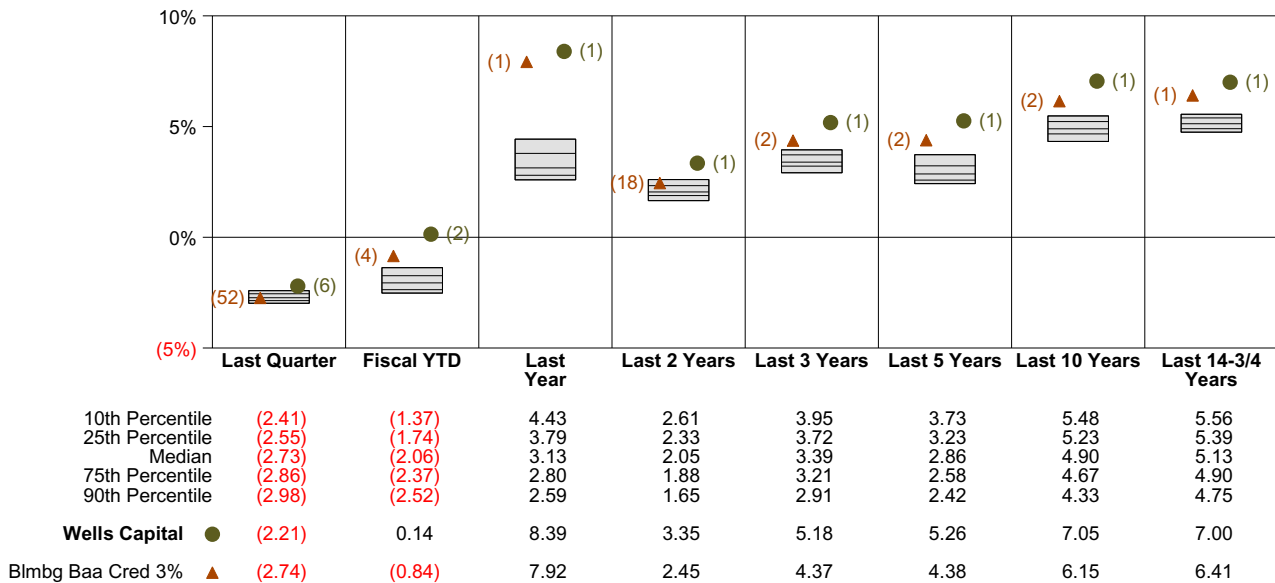
Quarterly Summary and Highlights

- Wells Capital's portfolio posted a (2.21)% return for the quarter placing it in the 6 percentile of the CAI Core Bond Fixed Income group for the quarter and in the 1 percentile for the last year.
- Wells Capital's portfolio outperformed the Blmbg Baa Cred 3% by 0.53% for the quarter and outperformed the Blmbg Baa Cred 3% for the year by 0.47%.

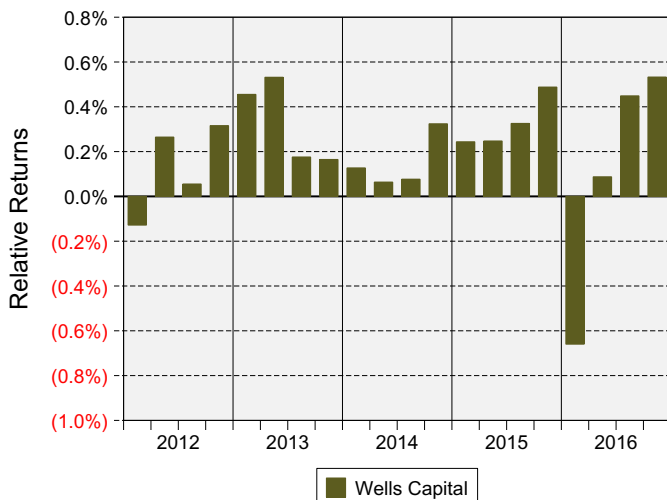
Quarterly Asset Growth

Beginning Market Value	\$310,768,674
Net New Investment	\$-5,000,000
Investment Gains/(Losses)	\$-6,809,850
Ending Market Value	\$298,958,824

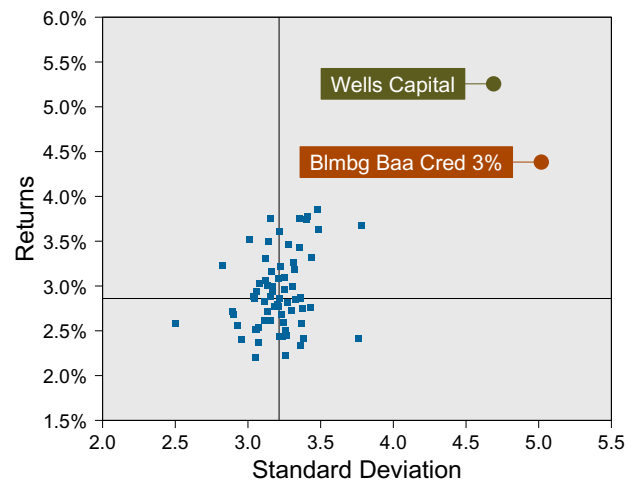
Performance vs CAI Core Bond Fixed Income (Gross)



Relative Return vs Blmbg Baa Cred 3%



CAI Core Bond Fixed Income (Gross) Annualized Five Year Risk vs Return



Western Asset Management Company

Period Ended December 31, 2016

Investment Philosophy

Western Asset designs this portfolio using all major fixed-income sectors with a bias towards non-Treasuries, especially corporate, mortgage-backed and asset-backed securities. Value can be added through sector rotation, issue selection, duration and term structure weighting.

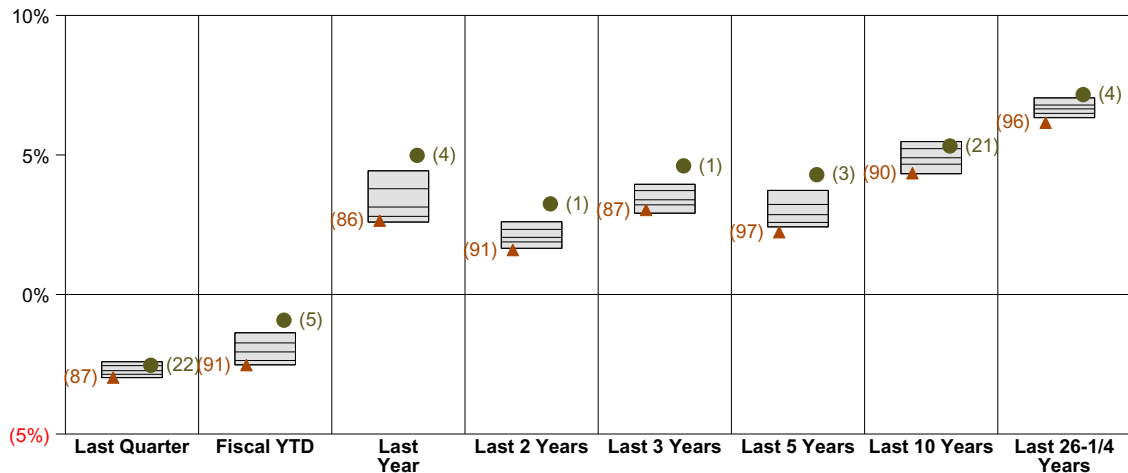
Quarterly Summary and Highlights

- Western Asset's portfolio posted a (2.54)% return for the quarter placing it in the 22 percentile of the CAI Core Bond Fixed Income group for the quarter and in the 4 percentile for the last year.
- Western Asset's portfolio outperformed the Blmbg Aggregate Idx by 0.44% for the quarter and outperformed the Blmbg Aggregate Idx for the year by 2.34%.

Quarterly Asset Growth

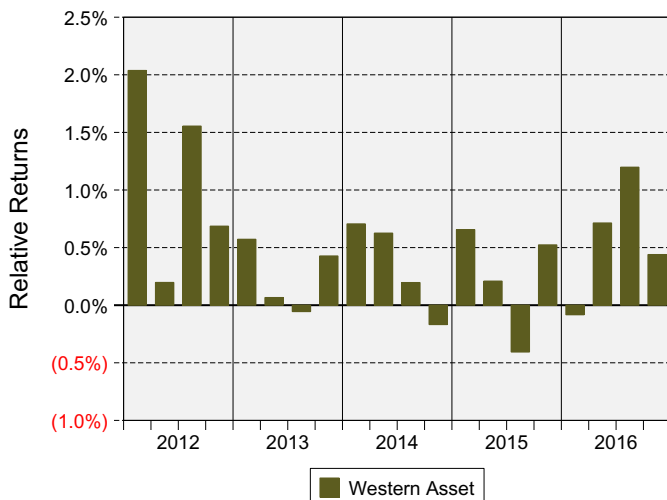
Beginning Market Value	\$311,038,572
Net New Investment	\$-4,104,585
Investment Gains/(Losses)	\$-7,898,666
Ending Market Value	\$299,035,320

Performance vs CAI Core Bond Fixed Income (Gross)

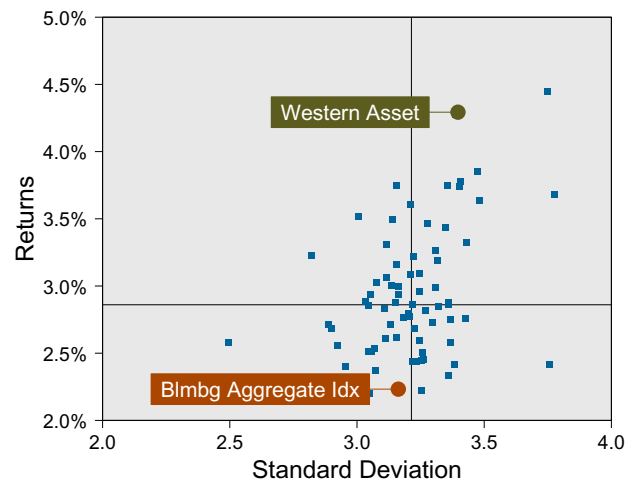


10th Percentile	(2.41)	(1.37)	4.43	2.61	3.95	3.73	5.48	7.05
25th Percentile	(2.55)	(1.74)	3.79	2.33	3.72	3.23	5.23	6.79
Median	(2.73)	(2.06)	3.13	2.05	3.39	2.86	4.90	6.65
75th Percentile	(2.86)	(2.37)	2.80	1.88	3.21	2.58	4.67	6.49
90th Percentile	(2.98)	(2.52)	2.59	1.65	2.91	2.42	4.33	6.34
Western Asset	● (2.54)	(0.92)	4.99	3.25	4.61	4.29	5.32	7.16
Blmbg Aggregate Idx	▲ (2.98)	(2.53)	2.65	1.59	3.03	2.23	4.34	6.16

Relative Return vs Blmbg Aggregate Idx



CAI Core Bond Fixed Income (Gross) Annualized Five Year Risk vs Return



Western TIPS Period Ended December 31, 2016

Investment Philosophy

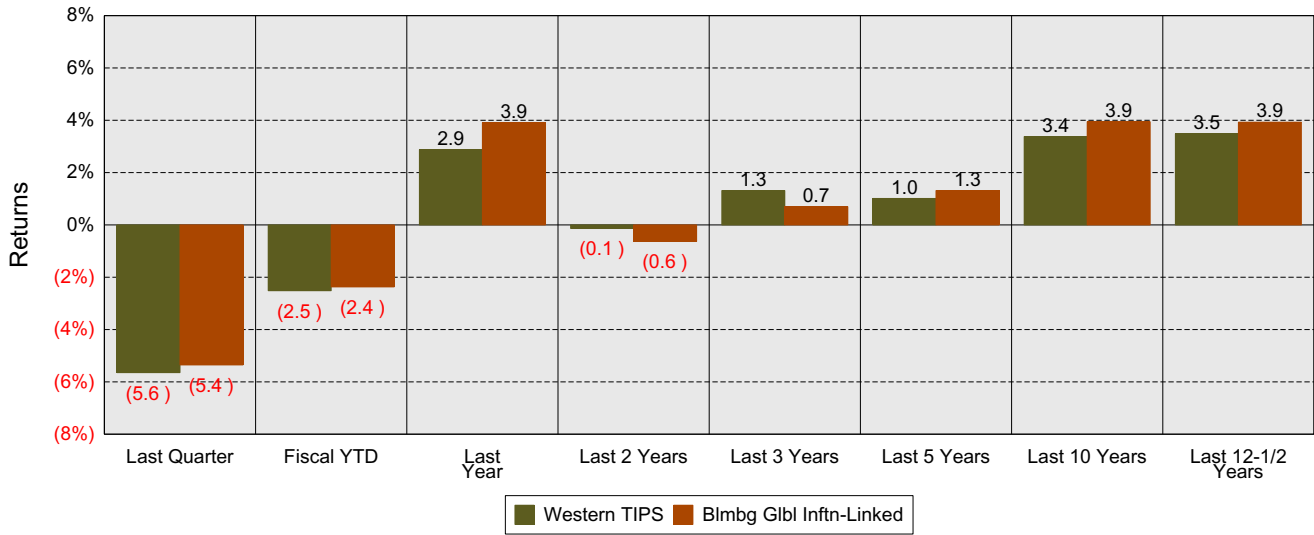
Western Asset's Global Inflation-Linked composite includes portfolios that employ an active, team-managed investment approach around a long-term, value-oriented investment philosophy. Constructed primarily of inflation-indexed securities, these portfolios use diversified strategies in seeking to add value while minimizing risk. Value can be added through country selection, term structure, issue selection, duration management and currency management. **Bloomberg US TIPS through 12/31/2009 and Bloomberg Global Inflation-Linked thereafter.**

Quarterly Summary and Highlights

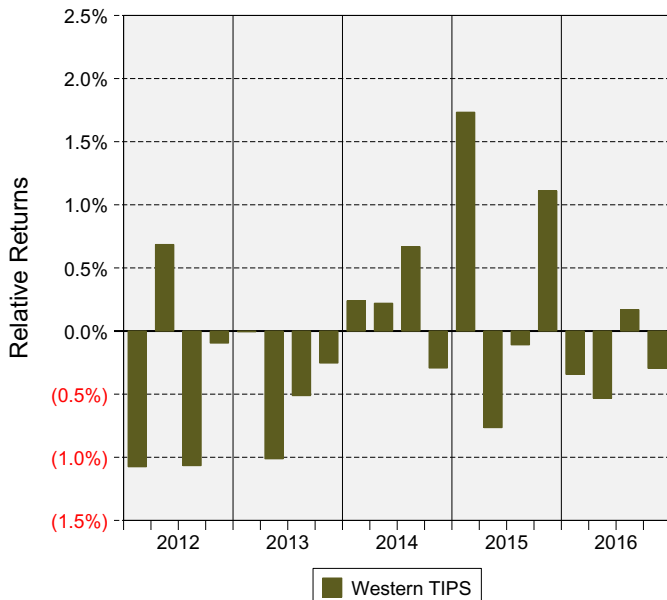
- Western TIPS's portfolio underperformed the Blmbg Gbl Inftn-Linked by 0.29% for the quarter and underperformed the Blmbg Gbl Inftn-Linked for the year by 1.03%.

Quarterly Asset Growth

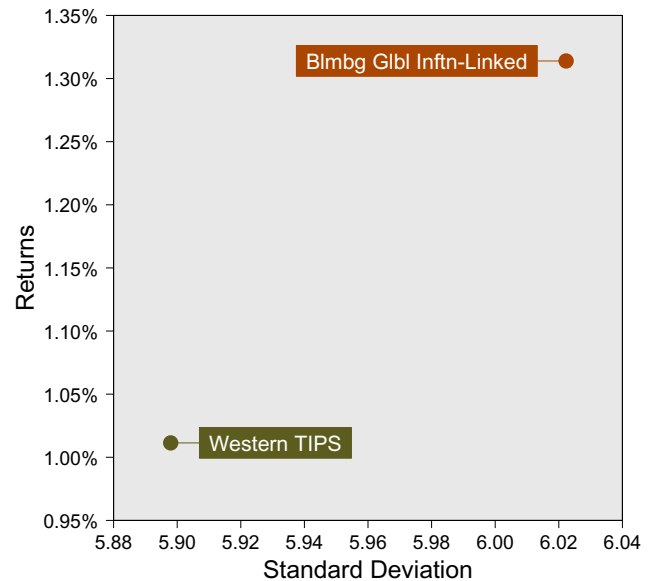
Beginning Market Value	\$116,819,469
Net New Investment	\$-44,994
Investment Gains/(Losses)	\$-6,594,982
Ending Market Value	\$110,179,493



Relative Return vs Blmbg Gbl Inftn-Linked



Annualized Five Year Risk vs Return



Eastern Timber Opportunities

Period Ended December 31, 2016

Investment Philosophy

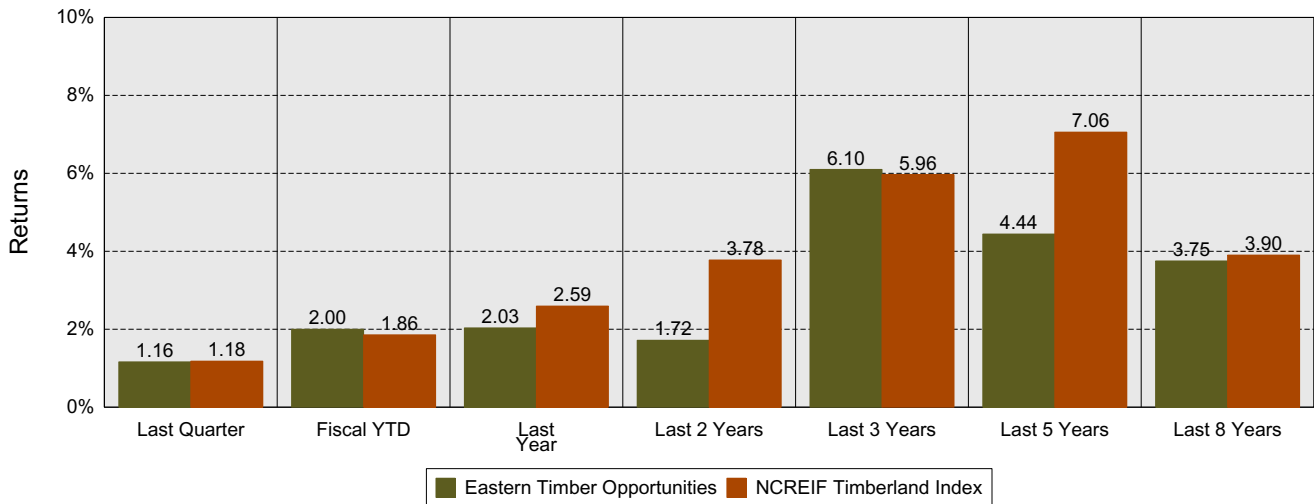
The investment objective of the Eastern Timberland Opportunities fund is to provide competitive timberland investment returns from Eastern US timberland investments by pursuing management strategies to increase timber production and land values through the investment term. TIR will maximize timber values within the portfolio with the application of intensive forest management techniques to accelerate the growth in timber volume and movement into higher value product categories. Additional value will be captured by realizing higher and better use opportunities for select timberland properties throughout the portfolio.

Quarterly Summary and Highlights

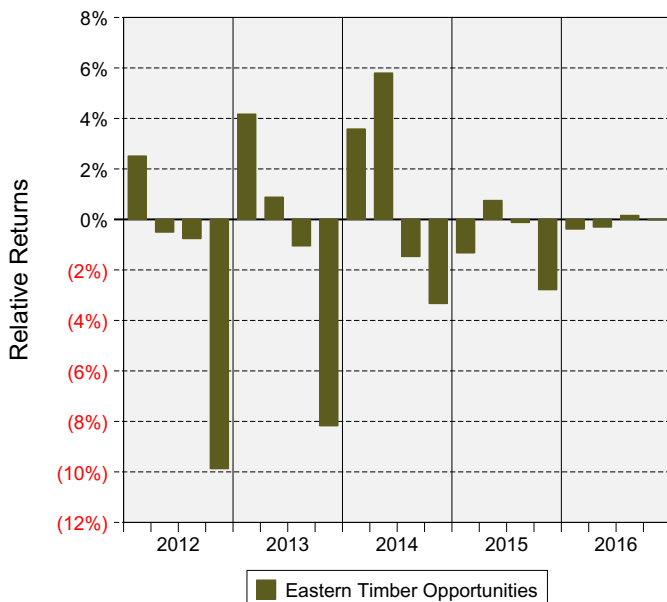
- Eastern Timber Opportunities's portfolio underperformed the NCREIF Timberland Index by 0.02% for the quarter and underperformed the NCREIF Timberland Index for the year by 0.56%.

Quarterly Asset Growth

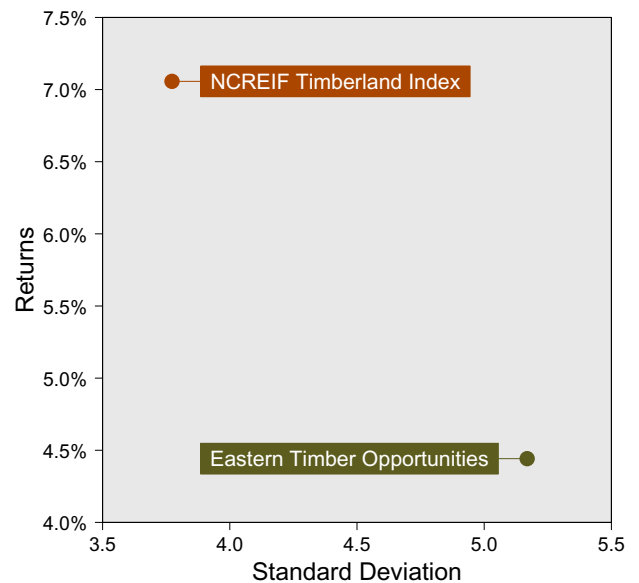
Beginning Market Value	\$59,638,348
Net New Investment	\$-5,328,638
Investment Gains/(Losses)	\$638,786
Ending Market Value	\$54,948,496



Relative Return vs NCREIF Timberland Index



Annualized Five Year Risk vs Return



JP Morgan Infrastructure Period Ended December 31, 2016

Investment Philosophy

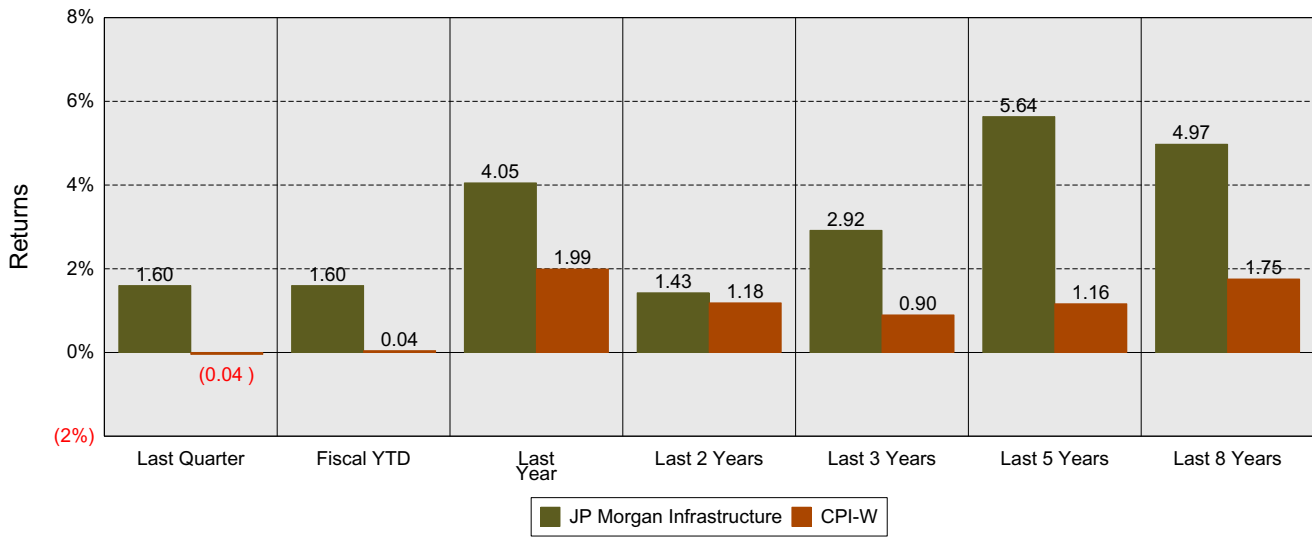
The only open-ended private commingled infrastructure fund in the U.S, the JPMorgan Infrastructure Investments Fund invests in stabilized assets in OECD countries with selected value-added opportunities, across infrastructure industry sub-sectors, including: toll roads, bridges and tunnels; oil and gas pipelines; electricity transmission and distribution facilities; contracted power generation assets; water distribution; waste-water collection and processing; railway lines and rapid rail links; and seaports and airports.

Quarterly Summary and Highlights

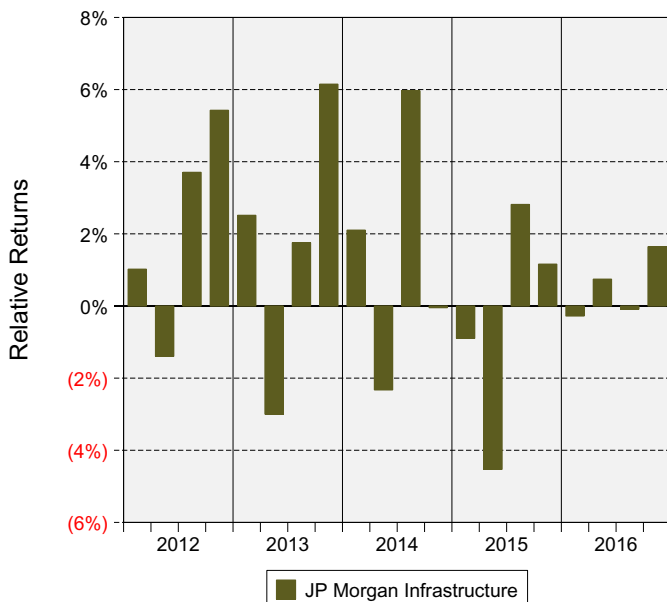
- JP Morgan Infrastructure's portfolio outperformed the CPI-W by 1.64% for the quarter and outperformed the CPI-W for the year by 2.06%.

Quarterly Asset Growth

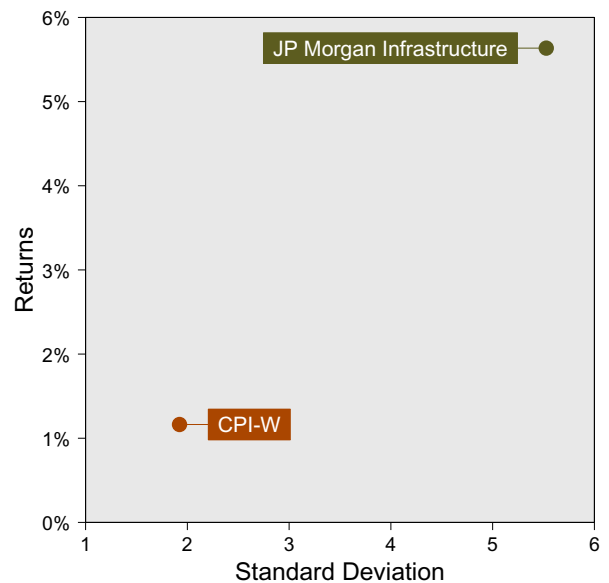
Beginning Market Value	\$75,325,818
Net New Investment	\$4,830,503
Investment Gains/(Losses)	\$1,278,061
Ending Market Value	\$81,434,382



Relative Return vs CPI-W



Annualized Five Year Risk vs Return



Grosvenor Cust. Infrastructure Period Ended December 31, 2016

Investment Philosophy

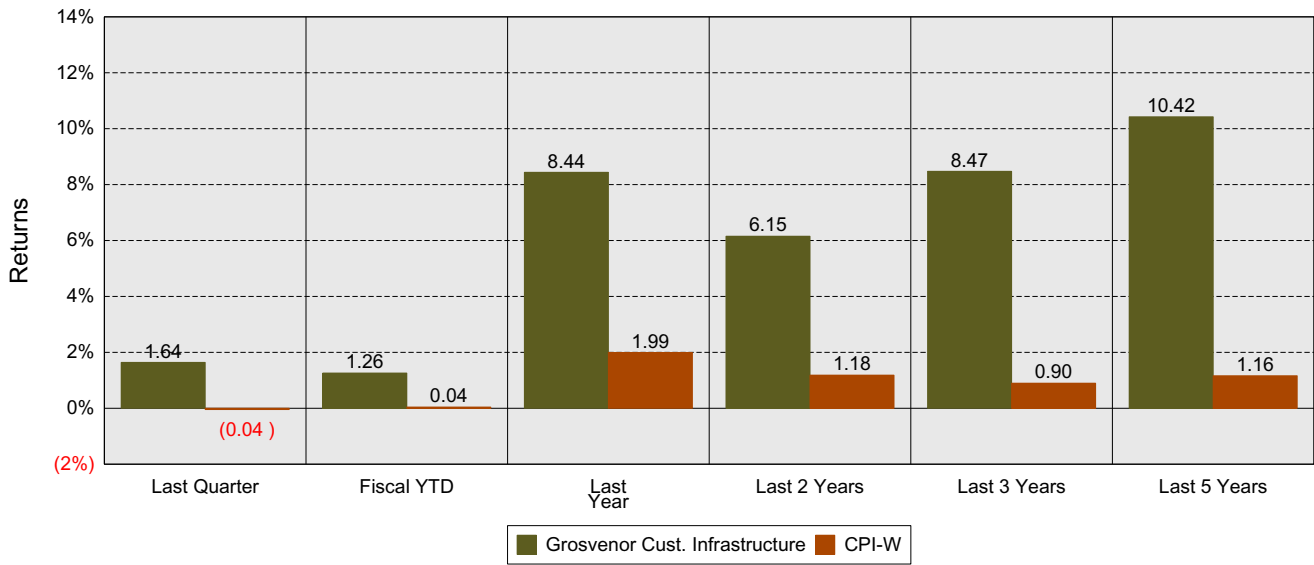
The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified portfolio of primary core and core plus infrastructure funds (30%), co-investments (40%) and opportunistic secondary fund purchases (30%).

Quarterly Summary and Highlights

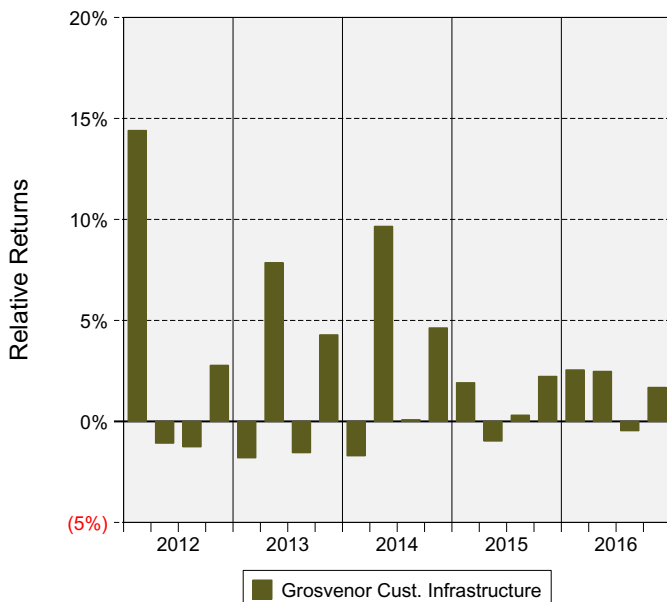
- Grosvenor Cust. Infrastructure's portfolio outperformed the CPI-W by 1.68% for the quarter and outperformed the CPI-W for the year by 6.45%.

Quarterly Asset Growth

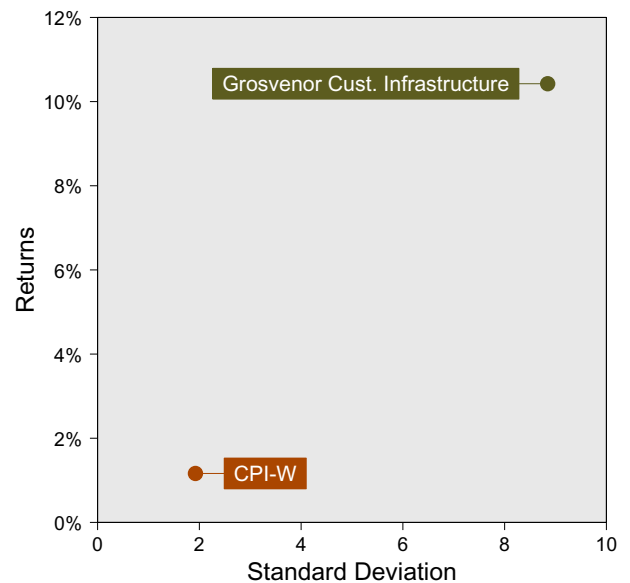
Beginning Market Value	\$19,991,813
Net New Investment	\$-3,299,463
Investment Gains/(Losses)	\$292,095
Ending Market Value	\$16,984,446



Relative Return vs CPI-W



Annualized Five Year Risk vs Return



Invesco Core Real Estate Period Ended December 31, 2016

Investment Philosophy

IRE's investment philosophy is comprised of two fundamental principles: (1) maximize the predictability and consistency of investment returns and (2) minimize the risk of capital loss. This philosophy forms the cornerstone of the company's real estate investment philosophy.

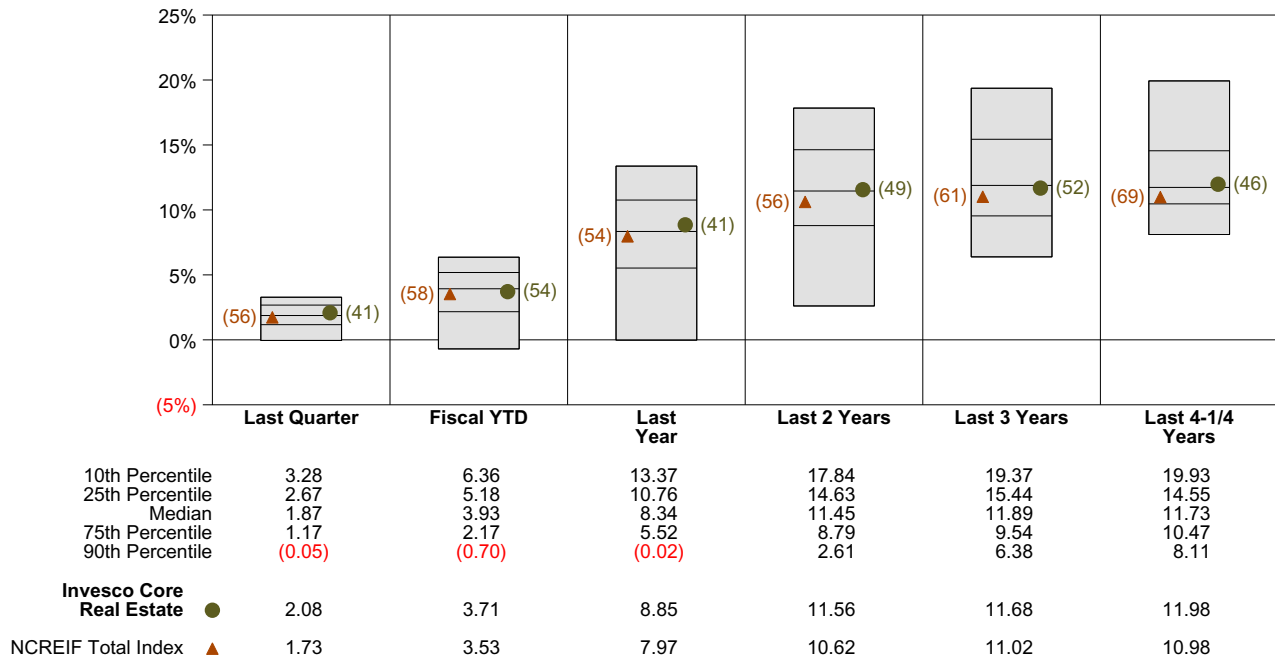
Quarterly Summary and Highlights

- Invesco Core Real Estate's portfolio posted a 2.08% return for the quarter placing it in the 41 percentile of the CAI Total Real Estate Database group for the quarter and in the 41 percentile for the last year.
- Invesco Core Real Estate's portfolio outperformed the NCREIF Total Index by 0.35% for the quarter and outperformed the NCREIF Total Index for the year by 0.88%.

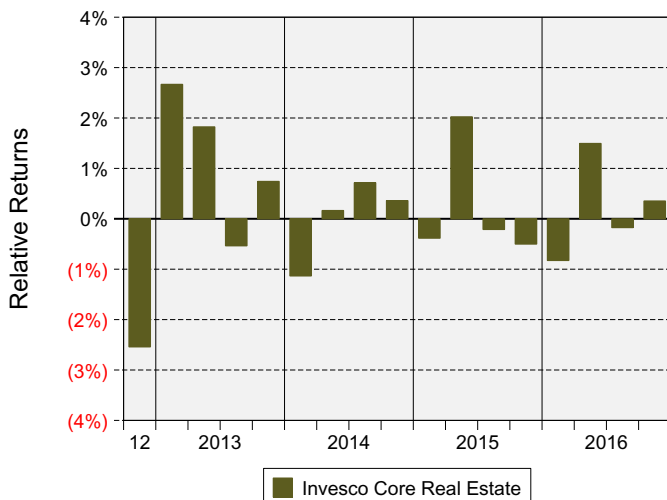
Quarterly Asset Growth

Beginning Market Value	\$62,884,208
Net New Investment	\$-467,229
Investment Gains/(Losses)	\$1,300,388
Ending Market Value	\$63,717,366

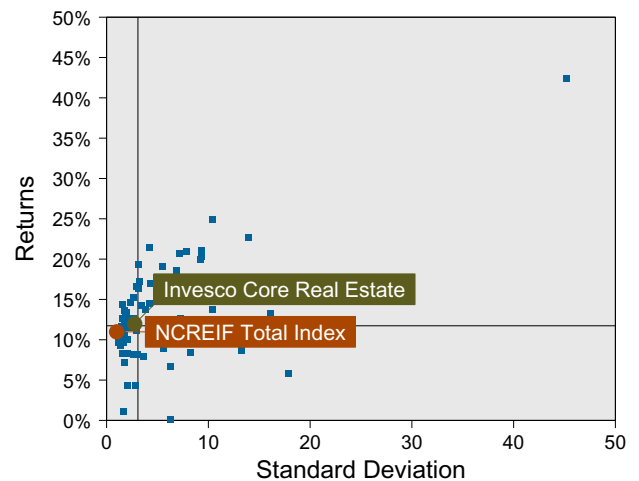
Performance vs CAI Total Real Estate Database (Net)



Relative Return vs NCREIF Total Index



CAI Total Real Estate Database (Net) Annualized Four and One-Quarter Year Risk vs Return



JP Morgan Real Estate Period Ended December 31, 2016

Investment Philosophy

The J.P. Morgan U.S. Real Estate Income and Growth Fund seeks to construct and opportunistically manage a portfolio of core direct real estate investments, complemented by other real estate and real estate-related assets. The Fund pursues a broadly diversified absolute-return strategy and pursues all property investments on an opportunistic basis. The majority of the Fund's investments will be in direct core properties in the office, industrial, retail and residential sectors.

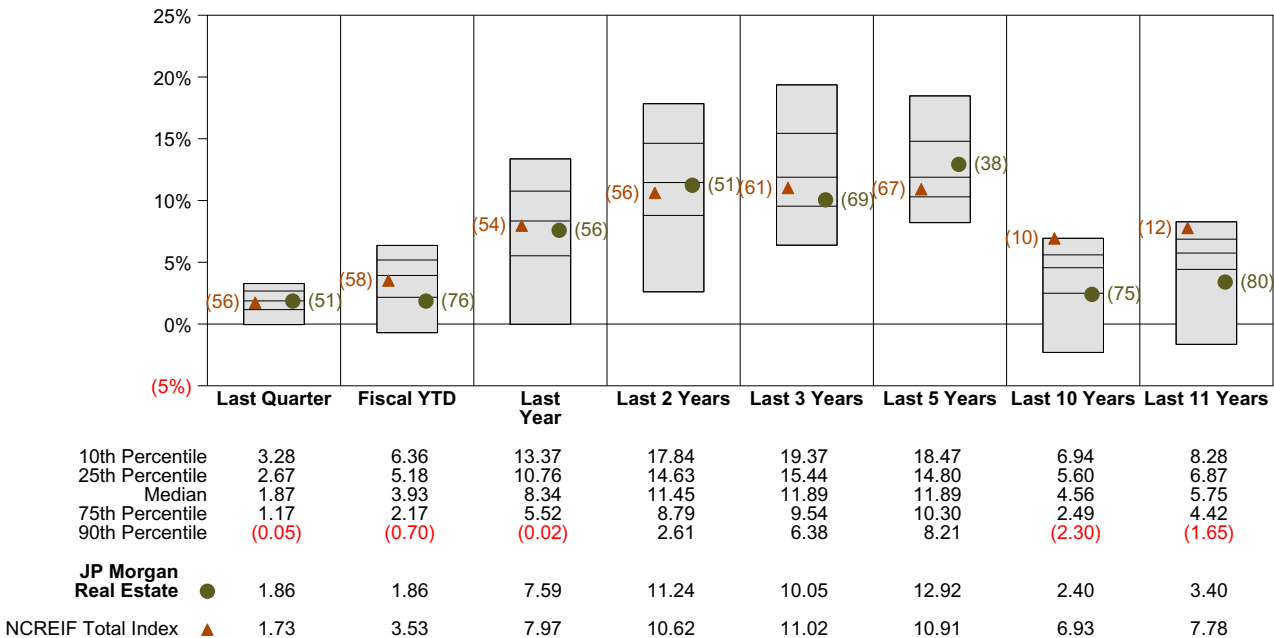
Quarterly Summary and Highlights

- JP Morgan Real Estate's portfolio posted a 1.86% return for the quarter placing it in the 51 percentile of the CAI Total Real Estate Database group for the quarter and in the 56 percentile for the last year.
- JP Morgan Real Estate's portfolio outperformed the NCREIF Total Index by 0.13% for the quarter and underperformed the NCREIF Total Index for the year by 0.38%.

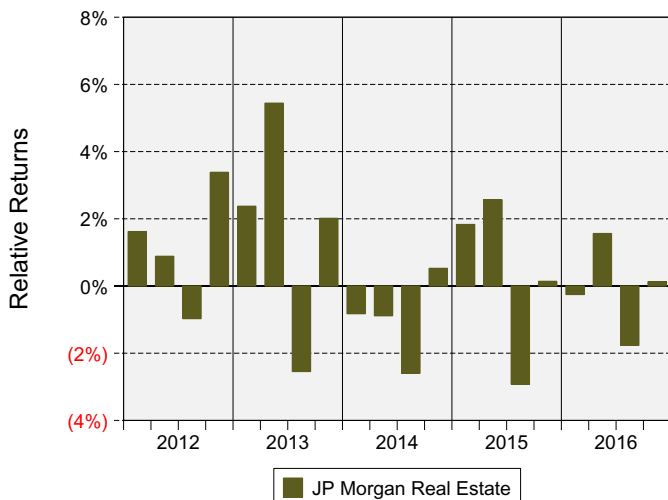
Quarterly Asset Growth

Beginning Market Value	\$69,386,281
Net New Investment	\$-36,753
Investment Gains/(Losses)	\$1,289,571
Ending Market Value	\$70,639,099

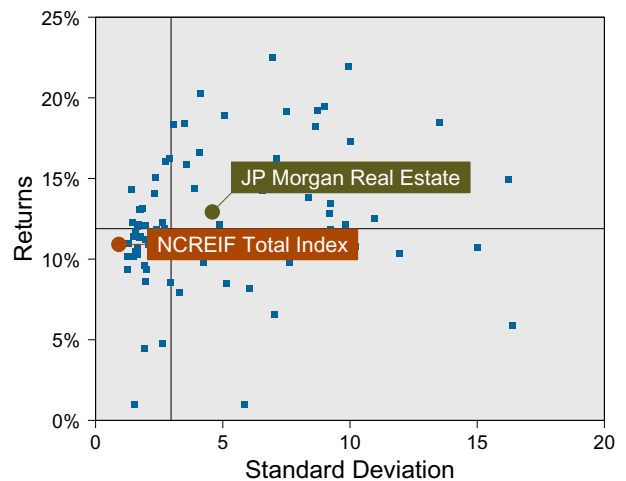
Performance vs CAI Total Real Estate Database (Net)



Relative Return vs NCREIF Total Index



CAI Total Real Estate Database (Net) Annualized Five Year Risk vs Return



JP Morgan Short Term Bonds Period Ended December 31, 2016

Investment Philosophy

The investment objective of this account is to outperform the Barclays Capital 1-3 year Government/Credit Index while maintaining total return risk similar to that of the benchmark as measured over a market cycle. The weighted average effective duration of the portfolio will typically remain within +/- 30% of the benchmark.

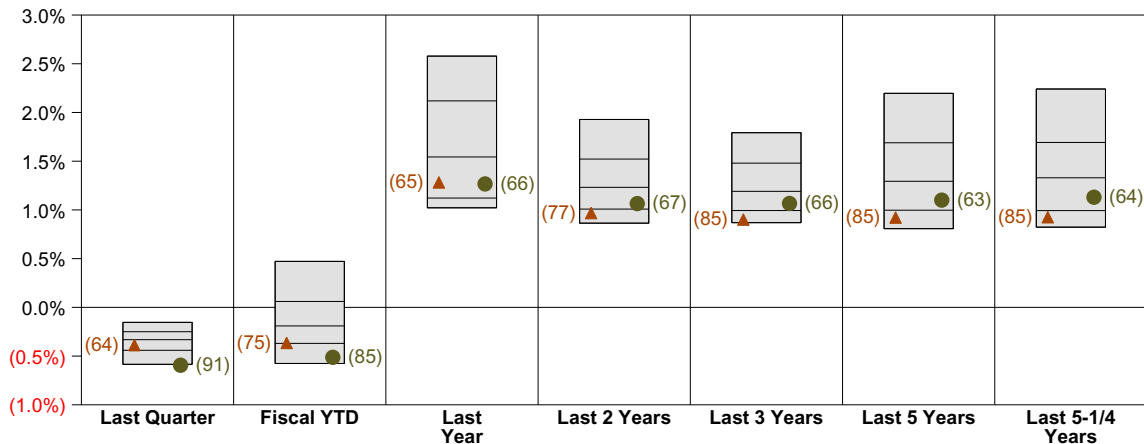
Quarterly Summary and Highlights

- JP Morgan Short Term Bonds's portfolio posted a (0.59)% return for the quarter placing it in the 91 percentile of the CAI Defensive Fixed Income group for the quarter and in the 66 percentile for the last year.
- JP Morgan Short Term Bonds's portfolio underperformed the Blmbg Gov/Cred 1-3Y by 0.21% for the quarter and underperformed the Blmbg Gov/Cred 1-3Y for the year by 0.02%.

Quarterly Asset Growth

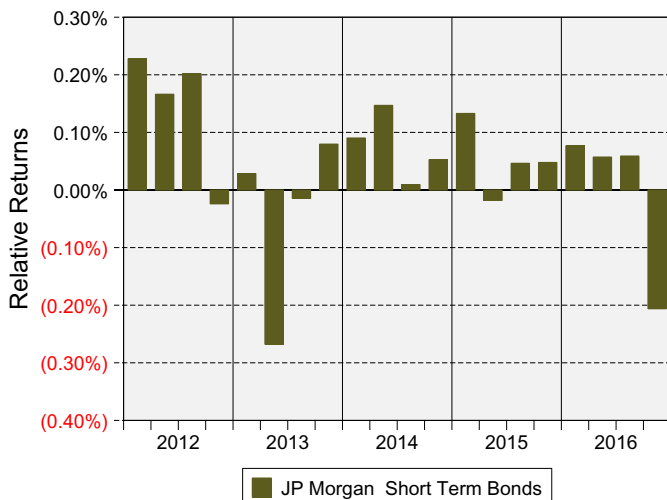
Beginning Market Value	\$277,097,315
Net New Investment	\$-205,500,000
Investment Gains/(Losses)	\$-744,918
Ending Market Value	\$70,852,396

Performance vs CAI Defensive Fixed Income (Gross)

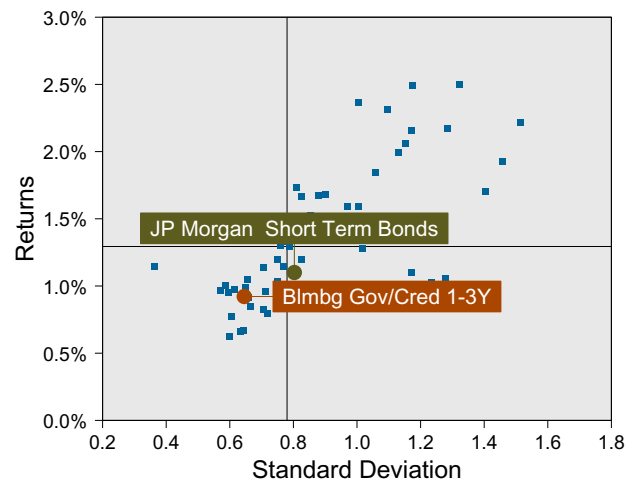


10th Percentile	(0.15)	0.47	2.58	1.93	1.79	2.20	2.24
25th Percentile	(0.25)	0.06	2.12	1.52	1.48	1.69	1.69
Median	(0.33)	(0.19)	1.54	1.23	1.19	1.29	1.33
75th Percentile	(0.44)	(0.37)	1.12	1.01	0.99	1.00	0.99
90th Percentile	(0.58)	(0.58)	1.02	0.86	0.87	0.81	0.82
JP Morgan Short Term Bonds	● (0.59)	(0.51)	1.27	1.06	1.07	1.10	1.13
Blmbg Gov/Cred 1-3Y	▲ (0.39)	(0.37)	1.28	0.97	0.90	0.92	0.93

Relative Return vs Blmbg Gov/Cred 1-3Y



CAI Defensive Fixed Income (Gross) Annualized Five Year Risk vs Return



Barings Short Term Bonds Period Ended December 31, 2016

Investment Philosophy

The investment objective of this account is to outperform the total return of the Barclays Capital 1-3 year US Government Index while minimizing fluctuations in capital value and providing sufficient liquidity to fund withdrawals.

Quarterly Summary and Highlights

- Barings Short Term Bonds's portfolio posted a 0.33% return for the quarter placing it in the 1 percentile of the CAI Defensive Fixed Income group for the quarter and in the 1 percentile for the last year.
- Barings Short Term Bonds's portfolio outperformed the Blmbg Gov 1-3 Yr by 0.78% for the quarter and outperformed the Blmbg Gov 1-3 Yr for the year by 2.70%.

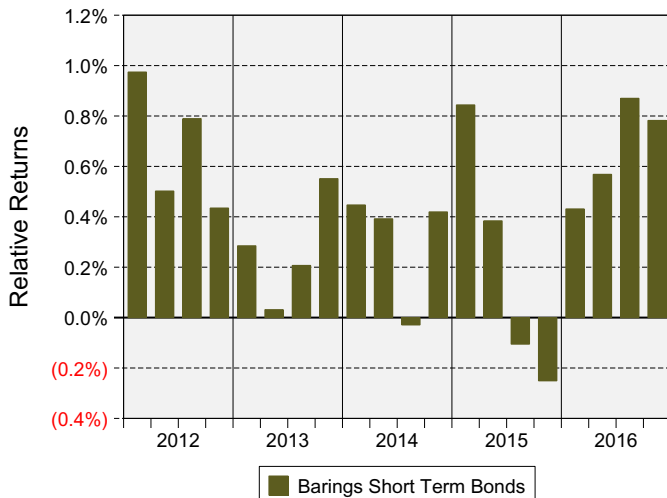
Quarterly Asset Growth

Beginning Market Value	\$245,189,526
Net New Investment	\$-209,593,525
Investment Gains/(Losses)	\$478,846
Ending Market Value	\$36,074,847

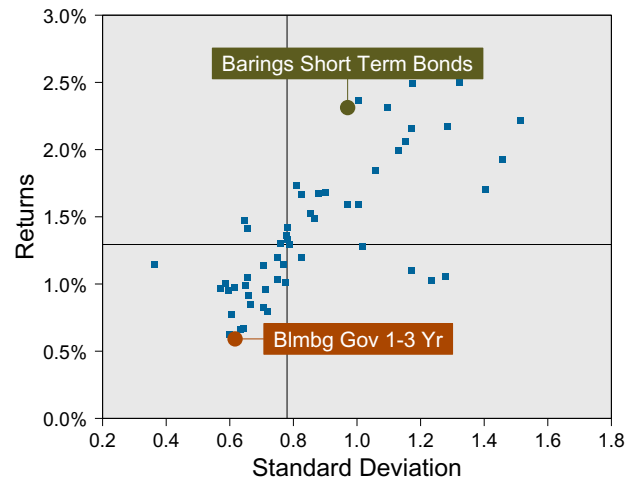
Performance vs CAI Defensive Fixed Income (Gross)



Relative Return vs Blmbg Gov 1-3 Yr



CAI Defensive Fixed Income (Gross) Annualized Five Year Risk vs Return



Research and Educational Programs

The Callan Institute provides research that updates clients on the latest industry trends while helping them learn through carefully structured educational programs. Visit www.callan.com/research to see all of our publications, or for more information contact Anna West at 415.974.5060 / institute@callan.com.

New Research from Callan's Experts

2017 Defined Contribution Trends Survey | Callan's 10th Annual DC Trends Survey highlights plan sponsors' key themes from 2016 and expectations for 2017.

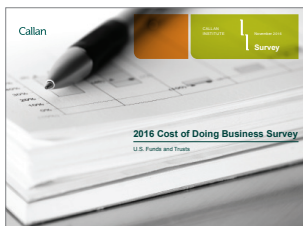
ESG Factors: U.S. Investor Usage Crystallizes | This charticle looks at environmental, social, and governance (ESG) factors from the perspectives of U.S. asset owners and global investment managers, revealing the growing incorporation of ESG factors in investment decision making.



Fixed Income: A Macroeconomic Lightning Rod | Callan's October 2016 Regional Workshop addressed alternative fixed income strategies to deal with the shifting market and economic environment investors face, as the extended period of low yields in the wake of the Global Financial Crisis appears to be ending.

ESG Interest and Implementation Survey | Callan's fourth annual survey on the status of ESG factor integration in the U.S. institutional market reflects responses from 84 funds representing approximately \$843 billion in assets.

2016 Cost of Doing Business Survey | In this survey, Callan compares the costs of administering and operating



funds and trusts across all types of tax-exempt and tax-qualified organizations in the U.S. We identify practices and trends to help institutional investors manage expenses.

ESG and Investors: What, Why, and Who | In this video, Mark Wood, CFA, of Callan's Global Manager Research group explains ESG investing principles and how asset managers can implement them.

Momentum: The Trend Is Your Friend | Callan's director of Hedge Fund Research, Jim McKee, explores the advantages of momentum-based investing strategies, which profit from market trends in whichever direction. He discusses the rationale behind them, how they are defined and harnessed for different diversification needs, and whether they are appropriate for fund sponsors.

Periodicals

Private Markets Trends, Fall 2016 | Gary Robertson, manager of Callan's Private Equity Research group, discusses the steady performance of private markets in 2016, with year-to-date figures tracking very close to 2015's levels.

DC Observer, 3rd Quarter 2016 | This quarter's cover story is "Merging DC Plans: Making the Transition Smooth."

Hedge Fund Monitor, 3rd Quarter 2016 | This quarter's cover story is "Musketeers or Mercenaries..." on the growing appeal of the multi-strategy hedge fund category.

Capital Market Review, 3rd Quarter 2016 | A quarterly macroeconomic newsletter providing thoughtful insights on the economy and recent performance in equity, fixed income, alternatives, international, real estate, and other capital markets.

Events

Miss out on a Callan conference or workshop? Event summaries and speakers' presentations are available on our website: <https://www.callan.com/education/CII/>

Mark your calendars for our **National Conference**, January 23–25, 2017, at the Palace Hotel in San Francisco.

For more information about events, please contact Barb Gerraty: 415.274.3093 / gerraty@callan.com

The Center for Investment Training Educational Sessions

The Center for Investment Training, better known as the “Callan College,” provides a foundation of knowledge for industry professionals who are involved in the investment decision-making process. It was founded in 1994 to provide clients and non-clients alike with basic- to intermediate-level instruction. Our next sessions are:

Introduction to Investments

San Francisco, April 18-19, 2017

San Francisco, July 25-26, 2017

Chicago, October 24-25, 2017

This program familiarizes fund sponsor trustees, staff, and asset management advisors with basic investment theory, terminology, and practices. It lasts one-and-a-half days and is designed for individuals who have less than two years of experience with asset-management oversight and/or support responsibilities. Tuition for the Introductory “Callan College” session is \$2,350 per person. Tuition includes instruction, all materials, breakfast and lunch on each day, and dinner on the first evening with the instructors.

Customized Sessions

The “Callan College” is equipped to customize a curriculum to meet the training and educational needs of a specific organization. These tailored sessions range from basic to advanced and can take place anywhere—even at your office.

Learn more at <https://www.callan.com/education/college/> or contact Kathleen Cunnie: 415.274.3029 / cunnie@callan.com

Education: By the Numbers

500 Attendees (on average) of the Institute's annual National Conference

50+ Unique pieces of research the Institute generates each year

3,500 Total attendees of the “Callan College” since 1994

1980 Year the Callan Institute was founded



“We think the best way to learn something is to teach it. Entrusting client education to our consultants and specialists ensures that they have a total command of their subject matter. This is one reason why education and research have been cornerstones of our firm for more than 40 years.”

Ron Peyton, Chairman and CEO

List of Callan's Investment Manager Clients

Confidential – For Callan Client Use Only

Callan takes its fiduciary and disclosure responsibilities to clients very seriously. We recognize that there are numerous potential conflicts of interest encountered in the investment consulting industry and that it is our responsibility to manage those conflicts effectively and in the best interest of our clients. At Callan, we employ a robust process to identify, manage, monitor and disclose potential conflicts on an on-going basis.

The list below is an important component of our conflicts management and disclosure process. It identifies those investment managers that pay Callan fees for educational, consulting, software, database or reporting products and services. We update the list quarterly because we believe that our fund sponsor clients should know the investment managers that do business with Callan, particularly those investment manager clients that the fund sponsor clients may be using or considering using. Please refer to Callan's ADV Part 2A for a more detailed description of the services and products that Callan makes available to investment manager clients through our Institutional Consulting Group, Independent Adviser Group and Fund Sponsor Consulting Group. Due to the complex corporate and organizational ownership structures of many investment management firms, parent and affiliate firm relationships are not indicated on our list.

Fund sponsor clients may request a copy of the most currently available list at any time. Fund sponsor clients may also request specific information regarding the fees paid to Callan by particular fund manager clients. Per company policy, information requests regarding fees are handled exclusively by Callan's Compliance Department.

Manager Name
1607 Capital Partners, LLC
Aberdeen Asset Management PLC
Acadian Asset Management LLC
AEGON USA Investment Management
Affiliated Managers Group, Inc.
AllianceBernstein
Allianz Global Investors
Allianz Life Insurance Company of North America
American Century Investment Management
Amundi Smith Breeden LLC
Analytic Investors
Angelo, Gordon & Co.
Apollo Global Management
AQR Capital Management
Ares Management LLC
Ariel Investments, LLC
Aristotle Capital Management, LLC
Artisan Holdings
Atlanta Capital Management Co., LLC
Aviva Investors Americas
AXA Investment Managers
Babson Capital Management
Baillie Gifford Overseas Limited
Baird Advisors
Bank of America
Baring Asset Management
Barings LLC
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC
BlackRock
BMO Global Asset Management
BNP Paribas Investment Partners
BNY Mellon Asset Management
Boston Partners
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC
Brown Brothers Harriman & Company

Manager Name
Cambiar Investors, LLC
Capital Group
CastleArk Management, LLC
Causeway Capital Management
Channing Capital Management, LLC
Chartwell Investment Partners
ClearBridge Investments, LLC
Cohen & Steers Capital Management, Inc.
Columbia Management Investment Advisers, LLC
Columbia Threadneedle Investments
Columbus Circle Investors
Corbin Capital Partners, L.P.
Cornerstone Capital Management
Cramer Rosenthal McGlynn, LLC
Credit Suisse Asset Management
Crestline Investors, Inc.
D.E. Shaw Investment Management, L.L.C.
Delaware Investments
DePrince, Race & Zollo, Inc.
Deutsche Asset Management
Diamond Hill Capital Management, Inc.
Duff & Phelps Investment Mgmt. Co.
Eagle Asset Management, Inc.
EARNEST Partners, LLC
Eaton Vance Management
Epoch Investment Partners, Inc.
Fayez Sarofim & Company
Federated Investors
Fidelity Institutional Asset Management
Fiera Capital Global Asset Management
First Eagle Investment Management, LLC
First Hawaiian Bank Wealth Management Division
First Quadrant L.P.
Fisher Investments
Fort Washington Investment Advisors, Inc.
Franklin Templeton Institutional
Fred Alger Management, Inc.

Manager Name
Fuller & Thaler Asset Management, Inc.
GAM (USA) Inc.
GE Asset Management
GMO
Goldman Sachs Asset Management
Guggenheim Investments
GW&K Investment Management
Harbor Capital Group Trust
Hartford Funds
Hartford Investment Management Co.
Henderson Global Investors
Holland Capital Management
Hotchkis & Wiley Capital Management, LLC
HSBC Global Asset Management
Income Research + Management, Inc.
Insight Investment Management Limited
Institutional Capital LLC
INTECH Investment Management, LLC
Invesco
Investec Asset Management
Ivy Investments
Janus Capital Management, LLC
Jennison Associates LLC
Jensen Investment Management
J.P. Morgan Asset Management
KeyCorp
Lazard Asset Management
Legal & General Investment Management America
Lincoln National Corporation
LMCG Investments, LLC
Logan Capital Management
Logan Circle Partners, L.P.
Longview Partners
Loomis, Sayles & Company, L.P.
Lord Abbett & Company
Los Angeles Capital Management
LSV Asset Management
MacKay Shields LLC
Man Investments Inc.
Manning & Napier Advisors, LLC
Manulife Asset Management
Martin Currie Inc.
Mellon Capital Management
MFS Investment Management
MidFirst Bank
Mondrian Investment Partners Limited
Montag & Caldwell, LLC
Morgan Stanley Investment Management
Mountain Lake Investment Management LLC
MUFG Union Bank, N.A.
Neuberger Berman
Newton Investment Management (fka Newton Capital Management)
Nicholas Investment Partners
Nikko Asset Management Co., Ltd.
Northern Trust Asset Management
Nuveen Investments, Inc.
OFI Global Asset Management
Old Mutual Asset Management

Manager Name
Opus Capital Management Inc.
Pacific Investment Management Company
Parametric Portfolio Associates
Peregrine Capital Management, Inc.
PGIM
PGIM Fixed Income
Pictet Asset Management Ltd.
PineBridge Investments
Pinnacle Asset Management L.P.
Pioneer Investments
PNC Capital Advisors, LLC
Principal Global Investors
Private Advisors, LLC
Putnam Investments, LLC
QMA (Quantitative Management Associates)
RBC Global Asset Management
Regions Financial Corporation
RidgeWorth Capital Management, Inc.
Rockefeller & Co., Inc.
Rothschild Asset Management, Inc.
Russell Investments
Santander Global Facilities
Schroder Investment Management North America Inc.
Scout Investments
SEI Investments
Smith, Graham & Co. Investment Advisors, L.P.
Smith Group Asset Management
Standard Life Investments Limited
Standish
State Street Global Advisors
Stone Harbor Investment Partners, L.P.
Systematic Financial Management
T. Rowe Price Associates, Inc.
Taplin, Canida & Habacht
The Boston Company Asset Management, LLC
The Davis Companies
The Hartford
The London Company
The TCW Group, Inc.
Thompson, Siegel & Walmsley LLC
Timberland Investment Resources, LLC
Tri-Star Trust Bank
UBS Asset Management
Van Eck Global
Versus Capital Group
Victory Capital Management Inc.
Vontobel Asset Management, Inc.
Voya Financial
Voya Investment Management (fka ING)
Waddell & Reed Asset Management Group
WCM Investment Management
WEDGE Capital Management
Wellington Management Company, LLP
Wells Capital Management
Western Asset Management Company
William Blair & Company
Windham Capital Management, LLC

December 31, 2016



North Dakota State Investment Board Legacy Fund

Investment Measurement Service
Quarterly Review

The following report was prepared by Callan Associates Inc. ("CAI") using information from sources that include the following: fund trustee(s); fund custodian(s); investment manager(s); CAI computer software; CAI investment manager and fund sponsor database; third party data vendors; and other outside sources as directed by the client. CAI assumes no responsibility for the accuracy or completeness of the information provided, or methodologies employed, by any information providers external to CAI. Reasonable care has been taken to assure the accuracy of the CAI database and computer software. Callan does not provide advice regarding, nor shall Callan be responsible for, the purchase, sale, hedge or holding of individual securities, including, without limitation securities of the client (i.e., company stock) or derivatives in the client's accounts. In preparing the following report, CAI has not reviewed the risks of individual security holdings or the conformity of individual security holdings with the client's investment policies and guidelines, nor has it assumed any responsibility to do so. Advice pertaining to the merits of individual securities and derivatives should be discussed with a third party securities expert. Copyright 2017 by Callan Associates Inc.

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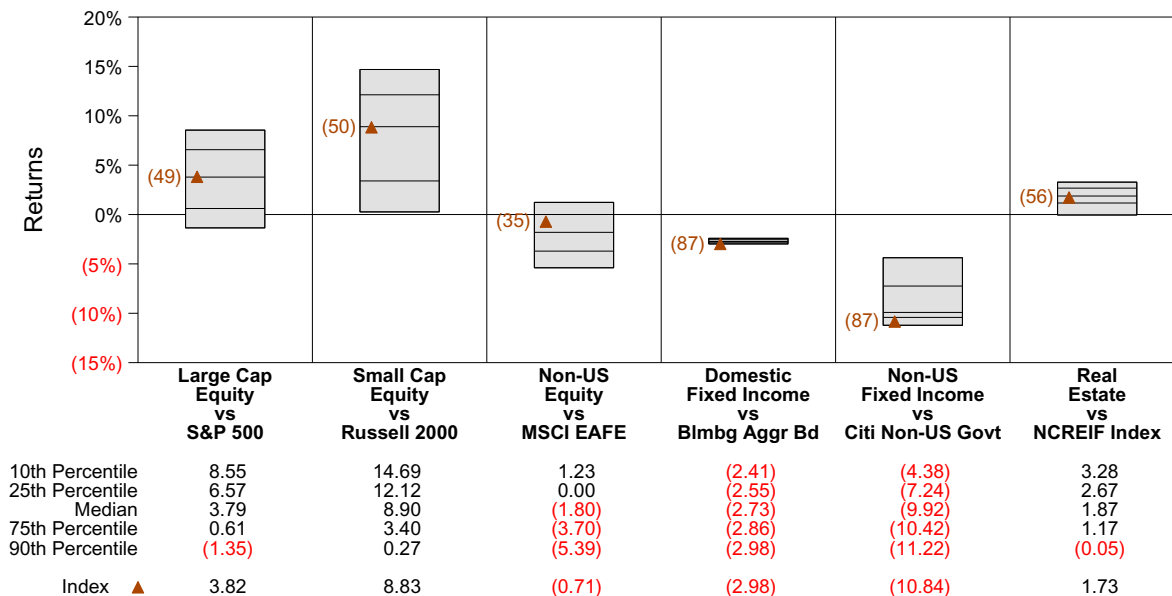
Market Overview

Active Management vs Index Returns

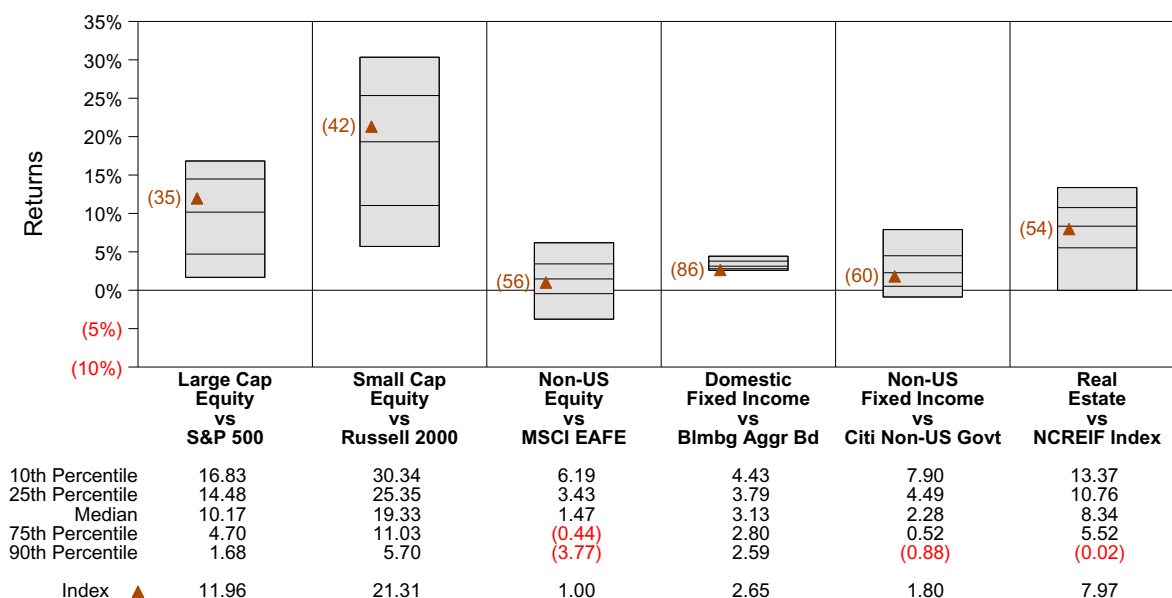
Market Overview

The charts below illustrate the range of returns across managers in Callan's Separate Account database over the most recent one quarter and one year time periods. The database is broken down by asset class to illustrate the difference in returns across those asset classes. An appropriate index is also shown for each asset class for comparison purposes. As an example, the first bar in the upper chart illustrates the range of returns for domestic equity managers over the last quarter. The triangle represents the S&P 500 return. The number next to the triangle represents the ranking of the S&P 500 in the Large Cap Equity manager database.

Range of Separate Account Manager Returns by Asset Class One Quarter Ended December 31, 2016



Range of Separate Account Manager Returns by Asset Class One Year Ended December 31, 2016





Fourth Quarter 2016

A Sentimental Journey

ECONOMY

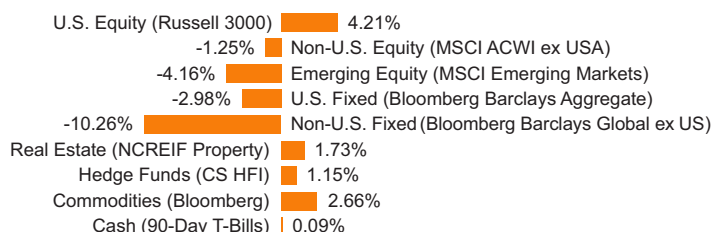
2 Real GDP grew 1.9% in the fourth quarter and **PAGE** 1.6% for the year. The dollar strengthened, raising the cost of exports. The unemployment rate stood at 4.7% at the end of the year, the lowest since August 2007.

Friends Mattered

FUND SPONSOR

4 Funds faced a tough **PAGE** fourth quarter. Taft-Hartley plans fared best, up 1.20%, while corporate funds had the weakest returns, falling 0.09%. Results stemmed primarily from how they chose “friends” in the securities markets.

Broad Market Quarterly Returns



Sources: Bloomberg Barclays, Bloomberg, Credit Suisse Hedge Index, Merrill Lynch, MSCI, NCREIF, Russell Investment Group

Election Rally

U.S. EQUITY

6 The **S&P 500 Index** hit **PAGE** an all-time high during the quarter and ended up 3.82% amid a bullish rally in the wake of the presidential election and a string of encouraging economic reports. Value dominated growth during the quarter, and small cap particularly benefited from Trump-fueled enthusiasm.

A Depressing Dollar

NON-U.S. EQUITY

9 The dollar's strength **PAGE** hampered returns for U.S. investors from non-U.S. equity markets in the fourth quarter; local investors fared better. For the year most world stock markets posted positive results, driven by economic improvements, accommodative central bank policies, and price hikes for commodities.

Treacherous Treasuries

U.S. FIXED INCOME

12 The **Bloomberg Barclays U.S. Aggregate Bond Index** **PAGE** fell 2.98% during the tumultuous quarter, but ended up 2.65% for the year. Rising yields sent returns across the fixed income sector down for the quarter, and spreads tightened as record new bond issuances met strong global demand.

Big-League Yields

NON-U.S. FIXED INCOME

15 Yields overseas **PAGE** increased and the dollar surged, weighing heavily on sovereign debt performance. The **Bloomberg Barclays Global Aggregate ex US** fell 10.26%. Geopolitical risk dominated the quarter, with the U.S. election, the Brexit vote, and a referendum in Italy.

Rates Trump Fundamentals

REAL ESTATE

17 The **NCREIF Property Index** again turned in **PAGE** its worst performance since the first quarter of 2010, and the **NCREIF Open End Diversified Core Equity Index** barely eclipsed the third quarter's five-year low return. U.S. REITs outperformed global REITs, but still posted negative returns.

Down but Far From Out

PRIVATE EQUITY

19 Company investments **PAGE** and exits trended down during the year and the quarter for both buyouts and venture capital, but activity continued at relatively high levels (except for IPOs). The one other anomaly was that the announced dollar volume for buyouts in 2016 reached an eight-year high.

Making Alpha Great Again

HEDGE FUNDS

20 The **Credit Suisse Hedge Fund Index** **PAGE** advanced 1.15% in the quarter, while the **Callan Hedge Fund-of-Funds Database**, a proxy for live portfolios, grew 1.33%. The best-performing strategy was *Global Macro* (+4.59%), while *Managed Futures* (-5.65%) took the worst hit.

A Case of the Jitters

DEFINED CONTRIBUTION

21 The average DC plan **PAGE** gained 3.92% in the third quarter, as measured by the Callan DC Index™, but trailed the Age 45 Target Date Fund's return of 4.53%. Plan balances grew 3.67%, although money flowed out of plans on a net basis at the highest level since the third quarter of 2006.

A Sentimental Journey

ECONOMY | Jay Kloepfer

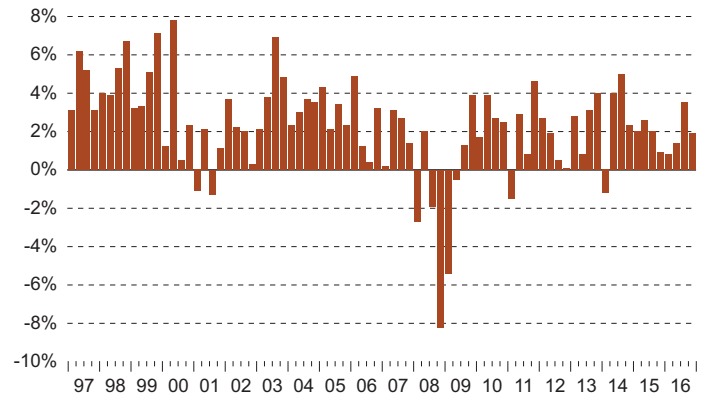
Last year turned out to be a tumultuous one, with two essentially non-economic events jolting the capital markets for reasons solely related to investor sentiment: the U.K. Brexit vote in June and the U.S. presidential election in November. In both instances, wild swings in sentiment and in confidence about the future moved markets around the globe without regard to the underlying economic data. Interest rates and the stock market were taken on a wild ride through the year, with stocks plunging through the summer and then surging following the U.S. election, and interest rates sliding while bonds rallied, only to see rates head back up in a hurry in November and December. This journey was driven almost entirely by sentiment rather than any sudden changes in economic fortune or financial fundamentals.

Real GDP growth in the U.S. came in at a modest 1.9% in the fourth quarter, down from the 3.5% gain in the third quarter. Combined with the weak growth in the first two quarters, total GDP growth for the year was 1.6%, down from the 2.6% gain in 2015. A sustained inventory correction that began in 2015 hung a black cloud over business sentiment during the first half of 2016, and the lingering effect of the bust in energy-sector investment spurred by the collapse in oil prices in 2015 held back economic growth for much of the year. The dollar strengthened over the course of the year, raising the cost of U.S. exports. The stronger dollar combined with anemic growth in Europe and Japan and slowing growth in developing markets held back demand for U.S. exports, while suppressing the cost of imports and driving demand for them higher. Imports are a negative in the GDP calculation and weigh on the measure of total GDP growth. As a result, net exports (exports minus imports) subtracted a hefty 1.7% from GDP growth during the fourth quarter, a reduction equal to the 1.7% gain provided by growth in consumption, which accounts for 70% of total GDP.

One bright spot in the fourth quarter GDP report was a rebound in fixed non-residential investment, which means capital spending: equipment, structures, and intellectual property. To give an

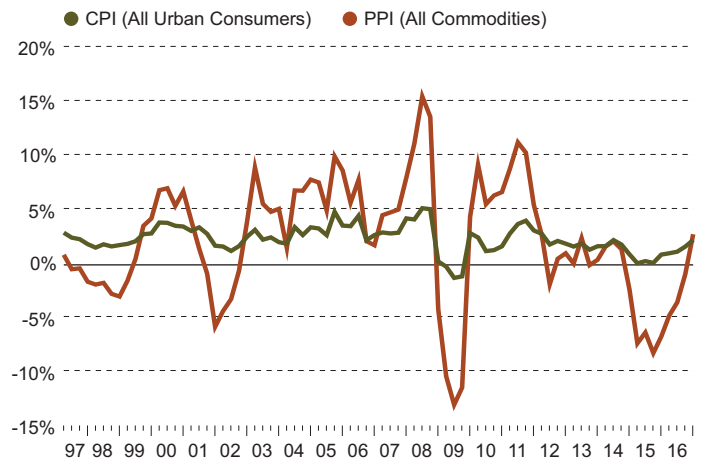
Quarterly Real GDP Growth

(20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

idea of just how depressed the domestic oil and gas industry got, the drilling rig count published by Baker Hughes dropped to a 71-year low of 404 in May 2016; the count rebounded to more than 650 by the end of the year, as energy prices appear to have moved off of a bottom. The downward pressure on capital spending from energy has therefore abated, and capital spending was further aided in the third and fourth quarters by a rebound in aircraft investment.

Consumption spending rose 2.5%, leading GDP gains, supported by gains in real disposable income and household net worth. As the year drew to a close, household finances appeared to be in great shape on an aggregate basis, helped by the post-election stock market rally, rising home prices, and almost a decade of restraint in consumer borrowing. Consumer sentiment indices took big hits in October as the U.S. election loomed, only to spike back up in November and December to levels last seen in 2004. The job market has cooperated, showing a strong 204,000 gain in November after a weak October report, and adding another 156,000 in December. The unemployment rate is now 4.7%, near a nine-year low and well below any target once articulated by policymakers as sufficient to handle a rise in interest rates.

With the economy at or near full employment, interest in inflation has perked up once again, although the measures of inflation remain relatively benign. The headline all-urban CPI was up 2.1% in December year-over-year, and core inflation (less food and energy) rose 2.2%, while the GDP deflator used by the Fed to target inflation was up 2.2%. Energy prices dragged down headline inflation until the second half of 2016, when the energy index increased for four consecutive months through December. Tight labor markets, confident consumers, and a potential for continued capital spending all point to the chance for inflation to move beyond the 1% to 2% range in which it has been bound for the past several years; countering this upward pressure is the strong U.S. dollar, which allows the U.S. to import deflationary pressure through falling import prices.

The Long-Term View

Index	2016 4th Qtr	Periods ended Dec. 31, 2016			
		1 Year	5 Yrs	10 Yrs	25 Yrs
U.S. Equity					
Russell 3000	4.21	12.74	14.67	7.07	9.29
S&P 500	3.82	11.96	14.66	6.95	9.15
Russell 2000	8.83	21.31	14.46	7.07	9.69
Non-U.S. Equity					
MSCI EAFE	-0.71	1.00	6.53	0.75	4.95
MSCI Emerging Markets	-4.16	11.19	1.28	1.84	-
S&P ex-U.S. Small Cap	-3.12	3.78	9.67	3.03	6.70
Fixed Income					
Bloomberg Barclays Agg	-2.98	2.65	2.23	4.34	5.63
90-Day T-Bills	0.09	0.33	0.12	0.80	2.71
Bloomberg Barclays Long G/C	-7.84	6.67	4.07	6.85	7.58
Bloomberg Barclays GI Agg ex US	-10.26	1.49	-1.39	2.44	4.73
Real Estate					
NCREIF Property	1.73	7.97	10.91	6.93	8.63
FTSE NAREIT Equity	-2.89	8.52	12.01	5.08	11.13
Alternatives					
CS Hedge Fund	1.15	1.25	4.34	3.75	-
Cambridge PE*	-	3.95	10.89	10.33	14.35
Bloomberg Commodity	2.66	11.77	-8.95	-5.57	2.55
Gold Spot Price	-12.56	8.63	-5.97	6.08	4.82
Inflation – CPI-U	0.00	2.07	1.36	1.81	2.26

*Private equity returns show pooled horizon IRRs for periods ended June 30, 2016. Most recent quarterly data not available.

Sources: Bloomberg Barclays, Bloomberg, Credit Suisse, FTSE, MSCI, NCREIF, Russell Investment Group, Standard & Poor's, Thomson/Cambridge, Bureau of Economic Analysis.

Recent Quarterly Economic Indicators

	4Q16	3Q16	2Q16	1Q16	4Q15	3Q15	2Q15	1Q15
Employment Cost–Total Compensation Growth	2.2%	2.3%	2.3%	1.9%	2.0%	2.0%	2.0%	2.6%
Nonfarm Business–Productivity Growth	-0.2%*	3.1%	-0.2%	-0.6%	-1.7%	2.0%	3.1%	-0.8%
GDP Growth	1.9%	3.5%	1.4%	0.8%	0.9%	2.0%	2.6%	2.0%
Manufacturing Capacity Utilization	74.8%	74.8%	74.9%	75.3%	75.4%	75.6%	75.5%	75.5%
Consumer Sentiment Index (1966=100)	93.2	90.3	92.4	91.5	91.3	90.8	94.2	95.5

*Estimate.

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, IHS Economics, Reuters/University of Michigan.

Friends Mattered

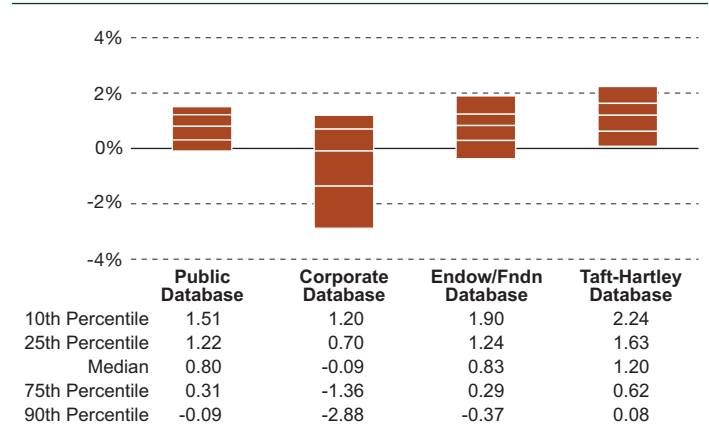
FUND SPONSOR | Kitty Lin

The surprising election results in the U.S.—and the unsurprising December interest rate hike—spurred a significant divergence in U.S. securities markets. Despite some predictions otherwise, U.S. stocks caught fire with the election of what investors saw as a pro-business president who will lower taxes and cut regulations. U.S. fixed income markets, on the other hand, were sharply lower as they prepared for higher interest rates in the future.

These events had a significant impact on the results of institutional funds tracked by Callan, as all types experienced weaker performance compared to the previous quarter. According to Callan’s database, the median return for all fund types was +0.65% in the fourth quarter, compared to +3.44% in the third. But how funds did depended on how well they chose their “friends” in the markets. Corporate plans performed the worst with a -0.09% return and Taft-Hartley plans the best at +1.20%.

Taft-Hartley plans saw better results because they had higher allocations to U.S. equity than other plan types, and the lowest among all types to non-U.S. equity. The **S&P 500 Index** jumped 3.82% for the quarter, while the **MSCI ACWI ex USA Index** dropped 1.25%. Although non-U.S. equities helped performance in the third quarter, major upcoming elections in Europe and Asia may have contributed to the shift in sentiment, contributing to the lackluster performance by stocks in the fourth quarter.

Callan Fund Sponsor Returns for the Quarter



Source: Callan

On the other end of the spectrum, the weak performance by corporate plans may have stemmed from their higher allocations to U.S. fixed income. While Taft-Hartley plans had an average of 25% of their portfolios allocated to U.S. fixed income, corporate plans had an average of 40%, and the lowest allocation to U.S. equity among the types of plans Callan tracks. The **Bloomberg Barclays U.S. Aggregate Index** was off 2.98% for the quarter, whereas the **Russell 2000 Index** jumped 8.83% and the **Russell 1000 Index** rose 3.83%. Although corporate plans had a tough fourth quarter, they topped all other institutional funds in the past year with a +7.88% return. In addition to their solid

Callan Database Median Returns* for Periods ended December 31, 2016

Fund Sponsor	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Public Funds	0.80	7.49	7.49	4.62	8.32	5.25	6.34
Corporate Funds	-0.09	7.88	7.88	4.70	8.02	5.36	6.37
Endowments/Foundations	0.83	7.09	7.09	3.59	7.84	4.94	6.13
Taft-Hartley	1.20	7.81	7.81	5.26	8.87	5.23	6.01

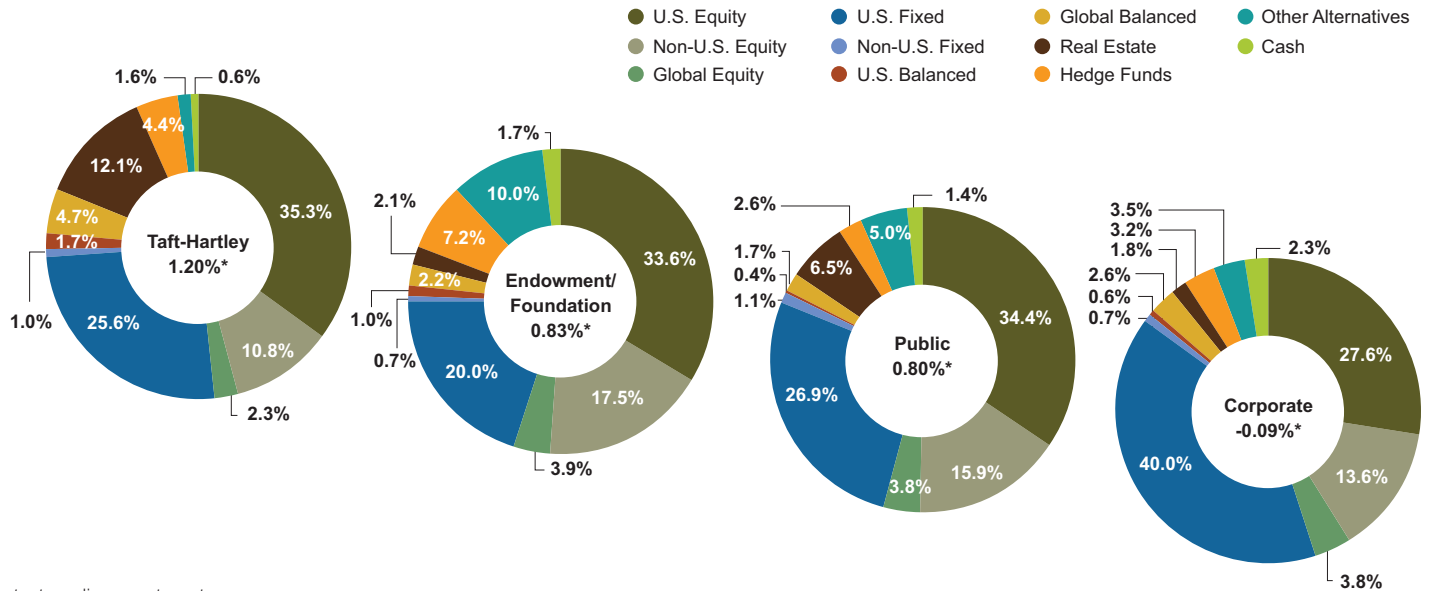
*Returns less than one year are not annualized.

Source: Callan. Callan’s database includes the following groups: public defined benefit, corporate defined benefit, endowments/foundations, and Taft-Hartley plans. Approximately 10% to 15% of the database constituents are Callan’s clients. All database group returns presented gross of fees. Past performance is no guarantee of future results. Reference to or inclusion in this report of any product, service, or entity should not be construed as a recommendation, approval, affiliation, or endorsement of such product, service, or entity by Callan.

performance this quarter, Taft-Hartley plans have performed well over the past one, three, and five years compared to other institutional funds.

By size, small funds led during the fourth quarter with a median return of +0.72% while large funds had the lowest return at +0.56%. On the other hand, large funds performed the best when looking at funds in the 10th percentile, up 1.82%.

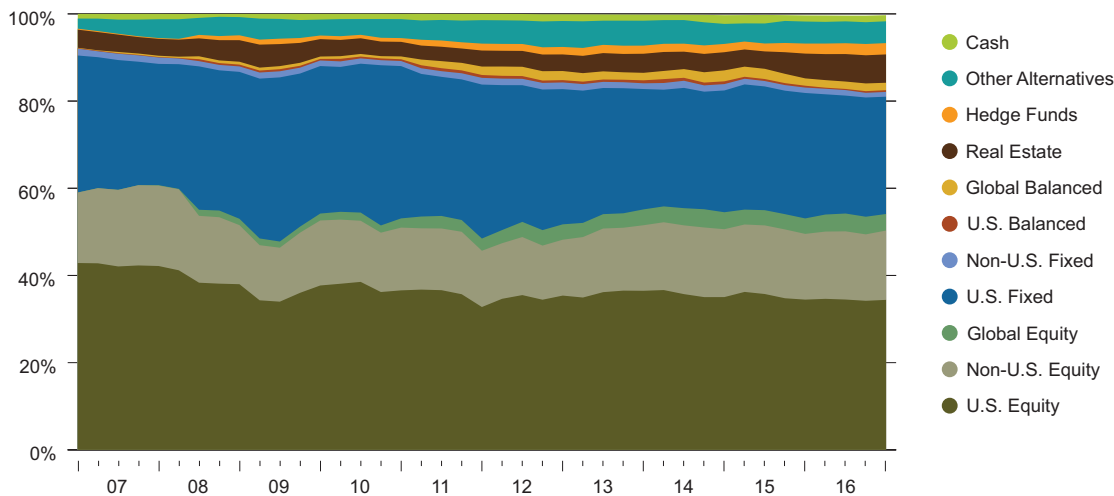
Callan Fund Sponsor Average Asset Allocation



*Latest median quarter return.
 Note: charts may not sum to 100% due to rounding.
 Source: Callan

Callan Public Fund Database Average Asset Allocation

(10 Years)



Source: Callan. Callan's database includes the following groups: public defined benefit, corporate defined benefit, endowments/foundations, and Taft-Hartley plans. Approximately 10% to 15% of the database constituents are Callan's clients. All database group returns presented gross of fees. Past performance is no guarantee of future results. Reference to or inclusion in this report of any product, service, or entity should not be construed as a recommendation, approval, affiliation, or endorsement of such product, service, or entity by Callan.

Election Rally

U.S. EQUITY | Lauren Mathias, CFA

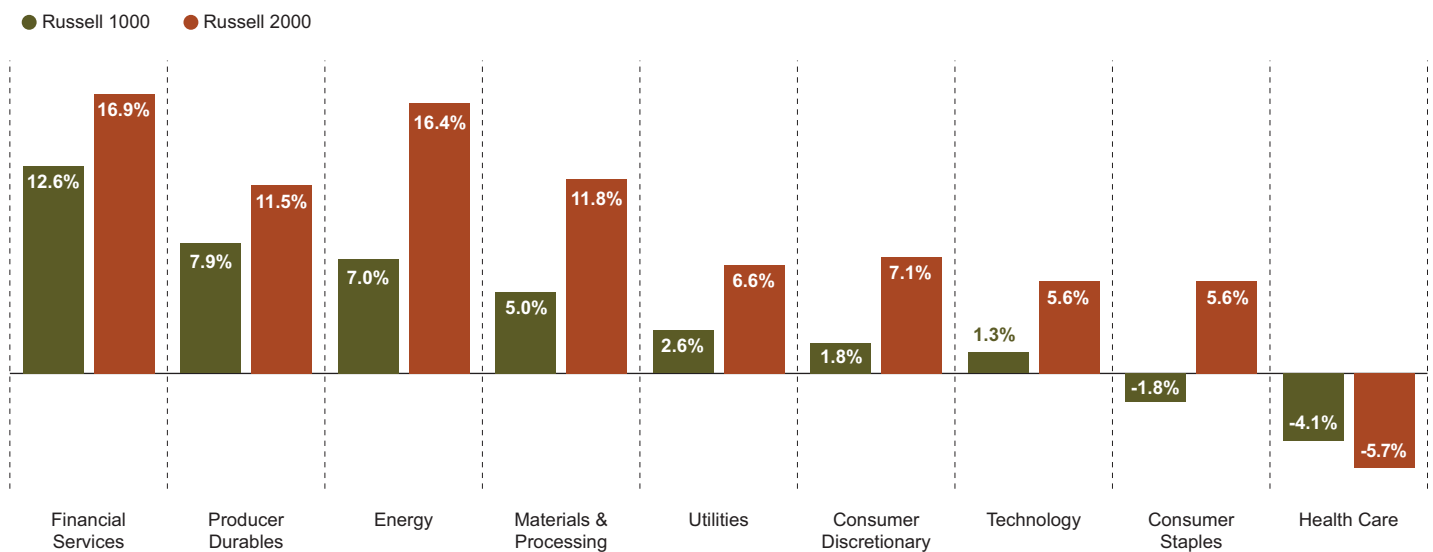
The **S&P 500 Index** notched a +3.82% return for the fourth quarter after reaching an all-time high (2,239) just days before the end of 2016. Even more impressive was the return from small-capitalization companies (**Russell 2000 Index**: +8.83%), as was the divergence between value and growth across the size spectrum (**Russell 1000 Value Index**: +6.68% vs. **Russell 1000 Growth Index**: +1.01%; **Russell 2000 Value Index**: +14.07% vs. **Russell 2000 Growth Index**: +3.57%).

The market in the fourth quarter was trumped by politics as the incoming administration promised to lower personal and corporate income taxes, decrease business and environmental regulation, and increase infrastructure spending. Investors appeared to approve; November saw the highest monthly return of the quarter (+3.70%). Other tailwinds furthered the frenzy, including upwardly revised third-quarter GDP (to +3.5%), subdued initial jobless claims, unemployment at the lowest level in nine years (4.6%), average wage growth of 2.9% in December,

and a surging U.S. dollar; home and automobile prices hit all-time highs, as did consumer confidence. In light of the progress, the Fed Funds rate was increased in December to a range of 0.50% to 0.75%. There are still pockets of uncertainty, however; across the pond the European Central Bank continued quantitative easing and back at home a Trump government could mean higher debt and subsequently inflation. Sentiment is nonetheless revved up, at least for now.

U.S. equity was the preferred market globally; small cap particularly benefited from Trump-fueled enthusiasm. Micro and small capitalization companies outpaced mid and large cap stocks (**Russell Microcap Index**: +10.05%, **Russell 2000 Index**: +8.83%, **Russell Midcap Index**: +3.21%, and **Russell 1000 Index**: +3.83%). Value regained its lead over growth in all capitalizations; the dispersion in style returns was broad across market capitalizations, with the widest (1,050 bps) in small cap (Russell 2000 Value minus Russell 2000 Growth)—the most since the technology bubble burst in 2001.

Economic Sector Quarterly Performance



Source: Russell Investment Group

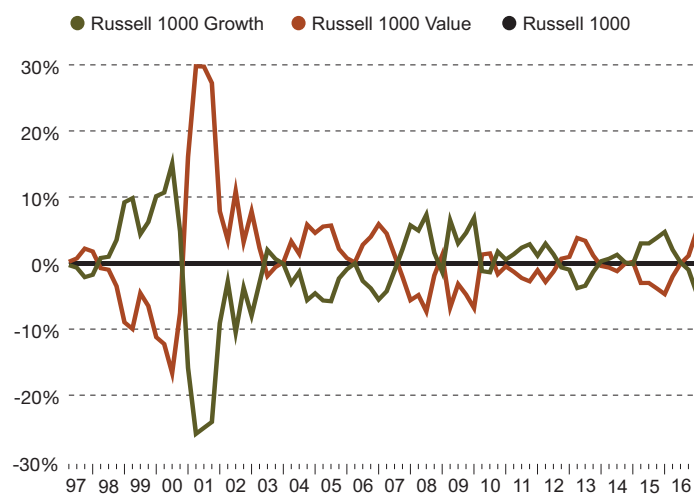
Note: As of the fourth quarter of 2015, the Capital Market Review reports sector-specific returns using the Russell Global Sectors (RGS) classification system rather than the Global Industry Classification Standard (GICS) system. RGS uses a three-tier classification system containing nine sectors; GICS uses a four-tier system containing 11 sectors.

Sector performance reflected the style shift; the best-performing sectors in the S&P 500 during the quarter were value-oriented, including Financials (+21.10%), Energy (+7.28%), and Materials (+4.70%). Within Financials, banks did especially well, benefiting from both an increase in interest rates and talk of deregulation. The Organization of Petroleum Exporting Countries (OPEC) agreed on oil production cuts in the quarter, boosting Energy stocks. In general, investors preferred companies with lower leverage and higher operating margins and return on equity. The growth-oriented, momentum areas of the market declined, including Health Care (-4.00%) and Consumer

Staples (-2.02%). The new Real Estate sector, representing 2.9% of the S&P 500, finished the quarter down 4.41% as these investments tend to move in the opposite direction of interest rates.

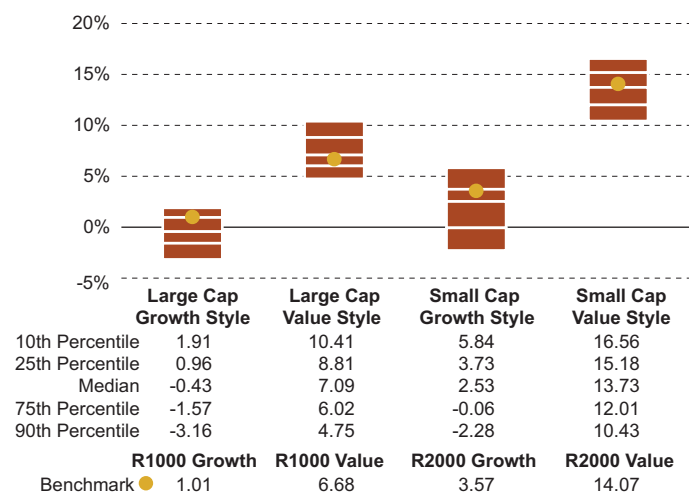
U.S. equity valuations were elevated; the S&P 500 Index Forward P/E was 16.9x at the end of the year versus the 25-year average of 15.9x. In this environment active managers were challenged; outflows from this group have totaled over \$1 trillion since 2005. However, a future with more volatility, lower returns, and higher interest rates should favor active management.

Rolling One-Year Relative Returns (vs. Russell 1000)



Source: Russell Investment Group

Callan Style Group Quarterly Returns



Sources: Callan, Russell Investment Group

U.S. Equity Index Characteristics as of December 31, 2016

	S&P 500	Rus 3000	Rus 1000	Rus Midcap	Rus 2500	Rus 2000
Number of Issues	505	2,972	994	793	2,473	1,978
Wtd Avg Mkt Cap (\$bn)	139.0	115.8	125.6	13.0	4.2	2.1
Price/Book Ratio	2.8	2.7	2.7	2.4	2.2	2.1
Forward P/E Ratio	17.1	17.6	17.4	18.9	20.0	21.1
Dividend Yield	2.1%	2.0%	2.0%	1.7%	1.5%	1.4%
5-Yr Earnings (forecasted)	12.3%	12.3%	12.2%	10.9%	11.8%	12.8%

Sources: Russell Investment Group, Standard & Poor's.

U.S. EQUITY (Continued)

Callan Style Median and Index Returns* for Periods ended December 31, 2016

Large Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Large Cap Core Style	3.83	10.40	10.40	8.30	14.44	7.22	7.26
Russell 3000	4.21	12.74	12.74	8.43	14.67	7.07	7.11
Russell 1000	3.83	12.05	12.05	8.59	14.69	7.08	7.00
S&P 500	3.82	11.96	11.96	8.87	14.66	6.95	6.69
Large Cap Growth Style	-0.43	3.42	3.42	7.31	13.98	8.18	6.55
Russell 1000 Growth	1.01	7.08	7.08	8.55	14.50	8.33	6.42
Large Cap Value Style	7.09	15.25	15.25	8.28	14.69	6.51	8.11
Russell 1000 Value	6.68	17.34	17.34	8.59	14.8	5.72	7.41
Mid Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Mid Cap Core Style	5.47	14.48	14.48	8.53	15.49	8.83	10.13
Russell Midcap	3.21	13.80	13.80	7.92	14.72	7.86	9.51
Mid Cap Growth Style	0.30	4.23	4.23	4.36	12.33	8.09	8.30
Russell Midcap Growth	0.46	7.33	7.33	6.23	13.51	7.83	7.96
Mid Cap Value Style	6.55	17.10	17.10	8.26	15.03	8.41	10.45
Russell Midcap Value	5.52	20.00	20.00	9.45	15.70	7.59	10.28
Small Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Small Cap Core Style	9.76	20.58	20.58	8.53	16.32	8.47	10.60
Russell 2000	8.83	21.31	21.31	6.74	14.46	7.07	8.49
Small Cap Growth Style	2.53	8.63	8.63	3.44	13.40	8.62	8.54
Russell 2000 Growth	3.57	11.32	11.32	5.05	13.74	7.76	7.48
Small Cap Value Style	13.73	27.75	27.75	9.13	16.43	8.61	11.17
Russell 2000 Value	14.07	31.74	31.74	8.31	15.07	6.26	9.22
Smid Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Smid Cap Core Style	5.56	16.00	16.00	6.84	15.17	9.47	-
Russell 2500	6.12	17.59	17.59	6.93	14.54	7.69	9.17
Smid Cap Growth Style	1.81	7.70	7.70	3.95	13.11	8.95	8.91
Russell 2500 Growth	2.60	9.73	9.73	5.45	13.88	8.24	8.03
Smid Cap Value Style	10.12	22.16	22.16	7.93	14.78	8.59	10.96
Russell 2500 Value	9.34	25.20	25.20	8.22	15.04	6.94	9.72
Russell 3000 Sectors	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Consumer Discretionary	2.22	6.85	6.85	6.90	16.75	10.79	-
Consumer Staples	-1.57	5.79	5.79	10.14	13.53	10.79	-
Energy	7.31	26.29	26.29	-4.45	2.64	3.40	-
Financial Services	13.04	17.96	17.96	10.65	18.18	1.41	-
Health Care	-4.22	-3.33	-3.33	9.10	17.25	10.15	-
Materials & Processing	5.95	23.09	23.09	5.65	11.94	6.42	-
Producer Durables	8.23	20.13	20.13	8.07	15.81	7.44	-
Technology	1.55	14.82	14.82	12.56	15.52	9.81	-
Utilities	2.87	20.49	20.49	11.26	11.34	6.41	-

*Returns less than one year are not annualized.

Sources: Callan, Russell Investment Group, Standard & Poor's.

A Depressing Dollar

NON-U.S. EQUITY | Irina Sushch

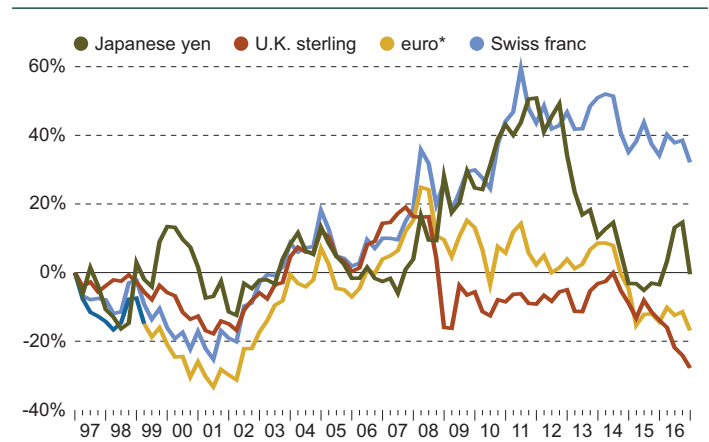
During the final quarter of 2016, foreign developed and emerging markets floundered in U.S. dollar terms despite hearty local returns. Donald Trump's election drove U.S. stocks to record highs, as investors reacted positively to his business-friendly stances on taxes, trade, and regulations. The U.S. dollar hit a multi-year high versus the euro and the yen and appreciated roughly 7% compared to a basket of currencies.

That broad-based dollar strength detracted from overseas returns for U.S. investors. The **MSCI ACWI ex USA Index** was down 1.25% for the quarter (but up 4.93% in local currency). As in the previous quarter, the defensive-oriented sectors dragged down returns (Consumer Staples: -10.09%, Health Care: -8.08%, REITs: -7.90%, Utilities: -7.19%). The interest rate-sensitive sectors helped limit the damage (Energy: +8.32%, Financials: +6.84%).

In dollar-denominated results, emerging markets (**MSCI Emerging Markets Index**: -4.16%) trailed their developed peers (**MSCI World ex USA Index**: -0.36%, **MSCI EAFE Index**: -0.71%). The **MSCI ACWI ex USA Value Index** (+3.29%) fared much better than the **MSCI ACWI ex USA Growth Index** (-5.72%). Small cap stocks joined growth and emerging market stocks at the bottom of the barrel (**MSCI ACWI ex USA Small Cap Index**: -3.52%). Despite multiple headwinds, the **MSCI ACWI ex USA Index** ended the year up 4.50%.

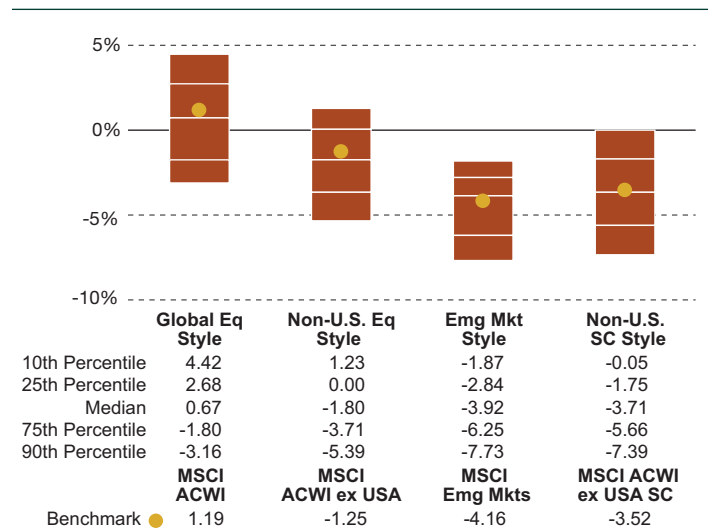
The European Central Bank announced that it would extend its bond purchase program, although it plans to lower investments from €80 billion to €60 billion per month. The unemployment rate in the euro zone declined to 9.8%, the lowest since July 2009. Consumer prices ticked up 0.6% year-over-year in November, and GDP was on track to increase at a 0.4% to 0.5% pace from 0.3% in the third quarter, based on early indications ahead of the release of the official figures in early 2017. Against this backdrop, the **MSCI Europe Index** rose 5.44% in the fourth quarter and 7.23% during the year for local investors; however, in U.S. dollar terms, the Index was essentially flat for the quarter

Major Currencies' Cumulative Returns (vs. U.S. Dollar)



* German mark returns before 1Q99
Source: MSCI

Callan Style Group Quarterly Returns



Sources: Callan, MSCI

and year (-0.40% for both periods). Italy (+10.75%) led the pack during the quarter, while Belgium (-11.80%) brought up the rear. Across the euro zone, economically sensitive Financial (+11.45%) and Energy (+11.16%) stocks posted healthy returns, while defensively oriented REIT (-9.96%) and Utility (-9.40%) stocks faltered.

NON-U.S. EQUITY (Continued)

In Southeast Asia and the Pacific, Japan's stimulus measures boosted returns for local investors (+14.99%). But the dollar hit a 14-year high versus the yen, hammering returns for U.S. investors (-0.16%). New Zealand had a rough quarter (-10.88%), although it closed out the year up 18.37%. Australia was the only country in the region to end the quarter in the black, up 0.69% (and +11.45% for the year), buoyed by rebounding commodity prices and higher interest rates. The **MSCI Pacific Index** slumped 1.03% for the quarter, but rose for the year (+4.18%).

Despite the MSCI Emerging Markets Index's decline during the quarter, it jumped a robust 11.19% during 2016, buttressed by strengthening commodity prices as well as reform efforts and accommodative monetary policies in several countries. Russia, up 18.56% in the quarter and 54.82% for the year, benefited richly from rising prices for oil and industrial commodities. China fell

during the quarter (-7.07%) but ended the year essentially flat (+0.90%). Most emerging Asian markets gained ground during the year (**MSCI EM Asia**: +6.14%), despite a rough fourth quarter (-6.06%), driven by economic reform and technology stocks. Mexico dropped 7.88% for the quarter and 9.16% for the year, hurt by peso weakness and Trump's election.

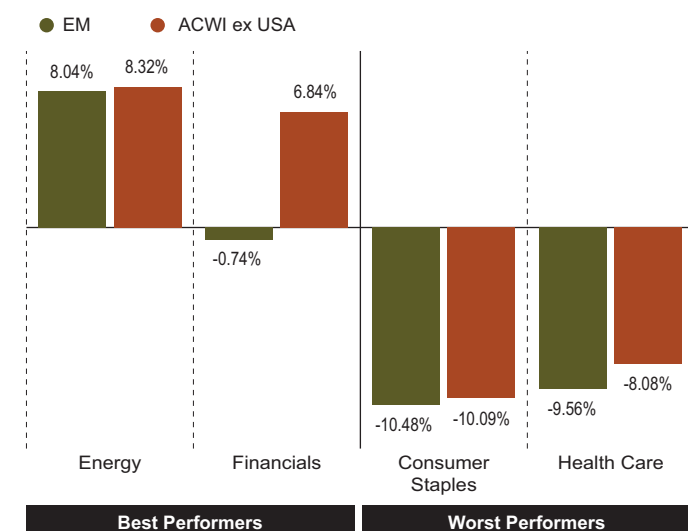
Quarterly Returns for Non-U.S. Developed Countries

Country	Equity Index			Weight*
	(US\$)	(Local Currency)	Local Currency	
Australia	0.69%	6.41%	-5.38%	5.20%
Austria	6.51%	13.48%	-6.14%	0.14%
Belgium	-11.80%	-6.03%	-6.14%	0.83%
Canada	3.26%	5.36%	-2.00%	7.05%
Denmark	-8.74%	-2.90%	-6.01%	1.16%
Finland	-4.40%	1.86%	-6.14%	0.68%
France	2.93%	9.67%	-6.14%	7.16%
Germany	1.45%	8.10%	-6.14%	6.53%
Hong Kong	-8.97%	-9.00%	0.04%	2.28%
Ireland	0.14%	6.69%	-6.14%	0.33%
Israel	-11.32%	-9.61%	-2.51%	0.48%
Italy	10.75%	18.01%	-6.14%	1.46%
Japan	-0.16%	14.99%	-13.18%	16.95%
Netherlands	-2.10%	3.72%	-6.14%	2.33%
New Zealand	-10.88%	-7.06%	-4.11%	0.13%
Norway	2.40%	10.29%	-7.15%	0.47%
Portugal	-2.92%	3.44%	-6.14%	0.11%
Singapore	-3.64%	2.02%	-5.62%	0.87%
Spain	2.24%	8.94%	-6.14%	2.21%
Sweden	-0.84%	5.15%	-5.69%	2.00%
Switzerland	-3.86%	0.80%	-4.62%	6.08%
U.K.	-0.90%	4.19%	-4.88%	12.89%

*Weight in the MSCI ACWI ex USA Index

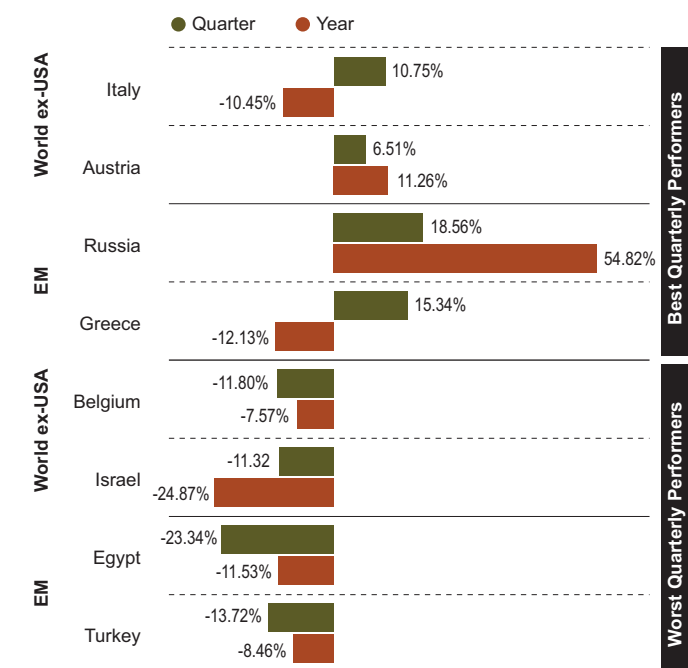
Sources: MSCI, Russell Investment Group, Standard & Poor's.

Quarterly Returns: Strong and Struggling Sectors



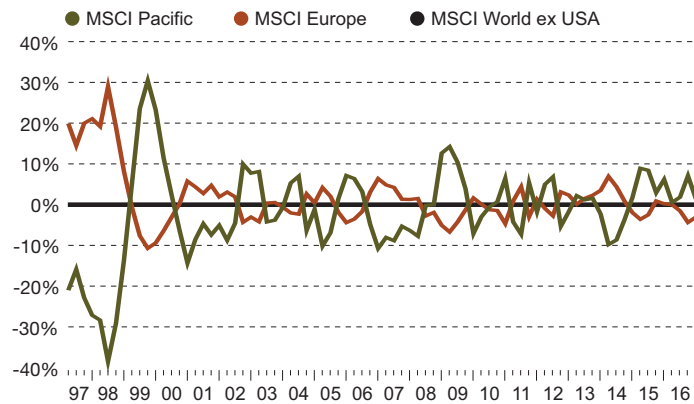
Source: MSCI

Quarterly and Annual Country Performance Snapshot



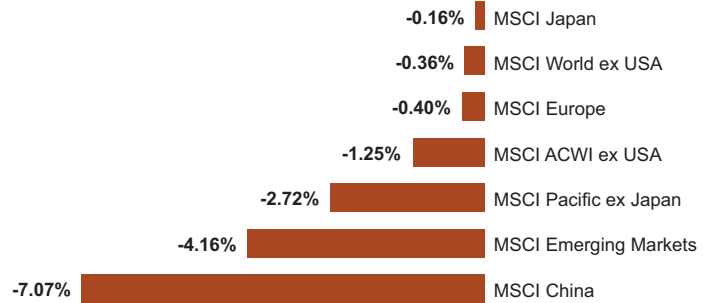
Source: MSCI

Rolling One-year Relative Returns (vs. MSCI World ex USA)



Source: MSCI

Regional Quarterly Performance (U.S. Dollar)



Source: MSCI

Callan Style Median and Index Returns* for Periods ended December 31, 2016

Global Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Global Equity Style	0.67	6.41	6.41	3.53	10.74	4.86	7.11
MSCI World	1.86	7.51	7.51	3.80	10.41	3.83	5.83
MSCI ACWI	1.19	7.86	7.86	3.13	9.36	3.56	5.92
Non-U.S. Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Non-U.S. Equity Style	-1.80	1.47	1.47	-0.55	7.39	2.01	7.00
MSCI World ex USA	-0.36	2.75	2.75	-1.59	6.07	0.86	5.45
MSCI ACWI ex USA	-1.25	4.50	4.50	-1.78	5.00	0.96	5.87
Regional Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
MSCI China	-7.07	0.90	0.90	0.14	5.02	3.76	11.62
MSCI Europe ex UK	-0.20	-0.56	-0.56	-2.62	7.41	0.36	5.22
MSCI Japan	-0.16	2.38	2.38	2.49	8.17	0.54	4.69
MSCI Japan (local)	14.99	-0.74	-0.74	6.11	17.56	0.32	3.88
MSCI Pacific	-1.03	4.18	4.18	1.43	7.15	1.62	6.05
MSCI Pacific (local)	10.16	2.26	2.26	5.34	14.46	1.24	4.70
MSCI Pacific ex Japan	-2.72	7.85	7.85	-0.59	5.24	3.94	9.45
MSCI Pacific ex Japan (local)	1.23	8.34	8.34	4.28	10.08	4.25	7.43
MSCI United Kingdom	-0.90	-0.10	-0.10	-4.40	3.97	0.32	4.51
MSCI United Kingdom (local)	4.19	19.16	19.16	5.41	8.85	5.05	5.66
Emerging/Frontier Markets	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Emerging Market Style	-3.92	11.66	11.66	-1.25	3.09	3.06	10.94
MSCI Emerging Markets	-4.16	11.19	11.19	-2.55	1.28	1.84	9.50
MSCI Emerging Markets (local)	-1.44	9.69	9.69	2.83	5.64	4.35	10.02
MSCI Frontier Markets	0.49	2.66	2.66	-2.10	5.16	-0.62	-
Global/Non-U.S. Small Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Non-U.S. Small Cap Style	-3.71	-0.17	-0.17	2.35	11.72	4.69	11.27
MSCI World Small Cap	2.74	12.71	12.71	4.62	12.21	5.59	9.40
MSCI ACWI Small Cap	1.76	11.59	11.59	3.97	11.29	5.66	9.66
MSCI World ex USA Small Cap	-2.74	4.32	4.32	1.36	8.96	2.69	9.26
MSCI ACWI ex USA Small Cap	-3.52	3.91	3.91	0.76	7.74	2.89	9.64

*Returns less than one year are not annualized.
Sources: Callan, MSCI.

Treacherous Treasuries

U.S. FIXED INCOME | Rufash Lama

The U.S. bond market experienced a tumultuous fourth quarter, triggered by the unexpected election results and strong economic data, among other factors. The **Bloomberg Barclays U.S. Aggregate Bond Index** dropped 2.98%, while the **Bloomberg Barclays High Yield Index** rose 1.75%. But the year ended on an upbeat note, with the Aggregate up 2.65% and the High Yield Index delivering equity-like returns at 17.13%.

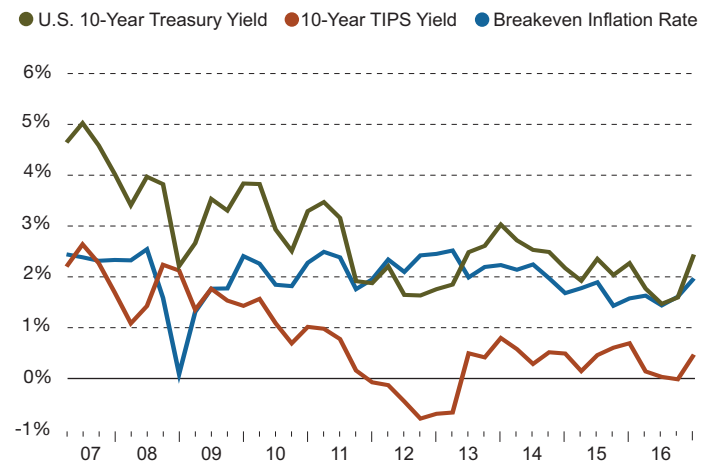
The yield curve rose following the presidential election and an upward revision for third-quarter GDP to 3.5%, the highest quarterly increase in two years. Yields rose across the maturity spectrum. The benchmark 10-year Treasury note showed the biggest change, ending the quarter at 2.45% (an increase of 85 bps). Yields on the 5-year and 30-year finished at 1.93% and 3.07%, respectively.

Markets entered 2016 expecting four rate hikes, but the Fed increased the Federal Funds rate only once, by 25 bps to a range of 0.50% to 0.75% in December. As a result of rising yields, returns across the broad fixed income sector were negative for the quarter. Tax-exempt municipal bonds and Treasuries dropped 3.62% and 3.84%, respectively. On a duration-adjusted

basis, Treasuries underperformed credit securities by 156 bps. Long Treasuries were hit particularly hard, falling 11.67%.

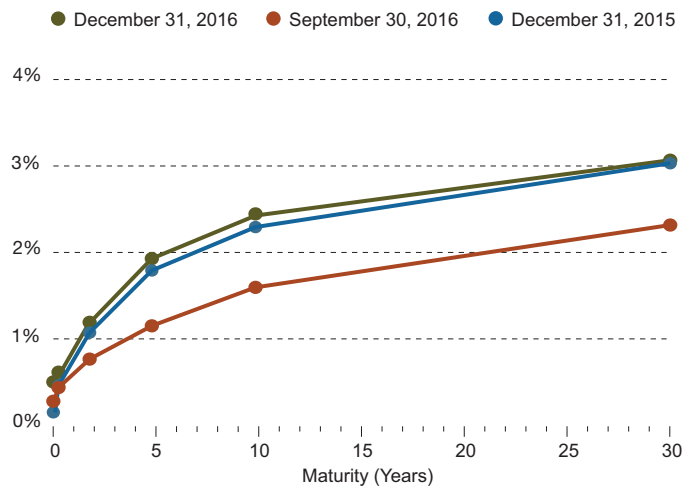
Spreads tightened during the quarter. Investment-grade corporate spreads over comparable Treasuries tightened 42 bps and ended the year at 123 bps—a stark contrast to the first half of the year, in which spreads had widened up to 214 bps in February.

Historical 10-Year Yields



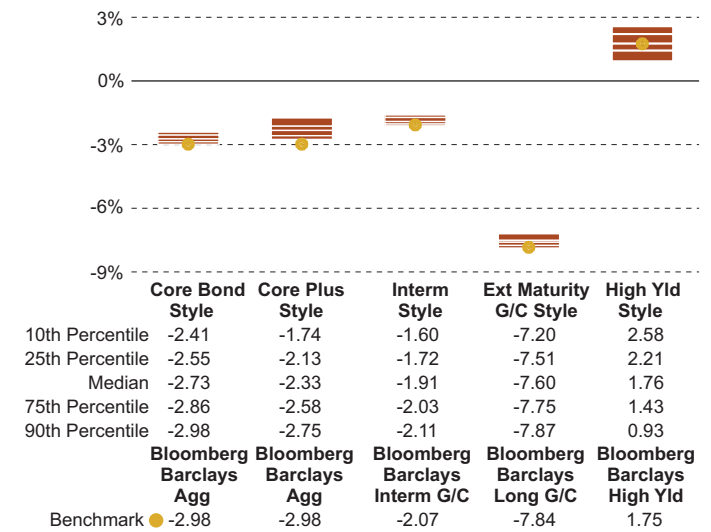
Source: Bloomberg

U.S. Treasury Yield Curves



Source: Bloomberg

Callan Style Group Quarterly Returns



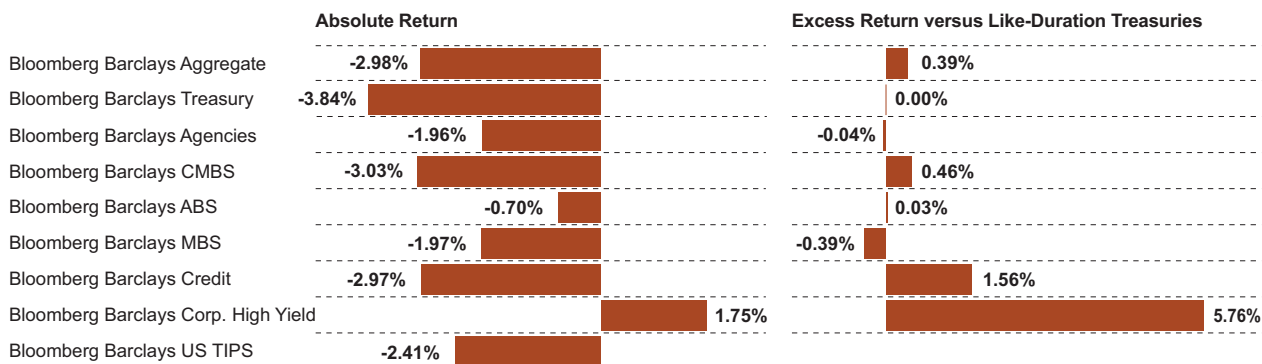
Sources: Bloomberg Barclays, Callan

Corporates declined 2.8% for the quarter, but generated a strong return (+6.11%) for the year. On a duration-adjusted basis, long credit outperformed intermediate credit by 330 bps. Despite a slow start, high yield corporates made a powerful comeback to end the year on a strong note; they delivered 407 bps of excess returns for the quarter. Mortgage-backed securities (MBS), plagued by rate volatility and elevated prepayment concerns, fell 1.97% for the quarter (but were up 1.67% for the year) and underperformed duration-matched Treasuries by 39 bps.

Asset-backed securities (ABS) were off 0.70% for the quarter but up 2.03% for the year. Commercial mortgage-backed securities (CMBS) experienced a similar divergence, falling 3.03% in the quarter but rising 3.32% over the year.

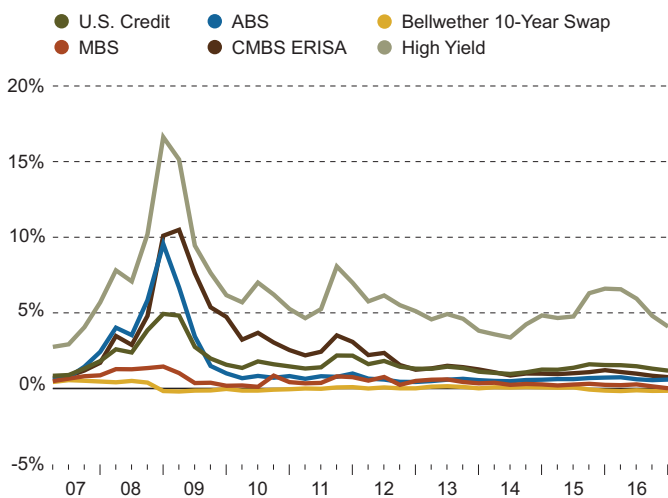
In 2016, U.S. corporations set a milestone with new high yield and investment-grade issuances that totaled \$1.5 trillion. The municipal bond market also set a record with new offerings totaling \$445 billion.

Fixed Income Index Quarterly Returns



Source: Bloomberg Barclays

Effective Yield Over Treasuries



Source: Bloomberg Barclays

U.S. Fixed Income Index Characteristics as of Dec. 31, 2016

Bloomberg Barclays Indices	Yield to Worst	Mod Adj Duration	Avg Maturity
Bloomberg Barclays Aggregate	2.61	5.89	8.19
Bloomberg Barclays Universal	2.99	5.69	7.97
Bloomberg Barclays Gov/Credit	2.51	6.45	8.74
1-3 Year	1.45	1.92	1.98
Intermediate	2.11	4.05	4.39
Long-Term	3.95	14.97	24.18
Bloomberg Barclays Long Credit	4.55	13.57	23.77
Bloomberg Barclays Corp High Yield	6.12	4.11	6.30
Bloomberg Barclays TIPS	2.20	4.87	8.25
Bloomberg Barclays Muni Bond 1-5 Year	1.76	2.69	3.17
Bloomberg Barclays Muni 1-10 Year	2.11	4.04	5.79
Bloomberg Barclays Municipal	2.65	6.24	12.82

Source: Bloomberg Barclays

U.S. FIXED INCOME (Continued)

Callan Style Median and Index Returns* for Periods ended December 31, 2016

	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Broad Fixed Income							
Core Bond Style	-2.73	3.13	3.13	3.39	2.86	4.90	5.05
Core Bond Plus Style	-2.33	4.67	4.67	3.54	3.72	5.35	5.67
Bloomberg Barclays Aggregate	-2.98	2.65	2.65	3.03	2.23	4.34	4.58
Bloomberg Barclays Universal	-2.61	3.91	3.91	3.27	2.78	4.57	4.92
Long-Term							
Extended Maturity Credit Style	-5.33	10.77	10.77	7.47	6.09	7.27	-
Bloomberg Barclays Long Credit	-5.40	10.22	10.22	6.98	5.20	6.87	7.15
Extended Maturity Gov/Credit Style	-7.60	7.28	7.28	7.33	4.64	7.45	7.46
Bloomberg Barclays Long Gov/Credit	-7.84	6.67	6.67	7.16	4.07	6.85	7.03
Intermediate-Term							
Intermediate Style	-1.91	2.33	2.33	2.31	2.27	4.27	4.50
Bloomberg Barclays Interm Gov/Credit	-2.07	2.08	2.08	2.09	1.85	3.84	4.07
Short-Term							
Defensive Style	-0.33	1.54	1.54	1.19	1.29	2.74	2.98
Bloomberg Barclays Gov/Credit 1-3 Yr	-0.39	1.28	1.28	0.90	0.92	2.44	2.72
Bank Loans							
Bank Loan Style	2.13	9.38	9.38	3.90	5.43	4.89	5.17
Credit Suisse Leveraged Loans	2.25	9.88	9.88	3.76	5.21	4.26	4.87
High Yield							
High Yield Style	1.76	14.74	14.74	4.61	7.36	7.42	8.26
Bloomberg Barclays Corp High Yield	1.75	17.13	17.13	4.66	7.36	7.45	8.35
Unconstrained							
Unconstrained Fixed Style	0.79	5.07	5.07	2.34	3.89	4.59	6.33
90 Day T-Bill + 3%	0.82	3.33	3.33	3.14	3.12	3.80	4.34
Stable Value							
Stable Value Style	0.48	1.87	1.87	1.78	1.89	2.76	3.44
iMoneyNet Mutual Fund Avg	0.05	0.13	0.13	0.05	0.04	0.71	-
TIPS							
Inflation-Linked Style	-2.34	4.82	4.82	2.27	0.93	4.44	5.39
Bloomberg Barclays TIPS	-2.41	4.68	4.68	2.26	0.89	4.36	5.30
Municipal							
Short Municipal Style	-0.91	-0.10	-0.10	0.45	0.64	1.65	1.88
Bloomberg Barclays Municipal 1-5 Yr	-1.36	0.00	0.00	1.08	1.25	2.86	2.99
Intermediate Municipal Style	-3.47	-0.29	-0.29	2.84	2.35	3.47	3.77
Bloomberg Barclays Municipal 1-10 Yr	-2.62	-0.10	-0.10	2.32	2.03	3.69	3.87
Long Municipal Style	-3.50	0.50	0.50	4.32	3.60	4.54	4.97
Bloomberg Barclays Municipal	-3.62	0.25	0.25	4.14	3.28	4.25	4.67

*Returns for less than one year are not annualized.

Sources: Bloomberg Barclays, Callan, Credit Suisse, Merrill Lynch

Big-League Yields

NON-U.S. FIXED INCOME | Kyle Fekete

The U.S. dollar skyrocketed against a trade-weighted basket of currencies on the back of the November U.S. election and higher U.S. interest rates. Investment strategies with foreign currency exposure faced strong headwinds as the **Bloomberg Barclays Global Aggregate ex US** fell 10.26% (-1.86% on a hedged basis).

Continuing 2016's anti-establishment geopolitical theme, Italians voted against reforms proposed by the government, leading to Italian President Matteo Renzi's resignation. In December, European Central Bank President Mario Draghi announced the extension of its stimulus program out to December 2017; however, the bond buying will be dialed

Quarterly Returns for Non-U.S. Government Indices

Country	Country Debt (\$)	Country Debt	Local Currency	Weight*
Australia	-9.22%	-4.06%	-5.38%	2.45%
Austria	-8.58%	-2.60%	-6.14%	1.85%
Belgium	-9.47%	-3.54%	-6.14%	3.03%
Canada	-5.79%	-3.87%	-2.00%	2.55%
Denmark	-8.77%	-2.93%	-6.01%	0.77%
Finland	-8.12%	-2.11%	-6.14%	0.72%
France	-9.35%	-3.42%	-6.14%	11.80%
Germany	-8.47%	-2.48%	-6.14%	8.85%
Ireland	-7.81%	-1.77%	-6.14%	0.93%
Italy	-9.24%	-3.30%	-6.14%	11.41%
Japan	-14.72%	-1.78%	-13.18%	33.08%
Malaysia	-10.17%	-2.55%	-7.81%	0.52%
Mexico	-11.18%	-5.46%	-6.06%	0.94%
Netherlands	-8.70%	-2.73%	-6.14%	2.82%
Norway	-8.54%	-1.50%	-7.15%	0.33%
Poland	-10.13%	-1.98%	-8.31%	0.72%
Singapore	-8.91%	-3.49%	-5.62%	0.45%
South Africa	0.72%	0.16%	0.56%	0.64%
Spain	-8.80%	-2.83%	-6.14%	6.61%
Sweden	-7.73%	-2.16%	-5.69%	0.56%
Switzerland	-6.03%	-1.48%	-4.62%	0.29%
U.K.	-8.40%	-3.70%	-4.88%	8.69%

*Weight in the Citi Non-U.S. World Government Bond Index.
Source: Citigroup

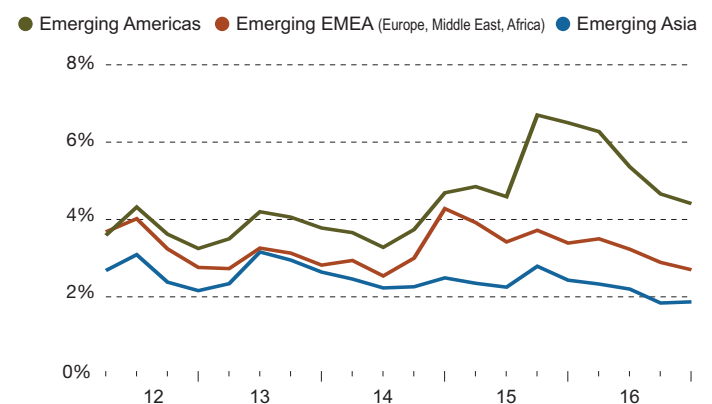
back to €60 billion per month, down from €80 billion. The quantitative easing program reached approximately €1.7 trillion in 2016, and should top €2.2 trillion by the end of 2017.

Yields on 10-year German government bonds increased to 0.21%, 224 bps below that of the 10-year Treasury. The U.S./German 10-year debt spread reached the widest it has been since 1990. The euro declined 6.14% against the dollar.

Ahead of the uncertainty surrounding the Brexit process, the Bank of England (BOE) elected to hold the benchmark rate at 0.25% and maintain the same rate of bond purchasing, saying the sterling's recent appreciation against the euro may curtail inflation. The U.K. 10-year yield jumped 49 bps to 1.24% and the sterling declined 4.9% against the dollar. Changes to Japan's monetary policy were also put on hold as the unemployment rate reached a healthy level and a weakened yen stood poised to boost potential earnings growth. The Bank of Japan upheld its pledge to keep the yield of 10-year Japanese debt near 0%; its yield settled at 0.05%.

Emerging market debt weakened and underperformed developed markets. The local currency-denominated **JP Morgan GBI-EM Global Diversified Index** fell 6.09%. The USD-denominated **JPM EM Global Diversified Index** fell 4.02%.

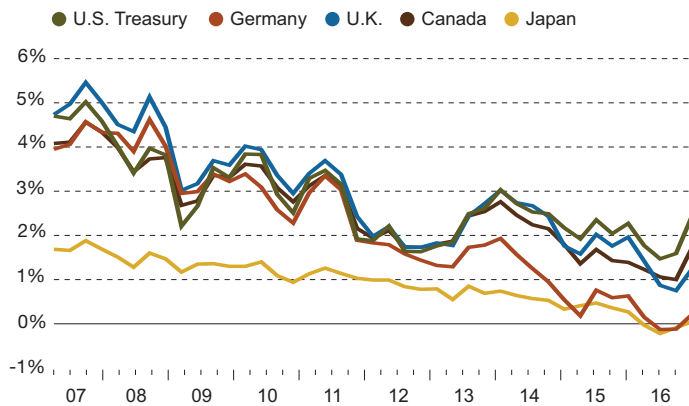
Emerging Spreads Over Developed (By Region)



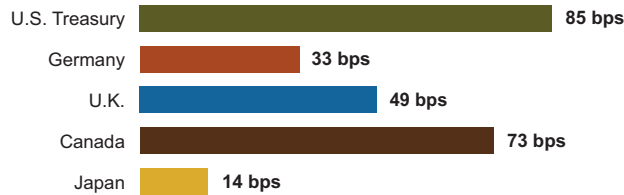
Source: Bloomberg Barclays

NON-U.S. FIXED INCOME (Continued)

10-Year Global Government Bond Yields



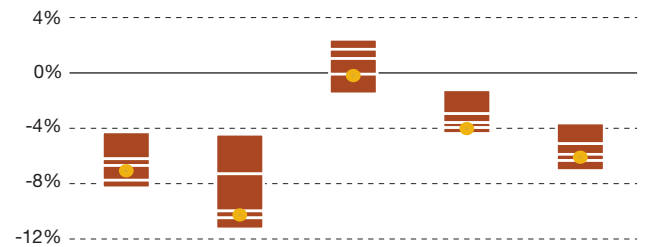
Change in 10-Year Yields from 3Q16 to 4Q16



Source: Bloomberg

Turkey and Mexico were among the worst performers in both indices. However, emerging market sovereign debt proved to be one of the strongest asset classes in 2016, gaining roughly 10% in both JP Morgan indices, benefiting from the tailwind of increased commodity prices.

Callan Style Group Quarterly Returns



	Global Fixed Style	Non-U.S. Fixed Style	Global High Yield	Em Debt USD DB	Em Debt Local
10th Percentile	-4.21	-4.38	2.48	-1.17	-3.57
25th Percentile	-6.15	-7.24	1.76	-2.89	-5.06
Median	-6.64	-9.92	1.09	-3.54	-5.83
75th Percentile	-7.70	-10.42	-0.04	-3.90	-6.28
90th Percentile	-8.25	-11.22	-1.46	-4.32	-7.00
Benchmark	-7.07	-10.26	-0.19	-4.02	-6.09

Sources: Bloomberg Barclays, Callan, JPMorgan Chase

Callan Style Median and Index Returns* for Periods ended December 31, 2016

Global Fixed Income	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Global Fixed Income Style	-6.64	2.23	2.23	0.08	0.69	3.77	5.69
Bloomberg Barclays Global Aggregate	-7.07	2.09	2.09	-0.19	0.21	3.29	4.79
Global Fixed Income Style (hedged)	-2.32	4.37	4.37	4.29	4.17	4.96	5.36
Bloomberg Barclays Global Aggregate (hedged)	-2.34	3.95	3.95	4.15	3.59	4.39	4.55
High Yield	1.09	14.82	14.82	3.10	6.43	6.76	9.15
Bloomberg Barclays Global High Yield	-0.19	14.27	14.27	3.60	7.37	7.35	9.18
Non-U.S. Fixed Income	-9.92	2.28	2.28	-1.70	-0.15	3.48	5.70
Bloomberg Barclays Global Aggregate ex US	-10.26	1.49	1.49	-2.59	-1.39	2.44	4.96
Emerging Markets Fixed Income	-3.54	12.05	12.05	5.46	5.94	7.28	10.23
JPM EMBI Global Diversified	-4.02	10.15	10.15	6.19	5.91	6.89	9.02
Emerging Debt Style (local)	-5.83	9.97	9.97	-3.77	-0.93	3.64	7.04
JPM GBI-EM Global Diversified	-6.09	9.94	9.94	-4.10	-1.29	3.82	-
Emerging Debt Blend Style	-3.98	10.25	10.25	0.69	2.48	6.50	11.84
JPM EMBI GI Div/JPM GBI-EM GI Div	-5.06	10.24	10.24	1.05	2.36	5.44	-
Emerging Debt Corporate Style	-1.19	11.51	11.51	5.42	6.51	-	-
JPM CEMBI	-1.29	11.11	11.11	5.33	5.90	6.74	7.83

*Returns less than one year are not annualized.

Sources: Bloomberg Barclays, Callan, JPMorgan

Rates Trump Fundamentals

REAL ESTATE | Kevin Nagy

The **NCREIF Property Index** advanced 1.73% during the fourth quarter (1.14% from income and 0.59% from appreciation). This was the lowest return since 2010, eclipsing the third quarter's mark of 1.78%. Appreciation fell for the seventh consecutive quarter.

Industrial (+2.89%) was the best-performing sector for the third quarter in a row and Apartments (+1.67%) and Retail (+1.65%) also posted strong relative returns; Hotels (+0.37%) were the worst performers. The West region posted the strongest results (+2.22%), and the Midwest was the weakest (+1.29%). Transaction volume totaled \$14 billion, the highest on record, a 45% jump over the previous quarter, and a 24% increase over the same period in 2015. Appraisal capitalization rates fell to 4.43%, a new all-time low, undercutting the third quarter's 4.48%. Transaction capitalization rates fell sharply from 6.2% to 5.7% in the fourth quarter, tightening the spread between appraisal and transactional rates to 123 basis points.

Occupancy rates stayed steady at 93.22%, a 15-year high hit in the third quarter. For the second straight quarter Retail and Apartment occupancy rates fell slightly, and Industrial and Office rates increased.

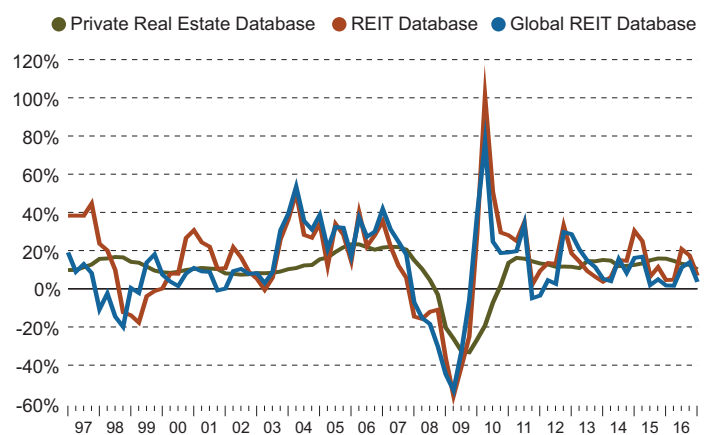
The **NCREIF Open End Diversified Core Equity Index** rose 1.88% (0.84% from income and 1.04% from appreciation). This marked a 5 bps increase over the third quarter return of 1.83%, which was the lowest for the Index since 2010. Income returns fell slightly, but appreciation bounced back from a five-year low in the third quarter.

Global real estate investment trusts (REITs), tracked by the **FTSE EPRA/NAREIT Developed REIT Index (USD)**, lagged behind their U.S. counterparts and dropped 5.39%. U.S. REITs, as measured by the **FTSE NAREIT Equity REITs Index**, lost 2.89% for the quarter.

In the U.S., REITs started the quarter with a sharp decline due to an increase in interest rates. Donald Trump's surprise victory in the presidential election sent rates even higher and further punished many REIT sectors, especially those that represent a higher weight in the Index. Health Care (-10.80%) was the worst performer, hammered by the possibility that the incoming Republican administration would repeal the Affordable Care Act. Retail (-10.73%) and Infrastructure (-6.95%) also suffered large losses. The biggest winner for the quarter was the Hotel sector, which skyrocketed 20.39% with the election of Donald Trump, a hotelier. Specialty (+6.67%) and Data Centers (+0.82%) were other strong-performing sectors for the quarter. Politics and interest rates drove some REIT valuations downward, despite generally strong fundamentals.

Political issues also impacted the European market. Fears of a hard Brexit slowed transaction volume in the U.K., despite strong economic data suggesting that the economy was still on track. On the continent, pricing and transactions were weighed down by fears of an Italian banking crisis and uncertainty concerning France's upcoming elections.

Rolling One-Year Returns

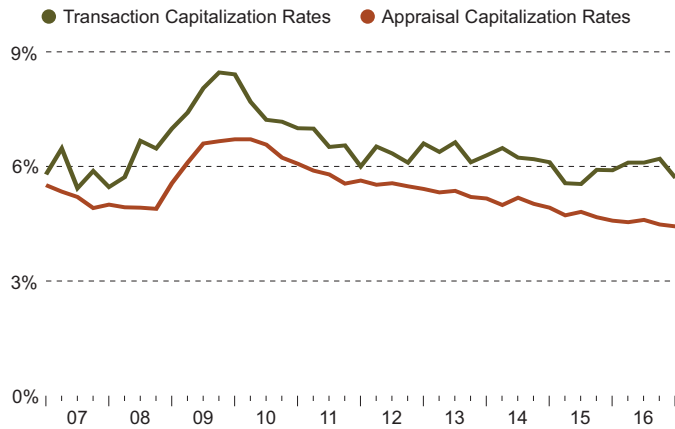


Source: Callan

*Index subreturns are calculated separately from index return and may not total.

REAL ESTATE (Continued)

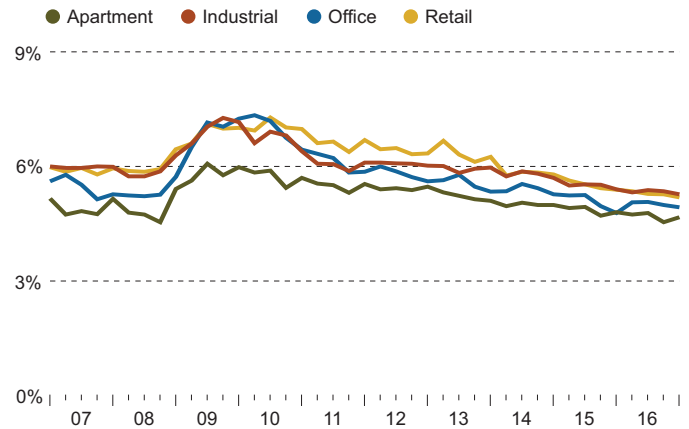
NCREIF Transaction and Appraisal Capitalization Rates



Source: NCREIF

Note: Transaction capitalization rate is equal weighted.

NCREIF Capitalization Rates by Property Type



Source: NCREIF

Note: Capitalization rates are appraisal-based.

Commercial mortgage-backed securities (CMBS) issuance for the quarter jumped 31% to \$26.0 billion from the \$19.8 billion in the third quarter. This also represented a 19.3% increase over the fourth quarter of 2015 (\$21.8 billion).

Callan Database Median and Index Returns* for Periods ended December 31, 2016

	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Private Real Estate							
Real Estate Database (net of fees)	1.87	8.34	8.34	11.89	11.89	4.56	7.57
NCREIF Property	1.73	7.97	7.97	11.02	10.91	6.93	9.00
NFI-ODCE (value wtd. net)	1.88	7.79	7.79	11.04	11.16	4.84	7.15
Public Real Estate							
REIT Database	-2.66	6.87	6.87	13.59	12.26	5.65	11.85
FTSE NAREIT Equity	-2.89	8.52	8.52	13.38	12.01	5.08	10.80
Global Public Real Estate							
Global REIT Database	-5.11	3.97	3.97	7.26	10.83	2.82	10.55
FTSE EPRA/NAREIT Developed REIT	-5.39	4.99	4.99	6.78	10.34	2.23	9.84
Global ex U.S. Public Real Estate							
Global ex-U.S. REIT Database	-7.77	0.48	0.48	1.13	8.95	-0.12	10.03
EPRA/NAREIT Dev REITs ex-U.S.	-7.68	1.97	1.97	0.61	8.42	0.12	9.24

*Returns for less than one year are not annualized.

All REIT returns are reported gross in USD.

Sources: Callan, NAREIT, NCREIF, The FTSE Group. NCREIF statistics are the product of direct queries and may fluctuate over time.

Down but Far From Out

PRIVATE EQUITY | Gary Robertson

Based on preliminary data, private equity funds raised \$281 billion in 2016, a moderate \$24.2 billion (9%) increase over 2015, and 783 partnerships were formed, up by 101 (15%) over the previous year, according to *Private Equity Analyst*.

In the fourth quarter, commitments totaled \$86.9 billion and 267 funds were created. The amount raised skyrocketed by 125% compared to the third quarter's \$38.6 billion, and the number of new funds jumped by 87% from the prior quarter's 143.

Private equity firms purchased 1,728 companies in 2016, down 14% from 2,006 in 2015, according to *Buyouts* newsletter. The year's announced dollar volume was \$163.2 billion, an eight-year high and up 39% from \$117.5 billion in 2015. The fourth quarter saw 322 transactions, down from 385 in the third quarter, and disclosed dollar volume totaled \$28.3 billion, down from \$39.0 billion.

The year produced 8,136 rounds of new investment in venture capital companies, down 22% from 2015's 10,468, according to the National Venture Capital Association. The announced volume of \$69.1 billion for the year was down 13% from \$79.3 billion in 2015. Fourth quarter VC investments totaled 1,744 rounds and \$12.7 billion of announced financing, down from 1,979 rounds and \$15.7 billion in the previous quarter.

Funds Closed January 1 to December 31, 2016

Strategy	No. of Funds	Amt (\$mm)	Percent
Venture Capital	401	41,060	15%
Buyouts	278	168,798	60%
Subordinated Debt	22	17,739	6%
Distressed Debt	20	21,972	8%
Secondary and Other	23	22,525	8%
Fund-of-funds	39	8,808	3%
Totals	783	280,902	100%

Source: Private Equity Analyst

Buyouts reports that 2016's 505 private M&A exits of buyout-backed companies was down 11% from the 567 in 2015. The year's aggregate disclosed M&A exit values of \$85.7 billion was down 35% from 2015's \$131.4 billion. In the fourth quarter, there were 105 M&A exits, and announced values totaled \$18.1 billion, down from 142 exits totaling \$27.5 billion in the third quarter. There were three buyout-backed IPOs, with a total value of \$2.0 billion, and eight for the full year, raising a total of \$4.1 billion.

Venture-backed M&A exits for the year totaled 687, down 22% from 884 in 2015, with announced values of \$43.9 billion, up 3.8% from \$42.3 billion in 2015. The quarter had 184 exits with announced values totaling \$7.52 billion, compared to 192 and \$13.4 billion in the third quarter. The year produced 39 venture-backed IPOs raising \$2.9 billion, down from the 77 IPOs in 2015 that raised \$8.1 billion.

Private Equity Performance Database (%)

(Pooled Horizon IRRs through June 30, 2016*)

Strategy	3 Months	Year	3 Years	5 Years	10 Years	15 Years	20 Years
All Venture	0.26	-0.09	19.18	13.63	10.38	5.66	20.65
Growth Equity	1.60	1.83	12.86	10.13	11.25	10.25	13.65
All Buyouts	2.85	6.29	12.91	10.81	10.40	12.32	12.62
Mezzanine	2.25	7.09	8.79	9.67	9.35	8.12	9.19
Distressed	2.34	1.41	7.34	8.73	9.26	10.50	10.55
All Private Equity	2.13	3.95	13.11	10.89	10.33	10.32	13.26
S&P 500	2.46	3.99	11.66	12.10	7.42	5.75	7.87
Russell 3000	2.63	2.14	11.13	11.60	7.40	6.09	7.96

*Most recent data available at time of publication.

Notes: Private equity returns are net of fees. Transaction count and dollar volume figures across all private equity measures are preliminary figures and are subject to update in subsequent versions of *Capital Market Review* and other Callan publications.

Sources: Russell Investment Group, Standard & Poor's, Thomson Reuters/Cambridge

Making Alpha Great Again

HEDGE FUNDS | Jim McKee

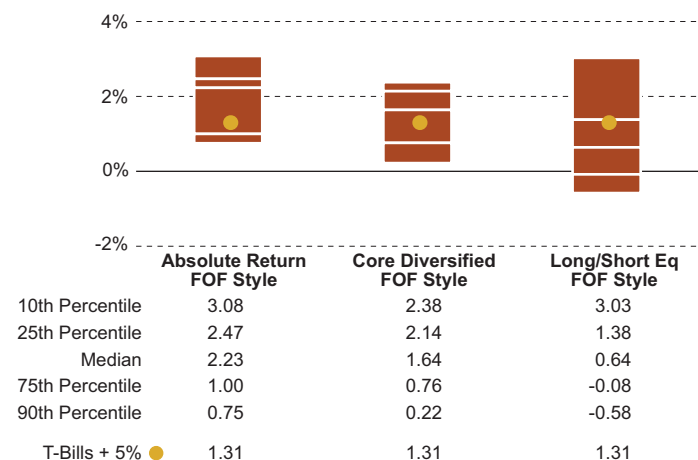
In the wake of the U.S. presidential election, the reflation trade exploded as U.S. stocks jumped and Treasuries were dumped. The dollar also strengthened dramatically. During this rapid market paradigm shift, the average hedge fund appeared to gain little over embedded betas, as most conservatively positioned their gross and net exposures going into the election. However, the hedge fund community will likely see a combination of more fiscal policy and less monetary policy as a better trading environment.

Representing the average fund's performance without implementation costs, the **Credit Suisse Hedge Fund Index (CS HFI)** rose 1.15% in the fourth quarter. As a proxy for live portfolios, the median manager in the **Callan Hedge Fund-of-Funds Database** advanced 1.26%, net of all fees.

Within CS HFI, the best-performing strategy was *Global Macro* (+4.59%), aided by a stronger dollar. *Distressed* gained 3.57%. The sharp reversals following the election across currencies, rates, and equities upset the trend-following mantra of *Managed Futures* (-5.65%). *Long/Short Equity* (-0.20%) was also caught flat-footed by the unexpected Trump effect.

Within Callan's Hedge Fund-of-Funds Database, market exposures marginally affected performance in the fourth quarter. Aided by tightening credits and supportive fundamentals, the median *Callan Absolute Return FoF* (+2.23%) outpaced the *Callan Long/Short Equity FoF* (+0.64%). With diversifying exposures to both non-directional and directional styles, the *Callan Core Diversified FoF* gained 1.64%.

Callan Style Group Quarterly Returns



Sources: Callan, Merrill Lynch

Callan Database Median and Index Returns* for Periods ended December 31, 2016

	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Hedge Fund-of-Funds Database	1.26	1.19	1.19	1.43	4.91	3.31	4.74
CS Hedge Fund Index	1.15	1.25	1.25	1.54	4.34	3.75	5.74
CS Equity Market Neutral	-2.65	-4.58	-4.58	-1.40	1.11	-2.93	0.47
CS Convertible Arbitrage	0.42	6.60	6.60	1.85	3.85	3.69	4.43
CS Fixed Income Arbitrage	1.85	4.29	4.29	3.07	4.76	3.42	4.25
CS Multi-Strategy	1.16	4.41	4.41	4.78	7.30	5.19	6.81
CS Distressed	3.57	6.38	6.38	1.09	6.02	3.96	6.94
CS Risk Arbitrage	0.77	5.89	5.89	1.62	2.51	3.33	3.66
CS Event-Driven Multi-Strategy	1.77	1.25	1.25	-1.50	3.95	3.67	6.07
CS Long/Short Equity	-0.20	-3.43	-3.43	1.82	6.10	4.03	6.00
CS Dedicated Short Bias	1.82	-16.87	-16.87	-7.04	-13.65	-9.95	-8.11
CS Global Macro	4.59	3.58	3.58	2.28	3.14	5.82	8.07
CS Managed Futures	-5.65	-6.84	-6.84	2.99	0.66	2.67	4.77
CS Emerging Markets	-0.27	4.47	4.47	1.91	4.89	3.68	7.97

*Returns less than one year are not annualized. Sources: Callan, Credit Suisse.

A Case of the Jitters

DEFINED CONTRIBUTION | Tom Szkwarla

The average defined contribution (DC) plan gained 3.92% in the third quarter of 2016, as measured by the Callan DC Index™. Still, the Index trailed the Age 45 Target Date Fund—the average of target date funds that would be selected by participants age 45 and retiring at age 65—which gained 4.53%. Since inception, the DC Index's annual return of 5.41% has trailed the Age 45 Target Date Fund by 74 basis points.

During the third quarter, DC plan balances grew by 3.67%, driven entirely by market returns. Participants appeared to be jittery; money flowed out of plans on a net basis, reducing total balance growth by 25 basis points. The quarter's outflows were the highest since the third quarter of 2006. And third quarter turnover (i.e., net transfer activity levels within DC plans) in the DC Index came in at 0.82%, its highest level since the third quarter of 2012.

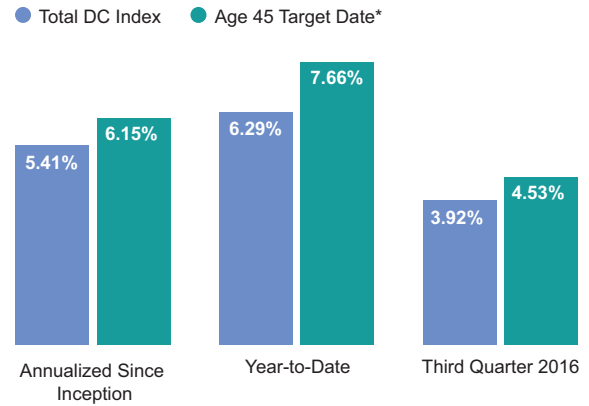
Stable value experienced its fifth quarter in a row of net inflows—and the highest of the five—during the period. Meanwhile, U.S. large, small, and mid cap equity saw significant outflows. Even non-U.S. equity experienced outflows, despite its exceptional performance during the quarter. Target date funds held fast; for the third quarter, over 55 cents of every dollar that moved within DC plans flowed to TDFs. Target date funds now make up 27.7% of the average DC plan.

The Callan DC Index's overall equity allocation ended the quarter at 68%, modestly above the Index's historical average (67%).

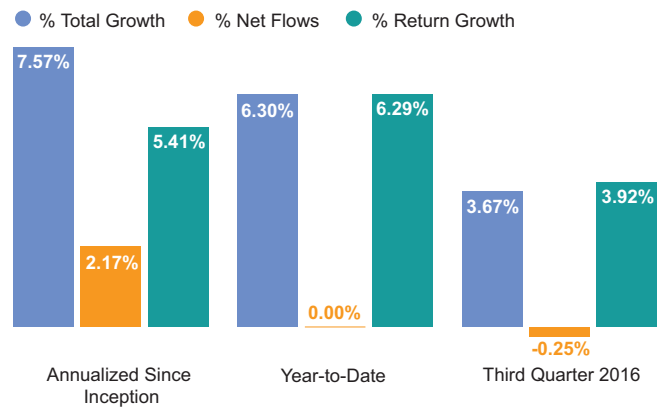
Target date funds are less prevalent than U.S. large cap equity; however, when target date funds are available in a DC plan, they hold a much greater portion of assets (32%) than U.S. large cap equity funds (23%).

The Callan DC Index is an equally weighted index tracking the cash flows and performance of nearly 90 plans, representing more than one million DC participants and over \$135 billion in assets. The Index is updated quarterly and is available on Callan's website, as is the quarterly DC Observer newsletter.

Investment Performance*



Growth Sources*



Net Cash Flow Analysis (Third Quarter 2016) (Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	55.31%
Stable Value	28.35%
Company Stock	-20.41%
U.S. Large Cap	-33.88%
Total Turnover**	0.82%

Source: Callan DC Index
Data provided here is the most recent available at time of publication.

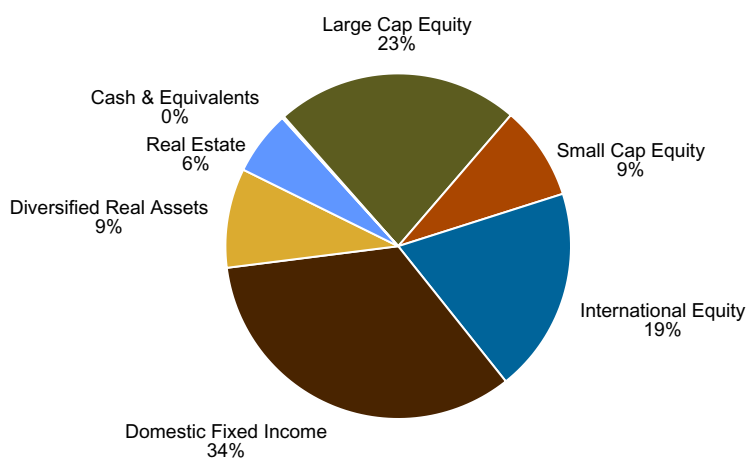
* DC Index inception date is January 2006.

** Total Index "turnover" measures the percentage of total invested assets (transfers only, excluding contributions and withdrawals) that moved between asset classes.

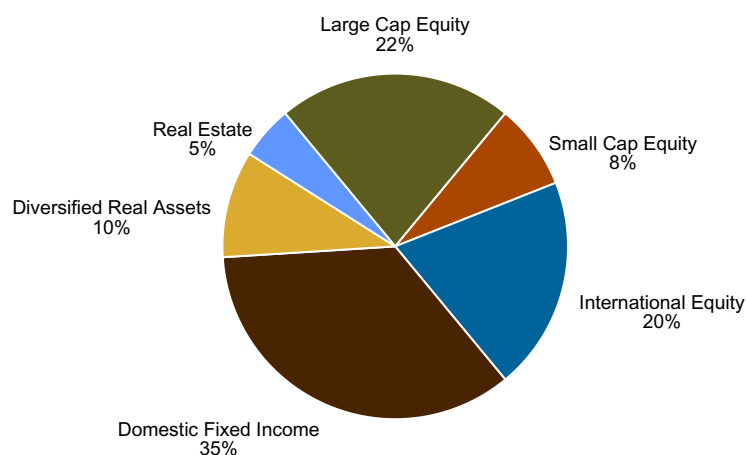
Actual vs Target Asset Allocation As of December 31, 2016

The first chart below shows the Fund's asset allocation as of December 31, 2016. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

Actual Asset Allocation



Target Asset Allocation



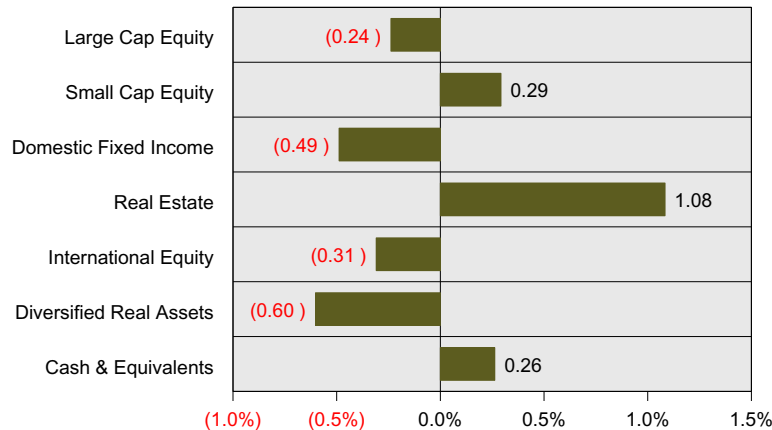
Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap Equity	956,157	22.8%	22.0%	0.8%	34,503
Small Cap Equity	369,572	8.8%	8.0%	0.8%	34,425
International Equity	805,323	19.2%	20.0%	(0.8%)	(32,544)
Domestic Fixed Income	1,410,552	33.7%	35.0%	(1.3%)	(55,715)
Diversified Real Assets	390,428	9.3%	10.0%	(0.7%)	(28,506)
Real Estate	251,367	6.0%	5.0%	1.0%	41,901
Cash & Equivalents	5,936	0.1%	0.0%	0.1%	5,936
Total	4,189,336	100.0%	100.0%		

* Current Quarter Target = 35.0% Blmbg Aggregate Idx, 22.0% Russell 1000 Index, 20.0% MSCI EAFE, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index and 5.0% NCREIF Total Index.

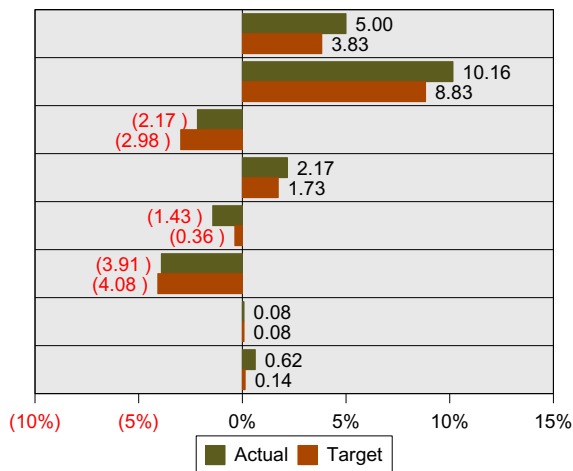
Quarterly Total Fund Relative Attribution - December 31, 2016

The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

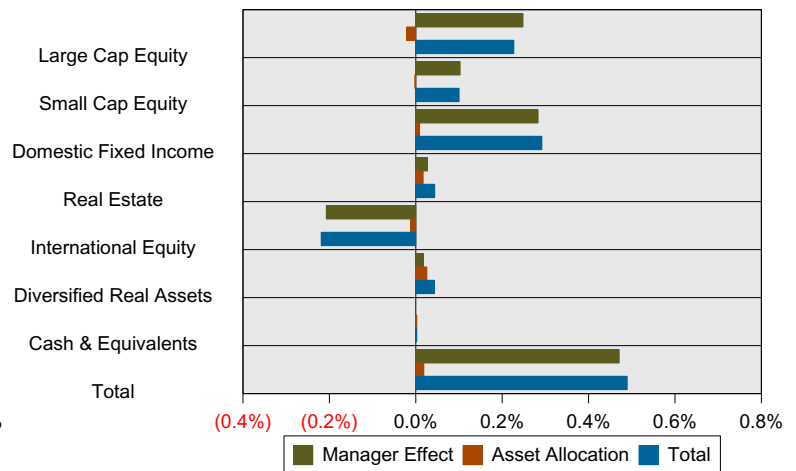
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended December 31, 2016

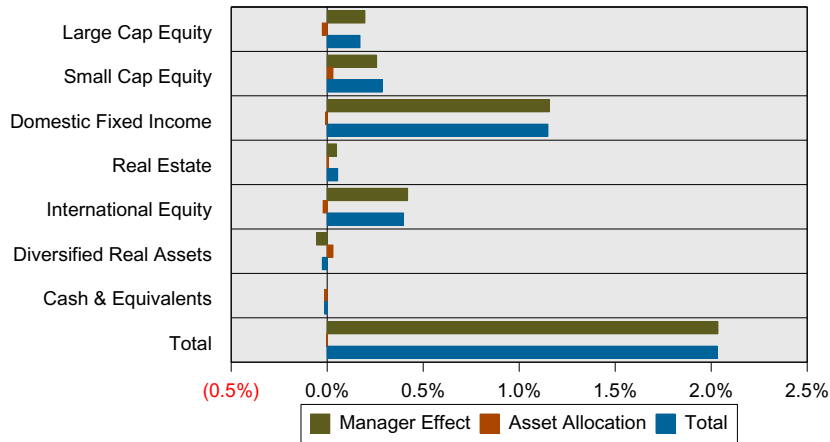
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	22%	22%	5.00%	3.83%	0.25%	(0.02%)	0.23%
Small Cap Equity	8%	8%	10.16%	8.83%	0.10%	(0.00%)	0.10%
Domestic Fixed Income	35%	35%	(2.17%)	(2.98%)	0.28%	0.01%	0.29%
Real Estate	6%	5%	2.17%	1.73%	0.03%	0.02%	0.04%
International Equity	20%	20%	(1.43%)	(0.36%)	(0.21%)	(0.01%)	(0.22%)
Diversified Real Assets	9%	10%	(3.91%)	(4.08%)	0.02%	0.03%	0.04%
Cash & Equivalents	0%	0%	0.08%	0.08%	0.00%	0.00%	0.00%
Total			0.62%	0.14%	0.47%	0.02%	0.49%

* Current Quarter Target = 35.0% Blmbg Aggregate Idx, 22.0% Russell 1000 Index, 20.0% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index and 5.0% NCREIF Total Index.

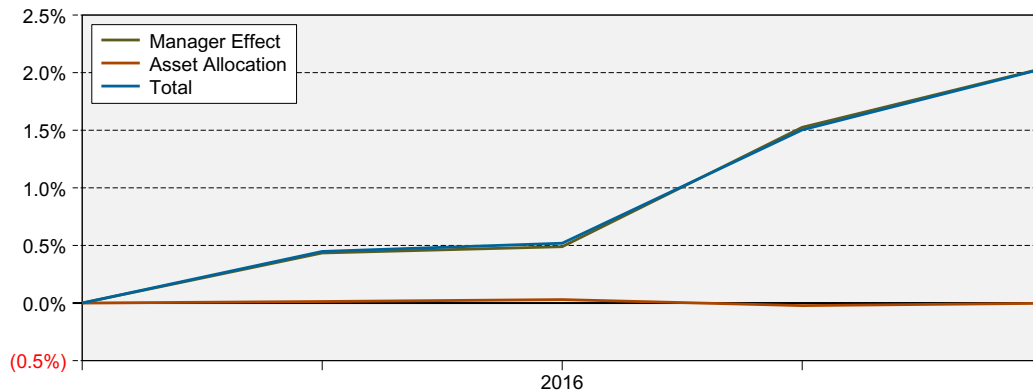
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

One Year Relative Attribution Effects



Cumulative Relative Attribution Effects



One Year Relative Attribution Effects

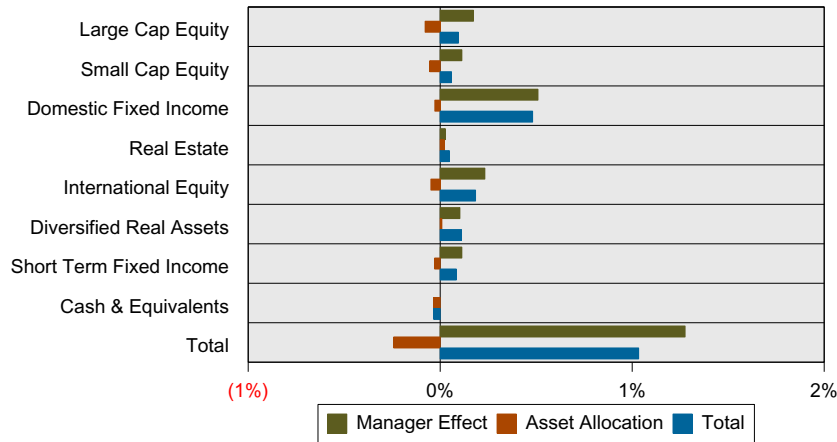
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	22%	22%	13.01%	12.05%	0.20%	(0.03%)	0.17%
Small Cap Equity	8%	8%	25.11%	21.31%	0.26%	0.03%	0.29%
Domestic Fixed Income	35%	35%	5.97%	2.65%	1.16%	(0.01%)	1.15%
Real Estate	6%	5%	8.93%	7.97%	0.05%	0.01%	0.05%
International Equity	19%	20%	3.25%	1.22%	0.42%	(0.02%)	0.40%
Diversified Real Assets	10%	10%	2.84%	3.33%	(0.06%)	0.03%	(0.03%)
Cash & Equivalents	0%	0%	0.25%	0.25%	0.00%	(0.01%)	(0.01%)
Total			8.42%	= 6.39%	+ 2.04%	+ (0.00%)	2.03%

* Current Quarter Target = 35.0% Blmbg Aggregate Idx, 22.0% Russell 1000 Index, 20.0% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index and 5.0% NCREIF Total Index.

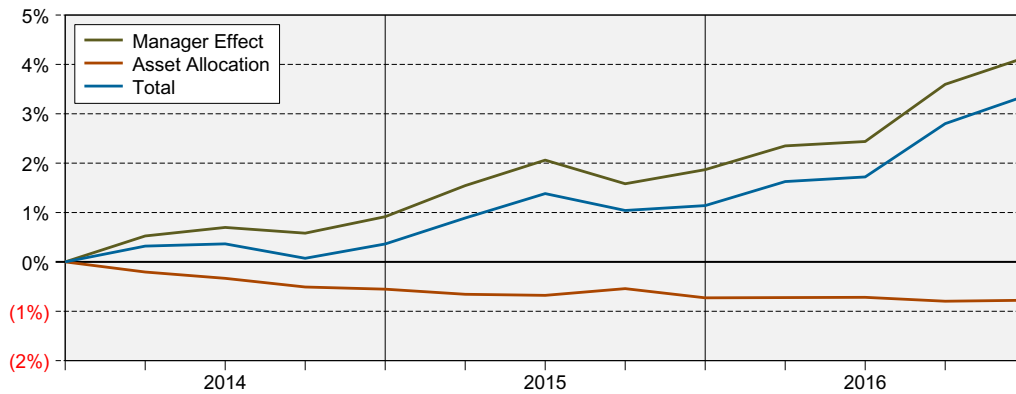
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Three Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Three Year Annualized Relative Attribution Effects

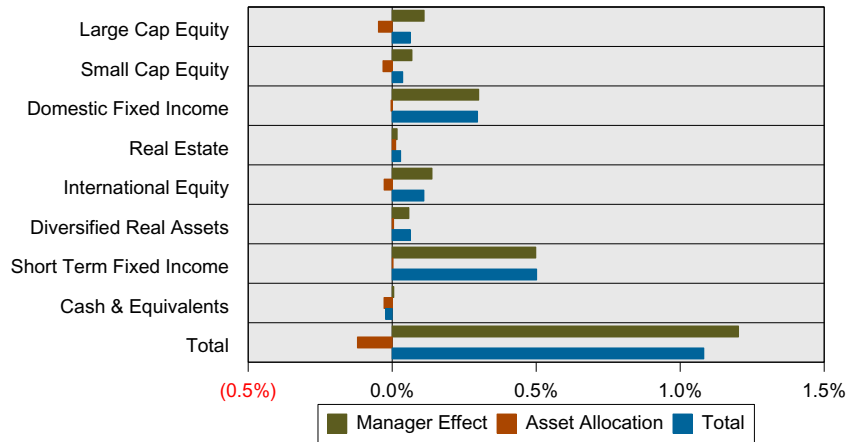
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	20%	20%	9.38%	8.59%	0.17%	(0.08%)	0.09%
Small Cap Equity	7%	7%	8.25%	6.74%	0.11%	(0.05%)	0.06%
Domestic Fixed Income	32%	32%	4.74%	3.03%	0.51%	(0.03%)	0.48%
Real Estate	5%	5%	11.54%	11.02%	0.03%	0.02%	0.05%
International Equity	18%	19%	(0.38%)	(1.53%)	0.23%	(0.05%)	0.18%
Diversified Real Assets	8%	8%	1.26%	0.15%	0.10%	0.01%	0.11%
Short Term Fixed Income	9%	9%	-	-	0.11%	(0.03%)	0.08%
Cash & Equivalents	0%	0%	0.09%	0.09%	0.00%	(0.03%)	(0.03%)
Total			4.63%	3.60%	+ 1.28%	+ (0.24%)	1.03%

* Current Quarter Target = 35.0% Blmbg Aggregate Idx, 22.0% Russell 1000 Index, 20.0% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index and 5.0% NCREIF Total Index.

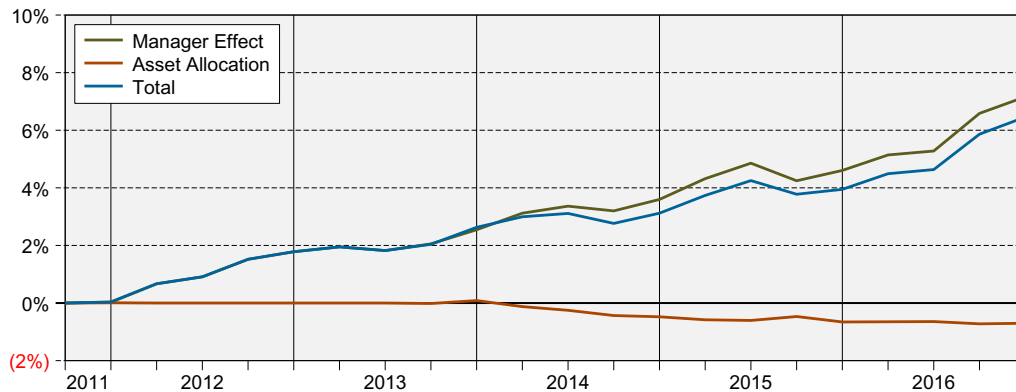
Cumulative Total Fund Relative Attribution - December 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Five and One-Quarter Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Five and One-Quarter Year Annualized Relative Attribution Effects

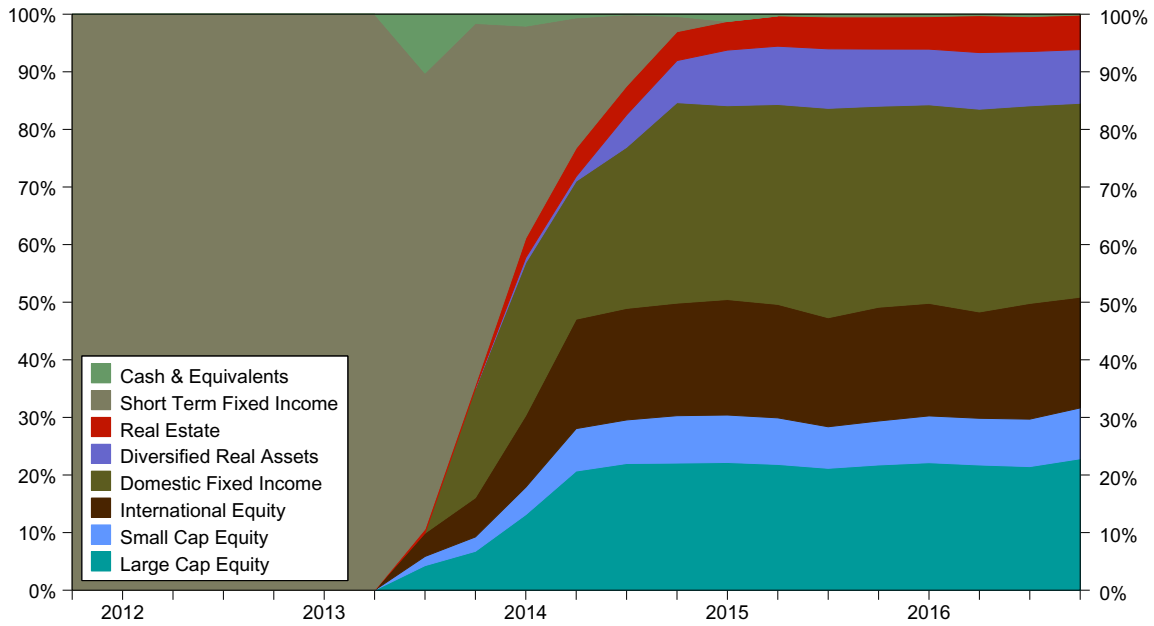
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	12%	12%	-	-	0.11%	(0.05%)	0.06%
Small Cap Equity	4%	4%	-	-	0.07%	(0.03%)	0.04%
Domestic Fixed Income	19%	19%	-	-	0.30%	(0.00%)	0.30%
Real Estate	3%	3%	-	-	0.02%	0.01%	0.03%
International Equity	11%	11%	-	-	0.14%	(0.03%)	0.11%
Diversified Real Assets	4%	4%	-	-	0.06%	0.00%	0.06%
Short Term Fixed Income	42%	43%	-	-	0.50%	0.00%	0.50%
Cash & Equivalents	4%	3%	0.12%	0.12%	0.01%	(0.03%)	(0.02%)
Total					3.60%	2.52%	1.08%

* Current Quarter Target = 35.0% Blmbg Aggregate Idx, 22.0% Russell 1000 Index, 20.0% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index and 5.0% NCREIF Total Index.

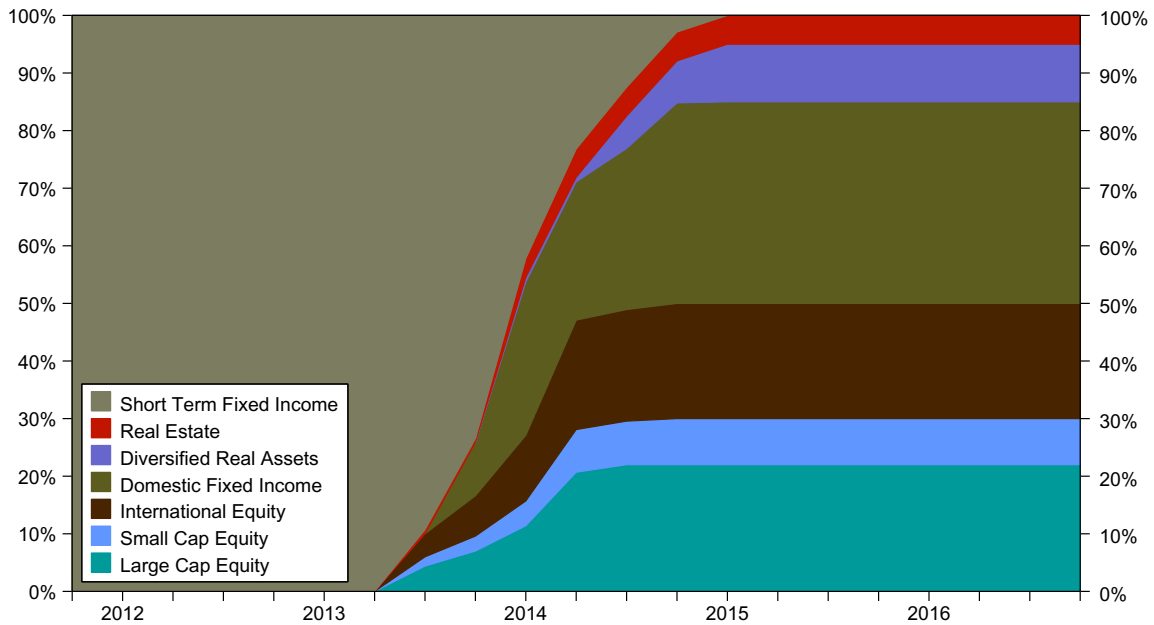
Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, and the fund's historical target asset allocation.

Actual Historical Asset Allocation



Target Historical Asset Allocation

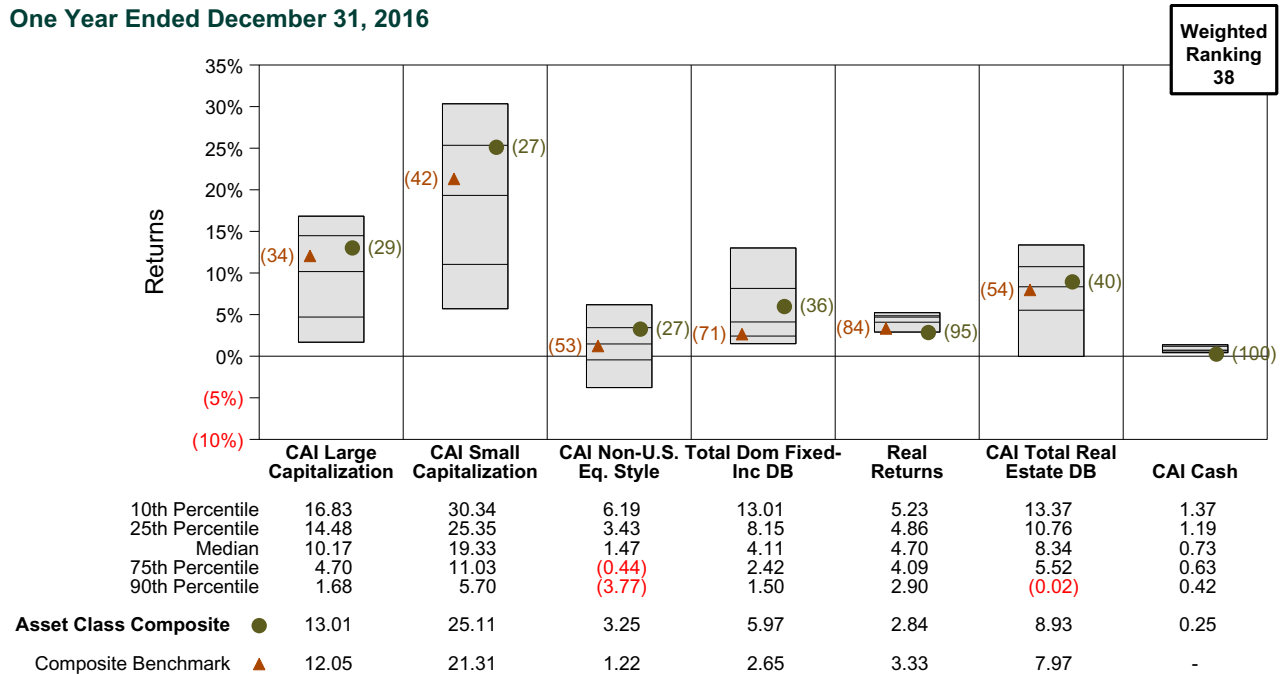


* Current Quarter Target = 35.0% Blmbg Aggregate Idx, 22.0% Russell 1000 Index, 20.0% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index and 5.0% NCREIF Total Index.

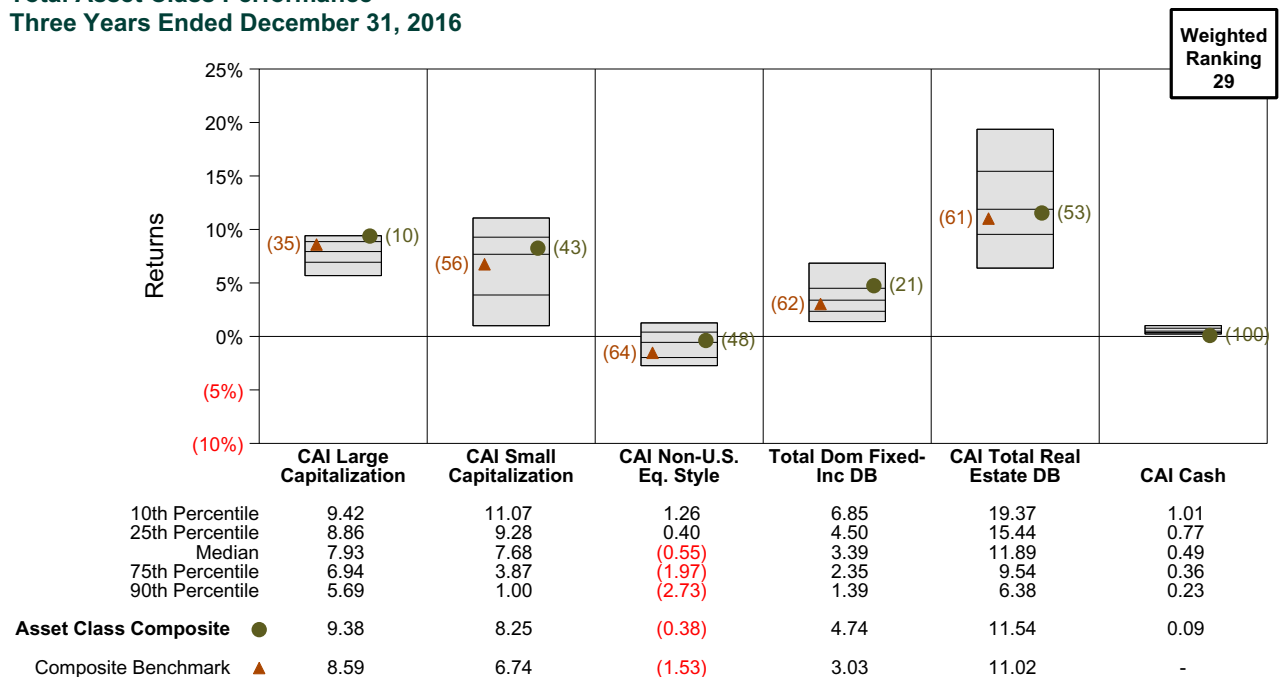
Asset Class Rankings

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.

Total Asset Class Performance One Year Ended December 31, 2016



Total Asset Class Performance Three Years Ended December 31, 2016



* Current Quarter Target = 35.0% Blmbg Aggregate Idx, 22.0% Russell 1000 Index, 20.0% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index and 5.0% NCREIF Total Index.

Asset Class Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of December 31, 2016, with the distribution as of September 30, 2016. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

Asset Class Allocation

	December 31, 2016		Net New Inv.	Inv. Return	September 30, 2016	
	Market Value	Weight			Market Value	Weight
Domestic Equity	\$1,325,728,760	31.65%	\$38,512,058	\$78,321,257	\$1,208,895,445	29.70%
Large Cap Equity	\$956,157,195	22.82%	\$38,610,483	\$44,245,441	\$873,301,271	21.46%
L.A. Capital Enhanced	188,549,213	4.50%	5,439,188	7,984,279	175,125,746	4.30%
L.A. Capital Large Cap Growth	284,067,588	6.78%	18,864,679	2,775,617	262,427,293	6.45%
Parametric Clifton Large Cap	186,410,471	4.45%	5,500,000	6,403,113	174,507,357	4.29%
LSV Large Cap Value	297,129,923	7.09%	8,806,615	27,082,432	261,240,875	6.42%
Small Cap Equity	\$369,571,565	8.82%	\$(98,424)	\$34,075,816	\$335,594,173	8.25%
Parametric Clifton SmallCap	198,214,025	4.73%	0	15,814,763	182,399,262	4.48%
PIMCO RAE	171,357,540	4.09%	(98,424)	18,261,052	153,194,911	3.76%
International Equity	\$805,323,194	19.22%	\$(645,728)	\$(11,705,334)	\$817,674,256	20.09%
DFA Intl SmallCap Value	81,754,898	1.95%	0	1,378,291	80,376,607	1.97%
LSV Intl Value	337,718,643	8.06%	(323,263)	9,643,099	328,398,806	8.07%
Vanguard Intl Explorer Fund	76,940,602	1.84%	0	(3,323,550)	80,264,153	1.97%
William Blair	308,909,051	7.37%	(322,465)	(19,403,174)	328,634,690	8.07%
Domestic Fixed Income	\$1,410,552,034	33.67%	\$44,897,336	\$(30,759,106)	\$1,396,413,804	34.31%
BND CDs	45,241,659	1.08%	45,165,241	76,418	-	-
Declaration Total Return	104,776,569	2.50%	0	(528,859)	105,305,428	2.59%
Prudential	153,382,834	3.66%	(105,475)	(4,601,890)	158,090,200	3.88%
SSgA US Govt Credit Bd Idx	187,405,511	4.47%	(16,574)	(6,582,070)	194,004,154	4.77%
Wells Capital	426,531,780	10.18%	0	(9,715,166)	436,246,947	10.72%
Western Asset Management	426,015,493	10.17%	(145,856)	(11,577,290)	437,738,640	10.75%
Pooled Fixed Income(1)	67,198,188	1.60%	0	2,169,752	65,028,436	1.60%
Diversified Real Assets	\$390,427,999	9.32%	\$22,069,913	\$(15,080,861)	\$383,438,948	9.42%
Western TIPS	287,341,546	6.86%	9,901,185	(16,437,507)	293,877,868	7.22%
JP Morgan Infrastructure	88,947,522	2.12%	7,355,567	1,325,986	80,265,969	1.97%
Grosvenor Cust. Infrastructure	14,138,932	0.34%	4,813,162	30,659	9,295,111	0.23%
Real Estate	\$251,367,424	6.00%	\$(504,674)	\$5,354,377	\$246,517,721	6.06%
Invesco Core Real Estate	121,815,020	2.91%	(104,853)	2,590,843	119,329,030	2.93%
JP Morgan RE Inc & Growth	129,552,404	3.09%	(399,820)	2,763,534	127,188,691	3.12%
Cash & Equivalents	\$5,936,253	0.14%	\$(11,324,584)	\$11,486	\$17,249,351	0.42%
Securities Lending Income	\$0	0.00%	\$(116,704)	\$116,704	-	-
Total Fund	\$4,189,335,664	100.0%	\$92,887,618	\$26,258,522	\$4,070,189,524	100.0%

(1) Comprised of PIMCO DiSCO II and PIMCO Bravo II.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended December 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5-1/4 Years
Domestic Equity				
Gross	6.41%	16.28%	9.15%	-
Net	6.37%	15.96%	8.90%	-
Large Cap Equity				
Gross	5.00%	13.01%	9.38%	-
Net	4.95%	12.76%	9.17%	-
Russell 1000 Index	3.83%	12.05%	8.59%	16.40%
L.A. Capital Enhanced - Gross	4.50%	13.55%	9.37%	-
L.A. Capital Enhanced - Net	4.46%	13.39%	9.23%	-
Russell 1000 Index	3.83%	12.05%	8.59%	16.40%
L.A. Capital LargeCap Growth - Gross	1.07%	8.64%	9.28%	-
L.A. Capital LargeCap Growth - Net	1.01%	8.41%	9.06%	-
Russell 1000 Growth Index	1.01%	7.08%	8.55%	15.97%
Parametric Clifton Large Cap - Gross	3.57%	12.30%	9.52%	-
Parametric Clifton Large Cap - Net	3.57%	12.04%	9.38%	-
S&P 500 Index	3.82%	11.96%	8.87%	16.37%
LSV Large Cap Value - Gross	10.26%	17.44%	9.28%	-
LSV Large Cap Value - Net	10.17%	17.09%	8.97%	-
Russell 1000 Value Index	6.68%	17.34%	8.59%	16.75%
Small Cap Equity				
Gross	10.16%	25.11%	8.25%	-
Net	10.12%	24.63%	7.87%	-
Russell 2000 Index	8.83%	21.31%	6.74%	16.89%
Parametric Clifton Small Cap - Gross	8.67%	22.66%	8.32%	-
Parametric Clifton Small Cap - Net	8.67%	22.05%	7.90%	-
Russell 2000 Index	8.83%	21.31%	6.74%	16.89%
PIMCO RAE - Gross	11.93%	28.13%	7.93%	-
PIMCO RAE - Net	11.86%	27.80%	7.63%	-
Russell 2000 Index	8.83%	21.31%	6.74%	16.89%
International Equity				
Gross	(1.43%)	3.25%	(0.38%)	-
Net	(1.51%)	2.96%	(0.67%)	-
Benchmark(1)	(0.36%)	1.22%	(1.53%)	6.92%
DFA Intl Small Cap Value	1.71%	8.00%	2.19%	-
World ex US SC Va	(0.12%)	7.87%	0.86%	8.98%
LSV Intl Value - Gross	2.94%	5.17%	0.55%	-
LSV Intl Value - Net	2.84%	4.77%	0.16%	-
MSCI EAFE Index	(0.71%)	1.00%	(1.60%)	6.88%
Vanguard Intl Explorer Fund	(4.14%)	(1.77%)	1.19%	-
BMI, EPAC, <\$2 B	(3.15%)	3.92%	2.93%	9.01%
William Blair - Gross	(5.91%)	-	-	-
William Blair - Net	(6.00%)	-	-	-
MSCI ACWI ex US	(1.25%)	4.50%	(1.78%)	5.49%

(1) MSCI EAFE through 6/30/2016 and MSCI World ex-US thereafter.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended December 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5-1/4 Years
Domestic Fixed Income				
Gross	(2.17%)	5.97%	4.74%	-
Net	(2.19%)	5.84%	4.61%	-
Blmbg Aggregate Index	(2.98%)	2.65%	3.03%	2.34%
Declaration Total Return - Net	(0.50%)	3.92%	4.11%	-
Libor-3 Month	0.23%	0.75%	0.42%	0.41%
Prudential - Gross	(2.91%)	5.77%	4.45%	-
Prudential - Net	(2.98%)	5.48%	4.17%	-
Blmbg Aggregate Index	(2.98%)	2.65%	3.03%	2.34%
Wells Capital - Gross	(2.23%)	8.29%	5.16%	-
Wells Capital - Net	(2.23%)	8.15%	4.99%	-
Blmbg Baa Credit 3% In	(2.74%)	7.92%	4.37%	4.70%
Western Asset - Gross	(2.65%)	4.95%	4.45%	-
Western Asset - Net	(2.68%)	4.81%	4.31%	-
Blmbg Aggregate Index	(2.98%)	2.65%	3.03%	2.34%
SSgA US Govt Credit Bd Idx - Gross	(3.39%)	3.03%	3.04%	-
SSgA US Govt Credit Bd Idx - Net	(3.40%)	3.00%	3.01%	-
Blmbg Govt/Credit Bd	(3.39%)	3.05%	3.04%	2.40%
Pooled Fixed Income - Net(1)	3.34%	9.75%	-	-
Blmbg Aggregate Index	(2.98%)	2.65%	3.03%	2.34%
Diversified Real Assets				
Gross	(3.91%)	2.84%	-	-
Net	(3.96%)	2.55%	-	-
Weighted Benchmark	(4.08%)	3.33%	0.13%	-
Western Asset TIPS - Gross	(5.65%)	2.87%	-	-
Western Asset TIPS - Net	(5.68%)	2.73%	-	-
Blmbg Gbl Inftn-Lnked	(5.35%)	3.91%	0.70%	1.73%
JP Morgan Infrastructure - Gross	1.52%	3.97%	-	-
JP Morgan Infrastructure - Net	1.40%	3.10%	-	-
CPI-W	(0.04%)	1.99%	0.90%	0.98%
Grosvenor Cust. Infrastructure - Net	0.27%	(5.61%)	-	-
CPI-W	(0.04%)	1.99%	0.90%	0.98%
Real Estate				
Gross	2.17%	8.93%	11.54%	-
Net	1.99%	8.18%	10.77%	-
NCREIF Total Index	1.73%	7.97%	11.02%	10.98%
Invesco Core Real Estate - Gross	2.17%	9.23%	12.08%	-
Invesco Core Real Estate - Net	2.08%	8.85%	11.68%	-
NCREIF Total Index	1.73%	7.97%	11.02%	10.98%
JP Morgan RE Inc & Growth - Gross	2.17%	8.81%	11.21%	-
JP Morgan RE Inc & Growth - Net	1.90%	7.63%	10.09%	-
NCREIF Total Index	1.73%	7.97%	11.02%	10.98%
Cash & Equivalents - Net				
90 Day Treasury Bills	0.08%	0.25%	0.09%	0.12%
	0.09%	0.33%	0.14%	0.11%
Total Fund				
Gross	0.62%	8.42%	4.63%	3.60%
Net	0.57%	8.15%	4.39%	3.43%
Target*	0.14%	6.39%	3.60%	2.52%

* Current Quarter Target = 35.0% Blmbg Aggregate Idx, 22.0% Russell 1000 Index, 20.0% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index and 5.0% NCREIF Total Index.

(1) Comprised of PIMCO DiSCO II and PIMCO Bravo II.

Parametric Clifton Large Cap Period Ended December 31, 2016

Investment Philosophy

Parametric Clifton utilizes equity futures to gain benchmark exposure in constructing the portfolio it believes provides the greatest likelihood of outperforming the index. In this construction the underlying cash portfolio is invested in a liquid, high quality short duration fixed income portfolio. Over market cycles excess return generated by the short duration portfolio, when added to the performance of futures is expected to allow the strategy to achieve 0.50% to 1.00% of gross excess annual performance.

Quarterly Summary and Highlights

- Parametric Clifton Large Cap's portfolio posted a 3.57% return for the quarter placing it in the 52 percentile of the CAI Large Capitalization group for the quarter and in the 33 percentile for the last year.
- Parametric Clifton Large Cap's portfolio underperformed the S&P 500 Index by 0.25% for the quarter and outperformed the S&P 500 Index for the year by 0.34%.

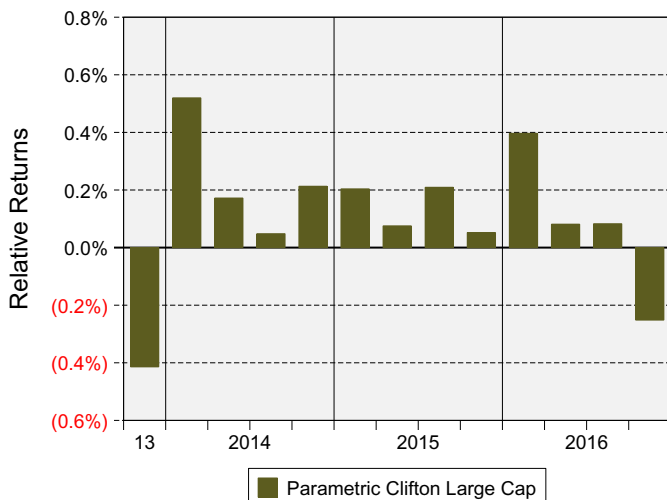
Quarterly Asset Growth

Beginning Market Value	\$174,507,357
Net New Investment	\$5,500,000
Investment Gains/(Losses)	\$6,403,113
Ending Market Value	\$186,410,471

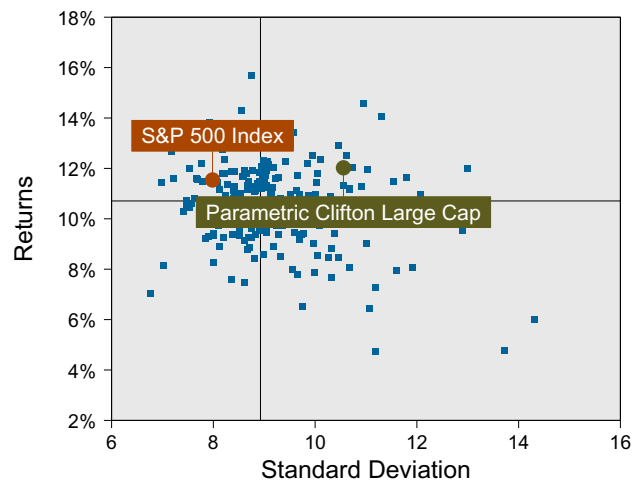
Performance vs CAI Large Capitalization (Gross)



Relative Return vs S&P 500 Index



CAI Large Capitalization (Gross) Annualized Three and One-Quarter Year Risk vs Return



L.A. Capital Period Ended December 31, 2016

Investment Philosophy

The LA Capital Structured portfolio is a large growth portfolio benchmarked to the Russell 1000 Growth Index. It is an active assignment meaning that it targets a 2% alpha and constrains its risk budget (tracking error) to 4% relative to the benchmark. LA Capital believes that investment results are driven by Investor Preferences and thus recognize that when preferences shift a different posture related to that factor is warranted.

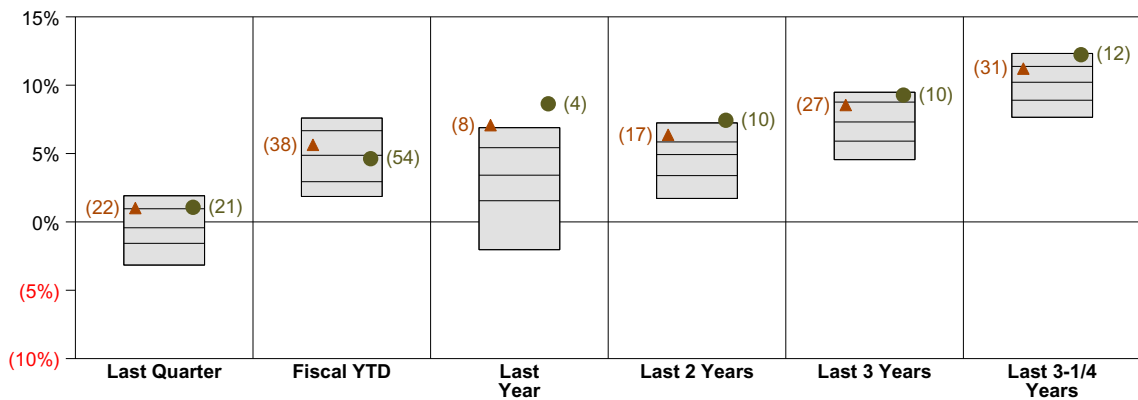
Quarterly Summary and Highlights

- L.A. Capital Large Cap Growth's portfolio posted a 1.07% return for the quarter placing it in the 21 percentile of the CAI Large Cap Growth group for the quarter and in the 4 percentile for the last year.
- L.A. Capital Large Cap Growth's portfolio outperformed the Russell 1000 Growth Index by 0.06% for the quarter and outperformed the Russell 1000 Growth Index for the year by 1.56%.

Quarterly Asset Growth

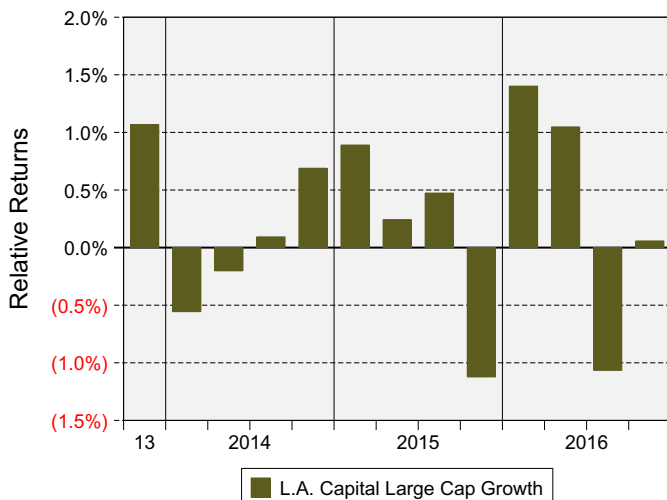
Beginning Market Value	\$262,427,293
Net New Investment	\$18,864,679
Investment Gains/(Losses)	\$2,775,617
Ending Market Value	\$284,067,588

Performance vs CAI Large Cap Growth (Gross)

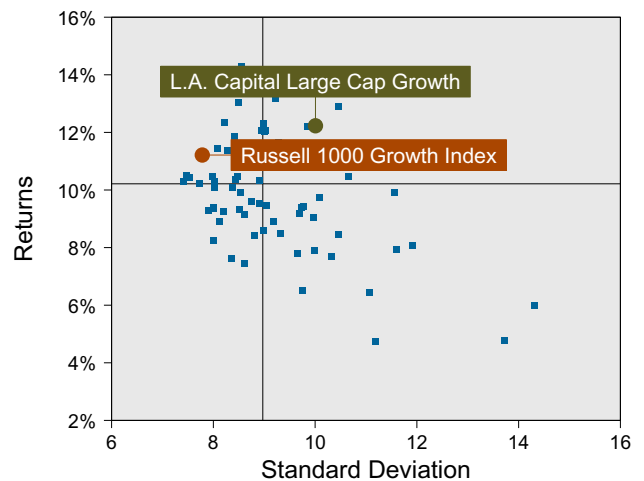


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 3-1/4 Years
10th Percentile	1.91	7.60	6.89	7.24	9.48	12.32
25th Percentile	0.96	6.67	5.43	5.85	8.76	11.37
Median	(0.43)	4.87	3.42	4.92	7.31	10.21
75th Percentile	(1.57)	2.94	1.55	3.39	5.91	8.90
90th Percentile	(3.16)	1.86	(2.03)	1.72	4.55	7.65
L.A. Capital Large Cap Growth	1.07	4.62	8.64	7.43	9.28	12.23
Russell 1000 Growth Index	1.01	5.64	7.08	6.37	8.55	11.21

Relative Return vs Russell 1000 Growth Index



CAI Large Cap Growth (Gross) Annualized Three and One-Quarter Year Risk vs Return



L.A. Capital Enhanced Period Ended December 31, 2016

Investment Philosophy

The LA Capital Enhanced portfolio is a large core portfolio benchmarked to the Russell 1000 Index. Characterized as an enhanced index assignment, its objective is to track the benchmark with lower variability. The pension portfolio began in August of 2000 and the insurance portfolio was initiated in April of 2004. Since October of 2006 a small portion of each of the two core accounts was allocated into the Large Cap Alpha Fund with intent to add incremental alpha to the assignment given that the information ratio was expected to be higher.

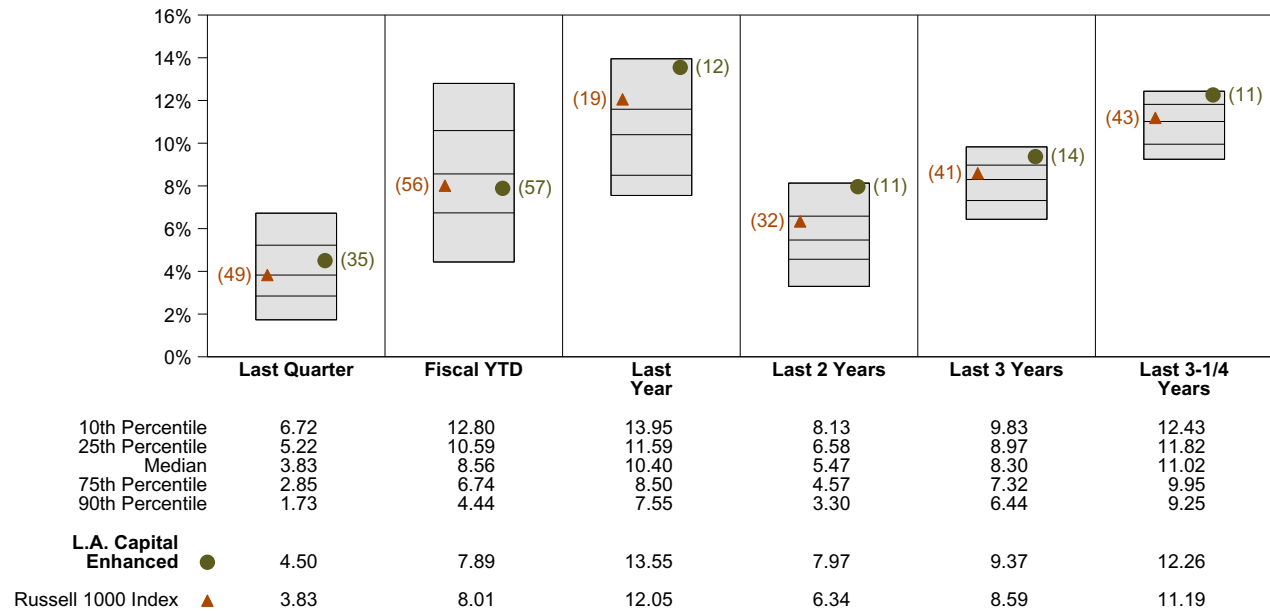
Quarterly Summary and Highlights

- L.A. Capital Enhanced's portfolio posted a 4.50% return for the quarter placing it in the 35 percentile of the CAI Large Cap Core group for the quarter and in the 12 percentile for the last year.
- L.A. Capital Enhanced's portfolio outperformed the Russell 1000 Index by 0.67% for the quarter and outperformed the Russell 1000 Index for the year by 1.49%.

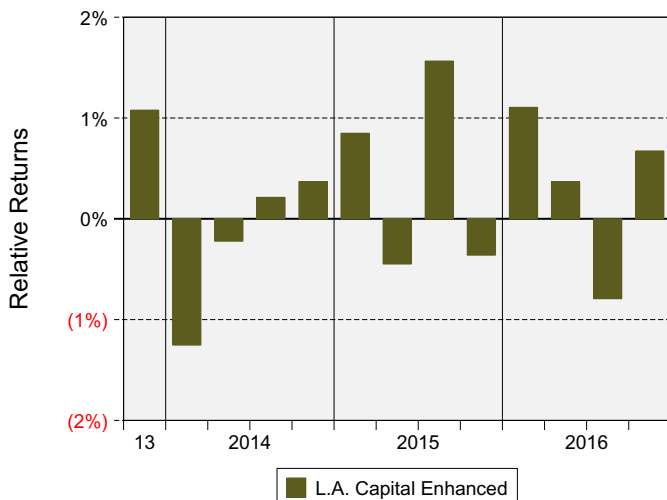
Quarterly Asset Growth

Beginning Market Value	\$175,125,746
Net New Investment	\$5,439,188
Investment Gains/(Losses)	\$7,984,279
Ending Market Value	\$188,549,213

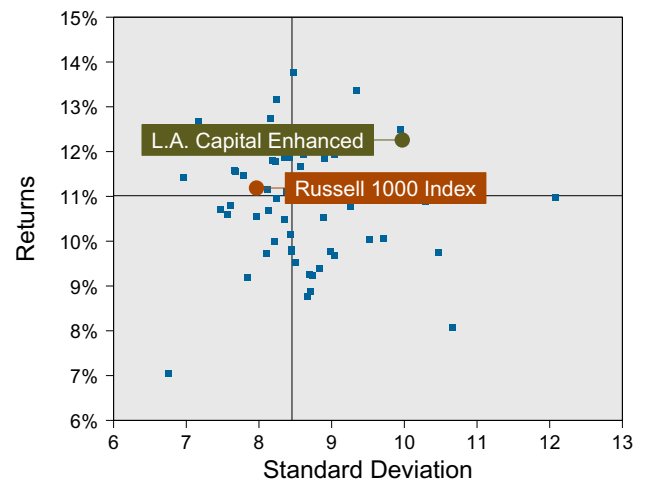
Performance vs CAI Large Cap Core (Gross)



Relative Return vs Russell 1000 Index



CAI Large Cap Core (Gross) Annualized Three and One-Quarter Year Risk vs Return



LSV Asset Management

Period Ended December 31, 2016

Investment Philosophy

The objective of LSV Asset Management's Large Cap Value Equity (U.S.) strategy is to outperform the Russell 1000 Value by at least 200 basis points (gross of fees) per annum over a 3-5 year period with a tracking error of approximately 4%. Their stock selection process is a quantitative approach that ranks a broad universe of stocks on a combination of value and momentum factors and seeks to invest approximately 100 stocks in the most attractive securities possible within strict risk parameters to control the portfolio's tracking error relative to the benchmark. The resulting portfolio is broadly diversified across industry groups and fully invested.

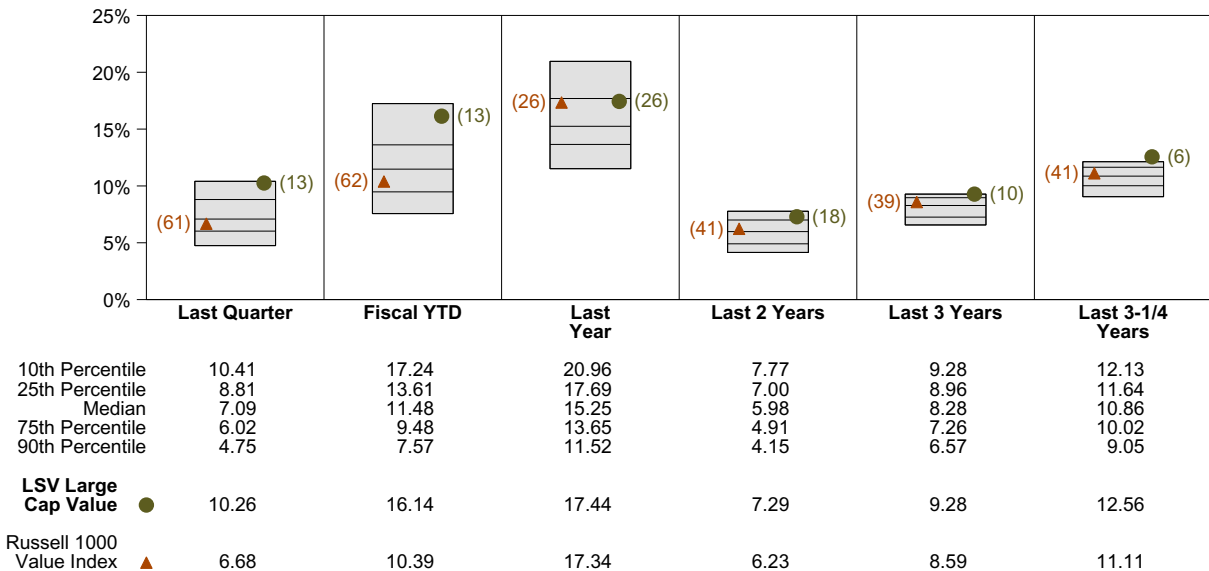
Quarterly Summary and Highlights

- LSV Large Cap Value's portfolio posted a 10.26% return for the quarter placing it in the 13 percentile of the CAI Large Cap Value group for the quarter and in the 26 percentile for the last year.
- LSV Large Cap Value's portfolio outperformed the Russell 1000 Value Index by 3.58% for the quarter and outperformed the Russell 1000 Value Index for the year by 0.10%.

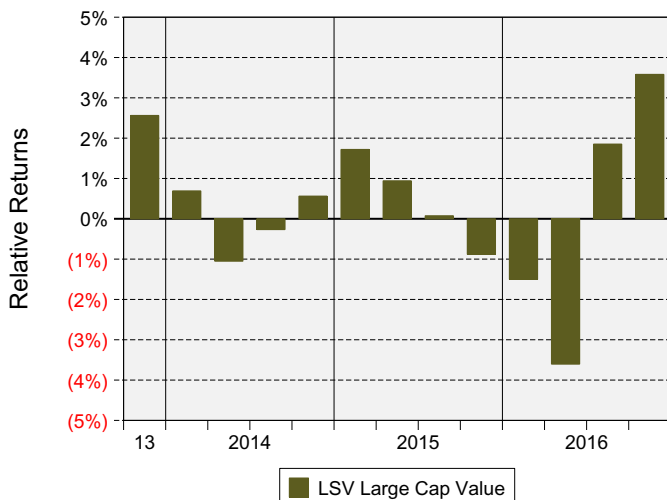
Quarterly Asset Growth

Beginning Market Value	\$261,240,875
Net New Investment	\$8,806,615
Investment Gains/(Losses)	\$27,082,432
Ending Market Value	\$297,129,923

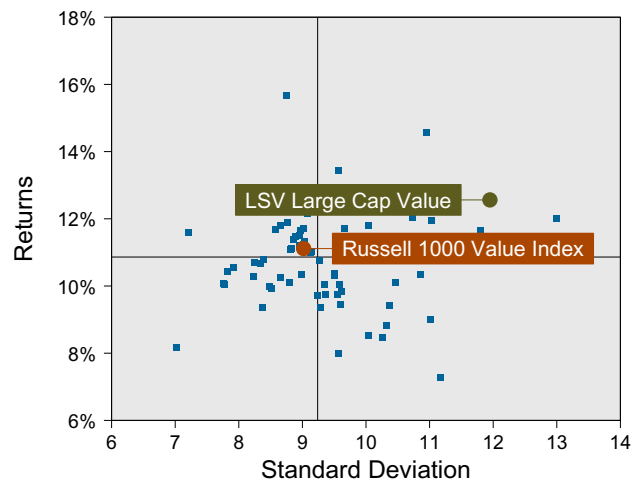
Performance vs CAI Large Cap Value (Gross)



Relative Return vs Russell 1000 Value Index



CAI Large Cap Value (Gross) Annualized Three and One-Quarter Year Risk vs Return



Parametric Clifton Small Cap Period Ended December 31, 2016

Investment Philosophy

Parametric Clifton utilizes equity futures to gain benchmark exposure in constructing the portfolio it believes provides the greatest likelihood of outperforming the index. In this construction the underlying cash portfolio is invested in a liquid, high quality short duration fixed income portfolio. Over market cycles excess return generated by the short duration portfolio, when added to the performance of futures is expected to allow the strategy to achieve 0.50% to 1.00% of gross excess annual performance.

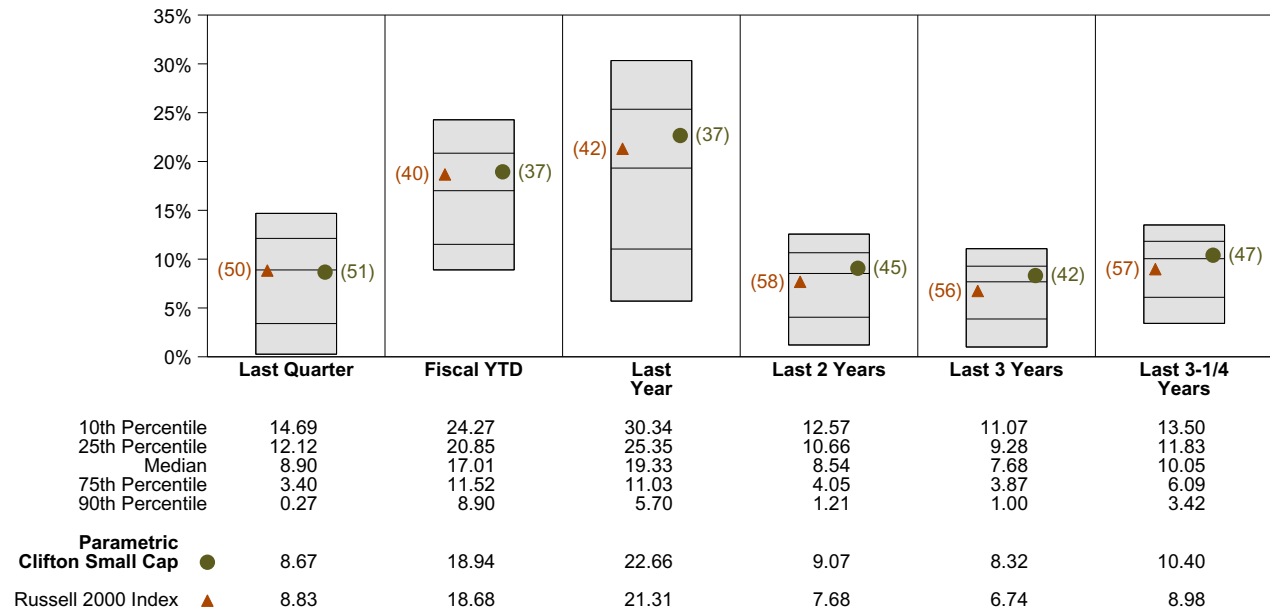
Quarterly Summary and Highlights

- Parametric Clifton Small Cap's portfolio posted a 8.67% return for the quarter placing it in the 51 percentile of the CAI Small Capitalization group for the quarter and in the 37 percentile for the last year.
- Parametric Clifton Small Cap's portfolio underperformed the Russell 2000 Index by 0.16% for the quarter and outperformed the Russell 2000 Index for the year by 1.35%.

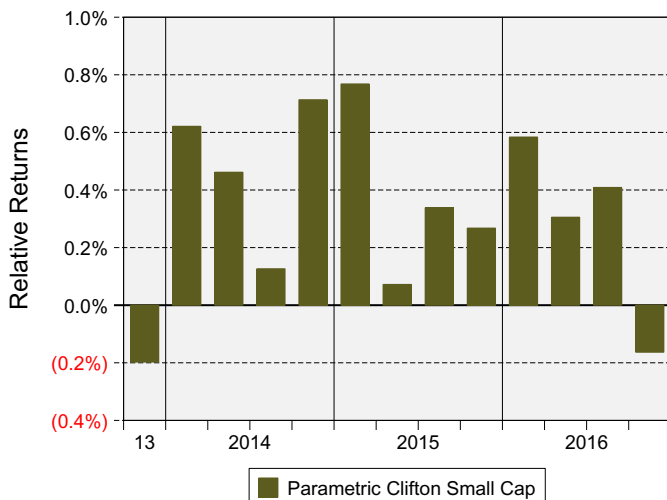
Quarterly Asset Growth

Beginning Market Value	\$182,399,262
Net New Investment	\$0
Investment Gains/(Losses)	\$15,814,763
Ending Market Value	\$198,214,025

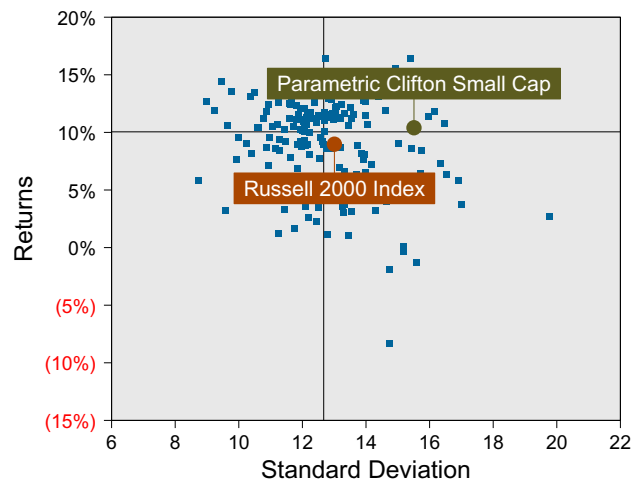
Performance vs CAI Small Capitalization (Gross)



Relative Return vs Russell 2000 Index



CAI Small Capitalization (Gross) Annualized Three and One-Quarter Year Risk vs Return



PIMCO RAE

Period Ended December 31, 2016

Investment Philosophy

Small company value equity portfolio utilizing the index strategy and philosophy described as the Enhanced RAFI US Small strategy which relies on portfolio weights derived from firm fundamentals (free cash flow, book equity value, total sales and gross dividend), instead of market capitalization. Additionally, the enhanced portfolio strategy uses a quality of earnings screening and a financial distress screening to augment portfolio returns and reduce portfolio volatility.

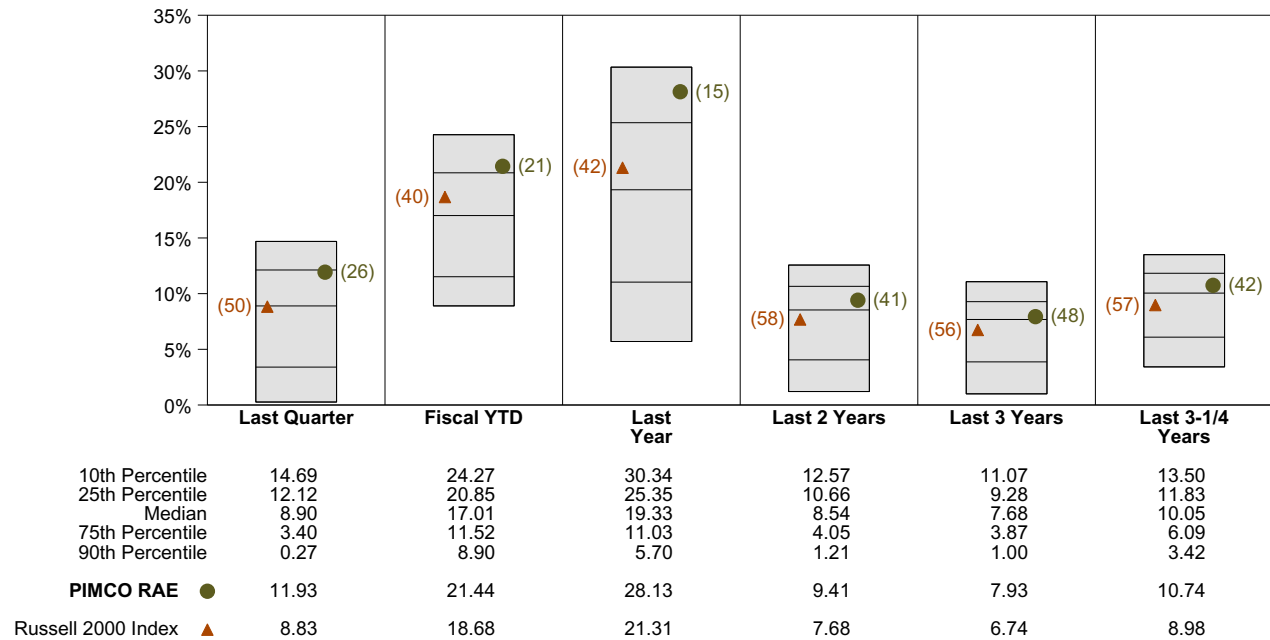
Quarterly Summary and Highlights

- PIMCO RAE's portfolio posted a 11.93% return for the quarter placing it in the 26 percentile of the CAI Small Capitalization group for the quarter and in the 15 percentile for the last year.
- PIMCO RAE's portfolio outperformed the Russell 2000 Index by 3.09% for the quarter and outperformed the Russell 2000 Index for the year by 6.82%.

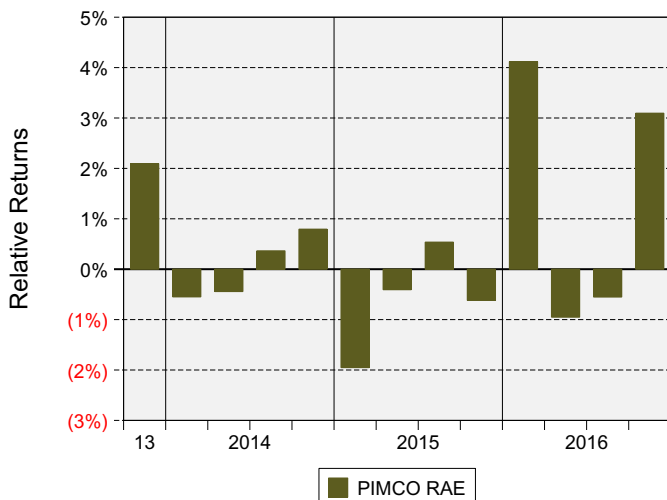
Quarterly Asset Growth

Beginning Market Value	\$153,194,911
Net New Investment	\$-98,424
Investment Gains/(Losses)	\$18,261,052
Ending Market Value	\$171,357,540

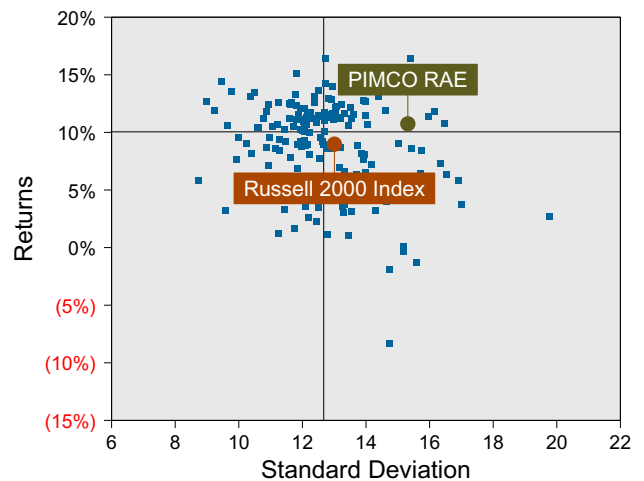
Performance vs CAI Small Capitalization (Gross)



Relative Return vs Russell 2000 Index



CAI Small Capitalization (Gross) Annualized Three and One-Quarter Year Risk vs Return



DFA Intl Small Cap Value Period Ended December 31, 2016

Investment Philosophy

The International Small Cap Value Portfolio invests in the stocks of small, non-US developed markets companies that Dimensional believes to be value stocks at the time of purchase. Specifically, it looks at companies that fall within the smallest 8-10% of each country's market capitalization, and who's shares have a high book value in relation to their market value (BtM). It does not invest in emerging markets.

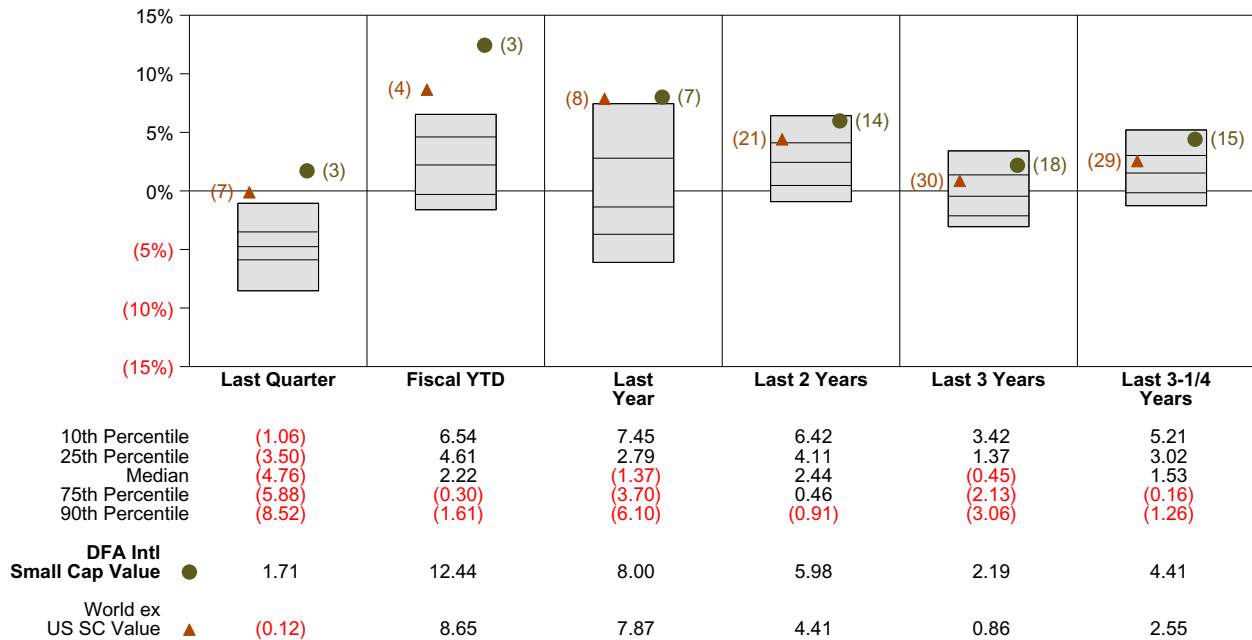
Quarterly Summary and Highlights

- DFA Intl Small Cap Value's portfolio posted a 1.71% return for the quarter placing it in the 3 percentile of the CAI International Small Cap Mut Funds group for the quarter and in the 7 percentile for the last year.
- DFA Intl Small Cap Value's portfolio outperformed the World ex US SC Value by 1.83% for the quarter and outperformed the World ex US SC Value for the year by 0.14%.

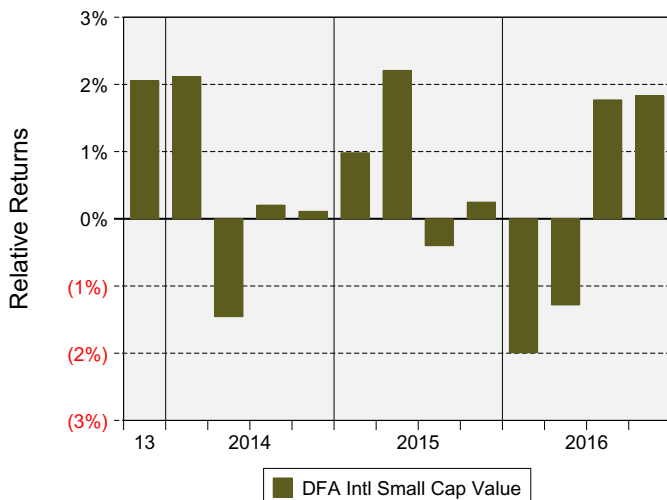
Quarterly Asset Growth

Beginning Market Value	\$80,376,607
Net New Investment	\$0
Investment Gains/(Losses)	\$1,378,291
Ending Market Value	\$81,754,898

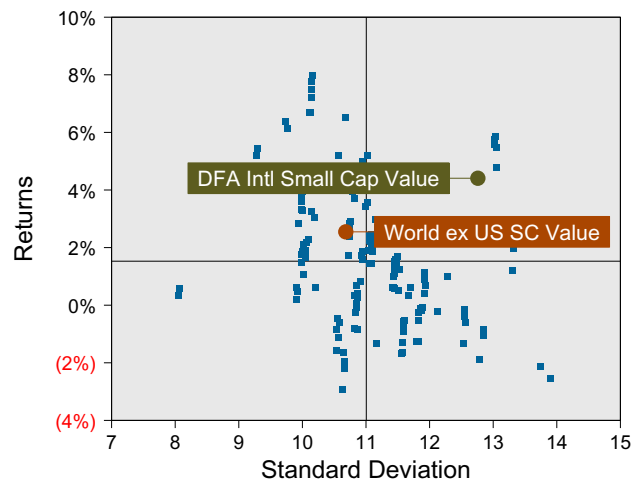
Performance vs CAI International Small Cap Mut Funds (Net)



Relative Return vs World ex US SC Value



CAI International Small Cap Mut Funds (Net) Annualized Three and One-Quarter Year Risk vs Return



LSV Intl Value

Period Ended December 31, 2016

Investment Philosophy

The objective of LSV Asset Management's International Large Cap Value strategy is to outperform the MSCI EAFE Index by at least 250 basis points (gross of fees) per annum over an annualized 3-5 year period with a tracking error of approximately 5-6%. Their stock selection process is a quantitative approach that ranks a broad universe of stocks on a combination of value and momentum factors and seeks to invest approximately 150 stocks in the most attractive securities possible within strict risk parameters to control the portfolio's tracking error relative to the benchmark. The resulting portfolio is broadly diversified across industry groups and fully invested. LSV weights countries at a neutral weight relative to the benchmark country weights. 50% of the portfolio is US dollar hedged.

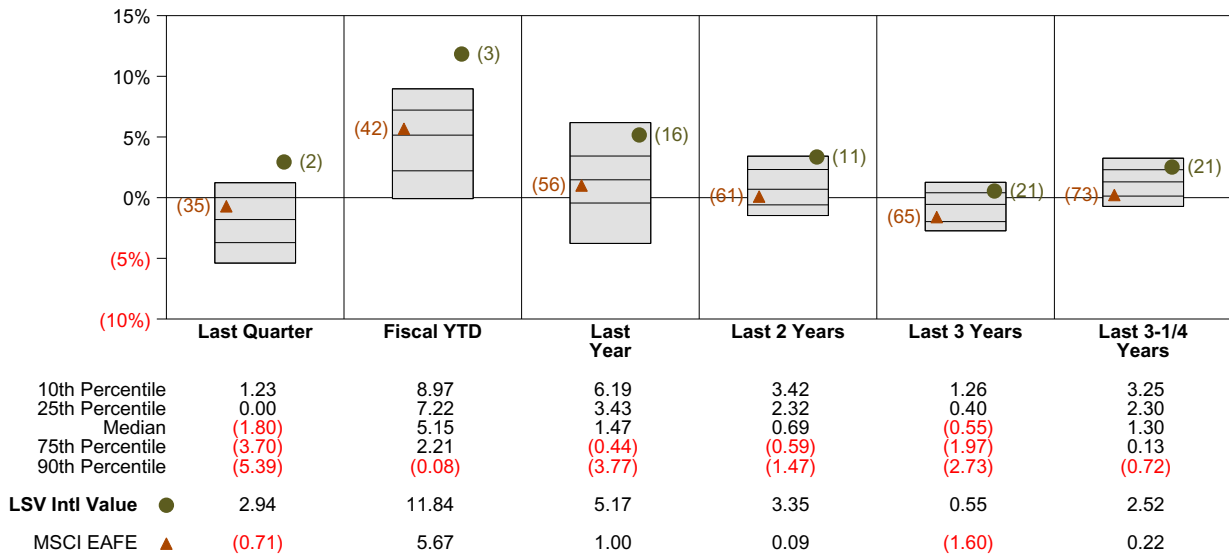
Quarterly Summary and Highlights

- LSV Intl Value's portfolio posted a 2.94% return for the quarter placing it in the 2 percentile of the CAI Non-U.S. Equity Style group for the quarter and in the 16 percentile for the last year.
- LSV Intl Value's portfolio outperformed the MSCI EAFE by 3.65% for the quarter and outperformed the MSCI EAFE for the year by 4.17%.

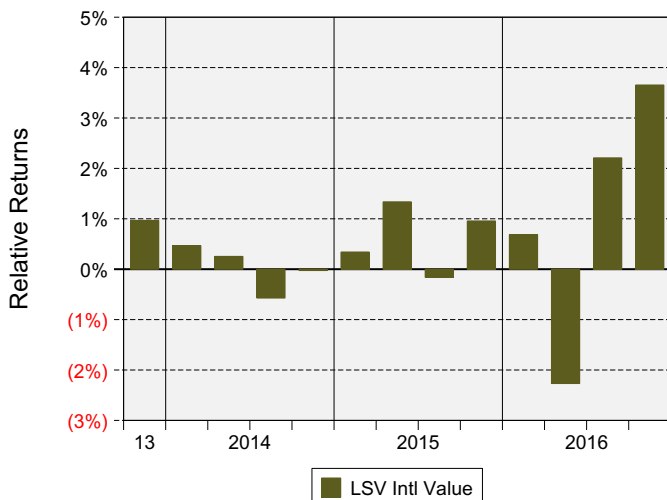
Quarterly Asset Growth

Beginning Market Value	\$328,398,806
Net New Investment	\$-323,263
Investment Gains/(Losses)	\$9,643,099
Ending Market Value	\$337,718,643

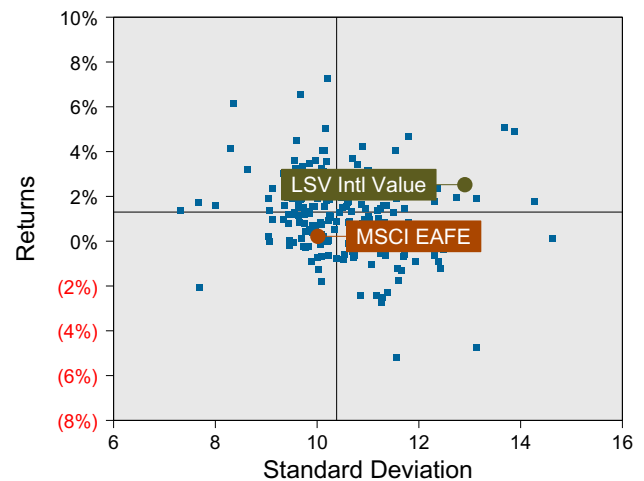
Performance vs CAI Non-U.S. Equity Style (Gross)



Relative Return vs MSCI EAFE



CAI Non-U.S. Equity Style (Gross) Annualized Three and One-Quarter Year Risk vs Return



Vanguard Intl Explorer Fund

Period Ended December 31, 2016

Investment Philosophy

Vanguard International Explorer Fund invests primarily in the equity securities of small-capitalization companies located outside the United States that the advisor believes offer the potential for long-term capital appreciation. The advisor considers, among other things, whether a company is likely to have above-average earnings growth, whether the company's securities are attractively valued, and whether the company has any proprietary advantages.

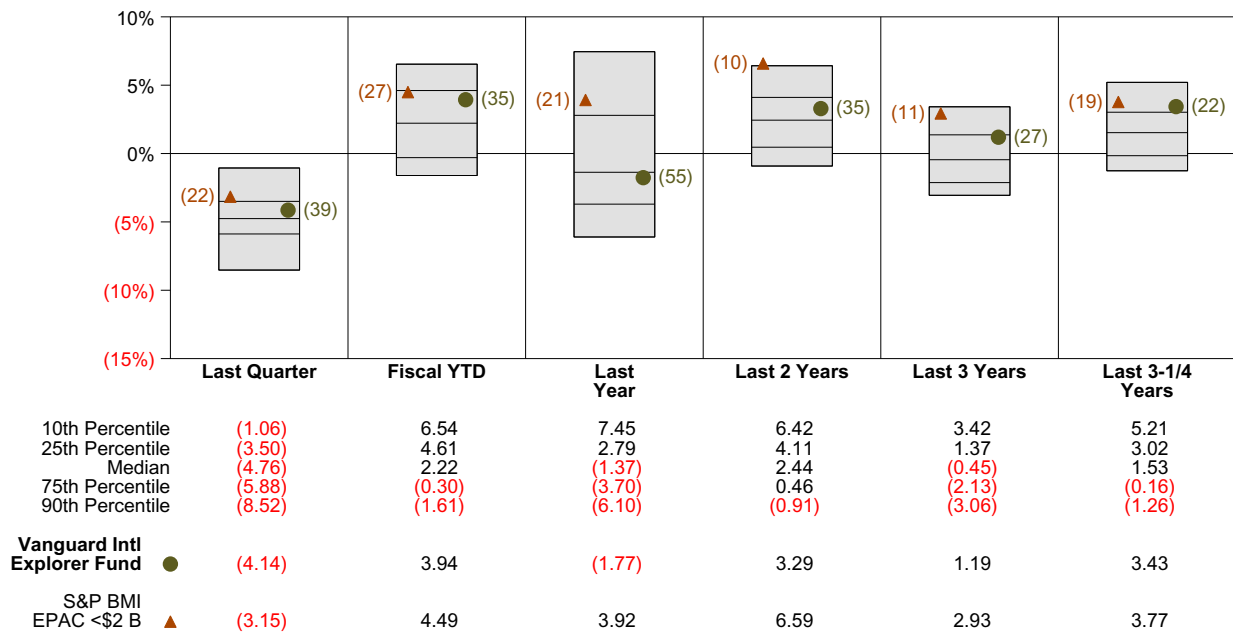
Quarterly Summary and Highlights

- Vanguard Intl Explorer Fund's portfolio posted a (4.14)% return for the quarter placing it in the 39 percentile of the CAI International Small Cap Mut Funds group for the quarter and in the 55 percentile for the last year.
- Vanguard Intl Explorer Fund's portfolio underperformed the S&P BMI EPAC <\$2 B by 0.99% for the quarter and underperformed the S&P BMI EPAC <\$2 B for the year by 5.69%.

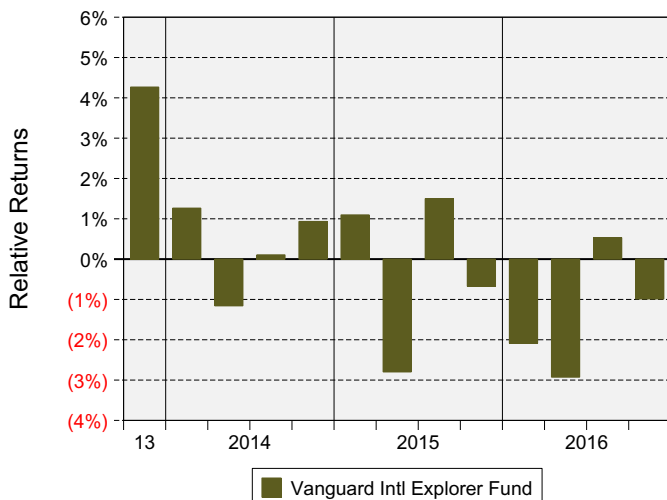
Quarterly Asset Growth

Beginning Market Value	\$80,264,153
Net New Investment	\$0
Investment Gains/(Losses)	\$-3,323,550
Ending Market Value	\$76,940,602

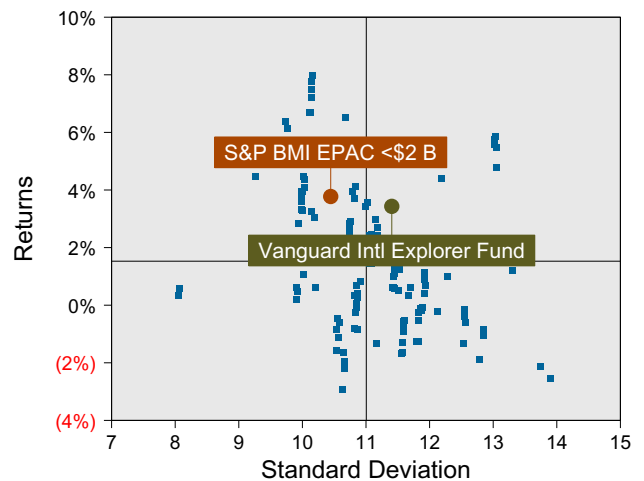
Performance vs CAI International Small Cap Mut Funds (Net)



Relative Return vs S&P BMI EPAC <\$2 B



CAI International Small Cap Mut Funds (Net) Annualized Three and One-Quarter Year Risk vs Return



William Blair

Period Ended December 31, 2016

Investment Philosophy

One of the basic investment tenets of William Blair & Company has been its focus on quality growth companies. They believe that investing in quality growth companies will generate above average results with generally less risk than the market. This opportunity exists because they believe the market underestimates the durability and rate of growth in companies that have the following characteristics: strong management with a unique vision, competitive advantages that prolong the duration and size of earnings growth, and conservative financing. Internationally, they believe that this philosophy can be combined with strategic flexibility in managing geographic exposure, capitalization, sector emphasis, and relative growth and valuation at the portfolio level in order to provide an appropriate degree of adaptability to cyclical conditions.

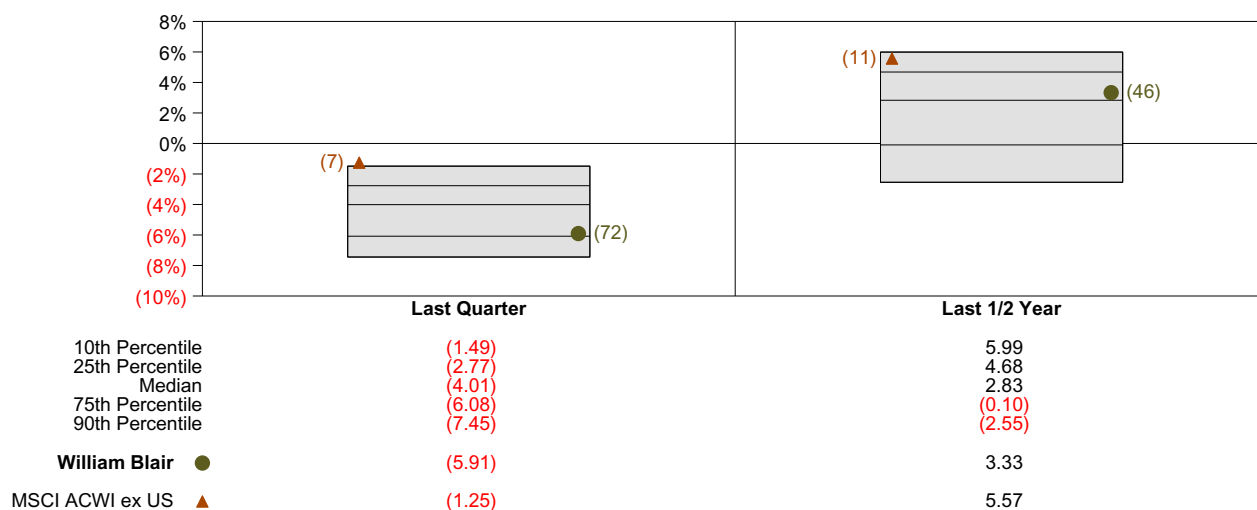
Quarterly Summary and Highlights

- William Blair's portfolio posted a (5.91)% return for the quarter placing it in the 72 percentile of the CAI Core+ Growth Int'l Eq Style group for the quarter and in the 46 percentile for the last one-half year.
- William Blair's portfolio underperformed the MSCI ACWI ex US by 4.65% for the quarter and underperformed the MSCI ACWI ex US for the one-half year by 2.24%.

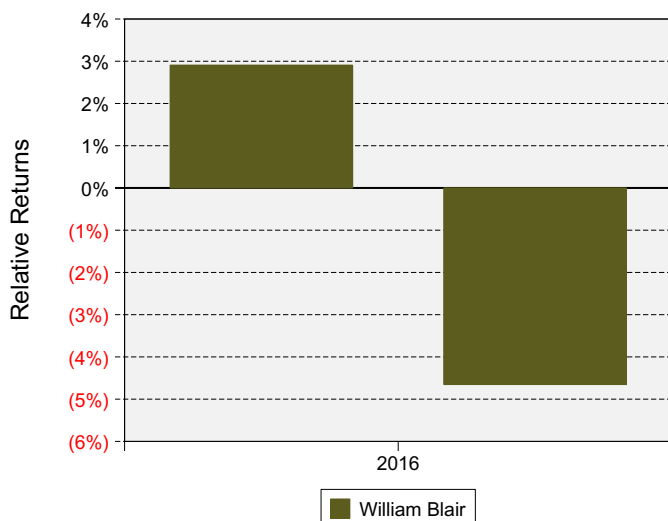
Quarterly Asset Growth

Beginning Market Value	\$328,634,690
Net New Investment	\$-322,465
Investment Gains/(Losses)	\$-19,403,174
Ending Market Value	\$308,909,051

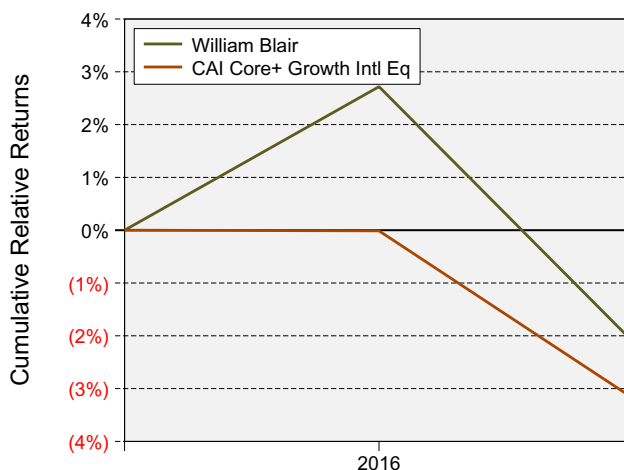
Performance vs CAI Core+ Growth Int'l Eq Style (Gross)



Relative Return vs MSCI ACWI ex US



Cumulative Returns vs MSCI ACWI ex US



Declaration Total Return Period Ended December 31, 2016

Investment Philosophy

The Fund's portfolio holdings consist primarily of RMBS issued by private sector companies (Non-Agency RMBS) and government agencies (Agency MBS) and CMBS issued by private sector companies. Agency MBS includes securities issued by the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac) and the Government National Mortgage Association (Ginnie Mae). Portfolio holdings may range from short tenure senior classes to stressed issues or subordinated securities with substantial risk of non-payment and correspondingly higher yields. Smaller portfolio allocations may include consumer asset-backed securities (ABS), or other structured credit securities and corporate bonds. As a diversification strategy and a potential hedge to credit risk, the Fund may invest in securities which tend to benefit from slow mortgage prepayments and economic growth, such as interest only (IO) MBS.

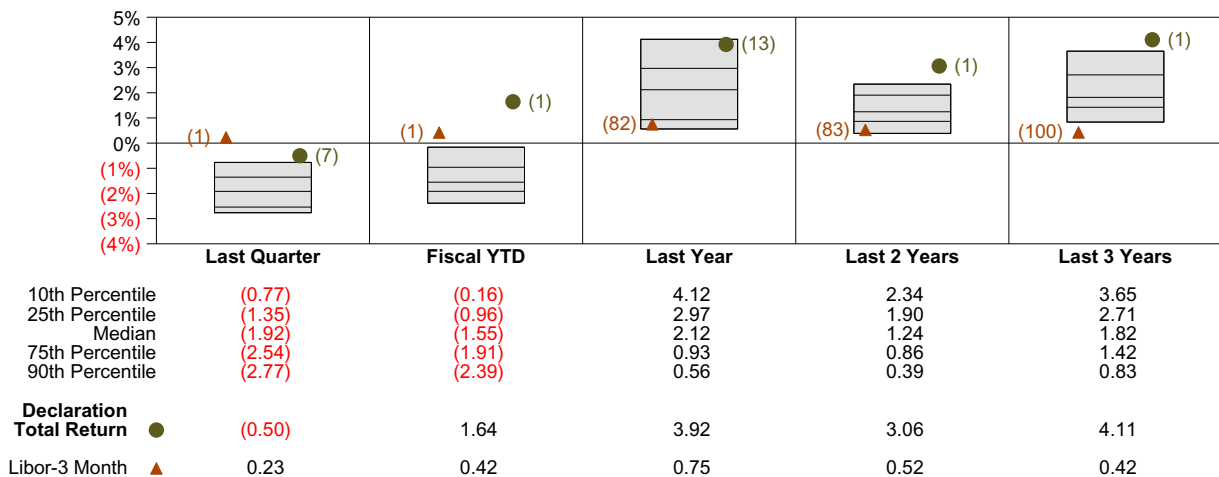
Quarterly Summary and Highlights

- Declaration Total Return's portfolio posted a (0.50)% return for the quarter placing it in the 7 percentile of the CAI Intermediate Fixed Income Mut Funds group for the quarter and in the 13 percentile for the last year.
- Declaration Total Return's portfolio underperformed the Libor-3 Month by 0.73% for the quarter and outperformed the Libor-3 Month for the year by 3.17%.

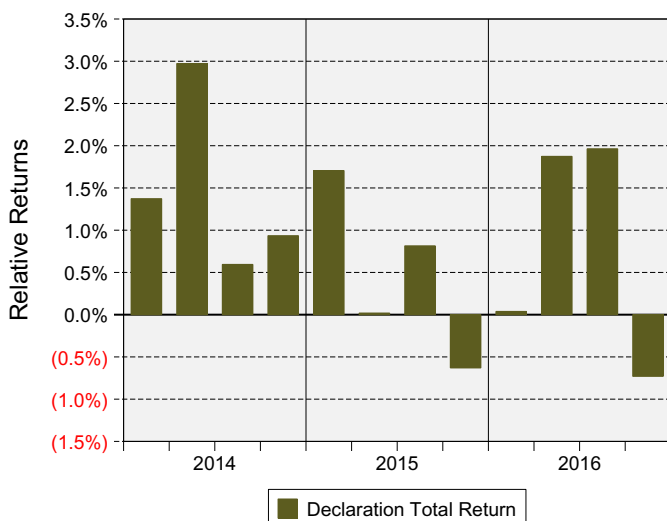
Quarterly Asset Growth

Beginning Market Value	\$105,305,428
Net New Investment	\$0
Investment Gains/(Losses)	\$-528,859
Ending Market Value	\$104,776,569

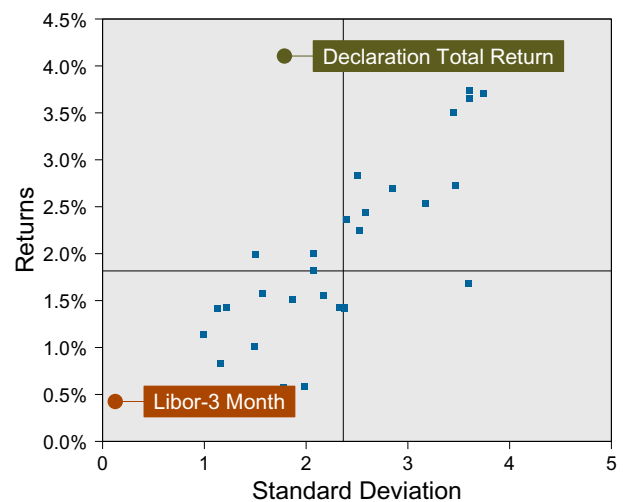
Performance vs CAI Intermediate Fixed Income Mut Funds (Net)



Relative Return vs Libor-3 Month



CAI Intermediate Fixed Income Mut Funds (Net) Annualized Three Year Risk vs Return



Prudential Period Ended December 31, 2016

Investment Philosophy

The core plus fixed income account is a multi-sector strategy that is diversified across a broad range of fixed income sectors, including Treasuries, agencies, mortgage-backed securities, structured product (asset-backed securities, commercial mortgage-backed securities), investment grade corporate bonds, high yield bonds, bank loans and international debt. The primary sources of excess return are sector allocation and security selection, with duration and yield curve less of a focus.

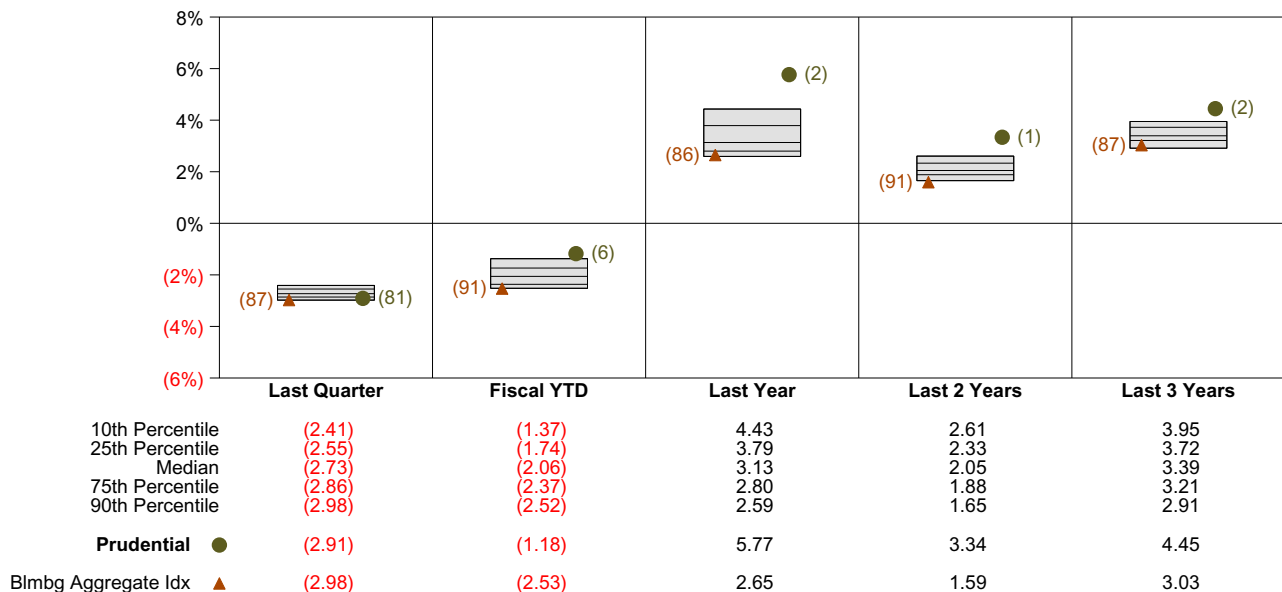
Quarterly Summary and Highlights

- Prudential's portfolio posted a (2.91)% return for the quarter placing it in the 81 percentile of the CAI Core Bond Fixed Income group for the quarter and in the 2 percentile for the last year.
- Prudential's portfolio outperformed the Blmbg Aggregate Idx by 0.06% for the quarter and outperformed the Blmbg Aggregate Idx for the year by 3.12%.

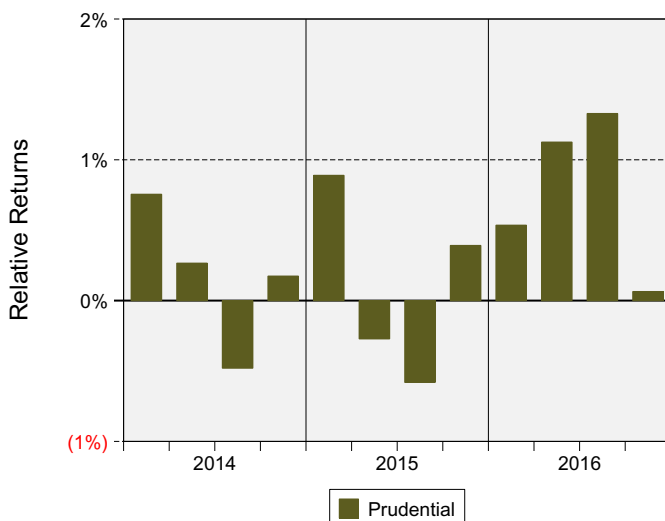
Quarterly Asset Growth

Beginning Market Value	\$158,090,200
Net New Investment	\$-105,475
Investment Gains/(Losses)	\$-4,601,890
Ending Market Value	\$153,382,834

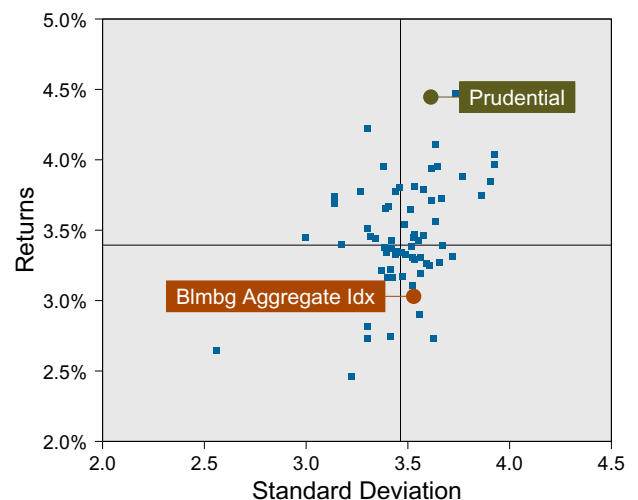
Performance vs CAI Core Bond Fixed Income (Gross)



Relative Return vs Blmbg Aggregate Idx



CAI Core Bond Fixed Income (Gross) Annualized Three Year Risk vs Return



SSgA US Govt Credit Bd Idx Period Ended December 31, 2016

Investment Philosophy

The Fund seeks an investment return that approximates as closely as practicable, before expenses, the performance of the Barclays Capital U.S. Government/Credit Bond Index over the long term.

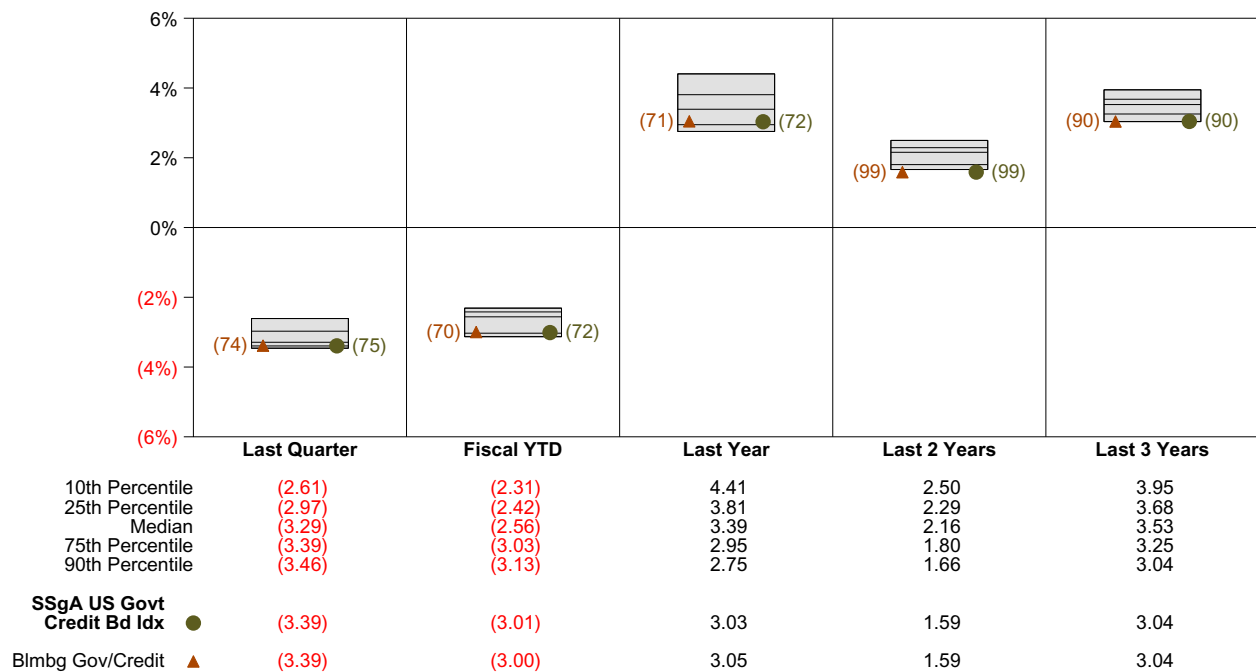
Quarterly Summary and Highlights

- SSgA US Govt Credit Bd Idx's portfolio posted a (3.39)% return for the quarter placing it in the 75 percentile of the CAI Government/Credit group for the quarter and in the 72 percentile for the last year.
- SSgA US Govt Credit Bd Idx's portfolio underperformed the Blmbg Gov/Credit by 0.01% for the quarter and underperformed the Blmbg Gov/Credit for the year by 0.01%.

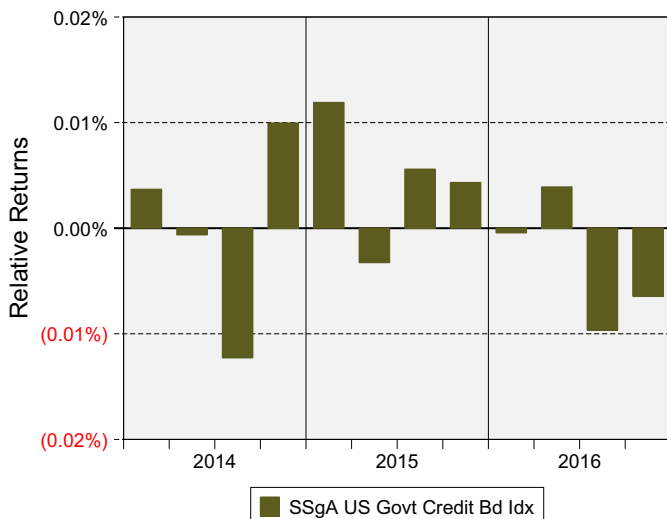
Quarterly Asset Growth

Beginning Market Value	\$194,004,154
Net New Investment	\$-16,574
Investment Gains/(Losses)	\$-6,582,070
Ending Market Value	\$187,405,511

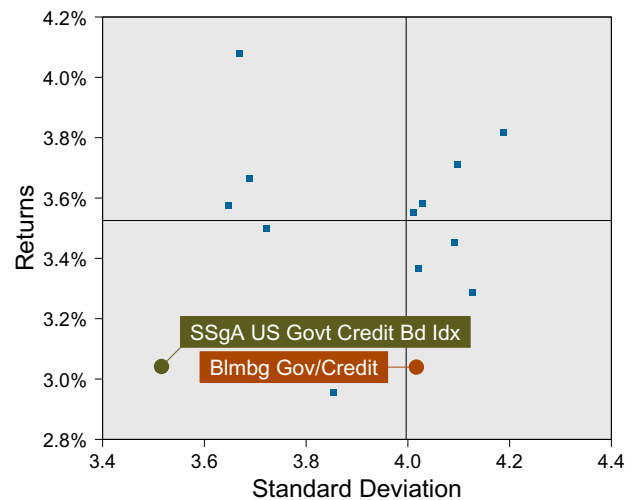
Performance vs CAI Government/Credit (Gross)



Relative Return vs Blmbg Gov/Credit



CAI Government/Credit (Gross) Annualized Three Year Risk vs Return



Wells Capital

Period Ended December 31, 2016

Investment Philosophy

The Medium Quality Credit fixed income strategy is designed to maximize total return from the high-grade corporate bond market while maintaining a strategic allocation to the BBB portion of the high yield market. The investment process for this fund starts with a "top-down" strategy. Security selection is determined by in-depth credit research, holding that in-depth knowledge of industries, companies, and their management teams can help identify credit trends that can lead to investment opportunities. Furthermore, a disciplined relative value framework is applied to help determine the optimal position to invest within an industry and within an individual issuer's capital structure.

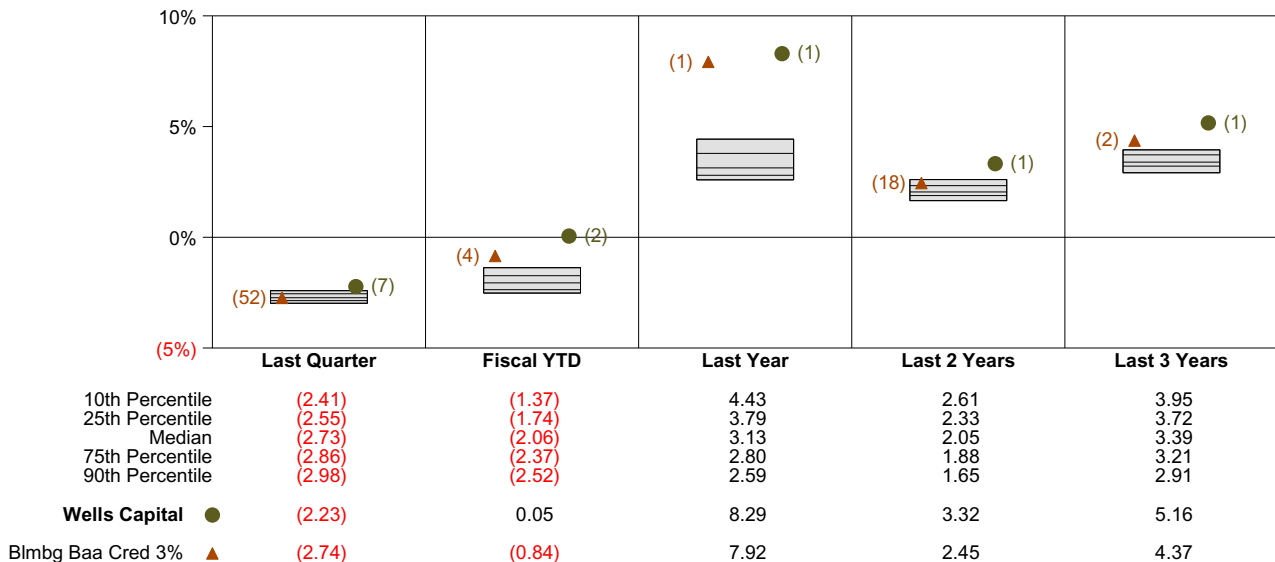
Quarterly Summary and Highlights

- Wells Capital's portfolio posted a (2.23)% return for the quarter placing it in the 7 percentile of the CAI Core Bond Fixed Income group for the quarter and in the 1 percentile for the last year.
- Wells Capital's portfolio outperformed the Blmbg Baa Cred 3% by 0.51% for the quarter and outperformed the Blmbg Baa Cred 3% for the year by 0.37%.

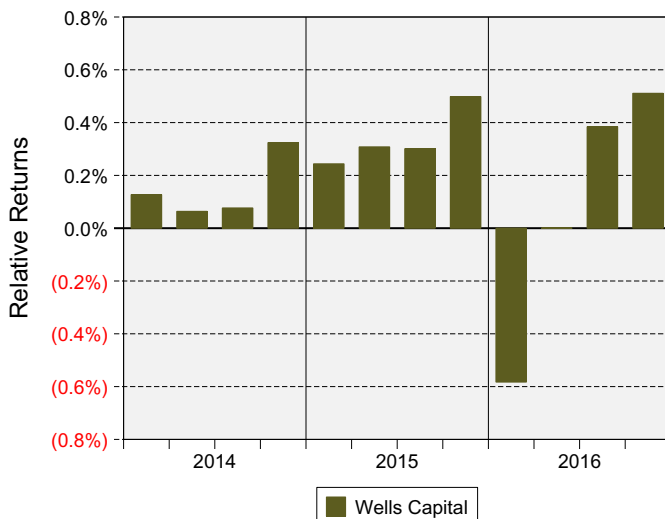
Quarterly Asset Growth

Beginning Market Value	\$436,246,947
Net New Investment	\$0
Investment Gains/(Losses)	\$-9,715,166
Ending Market Value	\$426,531,780

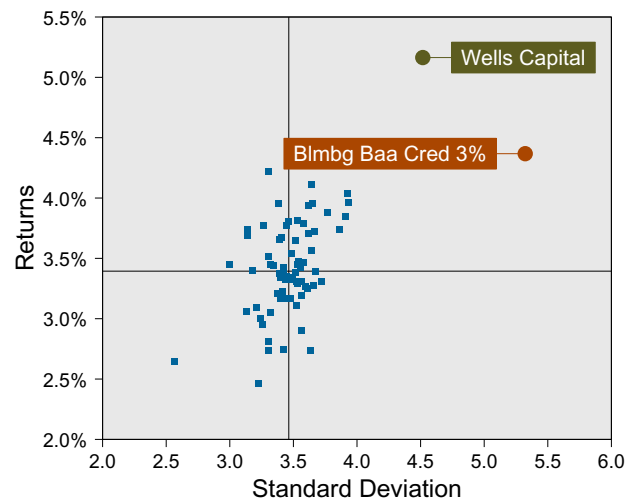
Performance vs CAI Core Bond Fixed Income (Gross)



Relative Return vs Blmbg Baa Cred 3%



CAI Core Bond Fixed Income (Gross) Annualized Three Year Risk vs Return



Western Asset Management Company

Period Ended December 31, 2016

Investment Philosophy

Western Asset designs this portfolio using all major fixed-income sectors with a bias towards non-Treasuries, especially corporate, mortgage-backed and asset-backed securities. Value can be added through sector rotation, issue selection, duration and term structure weighting.

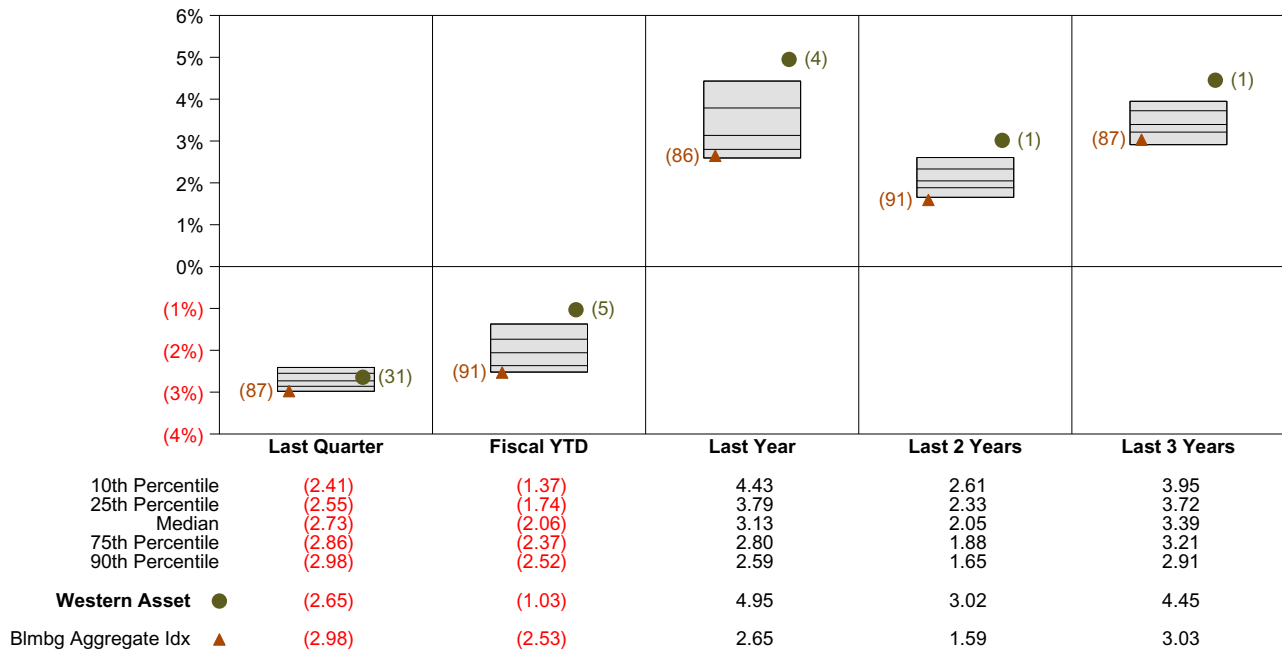
Quarterly Summary and Highlights

- Western Asset's portfolio posted a (2.65)% return for the quarter placing it in the 31 percentile of the CAI Core Bond Fixed Income group for the quarter and in the 4 percentile for the last year.
- Western Asset's portfolio outperformed the Blmbg Aggregate Idx by 0.33% for the quarter and outperformed the Blmbg Aggregate Idx for the year by 2.30%.

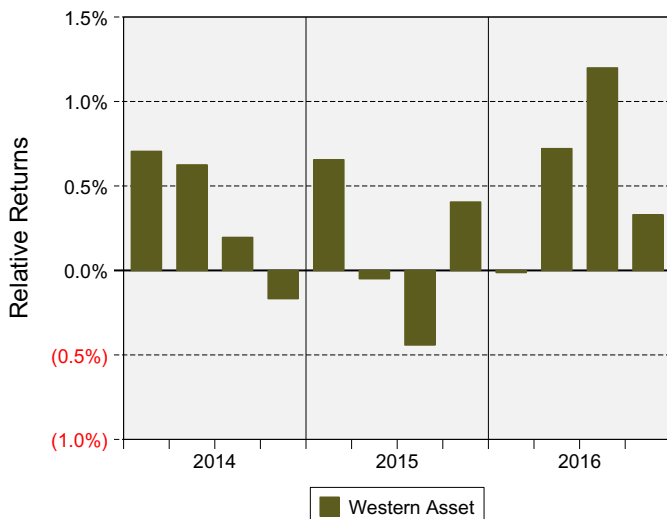
Quarterly Asset Growth

Beginning Market Value	\$437,738,640
Net New Investment	\$-145,856
Investment Gains/(Losses)	\$-11,577,290
Ending Market Value	\$426,015,493

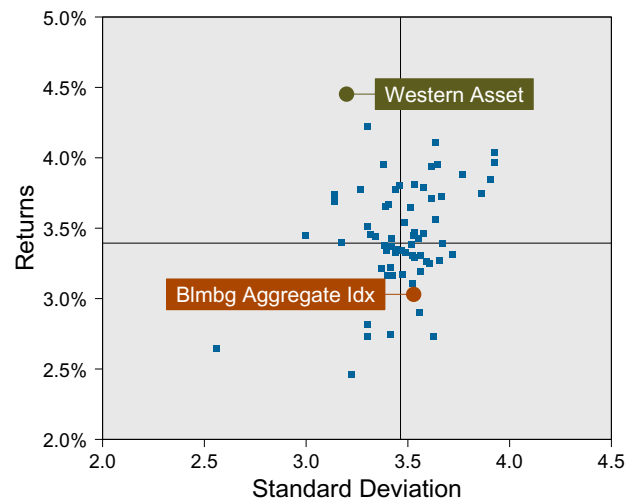
Performance vs CAI Core Bond Fixed Income (Gross)



Relative Return vs Blmbg Aggregate Idx



CAI Core Bond Fixed Income (Gross) Annualized Three Year Risk vs Return



Western Asset TIPS Period Ended December 31, 2016

Investment Philosophy

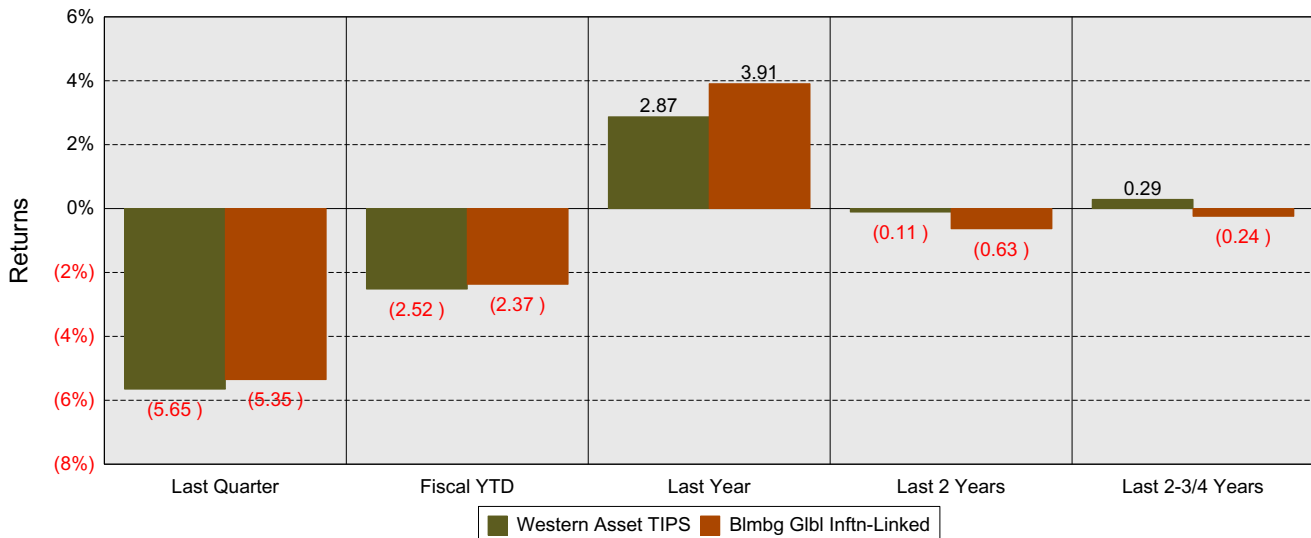
Western Asset's Global Inflation-Linked composite includes portfolios that employ an active, team-managed investment approach around a long-term, value-oriented investment philosophy. Constructed primarily of inflation-indexed securities, these portfolios use diversified strategies in seeking to add value while minimizing risk. Value can be added through country selection, term structure, issue selection, duration management and currency management.

Quarterly Summary and Highlights

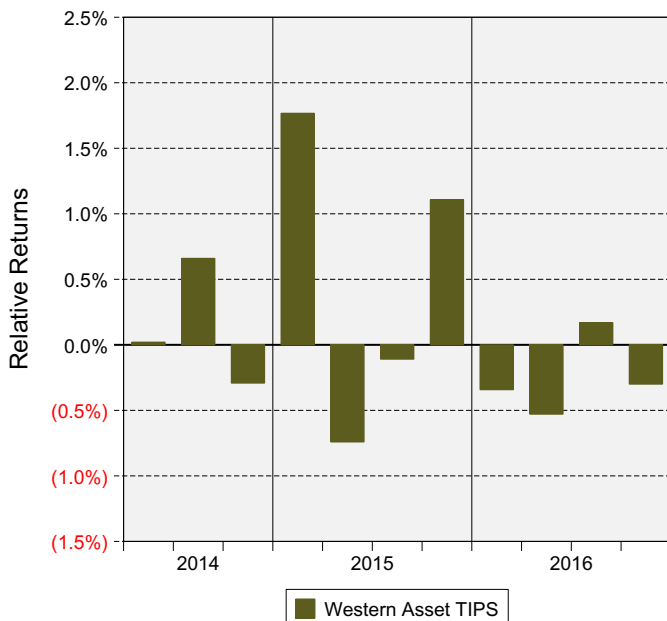
- Western Asset TIPS's portfolio underperformed the Blmbg Gbl Inftn-Linked by 0.30% for the quarter and underperformed the Blmbg Gbl Inftn-Linked for the year by 1.04%.

Quarterly Asset Growth

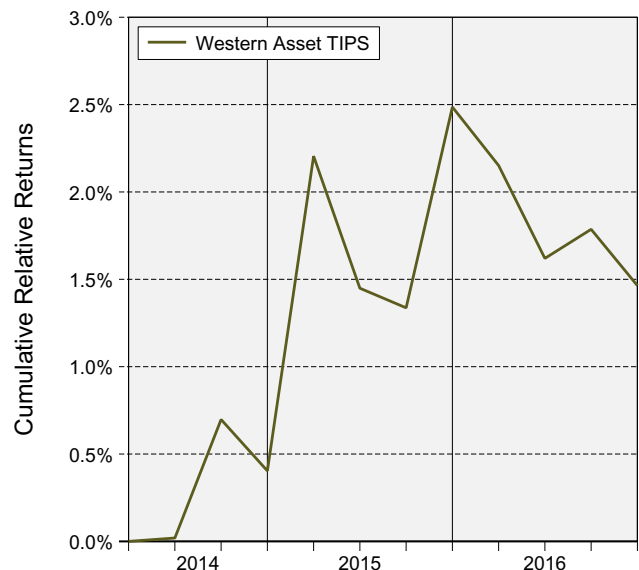
Beginning Market Value	\$293,877,868
Net New Investment	\$9,901,185
Investment Gains/(Losses)	\$-16,437,507
Ending Market Value	\$287,341,546



Relative Return vs Blmbg Gbl Inftn-Linked



Cumulative Returns vs Blmbg Gbl Inftn-Linked



JP Morgan Infrastructure Period Ended December 31, 2016

Investment Philosophy

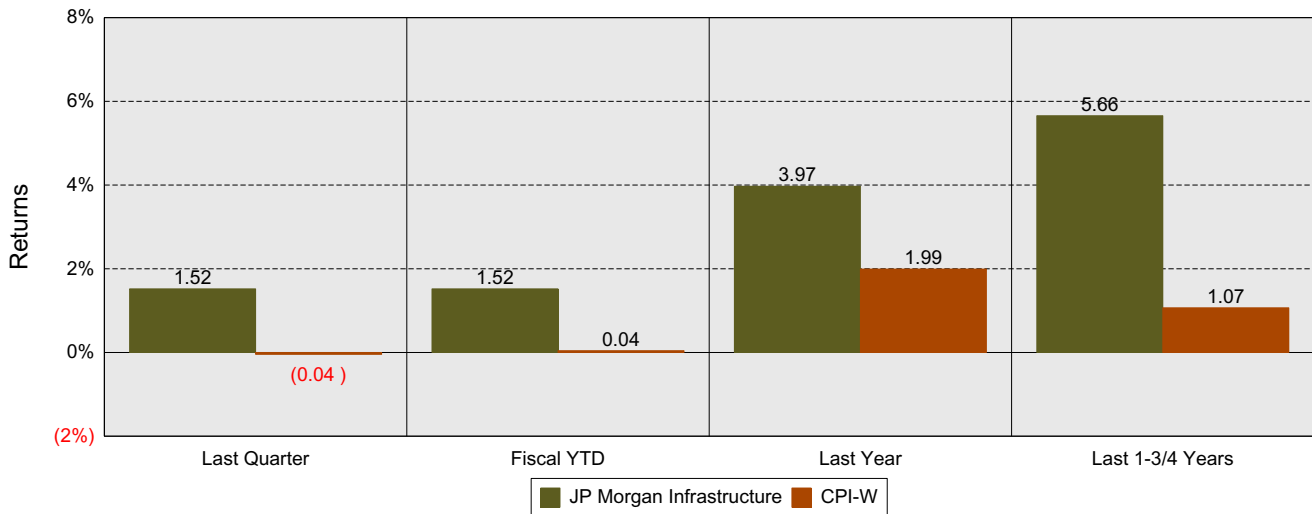
The only open-ended private commingled infrastructure fund in the U.S, the JPMorgan Infrastructure Investments Fund invests in stabilized assets in OECD countries with selected value-added opportunities, across infrastructure industry sub-sectors, including: toll roads, bridges and tunnels; oil and gas pipelines; electricity transmission and distribution facilities; contracted power generation assets; water distribution; waste-water collection and processing; railway lines and rapid rail links; and seaports and airports.

Quarterly Summary and Highlights

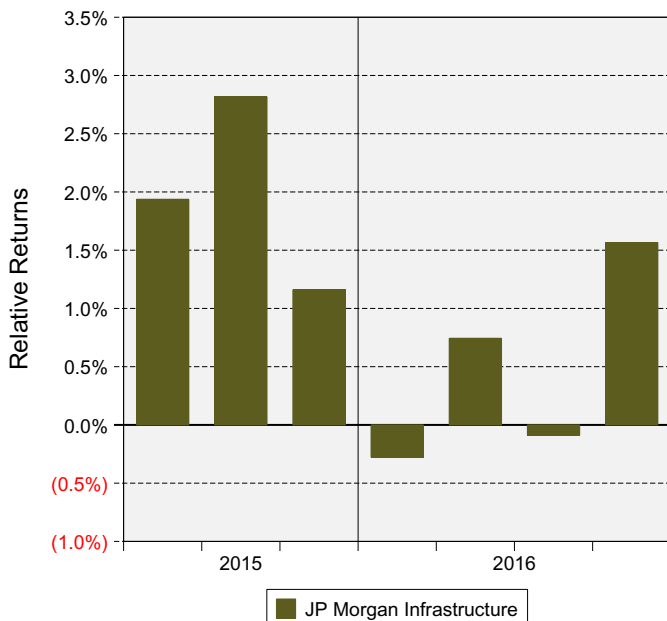
- JP Morgan Infrastructure's portfolio outperformed the CPI-W by 1.56% for the quarter and outperformed the CPI-W for the year by 1.98%.

Quarterly Asset Growth

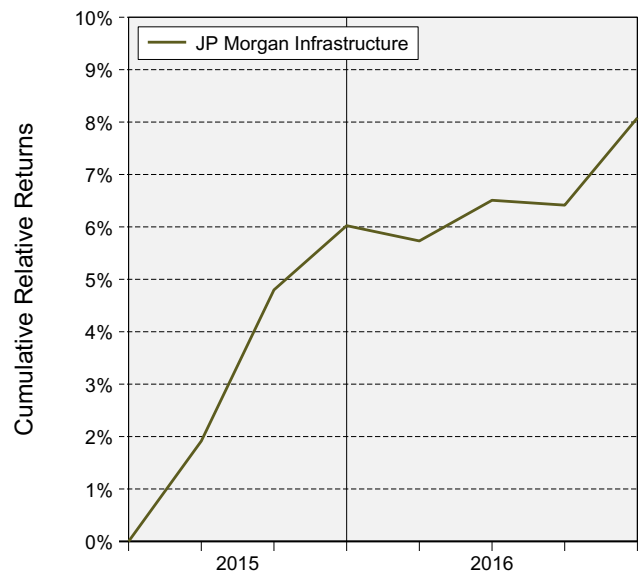
Beginning Market Value	\$80,265,969
Net New Investment	\$7,355,567
Investment Gains/(Losses)	\$1,325,986
Ending Market Value	\$88,947,522



Relative Return vs CPI-W



Cumulative Returns vs CPI-W



Grosvenor Cust. Infrastructure Period Ended December 31, 2016

Investment Philosophy

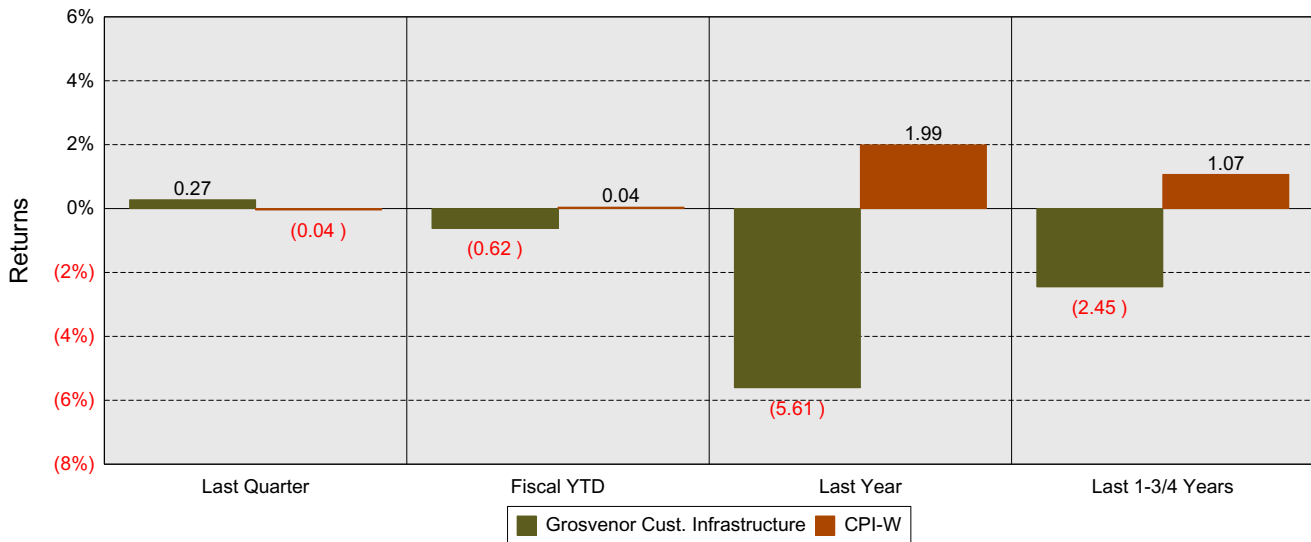
The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified portfolio of primary core and core plus infrastructure funds (30%), co-investments (40%) and opportunistic secondary fund purchases (30%).

Quarterly Summary and Highlights

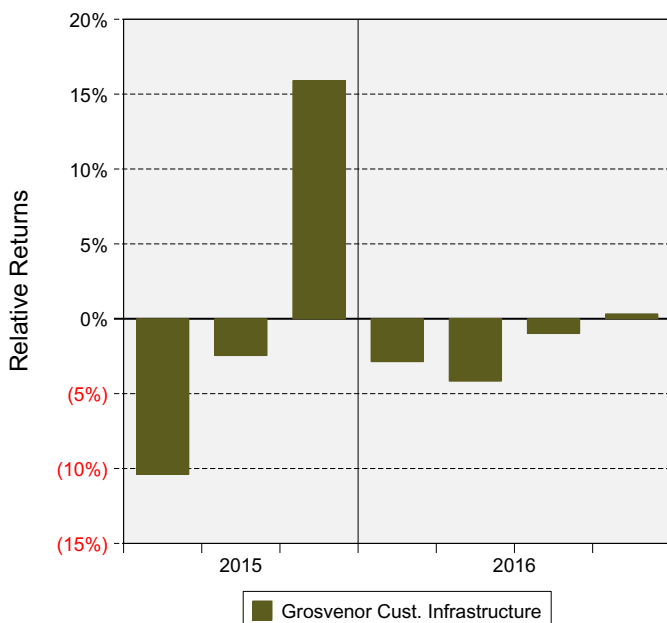
- Grosvenor Cust. Infrastructure's portfolio outperformed the CPI-W by 0.32% for the quarter and underperformed the CPI-W for the year by 7.60%.

Quarterly Asset Growth

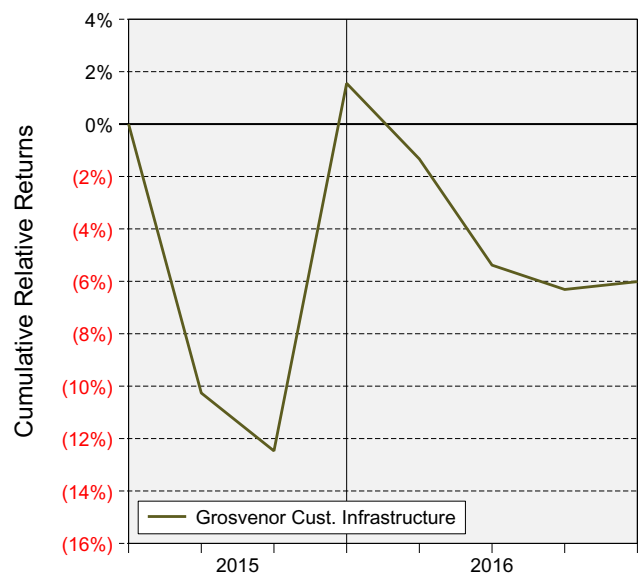
Beginning Market Value	\$9,295,111
Net New Investment	\$4,813,162
Investment Gains/(Losses)	\$30,659
Ending Market Value	\$14,138,932



Relative Return vs CPI-W



Cumulative Returns vs CPI-W



Invesco Core Real Estate Period Ended December 31, 2016

Investment Philosophy

IRE's investment philosophy is comprised of two fundamental principles: (1) maximize the predictability and consistency of investment returns and (2) minimize the risk of capital loss. This philosophy forms the cornerstone of the company's real estate investment philosophy.

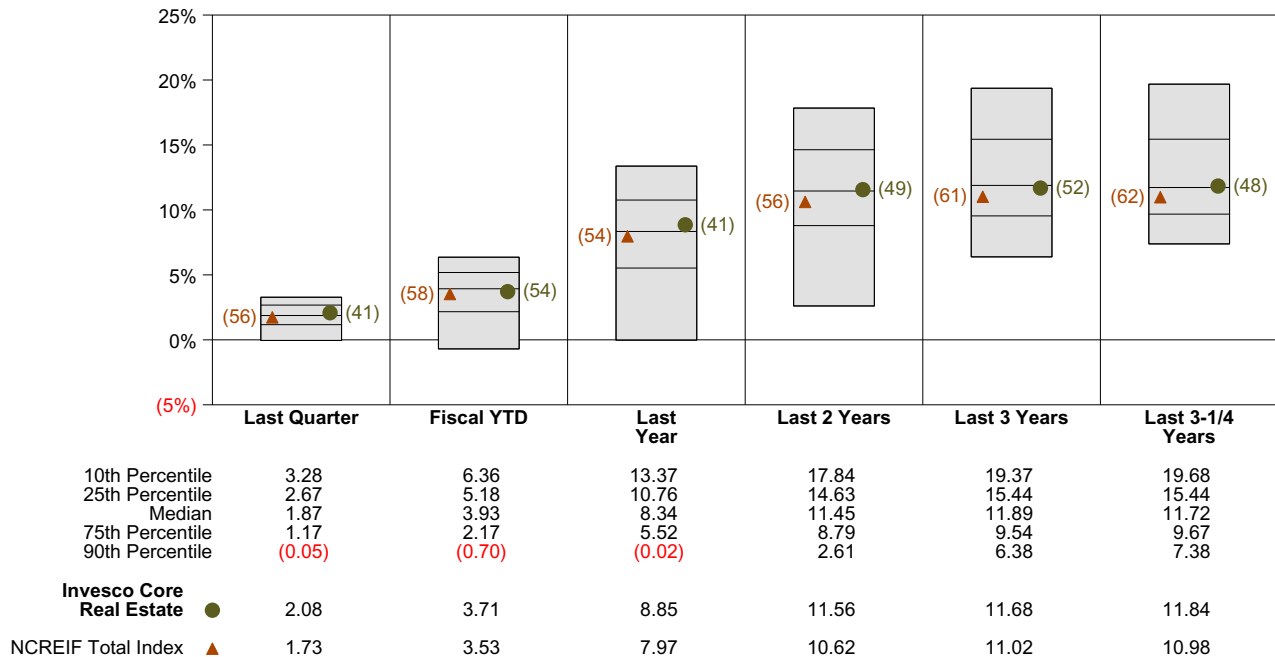
Quarterly Summary and Highlights

- Invesco Core Real Estate's portfolio posted a 2.08% return for the quarter placing it in the 41 percentile of the CAI Total Real Estate Database group for the quarter and in the 41 percentile for the last year.
- Invesco Core Real Estate's portfolio outperformed the NCREIF Total Index by 0.35% for the quarter and outperformed the NCREIF Total Index for the year by 0.89%.

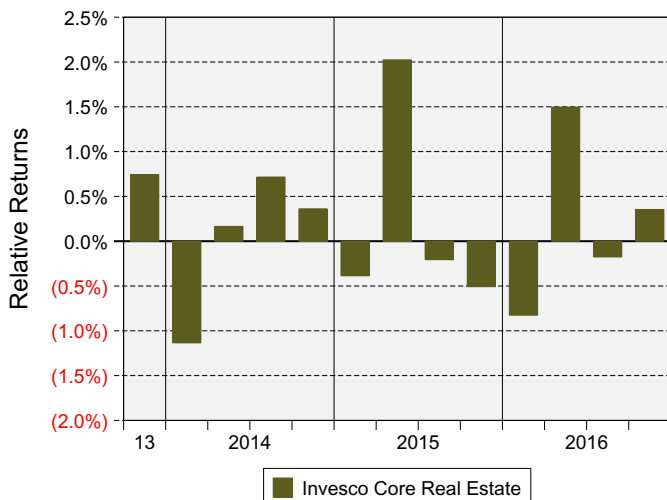
Quarterly Asset Growth

Beginning Market Value	\$119,329,030
Net New Investment	\$-104,853
Investment Gains/(Losses)	\$2,590,843
Ending Market Value	\$121,815,020

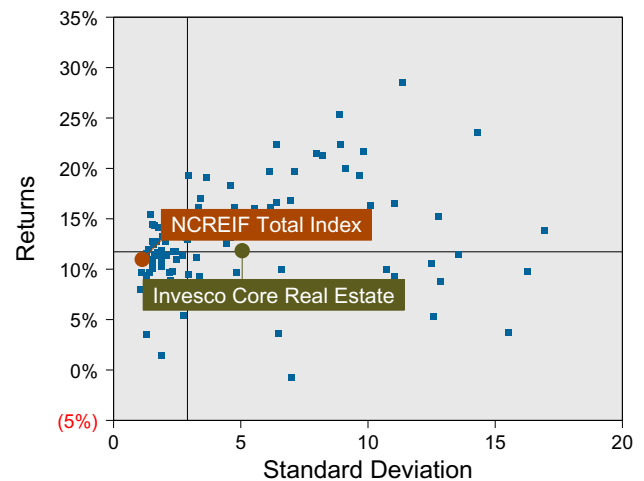
Performance vs CAI Total Real Estate Database (Net)



Relative Return vs NCREIF Total Index



CAI Total Real Estate Database (Net) Annualized Three and One-Quarter Year Risk vs Return



JP Morgan RE Inc & Growth Period Ended December 31, 2016

Investment Philosophy

The J.P. Morgan U.S. Real Estate Income and Growth Fund seeks to construct and opportunistically manage a portfolio of core direct real estate investments, complemented by other real estate and real estate-related assets. The Fund pursues a broadly diversified absolute-return strategy and pursues all property investments on an opportunistic basis. The majority of the Fund's investments will be in direct core properties in the office, industrial, retail and residential sectors.

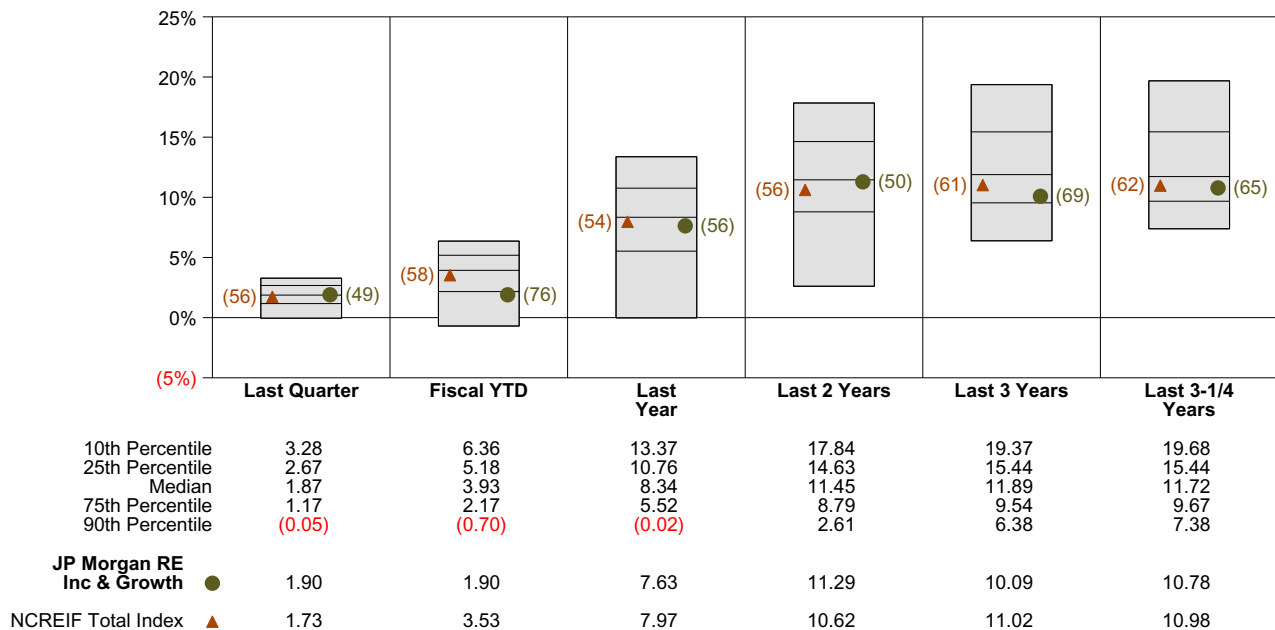
Quarterly Summary and Highlights

- JP Morgan RE Inc & Growth's portfolio posted a 1.90% return for the quarter placing it in the 49 percentile of the CAI Total Real Estate Database group for the quarter and in the 56 percentile for the last year.
- JP Morgan RE Inc & Growth's portfolio outperformed the NCREIF Total Index by 0.17% for the quarter and underperformed the NCREIF Total Index for the year by 0.34%.

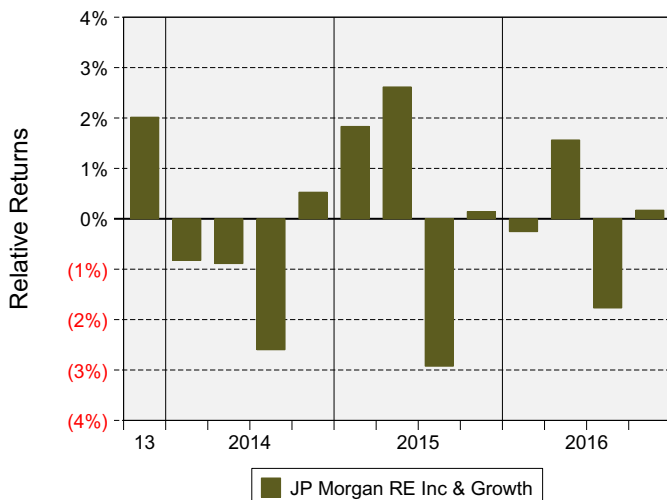
Quarterly Asset Growth

Beginning Market Value	\$127,188,691
Net New Investment	\$-51,480
Investment Gains/(Losses)	\$2,415,194
Ending Market Value	\$129,552,404

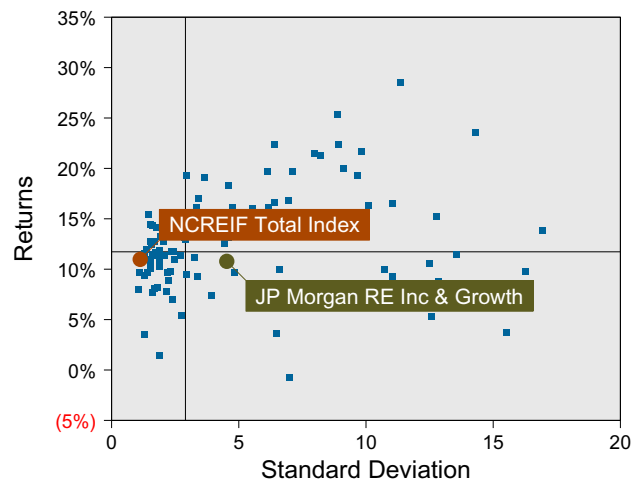
Performance vs CAI Total Real Estate Database (Net)



Relative Return vs NCREIF Total Index



CAI Total Real Estate Database (Net) Annualized Three and One-Quarter Year Risk vs Return



Research and Educational Programs

The Callan Institute provides research that updates clients on the latest industry trends while helping them learn through carefully structured educational programs. Visit www.callan.com/research to see all of our publications, or for more information contact Anna West at 415.974.5060 / institute@callan.com.

New Research from Callan's Experts

2017 Defined Contribution Trends Survey | Callan's 10th Annual DC Trends Survey highlights plan sponsors' key themes from 2016 and expectations for 2017.

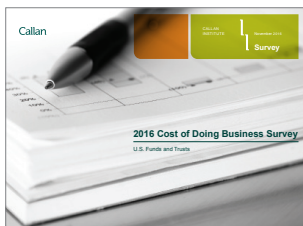
ESG Factors: U.S. Investor Usage Crystallizes | This charticle looks at environmental, social, and governance (ESG) factors from the perspectives of U.S. asset owners and global investment managers, revealing the growing incorporation of ESG factors in investment decision making.



Fixed Income: A Macroeconomic Lightning Rod | Callan's October 2016 Regional Workshop addressed alternative fixed income strategies to deal with the shifting market and economic environment investors face, as the extended period of low yields in the wake of the Global Financial Crisis appears to be ending.

ESG Interest and Implementation Survey | Callan's fourth annual survey on the status of ESG factor integration in the U.S. institutional market reflects responses from 84 funds representing approximately \$843 billion in assets.

2016 Cost of Doing Business Survey | In this survey, Callan compares the costs of administering and operating



funds and trusts across all types of tax-exempt and tax-qualified organizations in the U.S. We identify practices and trends to help institutional investors manage expenses.

ESG and Investors: What, Why, and Who | In this video, Mark Wood, CFA, of Callan's Global Manager Research group explains ESG investing principles and how asset managers can implement them.

Momentum: The Trend Is Your Friend | Callan's director of Hedge Fund Research, Jim McKee, explores the advantages of momentum-based investing strategies, which profit from market trends in whichever direction. He discusses the rationale behind them, how they are defined and harnessed for different diversification needs, and whether they are appropriate for fund sponsors.

Periodicals

Private Markets Trends, Fall 2016 | Gary Robertson, manager of Callan's Private Equity Research group, discusses the steady performance of private markets in 2016, with year-to-date figures tracking very close to 2015's levels.

DC Observer, 3rd Quarter 2016 | This quarter's cover story is "Merging DC Plans: Making the Transition Smooth."

Hedge Fund Monitor, 3rd Quarter 2016 | This quarter's cover story is "Musketeers or Mercenaries..." on the growing appeal of the multi-strategy hedge fund category.

Capital Market Review, 3rd Quarter 2016 | A quarterly macroeconomic newsletter providing thoughtful insights on the economy and recent performance in equity, fixed income, alternatives, international, real estate, and other capital markets.

Events

Miss out on a Callan conference or workshop? Event summaries and speakers' presentations are available on our website: <https://www.callan.com/education/CII/>

Mark your calendars for our **National Conference**, January 23–25, 2017, at the Palace Hotel in San Francisco.

For more information about events, please contact Barb Gerraty: 415.274.3093 / gerraty@callan.com

The Center for Investment Training Educational Sessions

The Center for Investment Training, better known as the “Callan College,” provides a foundation of knowledge for industry professionals who are involved in the investment decision-making process. It was founded in 1994 to provide clients and non-clients alike with basic- to intermediate-level instruction. Our next sessions are:

Introduction to Investments

San Francisco, April 18-19, 2017

San Francisco, July 25-26, 2017

Chicago, October 24-25, 2017

This program familiarizes fund sponsor trustees, staff, and asset management advisors with basic investment theory, terminology, and practices. It lasts one-and-a-half days and is designed for individuals who have less than two years of experience with asset-management oversight and/or support responsibilities. Tuition for the Introductory “Callan College” session is \$2,350 per person. Tuition includes instruction, all materials, breakfast and lunch on each day, and dinner on the first evening with the instructors.

Customized Sessions

The “Callan College” is equipped to customize a curriculum to meet the training and educational needs of a specific organization. These tailored sessions range from basic to advanced and can take place anywhere—even at your office.

Learn more at <https://www.callan.com/education/college/> or contact Kathleen Cunnie: 415.274.3029 / cunnie@callan.com

Education: By the Numbers

500 Attendees (on average) of the Institute's annual National Conference

50+ Unique pieces of research the Institute generates each year

3,500 Total attendees of the “Callan College” since 1994

1980 Year the Callan Institute was founded



“We think the best way to learn something is to teach it. Entrusting client education to our consultants and specialists ensures that they have a total command of their subject matter. This is one reason why education and research have been cornerstones of our firm for more than 40 years.”

Ron Peyton, Chairman and CEO

List of Callan's Investment Manager Clients

Confidential – For Callan Client Use Only

Callan takes its fiduciary and disclosure responsibilities to clients very seriously. We recognize that there are numerous potential conflicts of interest encountered in the investment consulting industry and that it is our responsibility to manage those conflicts effectively and in the best interest of our clients. At Callan, we employ a robust process to identify, manage, monitor and disclose potential conflicts on an on-going basis.

The list below is an important component of our conflicts management and disclosure process. It identifies those investment managers that pay Callan fees for educational, consulting, software, database or reporting products and services. We update the list quarterly because we believe that our fund sponsor clients should know the investment managers that do business with Callan, particularly those investment manager clients that the fund sponsor clients may be using or considering using. Please refer to Callan's ADV Part 2A for a more detailed description of the services and products that Callan makes available to investment manager clients through our Institutional Consulting Group, Independent Adviser Group and Fund Sponsor Consulting Group. Due to the complex corporate and organizational ownership structures of many investment management firms, parent and affiliate firm relationships are not indicated on our list.

Fund sponsor clients may request a copy of the most currently available list at any time. Fund sponsor clients may also request specific information regarding the fees paid to Callan by particular fund manager clients. Per company policy, information requests regarding fees are handled exclusively by Callan's Compliance Department.

Manager Name
1607 Capital Partners, LLC
Aberdeen Asset Management PLC
Acadian Asset Management LLC
AEGON USA Investment Management
Affiliated Managers Group, Inc.
AllianceBernstein
Allianz Global Investors
Allianz Life Insurance Company of North America
American Century Investment Management
Amundi Smith Breeden LLC
Analytic Investors
Angelo, Gordon & Co.
Apollo Global Management
AQR Capital Management
Ares Management LLC
Ariel Investments, LLC
Aristotle Capital Management, LLC
Artisan Holdings
Atlanta Capital Management Co., LLC
Aviva Investors Americas
AXA Investment Managers
Babson Capital Management
Baillie Gifford Overseas Limited
Baird Advisors
Bank of America
Baring Asset Management
Barings LLC
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC
BlackRock
BMO Global Asset Management
BNP Paribas Investment Partners
BNY Mellon Asset Management
Boston Partners
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC
Brown Brothers Harriman & Company

Manager Name
Cambiar Investors, LLC
Capital Group
CastleArk Management, LLC
Causeway Capital Management
Channing Capital Management, LLC
Chartwell Investment Partners
ClearBridge Investments, LLC
Cohen & Steers Capital Management, Inc.
Columbia Management Investment Advisers, LLC
Columbia Threadneedle Investments
Columbus Circle Investors
Corbin Capital Partners, L.P.
Cornerstone Capital Management
Cramer Rosenthal McGlynn, LLC
Credit Suisse Asset Management
Crestline Investors, Inc.
D.E. Shaw Investment Management, L.L.C.
Delaware Investments
DePrince, Race & Zollo, Inc.
Deutsche Asset Management
Diamond Hill Capital Management, Inc.
Duff & Phelps Investment Mgmt. Co.
Eagle Asset Management, Inc.
EARNEST Partners, LLC
Eaton Vance Management
Epoch Investment Partners, Inc.
Fayez Sarofim & Company
Federated Investors
Fidelity Institutional Asset Management
Fiera Capital Global Asset Management
First Eagle Investment Management, LLC
First Hawaiian Bank Wealth Management Division
First Quadrant L.P.
Fisher Investments
Fort Washington Investment Advisors, Inc.
Franklin Templeton Institutional
Fred Alger Management, Inc.

Manager Name
Fuller & Thaler Asset Management, Inc.
GAM (USA) Inc.
GE Asset Management
GMO
Goldman Sachs Asset Management
Guggenheim Investments
GW&K Investment Management
Harbor Capital Group Trust
Hartford Funds
Hartford Investment Management Co.
Henderson Global Investors
Holland Capital Management
Hotchkis & Wiley Capital Management, LLC
HSBC Global Asset Management
Income Research + Management, Inc.
Insight Investment Management Limited
Institutional Capital LLC
INTECH Investment Management, LLC
Invesco
Investec Asset Management
Ivy Investments
Janus Capital Management, LLC
Jennison Associates LLC
Jensen Investment Management
J.P. Morgan Asset Management
KeyCorp
Lazard Asset Management
Legal & General Investment Management America
Lincoln National Corporation
LMCG Investments, LLC
Logan Capital Management
Logan Circle Partners, L.P.
Longview Partners
Loomis, Sayles & Company, L.P.
Lord Abbett & Company
Los Angeles Capital Management
LSV Asset Management
MacKay Shields LLC
Man Investments Inc.
Manning & Napier Advisors, LLC
Manulife Asset Management
Martin Currie Inc.
Mellon Capital Management
MFS Investment Management
MidFirst Bank
Mondrian Investment Partners Limited
Montag & Caldwell, LLC
Morgan Stanley Investment Management
Mountain Lake Investment Management LLC
MUFG Union Bank, N.A.
Neuberger Berman
Newton Investment Management (fka Newton Capital Management)
Nicholas Investment Partners
Nikko Asset Management Co., Ltd.
Northern Trust Asset Management
Nuveen Investments, Inc.
OFI Global Asset Management
Old Mutual Asset Management

Manager Name
Opus Capital Management Inc.
Pacific Investment Management Company
Parametric Portfolio Associates
Peregrine Capital Management, Inc.
PGIM
PGIM Fixed Income
Pictet Asset Management Ltd.
PineBridge Investments
Pinnacle Asset Management L.P.
Pioneer Investments
PNC Capital Advisors, LLC
Principal Global Investors
Private Advisors, LLC
Putnam Investments, LLC
QMA (Quantitative Management Associates)
RBC Global Asset Management
Regions Financial Corporation
RidgeWorth Capital Management, Inc.
Rockefeller & Co., Inc.
Rothschild Asset Management, Inc.
Russell Investments
Santander Global Facilities
Schroder Investment Management North America Inc.
Scout Investments
SEI Investments
Smith, Graham & Co. Investment Advisors, L.P.
Smith Group Asset Management
Standard Life Investments Limited
Standish
State Street Global Advisors
Stone Harbor Investment Partners, L.P.
Systematic Financial Management
T. Rowe Price Associates, Inc.
Taplin, Canida & Habacht
The Boston Company Asset Management, LLC
The Davis Companies
The Hartford
The London Company
The TCW Group, Inc.
Thompson, Siegel & Walmsley LLC
Timberland Investment Resources, LLC
Tri-Star Trust Bank
UBS Asset Management
Van Eck Global
Versus Capital Group
Victory Capital Management Inc.
Vontobel Asset Management, Inc.
Voya Financial
Voya Investment Management (fka ING)
Waddell & Reed Asset Management Group
WCM Investment Management
WEDGE Capital Management
Wellington Management Company, LLP
Wells Capital Management
Western Asset Management Company
William Blair & Company
Windham Capital Management, LLC

INFORMATIONAL

To: State Investment Board
From: Dave Hunter, Executive Director / CIO
Date: February 17, 2017
RE: [Invesco Real Estate Update – Cover Memo](#)

The SIB has been investing in real estate with Invesco for over 10 years. The following table summarizes our real estate investments by trust and sector as of Dec. 31, 2016.

	TOTAL	Pension	Insurance	Legacy
	\$ millions	\$ millions	\$ millions	\$ millions
Invesco Real Estate:				
- U.S. Core	\$ 436	\$ 250	\$ 64	\$ 122
- U.S. Value Add	\$ 60	\$ 60	\$ -	\$ -
- Opportunistic/ Int'l.	\$ 20	\$ 20	\$ -	\$ -
	<u>\$ 515</u>	<u>\$ 329</u>	<u>\$ 64</u>	<u>\$ 122</u>

Note: Approximately 85% of our Invesco assets are invested in the “Core” real estate which has outperformed the widely used NCREIF (National Council of Real Estate Investment Fiduciaries) Total Index over the last 1-, 3- and 5-year periods (net of fees).

Invesco Real Estate:	Last Year	Last 3 Yrs.	Last 5 Yrs.	Last 10 Yrs.
- U.S. Core	8.9%	11.7%	11.4%	5.5%
- NCREIF Total Index	8.0%	11.0%	10.9%	6.9%

Callan’s Pension Trust Performance Book – Dec. 31, 2016: Invesco Real Estate Returns

Returns for Periods Ended December 31, 2016

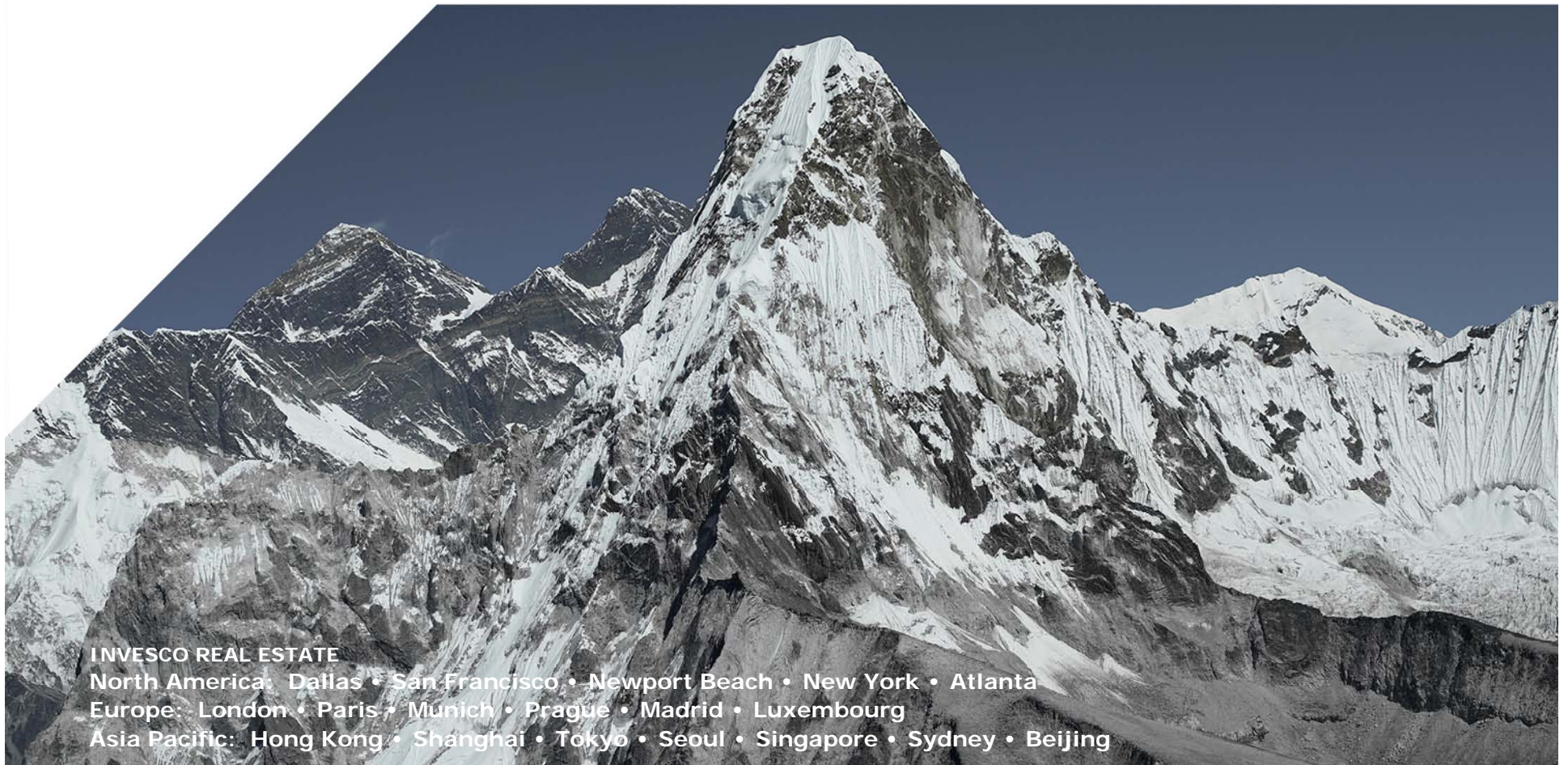
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Global Real Estate					
Gross	2.15%	10.36%	13.42%	12.86%	5.55%
Net	2.02%	9.82%	12.86%	12.06%	3.87%
NCREIF Total Index	1.73%	7.97%	11.02%	10.91%	6.93%
Invesco Core Real Estate - Gross	2.17%	9.23%	12.08%	11.79%	6.00%
Invesco Core Real Estate - Net	2.08%	8.85%	11.68%	11.37%	5.53%
Invesco Fund II - Net	(2.76%)	(2.62%)	6.24%	11.90%	-
Invesco Fund III - Net	6.47%	19.13%	17.09%	-	-
Invesco Asia RE Feeder - Net	(31.45%)	7.74%	22.57%	14.22%	-
Invesco Asia RE Fund III - Net	3.46%	1.80%	-	-	-
Invesco Value Added Fd IV - Net	2.59%	9.47%	-	-	-

Attachments: [Invesco Real Estate Funds Update](#)



Invesco Real Estate Funds Update

February 24, 2017



INVESCO REAL ESTATE

North America: Dallas • San Francisco • Newport Beach • New York • Atlanta

Europe: London • Paris • Munich • Prague • Madrid • Luxembourg

Asia Pacific: Hong Kong • Shanghai • Tokyo • Seoul • Singapore • Sydney • Beijing

Table of Contents



1 Invesco Real Estate Overview

2 Portfolio Overview

3 Market Discussion

For one-on-one Institutional Investor use with North Dakota State Investment Board.

All material presented is compiled from sources believed to be reliable and current, but accuracy cannot be guaranteed. This is not to be construed as an offer to buy or sell any financial instruments. It is not our intention to state, indicate or imply in any manner that current or past results are indicative of future profitability or expectations. As with all investments there are associated inherent risks. Please obtain and review all financial material carefully before investing. This publication may contain confidential and proprietary information of Invesco Companies. Circulation, disclosure, or dissemination of all or any part of this material to any unauthorized persons is prohibited. Unauthorized reproduction or distribution of all or any part of this material is prohibited. For one-on-one presentations only.

Section 1

Invesco Real Estate Update



Invesco Ltd.



As an independent firm, our global organization is solely focused on investment management:

- Investment professionals located in 29 cities and 11 countries
- Global assets under management of \$812.9 billion
- More than 6,500 employees worldwide



<p>Invesco Real Estate</p> <ul style="list-style-type: none"> ▪ Global direct real estate ▪ Global securities <p>Locations: Atlanta, Beijing, Dallas, Hong Kong, Hyderabad, London, Luxembourg, Madrid, Milan, Munich, New York, Newport Beach, Paris, Prague, San Francisco, Seoul, Shanghai, Singapore, Sydney, Tokyo, Warsaw</p>	<p>Invesco Asia-Pacific</p> <ul style="list-style-type: none"> ▪ Asia ex-Japan ▪ Greater China ▪ India ▪ Japan ▪ Australia <p>Locations: Beijing, Hong Kong, Melbourne, Mumbai, Shenzhen, Singapore, Sydney, Taipei, Tokyo</p>	<p>Invesco Canada</p> <p>Trimark Investments</p> <ul style="list-style-type: none"> ▪ Canadian, regional, sector and global equity ▪ Canadian and global fixed income ▪ Balanced portfolios <p>Location: Toronto, Vancouver</p>	<p>Invesco Fixed Income</p> <ul style="list-style-type: none"> ▪ Global liquidity ▪ Stable value ▪ Global and US broad fixed income ▪ Global alternatives and bank loans <p>Locations: Atlanta, Chicago, Hong Kong, London, Louisville, New York, Palm Harbor, FL, Portland, San Diego</p>	<p>Invesco Fundamental Equity</p> <ul style="list-style-type: none"> ▪ US growth equity ▪ US value equity ▪ International and global growth equity ▪ Sector equity ▪ Balanced portfolios <p>Locations: Austin, Houston, San Francisco</p>	<p>Invesco Global Asset Allocation</p> <ul style="list-style-type: none"> ▪ Global macro ▪ Risk parity ▪ Commodities ▪ Active balanced solutions <p>Locations: Atlanta, Frankfurt</p>
<p>Invesco Global Core Equity</p> <ul style="list-style-type: none"> ▪ Emerging markets ▪ International and global equity ▪ US equity <p>Locations: Atlanta, San Francisco</p>	<p>Invesco Perpetual</p> <ul style="list-style-type: none"> ▪ Global and regional equity, including UK, European, US, Asian, Japanese and emerging markets ▪ Multi-asset ▪ Fixed income <p>Location: Henley, UK</p>	<p>Invesco PowerShares</p> <p>Index-based exchange traded funds (ETFs) and actively managed ETFs</p> <ul style="list-style-type: none"> ▪ Domestic and international equity ▪ Taxable and tax-free fixed income ▪ Commodities and currencies <p>Location: Chicago</p>	<p>Invesco Private Capital</p> <ul style="list-style-type: none"> ▪ Private equity funds of funds ▪ Customized portfolios <p>Locations: London, New York, San Francisco</p>	<p>Invesco Quantitative Strategies</p> <ul style="list-style-type: none"> ▪ US, global, regional and emerging equity ▪ Long/short strategies ▪ Active low volatility ▪ Balanced solutions <p>Locations: Boston, Frankfurt, Melbourne, New York, Tokyo, Toronto</p>	<p>Invesco Unit Investment Trusts</p> <ul style="list-style-type: none"> ▪ Equity trusts ▪ Closed-end trusts ▪ Tax-free fixed-income trusts ▪ Taxable fixed-income trusts <p>Location: Chicago</p>
<p>WL Ross & Co.</p> <ul style="list-style-type: none"> ▪ Private equity: Contrarian buyouts, distressed and special situations <p>Locations: Beijing, New York, Tokyo*</p>					

*WL Ross joint venture

Source: Invesco Ltd. Client-related data, investment professional, employee data and AUM are as of December 31, 2016, and include all assets under advisement, distributed and overseen by Invesco. Invesco Distributors, Inc. is the US distributor for Invesco Ltd.'s retail products. The entities listed are each indirect, wholly owned subsidiaries of Invesco Ltd., except Invesco Great Wall in Shenzhen, which is a joint venture between Invesco and Great Wall Securities, and the Huaneng Invesco WLR Investment Consulting Company Ltd. in Beijing, which is a joint venture between Huaneng Capital Services and Invesco WLR Limited. Please consult your Invesco representative for more information.

Invesco Real Estate

As of December 31, 2016



\$67.8 Billion Under Management

447 Employees Worldwide; 21 Offices; 16 Countries



North American Direct Real Estate Investments

- \$28.6 BN Under Management
- Since 1983

Global Securities Management

- \$26.3 BN Under Management
- Since 1988

European Direct Real Estate Investments

- \$7.7 BN Under Management
- Since 1996

Asian Direct Real Estate Investments

- \$5.2 BN Under Management
- Since 2006

Source: Invesco Real Estate (IRE)

Invesco Real Estate Vision



- 
- A decorative graphic on the left side of the slide, consisting of several overlapping, semi-transparent blue arrows pointing to the right. The arrows are of varying lengths and are arranged in a way that they appear to be moving towards the right, creating a sense of forward motion and direction.
- Global investment management business
 - One corporate culture
 - Global perspective
 - Local expertise/execution
 - Best practices
 - Performance driven

Section 2

Portfolio Overview



North Dakota/Invesco Real Estate Partnership



Maintain exposure to real estate in a portfolio diversified by property type, location and investment strategy.

Portfolio Targets:

- 60% exposure to core, high quality portfolio of stabilized assets.
- 30% exposure to value added investments to increment returns.
- 10% exposure to Asia to capture higher growth opportunities.

Target Allocation: \$511 million

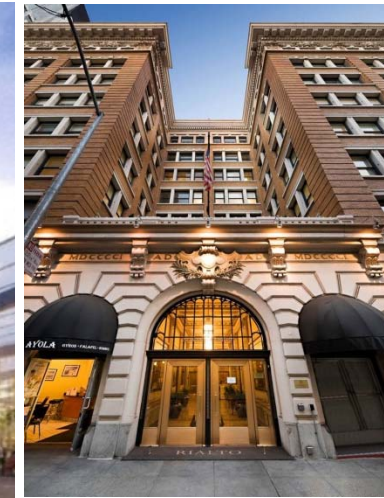
Current Portfolio: \$511 million

Relationship began in 1996

Swanston Square • Apartment
Melbourne, Australia



116 New Montgomery • Office
San Francisco, CA



The Shops at Legacy
Retail • Plano, TX

Photographs shown above represent recently acquired Core, Value Add and Asia Fund assets.



Investment Objectives and Portfolio Construction



Current				
	Target Allocation (%)	Target Allocation (\$ Millions)	Current Allocation (\$ Millions)	Long-Term Return Profile (Net)
1. US Core	60%	\$307	\$433	7.0%
2. US Value Add	30%	\$153	\$58	10.0%
3. Opportunistic/International	10%	\$51	\$20	14.0%
Total	100%	\$511	\$511	8.6%

US Core Fund



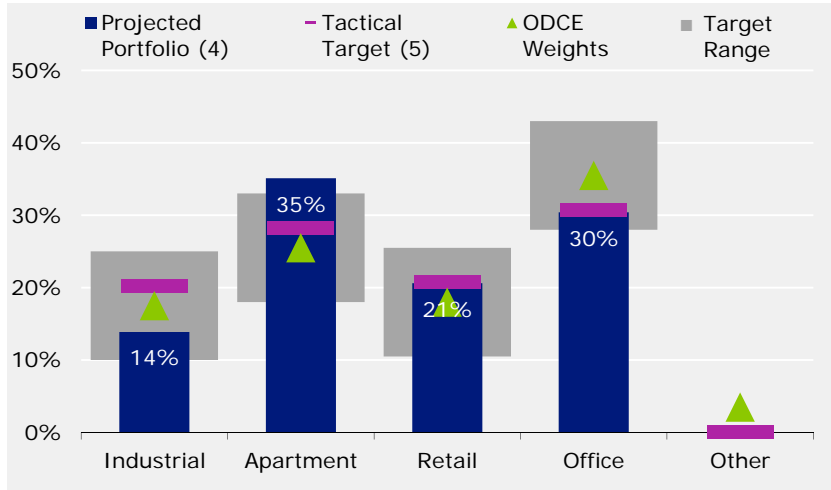
Overview

Investment Strategy:	Core Real Estate
Target Sectors:	Apartment, Retail, Industrial, Office
Geographic Focus:	Major metropolitan areas within the United States
Target Returns:	Equal or exceed NFI-ODCE over 3- and 5-year rolling basis
Leverage:	Maximum of 35% loan-to-value
Structure:	A Delaware limited partnership; open-ended commingled strategy
Liquidity:	Quarterly with 45 days notice and reasonable best efforts basis ⁽¹⁾

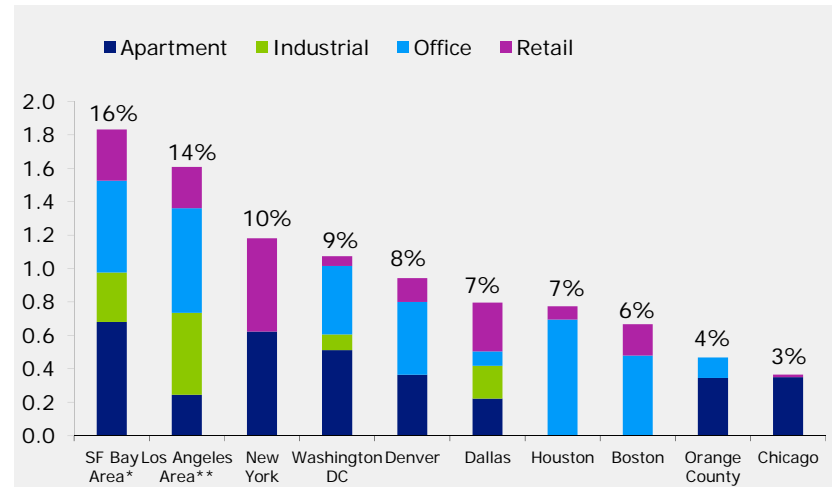
Portfolio Summary

Gross Asset Value:	\$11.3 Billion
Net Asset Value:	\$8.1 Billion
Loan-to-Value:	25.5% ⁽²⁾
Number of Investments:	91
Portfolio % Leased:	93.8% ⁽³⁾
Since Inception Gross Return:	8.31%
Trailing 4 Quarter Dividend Yield:	3.4%
Number of Clients:	115

Property Type Allocations - Proforma



Top 10 Market Exposure - Proforma (billions) ⁽⁶⁾



Source: Invesco Real Estate as of December 31, 2016

¹ The Manager is not required to liquidate or encumber assets or defer investments in order to pay redemptions ² Does not include outstanding balance on short term line of credit of \$90MM as of quarter end. ³ Core Portfolio = 95.0% ⁴ Projected property type weightings include the Manage-to-Core Portfolio on a fully funded basis plus any known acquisitions/dispositions. ⁵ Target diversification may change based on changing market conditions. ⁶ Based on gross real estate value of the Core Portfolio. Proforma MSA weightings include remaining capital to be spent on the Value Add Portfolio.

*Represents San Francisco, SF East Bay, and San Jose

**Represents Los Angeles and the Inland Empire Region



Invesco Real Estate Fund II Executive Summary

*Milehouse
Denver, CO*



*Broadstone Arboretum
Austin, TX*



Vintage Year

2007

Fund Size (millions)

\$457

Fund IRR (gross)

8.2%

Fund Equity Multiple (gross)

1.36x

Realized (%)

100%

Investments

16

Fund Maturity ⁽¹⁾

December 2015

As of December 31, 2016

11 ¹ The Fund is no longer in active business and is in the process of liquidating and winding up the affairs for the Partnership.

Invesco Real Estate Fund III Executive Summary



*Pearl Dadeland
Miami, FL*



*Vineyards at Old Town
Riverside, CA*



Vintage Year

2012

Fund Size (millions)

\$344

Projected/Since Inception IRR (gross)

21.9%/24.7%

Projected/Since Inception Equity Multiple (gross)

1.72x/1.62x

Leverage

46%

Realized

42%

Investments (Total/Realized)

13/7

Fund Maturity

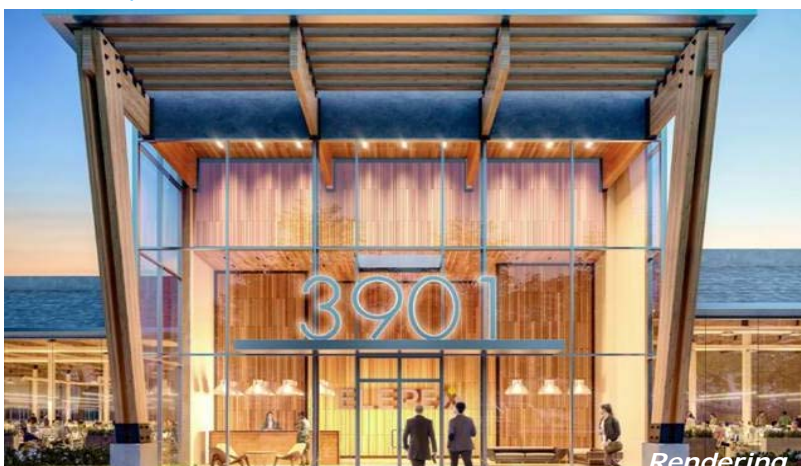
December 2019

Invesco Real Estate Fund IV Executive Summary

*Broadstone Harbor Beach
Fort Lauderdale, FL*



*LAM Campus
San Jose, CA*



Final Closing
February 2016

Fund Size (millions) ⁽¹⁾
\$759

Target IRR (gross)
12% - 15%

Target Equity Multiple (gross)
1.60x – 1.75x

Leverage (LTV)
40%

Committed Capital to Date ⁽²⁾
69%

Investments (Total/Realized) ⁽²⁾
15/2

Fund Maturity
December 2022

As of December 31, 2016

¹ Includes GP's \$10 million commitment.

² As of quarter-end, two (2) of the fifteen (15) total investments are in due diligence.

Invesco Asia Real Estate Fund I Executive Summary

*Swanton Square,
Melbourne, Australia*



*Dignity Mansion,
Changzhou, China*



*M Plaza
Seoul, South Korea*



*Urban Square
Greater Tokyo, Japan*



Vintage Year

2010 (final close)

Fund Size (millions)

\$113

Projected/Since Inception IRR (gross)

14.6%/13.9%

Projected/Since Inception Equity Multiple (gross)

1.6x/1.5x

Leverage

22%

Net Invested Capital

94%

Investments (Total/Unrealized)

6/1

Fund Maturity

December 2017

Invesco Asia Real Estate Fund III Executive Summary



Project Samsung, Seoul, South Korea



Vintage Year

2015 (Initial close)

Fund Size (millions)

\$100

Projected/Since Inception IRR (gross)

22.2%/N.A.

Projected/Since Inception Equity Multiple (gross)

1.5x/N.A.

Leverage

54%

Net Invested Capital

39%

Investments (Total/Unrealized)

2/2

Fund Maturity

8 years from Final Closing

Project Skyler, Brisbane, Australia



Section 3

Market Discussion

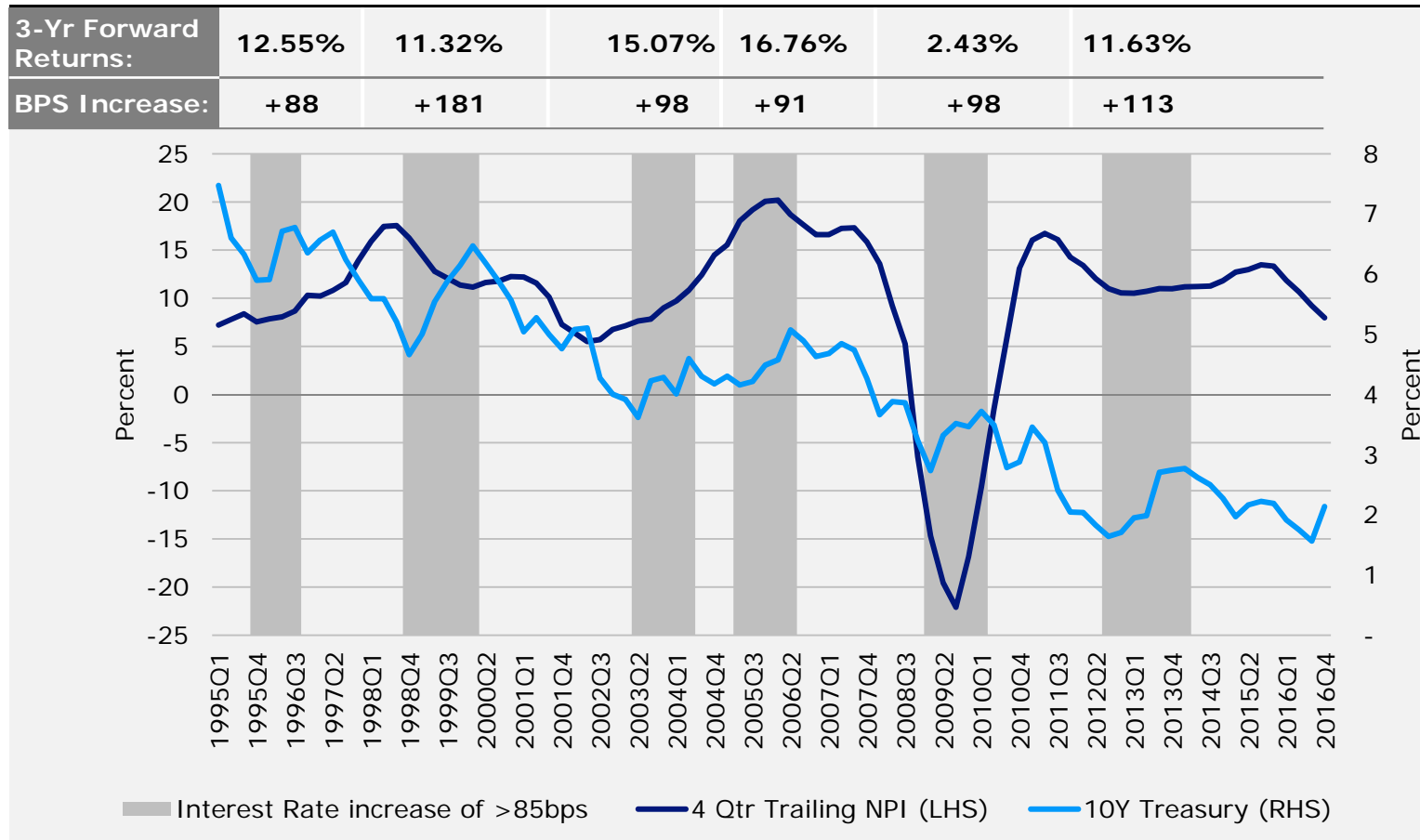


Risks to Consider



1. Year 8 of bull real estate market.
2. Cap rates are at lows.
3. Occupancy rates are at highs.
4. Record transaction level.
5. Pockets of high construction levels.
6. Global slowdown.

NPI Total Return vs. 10Y Treasury



Source: Invesco Real Estate using data from Moody's Analytics and NCREIF, Q4 2016



February 24, 2017

**North Dakota
State Investment Board**

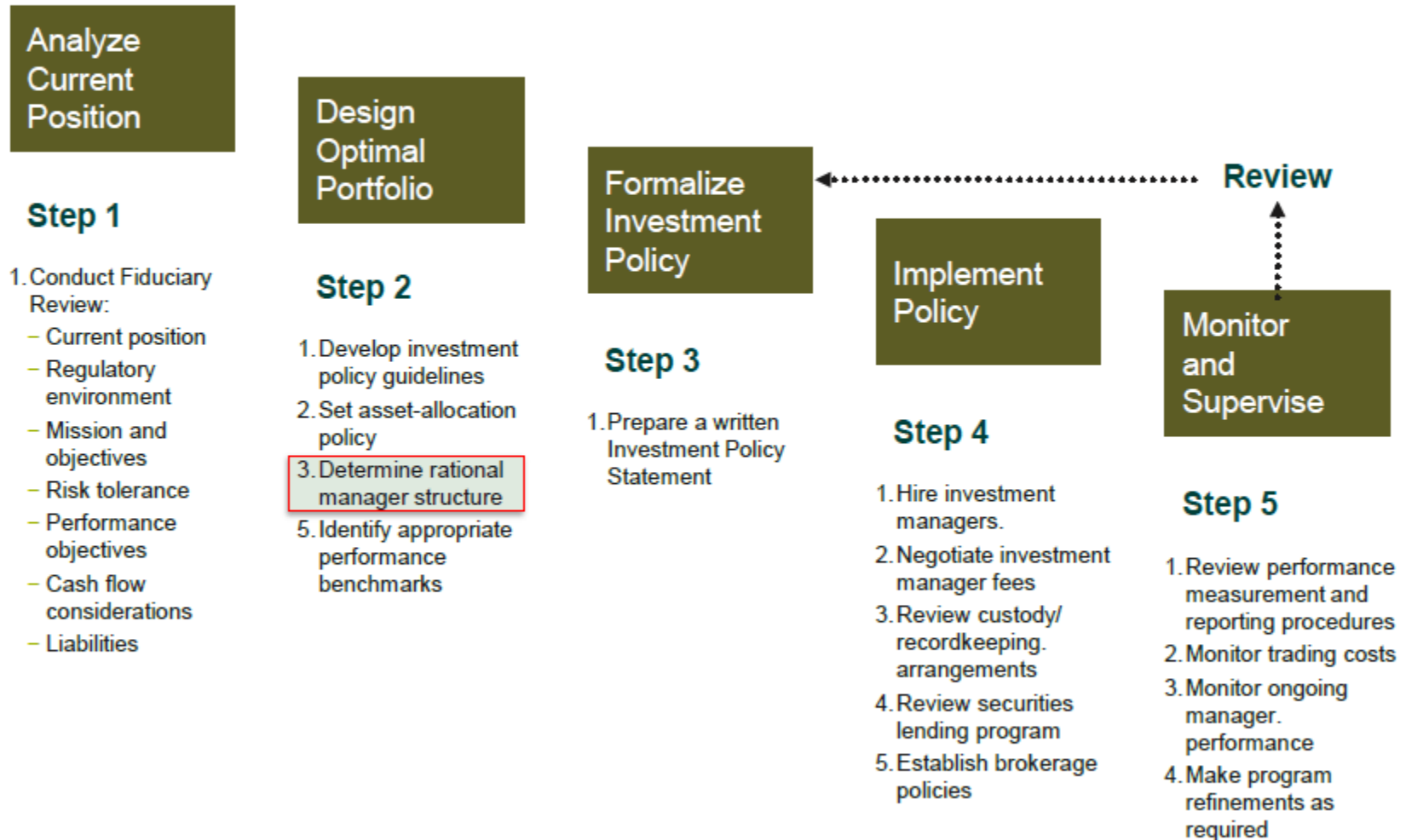
Private Credit: Middle Market Direct
Lending in a Diversified Portfolio

Paul Erlendson
Senior Vice President

Alex Browning
Vice President

A Review: Steps in a Prudent Fiduciary Process

A Recommended Fiduciary Process for Pension Fund Trustees

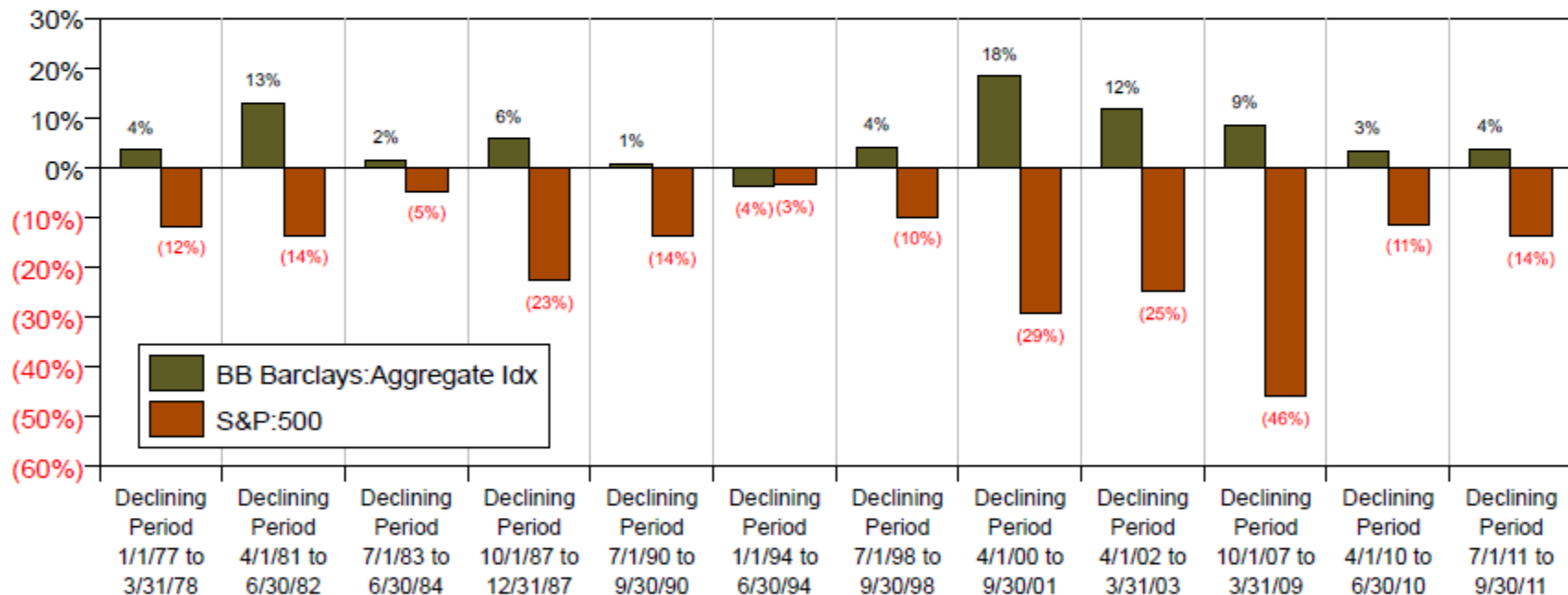


What is the Role of Fixed Income in a Portfolio?

A Common Role is as an “Anchor to Windward”

- Within a **total return** strategy – the investment orientation of the trust’s overseen by the State Investment Board – the role of fixed income is to serve as a diversifying anchor that offsets exposures to riskier, higher return-seeking assets such as equity.

Cumulative Returns in Periods when Domestic Equity Declines



Fixed Income Returns

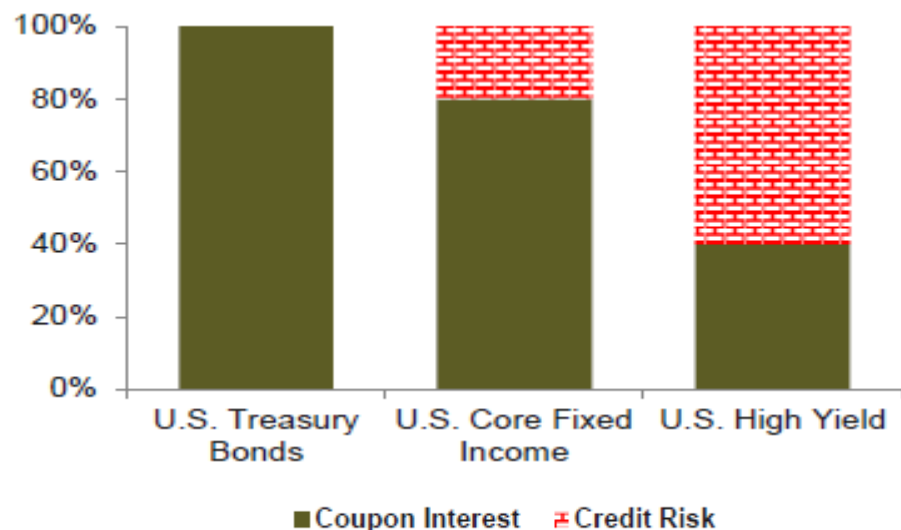
The Fundamentals of how wealth is created with bonds.

Bond Return = Capital Appreciation + Income + Roll Return

- **Capital appreciation** (or depreciation) is the change in price of the bond and depends on future interest rates. It can be positive or negative. Among other factors, the price will be influenced by:
 - Inflation
 - Central bank policy
 - Credit conditions (default risk)
- **Income** is the yield (coupon income) that the investor receives from the borrower.
- **Roll return** reflects capital appreciation (or depreciation) from declines (increases) in yields as bonds move toward maturity with upward (downward) sloping yield curves.

What is the Role of Fixed Income in a Portfolio

The type(s) of risk depend on the fixed income strategy



- **Treasuries are credit-risk-free so investors are compensated with a lower (risk-free) interest rate.**
- **Credit bonds may entail potential risks that result in higher interest rates to compensate the investor.**
 - Default
 - Downgrade (the borrower’s perceived ability to repay drops, resulting in a price decline of the bond)
 - Liquidity (inability to find a willing buyer if the investor wants to sell the bond)
 - Leverage
 - Pre-payment (the borrower can return principal back to the investor prior to the bond’s stated maturity)
- **The investment vehicle in which investors gain access to credit may pose other risks:**
 - More sector concentration (i.e.—less diversification)
 - Higher management fees
 - Incentive compensation above and beyond the management fee

Potential responses to low fixed income yields

Three broad categories

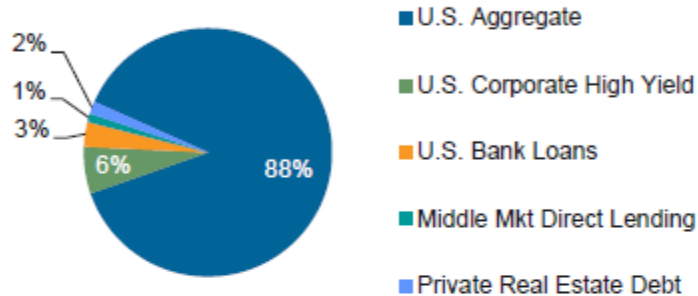
Spread	Non-Traditional Solutions	Liquidity Premium
<ul style="list-style-type: none">● Global/non-U.S. fixed income● Mortgage credit● High yield● Bank loans● Emerging market debt● CLOs, structured product	<ul style="list-style-type: none">● Multi-sector credit● Opportunistic and unconstrained● Global macro● Long/short strategies● Convertibles● Life settlement bonds● Catastrophe bonds● Trade finance	<ul style="list-style-type: none">● Private credit<ul style="list-style-type: none">– Direct lending– Distressed/special situations– Mezzanine debt– Real Estate debt● Infrastructure debt

- Most of these alternatives are credit oriented and thus correlated with the investor's growth assets
- Different risk and return expectations than for a core fixed income allocation

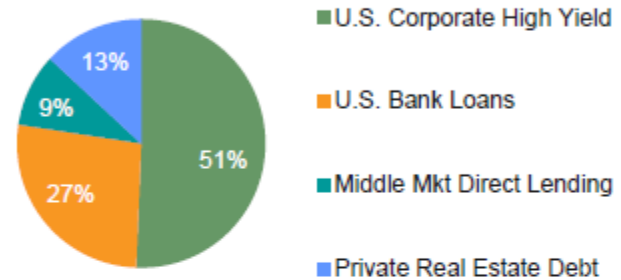
The Reasons Behind the Opportunity Set

Why Now? It's because of bank disintermediation and the search for yield

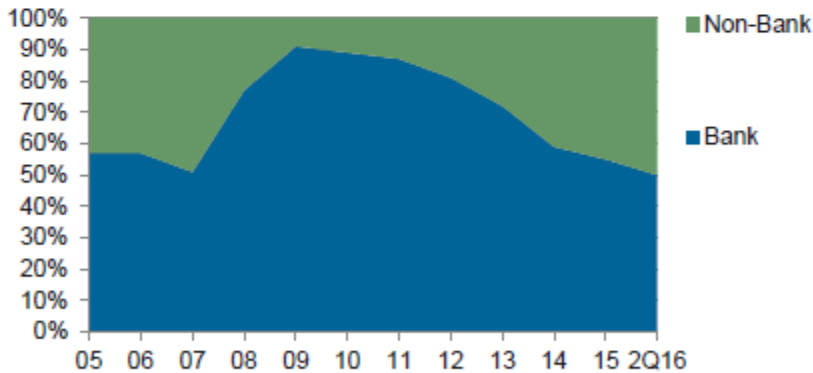
Core, Public & Private Credit ~ \$22.3T¹



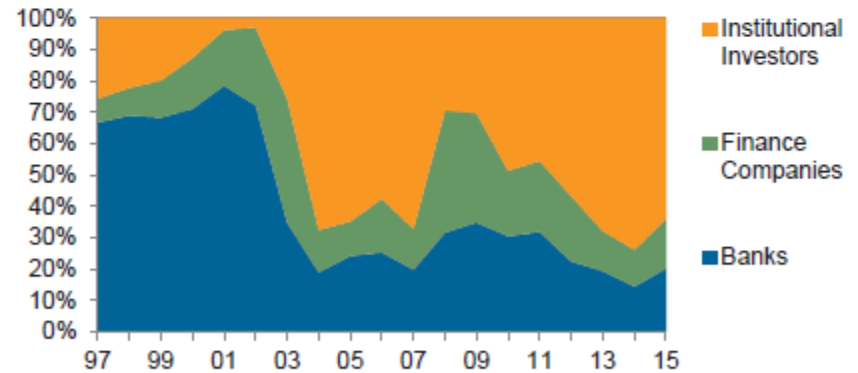
Public & Private Credit ~ \$2.7T¹



Top 50 Mortgage Lenders

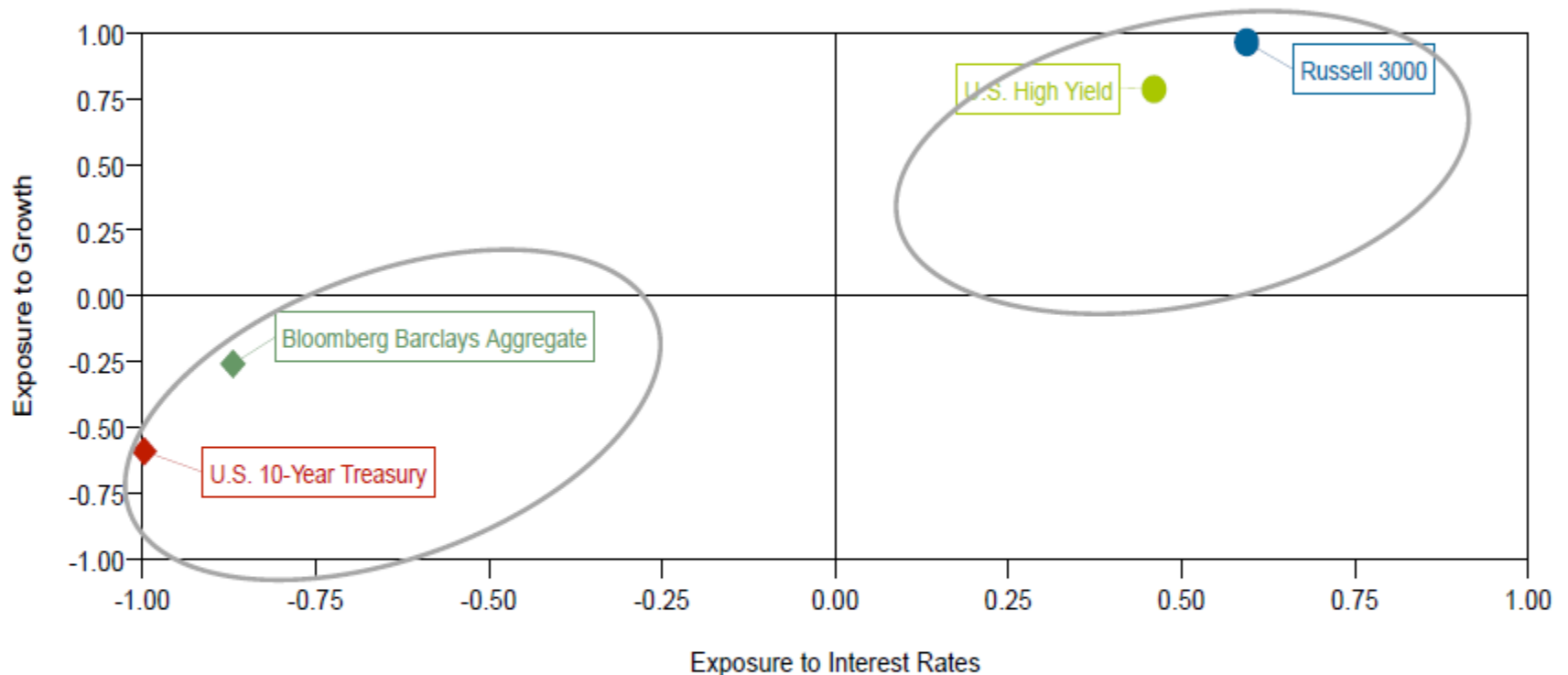


Middle Market Direct Lenders



Traditional Portfolio Risk Factors

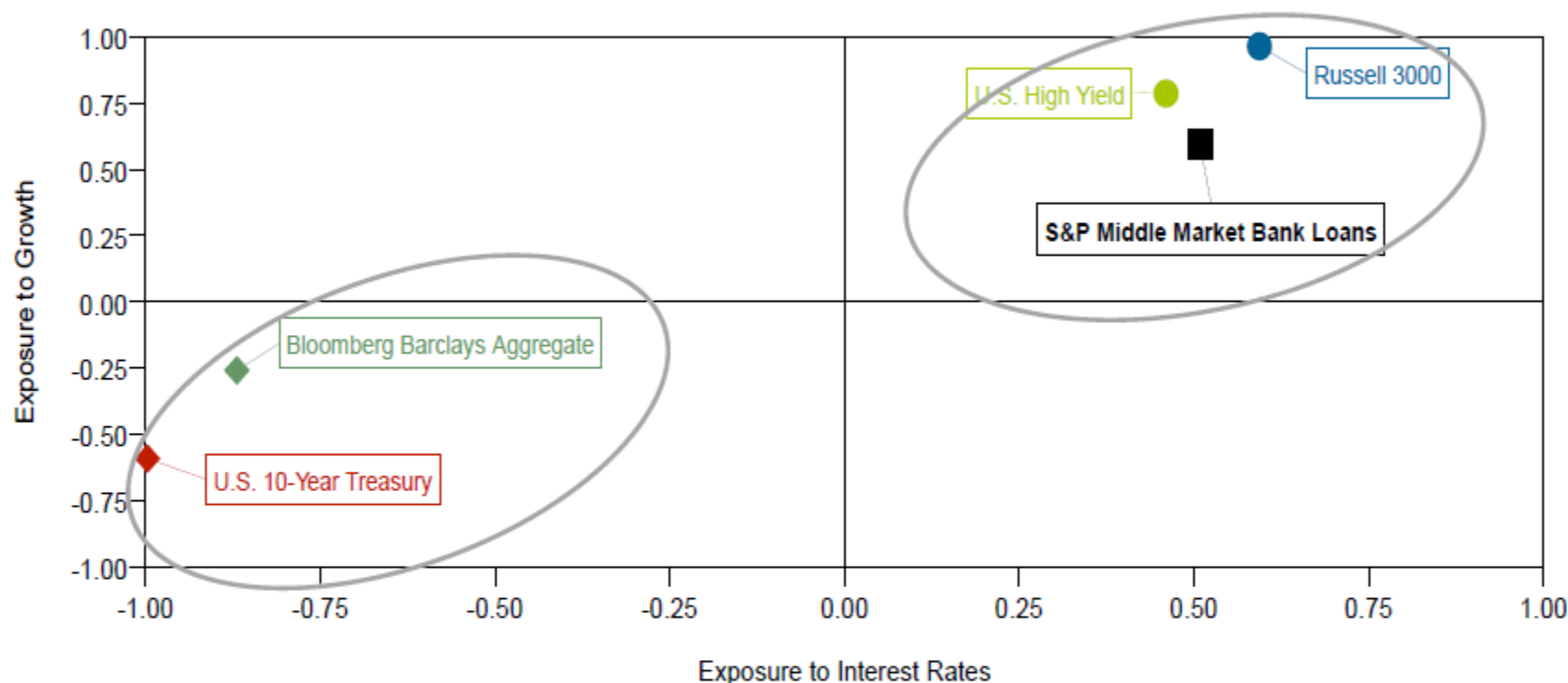
15-Year Average Macro Factor Exposures as of September 30, 2016



- **Interest rate sensitive assets provide protection in low growth environments**
 - Treasuries and investment grade bonds
- **Growth assets do well in economic expansions where interest rates rise due to competition for capital**
 - High Yield bonds and U.S. Stocks

Traditional Portfolio and Middle Market Direct Lending Risk Factors

15-Year Average Macro Factor Exposures as of September 30, 2016

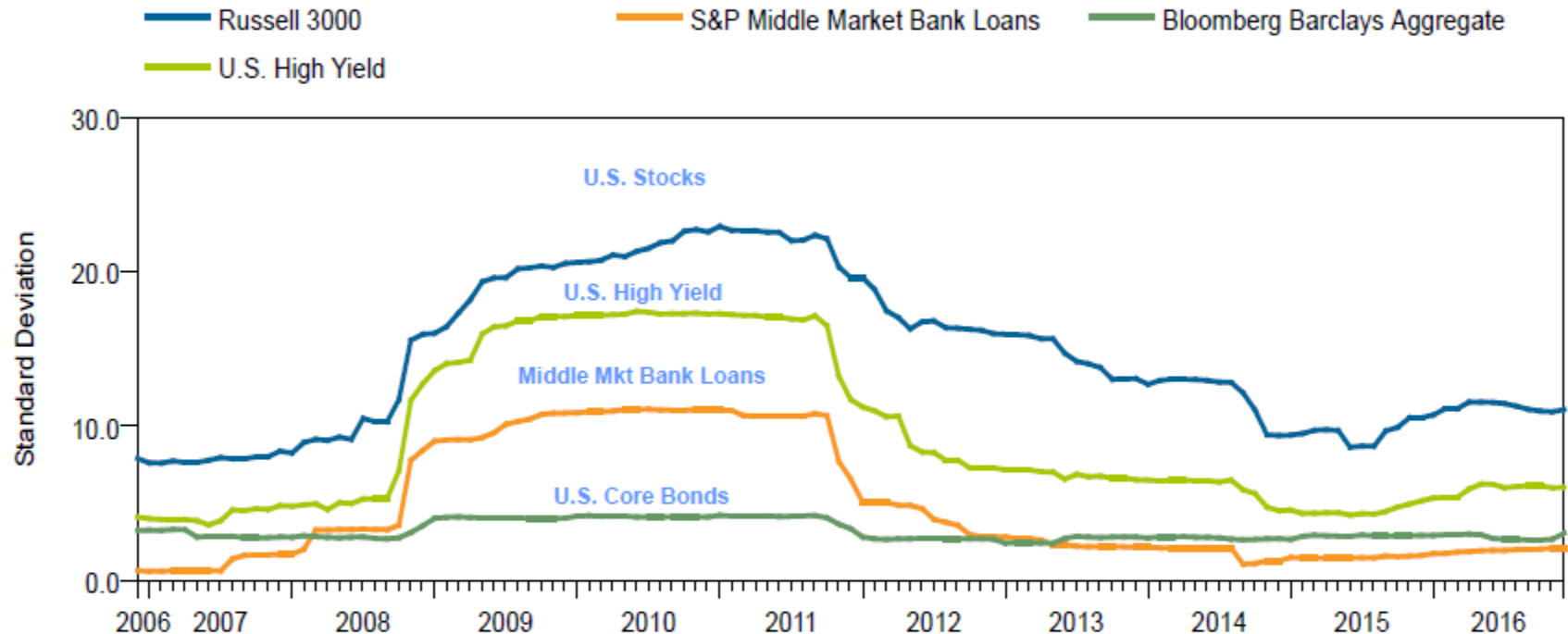


- No private credit indexes thus a public market proxy for middle market direct lending
- Private Credit in context of traditional portfolio assets – where do I add it and how do I fund it?

Note: 15-year average correlation to MSCI ACWI is used as a proxy for exposure to growth and the change in 10-Year Treasury yields is used as a proxy for exposure to interest rates
Sources: Bloomberg Barclays, MSCI, Russell, Standard & Poor's, U.S. Treasury

Historical Risk of Traditional Assets and Middle Market Direct Lending

3-Year Rolling Risk as of September 30, 2016



- Private credit is illiquid, lacks transparency, and is heavily subject to the stage in the credit cycle
- Many different economic factors influence asset returns and those influences change over time
- Relative risk is generally stable, i.e. Stock Risk > U.S. High Yield Risk > Bank Loan Risk, etc.

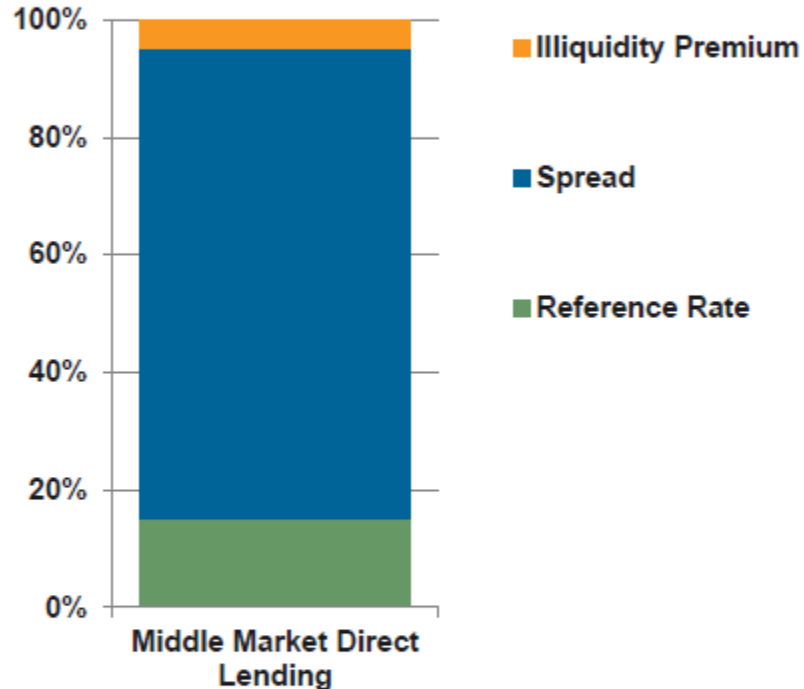
Components of Middle Market Direct Lending Returns

Fundamental Drivers of Middle Market Direct Lending

- Borrowing from CAPM, we can essentially model asset class returns as:

$$E(r) = \text{Risk-free} + \text{Beta}$$

- **Reference Rate** captures the risk-free rate or the market's base pricing term
- **Spread** captures the Beta term
- Add **Illiquidity Premium**
- Return expectation is constructed in a risk/return component framework



- Middle Market Direct Lending is mostly spread given much higher economic growth sensitivity
 - Spread includes market based spread, amortization discount, origination fees, and other unique risk factors
- Specifics of underwriting and loan type will drive these components

Middle Market Direct Lending vs. Large Corporate Loans

Key Metrics

	Large Corporate	Middle Market
Broad Definition	EBITDA >\$100 million	EBITDA <\$100 million
Loan Size	>\$200 million	\$10 – \$200 million
Structure	Syndicated	Direct Origination
Terms	Floating Rate	Floating Rate
Liquidity	Trade OTC	Originate and hold; Illiquid
Final Maturity	5 years	5 – 7 years
Average Loan Life	3 years	2 – 3 years
Typical Spread	300 – 400 bps	400 – 600 bps
Average Historical Default Rate*	4.9%	3.4%
Average Historical Recovery*	76% of Par	80% of Par

Middle Market Direct Lending Supply Dynamics

Structural Replacement for Banks

Disappearing Middle Market Direct Lenders

Allied Capital	Golden State	US Trust
Bank One	Golden West Financial	Wachovia
Bank United Corp.	Great Western	Washington Mutual
BankBoston	H.F. Ahmanson & Co.	Westcorp Inc
Barnett Banks	Heller	
BayBanks	LaSalle Bank	Source: Audax Group
Bear Stearns	Manufacturers Hanover	
Boatmen's	MBNA Corporation	
Chemical Banking	Meridian	
Continental Illinois	Merrill Lynch Capital	
CoreStates Financial	Michigan National	
Dime Bancorp	National Westminster	
Emporia	NationsBank	
Finova	NBD Bancorp	
First Chicago	Norwest	
First Commerce	Security Pacific	
First Fidelity	Shawmut National	
First Interstate	Signet Banking	
First Light	SouthTrust	
First Nationwide	Standard Federal	
First Security	Summit Bancorp	
First Union	Textron	
First USA	TransAmerica	
FleetBoston	Travelers Group	

Current



- **Basel III has increased banks' capital costs**
- **Dodd-Frank has reduced banks' ability to hold debt on balance sheets**
- **Consolidation has shrunk the number of bank lenders**

Middle Market Direct Lending Demand Sources

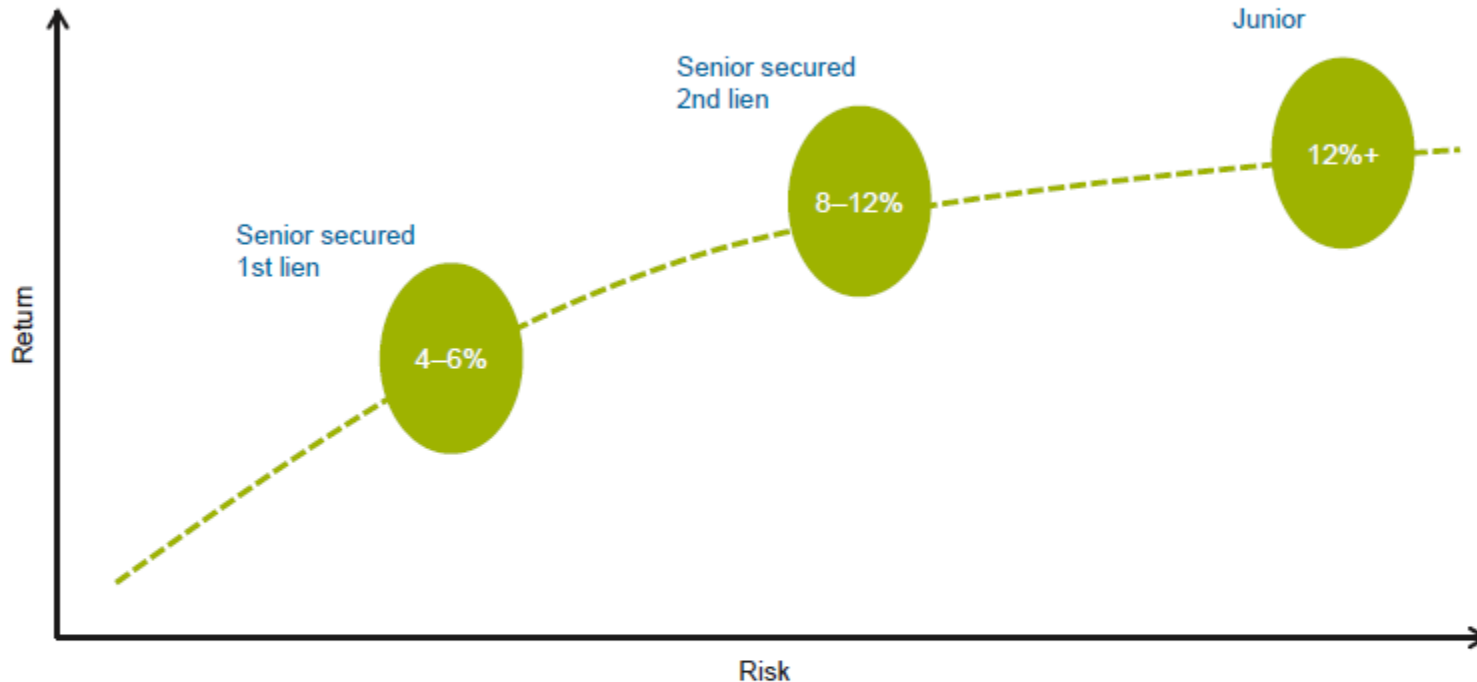
Middle Market Business Estimates

- 200,000 U.S. companies
- 33% of private sector GDP
- 50 million jobs
- 3rd largest global economy
- More than 60 direct lending managers in North America
- As of September 30, 2016, over 130 direct lending funds marketing



Middle Market Direct Lending Risk/Return Spectrum

Generalized return expectations



Lenders



- Importantly, the overall architecture within the capital structure will affect the resulting risk and return

Middle Market Direct Lending Considerations

Weighing the Benefits

Benefits

- Yield premium over broadly syndicated loans
- Partial hedge against rising interest rates
- Higher recovery and lower default rates (historically) relative to broadly syndicated loans
- Potential for stronger covenants, relative to broadly syndicated loans

Costs

- Complex strategies
- Many firms are new and thus have “unproven” track records
- Investments are highly illiquid
- Performance benchmarking is challenging
- Difficult to fit into a total portfolio construct
- Late stage in credit cycle
- Managing exposure to the strategy
 - How does the Plan Sponsor manage distributions: are proceeds re-invested or deployed elsewhere?
 - Does the Plan Sponsor allow the strategy to ‘play out,’ or is the target allocation strategic and maintained throughout the entire credit cycle?

Private Credit: Manager Differentiation

Investment Strategy and Process

- Target geographies and industries
- Deal flow and sourcing
- Capital structure focus
- Covenant and term structure flexibility
- Competing vehicles
- Diversification and risk management
- Sponsored versus non-sponsored
- Deal control

Organization and Team

- Scale and breadth of investment team
- Culture
- Experience across credit cycles
- Platform and team stability
- Industry reputation
- Number of deals reviewed and "hit" rate
- Depth of resources: underwriting/monitoring/restructuring
- Size of balance sheet

Investment Vehicle

- Target return
- Reinvestment provisions
- Management fees
- Carried interest structuring
- Alignment of interests
- Allocation of deal flow
- Portfolio-level leverage

Performance Track Record

- Composition of investment returns
- Loan-level covenant details
- Overlap of track record and strategy
- Review of credit events
- Realized and unrealized losses

BOARD ACCEPTANCE REQUESTED

TO: State Investment Board (“SIB”) Clients
FROM: Dave Hunter
DATE: February 17, 2017
SUBJECT: **Callan Fee Study – Summary Memo**

RIO February 17, 2017 Update:

RIO Staff previously reviewed the results of the Callan Fee Study with the SIB on November 18, 2016, although Callan was unable to attend this meeting due to weather related flight delays. Callan is onsite today and can address any follow-up questions directly. **At the end of the Callan Q&A, RIO requests the SIB to formally accept Callan’s Fee Study for the fiscal year ended June 30, 2016.**

Background:

SIB Governance Policy D-1 on **Ends** states that “SIB clients receive investment returns ... in a cost effective manner ...” and Policy E-1 on **Fiduciary Duties** states that “investment expenses must be controlled”. As consistent with prior years, the SIB approved RIO’s recommendation to engage Callan to conduct a review of investment fee levels. (RIO notes the Callan contract includes two projects per fiscal year and the fee study represents one of the two projects for the current fiscal year.) RIO will continue to work with our existing managers on various fee reduction initiatives. Most recently, this included an expansion of the Novarca contract to include two large fixed income managers (Western Asset Management Company - \$1.1 billion and Wells Capital Management - \$750 million).

Summary:

The following page summarizes the fee ranking of each asset class within the Pension Trust, Insurance Trust and Legacy Fund. The lowest fee level is highlighted in **blue**, the second lowest fee level is **green**, median pricing is **brown**, above average pricing is **orange** and the highest fee level is **yellow**. Based on this quartile ranking system for “All-In Pricing”, about two-thirds of the asset classes are ranked in the two best quartiles (e.g. **blue is best** and **green is good**) and generally include our equity allocations. In contrast, about 30% of the asset classes are ranked in the two worst quartiles (e.g. **orange** or **yellow**) and generally includes fixed income and real assets. Although fixed income and real assets are often ranked in the two worst quartiles from a fee perspective, it is important to note that these sectors have generated above average levels of excess return (as highlighted in the *RIO Commentary* section on the next page). As such, RIO firmly believes this significant level of outperformance justifies the above median fee levels within these sectors.

RIO believes that investment expenses are reasonable overall noting that management fees have declined on both a % basis and absolute dollar basis in recent years. More importantly, RIO notes the return on investment fees has been meaningfully positive and exceeded 50 bps per annum (or **\$250 million** in aggregate) over the last five years. As such, the SIB has been successful in prudently using active management to generate positive risk adjusted rates of return while significantly reducing fee levels for nearly all of our clients.

Attachments: NDSIB Fee Study: Fiscal Year 2015 – Pension Trust, Insurance Trust and Legacy Fund

**Callan Fee Study
Financial Dashboard
As of November 10, 2016**



Blue - 4th Quartile ("Blur is Best" or Lowest Fee Level)
Green - 3rd Quartile ("Green is Good")
Brown = Median or Average Industry Pricing
Orange - 2nd Quartile (Below Average)
Yellow - 1st Quartile (Highest Fee Level)

Column A	Column B ----- ND SIB ----- Asset Based Pricing	Column C All-In Pricing	Column D Callan Median	Column E All Strategies Quartile	RIO Commentary
PENSION TRUST:					
World Equity	0.64%	0.38%	0.42%	3rd	ND SIB fees are within 1 bp of the lowest quartile.
Domestic Large Cap Equity	0.21%	0.25%	0.25%	Median	ND SIB fees are at the "Industry Median".
Domestic Small Cap Equity	0.62%	0.56%	0.64%	3rd	ND SIB fees are within 2 bps of the lowest quartile.
Developed International Equity	0.32%	0.35%	0.51%	4th	ND SIB fees are in the lowest or "Best" quartile.
Emerging Markets Equity	0.82%	0.82%	0.89%	3rd	ND SIB fees are "Good" and in the 3rd quartile.
Investment Grade Fixed Income	0.20%	0.39%	0.25%	1st	Excess returns > 2% (5.2% net vs 3.1% 5-yr. index) justify "All-In Pricing".
Non-Invest. Grade Fixed Income	0.50%	1.04%	0.40%	1st	Excess returns > 0.35% (8.71% net vs 8.34% 5-yr. index).
International Fixed Income	0.35%	0.35%	0.38%	3rd	ND SIB fees are "Good" and in the 3rd quartile.
Real Estate	0.67%	0.96%	0.86%	1st	Excess returns > 1.8% (13% net vs 11.2% index) justify "All-In Pricing".
Timber	n.m.	-1.31%	n.a.	n.a.	<i>"Callan cannot produce reasonable ... comparisons due to the highly varied & customized approach of strategies in these asset classes." P/E (0.7%), Timber (1.3%) & Infrastr. (4.9%) have underperformed (5 yrs)</i>
Infrastructure	n.m.	1.05%	n.a.	n.a.	
Private Equity ("P/E")	n.m.	1.80%	n.a.	n.a.	
Cash	0.11%	0.11%	< 0.20%	n.a.	Callan notes that fees "are well within industry norms".
INSURANCE TRUST:					
Domestic Large Cap Equity	0.26%	0.28%	0.51%	4th	ND SIB fees are in the lowest or best quartile.
Domestic Small Cap Equity	0.28%	0.43%	0.84%	4th	ND SIB fees are in the lowest or best quartile.
International Equity	0.45%	0.45%	0.63%	4th	ND SIB fees are in the lowest or best quartile.
Domestic Fixed Income	0.18%	0.40%	0.25%	1st	Excess returns > 2.8% (5.9% net vs 3.1% index) justify "All-In Pricing".
Inflation Protected - Bonds	0.14%	0.14%	0.19%	4th	ND SIB fees are in the lowest or best quartile.
Diversified Real Assets - All	0.14%	0.57%	0.19%	1st	<i>See Pension Trust - RIO Commentary for Infrastructure and Timber.</i>
Real Estate	0.72%	0.72%	0.95%	4th	ND SIB fees are in the lowest or best quartile.
Short-Term Fixed Income	0.14%	0.14%	0.15%	3rd	ND SIB fees are "Good" and in the 3rd quartile.
Cash & Cash Equivalents	0.14%	0.14%	< 0.20%	n.a.	Callan notes that fees "are well within industry norms".
LEGACY FUND:					
Domestic Large Cap Equity	0.25%	0.27%	0.25%	2nd	ND SIB fees are within 2 bps of the "Industry Median".
Domestic Small Cap Equity	0.27%	0.43%	0.64%	4th	ND SIB fees are in the lowest or best quartile.
International Equity	0.40%	0.40%	0.51%	4th	ND SIB fees are in the lowest or best quartile.
Domestic Fixed Income	0.18%	0.18%	0.19%	3rd	ND SIB fees are "Good" and in the 3rd quartile.
Inflation Protected - Bonds	0.14%	0.14%	0.15%	3rd	ND SIB fees are "Good" and in the 3rd quartile.
Diversified Real Assets - All	0.14%	0.41%	0.15%	1st	<i>See Pension Trust - RIO Commentary for Infrastructure.</i>
Real Estate	0.65%	0.65%	0.86%	4th	ND SIB fees are in the lowest or best quartile.

n.a. or n.m. = not available or not meaningful
bp = basis point (1 basis point = 1/100th of 1%)

RIO SUMMARY: Overall fees are reasonable, although investment manager fees are comparatively higher in the Pension Trust than the Insurance Trust. In recent years, RIO and SIB has been successful in reducing overall investment management fees to less than 0.45% (from 0.65% in fiscal 2013). RIO will continue to work with Callan and our managers on additional fee reductions but expect fees to approximate 0.50% per annum over the long-term.

November 2016



NDSIB Fee Study: Fiscal Year 2016

Pension Trust, Insurance Trust,
and Legacy Fund

Paul Erlendson

Senior Vice President

Alex Browning

Vice President

Andrea Biel

Assistant Vice President

Summary Notes and Comments

NDSIB – Pension Trust, Insurance Trust, and Legacy Fund

- All market values and fee data are as of the fiscal year ending June 30, 2016.
- Investment managers employ three primary fee calculation methods to charge for their services;
 - **AUM Based Fees:** fees are calculated as a percentage of assets under management
 - **Performance Based Fees:** fees are calculated on outperformance relative to a pre-specified benchmark during a contracted measurement period
 - **Hybrid Fees:** A combination of a low AUM based fee and a performance based fee schedule
- Regardless of the method used by a particular manager, Callan calculated fees as a percentage of assets under management for each manager for the purposes of comparison.
- In many instances, fees paid by the individual trusts benefit from fee schedules that account for the aggregate level of assets invested with a particular manager or in a specific strategy.
- Fee universes used in the study reflect either:
 - **Actual Fees** paid by Callan clients in similar mandates,
 - **Published Fees** calculated using a universe of manager fee schedules for similar mandates, or;
 - An **Average of Actual & Published Fee** universes. This method was employed where the Actual Fee universe was smaller than 10.
- All fee universes are explicitly noted beneath each chart where “n=” will denote the applicable sample size.
- Greater detail on fee measurements and data are available on the last page of the report.



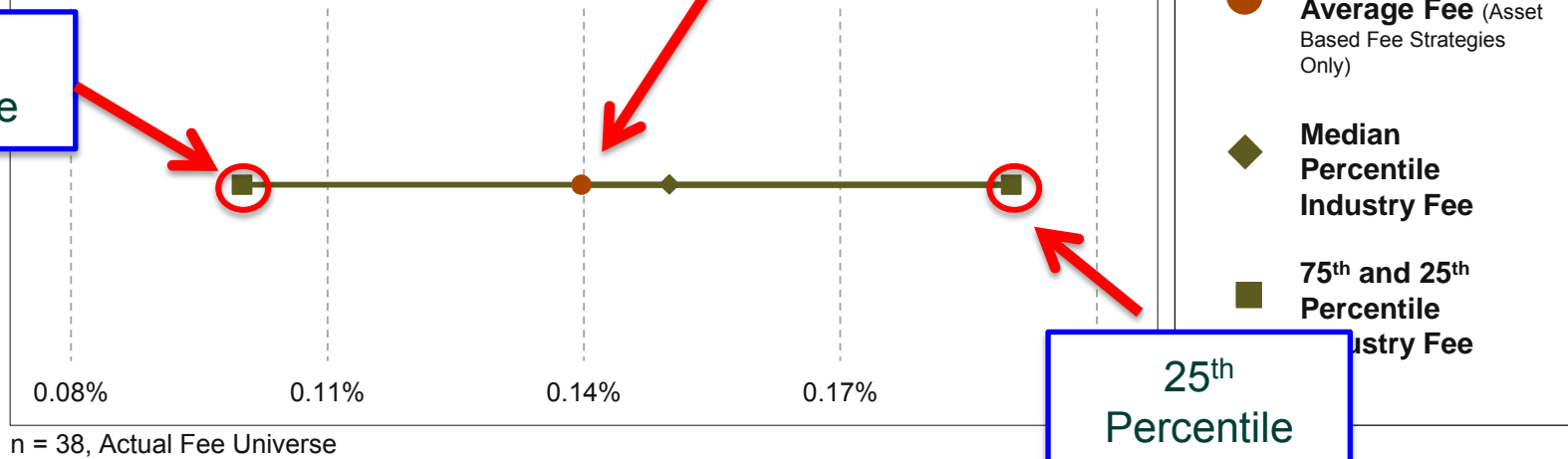
Guide to Charts and Tables

Short Term Fixed Income

Insurance Trust

This is NDSIB's
Weighted Average Fee

Short Term Fixed Income Fees



- Short Term Fixed Income managers invest in bonds that have short maturity dates.
- North Dakota's average account size for FY 2016 **\$253mm.**
- Red circle represents NDSIB Insurance Trust's asset based weighted average short-term fixed income mgmt. fee **0.14%.**
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using Callan's 2014 Investment Management Fee Survey for mandate sizes **greater than \$200mm.**

Investment Strategies – Short Term Fixed Income & Cash

Insurance Trust

Short Term Fixed Income	
AUM Based Fee Strategies	Fee %
JPM Short Term	0.11%
Babson Short Term	0.17%
Weighted Average AUM Based Fee	0.14%
Industry Fee - 25 th Percentile	0.19%
Industry Fee - Median	0.15%
Industry Fee - 75 th Percentile	0.10%
Total Weighted Average Fee	0.14%

Cash & Equivalents	
AUM Based Fee Strategies	Fee %
Northern Trust Cash Account	0.14%
Weighted Average AUM Based Fee	0.14%
Total Weighted Average Fee	0.14%

Fee Distribution

The table summarizes the data behind the chart

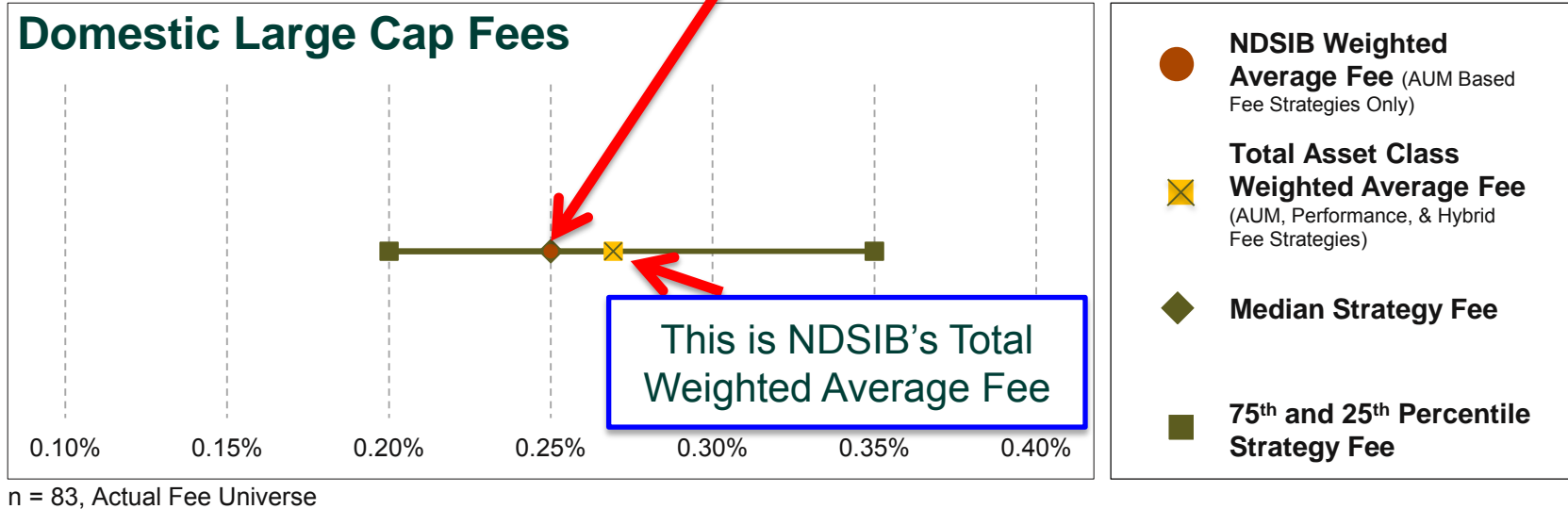
Sometimes, no universe exists

- All managers for this asset class fall into the asset based fee category.
- Fees for cash management are typically below 20 basis points (0.20%). Fees paid by the North Dakota State Investment Board's Insurance Trust cash and short-term fixed income management are well within industry norms.
- Note that the Legacy Fund cash allocation is included in the Insurance Trust Cash Account

Domestic Large Cap Equity

Legacy Fund

This is NDSIB's Weighted Average Fee



- Domestic Large Cap Equity managers invest in large company stocks that are typically listed within the U.S.
- North Dakota's average account size for FY 2016: \$233mm.
- Red circle represents NDSIB Legacy Fund's asset based weighted average large cap equity mgmt. fee: 0.25%.
- Yellow box represents total asset class weighted average fee (asset based & performance/hybrid fees) in FY 2016: 0.27%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using Callan's 2014 Investment Management Fee Survey for mandate sizes of greater than \$200mm.

Investment Strategies – Domestic Large Cap Equity

Legacy Fund

Domestic Large Cap Equity	
AUM Based Fee Strategies	Fee %
L.A. Capital Growth	0.21%
LSV Asset Management	0.29%
Weighted Average AUM Based Fee	0.25%
Industry Fee - 25 th Percentile	0.35%
Industry Fee - Median	0.25%
Industry Fee - 75 th Percentile	0.20%
Performance & Hybrid Fee Strategies	Fee %
L.A. Capital Enhanced Index	0.33%
Parametric Clifton Enhanced S&P 500	0.26%
Total Weighted Average Fee	0.27%

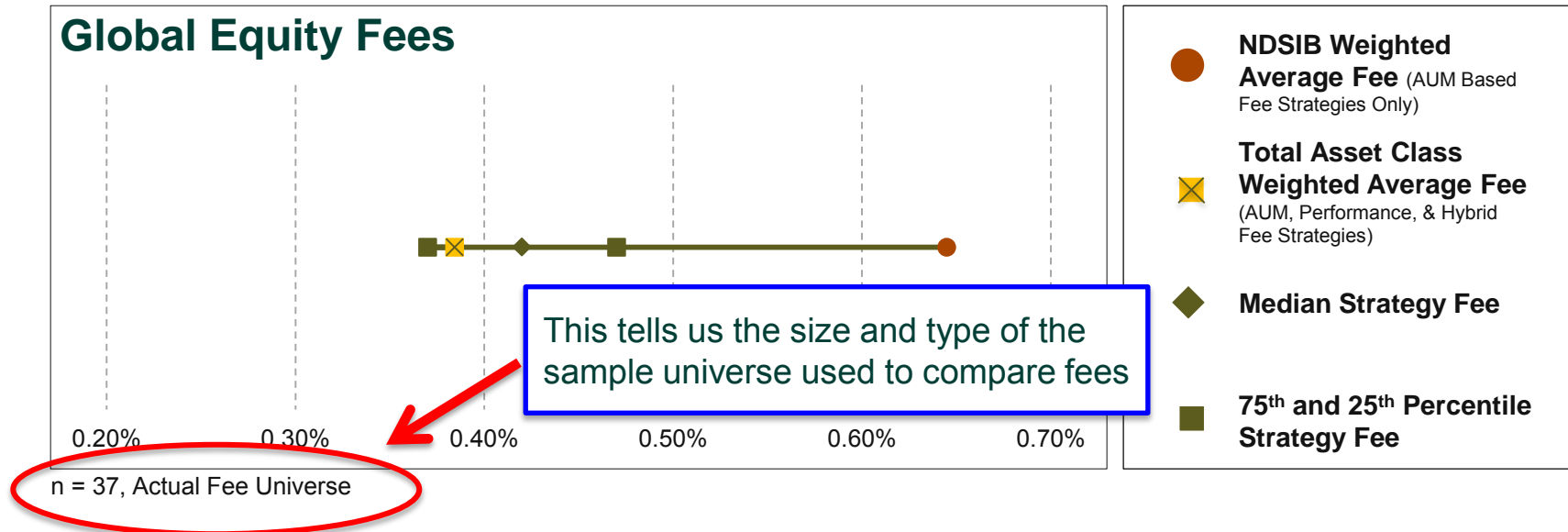
AUM Based Fees

Performance and Hybrid Based Fees

- Due to the fee structure of the funds in the Performance & Hybrid Fee Strategies category, the Total Weighted Average Fees are not comparable to industry fees from Callan's 2014 Investment Management Fee Survey.
 - L.A. Capital Enhanced Index charges a base management fee on all assets under management. A performance-based fee of 20% of returns in excess of the benchmark return is charged on approximately 40% of the assets.
 - Parametric Clifton Enhanced Index charges no base management fee. The manager is paid 35% of any excess return above the benchmark. Fees are paid annually for performance through June 30.

Global Equity

Pension Trust



- Global equity managers invest in stocks traded in both U.S. and non-U.S. markets.
- North Dakota's average account size for FY 2016: \$326mm.
- Red circle represents NDSIB Pension Trust's asset based weighted average global equity mgmt. fee: 0.64%.
- Yellow box represents total asset class weighted average fee (asset based & performance/hybrid fees) in FY 2016: 0.38%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using Callan's 2014 Investment Management Fee Survey for mandate sizes of greater than \$200mm.

Investment Strategies – Global Equity

Pension Trust

Global Equity	
AUM Based Fee Strategies	Fee %
EPOCH Inv. Partners	0.64%
Weighted Average AUM Based Fee	0.64%
Industry Fee - 25 th Percentile	0.47%
Industry Fee - Median	0.42%
Industry Fee - 75 th Percentile	0.37%
Performance & Hybrid Fee Strategies	Fee %
LSV Asset Management	0.18%
Total Weighted Average Fee	0.38%

- Due to the fee structure of the funds in the Performance & Hybrid Fee Strategies category, the Total Weighted Average Fees are not comparable to industry fees from Callan's 2014 Investment Management Fee Survey.
 - LSV charges a flat fee of 0.10% on assets under management plus 25% of the net outperformance relative to its benchmark with totals fees capped at 0.85%.



The text provides more detail on how a particular fee was calculated and or had and effect on the total weighted average



Pension Trust

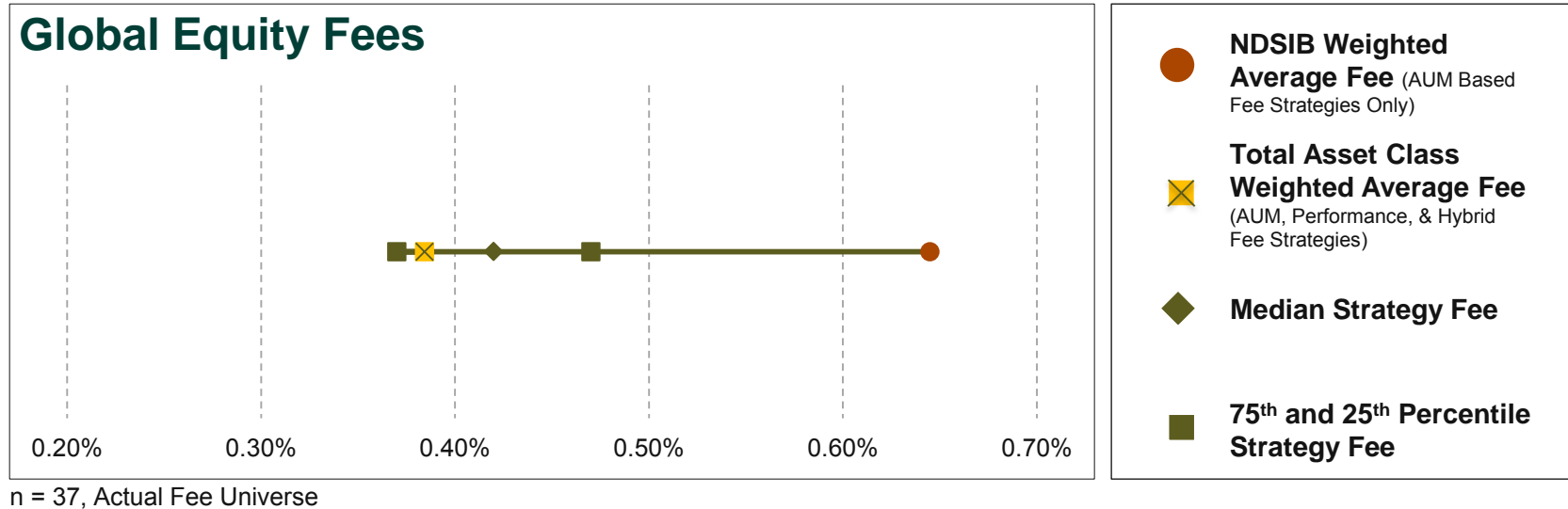
Pension Trust

NDSIB Fee Study Fiscal Year 2016 Executive Summary

- Total Equity Manager fees paid represented a mix of asset-based and performance/hybrid fee strategies. In aggregate all equity strategy composites had fees equal to or below their respective medians.
 - Total Global Equity fees fell below their respective distribution median helped in part by performance/hybrid fee based strategies
 - Total Domestic Large Cap Equity fees were equal to the fee distribution median with performance/hybrid fee based strategies displaying a wide range
 - Total Small Cap Equity fees were close to the 75th percentile with asset-based fees falling closer to median
 - Developed International Equity fees were well below the 75th percentile and represented only asset-based fee strategies
 - Emerging Market Equity fees fell just below median and represented only asset-based fee strategies
- Total Fixed Income Manager fees paid represented a mix of asset-based and performance/hybrid fee strategies. In aggregate fees for Investment Grade, Below Investment Grade, and International Fixed Income displayed a broad range.
 - Total Investment Grade Fixed Income fees paid were above the 25th percentile, driven largely by performance/hybrid fee based strategies
 - Total Below Investment Grade Fixed Income fees paid were above the 25th percentile, driven largely by performance/hybrid fee based strategies
 - Total International Fixed Income fees paid were below median and represented only asset-based fee strategies
- Total Real Estate Manager fees paid represented a mix of asset-based and performance/hybrid fee strategies. Asset based fee strategies fell well below the 75th percentile with performance/hybrid fee strategies pushing the total fees paid just above the 25th percentile.
 - Due to the custom nature of non-core real estate strategies and their closed-end fund structures, there is no applicable manager fee distribution and so it presents a skew to the asset-based fee universe comparison
- Total Real Assets represents a wide variety of inflation sensitive strategies ranging from Domestic Timber and Infrastructure to Asian Infrastructure. Due to the custom nature of these strategies no applicable manager fee distribution is available.
 - Fee structures do however appear to follow industry norms and standards
- Private Equity represents a variety of strategies and investment vehicles that cannot produce a reasonable industry fee universe for comparison.
 - Fee structures do however appear to follow industry norms and standards

Global Equity

Pension Trust



- Global equity managers invest in stocks traded in both U.S. and non-U.S. markets.
- North Dakota's average account size for FY 2016: \$326mm.
- Red circle represents NDSIB Pension Trust's asset based weighted average global equity mgmt. fee: 0.64%.
- Yellow box represents total asset class weighted average fee (asset based & performance/hybrid fees) in FY 2016: 0.38%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using Callan's 2014 Investment Management Fee Survey for mandate sizes of greater than \$200mm.

Investment Strategies – Global Equity

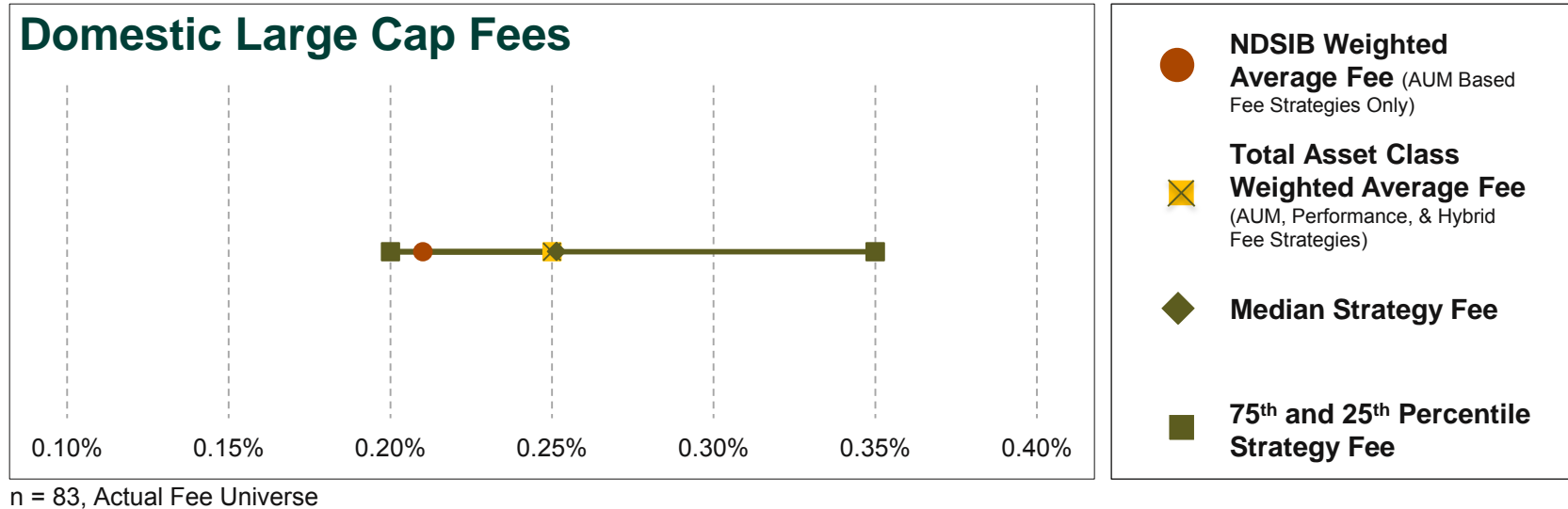
Pension Trust

Global Equity	
AUM Based Fee Strategies	Fee %
EPOCH Inv. Partners	0.64%
Weighted Average AUM Based Fee	0.64%
Industry Fee - 25 th Percentile	0.47%
Industry Fee - Median	0.42%
Industry Fee - 75 th Percentile	0.37%
Performance & Hybrid Fee Strategies	Fee %
LSV Asset Management	0.18%
Total Weighted Average Fee	0.38%

- Due to the fee structure of the funds in the Performance & Hybrid Fee Strategies category, the Total Weighted Average Fees are not comparable to industry fees from Callan's 2014 Investment Management Fee Survey.
 - LSV charges a flat fee of 0.10% on assets under management plus 25% of the net outperformance relative to its benchmark with totals fees capped at 0.85%.

Domestic Large Cap Equity

Pension Trust



- Domestic Large Cap Equity managers invest in large company stocks that are typically listed and traded within the U.S.
- North Dakota's average account size for FY 2016: \$306mm.
- Red circle represents NDSIB Pension Trust's asset based weighted average large cap equity mgmt. fee: 0.21%.
- Yellow box represents total asset class weighted average fee (asset based & performance/hybrid fees) in FY 2016: 0.25%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using Callan's 2014 Investment Management Fee Survey for mandate sizes of greater than \$200mm.

Investment Strategies – Domestic Large Cap Equity

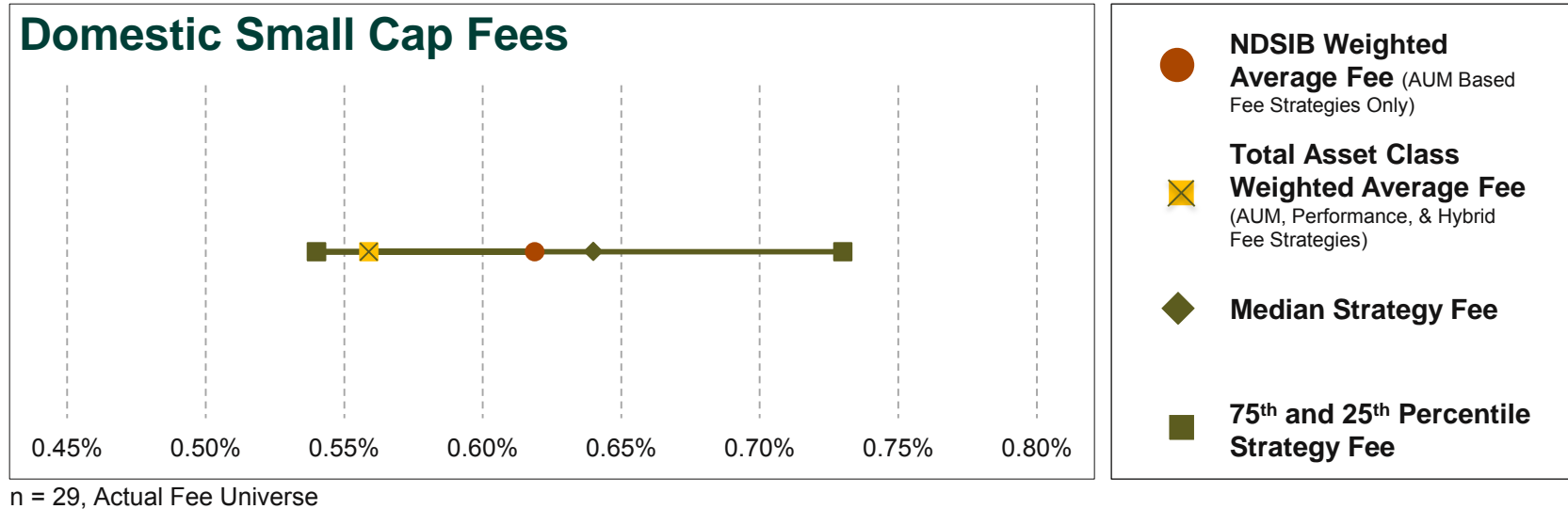
Pension Trust

Domestic Large Cap Equity	
AUM Based Fee Strategies	Fee %
L.A. Capital Growth	0.21%
Weighted Average AUM Based Fee	0.21%
Industry Fee - 25 th Percentile	0.35%
Industry Fee - Median	0.25%
Industry Fee - 75 th Percentile	0.20%
Performance & Hybrid Fee Strategies	Fee %
L.A. Capital Enhanced Index	0.53%
Northern Trust Enhanced S&P 500	0.00%
Parametric Clifton Enhanced S&P 500	0.22%
Total Weighted Average Fee	0.25%

- Due to the fee structure of the funds in the Performance & Hybrid Fee Strategies category, the Total Weighted Average Fees are not comparable to industry fees from Callan's 2014 Investment Management Fee Survey.
 - L.A. Capital Enhanced Index charges a base management fee on all assets under management. A performance based fee of 20% of returns in excess of the benchmark is charged on approximately 40% of the assets.
 - Northern Trust Enhanced Index charges no base management fee. The only fee charged is 25% of the excess return generated. Fees are calculated and paid quarterly.
 - Parametric Clifton Enhanced Index charges no base management fee. The only fee charged is 35% of the excess return generated. Fees are paid once a year for performance through June 30.

Domestic Small Cap Equity

Pension Trust



- Small Cap Equity managers invest in smaller company stocks that are typically listed and traded within the U.S.
- North Dakota's average account size for FY 2016: \$111mm.
- Red circle represents NDSIB Pension Trust's asset based weighted average domestic small cap equity mgmt. fee: 0.62%.
- Yellow box represents total asset class weighted average fee (asset based & performance/hybrid fees) in FY 2016: 0.56%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using Callan's 2014 Investment Management Fee Survey for mandate sizes between \$100mm and \$200mm.

Investment Strategies – Domestic Small Cap Equity

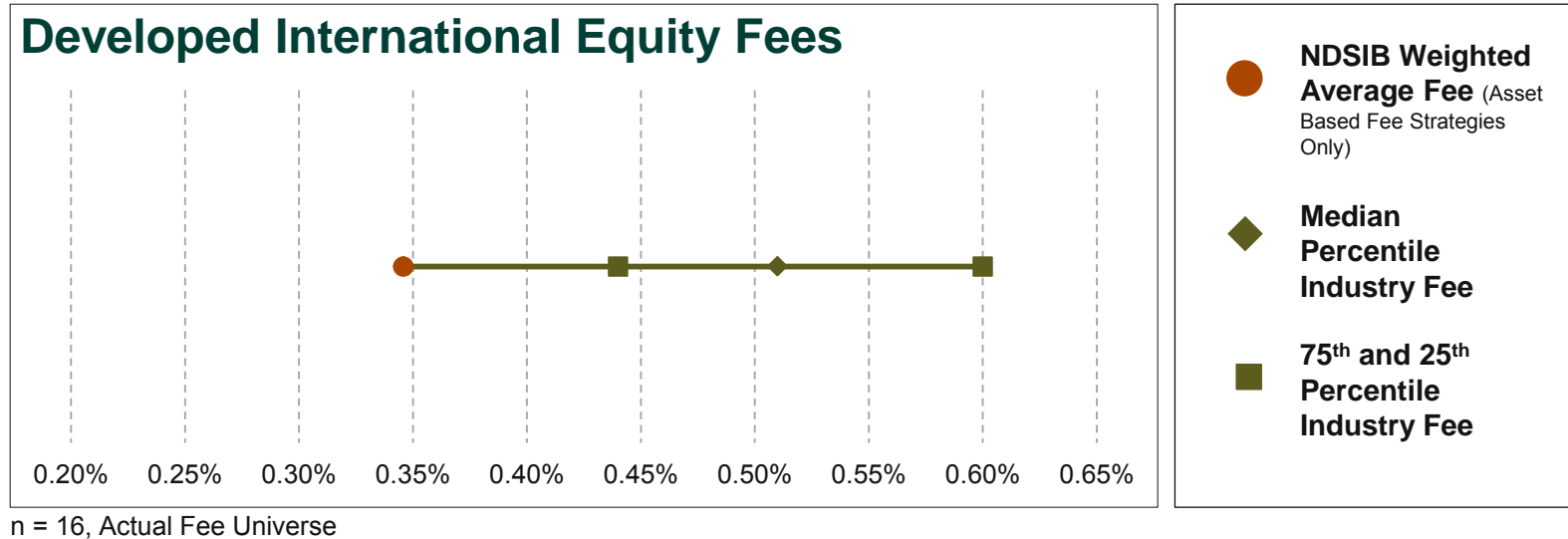
Pension Trust

Domestic Small Cap Equity	
AUM Based Fee Strategies	Fee %
Callan Diversified Alpha Group Trust	0.43%
Atlanta Capital	0.18%
Weighted Average AUM Based Fee	0.62%
Industry Fee - 25 th Percentile	0.73%
Industry Fee - Median	0.64%
Industry Fee - 75 th Percentile	0.54%
Performance & Hybrid Fee Strategies	Fee %
Parametric Clifton Enhanced Small Cap	0.50%
Total Weighted Average Fee	0.56%

- Due to the fee structure of the funds in the Performance & Hybrid Fee Strategies category, the Total Weighted Average Fees are not comparable to industry fees from Callan’s 2014 Investment Management Fee Survey.
 - Parametric Clifton Enhanced Small Cap charges no base management fee. The only fee charged is 35% of the excess return generated over the index. Fees are paid once a year for performance through June 30.
- Note that the Callan Diversified Alpha Group Trust was terminated in March 2016 and the proceeds were used to fund Atlanta Capital in April 2016.

Developed International Equity

Pension Trust



- Developed International Equity managers invest in stocks that trade and gain exposure to developed markets and economies outside of the U.S.
- North Dakota's average account size for FY 2016: \$122mm.
- Red circle represents NDSIB Pension Trust's asset based weighted average developed international equity mgmt. fee: 0.35%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using Callan's 2014 Investment Management Fee Survey for mandate sizes between \$100mm and \$200mm.

Investment Strategies – Developed International Equity

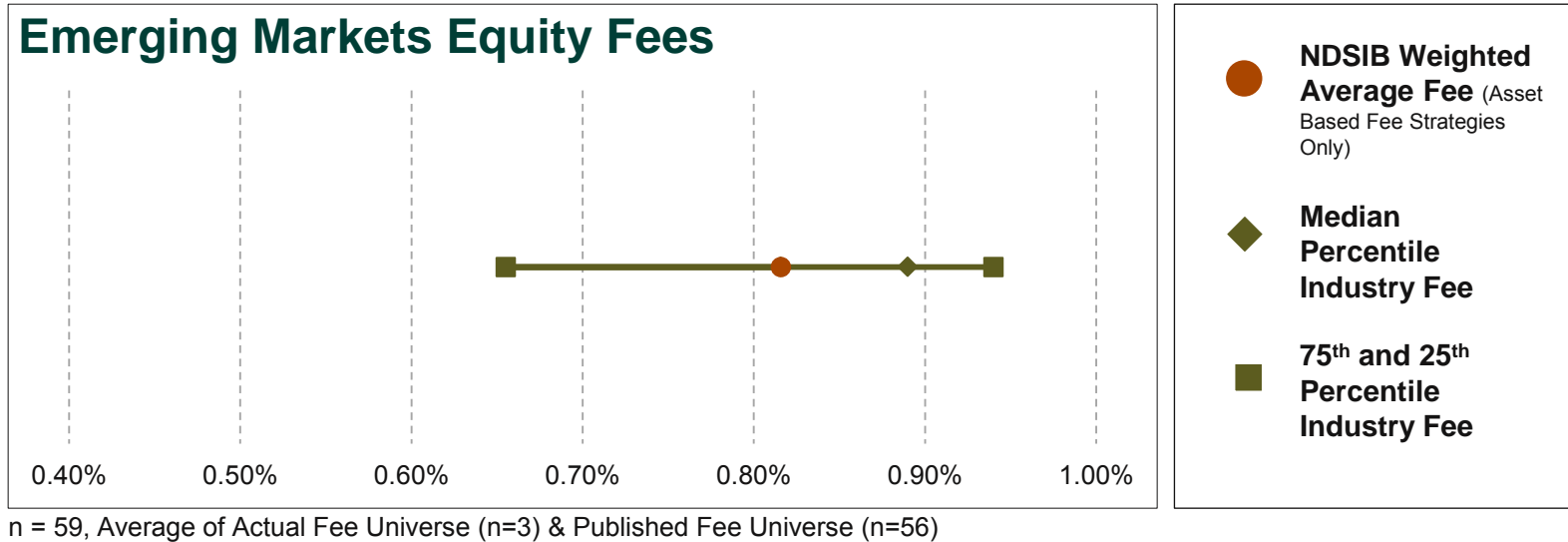
Pension Trust

Developed International Equity	
AUM Based Fee Strategies	Fee %
Capital Guardian Trust	0.50%
DFA International Small Cap Value	0.66%
Northern Trust World ex-US	0.03%
Wellington Intl SC Opp	0.85%
William Blair	0.03%
Weighted Average AUM Based Fee	0.35%
<hr/>	
Industry Fee - 25 th Percentile	0.60%
Industry Fee - Median	0.51%
Industry Fee - 75 th Percentile	0.44%
<hr/>	
Total Weighted Average Fee	0.35%

- All managers for this asset class fall into the asset based fee category.
- Note that Capital Guardian Trust was terminated in May 2016 and the proceeds were used to fund William Blair in June 2016

Emerging Markets Equity

Pension Trust



- Emerging Markets Equity managers invest in stocks that gain exposure to emerging market economies.
- North Dakota's average account size: \$80mm.
- Red circle represents NDSIB Pension Trust's asset based weighted average emerging markets equity mgmt. fee: 0.82%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using Callan's 2014 Investment Management Fee Survey for mandate sizes between \$75mm and \$100mm.

Investment Strategies – Emerging Markets Equity

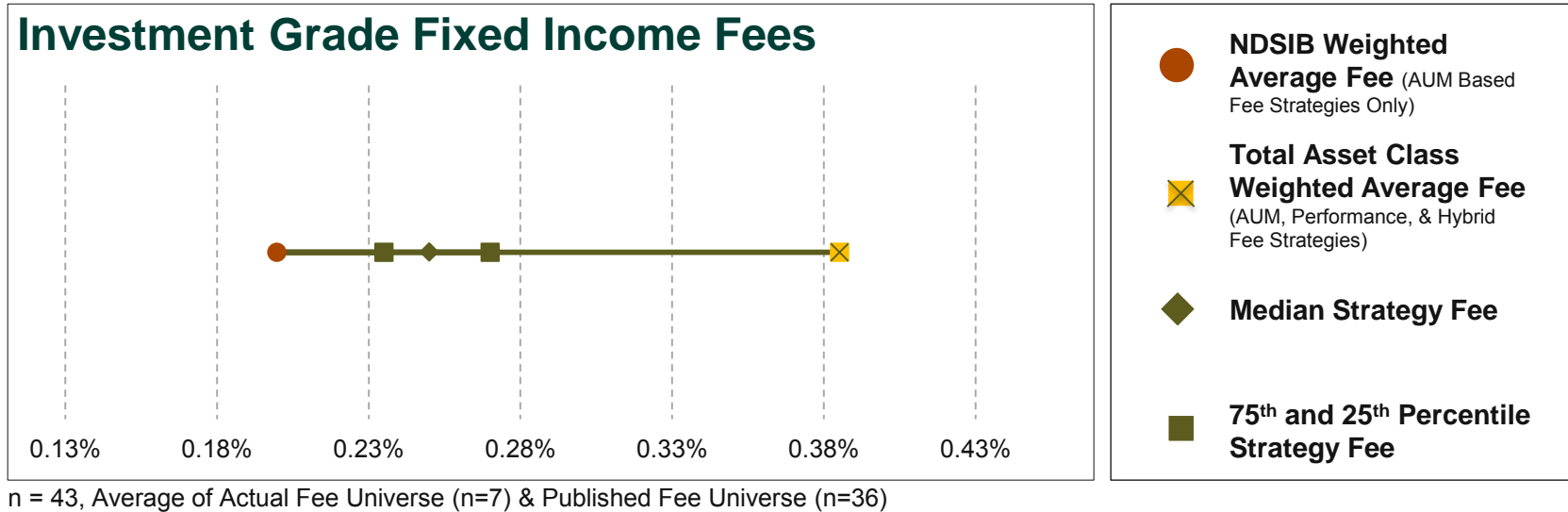
Pension Trust

Emerging Markets Equity	
AUM Based Fee Strategies	Fee %
DFA Emerging	0.62%
Axiom	0.88%
Weighted Average AUM Based Fee	0.82%
<hr/>	
Industry Fee - 25 th Percentile	0.94%
Industry Fee - Median	0.89%
Industry Fee - 75 th Percentile	0.66%
<hr/>	
Total Weighted Average Fee	0.82%

- All managers for this asset class fall into the asset based fee category.

Investment Grade Fixed Income

Pension Trust



- Investment Grade Fixed Income managers invest in bonds and other debt instruments that are rated “investment grade” by rating agencies and/or investment analysts.
- North Dakota’s average account size for FY 2016: \$108mm.
- Red circle represents NDSIB Pension Trust’s asset based weighted average investment grade fixed income mgmt. fee: 0.15%.
- Yellow box represents total asset class weighted average fee (asset based & performance/hybrid fees) in FY 2016: 0.39%
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using Callan’s 2014 Investment Management Fee Survey for mandate sizes between \$100mm and \$200mm.

Investment Strategies – Investment Grade Fixed Income

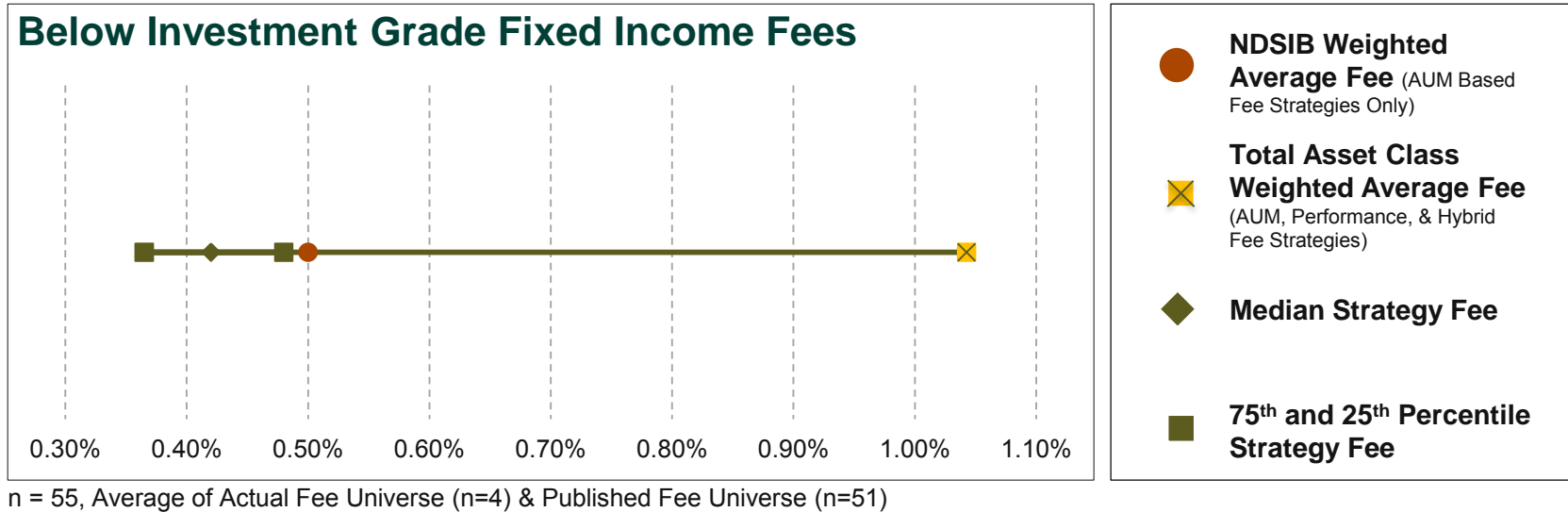
Pension Trust

Investment Grade Fixed Income	
AUM Based Fee Strategies	Fee %
SSgA Long U.S. Treasury Index	0.04%
JP Morgan MBS	0.21%
PIMCO MBS	0.17%
PIMCO Unconstrained	0.10%
Declaration Total Return	0.46%
Weighted Average AUM Based Fee	0.20%
Industry Fee - 25 th Percentile	0.27%
Industry Fee - Median	0.25%
Industry Fee - 75 th Percentile	0.24%
Performance & Hybrid Fee Strategies	Fee %
PIMCO DiSCO II	1.46%
Total Weighted Average Fee	0.39%

- Declaration Total Return charges an AUM Based Fee of 0.60%. 1/12 of the AUM Based fee is charged monthly. However, fees charged on amounts in excess of \$75mm are rebated back to the Pension Trust on a quarterly basis. This rebate process is a specially negotiated arrangement made necessary by the partnership structure.
- Due to the fee structure of the funds in the Performance & Hybrid Fee Strategies category, the Total Weighted Average Fees are not comparable to industry fees from Callan's 2014 Investment Management Fee Survey.
 - PIMCO DiSCO II charges a fee of 0.75% based on assets under management plus a performance fee. The performance fee is 15% of the excess return above a variable hurdle rate.

Below Investment Grade Fixed Income

Pension Trust



- Below Investment Grade (I.G.) Fixed Income managers invest in bonds and other debt instruments that are rated below “investment grade” by rating agencies and/or investment analysts.
- North Dakota’s average account size for FY 2016: \$197mm.
- Red circle represents NDSIB Pension Trust’s asset based weighted average below I.G. fixed income mgmt. fee: 0.50%.
- Yellow box represents total asset class weighted average fee (asset based & performance/hybrid fees) in FY 2016: 1.04%
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using Callan’s 2014 Investment Management Fee Survey for mandate sizes between \$100mm and \$200mm.

Investment Strategies – Below Investment Grade Fixed Income

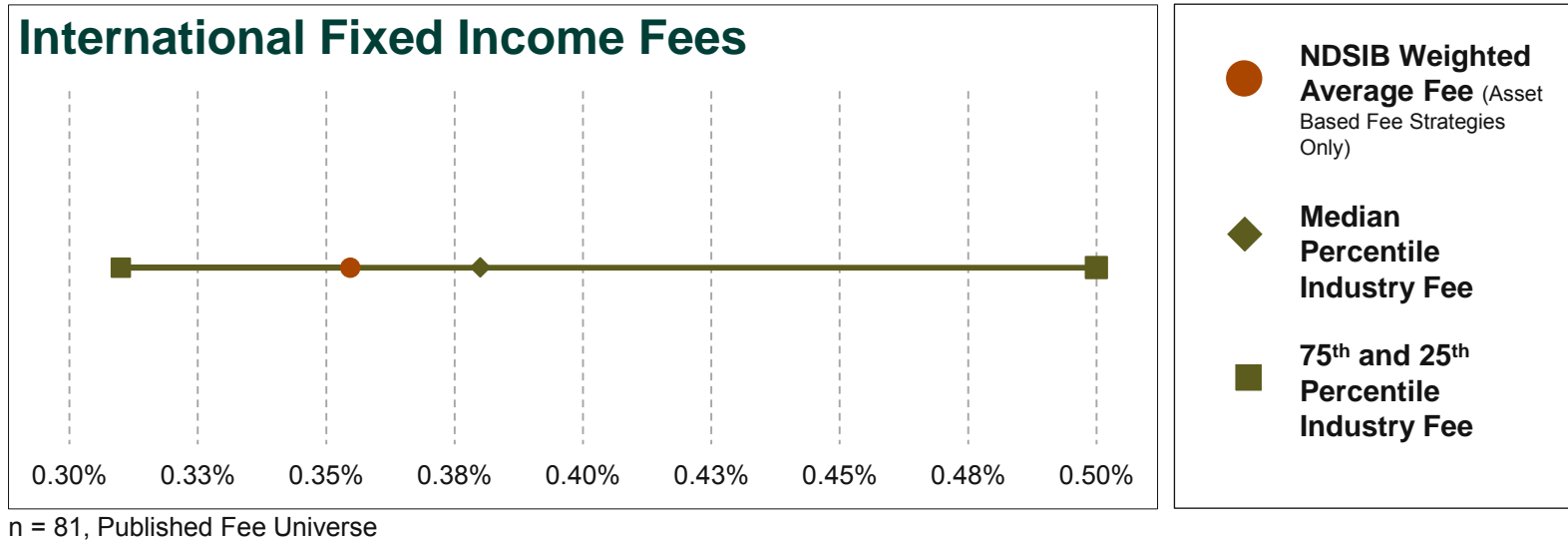
Pension Trust

Below Investment Grade Fixed Income	
AUM Based Fee Strategies	Fee %
Loomis Sayles	0.50%
Weighted Average AUM Based Fee	0.50%
<hr/>	
Industry Fee - 25 th Percentile	0.48%
Industry Fee - Median	0.42%
Industry Fee - 75 th Percentile	0.37%
<hr/>	
Performance & Hybrid Fee Strategies	Fee %
Goldman Sachs 2006 Offshore	1.27%
Goldman Sachs V Offshore	8.13%
PIMCO Bravo Fund II	3.05%
<hr/>	
Total Weighted Average Fee	1.04%

- Due to the fee structure of the funds in the Performance & Hybrid Fee Strategies category, the Total Weighted Average Fees are not comparable to industry fees from Callan's 2014 Investment Management Fee Survey.
 - Both Goldman Sachs investment products charge a management fee of 1.5% based on the original commitment plus a performance-based fee. No performance fee was charged for the 2006 Offshore fund.
 - PIMCO Bravo Fund II charges a fee of 1.45% based on assets under management plus a performance fee. The performance fee is 20% of excess returns over a “preferred” return of 8%.

International Fixed Income

Pension Trust



- International Fixed Income managers invest in bonds and other debt instruments that gain exposure to foreign entities and currencies that typically trade outside the U.S.
- North Dakota's average account size for FY 2016: \$118mm.
- Red circle represents NDSIB Pension Trust's asset based weighted average international fixed income mgmt. fee: 0.35%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using published active management fee schedules from Callan's International Fixed Income Peer Group, using a mandate size between \$100mm and \$200mm.

Investment Strategies – International Fixed Income

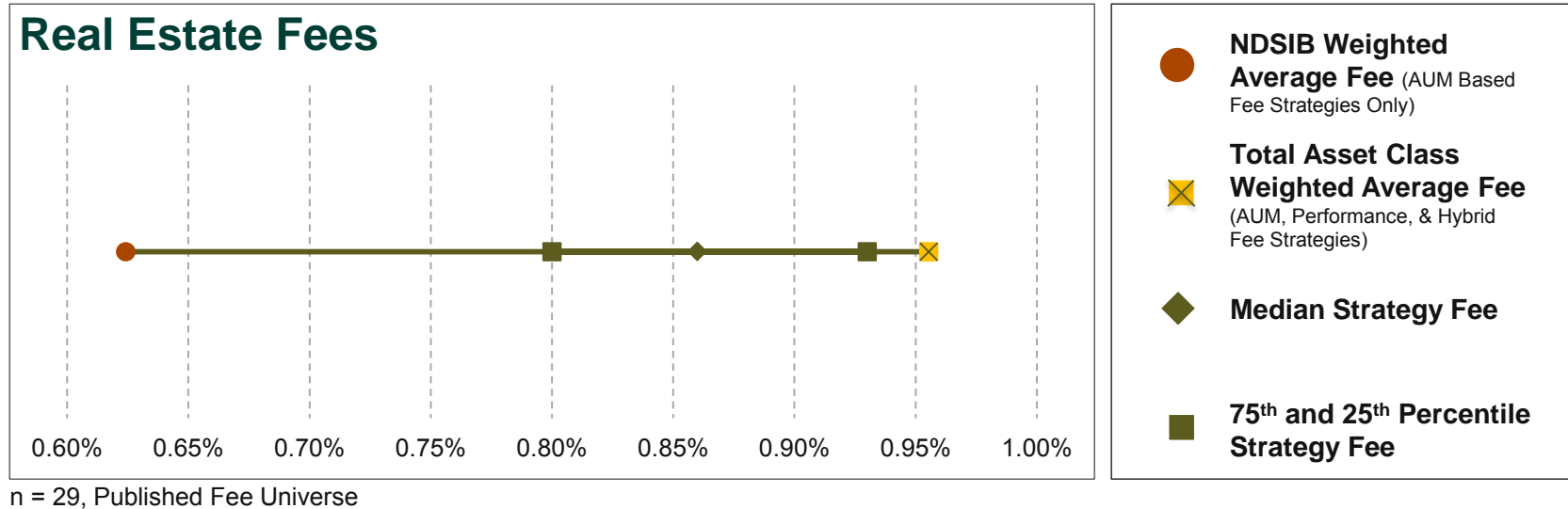
Pension Trust

International Fixed Income	
AUM Based Fee Strategies	Fee %
Brandywine	0.38%
UBS Global Asset Management	0.32%
Weighted Average AUM Based Fee	0.35%
<hr/>	
Industry Fee - 25 th Percentile	0.50%
Industry Fee - Median	0.38%
Industry Fee - 75 th Percentile	0.31%
<hr/>	
Total Weighted Average Fee	0.35%

- All managers for this asset class fall into the asset based fee category.

Real Estate

Pension Trust



- Real Estate managers invest directly in real properties (e.g. offices, multi-family, retail, and other physical properties) and securities that gain access to such economic interests.
- North Dakota's average account size: \$195mm.
- Red circle represents NDSIB Pension Trust's asset based weighted average real estate mgmt. fee: 0.62%.
- Yellow box represents total asset class weighted average fee (asset based & performance/hybrid fees) in FY 2016: 0.96%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using published fee schedules from Callan's Real Estate Manager Peer Group, using a mandate size between \$100mm and \$200mm.

Investment Strategies – Real Estate

Pension Trust

Real Estate	
AUM Based Fee Strategies	Fee %
INVESCO Core Real Estate	0.34%
JP Morgan Special & Strategic	0.95%
Weighted Average AUM Based Fee	0.62%
Industry Fee - 25th Percentile	0.93%
Industry Fee - Median	0.86%
Industry Fee - 75th Percentile	0.80%

Real Estate	
Performance & Hybrid Fee Strategies	Fee %
INVESCO Real Estate Fund II	0.50%
INVESCO Real Estate Fund III	4.45%
INVESCO Asia RE Feeder	2.48%
INVESCO Asia RE Fund III	0.99%
INVESCO Value Added Fund IV	2.74%
J.P. Morgan Alternative Property Fd.	0.00%
JP Morgan Greater China Fund	0.73%
JP Morgan Greater European Opp	0.63%

Total Weighted Average Fee	0.96%
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- Due to the fee structure of the funds in the Performance & Hybrid Fee Strategies category, the Total Weighted Average Fees are not comparable to industry fees from Callan’s 2014 Investment Management Fee Survey.
 - Invesco Real Estate Fund II, Invesco Real Estate Fund III, Invesco Asia RE Feeder Fund, Invesco Asia RE Fund III, and Invesco Valued Added Fund IV each charge a base management fee on assets and charges a performance fee of 20% for performance exceeding a “preferred” return set by each fund.
 - The JP Morgan Greater China Fund and JP Morgan Greater European Opportunity Fund each charge a base management fee on assets and then charges a sliding scale performance fee for performance exceeding a series of “preferred” returns set by each fund.
 - The JP Morgan Alternative Fund is currently being liquidated. The manager is not presently charging a fee to manage this fund during liquidation.

Investment Strategies – Real Assets

Pension Trust

Real Assets	
Timber	Fee %
TIR - Teredo	0.58%
TIR - Springbank	-1.96%
Weighted Average Timber Fee	-1.31%
Infrastructure	Fee %
JP Morgan Asian Infrastructure	1.55%
JP Morgan Infrastructure Inv. Fund	0.90%
Grosvenor Infrastructure Fund I	0.97%
Grosvenor Infrastructure Fund II	2.96%
Weighted Average Infrastructure Fee	1.05%
Total Weighted Average Fee	0.05%

- Due to the highly varied and customized approach of strategies in these asset classes, Callan cannot produce reasonable industry fee universes for comparison.
 - TIR Teredo and Springbank charge a base management fee on assets and charge a performance fee for performance exceeding a “preferred” return set by each fund.
 - The total asset class weighted average fee for Timber for FY 2016 was -1.31%. The negative fee represents a rebate of incentive fees from the Springbank portfolio as a result of a miscalculation of prior period incentive fees.
 - The Grosvenor Infrastructure Fund I and II charge a base management fee on assets and charge a performance fee for performance exceeding a “preferred” return set by each fund.
 - JP Morgan Asian Infrastructure and Infrastructure Investment Funds charge a base management fee on assets and charge a performance fee for performance exceeding a “preferred” return set by each fund.

Investment Strategies – Private Equity

Pension Trust

- Due to the highly varied and customized approach of Private Equity strategies, Callan cannot produce a reasonable industry fee universe for comparison.
- At the end of fiscal year 2016 private equity accounted for 3.37% of Total Fund assets.
- Total asset class weighted average fee for FY 2016: 1.80%
- Similar to the fiscal 2014 fee study, the management fees for NDSIB's private equity portfolio are at levels for similar strategies and are in line with industry norms.

Investment Strategies – Cash

Pension Trust

Cash	
Northern Trust Cash	0.11%

- The manager for this asset class fall into the asset based fee category.
- Fees for cash management are typically below 20 basis points (0.20%). Fees paid by the North Dakota State Investment Board’s Pension Trust cash management are well within industry norms.



Insurance Trust

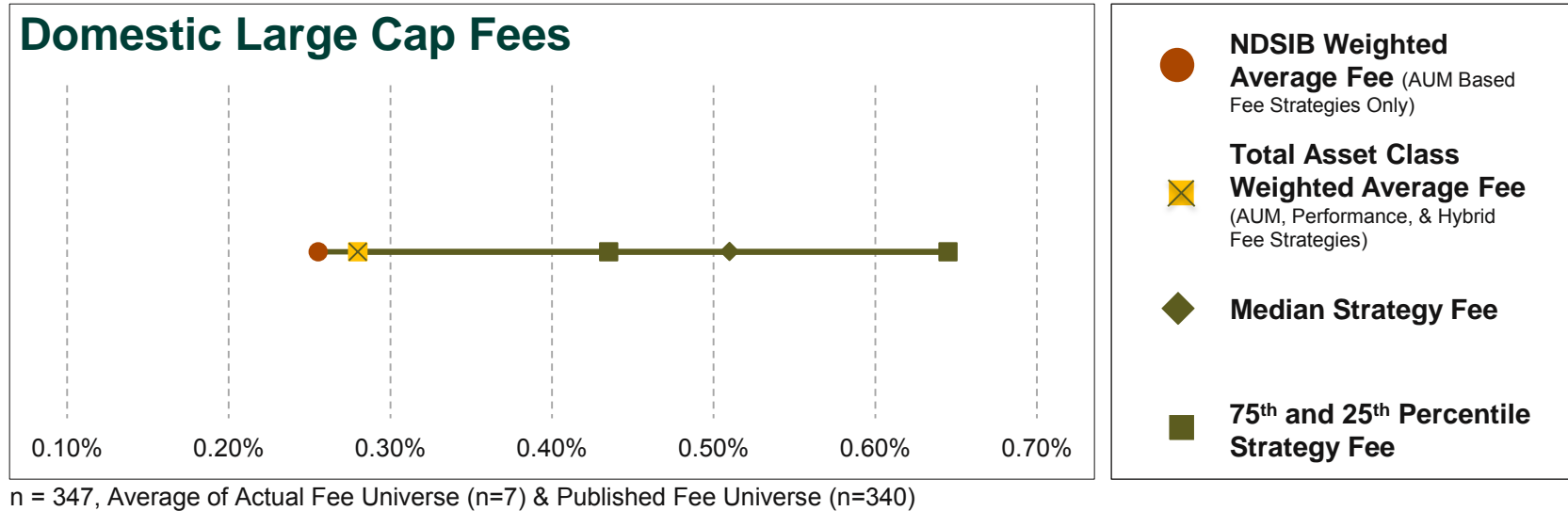
Insurance Trust

NDSIB Fee Study Fiscal Year 2016 Executive Summary

- Total Equity Manager fees paid represented a mix of asset-based and performance/hybrid fee strategies. In aggregate all equity strategy composites had fees below their respective 75th percentiles.
 - Total Domestic Large Cap Equity fees were well below the 75th percentile
 - Total Small Cap Equity fees were well below the 75th percentile with asset-based fees even lower
 - Total Developed International Equity fees were well below the 75th percentile and represented only asset-based fee strategies
- Total Domestic Fixed Income Manager fees paid represented a mix of asset-based and performance/hybrid fee strategies.
 - Total Domestic Fixed Income fees paid were above the 25th percentile, driven largely by performance/hybrid fee based strategies while total asset based fee strategies were well below the 75th percentile
- Diversified Real Assets Manager fees paid represented a mix of asset-based and performance/hybrid fee strategies spanning public and private markets. Asset based fee strategies fell below the 75th percentile with performance/hybrid fee strategies pushing the total fees paid well above the 25th percentile.
 - Due to the custom nature of non-core public strategies and their closed-end fund structures, there is no applicable manager fee distribution and so it presents a skew to the asset-based fee universe for the comparison
- Total Real Estate manager fees paid represented asset based fee strategies only.
 - Total Real Estate manager fees paid were well below the 75th percentile
- Short-term Fixed Income manager fees paid represented asset based fee strategies only.
 - Fees paid fell below the strategy universe median

Domestic Large Cap Equity

Insurance Trust



- Large Cap Equity managers invest in large company stocks that are typically listed within the U.S.
- North Dakota's average account size for FY 2016: \$68mm.
- Red circle represents NDSIB Insurance Trust's asset based weighted average large cap equity mgmt. fee: 0.26%.
- Yellow box represents total asset class weighted average fee (asset based & performance/hybrid fees) in FY 2016: 0.28%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using Callan's 2014 Investment Management Fee Survey for mandate sizes between \$50mm and \$75mm.

Investment Strategies – Domestic Large Cap Equity

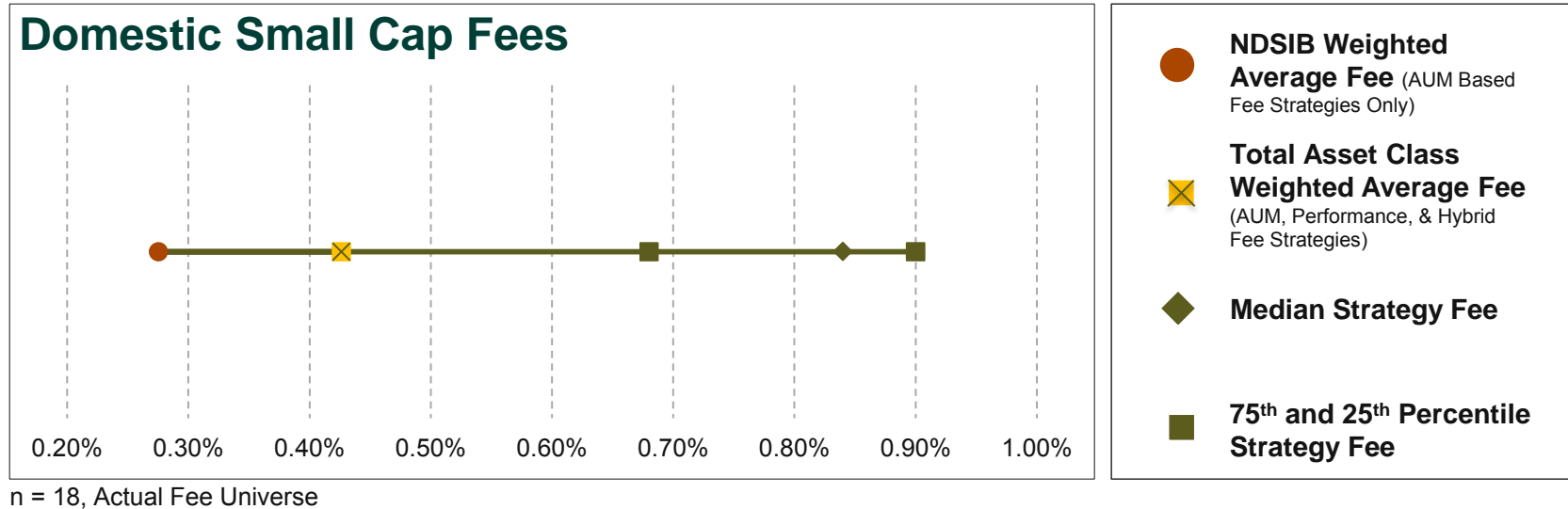
Insurance Trust

Domestic Large Cap Equity	
AUM Based Fee Strategies	Fee %
L.A. Capital Growth	0.21%
LSV Asset Management	0.30%
Weighted Average AUM Based Fee	0.26%
Industry Fee - 25 th Percentile	0.65%
Industry Fee - Median	0.51%
Industry Fee - 75 th Percentile	0.44%
Performance & Hybrid Fee Strategies	Fee %
L.A. Capital Enhanced Index	0.43%
Parametric Clifton Enhanced S&P 500	0.20%
Total Weighted Average Fee	0.28%

- Due to the fee structure of the funds in the Performance & Hybrid Fee Strategies category, the Total Weighted Average Fees are not comparable to industry fees from Callan's 2014 Investment Management Fee Survey.
 - L.A. Capital Enhanced Index charges a base management fee on all assets under management. A performance-based fee of 20% of returns in excess of the benchmark return is charged on approximately 40% of the assets.
 - Parametric Clifton Enhanced Index charges no base management fee. The manager is paid 35% of any excess return above the benchmark. Fees are paid annually for performance through June 30.

Domestic Small Cap Equity

Insurance Trust



- Small Cap Equity managers invest in smaller company stocks that are typically listed and traded within the U.S.
- North Dakota's average account size for FY 2016: \$28mm.
- Red circle represents NDSIB Insurance Trust's asset based weighted average domestic small cap equity mgmt. fee: 0.28%.
- Yellow box represents total asset class weighted average fee (asset based & performance/hybrid fees) in FY 2016: 0.43%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using Callan's 2014 Investment Management Fee Survey for mandate sizes between \$25mm and \$50mm.

Investment Strategies – Domestic Small Cap Equity

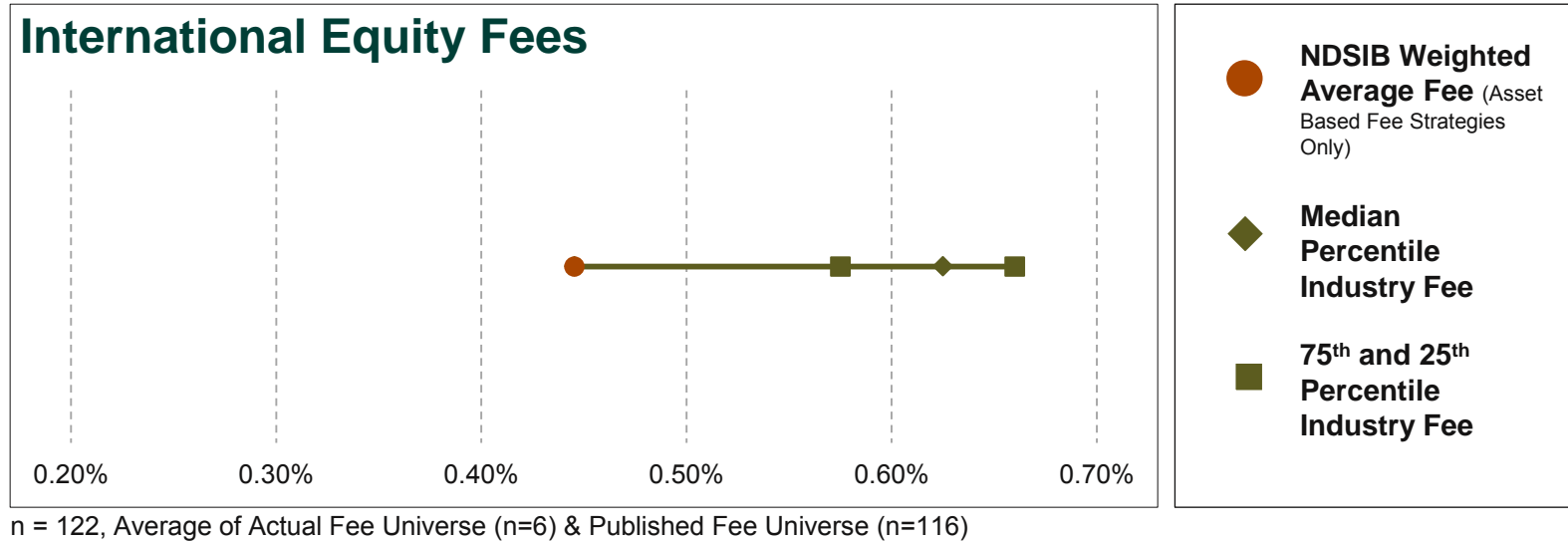
Insurance Trust

Domestic Small Cap Equity	
AUM Based Fee Strategies	Fee %
PIMCO (Research Affiliates)	0.28%
Weighted Average AUM Based Fee	0.28%
Industry Fee - 25 th Percentile	0.90%
Industry Fee - Median	0.84%
Industry Fee - 75 th Percentile	0.68%
Performance & Hybrid Fee Strategies	Fee %
Parametric Clifton Enhanced Index	0.51%
Total Weighted Average Fee	0.43%

- Due to the fee structure of the funds in the Performance & Hybrid Fee Strategies category, the Total Weighted Average Fees are not comparable to industry fees from Callan’s 2014 Investment Management Fee Survey.
 - Parametric Clifton Small Cap Enhanced Index charges no base management fee. The only fee charged is 35% of the excess return generated over the benchmark. Fees are paid once a year for performance through June 30.

Developed International Equity

Insurance Trust



- Developed International Equity managers invest in stocks that trade and gain exposure to developed markets and economies outside of the U.S.
- North Dakota's average account size for FY 2016: \$41mm.
- Red circle represents NDSIB Insurance Trust's asset based weighted average developed int'l equity mgmt. fee: 0.45%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using Callan's 2014 Investment Management Fee Survey for mandate sizes between \$25mm and \$50mm.

Investment Strategies – Developed International Equity

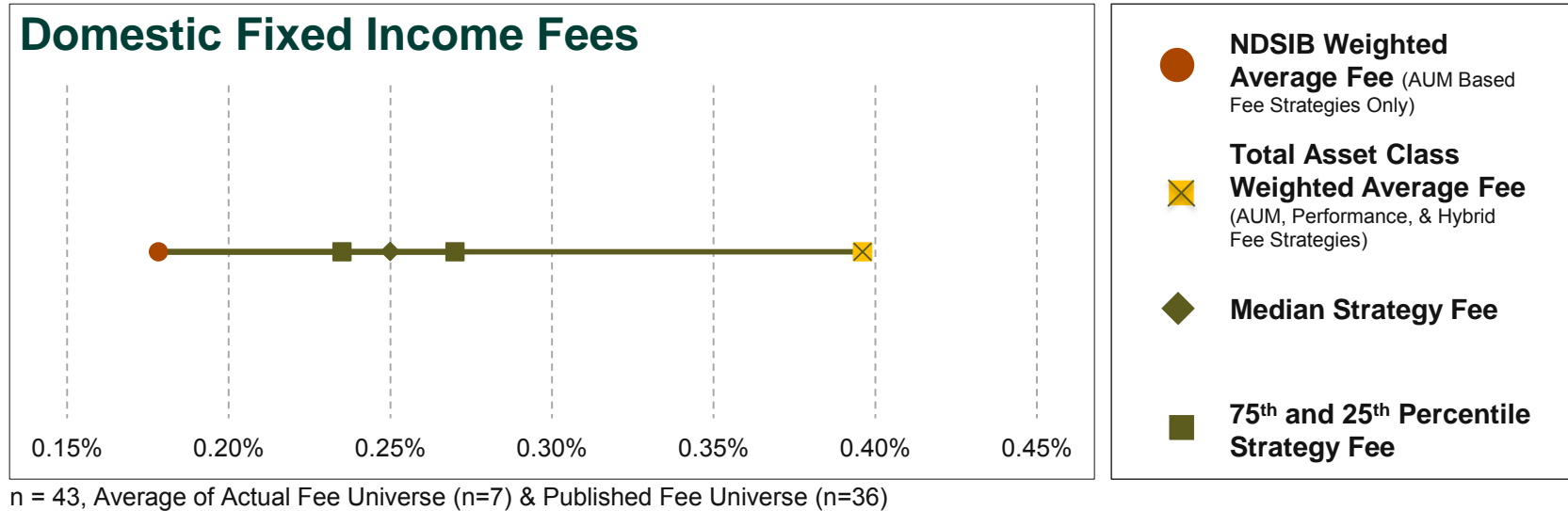
Insurance Trust

International Equity	
AUM Based Fee Strategies	Fee %
Capital Guardian	0.59%
DFA Int'l Small Cap	0.65%
LSV Asset Management	0.39%
Vanguard Int'l Explorer Fund	0.35%
William Blair	0.04%
Weighted Average AUM Based Fee	0.45%
Industry Fee - 25 th Percentile	0.66%
Industry Fee - Median	0.63%
Industry Fee - 75 th Percentile	0.58%
Total Weighted Average Fee	0.45%

- All managers for this asset class fall into the asset based fee category.
- Note that Capital Guardian Trust was terminated in May 2016 and the proceeds were used to fund William Blair in June 2016.

Domestic Fixed Income

Insurance Trust



- Domestic Fixed Income managers invest in bonds and other debt instruments.
- North Dakota's average account size for FY 2016: \$184mm.
- Red circle represents NDSIB Insurance Trust's asset based weighted average domestic fixed income mgmt. fee: 0.18%.
- Yellow box represents total asset class weighted average fee (asset based & performance/hybrid fees) in FY 2016: 0.40%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using Callan's 2014 Investment Management Fee Survey for mandate sizes between \$100mm and \$200mm.

Investment Strategies – Domestic Fixed Income

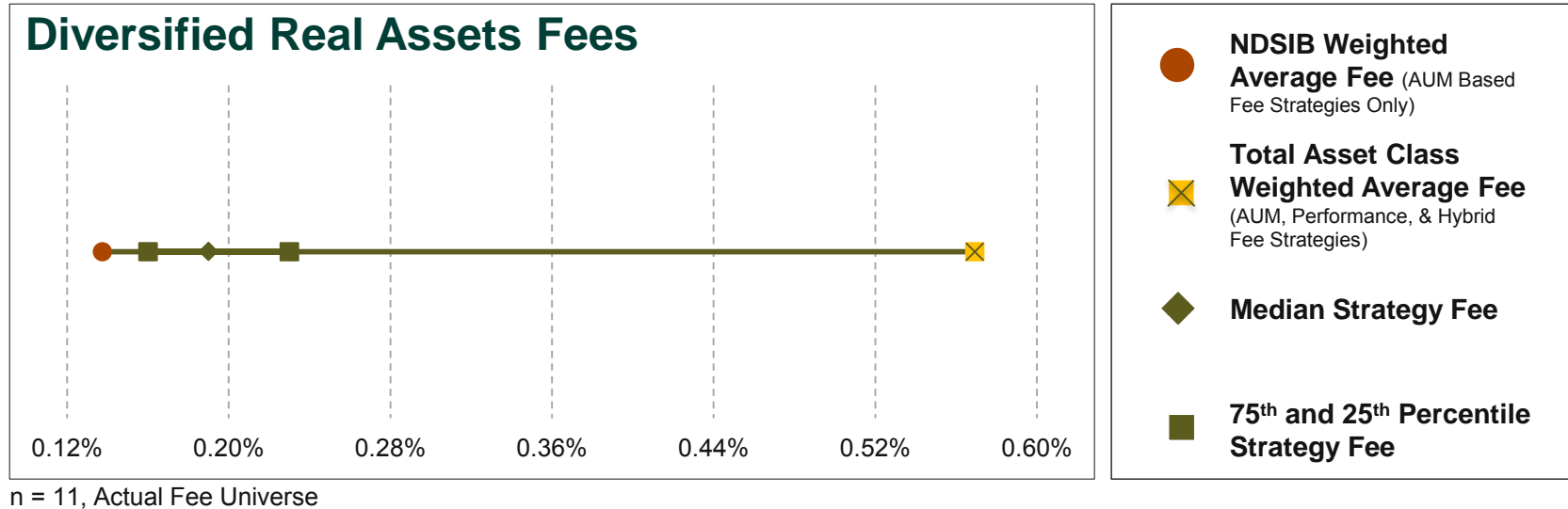
Insurance Trust

Domestic Fixed Income	
AUM Based Fee Strategies	Fee %
Declaration of Total Return	0.46%
Prudential	0.27%
SSgA U.S. Govt Credit Bond Index	0.03%
Wells Capital	0.18%
Western Asset Management	0.14%
Weighted Average AUM Based Fee	0.18%
Industry Fee - 25 th Percentile	0.27%
Industry Fee - Median	0.25%
Industry Fee - 75 th Percentile	0.24%
Performance & Hybrid Fee Strategies	Fee %
PIMCO DiSCO II	1.46%
PIMCO Bravo II	3.05%
Total Weighted Average Fee	0.40%

- Due to the fee structure of the funds in the Performance & Hybrid Fee Strategies category, the Total Weighted Average Fees are not comparable to industry fees from Callan's 2014 Investment Management Fee Survey.
 - PIMCO DiSCO II charges a fee of 0.75% based on assets under management plus a performance fee. The performance fee is 15% of the excess return above a variable hurdle rate.
 - PIMCO Bravo Fund II charges a fee of 1.45% based on assets under management plus a performance fee. The performance fee is 20% of excess returns over a "preferred" return of 8%.
 - The Legacy Fund participates in the two PIMCO Funds within the Insurance Trust.

Diversified Real Assets

Insurance Trust



- Diversified Real Assets managers invest in assets that are expected to perform well during periods of inflation.
- North Dakota's average account size: \$110mm.
- Red circle represents NDSIB Insurance Trust's asset based weighted average domestic fixed income mgmt. fee: 0.14%.
- Yellow box represents total asset class weighted average fee (asset based & performance/hybrid fees) in FY 2016: 0.57%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using Callan's 2014 Investment Management Fee Survey for mandate sizes between \$100mm and \$200mm.

Investment Strategies – Diversified Real Assets

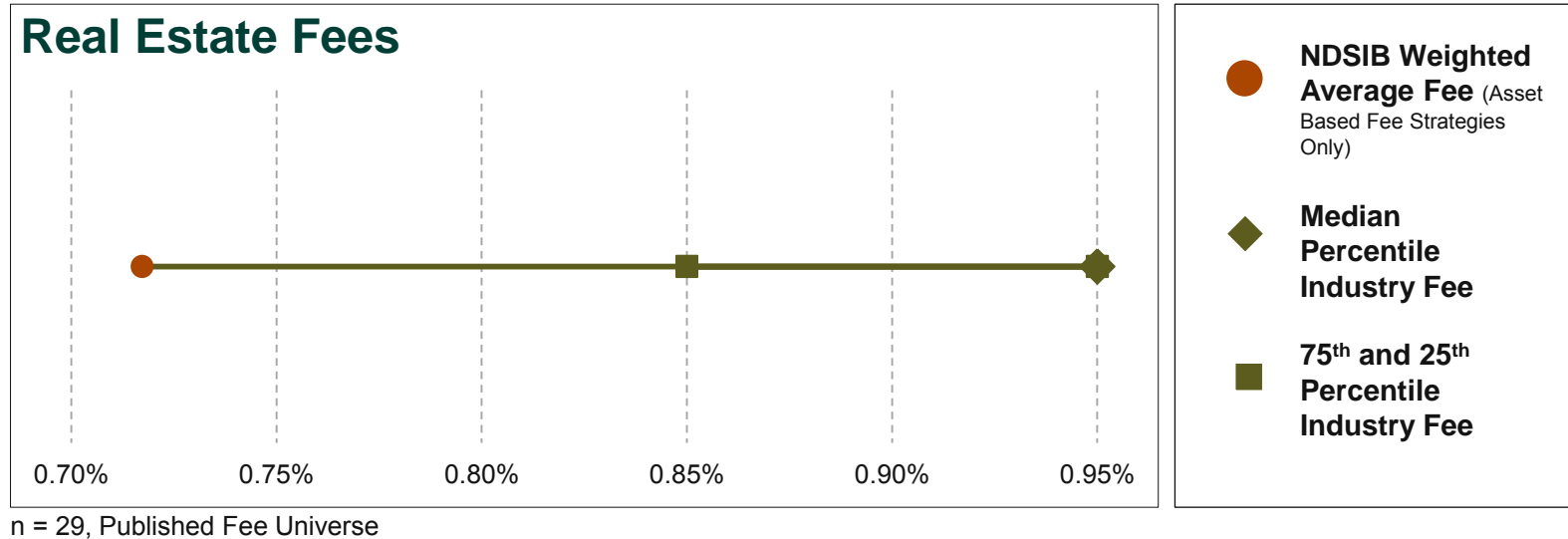
Insurance Trust

Diversified Real Assets	
AUM Based Fee Strategies	Fee %
Western Asset Management	0.14%
Weighted Average AUM Based Fee	0.14%
Industry Fee - 25 th Percentile	0.23%
Industry Fee - Median	0.19%
Industry Fee - 75 th Percentile	0.16%
Performance & Hybrid Fee Strategies	Fee %
JP Morgan Infrastructure	0.90%
Grosvenor Infrastructure Fund I	0.97%
TIR - Eastern Timber Opportunities	0.82%
Total Weighted Average Fee	0.57%

- Due to the fee structure of the funds in the Performance & Hybrid Fee Strategies category, the Total Weighted Average Fees are not comparable to industry fees from Callan’s 2014 Investment Management Fee Survey.
 - JP Morgan Infrastructure Fund charges a base management fee on assets and charges a performance fee for performance exceeding a “preferred” return set by the fund.
 - Grosvenor Infrastructure Fund I charges a base management fee on assets and charges a performance fee for performance exceeding a “preferred” return set by the fund.
 - TIR Easter Timber Opportunities Fund charges a base management fee on assets and charges a performance fee for performance exceeding a “preferred” return set by the fund.

Real Estate

Insurance Trust



- Real Estate managers invest directly in real properties (e.g. offices, multi-family, retail, and other physical properties) and securities that gain access to such economic interests.
- North Dakota's average account size: \$63mm.
- Red circle represents NDSIB Insurance Trust's asset based weighted average real estate mgmt. fee: 0.72%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using published fee schedules from Callan's Real Estate Manager Peer Group, using a mandate size between \$50mm and \$75mm.

Investment Strategies – Real Estate

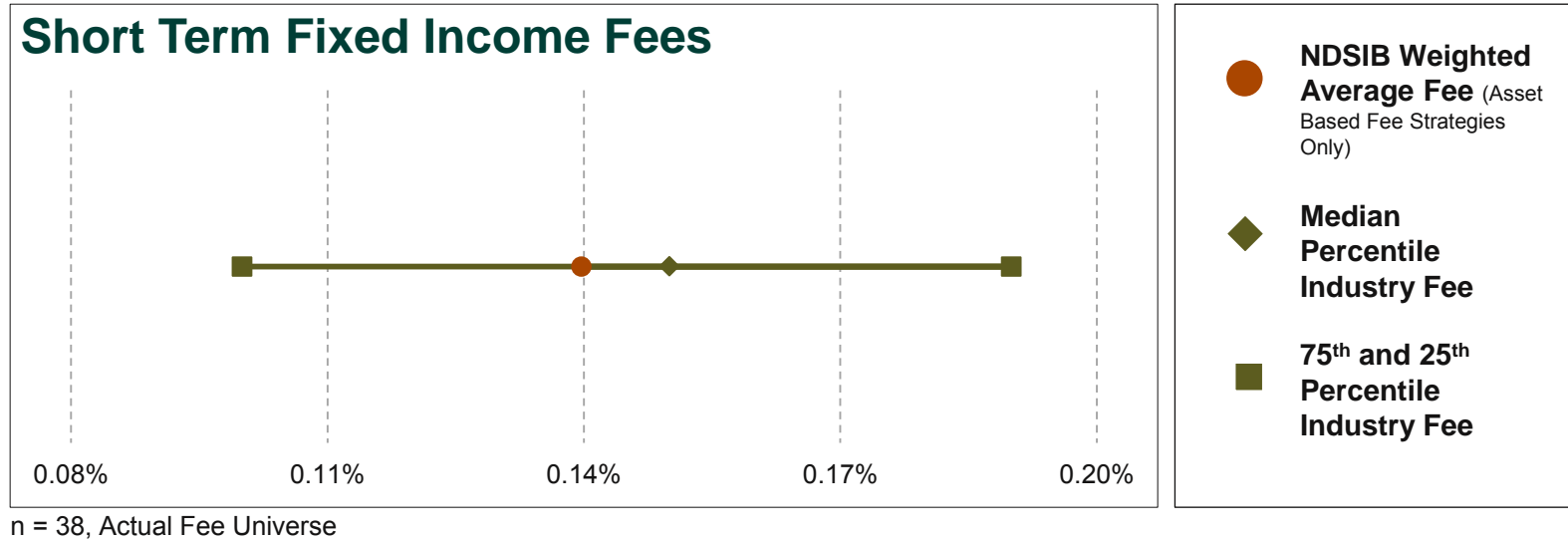
Insurance Trust

Real Estate	
AUM Based Fee Strategies	Fee %
Invesco Core Real Estate	0.34%
JP Morgan Real Estate	1.05%
Weighted Average AUM Based Fee	0.72%
Industry Fee - 25 th Percentile	0.95%
Industry Fee - Median	0.95%
Industry Fee - 75 th Percentile	0.85%
Total Weighted Average Fee	0.72%

- All managers for this asset class fall into the asset based fee category.

Short Term Fixed Income

Insurance Trust



- Short Term Fixed Income managers invest in bonds that have short maturity dates.
- North Dakota's average account size for FY 2016: \$253mm.
- Red circle represents NDSIB Insurance Trust's asset based weighted average short-term fixed income mgmt. fee: 0.14%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using Callan's 2014 Investment Management Fee Survey for mandate sizes greater than \$200mm.

Investment Strategies – Short Term Fixed Income & Cash

Insurance Trust

Short Term Fixed Income	
AUM Based Fee Strategies	Fee %
JPM Short Term	0.11%
Babson Short Term	0.17%
Weighted Average AUM Based Fee	0.14%
Industry Fee - 25 th Percentile	0.19%
Industry Fee - Median	0.15%
Industry Fee - 75 th Percentile	0.10%
Total Weighted Average Fee	0.14%

Cash & Equivalents	
AUM Based Fee Strategies	Fee %
Northern Trust Cash Account	0.14%
Weighted Average AUM Based Fee	0.14%
Total Weighted Average Fee	0.14%

- All managers for this asset class fall into the asset based fee category.
- Fees for cash management are typically below 20 basis points (0.20%). Fees paid by the North Dakota State Investment Board's Insurance Trust cash and short-term fixed income management are well within industry norms.
- Note that the Legacy Fund cash allocation is included in the Insurance Trust Cash Account.



Legacy Fund

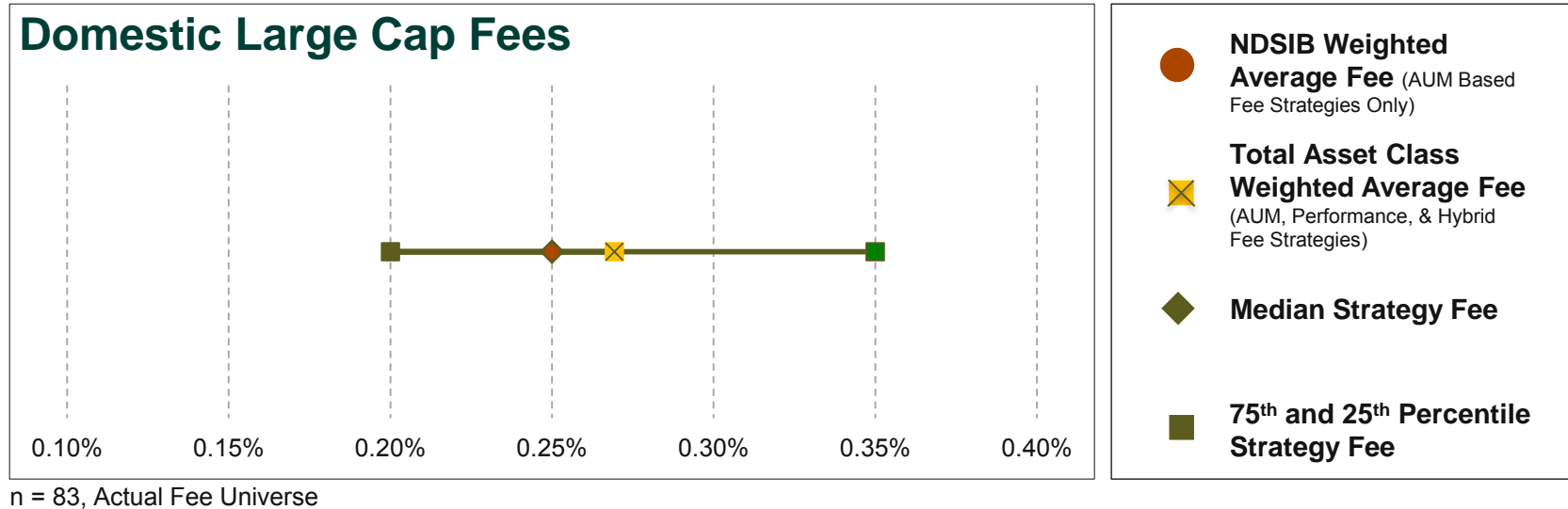
Legacy Trust

NDSIB Fee Study Fiscal Year 2016 Executive Summary

- Total Equity Manager fees paid represented a mix of asset-based and performance/hybrid fee strategies.
 - Total Domestic Large Cap Equity fees were just above median being pushed up slightly by performance based fee strategies
 - Total Small Cap Equity fees were well below the 75th percentile with asset-based fee strategies lower than performance/hybrid based fee strategies
 - Developed International Equity fees were below the 75th percentile and represented only asset-based fee strategies
- Total Domestic Fixed Income Manager fees paid represented asset based fee strategies only.
 - Total Domestic Fixed Income fees paid were below median but above the 75th percentile
- Diversified Real Assets Manager fees paid represented a mix of asset-based and performance/hybrid fee strategies spanning public and private markets. Asset based fee strategies fell below median with performance/hybrid fee strategies pushing the total fees paid well above the 25th percentile.
 - Due to the custom nature of the private strategies and their closed-end fund structures, there is no applicable manager fee distribution and so it presents a skew to the asset-based fee universe for the comparison
- Total Real Estate manager fees paid represented asset based fee strategies only.
 - Total Real Estate manager fees paid were well below the 75th percentile

Domestic Large Cap Equity

Legacy Fund



- Domestic Large Cap Equity managers invest in large company stocks that are typically listed within the U.S.
- North Dakota's average account size for FY 2016: \$233mm.
- Red circle represents NDSIB Legacy Fund's asset based weighted average large cap equity mgmt. fee: 0.25%.
- Yellow box represents total asset class weighted average fee (asset based & performance/hybrid fees) in FY 2016: 0.27%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using Callan's 2014 Investment Management Fee Survey for mandate sizes of greater than \$200mm.

Investment Strategies – Domestic Large Cap Equity

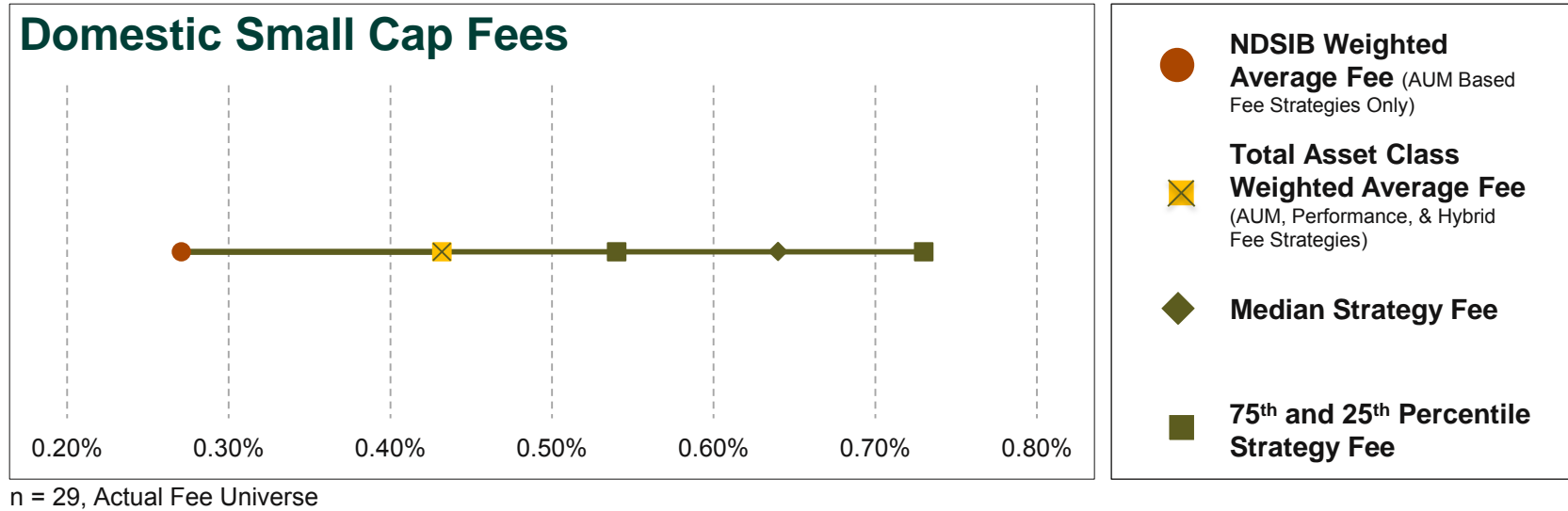
Legacy Fund

Domestic Large Cap Equity	
AUM Based Fee Strategies	Fee %
L.A. Capital Growth	0.21%
LSV Asset Management	0.29%
Weighted Average AUM Based Fee	0.25%
Industry Fee - 25 th Percentile	0.35%
Industry Fee - Median	0.25%
Industry Fee - 75 th Percentile	0.20%
Performance & Hybrid Fee Strategies	Fee %
L.A. Capital Enhanced Index	0.33%
Parametric Clifton Enhanced S&P 500	0.26%
Total Weighted Average Fee	0.27%

- Due to the fee structure of the funds in the Performance & Hybrid Fee Strategies category, the Total Weighted Average Fees are not comparable to industry fees from Callan’s 2014 Investment Management Fee Survey.
 - L.A. Capital Enhanced Index charges a base management fee on all assets under management. A performance-based fee of 20% of returns in excess of the benchmark return is charged on approximately 40% of the assets.
 - Parametric Clifton Enhanced Index charges no base management fee. The manager is paid 35% of any excess return above the benchmark. Fees are paid annually for performance through June 30.

Domestic Small Cap Equity

Legacy Fund



- Small Cap Equity managers invest in smaller company stocks that are typically listed and traded within the U.S.
- North Dakota's average account size for FY 2016: \$117mm.
- Red circle represents NDSIB Legacy Fund's asset based weighted average domestic small cap equity mgmt. fee: 0.27%.
- Yellow box represents total asset class weighted average fee (asset based & performance/hybrid fees) in FY 2016: 0.43%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using Callan's 2014 Investment Management Fee Survey for mandate sizes between \$100mm and \$200mm.

Investment Strategies – Domestic Small Cap Equity

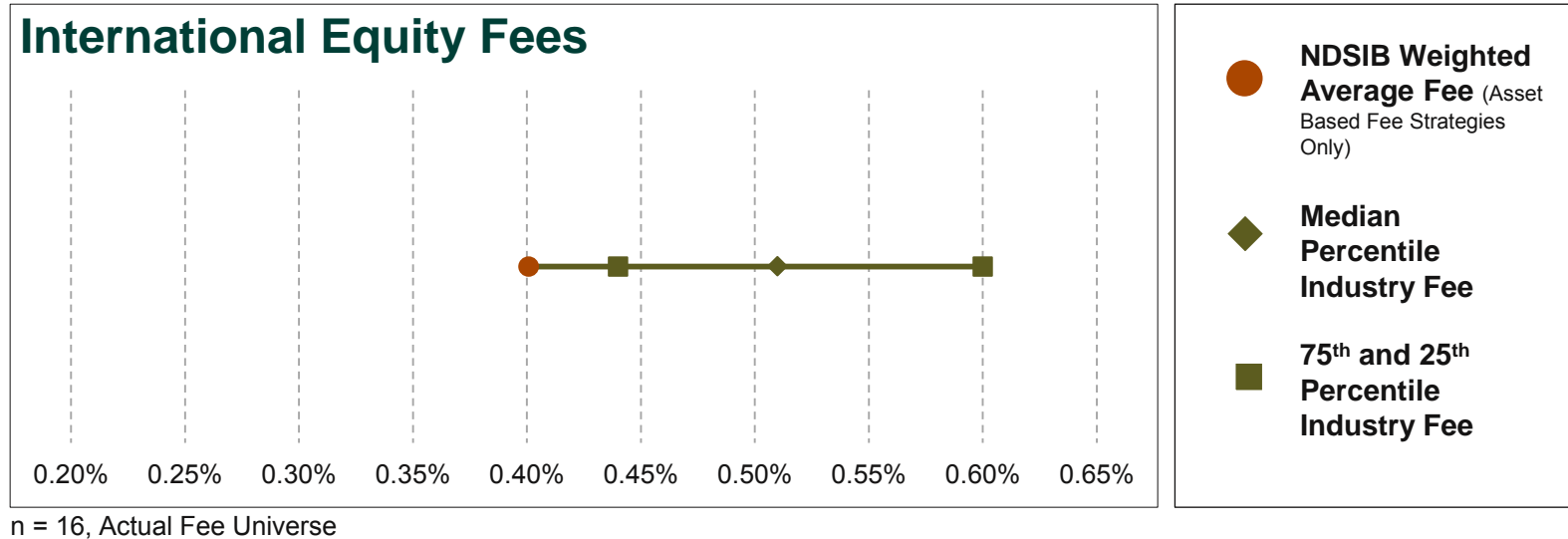
Legacy Fund

Domestic Small Cap Equity	
AUM Based Fee Strategies	Fee %
PIMCO (Research Affiliates)	0.27%
Weighted Average AUM Based Fee	0.27%
Industry Fee - 25 th Percentile	0.73%
Industry Fee - Median	0.64%
Industry Fee - 75 th Percentile	0.54%
Performance & Hybrid Fee Strategies	Fee %
Parametric Clifton Enhanced Index	0.55%
Total Weighted Average Fee	0.43%

- Due to the fee structure of the funds in the Performance & Hybrid Fee Strategies category, the Total Weighted Average Fees are not comparable to industry fees from Callan’s 2014 Investment Management Fee Survey.
 - Parametric Clifton Small Cap Enhanced Index charges no base management fee. The only fee charged is 35% of the excess return generated over the benchmark. Fees are paid once a year for performance through June 30.

Developed International Equity

Legacy Fund



- Developed International Equity managers invest in stocks that trade and gain exposure to developed markets and economies outside of the U.S.
- North Dakota's average account size for FY 2016: \$176mm.
- Red circle represents NDSIB Legacy Fund's asset based weighted average developed international equity mgmt. fee: 0.40%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using Callan's 2014 Investment Management Fee Survey for mandate sizes between \$100mm and \$200mm.

Investment Strategies – Developed International Equity

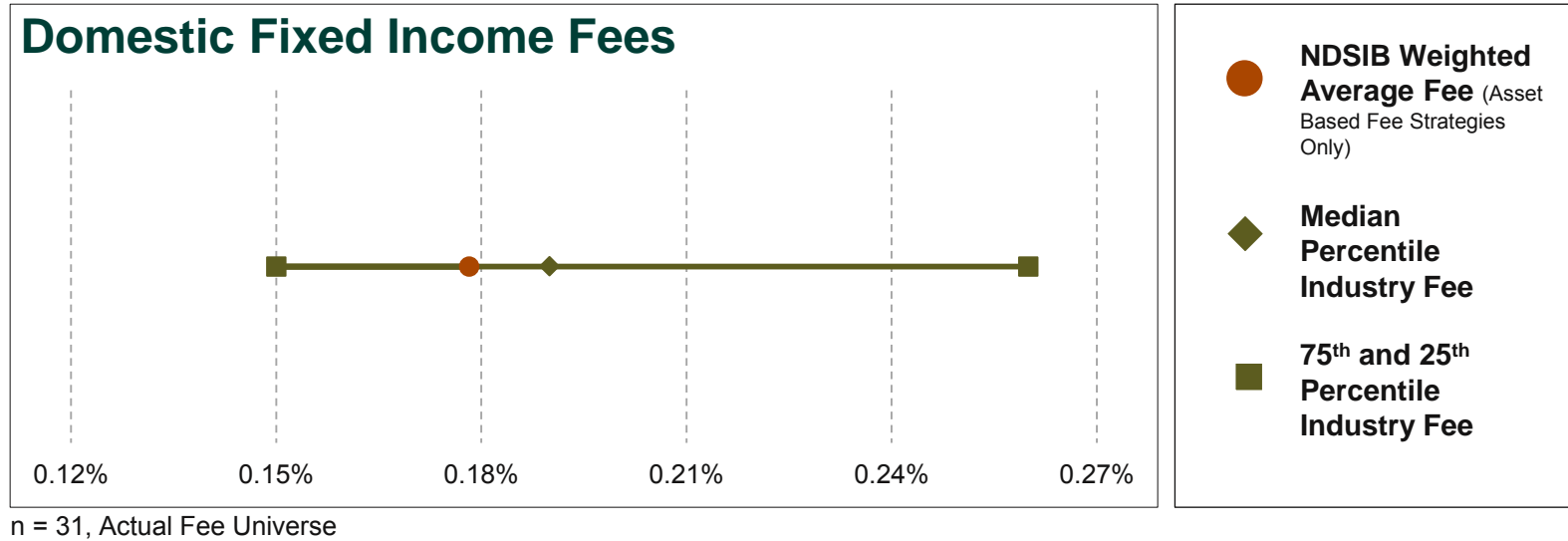
Legacy Fund

International Equity	
AUM Based Fee Strategies	Fee %
Capital Guardian	0.45%
DFA Int'l Small Cap	0.65%
LSV Asset Management	0.38%
Vanguard Int'l Explorer Fund	0.35%
William Blair	0.04%
Weighted Average AUM Based Fee	0.40%
Industry Fee - 25 th Percentile	0.60%
Industry Fee - Median	0.51%
Industry Fee - 75 th Percentile	0.44%
Total Weighted Average Fee	0.40%

- All managers for this asset class fall into the asset based fee category.
- Note that Capital Guardian Trust was terminated in May 2016 and the proceeds were used to fund William Blair in June 2016.

Domestic Fixed Income

Legacy Fund



- Domestic Fixed Income managers invest in bonds and other debt instruments.
- North Dakota's average account size for FY 2016: \$240mm.
- Red circle represents NDSIB Legacy Fund's asset based weighted average domestic fixed income mgmt. fee: 0.18%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using Callan's 2014 Investment Management Fee Survey for mandate sizes greater than \$200mm.

Investment Strategies – Domestic Fixed Income

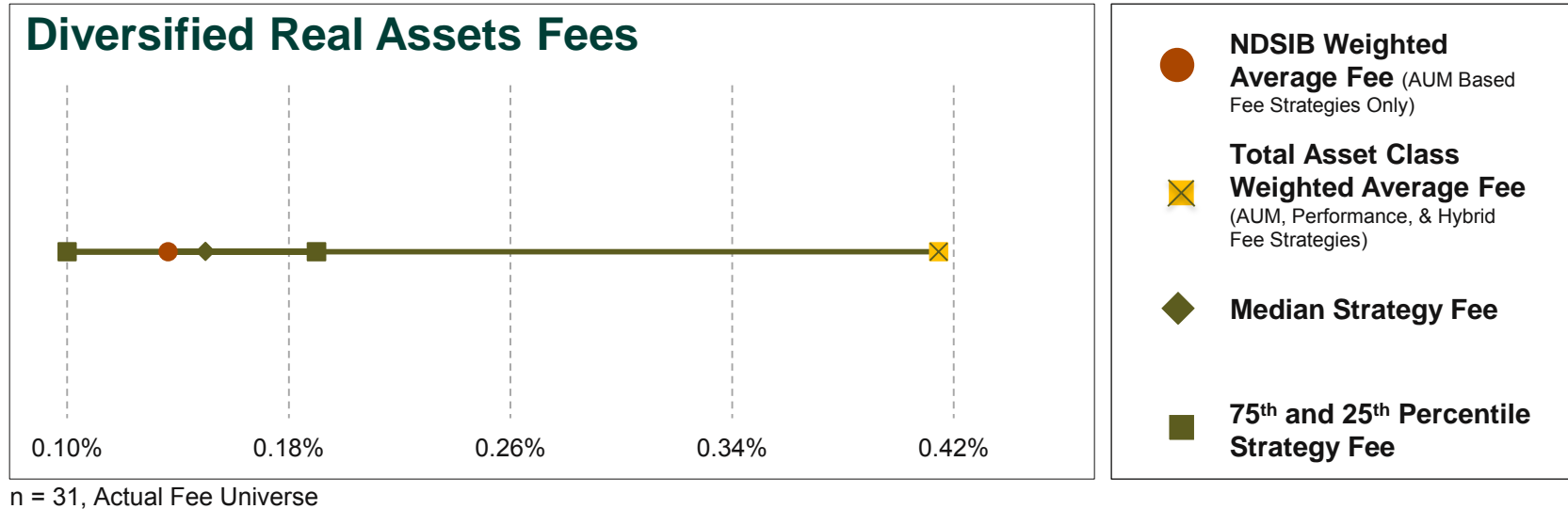
Legacy Fund

Domestic Fixed Income	
AUM Based Fee Strategies	Fee %
Declaration of Total Return	0.45%
Prudential	0.27%
SSgA U.S. Govt Credit Bond Index	0.03%
Wells Capital	0.18%
Western Asset Management	0.14%
Weighted Average AUM Based Fee	0.18%
Industry Fee - 25 th Percentile	0.26%
Industry Fee - Median	0.19%
Industry Fee - 75 th Percentile	0.15%
Total Weighted Average Fee	0.18%

- All managers for this asset class fall into the asset based fee category.

Diversified Real Assets

Legacy Fund



- Diversified Real Assets managers invest in assets that are expected to perform well during periods of inflation.
- North Dakota's average account size: \$263mm.
- Red circle represents NDSIB Legacy Fund's asset based weighted average Diversified Real Assets mgmt. fee: 0.14%.
- Yellow box represents total asset class weighted average fee (asset based & performance/hybrid fees) in FY 2016: 0.41%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using Callan's 2014 Investment Management Fee Survey for mandate sizes greater than \$200mm.

Investment Strategies – Diversified Real Assets

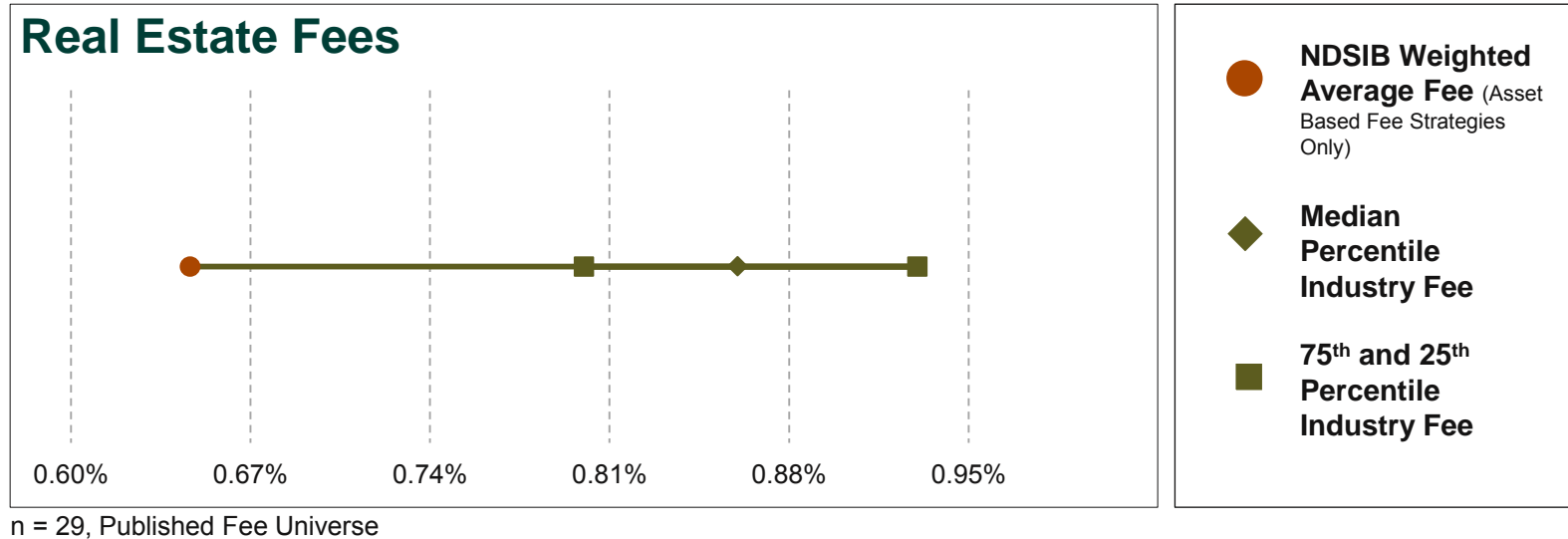
Legacy Fund

Inflation Protected	
AUM Based Fee Strategies	Fee %
Western Asset Management	0.14%
Weighted Average AUM Based Fee	0.14%
Industry Fee - 25 th Percentile	0.19%
Industry Fee - Median	0.15%
Industry Fee - 75 th Percentile	0.10%
Performance & Hybrid Fee Strategies	Fee %
JP Morgan Infrastructure	0.90%
Grosvenor Infrastructure Fund II	2.96%
Total Weighted Average Fee	0.41%

- Due to the fee structure of the funds in the Performance & Hybrid Fee Strategies category, the Total Weighted Average Fees are not comparable to industry fees from Callan’s 2014 Investment Management Fee Survey.
- The infrastructure universe is too small to make an appropriate comparison of fees.
 - JP Morgan Infrastructure Fund charges a base management fee on assets and charges a performance fee for performance exceeding a “preferred” return set by the fund.
 - Grosvenor Infrastructure Fund II charges a base management fee on assets and charges a performance fee for performance exceeding a “preferred” return set by the fund.

Real Estate

Legacy Fund



- Real Estate managers invest directly in real properties (e.g. offices, multi-family, retail, and other physical properties) and securities that gain access to such economic interests.
- North Dakota's average account size: \$104mm.
- Red circle represents NDSIB Legacy Fund's asset based weighted average real estate mgmt. fee: 0.65%.
- Green boxes and diamond represent the 75th, Median, and 25th fee percentiles for the fee universe.
- Fee universe was constructed using published fee schedules from Callan's Real Estate Manager Peer Group, using a mandate size between \$100mm and \$200mm.

Investment Strategies – Real Estate

Legacy Fund

Real Estate	
AUM Based Fee Strategies	Fee %
Invesco Core Real Estate	0.34%
JP Morgan Real Estate	0.97%
Weighted Average AUM Based Fee	0.65%
Industry Fee - 25 th Percentile	0.93%
Industry Fee - Median	0.86%
Industry Fee - 75 th Percentile	0.80%
Total Weighted Average Fee	0.65%

- All managers for this asset class fall into the asset based fee category.

Notes and Comments Regarding Report Measurements

NDSIB – Pension Trust, Insurance Trust, and Legacy Fund

- All market values, fee data and other information is as of the fiscal year ending June 30, 2016.
- Fee data was provided by NDSIB; no audit of the fees paid by NDSIB was conducted.
- Average account sizes are measured by using the balances at quarter-end for each quarter in the fiscal year 2016. In some cases, an account's value changed significantly during the fiscal year due to external capital flows. In those cases, reasonable adjustments were made to reflect the effect and timing of these cash flows.
- Fees charged by investment managers who did not have assets under management for the entire fiscal year are included in this study for only the period during which that manager was utilized.
- Investment managers employ three primary fee calculation methods to charge for their services;
 - **AUM based fees:** fees are calculated as a percentage of assets under management
 - **Performance based fees:** fees are calculated based on the manager's ability to outperform a pre-specified benchmark during a contracted measurement period
 - **Hybrid fees:** base management fees are calculated as a percentage of assets under management and a performance fee is calculated based on the managers ability to outperform a pre-specified benchmark during a contracted measurement period.
- Regardless of the method used by a particular manager, Callan has calculated fees as a percentage of assets under management for each manager for the purposes of comparison.
- In many instances, fees paid by the individual trusts benefit from fee schedules that account for the aggregate level of assets invested with a particular manager or in a specific strategy.
- Fee universes used in the study reflect either **Actual Fees** paid by Callan clients in similar mandates, fees calculated using a universe of **Published Fees** representing manager fee schedules for similar mandates, or an Average of **Actual & Published Fee** universes where the actual fee universe was smaller than 10. All fee universes are explicitly noted beneath each chart where "n=" will denote the applicable sample size.

BOARD ACTION REQUESTED

TO: State Investment Board
FROM: Dave Hunter and Darren Schulz
DATE: February 17, 2017
SUBJECT: **WSI Investment Policy – Cover Memo**

RIO routinely conducts annual reviews with our clients which includes a review of recent returns and the impact of any proposed organizational developments (such as changes in personnel, liquidity and/or risk/return expectations) on the existing investment policy statement. These reviews serve as the basis for Staff recommendations to modify asset allocation guidelines.

On February 15th, RIO reviewed recent investment performance and the current investment policy with the **Workforce Safety & Insurance (WSI)** board. At the conclusion of the presentation, the **WSI board approved the following changes to their investment policy statement:**

- 1.) **Section 4 – Standards of Investment Performance was revised in order to incorporate investment terminology and guidelines adopted by most other SIB clients in recent years. These changes will provide a consistent time frame for evaluating investment performance (of 5-years instead of 10-years), introduce a new performance metric (risk adjusted excess return), and clarify that investment risk, as measured by standard deviation, is allowed to exceed the policy benchmark by an agreed upon margin.**

- 2.) **Section 7 – Internal Controls was added in order to formally acknowledge the importance of internal controls used by the SIB to prevent losses of public funds arising from fraud or employee error. The revised language being proposed has been adopted by most other SIB clients in recent years.**

RIO did not recommend any asset allocations at this time, although RIO concurred with WSI boards request to conduct a new asset liability study commencing in February of 2018. RIO advised the WSI board that it is currently conducting due diligence in the fixed income sector which could lead to investment strategy changes within WSI's approved fixed income and diversified real asset allocations in order to mitigate rising interest rate risk and further reduce international debt exposure given persistent volatility in the foreign currency markets.

WSI approved the recommended changes as highlighted in **red** on the following five pages.

RIO's Recommendation:

RIO requests the SIB accept the following WSI board recommended Investment Policy Statement changes noting that no asset allocation changes are recommended at this time.

Workforce Safety & Insurance Investment Policy Statement Review

February 17, 2017

Dave Hunter
Executive Director/CIO
ND Retirement & Investment Office (RIO)
State Investment Board (SIB)

WSI – Investment Policy Statement Review

No Revisions Proposed for Sections 1 and 2

1. PLAN CHARACTERISTICS AND FUND CONSTRAINTS.

North Dakota Workforce Safety & Insurance (WSI) is an exclusive state workers' compensation fund (Fund), which exists for the mutual benefit of North Dakota employers and employees. The assets of the Fund are utilized to pay benefits to injured workers or their survivors.

Section 65-04-01 of the North Dakota Century Code requires WSI to establish premium rates for funding sufficiently high to provide for:

1. The payment of the expenses of administration of the organization,
2. The payment of compensation according to the provisions and schedules contained in this title, and
3. The maintenance by the Fund of adequate reserves and surplus to the end that it may be kept at all times in an entirely solvent condition.

2. RESPONSIBILITIES AND DISCRETION OF THE STATE INVESTMENT BOARD (SIB).

The governing body of WSI is charged by law under NDCC 21-10-02.1 with the responsibility of establishing policies on investment goals and asset allocation of the Fund. WSI fulfills this responsibility through its Board of Directors, under the oversight and approval of the Governor. The SIB is charged with implementing these policies and asset allocation and investing the assets of the Fund in a manner consistent with the prudent investor rule as provided in NDCC 21-10-07. The Fund must be invested exclusively for the benefit of the members and their beneficiaries in accordance with this investment policy.

At the discretion of the SIB, the Fund's assets may be pooled with other funds. In pooling funds, the SIB may establish whatever asset class pools it deems necessary with specific quality, diversification, restrictions, and performance objectives appropriate to the prudent investor rule and the objectives of the funds participating in the pools.

The SIB may delegate investment responsibility to professional money managers. Where a money manager has been retained, the SIB's role in determining investment strategy and security selection is supervisory not advisory.

The SIB is responsible for establishing criteria, procedures, and making decisions with respect to hiring, keeping, and terminating money managers. SIB investment responsibility also includes selecting performance measurement services, consultants, report formats, and frequency of meetings with managers.

The SIB will implement changes to this policy as promptly as is prudent.

No Revisions Proposed for Sections 3

Proposed Revisions for Section 4 (in red)

3. INVESTMENT OBJECTIVES.

The investment goal of WSI is to supplement premiums, through various investments, to accomplish its statutory obligations.

The following investment objectives are established as of the date adopted and are in keeping with the fiduciary requirements as set forth in federal and state law and as expected by the members. WSI expects to receive results from the SIB that are consistent with the policies included herein. These objectives and guidelines will provide a basis for evaluating the effectiveness of the investment program over time. It is clearly understood these objectives and standards are to be viewed over the long term and have been established after full consideration of all factors set out in the Statement of Investment Policy.

The operating and liquidity needs of WSI are generally to be met by the cash equivalents allocation.

Funds in excess of those required for operating and liquidity needs will be invested in domestic equity, international equity, real estate and fixed income securities. The objective of these assets is to obtain the maximum total return on investments consistent with safety of principal on funds in excess of those required for operating and liquidity needs.

4. STANDARDS OF INVESTMENT PERFORMANCE.

The Fund's investment objectives and characteristics give rise to an asset allocation that is considered to have greater than a 50% probability of achieving the results desired. For evaluation purposes, the following performance targets will apply:

- a. **The rate of return, net of fees and expenses, should at least match that of the policy portfolio, over a minimum evaluation period of five years.**
- b. **Risk, as measured by the annual standard deviation of net returns for the Fund, should not exceed that of the policy portfolio by more than 100 basis points over a minimum evaluation period of five years.**
- c. **Risk adjusted excess returns of the Fund, net of fees and expenses, should match or exceed the policy benchmark over a minimum evaluation period of five years.**

Current Section 4 language shown below **with deleted text in red**

No Substantive Revisions Proposed for Section 5

~~4.—STANDARDS OF INVESTMENT PERFORMANCE.~~

~~The Fund's investment objectives and characteristics give rise to an asset allocation that is considered to have greater than a 50% probability of achieving the results desired. For evaluation purposes, the following performance targets will apply:~~

- ~~a.—The Fund should produce a rate of return, net of fees and expenses, which at least matches that of the policy portfolio, which is comprised of policy weights of appropriate asset class benchmarks as set by the SIB.~~
- ~~b.—The annual standard deviation of total net returns for the Fund should not exceed that of the policy portfolio.~~
- ~~c.—Over 10 year and longer time periods the Fund's returns, net of fees and expenses, should match or exceed the expected rate of return assumption of the policy benchmark. The expected risk of the Fund, as measured by standard deviation, should not exceed the policy benchmark.~~

5. POLICY ASSET MIX

The asset allocation policy developed herein is based on an evaluation of WSI's ability and willingness to assume investment risk in light of WSI's financial goals and objectives. In recognition of these goals and objectives, coupled with a liability-sensitive asset allocation study conducted by Callan Associates in April of 2014, the following asset allocation is deemed appropriate for WSI. The portfolio mix shall be in accordance with the following asset allocation and periodically reviewed by WSI.

Large Cap Domestic Equity	12%
Small Cap Domestic Equity	4%
International Equity	9%
Domestic Fixed Income	53%
Diversified Real Assets	15%
Real Estate	6%
Cash Equivalents	1%

Rebalancing of the Fund to this target will be done in accordance with the SIB's rebalancing policy, but not less than annually.

WSI – Investment Policy Statement Review

No Substantive Revisions Proposed for Section 6

6. RESTRICTIONS

While the SIB is responsible for establishing specific quality, diversification, restrictions, and performance objectives for the investment vehicles in which the Fund's assets will be invested, it is understood that:

- a. Futures and options may be used to hedge or replicate underlying index exposure, but not for speculation.
- b. Derivatives use will be monitored to ensure that undue risks are not taken by the money managers.
- c. No transaction shall be made which threatens the tax exempt status of the Fund.
- d. All assets will be held in custody by the SIB's master custodian or such other custodians as are acceptable to the SIB.
- e. No unhedged short sales or speculative margin purchases shall be made.
- f. Social investing is prohibited unless it meets the Exclusive Benefit Rule and it can be substantiated that the investment must provide an equivalent or superior rate of return for a similar investment with a similar time horizon and similar risk.

For the purpose of this document, Social Investing is defined as *"The investment or commitment of public pension fund money for the purpose of obtaining an effect other than a maximized return to the intended beneficiaries."*

- g. Economically targeted investing is prohibited unless the investment meets the Exclusive Benefit Rule.

For the purpose of this document economically targeted investment is defined as an investment designed to produce a competitive rate of return commensurate with risk involved, as well as to create collateral economic benefits for a targeted geographic area, group of people, or sector of the economy.

Also, for the purpose of this document, the Exclusive Benefit Rule is met if the following four conditions are satisfied:

- (1) The cost does not exceed the fair market value at the time of investment.
- (2) The investment provides the Fund with an equivalent or superior rate of return for a similar investment with a similar time horizon and similar risk.
- (3) Sufficient liquidity is maintained in the Fund to permit distributions in accordance with the terms of the plan.
- (4) The safeguards and diversity that a prudent investor would adhere to are present.

Where investment characteristics, including yield, risk, and liquidity are equivalent, the Board's policy favors investments which will have a positive impact on the economy of North Dakota.

Revisions Proposed for Sections 7 (New)

No Substantive Revisions Proposed for Section 8

7. INTERNAL CONTROLS

A system of internal controls must be in place by the SIB to prevent losses of public funds arising from fraud or employee error. Such controls deemed most important are the separation of responsibilities for investment purchases from the recording of investment activity, custodial safekeeping, written confirmation of investment transactions, and established criteria for investment manager selection and monitoring. The annual financial audit must include a comprehensive review of the portfolio, accounting procedures for security transactions, and compliance with the investment policy.

8. EVALUATION AND REVIEW.

Investment management of the Fund will be evaluated against the Fund's investment objectives and investment performance standards. Evaluation will be conducted quarterly by the SIB through its review of funds participating in the Insurance Trust.

Money managers will be evaluated by the SIB quarterly. In-state meetings will be held with the money managers at least annually.

WSI Board Action Requested:

RIO requests WSI consider approving recommended revisions (highlighted in red) to the Investment Policy Statement at this time (or sometime in the future).

If approved, RIO will submit the revised policy to the SIB for acceptance at our next board meeting on February 24, 2017.

KEY UPDATE:

WSI approved the recommended changes on February 15, 2017.

**ND STATE INVESTMENT BOARD
AUDIT COMMITTEE MEETING**

Thursday, February 23, 2017 - 3:00 PM
Workforce Safety & Insurance
1600 E Century Ave, Bismarck, ND 58503

AGENDA

1. Call to Order and Approval of Agenda – Chair (committee action) (5 minutes)
2. Approval of November 17, 2016 Minutes – Chair (committee action) (5 minutes)
3. 2016 - 2017 Second Quarter Audit Activities Report – Terra Miller Bowley (committee action)(10 minutes)
4. Executive Limitation Audit – Terra Miller Bowley (committee action)(10 minutes)
5. GASB 68 Schedule Audit Update – Terra Miller Bowley (information)(10 minutes)
6. TFFR Employer Auditing: Audit Recommendation Follow-up (information)(**to follow**)(15 minutes)
7. Committee Meeting with Executive Director and Deputy Executive Director – Dave Hunter and Fay Kopp, SIB Audit Committee Members (15 minutes)
8. Committee Meeting with Supervisor of Audit Services and Auditor – Terra Miller Bowley and Dottie Thorsen, SIB Audit Committee Members (15 minutes)
9. Other – Next SIB Audit Committee Meeting

North Dakota State Capitol Building
Thursday, May 25, 2017 - 3:00 PM
Peace Garden Room

10. Adjournment

Any individual requiring an auxiliary aid or service should contact the Retirement and Investment Office at (701) 328-9885 at least (3) days prior to the scheduled meeting.

**STATE INVESTMENT BOARD
AUDIT COMMITTEE MEETING
MINUTES OF THE
NOVEMBER 17, 2016, MEETING**

COMMITTEE MEMBERS PRESENT: Rebecca Dorwart, Chair
Mike Gessner, TFFR Board (TLCF)
Mike Sandal, PERS Board
Josh Wiens, External Representative

MEMBER ABSENT: Cindy Ternes, Workforce Safety & Insurance

STAFF PRESENT: Connie Flanagan, Fiscal & Invt Ops Mgr
Bonnie Heit, Assist to the Audit Committee
David Hunter, ED/CIO
Terra Miller Bowley, Suprv Audit Services
Dottie Thorsen, Internal Auditor

GUESTS: Thomas Rey, CliftonLarsonAllen (TLCF)

CALL TO ORDER:

Ms. Dorwart called the State Investment Board (SIB) Audit Committee meeting to order at 3:00 p.m. on Thursday, November 17, 2016, at Workforce Safety & Insurance, 1600 E Century Ave., Bismarck, ND.

A quorum was present for the purpose of conducting business.

AGENDA:

IT WAS MOVED BY MR. SANDAL AND SECONDED BY MR. WIENS AND CARRIED ON A VOICE VOTE TO APPROVE THE AGENDA FOR THE NOVEMBER 17, 2016, MEETING AS DISTRIBUTED.

AYES: MR. SANDAL, MR. WIENS, MR. GESSNER, AND MS. DORWART

NAYS: NONE

MOTION CARRIED

ABSENT: MS. TERNES

MINUTES:

IT WAS MOVED BY MR. SANDAL AND SECONDED BY MR. WIENS AND CARRIED ON A VOICE VOTE TO ACCEPT THE SEPTEMBER 23, 2016, MINUTES AS DISTRIBUTED.

AYES: MR. GESSNER, MR. SANDAL, MR. WIENS, AND MS. DORWART

NAYS: NONE

MOTION CARRIED

ABSENT: MS. TERNES

RIO FINANCIAL AUDIT:

Mr. Thomas Rey, CliftonLarsonAllen, LLP (CLA), reviewed the results of the June 30, 2016, financial audit of the Retirement and Investment Office. CLA issued an unmodified "clean" opinion that the financial statements are presented fairly, in all material respects, and in conformity with U.S. Generally Accepted Accounting Principles (GAAP).

Mr. Rey also briefed the Audit Committee on the GASB 68 Census Data Audits. Employer census testing was completed with 17 employers. No findings were noted. Work on the GASB 68 schedules will began this month and CLA expects to issue their final report on the schedules by the end of 2016.

The Audit Committee congratulated RIO personnel on their excellent work on the financial audit report.

IT WAS MOVED BY MR. WIENS AND SECONDED BY MR. SANDAL AND CARRIED BY A VOICE VOTE TO APPROVE THE CLIFTONLARSONALLEN JUNE 30, 2016 FINANCIAL AUDIT OF RIO.

AYES: MR. WIENS, MR. SANDAL, MR. GESSNER, AND MS. DORWART

NAYS: NONE

MOTION CARRIED

ABSENT: MS. TERNES

AUDIT ACTIVITIES REPORT:

Ms. Miller Bowley reviewed activities of the Audit Division for the period of July 1, 2016 - September 30, 2016.

Eleven employer audits were completed. Five employer audits were in progress at fiscal year-end, which included two employers from the third audit cycle and three from the fourth audit cycle. Five audits in the fourth audit cycle were pending and not yet started. Five employers from the fourth audit cycle received audit notifications but the information requested had yet to be received from the employers.

Discussion followed on employers who have reoccurring reporting discrepancies. The Audit Committee discussed what options are available to the Teachers' Fund for Retirement Board, RIO personnel, as well as the Audit Committee themselves.

After discussion, the Audit Committee felt this issue should be brought before the Teachers' Fund for Retirement Board to determine what options if any are available to hold these employers accountable. The Audit Committee felt strongly that since they are a Committee of the State Investment Board that a recommendation should be made to the Teachers' Fund for Retirement Board but only after discussions have occurred with the Board and legal counsel sought.

The Audit Division completed the following audits - Benefits Payments Audit, Teachers' Fund for Retirement (TFFR) File Maintenance Audit, and Executive Limitation Audit.

Ms. Miller Bowley stated the TFFR Cost Effective Benefit Payments/Benefit Recalculation Audit was delayed. The audit was not completed in fiscal year 2016 and has been carried over to be completed in fiscal year 2017. The audit is currently in progress.

The Audit Division also assisted the external auditors, CliftonLarsonAllen, during the current financial audit of RIO along with the GASB 68 census data audits.

The Audit Division in conjunction with the Retirement Division created an internship program. The internship program ran from May 16 - August 19, 2016. The Supervisor of Audit Services and the Retirement Program Manager provided ongoing support and assistance to the intern throughout the program.

The Audit Division continues to make progress on their procedures manual. Procedures for the TFFR File Maintenance Audit have been placed on RIO's intranet site. Procedures for the TFFR Cost Effective Benefit Payments Audit and the Benefit Payment Audit are in progress.

Staff continues to attend local Institute of Internal Audit (IIA) meetings as well as regional conferences and other misc. seminars and webinars. Ms. Miller Bowley completed the requirements for a Certified Internal Auditor (CIA) designation in July 2016.

IT WAS MOVED BY MR. SANDAL AND SECONDED BY MR. WIENS AND CARRIED BY A VOICE VOTE TO ACCEPT THE JULY 1, 2016 - SEPTEMBER 30, 2016, AUDIT ACTIVITIES REPORT.

AYES: MR. GESSNER, MR. WIENS, MR. SANDAL, AND MS. DORWART

NAYS: NONE

MOTION CARRIED

ABSENT: MS. TERNES

OTHER:

The next Audit Committee meeting is scheduled for Thursday, November 17, 2016, at 3:00 pm at Workforce Safety and Insurance, 1600 E Century Ave, Bismarck, ND.

With no further business to come before the Audit Committee, Ms. Dorwart adjourned the meeting at 3:45 p.m.

Respectfully Submitted:

Ms. Rebecca Dorwart, Chair
SIB Audit Committee

Bonnie Heit
Assistant to the Audit Committee

MEMORANDUM

TO: State Investment Board (SIB)
State Investment Board (SIB) Audit Committee
David Hunter, Executive Director/CIO

FROM: Terra Miller Bowley, Supervisor of Audit Services

DATE: February 23, 2017

SUBJECT: Executive Limitations Final Audit Report

Audit Services has completed the annual review of the Executive Director/CIO's level of compliance with State Investment Board (SIB) Governance Manual Executive Limitation policies for the calendar year beginning January 1, 2016 and ending December 31, 2016.

The policies reviewed during the course of the audit were:

- General Executive Constraint (A-1)
- Staff Relations (A-2)
- Relating to Public and Government (A-3)
- Budgeting (A-4)
- Financial Condition (A-5)
- Communication and Counsel to the Board (A-6)
- Asset Protection (A-7)
- Compensation and Benefits (A-8)
- Conflict of Interest (A-9)
- Code of Conduct (A-10)
- Unrelated Business Interests (A-11)

Audit Services is sufficiently satisfied that the Executive Director/CIO was in compliance with SIB Governance Manual Executive Limitation policies A-1 through A-11 during calendar year 2016.

**RETIREMENT AND INVESTMENT OFFICE
AUDIT SERVICES
EXECUTIVE LIMITATIONS AUDIT REPORT
January 1, 2016 – December 31, 2016**

Executive Limitations – General Executive Constraint (A-1)

The following documents were reviewed and found to support the Executive Director/CIO's compliance with Executive Limitation A-1:

- Executive Team Members – Communication Questionnaires
- State Investment Board (SIB) Meeting Agendas, Materials, and Minutes

The executive team indicated that frequent communication occurs regarding board and executive issues and processes. Executive team members believe they are well informed and not lacking pertinent or relevant information. The executive team demonstrated greater cohesion than in prior years. There was a greater consensus regarding the most important issues facing the organization. Executive team members overwhelmingly agree that the depth of knowledge and experience currently held by executive staff will insulate the organization from any risk associated with the sudden loss of executive services.

Executive Limitations – Staff Relations (A-2)

The following documents were reviewed and found to support the Executive Director/CIO's compliance with Executive Limitation A-2:

- RIO Administrative Manual and Employee Acknowledgements
- RIO Termination Checklist, Exit Interview, and Employee Termination Documents
- 2016 Executive Director/CIO Effectiveness Survey and Results
- 2016 SIB Executive Review Committee Survey, Results, and Meeting Minutes

RIO maintains an Administrative Manual which includes personnel rules for staff, provides for the effective handling of grievances, and protects against wrongful conditions or violations of state and federal law. During calendar year 2016 the Code of Conduct, Family and Medical Leave, Requesting Leave or Absence from Work, Flextime, Travel, and Infant at Work policies were revised and/or created. All staff members signed acknowledgements indicating that they reviewed and understood all policies contained within the Administrative Manual. RIO implemented a summer internship program in 2016. The summer intern was a temporary employee and departed RIO in August 2016. A termination checklist and an exit interview were completed prior to the intern's departure. Staff and SIB survey responses were positive regarding staff relations.

Executive Limitations – Relating to Public and Government (A-3)

The following documents were reviewed and found to support the Executive Director/CIO's compliance with Executive Limitation A-3:

- 2016 SIB Client Satisfaction Survey and Responses
- RIO Administrative Manual (Media Policy), Media Inquiry, and Open Records Request
- 2016 SIB Executive Review Committee Survey, Results, and Meeting Minutes

SIB clients were asked to rate the services provided by RIO staff on behalf of the SIB. A score of 3.60 was received on a 4.0 weighted average scale. Comments received were generally positive and indicated clients have a great deal of trust in staff, receive excellent customer service, and appreciate the current leadership. The Executive Director/CIO routinely responds to media requests and open records requests. The requests reviewed revealed that information provided by staff was accurate and when applicable distinguished between fact and personal opinion. Members of the SIB overwhelmingly

Executive Limitations – Relating to Public and Government (A-3) (continued)

agreed that the Executive Director/CIO effectively promotes the SIB and provides necessary information to various stakeholders, constituencies, political subdivisions, and the state legislature. This is most often accomplished with appropriately timed and relevant communications, presentations, and general discussions.

Executive Limitations – Budgeting (A-4) and Financial Condition (A-5)

The following documents were reviewed and found to support the Executive Director/CIO's compliance with Executive Limitation A-4 and A-5:

- RIO 2017-2019 Proposed Biennium Budget and Other Supporting Documentation
- Budget and Financial Condition Quarterly Monitoring Reports – SIB Meeting Materials
- 2016 Callan Associates, Inc. Fee Study and Other Supporting Documentation
- 2016 Executive Review Committee Survey, Results, and Meeting Minutes

The 65th Legislative Assembly commenced in January 2016. The 2017-2019 budgeting process was still ongoing at the conclusion of audit work. A review of the quarterly monitoring reports for fiscal year 2016 revealed that RIO operated well within budget and had not made any expenditure which exceeded the appropriation authorized by the legislature. This confirms that the budget planning process currently used by RIO is adequate and results in the development of credible expense projections. During calendar year 2016 RIO did not reduce the level of service of any programs nor request the assistance of the Emergency Commission. Continuing appropriations are reviewed by third parties, one of the largest expenditures is related to investment management fees and consulting expenses. In 2016 Callan Associates, Inc. conducted a fee study and determined that fees are reasonable when compared to returns received. Fees have continued to decline since FY 2013. SIB members surveyed indicated they are satisfied with the Executive Director/CIO's budgeting actions and RIO's overall financial condition.

Executive Limitations – Communication and Counsel to the Board (A-6)

The following documents were reviewed and found to support the Executive Director/CIO's compliance with Executive Limitation A-6:

- 2016 SIB Executive Review Committee Survey, Results, and Meeting Minutes
- SIB Governance Manual Policy C-4 (Monitoring Executive Performance Policy)
- SIB Meeting Agendas, Materials, and Minutes – Calendar Year 2016

SIB members indicated that the Executive Director/CIO routinely provides information to assist in decision making, board education, updates on current issues, and timely problem identification. The Executive Director/CIO also adequately monitors investment performance, managers, and strategies. The Executive Director/CIO met all reporting requirements detailed in SIB Governance Manual Policy C-4.

Executive Limitations – Asset Protection (A-7)

The following documents were reviewed and found to support the Executive Director/CIO's compliance with Executive Limitation A-7:

- State Fire and Tornado Fund Insurance Policy – FY 2016 and FY 2017
- OMB/Risk Management – Risk Management Fund Manual
- State Bonding Fund – Commercial Blanket Bond – CY 2016 and CY 2017
- RIO Financial Audit - Fiscal Year Ended June 30, 2016
- 2016 SIB Executive Review Committee Survey, Results, and Meeting Minutes
- 2016 SIB Meeting Agendas, Materials, and Minutes – Nov 18, 2016

Executive Limitations – Asset Protection (A-7) (continued)

RIO has obtained adequate insurance to protect against theft and casualty losses as well as to protect against liability losses to board members, staff, and the organization. All RIO personnel who have access to funds are properly bonded. External auditors confirmed that funds are received, processed, and distributed under controls which are sufficient to meet State Auditor standards. The financial audit for the fiscal year ended June 30, 2016 received a clean unmodified opinion. Information on actual versus target asset allocation, excess returns for the 1, 3, and 5 year time periods, and current level of risk assumed indicates that the investment process undertaken by RIO is in compliance with the SIB policy on investment.

Executive Limitations – Compensation and Benefits (A-8)

The following documents were reviewed and found to support the Executive Director/CIO's compliance with Executive Limitation A-8:

- OMB ND Salary Ranges – 2015/16 and 2016/17
- Agency Position Number Listing Report – Business Unit 190
- SIB Executive Review Committee – Executive Director/CIO Performance Review
- ND Administrative Code, Chapter 04-07-02
- SIB Meeting Agenda, Materials, and Minutes – May 27, 2016

A review of available documents confirmed that compensation and benefits for staff are in compliance with the ND Administrative Code, Chapter 04-07-02. Current salary and benefits for the Executive Director/CIO are consistent with the recommendations of the SIB Executive Review Committee.

Executive Limitations – General Executive Constraint (A-1), Conflict of Interest (A-9), Code of Conduct (A-10), and Unrelated Business Interests (A-11)

The following documents were reviewed and found to support the Executive Director/CIO's compliance with Executive Limitation A-1, A-9, A-10, and A-11:

- 2016 Executive Limitation/CIO Effectiveness Survey and Results
- 2016 Executive Review Committee Survey and Results
- SIB Governance Manual Policy A-9 and Conflict of Interest Statement
- SIB Meeting Agenda, Materials, and Minutes – Feb 26, 2016 and Jul 22, 2016
- SIB Audit Committee Agenda, Materials, and Minutes – Feb 25, 2016

The Executive Director/CIO affirmed understanding of the Executive Limitation Conflict of Interest Policy (A-9) located within the SIB Governance Manual. Executive team members independently confirmed that they are not aware of any actual or perceived conflicts of interest concerning the Executive Director/CIO. SIB members indicated they believe the Executive Director/CIO maintains high fiduciary standards and adheres to all laws, rules, policies, procedures, and professional ethics. Staff overwhelmingly believes that the Executive Director/CIO demonstrates integrity and sets an example for others to follow.

BOARD ACCEPTANCE REQUESTED

To: State Investment Board
From: Dave Hunter
Date: February 16, 2017
RE: **Appointment of Executive Review Committee**

SIB Governance Manual C-4 on Monitoring Executive Performance states that “Each March the board will conduct a formal evaluation of the Executive Director / Investment Officer. This evaluation will be based on accomplishments of Ends and Compliance with Executive Limitations. **At the February board meeting, the chairperson will appoint a three-member committee** to review the board’s evaluation and make a recommendation to the full board concerning the salary for the Executive Director / Investment Officer.”

In anticipation of the SIB Chairman appointing a three member “Executive Review Committee”, the Executive Director/CIO notes that **RIO’s Supervisor of Audit Services, Terra Miller-Bowley, may be requested to administer the Executive Director/CIO Survey on behalf of the SIB and/or the Executive Review Committee.**

A sample copy of the Executive Director/CIO Survey is attached for reference or discussion purposes.

Attachments: SIB Executive Director/CIO Survey

Introduction

This evaluation tool assesses on six major categories. When evaluating, use the following categories (indicate a rating of 1, 2, or 3 in each area):

1) DOES NOT MEET EXPECTATIONS: Executive Director/CIO is not performing acceptably and expectations are not being met. Goals for improvement must be set and performance review date established (3-6 months).

2) MEETS EXPECTATIONS: Executive Director/CIO is performing acceptably and is meeting all standards and expectations.

3) EXCEEDS EXPECTATIONS: Executive Director is performing beyond and exceeds the established standards and expectations.

To ensure the best possible feedback for the Executive Director/CIO, it is suggested that ratings of DOES NOT MEET EXPECTATIONS and EXCEEDS EXPECTATIONS include comments that qualify that rating.

* 1. State Investment Board Member Completing the Evaluation:

CATEGORY 1 - Board Meetings

(Reference: Executive Limitations A-6)

2. The Executive Director/CIO prepares agenda items with supporting information and disseminates to State Investment Board members at least three days prior to the meeting.

- 1
- 2
- 3
- Not Applicable

Comments

3. The Executive Director/CIO provides appropriate information to the State Investment Board either in writing or verbally to aid in decision-making related to policy development, asset allocation, portfolio structure, and investment strategies.

- 1
- 2
- 3
- Not Applicable

Comments

4. The Executive Director/CIO provides board material that identify items, which need "Board Action" and makes a staff recommendation where appropriate.

- 1
- 2
- 3
- Not Applicable

Comments

5. The Executive Director/CIO provides education at board meetings in order for the State Investment Board to adequately perform their role.

- 1
- 2
- 3
- Not Applicable

Comments

CATEGORY 2 - Board Relations

(Reference: Executive Limitations A-6)

6. The Executive Director/CIO is responsive to requests of the State Investment Board, adapts to the State Investment Board's direction on policy, and works with the board as a team member.

- 1
- 2
- 3
- Not Applicable

Comments

7. The Executive Director/CIO keeps the State Investment Board aware of current issues and, when appropriate, provides information between board meetings.

- 1
- 2
- 3
- Not Applicable

Comments

8. The Executive Director/CIO provides timely and accurate problem identification to the State Investment Board as well as solutions and options for consideration.

- 1
- 2
- 3
- Not Applicable

Comments

CATEGORY 3 - Office Operations

(Reference: Executive Limitations A-2, A-4, A-5 and A-7)

9. The Executive Director/CIO adequately prepares a biennial budget, which includes, but is not limited to the following sub-categories:

3.2.1 - Biennial budget is prepared pursuant to OMB guidelines and submitted pursuant to guidelines established by the Office of the Governor.

3.2.2 - Does not reduce the level of service, or anticipate a reduction in the level of service, of any Retirement and Investment Office program without the prior approval of the State Investment Board.

3.2.3 - Expenditures for budget items do not exceed the appropriation without approval of the State Investment Board.

- 1
- 2
- 3
- Not Applicable

Comments

10. The Executive Director/CIO provides leadership, coaching and effective feedback to RIO staff, recommending measures to improve performance and increase efficiency.

- 1
- 2
- 3
- Not Applicable

Comments

11. The Executive Director/CIO maintains and continues to develop positive working relationships across all organizational units and levels.

- 1
- 2
- 3
- Not Applicable

Comments

12. The Executive Director/CIO provides adequate staffing for the NDRIO, which includes, but is not limited to the following sub-categories:

3.4.1 - All applicable personnel rules of the State of North Dakota are followed.

3.4.2 - Staff performance evaluations are completed at least annually.

- 1
- 2
- 3
- Not Applicable

Comments

CATEGORY 4 - Investment Programs and Program Operations

(Reference: Executive Limitations A-6, A-7, A-9 and Ends D-3, D4)

13. The Executive Director/CIO maintains approved Investment Objectives and Policies.

- 1
- 2
- 3
- Not Applicable

Comments

14. The Executive Director/CIO effectively advises, monitors and reports investment performances, which includes, but is not limited to the following sub-categories:

- 4.2.1 - Produces accurate and timely reports which are provided to the State Investment Board concerning investments, progress and compliance with investment policies.
- 4.2.2 - Advises and makes recommendations to the State Investment Board regarding investment programs and strategies.
- 4.2.3 - Recommends corrective actions as necessary to investment strategies.
- 4.2.4 - Monitors, analyzes, and recommends changes for all investment costs, including commissions, manager fees, and other costs.

- 1
- 2
- 3
- Not Applicable

Comments

15. The Executive Director/CIO effectively monitors investment strategies, which includes, but is not limited to the following sub-categories:

4.3.1 - Formulates, evaluates, and recommends an investment policy for all of the State Investment Board client assets, including asset allocation, structure of investment assets and, upon approval, implementation of the policy.

4.3.2 - Makes recommendations to the State Investment Board related to the Watch List.

4.3.3 - Monitors and evaluates total portfolio risk and return and recommend adjustments to the asset allocation, investment strategy, manager structure and guidelines.

4.3.4 - Researches and recommends new asset classes and innovative investment management styles that can increase the return on assets, reduce risk, or reduce costs to the plan.

1

2

3

Not Applicable

Comments

16. The Executive Director/CIO effectively monitors investment managers, which includes, but is not limited to the following sub-categories:

4.4.1 - Adjust managers' assets to maintain proper risk levels and asset allocation targets.

4.4.2 - At least quarterly, evaluates and reviews the investment activity and portfolio management of the investment managers.

4.4.3 - Reports a summary of investment manager activity and compliance with investment policy and contractual guidelines to the State Investment Board and individual plan governing boards.

4.4.4 - Regularly meets with the investment managers to review performance and other activity.

4.4.5 - Oversees and, when necessary, participates in searches for new investment managers and consultants, negotiates fees and contracts, and recommends termination of managers.

- 1
- 2
- 3
- Not Applicable

Comments

17. The Executive Director/CIO maintains high fiduciary standards.

- 1
- 2
- 3
- Not Applicable

Comments

18. The Executive Director/CIO adequately provides State Investment Board contract management, which includes, but is not limited to the following sub-categories:

4.6.1 - Distributes and analyzes bids for services to facilitate decision-making for the State Investment Board.

4.6.2 - Monitors contractor performance and advises the State Investment Board of any issues, including options for responding and recommendations for associated action plans.

4.6.3 - Provide direction to all contracts to insure that State Investment Board objectives are achieved.

4.6.4 - Insure that all contractors comply with contract provision, state law and administrative rules.

1

2

3

Not Applicable

Comments

CATEGORY 5 - Public/Legislative Relations

(Reference: Executive Limitations A-3, A-9)

19. The Executive Director/CIO provides necessary information, through regular effective communications and timely programs, to various stakeholders.

- 1
- 2
- 3
- Not Applicable

Comments

20. The Executive Director/CIO represents RIO and promotes State Investment Board programs to various stakeholders, constituencies, political subdivisions and the state legislature.

- 1
- 2
- 3
- Not Applicable

Comments

21. The Executive Director/CIO develops legislative proposals in concert with the State Investment Board and represents the board in communications and presentations to the legislature.

- 1
- 2
- 3
- Not Applicable

Comments

22. The Executive Director/CIO properly informs the Legislature, through the Interim Committee, regarding the status of the investment funds which fall under the oversight of the State Investment Board.

- 1
- 2
- 3
- Not Applicable

Comments

23. The Executive Director/CIO has developed a rapport with legislators to ensure the credible recognition of the positions of the State Investment Board.

- 1
- 2
- 3
- Not Applicable

Comments

CATEGORY 6 - Professional Skills and Development

(Reference: Executive Limitations A-2, A-6)

24. The Executive Director/CIO maintains membership and involvement in professional organizations and is current with applicable certifications.

- 1
- 2
- 3
- Not Applicable

Comments

25. The Executive Director/CIO provides visionary and strategic leadership to the State Investment Board.

- 1
- 2
- 3
- Not Applicable

Comments

26. The Executive Director/CIO exhibits a positive and results-oriented style with a predisposition to building consensus and goal achievement through collaboration.

- 1
- 2
- 3
- Not Applicable

Comments

27. The Executive Director/CIO demonstrates the ability to dissect highly complex issues and effectively develop and communicate a corresponding plan of action.

- 1
- 2
- 3
- Not Applicable

Comments

28. The Executive Director/CIO has reasonably attained professional goals for present year.

- 1
- 2
- 3
- Not Applicable

Comments

29. The Executive Director/CIO adheres to all laws, rules, policies, procedures, and professional ethics.

- 1
- 2
- 3
- Not Applicable

Comments

30. The Executive Director/CIO exhibits courtesy and respect in all interactions.

- 1
- 2
- 3
- Not Applicable

Comments

31. The Executive Director/CIO understands motivational drivers and is skilled at getting individuals, teams, and the entire organization to perform at the highest possible level and to embrace change.

- 1
- 2
- 3
- Not Applicable

Comments

SIB Legislative Update February 22, 2017

HB 1022 – RIO Budget

Introduced by: Appropriations Committee

<http://www.legis.nd.gov/assembly/65-2017/documents/17-0507-02000.pdf>

<http://www.legis.nd.gov/assembly/65-2017/documents/17-0507-01001a.pdf>

HB 1082 – RIO Budget

Introduced by: Appropriations Committee (at the request of the Governor)

<http://www.legis.nd.gov/assembly/65-2017/documents/17-8143-01000.pdf>

HB 1022 and HB 1082 both contain the budget authority and continuing appropriations for the Retirement and Investment Office (RIO) administrative expenses for operating the retirement program for the TFFR Board and the investment program for the SIB. There are two RIO budget bills. While both start with base level amounts, HB 1082 includes former Governor Dalrymple's executive budget adjustments, while the former Governor's adjustments are excluded from HB 1022.

HB 1022 and HB 1082 were assigned to the House Appropriations - Government Operations Division. Dave, Connie and Fay attended a committee hearing on 1/5. Many questions revolved around Legacy Fund earnings and returns which Dave addressed. Other questions related to TFFR funding, plan design, and contributions to which Fay responded.

Another committee meeting on HB 1022 was held on 1/16 which was attended by Connie, Fay and Dave. RIO's budget proposal was presented with no specifics issued noted.

On 1/17, OMB requested (on behalf of the Governor) reductions to Rio's budget of an additional \$110,000 for the 2017-19 biennium. After a careful review of all budget areas, RIO proposed the following expense reductions:

- 1) Reduced "Temporary Salaries" (and related fringe benefits) by \$20,000 (thereby eliminating the internship position);
- 2) Reduced "Travel" by \$53,000 for both Board members and RIO Staff;
- 3) Reduced our "Contingency" line item by \$28,000 (to \$52,000); and
- 4) Eliminated a \$9,000 copier purchase in the 2017-19 biennium.

The new "Contingency" amount of \$52,000 approximates the average contingency amount used by RIO the last four biennia.

On 1/27, the Governor's budget recommendation in HB 1082 failed in the House. No action was taken yet on HB 1022, the Appropriations Committee budget bill for RIO.

At the request of the House Appropriations Committee, RIO met with Representatives Brabandt and Boehning on 1/30 and 1/31 to discuss further cuts to RIO's budget for the next biennium. RIO's latest budget proposals came in at \$5.27 million (Option 1) and \$5.22 million (Option 2) versus our Base Level Budget of \$5.41 million. Committee members expressed their gratitude for working quickly in an attempt to generate additional budget savings.

RIO Option 1 keeps RIO’s FTE count at 19 positions, but pay raises and performance bonuses were eliminated while staff and board travel and professional development costs were effectively eliminated. Based on discussion with House Appropriations Committee representatives, there is a belief that existing state employees would not be required to pay for health care costs. Option 1 represents a 2.6% (or \$142,000) reduction from our current base level budget. Operating Expenses were cut by 20% or \$200,000 and Contingencies were cut by 37% or \$30,000. Salaries and Wages increase by 2% or \$89,000 due to higher health care costs (\$54,000) and cost to continue salary increases implemented in our current biennium.

RIO OPTION 1	Base Level 1	Option 1	Option 1 Savings	
Key Expense Cuts:	Base Level	<i>Option 1</i>	Total	
Operating cut 20%	(current	<i>Request</i>	Change	
Contingency cut 37%	biennium		from Base	
	budget)		Level	
Salaries and wages	4,340,551	4,429,510	88,959	2%
Operating expenses	990,874	790,027	(200,847)	-20%
Capital assets	-	-	-	
Contingencies	82,000	52,000	(30,000)	-37%
Total special funds	5,413,425	5,271,537	(141,888)	-2.6%
<i>FTE positions</i>	19	19	-	

RIO Option 2 is identical to Option 1 although Contingencies are reduced by \$82,000 to zero. RIO did not recommend Option 2 since it eliminates a line item which has been used in each of the last four biennia. Option 2 represents a 3.6% (or \$194,000) reduction from our current base level budget.

RIO met with the Government Operations Subcommittee of House Appropriations on 2/6 and 2/7. On 2/7, the Subcommittee unanimously approved RIO Option 1 (as summarized in the table above).

On 2/15, the House Appropriations Committee gave amended HB1022 a “do pass” recommendation by 13-4-4 vote. This version contains the Option 1 reductions noted above. The House approved the amendment on 2/17. **The House approved amended HB 1022 by a vote of 81-10 on 2/22.**

HB 1175 - SIB Membership

Introduced by: Representatives Kreidt, Delzer, Devlin, Kempenich and Senator Klein
<http://www.legis.nd.gov/assembly/65-2017/documents/17-0409-01000.pdf>

HB 1175 adds two members to the SIB, one selected by the House Majority Leader and one selected by the Senate Majority Leader, thereby increasing the number of SIB members to 13.

The bill was assigned to the Political Subdivisions Committee. The hearing was scheduled for 1/19, but was postponed since the “bill carrier” was unable to attend. Dave attended the scheduled hearing and let Committee Chairman Lawrence Klemin know that he was available to address any SIB process questions, but did not intend to provide testimony either “for” or “against” HB 1175. On 1/27, the Committee gave the bill a “do pass” recommendation 11-3-1. On 2/1, the House approved the bill by a vote of 71-22. The bill will now move to the Senate.

OTHER BILLS OF INTEREST:

HB 1023 – PERS Budget

Introduced by: Appropriations Committee

<http://www.legis.nd.gov/assembly/65-2017/documents/17-0508-02000.pdf>

<http://www.legis.nd.gov/assembly/65-2017/documents/17-0508-01009a.pdf>

HB 1023 is the PERS budget bill. On 2/10, RIO was made aware of amendments which might impact the SIB. Proposed amendments would change the governance of PERS. These changes make the PERS Retirement Board advisory and change the membership of this board; create a state agency called the PERS Office; and provide that the Governor appoints an Executive Director of the PERS Office.” In addition, the State Investment Board statutes would be amended to include “two of the elected members of the PERS advisory board as selected by that board and the PERS office executive director or the director’s designee.” The Government Operations Subcommittee of the House Appropriations Committee adopted the amendments on 2/10. RIO staff and legal counsel are reviewing the amendments for potential implications.

On 2/15, the House Appropriations Committee passed the amended HB 1023 and gave it a “do pass” recommendation by a vote of 15-3-3.

On 2/16, the interim Legislative Employee Benefits Programs Committee held a public hearing to consider the amendments to HB 1023 and to receive the results of the actuarial and technical analysis from PERS. While there is no actuarial impact on the PERS plan, the technical and legal analysis of the amendments brings up other issues relating to plan governance. Comments that could have some implications on SIB/TFFR are summarized below.

Section 31: The changes proposed in Section 31 remove the PERS Board as the governing body of the plan, instead granting authority for plan administration to the PERS office through an Executive Director appointed by the Governor. It appears this will create a single fiduciary or sole trustee plan, with fiduciary authority/responsibility vested in the Governor but carried out through the appointed Executive Director. Note that if a single fiduciary holds another government office, this creates the potential for conflicts of interest for that fiduciary. For example, if the Governor is the plan fiduciary, that individual may be put in the position of making decisions on behalf of the state that run contrary to fiduciary duties to the plan. This is the same potential for conflict faced by the members of the legislature currently sitting on the PERS Board. However, the risk to these Board members is mitigated by being one member of a nine member board and thus not solely responsible for actions taken by Board majority. It is unclear if the intent of this legislation is to have the PERS executive director be the sole fiduciary or trustee for the plan. Further clarity in statute would be needed to make that assertion on behalf of the plan.

This section also creates an advisory board comprised of the same membership as the current PERS Board, except that the Attorney Generals’ designee and Health Officers’ designee will be removed. Further, while the current statute requires the PERS Board to be chaired by an individual appointed by the Governor, there is no such requirement for the Advisory Board which may select its own chairman from any of its membership. While these Advisory Board members will be expected to “act” as fiduciaries, ultimately fiduciary responsibility will not reside with this Board because it will be limited to making recommendations as opposed to taking action.

Section 8: This section changes the membership of the SIB by removing the three PERS Board members and replacing them with 2 members of the newly created Advisory Board and the Executive Director of the PERS Board. Due to other amendments in this bill, PERS Advisory Board members may only make recommendations to the PERS Office, whereas the Executive Director will have the authority and responsibility to administer the PERS office. Note that the Advisory Board members will be granted 2 votes to the Executive Director's 1 vote, and in fact the SIB will be the only Board where the Advisory Board members may take action directly affecting the PERS plan.

This section also has an interesting impact on the TFFR plan. Given the SIB is the governing body of the RIO agency, which administers the TFFR plan, the PERS Executive Director would have a vote and be placed in a supervisory capacity over the TFFR plan, whereas the Executive Director for the TFFR program would not fill a similar role. These changes, and the expansion of the SIB proposed in HB 1175, may impact the governance process of the SIB and RIO.

Section 27: This section increases the membership of the Employee Benefits Program Committee by adding 3 non-voting employee members from the PERS Advisory Board to this Interim Committee. On its face this would appear to result in a slight executive branch encroachment of the legislative branch (non-voting status notwithstanding), given the Employee Benefits Programs Committee is a standing interim committee and not advisory. Further, there is a potential for conflict given that advisory board members will be in a position to recommend a course of action or position to the PERS office, and then as contributors to the legislative interim committee, and given the powers of oversight granted the committee under NDCC 54-35-02.4, comment on the appropriateness of that action. The PERS office will be responsible for the cost of attendance by Advisory Board members.

After discussion, the Legislative Employee Benefits Programs Committee gave the amendments to HB 1023 an "unfavorable" recommendation by a vote of 10-2-1. **Despite the recommendation of the EBPC, the (Government Operations Subcommittee and the) full House Appropriations Committee gave a "do pass" recommendation to HB1023 by a 14-3 vote. The House passed amended HB 1023 by a vote of 76-15 on 2/22.**

HB 1088 – Data Breach Response and Remediation Costs

Introduced by: Government and Veterans Affairs Committee (at the request of OMB)

<http://www.legis.nd.gov/assembly/65-2017/documents/17-8014-01000.pdf>

HB 1088 would allow the State's Risk Management fund to cover state agencies for certain 1st party costs associated with a data breach including notification of affected parties, credit counseling, etc. A related OMB bill (HB1075) also includes special fund appropriation authority for self-insurance remediation costs, i.e. fixing the issues related to hardware and software. Please be reminded that RIO had originally included funds in an optional budget package for cyber insurance which was not included in the former Governor's Executive Budget recommendation.

HB 1088 was assigned to House GVA Committee. A committee hearing was held on 1/05. The committee gave the bill a do pass recommendation 14-0-0. **The House approved the bill on 1/10 by a vote of 91 – 1.** The Senate GVA Committee held a public meeting on the bill on 2/16. **On 2/21, the Senate GVA Committee recommended a "do pass" vote for HB 1088 by a vote of 5-0-1. HB 1088 is now on the Senate calendar.**

HB 1154 - Budget Stabilization Fund

Introduced by: Rep. Delzer, Brandenburg, Kempenich, Pollert, Streyle and Senator Wanzek

<http://www.legis.nd.gov/assembly/65-2017/documents/17-0100-01000.pdf>

HB 1154 increases the Budget Stabilization Fund to 15% of the current biennial state general fund budget versus 9.5% currently.

The House Appropriations Committee scheduled a Committee hearing for HB 1154 on 1/18. On 2/7 the Committee gave a “do not pass” recommendation to HB 1154 by a vote of 19-0. On 2/10, HB 1154 failed the House with a vote of 5-84.

HB 1155 – Transfers and Expenditures from Budget Stabilization Fund

Introduced by: Representatives Delzer, Bellew, Carlson, Monson and Streyle

<http://www.legis.nd.gov/assembly/65-2017/documents/17-0101-02000.pdf>

HB 1155 changes the rules which govern transfers and expenditures from the budget stabilization fund to the general fund and increases the Budget Stabilization Fund to 15% of the current biennial state general fund budget (versus 9.5% currently).

The House Appropriations Committee scheduled a Committee hearing for HB 1155 on 1/18. On 2/7 the Committee gave a “do pass” recommendation to HB 1155 by a vote of 19-0. On 2/10, HB 1155 passed the House with a vote of 89-2 (and the emergency clause was declared carried).

HB 1317 – Transfers of Legacy Fund Earnings - Intent

Introduced by: Representatives Steiner and Toman and Senator Sorvaag

<http://www.legis.nd.gov/assembly/65-2017/documents/17-0065-02000.pdf>

HB 1317 introduces a new section to NDCC 54-27 relating to the transfer of legacy fund earnings to the general fund with “the intent ... that earnings of the legacy fund be used for tax relief programs.”

The House Appropriations Committee held a Committee hearing for HB 1317 on 1/26 at 2:15 pm in the Roughrider Room. On 2/3, the Committee gave a “do not pass” recommendation 19-0-2. On 2/9, HB 1317 failed in the House by a vote of 4-87.

HB 1408 – Transfer from Legacy Fund to Natural Gas Pipeline Infrastructure Loan Fund

Introduced by: Representative Marvin Nelson

<http://www.legis.nd.gov/assembly/65-2017/documents/17-0736-03000.pdf>

HB 1408 introduces a new section to NDCC 54-17.7 to create a natural gas pipeline infrastructure loan fund to deliver natural gas to areas of the state without existing service and funded by a \$100 million transfer from the Legacy Fund in the 2017-19 biennium.

House Appropriations held a Committee hearing for HB 1408 on 2/2. On 2/3, the Committee gave a “do not pass” recommendation 12-1-1. On 2/15, HB 1408 failed in the House by a vote of 18-72.

INFORMATIONAL

TO: State Investment Board
FROM: Dave Hunter, Executive Director/CIO
DATE: February 17, 2017
SUBJECT: **Callan College Onsite – Moved to July 28, 2017**

RIO is moving the date of the Callan College Onsite from March 24, 2017, to July 28, 2017, in order to allow staff additional time to conduct ongoing fixed income manager due diligence, while also minimizing potential scheduling conflicts during the current legislative session. This important Board Education session will be held at the Bismarck State College – Energy Center. Callan will allow us to extend this educational opportunity to our 14 client boards including PERS, TFFR and WSI. The invitation may also be extended to our Advisory Boards.



BOARD LEADERSHIP

INNOVATIVE APPROACHES TO GOVERNANCE

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Reflections on the World of Governance 2017

by Caroline Oliver

WHAT A YEAR it has been for us all. Seismic movements of people, of attitudes, and of power. Scary stuff. Now more than ever the question of whether we have the capacity to govern ourselves well is on the table. Now more than ever the definition of well is a matter of debate.

The words *complexity* and *uncertainty* are on everyone's lips. The exponential growth of technology continues and evolves into multiple new forms. Our faith in the efficacy of our national and international governing structures and the competence of our leaders has been severely shocked.

Like so many others, I have taken some comfort in talking to like-minded friends, exchanging notes about our fears, dishing out judgments about where our leaders have gone wrong, and despairing about the future. Like so many others, I have wondered, where do we go from here and how can I help to make sure it is to a good place—by which I mean a unifying, positive, and productive place for humanity?

Yet I do see small gleams of light. I see light in the attitudes of young people, those who, after all, have the most to lose and gain from all this. The young people I know are not panicking. They seem far more comfortable than the rest of us with the idea that this is just another stage of our evolution—a stage that is far from pretty but also far from surprising. Maybe even a stage that is symptomatic of the inevitable pain associated with change—change that in the long run may be what is needed to have us address all the new issues that are arising from globalization, climate change, and the like.

I also see light in the liberal reaction that asks us to question ourselves and our part in causing our current ills, and to seek to understand those who see the world differently. I also see light in the way people are saying that as individuals we may be pretty powerless to combat the negative international and national forces we see at work, but we are all-powerful in our own worlds. We can all make our families', our neighbors', our communities' lives better through small everyday acts of kindness. It may be my imagination, but I honestly feel I am seeing more consideration of others in small ways all around me. Maybe I am looking a lot older than I did, or maybe, among so much that feels like it is going wrong, people just want to show they care by

(continued on page 2)

NEWS

UK Select Committee Calls for Evidence on Corporate Governance

On September 16, 2016, the United Kingdom's Business, Energy, and Industrial Strategy Committee (BEIS Committee, formerly known as the BIS Committee) announced an inquiry on corporate governance. It focuses on directors' duties, executive pay, and the composition of boardrooms, including worker representation and gender balance in executive positions.

You can see the submissions and listen to the select committee's work here: <https://www.parliament.uk/business/committees/committees-a-z/commons-select/business-energy-industrial-strategy/inquiries/parliament-2015/corporate-governance-inquiry/publications/>

The Nonprofit Overhead Baby and the Bathwater: A Need-to-Know for Boards

An interesting article on a vital topic by John MacIntosh and George Morris appears in the December 2016 edition of *Nonprofit Quarterly*. For example, did you know that larger organizations show administrative costs that are significantly less (15 to 50 percent lower) than smaller organizations as a percentage of total expenses, and three-quarters of organizations have administrative expense ratios between 8 and 19 percent?

(continued on page 8)

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Reflections

(continued from front page)

offering me their seat on the train or giving me a warm smile.

So back to governance. Are there small things we can all do to make governance better? As we head into 2017, can we lead the way to a better future by starting with the boards in our own backyards? In this article I will review a number of areas in which I think we can all make a difference.

Remember How Far We Have Come

A great reminder for me this year of how far we have come was when John Carver's long-time assistant, Ivan Benson, told me that, upon starting his inquiry that led to the creation of the Policy Governance® system, John was able to carry home under one arm all the books that existed on the topic. That inquiry began over twenty-five years ago, and John, having now retired, can look back on a body of knowledge that has grown exponentially with input from many contributors, most notably himself. Today, he would likely need a truck to get all the books home.

Twenty-six years ago, Sir Adrian Cadbury produced the report that led to the world's first corporate governance code.¹ Now there are several hundred for the for-profit corporate sector alone.² We also now have the world's first national governance standard—*BS 13500: Code of Practice for Delivering Effective Governance of Organizations*³—and an International Organization for Standardization (ISO) standard in the works on governance of organizations.

Does this mean we have better governance? It is difficult to say, but surely we can say that we now have an environment that provides more specific expectations and transparency around governance structures and processes.

Keep Believing We Can Do Better

We still don't know how to measure the effectiveness of governance and

our progress toward greater effectiveness because we still have little agreement about what the board's job is. So there is a long way to go. We can do better.

We can better define the roles of all the parties involved in the governance process. We can better determine and enunciate the chain of accountability. We can educate the public more fully about the importance of boards. We can better educate owners about responsible ownership. We can better empower owners to exercise responsible ownership. We can better educate board members about their roles and better equip them to fulfill them. We can better educate staff at all levels about their contributions to governance and equip them to make them as helpful to the board as possible.

Are there small things we can all do to make governance better? As we head into 2017, can we lead the way to a better future by starting with the boards in our own backyards?

Stay Open-Minded

The world is changing all the time. Things we were absolutely certain of a few years ago are no longer valid. We used to think that face-to-face communication was always better than any other form of communication. We used to think that shareholders were unquestionably the owners of for-profit organizations. We used to think that increasing shareholder value was synonymous with increasing private financial gain. We used to think that the purpose of a for-profit corporation was obvious. We used to think that board members

have some hope of understanding what is currently happening in their organizations and what is likely to happen to them.

All these certainties are now being questioned and more, and we cannot assume that we know now how best to address them. Never has the need to be a learning organization and a learning individual been greater.

Don't Settle for Mediocrity

By suggesting that we start with the small things we can all do to make governance better, I am not offering "a counsel of despair" or suggesting that we settle for less than the very best we can do. Let's not settle for board governance practice being a random collection of historical practices that make sense individually but fail to address the full challenge. Let's not settle for reliance on individual personalities and skills leaving us collectively none the wiser or better. Let's not give up on the search for governance principles and systems that make governance into a truly unique, transformative, and effective leadership discipline.

Stay Focused on Why Good Governance Matters

No one cares about governance for its own sake. If we could run the world and our organizations better in our collective best interests without boards (in the sense of ultimately accountable bodies empowered to run things on our behalf) and without role clarity and chains of accountability, then that's what we should do. But we do need boards and role clarity and chains of accountability, for without them we have no mechanisms for collaboration and delegation to achieve our mutual objectives. We need to remember that the reason why governance matters is that it is a discipline that helps all of us to, as John Carver once memorably put it, "transcend ourselves" for the greater good. Or, as Garrett Hardin put it, to avoid "the tragedy of the commons."⁴ □

(continued on page 8)

Toward a New International Standard on Governance of Organizations

by Rubina Faber

As the new year gets under way, Rubina Faber, who has been closely involved in the creation of the British standard BS 13500: Code of Practice for Delivering Effective Governance of Organizations,¹ reflects on that experience and the work under way to establish an ISO (International Organization for Standardization) standard on governance of organizations.

TECHNOLOGY has made the world seem more accessible and the concept of globalization a reality. A more level playing field has been created, with access to international markets no longer available only to the multinational corporation (MNC). Technology has also given rise to the born-global firm—"companies that adopt a global perspective and engage in international business from or near their inception."²

However, whereas MNCs have the benefit of corporate governance standards to guide them as they consider operating in different locations and markets, smaller to medium-sized organizations have no such guidance, and guidance in the nonprofit and public sectors is patchy at best.

As globalization and technology evolve, it would seem increasingly necessary to consider governance an issue of concern to organizations of all shapes and sizes. It would seem that there is a need for an international governance standard for all organizations—everywhere.

Looking Back

In the summer of 2016 I taught postgraduate students from the United States. It was a wonderful experience on many levels. Indeed, I would go so far as to say it was life changing. One of the key lessons I experienced was that while we all spoke a similar language (English)

and valued education, there were nevertheless complex cultural differences that we needed to overcome. Seemingly small cultural differences made what seemed small things take on extraordinary significance.

Organizational governance can be thought of as a system brought together under the principles of direction, control, and accountability to help an organization deliver its purpose over the long term.

According to *BS 13500: Code of Practice for Delivering Effective Governance of Organizations*,¹ organizational governance can be thought of as a system brought together under the principles of direction, control, and accountability to help an organization deliver its purpose over the long term. While awareness of good governance has risen, it is hard to see how lessons have been learned when

we continue to read of significant conflicts of interests in management and board behavior. One notable example is the conflict of interest involved in board member selection, where decisions are made because of who they know rather than their skills.³

Of course, all organizations need to govern all of their board and operational practices well. In 1987, a commuter discarded a match onto a fifty-year-old wooden escalator at King's Cross station in London, United Kingdom. This seemingly insignificant act resulted in a fire that claimed thirty-one lives. However, what makes the incident more tragic is that a safety inspector at the scene had *not* been trained and as a result "forgot" that the escalator was fitted with a manual water sprinkler system. In a memorable book detailing the tragic events surrounding the King's Cross fire, Paul Chambers writes, "If someone had remembered to turn it on, then events that night might have turned out differently."⁴

What is essential in understanding this disaster is that in 1987, at the time of the incident, workers operated by informal rules, which meant that they lacked clarity about who was supposed to do what. In turn, this has meant that there is no clarity about where the accountability for the tragedy at King's Cross lies. Achieving role clarity at all levels and understanding accountability at all levels—from the front line to the boardroom—is vital to good governance.

In 2013, when the British Standards Institution (BSI) published BS 13500, its first standard on organizational governance, it was met with considerable interest both nationally and internationally. The standard was the culmination of significant work undertaken by volunteers in the United Kingdom who came from different backgrounds, with the collective aim of producing a governance best practice approach, applicable across organizations of *all* sizes and *all* types.

As part of the launch of BS 13500, work was commissioned to evaluate

how five organizations of various sizes and from various industries met the challenge of applying BS 13500.

A quality management approach was used to conduct the case studies, ensuring that the research approach was methodical and open. Each study included reviewing each organization's context and associated governance arrangements against BS 13500, clause by clause. The result was a gap analysis, which informed discussions with the organizations around differences and recommendations to help develop both the standard and the organization, going forward.

It was a tremendous boost to the launch that each of the five organizations presented at the launch event and provided very positive and well-received feedback.

Subsequent sales analysis of BS 13500 indicated a diverse global market, with usage in academia and businesses large and small in public, private, and other sectors. However, language aside, the different legal infrastructures and ways of working meant that organizations in other parts of the world would find challenges in applying BS 13500. Recognizing that there is a market for an international standard, BSI has proposed the development of an

international standard to provide international guidance on what "governance" is and how, as a separate discipline, it fits with management and management standards.

BSI has submitted its proposal to ISO, the International Organization for Standardization, which has now approved the establishment of a new Technical Committee, under the secretariat of BSI, toward developing a standard in the field of governance relating to aspects of direction, control, and accountability of organizations.

It is important that we reflect on the governance lessons of our past, balancing good and bad; however, we should also be present in the moment and look forward to the promise of what is yet to come.

The new ISO Technical Committee, TC 309, held its plenary meeting over three days in November 2016, actively discussing whether an international standard on governance in organizations could be developed. An important consideration in developing international standards is that members are asked to approve and comment on work being proposed at various stages. These comments are helpful for technical committees, as they provide insights into areas they should consider in taking the work forward, and help to gain support in developing an international standard to ISO.

ISO work is by its nature multicultural, and participants are required to be open-minded and adhere to ISO's code of conduct. It is fundamental

that persons act professionally and are prepared to share and consider different approaches. Participants should not expect the work to be easy, not least because ISO work groups are largely virtual, although at least one annual meeting will be held. ISO TC 309's next meeting is scheduled to take place in May 2017 in Quebec.

In the interim, work is under way, with ad hoc groups being formed to consider comments from the various participating countries and draft both a new work item proposal providing the scope and audience for the standard and the strategic business plan. It is expected that progress will be reported to the May meeting in Quebec.

Looking Forward

BSI has proposed that any international governance development standard could benefit from using the lessons learned during development of BS 13500, and indeed this could be used as a potential source document rather than starting from scratch.

As the concept of globalization becomes more of a reality, it is important that we not only become better at governance wherever we are using best practices in our local contexts, but also remain open to learning from others from other parts of the world.

The development of an international standard will require consideration of the organization in its local and global settings in subtle and not-so-subtle ways. While we can all appreciate language differences, other cultural differences will also need to be taken into account. As a minimum, it is expected that political, economic, legal, and technological forces will need to be considered. The challenge, as with the British standard, will be to rise to a sufficient level of principle to produce something that works in all settings while also producing something of real practical use.

WRITING FOR BOARD LEADERSHIP

Board Leadership welcomes articles from governance practitioners, researchers, and consultants on topics related to the discovery, explanation, and discussion of innovative approaches to board governance. If you have something new to say or want to provide a new perspective on something already said, please get in touch to discuss your idea further and to get a copy of our publishing criteria. Email: coliver@goodtogovern.com □

If we succeed, organizations everywhere will be able to take a principled, logical, and systematic approach to governance and use a common language across all divides. If we fail, we will at least have come to understand each other more.

Finally

I realize that I learn a lot from my students and I believe they learn a lot from me. However, I was deeply moved when on the last day a student gave me a handwritten letter. It said, among other things:

If there is one thing I have learned from you it is that we may not always like or understand our cultural differences; however we must respect them as they make us who we are ... they make us unique. I admire you for getting to know us on a deeper level ... thank you for teaching me; it truly was a pleasure being in your class.

In today's digital society, the fact that it was handwritten made it even more meaningful to me. The student recognized that I love to learn and indeed I am often amused at the seemingly obscure places I find useful lessons in seemingly everyday things.

I found this on a roll of Christmas ribbon as I was putting up decorations:

*Yesterday is history.
Tomorrow is a mystery.
Today is a gift. That's why it's called the Present.*

It is important that we reflect on the governance lessons of our past, balancing good and bad; however, we should also be present in the moment and look forward to the promise of what is yet to come—Happy 2017. □

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Notes

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3. "Roads to Ruin: The analysis." Airmic [online]. Available at <https://www.airmic.com/technical/library/roads-ruin-analysis>
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WHEN WE SAY ...

BOARD LEADERSHIP'S mission is "to discover, explain, and discuss innovative approaches to board governance with the goal of helping organizations achieve effective, meaningful, and successful leadership to fulfill their missions."

Board Leadership aims to fulfill this mission by engaging its readers in a lively and illuminating inquiry into how board governance can be made more effective. This inquiry is based on three key assumptions:

- Boards exist to lead organizations; not merely monitor them.
- Effective board governance is not about either systems, structures, processes, theories, practices, culture, or behaviors—it is about all of them.
- Significant improvements are likely to come only through challenging the status quo and trying out new ideas in theory and in practice.

Uniquely among regular publications on board governance, *Board Leadership* primarily focuses on the job of board leadership as a whole, rather than on individual elements of practice within the overall job.

Over time, *Board Leadership* will provide a repository of different approaches to governance created through its regular "One Way to Govern" feature.

Here's what a few of the key terms we use mean to us:

- **Innovative:** Creating significant positive change.
- **Approaches to:** principles, theories, ideas, methodologies, and practices.
- **Board governance:** The job of governing whole organizations. □

BOARD LEADERSHIP IS NOW MORE ACCESSIBLE THAN EVER!

Do you vaguely remember a fascinating *Board Leadership* article that you can no longer find? Do you or your colleagues want to be able to see what past *Board Leadership* articles have to say on a particular subject? Look no further. All issues of *Board Leadership* from 1992 onwards are now searchable. And, Issues 135 and prior are available for purchase—

as are individual articles from Issue 136 to date. Just go to <http://onlinelibrary.wiley.com> and search for *Board Leadership* and then use the "In this Journal" option on that page (top right) to search on any term you choose.

And you can find more about *Board Leadership* and some free "taster" articles at www.boardleadershipnewsletter.com. □

CALENDAR OF EVENTS

FEBRUARY 24–25, 2017

International Policy Governance Association (IPGA) Consultants' Forum

— Las Vegas, Nevada, USA

This is the main opportunity for Policy Governance Consultants and board and staff members with extensive experience in using the system to get together to discuss a range of issues of mutual interest. This forum will include a particular focus on the meaning and implications of governance as "ownership one step down."

For more information go to www.policygovernanceassociation.org or contact ceo@policygovernanceassociation.org

JUNE 22–24, 2017

International Policy Governance Association (IPGA) Annual Conference

— San Diego, California, USA

A variety of opportunities for learning and networking for board members, CEOs, and board administrators using the Policy Governance system to determine and fulfill their organizations' purpose, as well as for International Young Governance Professionals and others exploring good governance. Early bird discounts available.

Thinking of publishing in Board Leadership? Contact managing editor Caroline Oliver for criteria at coliver@goodtogovern.com

For more information go to www.policygovernanceassociation.org

OCTOBER 19–20, 2017

BoardSource Leadership Forum

— Seattle, Washington, USA

Plenary sessions, workshops, discussions, presentations, and networking for nonprofit board members, chief executives, staff, and nonprofit professionals to learn how to guide their organizations toward greater impact and mission.

For more information go to www.boardsource.org

HARVARD BUSINESS SCHOOL

The HBS programs on governance can be seen here: <http://www.exed.hbs.edu/programs/Pages/program-finder.aspx?HBSTopics=Governance>

HAINES CENTRE

International Corporate Governance Network Annual Conference

The Haines Center for Strategic Management is a team of strategic management consultants, whose work is based in Systems Thinking. <http://hainescentre.com/training/our-public-workshops/>

HOLACRACY

Holacracy is not a system for the work of boards but does bring structure and discipline to a peer-to-peer workplace. HolacracyOne offers a range of events from free introduc-

tory webinars to advanced immersive trainings.

For more information see <http://events.holacracy.org/>

NATIONAL COALITION FOR DIALOGUE & DELIBERATION (NCDD)

NCDD also regularly provides useful training events.

For more information, see <http://ncdd.org/events/ncdd2014>

NATIONAL COUNCIL FOR VOLUNTARY ORGANISATIONS (NCVO)

NCVO provides a range of programs across the United Kingdom and online. Topics relevant to boards include understanding financials, mentoring (for new board members) and outcome measurement.

For more information see <https://www.ncvo.org.uk/training-and-events>

INTERNATIONAL ASSOCIATION OF FACILITATORS (IAF)

IAF holds regular events and has a YouTube channel with content that is being expanded all the time.

For more information see <https://www.iaf-world.org/site/events/conference> and <https://www.youtube.com/user/iafworld>

SOCIOCRACY/DYNAMIC GOVERNANCE

This methodology for the operation of organizations was described in *Board Leadership* Issue 134 in the *One Way to Govern* feature.

More information and events can be found at <http://sociocracyconsulting.com/about/sociocracy/> and <http://sociocracyconsulting.com/events> □

A Word in Your Ear

by Caroline Oliver

I HAVE DECIDED it is time to pin my colors to the mast and create a spot in each issue from which I can set some context for the current and future issues.

Our next issue will be our 150th. That “New Year feeling” plus the recognition that I have been managing editor for two years now and sole editor for a further two years, are urging me to think about refreshing and renewing *Board Leadership* and its contribution to its readers.

When I fully took the reins in January 2014, my Jossey-Bass colleagues and I moved away from being solely about the Policy Governance system created by John Carver and took on a broader brief. That brief is to “publish articles that will illuminate governance theory and practice through the discovery, explanation, and discussion of innovative approaches to board governance.”

This provides me with the huge privilege of connecting with many people who have something new and interesting to say, or even old and interesting to say. It gives me a reason for permanently scanning the governance horizon and beyond for things that may help you, *Board Leadership’s* readers, to broaden your horizons, too. While I continue to see Policy Governance as the most sophisticated and comprehensive governance system we currently have, I am constantly seeking any and all improvements and hope I can help *Board Leadership’s* readers to be always in the governance vanguard.

So if you hear or see anything that you think would help advance our governance thinking, I hope you will not hesitate to let me know.

Here are some of the things that are coming your way in *Board Leadership* in 2017:

- We will be continuing our occasional “One Way to Govern” feature, in which we ask the following questions of experts in different approaches to the work

of governing organizations:

1. What are the origins of this approach and what gave rise to its name?
 2. What are the fundamental principles that underlie this approach?
 3. What does the practice of this approach provide?
 4. How widely is this approach used?
 5. Has this approach been subject to any research? If so, what has been demonstrated?
 6. What are the key distinctions between this and other approaches?
- We will be following the progress of the development of the forthcoming International Organization for Standardization (ISO) standard on the governance of organizations, which promises to be a fascinating journey.
 - We will continue to review important books on governance to let you know about what they offer for improving your governance understanding and practice.
 - We will bring you a major review of the rapidly evolving world of technology specifically developed for board work.
 - We will examine the governance of risk and current issues surrounding the definition and management of risk.
 - We will explore the concept and reality of blame and its impact on our ability to hold each other accountable.
 - We will do more on the role of board support—what is needed and who should provide it?
 - We will investigate the raft of new thinking and organizations springing up around the notion of the role of corporations in relation to wider society.

It promises to be a fascinating, challenging, and enlightening year for our whole world and your board—and *Board Leadership* is here to help you digest what is going on so that you can navigate the opportunities and challenges and find the best way forward. □

Caroline Oliver can be contacted at coliver@goodtogovern.com

FOOD FOR THOUGHT

“In any complex setting, people typically focus their attention on the parts of the system most visible from their own vantage point. This usually results in arguments about who has the right perspective on the problem. Helping people see the larger system is essential to building a shared understanding of complex problems. This understanding enables collaborating organizations to jointly develop solutions not evident to any of them individually and to work together for the health of the whole system rather than just pursue symptomatic fixes to individual pieces.” □

Peter Senge, Hal Hamilton, and John Kania, “The Dawn of System Leadership,” *Stanford Social Innovation Review*, Winter 2015. http://ssir.org/articles/entry/the_dawn_of_system_leadership#sthash.Dc8CuLqL.dpuf

News

(continued from front page)

<https://nonprofitquarterly.org/2016/12/12/nonprofit-overhead-baby-bathwater-need-know-boards/>

Company Secretaries Must Learn to Put Themselves First!

The work of supporting boards is vital, yet often undervalued. Seamus Gillen has now urged company secretaries to assert themselves more strongly in this December 2, 2016, article.

<https://www.linkedin.com/pulse/company-secretaries-must-learn-put-themselves-first-seamus>

Governance Coach Blog

Policy Governance specialists the Governance Coach are producing a lively new blog. <http://governance-coach.com/realboard-buzz/>

2017 Board of Directors Predictions: Five Trends to Watch

Brian Stafford, chief executive officer of Diligent Corporation and a former partner at McKinsey & Company, has published his predictions for 2017 in *Private Company Director* magazine.

His thoughts on the five top trends that will make the biggest impact on boards in 2017 are summarized below:

1. **Individual accountability will become more important.** Board members will be held more accountable for their personal effectiveness. As a result, board

members will need to do more to protect their confidential communications (both personal and professional) and their personal reputations.

2. **Diversity in board composition will be more highly valued.** As complexity of the issues boards face increases, so does the need for diversity around the board table in terms of opinions, experience, and skill sets. In particular, boards will need to recruit more women and more persons who are aware of the implications of new technological opportunities and dangers for all aspects of the organization and the operation of the board itself.
3. **Greater collaboration with executive management will be needed.** As accountability increases, board members will need to collaborate more closely with executive management.
4. **Cyber security will become a greater concern.** Cyber security is perhaps the single biggest risk to organizations today. Breaches are now impacting corporations daily, and many are not prepared.
5. **Political change.** Board members will need to keep a close eye on the political scene, as it is likely to impact governance in terms of new requirements for the board's work, including the role of the corporate secretary.

The full article is available at <http://www.privatecompanydirector.com/features/2017-board-directors-predictions-5-trends-watch> □

Reflections

(continued from page 2)

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1. The UK Corporate Governance Code, Financial Reporting Council, London, September 2014. <https://www.frc.org.uk/Our-Work/Publications/>

Corporate-Governance/UK-Corporate-Governance-Code-2014.pdf

2. http://www.ecgi.org/codes/all_codes.php

3. *BS 13500: Code of Practice for Delivering Effective Governance of Organizations* (London: British Standards Institute, Stationery Office Books, 2013).

4. Hardin, G., "The Tragedy of the Commons." *Science*, December 13, 1968. http://www.garretthardinsociety.org/articles/art_tragedy_of_the_commons.html

BOARD LEADERSHIP

INNOVATIVE APPROACHES TO GOVERNANCE

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Public Pensions and the Siren Song of Environmental Activism

Retirement funds are being urged to sell off their investments in traditional energy producers. That's bad for retirees, and it wouldn't help the environment.

BY YOLANDA HUDSON, TIM SHAW | FEBRUARY 14, 2017

In America and around the globe, there are signs that consumers are becoming more socially conscious. In a 2015 report, 84 percent of the citizens of the 10 largest countries who were surveyed indicated that corporate responsibility would guide their decisions about product purchases.

But while few would argue against heightened public awareness of social accountability, those attitudes should not supersede the welfare of workers counting on their pensions to help provide them with a comfortable retirement. Ideological causes should be accessory to that fundamental obligation; they should not come at a cost to it.

Regrettably, however, some would now put dogma grounded in a false narrative ahead of the financial livelihood of our nation's public employees. These activists are pressuring state and local government pension funds, along with university endowments and other institutional investors, to sell off their holdings in traditional energy producers. Such divestment, the activists argue, will destabilize fossil-fuel production, which they blame for much of the destruction of our environment.

Not only does that position make pawns of our teachers and other civil servants, but it is built on a faulty premise. While activists paint oil and gas producers as the enemies of clean-energy initiatives, the industry is in fact leading the charge, working to bring new technologies to market, improve efficiencies and cut harmful emissions. The five largest American energy companies have invested more than \$20 billion in research and development of alternative and sustainable energy resources.

In his 2014 State of the Union Address, President Obama identified natural gas as a "bridge fuel" that is better positioning policymakers to address climate realities. That has proved remarkably true. Gas-fired electricity production increased by 4 percent last year, marking a record high and surpassing the amount of power produced by coal. In 2015, according to the federal Energy Information Administration, energy-related carbon dioxide emissions in the United States fell to 12 percent below 2005 levels.

Nevertheless, public pension funds continue to face pressure from activists seeking to impose their social agendas at the expense of the livelihoods of the public employees who serve our states and communities. The California State Teachers' Retirement System, the nation's largest teachers' pension fund, is among those being pushed by elites and academics to sell its investments in traditional energy producers.

The same thing is happening at the local-government level: The Montgomery County, Md., council, for example, is considering legislation introduced by three council members to sell its pension fund's \$65 million in holdings in fossil-fuel companies. *The Washington Post* has called the proposal "no more than a feel-good gesture" that would impose "very real costs" on the suburban Washington county's retirement fund.

While the impact of divestment on energy producers is questionable -- after all, the selling of those holdings will simply open opportunities to new investors -- it unquestionably hurts the funds. [A study last year by Daniel Fischel, a law professor at the University of Chicago, found that divestment of traditional energy equities by pension funds, college endowments and other investors reduced investment-portfolio returns by 0.7 percent annually.](#) That's a number that public pensions, many of them already struggling to achieve the investment returns they need to meet their obligations to retirees, should take to heart.

In the end, it is impossible to square the costs of divestment -- and the very tangible consequences it would impose on retirees -- with its goal of destabilizing energy producers. Efforts by energy companies to reduce emissions are a cause that activists should champion, not oppose. And our public pension funds should put pragmatism ahead of dogma and resist the siren song of those who would squander our civil servants' pensions on social activism that contradicts itself.

<http://www.governing.com/gov-institute/voices/col-public-pension-funds-divestment-energy-producers.html>