



ND STATE INVESTMENT BOARD MEETING

Friday, November 18, 2016, 8:30 a.m.
Workforce Safety & Insurance
1600 E Century Ave., Bismarck, ND

AGENDA

I. CALL TO ORDER AND ACCEPTANCE OF AGENDA

II. ACCEPTANCE OF MINUTES (October 28, 2016)

III. INVESTMENTS

- A. Asset and Performance Overview - Mr. Hunter (enclosed) (15 min) *Informational*
- B. SIB Update – Chairman Wrigley (to follow) (15 min) *Informational*
- C. Callan Investment Review - Mr. Erlendson and Mr. Browning (enclosed) (1 hour) **Board Acceptance**
 - 1. Pension Trust
 - 2. Insurance Trust
 - 3. Legacy Fund

===== Break from 10:00 to 10:15 am =====

- D. Annual SIB Client Investment Reviews - Mr. Hunter (enclosed) (10 min) *Informational*
- E. Callan Fee Study - Mr. Browning and Mr. Erlendson (enclosed) (20 min) **Board Acceptance**
- F. Bank of North Dakota Update - Mr. Schulz (enclosed) (10 min) *Informational*
- G. Watch List Commentary - Mr. Hunter (enclosed) (10 min) *Informational*

IV. GOVERNANCE

- A. RIO Financial Audit Report for June 30, 2016 - Mr. Hunter (enclosed) **Board Acceptance** (10 min)
 - 1. SIB Audit Committee Agenda and Minutes
- B. Governance Policy Amendment (Second Reading) - Mr. Hunter (enclosed) (5 min) **Board Approval**

V. OTHER

Next Meetings: SIB meeting - January 27, 2017, 8:30 a.m. - [Workforce Safety & Insurance](#)
SIB Audit Committee meeting - February 23, 2017, 3:00 p.m. - [Workforce Safety & Insurance](#)

VI. ADJOURNMENT

**NORTH DAKOTA STATE INVESTMENT BOARD
MINUTES OF THE
OCTOBER 28, 2016, BOARD MEETING**

MEMBERS PRESENT: Drew Wrigley, Lt. Governor, Chair
Mike Sandal, Vice Chair
Mike Burton, TFFR Board
Lance Gaebe, Commissioner of Trust Lands
Mike Gessner, TFFR Board
Mel Olson, TFFR Board
Kelly Schmidt, State Treasurer
Yvonne Smith, PERS Board
Cindy Ternes, WSI designee
Tom Trenbeath, PERS Board

MEMBERS ABSENT: Adam Hamm, Insurance Commissioner
Rob Lech, TFFR Board

STAFF PRESENT: Connie Flanagan, Fiscal & Invt Ops Mgr
Bonnie Heit, Assist to the SIB
David Hunter, ED/CIO
Fay Kopp, Dep ED/CRA
Terra Miller Bowley, Supvr Audit Services
Cody Schmidt, Compliance Officer
Darren Schulz, Dep CIO

GUESTS PRESENT: Alex Browning, Callan Associates (TLCF)
Carl Eichstaedt, Western Asset
Jan Murtha, Attorney General's Office
Susan Signori, Western Asset

CALL TO ORDER:

Lt. Governor Wrigley, Chairman, called the State Investment Board (SIB) meeting to order at 8:30 a.m. on Friday, October 28, 2016, at the State Capitol, Peace Garden Room, Bismarck, ND.

Mr. Hunter introduced Mr. Mike Burton who represents the Teachers' Fund for Retirement (TFFR) Board as an alternate to the SIB.

AGENDA:

IT WAS MOVED BY TREASURER SCHMIDT AND SECONDED BY MR. SANDAL AND CARRIED ON A VOICE VOTE TO ACCEPT THE AGENDA FOR THE OCTOBER 28, 2016, MEETING AS DISTRIBUTED.

AYES: MS. TERNES, COMMISSIONER GAEBE, MR. GESSNER, MS. SMITH, MR. TRENBEATH, MR. SANDAL, MR. BURTON, MR. OLSON, TREASURER SCHMIDT, AND LT. GOVERNOR WRIGLEY

NAYS: NONE

MOTION CARRIED

ABSENT: COMMISSIONER HAMM

MINUTES:

IT WAS MOVED BY COMMISSIONER GAEBE AND SECONDED BY MS. TERNES AND CARRIED ON A VOICE VOTE TO ACCEPT THE SEPTEMBER 23, 2016, MINUTES AS DISTRIBUTED.

AYES: MR. GESSNER, COMMISSIONER GAEBE, MS. SMITH, TREASURER SCHMIDT, MR. BURTON, MR. OLSON, MR. TRENBEATH, MR. SANDAL, MS. TERNES, AND LT. GOVERNOR WRIGLEY

NAYS: NONE

MOTION CARRIED

ABSENT: COMMISSIONER HAMM

GOVERNANCE :

Client Satisfaction Survey - Mr. Hunter stated RIO's Audit Services Division conducted a SIB "client satisfaction" survey for the period of July 1, 2015 - June 30, 2016. All clients responded to the survey. The ND Board of Medicine's response was not available at the time the results were calculated but gave the SIB a favorable rating in all categories. The SIB received a 3.6 overall rating, which is comparable to prior years. The majority of board responses were positive and encouraging.

IT WAS MOVED BY MR. SANDAL AND SECONDED BY MR. GESSNER AND CARRIED BY A VOICE VOTE TO ACCEPT THE RESULTS OF THE SIB CLIENT SATISFACTION SURVEY FOR THE PERIOD OF JULY 1, 2015 - JUNE 30, 2016.

AYES: MR. OLSON, MR. GESSNER, MR. SANDAL, MS. SMITH, MR. TRENBEATH, MS. TERNES, COMMISSIONER GAEBE, MR. BURTON, TREASURER SCHMIDT, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED
ABSENT: COMMISSIONER HAMM

Audit Committee - Ms. Miller Bowley reviewed activities of the SIB Audit Committee for the period of July 1, 2015 - June 30, 2016. Highlights included - twenty-two employer audits were completed along with the TFFR File Maintenance, Benefit Payment, Annual Salary Verification, and Executive Limitations audits. The Audit Committee also accepted the results of CliftonLarsonAllen's June 30, 2015, financial audit of RIO, issuing an unmodified opinion. The Audit Committee also accepted CliftonLarsonAllen's financial audit scope and approach of RIO for the fiscal year ended June 30, 2016, along with the final report for the GASB 68 Schedule audit.

IT WAS MOVED BY MR. TRENBEATH AND SECONDED BY MR. OLSON AND CARRIED BY A VOICE VOTE TO ACCEPT THE JULY 1, 2015 - JUNE 30, 2016, AUDIT COMMITTEE ACTIVITIES REPORT.

AYES: MS. TERNES, MR. OLSON, TREASURER SCHMIDT, COMMISSIONER GAEBE, MR. TRENBEATH, MR. BURTON, MR. SANDAL, MS. SMITH, MR. GESSNER, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED
ABSENT: COMMISSIONER HAMM

Governance Manual Review - Mr. Hunter reviewed Governance Manual Section D-Ends policies and also reviewed revised language in Section B-Policy Introduction/Amendment Passage. There were no proposed changes to Section D. The SIB received the first reading to Section B-Policy Introduction/Amendment Passage. The second review and consideration of acceptance will be addressed at the November 18, 2016, meeting.

RIO vs Policy Ends - Mr. Hunter reviewed RIO's adherence to policy "Ends" for the period of July 1, 2015 - June 30, 2016. Mr. Hunter stated all of the SIB's Pension Trust clients generated positive excess returns over the last five years. For the five years ending June 30, 2016, PERS and TFFR generated excess returns of approximately 0.41% and 0.59% respectively.

For the same time period, every non-pension trust client (exception PERS Retiree Health Insurance Credit Fund) generated positive excess returns and positive risk adjusted excess returns.

For the same time period, risk, as measured by standard deviation, was within policy levels for all SIB clients for the five-years ended June 30, 2016, if applicable.

Discussion took place on transparency and ensuring the appropriate information on RIO's website is easily accessible and understandable for those constituents the SIB

and RIO serve. RIO personnel will take this into consideration as they post information to the office website.

IT WAS MOVED BY MS. TERNES AND SECONDED BY MS. SMITH AND CARRIED BY A VOICE VOTE TO ACCEPT THE EVALUATION RESULTS OF RIO VS POLICY ENDS FOR THE PERIOD OF JULY 1, 2015 - JUNE 30, 2016.

AYES: MS. TERNES, MR. OLSON, MR. SANDAL, TREASURER SCHMIDT, MR. GESSNER, MS. SMITH, COMMISSIONER GAEBE, MR. BURTON, MR. TRENBEATH, AND LT. GOVERNOR WRIGLEY

NAYS: NONE

MOTION CARRIED

ABSENT: COMMISSIONER HAMM

MONITORING:

Per Governance Policy, Board/Staff Relationship/Monitoring Executive Performance C-4, the following monitoring reports for the quarter ending September 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 three firms currently on the Watch List - PIMCO (MBS & Unconstrained mandates), JP Morgan (MBS Strategy mandate) and UBS (International Fixed Income mandate).

IT WAS MOVED BY TREASURER SCHMIDT AND SECONDED BY MS. SMITH TO ACCEPT THE MONITORING REPORTS FOR THE QUARTER ENDING SEPTEMBER 30, 2016.

AYES: MR. BURTON, TREASURER SCHMIDT, MR. OLSON, COMMISSIONER GAEBE, MR. TRENBEATH, MR. SANDAL, MR. GESSNER, MS. SMITH, MS. TERNES

NAYS: NONE

MOTION CARRIED

ABSENT: COMMISSIONER HAMM, LT. GOVERNOR WRIGLEY

INVESTMENTS:

Legacy and Budget Stabilization Fund - Mr. Hunter stated as of October 28, 2016, RIO will have transferred \$375 million, at the direction of the Governor and OMB, from the Budget Stabilization Fund to the General Fund.

The Bank of North Dakota CD Program valued at approximately \$79 million as of August 31, 2016, will be transferred from the Budget Stabilization Fund to the Legacy Fund over the next few months in anticipation of future transfers from the Budget Stabilization Fund.

The Legacy Fund, as of August 31, 2016, surpassed \$4 billion in assets. The Legacy Fund had received over \$3.6 billion in deposits and generated over \$400 million of investment income since the initial funding on September 7, 2011. RIO is working with the Office of Management and Budget, Legislative Council, and the Office of the State Treasurer to develop procedures for the potential transfer of funds from the Legacy Fund to the General Fund. An Attorney General's opinion has also been requested to assist in the matter.

Lt. Governor Wrigley left the meeting and Mr. Sandal presided over the remainder of the meeting.

Western Asset Management - Ms. Signori and Mr. Eichstaedt provided an update on the mandates they manage on behalf of the SIB as well as a sector update on fixed income.

The Board recessed at 9:45 a.m. and reconvened at 9:55 a.m.

Fixed Income - Mr. Schulz provided an update to the board on the processes and progress being undertaken by staff on the fixed income restructure for the Pension Trust. Staff will be proposing a fixed income manager framework that seeks to achieve material improvements in return potential and diversification without increasing plan-level risk within the next couple of months for the board's consideration.

Private Equity - Mr. Schulz updated the board on private equity. RIO personnel have spent considerable time and resources working to optimize the SIB's projected private equity portfolio. Because of these efforts, staff became aware that Adams Street provides different levels of transparency to different types of clients. Adams Street has signed confidentiality agreements with their underlying general partners; thus, Adams Street is mandated to limit information to investors subject to FOIA or similar open records laws. Adams Street is concerned that North Dakota's confidentiality provisions may be inadequate, and unable to protect confidential information if contested by a third party despite numerous conversations between RIO personnel, Ms. Murtha, and Adams Street's counsel. Adams Street is reducing the information that was previously provided to RIO personnel. After discussion,

IT WAS MOVED BY TREASURER SCHMIDT AND SECONDED BY MR. TRENBEATH AND CARRIED BY A ROLL CALL VOTE TO PLACE ADAMS STREET PARTNERS ON THE WATCH LIST DUE TO THE TRANSPARENCY ISSUES.

AYES: TREASURER SCHMIDT, MR. GESSNER, MS. TERNES, COMMISSIONER GAEBE, MS. SMITH, MR. BURTON, MR. SANDAL, MR. TRENBEATH, AND MR. OLSON

NAYS: NONE

MOTION CARRIED

ABSENT: COMMISSIONER HAMM, LT. GOVERNOR WRIGLEY

RIO personnel is recommending to temporarily pause future investments with Adams Street in order to revisit the private equity firms that were evaluated during the SIB's 2015-16 private equity search. This does not include previous commitments.

IT WAS MOVED BY MR. TRENBEATH AND SECONDED BY MS. SMITH AND CARRIED BY A ROLL CALL VOTE TO ACCEPT STAFF RECOMMENDATION AND TEMPORARILY PAUSE FUTURE INVESTMENTS WITH ADAMS STREET PARTNERS IN ORDER TO REVISIT THE PRIVATE EQUITY CANDIDATES EVALUATED DURING THE SIB'S PRIVATE EQUITY SEARCH TO DETERMINE IF THERE EXISTS A SUITABLE REPLACEMENT.

AYES: MS. SMITH, MR. SANDAL, MR. OLSON, MR. GESSNER, MR. BURTON, MR. TRENBEATH, MS. TERNES, COMMISSIONER GAEBE, AND TREASURER SCHMIDT.

NAYS: NONE

MOTION CARRIED

ABSENT: COMMISSIONER HAMM, LT. GOVERNOR WRIGLEY

OTHER:

The next meeting of the SIB Audit Committee is scheduled for November 17, 2016, at 3:00 p.m. at Workforce Safety & Insurance, 1600 E Century Ave., Bismarck, ND.

The next meeting of the SIB is scheduled for November 18, 2016, 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, Mr. Sandal adjourned the meeting at 10:40 a.m.

Mike Sandal, Vice Chair
State Investment Board

Bonnie Heit
Assistant to the Board

State Investment Board

Asset and Investment Performance Overview

For the periods ended September 30, 2016

November 10, 2016

Dave Hunter, Executive Director / CIO

Darren Schulz, Deputy Chief Investment Officer

ND Retirement & Investment Office (RIO)

State Investment Board (SIB)

State Investment Board – Client Assets Under Management

<u>Fund Name</u>	<u>Market Values as of 9/30/16 ⁽¹⁾</u>	<u>Market Values as of 6/30/16 ⁽²⁾</u>	<u>Market Values as of 9/30/15 ⁽¹⁾</u>
Pension Trust Fund			
Public Employees Retirement System (PERS)	2,548,430,036	2,459,388,086	2,297,953,486
Teachers' Fund for Retirement (TFFR)	2,144,533,865	2,082,183,640	1,986,019,289
Job Service of North Dakota Pension			92,671,408
City of Bismarck Employees Pension	85,179,534	82,441,003	78,265,663
City of Grand Forks Employees Pension	58,778,547	57,975,758	54,988,439
City of Bismarck Police Pension	35,180,238	33,983,598	34,180,733
Grand Forks Park District	5,834,315	5,720,245	5,736,838
City of Fargo Employees Pension			1,250
Subtotal Pension Trust Fund	4,877,936,536	4,721,692,330	4,549,817,105
Insurance Trust Fund			
Workforce Safety & Insurance (WSI)	1,860,023,835	1,832,104,203	1,722,726,573
Budget Stabilization Fund	578,309,532	575,918,381	575,697,144
PERS Group Insurance Account	37,239,691	37,715,356	36,093,259
City of Fargo FargoDome Permanent Fund	35,386,219	38,782,721	37,545,105
State Fire and Tornado Fund	24,853,937	24,091,203	22,737,348
Petroleum Tank Release Compensation Fund	7,214,431	7,149,512	7,176,956
State Risk Management Fund	6,208,850	6,534,801	6,116,849
State Risk Management Workers Comp Fund	5,680,663	5,516,177	5,614,318
ND Association of Counties (NDACo) Fund	4,167,501	4,048,863	3,836,386
State Bonding Fund	3,329,117	3,296,372	3,186,910
ND Board of Medicine	2,248,565	2,208,667	2,138,284
Insurance Regulatory Trust Fund	1,232,868	1,085,836	2,567,559
Bismarck Deferred Sick Leave Account	661,908	642,265	850,301
Cultural Endowment Fund	398,147	386,452	366,207
Subtotal Insurance Trust Fund	2,566,955,264	2,539,480,809	2,426,653,198
Legacy Trust Fund			
Legacy Fund	4,070,189,950	3,809,485,177	3,328,631,897
PERS Retiree Insurance Credit Fund	105,505,466	101,623,224	92,663,350
Job Service of North Dakota Pension	96,325,192	96,588,333	
ND Tobacco Prevention and Control Trust Fund	52,785,217	54,366,538	47,300,013
Total Assets Under SIB Management	11,769,697,625	11,323,236,410	10,445,065,563

- ▶ **SIB client assets grew by approximately 12% (or \$1.27 billion) in the last year with the Legacy Fund creating the largest asset growth of \$742 million primarily due to tax collections.**
- ▶ **The Legacy Fund generated a net investment gain of 10.18% for the year ended September 31, 2016, exceeding its performance benchmark. Since inception, the Legacy Fund has generated a net annualized return of 3.49% (over the last 5 years) exceeding the performance benchmark of 2.62%.**
- ▶ **The Pension Trust posted a net return of 9.43% in the last year. During the last 5-years, the Pension Trust generated a net annualized return of 9.44%, exceeding the performance benchmark of 8.83%.**
- ▶ **The Insurance Trust generated a net return of 7.04% in the last year. During the last 5-years, the Insurance Trust posted a net annualized return of 5.79%, exceeding the performance benchmark of 4.38%.**
- ▶ **SIB client assets exceeded \$11.7 billion as of September 30, 2016, based on unaudited valuations.**

⁽¹⁾ 9/30/16 and 9/30/15 market values are unaudited and subject to change.

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

Investment Performance Evaluation – Sep. 30, 2016

Investment Performance Criteria :

SIB clients should receive investment returns consistent with their investment policies and market variables (pursuant to Section D.3 of the SIB Governance Manual). **The “Ends” for investment performance is evaluated based on comparison of each client’s actual rate of return (net of fees), risk levels and risk adjusted returns, versus the client’s policy benchmark over 5 years.**

Pension Trust:

Every Pension Trust client posted positive Excess Returns for the 3- and 5-year periods ended September 30, 2016. For PERS, Excess Return approximated 0.66% and 0.60% over the last 3- and 5-year periods, respectively. For TFFR, Excess Return approximated 0.68% for the last 3-years and 0.77% for the last 5-years.

For the 5-years ended September 30, 2016, PERS generated a net return of approximately 9.4%, while TFFR generated a net return of approximately 9.6%. U.S. Public Equity and Real Estate were the top two performers with net annualized returns of 17% and 13%, respectively, for the last 5-years. World Equity and International Equity also performed well with annual returns of 11% and 8%, while U.S. High Yield and Investment Grade Fixed Income generated returns of approximately 9% and 5%, respectively, over the last 5-years. Infrastructure underperformed long term expectations with (annualized) returns approximating 4.9% (since 9/30/2011). Private Equity, Timber and International Debt were the three most disappointing asset classes with net annualized returns of 0.7%, 1.3% and 2.1%, respectively, for the last 5-years.

For the 1-year period ended September 30, 2016, PERS and TFFR reported a net investment return of 9.4%, which outperformed their respective benchmarks by approximately 0.3%.

Non-Pension Trust:

Every Non-Pension Trust client generated positive Excess Return for the 5-years ended Sep. 30, 2016, while all but one Non-Pension Trust client reported positive Risk Adjusted Excess Returns for the 5-years ended June 30, 2016 (with PERS Retiree Health Insurance Credit Fund as the lone exception). WSI generated net returns of 8.5% over the last year and 7.6% over the last 5-years, both of which exceeded the performance benchmark. The Budget Stabilization Fund (BSF) also performed well and generated above benchmark returns of 1.9% over the last year and 2.0% over the last 5-years. **Risk, as measured by standard deviation, was within approved levels for all SIB clients for the five-years ended September 30, 2016.**

Pension Trust Return & Risk Summary – Sep. 30, 2016

Returns: Every Pension Trust client portfolio generated positive “Excess Return” and positive “Risk Adjusted Excess Return” for the 5-years ended September 30, 2016.

Risk: Every Pension Trust client investment portfolio was in compliance with prescribed risk levels (e.g. within 115% of the Policy Benchmark over the last 5-years).

	Current FYTD 9/30/2016	1 Yr Ended 9/30/2016	3 Yrs Ended 9/30/2016	5 Yrs Ended 9/30/2016	Risk 5 Yrs Ended 9/30/2016	Risk Adj Excess Return 5 Yrs Ended 9/30/2016
PERS						
Total Fund Return - Net	3.68%	9.49%	6.12%	9.46%	5.7%	0.36%
Policy Benchmark Return	3.61%	9.21%	5.46%	8.85%	5.5%	
Excess Return	0.07%	0.28%	0.66%	0.60%	103%	
TFFR						
Total Fund Return - Net	3.69%	9.43%	6.14%	9.64%	5.7%	0.42%
Policy Benchmark Return	3.52%	9.11%	5.45%	8.87%	5.5%	
Total Relative Return	0.17%	0.32%	0.68%	0.77%	104%	

PERS and TFFR net investment returns exceeded 9% for the 1- and 5-years ended Sep. 30, 2016. PERS generated 0.60% and TFFR posted 0.77% of positive “Excess Return” over the last 5-years.

Pension Trust Return & Risk Summary – June 30, 2016

	Current FYTD 9/30/2016	1 Yr Ended 9/30/2016	3 Yrs Ended 9/30/2016	5 Yrs Ended 9/30/2016	Risk 5 Yrs Ended 9/30/2016	Risk Adj Excess Return 5 Yrs Ended 9/30/2016
BISMARCK EMPLOYEES PENSION						
Total Fund Return - Net	3.33%	8.81%	5.91%	8.94%	5.0%	0.44%
Policy Benchmark Return	3.21%	8.70%	5.30%	8.25%	4.8%	
Excess Return	0.12%	0.11%	0.61%	0.69%	103%	
BISMARCK POLICE PENSION						
Total Fund Return - Net	3.53%	9.06%	5.87%	9.24%	5.4%	0.44%
Policy Benchmark Return	3.48%	8.91%	5.27%	8.60%	5.3%	
Excess Return	0.05%	0.15%	0.60%	0.65%	102%	
JOB SERVICE PENSION PLAN						
Total Fund Return - Net	0.92%	9.85%	6.36%	8.98%	4.6%	1.22%
Policy Benchmark Return	2.18%	7.38%	4.91%	7.37%	4.4%	
Excess Return	-1.27%	2.47%	1.45%	1.60%	104%	
CITY OF GRAND FORKS PENSION PLAN						
Total Fund Return - Net	3.61%	9.56%	6.07%	9.74%	5.9%	0.38%
Policy Benchmark Return	3.64%	9.61%	5.61%	9.22%	5.8%	
Excess Return	-0.03%	-0.05%	0.47%	0.52%	101%	
GRAND FORKS PARK DISTRICT PENSION PLAN						
Total Fund Return - Net	3.51%	9.23%	6.37%	10.04%	5.9%	0.59%
Policy Benchmark Return	3.27%	9.03%	5.82%	9.39%	5.9%	
Excess Return	0.24%	0.20%	0.55%	0.66%	101%	

Risk Adjusted Excess Returns for the 5-years ended Sep. 30, 2016, were positive for all Pension Trust clients and generally exceeded 0.50% (or ½ percent).

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 – Sep. 30, 2016

	Current FYTD 9/30/2016	1 Yr Ended 9/30/2016	3 Yrs Ended 9/30/2016	5 Yrs Ended 9/30/2016	Risk 5 Yrs Ended 9/30/2016	Risk Adj Excess Return 5 Yrs 9/30/2016
LEGACY FUND						
Net Investment Return	4.21%	10.18%	4.74%	3.49%	3.6%	0.53%
Policy Benchmark Return	3.35%	8.85%	3.92%	2.62%	3.2%	
Excess Return	0.85%	1.34%	0.82%	0.87%	OK	
WSI						
Total Fund Return - Net	2.82%	8.59%	6.15%	7.66%	3.5%	1.04%
Policy Benchmark Return	1.99%	7.08%	4.94%	5.74%	3.1%	
Excess Return	0.83%	1.51%	1.21%	1.92%	OK	
BUDGET STABILIZATION FUND						
Total Fund Return - Net	0.42%	1.97%	1.87%	2.03%	0.7%	0.78%
Policy Benchmark Return	0.01%	1.14%	0.89%	0.69%	0.5%	
Excess Return	0.41%	0.83%	0.98%	1.34%	OK	

Returns and Risk: Every Non-Pension Trust client generated positive “Excess Return” and all but one Non-Pension Trust client generated positive “Risk Adjusted Excess Return” for the 5-years ended Sep. 30, 2016 (if applicable). These returns were achieved while adhering to reasonable risk levels which were consistently 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 – Sep. 30, 2016

	Current FYTD 9/30/2016	1 Yr Ended 9/30/2016	3 Yrs Ended 9/30/2016	5 Yrs Ended 9/30/2016	Risk 5 Yrs Ended 9/30/2016	Risk Adj Excess Return 5 Yrs Ended 9/30/2016
FIRE & TORNADO FUND - \$24 million						
Total Fund Return - Net	3.20%	9.11%	6.03%	8.52%	4.3%	0.50%
Policy Benchmark Return	2.20%	7.44%	4.85%	6.59%	3.6%	
Excess Return	1.00%	1.67%	1.18%	1.94%	OK	
STATE BONDING FUND - \$3.3 million						
Total Fund Return - Net	1.02%	4.32%	3.12%	3.31%	1.8%	0.96%
Policy Benchmark Return	0.30%	2.96%	2.26%	1.74%	1.5%	
Excess Return	0.73%	1.36%	0.87%	1.58%	OK	
INSURANCE REGULATORY TRUST FUND (\$1.1 million)						
Total Fund Return - Net	2.59%	6.83%	4.29%	6.40%	3.6%	0.27%
Policy Benchmark Return	1.87%	5.66%	3.56%	5.15%	3.0%	
Excess Return	0.71%	1.17%	0.73%	1.24%	OK	
PETROLEUM TANK RELEASE COMPENSATION FUND - \$7.1 million						
Total Fund Return - Net	0.94%	3.94%	2.84%	2.97%	1.6%	0.89%
Policy Benchmark Return	0.28%	2.72%	2.06%	1.59%	1.4%	
Excess Return	0.66%	1.22%	0.78%	1.38%	OK	
STATE RISK MANAGEMENT FUND - \$6.5 million						
Total Fund Return - Net	2.74%	9.60%	6.94%	9.07%	4.0%	0.67%
Policy Benchmark Return	1.87%	8.01%	5.68%	6.91%	3.4%	
Excess Return	0.86%	1.60%	1.26%	2.15%	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 Sep. 30, 2016, including Excess Returns of 1.0% or more.

Non-Pension Trust Return & Risk Summary – Sep. 30, 2016

	Current FYTD 9/30/2016	1 Yr Ended 9/30/2016	3 Yrs Ended 9/30/2016	5 Yrs Ended 9/30/2016	Risk 5 Yrs Ended 9/30/2016	Risk Adj Excess Return 5 Yrs Ended 9/30/2016
STATE RISK MANAGEMENT WORKERS COMP FUND - \$5.5 million						
Total Fund Return - Net	3.01%	10.26%	7.40%	9.99%	4.6%	0.73%
Policy Benchmark Return	2.22%	8.85%	6.18%	7.90%	4.0%	
Excess Return	0.78%	1.41%	1.22%	2.09%	OK	
ND ASSOCIATION OF COUNTIES FUND (NDACo) - \$4.0 million						
Total Fund Return - Net	2.98%	8.53%	5.61%	7.74%	3.9%	0.43%
Policy Benchmark Return	1.95%	6.80%	4.44%	5.83%	3.2%	
Excess Return	1.02%	1.74%	1.17%	1.91%	OK	
CITY OF BISMARCK DEFERRED SICK LEAVE ACCOUNT - \$1 million						
Total Fund Return - Net	3.12%	9.19%	6.10%	8.26%	4.1%	0.49%
Policy Benchmark Return	1.98%	7.21%	4.76%	6.08%	3.2%	
Excess Return	1.13%	1.99%	1.34%	2.17%	OK	
FARGODOME PERMANENT FUND - \$39 million						
Total Fund Return - Net	4.23%	10.44%	6.53%	10.10%	5.9%	0.71%
Policy Benchmark Return	3.30%	8.91%	5.40%	8.41%	5.4%	
Excess Return	0.91%	1.52%	1.13%	1.69%	OK	
CULTURAL ENDOWMENT FUND \$382,000						
Total Fund Return - Net	3.96%	11.11%	7.70%	11.63%	6.1%	0.67%
Policy Benchmark Return	3.25%	9.98%	6.65%	9.85%	5.6%	
Excess Return	0.70%	1.13%	1.05%	1.78%	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 June 30, 2016, including Excess Returns of 1% or more.

Non-Pension Trust Return & Risk Summary – Sep. 30, 2016

	Current FYTD 9/30/2016	1 Yr Ended 9/30/2016	3 Yrs Ended 9/30/2016	5 Yrs Ended 9/30/2016	Risk 5 Yrs Ended 9/30/2016	Risk Adj Excess Return 5 Yrs Ended 9/30/2016
BOARD OF MEDICAL EXAMINERS - \$2.2 million						
Total Fund Return - Net	1.83%	5.23%				
Policy Benchmark Return	1.17%	4.00%				
Excess Return	0.65%	1.23%				
PERS RETIREE HEALTH - \$102 million						
Total Fund Return - Net	3.62%	10.55%	6.21%	10.01%	6.6%	-0.74%
Policy Benchmark Return	3.37%	10.08%	6.43%	9.85%	6.0%	
Excess Return	0.25%	0.47%	-0.22%	0.16%	OK	
PERS GROUP INSURANCE - \$38 million						
Total Fund Return - Net	0.06%	1.55%	0.52%	0.41%	0.5%	0.04%
Policy Benchmark Return	0.03%	1.58%	0.55%	0.36%	0.5%	
Excess Return	0.02%	-0.03%	-0.02%	0.05%	OK	
TOBACCO CONTROL AND PREVENTION - \$54 million						
Total Fund Return - Net	0.32%	1.92%				
Policy Benchmark Return	0.34%	2.03%				
Excess Return	-0.02%	-0.11%				

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.

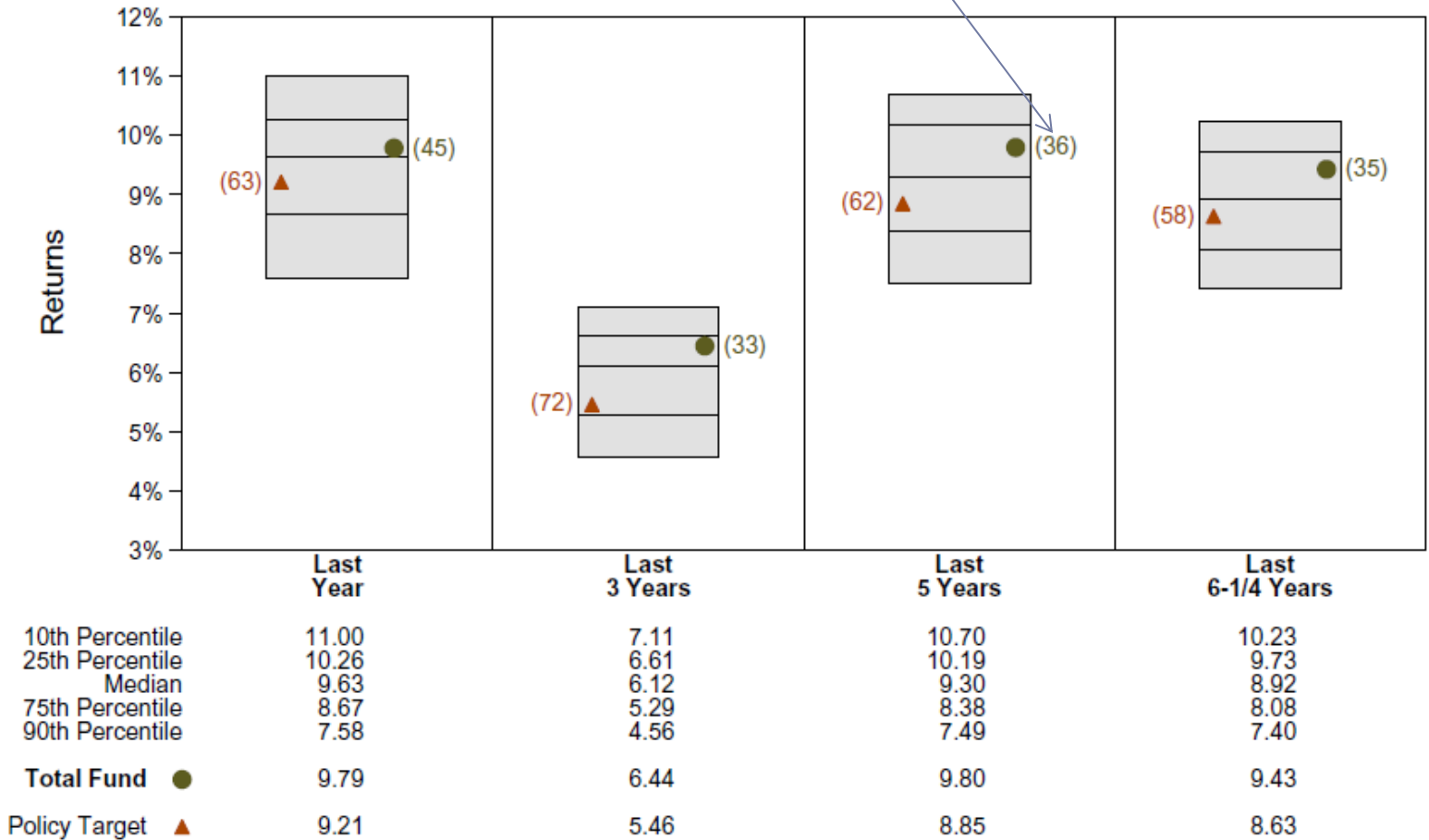
Absolute returns for the **PERS Retiree Health Insurance Credit Fund** have been reasonable the last 5-years (10%) **but disappointing on a risk adjusted basis.(-0.74%)**. We are re-examining SEI's benchmarks and risk and return profile.

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. **First year returns of 1.92% are 0.11% below the Policy Benchmark**, but exceed their actual returns prior to becoming an SIB client (of 0.10% per annum).

PERS “gross” returns were ranked in the 36th percentile for the 5-years ended Sep. 30, 2016, based on Callan’s “Public Fund Sponsor Database”.

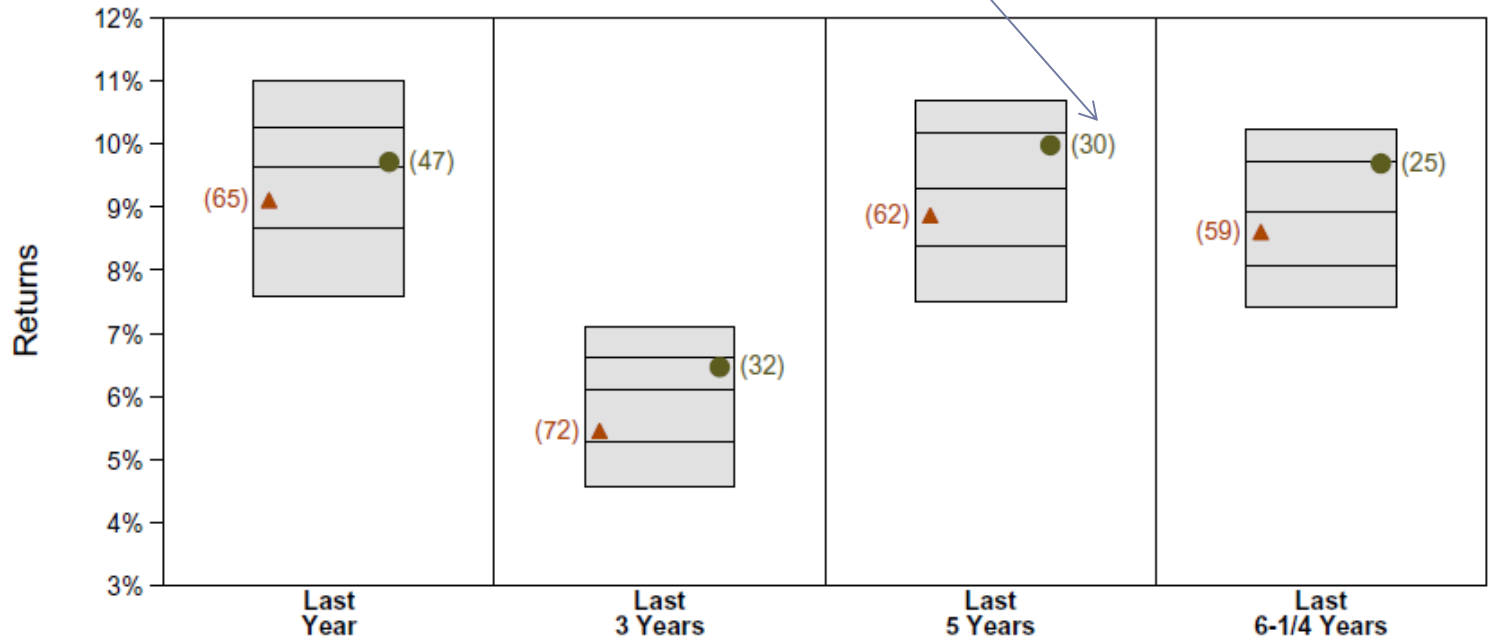
CAI Public Fund Sponsor Database



* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays US HY Corp 2% Cp, 5.0% NDSIB PERS - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI EM and 1.0% 3-month Treasury Bill.

TFFR's "gross" returns were ranked in the 30th percentile for the 5-years ended Sep. 30, 2016, based on Callan's "Public Fund Sponsor Database".

CAI Public Fund Sponsor Database



10th Percentile	11.00	7.11	10.70	10.23
25th Percentile	10.26	6.61	10.19	9.73
Median	9.63	6.12	9.30	8.92
75th Percentile	8.67	5.29	8.38	8.08
90th Percentile	7.58	4.56	7.49	7.40
Total Fund ●	9.72	6.46	9.98	9.69
Policy Target ▲	9.11	5.45	8.87	8.61

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

Investment Work Plan (Informational) – November 10, 2016

Pension Trust:

1. **Conduct annual investment performance and policy statement reviews for all Pension Trust clients;**
2. Implement asset allocation policy changes recently approved by the SIB client boards in a diligent, prudent and timely manner;
3. **Continue to review our overall fixed income allocation including our international debt, unconstrained bond and mortgage backed securities mandates in light of the long-anticipated raising interest rate environment;**
4. Complete board approved equity manager transitions (e.g. U.S. Small Cap, Private and International) while considering the merits of reverse inquiries relating to non-strategic, private strategies and implementing board approved litigation monitoring policies; and
5. Implement de-risking strategies as approved by the SIB and SIB client boards (e.g. Job Service).

Legacy and Insurance Trusts:

1. **Conduct annual investment performance & policy statement reviews (WSI, Legacy & Budget Stabilization are scheduled);**
2. **Assist the SIB and Legacy and Budget Stabilization Advisory Board prepare for potential liquidity needs within the Budget Stabilization Fund while continuing a review of our fixed income strategies in light of the long-anticipated raising interest rate environment; and**
3. Complete board approved equity manager transitions while considering the merits of reverse inquiries relating to non-strategic, private strategies and implementing SIB approved litigation monitoring policy.

Strategic Investment Plan:

1. **Remain steadfast in our commitment to continuing education (e.g. investment conferences and capital market updates) while raising awareness of other governance models (e.g. governance retreat in July of 2016);**
2. **Enhance transparency and understanding of our core goals and beliefs by easing public website access while promoting the benefits of active management (\$220 million for the 5-years ended June 30, 2016);**
3. **Heighten employee engagement by promoting an open and collaborative work environment while improving compensation levels particularly for RIO team members with more than 15-to-25 years of service;**
4. **Strengthen professional relationships with existing SIB clients, local organizations and legislative leaders;**
5. **Enhance risk management by using proven institutional grade risk management tools (i.e. a robust risk management framework provides a foundation to understand downside risks and the ability to withstand market corrections); and**
6. **Expand the efficient use of technology within RIO to enhance overall effectiveness while becoming fully staffed within our IT team.**

INFORMATIONAL

TO: State Investment Board

FROM: Chairman Wrigley

DATE: November 17, 2016

SUBJECT: SIB Update

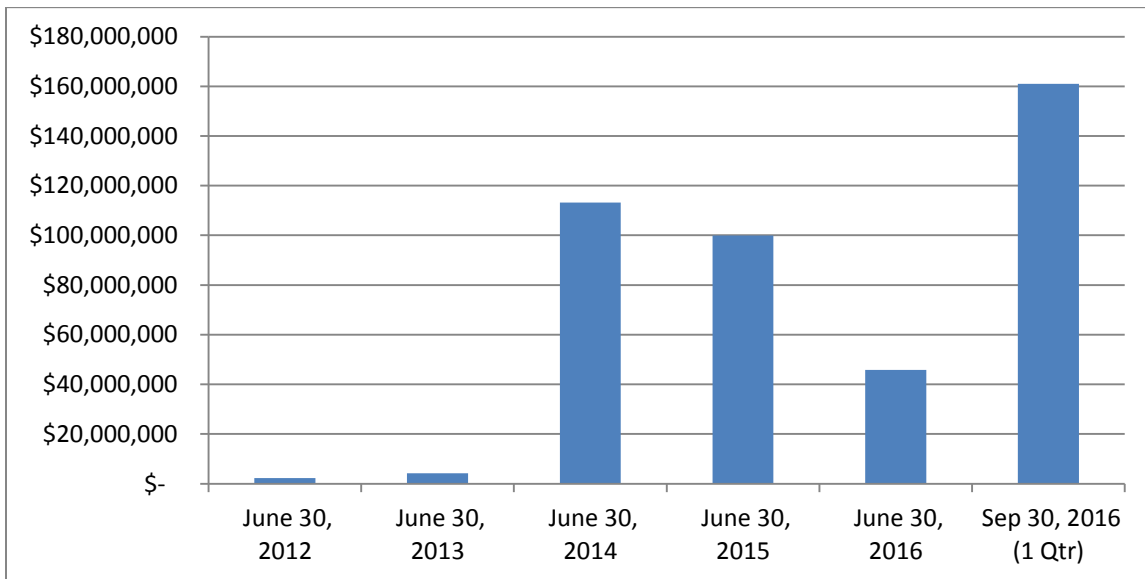
The following memo was created to highlight the key investment results of the SIB's three largest clients including the Legacy Fund, PERS and TFFR.

Legacy Fund Earnings Top 10%

Strong performance in equities (up 13%), bonds (up 8%) and real assets (up 7%) drove the Legacy Funds Net Investment Return to approximate 10.2% for the 1-year ended 9/30/2016 surpassing its Investment Policy Benchmark (of 8.8%).

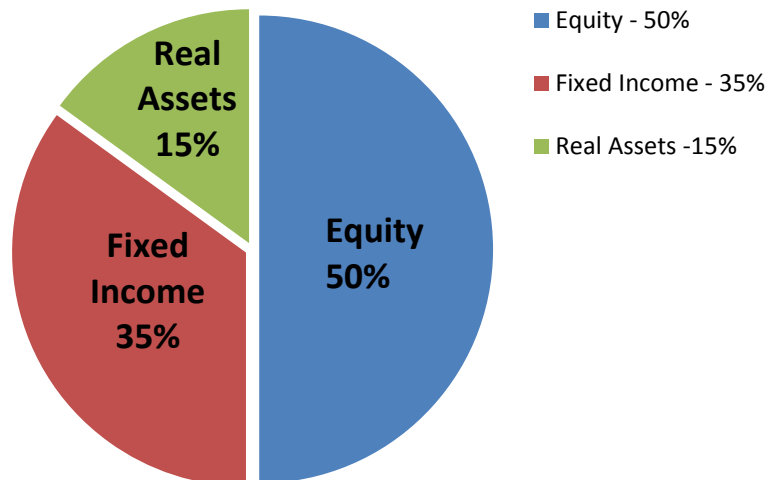
LEGACY FUND	1 Yr Ended 9/30/2016	3 Yrs Ended 9/30/2016	5 Yrs Ended 9/30/2016
Net Investment Return	10.2%	4.7%	3.5%
Investment Policy Benchmark	8.8%	3.9%	2.6%
Excess Return	1.3%	0.8%	0.9%

Since inception, the Legacy Fund generated \$426 million of income with a Net Investment Return of 3.5% per annum noting the fund was largely invested in fixed income prior to mid-2014. Net income by fiscal year is shown in the chart below. For the 1 quarter ended Sep. 30, 2016, net investment income was \$160 million (based on preliminary valuations which are unaudited).



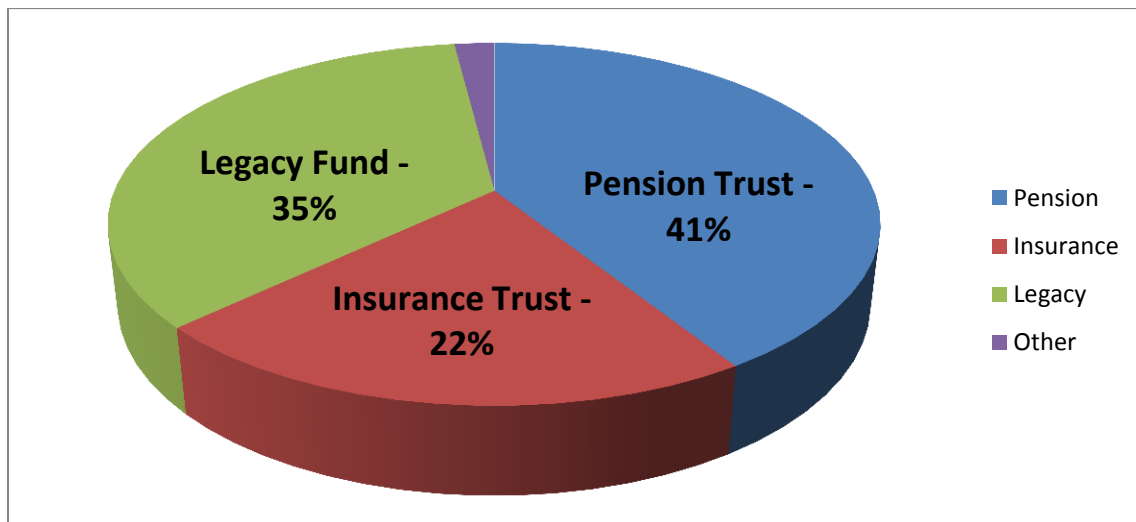
Legacy Fund Asset Allocation:

The current asset allocation is 50% Equity, 35% Fixed Income and 15% Real Assets as approved by the State Investment Board and Legacy Fund Advisory Board. Asset allocation is the primary driver of investment results and used to determine the Investment Policy Benchmark.



SIB Client Assets Double in 5-Years and Exceed \$11.7 billion at 9/30/16

<u>Fund Name</u>	<u>Market Values as of 9/30/16</u>
Pension Trust Fund	
Teachers' Fund for Retirement (TFFR)	2,144,533,865
Public Employees Retirement System (PERS)	2,548,430,036
City of Bismarck Employees Pension	85,179,534
City of Bismarck Police Pension	35,180,238
City of Grand Forks Employees Pension	58,778,547
Park District of the City of Grand Forks Pension	5,834,315
Subtotal Pension Trust Fund	4,877,936,536
Insurance Trust Fund	
Workforce Safety & Insurance (WSI)	1,860,023,835
State Fire and Tornado Fund	24,853,937
State Bonding Fund	3,329,117
Petroleum Tank Release Compensation Fund	7,214,431
Insurance Regulatory Trust Fund	1,232,868
State Risk Management Fund	6,208,850
State Risk Management Workers Comp Fund	5,680,663
Cultural Endowment Fund	398,147
Budget Stabilization Fund	578,309,532
ND Association of Counties (NDACo) Fund	4,167,501
Bismarck Deferred Sick Leave Account	661,908
City of Fargo FargoDome Permanent Fund	35,386,219
State Board of Medicine Fund	2,248,565
PERS Group Insurance Account	37,239,691
Subtotal Insurance Trust Fund	2,566,955,263
Legacy Fund	4,070,189,950
Job Service of North Dakota Pension	96,325,192
Tobacco Control and Prevention Fund	52,785,217
PERS Retiree Health Insurance Credit Fund	105,505,466
Total Assets Under SIB Management	\$ 11,769,697,624



PERS and TFFR Earnings Top 9%

Net Investment Returns for the Public Employees Retirement System (PERS) and Teachers' Fund for Retirement (TFFR) exceed 9.4% for the 1-year ended 9/30/2016. Strong performance in equities (up 11%), bonds (up 8%) and real assets (up 7%) were the primary drivers. **PERS and TFFR Net Investment Returns for the 5-year ended 9/30/16/2016 also exceeded 9.4% and surpassed their respective Policy Benchmark Returns.**

	<u>1 Yr Ended</u> <u>9/30/2016</u>	<u>3 Yrs Ended</u> <u>9/30/2016</u>	<u>5 Yrs Ended</u> <u>9/30/2016</u>
PERS			
Net Investment Return	9.49%	6.12%	9.46%
Policy Benchmark Return	9.21%	5.46%	8.85%
Excess Return	0.28%	0.66%	0.60%
TFFR			
Net Investment Return	9.43%	6.14%	9.64%
Policy Benchmark Return	9.11%	5.45%	8.87%
Excess Return	0.32%	0.68%	0.77%

Excess Return – Active management enhanced returns by 0.60% for PERS and 0.77% for TFFR (per annum) over the last 5-years. Successful active management occurs when our investment firms generate returns which exceed passive benchmarks such as the S&P 500.

SIB Client Returns Exceed Performance Benchmarks over the last 5-years

The SIB has been successful in using active management to increase investment income by **\$220 million over the last 5-years** (after deducting investment fees). In order to determine if clients are receiving investment returns consistent with their written policies and market conditions, the SIB reviews each client's actual and expected performance each quarter. An outside consultant also conducts a quarterly performance review to provide further assurance that reported results are being achieved while adhering to approved risk levels and actual asset allocation levels are consistent with stated targets. After conducting the above procedures, the Retirement and Investment Office notes that every client generated actual investment returns which exceeded their respective performance benchmarks for the 5-years ended September 30, 2016. It is important to note these above benchmark results were achieved while adhering to client approved risk levels.

Legacy Fund Growth Enhances Fee Savings Initiatives by \$20 million/year

The growth of the Legacy Fund had played an important role in improving SIB's ability to reduce investment fees. During the last three years, management fees have declined from 0.65% to less than 0.45% of assets. **Based on \$10 billion of assets, this translates into \$20 million of annual fee savings (e.g. \$10 billion x 0.20% = \$20 million/year).**



November 2016

**North Dakota
State Investment Board**

Performance Evaluation
as of September 30, 2016

Paul Erlendson
Senior Vice President

Alex Browning
Vice President

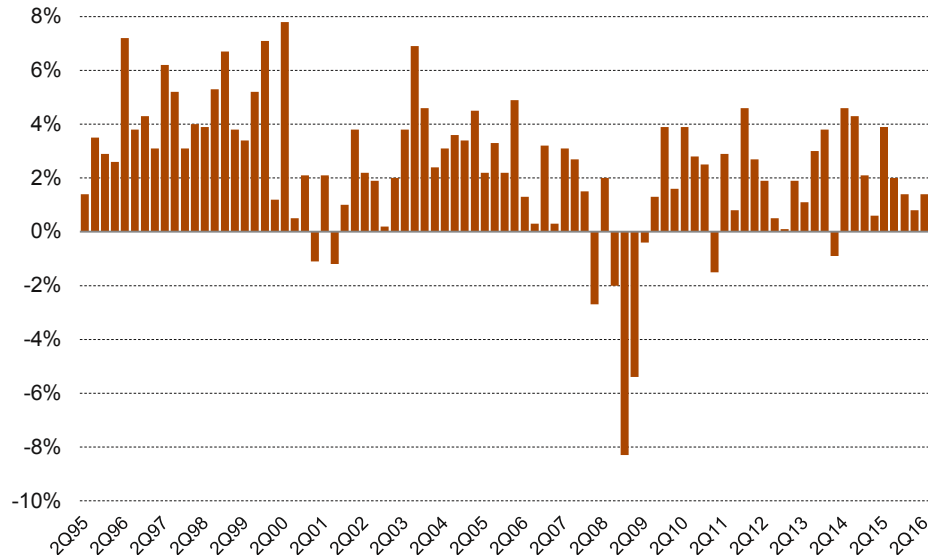
Agenda

- Review economic and market environment for periods ended September 30, 2016
- Pension Trust Quarterly Review
 - Results and Observations
- Insurance Trust Quarterly Review
 - Results and Observations

U.S. Economy

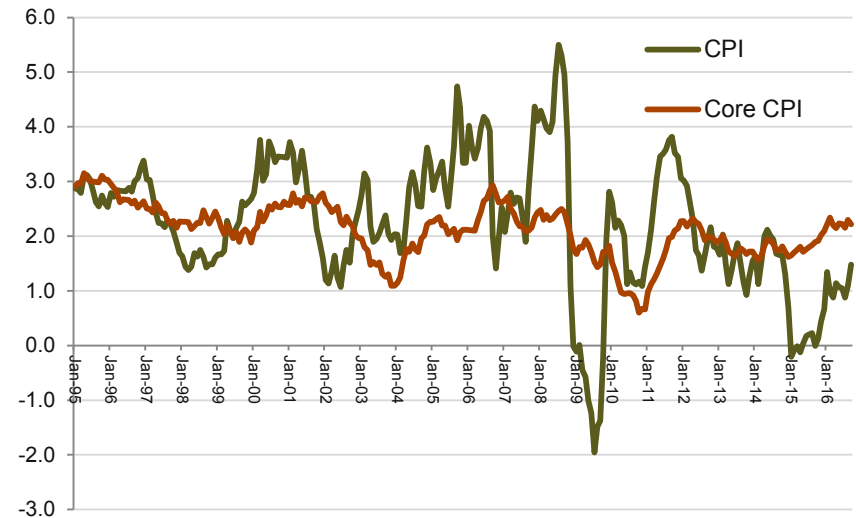
Periods Ending September 30, 2016

Quarterly Real GDP Growth (20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year (%)

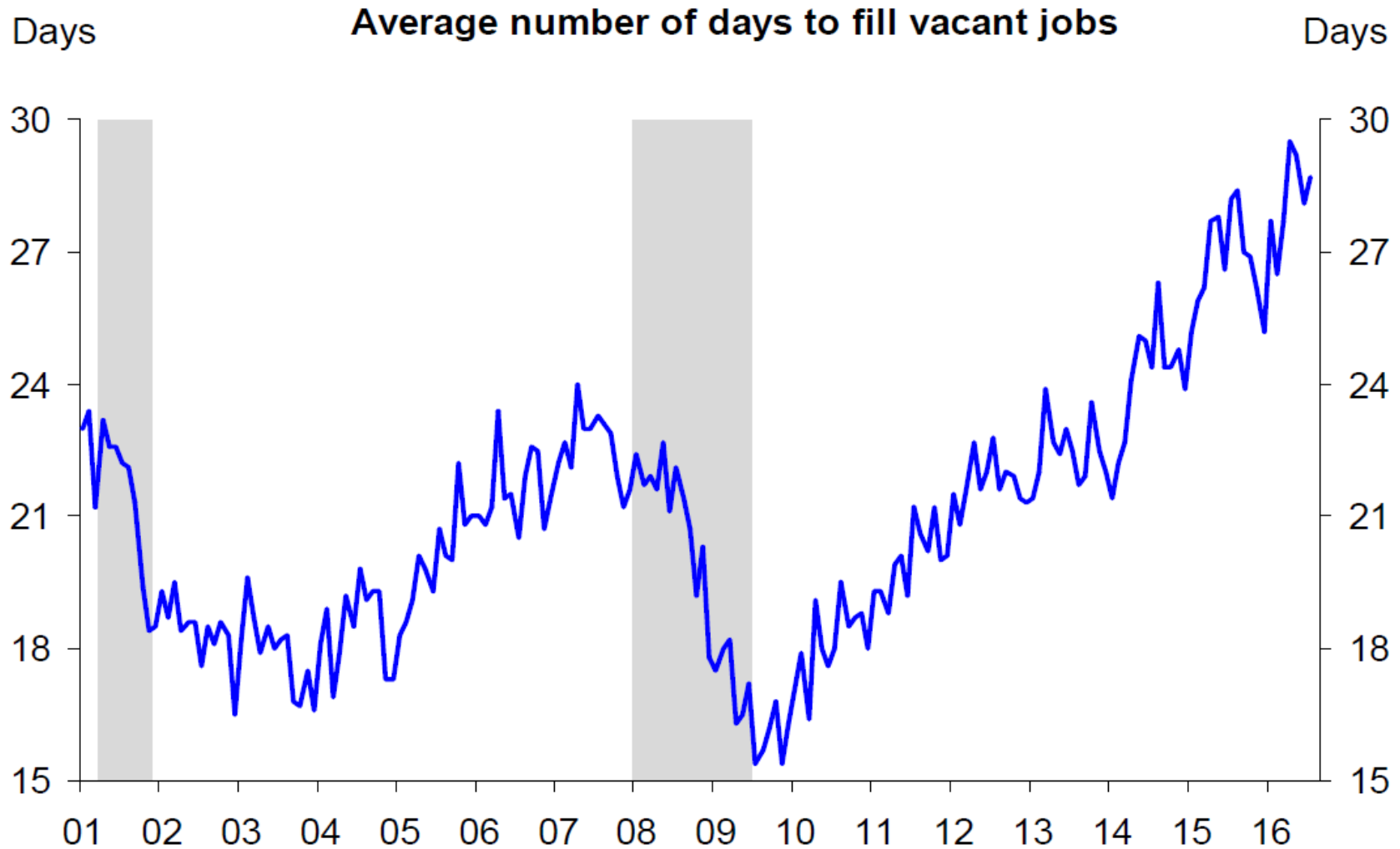


Source: Bureau of Labor Statistics

- The first estimate of third quarter GDP came out up 2.9%, an increase from a second quarter reading of 1.4%.
- September headline inflation rose 1.5% over the trailing twelve months. Core CPI increased 2.2%.
- September unemployment was 5.0% (up 0.1% from June) and the labor force participation rate increased to 62.9% (up 0.2%).
- The Fed maintained a target rate of 0.25% - 0.50%.

Days to Fill Vacant Jobs

It currently takes 29 days to fill a vacant job, up from 23 days in 2006



Available Labor per Job Opening

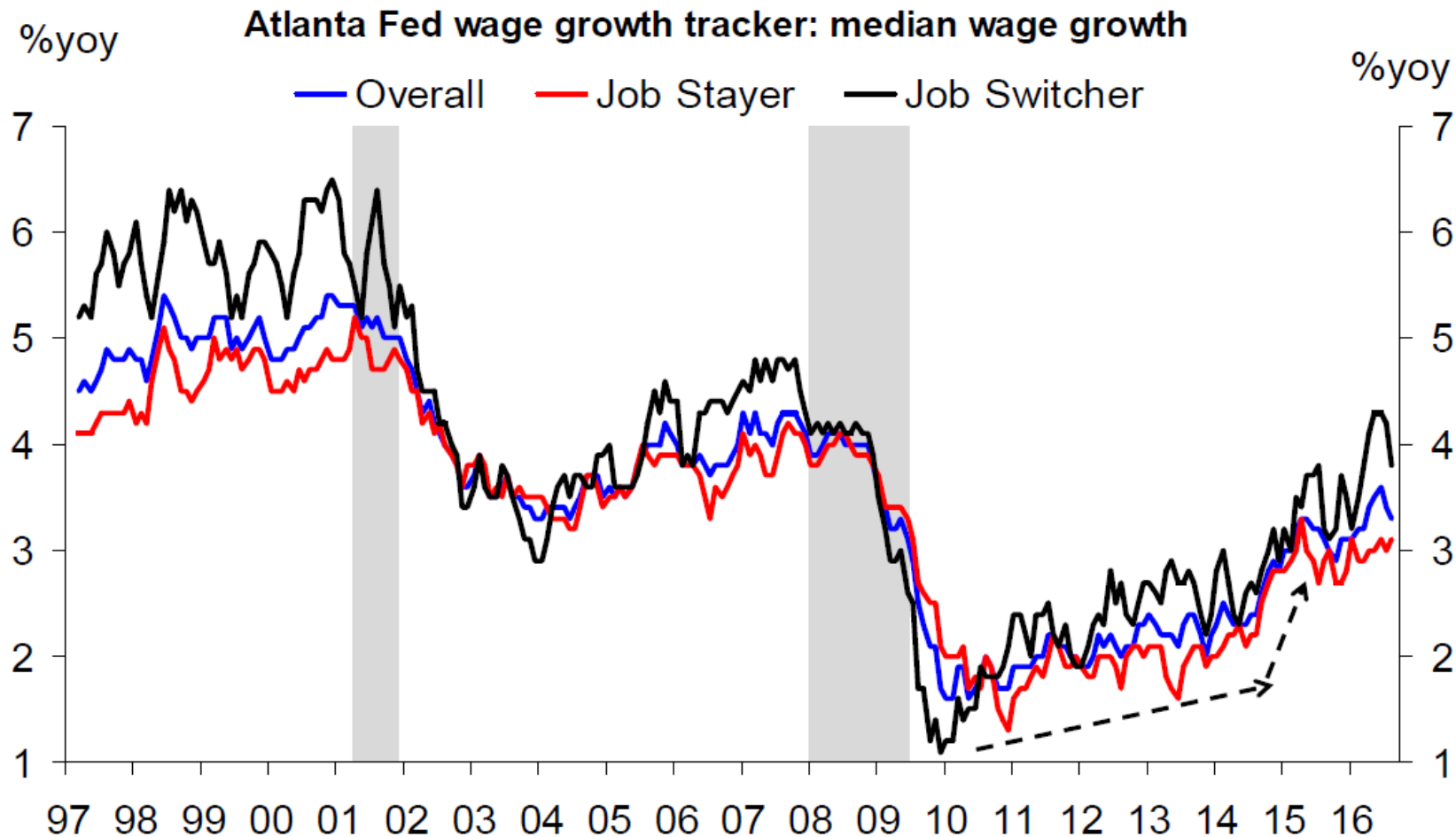
Waiting for the economy to run hot?

Number of available people per job opening below 2007 levels



Employment Market Dynamics Leading to Wage Growth

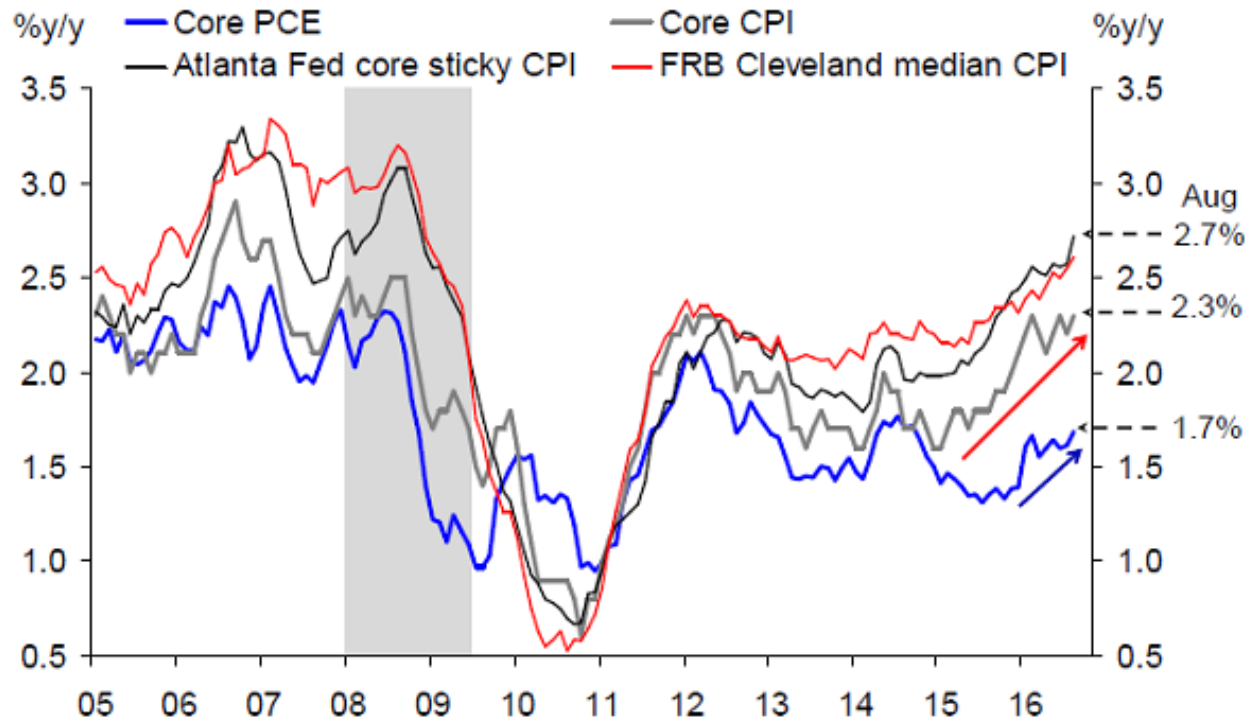
Waiting for the economy to run hot?
Wages accelerating, including for job switchers



"Job stayers" are defined as people who are in the same occupation and industry as one year ago and who have had the same employer for the past three months. "Job switchers" are everyone else.

Inflation

Is this the white of the eyes of inflation?



Source: BEA, BLS, FRBCLE, FRBATL, Haver Analytics, DB Global Markets Research

Deutsche Bank Research

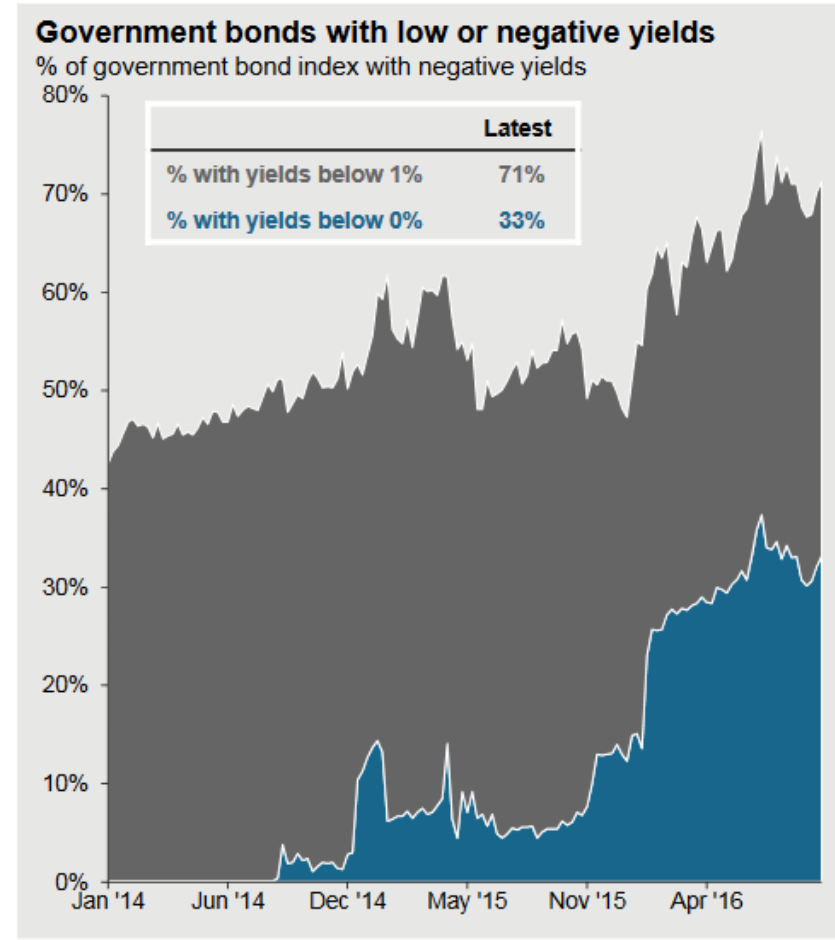
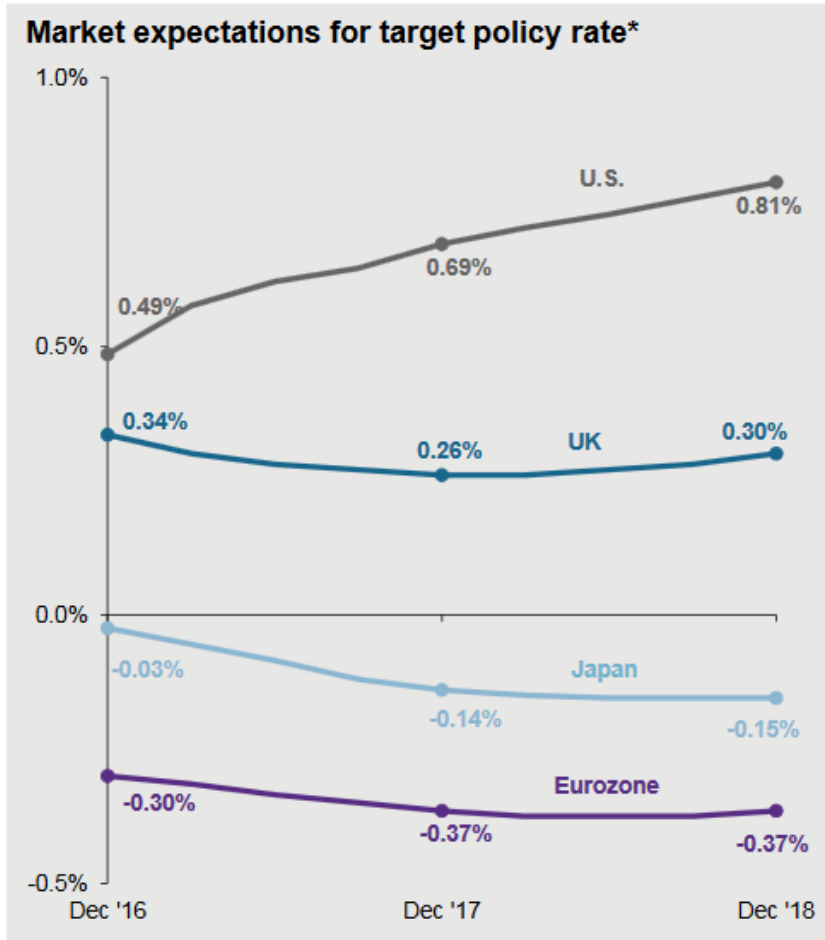
Torsten Slok, torsten.slok@db.com +1 212 250-2155

October 2016

14

- While headline inflation has been benign as a result of a strong dollar and falling oil prices – recent data shows an acceleration.
- Wage growth is hitting new highs and unemployment is very low.

Global Rate Expectations and Current Environment




* Target policy rates for Japan are estimated using EuroYen 3-month futures contracts less a 6 bps risk premium.

Sources: JP Morgan, Guide to the Markets, September 30, 2016. Bank of America / Merrill Lynch Global Government Bond Index

Asset Class Performance

Periodic Table of Investment Returns
for Periods Ended September 30, 2016



	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
MSCI:EM Gross	9.2%	17.2%	S&P:500 11.2%	S&P:500 16.4%	S&P:500 7.2%
Russell:2000 Index	9.0%	15.5%	Russell:2000 Index 6.7%	Russell:2000 Index 15.8%	Russell:2000 Index 7.1%
MSCI:EAFE	6.4%	S&P:500 15.4%	BB Barclays:Aggregate Idx 4.0%	MSCI:EAFE 7.4%	BB Barclays:Aggregate Idx 4.8%
S&P:500	3.9%	MSCI:EAFE 6.5%	MSCI:EAFE 0.5%	MSCI:EM Gross 3.4%	MSCI:EM Gross 4.3%
BB Barclays:Aggregate Idx 0.5%	BB Barclays:Aggregate Idx 5.2%	3 Month T-Bill 0.1%	BB Barclays:Aggregate Idx 3.1%	MSCI:EAFE 1.8%	
3 Month T-Bill 0.1%	3 Month T-Bill 0.3%	MSCI:EM Gross (0.2%)	3 Month T-Bill 0.1%	3 Month T-Bill 0.9%	
BLMBRG:Commdty Idx (3.9%)	BLMBRG:Commdty Idx (2.8%)	BLMBRG:Commdty Idx (12.4%)	BLMBRG:Commdty Idx (9.5%)	BLMBRG:Commdty Idx (6.1%)	

Recent U.S. Equity Performance



Source: JPM Guide to the Markets, September 30, 2016

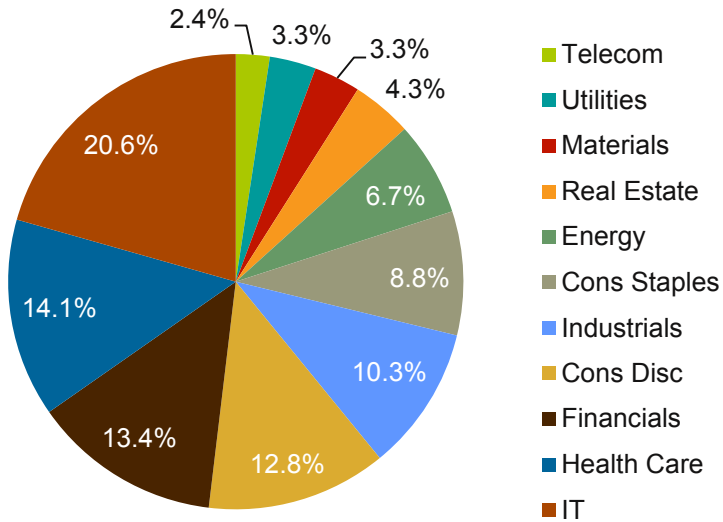
Note: Cyclicals include Consumer Discretionary, IT, Industrials, Financials and Materials

- Defensive sectors with high dividend yields (Consumer Staples, Utilities, Telecoms) outperformed until the end of June then retraced as Treasuries rose and investors became more confident that the Fed would increase rates in December.

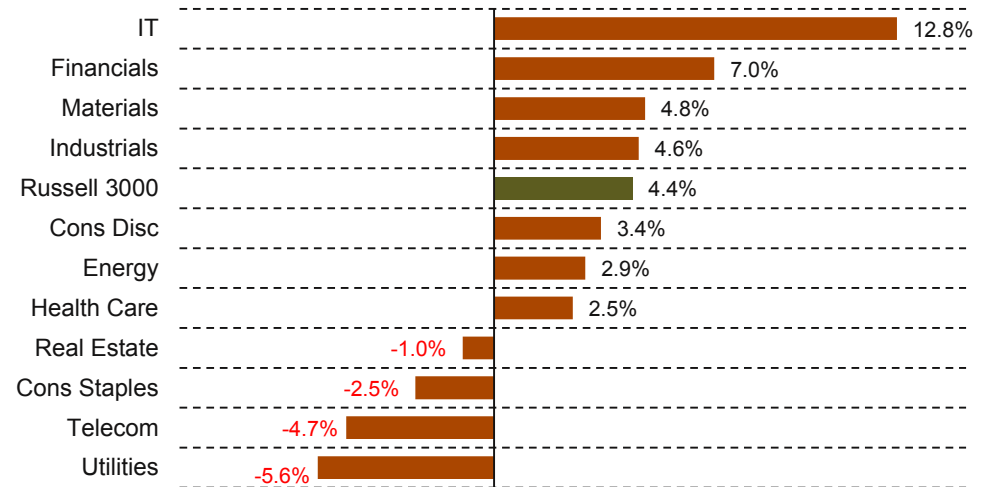
U.S. Equity Returns

Periods Ending September 30, 2016

Economic Sector Exposure (Russell 3000)



Russell 3000 Sector Returns

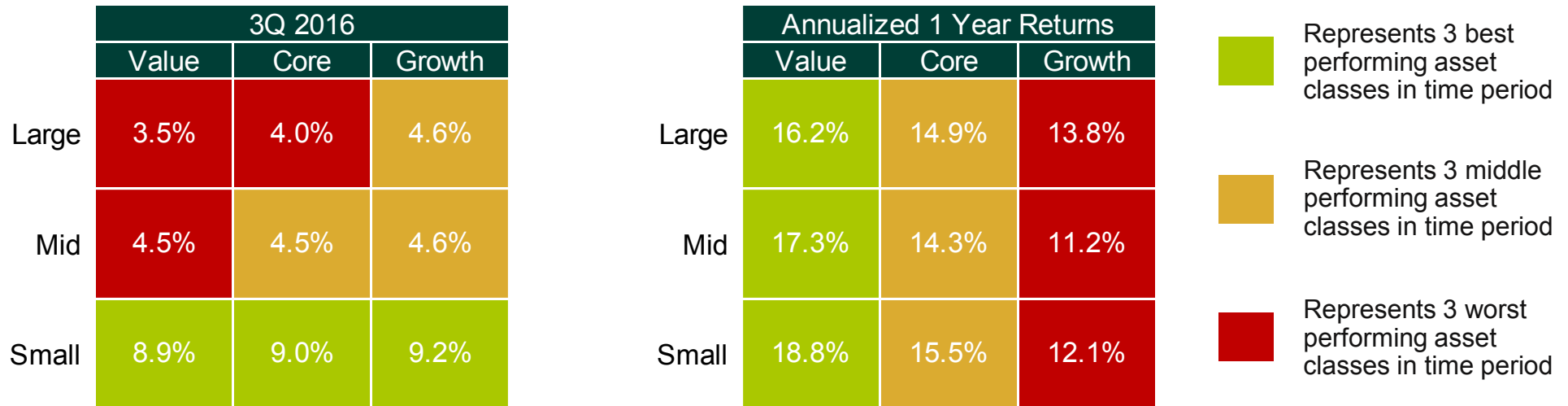


Source: Barrow Hanley Quarterly Benchmark Review

- The RU 1000 was up 4.0% - Information Technology (+12.6%) and Financials (+6.7%) were the best performing sectors.
- The RU 2000 was up 9.0% - Information Technology (+16.2%) and Health Care (+13.5%) were the best performing sectors.
- Best performing sectors through June underperformed in third quarter - Utilities (-5.6%); Telecom (-4.7%) Consumer Staples (-2.5%).

U.S. Equity Style Returns

Periods Ending September 30, 2016



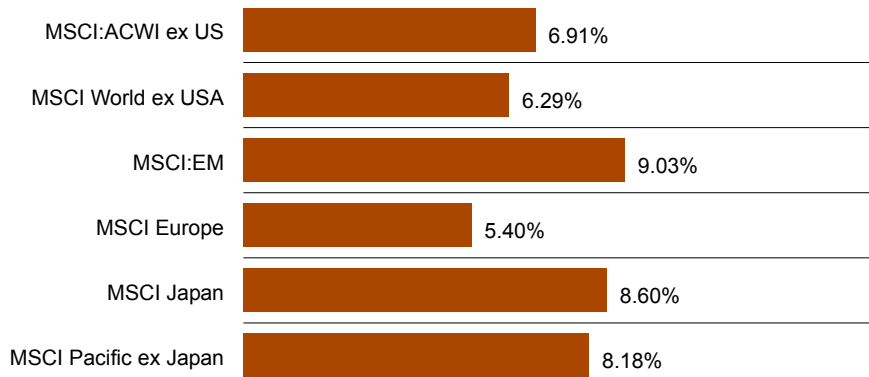
- Last Quarter: Small cap and growth outperformed
- Last Year: Size mixed; value outperformed

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

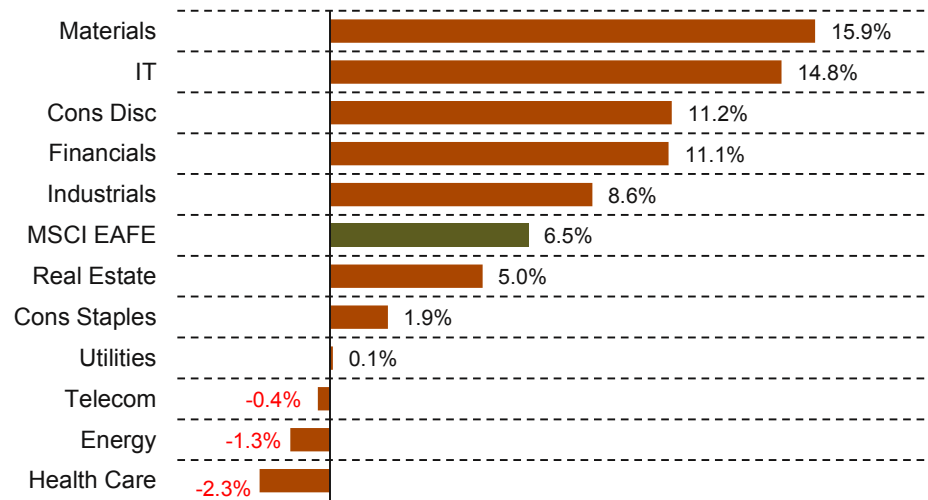
Periods Ending September 30, 2016

Regional Quarterly Performance (U.S. Dollar)



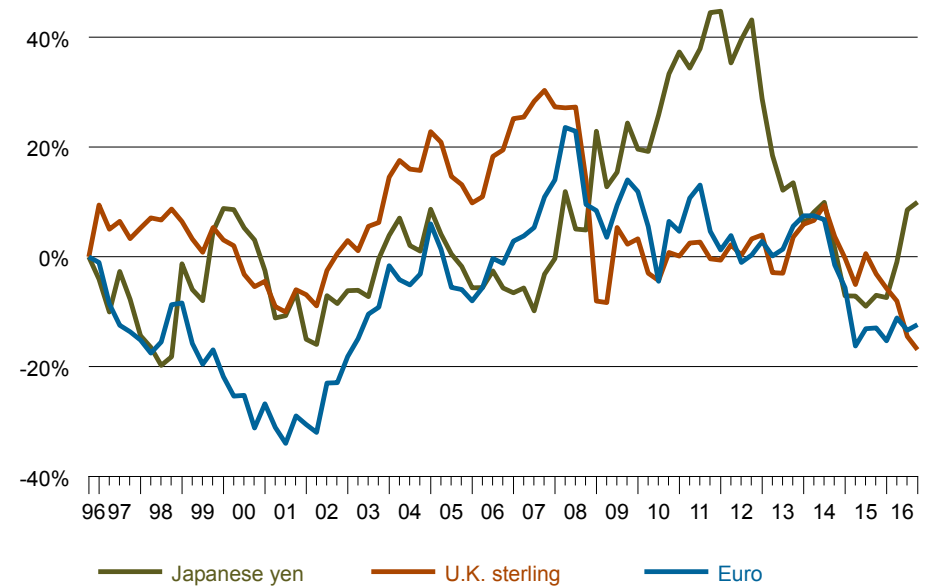
Source: MSCI

MSCI EAFE Sector Returns



Source: Barrow Hanley Quarterly Benchmark Review

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



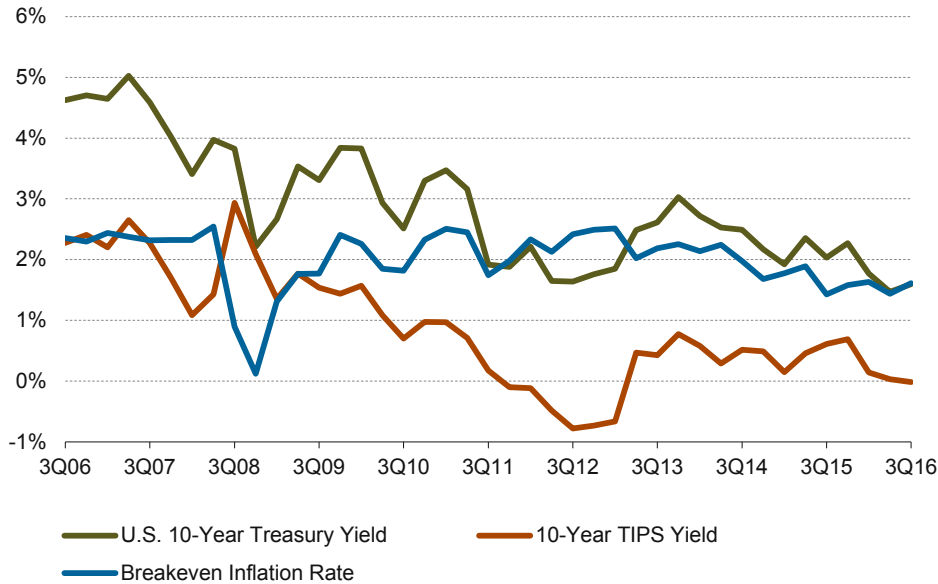
*Euro returns from 1Q99. German mark prior to 1Q99.
Source: MSCI

- Best performing region was emerging markets (+9.0%).
- The yen (+1.3%) and the euro (+1.2%) strengthened and the pound weakened (-2.8%) vs the dollar. The yen has risen almost 20% year to date.
- Materials was the top performing and Health Care the worst performing sector.

Yield Curve Changes

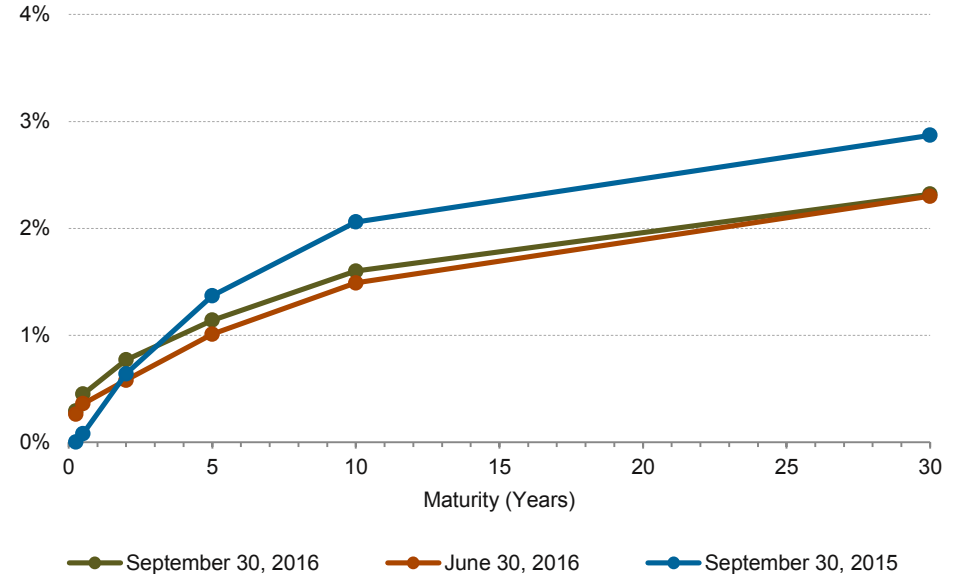
Periods Ending September 30, 2016

Historical 10-Year Yields



Source: Bloomberg

U.S. Treasury Yield Curves



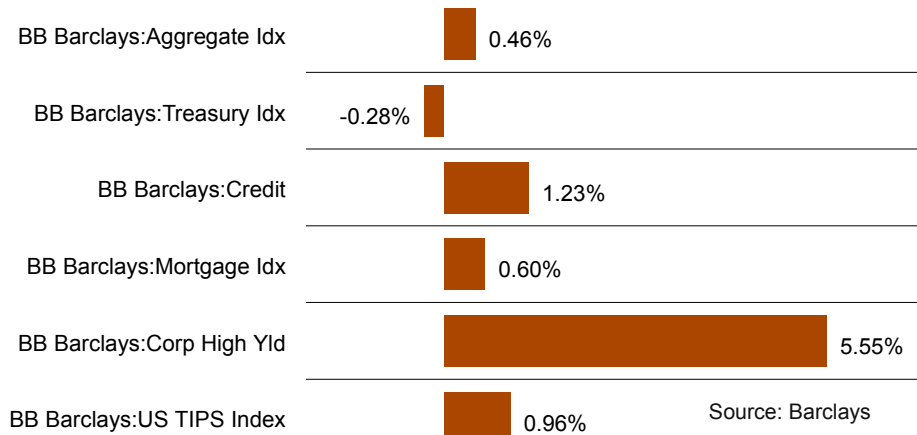
Source: U.S. Department of the Treasury

- Treasury yields rose across all segments of the curve, most notably at the short end where increases were greatest. The yield on the 2-year increased 19 bps and the 5-year increased 13 bps.
- Breakeven inflation edged higher on healthy core inflation figures and stable oil prices.
- Worldwide, rates remain low as Japan and the ECB contemplate additional stimulus measures.

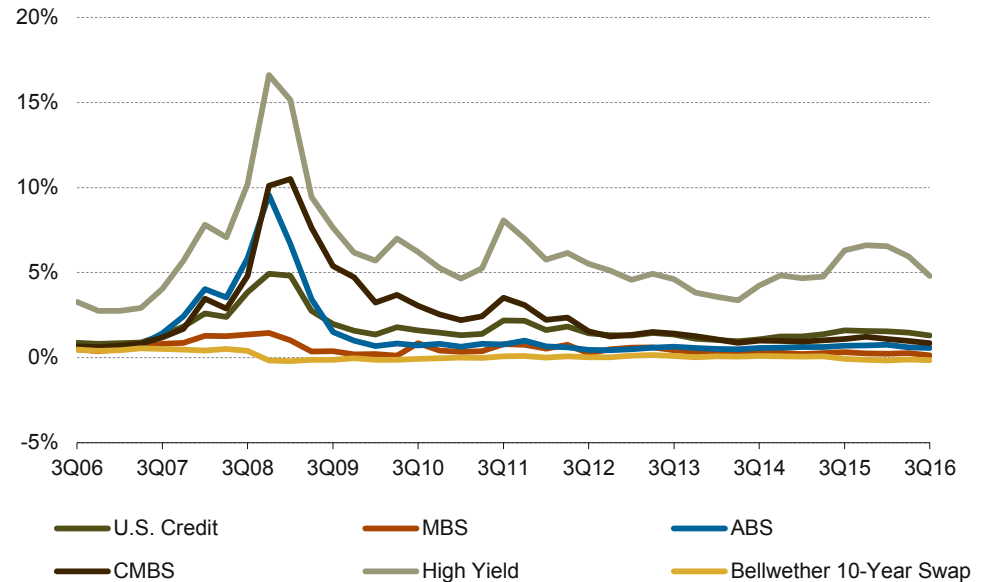
Total Rates of Return by Bond Sector

Periods Ending September 30, 2016

Absolute Returns for Quarter ended September 30, 2016



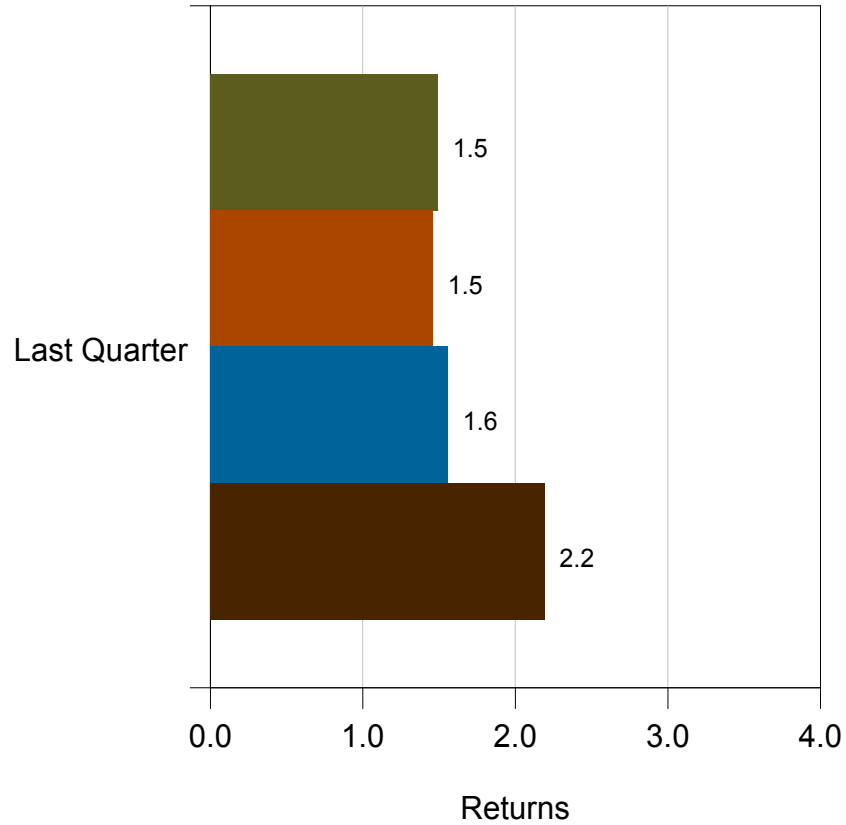
Effective Yield Over Treasuries



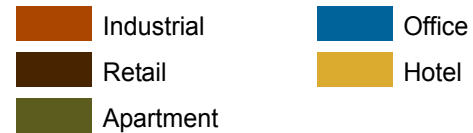
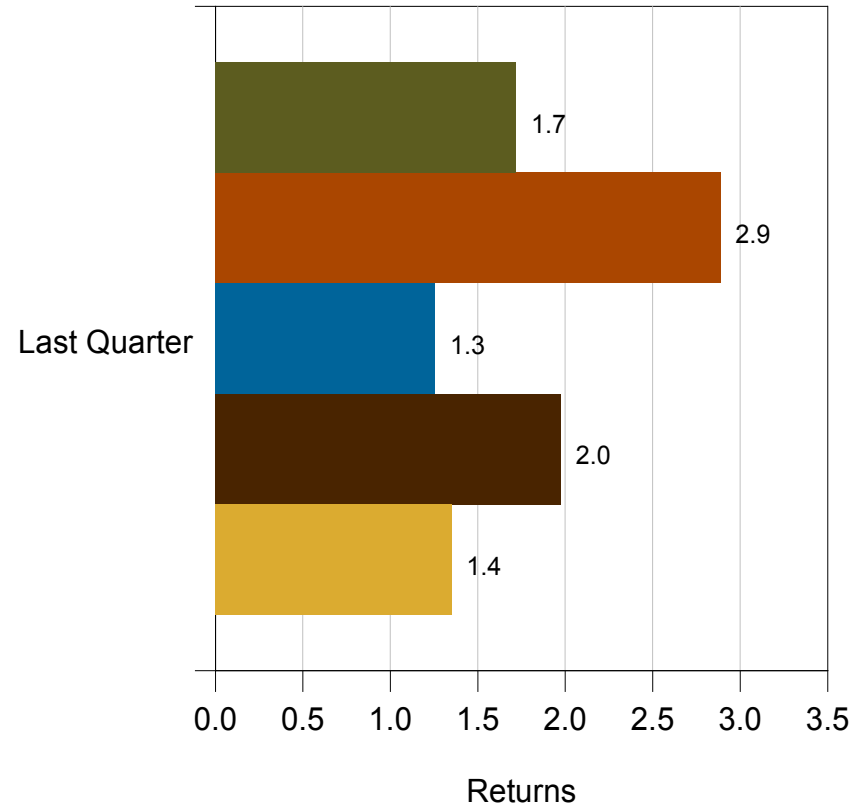
- Rising rates coupled with tightening spreads led the Aggregate to a muted return (+0.5%).
- Best performing sector of the Aggregate was investment grade credit (+1.2%).
- High yield gained 5.6% on spread narrowing of 114 bps.
- Treasury Inflation Protected Securities (TIPS) outperformed Treasuries on rising inflation expectations producing the highest excess return vs like-duration Treasuries (+5.8%).

Real Estate

**NCREIF Regional Returns
for Quarter Ending September 30, 2016**



**NCREIF Property Type Returns
for Quarter Ending September 30, 2016**





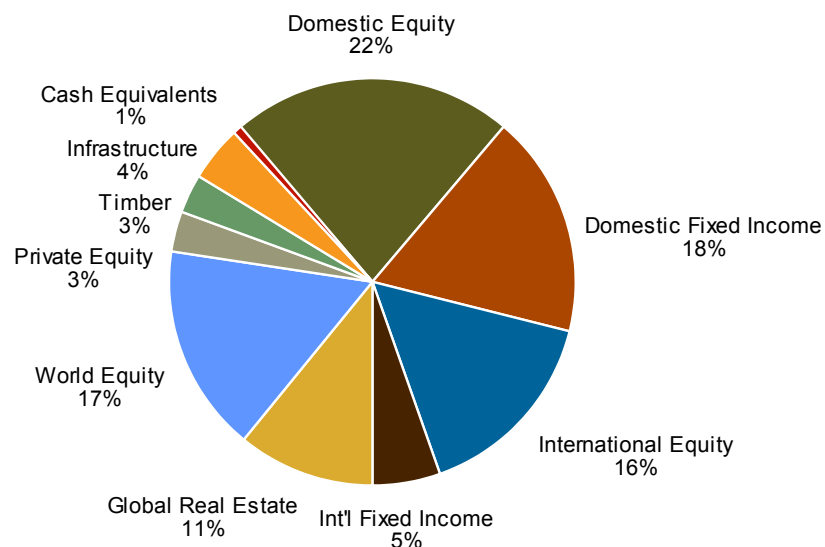
Consolidated Pension Trusts Quarterly Review

- Public Employees Retirement System
- Teachers' Fund for Retirement

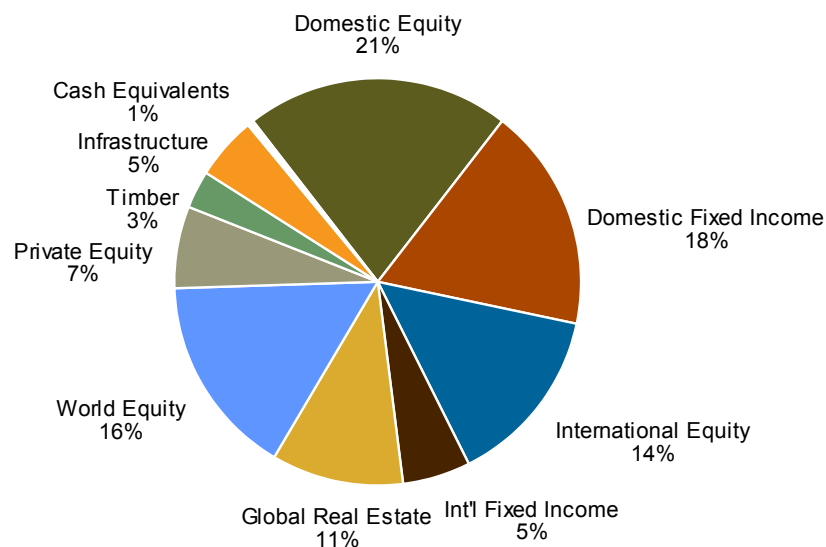
Consolidated Pension Trust Allocation

As of September 30, 2016

Actual Asset Allocation



Target Asset Allocation

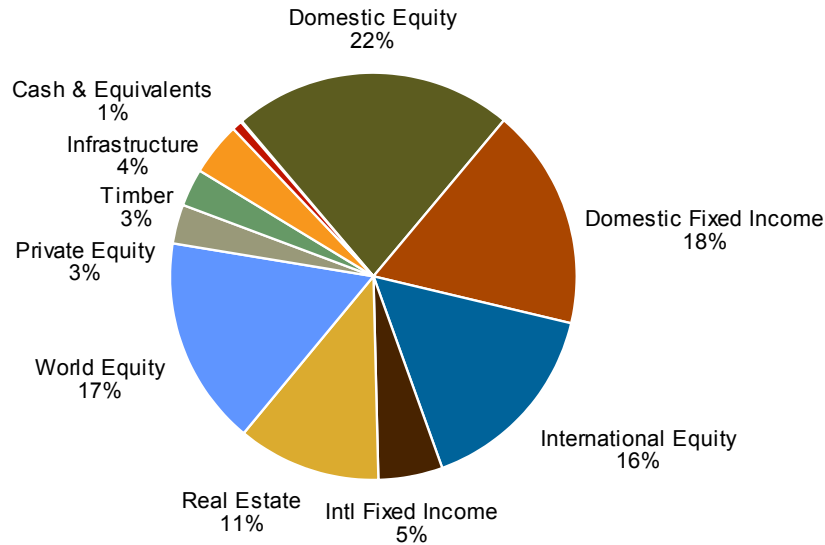


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	1,095,505	22.5%	21.0%	1.5%	71,144
Domestic Fixed Income	864,656	17.7%	17.8%	(0.1%)	(3,612)
International Equity	766,044	15.7%	14.3%	1.4%	68,503
Int'l Fixed Income	261,268	5.4%	5.4%	0.0%	(2,139)
Global Real Estate	529,785	10.9%	10.5%	0.4%	17,604
World Equity	806,126	16.5%	16.0%	0.5%	25,660
Private Equity	156,021	3.2%	6.5%	(3.3%)	(161,043)
Timber	152,589	3.1%	3.0%	0.1%	6,252
Infrastructure	213,935	4.4%	5.0%	(0.6%)	(29,960)
Cash Equivalents	31,982	0.7%	0.5%	0.2%	7,593
Total	4,877,911	100.0%	100.0%		

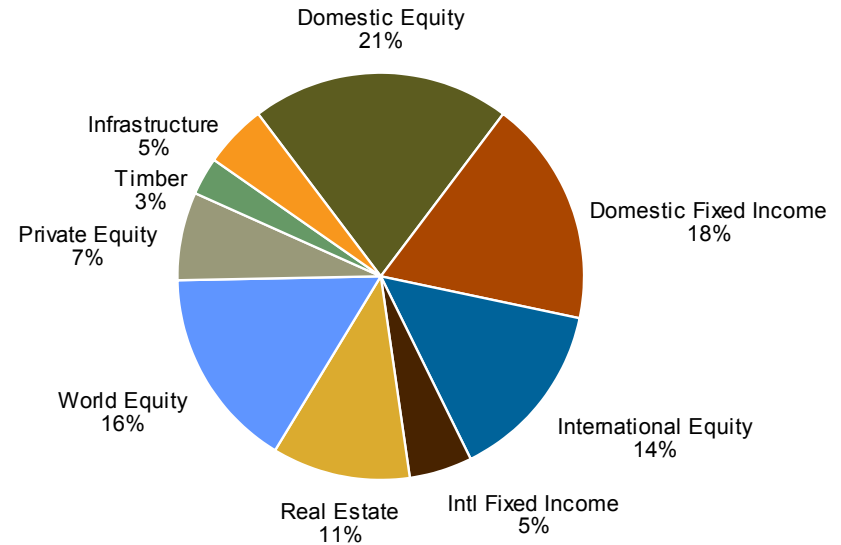
PERS Allocation

As of September 30, 2016

Actual Asset Allocation



Target Asset Allocation

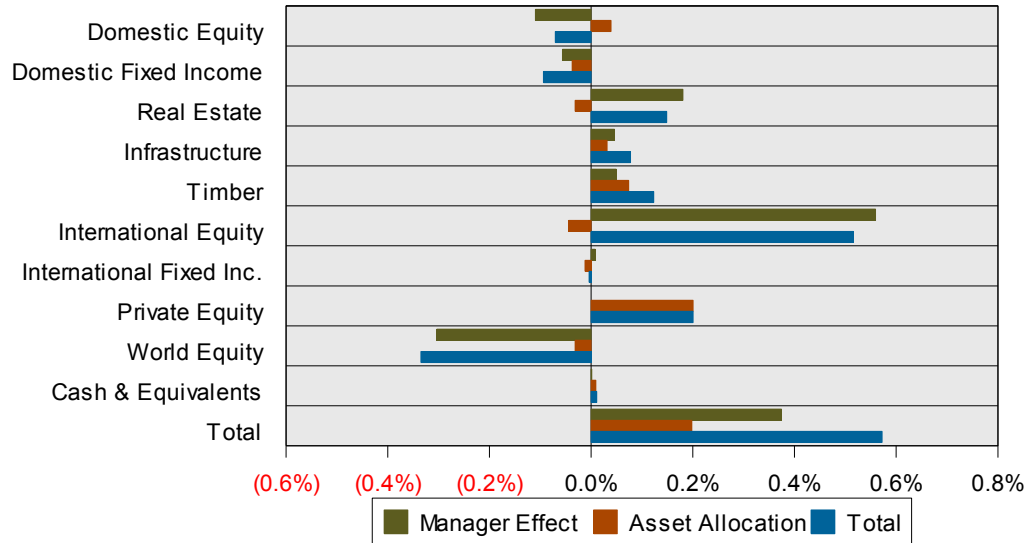


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	568,370	22.3%	20.6%	1.7%	43,396
Domestic Fixed Income	448,419	17.6%	18.0%	(0.4%)	(10,296)
International Equity	403,486	15.8%	14.4%	1.4%	36,515
Intl Fixed Income	130,467	5.1%	5.0%	0.1%	3,046
Real Estate	289,571	11.4%	11.0%	0.4%	9,245
World Equity	423,239	16.6%	16.0%	0.6%	15,492
Private Equity	78,273	3.1%	7.0%	(3.9%)	(100,116)
Timber	77,076	3.0%	3.0%	0.0%	623
Infrastructure	108,228	4.2%	5.0%	(0.8%)	(19,193)
Cash & Equivalents	21,287	0.8%	0.0%	0.8%	21,287
Total	2,548,416	100.0%	100.0%		

PERS Performance and Attribution

As of September 30, 2016

One Year Relative Attribution Effects



1 Year Ended 9/30/16

Gross: 9.79%
 Net of fees: 9.49%
 Target: 9.21%
 Net Added: 0.28%

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%	14.65%	15.11%	(0.11%)	0.04%	(0.07%)
Domestic Fixed Income	18%	17%	7.17%	7.41%	(0.06%)	(0.04%)	(0.09%)
Real Estate	11%	10%	10.81%	9.22%	0.18%	(0.03%)	0.15%
Infrastructure	5%	5%	2.14%	1.22%	0.05%	0.03%	0.08%
Timber	3%	5%	4.32%	3.28%	0.05%	0.07%	0.12%
International Equity	15%	15%	12.60%	8.90%	0.56%	(0.04%)	0.52%
International Fixed Inc.	5%	5%	11.91%	11.67%	0.01%	(0.01%)	(0.00%)
Private Equity	3%	5%	(5.77%)	(5.77%)	0.00%	0.20%	0.20%
World Equity	16%	16%	9.45%	11.36%	(0.30%)	(0.03%)	(0.33%)
Cash & Equivalents	1%	1%	0.39%	0.27%	0.00%	0.01%	0.01%

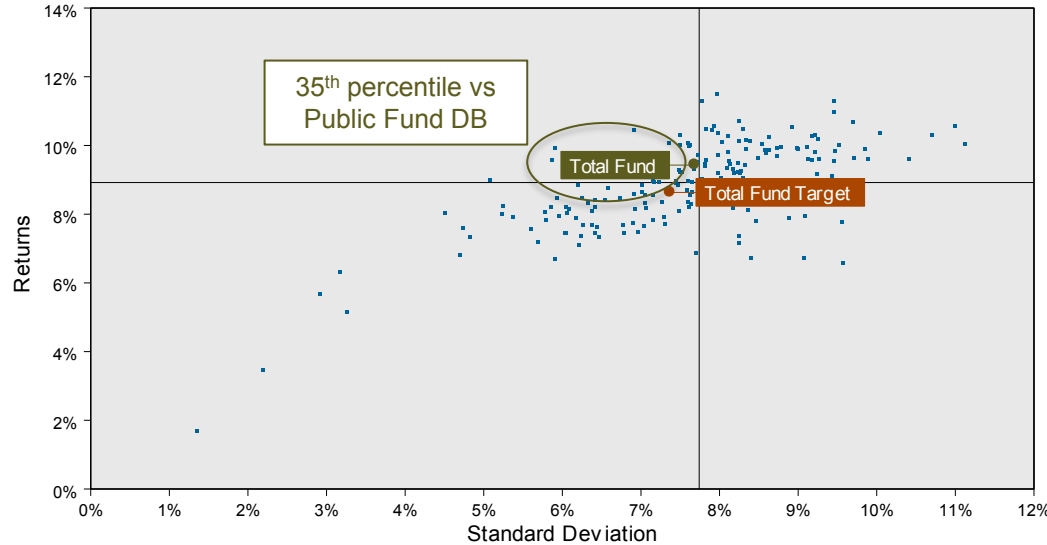
Total 9.79% = 9.21% + 0.37% + 0.20%

0.57%

PERS Performance and Attribution

As of September 30, 2016

Six and One-Quarter Year Annualized Risk vs Return



6 ¼ Years Ended 9/30/16

Gross: 9.43%
 Net of fees: 9.08%
 Target: 8.63%
 Net Added: 0.45%

Squares represent membership of the CAI Public Fund Sponsor Database

Six 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
Domestic Equity	27%	26%	15.26%	14.82%	0.05%	0.10%	0.15%
Domestic Fixed Income	20%	19%	6.34%	4.99%	0.22%	(0.04%)	0.18%
Real Estate	9%	9%	15.07%	12.16%	0.22%	0.01%	0.23%
Timber	4%	4%	-	-	(0.23%)	(0.04%)	(0.27%)
Infrastructure	3%	4%	-	-	0.14%	0.08%	0.22%
International Equity	16%	16%	7.48%	5.10%	0.36%	(0.06%)	0.30%
International Fixed Inc.	5%	5%	4.49%	2.77%	0.09%	(0.01%)	0.08%
Private Equity	4%	5%	2.92%	2.92%	0.00%	(0.02%)	(0.02%)
World Equity	10%	11%	-	-	(0.02%)	(0.04%)	(0.06%)
Cash & Equivalents	1%	1%	0.14%	0.11%	0.00%	(0.02%)	(0.01%)

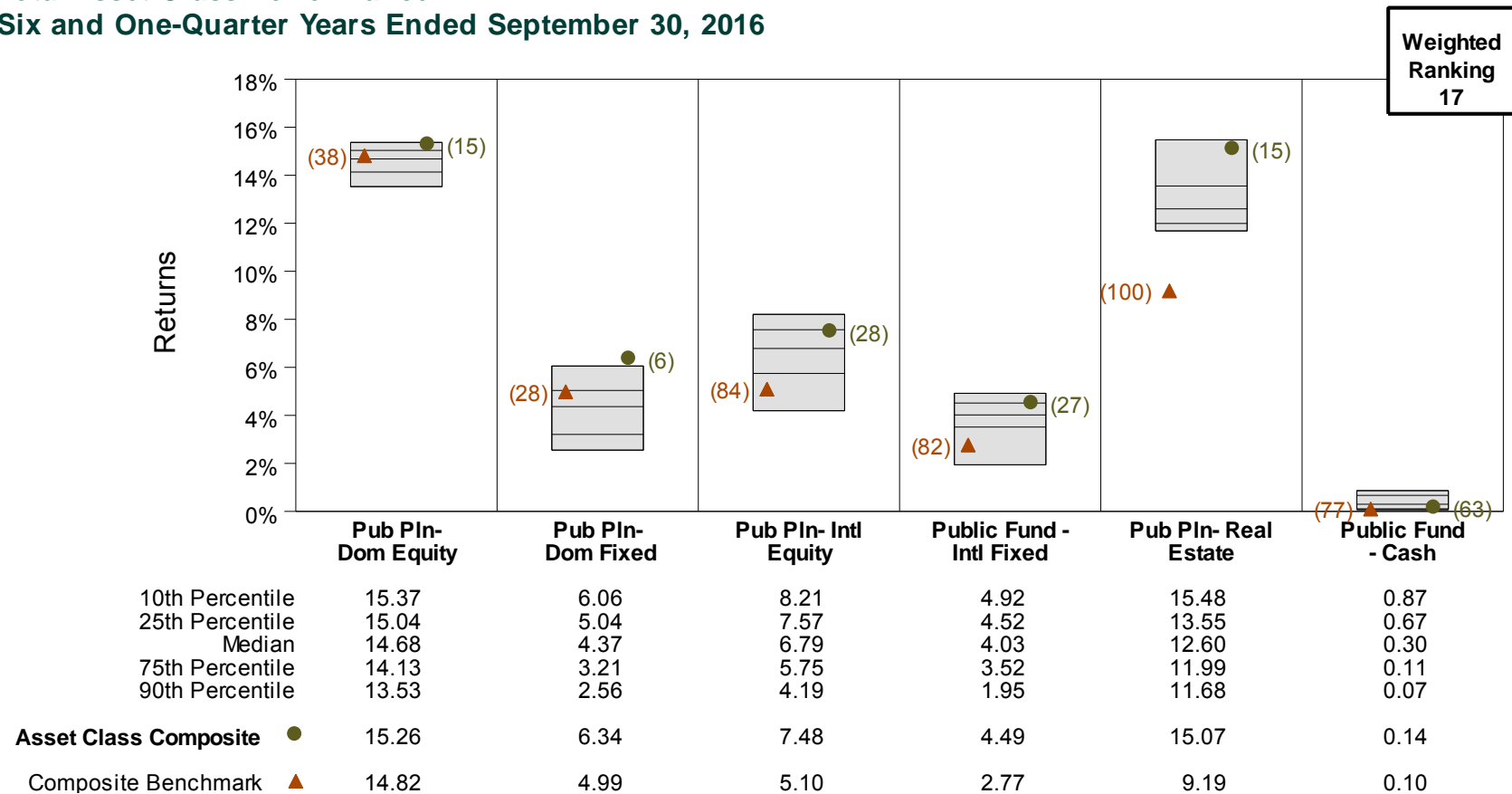
Total 9.43% = 8.63% + 0.84% + (0.04%)

0.79%

Asset class composite results

PERS' results vs other Public Funds

Total Asset Class Performance
Six and One-Quarter Years Ended September 30, 2016

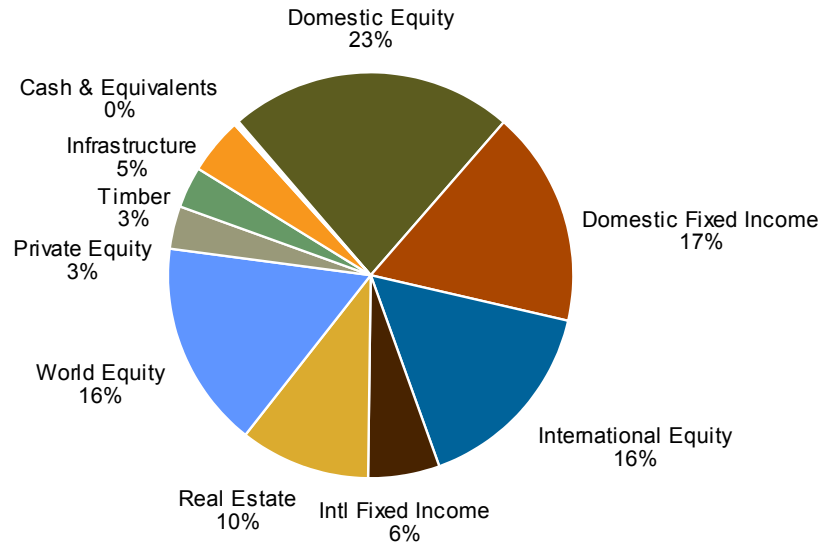


- Public market asset classes are all above their respective medians except cash.
 - Many “cash” funds have exposure to higher return and risk strategies (i.e. credit and longer duration) than NDSIB does.
- U.S. equity, U.S. fixed income and real estate returns are all in the top quartile.

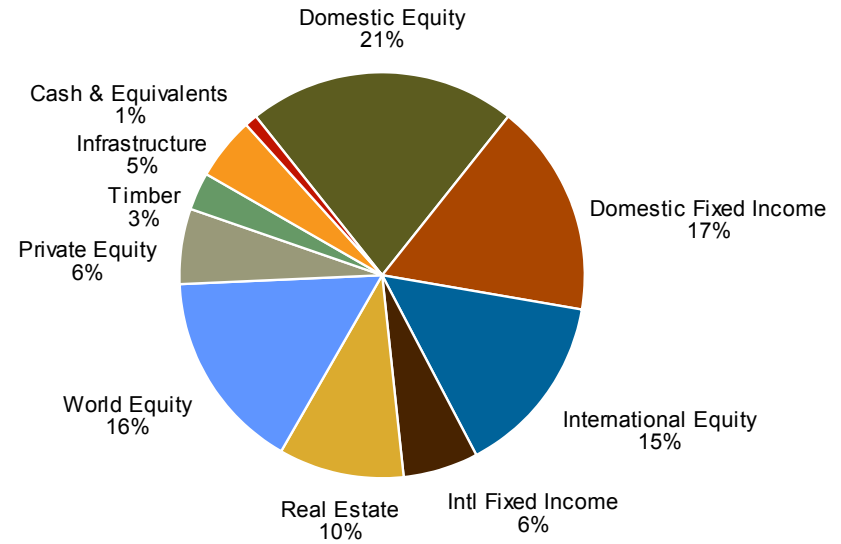
TFFR Allocation

As of September 30, 2016

Actual Asset Allocation



Target Asset Allocation

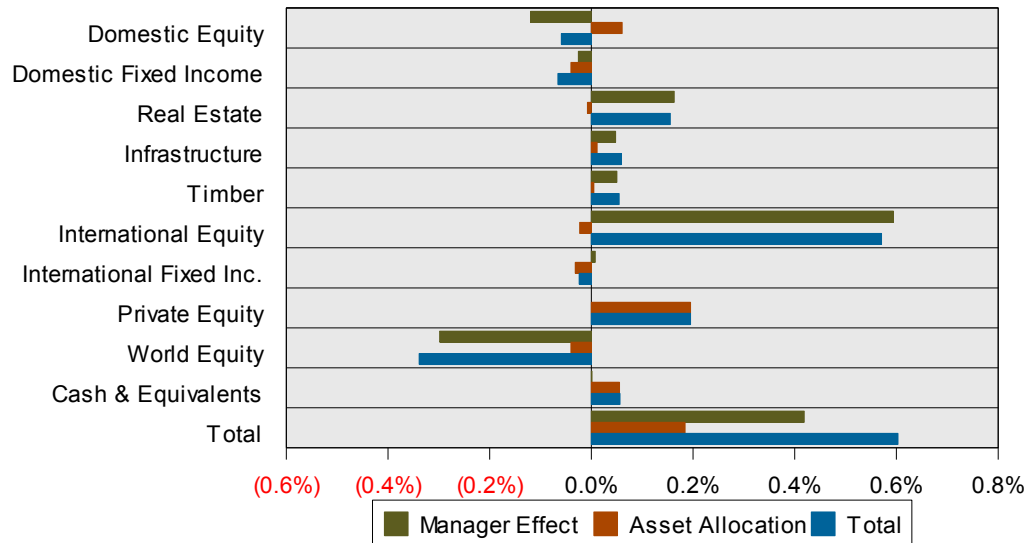


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	488,446	22.8%	21.4%	1.4%	29,518
Domestic Fixed Income	369,209	17.2%	17.0%	0.2%	4,640
International Equity	341,192	15.9%	14.6%	1.3%	28,092
Intl Fixed Income	122,993	5.7%	6.0%	(0.3%)	(5,678)
Real Estate	222,029	10.4%	10.0%	0.4%	7,577
World Equity	352,972	16.5%	16.0%	0.5%	9,848
Private Equity	71,846	3.4%	6.0%	(2.6%)	(56,825)
Timber	69,910	3.3%	3.0%	0.3%	5,575
Infrastructure	96,901	4.5%	5.0%	(0.5%)	(10,325)
Cash & Equivalents	9,025	0.4%	1.0%	(0.6%)	(12,420)
Total	2,144,524	100.0%	100.0%		

TFFR Performance and Attribution

As of September 30, 2016

One Year Relative Attribution Effects



1 Year Ended 9/30/16

Gross: 9.72%
 Net of fees: 9.43%
 Target: 9.11%
 Net Added: 0.32%

One Year Relative Attribution Effects

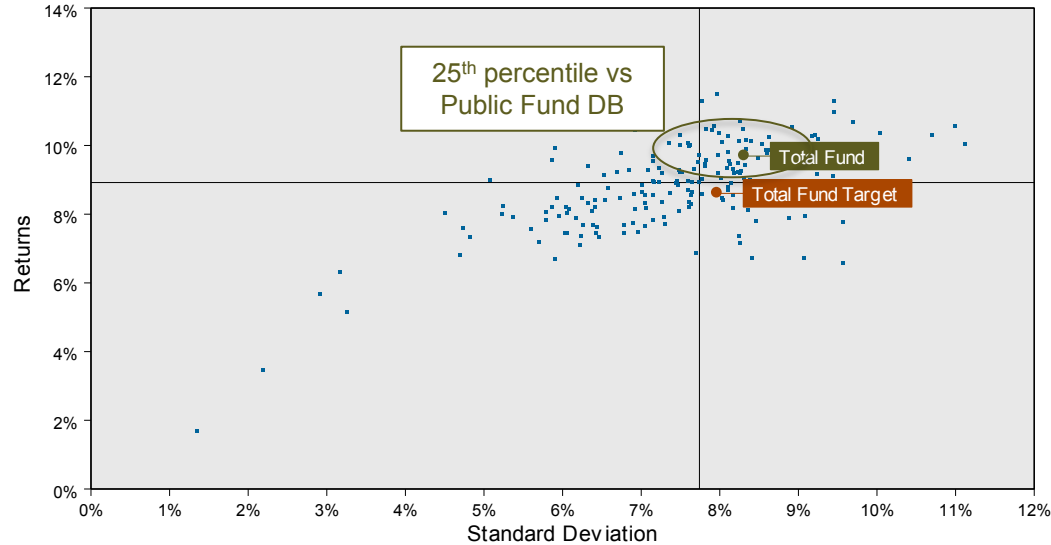
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	14.61%	15.10%	(0.12%)	0.06%	(0.06%)
Domestic Fixed Income	17%	17%	7.08%	7.17%	(0.03%)	(0.04%)	(0.07%)
Real Estate	11%	10%	10.81%	9.22%	0.16%	(0.01%)	0.16%
Infrastructure	5%	5%	2.14%	1.22%	0.05%	0.01%	0.06%
Timber	4%	4%	4.32%	3.28%	0.05%	0.00%	0.05%
International Equity	15%	15%	12.31%	8.40%	0.59%	(0.02%)	0.57%
International Fixed Inc.	5%	5%	11.91%	11.67%	0.01%	(0.03%)	(0.02%)
Private Equity	4%	5%	(5.77%)	(5.77%)	0.00%	0.20%	0.20%
World Equity	16%	16%	9.45%	11.36%	(0.30%)	(0.04%)	(0.34%)
Cash & Equivalents	1%	1%	0.39%	0.27%	0.00%	0.06%	0.06%

Total 9.72% = 9.11% + 0.42% + 0.18% **0.60%**

TFFR Performance and Attribution

As of September 30, 2016

Six and One-Quarter Year Annualized Risk vs Return



6 ¼ Years Ended 9/30/16

Gross: 9.44%
 Net of fees: 9.09%
 Target: 8.36%
 Net Added: 0.73%

Squares represent membership of the CAI Public Fund Sponsor Database

Six and One-Quarter Year Annualized Relative Attribution Effects

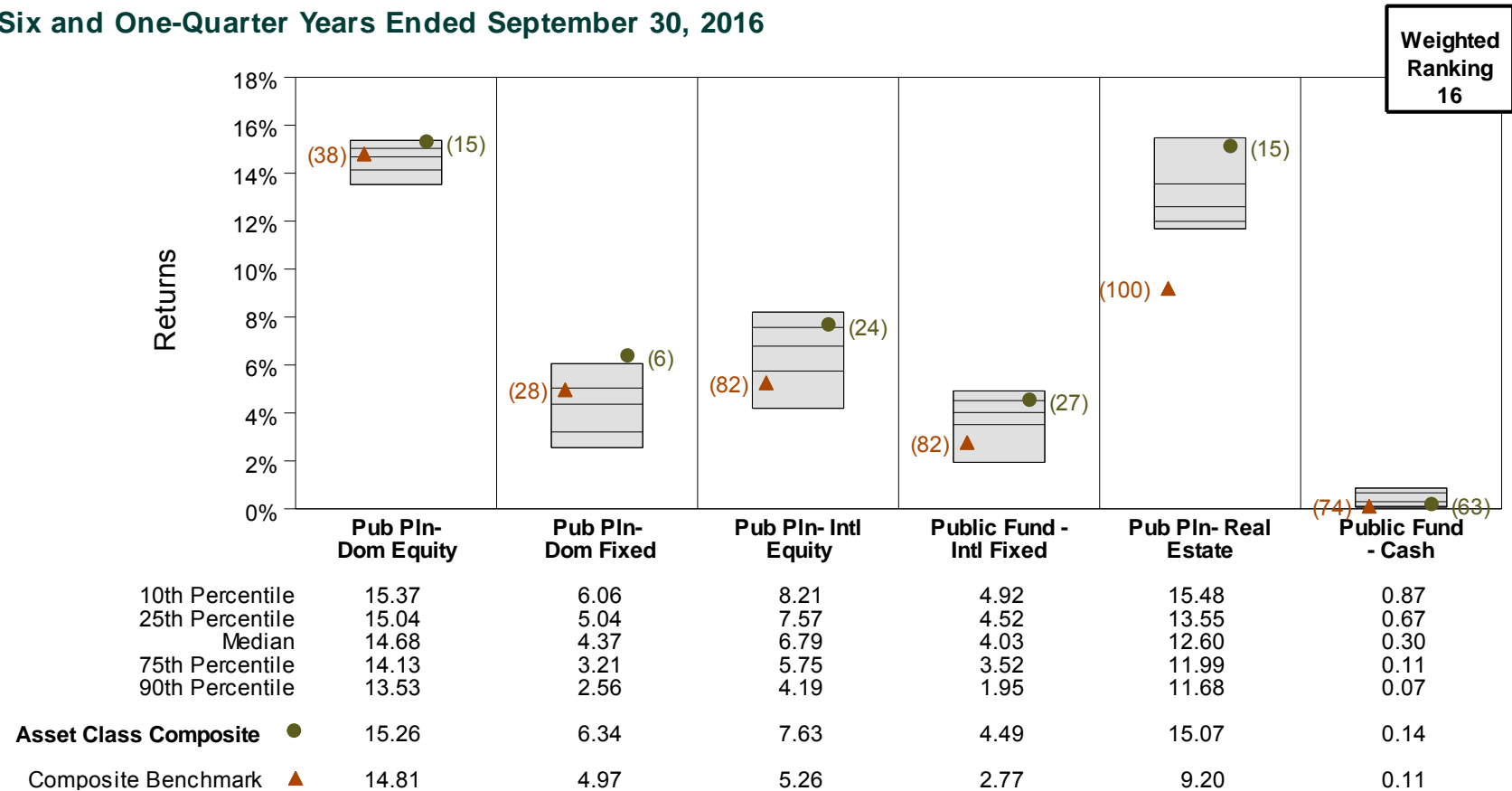
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	27%	26%	15.26%	14.81%	0.06%	0.09%	0.15%
Domestic Fixed Income	18%	17%	6.34%	4.97%	0.23%	(0.02%)	0.21%
Real Estate	10%	10%	15.07%	12.16%	0.27%	0.03%	0.30%
Timber	4%	4%	-	-	(0.23%)	(0.01%)	(0.23%)
Infrastructure	3%	4%	-	-	0.14%	0.10%	0.24%
International Equity	17%	17%	7.63%	5.26%	0.43%	(0.02%)	0.41%
International Fixed Inc.	5%	5%	4.49%	2.77%	0.09%	(0.02%)	0.08%
Private Equity	5%	5%	2.95%	2.95%	0.00%	(0.01%)	(0.01%)
World Equity	10%	11%	-	-	(0.02%)	(0.04%)	(0.06%)
Cash & Equivalents	1%	1%	0.14%	0.11%	0.00%	(0.00%)	(0.00%)

Total **9.69% = 8.61% + 0.99% + 0.10%** **1.09%**

Asset Class Composite Results

TFFR's asset class results vs other Public Pension Funds

Total Asset Class Performance
Six and One-Quarter Years Ended September 30, 2016

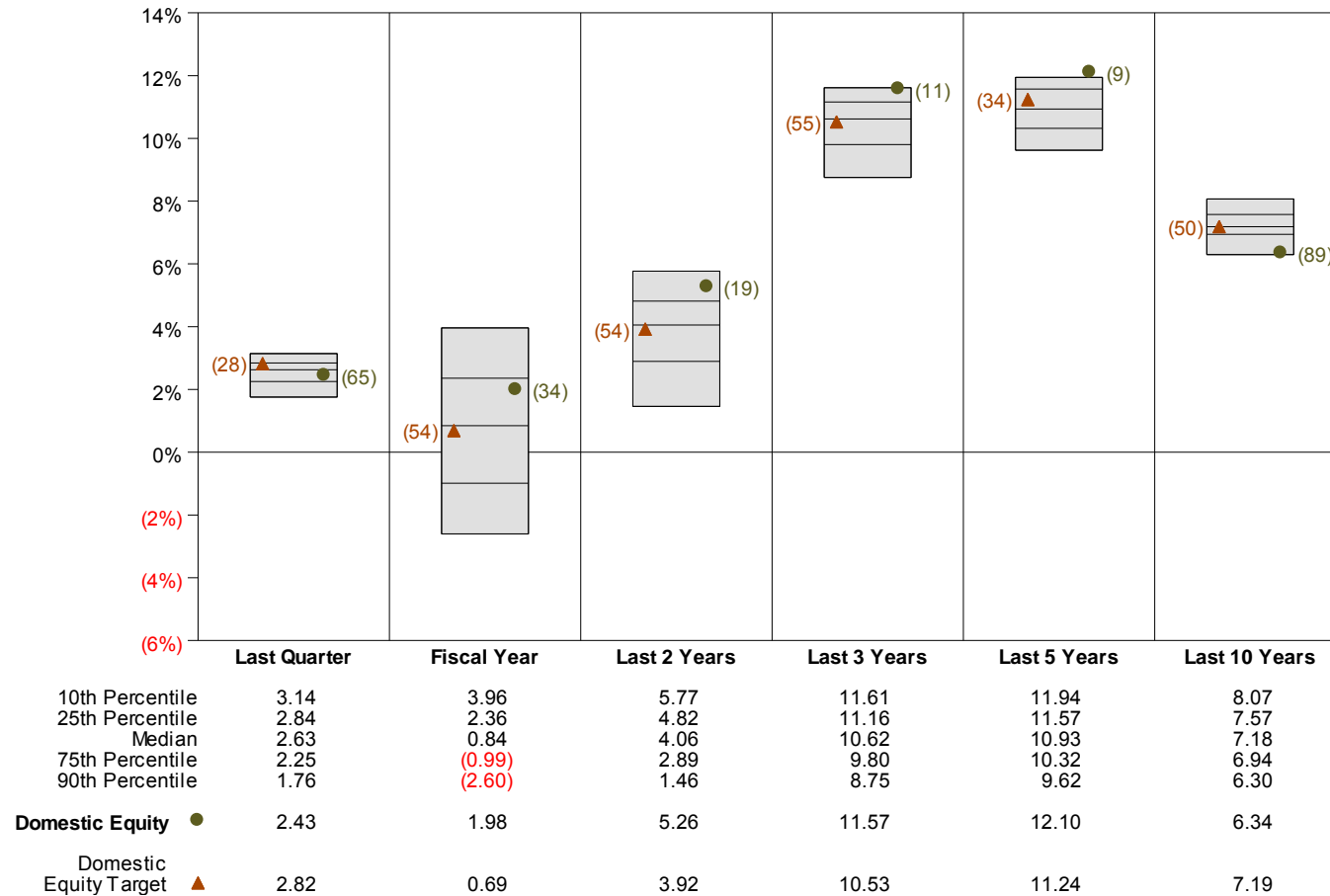


- Public market asset classes are all above their respective medians except cash.
 - Many “cash” funds have exposure to higher return and risk strategies (i.e. credit and longer duration) than NDSIB does.
- U.S. equity and fixed income, international fixed income and real estate returns in top quartile.

Consolidated Pension Trust: U.S. Equity

As of September 30, 2016

Performance vs Pub Pln- Domestic Equity (Gross)

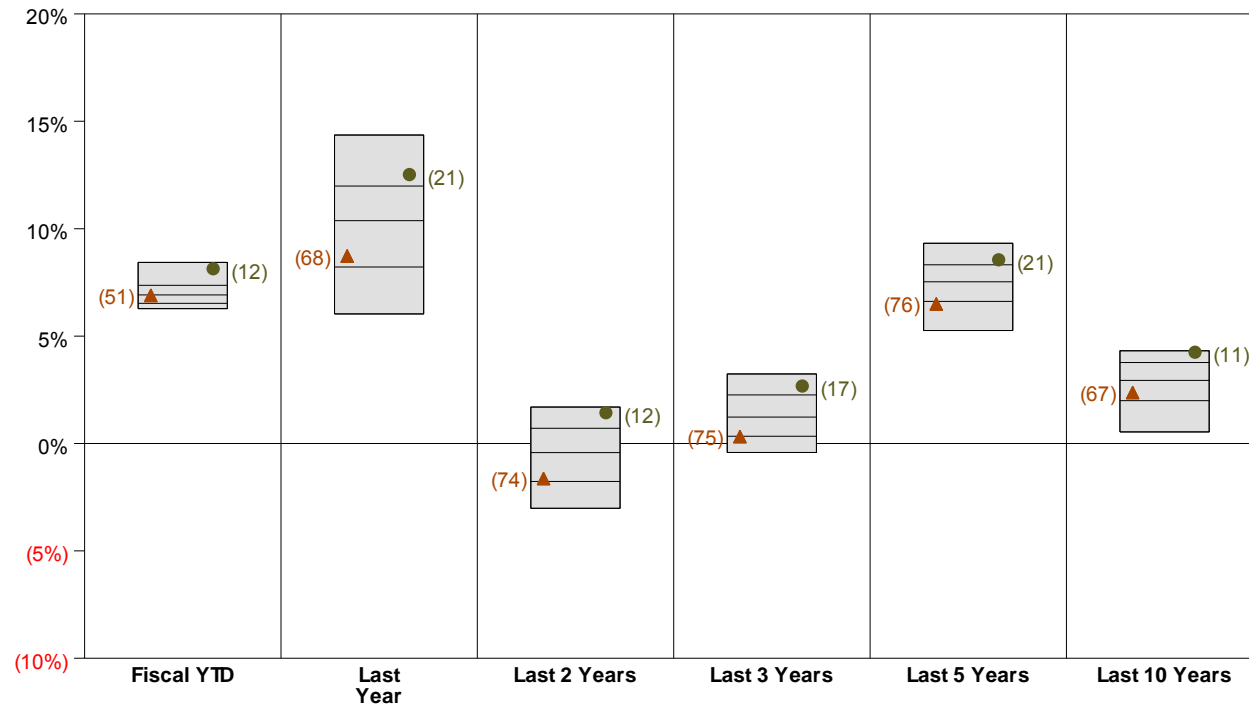


- The Domestic Equity returns are above median and the target index for all time periods except the last quarter and 10 years ended September 30, 2016.

Consolidated Pension Trust: International Equity

As of September 30, 2016

Performance vs Pub Pln- International Equity (Gross)

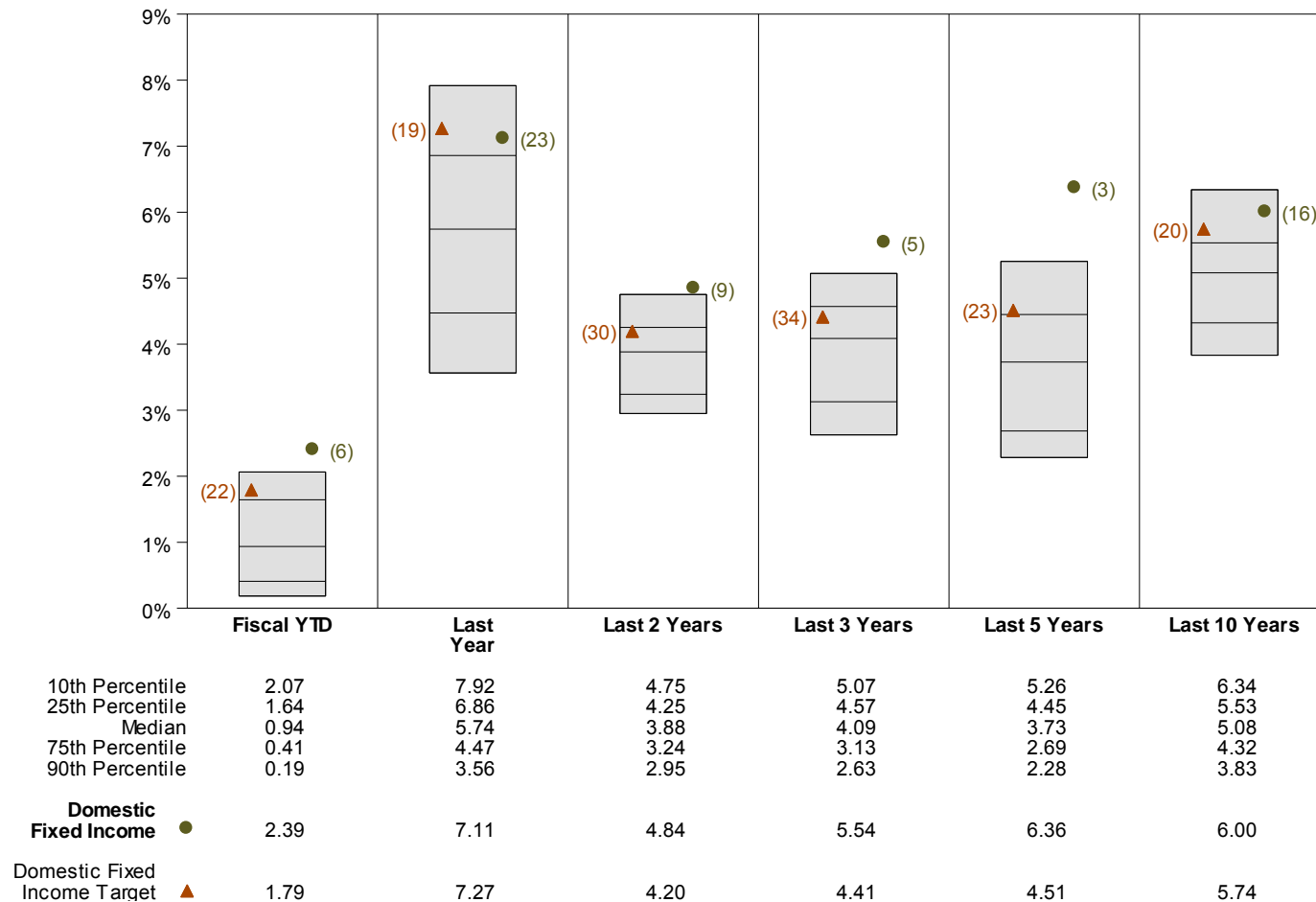


- The Consolidated Pension Trust's International Equity pool's returns are above both those of the median manager and the target index over the 10-year period.

Consolidated Pension Trust: U.S. Fixed Income

As of September 30, 2016

Performance vs Pub Pln- Domestic Fixed (Gross)

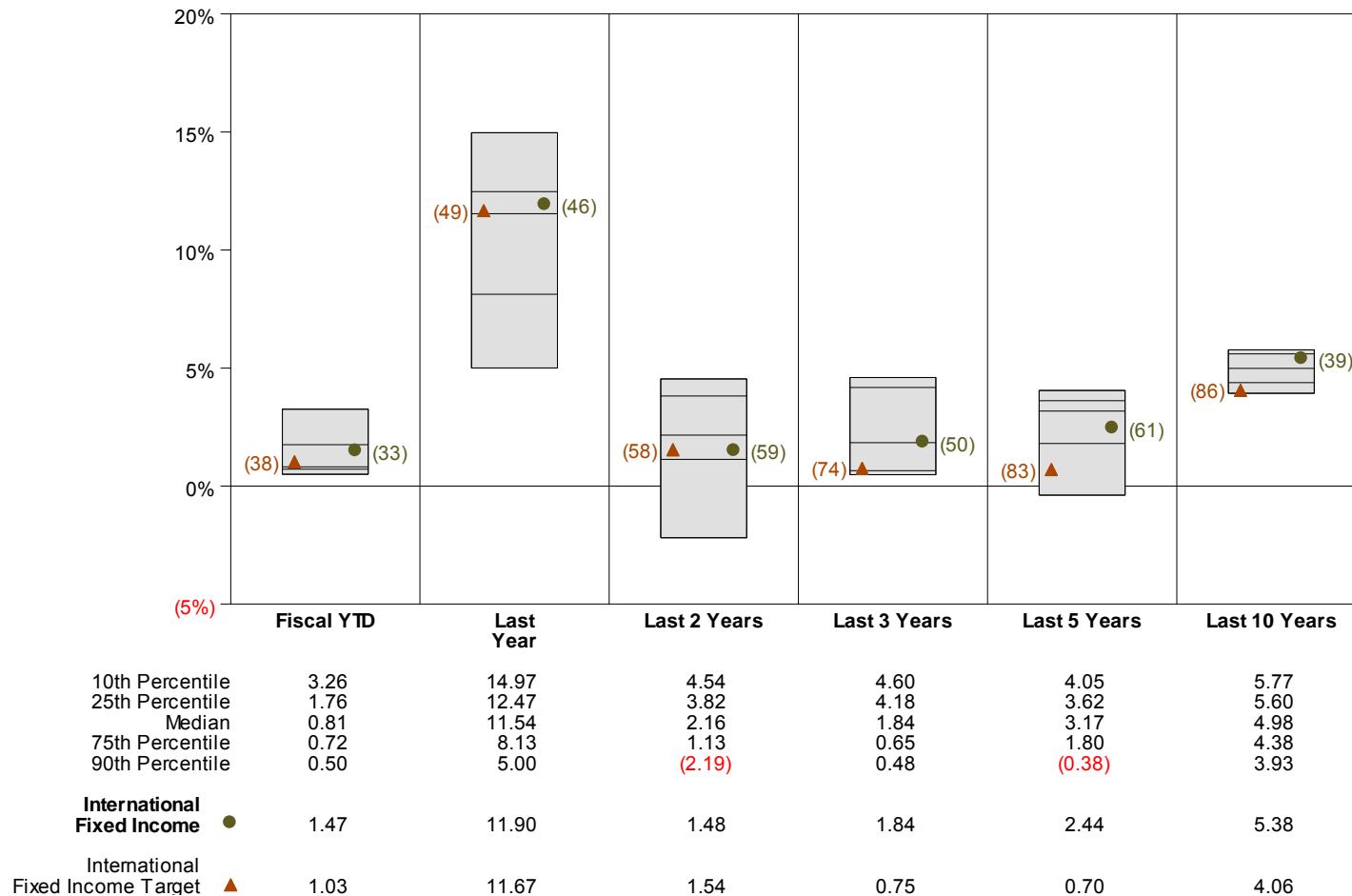


- The Consolidated Pension Trust's domestic fixed income program has outperformed the median manager and the benchmark for the trailing two-, three-, five- and 10-year periods.

Consolidated Pension Trust: International Fixed Income

As of September 30, 2016

Performance vs Public Fund - International Fixed (Gross)



- International Fixed Income exceeded the benchmark for the last three-, five-, and 10-year periods.



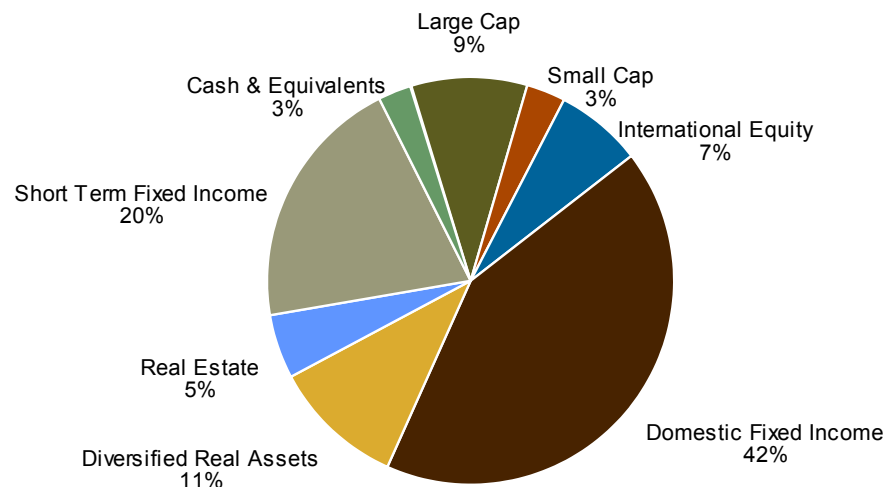
Consolidated Insurance Trust Quarterly Review

- Workforce Safety & Insurance
- Legacy Fund
- Budget Stabilization Fund

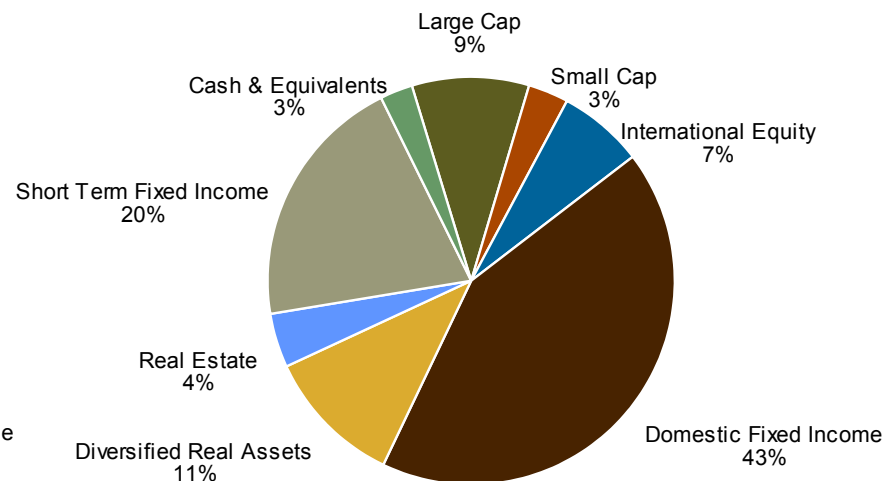
Consolidated Insurance Trust Allocation

As of September 30, 2016

Actual Asset Allocation



Target Asset Allocation

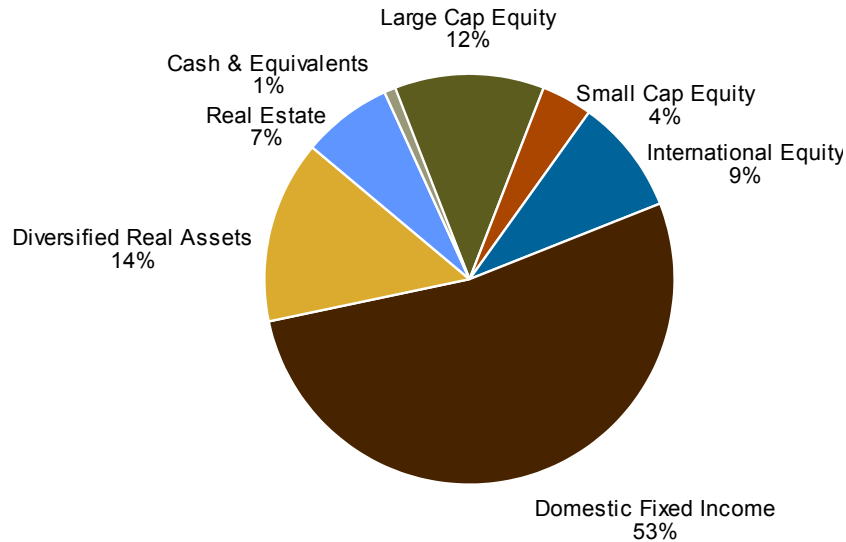


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap	238,466	9.2%	9.3%	(0.1%)	(1,389)
Small Cap	81,007	3.1%	3.2%	(0.1%)	(1,524)
International Equity	177,629	6.9%	6.8%	0.1%	2,251
Domestic Fixed Income	1,088,475	42.2%	42.5%	(0.3%)	(7,639)
Diversified Real Assets	271,775	10.5%	11.0%	(0.5%)	(11,924)
Real Estate	132,270	5.1%	4.3%	0.8%	21,370
Short Term Fixed Income	522,287	20.3%	20.3%	0.0%	(1,268)
Cash & Equivalents	67,181	2.6%	2.6%	0.0%	125
Total	2,579,090	100.0%	100.0%		

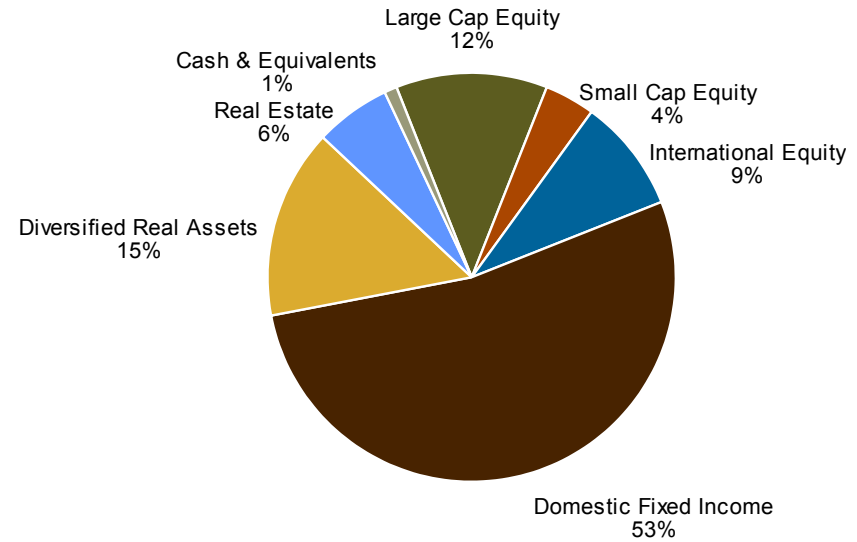
WSI Allocation

As of September 30, 2016

Actual Asset Allocation



Target Asset Allocation

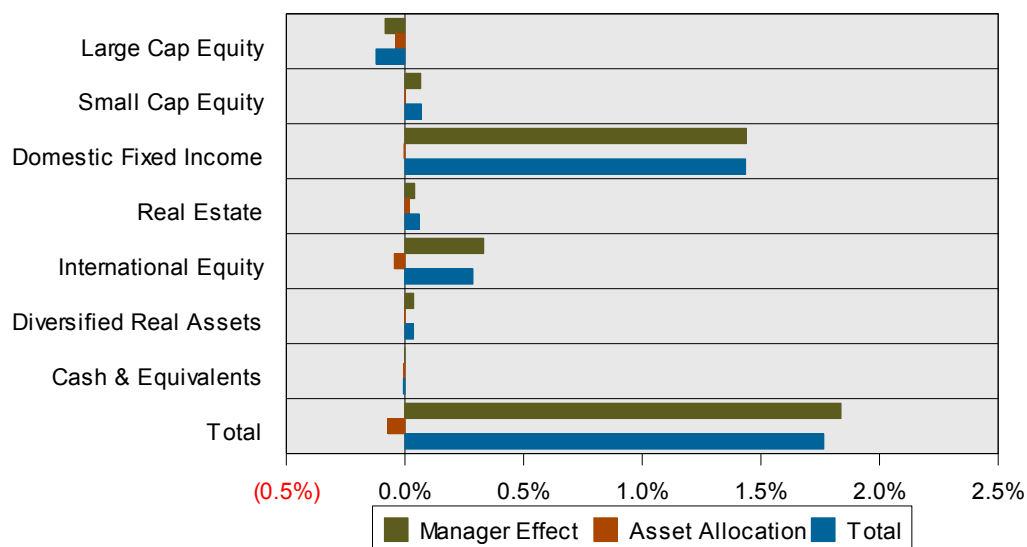


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap Equity	221,313	11.9%	12.0%	(0.1%)	(1,890)
Small Cap Equity	73,739	4.0%	4.0%	0.0%	(662)
International Equity	169,012	9.1%	9.0%	0.1%	1,610
Domestic Fixed Income	979,575	52.7%	53.0%	(0.3%)	(6,238)
Diversified Real Assets	268,256	14.4%	15.0%	(0.6%)	(10,747)
Real Estate	132,205	7.1%	6.0%	1.1%	20,604
Cash & Equivalents	15,922	0.9%	1.0%	(0.1%)	(2,678)
Total	1,860,023	100.0%	100.0%		

WSI Performance and Attribution

As of September 30, 2016

One Year Relative Attribution Effects



1 Year Ended 9/30/16

Gross: 8.85%
 Net of fees: 8.59%
 Target: 7.08%
 Net Added: 1.51%

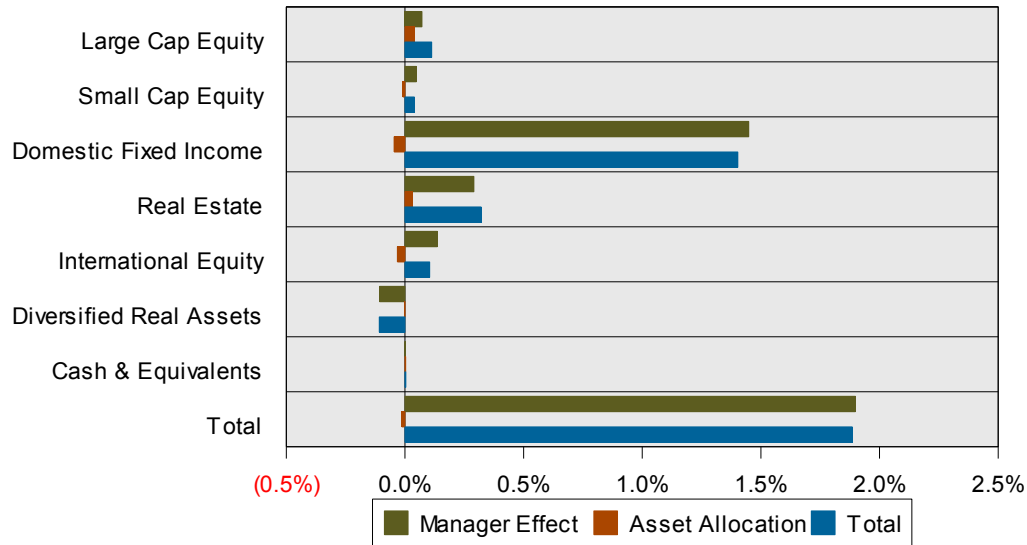
One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	12%	12%	14.21%	14.93%	(0.08%)	(0.04%)	(0.12%)
Small Cap Equity	4%	4%	17.37%	15.47%	0.07%	0.00%	0.07%
Domestic Fixed Income	53%	53%	7.94%	5.19%	1.44%	(0.00%)	1.44%
Real Estate	7%	6%	9.83%	9.22%	0.04%	0.02%	0.06%
International Equity	9%	9%	10.18%	6.38%	0.33%	(0.04%)	0.29%
Diversified Real Assets	15%	15%	4.59%	4.33%	0.04%	(0.00%)	0.04%
Cash & Equivalents	1%	1%	0.17%	0.27%	(0.00%)	(0.01%)	(0.01%)
Total			8.85%	7.08%	+ 1.84%	+ (0.07%)	1.77%

WSI Performance and Attribution

As of September 30, 2016

Six and One-Quarter Year Annualized Relative Attribution Effects



6 ¼ Year Ended 9/30/16

Gross: 8.11%
 Net of fees: 7.81%
 Target: 6.22%
 Net Added: 1.59%

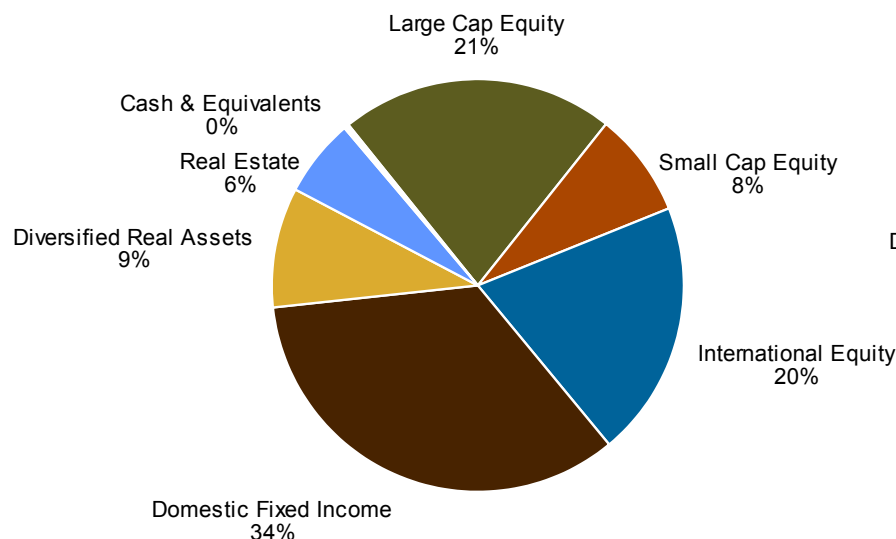
Six and One-Quarter Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	11%	11%	15.78%	15.08%	0.07%	0.04%	0.11%
Small Cap Equity	4%	4%	15.20%	13.76%	0.05%	(0.01%)	0.04%
Domestic Fixed Income	52%	52%	6.48%	3.71%	1.45%	(0.05%)	1.40%
Real Estate	6%	6%	17.12%	12.16%	0.29%	0.03%	0.32%
International Equity	7%	8%	7.59%	5.86%	0.14%	(0.03%)	0.10%
Diversified Real Assets	19%	19%	4.58%	5.13%	(0.11%)	(0.00%)	(0.11%)
Cash & Equivalents	1%	1%	0.17%	0.11%	0.00%	0.00%	0.00%
Total			8.11%	6.22%	+ 1.90%	+ (0.01%)	1.88%

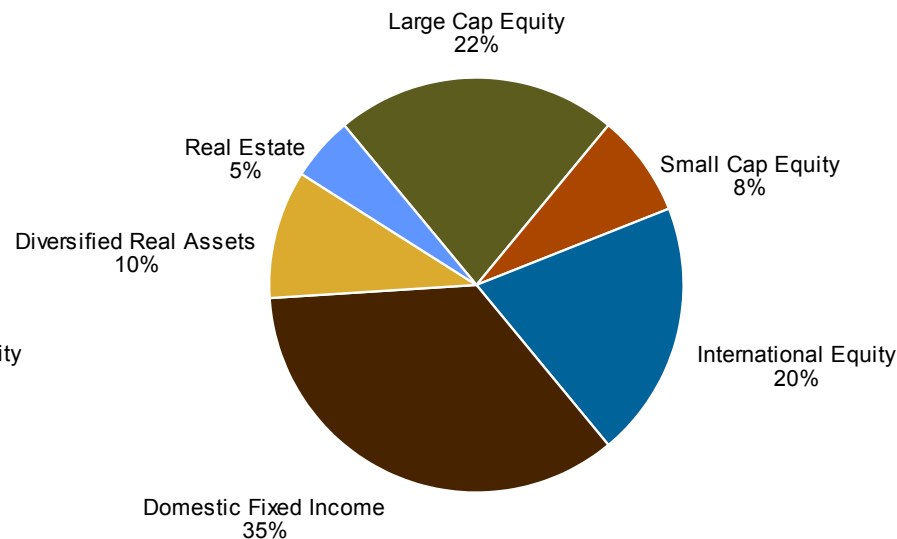
Legacy Fund Allocation

As of September 30, 2016

Actual Asset Allocation



Target Asset Allocation

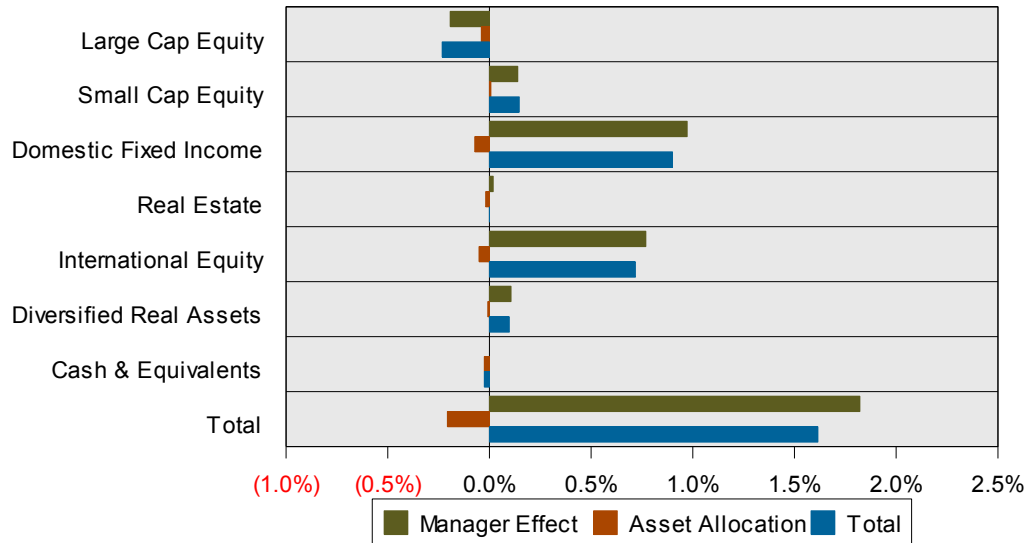


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap Equity	873,301	21.5%	22.0%	(0.5%)	(22,140)
Small Cap Equity	335,594	8.2%	8.0%	0.2%	9,979
International Equity	817,674	20.1%	20.0%	0.1%	3,636
Domestic Fixed Income	1,396,414	34.3%	35.0%	(0.7%)	(28,153)
Diversified Real Assets	383,439	9.4%	10.0%	(0.6%)	(23,580)
Real Estate	246,518	6.1%	5.0%	1.1%	43,008
Cash & Equivalents	17,249	0.4%	0.0%	0.4%	17,249
Total	4,070,190	100.0%	100.0%		

Legacy Fund Performance and Attribution

As of September 30, 2016

One Year Relative Attribution Effects



1 Year Ended 9/30/16

Gross: 10.46%
 Net of fees: 10.18%
 Target: 8.84%
 Net Added: 1.34%

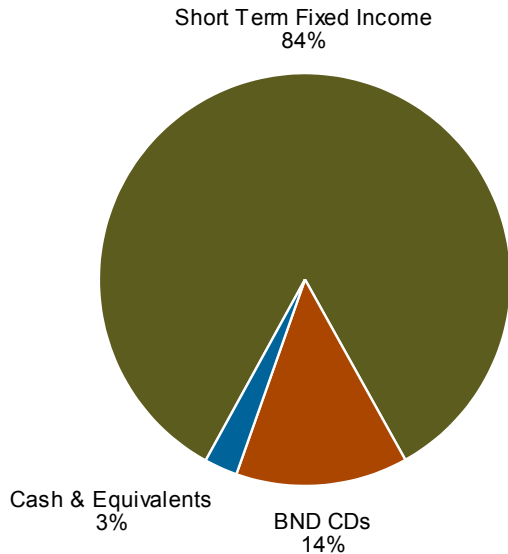
One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	22%	22%	14.03%	14.93%	(0.19%)	(0.04%)	(0.23%)
Small Cap Equity	8%	8%	17.50%	15.47%	0.14%	0.01%	0.15%
Domestic Fixed Income	35%	35%	7.98%	5.19%	0.97%	(0.07%)	0.90%
Real Estate	6%	5%	9.69%	9.22%	0.02%	(0.02%)	0.00%
International Equity	19%	20%	10.28%	6.38%	0.77%	(0.05%)	0.72%
Diversified Real Assets	10%	10%	6.68%	5.60%	0.11%	(0.01%)	0.10%
Cash & Equivalents	0%	0%	0.17%	0.17%	0.00%	(0.02%)	(0.02%)
Total			10.45%	8.84%	+ 1.82%	+ (0.21%)	1.61%

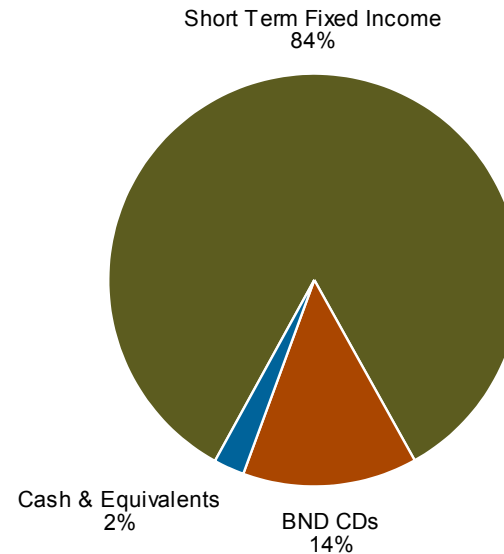
Budget Stabilization Fund Allocation

As of September 30, 2016

Actual Asset Allocation



Target Asset Allocation

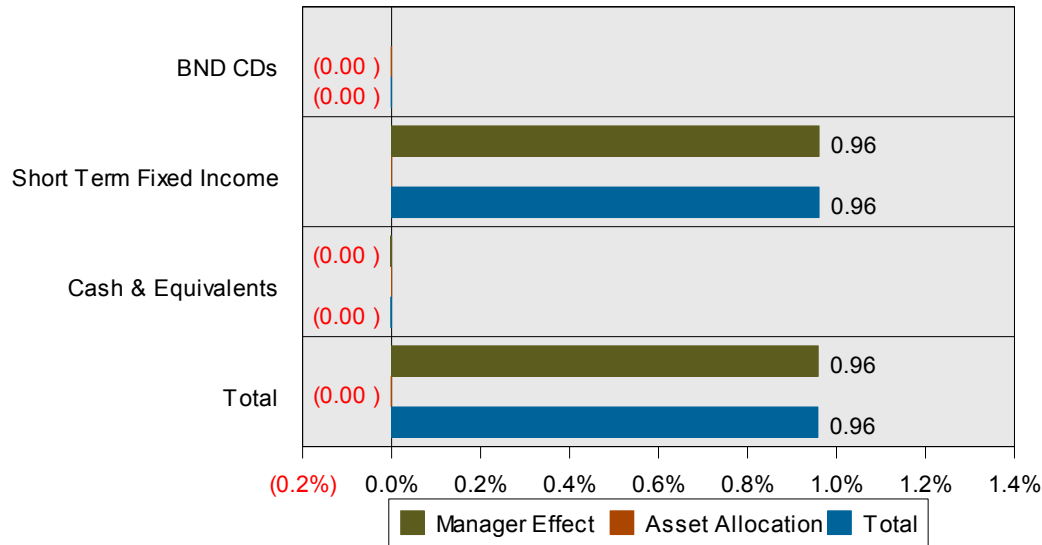


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Short Term Fixed Income	485,201	83.9%	83.9%	0.0%	(1)
BND CDs	78,098	13.5%	13.7%	(0.2%)	(1,073)
Cash & Equivalents	15,011	2.6%	2.4%	0.2%	1,074
Total	578,310	100.0%	100.0%		

Budget Stabilization Fund Overview

As of September 30, 2016

One Year Relative Attribution Effects



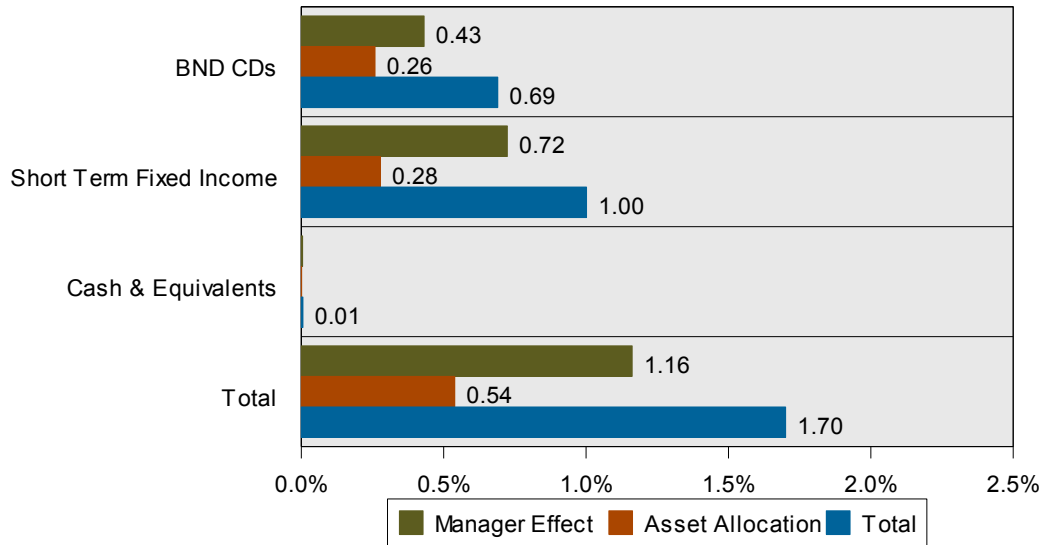
One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
BND CDs	15%	15%	2.59%	2.59%	0.00%	(0.00%)	(0.00%)
Short Term Fixed Income	83%	83%	2.03%	0.89%	0.96%	0.00%	0.96%
Cash & Equivalents	2%	2%	0.18%	0.27%	(0.00%)	0.00%	(0.00%)
Total			2.09%	1.13%	+ 0.96%	+ (0.00%)	0.96%

Budget Stabilization Fund Overview

As of September 30, 2016

Six and One-Quarter Year Annualized Relative Attribution Effects



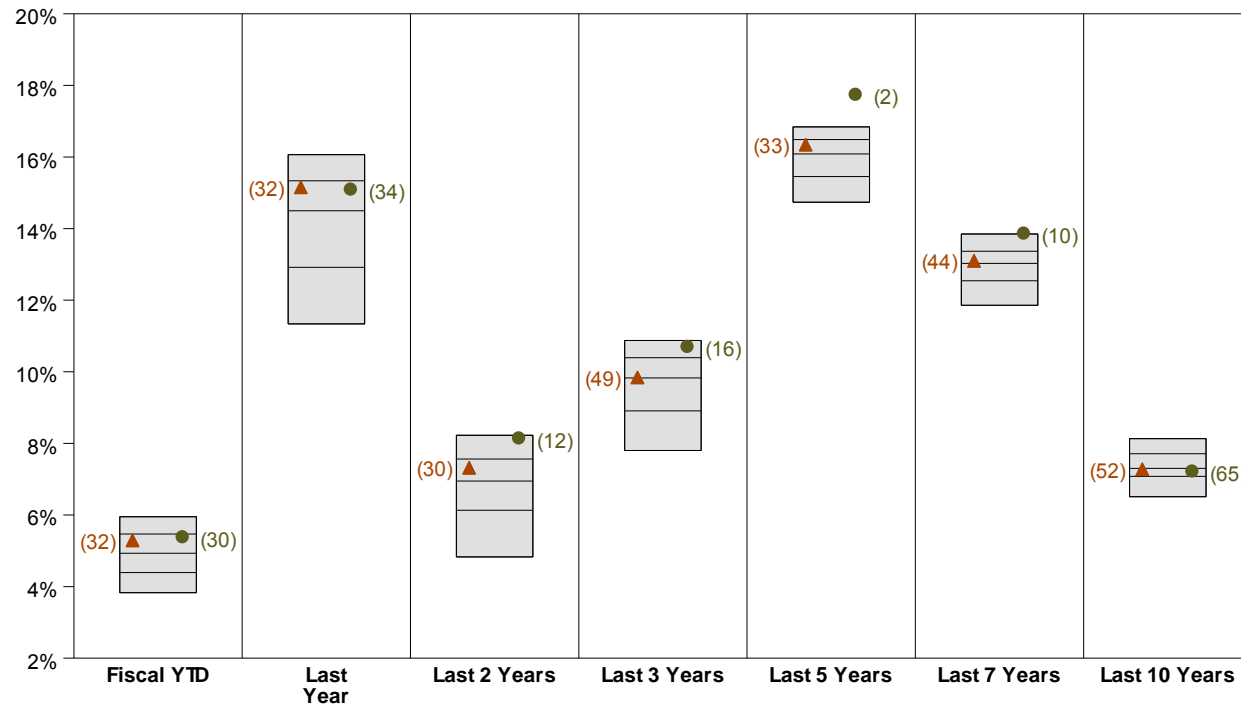
Six and One-Quarter Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return	
BND CDs	22%	16%	3.39%	1.43%	0.43%	0.26%	0.69%	
Short Term Fixed Income	74%	62%	2.01%	1.07%	0.72%	0.28%	1.00%	
Cash & Equivalents	4%	21%	0.17%	0.11%	0.00%	0.00%	0.01%	
Total			2.28%		= 0.58%	+ 1.16%	+ 0.54%	1.70%

Consolidated Insurance Trust: Domestic Equity

As of September 30, 2016

Performance vs Pub Pln- Domestic Equity (Gross)

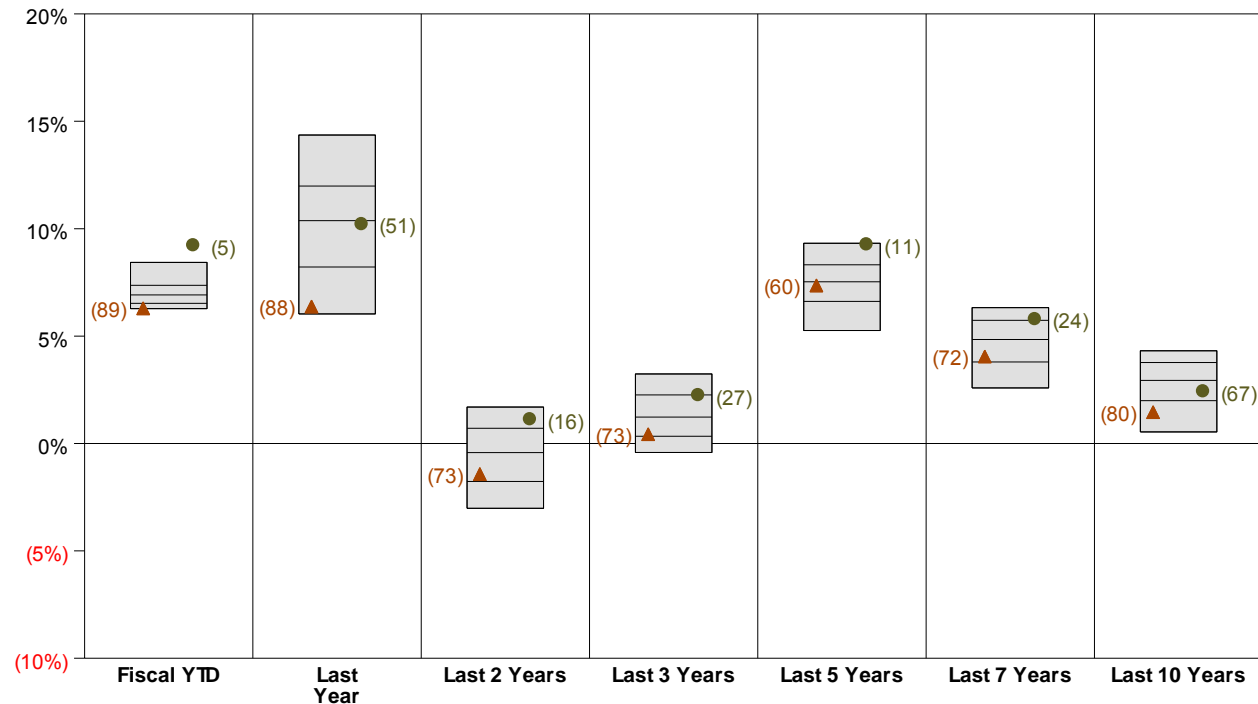


- The fund has outperformed the benchmark and placed above median for the last two-, three-, five-, and seven-year periods.

Consolidated Insurance Trust: International Equity

As of September 30, 2016

Performance vs Pub Pln- International Equity (Gross)

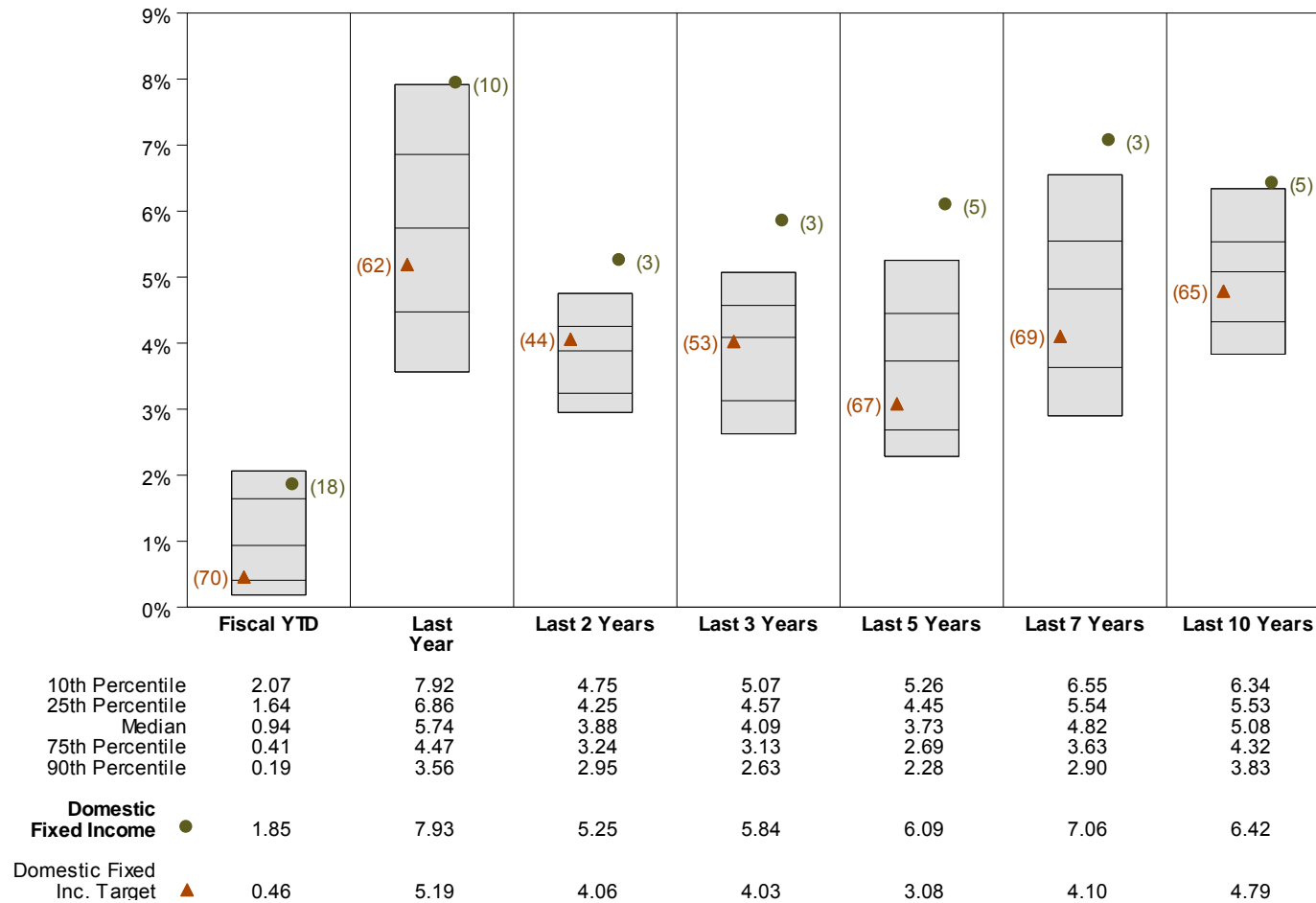


- The International Equity program has beaten the benchmark consistently over the past 10 years.

Consolidated Insurance Trust: Domestic Fixed Income

As of September 30, 2016

Performance vs Pub Pln- Domestic Fixed (Gross)



- Fixed Income has been an exceptionally well-performing asset in the Insurance Trust, outperforming the benchmark in each of the measured time frames.

September 30, 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 2016 by Callan Associates Inc.

Table of Contents

September 30, 2016

Executive Summary

Active Management Overview	2
Capital Market Review	3

NDSIB - Consolidated Pension Trust

Actual vs Target Asset Allocation	25
Quarterly Total Fund Attribution	26
Cumulative Total Fund Attribution	27
Cumulative Performance	31
Historical Asset Allocation	32
Asset Class Risk and Return	33
Total Fund Ranking	34
Asset Class Rankings	35
Investment Manager Asset Allocation	36
Investment Manager Returns	39

NDSIB - Public Employees Retirement System

Actual vs Target Asset Allocation	45
Quarterly Total Fund Attribution	46
Cumulative Total Fund Attribution	47
Cumulative Performance	51
Historical Asset Allocation	52
Asset Class Risk and Return	53
Total Fund Ranking	54
Asset Class Rankings	55
Asset Class Allocation	56
Asset Class Returns	57

NDSIB - Teachers Fund For Retirement

Actual vs Target Asset Allocation	60
Quarterly Total Fund Attribution	61
Cumulative Total Fund Attribution	62
Cumulative Performance	66
Historical Asset Allocation	67
Asset Class Risk and Return	68
Total Fund Ranking	69
Asset Class Rankings	70
Asset Class Allocation	71
Asset Class Returns	72

Table of Contents

September 30, 2016

Manager Evaluation

Domestic Equity

L.A. Capital Management	75
L.A. Capital Management Enhanced Index	76
Northern Trust AM Enhanced S&P 500	77
Parametric Clifton Enhanced S&P	78
Atlanta Capital	79
Parametric Clifton Enhanced Small Cap	80

International Equity

DFA International Small Cap Value Fund	82
Northern Trust AM World ex US	83
Wellington Management Company	84
William Blair	85
Axiom Emerging Markets	86
DFA Emerging Markets	87

World Equity

EPOCH Investment Partners	89
LSV Asset Management	90

Private Equity

Investment Manager Returns	92
----------------------------	----

Domestic Fixed Income

Declaration Total Return	94
J.P. Morgan MBS	95
PIMCO DiSCO II	96
PIMCO MBS	97
PIMCO Unconstrained	98
SSgA Long US Treasury Index	99
Goldman Sachs 2006 Offshore	100
Goldman Sachs Offshore Fund V	101
Loomis Sayles	102
PIMCO Bravo II Fund	103

International Fixed Income

Brandywine Asset Management	105
UBS Global Asset Management	106

Real Estate

Performance vs Total Real Estate Database	108
---	-----

Table of Contents

September 30, 2016

Timber

TIR Teredo	111
TIR Springbank	112

Infrastructure

JP Morgan Asian Infrastructure	114
JP Morgan Infrastructure Fund	115
Grosvenor Cust. Infrastructure	116
Grosvenor Cust. Infrastructure II	117

Callan Research/Education

118

Disclosures

121

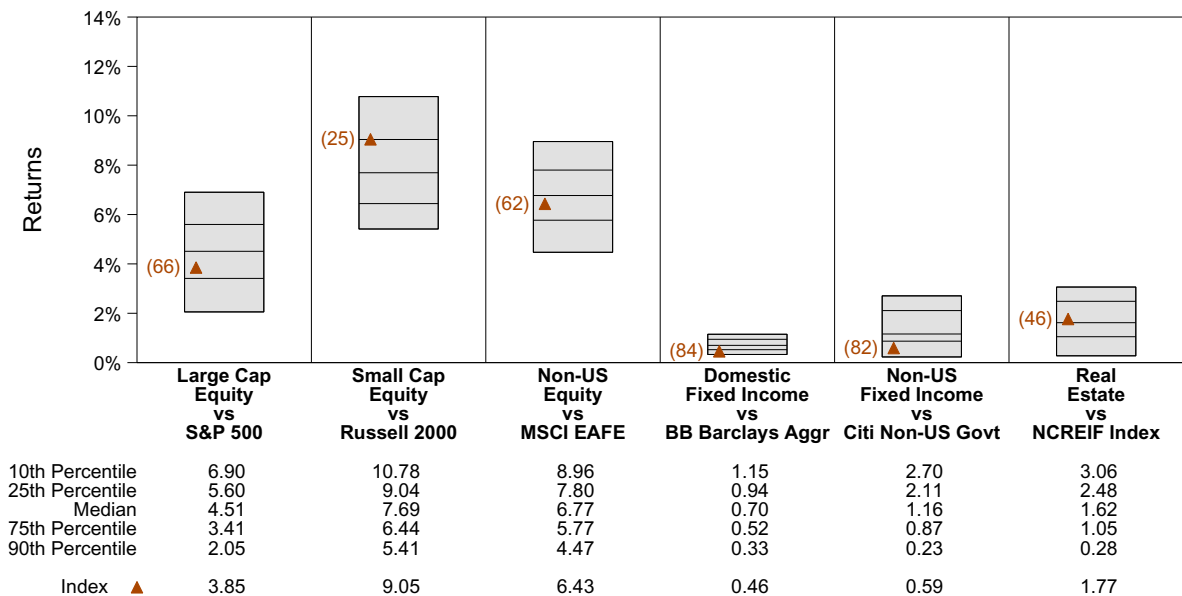
Market Overview

Active Management vs Index Returns

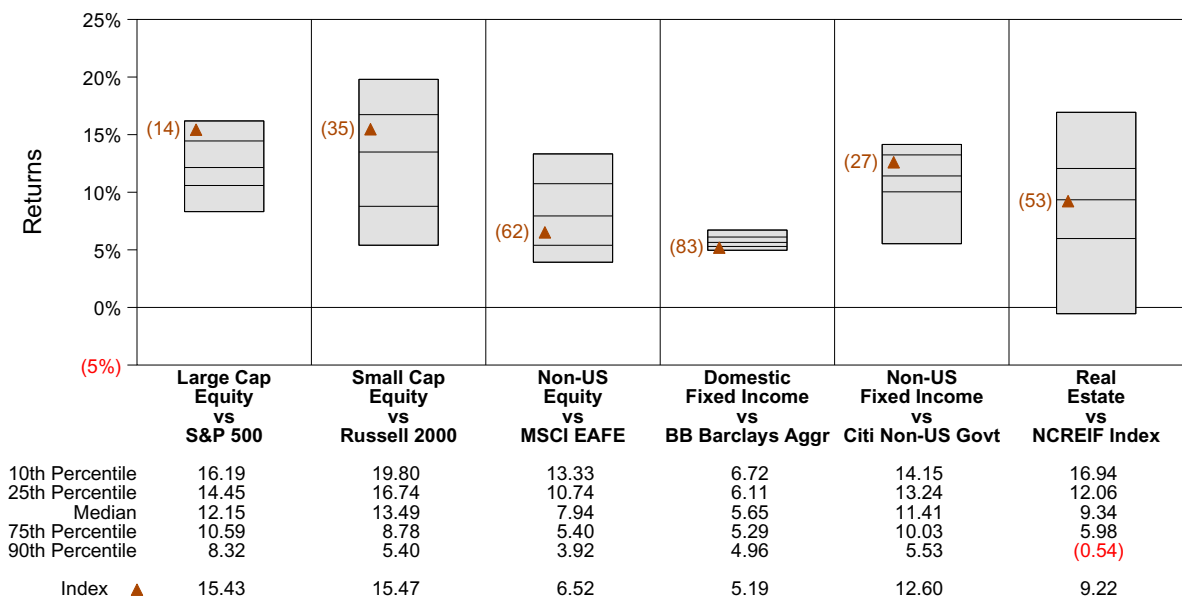
Market Overview

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 September 30, 2016



Range of Separate Account Manager Returns by Asset Class One Year Ended September 30, 2016





Third Quarter 2016

October Surprise

ECONOMY

2 Real GDP grew a surprisingly strong 2.9% in the third quarter, the best rate in two years. But the days of consumers driving the expansion are likely behind us, although investments in nonresidential construction rose after earlier weakness.

With a Little Help From My Friends

FUND SPONSOR

4 The second quarter's worst performer, endowments and foundations, beat other fund types in the third quarter with a 3.69% gain. Last quarter's champs, corporate funds, finished last. Surprisingly, small funds beat large and medium funds.

Broad Market Quarterly Returns



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

Sell in May? No Way!

U.S. EQUITY

6 The **S&P 500 Index** hit a new high and rose every month during the third quarter, ending up 3.85%. Small capitalization companies outperformed large cap (**Russell 2000 Index** +9.05% vs. **Russell 1000 Index** +4.03%), while growth outpaced value in all capitalizations.

Calm After the Storm

NON-U.S. EQUITY

9 Global stock markets hit highs as anxieties about the Brexit vote dwindled; even eurozone markets did well as it became clear that the U.K.'s decision to leave the European Union would not be catastrophic. Consistent with investors' risk-on mentality, emerging markets outpaced their developed peers.

Hut, Hut ... Hike!

U.S. FIXED INCOME

12 The yield on the benchmark 10-year Treasury note hit a record low of 1.37% in July, but ended the third quarter slightly higher. High yield corporates were the strongest performer, while Treasuries ended the quarter in the red. Investment-grade corporate bond issuance set a record.

Globe-Trotting for Yield

NON-U.S. FIXED INCOME

15 Sovereign bond markets strengthened during the third quarter, with emerging market bonds outmuscling the developed markets as investors sought yield. Major currencies were mixed as the British pound suffered following the Brexit. And there is now over \$12 trillion of negative-yielding debt globally.

Returns Take a Summer Vacation

REAL ESTATE

17 Both the **NCREIF Property Index** (+1.77%) and the **NCREIF Open End Diversified Core Equity Index** (+1.83%) turned in their worst performances since the first quarter of 2010. Global REITs did better than U.S. REITs; worries over a Fed rate hike appeared to be stronger than the post-Brexit fallout.

Sticker Shock

PRIVATE EQUITY

19 Markets maintained healthy liquidity in the third quarter. Private equity fundraising fell, but year-to-date numbers are very close to last year's. The number of new buyout investments increased slightly, but venture capital investments fell. And the IPO window for buyouts and VC remained open, if just a crack.

Can't Stop the Feeling

HEDGE FUNDS

20 Hedge funds showed modest returns during the quarter, with emerging markets the best-performing strategy. Choppy markets caught managed-futures funds a bit flat-footed. In Callan's database, the median *Callan Long/Short Equity FOF* (+4.26%) outpaced the *Callan Absolute Return FOF* (+2.10%).

DC Participants Seek Cover

DEFINED CONTRIBUTION

21 DC plan balances increased 1.67% in the second quarter, according to the *Callan DC Index™*. Although the Index rose 1.90%, target date funds outpaced it, gaining 2.02%. Unusually, money flowed out of DC plans, by 23 basis points, rather than into them as typically happens.

October Surprise

ECONOMY | Jay Kloepfer

Real gross domestic product (GDP) grew 2.9% in the third quarter, much stronger than expected, providing a pleasant surprise in a year filled with unpleasant ones. Third-quarter growth was by far the strongest this year and the best quarterly rate in two years. Personal consumption has been driving growth in the U.S. for the past several years, but while consumption accounted for half of the growth in the third quarter, its influence weakened.

Other third-quarter surprises included: a reversal in nonresidential fixed investment; continued growth in software and information processing; an uptick in federal government spending; strength in exports; and a return to inventory investment. Drags came from a decline in residential investment and weakness in state and local government spending, along with an increase in imports, which are a negative in the calculation of GDP.

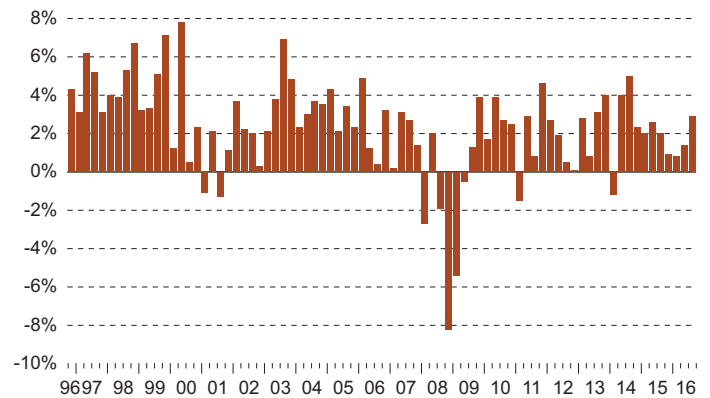
Political and economic shocks—China’s industrial recession, Brexit, the U.S. election—have increased uncertainty and hampered global growth, making many businesses increasingly risk averse. Add the uncertainty stemming from the global monetary policy experiment still underway—not the least of which involves the guessing game regarding the Fed’s interest rate policy—and expectations for U.S. growth soured as the year unfolded.

Real GDP came in very weak in the first quarter and disappointed again in the second, coinciding with the Brexit vote in late June when the U.K. chose to leave the European Union. Consensus expectations for the third quarter had GDP growth falling below 2%, even dipping to 1.5% as recently as September. However, the job market remained sound, consumer sentiment stayed buoyant, and the anticipated turnarounds in inventory and nonresidential fixed investment actually materialized.

The days of consumer spending driving this expansion are likely behind us. Consumption slowed from a robust 4.3% gain in the second quarter to 2.1% in the third; this will likely be the norm going forward. Consumers enjoyed a real shot in the arm from strong job gains for several years and a “dividend” from

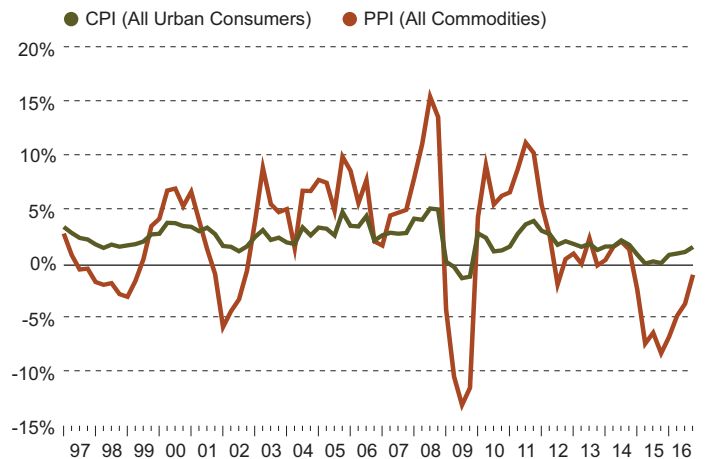
Quarterly Real GDP Growth

(20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

low commodity prices. The U.S. economy created an average of 178,000 jobs per month through the first three quarters of 2016. While solid, this is a deceleration from the 211,000 rate in the first nine months of 2015. Although support from the job market and commodity prices is waning, households are still benefiting from increases in real wages, disposable incomes, and asset values.

Highly anticipated reversals in inventory and nonresidential fixed investing provided meaningful gains to the economy in the third

quarter. The U.S. has suffered through an extended inventory correction, causing an outsized impact on overall growth: inventory contraction cut 1.2% from GDP growth in the second quarter, the fifth straight quarterly hit. Inventory investment turned the corner, adding 0.6% to third-quarter GDP. After a six-quarter collapse, investment in mining and petroleum structures began to revive in the third quarter, and the drilling rig count bounced up from an all-time low in the second quarter. This investment in the energy sector, along with gains in other types of structures, pushed nonresidential fixed investment up 3.1%.

Similar gains eluded residential construction, however, where demand appears robust, but supply and financing constraints are hampering the recovery. Real residential investment had been making progress for five years, but fell 7.7% in the second quarter and 6.2% in the third. Demand for housing appears to be solid, but sales of both existing and new homes fell during the third quarter. Potential homebuyers are still hampered by restricted access to mortgage financing, and homebuilders increasingly report challenges to hiring craft labor for projects.

The Fed refrained from raising interest rates over the summer, concerned about economic uncertainty and negative sentiment in the capital markets. The markets now expect the Fed to raise the short-term federal funds rate 25 basis points in December, and perhaps twice more in 2017, but these are fewer increases than previously predicted. In addition, the long-term equilibrium federal funds rate target has been cut from 3% to 2.6%.

Are central banks around the globe running out of ammunition? Rather than a dearth of ammunition, it seems the effectiveness of monetary policy is diminishing and with it the credibility of central banks. After the Great Recession, central bankers showed

The Long-Term View

Index	2016 3rd Qtr	Periods ended Dec. 31, 2015			
		Year	5 Yrs	10 Yrs	25 Yrs
U.S. Equity					
Russell 3000	4.40	0.48	12.18	7.35	10.03
S&P 500	3.85	1.38	12.57	7.31	9.82
Russell 2000	9.05	-4.41	9.19	6.80	10.50
Non-U.S. Equity					
MSCI EAFE	6.43	-0.81	3.60	3.03	5.40
MSCI Emerging Markets	9.03	-14.92	-4.80	3.61	-
S&P ex-U.S. Small Cap	7.98	5.92	5.51	5.33	6.80
Fixed Income					
Bloomberg Barclays Agg	0.46	0.55	3.25	4.51	6.15
90-Day T-Bill	0.10	0.05	0.07	1.24	2.93
Bloomberg Barclays Long G/C	1.24	-3.30	6.98	6.45	8.08
Citi Non-U.S. Government	0.59	-5.54	-1.30	3.05	5.37
Real Estate					
NCREIF Property	1.77	13.33	12.18	7.76	8.05
FTSE NAREIT Equity	-1.43	3.20	11.96	7.41	12.13
Alternatives					
CS Hedge Fund	1.74	-0.71	3.55	4.97	-
Cambridge PE*	-	8.50	12.41	11.50	15.59
Bloomberg Commodity	-3.86	-24.66	-13.47	-6.43	-
Gold Spot Price	-0.27	-10.46	-5.70	7.41	4.02
Inflation – CPI-U	0.17	0.73	1.53	1.86	2.30

*Private equity data is time-weighted return for period. Most recent quarterly data not available. Sources: Bloomberg Barclays, Bloomberg, Citigroup, Credit Suisse, FTSE, MSCI, NCREIF, Russell Investment Group, Standard & Poor's, Thomson/Cambridge, Bureau of Economic Analysis.

a remarkable willingness to try unorthodox policies, including quantitative easing (QE) and negative interest rates. But persistent banking problems (particularly in Europe and Japan) have made QE less effective, as central bank funds are used to rebuild bank balance sheets rather than for lending. In addition, tight fiscal policies have offset potential gains from monetary stimulus. And all regions have seen a drop in productivity growth, reducing the effectiveness of monetary or fiscal stimulation.

Recent Quarterly Economic Indicators

	3Q16	2Q16	1Q16	4Q15	3Q15	2Q15	1Q15	4Q14
Employment Cost–Total Compensation Growth	2.3%	2.3%	1.9%	2.0%	2.0%	2.0%	2.6%	2.2%
Nonfarm Business–Productivity Growth	0.6%*	-0.6%	-0.6%	-1.7%	2.0%	3.1%	-0.8%	-1.7%
GDP Growth	2.9%	1.4%	0.8%	0.9%	2.0%	2.6%	2.0%	2.3%
Manufacturing Capacity Utilization	75.0%	74.9%	75.3%	75.4%	75.6%	75.5%	75.5%	76.0%
Consumer Sentiment Index (1966=100)	90.3	92.4	91.5	91.3	90.8	94.2	95.5	89.8

*Estimate.

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

With a Little Help From My Friends

FUND SPONSOR | Kitty Lin

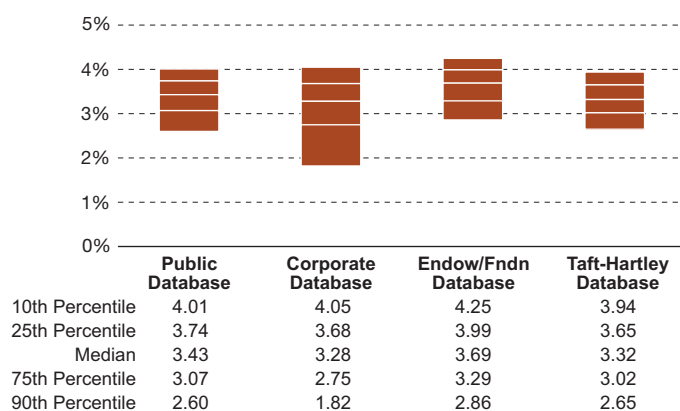
In a sharp shift from last quarter, endowments and foundations turned around and performed better than all other institutional fund types, with a median +3.69% return. Corporate funds, last quarter's best performer, brought up the rear at +3.28%. The median return for all fund types was +3.44%, according to Callan's database.

Interestingly, the rankings shifted slightly when looking at the top 10% of returns. Endowments and foundations still topped the list (+4.25%), but Taft-Hartley funds ranked last (+3.94%). Still, corporate funds and Taft-Hartley funds have done best over longer time periods. Corporates are on top over the last 15 years (+6.89% annualized) while Taft-Hartley funds edged them out over the last five years (+9.84%).

The outperformance from endowments/foundations stemmed from their "friends" in the stock market: non-U.S. equities. The **MSCI ACWI ex-USA Index** gained 6.91% in the third quarter, compared to +4.03% for the **Russell 1000 Index**. That came despite the shock of the U.K.'s Brexit vote to leave the European Union.

The underperformance from corporate funds stemmed from higher allocations to U.S. fixed income; in fact, both U.S. and non-U.S. fixed income markets continued to show lackluster performance (**Bloomberg Barclays Aggregate Index**: +0.46%, **Citi Non-U.S. World Government Bond Index**:

Callan Fund Sponsor Returns for the Quarter



Source: Callan

+0.59%). The decision of central banks in Europe and Japan not to cut rates and the upcoming U.S. election may have contributed to the disappointing returns for both in the quarter. As fixed income markets look less attractive these days, corporate funds increased their allocation of cash compared to the previous quarter.

By size, returns varied much less. Both large (more than \$1 billion in assets) and medium funds (\$100 million to \$1 billion) gained 3.43%, but surprisingly small funds (less than \$100 million) outpaced both, at +3.47%. Over the long haul large funds were the champs, +7.05% over 15 years versus +6.58% for medium funds and +6.35% for small funds.

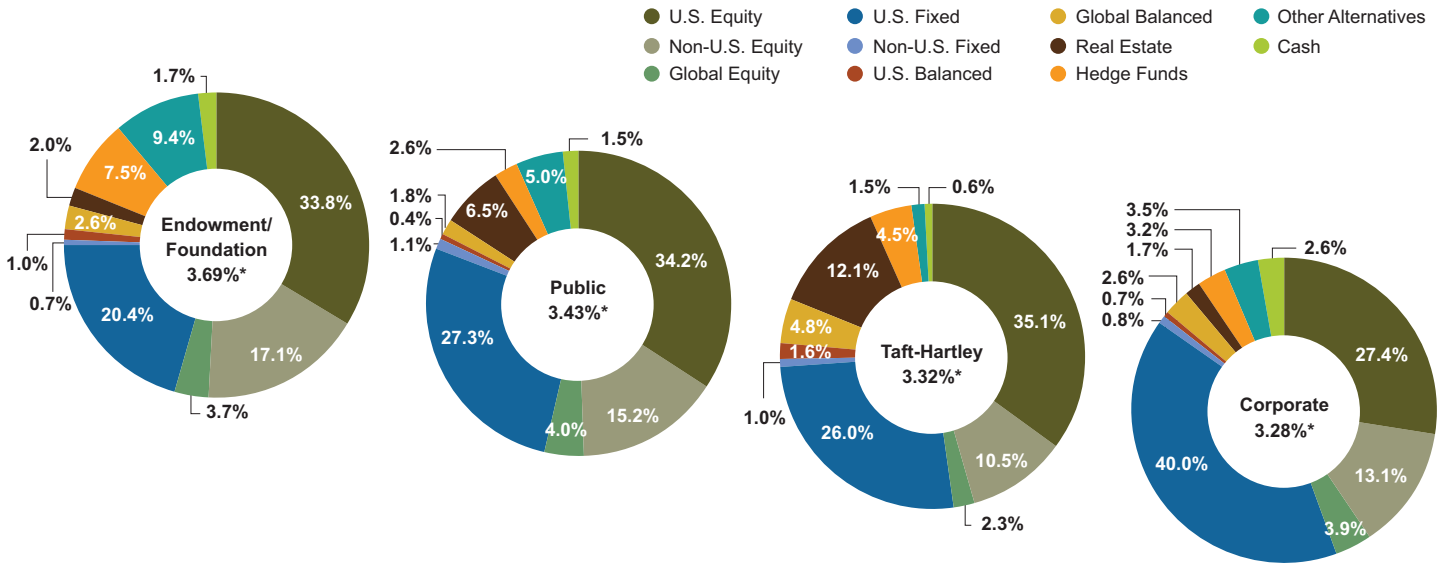
Callan Database Median Returns* for Periods ended September 30, 2016

Fund Sponsor	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Public Funds	3.43	6.65	9.63	6.12	9.30	5.66	6.72
Corporate Funds	3.28	7.64	10.22	6.29	9.22	5.91	6.89
Endowments/Foundations	3.69	6.13	8.81	4.99	8.52	5.39	6.54
Taft-Hartley	3.32	6.49	9.45	6.74	9.84	5.58	6.26

*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.

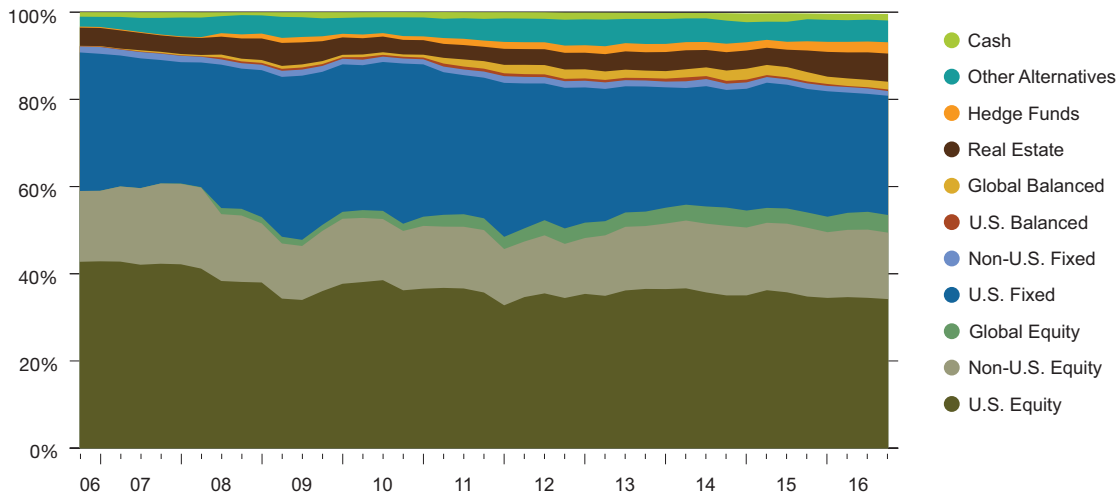
Callan Fund Sponsor Average Asset Allocation



*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.

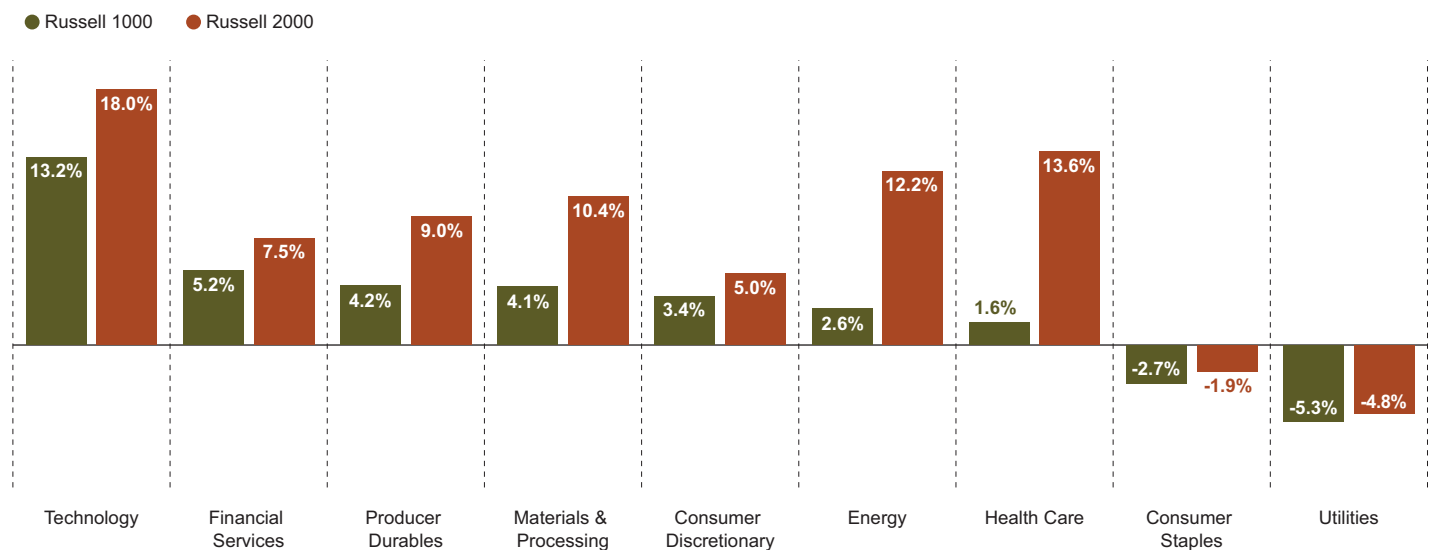
Sell in May? No Way!

U.S. EQUITY | Mark Wood, CFA

The **S&P 500 Index** climbed to its all-time high of 2,193 on August 15 and finished the quarter up 3.85%, ending in positive territory for the fourth quarter in a row. The early days of the quarter were characterized by a strong rebound in equity markets following the late June vote in the U.K. to leave the European Union (Brexit). Market volatility (as measured by VIX) spiked in the immediate aftermath but retreated just as quickly as investors absorbed the shock. The swift pivot, coupled with optimism over U.S. economic prospects and easing fears on China, led to a risk-on environment. July produced the strongest returns of the quarter across market capitalizations; August and September traded in a narrow (but ultimately positive) range as markets anticipated the Fed's interest rate decision in mid-September, which was to forego a rate hike. Foreign developed market indices outperformed the S&P 500 and, consistent with the quarter's risk-on theme, emerging markets were the top performers.

Size was the single biggest determinant of performance. Smaller companies did better—micro, small, and mid-capitalization companies outpaced large-cap stocks (**Russell Microcap Index**: +11.25%, **Russell 2000 Index**: +9.05%, **Russell Midcap Index**: +4.52%, and **Russell 1000 Index**: +4.03%). Additionally, after two strong quarters value underperformed growth in all capitalizations (**Russell 2000 Value Index**: +8.87% and **Russell 2000 Growth Index**: +9.22%). The dispersion in style returns was narrow across market capitalizations, with the widest (110 bps) in large cap (**Russell 1000 Growth** minus **Russell 1000 Value**). Defensive and high-dividend yield exposures sold off during the third quarter but have performed well year-to-date due to the increased global economic uncertainty earlier in 2016.

Economic Sector Quarterly Performance



Source: Russell Investment Group

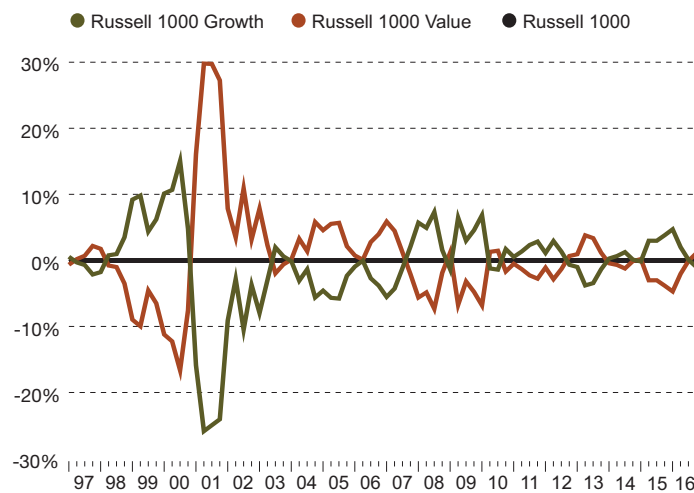
Note: As of the fourth quarter of 2015, the Capital Market Review reports sector-specific returns using the Russell Global Sectors (RGS) classification system rather than the Global Industry Classification Standard (GICS) system. RGS uses a three-tier classification system containing nine sectors; GICS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

Sector performance reflected the shift in risk attitudes. Among the worst-performing sectors in the S&P 500 during the quarter were Utilities (-0.7%), Consumer Staples (-0.7%), and Telecom (+1.0%)—all sectors associated with lower volatility and higher dividend yields. After a strong performance in the second quarter, Energy retreated, posting a 1.9% loss for the quarter. The more growth-oriented, risk-on sectors, Technology (+7.9%) and Health Care (+4.9%), were the top performers. In a new development, REITs and other listed real estate companies were extracted from the Financials sector and elevated to a new Real

Estate sector in the Global Industry Classification Standard (GICS). The new sector, representing 3.1% of the S&P 500, had a tough start, finishing down 2.1%.

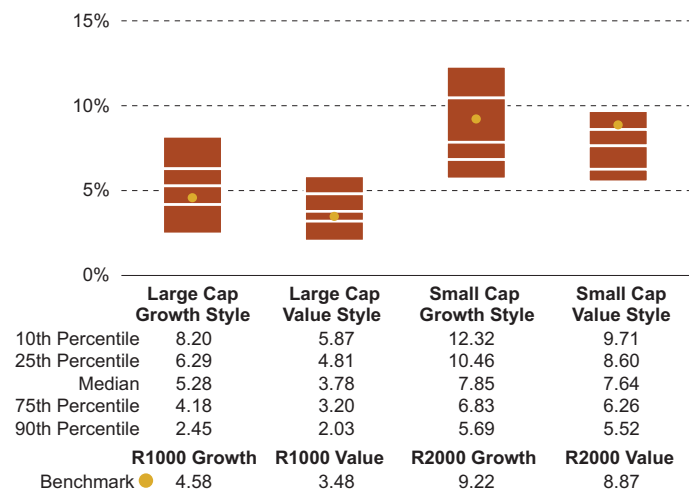
The U.S. equity market continued to rise, even as investor sentiment wavered between positive and negative over the course of the quarter. Active managers continue to find it a difficult environment to outperform as macro factors dominated price activity and performance in equity markets.

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 September 30, 2016

	S&P 500	Rus 3000	Rus 1000	Rus Midcap	Rus 2500	Rus 2000
Number of Issues	507	2,955	994	794	2,459	1,961
Wtd Avg Mkt Cap (\$bn)	134.8	112.6	121.7	12.6	4.0	1.8
Price/Book Ratio	2.7	2.6	2.7	2.4	2.1	2.0
Forward P/E Ratio	16.9	17.4	17.2	18.9	19.2	19.8
Dividend Yield	2.1%	2.0%	2.0%	1.7%	1.6%	1.5%
5-Yr Earnings (forecasted)	12.5%	12.5%	12.5%	11.2%	12.0%	13.5%

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

U.S. EQUITY (Continued)

Callan Style Median and Index Returns* for Periods ended September 30, 2016

Large Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Large Cap Core Style	4.55	5.71	12.77	10.64	16.13	7.39	7.80
Russell 3000	4.40	8.18	14.96	10.44	16.36	7.37	7.61
Russell 1000	4.03	7.92	14.93	10.78	16.41	7.40	7.48
S&P 500	3.85	7.84	15.43	11.16	16.37	7.24	7.15
Large Cap Growth Style	5.28	3.69	11.27	10.85	16.24	8.94	7.55
Russell 1000 Growth	4.58	6.00	13.76	11.83	16.60	8.85	7.35
Large Cap Value Style	3.78	7.61	13.71	8.99	15.88	6.54	8.08
Russell 1000 Value	3.48	10.00	16.20	9.70	16.15	5.85	7.46
Mid Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Mid Cap Core Style	4.98	7.80	11.05	9.88	16.81	8.65	10.96
Russell Midcap	4.52	10.26	14.25	9.70	16.67	8.32	10.44
Mid Cap Growth Style	4.05	4.30	6.98	6.98	14.55	8.62	9.53
Russell Midcap Growth	4.59	6.84	11.24	8.90	15.85	8.51	9.66
Mid Cap Value Style	4.82	9.73	13.35	9.30	16.62	8.48	10.99
Russell Midcap Value	4.45	13.72	17.26	10.49	17.38	7.89	10.72
Small Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Small Cap Core Style	7.62	10.07	14.32	8.51	17.63	8.55	11.31
Russell 2000	9.05	11.46	15.47	6.71	15.82	7.07	9.26
Small Cap Growth Style	7.85	6.52	8.73	5.47	15.82	9.13	9.81
Russell 2000 Growth	9.22	7.48	12.12	6.58	16.15	8.29	8.90
Small Cap Value Style	7.64	12.74	15.90	7.92	17.11	8.05	11.63
Russell 2000 Value	8.87	15.49	18.81	6.77	15.45	5.78	9.38
Smid Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Smid Cap Core Style	6.32	9.21	12.42	7.64	16.34	9.96	-
Russell 2500	6.56	10.80	14.44	7.77	16.30	7.95	10.07
Smid Cap Growth Style	6.03	4.73	8.39	6.01	15.25	9.23	9.85
Russell 2500 Growth	6.98	6.95	11.02	7.43	16.20	8.82	9.52
Smid Cap Value Style	6.39	12.17	14.71	7.37	16.23	8.56	11.41
Russell 2500 Value	6.18	14.51	17.68	8.05	16.29	6.92	10.17
Russell 3000 Sectors	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Consumer Discretionary	3.50	4.52	8.99	9.57	19.01	10.11	-
Consumer Staples	-2.67	7.48	15.77	13.92	15.95	11.57	-
Energy	2.87	17.69	16.60	-4.26	4.72	3.84	-
Financial Services	5.44	4.35	10.18	9.69	17.97	0.87	-
Health Care	2.40	0.92	9.82	14.21	20.52	10.82	-
Materials & Processing	4.98	16.18	25.84	7.17	14.12	6.94	-
Producer Durables	4.61	10.99	18.76	9.54	17.48	7.29	-
Technology	13.49	13.07	22.76	16.28	17.08	10.27	-
Utilities	-5.31	17.12	21.88	11.87	12.44	7.07	-

*Returns less than one year are not annualized.

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

Calm After the Storm

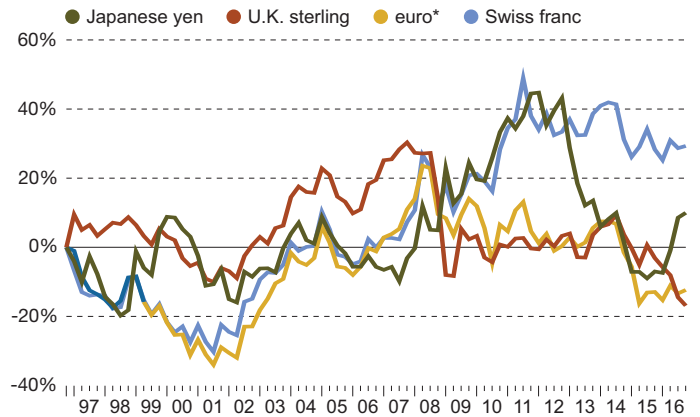
NON-U.S. EQUITY | Irina Sushch

Following two highly volatile quarters, the third quarter of 2016 bucked the trend—volatility was exceptionally low as investors appeared complacent about continued accommodative central bank policies and steady, albeit slow, economic growth. A risk-on rally led to stock market highs as anxieties about the U.K.'s Brexit vote to exit the European Union dwindled.

In this environment, the **MSCI ACWI ex USA Index** rose 6.91%. In contrast to the previous quarter, economically sensitive sectors fared best, particularly Information Technology (+15.50%) and Materials (+12.56%). Health Care was the only sector in the red (-1.96%), although its defensive counterparts, Utilities (+0.20%) and Telecommunications (+0.43%), faltered as well. Consistent with the quarter's risk-on theme, emerging markets (**MSCI Emerging Markets Index**: +9.03%) outpaced their developed peers (**MSCI World ex USA Index**: +6.29%), even excluding Canada (**MSCI EAFE Index**: +6.43%). The **MSCI ACWI ex USA Value Index** (+7.79%) overcame the **MSCI ACWI ex USA Growth Index** (+6.06%) for the first time since the second quarter of 2014. Small-cap stocks shot up into the black (**MSCI ACWI ex USA Small Cap Index**: +7.91%), finishing near the top among major non-U.S. indices.

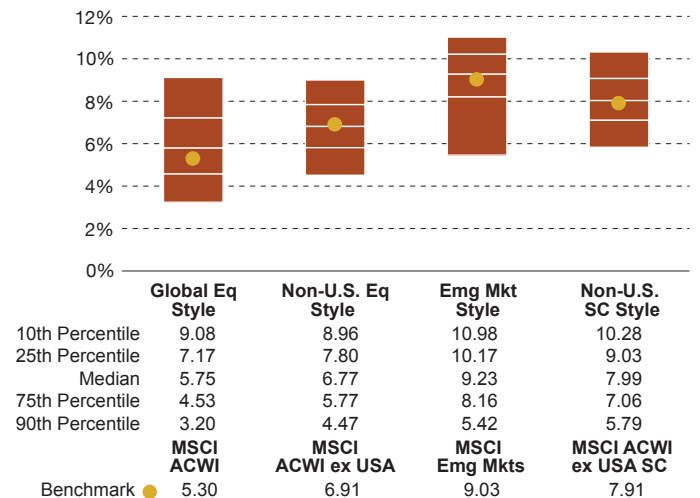
Equity markets across Europe crashed following the unexpected vote for Brexit but regained ground quickly as it became clear that the aftermath of the referendum was not immediately catastrophic. British Prime Minister David Cameron resigned and was replaced by Theresa May, who pledged that the U.K. would go through with exiting the European Union, but not hastily. The Bank of England sprang into action to support the economy, and the European Central Bank offered reassurance that it too would work to bolster growth. The **MSCI Europe Index** climbed 5.40%, with the strong performers including Austria (+16.66%), Germany (+10.01%), Spain (+9.32%), the Netherlands (+9.11%), and even the U.K. (+3.98%). Their vigor was attributed to better-than-expected earnings from Information Technology giants, improving commodity prices, rallying financial stocks, and a swell of M&A activity. European

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



* German mark returns before 1Q99
Source: MSCI

Callan Style Group Quarterly Returns



Sources: Callan, MSCI

Health Care stocks stumbled (-3.09%) due to intensified global scrutiny during the U.S. election; Denmark, where a large health care company makes up approximately 20% of the country's index, was particularly hard hit, dropping 6.27%.

Southeast Asia and the Pacific enjoyed a buoyant quarter as well; the **MSCI Pacific Index** was up 8.46%. Japanese equities rallied during the quarter, ascending 8.60% due to new

NON-U.S. EQUITY (Continued)

central bank policies and a fresh stimulus package. Additionally, Consumer Discretionary, IT, and Materials stocks surged due to strong earnings growth in several gaming and automobile companies. Australia (+7.91%) and New Zealand (+12.44%) also performed well as megabanks and commodities gained ground.

Emerging markets shot up in the accommodative macroeconomic environment (MSCI Emerging Markets Index: +9.03%). The top sector was IT, surging 16.08%. The stocks of smart-phone manufacturers and technology component suppliers soared, boosting the Asian markets, including Taiwan (+11.70%) and South Korea (+10.98%). China was one of the biggest beneficiaries (+13.92%), thanks to its burgeoning internet giants. Latin America was relatively sluggish this quarter (+5.37%) but was propped up by Brazil, which shot up another 11.31%, skyrocketing 62.90% year-to-date. Hopes for economic change run high under Michel Temer, who replaced the impeached Dilma

Rousseff as president. Russia (+8.43%) did not miss out on the rally. However, the Philippines, Turkey, and Malaysia were all in the red as political turmoil continued to afflict the countries (-5.33%, -5.26%, and -1.52%, respectively). Mexico also dwindled 2.24% as the peso fell 5% against the dollar.

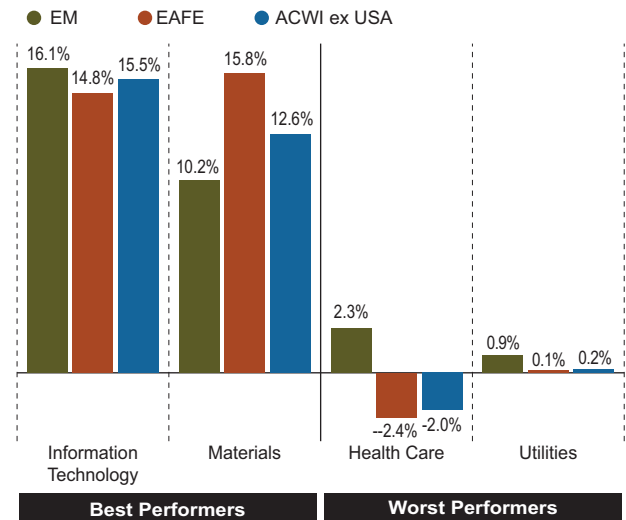
Quarterly Returns for Non-U.S. Developed Countries

Country	Equity Index			Weight*
	(US\$)	(Local Currency)	Local Currency	
Australia	7.91%	5.00%	2.77%	5.13%
Austria	16.66%	15.32%	1.16%	0.13%
Belgium	5.00%	3.80%	1.16%	0.96%
Canada	4.85%	6.10%	-1.18%	6.72%
Denmark	-6.27%	-7.26%	1.07%	1.23%
Finland	7.42%	6.19%	1.16%	0.70%
France	6.36%	5.14%	1.16%	6.81%
Germany	10.01%	8.75%	1.16%	6.31%
Hong Kong	11.92%	11.89%	0.03%	2.45%
Ireland	7.42%	6.20%	1.16%	0.33%
Israel	-1.97%	-3.96%	2.64%	0.50%
Italy	2.21%	1.04%	1.16%	1.33%
Japan	8.60%	7.20%	1.31%	16.70%
Netherlands	9.11%	7.96%	1.16%	2.35%
New Zealand	12.44%	10.12%	2.11%	0.14%
Norway	6.28%	1.51%	4.70%	0.45%
Portugal	6.28%	5.07%	1.16%	0.10%
Singapore	-0.15%	1.13%	-1.29%	0.89%
Spain	9.32%	8.07%	1.16%	2.13%
Sweden	7.48%	8.68%	-1.11%	1.97%
Switzerland	2.62%	2.12%	0.50%	6.29%
U.K.	3.98%	7.00%	-2.83%	13.23%

*Weight in the MSCI ACWI ex USA Index

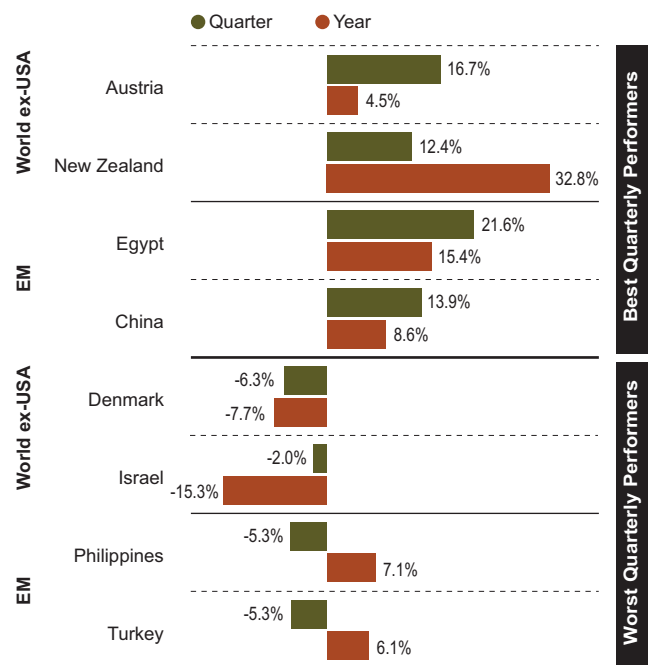
Sources: MSCI, Russell Investment Group, Standard & Poor's.

Quarterly Returns: Strong and Struggling Sectors



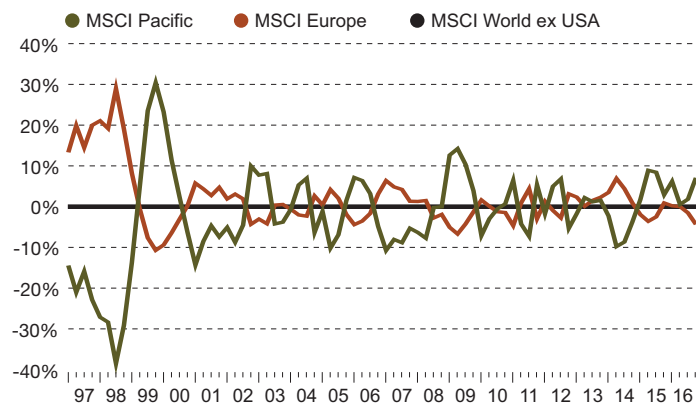
Source: MSCI

Quarterly and Annual Country Performance Snapshot



Source: MSCI

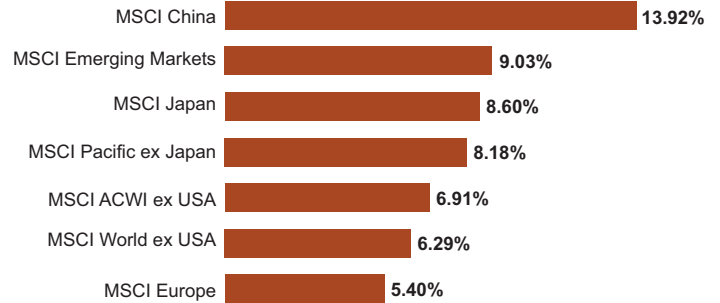
Rolling One-year Relative Returns (vs. MSCI World ex USA)



Source: MSCI

Regional Quarterly Performance

(U.S. Dollar)



Source: MSCI

Callan Style Median and Index Returns* for Periods ended September 30, 2016

Global Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Global Equity Style	5.75	5.48	11.23	6.25	12.38	5.57	7.80
MSCI World	4.87	5.55	11.36	5.85	11.63	4.47	6.29
MSCI ACWI	5.30	6.60	11.96	5.17	10.63	4.34	6.47
Non-U.S. Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Non-U.S. Style	6.77	3.14	7.94	2.16	8.75	3.20	7.81
MSCI World ex USA	6.29	3.12	7.16	0.33	6.89	1.88	5.96
MSCI ACWI ex USA	6.91	5.82	9.26	0.18	6.04	2.16	6.56
Regional Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
MSCI China	13.92	8.58	12.95	3.90	8.24	7.78	13.08
MSCI Europe ex UK	6.03	-0.36	2.90	0.01	8.17	1.53	6.02
MSCI Japan	8.60	2.54	12.13	3.33	7.36	1.05	4.27
MSCI Japan (local)	7.20	-13.68	-5.19	4.42	13.38	-0.49	3.15
MSCI Pacific	8.46	5.26	14.74	2.31	7.31	2.50	6.08
MSCI Pacific (local)	6.97	-7.17	0.77	4.39	11.86	0.99	4.47
MSCI Pacific ex Japan	8.18	10.86	20.05	0.42	7.07	5.85	10.99
MSCI Pacific ex Japan (local)	6.52	7.03	13.34	4.95	10.29	5.31	8.55
MSCI United Kingdom	3.98	0.80	1.53	-1.80	5.99	1.40	5.02
MSCI United Kingdom (local)	7.00	14.37	18.39	5.68	9.91	5.15	5.89
Emerging/Frontier Markets	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Emerging Market Style	9.23	16.44	18.41	0.81	4.83	5.23	12.93
MSCI Emerging Markets	9.03	16.02	16.78	-0.56	3.03	3.94	11.55
MSCI Emerging Markets (local)	7.59	11.30	12.96	4.33	6.95	5.94	11.97
MSCI Frontier Markets	2.65	2.16	0.91	-0.17	4.64	-0.26	-
Global/Non-U.S. Small Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Non-U.S. Small Cap Style	7.99	4.51	11.38	6.12	12.77	6.33	12.20
MSCI World Small Cap	7.24	9.70	14.34	6.18	13.38	6.30	10.31
MSCI ACWI Small Cap	7.28	9.66	14.21	5.67	12.47	6.59	10.52
MSCI World ex USA Small Cap	8.00	7.26	13.50	4.15	9.72	4.11	9.97
MSCI ACWI ex USA Small Cap	7.91	7.70	13.38	3.52	8.60	4.58	10.47

*Returns less than one year are not annualized.

Sources: Callan, MSCI.

Hut, Hut ... Hike!

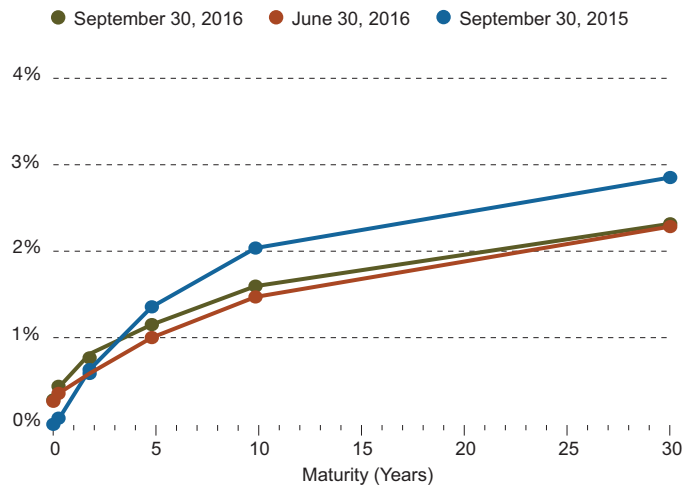
U.S. FIXED INCOME | Rufash Lama

For the quarter, the **Bloomberg Barclays High Yield Index** grew 5.55% while the **Bloomberg Barclays U.S. Aggregate Index** managed to rise a mere 0.46%.

Driven by Brexit-induced concerns, the yield on the benchmark 10-year Treasury note hit a record low of 1.37% in July; however, it rose for the remainder of the quarter and closed at 1.60%. While the Fed left the federal funds rate unchanged in the third quarter, its announcement was noteworthy because of the high level of disagreement; the three dissenting votes were the most since December 2014. Based on federal funds futures contracts, traders are betting there is a 78% chance of a rate hike at the next meeting in December after the Fed's decision to hold rates steady again in November.

Yields varied across the maturity spectrum during the quarter: While Treasury rates rose along the entire yield curve in August, the curve steepened in September as the 2-year fell by 4 basis points to 0.76% and the 30-year rose by 8 basis points to end at 2.32%. Intermediate Treasuries (-0.26%) outperformed long Treasuries (-0.36%) during the quarter.

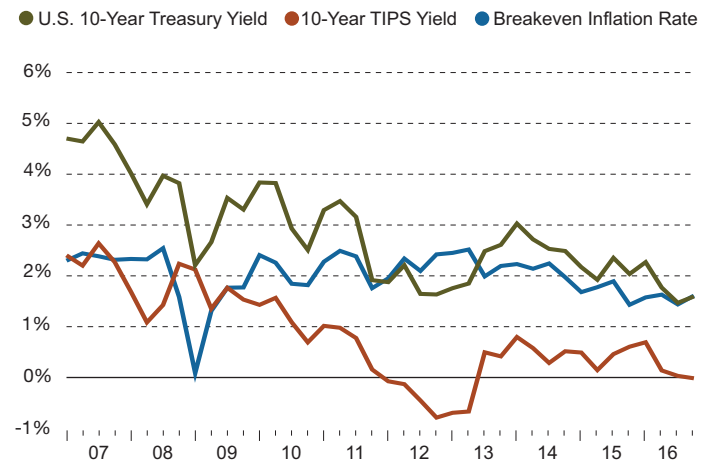
U.S. Treasury Yield Curves



Source: Bloomberg

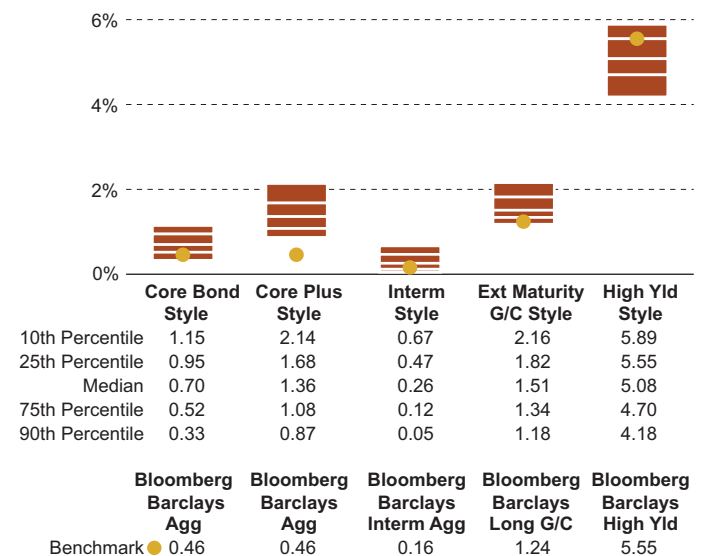
Credit spreads tightened during the quarter and yields inched toward historic lows. Their +5.55% return made high-yield corporates the strongest performer during the quarter. Despite record issuances in August, the credit sector gained 1.23% for the quarter and outperformed MBS (+0.60%) and CMBS (+0.59%). Industrials beat Utilities and Financials on a

Historical 10-Year Yields



Source: Bloomberg

Callan Style Group Quarterly Returns



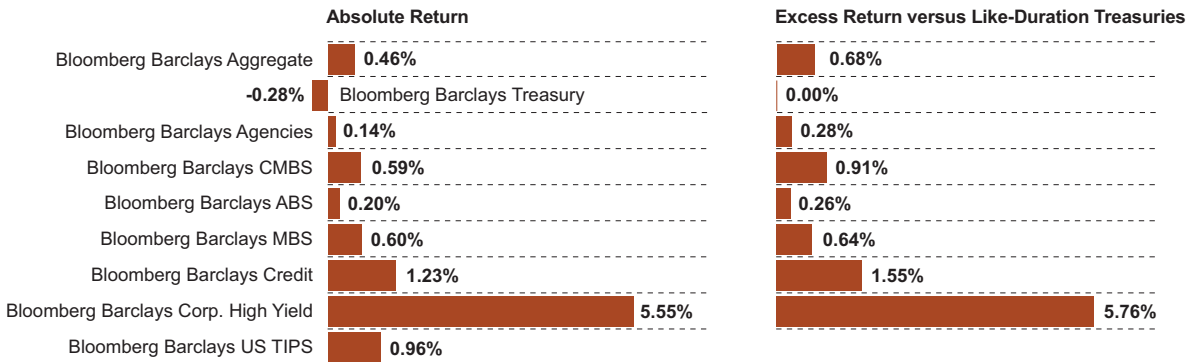
Source: Bloomberg Barclays, Callan

duration-adjusted basis. Further, on a duration-adjusted basis, credit securities outperformed Treasuries by 155 basis points. Treasuries ended the quarter in the red (-0.28%).

Investment-grade corporate issuance totaled \$340 billion for the quarter, setting a record. By the end of September,

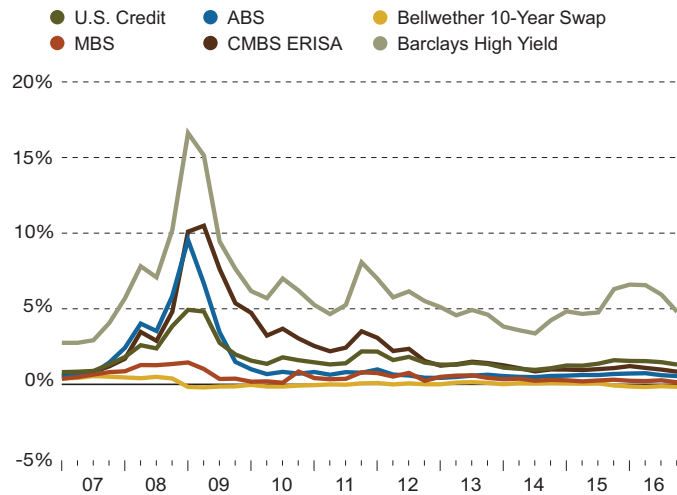
year-to-date corporate investment-grade bond issuance was 8% ahead of last year's pace. And the record supplies were met with strong demand as investors snapped up bonds. CMBS and municipal markets also demonstrated robust supply. And despite low yields and heavy issuance of CMBS securities in September, they outperformed Treasuries by 91 bps.

Fixed Income Index Quarterly Returns



Source: Bloomberg Barclays

Effective Yield Over Treasuries



Source: Bloomberg Barclays

U.S. Fixed Income Index Characteristics as of Sept. 30, 2016

Bloomberg Barclays Indices	Yield to Worst	Mod Adj Duration	Avg Maturity
Bloomberg Barclays Aggregate	1.96	5.51	7.82
Bloomberg Barclays Universal	2.39	5.39	7.68
Bloomberg Barclays Gov/Credit	1.92	6.72	8.99
1-3 Year	1.04	1.91	1.98
Intermediate	1.51	4.09	4.44
Long-Term	3.32	15.57	24.32
Bloomberg Barclays Long Credit	4.04	14.04	23.92
Bloomberg Barclays Corp High Yield	6.17	4.05	6.33
Bloomberg Barclays TIPS	1.62	6.59	8.61
Bloomberg Barclays Muni Bond 1-5 Year	1.15	2.72	3.22
Bloomberg Barclays Muni 1-10 Year	1.38	4.02	5.88
Bloomberg Barclays Municipal	1.82	5.52	13.08

Source: Bloomberg Barclays

U.S. FIXED INCOME (Continued)

Callan Style Median and Index Returns* for Periods ended September 30, 2016

Broad Fixed Income	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Core Bond Style	0.70	6.15	5.65	4.36	3.73	5.31	5.25
Core Bond Plus Style	1.36	7.16	6.55	4.61	4.55	5.77	5.91
Bloomberg Barclays Aggregate	0.46	5.80	5.19	4.03	3.08	4.79	4.80
Bloomberg Barclays Universal	0.96	6.69	6.11	4.27	3.62	5.00	5.12
Long-Term	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Extended Maturity Credit Style	2.50	17.00	16.11	10.05	7.94	8.07	-
Bloomberg Barclays Long Credit	2.26	16.50	15.73	9.53	7.05	7.63	7.74
Extended Maturity Gov/Credit Style	1.51	16.12	15.14	10.30	6.96	8.38	8.01
Bloomberg Barclays Long Gov/Credit	1.24	15.74	14.66	10.08	6.32	7.84	7.61
Intermediate-Term	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Intermediate Style	0.26	4.31	3.83	3.05	2.85	4.62	4.62
Bloomberg Barclays Interm Gov/Credit	0.16	4.24	3.52	2.80	2.45	4.17	4.22
Short-Term	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Defensive Style	0.15	1.94	1.72	1.47	1.48	2.89	3.01
Bloomberg Barclays Gov/Credit 1-3 Yr	0.02	1.68	1.31	1.09	1.05	2.59	2.80
Bank Loans	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Bank Loan Style	2.86	7.43	5.70	3.78	5.55	4.91	5.03
Credit Suisse Leveraged Loans	3.10	7.46	5.35	3.60	5.30	4.24	4.79
High Yield	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
High Yield Style	5.08	12.70	10.86	5.20	8.28	7.64	8.61
Bloomberg Barclays Corp High Yield	5.55	15.11	12.73	5.28	8.34	7.71	8.63
Unconstrained	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Unconstrained Fixed Style	2.21	3.95	4.56	2.36	3.87	4.60	6.44
90 Day T-Bill + 3%	0.84	2.48	3.27	3.12	3.11	3.92	4.38
Stable Value	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Stable Value Style	0.48	1.42	1.88	1.76	1.94	2.85	3.58
iMoneyNet Mutual Fund Avg	0.03	0.08	0.09	0.04	0.03	0.82	-
TIPS	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Inflation-Linked Style	1.00	7.28	6.62	2.40	1.96	4.58	5.50
Bloomberg Barclays TIPS	0.96	7.27	6.58	2.40	1.93	4.48	5.39
Municipal	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Short Municipal Style	-0.04	0.75	0.82	0.83	0.94	1.81	1.96
Bloomberg Barclays Municipal 1-5 Yr	-0.16	1.38	1.59	1.74	1.67	3.07	3.09
Intermediate Municipal Style	-0.26	3.28	4.64	4.13	3.52	3.91	4.00
Bloomberg Barclays Municipal 1-10 Yr	-0.11	2.58	3.40	3.34	2.95	4.04	4.02
Long Municipal Style	-0.21	4.14	5.83	5.74	4.95	5.03	5.19
Bloomberg Barclays Municipal	-0.30	4.01	5.58	5.54	4.48	4.75	4.89

*Returns for less than one year are not annualized.

Sources: Bloomberg Barclays, Callan, Citigroup, Merrill Lynch

Globe-Trotting for Yield

NON-U.S. FIXED INCOME | Kyle Fekete

In an extraordinary effort to stimulate economic growth and inflation, the Bank of Japan introduced a 0% yield-target for 10-year bonds, aiming to exceed its 2% inflation objective. The central bank also intends to maintain its negative short rate stance in an effort to steepen the yield curve and thus help increase profitability for banks. The bank's governor termed the new policy a "reinforcement" of its quantitative easing (QE) program. Central banks have typically targeted short-term rates in QE programs, focusing on maturities of less than a year. Yield on Japan's 10-year government bond settled at -0.09% at the end of the quarter.

Overall, the European sovereign bond market was flat as the European Central Bank left interest rates unchanged. The

Quarterly Returns for Non-U.S. Government Indices

Country	Country Debt (\$)	Country Debt	Local Currency	Weight*
Australia	3.60%	0.80%	2.77%	2.29%
Austria	1.81%	0.65%	1.16%	1.74%
Belgium	1.48%	0.32%	1.16%	2.93%
Canada	-0.67%	0.52%	-1.18%	2.32%
Denmark	0.96%	-0.10%	1.07%	0.82%
Finland	1.67%	0.51%	1.16%	0.67%
France	1.37%	0.21%	1.16%	11.72%
Germany	0.98%	-0.18%	1.16%	8.60%
Ireland	2.28%	1.11%	1.16%	0.95%
Italy	2.31%	1.14%	1.16%	11.07%
Japan	-0.92%	-2.19%	1.31%	34.89%
Malaysia	-0.66%	1.90%	-2.51%	0.53%
Mexico	-4.22%	0.47%	-4.67%	0.98%
Netherlands	1.29%	0.13%	1.16%	2.70%
Norway	3.53%	-1.12%	4.70%	0.30%
Poland	3.81%	0.30%	3.50%	0.71%
Singapore	0.22%	1.52%	-1.29%	0.45%
South Africa	10.29%	3.56%	6.50%	0.55%
Spain	3.39%	2.21%	1.16%	6.45%
Sweden	-0.63%	0.48%	-1.11%	0.52%
Switzerland	-0.08%	-0.57%	0.50%	0.27%
U.K.	-0.37%	2.52%	-2.83%	8.54%

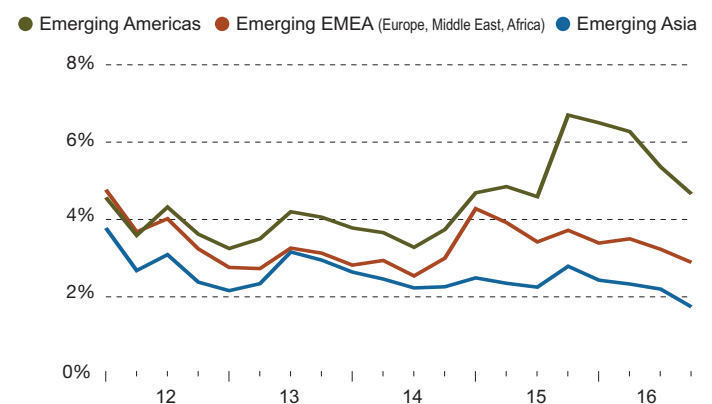
*Weight in the Citi Non-U.S. World Government Bond Index.
Source: Citigroup

Bloomberg Barclays Global Aggregate Index rose 0.82% (+0.53% hedged). The ECB committed to a monthly QE program of buying €80 billion in government bonds, asset-backed securities, and corporate debt through March 2017; however, President Mario Draghi announced a review of the program to ensure investable assets would not dry up. Yield on the German 10-year bund notched up a basis point to -0.12%. There is now over \$12 trillion of negative-yielding debt globally, with Japan accounting for nearly half and Western Europe—namely France, Germany, and the Netherlands—the other half. Investors' sustained hunt for yield was evident in European bond pricing as periphery government Treasuries tended to decline more than their core eurozone counterparts. The Spanish and Italian 10-year yields declined 28 bps and 7 bps to 0.88% and 1.91%, respectively. The euro increased 1.16% against the U.S. dollar.

Despite the economic and political uncertainty the Brexit vote left in its wake, when U.K. voters chose to leave the European Union and the British pound plummeted 2.83%, data released showed no immediate negative effect on confidence or productivity. Yield on the 10-year gilt fell 12 bps to +0.75%.

The developing markets advanced for the fourth straight quarter in spite of multiple political headwinds, including the

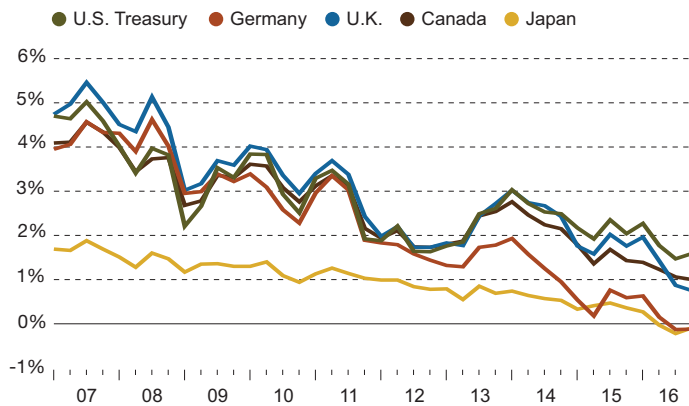
Emerging Spreads Over Developed (By Region)



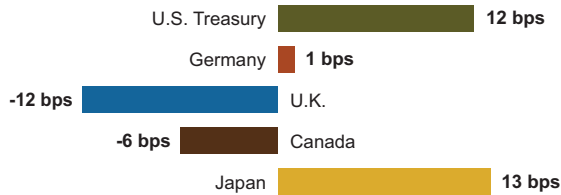
Source: Bloomberg Barclays

NON-U.S. FIXED INCOME (Continued)

10-Year Global Government Bond Yields



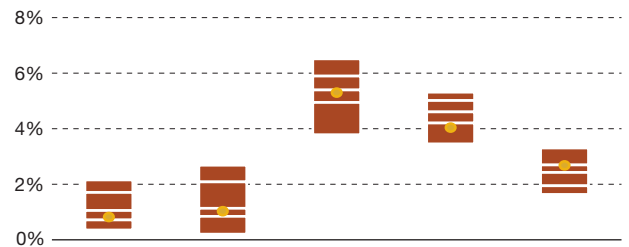
Change in 10-Year Yields from 2Q16 to 3Q16



Source: Bloomberg

impeachment of Brazil's president and the failed Turkish coup. The hard currency **J.P. Morgan EMBI Global Index** climbed 4.04%. Local currency debt, as measured by the **J.P. Morgan GBI-EM Global Diversified Index**, ticked up 2.68%.

Callan Style Group Quarterly Returns



	Global Fixed Style	Non-U.S. Fixed Style	Global High Yld Style	Em Debt Style (US\$)	Em Debt Style (local)
10th Percentile	2.18	2.71	6.54	5.34	3.33
25th Percentile	1.73	2.11	5.92	5.04	2.72
Median	1.08	1.16	5.42	4.63	2.45
75th Percentile	0.74	0.87	4.97	4.23	1.97
90th Percentile	0.38	0.23	3.81	3.48	1.66
Benchmark	0.82	1.03	5.3	4.04	2.68

Sources: Bloomberg Barclays, Callan, JPMorgan Chase

Callan Style Median and Index Returns* for Periods ended September 30, 2016

Global Fixed Income	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Global Fixed Income Style	1.08	9.70	8.88	2.39	2.15	4.91	6.14
Bloomberg Barclays Global Aggregate	0.82	9.85	8.83	2.13	1.74	4.26	5.13
Global Fixed Income Style (hedged)	1.05	6.96	7.26	5.52	4.95	5.44	5.64
Bloomberg Barclays Global Aggregate (hedged)	0.53	6.44	6.54	5.05	4.26	4.73	4.73
High Yield	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Global High Yield Style	5.42	13.65	12.46	3.91	7.61	7.03	9.74
Bloomberg Barclays Global High Yield	5.30	14.49	13.51	4.97	8.56	7.87	9.43
Non-U.S. Fixed Income	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Non-U.S. Fixed Income Style	1.16	12.95	11.41	1.52	2.01	4.48	6.26
Bloomberg Barclays Global Aggregate ex US	1.03	13.09	11.67	0.75	0.70	3.82	5.41
Emerging Markets Fixed Income	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Emerging Debt Style (US\$)	4.63	16.27	18.15	7.02	7.81	8.13	11.06
JPM EMBI Global Diversified	4.04	14.77	16.20	8.20	7.76	7.73	9.57
Emerging Debt Style (local)	2.45	16.95	16.83	-2.14	0.22	5.21	7.25
JPM GBI-EM Global Diversified	2.68	17.07	17.06	-2.58	0.06	5.52	-
Emerging Debt Blend Style	3.59	15.14	16.15	2.13	3.94	8.07	12.69
JPM EMBI GI Div/JPM GBI-EM GI Div	3.36	16.11	16.83	2.81	3.95	6.72	-
Emerging Debt Corporate Style	3.59	12.81	13.05	6.55	8.08	-	-
JPM CEMBI	3.25	12.57	13.34	6.38	7.31	7.16	-

*Returns less than one year are not annualized.

Sources: Bloomberg Barclays, Callan, JPMorgan

Returns Take a Summer Vacation

REAL ESTATE | Kevin Nagy

The **NCREIF Property Index*** gained 1.77% during the second quarter (1.16% from income and 0.60% from appreciation), its worst performance since the first quarter of 2010. In addition, appreciation fell for the sixth consecutive quarter.

In a repeat of the second quarter, Industrial (+2.89%) and Retail (+1.98%) topped property sector performance, and Office (+1.26%) and Hotels (+1.35%) were the worst performers again. The West region led the way (+2.19%) while the Midwest (+1.46%) was the weakest. Transaction volume was \$9.6 billion, a 7% increase over the previous quarter and a 20% increase over the same period in 2015. Appraisal capitalization rates fell to 4.48%, an all-time low. The spread between appraisal capitalization rates and transaction capitalization rates widened to 180 basis points, the largest since the third quarter of 2009.

Occupancy rates continued to climb, setting a new 15-year high at 93.22%. Retail and Apartment occupancy rates fell slightly; Industrial and Office rates increased. Apartments were the only property type to experience a drop year-to-date.

The preliminary return for the **NCREIF Open End Diversified Core Equity Index*** was 1.83%; 0.90% of that was income and 0.94% from appreciation. This surpassed last quarter as the lowest since the first quarter of 2010. Income returns stayed in line with past quarters, but appreciation reached its lowest level since the first quarter of 2010. Low long-term interest rates have been a strong tailwind for U.S. real estate performance in recent quarters, but expectations of a Fed rate increase have sucked the wind from its sails.

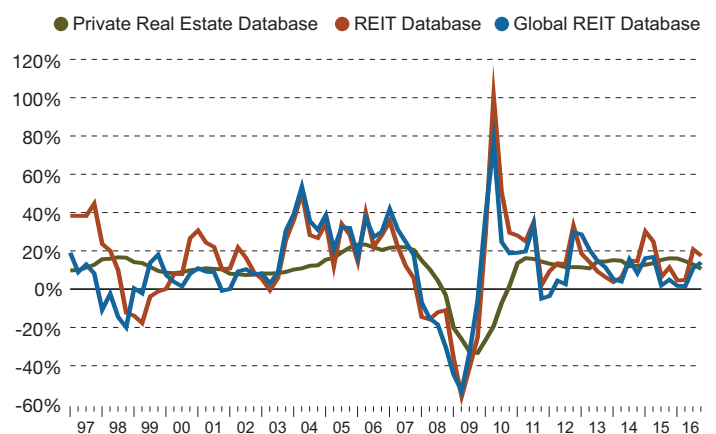
Global real estate investment trusts (REITs), tracked by the **FTSE EPRA/NAREIT Developed REIT Index (USD)**, outperformed their U.S. counterparts and posted a 1.46% return. U.S. REITs, as measured by the **FTSE NAREIT Equity REITs Index**, lost 1.43% for the quarter.

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

In the U.S., REITs started the quarter strong, riding the post-Brexit bounce that followed the U.K.'s surprise vote to leave the European Union. The gains would not last, however, as mixed economic data fueled concerns of a Federal Reserve rate increase. Timber (+7.72%), Industrial (+6.67%), and Office (+3.24%) were the strongest-performing sectors for the quarter. Specialty (-9.93%), Data Centers (-9.02%), and Retail (-2.62%) were some of the laggards. Self-storage (-12.20%) struggled for the second straight quarter and was the worst performing sector. Investors appeared to be shifting money into more economically sensitive U.S. stocks, which generally performed well on the back of modest long-term yield increases. Anticipation of a Fed rate hike also prompted some investors to sell out of crowded defensive positions such as REITs into more cyclical stocks. As of September 30, U.S. REITs were trading at a 12.3% premium to net asset value, more than a 500 basis point increase over the previous quarter.

As the dust settles from the initial shock of Brexit, the impact on U.K. real estate is beginning to be apparent. Transaction evidence shows City of London and West End offices were the most affected due to uncertainty about the city's future as a financial hub. Industrial assets were the least affected. Outside of the U.K., the Nordic countries were the strongest performers.

Rolling One-Year Returns



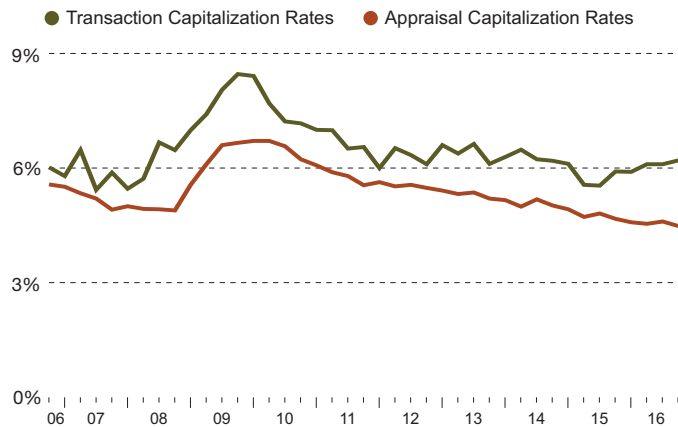
Source: Callan

REAL ESTATE (Continued)

Signs that the economies of Norway and Finland may finally be on the cusp of growth have led to record levels of investment and increases in property value. France also performed well as the economy recovered from a sluggish second quarter and employment growth propelled office returns upward.

Collateralized mortgage-backed securities (CMBS) issuance for the quarter was \$19.5 billion, a huge jump from the \$12.1 billion in the second quarter. While issuance was up quarter-over-quarter, it was still down compared to the third quarter of 2015 (\$25.3 billion).

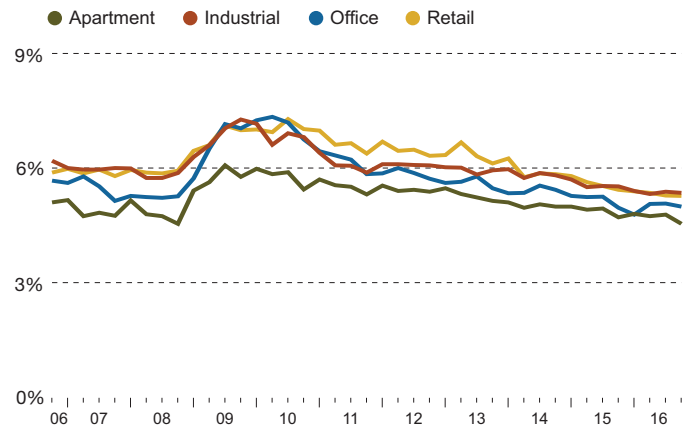
NCREIF Transaction and Appraisal Capitalization Rates



Source: NCREIF

Note: Transaction capitalization rate is equal weighted.

NCREIF Capitalization Rates by Property Type



Source: NCREIF

Note: Capitalization rates are appraisal-based.

Callan Database Median and Index Returns* for Periods ended September 30, 2016

Private Real Estate	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Real Estate Database (net of fees)	1.62	5.85	9.34	11.64	11.74	4.58	7.33
NCREIF Property	1.77	6.13	9.22	11.31	11.18	7.22	8.93
NFI-ODCE (value wtd. net)	1.83	5.80	9.08	11.42	11.34	5.05	7.03
Public Real Estate	Quarter	YTD	Year	3 years	5 Years	10 Years	15 Years
REIT Database	-1.15	9.61	17.67	14.49	16.28	7.05	12.57
FTSE NAREIT Equity	-1.43	11.75	19.86	14.22	15.91	6.35	11.38
Global Public Real Estate	Quarter	YTD	Year	3 years	5 Years	10 Years	15 Years
Global REIT Database	1.36	9.06	13.66	9.14	13.77	4.73	10.87
FTSE EPRA/NAREIT Developed REIT	1.46	10.97	15.85	8.60	13.17	4.16	10.67
Global ex U.S. Public Real Estate	Quarter	YTD	Year	3 years	5 Years	10 Years	15 Years
Global ex-U.S. REIT Database	4.51	7.75	8.49	2.98	11.00	2.41	-
EPRA/NAREIT Dev REITs ex-U.S.	4.28	10.44	11.66	3.21	10.42	2.57	10.59

*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.

Sticker Shock

PRIVATE EQUITY | Gary Robertson

Third-quarter fundraising commitments totaled \$38.6 billion with 143 new partnerships formed, Private Equity Analyst reported. The number of new funds dropped by 27% from 196 in the second quarter, and dollar volume plummeted 62% from \$102.2 billion. But this year is tracking closely to 2015, trailing by only \$3 billion (1%) in commitments and 41 (6%) in new partnerships.

The investment pace by funds into companies maintained momentum, according to Buyouts newsletter, totaling 385 transactions, up 8% from 356 in the second quarter but down 5% from 406 a year ago. The announced aggregate dollar volume was \$39 billion, up 4% from \$37.6 billion in the second quarter and up significantly from the \$11.6 billion a year ago. Just eight deals with announced values of \$1 billion or more closed in the quarter, but that was up from six in the second quarter.

New investments in venture capital companies totaled 1,796 rounds and \$15 billion of announced volume, according to the National Venture Capital Association. The number of rounds decreased 11% from 2,026 in the second quarter, and the dollar volume dropped 32% from \$22.1 billion.

Regarding exits, Buyouts reports there were 142 private M&A exits of buyout-backed companies, with 38 deals disclosing

Funds Closed January 1 to September 30, 2016

Strategy	No. of Funds	Amt (\$mm)	Percent
Venture Capital	274	32,312	17%
Buyouts	171	122,487	63%
Subordinated Debt	11	3,220	2%
Distressed Debt	17	17,250	9%
Secondary and Other	15	12,284	6%
Fund-of-funds	28	6,451	3%
Totals	516	194,004	100%

Source: Private Equity Analyst

values totaling \$27.5 billion. The M&A exits count was up 20% from 118 in the second quarter, and the announced value increased 12% from \$24.6 billion. There were two buyout-backed IPOs floating an aggregate \$551.6 million, down from three floating \$1.6 billion in the second quarter.

Venture-backed M&A exits totaled 192 transactions, with a disclosed dollar volume of \$13.4 billion. The number of private sale exits increased 19% from 161 in the second quarter, but the announced dollar volume declined 17% from the second quarter's \$16.1 billion. There were 14 VC-backed IPOs in the third quarter with a combined float of \$1 billion. For comparison, the second quarter of 2016 had 13 IPOs and total issuance of \$876.1 million.

Private Equity Performance Database (%)

(Pooled Horizon IRRs through March 31, 2016*)

Strategy	3 Months	Year	3 Years	5 Years	10 Years	15 Years	20 Years
All Venture	-2.4	6.6	20.6	15.0	10.4	5.3	23.2
Growth Equity	-0.1	6.0	12.7	10.5	11.1	10.3	13.9
All Buyouts	2.1	9.7	12.8	11.5	10.9	12.3	12.7
Mezzanine	3.0	8.0	9.3	10.2	9.6	8.5	9.4
Distressed	0.6	0.4	7.8	8.3	9.3	10.6	10.6
All Private Equity	0.8	7.5	13.3	11.5	10.6	10.2	13.5
S&P 500	1.4	1.8	11.8	11.6	7.0	6.0	8.0
Russell 3000	1.0	-0.3	11.2	11.0	6.9	6.4	8.0

Private equity returns are net of fees.

Sources: Standard & Poor's, Thomson/Cambridge

*Most recent data available at time of publication.

Note: 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.

Can't Stop the Feeling

HEDGE FUNDS | Jim McKee

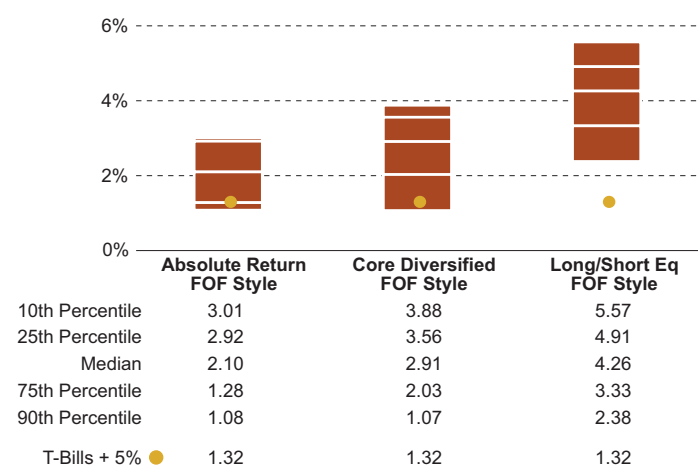
Despite the somber mood spurred by the Brexit vote closing out the prior quarter, capital markets got back on the dance floor in the third quarter. Central bankers let it be known that their music of easy money policies would not stop. **MSCI Emerging Markets** (+9.03%) led the beat upward, but the **S&P 500** (+3.85%) hit another record high. Higher income continued to be alluring as the **Bloomberg Barclays Corporate High Yield Index** jumped 5.55%.

Highlighting raw hedge fund performance without implementation costs, the **Credit Suisse Hedge Fund Index** (CS HFI) rose 1.74% in the third quarter. As a benchmark of actual hedge fund portfolios, the median manager in the **Callan Hedge Fund-of-Funds Database** advanced 2.92%, net of all fees.

Within CS HFI, the best-performing strategy last quarter was *Emerging Markets* (+4.20%), supported by strong debt and equity markets amid growing economies. Tightening credit spreads and improving fundamentals supported *Convertible Arb* (+3.83%), *Event-Driven Multi-Strategy* (+3.06%), and *Distressed* (+2.75%). Aided by strong equity tailwinds, *Long/Short Equity* gained 1.88%. Choppy markets caught the trend-following crowds of *Managed Futures* (-3.23%) a bit flat-footed.

Within Callan's Hedge Fund-of-Funds Database, the median *Callan Long/Short Equity FOF* (+4.26%) outpaced the *Callan Absolute Return FOF* (+2.10%). With diversifying exposures to both non-directional and directional styles, the *Core Diversified FOF* gained 2.91%.

Callan Style Group Quarterly Returns



Sources: Callan, Merrill Lynch

Callan Database Median and Index Returns* for Periods ended September 30, 2016

	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Hedge Fund-of-Funds Database	2.92	0.19	0.55	2.64	5.03	3.70	4.84
CS Hedge Fund Index	1.74	0.09	-0.03	2.53	4.25	4.21	5.81
CS Equity Market Neutral	1.59	-1.98	-2.02	1.17	2.12	-2.45	0.75
CS Convertible Arbitrage	3.83	6.16	5.54	2.14	4.01	3.98	4.55
CS Fixed Income Arbitrage	2.61	2.39	2.42	2.88	4.59	3.50	4.23
CS Multi-Strategy	2.55	3.21	3.74	5.86	7.33	5.66	6.79
CS Distressed	2.75	2.71	0.91	1.59	5.43	4.20	7.02
CS Risk Arbitrage	2.30	5.08	5.93	1.71	2.61	3.59	3.71
CS Event-Driven Multi-Strategy	3.06	-0.51	-3.04	-0.56	3.71	4.11	6.13
CS Long/Short Equity	1.88	-3.23	-1.70	3.99	6.56	4.76	6.12
CS Dedicated Short Bias	-12.06	-18.35	-21.86	-8.80	-15.43	-10.95	-9.05
CS Global Macro	0.58	-0.97	-0.36	1.68	2.34	5.75	7.98
CS Managed Futures	-3.23	-1.26	-2.30	6.80	0.98	4.09	4.93
CS Emerging Markets	4.20	4.74	7.67	3.48	4.99	4.62	8.76

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

DC Participants Seek Cover

DEFINED CONTRIBUTION | Tom Szkwarla

DC plan balances increased a solid 1.67% in the second quarter, according to the Callan DC Index™. But participants sought cover, shifting money from equities into fixed income and stable value. This is atypical behavior. Generally, DC plan participants tend to follow the market, heading to equities when the stock market rises.

Turnover—or net transfer activity levels—has also been below average this year, coming in at 0.55% in the second quarter and 0.45% in the first. Historical turnover since inception is 0.65% for the Index.

Although the Index rose smartly for the quarter—gaining 1.90%—target date funds still managed to marginally outpace the typical DC investor, gaining 2.02%. Since inception, the DC Index has trailed the Age 45 Target Date Fund by 70 basis points annually, averaging a 5.15% annual return.

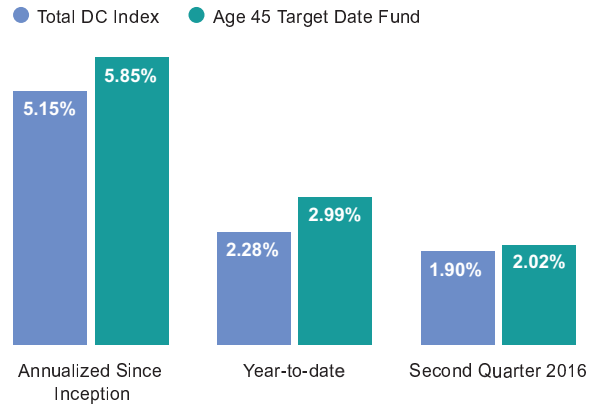
Money flowed out of DC plans during the quarter to the tune of 23 basis points. Historically, inflows (participant and plan sponsor contributions) have accounted for approximately 30% of total growth in plan balances (2.24% annualized). Altogether, participant balances have increased 7.39% annually since inception of the Index.

The DC Index’s allocation to target date funds continued to increase in the quarter, reaching 26.9% of total DC assets. Meanwhile, U.S. large cap equity dropped to its lowest allocation since the fourth quarter of 2011.

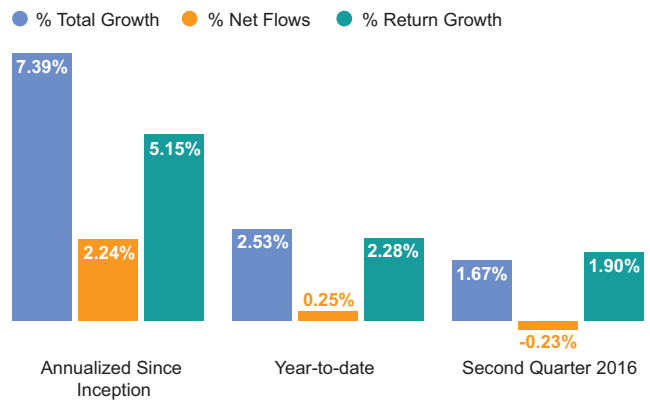
Target date funds are the fifth most prevalent asset class in DC plans (89% offer them), and when offered attract the lion’s share of assets, at 31% on average.

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 (Second Quarter 2016) (Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	47.68%
U.S. Fixed	22.94%
Company Stock	-22.66%
U.S. Large Cap	-39.59%
Total Turnover**	0.55%

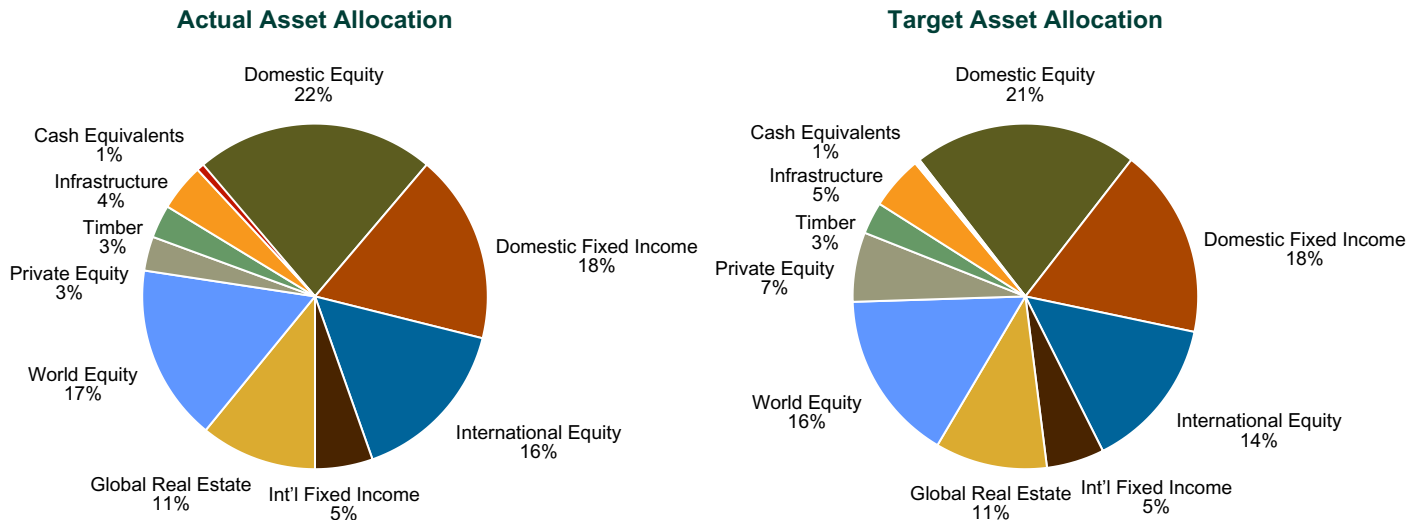
Source: Callan DC Index
Data provided here is the most recent available at time of publication.

* 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.

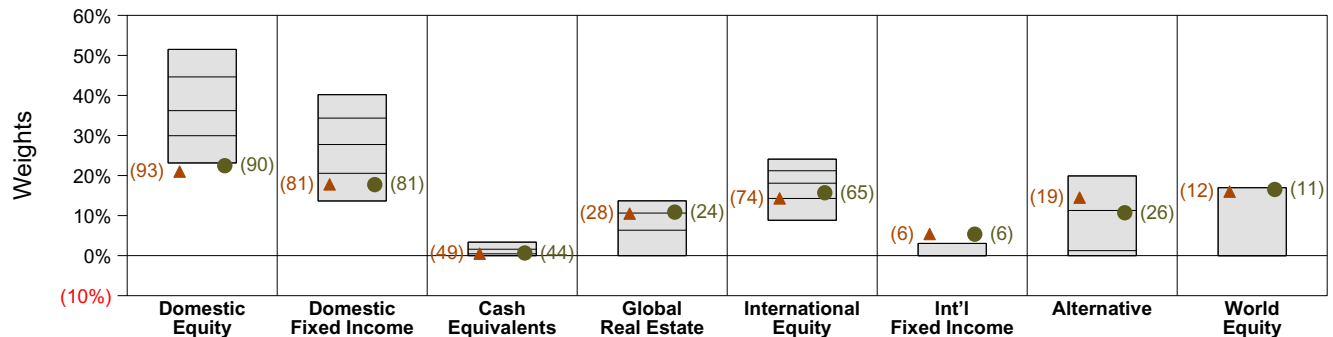
Actual vs Target Asset Allocation As of September 30, 2016

The top left chart shows the Fund's asset allocation as of September 30, 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	1,095,505	22.5%	21.0%	1.5%	71,144
Domestic Fixed Income	864,656	17.7%	17.8%	(0.1%)	(3,612)
International Equity	766,044	15.7%	14.3%	1.4%	68,503
Int'l Fixed Income	261,268	5.4%	5.4%	0.0%	(2,139)
Global Real Estate	529,785	10.9%	10.5%	0.4%	17,604
World Equity	806,126	16.5%	16.0%	0.5%	25,660
Private Equity	156,021	3.2%	6.5%	(3.3%)	(161,043)
Timber	152,589	3.1%	3.0%	0.1%	6,252
Infrastructure	213,935	4.4%	5.0%	(0.6%)	(29,960)
Cash Equivalents	31,982	0.7%	0.5%	0.2%	7,593
Total	4,877,911	100.0%	100.0%		

Asset Class Weights vs CAI Public Fund Sponsor Database



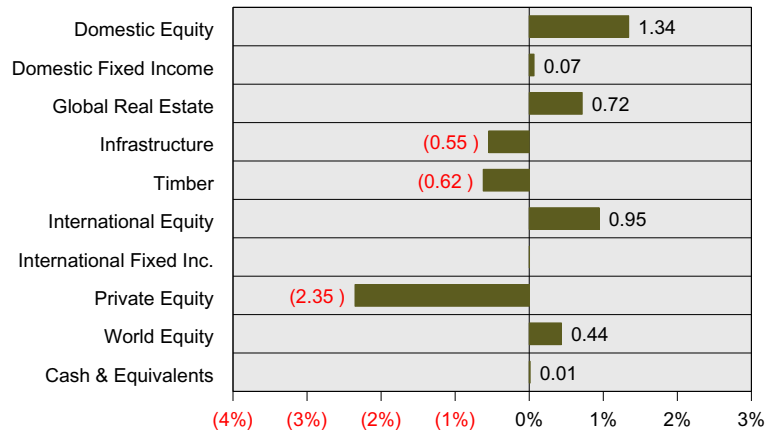
	Domestic Equity	Domestic Fixed Income	Cash Equivalents	Global Real Estate	International Equity	Int'l Fixed Income	Alternative	World Equity
10th Percentile	51.51	40.19	3.37	13.69	24.09	3.05	19.90	16.96
25th Percentile	44.63	34.34	1.60	10.63	21.20	0.00	11.27	0.00
Median	36.21	27.74	0.45	6.35	18.09	0.00	1.24	0.00
75th Percentile	29.95	20.56	0.00	0.00	14.28	0.00	0.00	0.00
90th Percentile	23.14	13.65	0.00	0.00	8.83	0.00	0.00	0.00
Fund	22.46	17.73	0.66	10.86	15.70	5.36	10.71	16.53
Target	21.00	17.80	0.50	10.50	14.30	5.40	14.50	16.00
% Group Invested	96.70%	97.25%	69.78%	60.99%	87.91%	14.29%	43.96%	24.18%

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

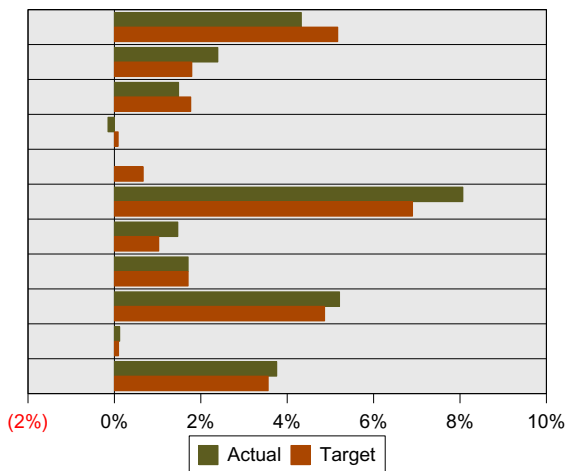
Quarterly Total Fund Relative Attribution - September 30, 2016

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 September 30, 2016

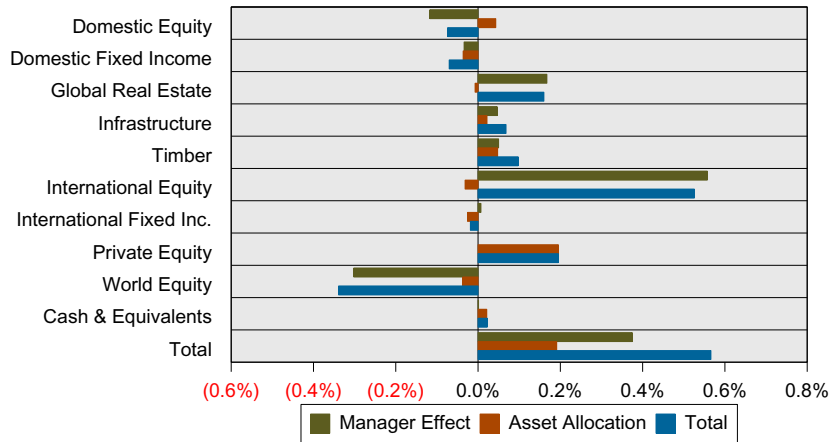
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	4.33%	5.17%	(0.19%)	0.02%	(0.17%)
Domestic Fixed Income	18%	17%	2.39%	1.79%	0.11%	(0.00%)	0.10%
Global Real Estate	11%	10%	1.49%	1.77%	(0.03%)	(0.01%)	(0.04%)
Infrastructure	4%	5%	0.15%	0.09%	(0.01%)	0.02%	0.01%
Timber	3%	4%	0.00%	0.67%	(0.02%)	0.02%	0.00%
International Equity	15%	14%	8.07%	6.90%	0.17%	0.03%	0.20%
International Fixed Inc.	5%	5%	1.47%	1.03%	0.02%	(0.00%)	0.02%
Private Equity	3%	6%	1.71%	1.71%	0.00%	0.02%	0.02%
World Equity	16%	16%	5.21%	4.87%	0.06%	0.00%	0.06%
Cash & Equivalents	1%	1%	0.12%	0.10%	0.00%	(0.00%)	(0.00%)
Total							3.76% = 3.56% + 0.11% + 0.09%
							0.20%

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

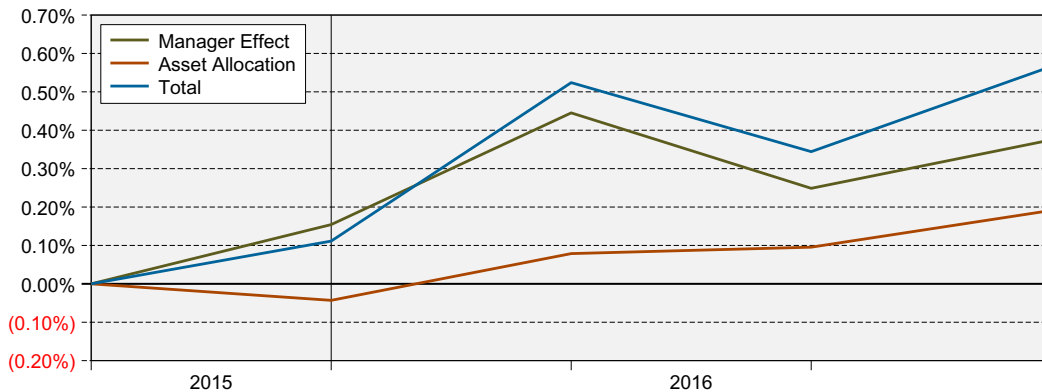
Cumulative Total Fund Relative Attribution - September 30, 2016

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

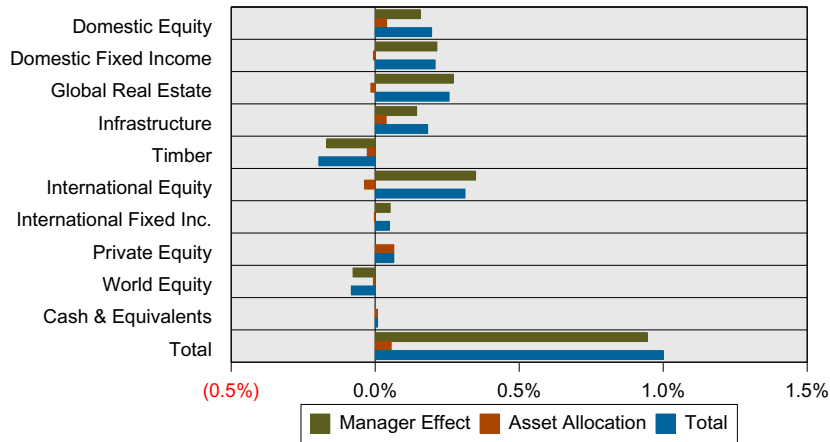
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	22%	21%	14.62%	15.11%	(0.12%)	0.04%	(0.07%)
Domestic Fixed Income	18%	17%	7.11%	7.27%	(0.03%)	(0.04%)	(0.07%)
Global Real Estate	11%	10%	10.77%	9.22%	0.17%	(0.01%)	0.16%
Infrastructure	5%	5%	2.14%	1.22%	0.05%	0.02%	0.07%
Timber	3%	5%	4.32%	3.28%	0.05%	0.05%	0.10%
International Equity	15%	14%	12.45%	8.73%	0.56%	(0.03%)	0.53%
International Fixed Inc.	5%	5%	11.90%	11.67%	0.01%	(0.03%)	(0.02%)
Private Equity	4%	5%	(5.78%)	(5.78%)	0.00%	0.20%	0.20%
World Equity	16%	16%	9.45%	11.36%	(0.30%)	(0.04%)	(0.34%)
Cash & Equivalents	1%	1%	0.39%	0.27%	0.00%	0.02%	0.02%
Total			9.72%	9.16%	+ 0.37%	+ 0.19%	0.57%

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

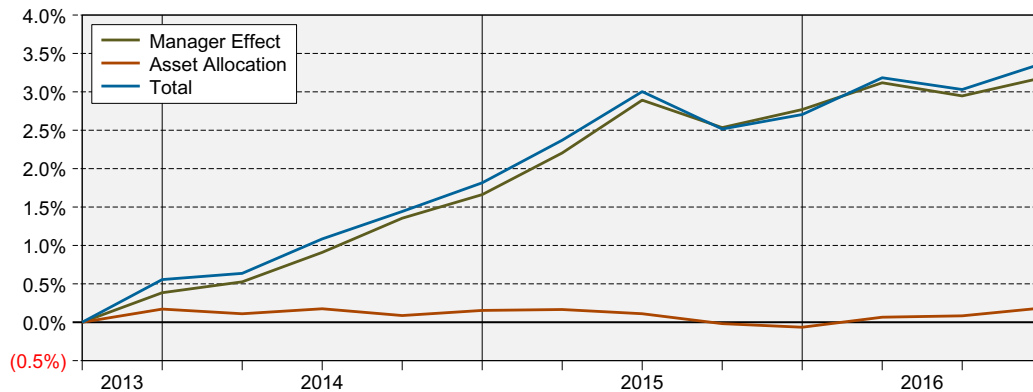
Cumulative Total Fund Relative Attribution - September 30, 2016

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

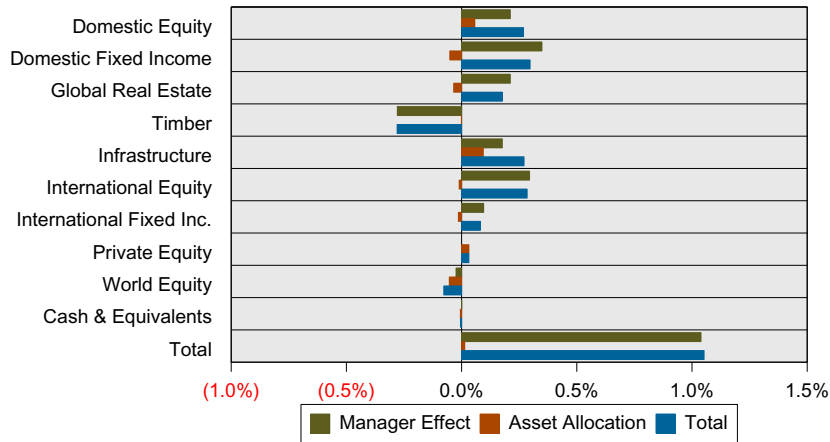
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	10.64%	9.90%	0.16%	0.04%	0.20%
Domestic Fixed Income	19%	18%	5.54%	4.41%	0.21%	(0.01%)	0.21%
Global Real Estate	10%	10%	14.34%	11.31%	0.27%	(0.02%)	0.26%
Infrastructure	4%	5%	4.36%	0.71%	0.14%	0.04%	0.18%
Timber	4%	5%	3.62%	7.59%	(0.17%)	(0.03%)	(0.20%)
International Equity	15%	14%	2.61%	0.32%	0.35%	(0.04%)	0.31%
International Fixed Inc.	5%	5%	1.84%	0.75%	0.05%	(0.00%)	0.05%
Private Equity	4%	5%	(2.09%)	(2.09%)	0.00%	0.06%	0.06%
World Equity	16%	16%	5.39%	5.85%	(0.08%)	(0.01%)	(0.08%)
Cash & Equivalents	1%	1%	0.17%	0.11%	0.00%	0.01%	0.01%
Total			6.45%	5.45%	+ 0.94%	+ 0.06%	1.00%

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

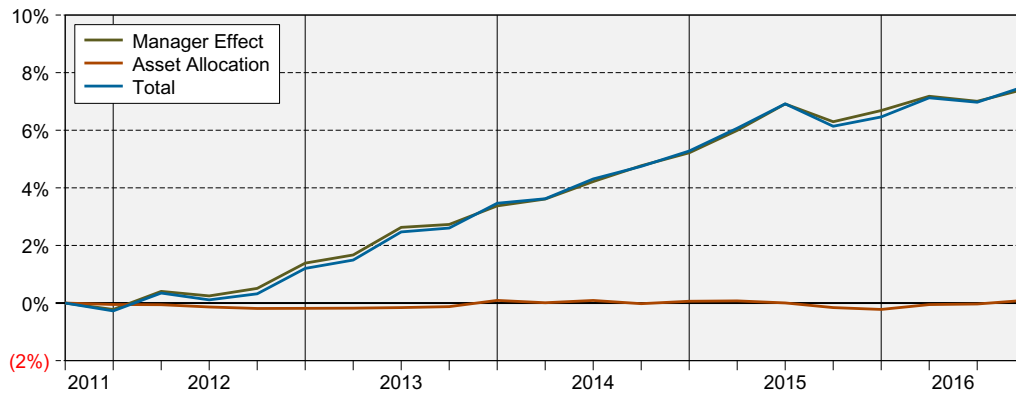
Cumulative Total Fund Relative Attribution - September 30, 2016

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

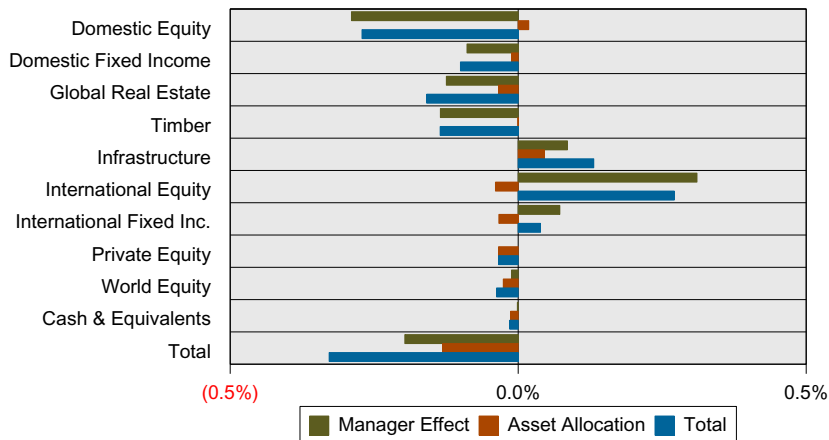
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	24%	23%	17.30%	16.33%	0.21%	0.06%	0.27%
Domestic Fixed Income	19%	18%	6.36%	4.51%	0.35%	(0.05%)	0.30%
Global Real Estate	10%	10%	13.51%	11.18%	0.21%	(0.03%)	0.18%
Timber	4%	5%	1.35%	6.91%	(0.28%)	(0.00%)	(0.28%)
Infrastructure	4%	5%	5.57%	1.03%	0.18%	0.09%	0.27%
International Equity	15%	15%	8.48%	6.50%	0.29%	(0.01%)	0.28%
International Fixed Inc.	5%	5%	2.44%	0.70%	0.10%	(0.01%)	0.08%
Private Equity	5%	5%	0.77%	0.77%	0.00%	0.03%	0.03%
World Equity	13%	13%	-	-	(0.02%)	(0.05%)	(0.08%)
Cash & Equivalents	1%	1%	0.14%	0.10%	0.00%	(0.01%)	(0.00%)
Total			9.88%	8.83%	+ 1.04%	+ 0.01%	1.05%

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

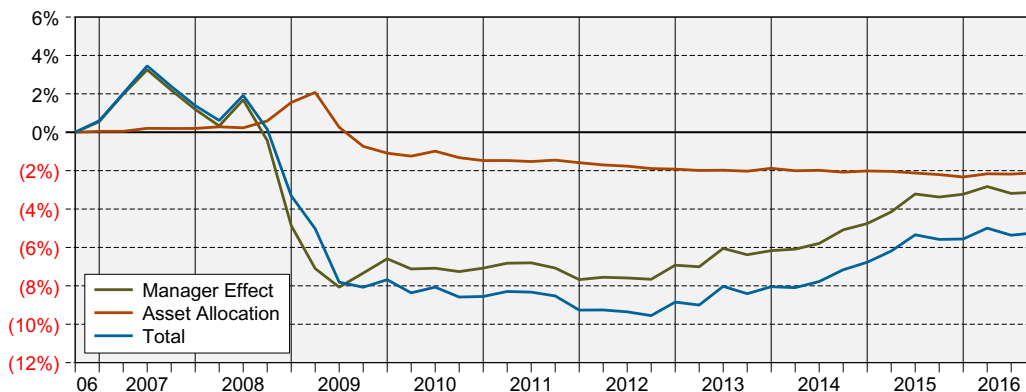
Cumulative Total Fund Relative Attribution - September 30, 2016

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

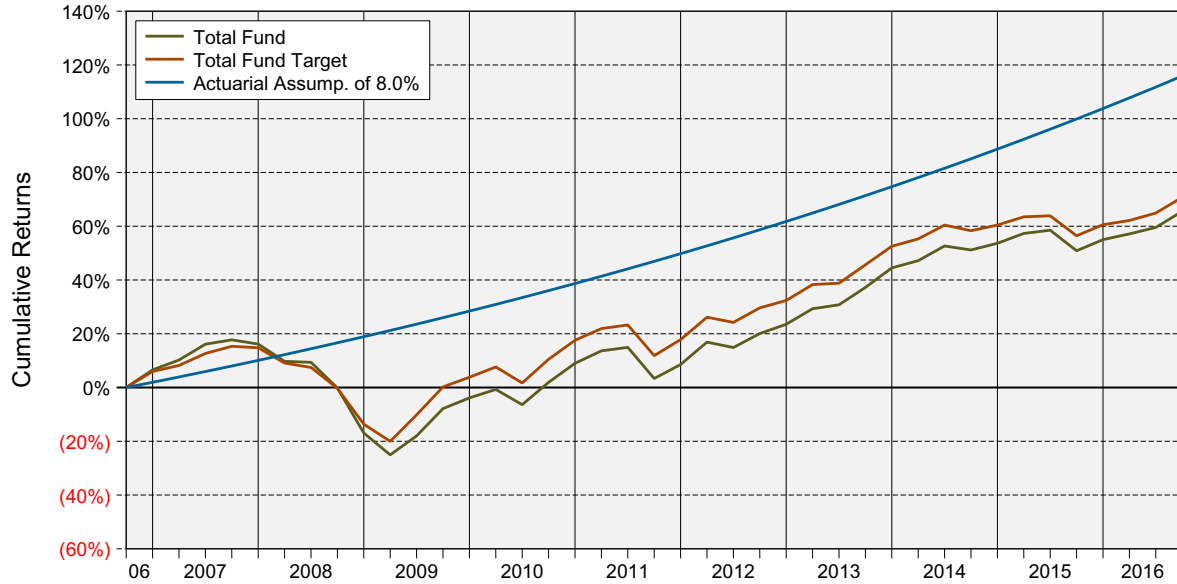
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	31%	31%	6.44%	7.27%	(0.29%)	0.02%	(0.27%)
Domestic Fixed Income	23%	22%	6.00%	5.74%	(0.09%)	(0.01%)	(0.10%)
Global Real Estate	9%	8%	5.73%	7.22%	(0.12%)	(0.03%)	(0.16%)
Timber	2%	2%	-	-	(0.14%)	(0.00%)	(0.14%)
Infrastructure	2%	2%	-	-	0.09%	0.05%	0.13%
International Equity	16%	17%	4.18%	2.37%	0.31%	(0.04%)	0.27%
International Fixed Inc.	5%	5%	5.38%	4.06%	0.07%	(0.03%)	0.04%
Private Equity	4%	5%	0.30%	0.30%	0.00%	(0.03%)	(0.03%)
World Equity	7%	7%	-	-	(0.01%)	(0.03%)	(0.04%)
Cash & Equivalents	1%	1%	0.68%	0.92%	(0.00%)	(0.01%)	(0.01%)
Total			5.17%	5.50%	(0.20%)	(0.13%)	(0.33%)

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

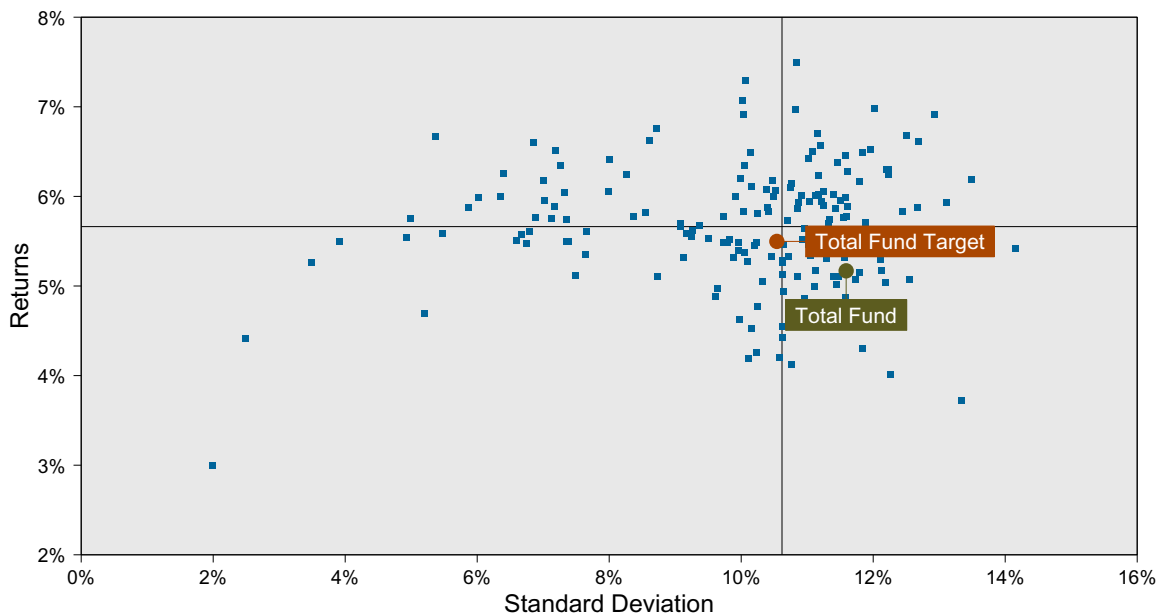
Cumulative Performance Relative to Target

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



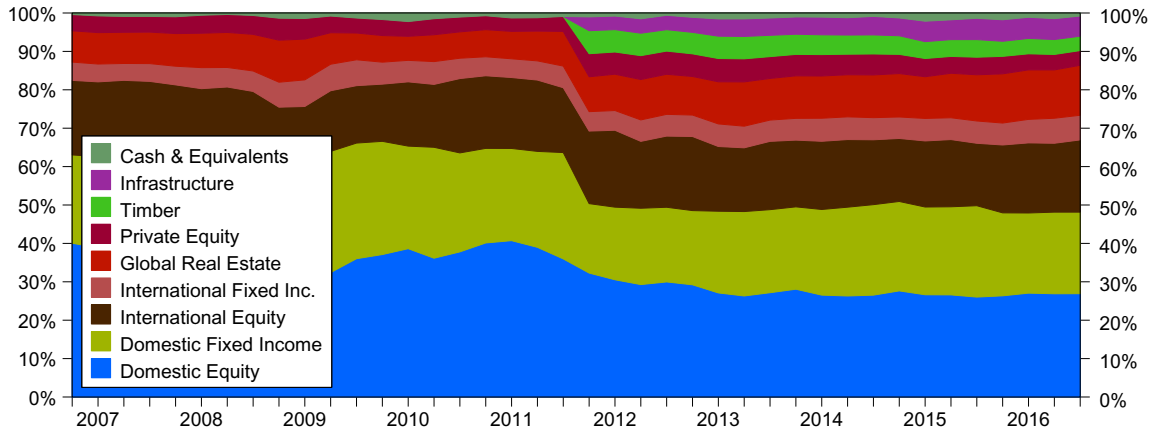
Squares represent membership of the CAI Public Fund Sponsor Database

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

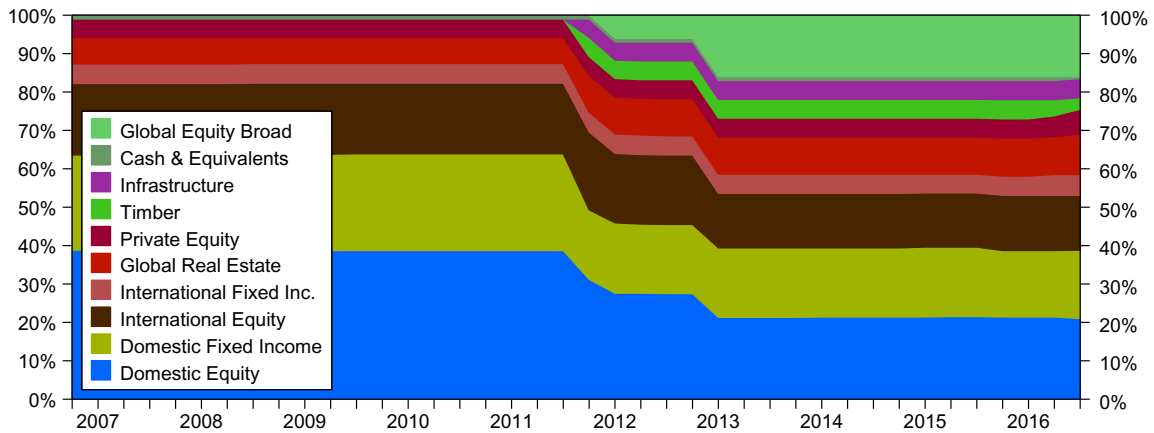
Actual vs Target Historical Asset Allocation

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.

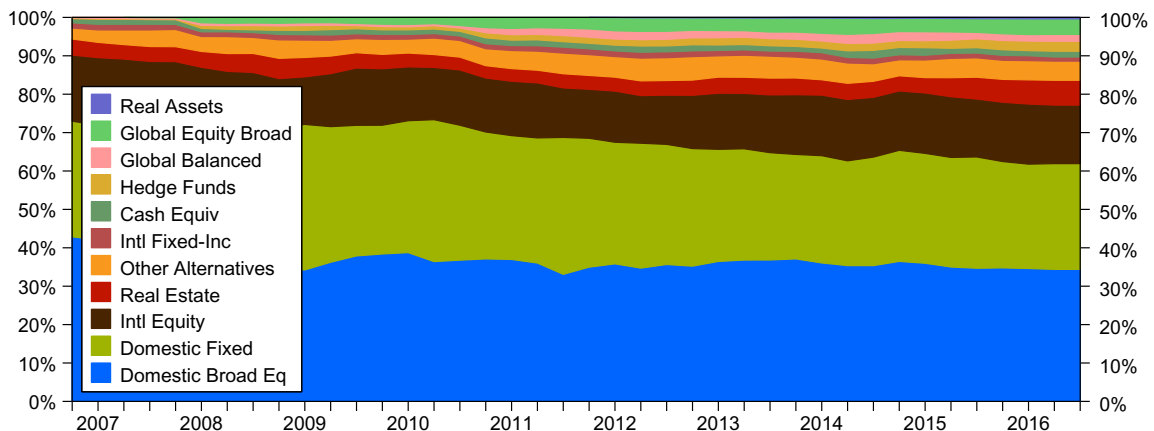
Actual Historical Asset Allocation



Target Historical Asset Allocation



Average CAI Public Fund Sponsor Database Historical Asset Allocation

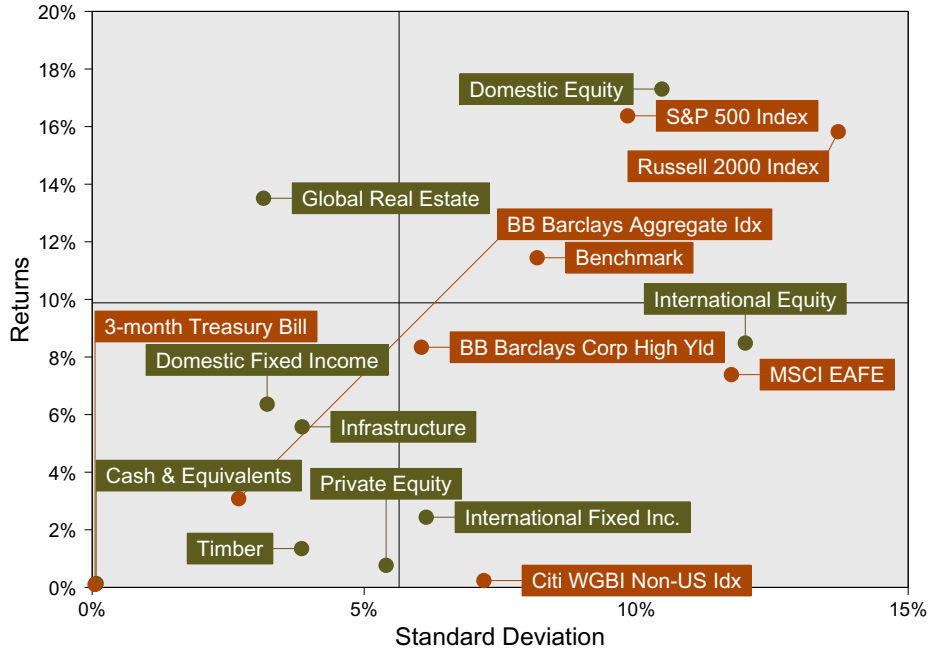


* Current Quarter Target = 16.1% Russell 1000 Index, 16.0% MSCI World, 13.2% BB Barclays Aggregate Idx, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 6.5% NDSIB PEN - Private Equity, 5.4% BB Barclays GI Agg ex US, 5.0% CPI-W, 4.9% Russell 2000 Index, 4.6% BB Barclays US HY Cor 2%C, 3.1% MSCI EM,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

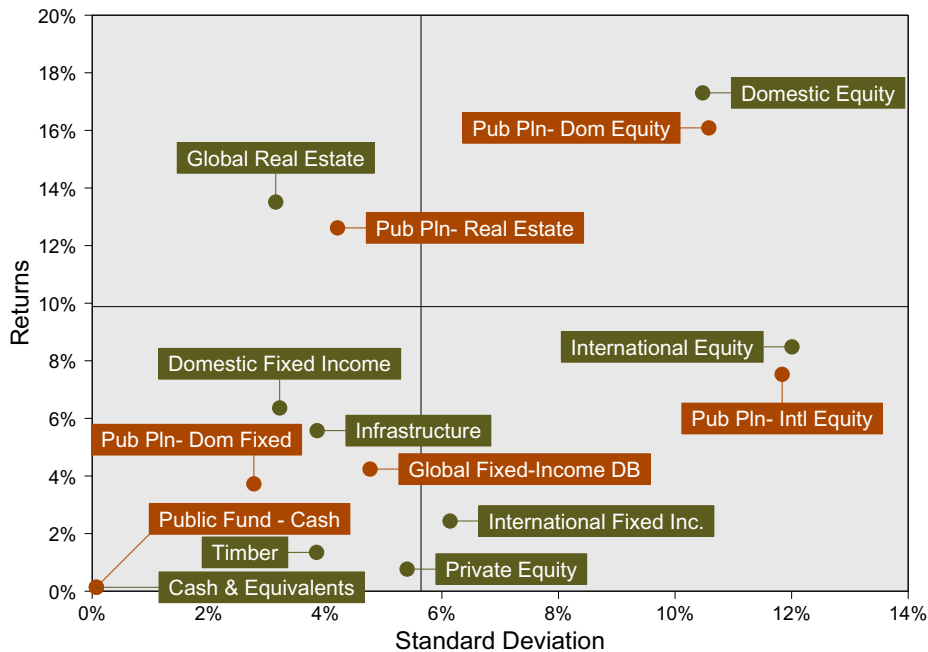
Asset Class Risk and Return

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



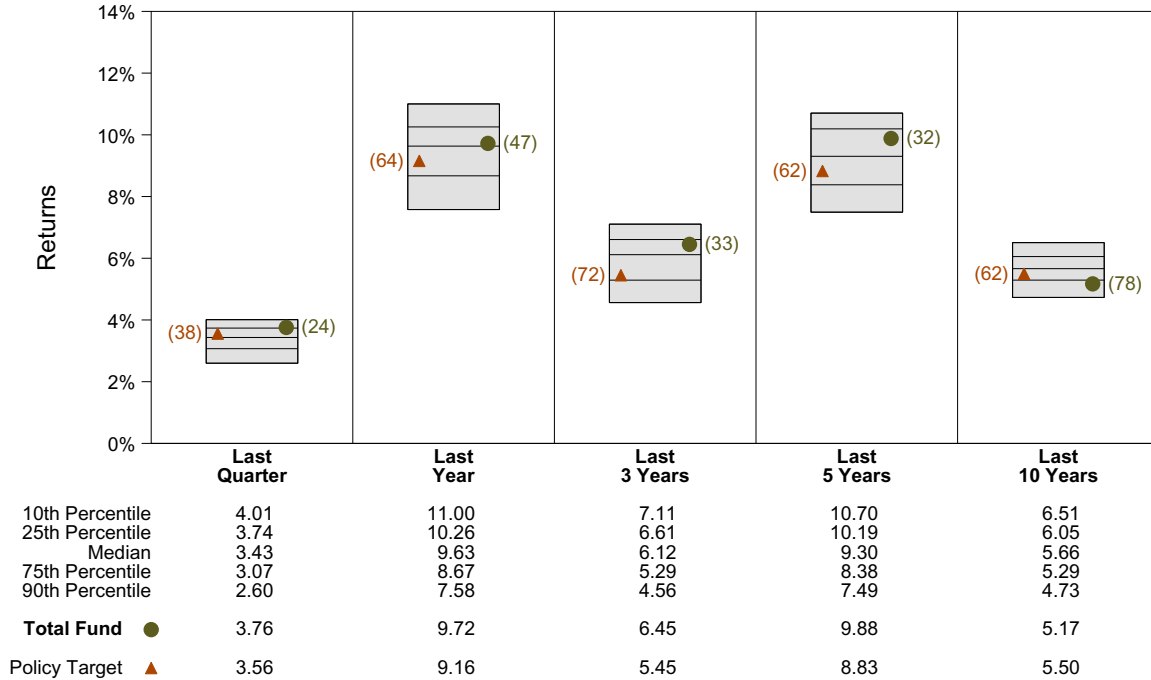
Five Year Annualized Risk vs Return Asset Classes vs Asset Class Median



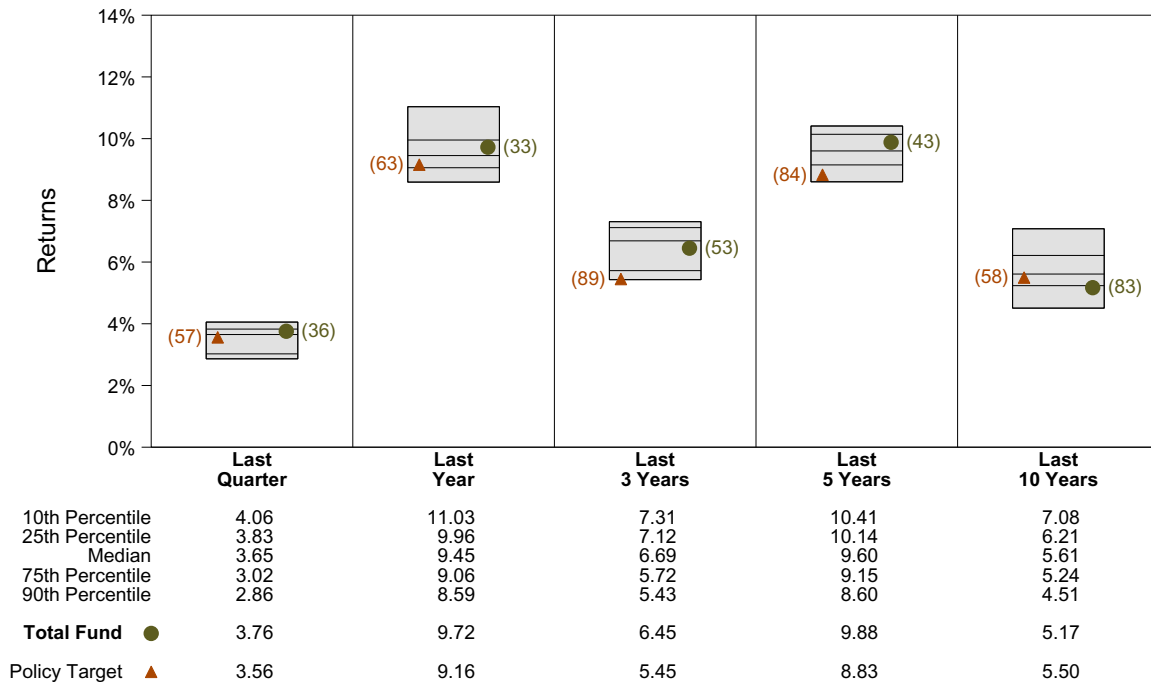
Total Fund Ranking

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 September 30, 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

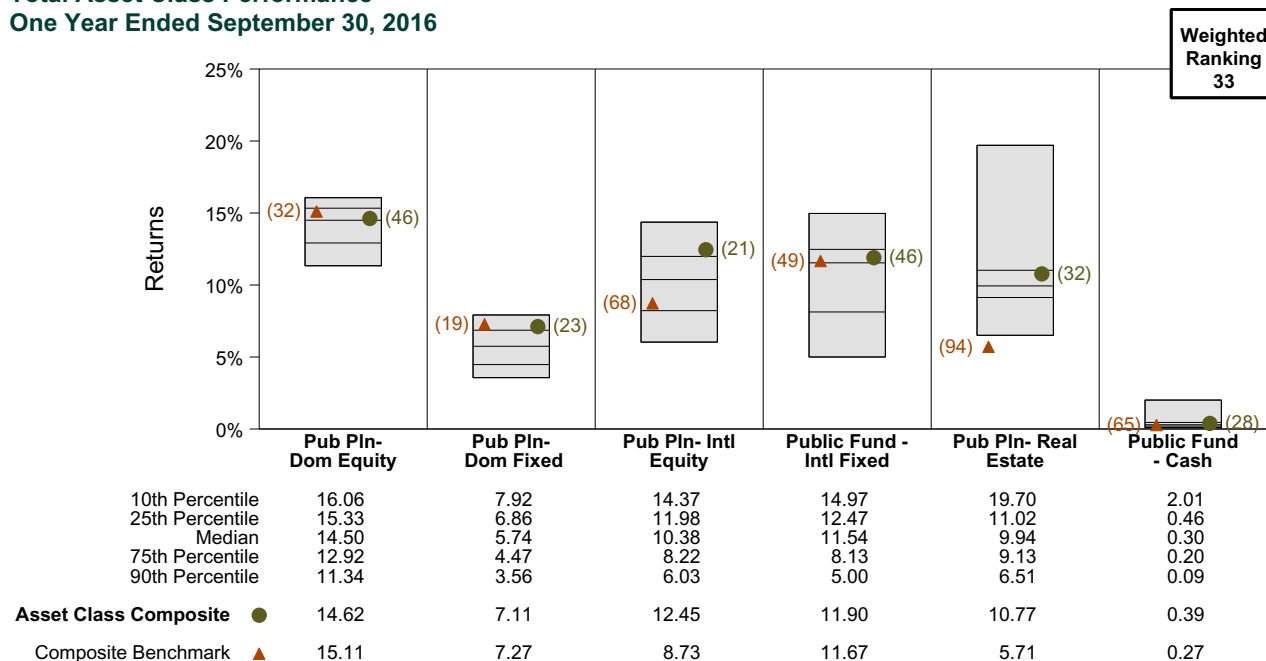


* Current Quarter Target = 16.1% Russell 1000 Index, 16.0% MSCI World, 13.2% BB Barclays Aggregate Idx, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 6.5% NDSIB PEN - Private Equity, 5.4% BB Barclays GI Agg ex US, 5.0% CPI-W, 4.9% Russell 2000 Index, 4.6% BB Barclays US HY Cor 2% C, 3.1% MSCI EM,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

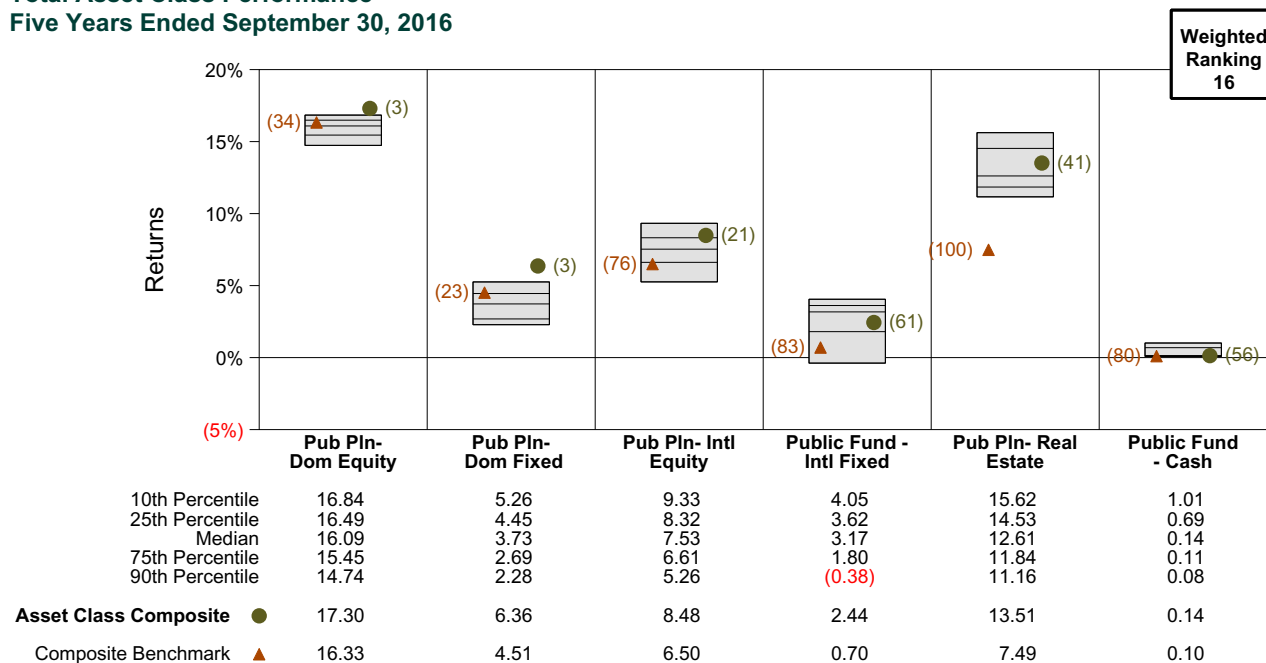
Asset Class Rankings

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 September 30, 2016



Total Asset Class Performance Five Years Ended September 30, 2016



* Current Quarter Target = 16.1% Russell 1000 Index, 16.0% MSCI World, 13.2% BB Barclays Aggregate Idx, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 6.5% NDSIB PEN - Private Equity, 5.4% BB Barclays GI Agg ex US, 5.0% CPI-W, 4.9% Russell 2000 Index, 4.6% BB Barclays 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 September 30, 2016, with the distribution as of June 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

	September 30, 2016		Net New Inv.	Inv. Return	June 30, 2016	
	Market Value	Weight			Market Value	Weight
GLOBAL EQUITY	\$2,823,696,183	57.89%	\$(20,914,798)	\$145,988,111	\$2,698,622,870	57.16%
Domestic Equity	\$1,095,505,317	22.46%	\$(13,400,125)	\$45,939,546	\$1,062,965,897	22.51%
Large Cap Domestic Equity	\$840,864,572	17.24%	\$(5,580,266)	\$30,652,488	\$815,792,350	17.28%
L.A. Capital	319,904,008	6.56%	(159,904)	11,609,076	308,454,836	6.53%
LACM Enhanced Index	197,472,253	4.05%	(48,167)	6,177,541	191,342,879	4.05%
Northern Trust AM Enh S&P 500	149,820,252	3.07%	0	6,207,521	143,612,731	3.04%
Parametric Clifton Enh S&P 500	173,668,059	3.56%	(5,372,195)	6,658,351	172,381,903	3.65%
Small Cap Domestic Equity	\$254,640,745	5.22%	\$(7,819,859)	\$15,287,057	\$247,173,547	5.24%
Atlanta Capital	115,848,391	2.37%	(207,293)	2,786,425	113,269,259	2.40%
Parametric Clifton Enh Small Cap	138,792,354	2.85%	(7,612,566)	12,500,632	133,904,288	2.84%
International Equity	\$766,044,087	15.70%	\$(342,208)	\$57,193,701	\$709,192,595	15.02%
Developed Int'l Equity	\$571,750,622	11.72%	\$(342,208)	\$41,336,138	\$530,756,692	11.24%
Capital Group	7,445	0.00%	(93,523)	7,140	93,828	0.00%
DFA Int'l Small Cap	79,505,332	1.63%	0	7,582,742	71,922,590	1.52%
Northern Trust AM World Ex US	271,364,101	5.56%	(21,117)	16,207,369	255,177,849	5.40%
Wellington Management Co.	86,811,610	1.78%	(188,138)	5,466,842	81,532,906	1.73%
William Blair	134,062,134	2.75%	(39,430)	12,072,045	122,029,518	2.58%
Emerging Markets Equity	\$194,293,465	3.98%	\$0	\$15,857,562	\$178,435,903	3.78%
Axiom	144,414,502	2.96%	0	12,087,251	132,327,251	2.80%
DFA	49,878,963	1.02%	0	3,770,311	46,108,652	0.98%
World Equity	\$806,125,731	16.53%	\$(966,403)	\$39,967,707	\$767,124,427	16.25%
EPOCH Investment Partners	348,628,218	7.15%	(543,642)	10,647,831	338,524,029	7.17%
LSV Asset Management	457,497,513	9.38%	(422,761)	29,319,876	428,600,398	9.08%

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2016, with the distribution as of June 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

	September 30, 2016			June 30, 2016		
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Private Equity	\$156,021,048	3.20%	\$(6,206,061)	\$2,887,158	\$159,339,951	3.37%
Adams Street Direct Co-Invest Fd	4,640,689	0.10%	(933,564)	0	5,574,253	0.12%
Adams Street Direct Fund 2010	1,224,918	0.03%	(126,684)	0	1,351,602	0.03%
Adams Street 1998 Partnership	125,383	0.00%	0	(418)	125,801	0.00%
Adams Street 1999 Partnership	325,810	0.01%	0	(12,174)	337,984	0.01%
Adams Street 2000 Partnership	935,213	0.02%	0	(2,831)	938,044	0.02%
Adams Street 2001 Partnership	1,493,923	0.03%	0	(22,563)	1,516,486	0.03%
Adams Street 2002 Partnership	742,416	0.02%	0	3,981	738,435	0.02%
Adams Street 2003 Partnership	302,724	0.01%	(56,258)	352	358,630	0.01%
Adams Street 2010 Partnership	5,513,205	0.11%	0	0	5,513,205	0.12%
Adams Street 2008 Fund	7,218,133	0.15%	(250,071)	0	7,468,204	0.16%
Adams Street 1999 Non-US	62,996	0.00%	(318,907)	(19,256)	401,159	0.01%
Adams Street 2000 Non-US	733,630	0.02%	0	23,918	709,712	0.02%
Adams Street 2001 Non-US	167,719	0.00%	0	(2,206)	169,925	0.00%
Adams Street 2002 Non-US	1,026,606	0.02%	0	(1,646)	1,028,252	0.02%
Adams Street 2003 Non-US	581,023	0.01%	0	15,943	565,080	0.01%
Adams Street 2004 Non-US	419,297	0.01%	0	16,372	402,925	0.01%
Adams Street 2010 Non-US	2,590,067	0.05%	(40,612)	0	2,630,679	0.06%
Adams Street 2010 Non-US Emg	1,290,610	0.03%	0	0	1,290,610	0.03%
Adams Street 2015 Global Fd	2,591,162	0.05%	1,078,219	0	1,512,943	0.03%
Adams Street BVCF IV Fund	3,764,686	0.08%	0	0	3,764,686	0.08%
Hearthstone Advisors MSII	12,792	0.00%	0	0	12,792	0.00%
Hearthstone Advisors MSIII	4,421,442	0.09%	0	0	4,421,442	0.09%
CorsAir III	13,394,710	0.27%	56,432	(56,432)	13,394,710	0.28%
ND Investors	1	0.00%	(14,853,744)	2,931,963	11,921,782	0.25%
CorsAir IV	22,953,119	0.47%	6,049,237	(200,951)	17,104,833	0.36%
Capital International V	7,597,875	0.16%	(174,417)	(46,794)	7,819,086	0.17%
Capital International VI	19,460,463	0.40%	1,742,693	(162,874)	17,880,644	0.38%
EIG Energy Fund XIV	5,159,290	0.11%	514,017	(21,044)	4,666,317	0.10%
Lewis & Clark, LP	1,329,909	0.03%	0	0	1,329,909	0.03%
Lewis & Clark II	9,613,134	0.20%	0	0	9,613,134	0.20%
Quantum Energy Partners	7,678,417	0.16%	1,107,598	443,819	6,127,000	0.13%
Quantum Resources	51,635	0.00%	0	0	51,635	0.00%
Matlin Patterson I	-	-	0	(1)	1	0.00%
Matlin Patterson II	1,625,922	0.03%	0	0	1,625,922	0.03%
Matlin Patterson III	26,972,129	0.55%	0	0	26,972,129	0.57%

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2016, with the distribution as of June 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

	September 30, 2016		Net New Inv.	Inv. Return	June 30, 2016	
	Market Value	Weight			Market Value	Weight
GLOBAL FIXED INCOME	\$1,125,923,815	23.08%	\$3,807,397	\$23,717,829	\$1,098,398,589	23.26%
Domestic Fixed Income	\$864,655,862	17.73%	\$4,033,181	\$19,936,331	\$840,686,350	17.81%
Inv. Grade Fixed Income	\$626,246,720	12.84%	\$12,757,828	\$9,410,783	\$604,078,109	12.79%
Declaration Total Return	88,395,900	1.81%	(30,967)	1,866,334	86,560,533	1.83%
J. P. Morgan MBS	123,474,049	2.53%	8,941,466	633,331	113,899,252	2.41%
PIMCO DiSCO II	95,519,443	1.96%	0	3,806,044	91,713,399	1.94%
PIMCO MBS	184,437,522	3.78%	(76,870)	1,327,148	183,187,244	3.88%
PIMCO Unconstrained	63,625,363	1.30%	(69,159)	2,018,361	61,676,161	1.31%
SSgA Long US Treas Index	70,794,443	1.45%	3,993,358	(240,436)	67,041,520	1.42%
Below Inv. Grade Fixed Income	\$238,409,143	4.89%	\$(8,724,647)	\$10,525,548	\$236,608,241	5.01%
Goldman Sachs 2006 Offshore	600,000	0.01%	(492,347)	(7,653)	1,100,000	0.02%
Goldman Sachs Offshore V	2,586,000	0.05%	0	0	2,586,000	0.05%
Loomis Sayles	188,140,843	3.86%	(8,232,300)	10,533,201	185,839,941	3.94%
PIMCO Bravo II Fund	47,082,300	0.97%	0	0	47,082,300	1.00%
Internationall Fixed Income	\$261,267,952	5.36%	\$(225,785)	\$3,781,497	\$257,712,240	5.46%
Brandywine	149,687,618	3.07%	(140,726)	2,483,777	147,344,567	3.12%
UBS Global Asset Mgmt.	111,580,334	2.29%	(85,059)	1,297,720	110,367,673	2.34%
GLOBAL REAL ASSETS	\$896,309,089	18.37%	\$22,548,577	\$7,452,466	\$866,308,046	18.35%
Global Real Estate	\$529,784,618	10.86%	\$24,505,205	\$7,771,035	\$497,508,378	10.54%
Invesco Core Real Estate	247,308,619	5.07%	19,785,904	4,090,737	223,431,979	4.73%
Invesco Fund II	5,294,577	0.11%	(3,000,170)	0	8,294,747	0.18%
Invesco Fund III	28,060,334	0.58%	0	0	28,060,334	0.59%
Invesco Asia RE Feeder	1,042,682	0.02%	(619,000)	(51,115)	1,712,797	0.04%
Invesco Asia RE Fund III	13,520,326	0.28%	5,145,000	(65,131)	8,440,457	0.18%
Invesco Value Added Fd IV	22,535,119	0.46%	3,193,173	0	19,341,946	0.41%
JP Morgan	190,113,635	3.90%	0	3,680,621	186,433,014	3.95%
JP Morgan Alternative Fd	312,204	0.01%	0	0	312,204	0.01%
JP Morgan China Property Fd	11,459,032	0.23%	0	(0)	11,459,032	0.24%
JP Morgan Greater European Opp Fd	10,138,090	0.21%	299	115,924	10,021,867	0.21%
Timber	\$152,589,151	3.13%	\$(760,000)	\$0	\$153,349,151	3.25%
TIR Teredo	33,820,778	0.69%	0	0	33,820,778	0.72%
TIR Springbank	118,768,373	2.43%	(760,000)	0	119,528,373	2.53%
Infrastructure	\$213,935,320	4.39%	\$(1,196,628)	\$(318,570)	\$215,450,517	4.56%
JP Morgan Asian Infrastructure	28,039,000	0.57%	133,405	(133,407)	28,039,002	0.59%
JP Morgan IIF	142,195,639	2.92%	(7)	(0)	142,195,646	3.01%
Grosvenor Cust. Infrastructure	39,983,644	0.82%	(1,232,574)	(150,917)	41,367,135	0.88%
Grosvenor Cust. Infrastructure II	3,717,037	0.08%	(97,451)	(34,246)	3,848,734	0.08%
CASH & CASH EQUIVALENTS	\$31,982,261	0.66%	\$(26,227,781)	\$46,520	\$58,163,522	1.23%
Northern Trust Cash Account	21,978,889	0.45%	(36,227,781)	43,148	58,163,522	1.23%
Bank of ND	10,003,372	0.21%	10,000,000	3,372	-	-
Securities Lending Income	\$0	0.00%	\$(131,242)	\$131,242	-	-
Total Fund	\$4,877,911,347	100.0%	\$(20,917,846)	\$177,336,168	\$4,721,493,026	100.0%

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 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 September 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Global Equity					
Gross	5.41%	11.18%	6.17%	12.19%	-
Net	5.31%	10.92%	5.82%	11.81%	-
Wtd Avg Global Equity Benchmark	5.22%	10.58%	5.32%	11.33%	-
Domestic Equity					
Gross	4.33%	14.62%	10.64%	17.30%	6.44%
Net	4.20%	14.40%	10.41%	17.02%	6.12%
Wtd Avg Domestic Equity Benchmark	5.17%	15.11%	9.90%	16.33%	7.27%
Large Cap Equity					
Gross	3.76%	15.03%	12.10%	17.56%	5.84%
Net	3.69%	14.86%	11.91%	17.35%	5.59%
Large Cap Benchmark (1)	4.03%	14.93%	10.78%	16.40%	7.25%
L.A. Capital - Gross	3.76%	14.82%	13.22%	18.24%	9.42%
L.A. Capital - Net	3.71%	14.58%	12.99%	17.99%	9.21%
Russell 1000 Growth Index	4.58%	13.76%	11.83%	16.60%	8.85%
LACM Enhanced Index - Gross	3.23%	15.54%	11.83%	17.38%	8.32%
LACM Enhanced Index - Net	3.20%	15.41%	11.70%	17.24%	8.16%
Russell 1000 Index	4.03%	14.93%	10.78%	16.41%	7.40%
Northern Tr AM Enh S&P500 - Gross	4.32%	13.54%	10.88%	16.75%	7.17%
Northern Tr AM Enh S&P500 - Net	4.32%	13.54%	10.53%	16.38%	6.99%
S&P 500 Index	3.85%	15.43%	11.16%	16.37%	7.24%
Parametric Clifton Enh S&P500 - Gross	3.86%	16.08%	11.49%	16.84%	-
Parametric Clifton Enh S&P500 - Net	3.65%	15.84%	11.41%	16.74%	-
S&P 500 Index	3.85%	15.43%	11.16%	16.37%	7.24%
Small Cap Equity					
Gross	6.20%	12.91%	5.70%	16.05%	7.80%
Net	5.87%	12.55%	5.36%	15.55%	7.27%
Russell 2000 Index	9.05%	15.47%	6.71%	15.82%	7.07%
Atlanta Capital - Gross	2.46%	-	-	-	-
Atlanta Capital - Net	2.28%	-	-	-	-
S&P 600 Small Cap Index	7.20%	18.12%	9.04%	17.86%	8.71%
Parametric Clifton Enh SmCap - Gross	9.35%	17.04%	7.97%	17.31%	-
Parametric Clifton Enh SmCap - Net	8.88%	16.54%	7.55%	16.81%	-
Russell 2000 Index	9.05%	15.47%	6.71%	15.82%	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 September 30, 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 September 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
International Equity					
Gross	8.07%	12.45%	2.61%	8.48%	4.18%
Net	8.03%	12.25%	2.36%	8.14%	3.81%
Wtd Avg Int'l Equity Benchmark	6.90%	8.73%	0.32%	6.50%	2.37%
Developed Intl Equity					
Gross	7.79%	10.34%	2.49%	9.26%	3.11%
Net	7.74%	10.08%	2.22%	8.92%	2.79%
Benchmark(1)	6.29%	6.38%	0.43%	7.36%	1.46%
DFA Int'l Small Cap Value - Net	10.54%	10.46%	4.19%	11.47%	-
World ex US SC Value	8.77%	12.08%	2.80%	9.48%	4.04%
Northern Tr AM World ex US - Gross	6.35%	7.57%	-	-	-
Northern Tr AM World ex US - Net	6.34%	7.53%	-	-	-
MSCI World ex US	6.29%	7.16%	0.33%	6.89%	1.88%
Wellington Management - Gross	6.71%	13.71%	6.93%	14.33%	7.09%
Wellington Management - Net	6.47%	12.76%	6.04%	13.37%	6.20%
BMI, EPAC, <\$2 B	7.90%	13.76%	5.21%	10.18%	4.14%
William Blair - Gross	9.89%	-	-	-	-
William Blair - Net	9.86%	-	-	-	-
MSCI ACWI ex US	6.91%	9.26%	0.18%	6.04%	2.16%
Emerging Markets Equity					
Gross	8.89%	18.79%	2.23%	5.03%	5.92%
Net	8.89%	18.79%	2.07%	4.64%	5.45%
Emerging Mkts - Net	9.03%	16.78%	(0.56%)	3.03%	3.94%
Axiom - Net	9.13%	18.23%	-	-	-
Emerging Mkts - Net	9.03%	16.78%	(0.56%)	3.03%	3.94%
DFA - Net	8.18%	20.73%	4.02%	6.94%	7.61%
Emerging Mkts - Net	9.03%	16.78%	(0.56%)	3.03%	3.94%
World Equity					
Gross	5.21%	9.45%	5.39%	-	-
Net	5.08%	9.04%	4.70%	-	-
MSCI World Index	4.87%	11.36%	5.85%	11.63%	4.47%
EPOCH Investment - Gross(2)	3.15%	6.88%	4.77%	-	-
EPOCH Investment - Net	2.98%	6.21%	4.08%	-	-
MSCI World Index	4.87%	11.36%	5.85%	11.63%	4.47%
LSV Asset Management - Gross(3)	6.84%	11.47%	5.96%	-	-
LSV Asset Management - Net	6.74%	11.28%	5.29%	-	-
MSCI ACWI Idx	5.43%	12.60%	5.74%	11.23%	4.90%

(1) MSCI EAFE through 12/31/1996; 50% Hedged EAFE through 3/31/2011, MSCI EAFE again through 6/30/2016 and 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 September 30, 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 September 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Private Equity*					
Net	1.71%	(5.78%)	(2.11%)	0.72%	0.23%
Adams Street Direct Co-Invest Fd	0.00%	6.82%	15.99%	12.59%	5.28%
Adams Street Direct Fund 2010	0.00%	3.10%	15.27%	12.80%	-
Adams Street 1998 Partnership	(0.33%)	3.00%	2.03%	0.88%	1.27%
Adams Street 1999 Partnership	(3.60%)	7.99%	1.23%	1.47%	2.71%
Adams Street 2000 Partnership	(0.30%)	(2.05%)	(1.11%)	1.37%	3.50%
Adams Street 2001 Partnership	(1.49%)	(7.93%)	2.30%	4.47%	3.73%
Adams Street 2002 Partnership	0.54%	10.02%	1.80%	4.80%	3.22%
Adams Street 2003 Partnership	0.12%	(2.44%)	10.57%	7.79%	6.94%
Adams Street 2010 Partnership	0.00%	6.18%	13.75%	12.03%	-
Adams Street 2008 Fund	0.00%	11.84%	12.80%	7.86%	-
Adams Street 1999 Non-US	(8.08%)	4.28%	(1.58%)	4.01%	7.79%
Adams Street 2000 Non-US	3.37%	(4.57%)	(1.58%)	(1.86%)	2.80%
Adams Street 2001 Non-US	(1.30%)	(17.79%)	23.66%	12.12%	3.65%
Adams Street 2002 Non-US	(0.16%)	29.18%	9.02%	5.88%	7.16%
Adams Street 2003 Non-US	2.82%	21.41%	10.54%	10.60%	13.06%
Adams Street 2004 Non-US	4.06%	(4.54%)	7.88%	4.18%	5.74%
Adams Street 2010 Non-US	0.00%	9.63%	6.95%	5.83%	-
Adams Street 2010 Non-US Emg	0.00%	10.50%	12.26%	1.21%	-
Adams Street 2015 Global Fd	0.00%	-	-	-	-
Adams Street BVCF IV Fund	0.00%	(1.65%)	18.20%	26.61%	28.39%
CorsAir III	(0.42%)	34.23%	7.44%	1.48%	-
ND Investors	24.54%	32.83%	7.40%	7.18%	-
CorsAir IV	(1.06%)	(2.78%)	13.88%	5.89%	-
Capital International V	(0.60%)	(25.76%)	(10.72%)	(9.04%)	-
Capital International VI	(0.87%)	1.29%	(9.01%)	-	-
EIG Energy Fund XIV	(0.41%)	(67.93%)	(37.54%)	(24.23%)	-
Lewis & Clark, LP	0.00%	(51.19%)	(35.55%)	(19.67%)	(7.95%)
Lewis & Clark II	0.00%	1.88%	(6.77%)	(5.56%)	-
Quantum Energy Partners	7.24%	(17.02%)	(4.26%)	6.49%	-
Matlin Patterson II	0.00%	7.27%	3.20%	(27.40%)	(23.79%)
Matlin Patterson III	0.00%	(5.29%)	(1.30%)	21.94%	-

* 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 September 30, 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 September 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Global Fixed Income					
Gross	2.18%	8.14%	4.83%	5.55%	-
Net	2.11%	7.88%	4.58%	5.32%	-
Wtd Avg Global FI Benchmark	1.62%	8.33%	3.66%	3.71%	-
Domestic Fixed Income					
Gross	2.39%	7.11%	5.54%	6.36%	6.00%
Net	2.34%	6.88%	5.31%	6.15%	5.73%
Wtd Avg Domestic FI Benchmark	1.79%	7.27%	4.41%	4.51%	5.74%
Inv. Grade Fixed Income					
Gross	1.56%	5.69%	5.13%	5.29%	5.65%
Net	1.52%	5.54%	5.00%	5.16%	5.43%
BB Barclays Aggregate Index	0.46%	5.19%	4.03%	3.08%	4.79%
Declaration Total Return - Net	2.16%	3.88%	4.71%	-	-
Libor-3 Month	0.19%	0.61%	0.37%	0.38%	1.32%
J.P. Morgan MBS - Gross	0.56%	3.65%	-	-	-
J.P. Morgan MBS - Net	0.50%	3.42%	-	-	-
BB Barclays Mortgage	0.60%	3.61%	3.61%	2.65%	4.65%
PIMCO Unconstrained - Gross(1)	3.27%	5.91%	1.90%	-	-
PIMCO Unconstrained - Net	3.16%	5.52%	1.59%	-	-
Blended Benchmark(2)	0.19%	0.61%	0.44%	-	-
PIMCO DiSCO II - Net	4.15%	8.30%	7.58%	-	-
BB Barclays Aggregate Index	0.46%	5.19%	4.03%	3.08%	4.79%
PIMCO MBS - Gross	0.72%	3.85%	3.60%	-	-
PIMCO MBS - Net	0.68%	3.67%	3.42%	-	-
BB Barclays Mortgage	0.60%	3.61%	3.61%	2.65%	4.65%
SSgA Long US Treas Idx - Gross	(0.36%)	13.11%	11.14%	-	-
SSgA Long US Treas Idx - Net	(0.37%)	13.06%	11.10%	-	-
BB Barclays Long Treas	(0.36%)	13.13%	11.16%	5.48%	8.06%
Below Inv. Grade Fixed Income					
Gross	4.61%	10.57%	6.44%	9.19%	6.50%
Net	4.50%	10.13%	5.99%	8.77%	6.11%
BB Barclays HY Corp 2% Issue	5.55%	12.74%	5.30%	8.34%	7.80%
Goldman Sachs 2006 Offshore - Net	(0.73%)	2.87%	17.41%	9.05%	6.43%
Goldman Sachs Offshore V - Net	0.00%	(3.13%)	6.38%	8.40%	-
PIMCO Bravo II Fund - Net	0.00%	7.02%	-	-	-
BB Barclays HY Corp 2% Issue	5.55%	12.74%	5.30%	8.34%	7.80%
Loomis Sayles - Gross	5.92%	11.79%	5.97%	9.23%	7.84%
Loomis Sayles - Net	5.79%	11.23%	5.45%	8.75%	7.47%
BB Barclays HY Corp 2% Issue	5.55%	12.74%	5.30%	8.34%	7.80%

(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 September 30, 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 September 30, 2016

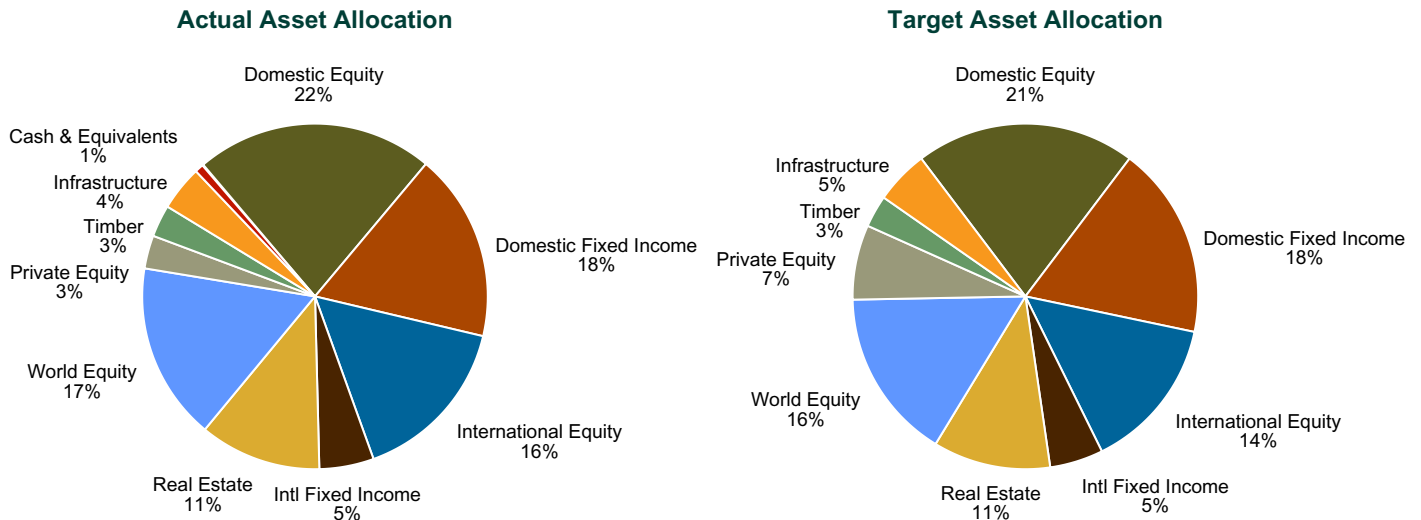
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
International Fixed Income					
Gross	1.47%	11.90%	1.84%	2.44%	5.38%
Net	1.38%	11.51%	1.48%	2.12%	5.14%
Wtd Avg Int'l FI Benchmark	1.03%	11.67%	0.75%	0.70%	4.06%
Brandywine - Gross	1.69%	11.59%	3.11%	4.30%	6.81%
Brandywine - Net	1.59%	11.17%	2.71%	3.98%	6.63%
BB Barclays Global Aggregate	0.82%	8.83%	2.13%	1.74%	4.26%
UBS Global Asset Mgmt. - Gross	1.18%	12.22%	0.66%	0.57%	3.73%
UBS Global Asset Mgmt. - Net	1.10%	11.86%	0.35%	0.26%	3.43%
Blended Benchmark(1)	1.03%	11.67%	0.75%	0.70%	4.06%
Global Real Assets					
Gross	0.84%	7.48%	9.47%	8.44%	-
Net	0.76%	7.01%	9.02%	7.88%	-
Wtd Avg Global Real Assets Benchmark	1.07%	5.67%	7.64%	7.48%	-
Global Real Estate					
Gross	1.49%	10.77%	14.34%	13.51%	5.73%
Net	1.36%	10.24%	13.78%	12.71%	3.97%
NCREIF Total Index	1.77%	9.22%	11.31%	11.18%	7.22%
Invesco Core Real Estate - Gross	1.68%	9.58%	12.51%	11.99%	6.22%
Invesco Core Real Estate - Net	1.59%	9.21%	12.11%	11.57%	5.73%
Invesco Fund II - Net	0.00%	6.65%	9.06%	15.56%	-
Invesco Fund III - Net	0.00%	14.25%	17.06%	-	-
Invesco Asia RE Feeder - Net	(3.02%)	115.72%	42.71%	22.36%	-
Invesco Asia RE Fund III - Net	(0.64%)	-	-	-	-
Invesco Value Added Fd IV - Net	0.00%	4.59%	-	-	-
JP Morgan - Gross	1.97%	10.25%	13.09%	13.65%	6.46%
JP Morgan - Net	1.73%	9.23%	11.95%	12.54%	5.35%
JP Morgan Alternative Fd - Net	0.00%	2.80%	(13.76%)	0.69%	(5.63%)
JP Morgan China Property Fd - Net	0.00%	16.15%	31.25%	15.64%	-
JPM Greater European Opp Fd - Net	1.16%	25.55%	33.95%	(20.00%)	-
NCREIF Total Index	1.77%	9.22%	11.31%	11.18%	7.22%
Timber					
Net	0.00%	4.32%	3.62%	1.35%	-
TIR Teredo	0.00%	9.29%	10.42%	6.70%	10.54%
TIR Springbank	0.00%	2.95%	0.38%	(1.39%)	1.61%
NCREIF Timberland Index	0.67%	3.28%	7.59%	6.91%	6.37%
Infrastructure					
Gross	(0.15%)	2.14%	4.36%	5.57%	-
Net	(0.15%)	1.51%	3.77%	4.90%	-
JP Morgan Asian Infrastructure - Net	(0.47%)	(9.56%)	(3.19%)	1.60%	-
JP Morgan IIF - Gross	0.00%	2.78%	4.62%	5.74%	-
JP Morgan IIF - Net	0.00%	1.82%	3.70%	4.72%	-
Grosvenor Cust. Infrastructure - Net	(0.38%)	8.21%	9.20%	-	-
Grosvenor Cust. Infrastructure II - Net	(0.89%)	8.34%	-	-	-
CPI-W	0.09%	1.22%	0.71%	1.03%	1.73%
Cash & Cash Equivalents - Net					
Cash Account - Net	0.13%	0.39%	0.17%	0.14%	0.67%
3-month Treasury Bill	0.10%	0.27%	0.11%	0.10%	0.92%
Total Fund					
Gross	3.76%	9.72%	6.45%	9.88%	5.17%
Net	3.67%	9.43%	6.11%	9.44%	4.69%
Target*	3.56%	9.16%	5.45%	8.83%	5.50%

* Current Quarter Target = 16.1% Russell 1000 Index, 16.0% MSCI World, 13.2% BB Barclays Aggregate Idx, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 6.5% NDSIB PEN - Private Equity, 5.4% BB Barclays GI Agg ex US, 5.0% CPI-W, 4.9% Russell 2000 Index, 4.6% BB Barclays 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 Barclays Global Aggregate Index ex US thereafter.

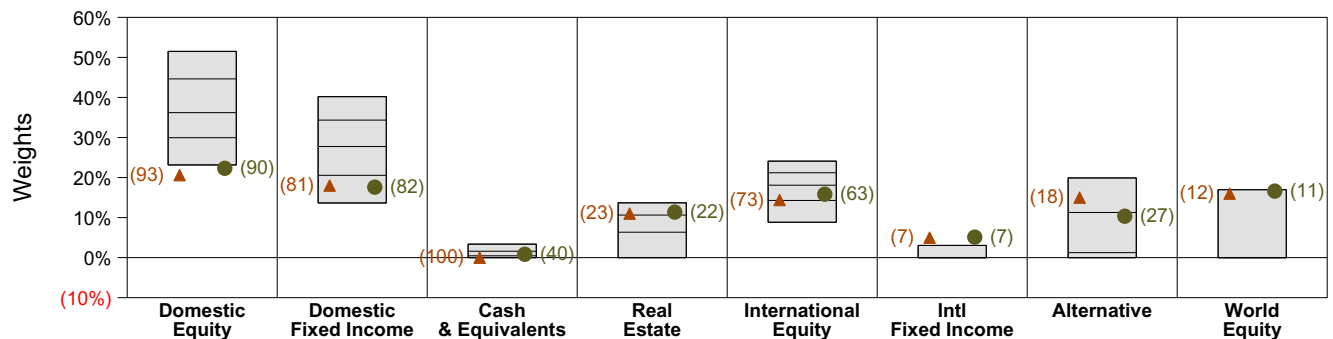
Actual vs Target Asset Allocation As of September 30, 2016

The top left chart shows the Fund's asset allocation as of September 30, 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	568,370	22.3%	20.6%	1.7%	43,396
Domestic Fixed Income	448,419	17.6%	18.0%	(0.4%)	(10,296)
International Equity	403,486	15.8%	14.4%	1.4%	36,515
Intl Fixed Income	130,467	5.1%	5.0%	0.1%	3,046
Real Estate	289,571	11.4%	11.0%	0.4%	9,245
World Equity	423,239	16.6%	16.0%	0.6%	15,492
Private Equity	78,273	3.1%	7.0%	(3.9%)	(100,116)
Timber	77,076	3.0%	3.0%	0.0%	623
Infrastructure	108,228	4.2%	5.0%	(0.8%)	(19,193)
Cash & Equivalents	21,287	0.8%	0.0%	0.8%	21,287
Total	2,548,416	100.0%	100.0%		

Asset Class Weights vs CAI Public Fund Sponsor Database



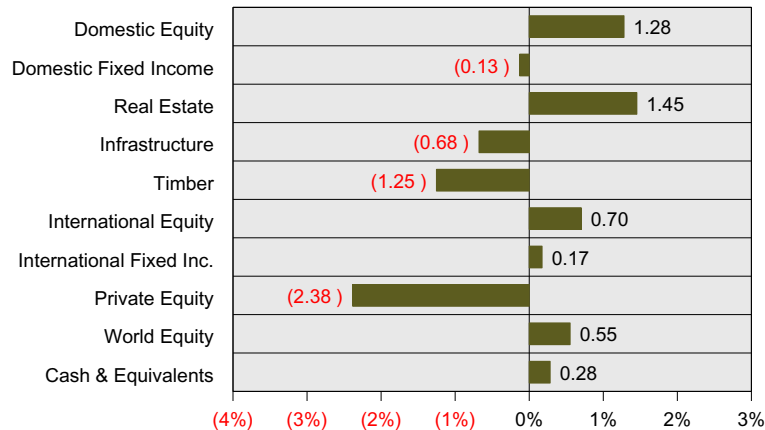
	Domestic Equity	Domestic Fixed Income	Cash & Equivalents	Real Estate	International Equity	Intl Fixed Income	Alternative	World Equity
10th Percentile	51.51	40.19	3.37	13.69	24.09	3.05	19.90	16.96
25th Percentile	44.63	34.34	1.60	10.63	21.20	0.00	11.27	0.00
Median	36.21	27.74	0.45	6.35	18.09	0.00	1.24	0.00
75th Percentile	29.95	20.56	0.00	0.00	14.28	0.00	0.00	0.00
90th Percentile	23.14	13.65	0.00	0.00	8.83	0.00	0.00	0.00
Fund	22.30	17.60	0.84	11.36	15.83	5.12	10.34	16.61
Target	20.60	18.00	0.00	11.00	14.40	5.00	15.00	16.00
% Group Invested	96.70%	97.25%	69.78%	60.99%	87.91%	14.29%	43.96%	24.18%

* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% BB Barclays 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% BB Barclays US HY Cor 2% C, 5.0% BB Barclays GI Agg ex US, 4.8% Russell 2000 Index, 3.4% MSCI EM and 3.0% NCREIF Timberland Index.

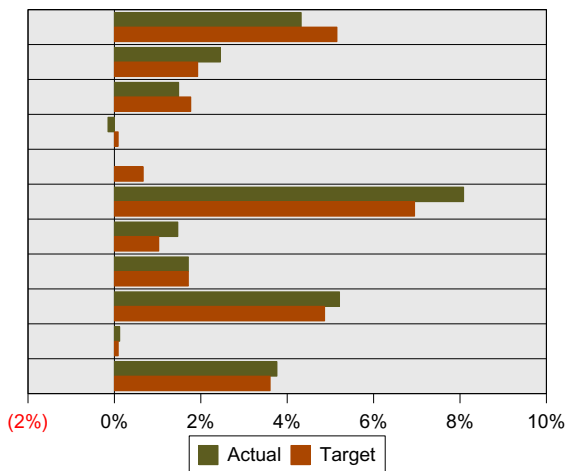
Quarterly Total Fund Relative Attribution - September 30, 2016

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.

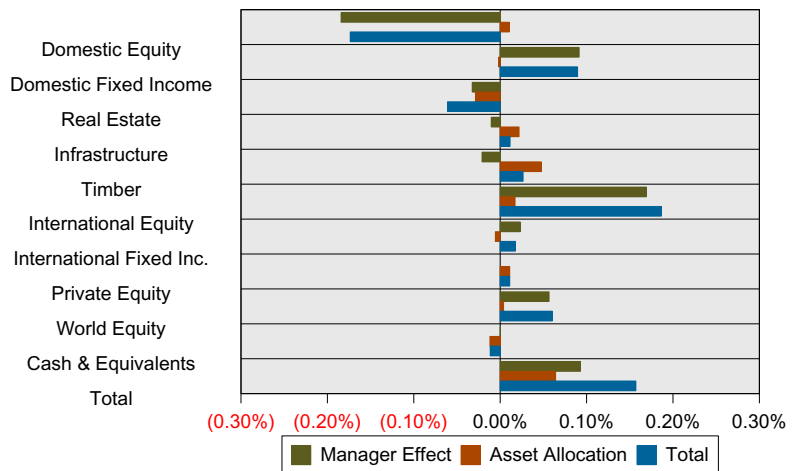
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended September 30, 2016

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	22%	21%	4.32%	5.15%	(0.18%)	0.01%	(0.17%)
Domestic Fixed Income	17%	17%	2.46%	1.93%	0.09%	(0.00%)	0.09%
Real Estate	12%	10%	1.49%	1.77%	(0.03%)	(0.03%)	(0.06%)
Infrastructure	4%	5%	(0.15%)	0.09%	(0.01%)	0.02%	0.01%
Timber	3%	4%	0.00%	0.67%	(0.02%)	0.05%	0.03%
International Equity	15%	15%	8.08%	6.95%	0.17%	0.02%	0.19%
International Fixed Inc.	5%	5%	1.47%	1.03%	0.02%	(0.01%)	0.02%
Private Equity	3%	6%	1.71%	1.71%	0.00%	0.01%	0.01%
World Equity	17%	16%	5.21%	4.87%	0.06%	0.00%	0.06%
Cash & Equivalents	1%	1%	0.12%	0.09%	0.00%	(0.01%)	(0.01%)

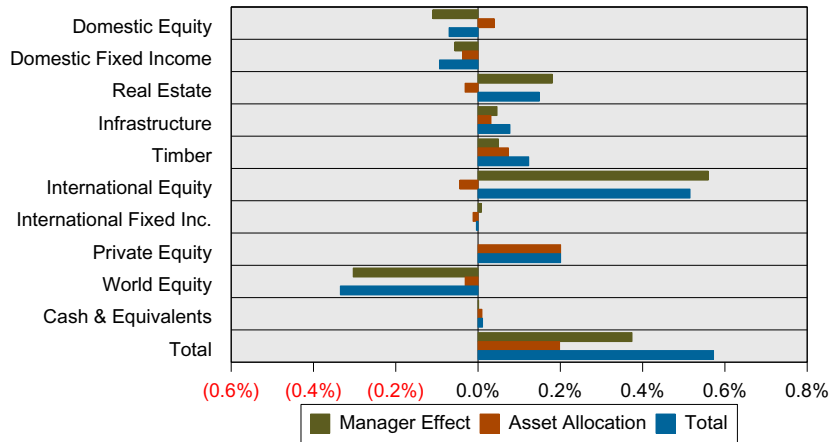
Total	3.76%	=	3.61%	+	0.09%	+	0.06%	0.16%
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* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% BB Barclays Aggregate Idx, 11.0% MSCI World ex US, 11.0% NCREIF Total Index, 7.0% NDSIB PERS - Private Equity, 5.0% CPI-W, 5.0% BB Barclays US HY Cor 2% C, 5.0% BB Barclays GI Agg ex US, 4.8% Russell 2000 Index, 3.4% MSCI EM and 3.0% NCREIF Timberland Index.

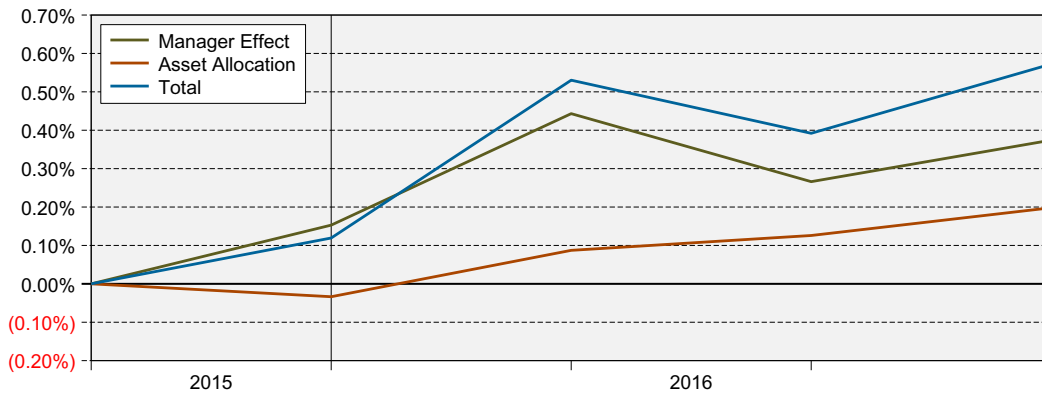
Cumulative Total Fund Relative Attribution - September 30, 2016

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

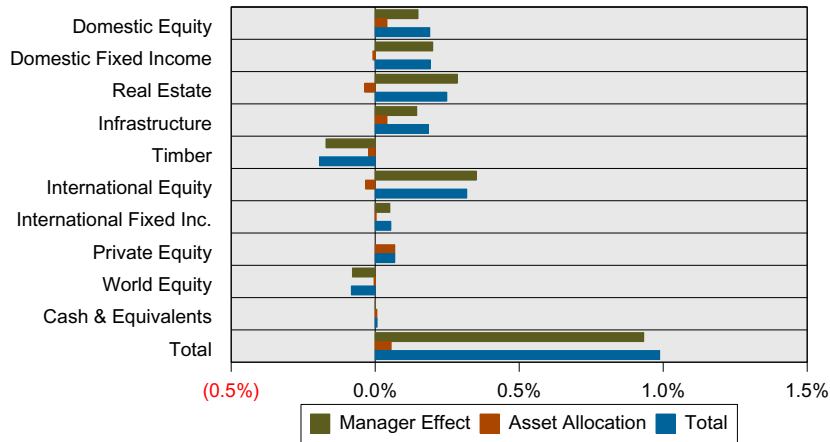
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	22%	21%	14.65%	15.11%	(0.11%)	0.04%	(0.07%)
Domestic Fixed Income	18%	17%	7.17%	7.41%	(0.06%)	(0.04%)	(0.09%)
Real Estate	11%	10%	10.81%	9.22%	0.18%	(0.03%)	0.15%
Infrastructure	5%	5%	2.14%	1.22%	0.05%	0.03%	0.08%
Timber	3%	5%	4.32%	3.28%	0.05%	0.07%	0.12%
International Equity	15%	15%	12.60%	8.90%	0.56%	(0.04%)	0.52%
International Fixed Inc.	5%	5%	11.91%	11.67%	0.01%	(0.01%)	(0.00%)
Private Equity	3%	5%	(5.77%)	(5.77%)	0.00%	0.20%	0.20%
World Equity	16%	16%	9.45%	11.36%	(0.30%)	(0.03%)	(0.33%)
Cash & Equivalents	1%	1%	0.39%	0.27%	0.00%	0.01%	0.01%
Total			9.79%	9.21%	+ 0.37%	+ 0.20%	0.57%

* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% BB Barclays 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% BB Barclays US HY Cor 2%C, 5.0% BB Barclays GI Agg ex US, 4.8% Russell 2000 Index, 3.4% MSCI EM and 3.0% NCREIF Timberland Index.

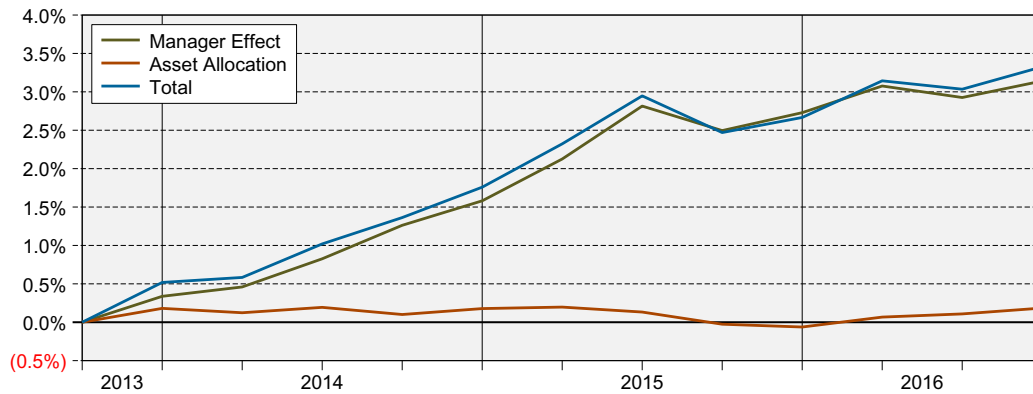
Cumulative Total Fund Relative Attribution - September 30, 2016

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

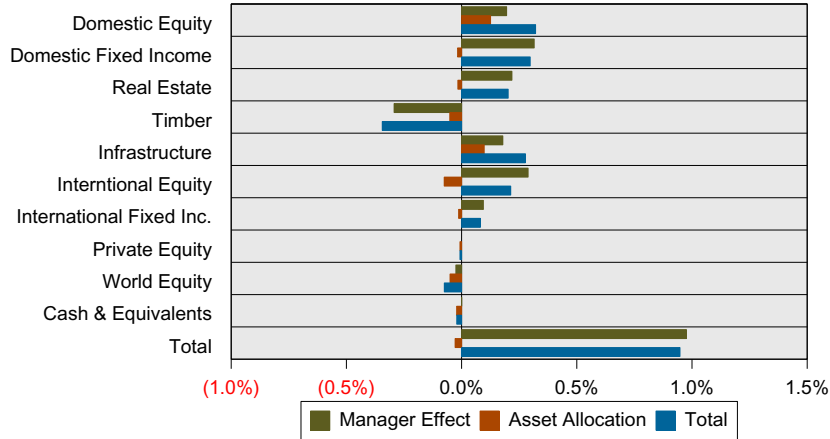
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	10.61%	9.92%	0.15%	0.04%	0.19%
Domestic Fixed Income	18%	17%	5.55%	4.43%	0.20%	(0.01%)	0.19%
Real Estate	10%	10%	14.42%	11.31%	0.28%	(0.04%)	0.25%
Infrastructure	4%	5%	4.36%	0.71%	0.14%	0.04%	0.19%
Timber	4%	5%	3.62%	7.59%	(0.17%)	(0.02%)	(0.19%)
International Equity	15%	15%	2.56%	0.30%	0.35%	(0.03%)	0.32%
International Fixed Inc.	5%	5%	1.85%	0.75%	0.05%	0.00%	0.05%
Private Equity	4%	5%	(2.09%)	(2.09%)	0.00%	0.07%	0.07%
World Equity	16%	16%	5.38%	5.85%	(0.08%)	(0.00%)	(0.08%)
Cash & Equivalents	1%	1%	0.17%	0.11%	0.00%	0.01%	0.01%
Total			6.44%	5.46%	0.93%	0.06%	0.99%

* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% BB Barclays 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% BB Barclays US HY Cor 2% C, 5.0% BB Barclays GI Agg ex US, 4.8% Russell 2000 Index, 3.4% MSCI EM and 3.0% NCREIF Timberland Index.

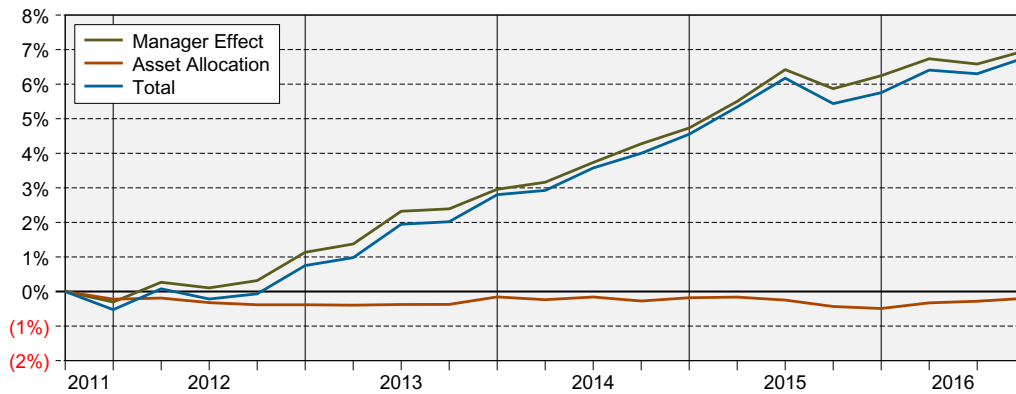
Cumulative Total Fund Relative Attribution - September 30, 2016

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

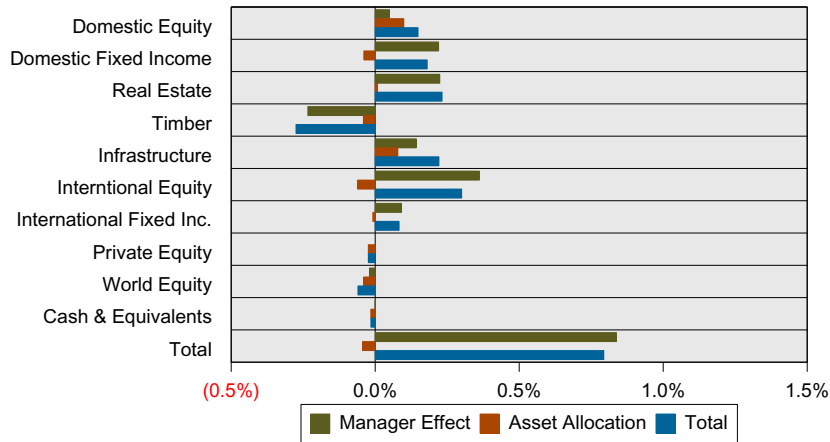
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	24%	23%	17.23%	16.33%	0.20%	0.13%	0.32%
Domestic Fixed Income	18%	17%	6.41%	4.64%	0.32%	(0.02%)	0.30%
Real Estate	10%	10%	13.55%	11.18%	0.22%	(0.02%)	0.20%
Timber	5%	5%	1.35%	6.91%	(0.29%)	(0.05%)	(0.34%)
Infrastructure	4%	5%	5.59%	1.03%	0.18%	0.10%	0.28%
International Equity	16%	16%	8.31%	6.40%	0.29%	(0.08%)	0.21%
International Fixed Inc.	5%	5%	2.44%	0.70%	0.09%	(0.01%)	0.08%
Private Equity	5%	5%	0.73%	0.73%	0.00%	(0.01%)	(0.01%)
World Equity	13%	13%	-	-	(0.02%)	(0.05%)	(0.08%)
Cash & Equivalents	1%	1%	0.13%	0.10%	0.00%	(0.02%)	(0.02%)
Total			9.80%	8.85%	+ 0.98%	+ (0.03%)	0.95%

* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% BB Barclays 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% BB Barclays US HY Cor 2%C, 5.0% BB Barclays GI Agg ex US, 4.8% Russell 2000 Index, 3.4% MSCI EM and 3.0% NCREIF Timberland Index.

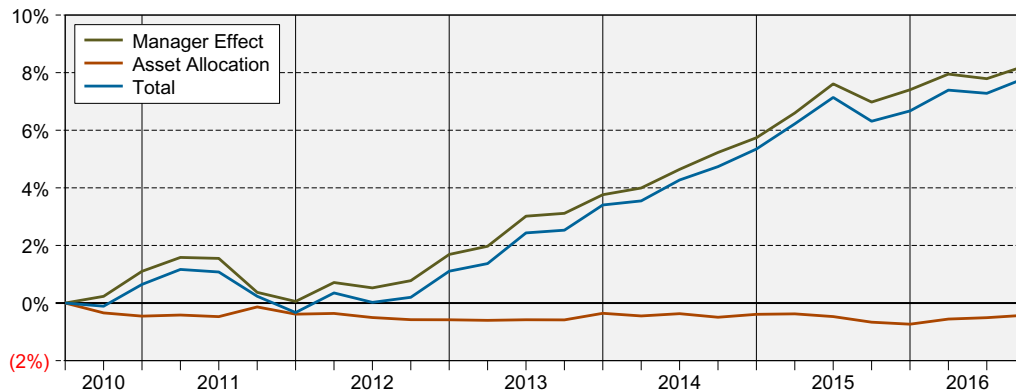
Cumulative Total Fund Relative Attribution - September 30, 2016

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-Quarter Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Six and One-Quarter Year Annualized Relative Attribution Effects

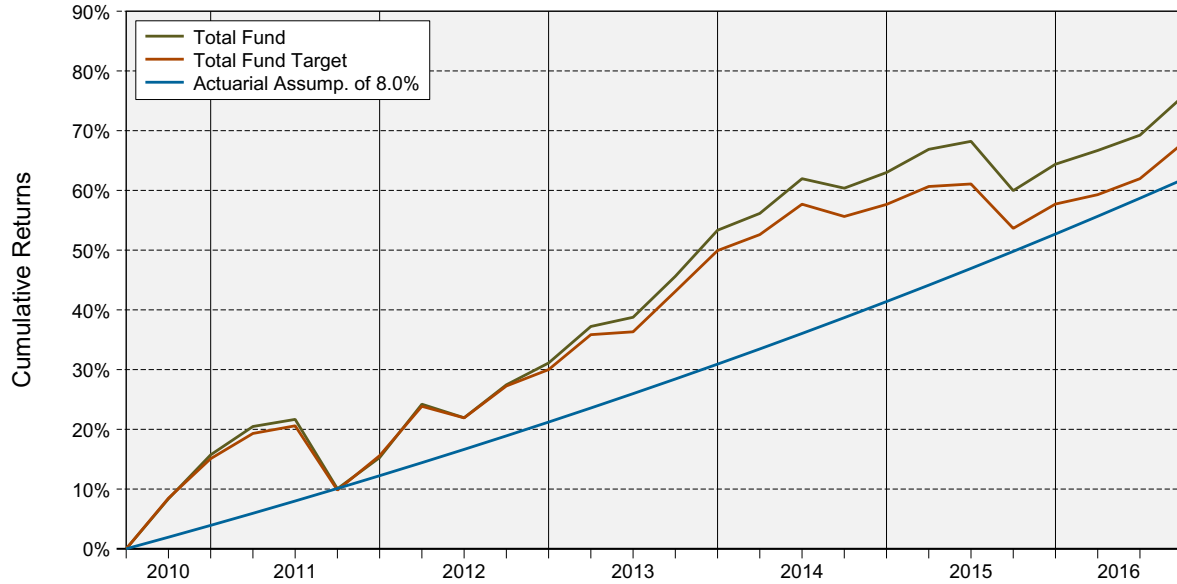
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	27%	26%	15.26%	14.82%	0.05%	0.10%	0.15%
Domestic Fixed Income	20%	19%	6.34%	4.99%	0.22%	(0.04%)	0.18%
Real Estate	9%	9%	15.07%	12.16%	0.22%	0.01%	0.23%
Timber	4%	4%	-	-	(0.23%)	(0.04%)	(0.27%)
Infrastructure	3%	4%	-	-	0.14%	0.08%	0.22%
International Equity	16%	16%	7.48%	5.10%	0.36%	(0.06%)	0.30%
International Fixed Inc.	5%	5%	4.49%	2.77%	0.09%	(0.01%)	0.08%
Private Equity	4%	5%	2.92%	2.92%	0.00%	(0.02%)	(0.02%)
World Equity	10%	11%	-	-	(0.02%)	(0.04%)	(0.06%)
Cash & Equivalents	1%	1%	0.14%	0.11%	0.00%	(0.02%)	(0.01%)
Total			9.43%	8.63%	+ 0.84%	+ (0.04%)	0.79%

* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% BB Barclays 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% BB Barclays US HY Cor 2% C, 5.0% BB Barclays GI Agg ex US, 4.8% Russell 2000 Index, 3.4% MSCI EM and 3.0% NCREIF Timberland Index.

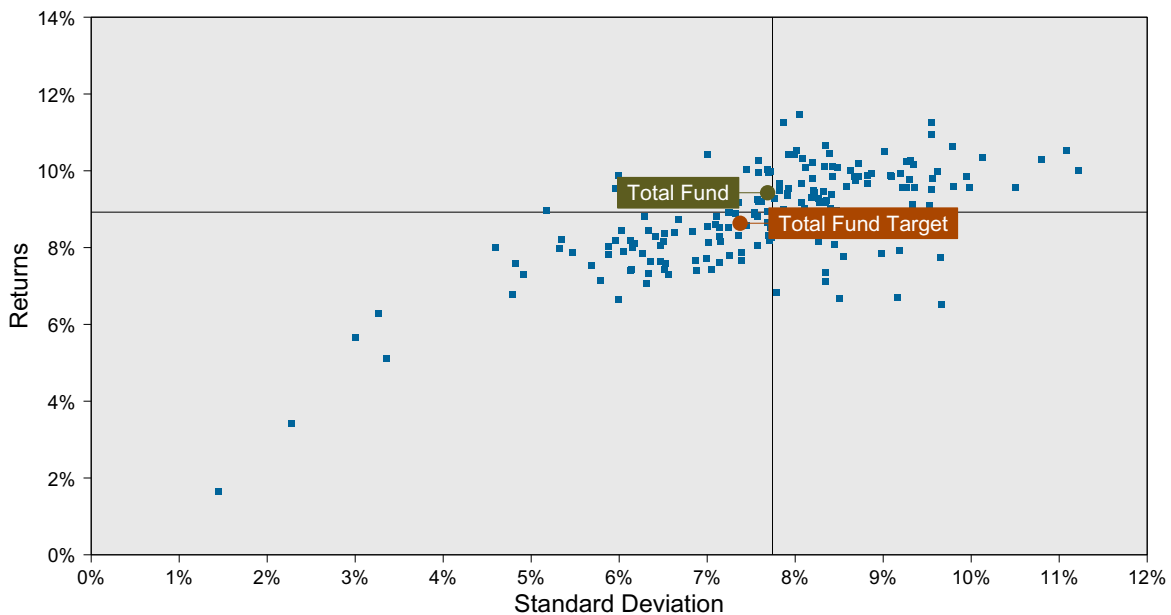
Cumulative Performance Relative to Target

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-Quarter Year Annualized Risk vs Return



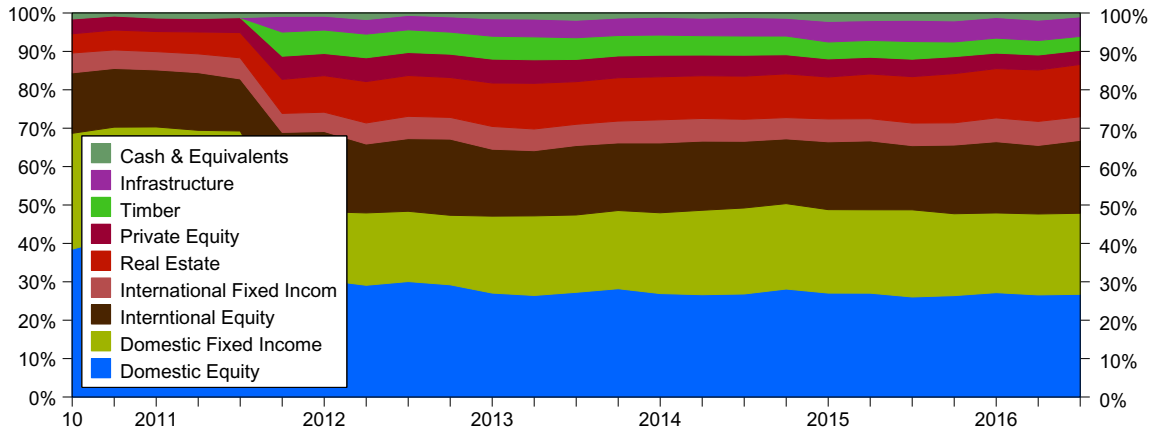
Squares represent membership of the CAI Public Fund Sponsor Database

* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% BB Barclays 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% BB Barclays US HY Cor 2% C, 5.0% BB Barclays GI Agg ex US, 4.8% Russell 2000 Index, 3.4% MSCI EM and 3.0% NCREIF Timberland Index.

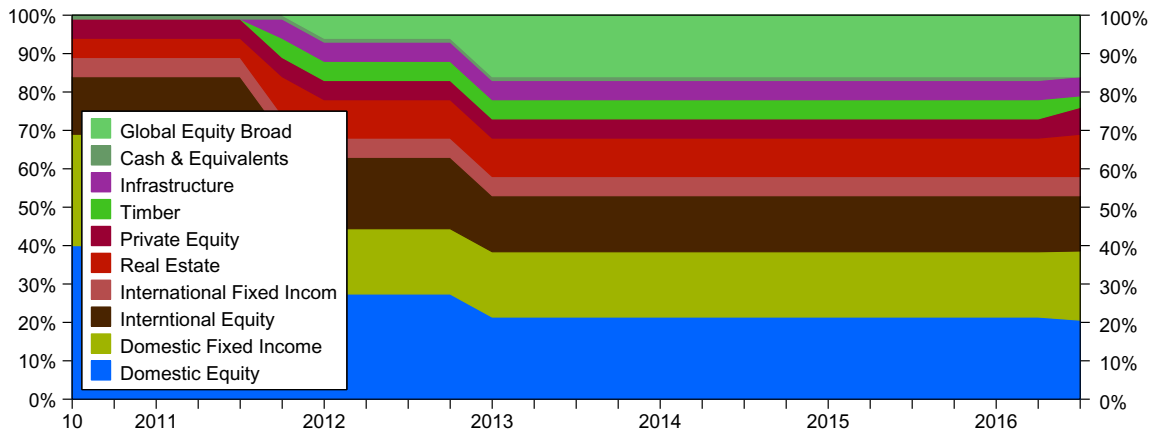
Actual vs Target Historical Asset Allocation

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.

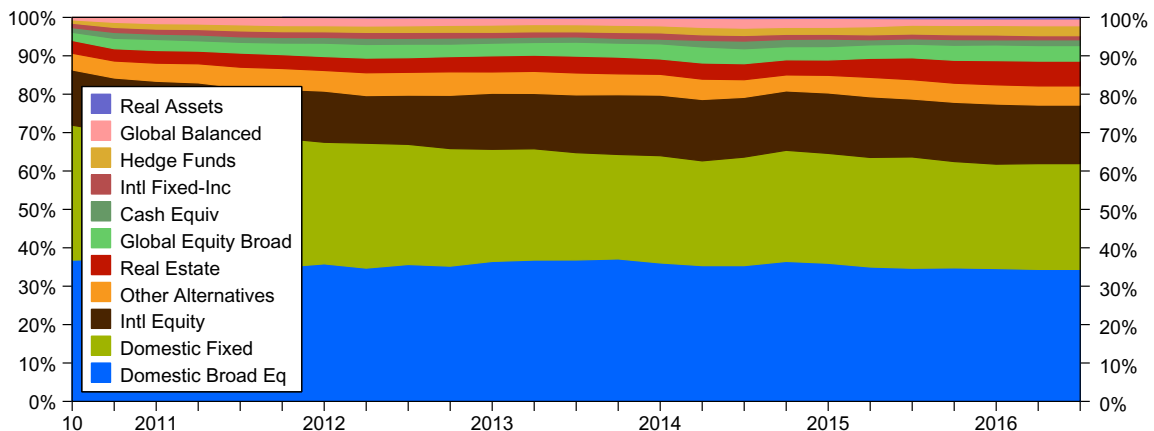
Actual Historical Asset Allocation



Target Historical Asset Allocation



Average CAI Public Fund Sponsor Database Historical Asset Allocation

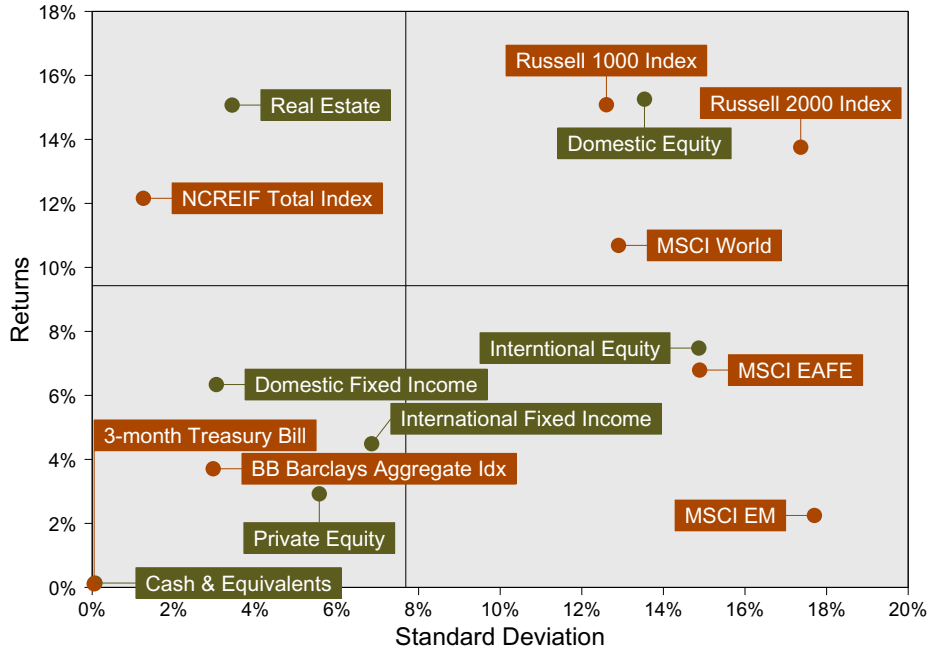


* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% BB Barclays Aggregate Idx, 11.0% MSCI World ex US, 11.0% NCREIF Total Index, 7.0% NDSIB PERS - Private Equity, 5.0% CPI-W, 5.0% BB Barclays US HY Cor 2% C, 5.0% BB Barclays GI Agg ex US, 4.8% Russell 2000 Index, 3.4% MSCI EM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

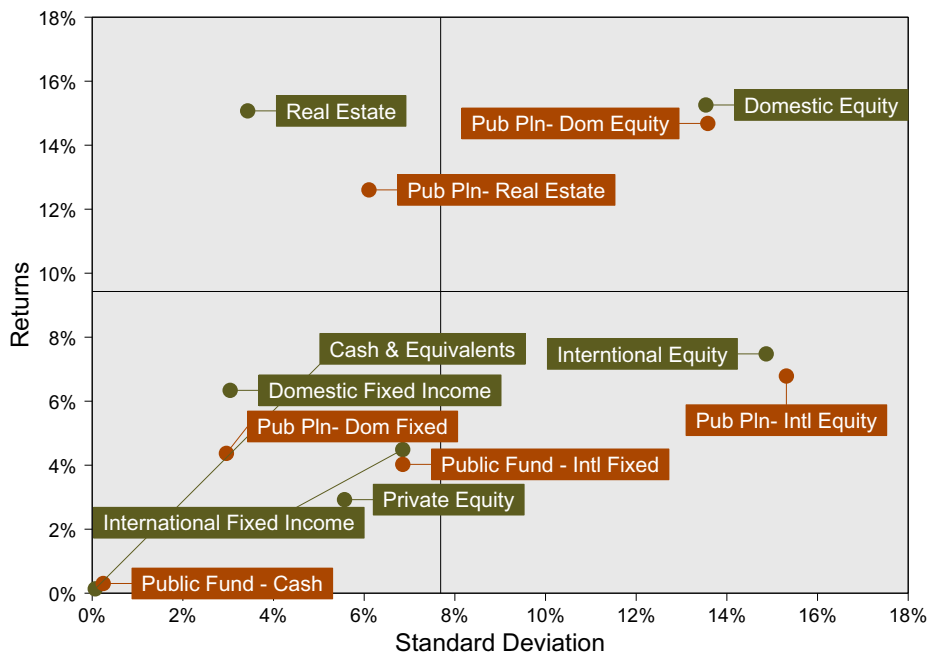
Asset Class Risk and Return

The charts below show the six and one-quarter 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-Quarter Year Annualized Risk vs Return Asset Classes vs Benchmark Indices



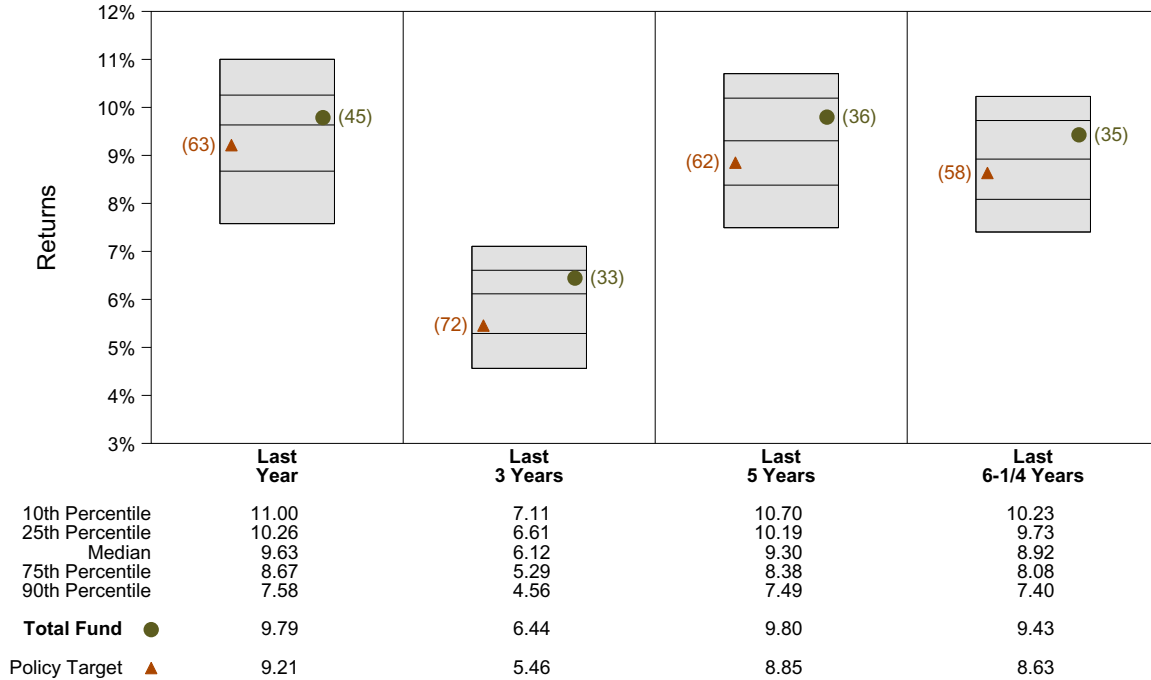
Six and One-Quarter Year Annualized Risk vs Return Asset Classes vs Asset Class Median



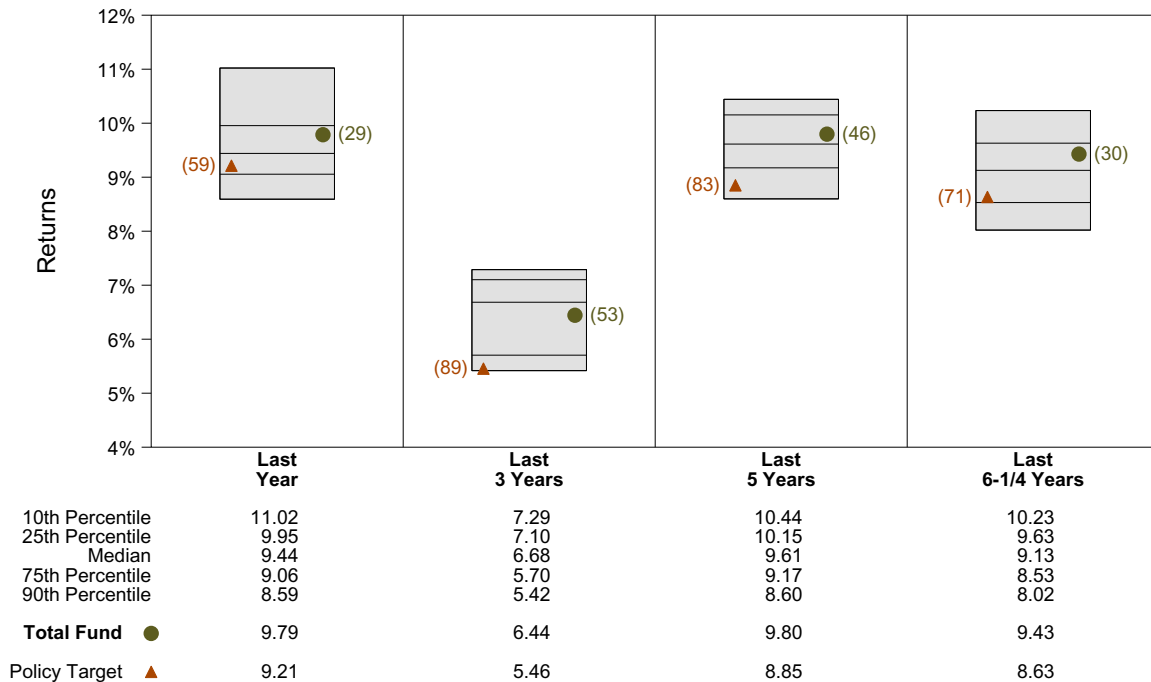
Total Fund Ranking

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 September 30, 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

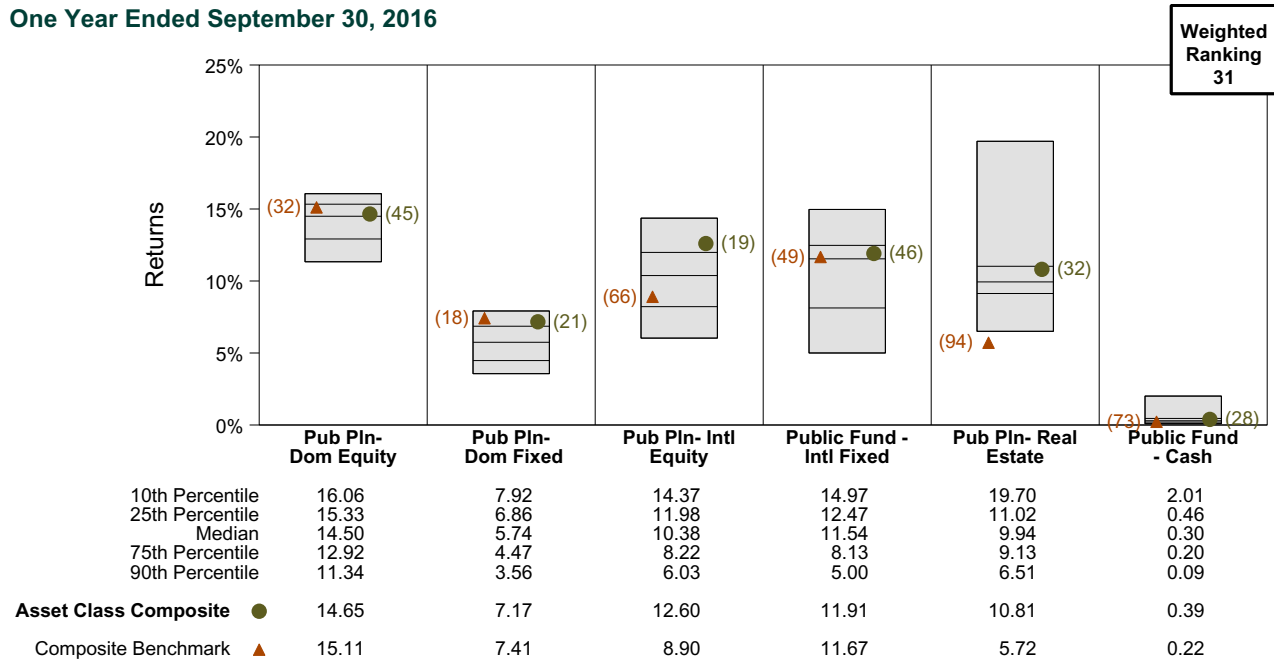


* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% BB Barclays Aggregate Idx, 11.0% MSCI World ex US, 11.0% NCREIF Total Index, 7.0% NDSIB PERS - Private Equity, 5.0% CPI-W, 5.0% BB Barclays US HY Cor 2%C, 5.0% BB Barclays GI Agg ex US, 4.8% Russell 2000 Index, 3.4% MSCI EM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

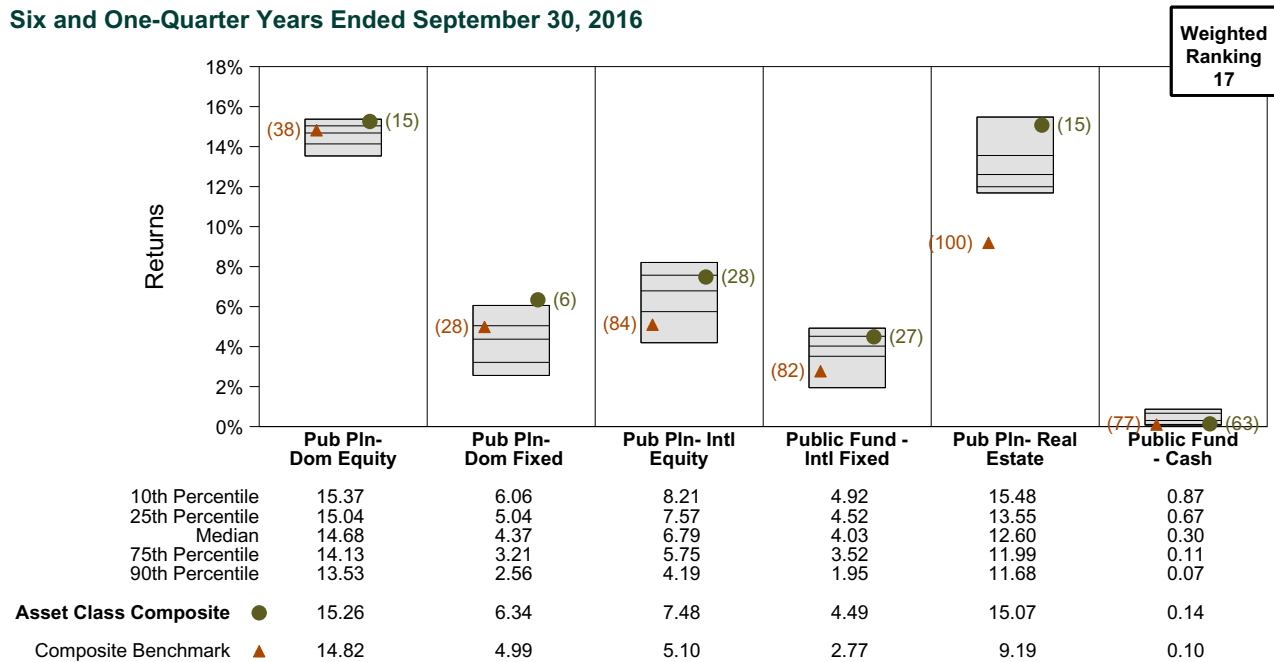
Asset Class Rankings

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 September 30, 2016



Total Asset Class Performance Six and One-Quarter Years Ended September 30, 2016



* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% BB Barclays 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% BB Barclays US HY Cor 2% C, 5.0% BB Barclays 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 September 30, 2016, with the distribution as of June 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

	September 30, 2016		Net New Inv.	Inv. Return	June 30, 2016	
	Market Value	Weight			Market Value	Weight
GLOBAL EQUITY	\$1,473,368,419	57.82%	\$906,320	\$75,776,976	\$1,396,685,124	56.79%
Domestic Equity	\$568,369,740	22.30%	\$(2,171,743)	\$23,649,509	\$546,891,974	22.24%
Large Cap	435,332,058	17.08%	76,432	15,766,067	419,489,559	17.06%
Small Cap	133,037,682	5.22%	(2,248,175)	7,883,442	127,402,415	5.18%
International Equity	\$403,486,478	15.83%	\$6,486,409	\$29,703,443	\$367,296,626	14.94%
Developed Intl Equity	296,054,467	11.62%	5,961,409	20,967,530	269,125,528	10.94%
Emerging Markets	107,432,011	4.22%	525,000	8,735,913	98,171,098	3.99%
World Equity	\$423,238,786	16.61%	\$(294,859)	\$20,975,580	\$402,558,064	16.37%
Private Equity	\$78,273,416	3.07%	\$(3,113,488)	\$1,448,444	\$79,938,460	3.25%
GLOBAL FIXED INCOME	\$578,885,727	22.72%	\$4,582,762	\$12,329,890	\$561,973,075	22.85%
Domestic Fixed Income	\$448,419,094	17.60%	\$4,670,382	\$10,441,391	\$433,307,321	17.62%
Inv. Grade Fixed Income	317,499,224	12.46%	12,797,431	4,672,730	300,029,063	12.20%
Below Inv. Grade Fixed Income	130,919,870	5.14%	(8,127,049)	5,768,662	133,278,258	5.42%
International Fixed Income	\$130,466,633	5.12%	\$(87,620)	\$1,888,499	\$128,665,754	5.23%
GLOBAL REAL ASSETS	\$474,874,827	18.63%	\$8,586,917	\$4,295,014	\$461,992,896	18.79%
Real Estate	289,571,257	11.36%	9,576,170	4,456,175	275,538,912	11.20%
Timber	77,075,733	3.02%	(383,891)	()	77,459,623	3.15%
Infrastructure	108,227,837	4.25%	(605,363)	(161,161)	108,994,361	4.43%
Cash & Equivalents	\$21,287,252	0.84%	\$(17,355,182)	\$27,096	\$38,615,338	1.57%
Securities Lending Income	\$0	0.00%	\$(69,197)	\$69,197	-	-
Total Fund	\$2,548,416,225	100.0%	\$(3,348,381)	\$92,498,174	\$2,459,266,432	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 September 30, 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 September 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6-1/4 Years
Global Equity					
Gross	5.42%	11.24%	6.14%	-	-
Net	5.32%	10.99%	5.81%	-	-
Wtd Avg Global Equity Benchmark	5.26%	10.52%	5.16%	-	-
Domestic Equity					
Gross	4.32%	14.65%	10.61%	17.23%	15.26%
Net	4.19%	14.44%	10.41%	16.99%	14.99%
Wtd Avg Domestci Equity Benchmark	5.15%	15.11%	9.92%	16.33%	14.82%
Large Cap Equity					
Gross	3.76%	15.00%	12.06%	17.54%	15.66%
Net	3.69%	14.83%	11.87%	17.32%	15.40%
Benchmark(1)	4.03%	14.93%	10.78%	16.40%	15.08%
Small Cap Equity					
Gross	6.19%	12.89%	5.61%	15.92%	13.80%
Net	5.85%	12.54%	5.36%	15.64%	13.52%
Russell 2000 Index	9.05%	15.47%	6.71%	15.82%	13.76%
International Equity					
Gross	8.08%	12.60%	2.56%	8.31%	7.48%
Net	8.05%	12.40%	2.35%	8.01%	7.15%
Wtd Avg Intl Equity Benchmark	6.95%	8.90%	0.30%	6.40%	5.10%
Developed Intl Equity					
Gross	7.79%	10.37%	2.45%	9.07%	8.14%
Net	7.74%	10.10%	2.20%	8.77%	7.82%
Benchmark(2)	6.29%	6.38%	0.43%	7.36%	5.86%
Emerging Markets					
Gross	8.89%	18.79%	2.11%	5.00%	4.81%
Net	8.89%	18.79%	2.02%	4.71%	4.49%
Benchmark(3)	9.03%	16.78%	(0.56%)	3.03%	2.30%
World Equity					
Gross	5.21%	9.45%	5.38%	-	-
Net	5.08%	9.04%	4.68%	-	-
MSCI World Index	4.87%	11.36%	5.85%	11.63%	10.69%
Private Equity					
Net	1.71%	(5.78%)	(2.11%)	0.68%	2.84%

(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 and 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 September 30, 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 September 30, 2016

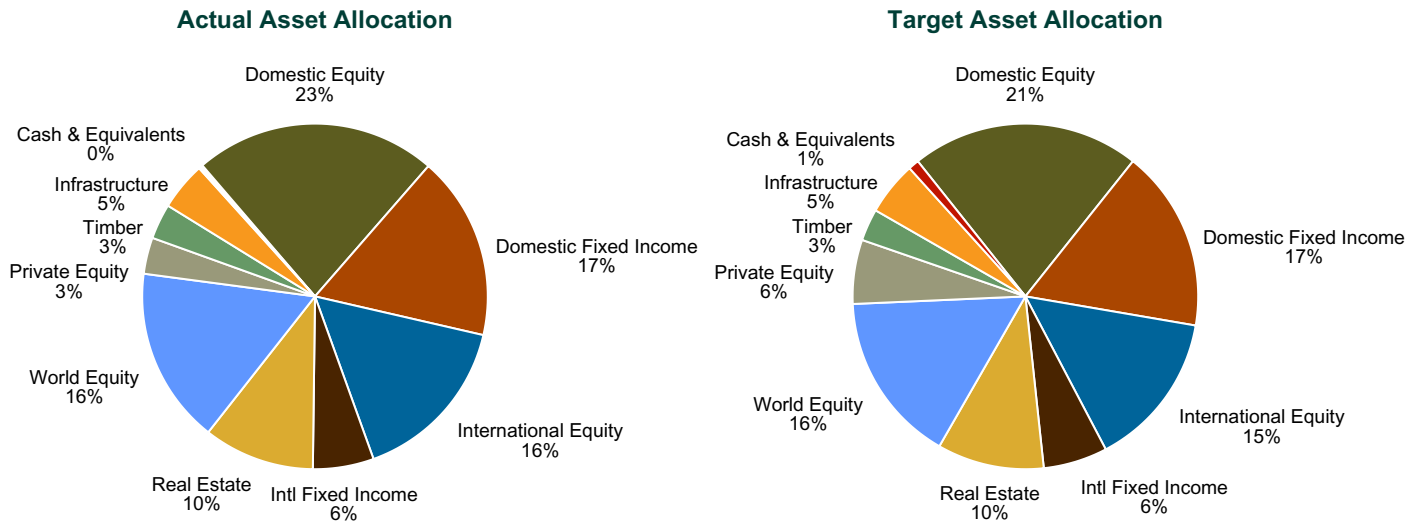
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6-1/4 Years
Global Fixed Income					
Gross	2.23%	8.20%	4.80%	-	-
Net	2.16%	7.93%	4.55%	-	-
Wtd Avg Global Fixed Income Benchmark	1.73%	8.41%	3.62%	-	-
Domestic Fixed Income					
Gross	2.46%	7.17%	5.55%	6.41%	6.34%
Net	2.40%	6.94%	5.32%	6.18%	6.09%
Wtd Avg Domestic FI Benchmark	1.93%	7.41%	4.43%	4.64%	4.99%
Inv. Grade Fixed Income					
Gross	1.56%	5.70%	5.13%	5.30%	5.37%
Net	1.52%	5.56%	5.00%	5.17%	5.19%
BB Barclays Aggregate Index	0.46%	5.19%	4.03%	3.08%	3.71%
Below Inv. Grade Fixed Income					
Gross	4.61%	10.52%	6.42%	9.18%	8.97%
Net	4.50%	10.08%	5.97%	8.72%	8.53%
BB Barclays HY Corp 2% Issue	5.55%	12.74%	5.30%	8.34%	8.02%
International Fixed Income					
Gross	1.47%	11.91%	1.85%	2.44%	4.49%
Net	1.38%	11.52%	1.49%	2.08%	4.12%
Wtd Avg Intl Fixed Income Benchmark	1.03%	11.67%	0.75%	0.70%	2.77%
Global Real Assets					
Gross	0.89%	7.65%	9.57%	-	-
Net	0.81%	7.18%	9.12%	-	-
Wtd Avg Global Real Assets Benchmark	1.07%	5.68%	7.66%	-	-
Real Estate					
Gross	1.49%	10.81%	14.42%	13.55%	15.07%
Net	1.36%	10.28%	13.85%	13.01%	14.50%
NCREIF Total Index	1.77%	9.22%	11.31%	11.18%	12.16%
Timber					
Net	0.00%	4.32%	3.62%	1.35%	-
NCREIF Timberland Index	0.67%	3.28%	7.59%	6.91%	5.52%
Infrastructure					
Gross	(0.15%)	2.14%	4.36%	5.59%	-
Net	(0.15%)	1.51%	3.77%	4.89%	-
CPI-W	0.09%	1.22%	0.71%	1.03%	1.56%
Cash & Equivalents - Net					
3-month Treasury Bill	0.12%	0.39%	0.17%	0.13%	0.14%
	0.10%	0.27%	0.11%	0.10%	0.11%
Total Fund					
Gross	3.76%	9.79%	6.44%	9.80%	9.43%
Net	3.68%	9.49%	6.12%	9.45%	9.08%
Target*	3.61%	9.21%	5.46%	8.85%	8.63%

* Current Quarter Target = 16.0% MSCI World, 15.8% Russell 1000 Index, 13.0% BB Barclays 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% BB Barclays US HY Cor 2%C, 5.0% BB Barclays 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.

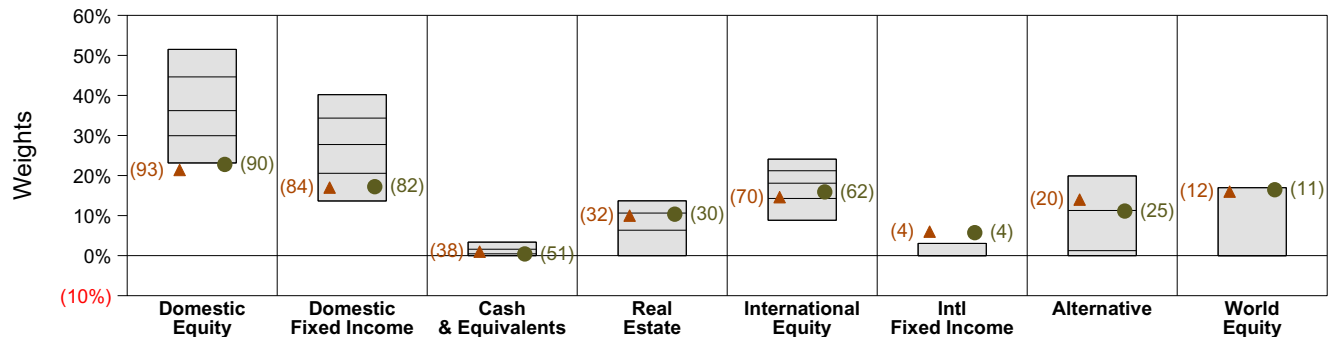
Actual vs Target Asset Allocation As of September 30, 2016

The top left chart shows the Fund's asset allocation as of September 30, 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	488,446	22.8%	21.4%	1.4%	29,518
Domestic Fixed Income	369,209	17.2%	17.0%	0.2%	4,640
International Equity	341,192	15.9%	14.6%	1.3%	28,092
Intl Fixed Income	122,993	5.7%	6.0%	(0.3%)	(5,678)
Real Estate	222,029	10.4%	10.0%	0.4%	7,577
World Equity	352,972	16.5%	16.0%	0.5%	9,848
Private Equity	71,846	3.4%	6.0%	(2.6%)	(56,825)
Timber	69,910	3.3%	3.0%	0.3%	5,575
Infrastructure	96,901	4.5%	5.0%	(0.5%)	(10,325)
Cash & Equivalents	9,025	0.4%	1.0%	(0.6%)	(12,420)
Total	2,144,524	100.0%	100.0%		

Asset Class Weights vs CAI Public Fund Sponsor Database



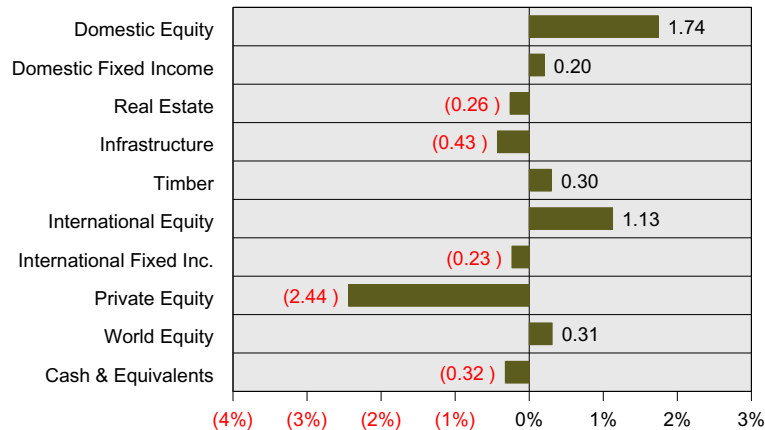
	Domestic Equity	Domestic Fixed Income	Cash & Equivalents	Real Estate	International Equity	Intl Fixed Income	Alternative	World Equity
10th Percentile	51.51	40.19	3.37	13.69	24.09	3.05	19.90	16.96
25th Percentile	44.63	34.34	1.60	10.63	21.20	0.00	11.27	0.00
Median	36.21	27.74	0.45	6.35	18.09	0.00	1.24	0.00
75th Percentile	29.95	20.56	0.00	0.00	14.28	0.00	0.00	0.00
90th Percentile	23.14	13.65	0.00	0.00	8.83	0.00	0.00	0.00
Fund	22.78	17.22	0.42	10.35	15.91	5.74	11.13	16.46
Target	21.40	17.00	1.00	10.00	14.60	6.00	14.00	16.00
% Group Invested	96.70%	97.25%	69.78%	60.99%	87.91%	14.29%	43.96%	24.18%

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

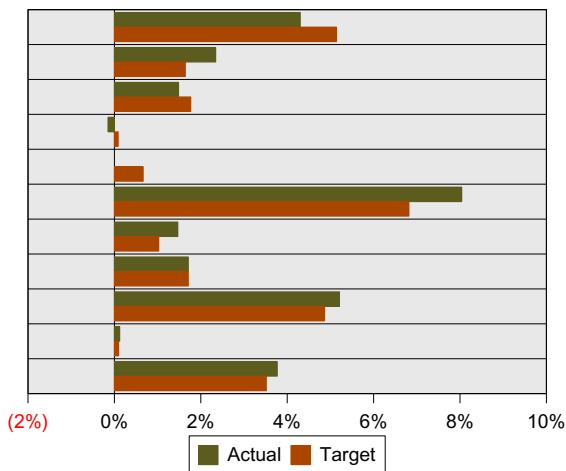
Quarterly Total Fund Relative Attribution - September 30, 2016

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.

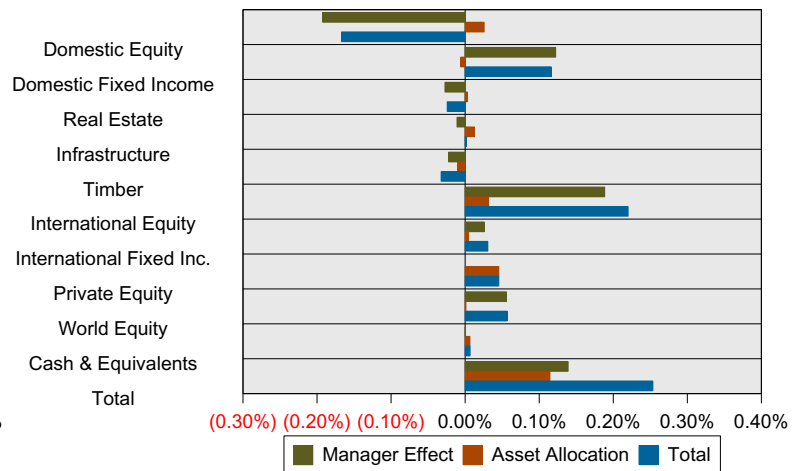
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended September 30, 2016

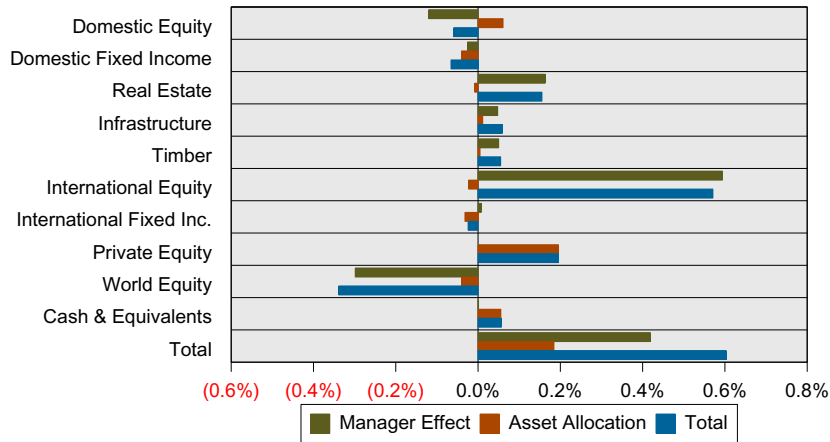
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	4.30%	5.14%	(0.19%)	0.03%	(0.17%)
Domestic Fixed Income	17%	17%	2.34%	1.64%	0.12%	(0.01%)	0.12%
Real Estate	10%	10%	1.49%	1.77%	(0.03%)	0.00%	(0.02%)
Infrastructure	5%	5%	0.09%	0.09%	(0.01%)	0.01%	0.00%
Timber	3%	3%	0.00%	0.67%	(0.02%)	(0.01%)	(0.03%)
International Equity	16%	15%	8.04%	6.82%	0.19%	0.03%	0.22%
International Fixed Inc.	6%	6%	1.47%	1.03%	0.03%	0.00%	0.03%
Private Equity	4%	6%	1.71%	1.71%	0.00%	0.05%	0.05%
World Equity	16%	16%	5.21%	4.87%	0.06%	0.00%	0.06%
Cash & Equivalents	1%	1%	0.12%	0.10%	0.00%	0.01%	0.01%
Total					0.377%	0.352%	0.025%

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

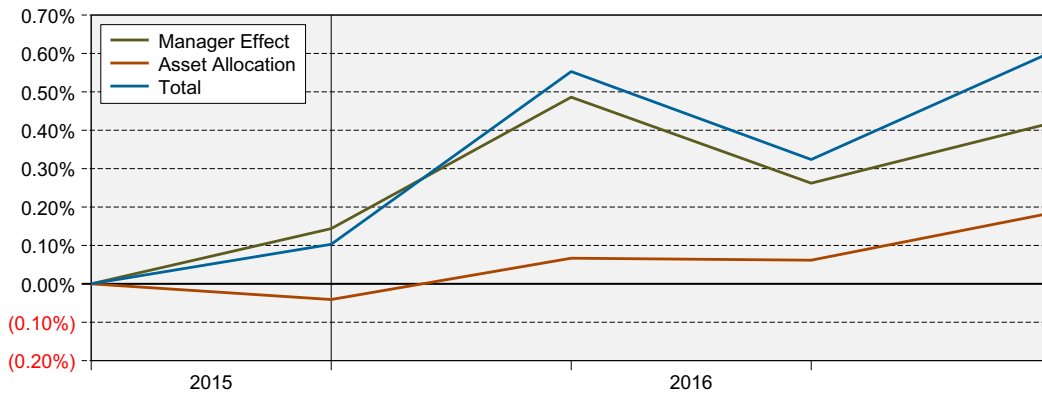
Cumulative Total Fund Relative Attribution - September 30, 2016

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

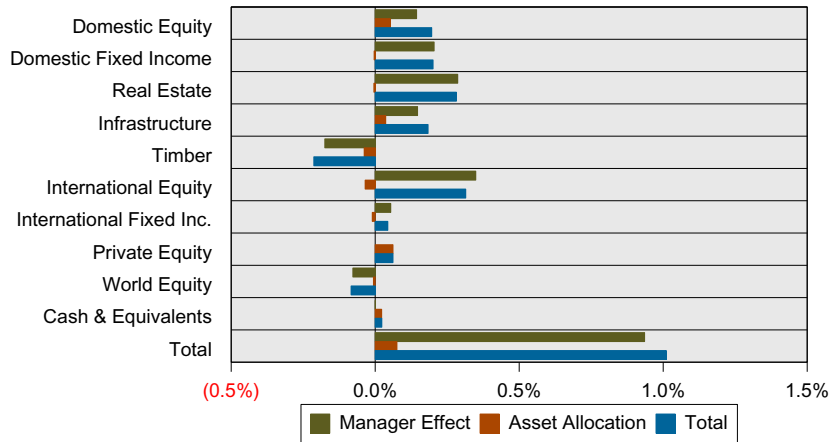
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	14.61%	15.10%	(0.12%)	0.06%	(0.06%)
Domestic Fixed Income	17%	17%	7.08%	7.17%	(0.03%)	(0.04%)	(0.07%)
Real Estate	11%	10%	10.81%	9.22%	0.16%	(0.01%)	0.16%
Infrastructure	5%	5%	2.14%	1.22%	0.05%	0.01%	0.06%
Timber	4%	4%	4.32%	3.28%	0.05%	0.00%	0.05%
International Equity	15%	15%	12.31%	8.40%	0.59%	(0.02%)	0.57%
International Fixed Inc.	5%	5%	11.91%	11.67%	0.01%	(0.03%)	(0.02%)
Private Equity	4%	5%	(5.77%)	(5.77%)	0.00%	0.20%	0.20%
World Equity	16%	16%	9.45%	11.36%	(0.30%)	(0.04%)	(0.34%)
Cash & Equivalents	1%	1%	0.39%	0.27%	0.00%	0.06%	0.06%
Total			9.72%	9.11%	+ 0.42%	+ 0.18%	0.60%

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

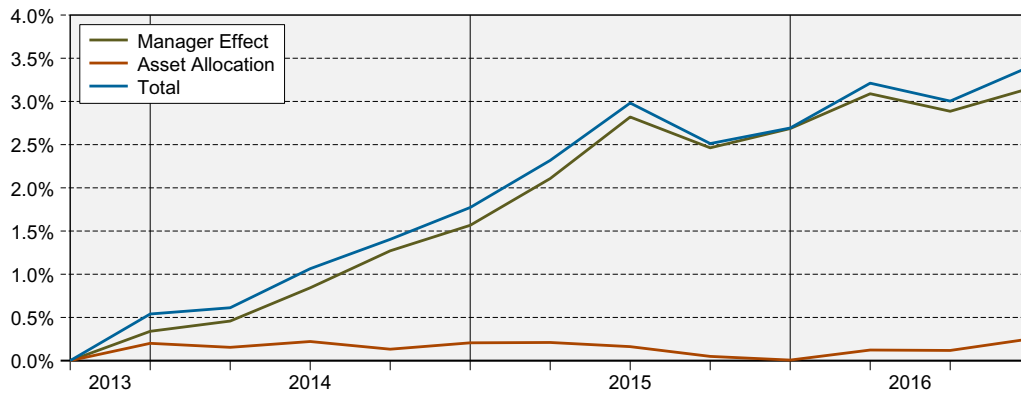
Cumulative Total Fund Relative Attribution - September 30, 2016

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

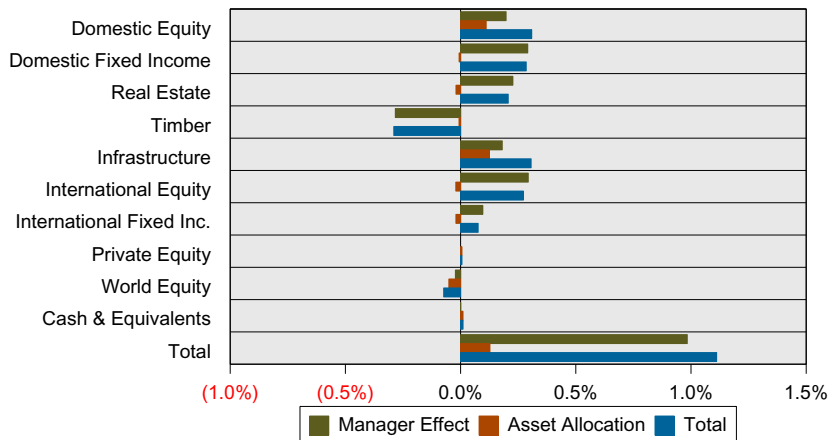
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	10.61%	9.92%	0.14%	0.05%	0.20%
Domestic Fixed Income	18%	17%	5.51%	4.35%	0.20%	(0.00%)	0.20%
Real Estate	10%	10%	14.42%	11.31%	0.29%	(0.00%)	0.28%
Infrastructure	4%	5%	4.36%	0.71%	0.15%	0.04%	0.18%
Timber	4%	5%	3.63%	7.59%	(0.17%)	(0.04%)	(0.21%)
International Equity	15%	15%	2.56%	0.33%	0.35%	(0.03%)	0.31%
International Fixed Inc.	5%	5%	1.85%	0.75%	0.05%	(0.01%)	0.04%
Private Equity	4%	5%	(2.09%)	(2.09%)	0.00%	0.06%	0.06%
World Equity	16%	16%	5.38%	5.85%	(0.08%)	(0.01%)	(0.08%)
Cash & Equivalents	1%	1%	0.17%	0.11%	0.00%	0.02%	0.02%
Total			6.46%	5.45%	+ 0.94%	+ 0.08%	1.01%

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

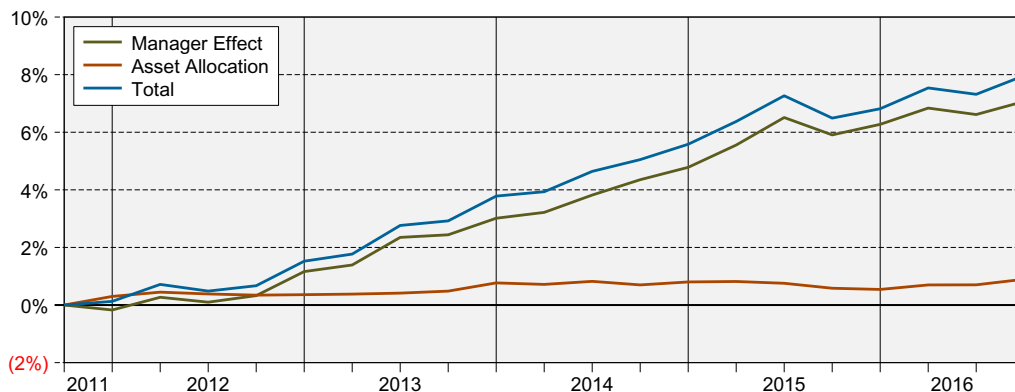
Cumulative Total Fund Relative Attribution - September 30, 2016

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

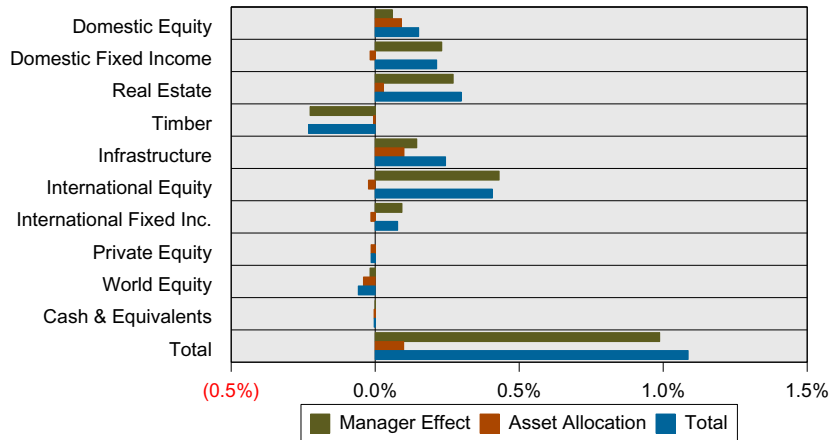
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	24%	23%	17.23%	16.33%	0.20%	0.11%	0.31%
Domestic Fixed Income	17%	17%	6.25%	4.59%	0.29%	(0.01%)	0.28%
Real Estate	10%	10%	13.54%	11.18%	0.23%	(0.02%)	0.21%
Timber	4%	5%	1.35%	6.91%	(0.28%)	(0.01%)	(0.29%)
Infrastructure	4%	5%	5.59%	1.03%	0.18%	0.13%	0.31%
International Equity	16%	16%	8.54%	6.60%	0.29%	(0.02%)	0.27%
International Fixed Inc.	5%	5%	2.45%	0.70%	0.10%	(0.02%)	0.08%
Private Equity	5%	5%	0.74%	0.74%	0.00%	0.01%	0.01%
World Equity	13%	13%	-	-	(0.02%)	(0.05%)	(0.07%)
Cash & Equivalents	1%	1%	0.13%	0.10%	0.00%	0.01%	0.01%
Total			9.98%	8.87%	+ 0.98%	+ 0.13%	1.11%

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

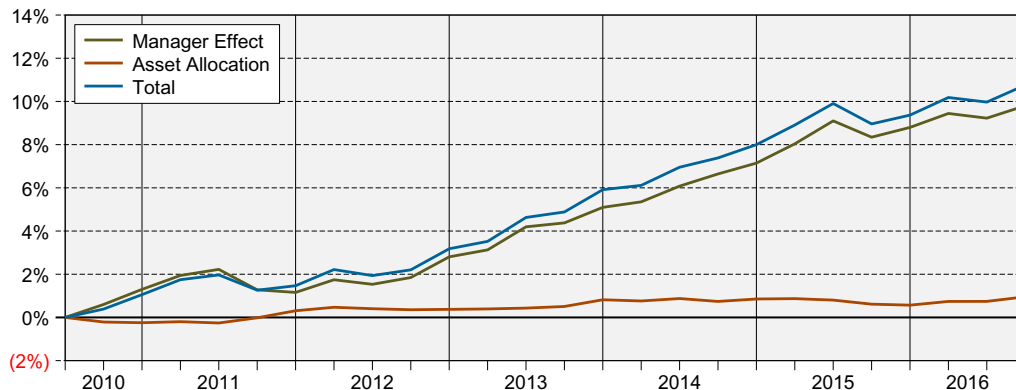
Cumulative Total Fund Relative Attribution - September 30, 2016

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-Quarter Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Six and One-Quarter Year Annualized Relative Attribution Effects

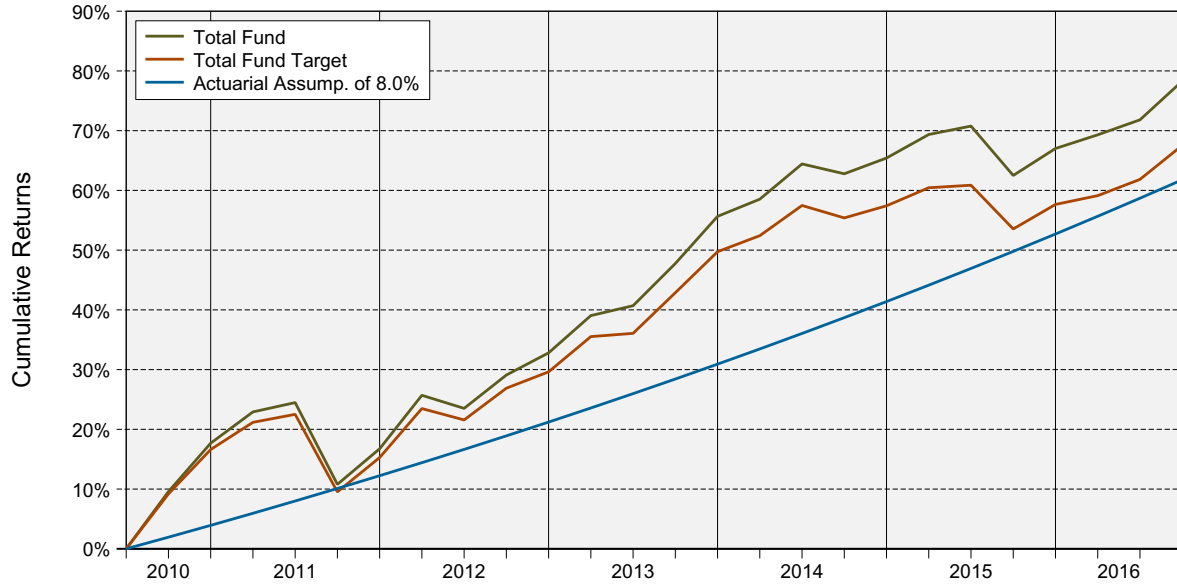
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	27%	26%	15.26%	14.81%	0.06%	0.09%	0.15%
Domestic Fixed Income	18%	17%	6.34%	4.97%	0.23%	(0.02%)	0.21%
Real Estate	10%	10%	15.07%	12.16%	0.27%	0.03%	0.30%
Timber	4%	4%	-	-	(0.23%)	(0.01%)	(0.23%)
Infrastructure	3%	4%	-	-	0.14%	0.10%	0.24%
International Equity	17%	17%	7.63%	5.26%	0.43%	(0.02%)	0.41%
International Fixed Inc.	5%	5%	4.49%	2.77%	0.09%	(0.02%)	0.08%
Private Equity	5%	5%	2.95%	2.95%	0.00%	(0.01%)	(0.01%)
World Equity	10%	11%	-	-	(0.02%)	(0.04%)	(0.06%)
Cash & Equivalents	1%	1%	0.14%	0.11%	0.00%	(0.00%)	(0.00%)
Total			9.69%	8.61%	+ 0.99%	+ 0.10%	1.09%

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

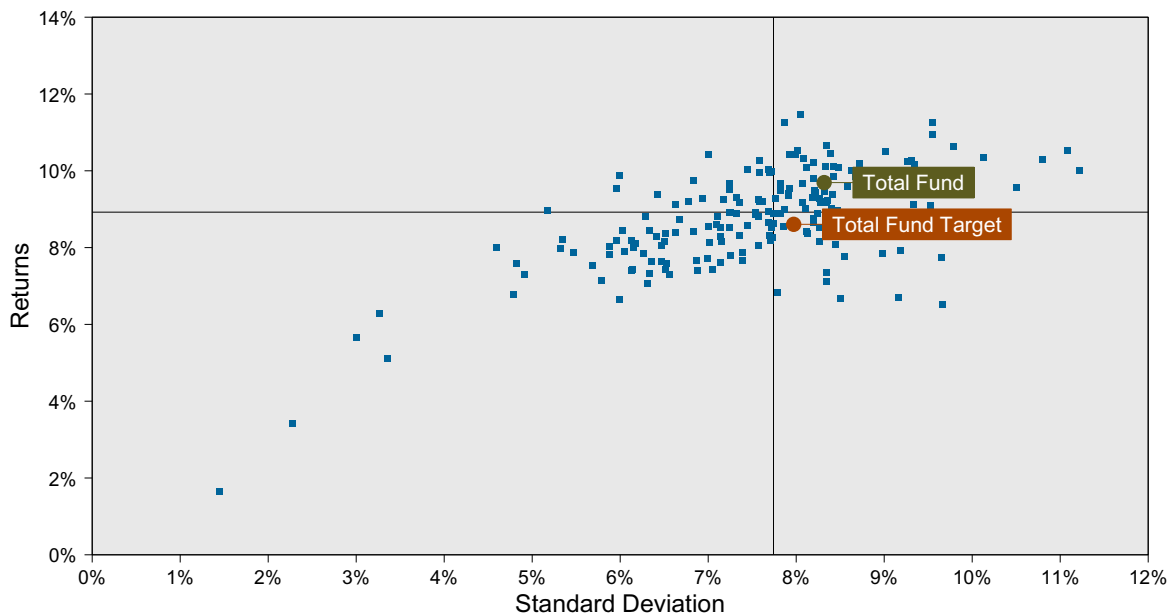
Cumulative Performance Relative to Target

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-Quarter Year Annualized Risk vs Return



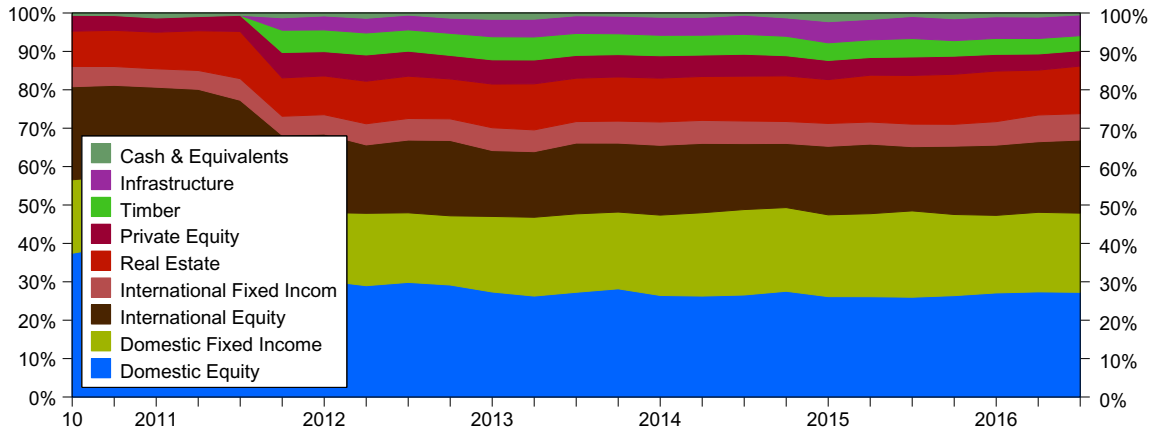
Squares represent membership of the CAI Public Fund Sponsor Database

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

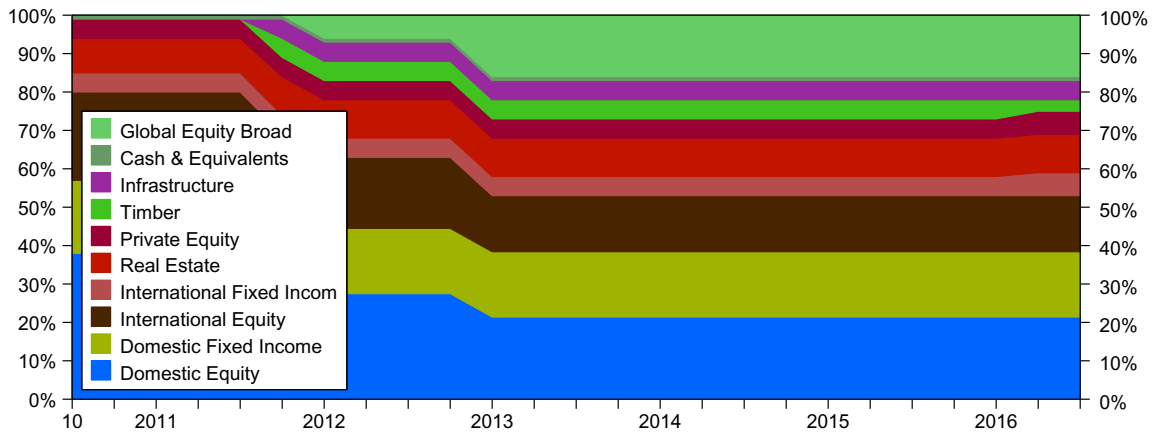
Actual vs Target Historical Asset Allocation

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.

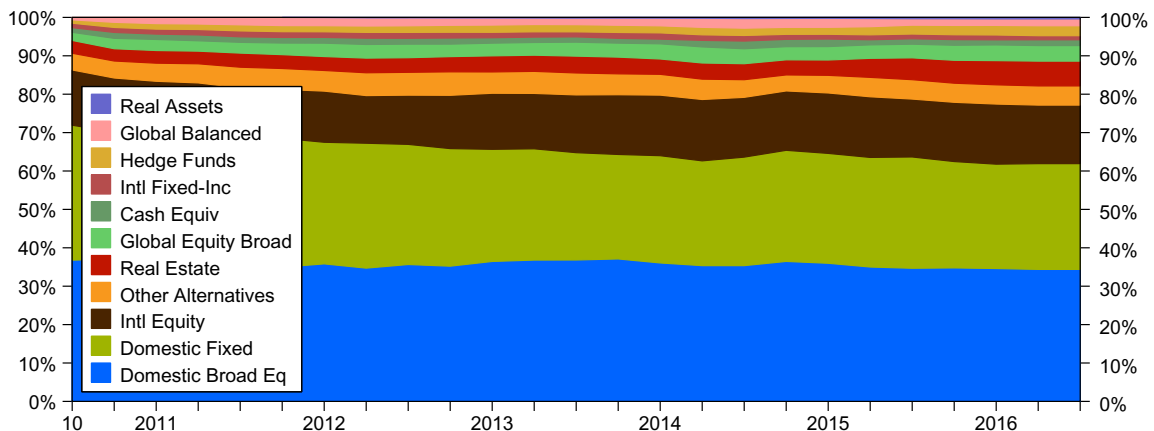
Actual Historical Asset Allocation



Target Historical Asset Allocation



Average CAI Public Fund Sponsor Database Historical Asset Allocation

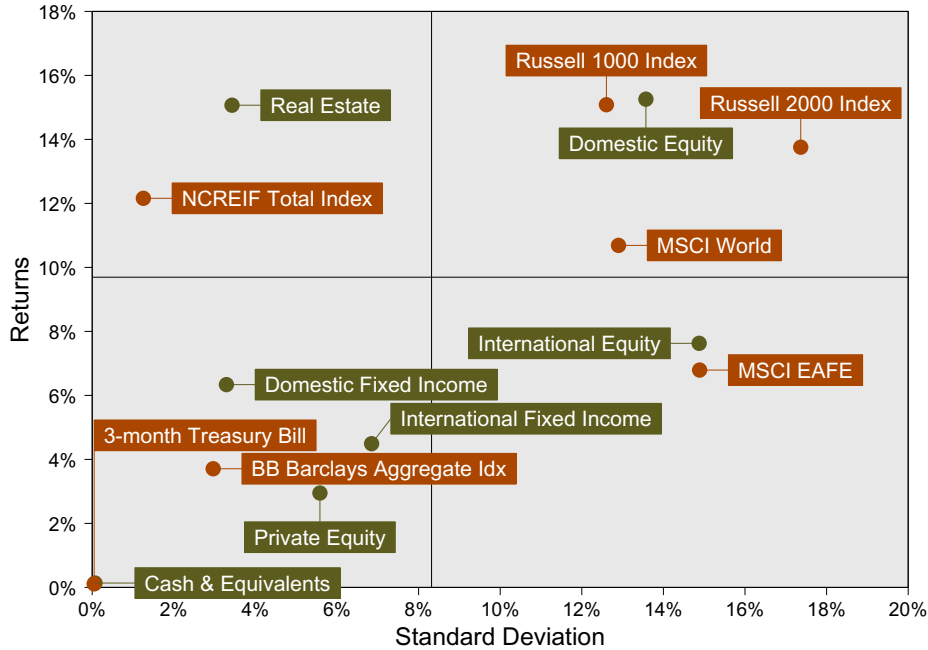


* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 13.0% BB Barclays Aggregate Idx, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 6.0% NDSIB TFFR - Private Equity, 6.0% BB Barclays GI Agg ex US, 5.0% CPI-W, 4.8% Russell 2000 Index, 4.0% BB Barclays US HY Cor 2%C, 3.0% NCREIF Timberland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

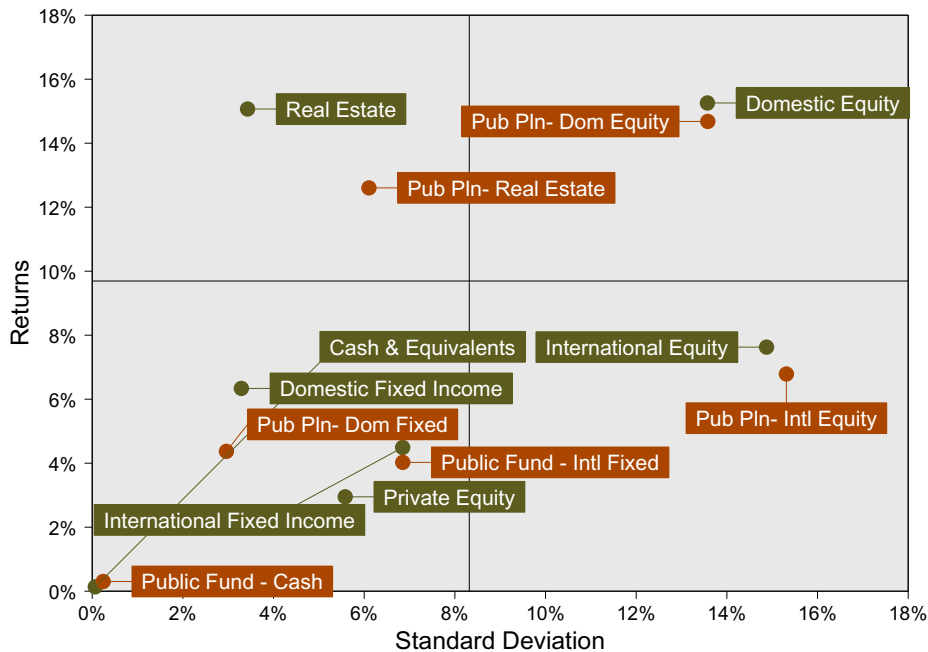
Asset Class Risk and Return

The charts below show the six and one-quarter 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-Quarter Year Annualized Risk vs Return Asset Classes vs Benchmark Indices



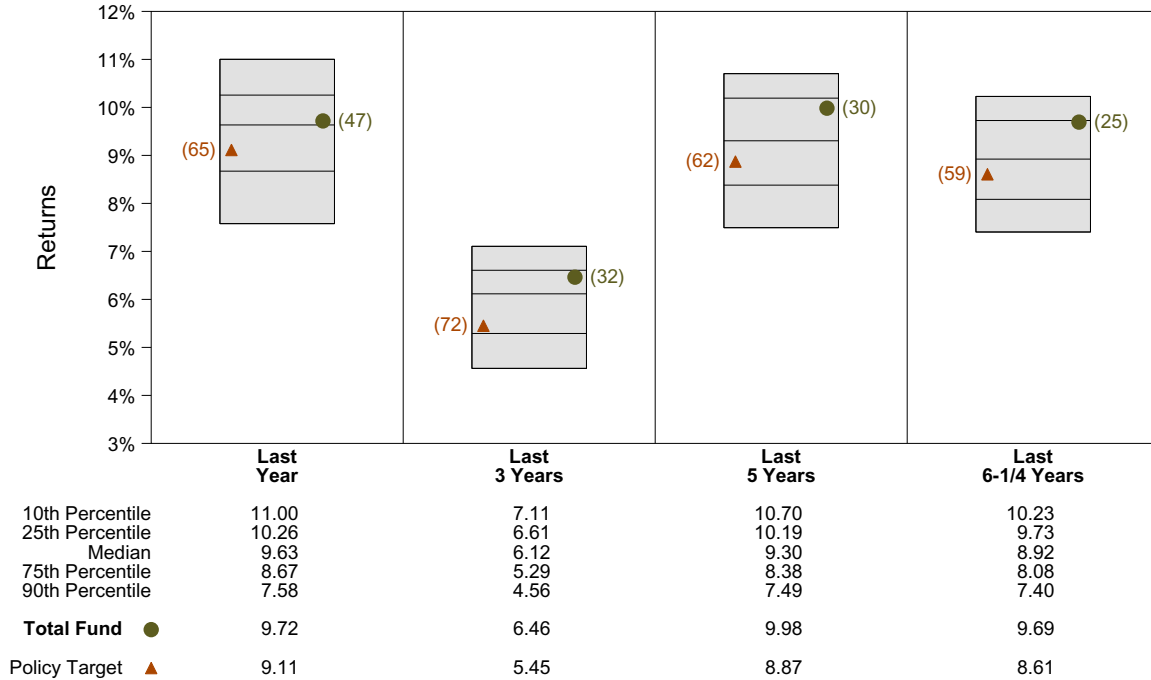
Six and One-Quarter Year Annualized Risk vs Return Asset Classes vs Asset Class Median



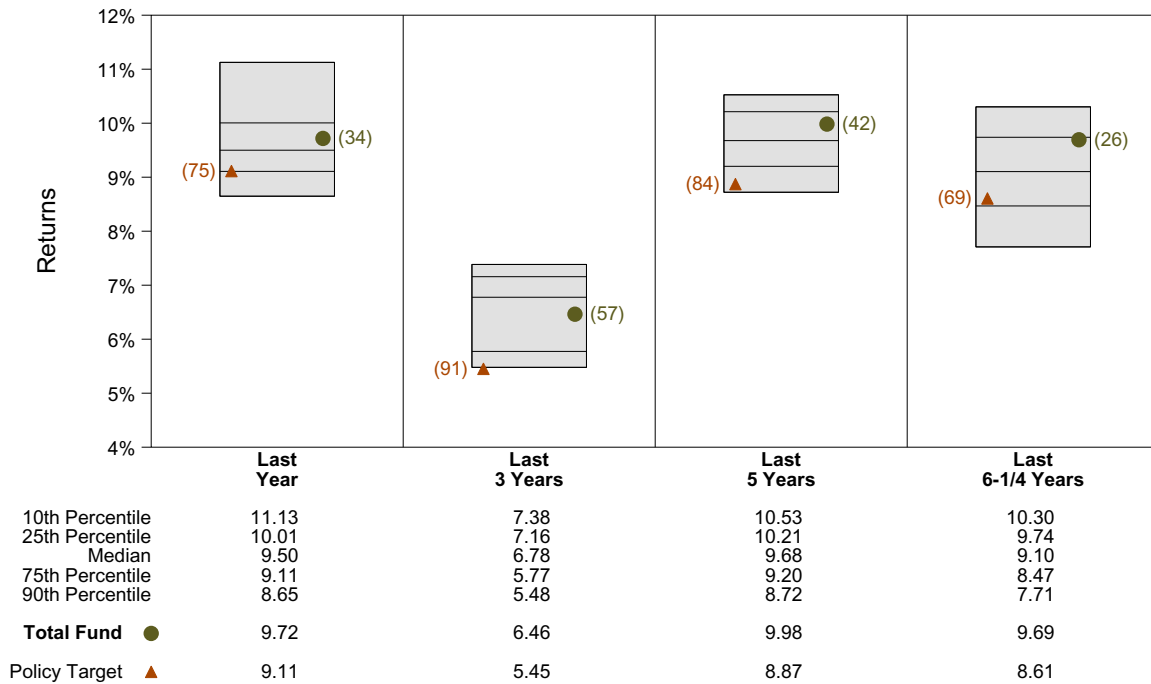
Total Fund Ranking

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 September 30, 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

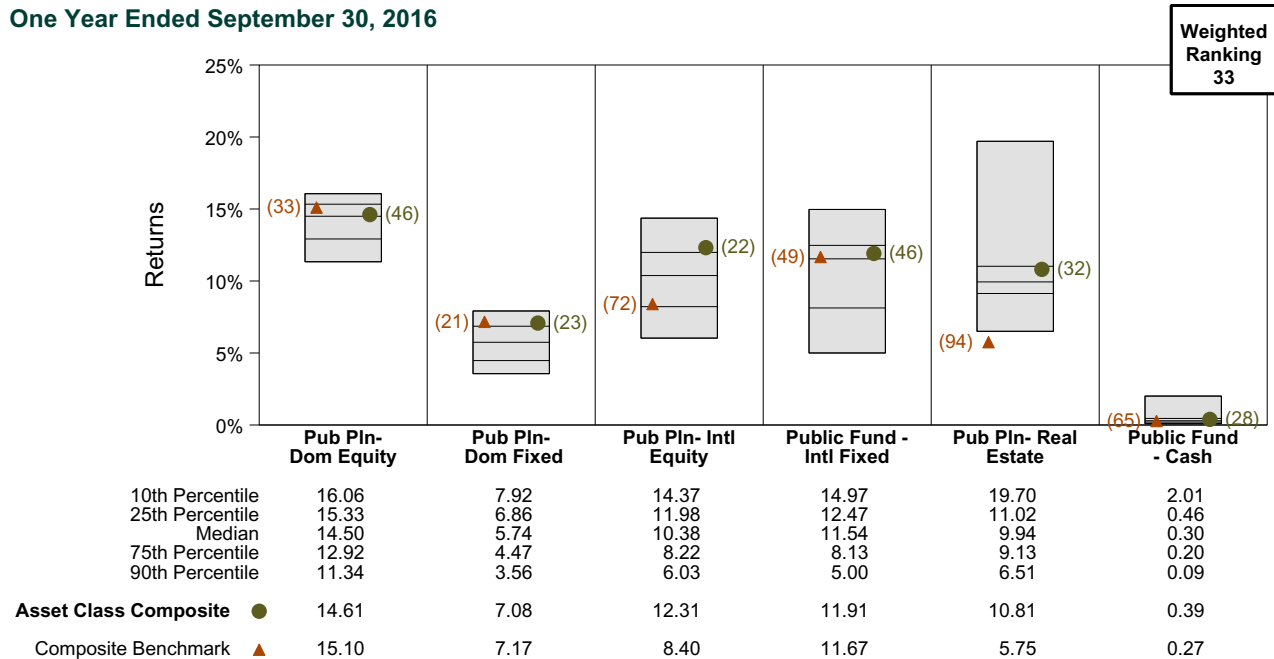


* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 13.0% BB Barclays Aggregate Idx, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 6.0% NDSIB TFFR - Private Equity, 6.0% BB Barclays GI Agg ex US, 5.0% CPI-W, 4.8% Russell 2000 Index, 4.0% BB Barclays US HY Cor 2%C, 3.0% NCREIF Timberland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

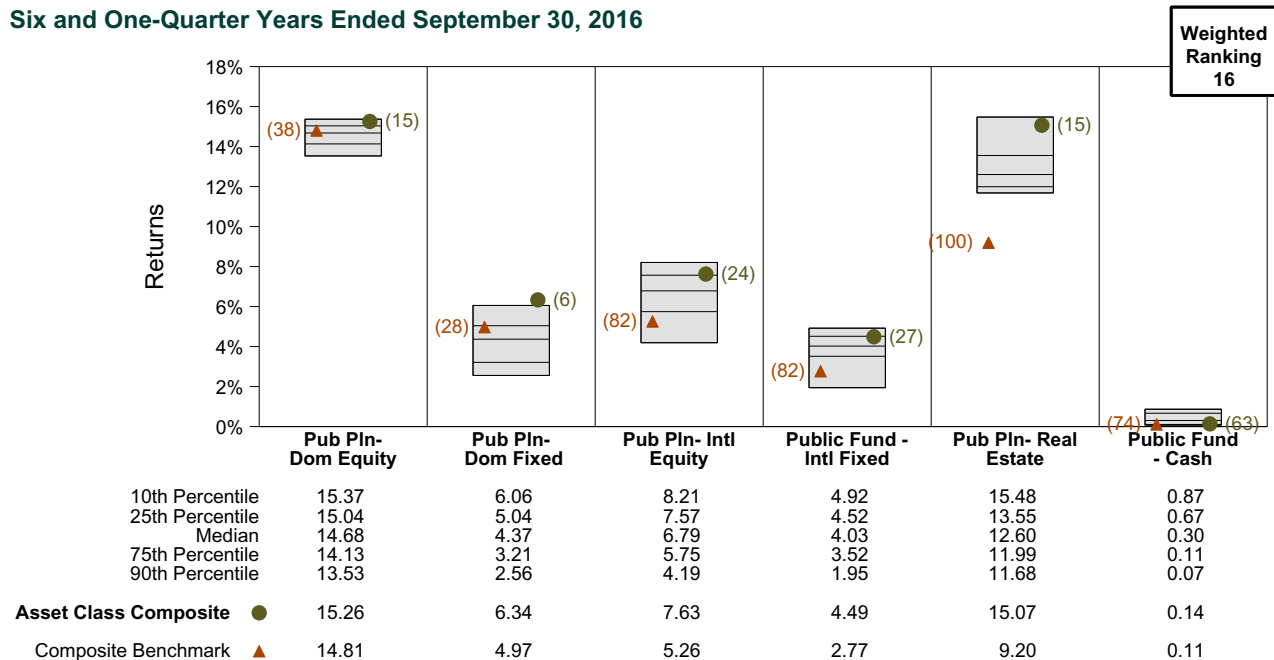
Asset Class Rankings

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 September 30, 2016



Total Asset Class Performance Six and One-Quarter Years Ended September 30, 2016



* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 13.0% BB Barclays Aggregate Idx, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 6.0% NDSIB TFFR - Private Equity, 6.0% BB Barclays GI Agg ex US, 5.0% CPI-W, 4.8% Russell 2000 Index, 4.0% BB Barclays 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 September 30, 2016, with the distribution as of June 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

	September 30, 2016			Inv. Return	June 30, 2016	
	Market Value	Weight	Net New Inv.		Market Value	Weight
GLOBAL EQUITY	\$1,254,455,689	58.50%	\$(19,159,158)	\$65,227,282	\$1,208,387,564	58.04%
Domestic Equity	\$488,445,613	22.78%	\$(10,255,780)	\$20,579,841	\$478,121,552	22.96%
Large Cap	379,545,786	17.70%	(5,073,845)	13,931,854	370,687,777	17.80%
Small Cap	108,899,827	5.08%	(5,181,935)	6,647,987	107,433,775	5.16%
International Equity	\$341,192,040	15.91%	\$(5,809,900)	\$25,824,983	\$321,176,957	15.43%
Developed Intl Equity	261,190,917	12.18%	(6,034,900)	19,306,734	247,919,083	11.91%
Emerging Markets	80,001,123	3.73%	225,000	6,518,249	73,257,874	3.52%
World Equity	\$352,971,975	16.46%	\$(235,651)	\$17,492,952	\$335,714,674	16.12%
Private Equity	\$71,846,061	3.35%	\$(2,857,826)	\$1,329,506	\$73,374,381	3.52%
GLOBAL FIXED INCOME	\$492,202,113	22.95%	\$(1,201,914)	\$10,254,789	\$483,149,237	23.21%
Fixed Income Comp	\$369,208,792	17.22%	\$(970,625)	\$8,472,830	\$361,706,587	17.37%
Investment Grade Fixed	271,907,587	12.68%	(649,877)	4,176,599	268,380,865	12.89%
Below Inv. Grade Fixed Income	97,301,205	4.54%	(320,748)	4,296,231	93,325,722	4.48%
International Fixed Income	\$122,993,321	5.74%	\$(231,289)	\$1,781,960	\$121,442,651	5.83%
GLOBAL REAL ASSETS	\$388,840,698	18.13%	\$13,884,186	\$2,925,933	\$372,030,580	17.87%
Real Estate	222,028,935	10.35%	14,774,397	3,070,228	204,184,309	9.81%
Timber	69,910,293	3.26%	(348,202)	()	70,258,495	3.37%
Infrastructure	96,901,471	4.52%	(542,010)	(144,295)	97,587,776	4.69%
Cash & Equivalents	\$9,025,033	0.42%	\$(9,515,489)	\$18,229	\$18,522,293	0.89%
Securities Lending Income	\$0	0.00%	\$(57,084)	\$57,084	-	-
Total Fund	\$2,144,523,533	100.0%	\$(16,049,458)	\$78,483,318	\$2,082,089,674	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 September 30, 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 September 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6-1/4 Years
Global Equity					
Gross	5.39%	11.10%	6.09%	-	-
Net	5.30%	10.85%	5.76%	-	-
Wtd Avg Global Equity Benchmark	5.14%	10.32%	5.15%	-	-
Domestic Equity					
Gross	4.30%	14.61%	10.61%	17.23%	15.26%
Net	4.17%	14.40%	10.41%	17.00%	15.00%
Wtd Avg Domestic Equity Benchmark	5.14%	15.10%	9.92%	16.33%	14.81%
Large Cap Equity					
Gross	3.76%	15.00%	12.06%	17.52%	15.64%
Net	3.69%	14.83%	11.87%	17.30%	15.38%
Benchmark(1)	4.03%	14.93%	10.78%	16.40%	15.08%
Small Cap Equity					
Gross	6.19%	12.89%	5.61%	15.92%	13.83%
Net	5.85%	12.54%	5.36%	15.63%	13.55%
Russell 2000 Index	9.05%	15.47%	6.71%	15.82%	13.76%
International Equity					
Gross	8.04%	12.31%	2.56%	8.54%	7.63%
Net	8.00%	12.10%	2.35%	8.25%	7.31%
Wtd Avg Intl Equity Benchmark	6.82%	8.40%	0.33%	6.60%	5.26%
Developed Intl Equity					
Gross	7.79%	10.36%	2.45%	9.24%	8.20%
Net	7.74%	10.10%	2.20%	8.95%	7.88%
Benchmark(2)	6.29%	6.38%	0.43%	7.36%	5.86%
Emerging Markets					
Gross	8.89%	18.79%	2.11%	4.96%	4.78%
Net	8.89%	18.79%	2.02%	4.67%	4.45%
Benchmark(3)	9.03%	16.78%	(0.56%)	3.03%	2.30%
World Equity					
Gross	5.21%	9.45%	5.38%	-	-
Net	5.08%	9.04%	4.69%	-	-
MSCI World Index	4.87%	11.36%	5.85%	11.63%	10.69%
Private Equity					
Net	1.71%	(5.78%)	(2.11%)	0.69%	2.86%

(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 and 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 September 30, 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 September 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6-1/4 Years
Global Fixed Income					
Gross	2.12%	8.12%	4.74%	-	-
Net	2.06%	7.86%	4.48%	-	-
Wtd Avg Global Fixed Inc. Benchmark	1.48%	8.26%	3.57%	-	-
Domestic Fixed Income					
Gross	2.34%	7.08%	5.51%	6.25%	6.34%
Net	2.29%	6.85%	5.28%	6.17%	6.20%
Wtd Avg Domestic FI Benchmark	1.64%	7.17%	4.35%	4.59%	4.97%
Inv. Grade Fixed Income					
Gross	1.56%	5.70%	5.13%	5.30%	5.37%
Net	1.52%	5.56%	5.00%	5.17%	5.20%
BB Barclays Aggregate Index	0.46%	5.19%	4.03%	3.08%	3.71%
Below Inv. Grade Fixed Income					
Gross	4.61%	10.53%	6.42%	9.17%	8.96%
Net	4.50%	10.08%	5.97%	8.71%	8.52%
BB Barclays HY Corp 2% Issue	5.55%	12.74%	5.30%	8.34%	8.02%
International Fixed Income					
Gross	1.47%	11.91%	1.85%	2.45%	4.49%
Net	1.38%	11.52%	1.49%	2.08%	4.12%
Wtd Avg Intl Fixed Income Benchmark	1.03%	11.67%	0.75%	0.70%	2.77%
Global Real Assets					
Gross	0.78%	7.38%	9.49%	-	-
Net	0.71%	6.92%	9.04%	-	-
Wtd Avg Global Real Assets Benchmark	1.12%	5.75%	7.68%	-	-
Real Estate					
Gross	1.49%	10.81%	14.42%	13.54%	15.07%
Net	1.36%	10.27%	13.85%	13.00%	14.50%
NCREIF Total Index	1.77%	9.22%	11.31%	11.18%	12.16%
Timber					
Net	0.00%	4.32%	3.63%	1.35%	-
NCREIF Timberland Index	0.67%	3.28%	7.59%	6.91%	5.52%
Infrastructure					
Gross	(0.15%)	2.14%	4.36%	5.59%	-
Net	(0.15%)	1.51%	3.77%	4.89%	-
CPI-W	0.09%	1.22%	0.71%	1.03%	1.56%
Cash & Equivalents - Net					
3-month Treasury Bill	0.12%	0.39%	0.17%	0.13%	0.14%
	0.10%	0.27%	0.11%	0.10%	0.11%
Total Fund					
Gross	3.77%	9.72%	6.46%	9.98%	9.69%
Net	3.69%	9.43%	6.14%	9.64%	9.34%
Target*	3.52%	9.11%	5.45%	8.87%	8.61%

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 13.0% BB Barclays Aggregate Idx, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 6.0% NDSIB TFFR - Private Equity, 6.0% BB Barclays GI Agg ex US, 5.0% CPI-W, 4.8% Russell 2000 Index, 4.0% BB Barclays 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 September 30, 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.

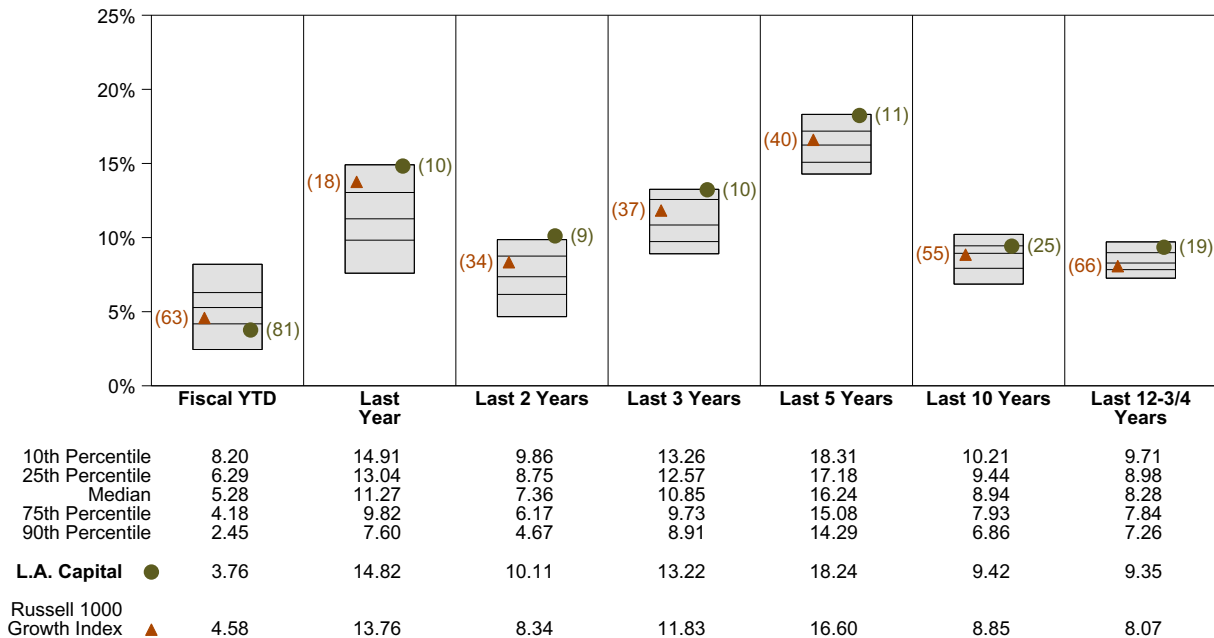
Quarterly Summary and Highlights

- L.A. Capital's portfolio posted a 3.76% return for the quarter placing it in the 81 percentile of the CAI Large Cap Growth group for the quarter and in the 10 percentile for the last year.
- L.A. Capital's portfolio underperformed the Russell 1000 Growth Index by 0.82% for the quarter and outperformed the Russell 1000 Growth Index for the year by 1.06%.

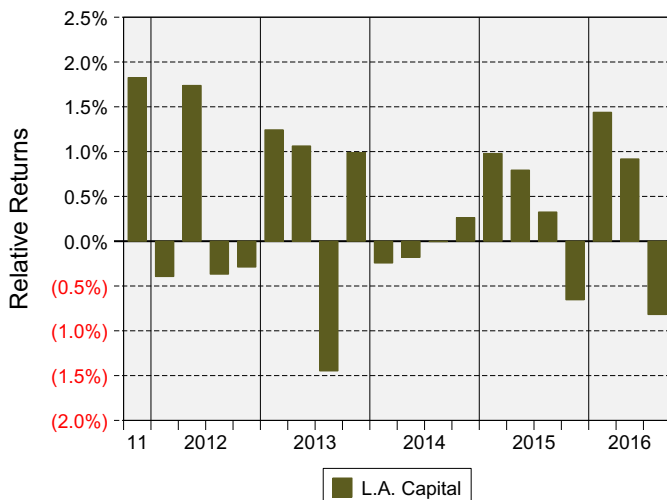
Quarterly Asset Growth

Beginning Market Value	\$308,454,836
Net New Investment	\$-159,904
Investment Gains/(Losses)	\$11,609,076
Ending Market Value	\$319,904,008

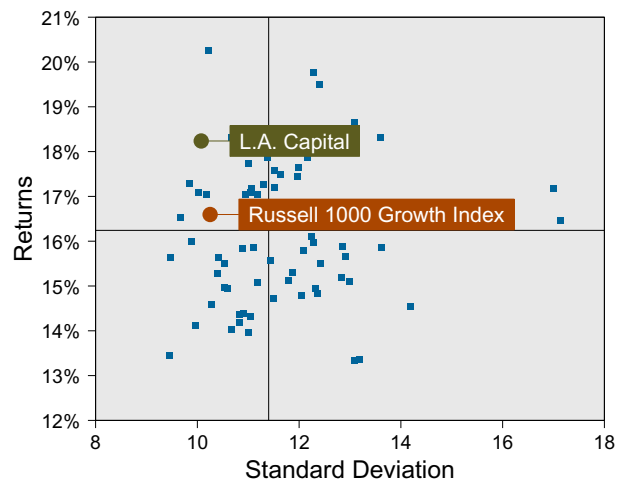
Performance vs CAI Large Cap Growth (Gross)



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 September 30, 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.

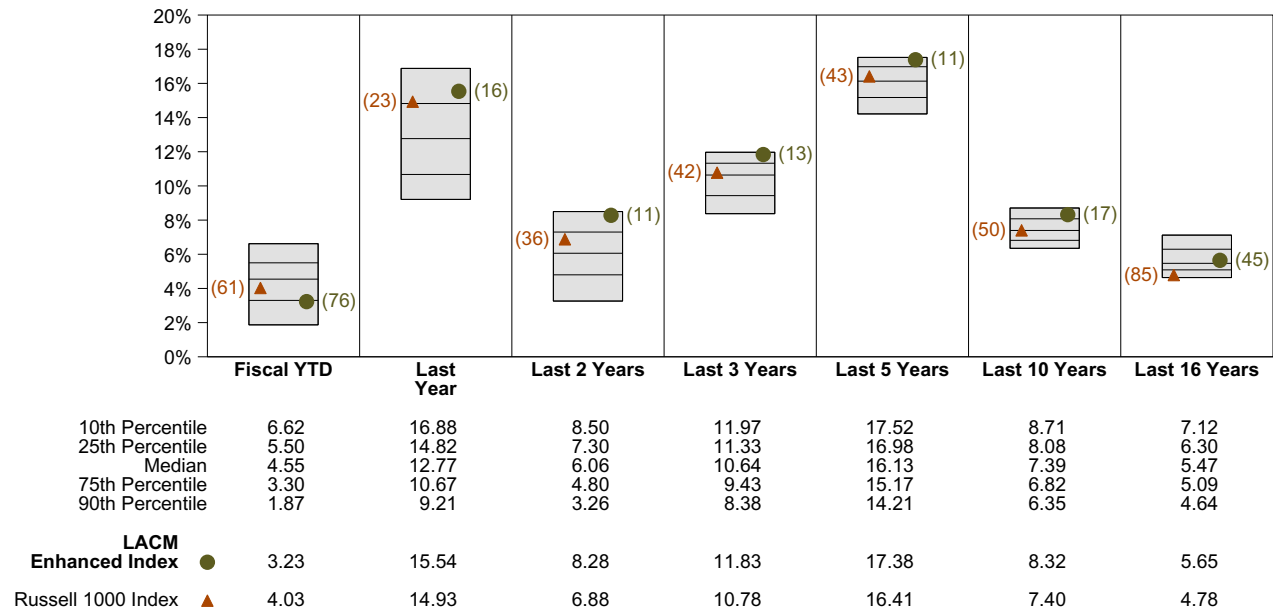
Quarterly Summary and Highlights

- LACM Enhanced Index's portfolio posted a 3.23% return for the quarter placing it in the 76 percentile of the CAI Large Cap Core group for the quarter and in the 16 percentile for the last year.
- LACM Enhanced Index's portfolio underperformed the Russell 1000 Index by 0.80% for the quarter and outperformed the Russell 1000 Index for the year by 0.60%.

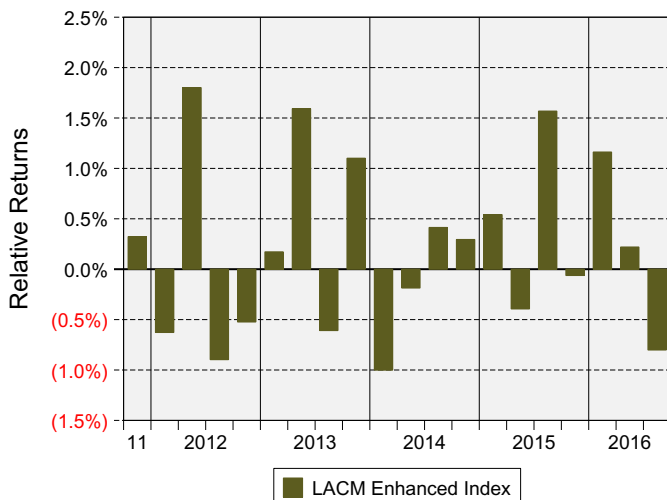
Quarterly Asset Growth

Beginning Market Value	\$191,342,879
Net New Investment	\$-48,167
Investment Gains/(Losses)	\$6,177,541
Ending Market Value	\$197,472,253

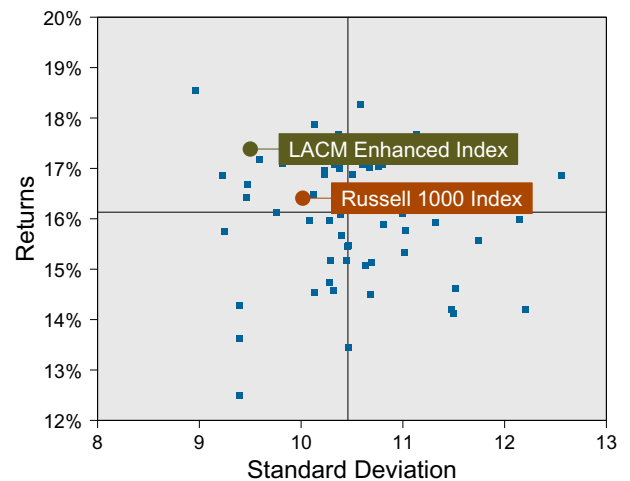
Performance vs CAI Large Cap Core (Gross)



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 September 30, 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.

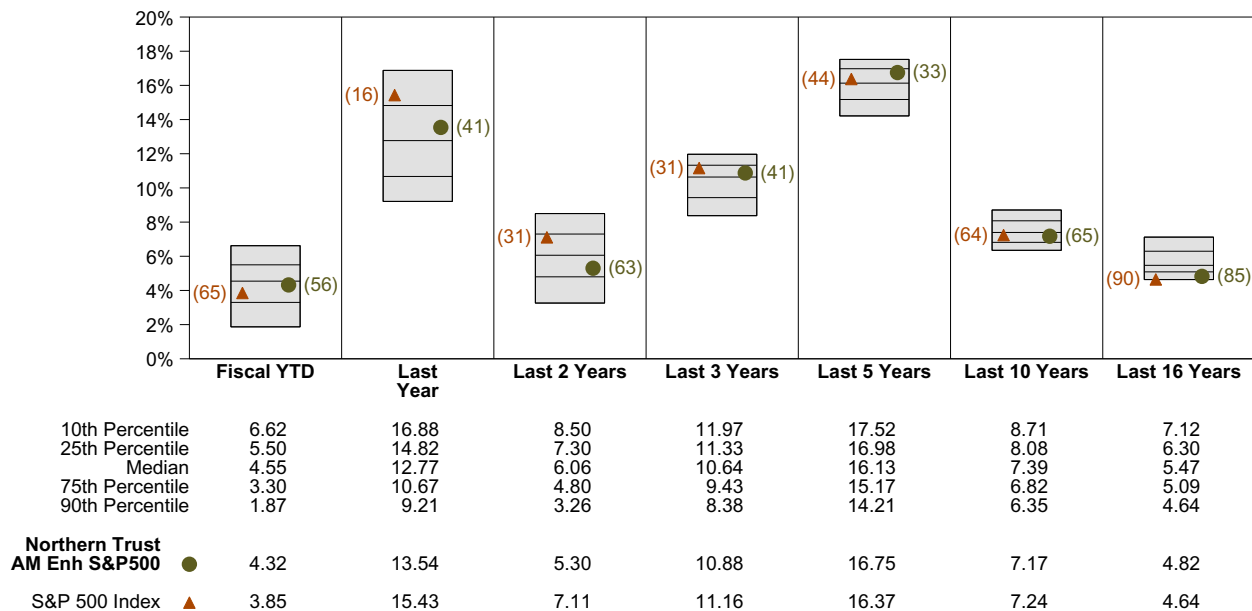
Quarterly Summary and Highlights

- Northern Trust AM Enh S&P500's portfolio posted a 4.32% return for the quarter placing it in the 56 percentile of the CAI Large Cap Core group for the quarter and in the 41 percentile for the last year.
- Northern Trust AM Enh S&P500's portfolio outperformed the S&P 500 Index by 0.47% for the quarter and underperformed the S&P 500 Index for the year by 1.89%.

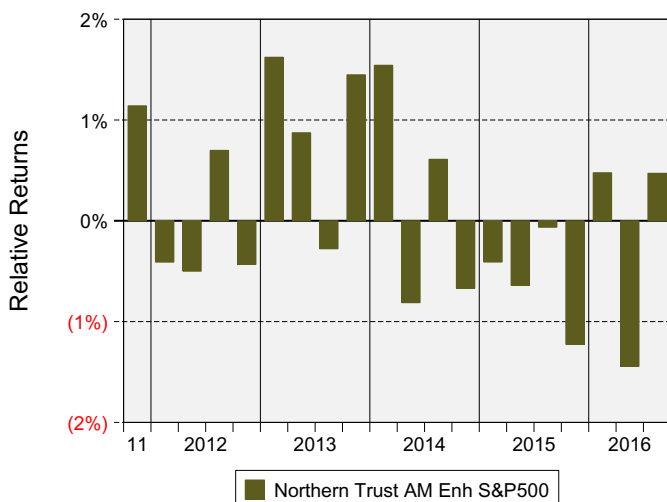
Quarterly Asset Growth

Beginning Market Value	\$143,612,731
Net New Investment	\$0
Investment Gains/(Losses)	\$6,207,521
Ending Market Value	\$149,820,252

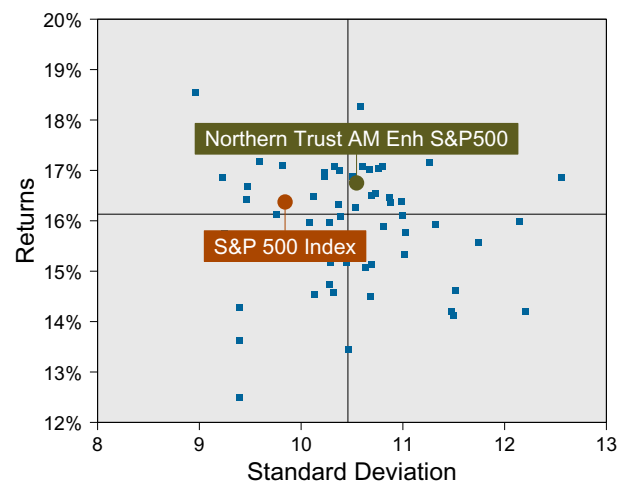
Performance vs CAI Large Cap Core (Gross)



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 September 30, 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 annual performance.

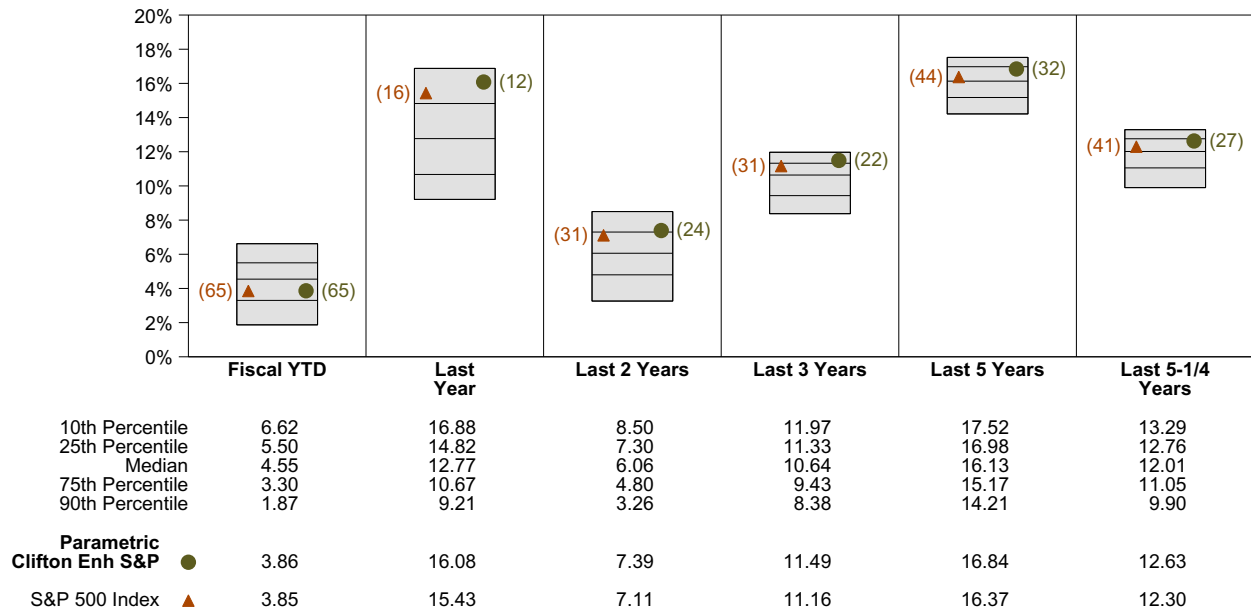
Quarterly Summary and Highlights

- Parametric Clifton Enh S&P's portfolio posted a 3.86% return for the quarter placing it in the 65 percentile of the CAI Large Cap Core group for the quarter and in the 12 percentile for the last year.
- Parametric Clifton Enh S&P's portfolio outperformed the S&P 500 Index by 0.01% for the quarter and outperformed the S&P 500 Index for the year by 0.65%.

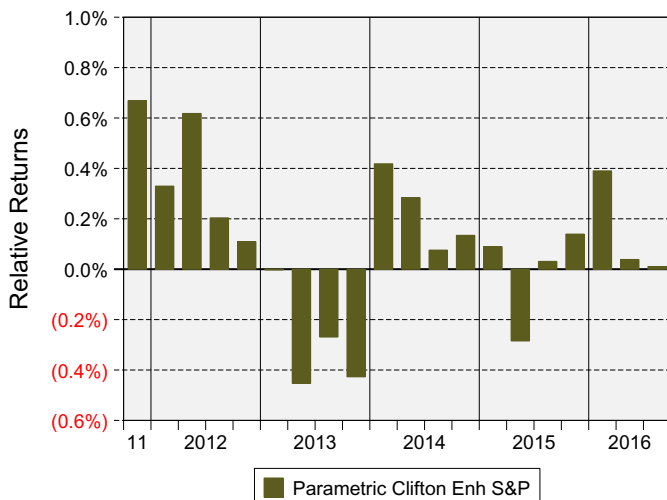
Quarterly Asset Growth

Beginning Market Value	\$172,381,903
Net New Investment	\$-5,372,195
Investment Gains/(Losses)	\$6,658,351
Ending Market Value	\$173,668,059

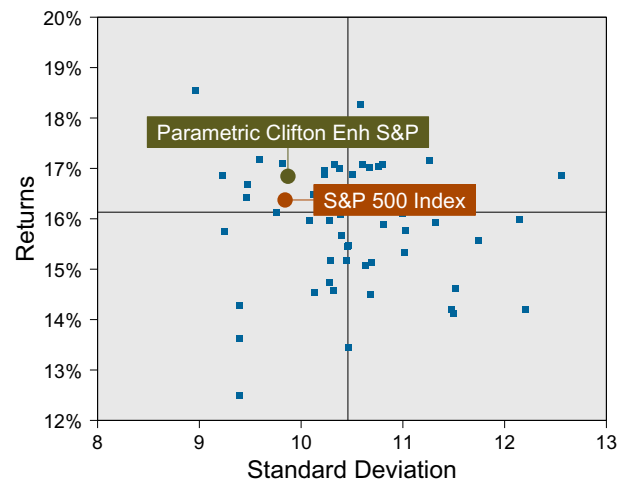
Performance vs CAI Large Cap Core (Gross)



Relative Return vs S&P 500 Index



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



Atlanta Capital Period Ended September 30, 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.

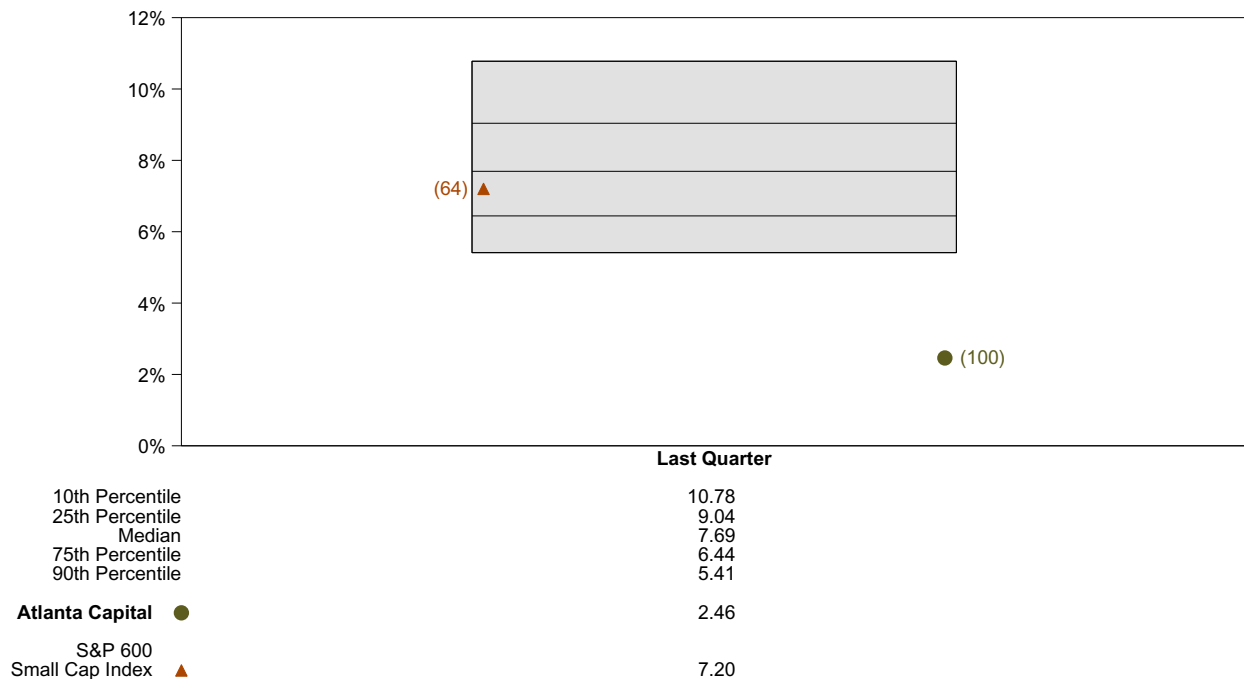
Quarterly Summary and Highlights

- Atlanta Capital's portfolio posted a 2.46% return for the quarter placing it in the 100 percentile of the CAI Small Capitalization group for the quarter.
- Atlanta Capital's portfolio underperformed the S&P 600 Small Cap Index by 4.74% for the quarter.

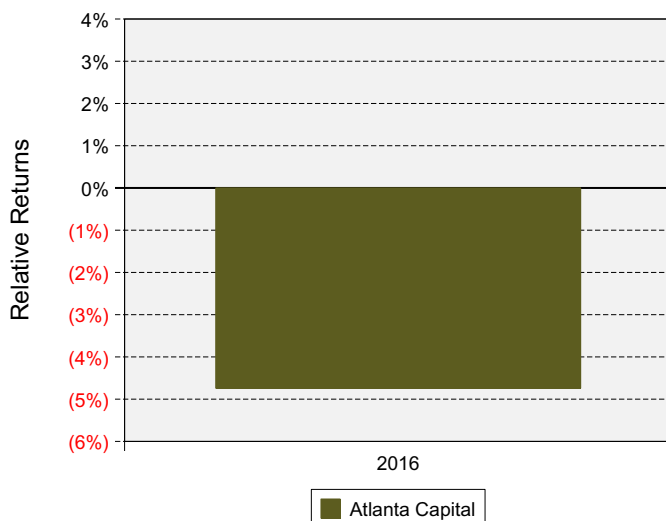
Quarterly Asset Growth

Beginning Market Value	\$113,269,259
Net New Investment	\$-207,293
Investment Gains/(Losses)	\$2,786,425
Ending Market Value	\$115,848,391

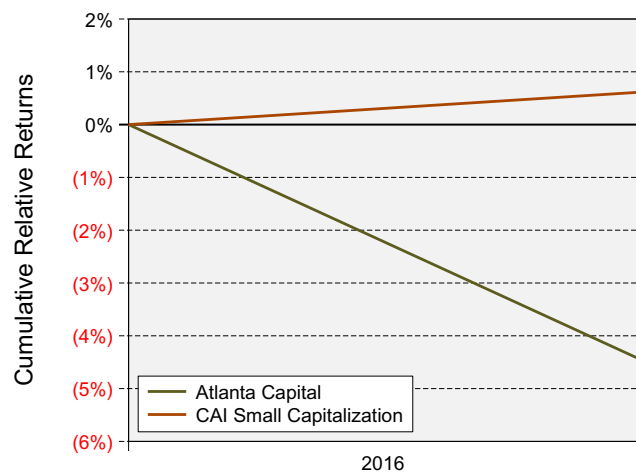
Performance vs CAI Small Capitalization (Gross)



Relative Return vs S&P 600 Small Cap Index



Cumulative Returns vs S&P 600 Small Cap Index



Parametric Clifton Enh SmCap Period Ended September 30, 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.

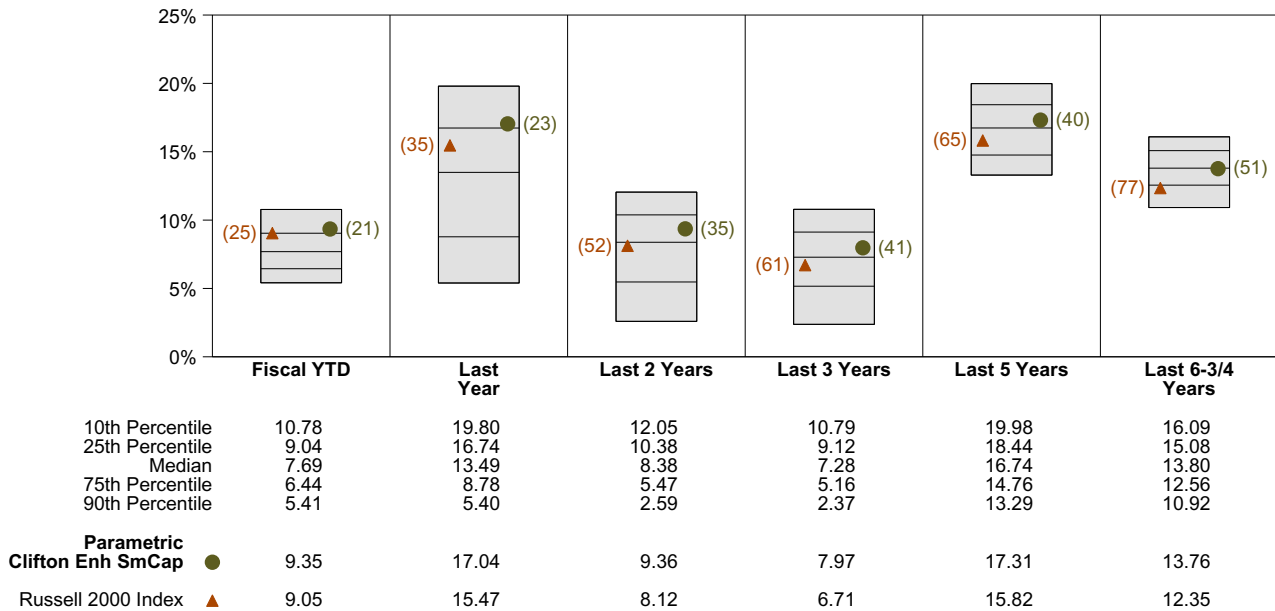
Quarterly Summary and Highlights

- Parametric Clifton Enh SmCap's portfolio posted a 9.35% return for the quarter placing it in the 21 percentile of the CAI Small Capitalization group for the quarter and in the 23 percentile for the last year.
- Parametric Clifton Enh SmCap's portfolio outperformed the Russell 2000 Index by 0.30% for the quarter and outperformed the Russell 2000 Index for the year by 1.57%.

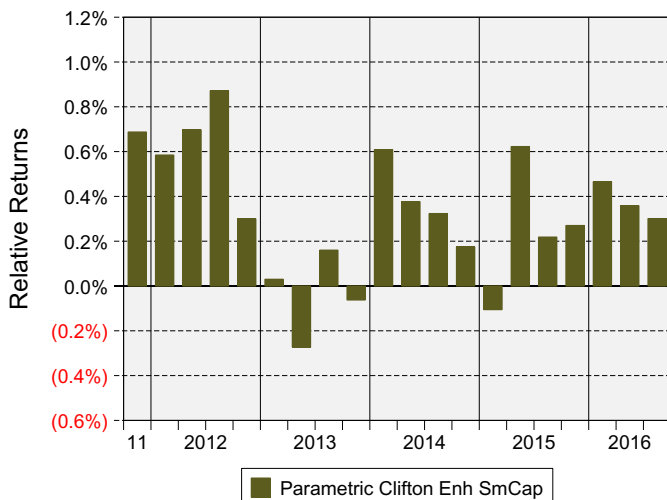
Quarterly Asset Growth

Beginning Market Value	\$133,904,288
Net New Investment	\$-7,612,566
Investment Gains/(Losses)	\$12,500,632
Ending Market Value	\$138,792,354

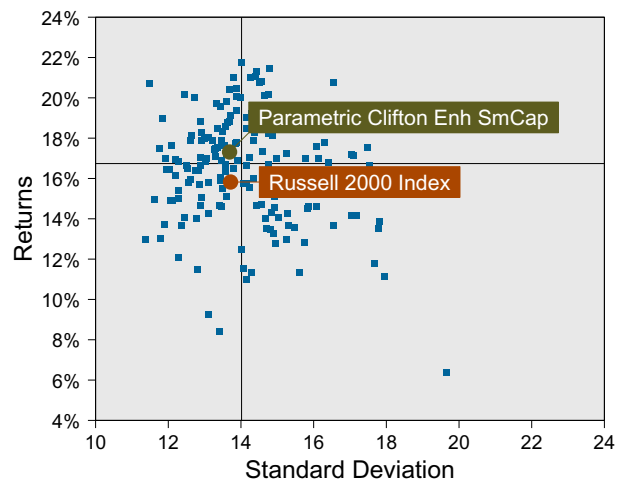
Performance vs CAI Small Capitalization (Gross)



Relative Return vs Russell 2000 Index



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



DFA International Small Cap Value Fund

Period Ended September 30, 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.

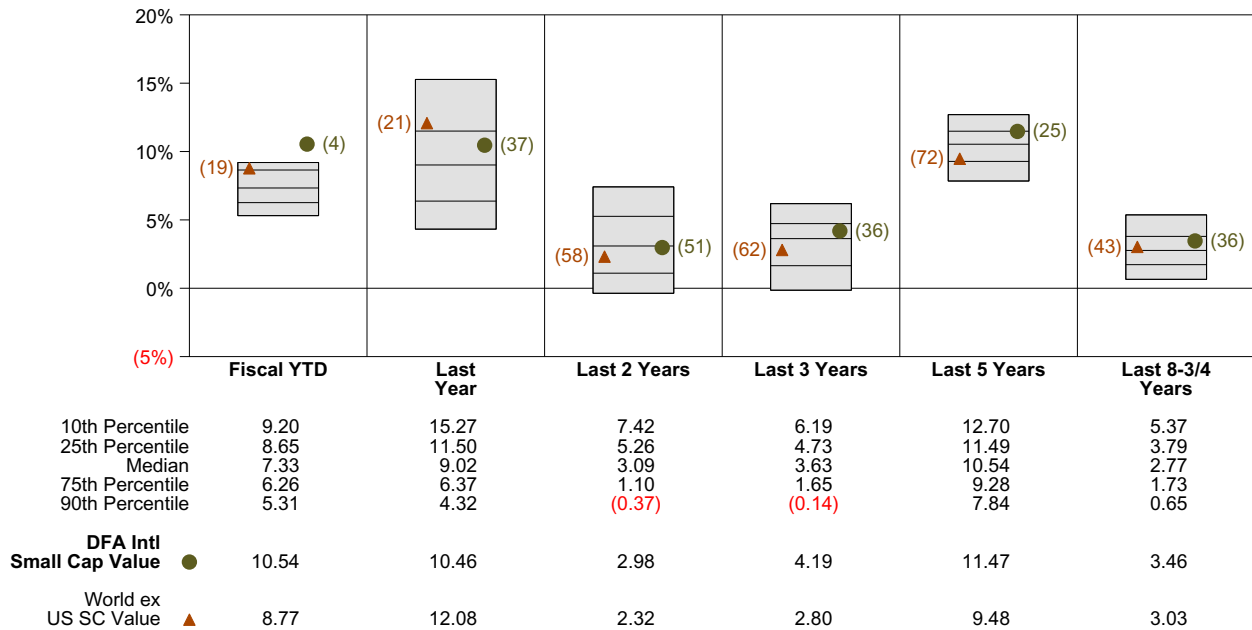
Quarterly Summary and Highlights

- DFA Intl Small Cap Value's portfolio posted a 10.54% return for the quarter placing it in the 4 percentile of the Lipper International Small Cap Funds group for the quarter and in the 37 percentile for the last year.
- DFA Intl Small Cap Value's portfolio outperformed the World ex US SC Value by 1.77% for the quarter and underperformed the World ex US SC Value for the year by 1.61%.

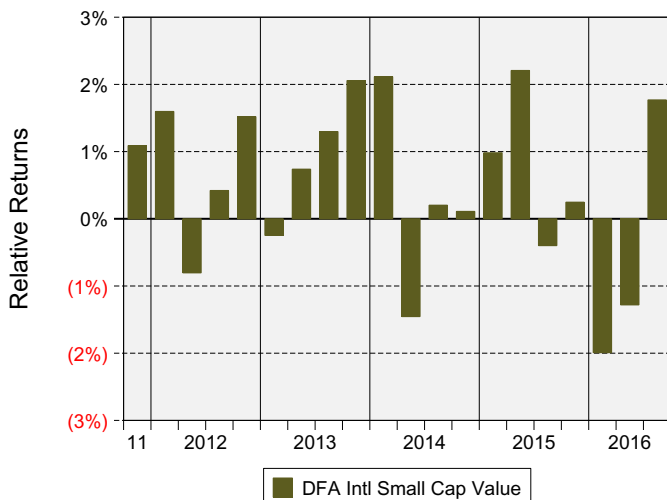
Quarterly Asset Growth

Beginning Market Value	\$71,922,590
Net New Investment	\$0
Investment Gains/(Losses)	\$7,582,742
Ending Market Value	\$79,505,332

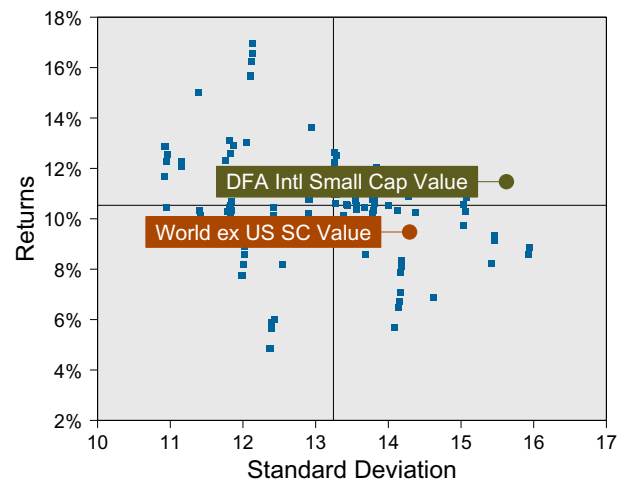
Performance vs Lipper International Small Cap Funds (Net)



Relative Return vs World ex US SC Value



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



Northern Tr AM Wrld ex US Period Ended September 30, 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.

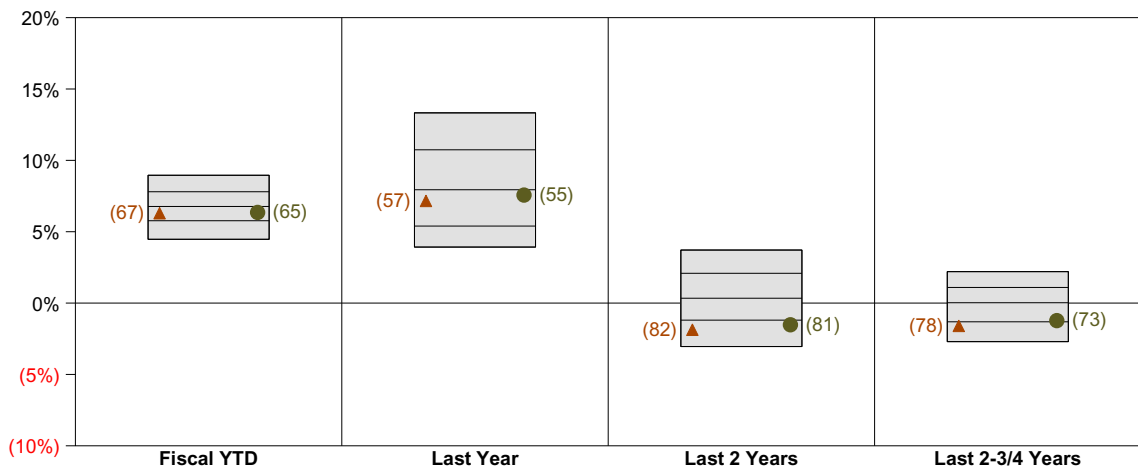
Quarterly Summary and Highlights

- Northern Tr AM Wrld ex US's portfolio posted a 6.35% return for the quarter placing it in the 65 percentile of the CAI Non-U.S. Equity Style group for the quarter and in the 55 percentile for the last year.
- Northern Tr AM Wrld ex US's portfolio outperformed the MSCI World ex US by 0.06% for the quarter and outperformed the MSCI World ex US for the year by 0.41%.

Quarterly Asset Growth

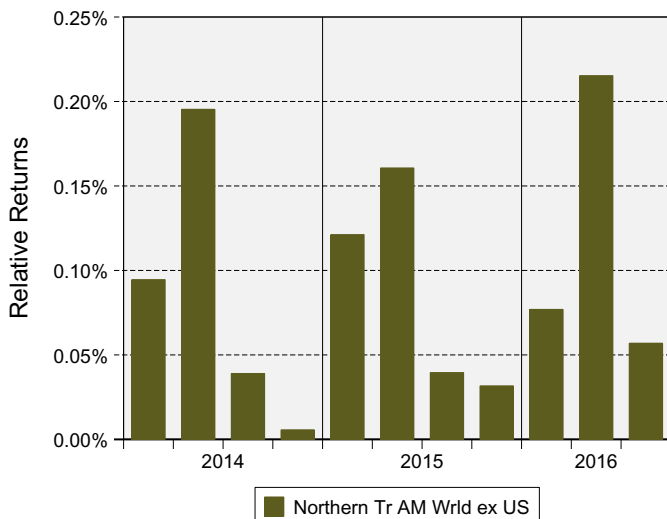
Beginning Market Value	\$255,177,849
Net New Investment	\$-21,117
Investment Gains/(Losses)	\$16,207,369
Ending Market Value	\$271,364,101

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

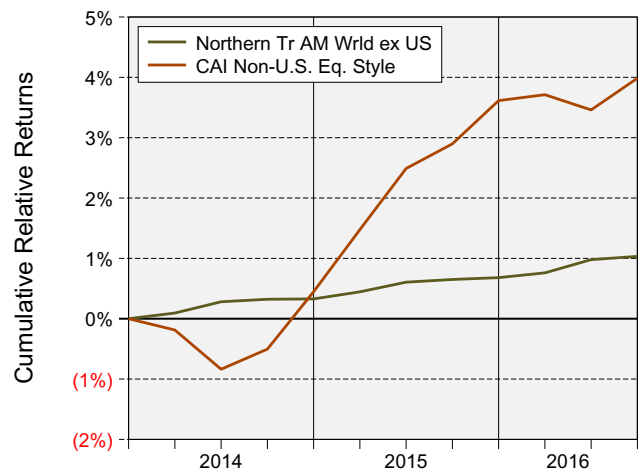


	Fiscal YTD	Last Year	Last 2 Years	Last 2-3/4 Years
10th Percentile	8.96	13.33	3.72	2.20
25th Percentile	7.80	10.74	2.09	1.10
Median	6.77	7.94	0.34	0.02
75th Percentile	5.77	5.40	(1.19)	(1.31)
90th Percentile	4.47	3.92	(3.05)	(2.70)

Relative Return vs MSCI World ex US



Cumulative Returns vs MSCI World ex US



Wellington Management Period Ended September 30, 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.

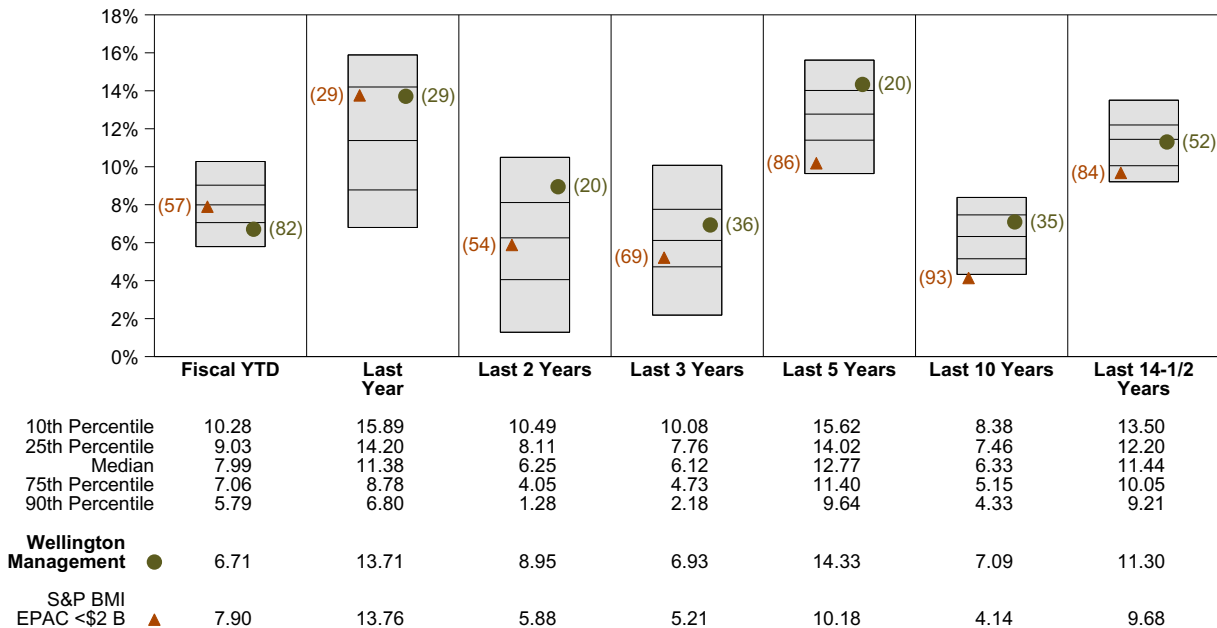
Quarterly Summary and Highlights

- Wellington Management's portfolio posted a 6.71% return for the quarter placing it in the 82 percentile of the CAI International Small Cap group for the quarter and in the 29 percentile for the last year.
- Wellington Management's portfolio underperformed the S&P BMI EPAC <\$2 B by 1.19% for the quarter and underperformed the S&P BMI EPAC <\$2 B for the year by 0.05%.

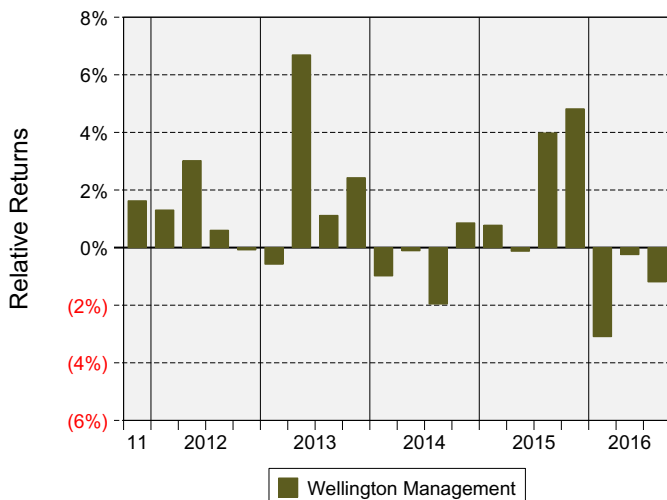
Quarterly Asset Growth

Beginning Market Value	\$81,532,906
Net New Investment	\$-188,138
Investment Gains/(Losses)	\$5,466,842
Ending Market Value	\$86,811,610

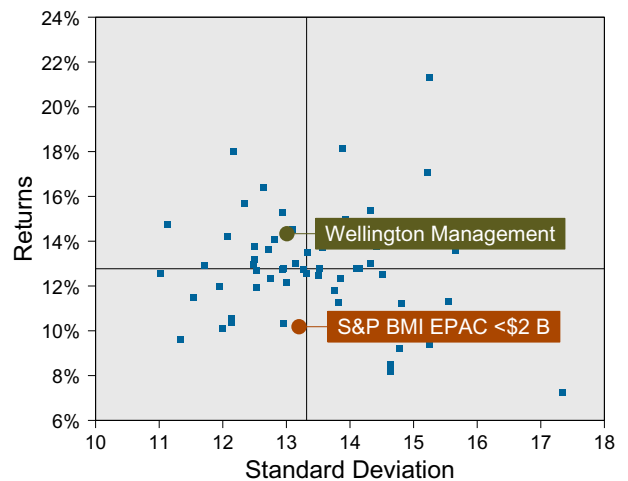
Performance vs CAI International Small Cap (Gross)



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



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



William Blair

Period Ended September 30, 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.

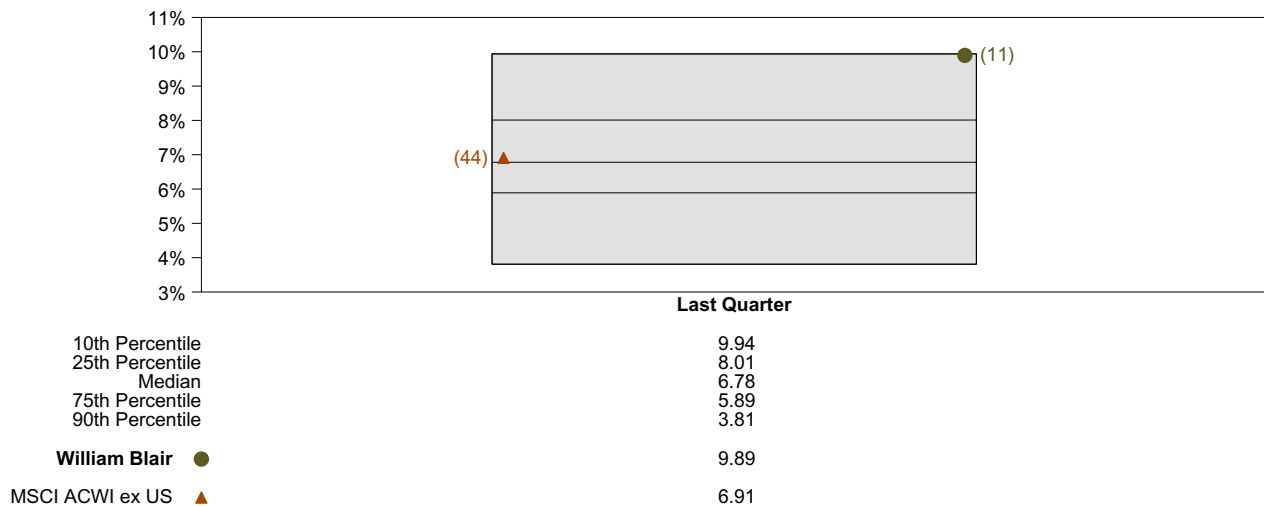
Quarterly Summary and Highlights

- William Blair's portfolio posted a 9.89% return for the quarter placing it in the 11 percentile of the CAI Core+ Growth Int'l Eq Style group for the quarter.
- William Blair's portfolio outperformed the MSCI ACWI ex US by 2.98% for the quarter.

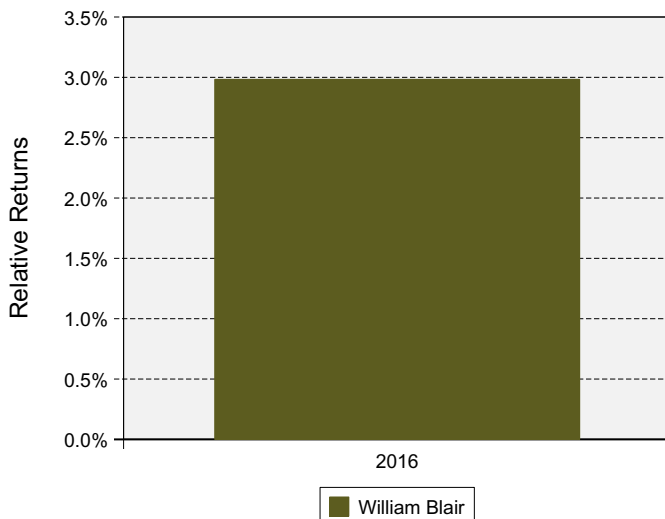
Quarterly Asset Growth

Beginning Market Value	\$122,029,518
Net New Investment	\$-39,430
Investment Gains/(Losses)	\$12,072,045
Ending Market Value	\$134,062,134

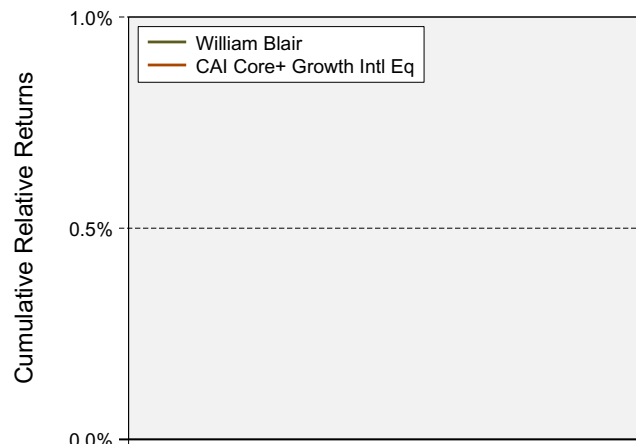
Performance vs CAI Core+ Growth Int'l Eq Style (Gross)



Relative Return vs MSCI ACWI ex US



Cumulative Returns vs MSCI ACWI ex US



Axiom Emerging Markets Period Ended September 30, 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.

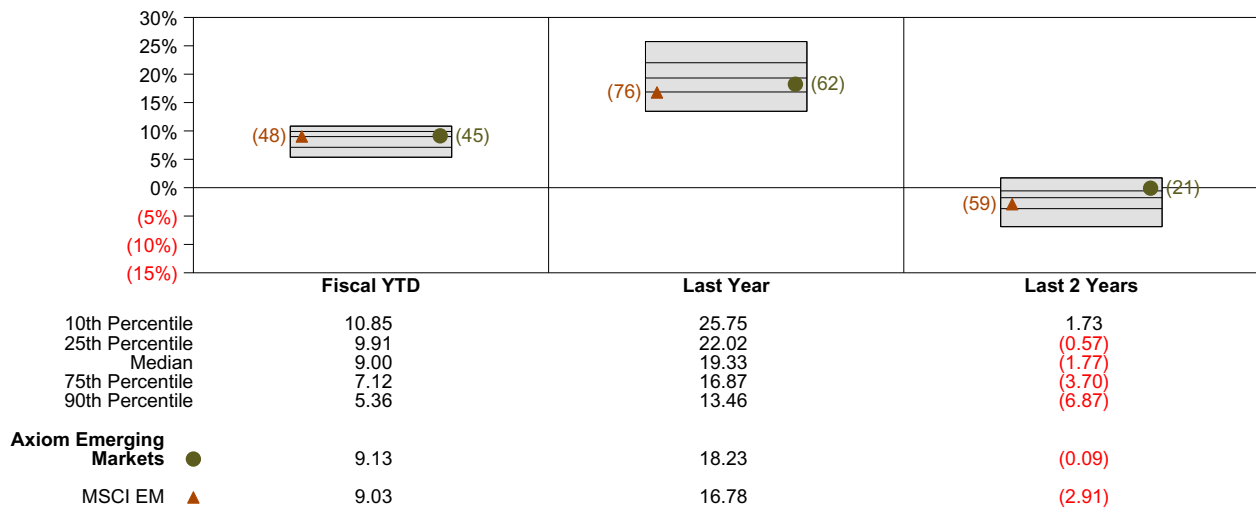
Quarterly Summary and Highlights

- Axiom Emerging Markets's portfolio posted a 9.13% return for the quarter placing it in the 45 percentile of the CAI Emerging Markets Equity Mut Funds group for the quarter and in the 62 percentile for the last year.
- Axiom Emerging Markets's portfolio outperformed the MSCI EM by 0.11% for the quarter and outperformed the MSCI EM for the year by 1.45%.

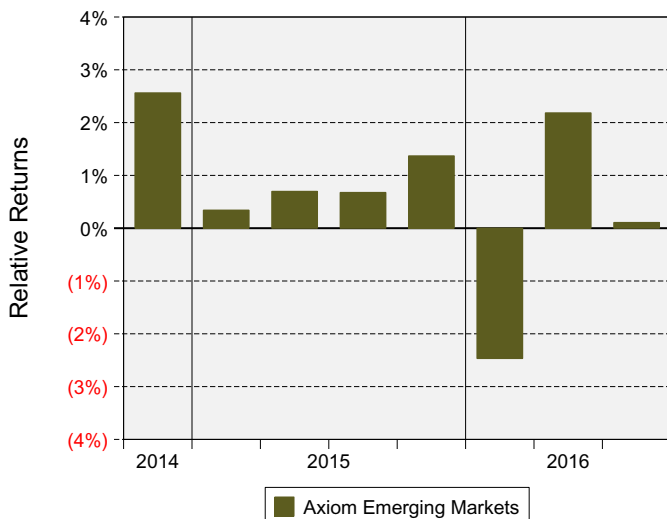
Quarterly Asset Growth

Beginning Market Value	\$132,327,251
Net New Investment	\$0
Investment Gains/(Losses)	\$12,087,251
Ending Market Value	\$144,414,502

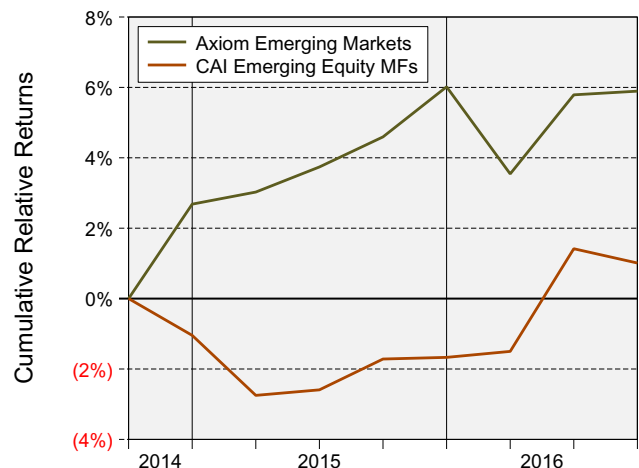
Performance vs CAI Emerging Markets Equity Mut Funds (Net)



Relative Return vs MSCI EM



Cumulative Returns vs MSCI EM



DFA Emerging Markets Period Ended September 30, 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.

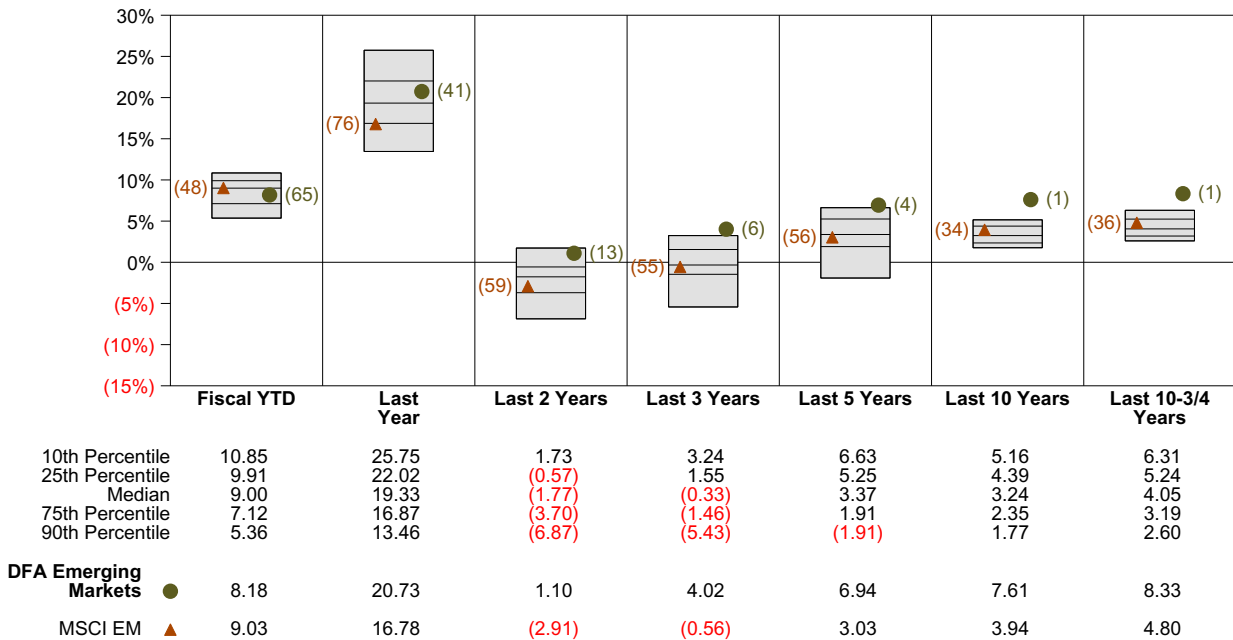
Quarterly Summary and Highlights

- DFA Emerging Markets's portfolio posted a 8.18% return for the quarter placing it in the 65 percentile of the CAI Emerging Markets Equity Mut Funds group for the quarter and in the 41 percentile for the last year.
- DFA Emerging Markets's portfolio underperformed the MSCI EM by 0.85% for the quarter and outperformed the MSCI EM for the year by 3.95%.

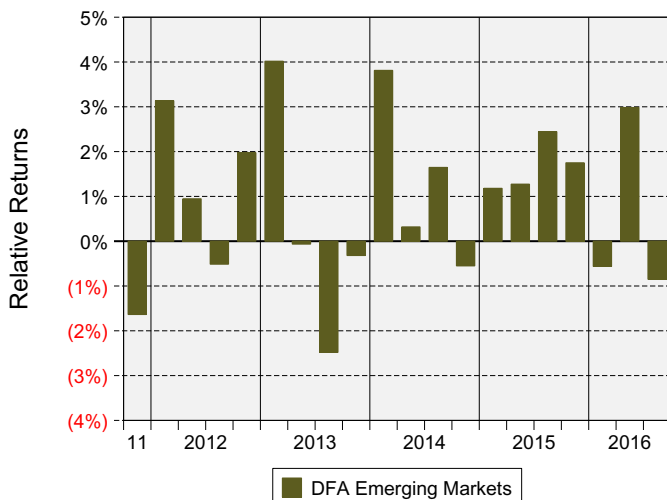
Quarterly Asset Growth

Beginning Market Value	\$46,108,652
Net New Investment	\$0
Investment Gains/(Losses)	\$3,770,311
Ending Market Value	\$49,878,963

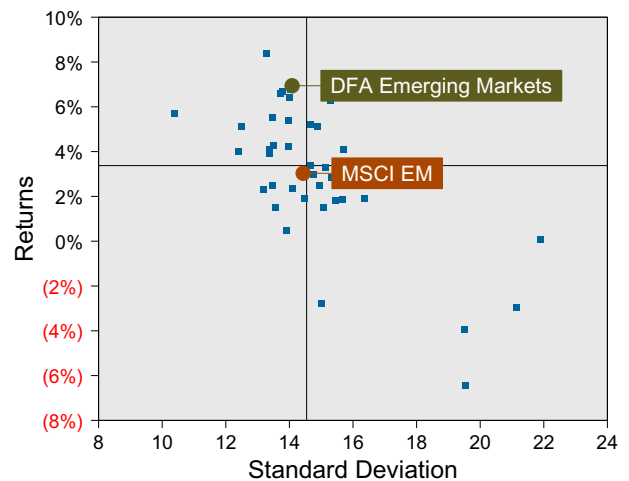
Performance vs CAI Emerging Markets Equity Mut Funds (Net)



Relative Return vs MSCI EM



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



EPOCH Investment Period Ended September 30, 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.**

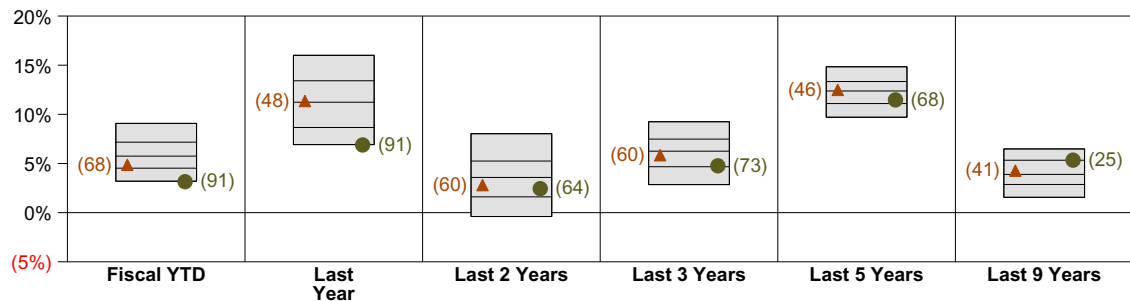
Quarterly Summary and Highlights

- EPOCH Investment's portfolio posted a 3.15% return for the quarter placing it in the 91 percentile of the CAI Global Equity Broad Style group for the quarter and in the 91 percentile for the last year.
- EPOCH Investment's portfolio underperformed the EPOCH Blended Benchmark by 1.72% for the quarter and underperformed the EPOCH Blended Benchmark for the year by 4.47%.

Quarterly Asset Growth

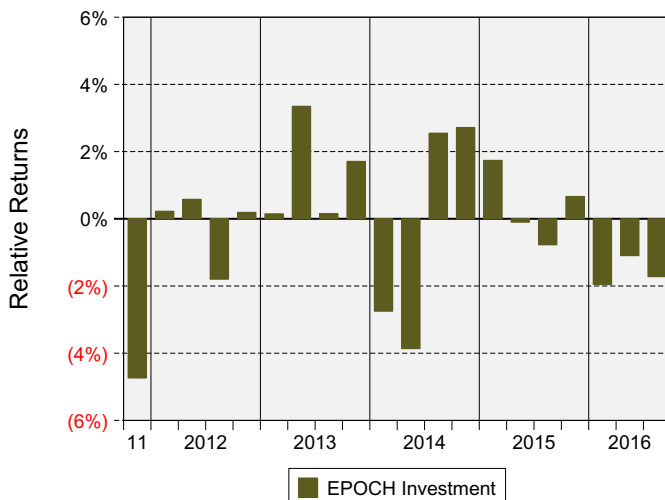
Beginning Market Value	\$338,524,029
Net New Investment	\$-543,642
Investment Gains/(Losses)	\$10,647,831
Ending Market Value	\$348,628,218

Performance vs CAI Global Equity Broad Style (Gross)

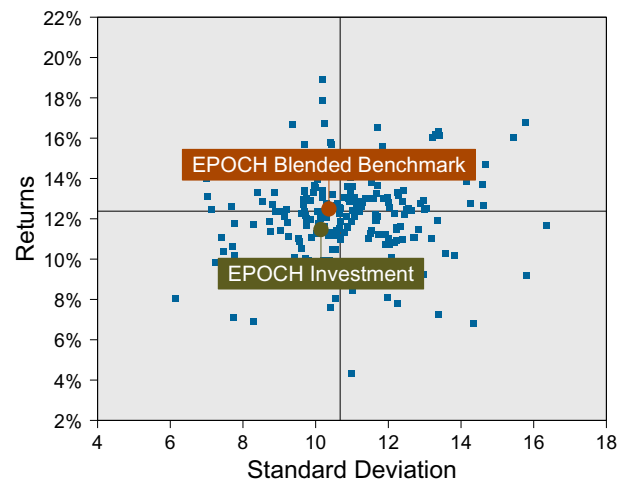


10th Percentile	9.08	16.00	8.03	9.25	14.84	6.48
25th Percentile	7.17	13.42	5.25	7.48	13.34	5.33
Median	5.75	11.23	3.58	6.25	12.38	3.89
75th Percentile	4.53	8.66	1.60	4.67	11.10	2.87
90th Percentile	3.20	6.92	(0.40)	2.85	9.70	1.56
EPOCH Investment	3.15	6.88	2.44	4.77	11.47	5.34
EPOCH Blended Benchmark	4.87	11.36	2.80	5.85	12.49	4.28

Relative Returns vs EPOCH Blended Benchmark



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



LSV Asset Management Period Ended September 30, 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.

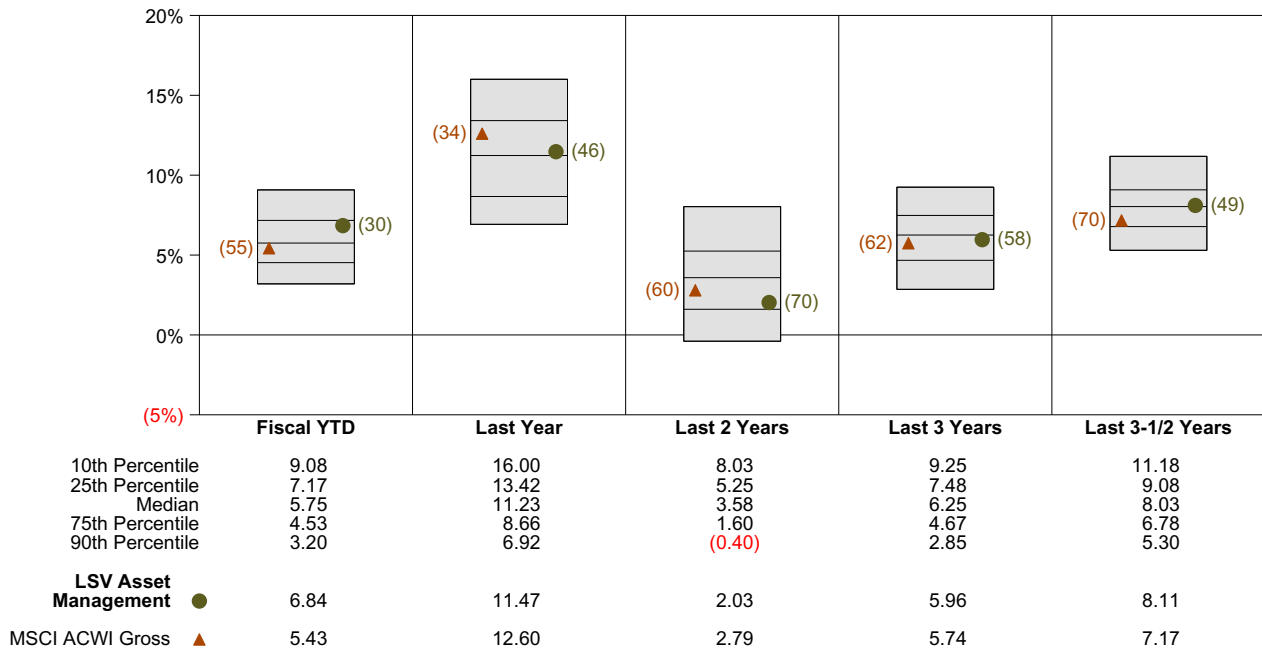
Quarterly Summary and Highlights

- LSV Asset Management's portfolio posted a 6.84% return for the quarter placing it in the 30th percentile of the CAI Global Equity Broad Style group for the quarter and in the 46th percentile for the last year.
- LSV Asset Management's portfolio outperformed the MSCI ACWI Gross by 1.41% for the quarter and underperformed the MSCI ACWI Gross for the year by 1.13%.

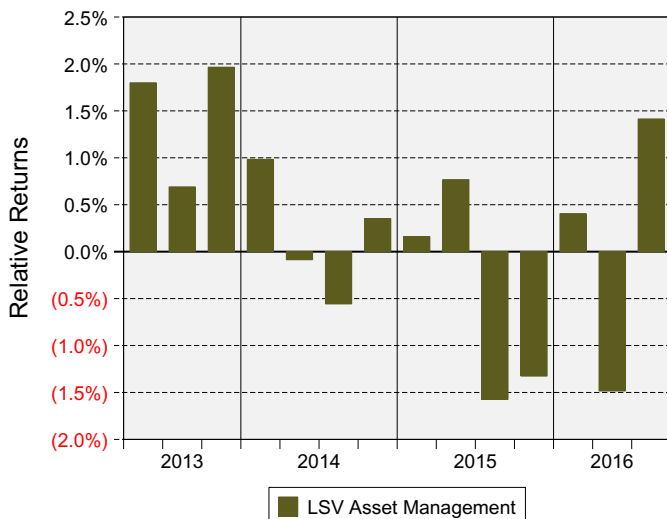
Quarterly Asset Growth

Beginning Market Value	\$428,600,398
Net New Investment	\$-422,761
Investment Gains/(Losses)	\$29,319,876
Ending Market Value	\$457,497,513

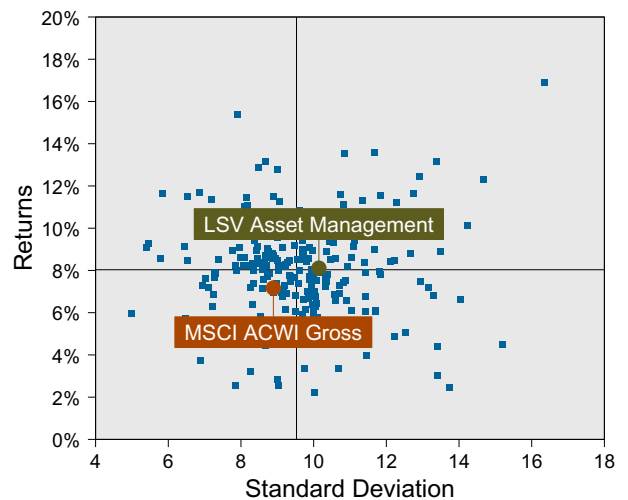
Performance vs CAI Global Equity Broad Style (Gross)



Relative Return vs MSCI ACWI Gross



CAI Global Equity Broad Style (Gross) Annualized Three and One-Half 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 September 30, 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 September 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 15-3/4 Years
Private Equity	1.71%	(5.78%)	(2.11%)	0.72%	1.91%
Adams Street Direct Co-Invest Fd	0.00%	6.82%	15.99%	12.59%	-
Adams Street Direct Fd 2010	0.00%	3.10%	15.27%	12.80%	-
Adams Street 1998 Partnership	(0.33%)	3.00%	2.03%	0.88%	1.74%
Adams Street 1999 Partnership	(3.60%)	7.99%	1.23%	1.47%	2.65%
Adams Street 2000 Partnership	(0.30%)	(2.05%)	(1.11%)	1.37%	3.15%
Adams Street 2001 Partnership	(1.49%)	(7.93%)	2.30%	4.47%	3.30%
Adams Street 2002 Partnership	0.54%	10.02%	1.80%	4.80%	-
Adams Street 2003 Partnership	0.12%	(2.44%)	10.57%	7.79%	-
Adams Street 2010 Partnership	0.00%	6.18%	13.75%	12.03%	-
Adams Street 2008 Fund	0.00%	11.84%	12.80%	7.86%	-
Adams Street 1999 Non-US	(8.08%)	4.28%	(1.58%)	4.01%	5.85%
Adams Street 2000 Non-US	3.37%	(4.57%)	(1.58%)	(1.86%)	2.71%
Adams Street 2001 Non-US	(1.30%)	(17.79%)	23.66%	12.12%	-
Adams Street 2002 Non-US	(0.16%)	29.18%	9.02%	5.88%	-
Adams Street 2003 Non-US	2.82%	21.41%	10.54%	10.60%	-
Adams Street 2004 Non-US	4.06%	(4.54%)	7.88%	4.18%	-
Adams Street 2010 Non-US	0.00%	9.63%	6.95%	5.83%	-
Adams Street 2010 NonUS Emg	0.00%	10.50%	12.26%	1.21%	-
Adams Street 2015 Global Fd	0.00%	-	-	-	-
Adams Street BVCF IV Fund	0.00%	(1.65%)	18.20%	26.61%	18.28%
CorsAir III	(0.42%)	34.23%	7.44%	1.48%	-
ND Investors	24.54%	32.83%	7.40%	7.18%	-
CorsAir IV	(1.06%)	(2.78%)	13.88%	5.89%	-
Capital International V	(0.60%)	(25.76%)	(10.72%)	(9.04%)	-
Capital International VI	(0.87%)	1.29%	(9.01%)	-	-
EIG Energy Fund XIV	(0.41%)	(67.93%)	(37.54%)	(24.23%)	-
Lewis & Clark	0.00%	(51.19%)	(35.55%)	(19.67%)	-
Lewis & Clark II	0.00%	1.88%	(6.77%)	(5.56%)	-
Quantum Energy Partners	7.24%	(17.02%)	(4.26%)	6.49%	-
Matlin Patterson II	0.00%	7.27%	3.20%	(27.40%)	-
Matlin Patterson III	0.00%	(5.29%)	(1.30%)	21.94%	-
Russell 1000 Index	4.03%	14.93%	10.78%	16.41%	5.50%
Russell 2000 Index	9.05%	15.47%	6.71%	15.82%	7.66%

Declaration Total Return Period Ended September 30, 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.

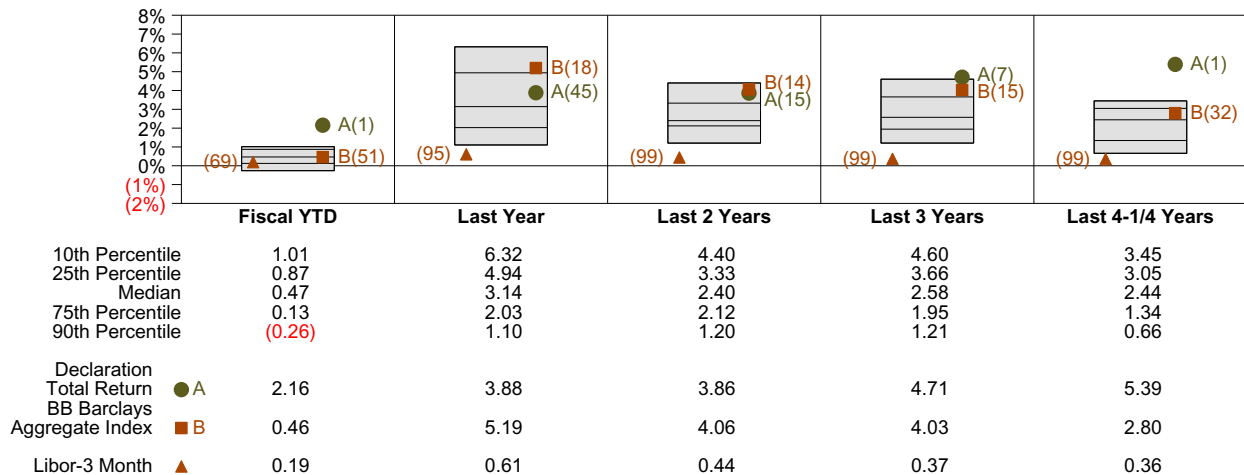
Quarterly Summary and Highlights

- Declaration Total Return's portfolio posted a 2.16% return for the quarter placing it in the 1 percentile of the CAI Intermediate Fixed Income Mut Funds group for the quarter and in the 45 percentile for the last year.
- Declaration Total Return's portfolio outperformed the Libor-3 Month by 1.96% for the quarter and outperformed the Libor-3 Month for the year by 3.27%.

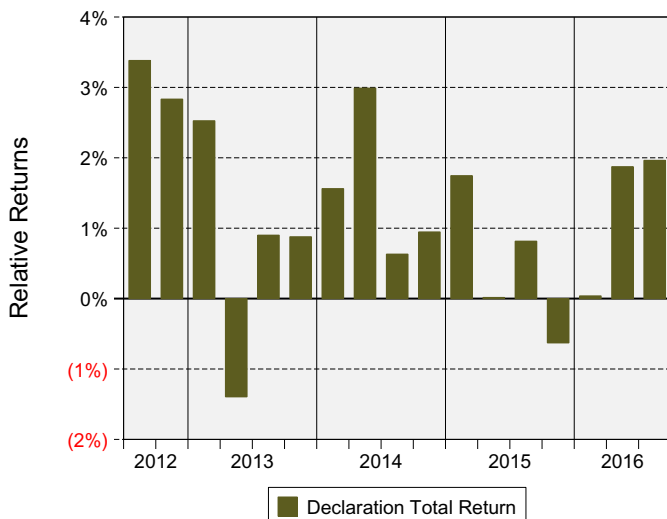
Quarterly Asset Growth

Beginning Market Value	\$86,560,533
Net New Investment	\$-30,967
Investment Gains/(Losses)	\$1,866,334
Ending Market Value	\$88,395,900

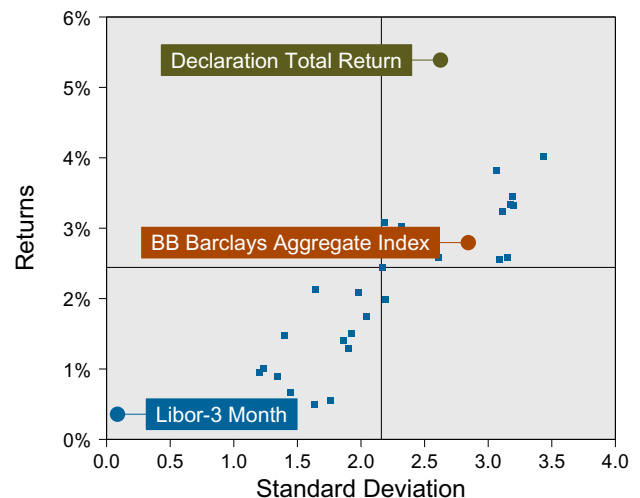
Performance vs CAI Intermediate Fixed Income Mut Funds (Net)



Relative Return vs Libor-3 Month



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



J.P. Morgan MBS

Period Ended September 30, 2016

Investment Philosophy

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

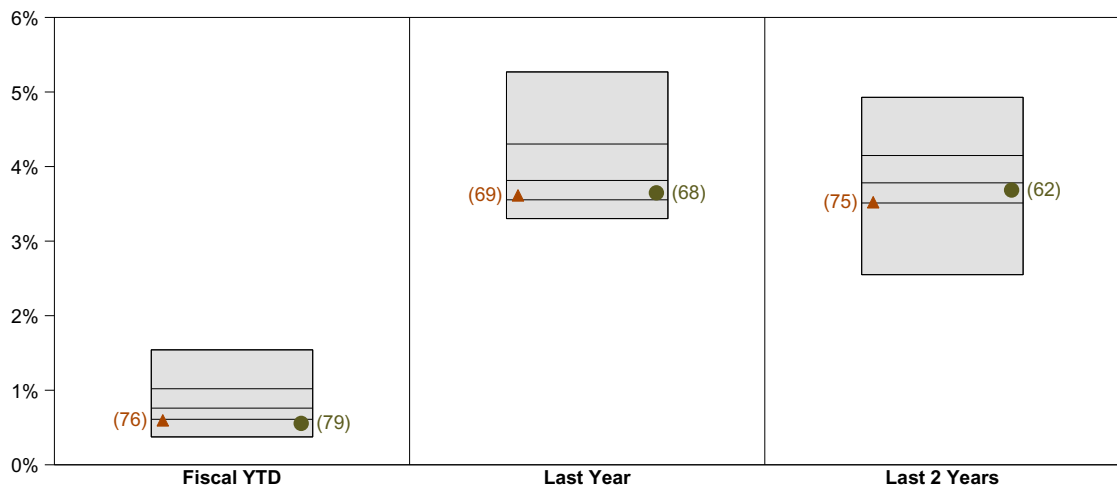
Quarterly Summary and Highlights

- J.P. Morgan MBS's portfolio posted a 0.56% return for the quarter placing it in the 79 percentile of the CAI Mortgage Backed Fixed Income group for the quarter and in the 68 percentile for the last year.
- J.P. Morgan MBS's portfolio underperformed the BB Barclays Mortgage Idx by 0.04% for the quarter and outperformed the BB Barclays Mortgage Idx for the year by 0.03%.

Quarterly Asset Growth

Beginning Market Value	\$113,899,252
Net New Investment	\$8,941,466
Investment Gains/(Losses)	\$633,331
Ending Market Value	\$123,474,049

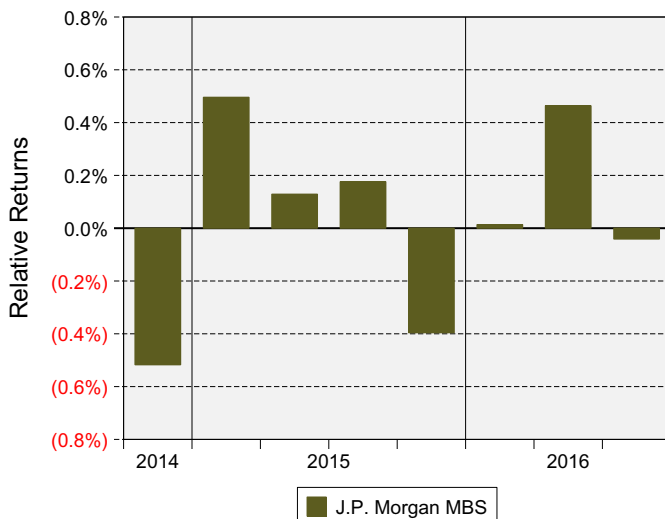
Performance vs CAI Mortgage Backed Fixed Income (Gross)



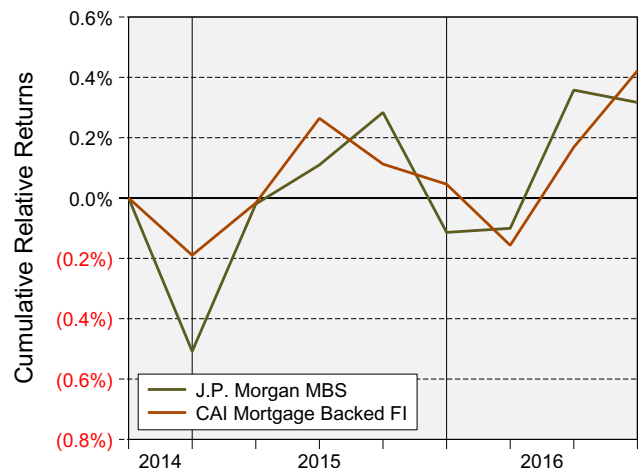
	Fiscal YTD	Last Year	Last 2 Years
10th Percentile	1.54	5.27	4.93
25th Percentile	1.02	4.30	4.15
Median	0.76	3.81	3.78
75th Percentile	0.61	3.55	3.51
90th Percentile	0.37	3.30	2.55

J.P. Morgan MBS ●	0.56	3.65	3.68
BB Barclays Mortgage Idx ▲	0.60	3.61	3.52

Relative Return vs BB Barclays Mortgage Idx



Cumulative Returns vs BB Barclays Mortgage Idx



PIMCO DiSCO II

Period Ended September 30, 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.

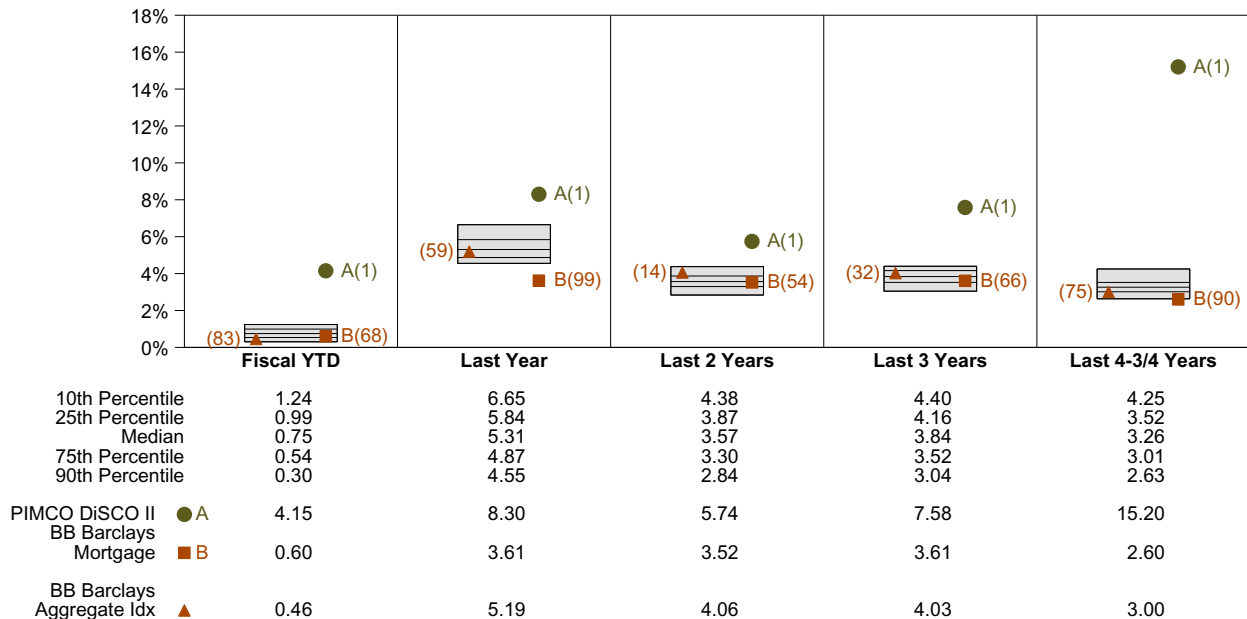
Quarterly Summary and Highlights

- PIMCO DiSCO II's portfolio posted a 4.15% 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 BB Barclays Aggregate Idx by 3.69% for the quarter and outperformed the BB Barclays Aggregate Idx for the year by 3.11%.

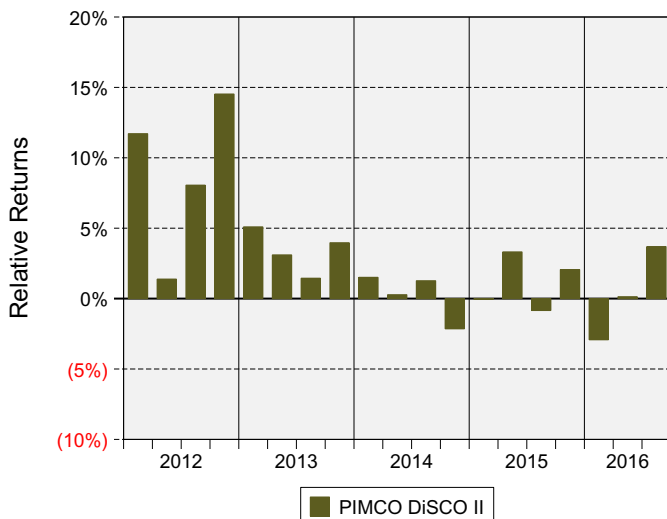
Quarterly Asset Growth

Beginning Market Value	\$91,713,399
Net New Investment	\$0
Investment Gains/(Losses)	\$3,806,044
Ending Market Value	\$95,519,443

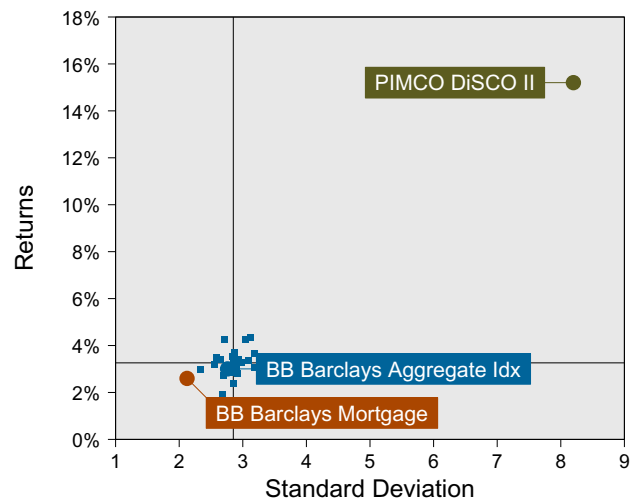
Performance vs CAI Core Bond Mutual Funds (Net)



Relative Return vs BB Barclays Aggregate Idx



CAI Core Bond Mutual Funds (Net) Annualized Four and Three-Quarter Year Risk vs Return



PIMCO MBS

Period Ended September 30, 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.

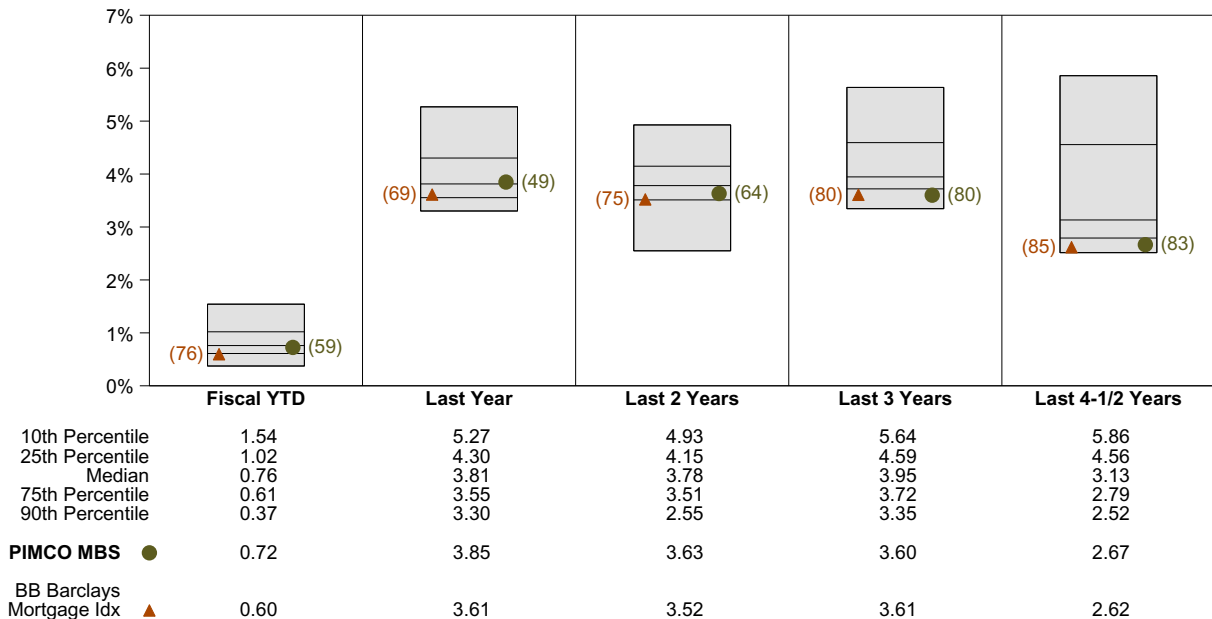
Quarterly Summary and Highlights

- PIMCO MBS's portfolio posted a 0.72% return for the quarter placing it in the 59 percentile of the CAI Mortgage Backed Fixed Income group for the quarter and in the 49 percentile for the last year.
- PIMCO MBS's portfolio outperformed the BB Barclays Mortgage Idx by 0.13% for the quarter and outperformed the BB Barclays Mortgage Idx for the year by 0.24%.

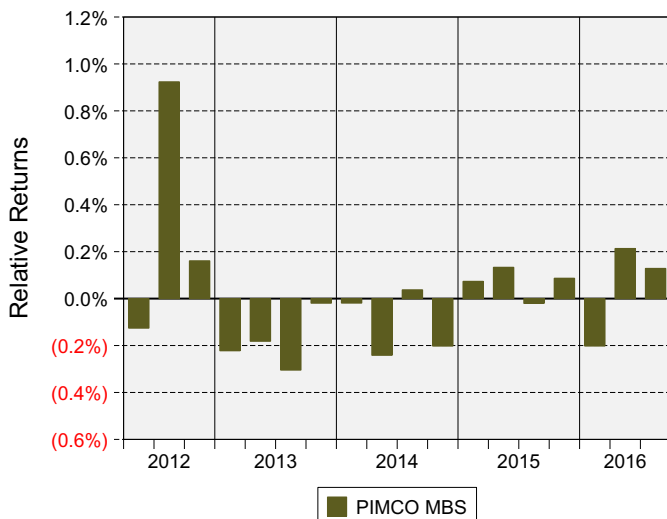
Quarterly Asset Growth

Beginning Market Value	\$183,187,244
Net New Investment	\$-76,870
Investment Gains/(Losses)	\$1,327,148
Ending Market Value	\$184,437,522

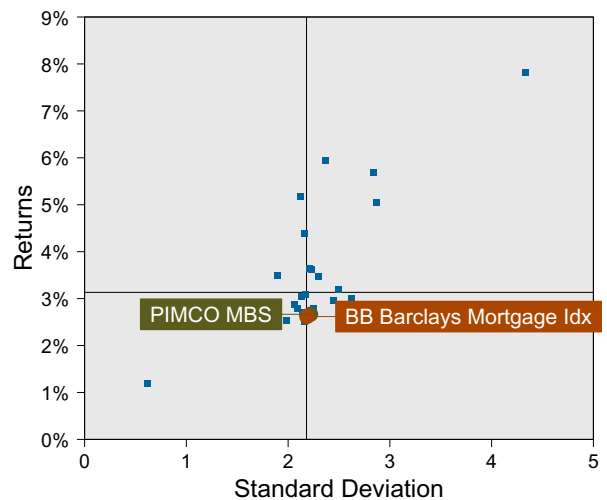
Performance vs CAI Mortgage Backed Fixed Income (Gross)



Relative Return vs BB Barclays Mortgage Idx



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



PIMCO Unconstrained Period Ended September 30, 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.**

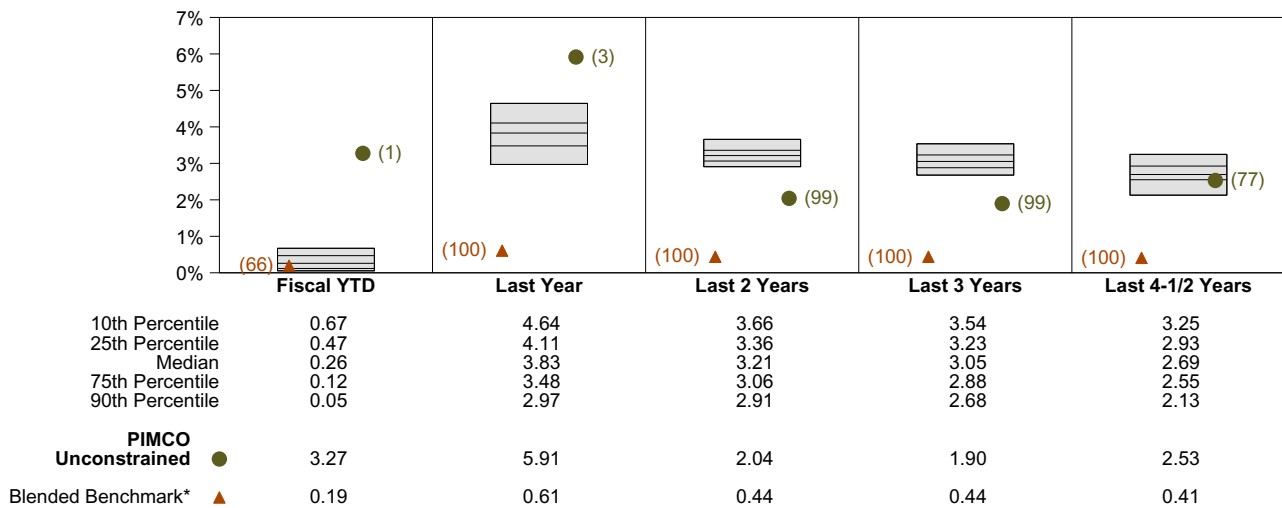
Quarterly Summary and Highlights

- PIMCO Unconstrained's portfolio posted a 3.27% return for the quarter placing it in the 1 percentile of the CAI Intermediate Fixed Income group for the quarter and in the 3 percentile for the last year.
- PIMCO Unconstrained's portfolio outperformed the Blended Benchmark* by 3.08% for the quarter and outperformed the Blended Benchmark* for the year by 5.31%.

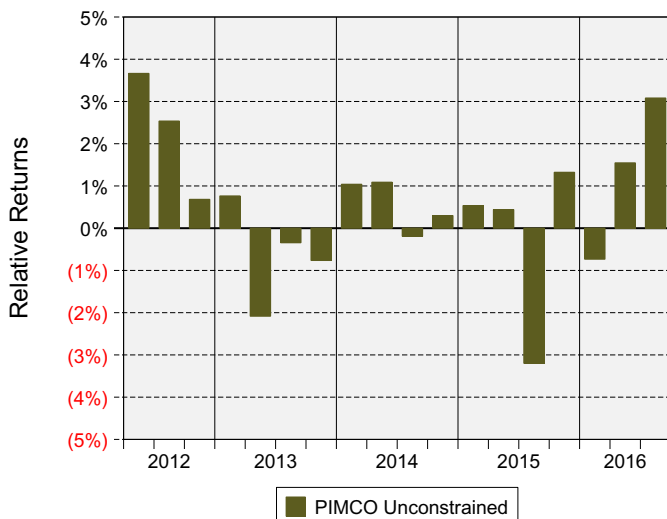
Quarterly Asset Growth

Beginning Market Value	\$61,676,161
Net New Investment	\$-69,159
Investment Gains/(Losses)	\$2,018,361
Ending Market Value	\$63,625,363

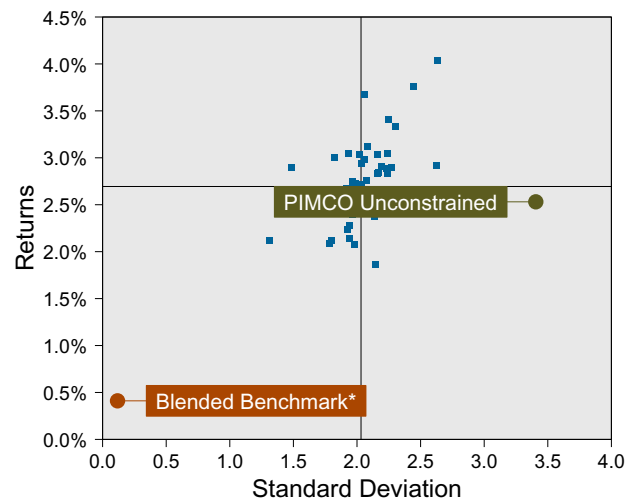
Performance vs CAI Intermediate Fixed Income (Gross)



Relative Return vs Blended Benchmark*



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



SSgA Long US Treas Index Period Ended September 30, 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.

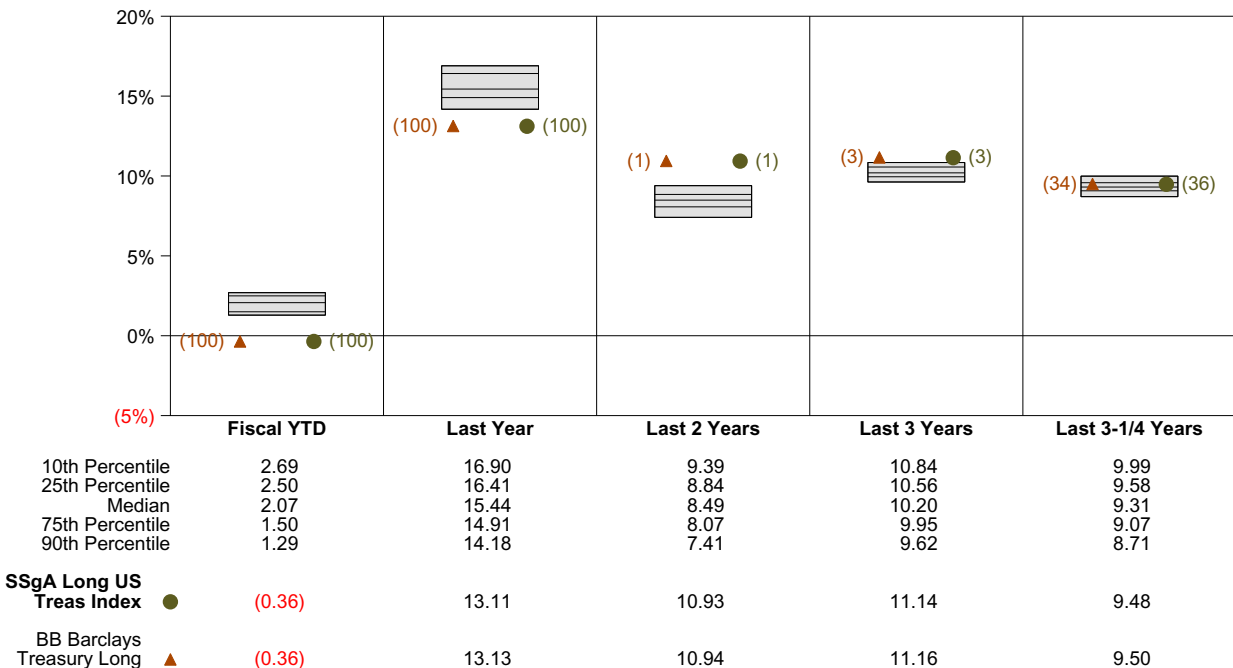
Quarterly Summary and Highlights

- SSgA Long US Treas Index's portfolio posted a (0.36)% 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 BB Barclays Treasury Long by 0.00% for the quarter and underperformed the BB Barclays Treasury Long for the year by 0.02%.

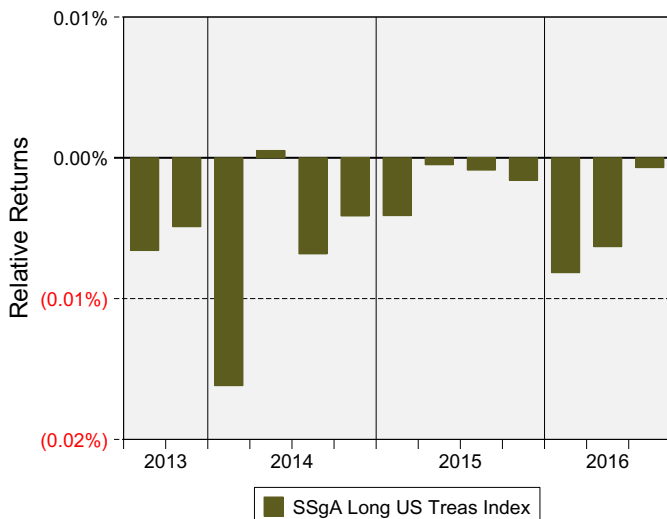
Quarterly Asset Growth

Beginning Market Value	\$67,041,520
Net New Investment	\$3,993,358
Investment Gains/(Losses)	\$-240,436
Ending Market Value	\$70,794,443

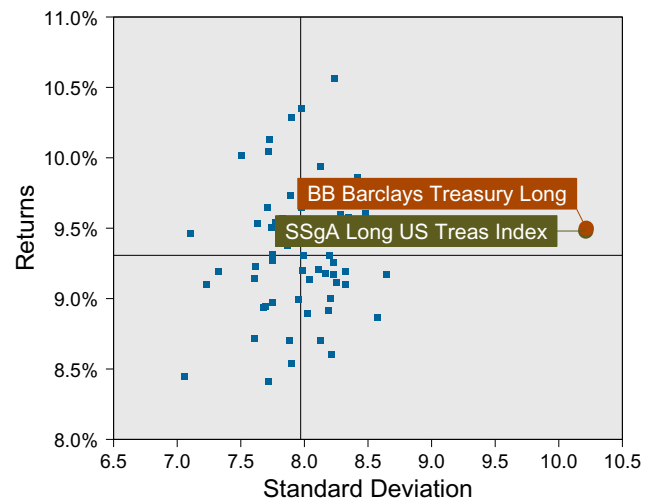
Performance vs CAI Extended Maturity Fixed Income (Gross)



Relative Return vs BB Barclays Treasury Long



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



Goldman Sachs 2006 Offshore Period Ended September 30, 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.

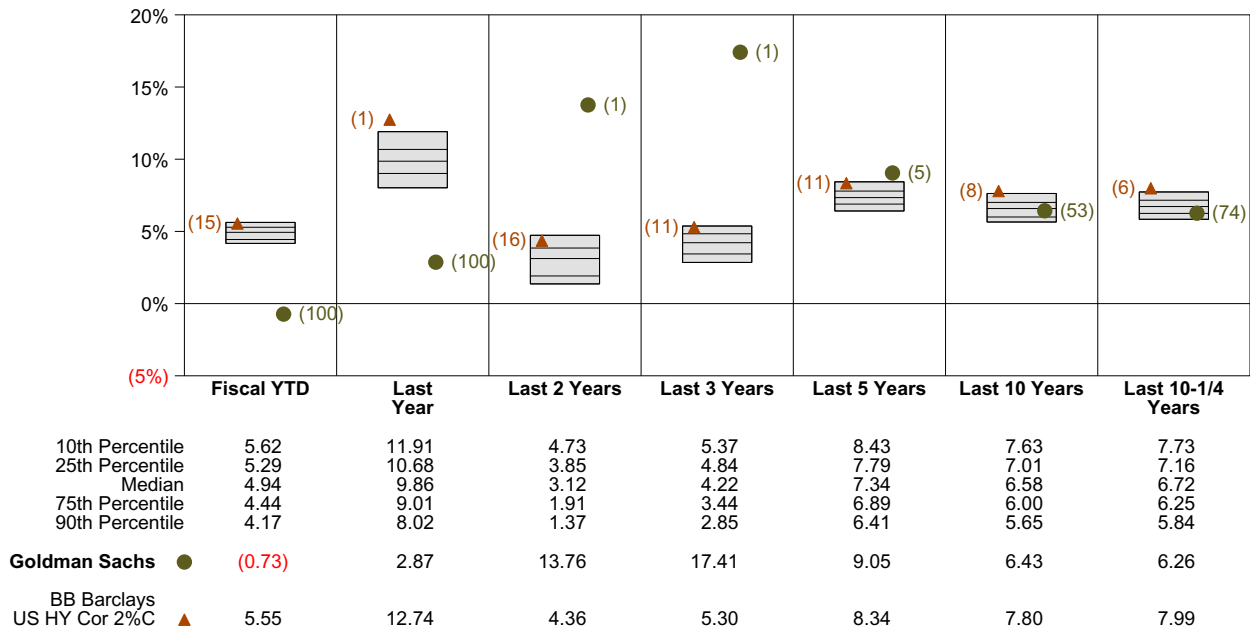
Quarterly Summary and Highlights

- Goldman Sachs's portfolio posted a (0.73)% return for the quarter placing it in the 100 percentile of the CAI High Yield Mutual Funds group for the quarter and in the 100 percentile for the last year.
- Goldman Sachs's portfolio underperformed the BB Barclays US HY Cor 2%C by 6.28% for the quarter and underperformed the BB Barclays US HY Cor 2%C for the year by 9.88%.

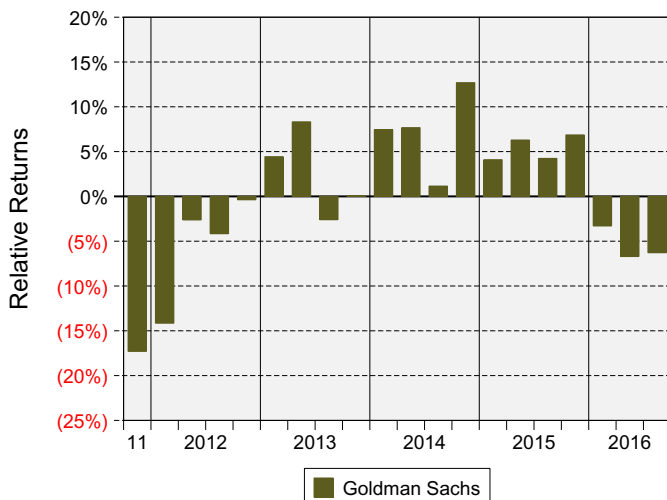
Quarterly Asset Growth

Beginning Market Value	\$1,100,000
Net New Investment	\$-492,347
Investment Gains/(Losses)	\$-7,653
Ending Market Value	\$600,000

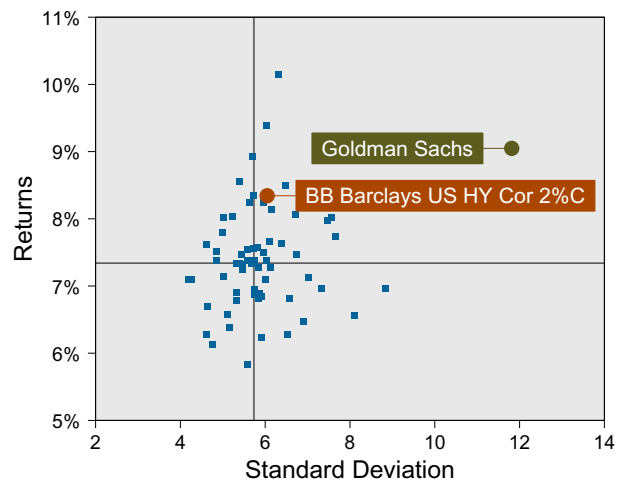
Performance vs CAI High Yield Mutual Funds (Net)



Relative Returns vs BB Barclays US HY Cor 2%C



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



Goldman Sachs Offshore Fund V Period Ended September 30, 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.

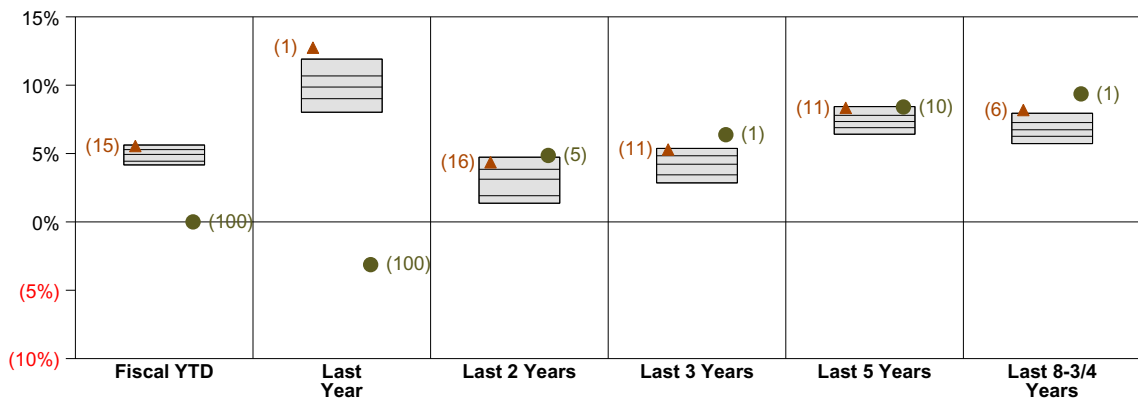
Quarterly Summary and Highlights

- Goldman Sachs Offshore V's portfolio posted a 0.00% return for the quarter placing it in the 100 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 underperformed the BB Barclays US HY Cor 2%C by 5.55% for the quarter and underperformed the BB Barclays US HY Cor 2%C for the year by 15.87%.

Quarterly Asset Growth

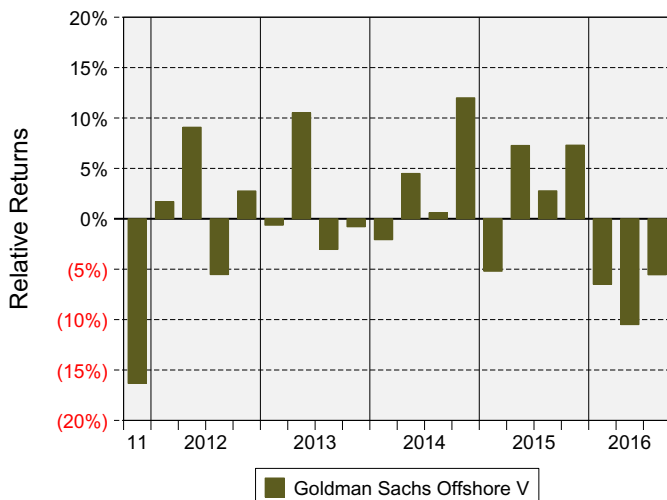
Beginning Market Value	\$2,586,000
Net New Investment	\$0
Investment Gains/(Losses)	\$0
Ending Market Value	\$2,586,000

Performance vs CAI High Yield Mutual Funds (Net)

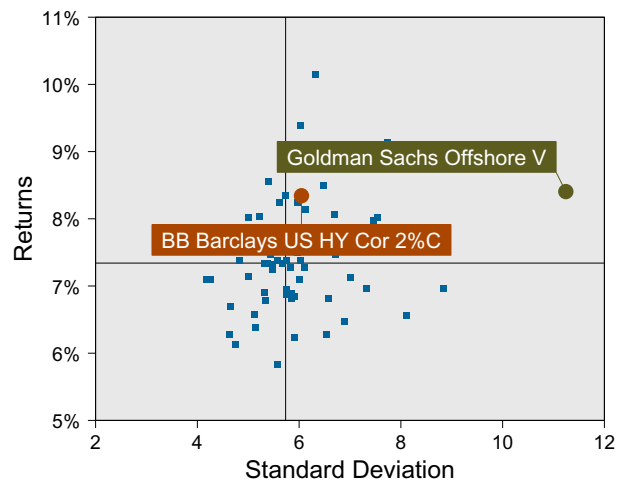


	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 8-3/4 Years
10th Percentile	5.62	11.91	4.73	5.37	8.43	7.95
25th Percentile	5.29	10.68	3.85	4.84	7.79	7.27
Median	4.94	9.86	3.12	4.22	7.34	6.74
75th Percentile	4.44	9.01	1.91	3.44	6.89	6.26
90th Percentile	4.17	8.02	1.37	2.85	6.41	5.73
Goldman Sachs Offshore V	0.00	(3.13)	4.86	6.38	8.40	9.36
BB Barclays US HY Cor 2%C	5.55	12.74	4.36	5.30	8.34	8.18

Relative Returns vs BB Barclays US HY Cor 2%C



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



Loomis Sayles

Period Ended September 30, 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.

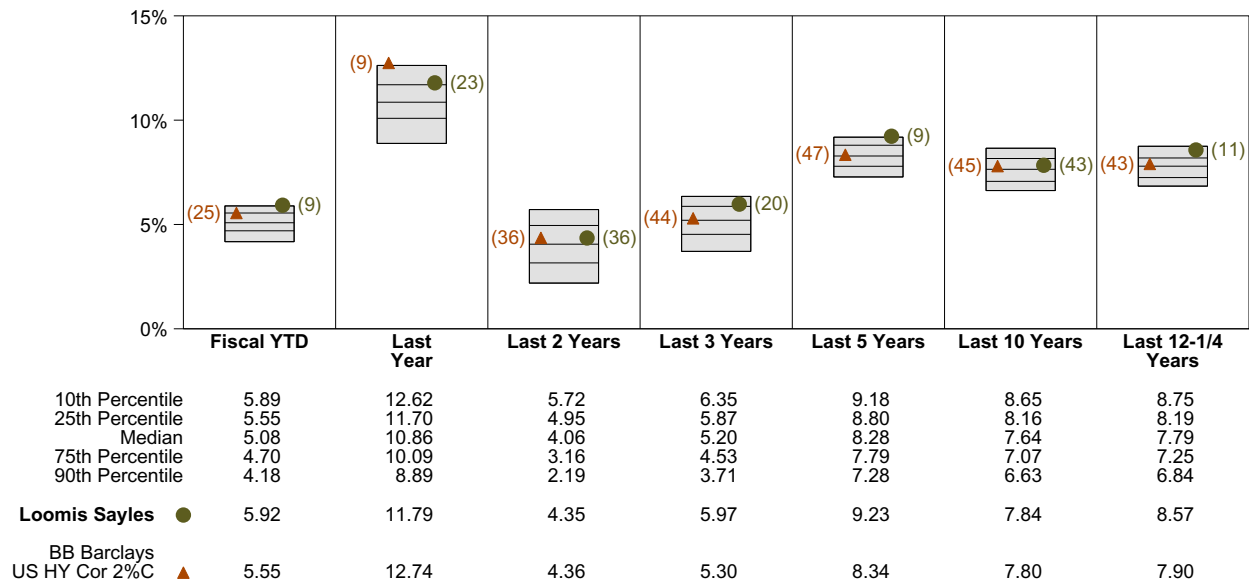
Quarterly Summary and Highlights

- Loomis Sayles's portfolio posted a 5.92% return for the quarter placing it in the 9 percentile of the CAI High Yield Fixed Income group for the quarter and in the 23 percentile for the last year.
- Loomis Sayles's portfolio outperformed the BB Barclays US HY Cor 2%C by 0.37% for the quarter and underperformed the BB Barclays US HY Cor 2%C for the year by 0.96%.

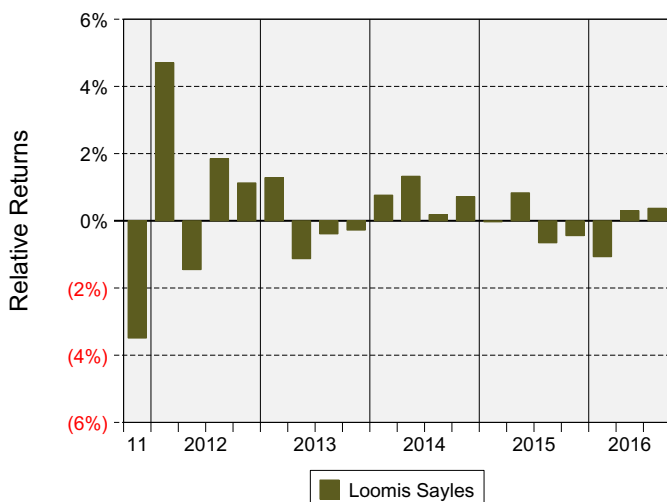
Quarterly Asset Growth

Beginning Market Value	\$185,839,941
Net Investment	\$-8,232,300
Investment Gains/(Losses)	\$10,533,201
Ending Market Value	\$188,140,843

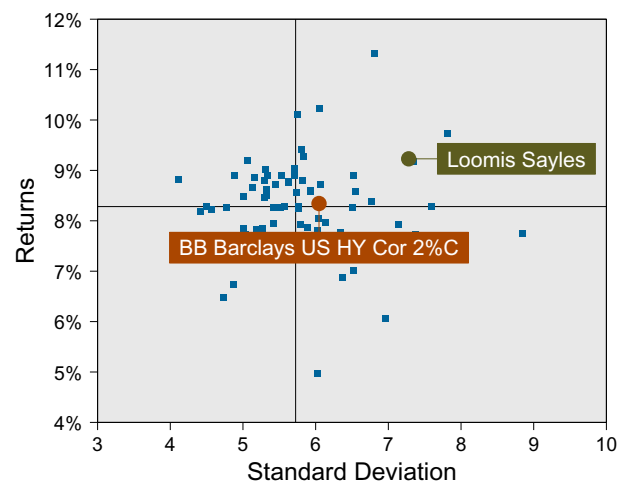
Performance vs CAI High Yield Fixed Income (Gross)



Relative Returns vs BB Barclays US HY Cor 2%C



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



PIMCO Bravo II Fund

Period Ended September 30, 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.

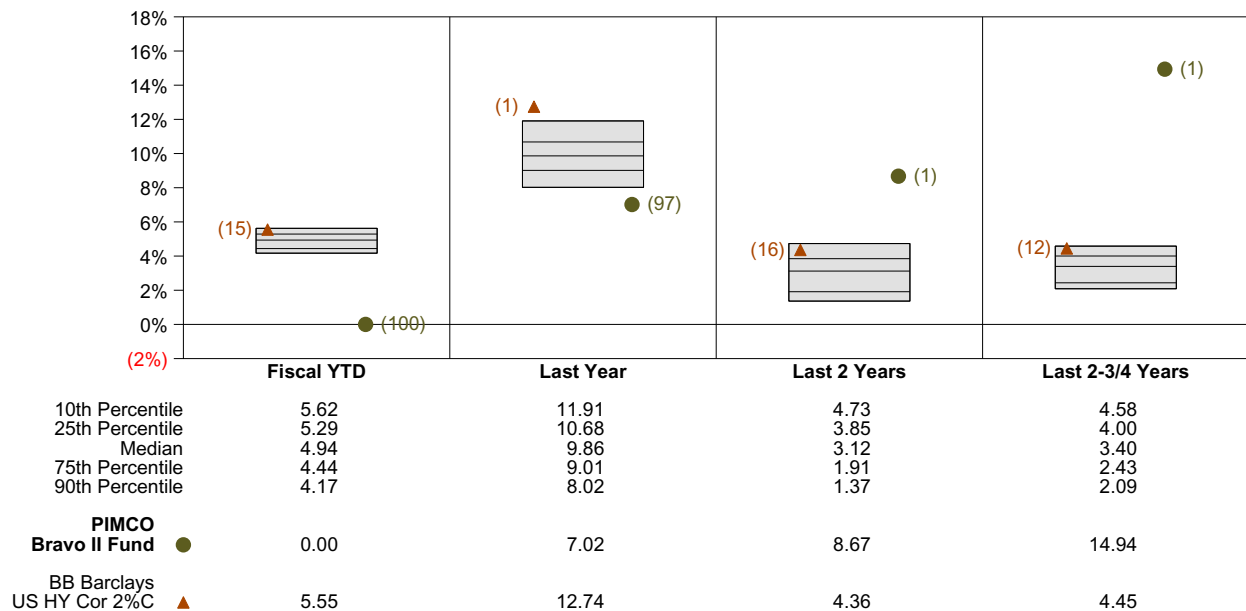
Quarterly Summary and Highlights

- PIMCO Bravo II Fund's portfolio posted a 0.00% return for the quarter placing it in the 100 percentile of the CAI High Yield Mutual Funds group for the quarter and in the 97 percentile for the last year.
- PIMCO Bravo II Fund's portfolio underperformed the BB Barclays US HY Cor 2%C by 5.55% for the quarter and underperformed the BB Barclays US HY Cor 2%C for the year by 5.73%.

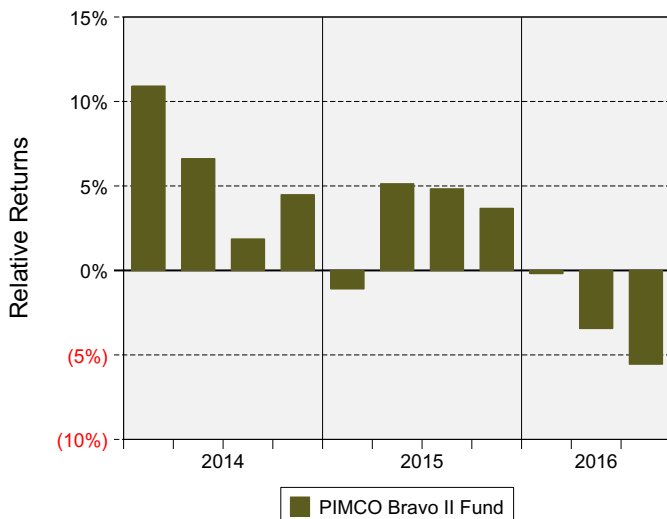
Quarterly Asset Growth

Beginning Market Value	\$47,082,300
Net New Investment	\$0
Investment Gains/(Losses)	\$0
Ending Market Value	\$47,082,300

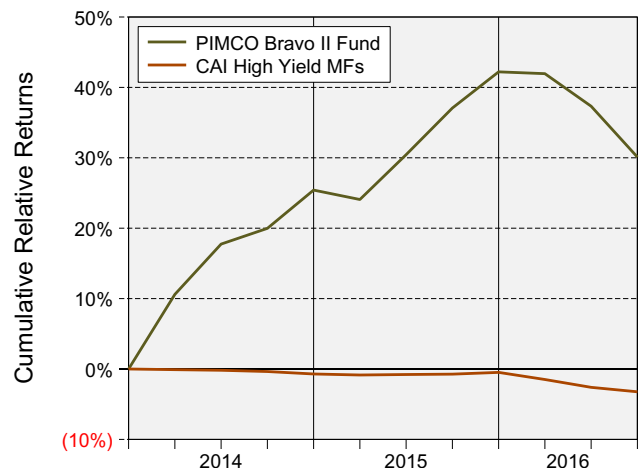
Performance vs CAI High Yield Mutual Funds (Net)



Relative Returns vs BB Barclays US HY Cor 2%C



Cumulative Returns vs BB Barclays US HY Cor 2%C



Brandywine Asset Management Period Ended September 30, 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.

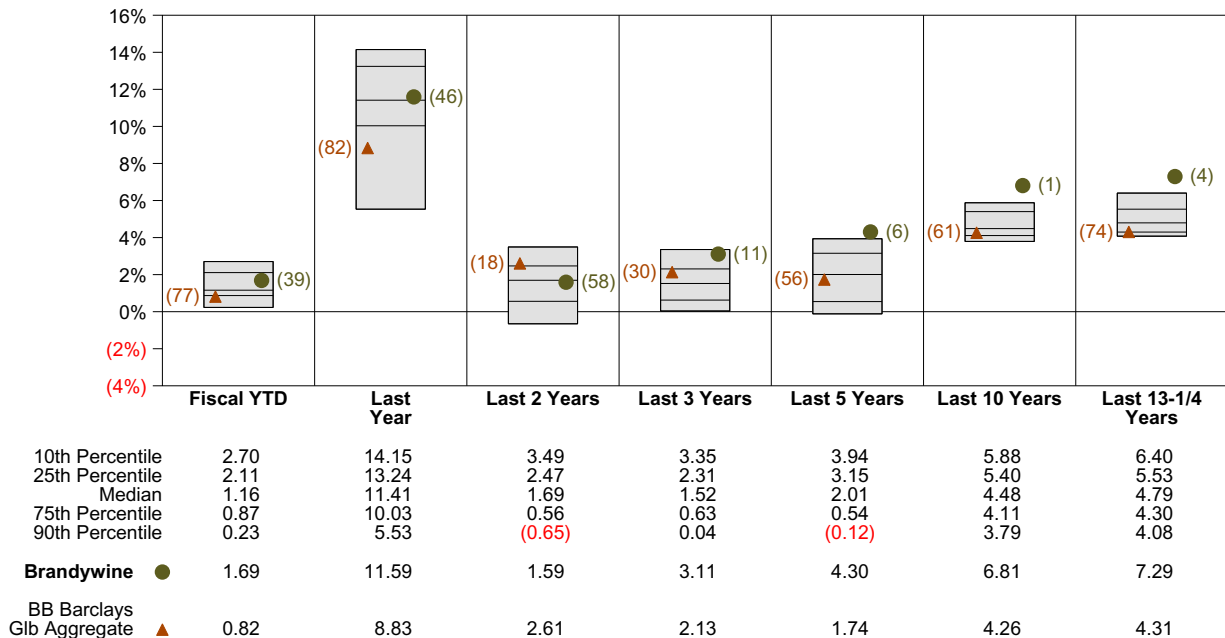
Quarterly Summary and Highlights

- Brandywine's portfolio posted a 1.69% return for the quarter placing it in the 39 percentile of the CAI Non US Fixed Income (Unhedged) group for the quarter and in the 46 percentile for the last year.
- Brandywine's portfolio outperformed the BB Barclays Glb Aggregate by 0.87% for the quarter and outperformed the BB Barclays Glb Aggregate for the year by 2.76%.

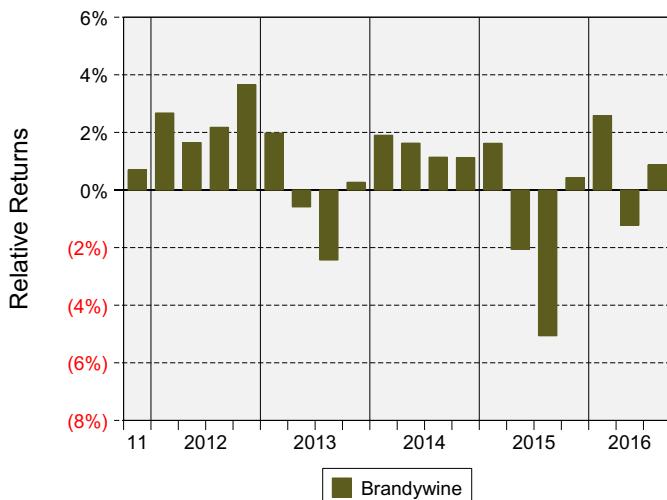
Quarterly Asset Growth

Beginning Market Value	\$147,344,567
Net New Investment	\$-140,726
Investment Gains/(Losses)	\$2,483,777
Ending Market Value	\$149,687,618

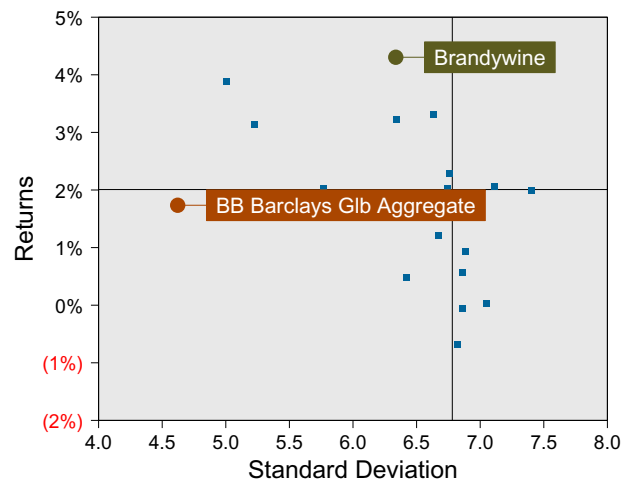
Performance vs CAI Non US Fixed Income (Unhedged) (Gross)



Relative Return vs BB Barclays Glb Aggregate



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



UBS Global Asset Management Period Ended September 30, 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 and the Barclays Global Aggregate ex-US Index thereafter.

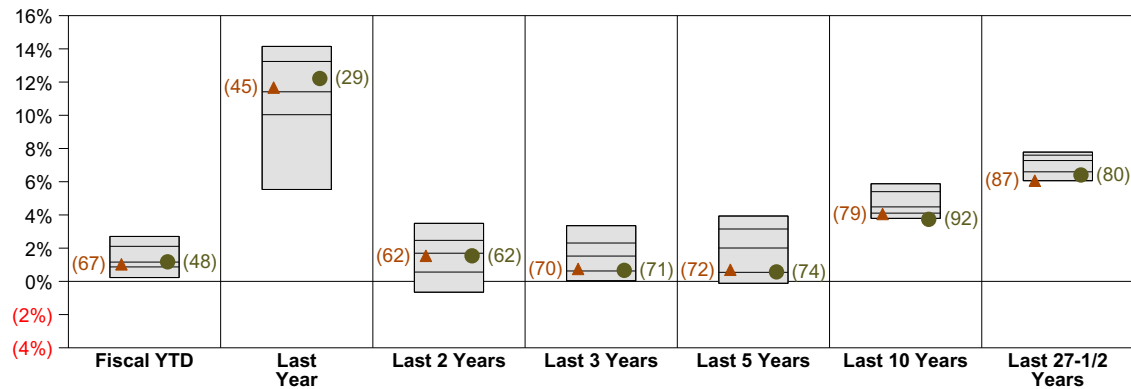
Quarterly Summary and Highlights

- UBS Global Asset Management's portfolio posted a 1.18% return for the quarter placing it in the 48 percentile of the CAI Non US Fixed Income (Unhedged) group for the quarter and in the 29 percentile for the last year.
- UBS Global Asset Management's portfolio outperformed the Blended Benchmark* by 0.15% for the quarter and outperformed the Blended Benchmark* for the year by 0.55%.

Quarterly Asset Growth

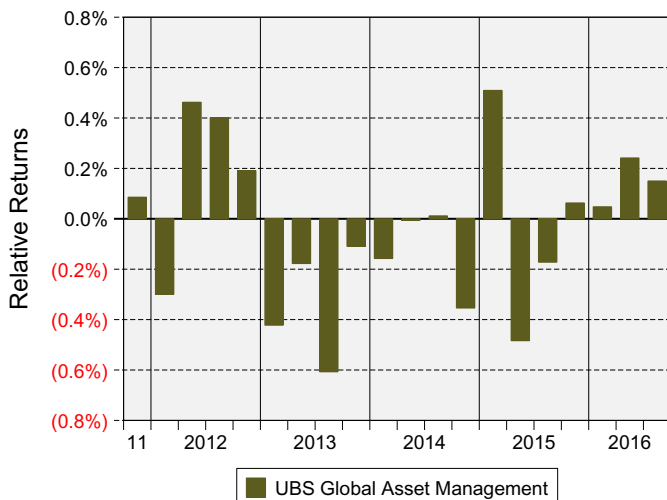
Beginning Market Value	\$110,367,673
Net New Investment	\$-85,059
Investment Gains/(Losses)	\$1,297,720
Ending Market Value	\$111,580,334

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

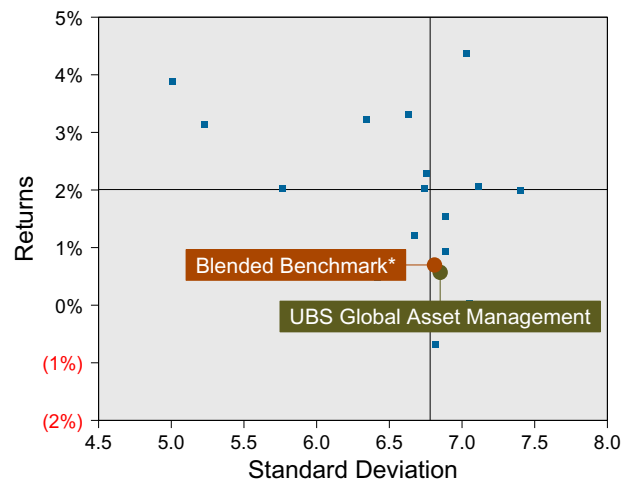


10th Percentile	2.70	14.15	3.49	3.35	3.94	5.88	7.78
25th Percentile	2.11	13.24	2.47	2.31	3.15	5.40	7.60
Median	1.16	11.41	1.69	1.52	2.01	4.48	7.27
75th Percentile	0.87	10.03	0.56	0.63	0.54	4.11	6.60
90th Percentile	0.23	5.53	(0.65)	0.04	(0.12)	3.79	6.06

Relative Return vs Blended Benchmark*



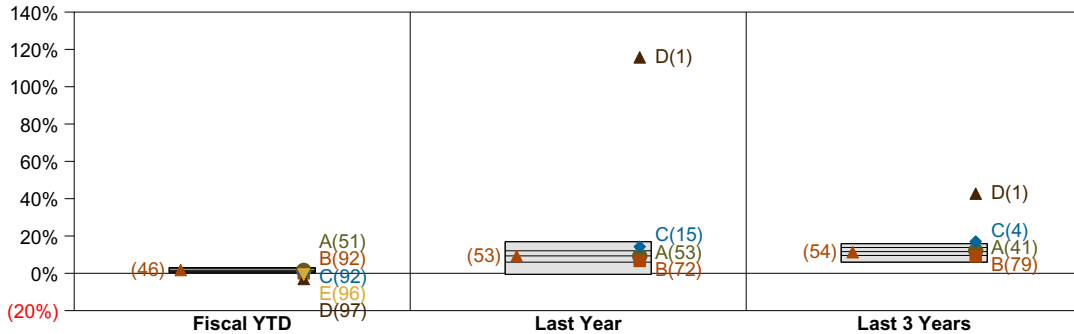
CAI Non US Fixed Income (Unhedged) (Gross) Annualized Five Year Risk vs Return



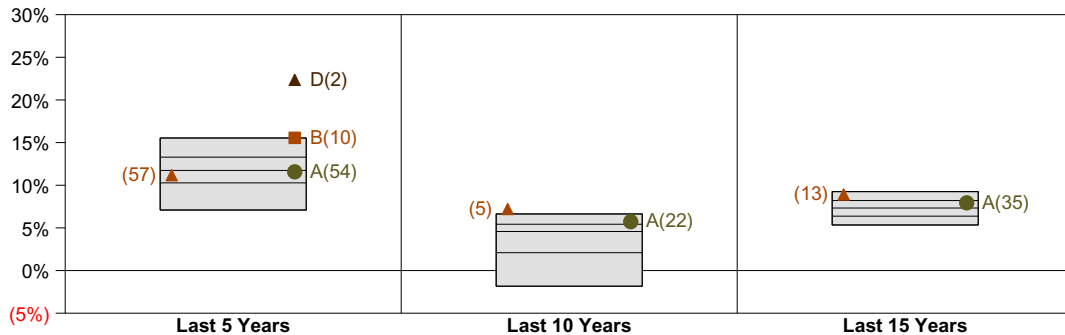
North Dakota State Investment Board Pension Funds Performance vs CAI Total Real Estate Database Periods Ended September 30, 2016

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.



	Fiscal YTD	Last Year	Last 3 Years
10th Percentile	3.06	16.94	15.88
25th Percentile	2.48	12.06	13.84
Median	1.62	9.34	11.64
75th Percentile	1.05	5.98	9.56
90th Percentile	0.28	(0.54)	5.97
Invesco Core Real Estate (A)	1.59	9.21	12.11
Invesco Fund II (B)	0.00	6.65	9.06
Invesco Fund III (C)	0.00	14.25	17.06
Invesco Asia RE Feeder (D)	(3.02)	115.72	42.71
Invesco Asia RE Fund III (E)	(0.64)	-	-
NCREIF Total Index (▲)	1.77	9.22	11.31

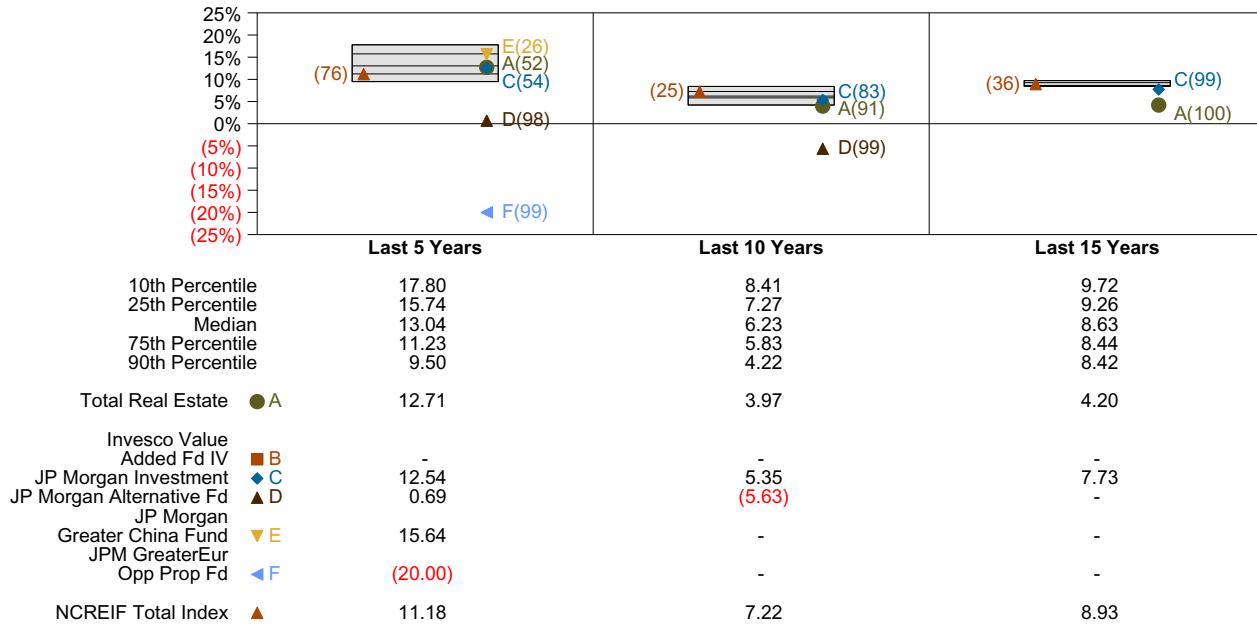
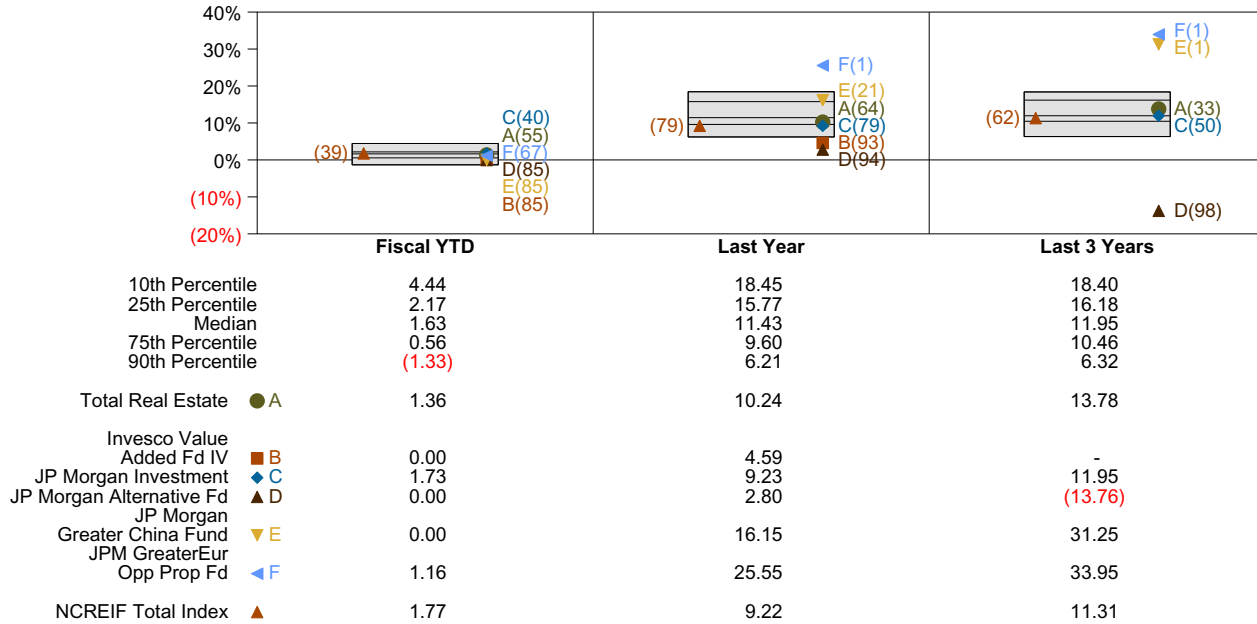


	Last 5 Years	Last 10 Years	Last 15 Years
10th Percentile	15.54	6.63	9.25
25th Percentile	13.29	5.43	8.21
Median	11.74	4.58	7.33
75th Percentile	10.28	2.09	6.38
90th Percentile	7.09	(1.83)	5.34
Invesco Core Real Estate (A)	11.57	5.73	7.94
Invesco Fund II (B)	15.56	-	-
Invesco Fund III (C)	-	-	-
Invesco Asia RE Feeder (D)	22.36	-	-
Invesco Asia RE Fund III (E)	-	-	-
NCREIF Total Index (▲)	11.18	7.22	8.93

North Dakota State Investment Board Pension Funds Performance vs CAI Total Real Estate Database Periods Ended September 30, 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 September 30, 2016

Investment Philosophy

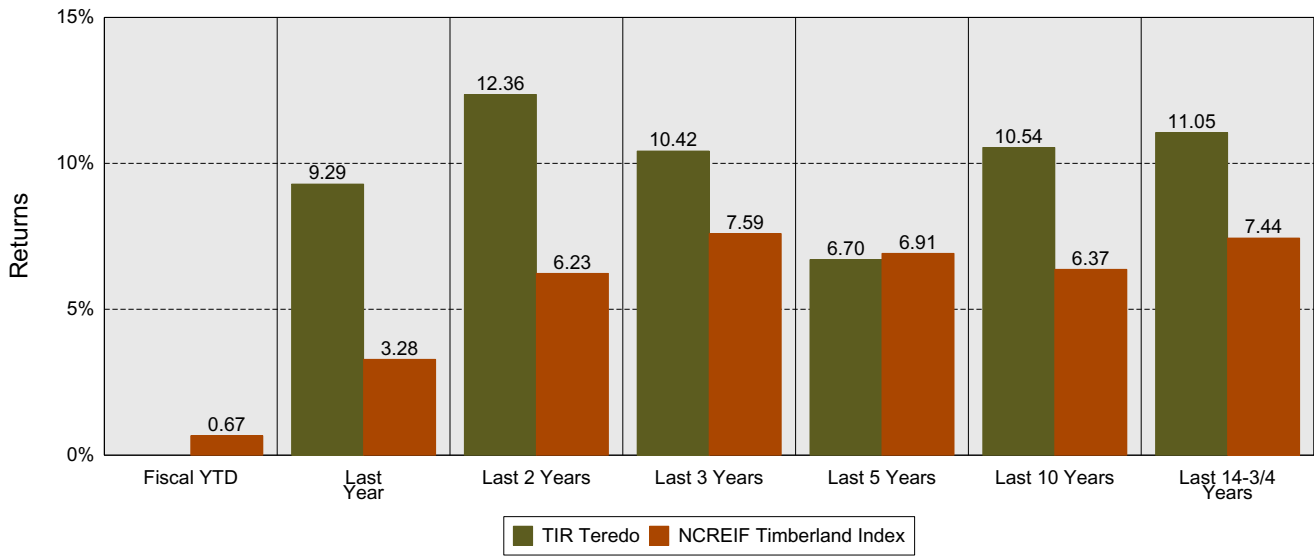
Teredo Timber LLC - The investment objective of Teredo is to provide competitive investment returns from increasing saw timber production through the 20 year term of the partnership. TIR's management strategy is to maximize saw timber volume by applying intensive forest management techniques which accelerate 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

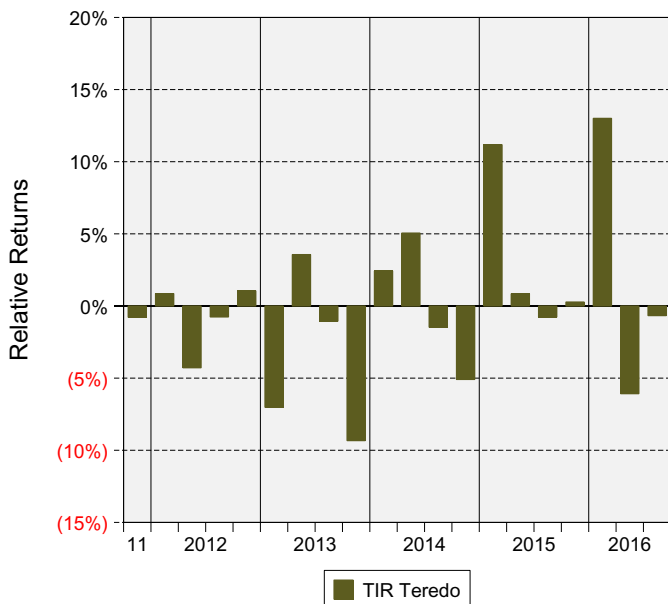
- TIR Teredo's portfolio posted a 0.00% return for the quarter placing it in the 99 percentile of the CAI Core Bond Fixed Income group for the quarter and in the 1 percentile for the last year.
- TIR Teredo's portfolio underperformed the NCREIF Timberland Index by 0.67% for the quarter and outperformed the NCREIF Timberland Index for the year by 6.00%.

Quarterly Asset Growth

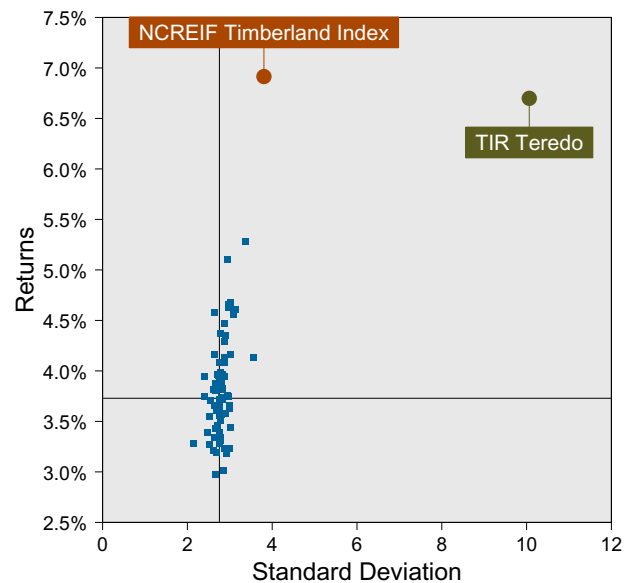
Beginning Market Value	\$33,820,778
Net New Investment	\$0
Investment Gains/(Losses)	\$0
Ending Market Value	\$33,820,778



Relative Return vs NCREIF Timberland Index



CAI Core Bond Fixed Income (Gross) Annualized Five Year Risk vs Return



TIR Springbank Period Ended September 30, 2016

Investment Philosophy

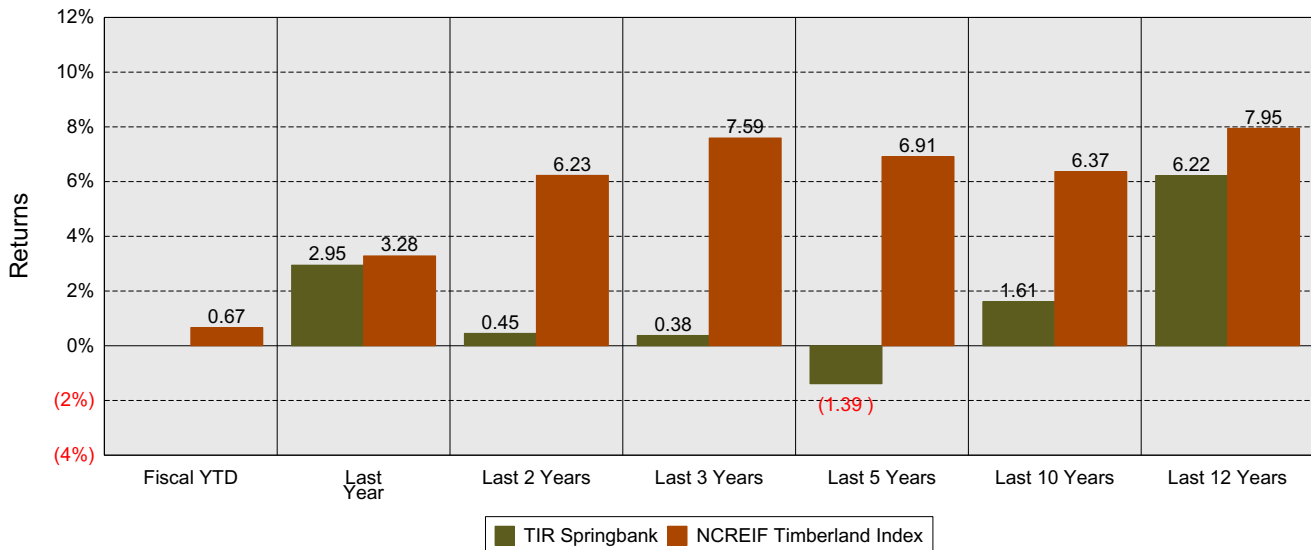
Springbank LLC - The investment objective of Springbank is to maximize long-term investment potential by means of the formation of a dedicated land management group, intensive timber management to increase timber production, the coordination of timber harvesting with land management activities and direct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

Quarterly Summary and Highlights

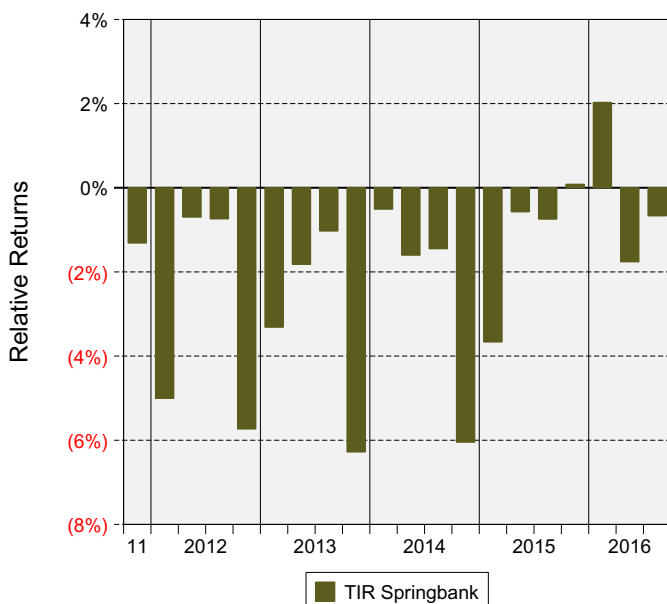
- TIR Springbank's portfolio posted a 0.00% return for the quarter placing it in the 99 percentile of the CAI Core Bond Fixed Income group for the quarter and in the 99 percentile for the last year.
- TIR Springbank's portfolio underperformed the NCREIF Timberland Index by 0.67% for the quarter and underperformed the NCREIF Timberland Index for the year by 0.34%.

Quarterly Asset Growth

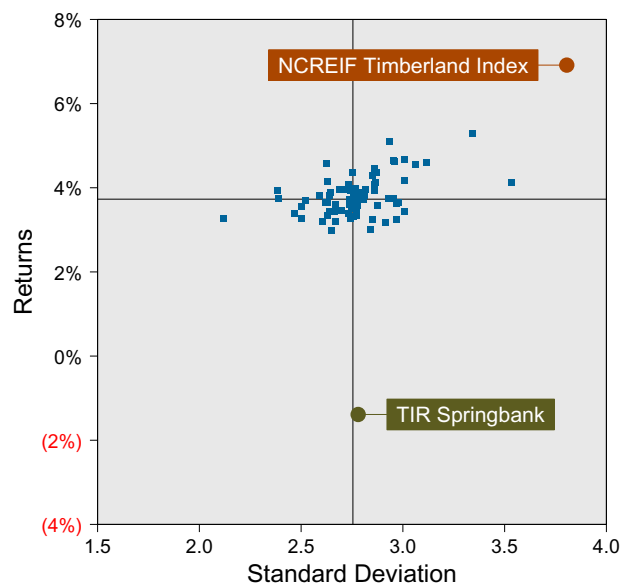
Beginning Market Value	\$119,528,373
Net New Investment	\$-760,000
Investment Gains/(Losses)	\$0
Ending Market Value	\$118,768,373



Relative Return vs NCREIF Timberland Index



CAI Core Bond Fixed Income (Gross) Annualized Five Year Risk vs Return



JP Morgan Asian Infrastructure Period Ended September 30, 2016

Investment Philosophy

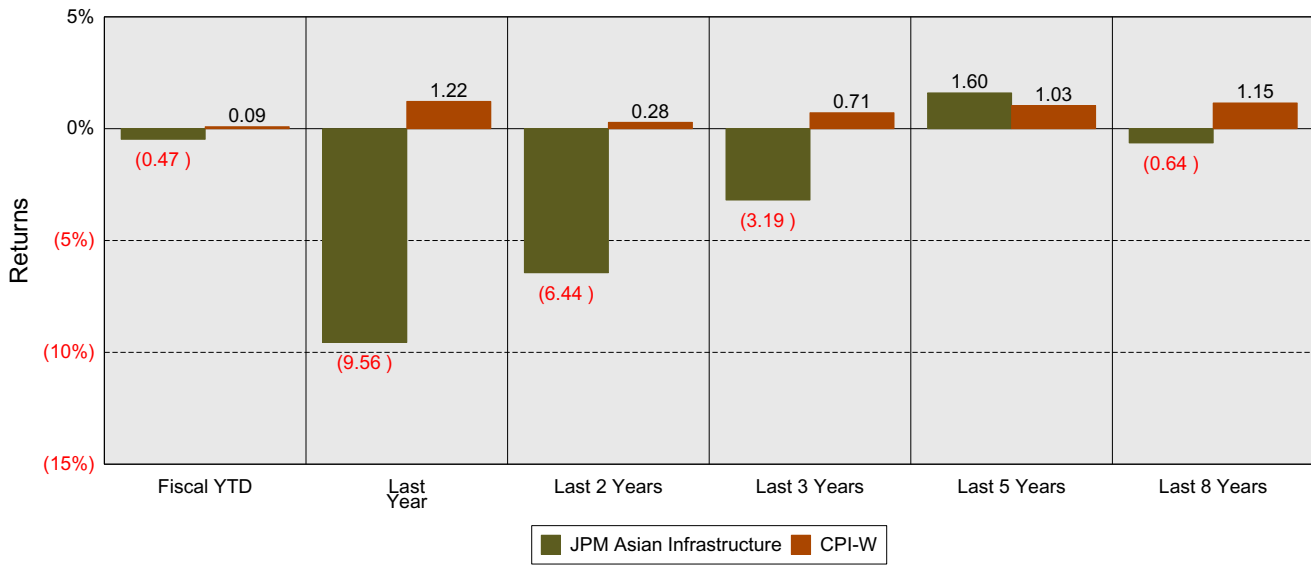
The JPMorgan Asian Infrastructure & Related Resources Opportunity ("AIRRO") Fund seeks to invest in infrastructure and related resources opportunities across the greater Asia Pacific region. The Fund seeks to invest in a broad range of assets, including: core infrastructure, power both from conventional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

Quarterly Summary and Highlights

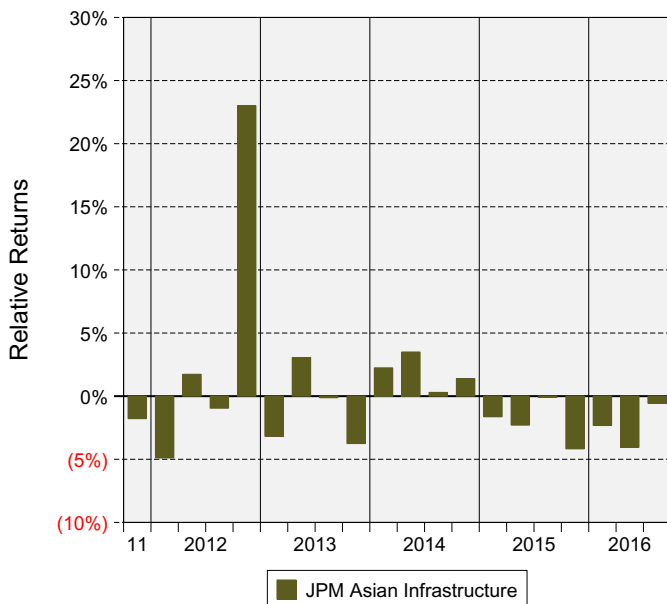
- JPM Asian Infrastructure's portfolio underperformed the CPI-W by 0.56% for the quarter and underperformed the CPI-W for the year by 10.78%.

Quarterly Asset Growth

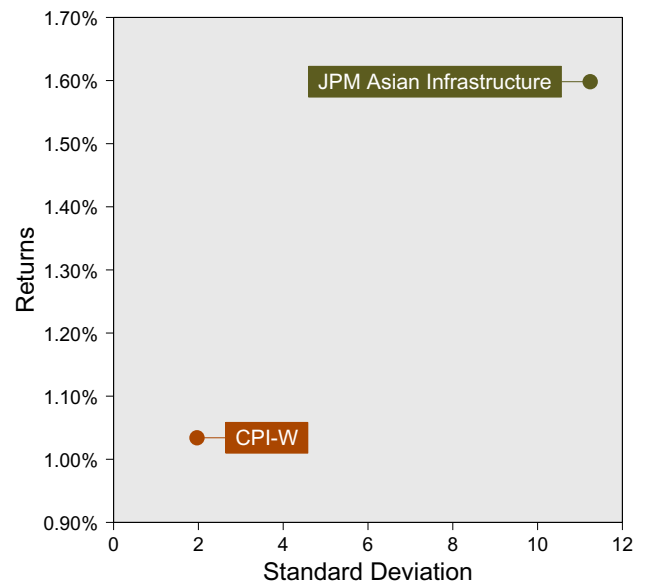
Beginning Market Value	\$28,039,002
Net New Investment	\$133,405
Investment Gains/(Losses)	\$-133,407
Ending Market Value	\$28,039,000



Relative Return vs CPI-W



Annualized Five Year Risk vs Return



JPM Infrastructure Fund

Period Ended September 30, 2016

Investment Philosophy

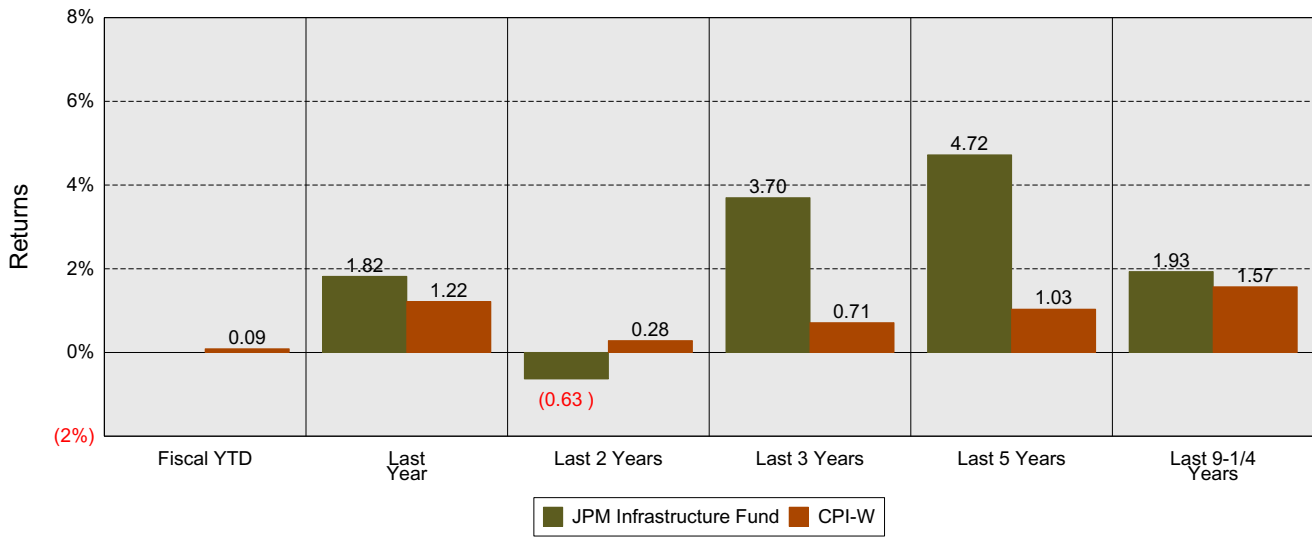
The only open-ended private commingled infrastructure fund in the U.S, the JPMorgan Infrastructure Investments Fund invests in stabilized assets in OECD countries with selected value-added opportunities, across infrastructure industry sub-sectors, including: toll roads, bridges and tunnels; oil and gas 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

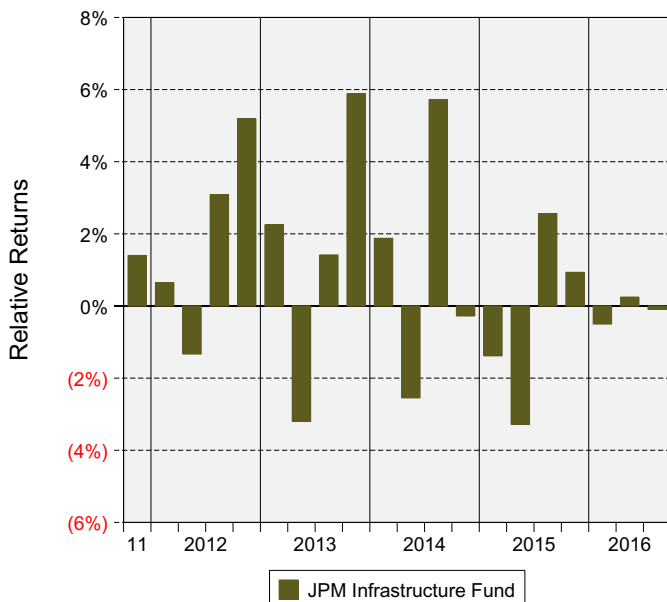
- JPM Infrastructure Fund's portfolio underperformed the CPI-W by 0.09% for the quarter and outperformed the CPI-W for the year by 0.60%.

Quarterly Asset Growth

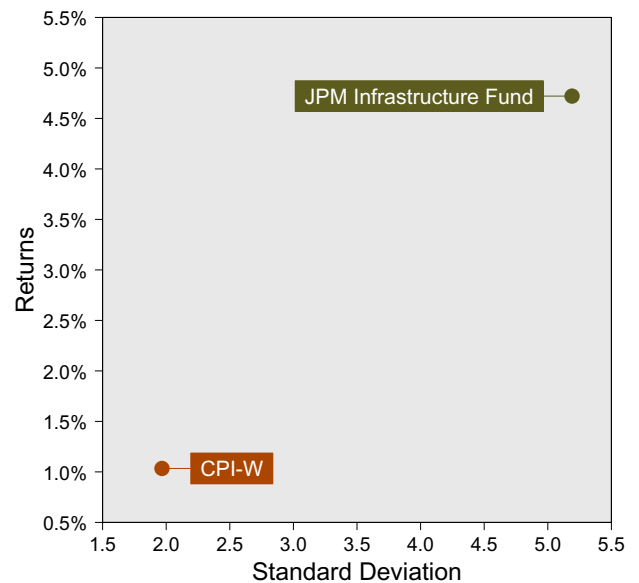
Beginning Market Value	\$142,195,646
Net New Investment	\$-7
Investment Gains/(Losses)	\$0
Ending Market Value	\$142,195,639



Relative Return vs CPI-W



Annualized Five Year Risk vs Return



Grosvenor Cust. Infrastructure Period Ended September 30, 2016

Investment Philosophy

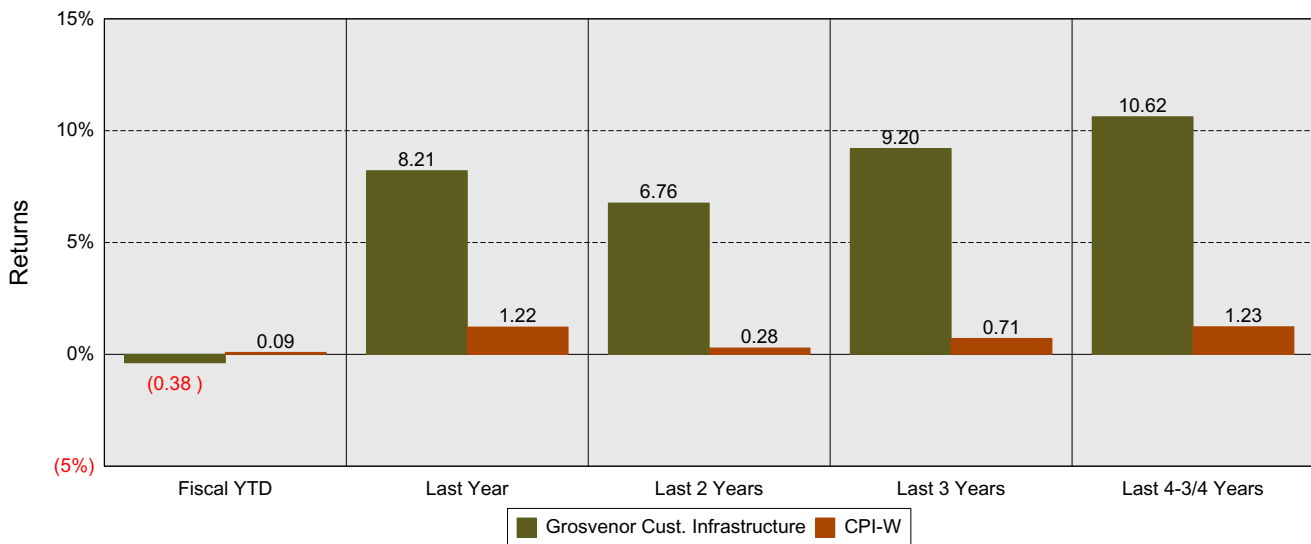
The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified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

Quarterly Summary and Highlights

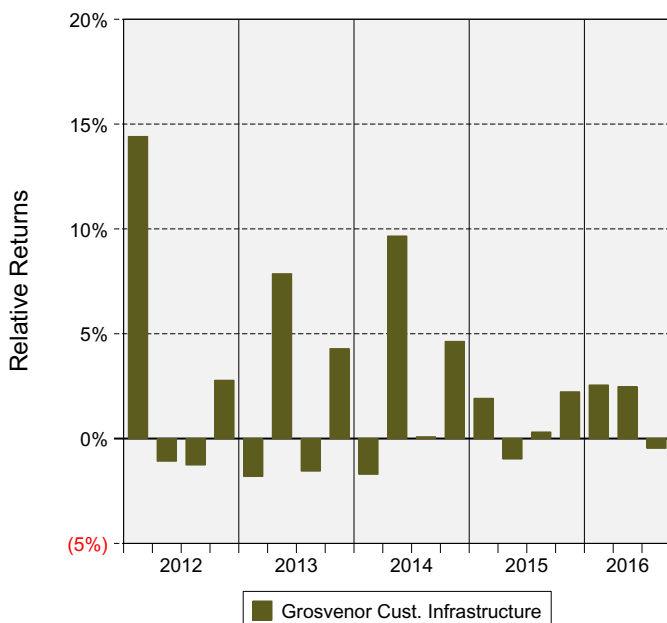
- Grosvenor Cust. Infrastructure's portfolio underperformed the CPI-W by 0.46% for the quarter and outperformed the CPI-W for the year by 6.99%.

Quarterly Asset Growth

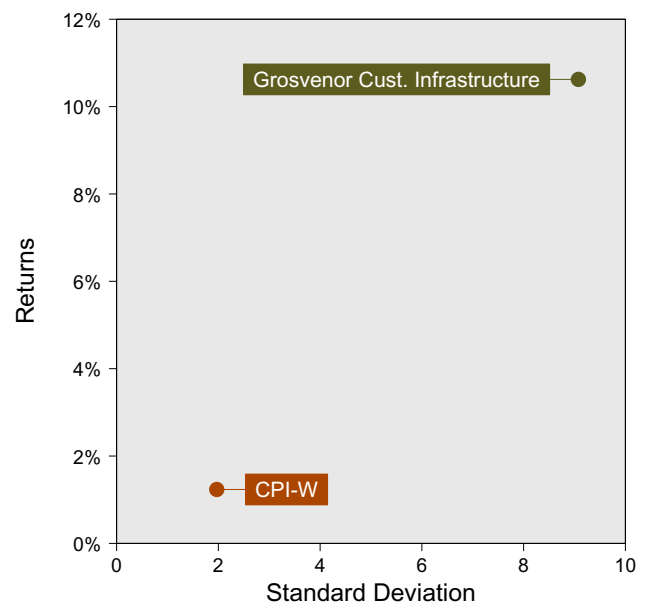
Beginning Market Value	\$41,367,135
Net New Investment	\$-1,232,574
Investment Gains/(Losses)	\$-150,917
Ending Market Value	\$39,983,644



Relative Return vs CPI-W



Annualized Four and Three-Quarter Year Risk vs Return



Grosvenor Cust. Infrastructure II Period Ended September 30, 2016

Investment Philosophy

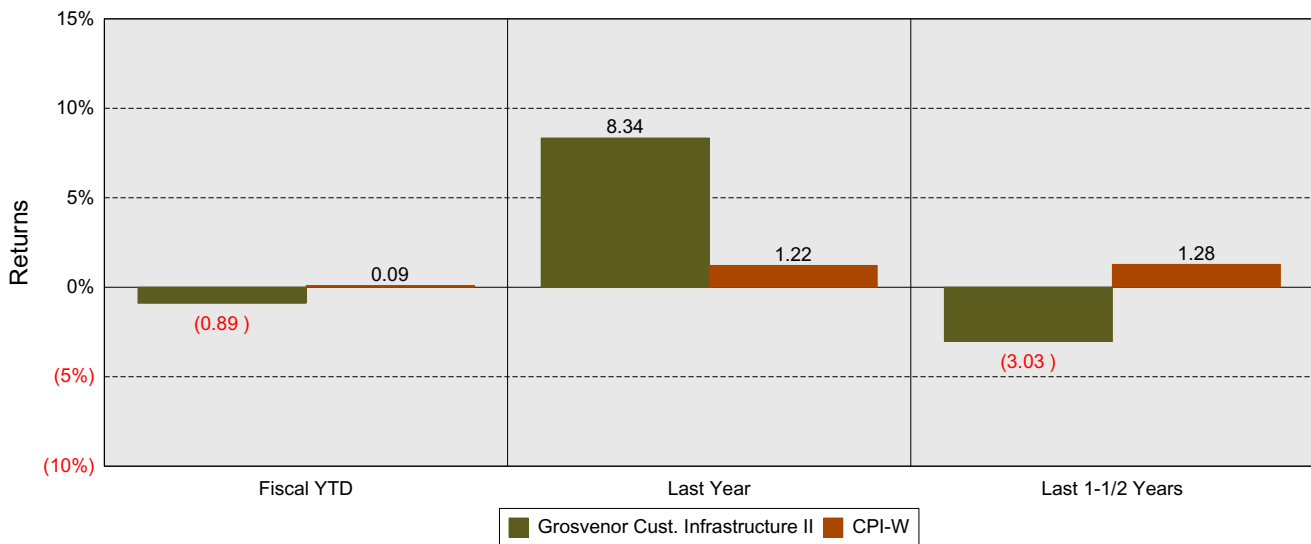
The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified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

Quarterly Summary and Highlights

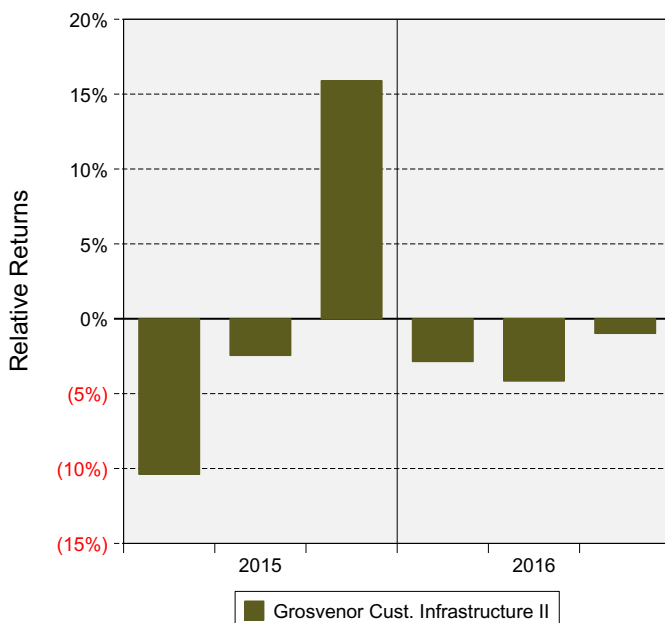
- Grosvenor Cust. Infrastructure II's portfolio underperformed the CPI-W by 0.98% for the quarter and outperformed the CPI-W for the year by 7.12%.

Quarterly Asset Growth

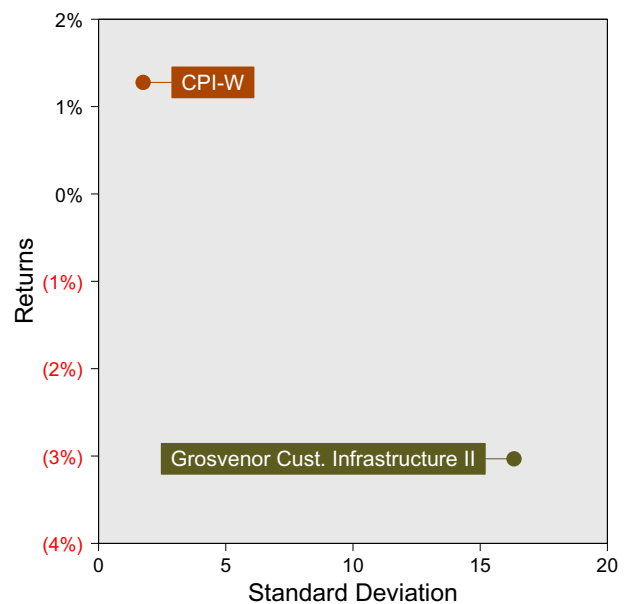
Beginning Market Value	\$3,848,734
Net New Investment	\$-97,451
Investment Gains/(Losses)	\$-34,246
Ending Market Value	\$3,717,037



Relative Return vs CPI-W



Annualized One and One-Half Year Risk vs Return



Research and Educational Programs

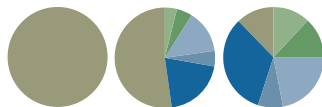
The Callan Institute provides research that updates clients on the latest industry trends while helping them learn through carefully structured educational programs. Visit www.callan.com/research to see all of our publications, or for more information contact Anna West at 415.974.5060 / institute@callan.com.

New Research from Callan's Experts

Built to Last: Strategic Guidance for Effective Investment Committees | Callan offers our high-level strategic advice for investment committees, touching on membership, investment policy statements, review processes, and fiduciary training and ongoing education.

10 Tips From Successful Investment Committees | Callan Chairman and CEO Ron Peyton and Consultant Brady O'Connell, CFA, CAIA, offer 10 tips based on their work with successful investment committees.

Risky Business | Callan research that found investors over the last 20 years have



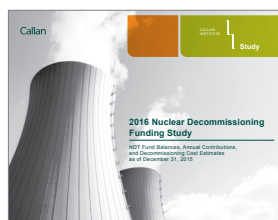
had to take on three times as much risk to earn the same return electrified the institutional investing community. We interviewed Jay Kloepfer and Julia Moriarty, CFA, about how the research was done and its implications.

Managing DC Plan Investments: A Fiduciary Handbook

Lori Lucas, CFA, covers responsibilities for DC plan fiduciaries, including investment structure, investment policy statements, QDIA oversight, and manager performance.

Ethics 101 for Investment Professionals | Callan Chairman and CEO Ron Peyton outlines his thoughts on how to create, instill, and maintain ethical standards for investment professionals. His advice: the right culture creates the best environment to maintain these standards. Firms should develop ethical guidelines that are based on principles, not rules, since the former offer better guidance for employees across the organization.

2016 Nuclear Decommissioning Funding Study | A report



by Julia Moriarty, CFA, covers 27 investor-owned and 27 public power utilities with an ownership interest in the 99 operating nuclear reactors (and 10 of the non-operating reactors) in the U.S.

How Green Is Your Bond? | Callan Analyst Rufash Lama tackles the area of green bonds, which are fixed income instruments issued specifically to support or finance environmental initiatives.

Periodicals

Real Assets Reporter, Summer/Fall 2016 | This edition explores if the boom in commercial real estate may be ending.

Private Markets Trends, Summer 2016 | Author Gary Robertson discusses the recent surge in private equity fundraising, an indication that some investors are establishing a defensive hedge as the five-year bull market pulls in its horns.

DC Observer, 2nd Quarter 2016 | Callan's Defined Contribution Practice Team outlines a framework to evaluate DC transaction fees. We explain how common they are, what they typically cost, and how they are generally paid.

Hedge Fund Monitor, 2nd Quarter 2016 | Jim McKee, director of Callan's Hedge Fund Research group, discusses the appeal of momentum-based investing strategies in the current climate of considerable economic uncertainty.

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 fall **Regional Workshop**, October 25 in New York and October 26 in Chicago, and 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 session is:

Introduction to Investments

San Francisco, April 18-19, 2017

San Francisco, July 25-26, 2017

Chicago, October 24-25, 2017

This session 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
ACR – Alpine Capital Research
AEGON USA Investment Management
AEW Capital 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
ASB Capital Management Inc.
Ativo Capital Management
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
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC
BlackRock
BMO Asset Management, Corp.
BNP Paribas Investment Partners
BNY Mellon Asset Management
Boston Partners

Manager Name
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC
Brown Brothers Harriman & Company
Brown Investment Advisory & Trust Company
Cambiar Investors, LLC
Capital Group
CastleArk Management, LLC
Causeway Capital Management
Chartwell Investment Partners
ClearBridge Investments, LLC
Cohen & Steers Capital Management, Inc.
Columbia Threadneedle Investments
Columbia Wanger Asset Management
Columbus Circle Investors
Conestoga Capital Advisors
Corbin Capital Partners, L.P.
Cornerstone Capital Management
Cramer Rosenthal McGlynn, LLC
Credit Suisse Asset Management
Crestline Investors, Inc.
D.E. Shaw Investment Management, LLC
Delaware Investments
DePrince, Race & Zollo, Inc.
Deutsche Asset Management
Diamond Hill Investments
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
Fisher Investments

Manager Name
Fort Washington Investment Advisors, Inc.
Franklin Templeton Institutional
Fred Alger Management, Inc.
Fuller & Thaler Asset Management, Inc.
GAM (USA) Inc.
GE Asset Management
GMO
Goldman Sachs Asset Management
Grand-Jean Capital Management
Guggenheim Investments
GW&K Investment Management
Harbor Capital Group Trust
Hartford Funds
Hartford Investment Management Co.
Henderson Global Investors
Hotchkis & Wiley Capital Management, LLC
HSBC Global Asset Management
Impax Asset Management Limited
Income Research + Management, Inc.
Insight Investment Management Limited
Institutional Capital LLC
INTECH Investment Management, LLC
Invesco
Investec Asset Management
Investment Counselors of Maryland, LLC
Janus Capital Management, LLC
Jarislowsky Fraser Global Investment Management
Jensen Investment Management
J.P. Morgan Asset Management
KeyCorp
Lazard Asset Management
Legal & General Investment Management America
Lincoln National Corporation
LMCG Investments, LLC
Longview Partners
Loomis, Sayles & Company, L.P.
Lord Abbett & Company
Los Angeles Capital Management
LSV Asset Management
Mackay Shields LLC
Man Investments Inc.
Manulife Asset Management
Martin Currie Inc.
McDonnell Investment Management, LLC
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)
Nikko Asset Management Co., Ltd.
Northern Trust Asset Management
Nuveen Investments, Inc.
OFI Global Asset Management
Old Mutual Asset Management
Opus Capital Management Inc.

Manager Name
O'Shaughnessy Asset Management, LLC
Pacific Alternative Asset Management Co.
Pacific Current Group
Pacific Investment Management Company
Parametric Portfolio Associates
P/E Investments
Peregrine Capital Management, Inc.
PGIM
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.
Riverbridge Partners LLC
Rockefeller & Co., Inc.
Rothschild Asset Management, Inc.
Russell Investments
Santander Global Facilities
Schroder Investment Management North America Inc.
Scout Investments
SEI Investments
Shenkman Capital Management, Inc.
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 Hartford
The London Company
The TCW Group, Inc.
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
Wasatch Advisors, Inc.
WEDGE Capital Management
Wellington Management Company, LLP
Wells Capital Management
Western Asset Management Company
William Blair & Company

September 30, 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 2016 by Callan Associates Inc.

Table of Contents

September 30, 2016

Executive Summary

Active Management Overview	2
Capital Market Review	3

NDSIB - Consolidated

Insurance Trust

Actual vs Target Asset Allocation	25
Quarterly Total Fund Attribution	26
Cumulative Total Fund Attribution	27
Cumulative Performance	31
Historical Asset Allocation	32
Asset Class Risk and Return	33
Total Fund Ranking	34
Asset Class Rankings	35
Investment Manager Asset Allocation	36
Investment Manager Returns	37

NDSIB - Workforce Safety & Insurance

Actual vs Target Asset Allocation	41
Quarterly Total Fund Attribution	42
Cumulative Total Fund Attribution	43
Cumulative Performance	47
Historical Asset Allocation	48
Asset Class Rankings	49
Asset Class Allocation	50
Asset Class Returns	51

NDSIB - Budget Stabilization Fund

Actual vs Target Asset Allocation	53
Quarterly Total Fund Attribution	54
Cumulative Total Fund Attribution	55
Cumulative Performance	59
Historical Asset Allocation	60
Asset Class Allocation	61
Asset Class Returns	62

Table of Contents

September 30, 2016

Manager Evaluation

Domestic Equity

Parametric Clifton Large Cap	64
L.A. Capital Large Cap Growth	65
L.A. Capital Enhanced	66
LSV Large Cap Value	67
Parametric Clifton Small Cap	68
PIMCO RAE	69

International Equity

DFA International Small Cap Value	71
LSV Intl Value	72
Vanguard Intl Explorer Fund	73
William Blair	74

Domestic Fixed Income

Declaration Total Return	76
PIMCO DiSCO II	77
PIMCO Bravo II	78
Prudential	79
SSgA US Government Credit Bond Index	80
Wells Capital	81
Western Asset Management Company	82

Diversified Real Assets

Western Asset Management TIPS	84
Eastern Timber Opportunities	85
JP Morgan Infrastructure	86
Grosvenor Cust. Infrastructure	87

Real Estate

Invesco Core Real Estate	89
JP Morgan	90

Short Term Fixed Income

JP Morgan Short Term Bonds - Budget Stabilization Fund	92
Barings Short Term Bonds - Budget Stabilization Fund	93

Callan Research/Education

94

Disclosures

97

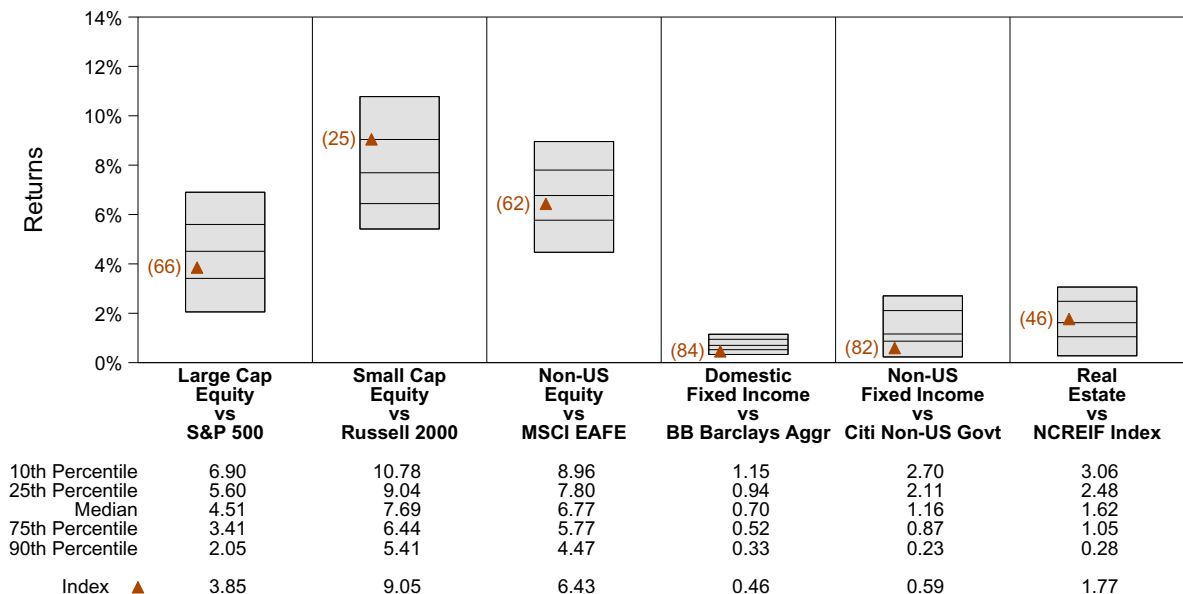
Market Overview

Active Management vs Index Returns

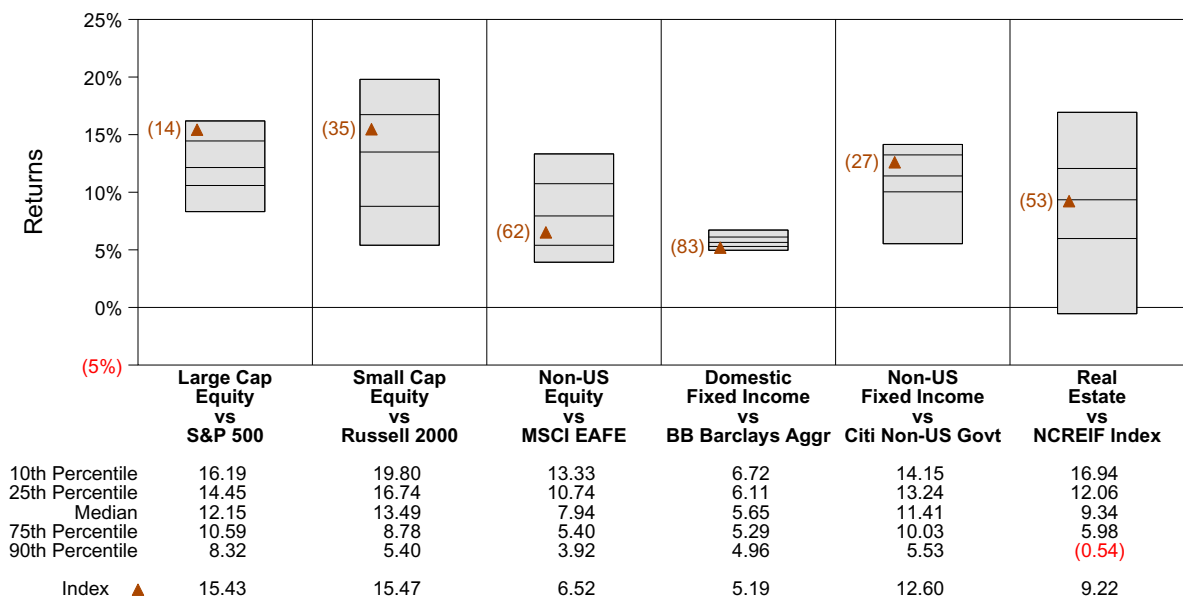
Market Overview

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 September 30, 2016



Range of Separate Account Manager Returns by Asset Class One Year Ended September 30, 2016





Third Quarter 2016

October Surprise

ECONOMY

2 Real GDP grew a surprisingly strong 2.9% in the third quarter, the best rate in two years. But the days of consumers driving the expansion are likely behind us, although investments in nonresidential construction rose after earlier weakness.

With a Little Help From My Friends

FUND SPONSOR

4 The second quarter's worst performer, endowments and foundations, beat other fund types in the third quarter with a 3.69% gain. Last quarter's champs, corporate funds, finished last. Surprisingly, small funds beat large and medium funds.

Broad Market Quarterly Returns



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

Sell in May? No Way!

U.S. EQUITY

6 The **S&P 500 Index** hit a new high and rose every month during the third quarter, ending up 3.85%. Small capitalization companies outperformed large cap (**Russell 2000 Index** +9.05% vs. **Russell 1000 Index** +4.03%), while growth outpaced value in all capitalizations.

Calm After the Storm

NON-U.S. EQUITY

9 Global stock markets hit highs as anxieties about the Brexit vote dwindled; even eurozone markets did well as it became clear that the U.K.'s decision to leave the European Union would not be catastrophic. Consistent with investors' risk-on mentality, emerging markets outpaced their developed peers.

Hut, Hut ... Hike!

U.S. FIXED INCOME

12 The yield on the benchmark 10-year Treasury note hit a record low of 1.37% in July, but ended the third quarter slightly higher. High yield corporates were the strongest performer, while Treasuries ended the quarter in the red. Investment-grade corporate bond issuance set a record.

Globe-Trotting for Yield

NON-U.S. FIXED INCOME

15 Sovereign bond markets strengthened during the third quarter, with emerging market bonds outmuscling the developed markets as investors sought yield. Major currencies were mixed as the British pound suffered following the Brexit. And there is now over \$12 trillion of negative-yielding debt globally.

Returns Take a Summer Vacation

REAL ESTATE

17 Both the **NCREIF Property Index** (+1.77%) and the **NCREIF Open End Diversified Core Equity Index** (+1.83%) turned in their worst performances since the first quarter of 2010. Global REITs did better than U.S. REITs; worries over a Fed rate hike appeared to be stronger than the post-Brexit fallout.

Sticker Shock

PRIVATE EQUITY

19 Markets maintained healthy liquidity in the third quarter. Private equity fundraising fell, but year-to-date numbers are very close to last year's. The number of new buyout investments increased slightly, but venture capital investments fell. And the IPO window for buyouts and VC remained open, if just a crack.

Can't Stop the Feeling

HEDGE FUNDS

20 Hedge funds showed modest returns during the quarter, with emerging markets the best-performing strategy. Choppy markets caught managed-futures funds a bit flat-footed. In Callan's database, the median *Callan Long/Short Equity FOF* (+4.26%) outpaced the *Callan Absolute Return FOF* (+2.10%).

DC Participants Seek Cover

DEFINED CONTRIBUTION

21 DC plan balances increased 1.67% in the second quarter, according to the *Callan DC Index™*. Although the Index rose 1.90%, target date funds outpaced it, gaining 2.02%. Unusually, money flowed out of DC plans, by 23 basis points, rather than into them as typically happens.

October Surprise

ECONOMY | Jay Kloepfer

Real gross domestic product (GDP) grew 2.9% in the third quarter, much stronger than expected, providing a pleasant surprise in a year filled with unpleasant ones. Third-quarter growth was by far the strongest this year and the best quarterly rate in two years. Personal consumption has been driving growth in the U.S. for the past several years, but while consumption accounted for half of the growth in the third quarter, its influence weakened.

Other third-quarter surprises included: a reversal in nonresidential fixed investment; continued growth in software and information processing; an uptick in federal government spending; strength in exports; and a return to inventory investment. Drags came from a decline in residential investment and weakness in state and local government spending, along with an increase in imports, which are a negative in the calculation of GDP.

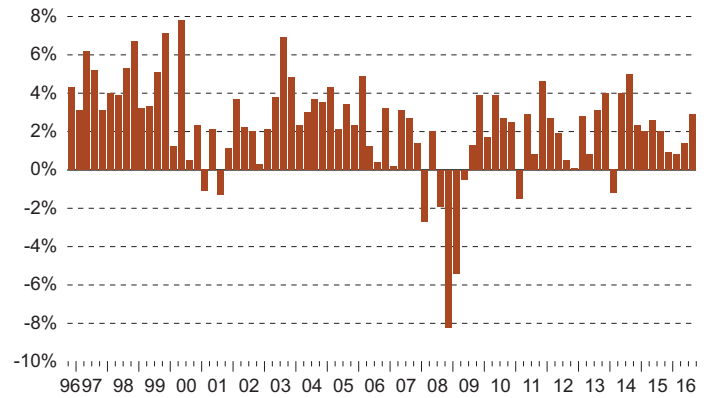
Political and economic shocks—China’s industrial recession, Brexit, the U.S. election—have increased uncertainty and hampered global growth, making many businesses increasingly risk averse. Add the uncertainty stemming from the global monetary policy experiment still underway—not the least of which involves the guessing game regarding the Fed’s interest rate policy—and expectations for U.S. growth soured as the year unfolded.

Real GDP came in very weak in the first quarter and disappointed again in the second, coinciding with the Brexit vote in late June when the U.K. chose to leave the European Union. Consensus expectations for the third quarter had GDP growth falling below 2%, even dipping to 1.5% as recently as September. However, the job market remained sound, consumer sentiment stayed buoyant, and the anticipated turnarounds in inventory and nonresidential fixed investment actually materialized.

The days of consumer spending driving this expansion are likely behind us. Consumption slowed from a robust 4.3% gain in the second quarter to 2.1% in the third; this will likely be the norm going forward. Consumers enjoyed a real shot in the arm from strong job gains for several years and a “dividend” from

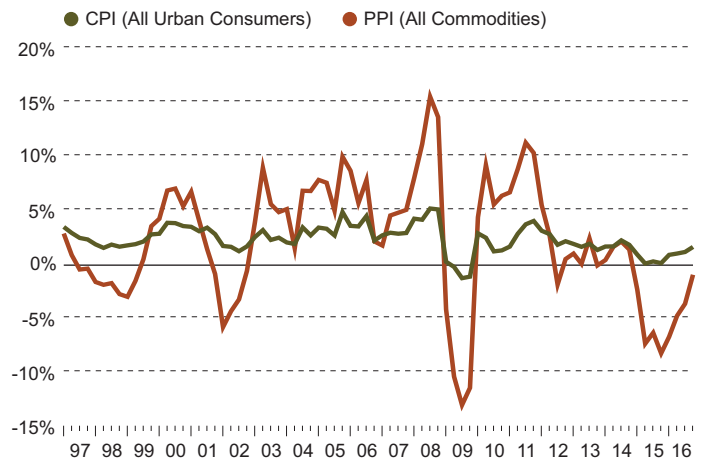
Quarterly Real GDP Growth

(20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

low commodity prices. The U.S. economy created an average of 178,000 jobs per month through the first three quarters of 2016. While solid, this is a deceleration from the 211,000 rate in the first nine months of 2015. Although support from the job market and commodity prices is waning, households are still benefiting from increases in real wages, disposable incomes, and asset values.

Highly anticipated reversals in inventory and nonresidential fixed investing provided meaningful gains to the economy in the third

quarter. The U.S. has suffered through an extended inventory correction, causing an outsized impact on overall growth: inventory contraction cut 1.2% from GDP growth in the second quarter, the fifth straight quarterly hit. Inventory investment turned the corner, adding 0.6% to third-quarter GDP. After a six-quarter collapse, investment in mining and petroleum structures began to revive in the third quarter, and the drilling rig count bounced up from an all-time low in the second quarter. This investment in the energy sector, along with gains in other types of structures, pushed nonresidential fixed investment up 3.1%.

Similar gains eluded residential construction, however, where demand appears robust, but supply and financing constraints are hampering the recovery. Real residential investment had been making progress for five years, but fell 7.7% in the second quarter and 6.2% in the third. Demand for housing appears to be solid, but sales of both existing and new homes fell during the third quarter. Potential homebuyers are still hampered by restricted access to mortgage financing, and homebuilders increasingly report challenges to hiring craft labor for projects.

The Fed refrained from raising interest rates over the summer, concerned about economic uncertainty and negative sentiment in the capital markets. The markets now expect the Fed to raise the short-term federal funds rate 25 basis points in December, and perhaps twice more in 2017, but these are fewer increases than previously predicted. In addition, the long-term equilibrium federal funds rate target has been cut from 3% to 2.6%.

Are central banks around the globe running out of ammunition? Rather than a dearth of ammunition, it seems the effectiveness of monetary policy is diminishing and with it the credibility of central banks. After the Great Recession, central bankers showed

The Long-Term View

Index	2016 3rd Qtr	Periods ended Dec. 31, 2015			
		Year	5 Yrs	10 Yrs	25 Yrs
U.S. Equity					
Russell 3000	4.40	0.48	12.18	7.35	10.03
S&P 500	3.85	1.38	12.57	7.31	9.82
Russell 2000	9.05	-4.41	9.19	6.80	10.50
Non-U.S. Equity					
MSCI EAFE	6.43	-0.81	3.60	3.03	5.40
MSCI Emerging Markets	9.03	-14.92	-4.80	3.61	-
S&P ex-U.S. Small Cap	7.98	5.92	5.51	5.33	6.80
Fixed Income					
Bloomberg Barclays Agg	0.46	0.55	3.25	4.51	6.15
90-Day T-Bill	0.10	0.05	0.07	1.24	2.93
Bloomberg Barclays Long G/C	1.24	-3.30	6.98	6.45	8.08
Citi Non-U.S. Government	0.59	-5.54	-1.30	3.05	5.37
Real Estate					
NCREIF Property	1.77	13.33	12.18	7.76	8.05
FTSE NAREIT Equity	-1.43	3.20	11.96	7.41	12.13
Alternatives					
CS Hedge Fund	1.74	-0.71	3.55	4.97	-
Cambridge PE*	-	8.50	12.41	11.50	15.59
Bloomberg Commodity	-3.86	-24.66	-13.47	-6.43	-
Gold Spot Price	-0.27	-10.46	-5.70	7.41	4.02
Inflation – CPI-U	0.17	0.73	1.53	1.86	2.30

*Private equity data is time-weighted return for period. Most recent quarterly data not available. Sources: Bloomberg Barclays, Bloomberg, Citigroup, Credit Suisse, FTSE, MSCI, NCREIF, Russell Investment Group, Standard & Poor's, Thomson/Cambridge, Bureau of Economic Analysis.

a remarkable willingness to try unorthodox policies, including quantitative easing (QE) and negative interest rates. But persistent banking problems (particularly in Europe and Japan) have made QE less effective, as central bank funds are used to rebuild bank balance sheets rather than for lending. In addition, tight fiscal policies have offset potential gains from monetary stimulus. And all regions have seen a drop in productivity growth, reducing the effectiveness of monetary or fiscal stimulation.

Recent Quarterly Economic Indicators

	3Q16	2Q16	1Q16	4Q15	3Q15	2Q15	1Q15	4Q14
Employment Cost–Total Compensation Growth	2.3%	2.3%	1.9%	2.0%	2.0%	2.0%	2.6%	2.2%
Nonfarm Business–Productivity Growth	0.6%*	-0.6%	-0.6%	-1.7%	2.0%	3.1%	-0.8%	-1.7%
GDP Growth	2.9%	1.4%	0.8%	0.9%	2.0%	2.6%	2.0%	2.3%
Manufacturing Capacity Utilization	75.0%	74.9%	75.3%	75.4%	75.6%	75.5%	75.5%	76.0%
Consumer Sentiment Index (1966=100)	90.3	92.4	91.5	91.3	90.8	94.2	95.5	89.8

*Estimate.

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

With a Little Help From My Friends

FUND SPONSOR | Kitty Lin

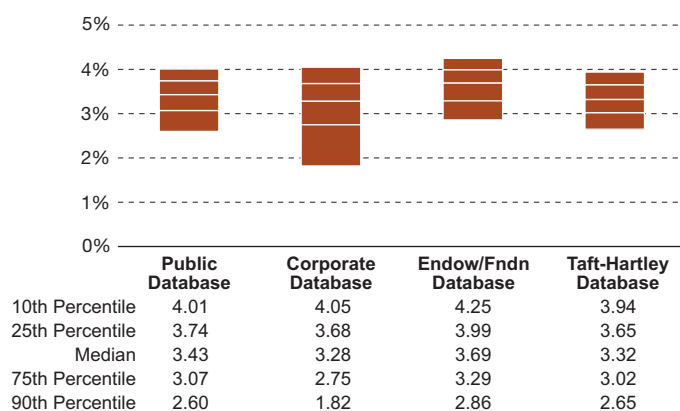
In a sharp shift from last quarter, endowments and foundations turned around and performed better than all other institutional fund types, with a median +3.69% return. Corporate funds, last quarter's best performer, brought up the rear at +3.28%. The median return for all fund types was +3.44%, according to Callan's database.

Interestingly, the rankings shifted slightly when looking at the top 10% of returns. Endowments and foundations still topped the list (+4.25%), but Taft-Hartley funds ranked last (+3.94%). Still, corporate funds and Taft-Hartley funds have done best over longer time periods. Corporates are on top over the last 15 years (+6.89% annualized) while Taft-Hartley funds edged them out over the last five years (+9.84%).

The outperformance from endowments/foundations stemmed from their "friends" in the stock market: non-U.S. equities. The **MSCI ACWI ex-USA Index** gained 6.91% in the third quarter, compared to +4.03% for the **Russell 1000 Index**. That came despite the shock of the U.K.'s Brexit vote to leave the European Union.

The underperformance from corporate funds stemmed from higher allocations to U.S. fixed income; in fact, both U.S. and non-U.S. fixed income markets continued to show lackluster performance (**Bloomberg Barclays Aggregate Index**: +0.46%, **Citi Non-U.S. World Government Bond Index**:

Callan Fund Sponsor Returns for the Quarter



Source: Callan

+0.59%). The decision of central banks in Europe and Japan not to cut rates and the upcoming U.S. election may have contributed to the disappointing returns for both in the quarter. As fixed income markets look less attractive these days, corporate funds increased their allocation of cash compared to the previous quarter.

By size, returns varied much less. Both large (more than \$1 billion in assets) and medium funds (\$100 million to \$1 billion) gained 3.43%, but surprisingly small funds (less than \$100 million) outpaced both, at +3.47%. Over the long haul large funds were the champs, +7.05% over 15 years versus +6.58% for medium funds and +6.35% for small funds.

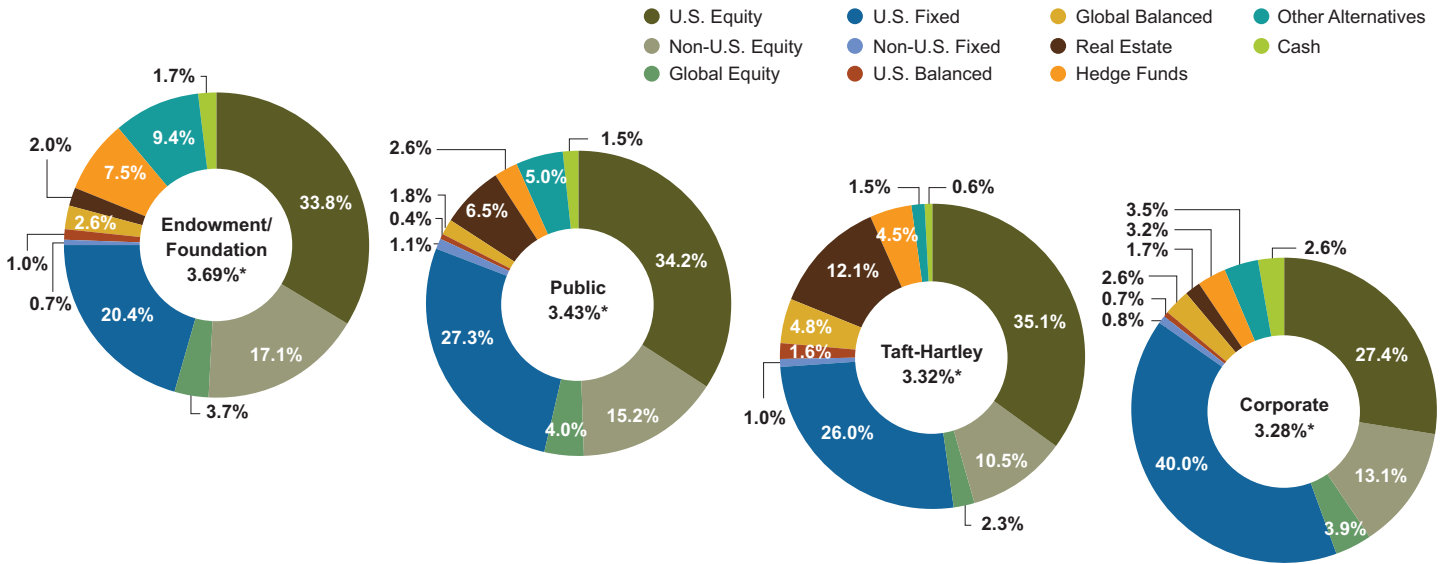
Callan Database Median Returns* for Periods ended September 30, 2016

Fund Sponsor	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Public Funds	3.43	6.65	9.63	6.12	9.30	5.66	6.72
Corporate Funds	3.28	7.64	10.22	6.29	9.22	5.91	6.89
Endowments/Foundations	3.69	6.13	8.81	4.99	8.52	5.39	6.54
Taft-Hartley	3.32	6.49	9.45	6.74	9.84	5.58	6.26

*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.

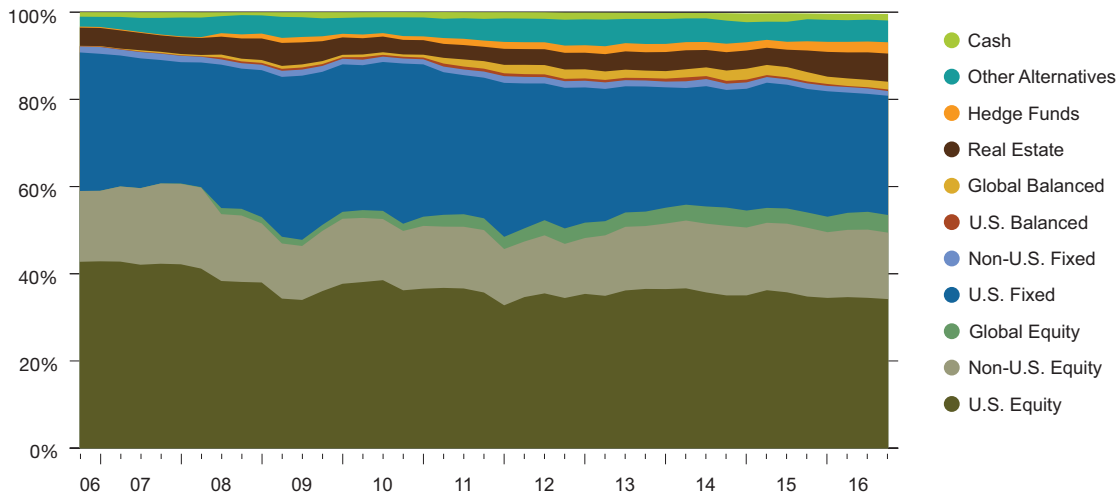
Callan Fund Sponsor Average Asset Allocation



*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.

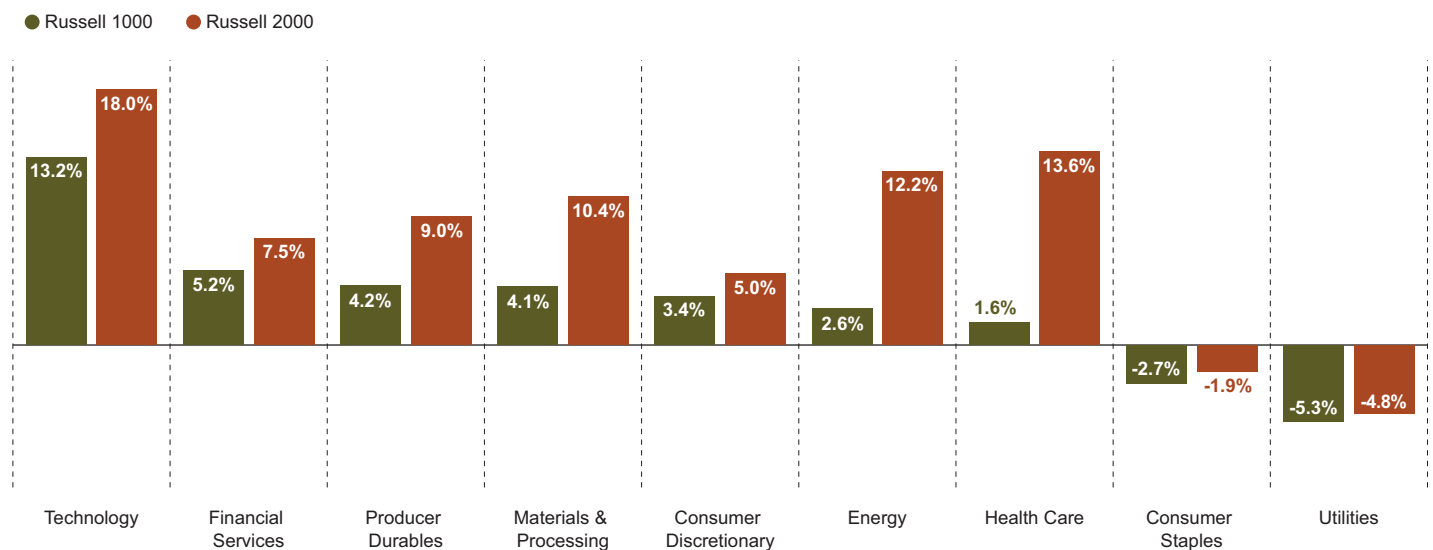
Sell in May? No Way!

U.S. EQUITY | Mark Wood, CFA

The **S&P 500 Index** climbed to its all-time high of 2,193 on August 15 and finished the quarter up 3.85%, ending in positive territory for the fourth quarter in a row. The early days of the quarter were characterized by a strong rebound in equity markets following the late June vote in the U.K. to leave the European Union (Brexit). Market volatility (as measured by VIX) spiked in the immediate aftermath but retreated just as quickly as investors absorbed the shock. The swift pivot, coupled with optimism over U.S. economic prospects and easing fears on China, led to a risk-on environment. July produced the strongest returns of the quarter across market capitalizations; August and September traded in a narrow (but ultimately positive) range as markets anticipated the Fed's interest rate decision in mid-September, which was to forego a rate hike. Foreign developed market indices outperformed the S&P 500 and, consistent with the quarter's risk-on theme, emerging markets were the top performers.

Size was the single biggest determinant of performance. Smaller companies did better—micro, small, and mid-capitalization companies outpaced large-cap stocks (**Russell Microcap Index**: +11.25%, **Russell 2000 Index**: +9.05%, **Russell Midcap Index**: +4.52%, and **Russell 1000 Index**: +4.03%). Additionally, after two strong quarters value underperformed growth in all capitalizations (**Russell 2000 Value Index**: +8.87% and **Russell 2000 Growth Index**: +9.22%). The dispersion in style returns was narrow across market capitalizations, with the widest (110 bps) in large cap (**Russell 1000 Growth** minus **Russell 1000 Value**). Defensive and high-dividend yield exposures sold off during the third quarter but have performed well year-to-date due to the increased global economic uncertainty earlier in 2016.

Economic Sector Quarterly Performance



Source: Russell Investment Group

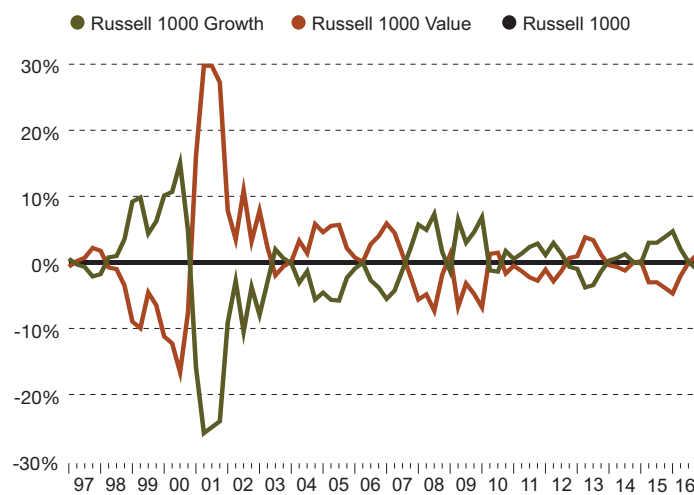
Note: As of the fourth quarter of 2015, the Capital Market Review reports sector-specific returns using the Russell Global Sectors (RGS) classification system rather than the Global Industry Classification Standard (GICS) system. RGS uses a three-tier classification system containing nine sectors; GICS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

Sector performance reflected the shift in risk attitudes. Among the worst-performing sectors in the S&P 500 during the quarter were Utilities (-0.7%), Consumer Staples (-0.7%), and Telecom (+1.0%)—all sectors associated with lower volatility and higher dividend yields. After a strong performance in the second quarter, Energy retreated, posting a 1.9% loss for the quarter. The more growth-oriented, risk-on sectors, Technology (+7.9%) and Health Care (+4.9%), were the top performers. In a new development, REITs and other listed real estate companies were extracted from the Financials sector and elevated to a new Real

Estate sector in the Global Industry Classification Standard (GICS). The new sector, representing 3.1% of the S&P 500, had a tough start, finishing down 2.1%.

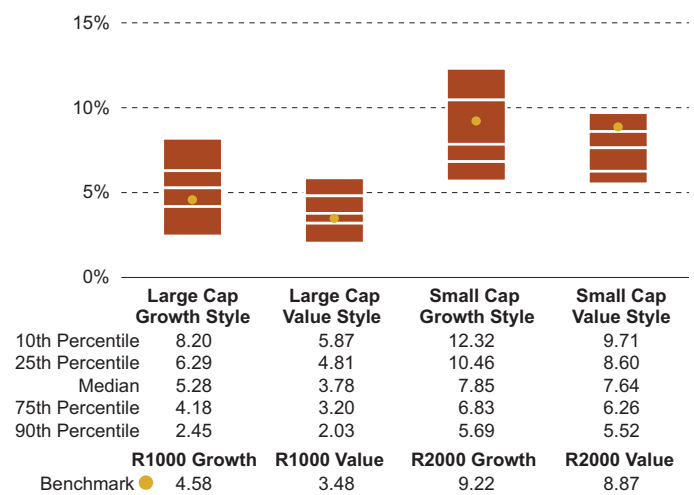
The U.S. equity market continued to rise, even as investor sentiment wavered between positive and negative over the course of the quarter. Active managers continue to find it a difficult environment to outperform as macro factors dominated price activity and performance in equity markets.

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 September 30, 2016

	S&P 500	Rus 3000	Rus 1000	Rus Midcap	Rus 2500	Rus 2000
Number of Issues	507	2,955	994	794	2,459	1,961
Wtd Avg Mkt Cap (\$bn)	134.8	112.6	121.7	12.6	4.0	1.8
Price/Book Ratio	2.7	2.6	2.7	2.4	2.1	2.0
Forward P/E Ratio	16.9	17.4	17.2	18.9	19.2	19.8
Dividend Yield	2.1%	2.0%	2.0%	1.7%	1.6%	1.5%
5-Yr Earnings (forecasted)	12.5%	12.5%	12.5%	11.2%	12.0%	13.5%

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

U.S. EQUITY (Continued)

Callan Style Median and Index Returns* for Periods ended September 30, 2016

Large Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Large Cap Core Style	4.55	5.71	12.77	10.64	16.13	7.39	7.80
Russell 3000	4.40	8.18	14.96	10.44	16.36	7.37	7.61
Russell 1000	4.03	7.92	14.93	10.78	16.41	7.40	7.48
S&P 500	3.85	7.84	15.43	11.16	16.37	7.24	7.15
Large Cap Growth Style	5.28	3.69	11.27	10.85	16.24	8.94	7.55
Russell 1000 Growth	4.58	6.00	13.76	11.83	16.60	8.85	7.35
Large Cap Value Style	3.78	7.61	13.71	8.99	15.88	6.54	8.08
Russell 1000 Value	3.48	10.00	16.20	9.70	16.15	5.85	7.46
Mid Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Mid Cap Core Style	4.98	7.80	11.05	9.88	16.81	8.65	10.96
Russell Midcap	4.52	10.26	14.25	9.70	16.67	8.32	10.44
Mid Cap Growth Style	4.05	4.30	6.98	6.98	14.55	8.62	9.53
Russell Midcap Growth	4.59	6.84	11.24	8.90	15.85	8.51	9.66
Mid Cap Value Style	4.82	9.73	13.35	9.30	16.62	8.48	10.99
Russell Midcap Value	4.45	13.72	17.26	10.49	17.38	7.89	10.72
Small Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Small Cap Core Style	7.62	10.07	14.32	8.51	17.63	8.55	11.31
Russell 2000	9.05	11.46	15.47	6.71	15.82	7.07	9.26
Small Cap Growth Style	7.85	6.52	8.73	5.47	15.82	9.13	9.81
Russell 2000 Growth	9.22	7.48	12.12	6.58	16.15	8.29	8.90
Small Cap Value Style	7.64	12.74	15.90	7.92	17.11	8.05	11.63
Russell 2000 Value	8.87	15.49	18.81	6.77	15.45	5.78	9.38
Smid Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Smid Cap Core Style	6.32	9.21	12.42	7.64	16.34	9.96	-
Russell 2500	6.56	10.80	14.44	7.77	16.30	7.95	10.07
Smid Cap Growth Style	6.03	4.73	8.39	6.01	15.25	9.23	9.85
Russell 2500 Growth	6.98	6.95	11.02	7.43	16.20	8.82	9.52
Smid Cap Value Style	6.39	12.17	14.71	7.37	16.23	8.56	11.41
Russell 2500 Value	6.18	14.51	17.68	8.05	16.29	6.92	10.17
Russell 3000 Sectors	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Consumer Discretionary	3.50	4.52	8.99	9.57	19.01	10.11	-
Consumer Staples	-2.67	7.48	15.77	13.92	15.95	11.57	-
Energy	2.87	17.69	16.60	-4.26	4.72	3.84	-
Financial Services	5.44	4.35	10.18	9.69	17.97	0.87	-
Health Care	2.40	0.92	9.82	14.21	20.52	10.82	-
Materials & Processing	4.98	16.18	25.84	7.17	14.12	6.94	-
Producer Durables	4.61	10.99	18.76	9.54	17.48	7.29	-
Technology	13.49	13.07	22.76	16.28	17.08	10.27	-
Utilities	-5.31	17.12	21.88	11.87	12.44	7.07	-

*Returns less than one year are not annualized.

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

Calm After the Storm

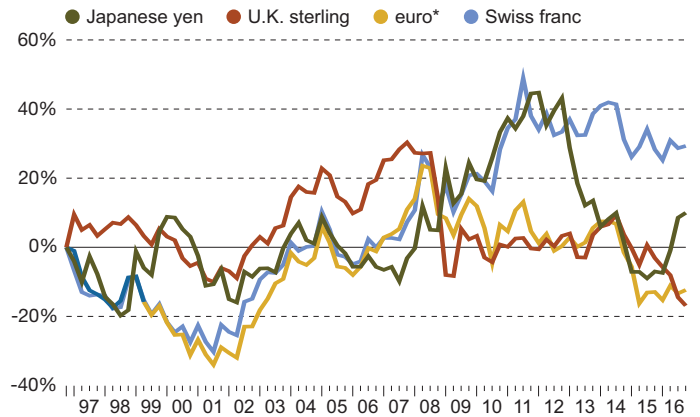
NON-U.S. EQUITY | Irina Sushch

Following two highly volatile quarters, the third quarter of 2016 bucked the trend—volatility was exceptionally low as investors appeared complacent about continued accommodative central bank policies and steady, albeit slow, economic growth. A risk-on rally led to stock market highs as anxieties about the U.K.'s Brexit vote to exit the European Union dwindled.

In this environment, the **MSCI ACWI ex USA Index** rose 6.91%. In contrast to the previous quarter, economically sensitive sectors fared best, particularly Information Technology (+15.50%) and Materials (+12.56%). Health Care was the only sector in the red (-1.96%), although its defensive counterparts, Utilities (+0.20%) and Telecommunications (+0.43%), faltered as well. Consistent with the quarter's risk-on theme, emerging markets (**MSCI Emerging Markets Index**: +9.03%) outpaced their developed peers (**MSCI World ex USA Index**: +6.29%), even excluding Canada (**MSCI EAFE Index**: +6.43%). The **MSCI ACWI ex USA Value Index** (+7.79%) overcame the **MSCI ACWI ex USA Growth Index** (+6.06%) for the first time since the second quarter of 2014. Small-cap stocks shot up into the black (**MSCI ACWI ex USA Small Cap Index**: +7.91%), finishing near the top among major non-U.S. indices.

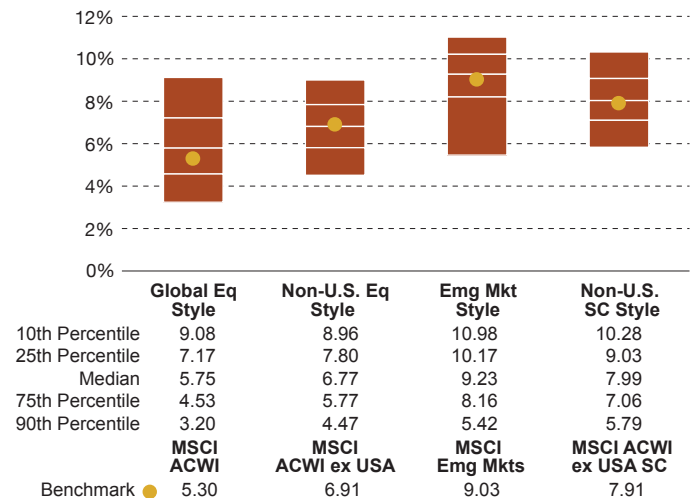
Equity markets across Europe crashed following the unexpected vote for Brexit but regained ground quickly as it became clear that the aftermath of the referendum was not immediately catastrophic. British Prime Minister David Cameron resigned and was replaced by Theresa May, who pledged that the U.K. would go through with exiting the European Union, but not hastily. The Bank of England sprang into action to support the economy, and the European Central Bank offered reassurance that it too would work to bolster growth. The **MSCI Europe Index** climbed 5.40%, with the strong performers including Austria (+16.66%), Germany (+10.01%), Spain (+9.32%), the Netherlands (+9.11%), and even the U.K. (+3.98%). Their vigor was attributed to better-than-expected earnings from Information Technology giants, improving commodity prices, rallying financial stocks, and a swell of M&A activity. European

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



* German mark returns before 1Q99
Source: MSCI

Callan Style Group Quarterly Returns



Sources: Callan, MSCI

Health Care stocks stumbled (-3.09%) due to intensified global scrutiny during the U.S. election; Denmark, where a large health care company makes up approximately 20% of the country's index, was particularly hard hit, dropping 6.27%.

Southeast Asia and the Pacific enjoyed a buoyant quarter as well; the **MSCI Pacific Index** was up 8.46%. Japanese equities rallied during the quarter, ascending 8.60% due to new

NON-U.S. EQUITY (Continued)

central bank policies and a fresh stimulus package. Additionally, Consumer Discretionary, IT, and Materials stocks surged due to strong earnings growth in several gaming and automobile companies. Australia (+7.91%) and New Zealand (+12.44%) also performed well as megabanks and commodities gained ground.

Emerging markets shot up in the accommodative macroeconomic environment (MSCI Emerging Markets Index: +9.03%). The top sector was IT, surging 16.08%. The stocks of smart-phone manufacturers and technology component suppliers soared, boosting the Asian markets, including Taiwan (+11.70%) and South Korea (+10.98%). China was one of the biggest beneficiaries (+13.92%), thanks to its burgeoning internet giants. Latin America was relatively sluggish this quarter (+5.37%) but was propped up by Brazil, which shot up another 11.31%, skyrocketing 62.90% year-to-date. Hopes for economic change run high under Michel Temer, who replaced the impeached Dilma

Quarterly Returns for Non-U.S. Developed Countries

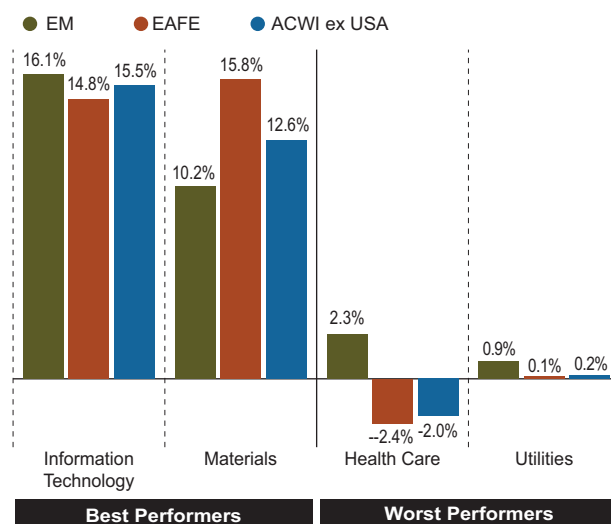
Country	Equity Index			Weight*
	(US\$)	(Local Currency)	Local Currency	
Australia	7.91%	5.00%	2.77%	5.13%
Austria	16.66%	15.32%	1.16%	0.13%
Belgium	5.00%	3.80%	1.16%	0.96%
Canada	4.85%	6.10%	-1.18%	6.72%
Denmark	-6.27%	-7.26%	1.07%	1.23%
Finland	7.42%	6.19%	1.16%	0.70%
France	6.36%	5.14%	1.16%	6.81%
Germany	10.01%	8.75%	1.16%	6.31%
Hong Kong	11.92%	11.89%	0.03%	2.45%
Ireland	7.42%	6.20%	1.16%	0.33%
Israel	-1.97%	-3.96%	2.64%	0.50%
Italy	2.21%	1.04%	1.16%	1.33%
Japan	8.60%	7.20%	1.31%	16.70%
Netherlands	9.11%	7.96%	1.16%	2.35%
New Zealand	12.44%	10.12%	2.11%	0.14%
Norway	6.28%	1.51%	4.70%	0.45%
Portugal	6.28%	5.07%	1.16%	0.10%
Singapore	-0.15%	1.13%	-1.29%	0.89%
Spain	9.32%	8.07%	1.16%	2.13%
Sweden	7.48%	8.68%	-1.11%	1.97%
Switzerland	2.62%	2.12%	0.50%	6.29%
U.K.	3.98%	7.00%	-2.83%	13.23%

*Weight in the MSCI ACWI ex USA Index

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

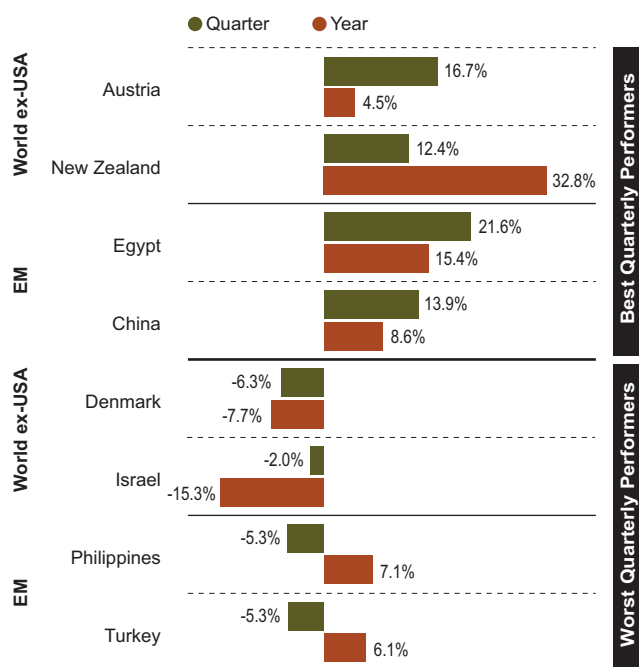
Rousseff as president. Russia (+8.43%) did not miss out on the rally. However, the Philippines, Turkey, and Malaysia were all in the red as political turmoil continued to afflict the countries (-5.33%, -5.26%, and -1.52%, respectively). Mexico also dwindled 2.24% as the peso fell 5% against the dollar.

Quarterly Returns: Strong and Struggling Sectors



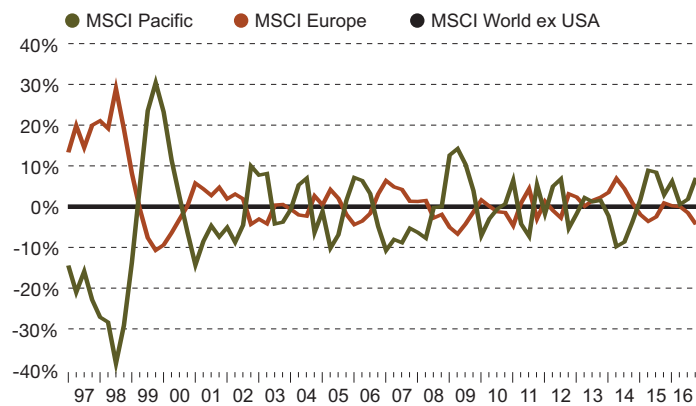
Source: MSCI

Quarterly and Annual Country Performance Snapshot



Source: MSCI

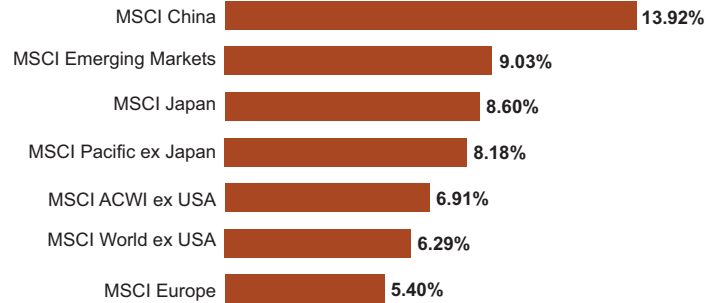
Rolling One-year Relative Returns (vs. MSCI World ex USA)



Source: MSCI

Regional Quarterly Performance

(U.S. Dollar)



Source: MSCI

Callan Style Median and Index Returns* for Periods ended September 30, 2016

Global Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Global Equity Style	5.75	5.48	11.23	6.25	12.38	5.57	7.80
MSCI World	4.87	5.55	11.36	5.85	11.63	4.47	6.29
MSCI ACWI	5.30	6.60	11.96	5.17	10.63	4.34	6.47
Non-U.S. Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Non-U.S. Style	6.77	3.14	7.94	2.16	8.75	3.20	7.81
MSCI World ex USA	6.29	3.12	7.16	0.33	6.89	1.88	5.96
MSCI ACWI ex USA	6.91	5.82	9.26	0.18	6.04	2.16	6.56
Regional Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
MSCI China	13.92	8.58	12.95	3.90	8.24	7.78	13.08
MSCI Europe ex UK	6.03	-0.36	2.90	0.01	8.17	1.53	6.02
MSCI Japan	8.60	2.54	12.13	3.33	7.36	1.05	4.27
MSCI Japan (local)	7.20	-13.68	-5.19	4.42	13.38	-0.49	3.15
MSCI Pacific	8.46	5.26	14.74	2.31	7.31	2.50	6.08
MSCI Pacific (local)	6.97	-7.17	0.77	4.39	11.86	0.99	4.47
MSCI Pacific ex Japan	8.18	10.86	20.05	0.42	7.07	5.85	10.99
MSCI Pacific ex Japan (local)	6.52	7.03	13.34	4.95	10.29	5.31	8.55
MSCI United Kingdom	3.98	0.80	1.53	-1.80	5.99	1.40	5.02
MSCI United Kingdom (local)	7.00	14.37	18.39	5.68	9.91	5.15	5.89
Emerging/Frontier Markets	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Emerging Market Style	9.23	16.44	18.41	0.81	4.83	5.23	12.93
MSCI Emerging Markets	9.03	16.02	16.78	-0.56	3.03	3.94	11.55
MSCI Emerging Markets (local)	7.59	11.30	12.96	4.33	6.95	5.94	11.97
MSCI Frontier Markets	2.65	2.16	0.91	-0.17	4.64	-0.26	-
Global/Non-U.S. Small Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Non-U.S. Small Cap Style	7.99	4.51	11.38	6.12	12.77	6.33	12.20
MSCI World Small Cap	7.24	9.70	14.34	6.18	13.38	6.30	10.31
MSCI ACWI Small Cap	7.28	9.66	14.21	5.67	12.47	6.59	10.52
MSCI World ex USA Small Cap	8.00	7.26	13.50	4.15	9.72	4.11	9.97
MSCI ACWI ex USA Small Cap	7.91	7.70	13.38	3.52	8.60	4.58	10.47

*Returns less than one year are not annualized.

Sources: Callan, MSCI.

Hut, Hut ... Hike!

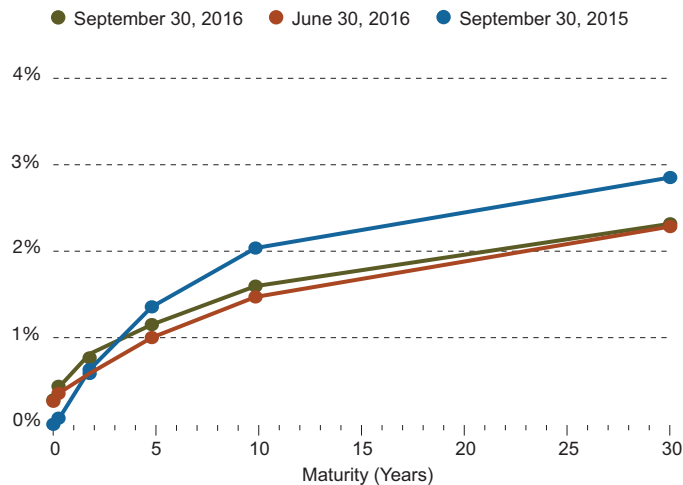
U.S. FIXED INCOME | Rufash Lama

For the quarter, the **Bloomberg Barclays High Yield Index** grew 5.55% while the **Bloomberg Barclays U.S. Aggregate Index** managed to rise a mere 0.46%.

Driven by Brexit-induced concerns, the yield on the benchmark 10-year Treasury note hit a record low of 1.37% in July; however, it rose for the remainder of the quarter and closed at 1.60%. While the Fed left the federal funds rate unchanged in the third quarter, its announcement was noteworthy because of the high level of disagreement; the three dissenting votes were the most since December 2014. Based on federal funds futures contracts, traders are betting there is a 78% chance of a rate hike at the next meeting in December after the Fed's decision to hold rates steady again in November.

Yields varied across the maturity spectrum during the quarter: While Treasury rates rose along the entire yield curve in August, the curve steepened in September as the 2-year fell by 4 basis points to 0.76% and the 30-year rose by 8 basis points to end at 2.32%. Intermediate Treasuries (-0.26%) outperformed long Treasuries (-0.36%) during the quarter.

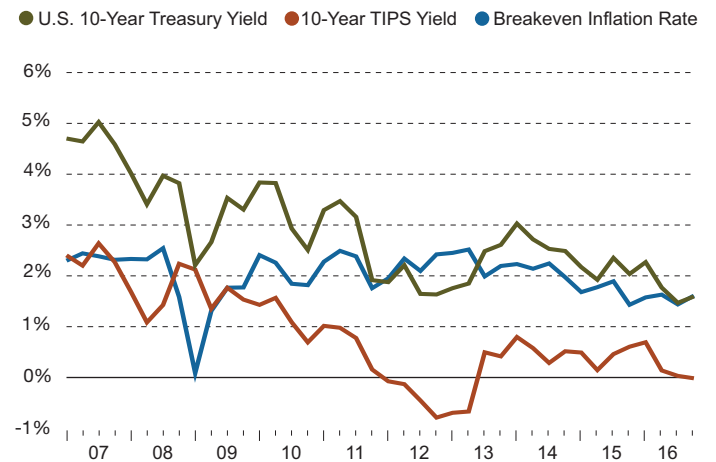
U.S. Treasury Yield Curves



Source: Bloomberg

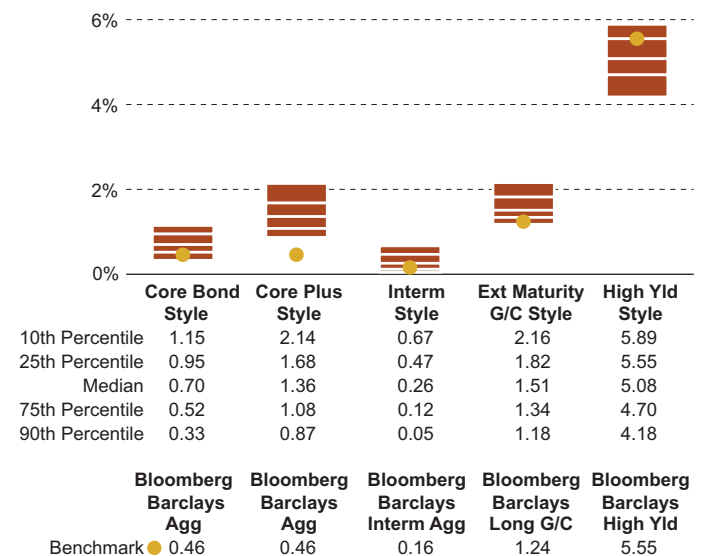
Credit spreads tightened during the quarter and yields inched toward historic lows. Their +5.55% return made high-yield corporates the strongest performer during the quarter. Despite record issuances in August, the credit sector gained 1.23% for the quarter and outperformed MBS (+0.60%) and CMBS (+0.59%). Industrials beat Utilities and Financials on a

Historical 10-Year Yields



Source: Bloomberg

Callan Style Group Quarterly Returns



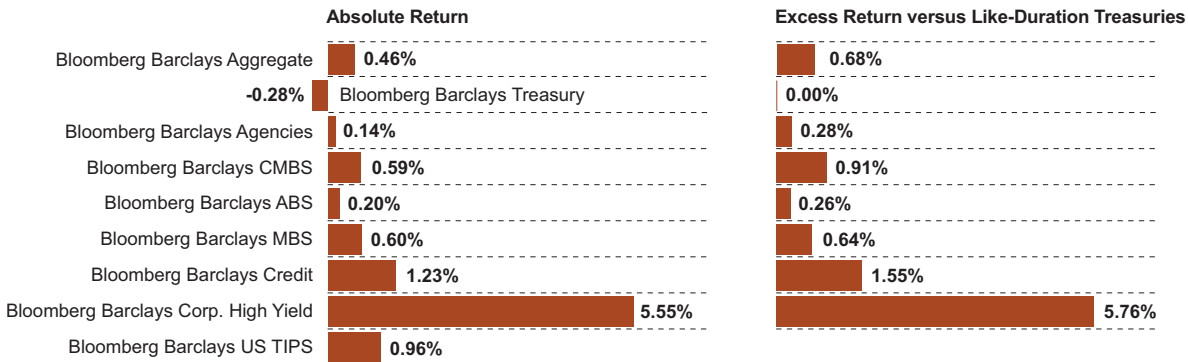
Source: Bloomberg Barclays, Callan

duration-adjusted basis. Further, on a duration-adjusted basis, credit securities outperformed Treasuries by 155 basis points. Treasuries ended the quarter in the red (-0.28%).

Investment-grade corporate issuance totaled \$340 billion for the quarter, setting a record. By the end of September,

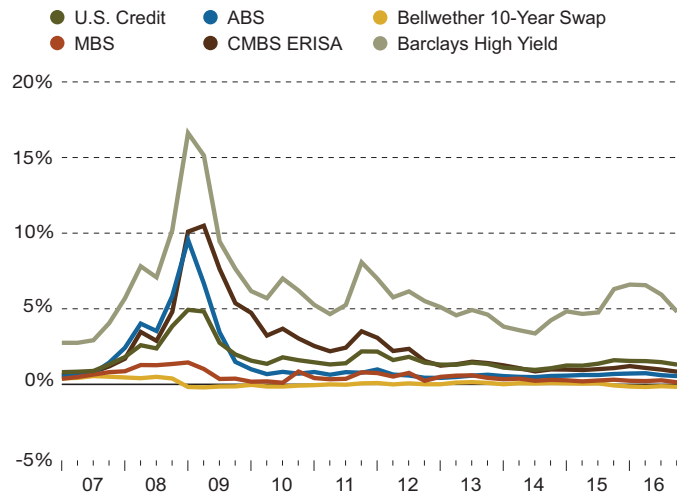
year-to-date corporate investment-grade bond issuance was 8% ahead of last year's pace. And the record supplies were met with strong demand as investors snapped up bonds. CMBS and municipal markets also demonstrated robust supply. And despite low yields and heavy issuance of CMBS securities in September, they outperformed Treasuries by 91 bps.

Fixed Income Index Quarterly Returns



Source: Bloomberg Barclays

Effective Yield Over Treasuries



Source: Bloomberg Barclays

U.S. Fixed Income Index Characteristics as of Sept. 30, 2016

Bloomberg Barclays Indices	Yield to Worst	Mod Adj Duration	Avg Maturity
Bloomberg Barclays Aggregate	1.96	5.51	7.82
Bloomberg Barclays Universal	2.39	5.39	7.68
Bloomberg Barclays Gov/Credit	1.92	6.72	8.99
1-3 Year	1.04	1.91	1.98
Intermediate	1.51	4.09	4.44
Long-Term	3.32	15.57	24.32
Bloomberg Barclays Long Credit	4.04	14.04	23.92
Bloomberg Barclays Corp High Yield	6.17	4.05	6.33
Bloomberg Barclays TIPS	1.62	6.59	8.61
Bloomberg Barclays Muni Bond 1-5 Year	1.15	2.72	3.22
Bloomberg Barclays Muni 1-10 Year	1.38	4.02	5.88
Bloomberg Barclays Municipal	1.82	5.52	13.08

Source: Bloomberg Barclays

U.S. FIXED INCOME (Continued)

Callan Style Median and Index Returns* for Periods ended September 30, 2016

Broad Fixed Income	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Core Bond Style	0.70	6.15	5.65	4.36	3.73	5.31	5.25
Core Bond Plus Style	1.36	7.16	6.55	4.61	4.55	5.77	5.91
Bloomberg Barclays Aggregate	0.46	5.80	5.19	4.03	3.08	4.79	4.80
Bloomberg Barclays Universal	0.96	6.69	6.11	4.27	3.62	5.00	5.12
Long-Term	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Extended Maturity Credit Style	2.50	17.00	16.11	10.05	7.94	8.07	-
Bloomberg Barclays Long Credit	2.26	16.50	15.73	9.53	7.05	7.63	7.74
Extended Maturity Gov/Credit Style	1.51	16.12	15.14	10.30	6.96	8.38	8.01
Bloomberg Barclays Long Gov/Credit	1.24	15.74	14.66	10.08	6.32	7.84	7.61
Intermediate-Term	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Intermediate Style	0.26	4.31	3.83	3.05	2.85	4.62	4.62
Bloomberg Barclays Interm Gov/Credit	0.16	4.24	3.52	2.80	2.45	4.17	4.22
Short-Term	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Defensive Style	0.15	1.94	1.72	1.47	1.48	2.89	3.01
Bloomberg Barclays Gov/Credit 1-3 Yr	0.02	1.68	1.31	1.09	1.05	2.59	2.80
Bank Loans	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Bank Loan Style	2.86	7.43	5.70	3.78	5.55	4.91	5.03
Credit Suisse Leveraged Loans	3.10	7.46	5.35	3.60	5.30	4.24	4.79
High Yield	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
High Yield Style	5.08	12.70	10.86	5.20	8.28	7.64	8.61
Bloomberg Barclays Corp High Yield	5.55	15.11	12.73	5.28	8.34	7.71	8.63
Unconstrained	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Unconstrained Fixed Style	2.21	3.95	4.56	2.36	3.87	4.60	6.44
90 Day T-Bill + 3%	0.84	2.48	3.27	3.12	3.11	3.92	4.38
Stable Value	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Stable Value Style	0.48	1.42	1.88	1.76	1.94	2.85	3.58
iMoneyNet Mutual Fund Avg	0.03	0.08	0.09	0.04	0.03	0.82	-
TIPS	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Inflation-Linked Style	1.00	7.28	6.62	2.40	1.96	4.58	5.50
Bloomberg Barclays TIPS	0.96	7.27	6.58	2.40	1.93	4.48	5.39
Municipal	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Short Municipal Style	-0.04	0.75	0.82	0.83	0.94	1.81	1.96
Bloomberg Barclays Municipal 1-5 Yr	-0.16	1.38	1.59	1.74	1.67	3.07	3.09
Intermediate Municipal Style	-0.26	3.28	4.64	4.13	3.52	3.91	4.00
Bloomberg Barclays Municipal 1-10 Yr	-0.11	2.58	3.40	3.34	2.95	4.04	4.02
Long Municipal Style	-0.21	4.14	5.83	5.74	4.95	5.03	5.19
Bloomberg Barclays Municipal	-0.30	4.01	5.58	5.54	4.48	4.75	4.89

*Returns for less than one year are not annualized.

Sources: Bloomberg Barclays, Callan, Citigroup, Merrill Lynch

Globe-Trotting for Yield

NON-U.S. FIXED INCOME | Kyle Fekete

In an extraordinary effort to stimulate economic growth and inflation, the Bank of Japan introduced a 0% yield-target for 10-year bonds, aiming to exceed its 2% inflation objective. The central bank also intends to maintain its negative short rate stance in an effort to steepen the yield curve and thus help increase profitability for banks. The bank's governor termed the new policy a "reinforcement" of its quantitative easing (QE) program. Central banks have typically targeted short-term rates in QE programs, focusing on maturities of less than a year. Yield on Japan's 10-year government bond settled at -0.09% at the end of the quarter.

Overall, the European sovereign bond market was flat as the European Central Bank left interest rates unchanged. The

Quarterly Returns for Non-U.S. Government Indices

Country	Country Debt (\$)	Country Debt	Local Currency	Weight*
Australia	3.60%	0.80%	2.77%	2.29%
Austria	1.81%	0.65%	1.16%	1.74%
Belgium	1.48%	0.32%	1.16%	2.93%
Canada	-0.67%	0.52%	-1.18%	2.32%
Denmark	0.96%	-0.10%	1.07%	0.82%
Finland	1.67%	0.51%	1.16%	0.67%
France	1.37%	0.21%	1.16%	11.72%
Germany	0.98%	-0.18%	1.16%	8.60%
Ireland	2.28%	1.11%	1.16%	0.95%
Italy	2.31%	1.14%	1.16%	11.07%
Japan	-0.92%	-2.19%	1.31%	34.89%
Malaysia	-0.66%	1.90%	-2.51%	0.53%
Mexico	-4.22%	0.47%	-4.67%	0.98%
Netherlands	1.29%	0.13%	1.16%	2.70%
Norway	3.53%	-1.12%	4.70%	0.30%
Poland	3.81%	0.30%	3.50%	0.71%
Singapore	0.22%	1.52%	-1.29%	0.45%
South Africa	10.29%	3.56%	6.50%	0.55%
Spain	3.39%	2.21%	1.16%	6.45%
Sweden	-0.63%	0.48%	-1.11%	0.52%
Switzerland	-0.08%	-0.57%	0.50%	0.27%
U.K.	-0.37%	2.52%	-2.83%	8.54%

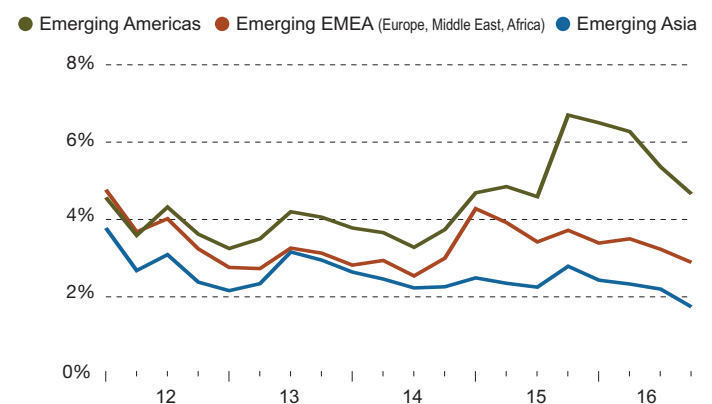
*Weight in the Citi Non-U.S. World Government Bond Index. Source: Citigroup

Bloomberg Barclays Global Aggregate Index rose 0.82% (+0.53% hedged). The ECB committed to a monthly QE program of buying €80 billion in government bonds, asset-backed securities, and corporate debt through March 2017; however, President Mario Draghi announced a review of the program to ensure investable assets would not dry up. Yield on the German 10-year bund notched up a basis point to -0.12%. There is now over \$12 trillion of negative-yielding debt globally, with Japan accounting for nearly half and Western Europe—namely France, Germany, and the Netherlands—the other half. Investors' sustained hunt for yield was evident in European bond pricing as periphery government Treasuries tended to decline more than their core eurozone counterparts. The Spanish and Italian 10-year yields declined 28 bps and 7 bps to 0.88% and 1.91%, respectively. The euro increased 1.16% against the U.S. dollar.

Despite the economic and political uncertainty the Brexit vote left in its wake, when U.K. voters chose to leave the European Union and the British pound plummeted 2.83%, data released showed no immediate negative effect on confidence or productivity. Yield on the 10-year gilt fell 12 bps to +0.75%.

The developing markets advanced for the fourth straight quarter in spite of multiple political headwinds, including the

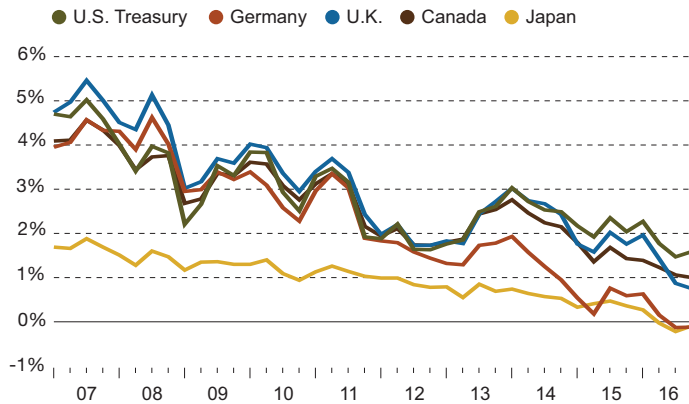
Emerging Spreads Over Developed (By Region)



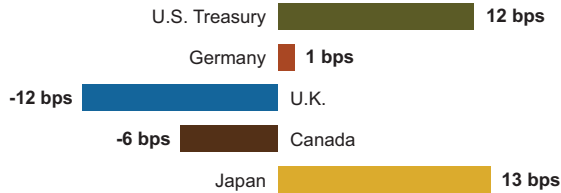
Source: Bloomberg Barclays

NON-U.S. FIXED INCOME (Continued)

10-Year Global Government Bond Yields



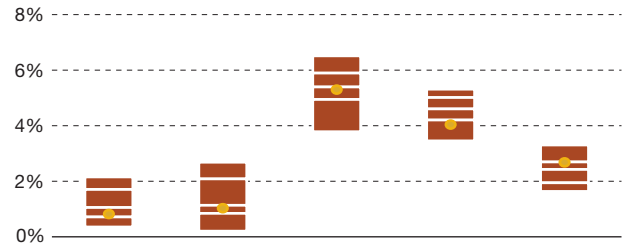
Change in 10-Year Yields from 2Q16 to 3Q16



Source: Bloomberg

impeachment of Brazil's president and the failed Turkish coup. The hard currency **J.P. Morgan EMBI Global Index** climbed 4.04%. Local currency debt, as measured by the **J.P. Morgan GBI-EM Global Diversified Index**, ticked up 2.68%.

Callan Style Group Quarterly Returns



	Global Fixed Style	Non-U.S. Fixed Style	Global High Yld Style	Em Debt Style (US\$)	Em Debt Style (local)
10th Percentile	2.18	2.71	6.54	5.34	3.33
25th Percentile	1.73	2.11	5.92	5.04	2.72
Median	1.08	1.16	5.42	4.63	2.45
75th Percentile	0.74	0.87	4.97	4.23	1.97
90th Percentile	0.38	0.23	3.81	3.48	1.66
Barclays GI Agg Benchmark	0.82				
Barclays GI Agg ex US		1.03			
Barclays High Yld			5.3		
JPM EMBI GI Div				4.04	
JPM GBI-EM GI Div					2.68

Sources: Bloomberg Barclays, Callan, JPMorgan Chase

Callan Style Median and Index Returns* for Periods ended September 30, 2016

Global Fixed Income	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Global Fixed Income Style	1.08	9.70	8.88	2.39	2.15	4.91	6.14
Bloomberg Barclays Global Aggregate	0.82	9.85	8.83	2.13	1.74	4.26	5.13
Global Fixed Income Style (hedged)	1.05	6.96	7.26	5.52	4.95	5.44	5.64
Bloomberg Barclays Global Aggregate (hedged)	0.53	6.44	6.54	5.05	4.26	4.73	4.73
High Yield	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Global High Yield Style	5.42	13.65	12.46	3.91	7.61	7.03	9.74
Bloomberg Barclays Global High Yield	5.30	14.49	13.51	4.97	8.56	7.87	9.43
Non-U.S. Fixed Income	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Non-U.S. Fixed Income Style	1.16	12.95	11.41	1.52	2.01	4.48	6.26
Bloomberg Barclays Global Aggregate ex US	1.03	13.09	11.67	0.75	0.70	3.82	5.41
Emerging Markets Fixed Income	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Emerging Debt Style (US\$)	4.63	16.27	18.15	7.02	7.81	8.13	11.06
JPM EMBI Global Diversified	4.04	14.77	16.20	8.20	7.76	7.73	9.57
Emerging Debt Style (local)	2.45	16.95	16.83	-2.14	0.22	5.21	7.25
JPM GBI-EM Global Diversified	2.68	17.07	17.06	-2.58	0.06	5.52	-
Emerging Debt Blend Style	3.59	15.14	16.15	2.13	3.94	8.07	12.69
JPM EMBI GI Div/JPM GBI-EM GI Div	3.36	16.11	16.83	2.81	3.95	6.72	-
Emerging Debt Corporate Style	3.59	12.81	13.05	6.55	8.08	-	-
JPM CEMBI	3.25	12.57	13.34	6.38	7.31	7.16	-

*Returns less than one year are not annualized.

Sources: Bloomberg Barclays, Callan, JPMorgan

Returns Take a Summer Vacation

REAL ESTATE | Kevin Nagy

The **NCREIF Property Index*** gained 1.77% during the second quarter (1.16% from income and 0.60% from appreciation), its worst performance since the first quarter of 2010. In addition, appreciation fell for the sixth consecutive quarter.

In a repeat of the second quarter, Industrial (+2.89%) and Retail (+1.98%) topped property sector performance, and Office (+1.26%) and Hotels (+1.35%) were the worst performers again. The West region led the way (+2.19%) while the Midwest (+1.46%) was the weakest. Transaction volume was \$9.6 billion, a 7% increase over the previous quarter and a 20% increase over the same period in 2015. Appraisal capitalization rates fell to 4.48%, an all-time low. The spread between appraisal capitalization rates and transaction capitalization rates widened to 180 basis points, the largest since the third quarter of 2009.

Occupancy rates continued to climb, setting a new 15-year high at 93.22%. Retail and Apartment occupancy rates fell slightly; Industrial and Office rates increased. Apartments were the only property type to experience a drop year-to-date.

The preliminary return for the **NCREIF Open End Diversified Core Equity Index*** was 1.83%; 0.90% of that was income and 0.94% from appreciation. This surpassed last quarter as the lowest since the first quarter of 2010. Income returns stayed in line with past quarters, but appreciation reached its lowest level since the first quarter of 2010. Low long-term interest rates have been a strong tailwind for U.S. real estate performance in recent quarters, but expectations of a Fed rate increase have sucked the wind from its sails.

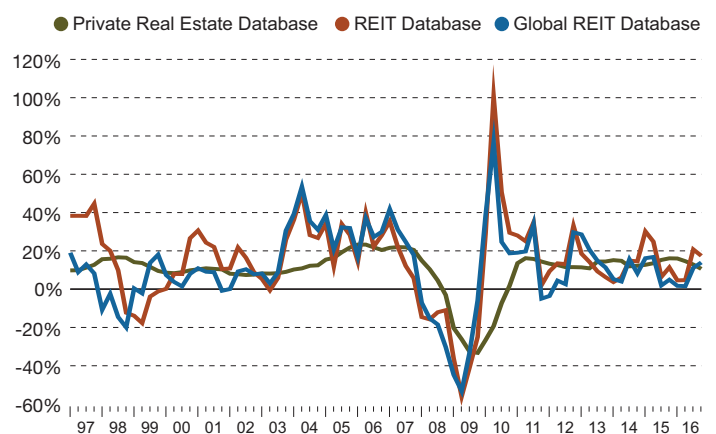
Global real estate investment trusts (REITs), tracked by the **FTSE EPRA/NAREIT Developed REIT Index (USD)**, outperformed their U.S. counterparts and posted a 1.46% return. U.S. REITs, as measured by the **FTSE NAREIT Equity REITs Index**, lost 1.43% for the quarter.

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

In the U.S., REITs started the quarter strong, riding the post-Brexit bounce that followed the U.K.'s surprise vote to leave the European Union. The gains would not last, however, as mixed economic data fueled concerns of a Federal Reserve rate increase. Timber (+7.72%), Industrial (+6.67%), and Office (+3.24%) were the strongest-performing sectors for the quarter. Specialty (-9.93%), Data Centers (-9.02%), and Retail (-2.62%) were some of the laggards. Self-storage (-12.20%) struggled for the second straight quarter and was the worst performing sector. Investors appeared to be shifting money into more economically sensitive U.S. stocks, which generally performed well on the back of modest long-term yield increases. Anticipation of a Fed rate hike also prompted some investors to sell out of crowded defensive positions such as REITs into more cyclical stocks. As of September 30, U.S. REITs were trading at a 12.3% premium to net asset value, more than a 500 basis point increase over the previous quarter.

As the dust settles from the initial shock of Brexit, the impact on U.K. real estate is beginning to be apparent. Transaction evidence shows City of London and West End offices were the most affected due to uncertainty about the city's future as a financial hub. Industrial assets were the least affected. Outside of the U.K., the Nordic countries were the strongest performers.

Rolling One-Year Returns



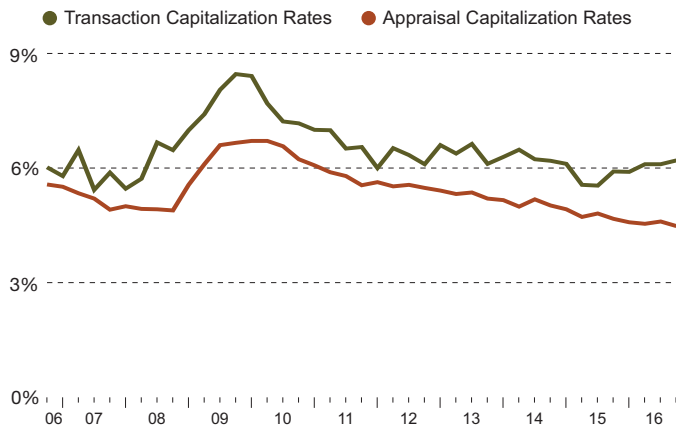
Source: Callan

REAL ESTATE (Continued)

Signs that the economies of Norway and Finland may finally be on the cusp of growth have led to record levels of investment and increases in property value. France also performed well as the economy recovered from a sluggish second quarter and employment growth propelled office returns upward.

Collateralized mortgage-backed securities (CMBS) issuance for the quarter was \$19.5 billion, a huge jump from the \$12.1 billion in the second quarter. While issuance was up quarter-over-quarter, it was still down compared to the third quarter of 2015 (\$25.3 billion).

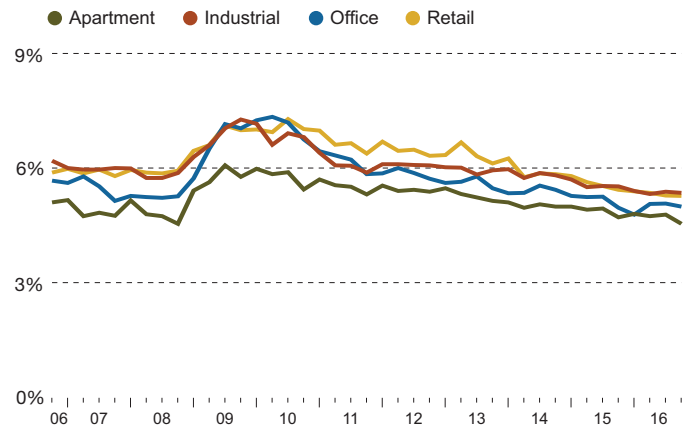
NCREIF Transaction and Appraisal Capitalization Rates



Source: NCREIF

Note: Transaction capitalization rate is equal weighted.

NCREIF Capitalization Rates by Property Type



Source: NCREIF

Note: Capitalization rates are appraisal-based.

Callan Database Median and Index Returns* for Periods ended September 30, 2016

Private Real Estate	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Real Estate Database (net of fees)	1.62	5.85	9.34	11.64	11.74	4.58	7.33
NCREIF Property	1.77	6.13	9.22	11.31	11.18	7.22	8.93
NFI-ODCE (value wtd. net)	1.83	5.80	9.08	11.42	11.34	5.05	7.03
Public Real Estate	Quarter	YTD	Year	3 years	5 Years	10 Years	15 Years
REIT Database	-1.15	9.61	17.67	14.49	16.28	7.05	12.57
FTSE NAREIT Equity	-1.43	11.75	19.86	14.22	15.91	6.35	11.38
Global Public Real Estate	Quarter	YTD	Year	3 years	5 Years	10 Years	15 Years
Global REIT Database	1.36	9.06	13.66	9.14	13.77	4.73	10.87
FTSE EPRA/NAREIT Developed REIT	1.46	10.97	15.85	8.60	13.17	4.16	10.67
Global ex U.S. Public Real Estate	Quarter	YTD	Year	3 years	5 Years	10 Years	15 Years
Global ex-U.S. REIT Database	4.51	7.75	8.49	2.98	11.00	2.41	-
EPRA/NAREIT Dev REITs ex-U.S.	4.28	10.44	11.66	3.21	10.42	2.57	10.59

*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.

Sticker Shock

PRIVATE EQUITY | Gary Robertson

Third-quarter fundraising commitments totaled \$38.6 billion with 143 new partnerships formed, Private Equity Analyst reported. The number of new funds dropped by 27% from 196 in the second quarter, and dollar volume plummeted 62% from \$102.2 billion. But this year is tracking closely to 2015, trailing by only \$3 billion (1%) in commitments and 41 (6%) in new partnerships.

The investment pace by funds into companies maintained momentum, according to Buyouts newsletter, totaling 385 transactions, up 8% from 356 in the second quarter but down 5% from 406 a year ago. The announced aggregate dollar volume was \$39 billion, up 4% from \$37.6 billion in the second quarter and up significantly from the \$11.6 billion a year ago. Just eight deals with announced values of \$1 billion or more closed in the quarter, but that was up from six in the second quarter.

New investments in venture capital companies totaled 1,796 rounds and \$15 billion of announced volume, according to the National Venture Capital Association. The number of rounds decreased 11% from 2,026 in the second quarter, and the dollar volume dropped 32% from \$22.1 billion.

Regarding exits, Buyouts reports there were 142 private M&A exits of buyout-backed companies, with 38 deals disclosing

Funds Closed January 1 to September 30, 2016

Strategy	No. of Funds	Amt (\$mm)	Percent
Venture Capital	274	32,312	17%
Buyouts	171	122,487	63%
Subordinated Debt	11	3,220	2%
Distressed Debt	17	17,250	9%
Secondary and Other	15	12,284	6%
Fund-of-funds	28	6,451	3%
Totals	516	194,004	100%

Source: Private Equity Analyst

values totaling \$27.5 billion. The M&A exits count was up 20% from 118 in the second quarter, and the announced value increased 12% from \$24.6 billion. There were two buyout-backed IPOs floating an aggregate \$551.6 million, down from three floating \$1.6 billion in the second quarter.

Venture-backed M&A exits totaled 192 transactions, with a disclosed dollar volume of \$13.4 billion. The number of private sale exits increased 19% from 161 in the second quarter, but the announced dollar volume declined 17% from the second quarter's \$16.1 billion. There were 14 VC-backed IPOs in the third quarter with a combined float of \$1 billion. For comparison, the second quarter of 2016 had 13 IPOs and total issuance of \$876.1 million.

Private Equity Performance Database (%)

(Pooled Horizon IRRs through March 31, 2016*)

Strategy	3 Months	Year	3 Years	5 Years	10 Years	15 Years	20 Years
All Venture	-2.4	6.6	20.6	15.0	10.4	5.3	23.2
Growth Equity	-0.1	6.0	12.7	10.5	11.1	10.3	13.9
All Buyouts	2.1	9.7	12.8	11.5	10.9	12.3	12.7
Mezzanine	3.0	8.0	9.3	10.2	9.6	8.5	9.4
Distressed	0.6	0.4	7.8	8.3	9.3	10.6	10.6
All Private Equity	0.8	7.5	13.3	11.5	10.6	10.2	13.5
S&P 500	1.4	1.8	11.8	11.6	7.0	6.0	8.0
Russell 3000	1.0	-0.3	11.2	11.0	6.9	6.4	8.0

Private equity returns are net of fees.

Sources: Standard & Poor's, Thomson/Cambridge

*Most recent data available at time of publication.

Note: 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.

Can't Stop the Feeling

HEDGE FUNDS | Jim McKee

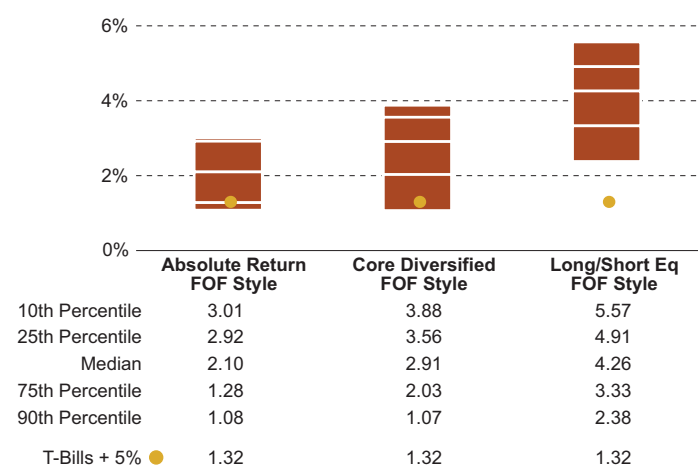
Despite the somber mood spurred by the Brexit vote closing out the prior quarter, capital markets got back on the dance floor in the third quarter. Central bankers let it be known that their music of easy money policies would not stop. **MSCI Emerging Markets** (+9.03%) led the beat upward, but the **S&P 500** (+3.85%) hit another record high. Higher income continued to be alluring as the **Bloomberg Barclays Corporate High Yield Index** jumped 5.55%.

Highlighting raw hedge fund performance without implementation costs, the **Credit Suisse Hedge Fund Index** (CS HFI) rose 1.74% in the third quarter. As a benchmark of actual hedge fund portfolios, the median manager in the **Callan Hedge Fund-of-Funds Database** advanced 2.92%, net of all fees.

Within CS HFI, the best-performing strategy last quarter was *Emerging Markets* (+4.20%), supported by strong debt and equity markets amid growing economies. Tightening credit spreads and improving fundamentals supported *Convertible Arb* (+3.83%), *Event-Driven Multi-Strategy* (+3.06%), and *Distressed* (+2.75%). Aided by strong equity tailwinds, *Long/Short Equity* gained 1.88%. Choppy markets caught the trend-following crowds of *Managed Futures* (-3.23%) a bit flat-footed.

Within Callan's Hedge Fund-of-Funds Database, the median *Callan Long/Short Equity FOF* (+4.26%) outpaced the *Callan Absolute Return FOF* (+2.10%). With diversifying exposures to both non-directional and directional styles, the *Core Diversified FOF* gained 2.91%.

Callan Style Group Quarterly Returns



Sources: Callan, Merrill Lynch

Callan Database Median and Index Returns* for Periods ended September 30, 2016

	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Hedge Fund-of-Funds Database	2.92	0.19	0.55	2.64	5.03	3.70	4.84
CS Hedge Fund Index	1.74	0.09	-0.03	2.53	4.25	4.21	5.81
CS Equity Market Neutral	1.59	-1.98	-2.02	1.17	2.12	-2.45	0.75
CS Convertible Arbitrage	3.83	6.16	5.54	2.14	4.01	3.98	4.55
CS Fixed Income Arbitrage	2.61	2.39	2.42	2.88	4.59	3.50	4.23
CS Multi-Strategy	2.55	3.21	3.74	5.86	7.33	5.66	6.79
CS Distressed	2.75	2.71	0.91	1.59	5.43	4.20	7.02
CS Risk Arbitrage	2.30	5.08	5.93	1.71	2.61	3.59	3.71
CS Event-Driven Multi-Strategy	3.06	-0.51	-3.04	-0.56	3.71	4.11	6.13
CS Long/Short Equity	1.88	-3.23	-1.70	3.99	6.56	4.76	6.12
CS Dedicated Short Bias	-12.06	-18.35	-21.86	-8.80	-15.43	-10.95	-9.05
CS Global Macro	0.58	-0.97	-0.36	1.68	2.34	5.75	7.98
CS Managed Futures	-3.23	-1.26	-2.30	6.80	0.98	4.09	4.93
CS Emerging Markets	4.20	4.74	7.67	3.48	4.99	4.62	8.76

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

DC Participants Seek Cover

DEFINED CONTRIBUTION | Tom Szkwarla

DC plan balances increased a solid 1.67% in the second quarter, according to the Callan DC Index™. But participants sought cover, shifting money from equities into fixed income and stable value. This is atypical behavior. Generally, DC plan participants tend to follow the market, heading to equities when the stock market rises.

Turnover—or net transfer activity levels—has also been below average this year, coming in at 0.55% in the second quarter and 0.45% in the first. Historical turnover since inception is 0.65% for the Index.

Although the Index rose smartly for the quarter—gaining 1.90%—target date funds still managed to marginally outpace the typical DC investor, gaining 2.02%. Since inception, the DC Index has trailed the Age 45 Target Date Fund by 70 basis points annually, averaging a 5.15% annual return.

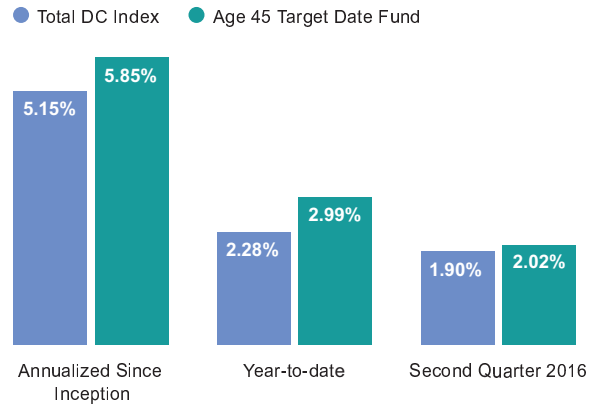
Money flowed out of DC plans during the quarter to the tune of 23 basis points. Historically, inflows (participant and plan sponsor contributions) have accounted for approximately 30% of total growth in plan balances (2.24% annualized). Altogether, participant balances have increased 7.39% annually since inception of the Index.

The DC Index’s allocation to target date funds continued to increase in the quarter, reaching 26.9% of total DC assets. Meanwhile, U.S. large cap equity dropped to its lowest allocation since the fourth quarter of 2011.

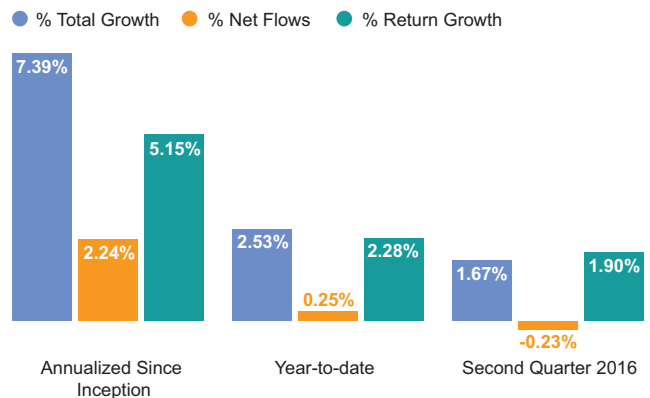
Target date funds are the fifth most prevalent asset class in DC plans (89% offer them), and when offered attract the lion’s share of assets, at 31% on average.

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 (Second Quarter 2016) (Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	47.68%
U.S. Fixed	22.94%
Company Stock	-22.66%
U.S. Large Cap	-39.59%
Total Turnover**	0.55%

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

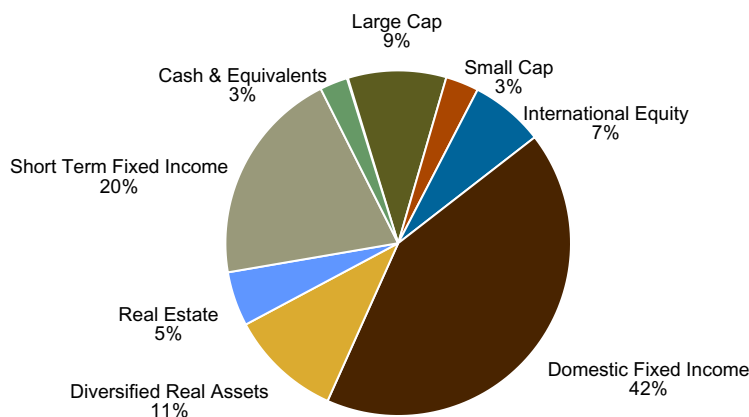
* DC Index inception date is January 2006.

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

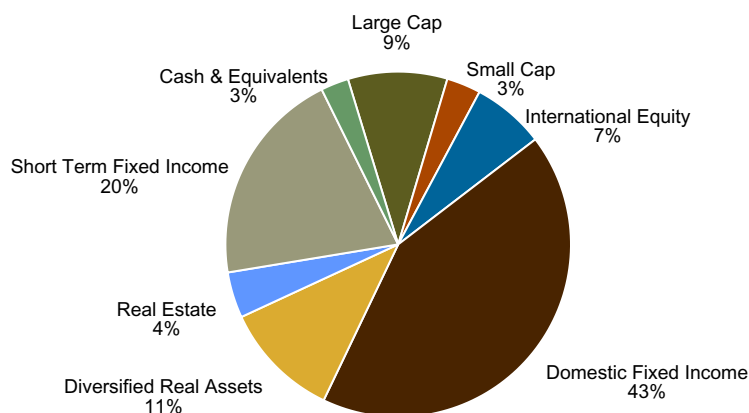
Actual vs Target Asset Allocation As of September 30, 2016

The first chart below shows the Fund's asset allocation as of September 30, 2016. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

Actual Asset Allocation



Target Asset Allocation



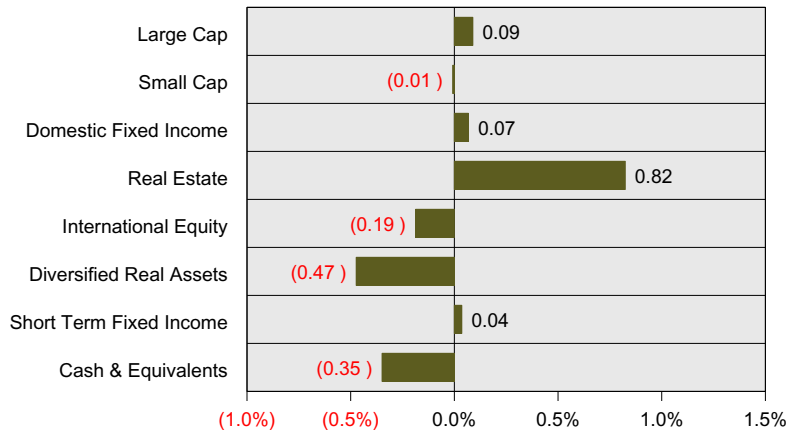
Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap	238,466	9.2%	9.3%	(0.1%)	(1,389)
Small Cap	81,007	3.1%	3.2%	(0.1%)	(1,524)
International Equity	177,629	6.9%	6.8%	0.1%	2,251
Domestic Fixed Income	1,088,475	42.2%	42.5%	(0.3%)	(7,639)
Diversified Real Assets	271,775	10.5%	11.0%	(0.5%)	(11,924)
Real Estate	132,270	5.1%	4.3%	0.8%	21,370
Short Term Fixed Income	522,287	20.3%	20.3%	0.0%	(1,268)
Cash & Equivalents	67,181	2.6%	2.6%	0.0%	125
Total	2,579,090	100.0%	100.0%		

* Current Quarter Target = 42.5% BB Barclays Aggregate Idx, 20.3% BB Barclays Gov 1-3 Yr, 11.0% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI World ex US, 4.3% NCREIF Total Index, 3.2% Russell 2000 Index and 2.6% 3-month Treasury Bill.

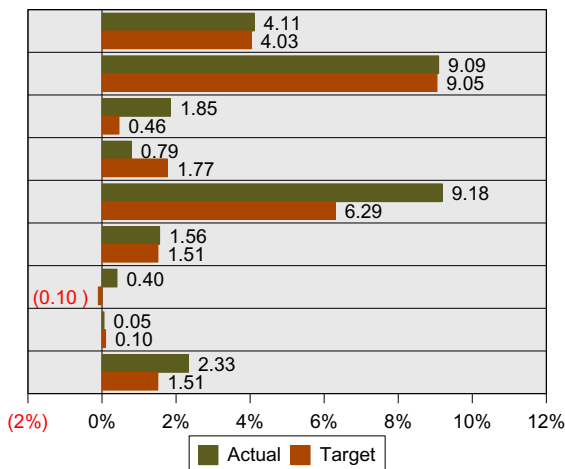
Quarterly Total Fund Relative Attribution - September 30, 2016

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.

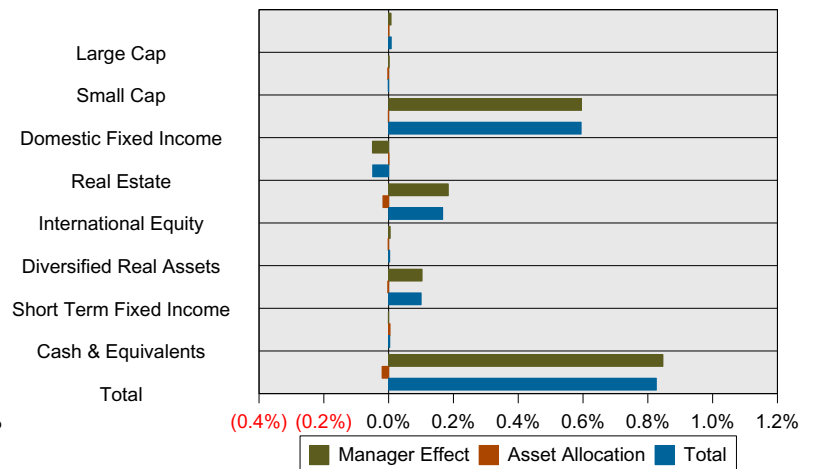
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended September 30, 2016

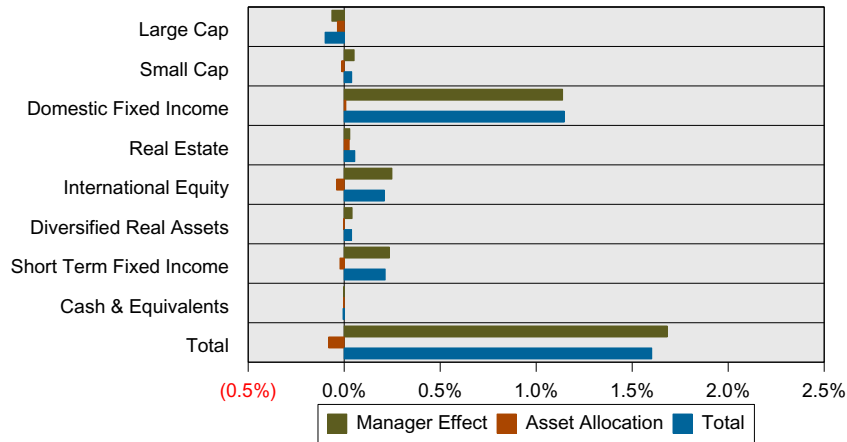
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	9%	9%	4.11%	4.03%	0.01%	0.00%	0.01%
Small Cap	3%	3%	9.09%	9.05%	0.00%	(0.00%)	(0.00%)
Domestic Fixed Income	43%	43%	1.85%	0.46%	0.60%	(0.00%)	0.59%
Real Estate	5%	4%	0.79%	1.77%	(0.05%)	0.00%	(0.05%)
International Equity	7%	7%	9.18%	6.29%	0.18%	(0.02%)	0.17%
Diversified Real Assets	11%	11%	1.56%	1.51%	0.00%	(0.00%)	0.00%
Short Term Fixed Income	20%	20%	0.40%	(0.10%)	0.10%	(0.00%)	0.10%
Cash & Equivalents	2%	2%	0.05%	0.10%	(0.00%)	0.00%	0.00%
Total			2.33%	1.51%	0.85%	(0.02%)	0.83%

* Current Quarter Target = 42.5% BB Barclays Aggregate Idx, 20.3% BB Barclays Gov 1-3 Yr, 11.0% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI World ex US, 4.3% NCREIF Total Index, 3.2% Russell 2000 Index and 2.6% 3-month Treasury Bill.

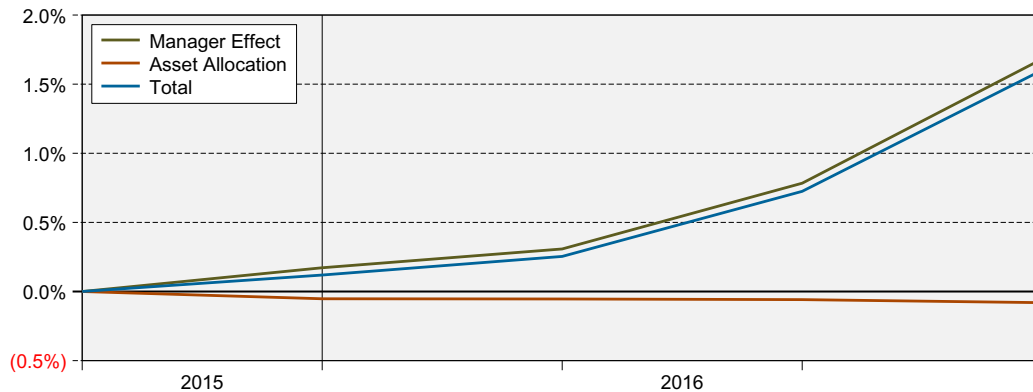
Cumulative Total Fund Relative Attribution - September 30, 2016

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

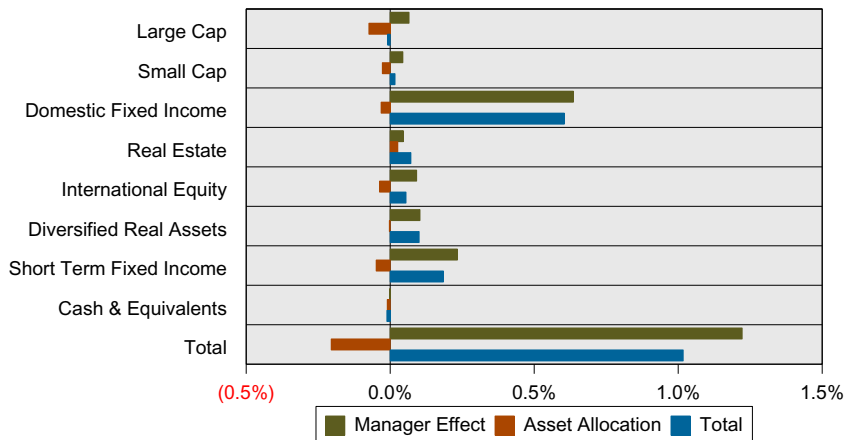
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	9%	9%	14.22%	14.93%	(0.06%)	(0.04%)	(0.10%)
Small Cap	3%	3%	17.39%	15.47%	0.05%	(0.01%)	0.04%
Domestic Fixed Income	42%	42%	7.93%	5.19%	1.14%	0.01%	1.15%
Real Estate	5%	4%	9.83%	9.22%	0.03%	0.03%	0.06%
International Equity	7%	7%	10.17%	6.38%	0.25%	(0.04%)	0.21%
Diversified Real Assets	11%	11%	4.54%	4.15%	0.04%	(0.00%)	0.04%
Short Term Fixed Income	20%	20%	2.00%	0.89%	0.24%	(0.02%)	0.21%
Cash & Equivalents	3%	3%	0.17%	0.27%	(0.00%)	(0.00%)	(0.01%)
Total			7.26%	5.66%	1.68%	(0.08%)	1.60%

* Current Quarter Target = 42.5% BB Barclays Aggregate Idx, 20.3% BB Barclays Gov 1-3 Yr, 11.0% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI World ex US, 4.3% NCREIF Total Index, 3.2% Russell 2000 Index and 2.6% 3-month Treasury Bill.

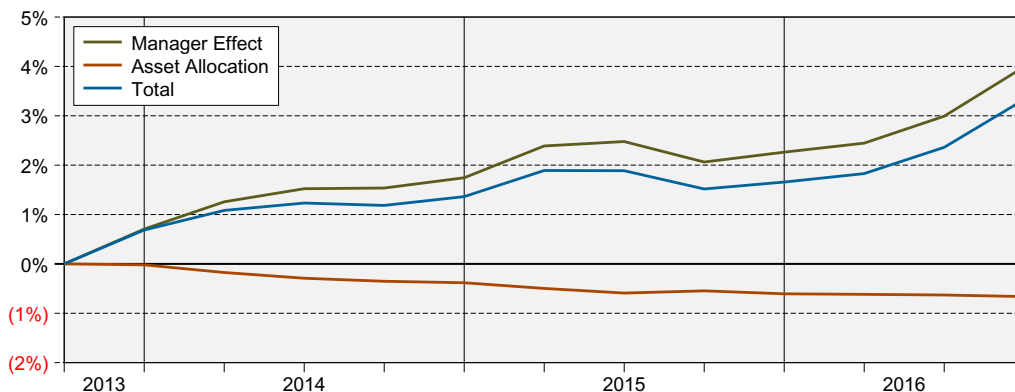
Cumulative Total Fund Relative Attribution - September 30, 2016

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Three Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Three Year Annualized Relative Attribution Effects

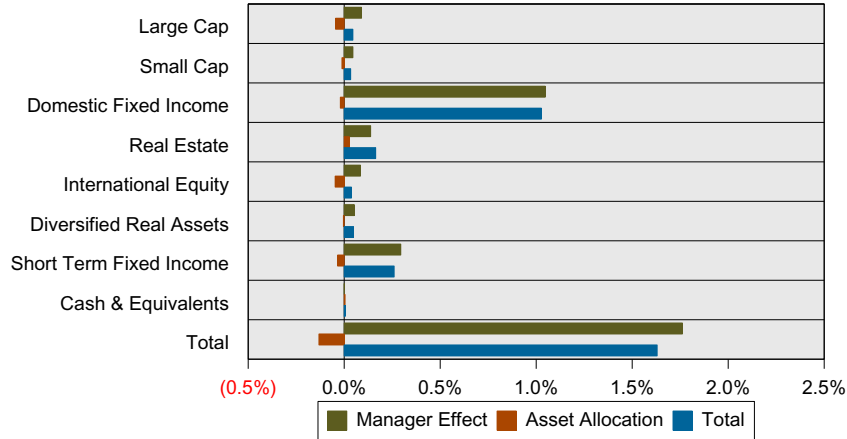
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	12%	12%	11.61%	10.78%	0.07%	(0.07%)	(0.01%)
Small Cap	4%	4%	8.09%	6.71%	0.04%	(0.03%)	0.02%
Domestic Fixed Income	38%	38%	5.84%	4.03%	0.64%	(0.03%)	0.60%
Real Estate	5%	4%	12.30%	11.31%	0.05%	0.03%	0.07%
International Equity	8%	8%	2.21%	0.43%	0.09%	(0.04%)	0.05%
Diversified Real Assets	10%	10%	3.94%	2.81%	0.10%	(0.00%)	0.10%
Short Term Fixed Income	22%	21%	1.86%	0.87%	0.23%	(0.05%)	0.18%
Cash & Equivalents	3%	2%	0.06%	0.11%	(0.00%)	(0.01%)	(0.01%)
Total			4.96%	3.94%	+ 1.22%	+ (0.20%)	1.02%

* Current Quarter Target = 42.5% BB Barclays Aggregate Idx, 20.3% BB Barclays Gov 1-3 Yr, 11.0% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI World ex US, 4.3% NCREIF Total Index, 3.2% Russell 2000 Index and 2.6% 3-month Treasury Bill.

Cumulative Total Fund Relative Attribution - September 30, 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

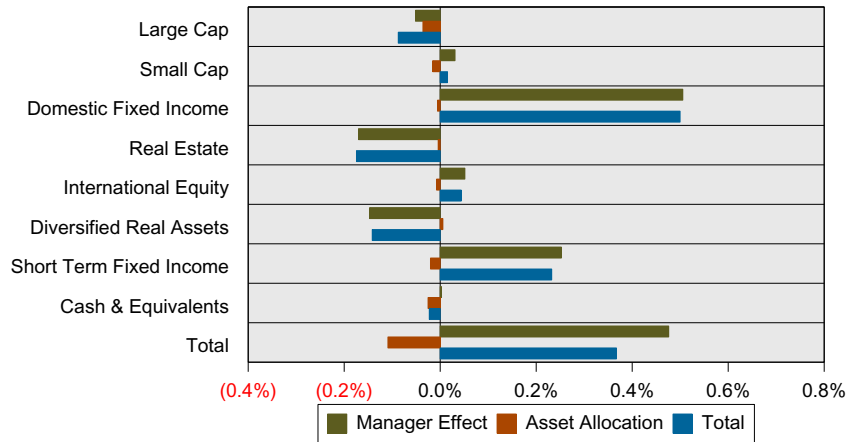
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	10%	10%	17.76%	16.40%	0.09%	(0.05%)	0.05%
Small Cap	3%	3%	17.59%	15.82%	0.05%	(0.01%)	0.03%
Domestic Fixed Income	36%	36%	6.09%	3.08%	1.05%	(0.02%)	1.03%
Real Estate	4%	4%	14.57%	11.18%	0.14%	0.03%	0.16%
International Equity	7%	7%	9.23%	7.36%	0.08%	(0.05%)	0.04%
Diversified Real Assets	11%	11%	3.81%	3.11%	0.05%	(0.00%)	0.05%
Short Term Fixed Income	27%	27%	1.84%	0.72%	0.29%	(0.03%)	0.26%
Cash & Equivalents	3%	3%	0.13%	0.10%	0.00%	0.00%	0.01%
Total			6.01%	4.38%	1.76%	(0.13%)	1.63%

* Current Quarter Target = 42.5% BB Barclays Aggregate Idx, 20.3% BB Barclays Gov 1-3 Yr, 11.0% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI World ex US, 4.3% NCREIF Total Index, 3.2% Russell 2000 Index and 2.6% 3-month Treasury Bill.

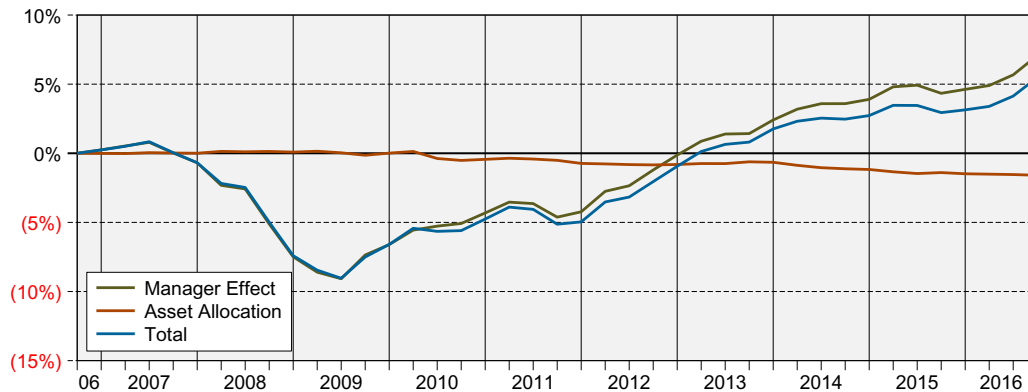
Cumulative Total Fund Relative Attribution - September 30, 2016

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

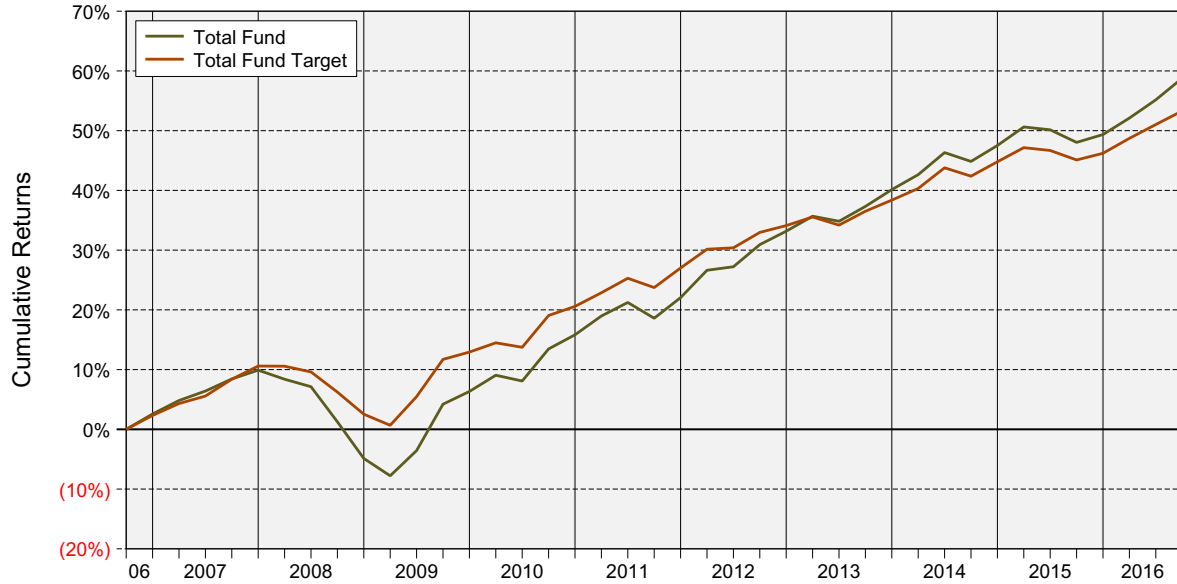
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	10%	10%	6.91%	7.25%	(0.05%)	(0.04%)	(0.09%)
Small Cap	3%	3%	7.99%	7.07%	0.03%	(0.02%)	0.02%
Domestic Fixed Income	41%	41%	6.42%	4.79%	0.51%	(0.01%)	0.50%
Real Estate	5%	5%	3.18%	7.22%	(0.17%)	(0.00%)	(0.17%)
International Equity	7%	7%	2.39%	1.46%	0.05%	(0.01%)	0.04%
Diversified Real Assets	15%	15%	3.98%	4.47%	(0.15%)	0.01%	(0.14%)
Short Term Fixed Income	16%	16%	-	-	0.25%	(0.02%)	0.23%
Cash & Equivalents	4%	3%	0.98%	0.92%	0.00%	(0.03%)	(0.02%)
Total			4.73%	4.36%	+ 0.48%	+ (0.11%)	0.37%

* Current Quarter Target = 42.5% BB Barclays Aggregate Idx, 20.3% BB Barclays Gov 1-3 Yr, 11.0% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI World ex US, 4.3% NCREIF Total Index, 3.2% Russell 2000 Index and 2.6% 3-month Treasury Bill.

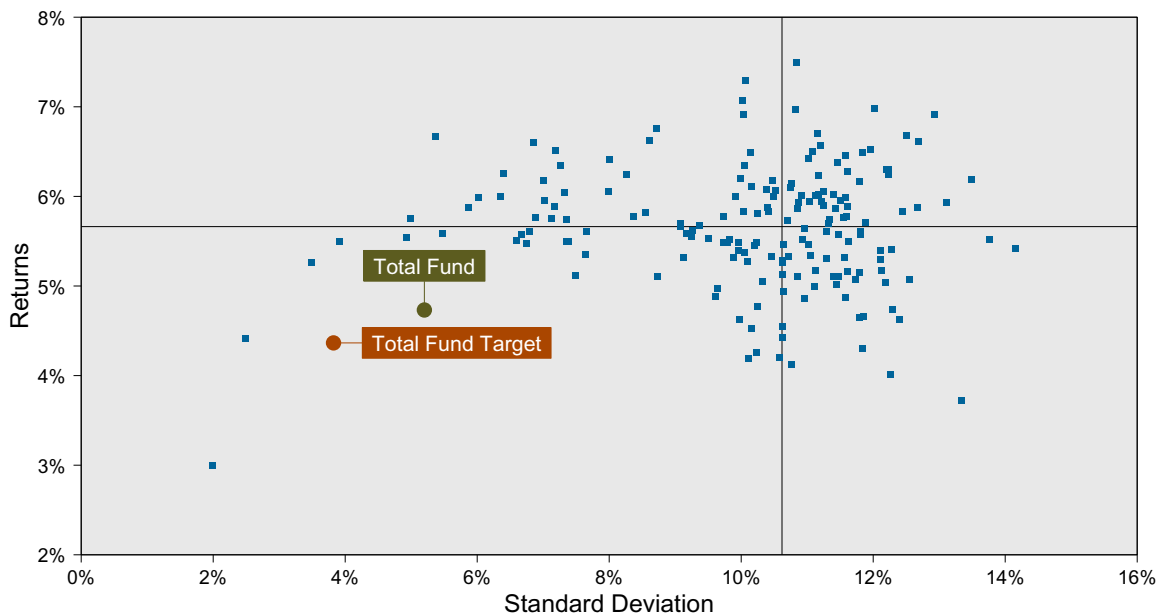
Cumulative Performance Relative to Target

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



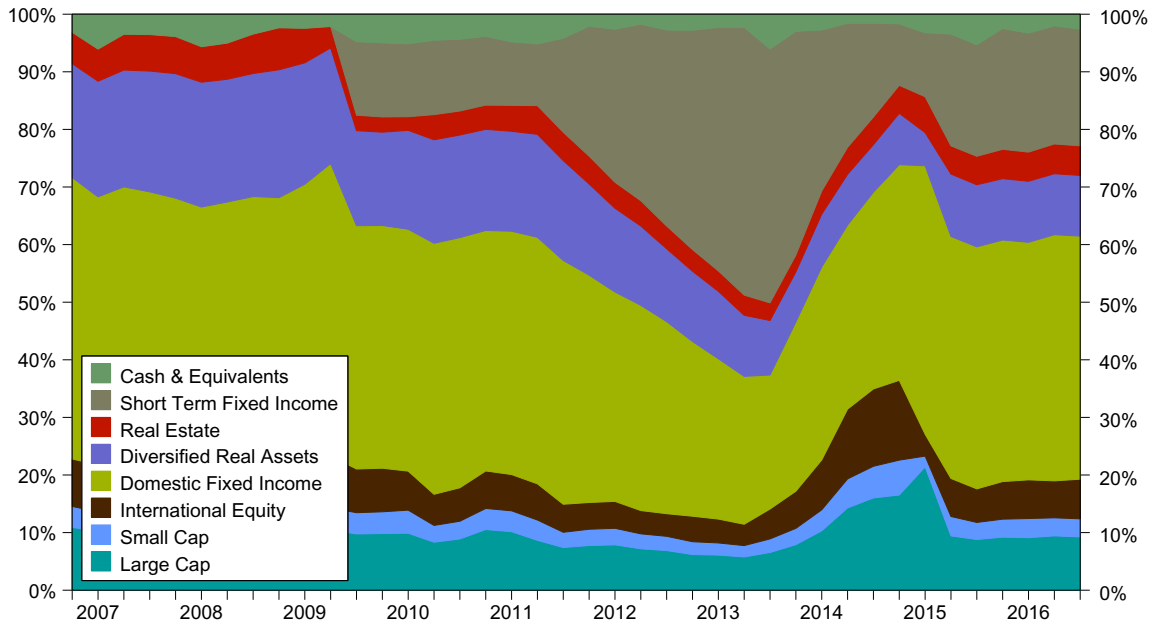
Squares represent membership of the CAI Public Fund Sponsor Database

* Current Quarter Target = 42.5% BB Barclays Aggregate Idx, 20.3% BB Barclays Gov 1-3 Yr, 11.0% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI World ex US, 4.3% NCREIF Total Index, 3.2% Russell 2000 Index and 2.6% 3-month Treasury Bill.

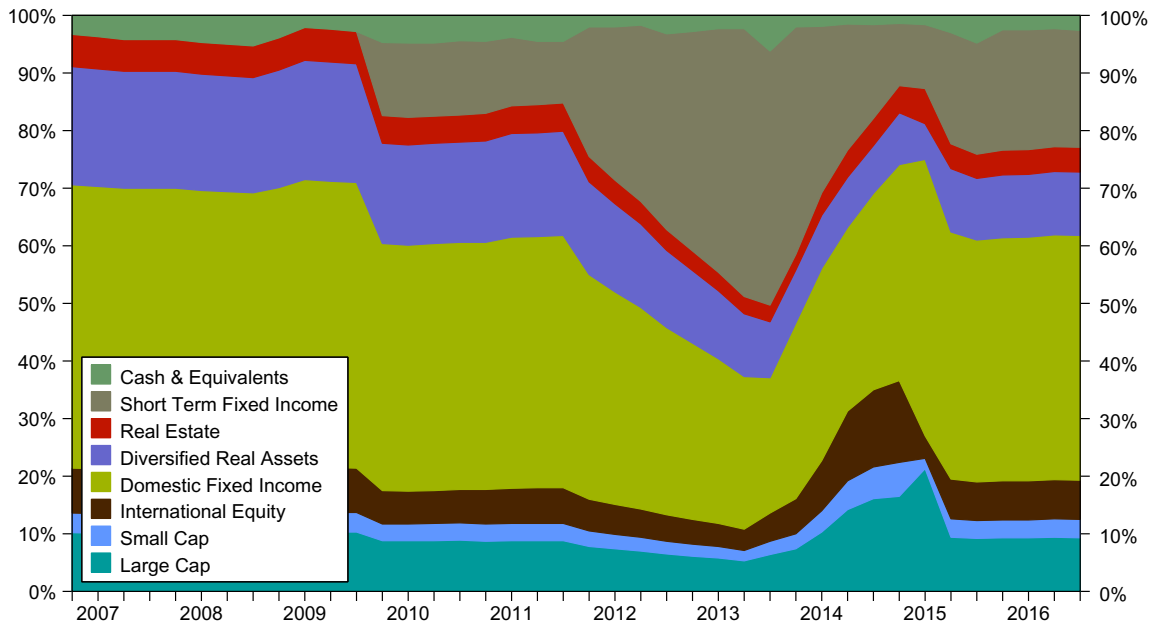
Actual vs Target Historical Asset Allocation

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

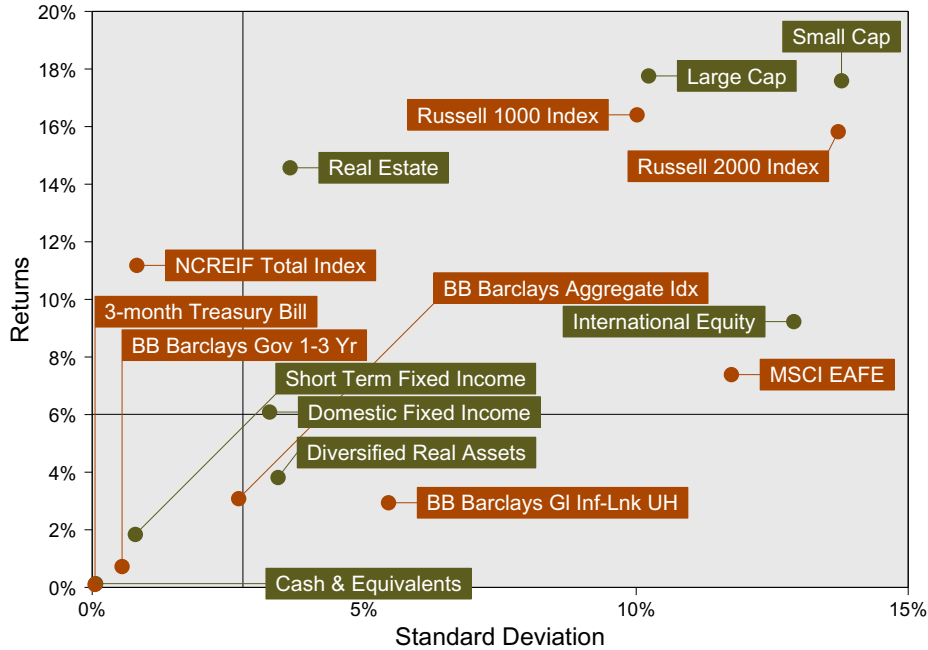


* Current Quarter Target = 42.5% BB Barclays Aggregate Idx, 20.3% BB Barclays Gov 1-3 Yr, 11.0% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI World ex US, 4.3% NCREIF Total Index, 3.2% Russell 2000 Index and 2.6% 3-month Treasury Bill.

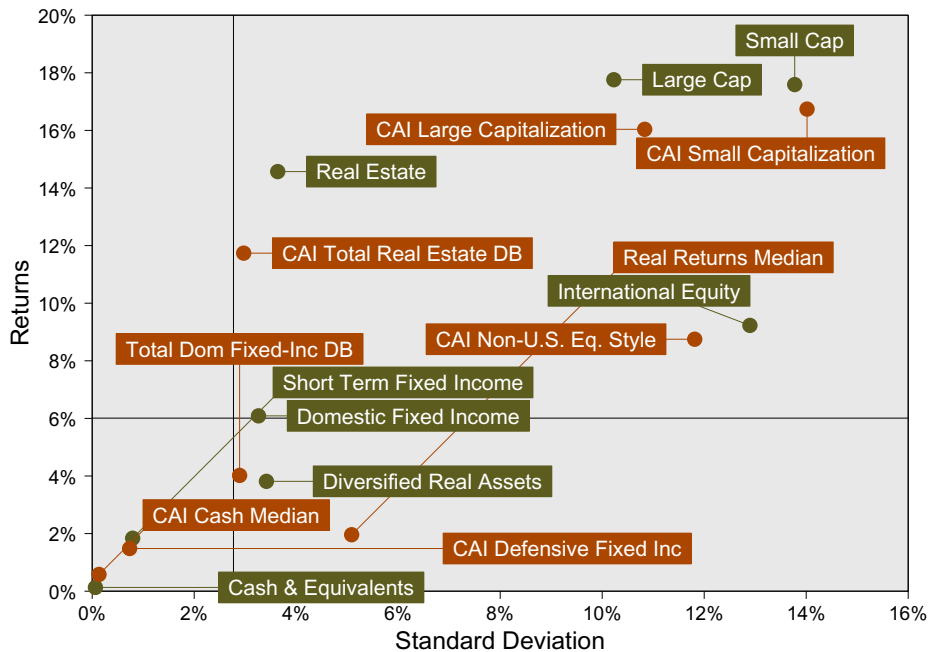
Asset Class Risk and Return

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



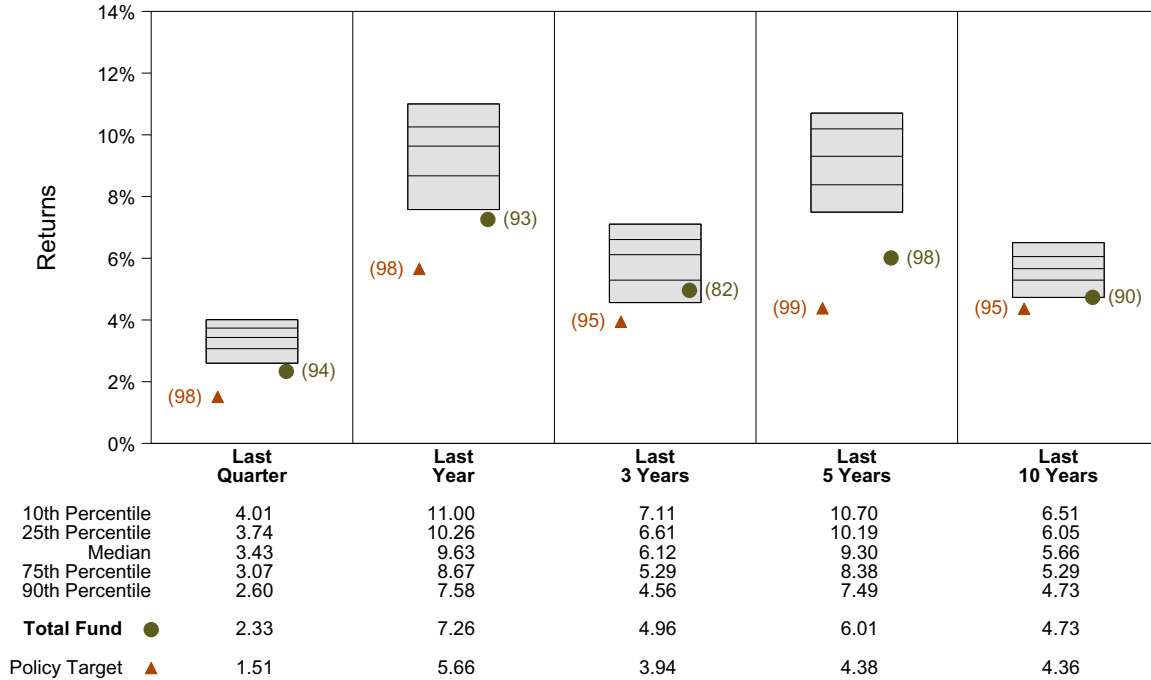
Five Year Annualized Risk vs Return Asset Classes vs Asset Class Median



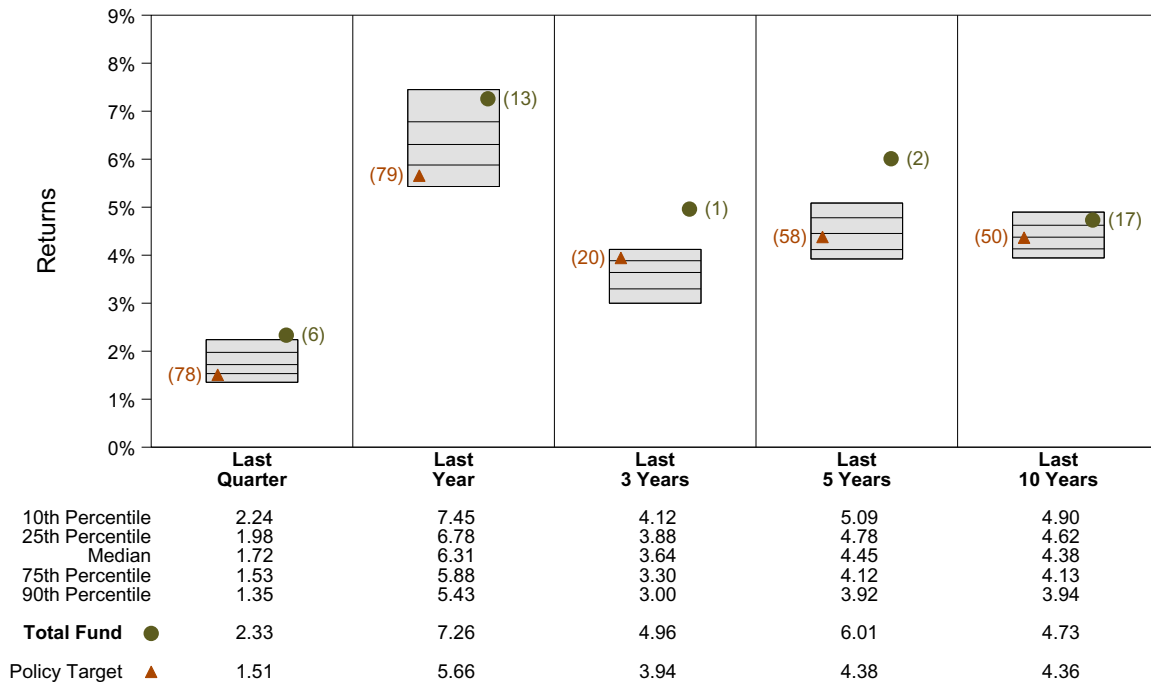
Total Fund Ranking

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 September 30, 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

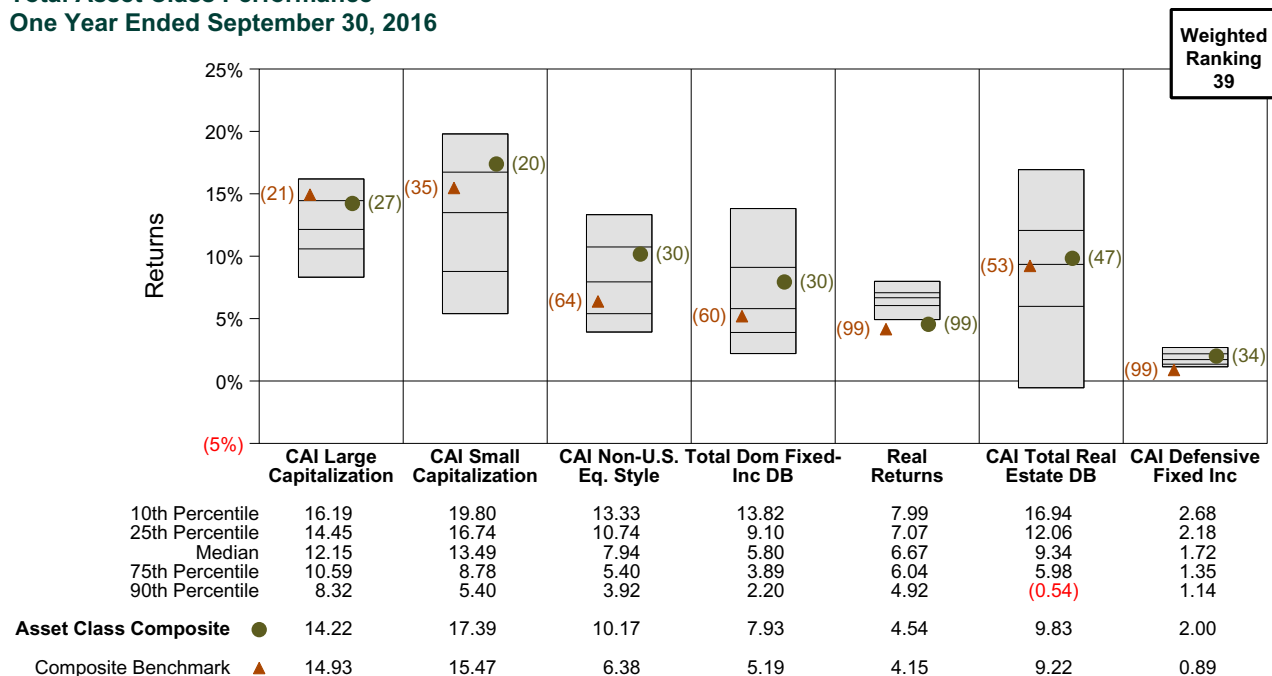


* Current Quarter Target = 42.5% BB Barclays Aggregate Idx, 20.3% BB Barclays Gov 1-3 Yr, 11.0% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI World ex US, 4.3% NCREIF Total Index, 3.2% Russell 2000 Index and 2.6% 3-month Treasury Bill.

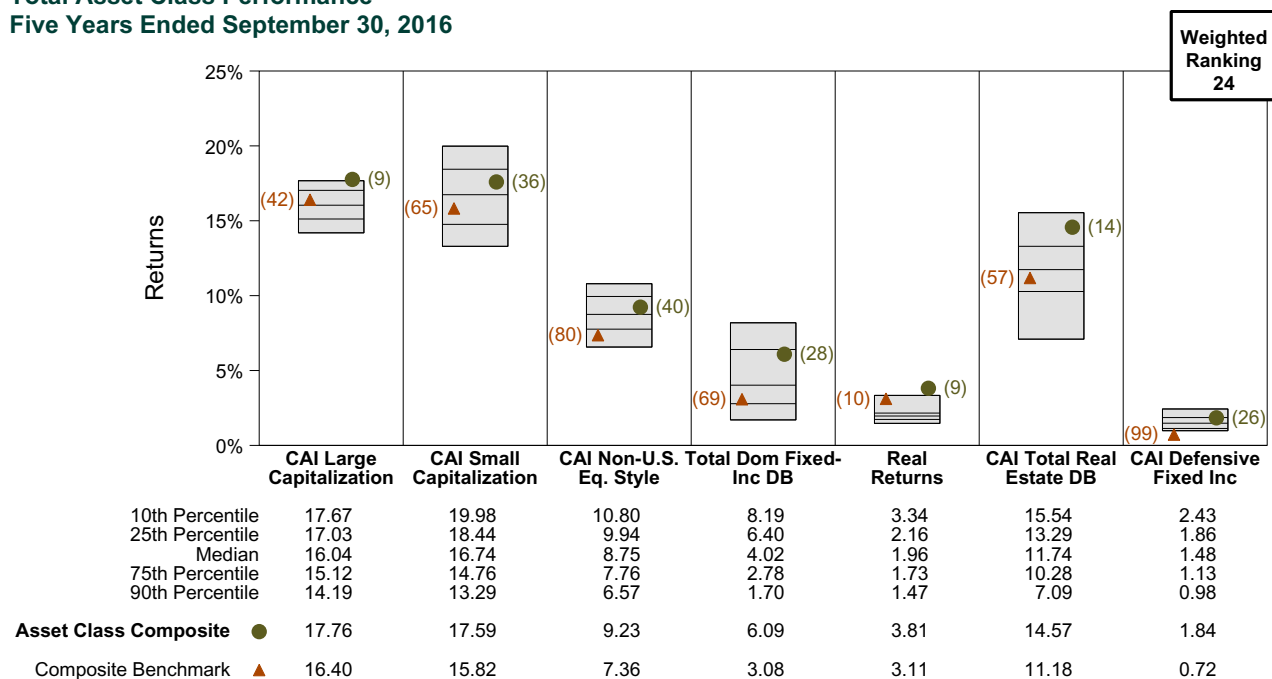
Asset Class Rankings

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 September 30, 2016



Total Asset Class Performance Five Years Ended September 30, 2016



* Current Quarter Target = 42.5% BB Barclays Aggregate Idx, 20.3% BB Barclays Gov 1-3 Yr, 11.0% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI World ex US, 4.3% NCREIF Total Index, 3.2% Russell 2000 Index and 2.6% 3-month Treasury Bill.

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2016, with the distribution as of June 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

	September 30, 2016		Net New Inv.	Inv. Return	June 30, 2016	
	Market Value	Weight			Market Value	Weight
Domestic Equity	\$319,473,000	12.39%	\$(16,478,417)	\$17,016,499	\$318,934,917	12.56%
Large Cap	\$238,465,989	9.25%	\$(10,699,968)	\$9,815,717	\$239,350,240	9.43%
Parametric Clifton Large Cap	47,911,347	1.86%	(2,092,954)	1,886,373	48,117,929	1.90%
L.A. Capital Large Cap Growth	71,240,303	2.76%	(4,037,517)	2,601,575	72,676,244	2.86%
L.A. Capital Enhanced	47,809,396	1.85%	(2,516,835)	1,637,228	48,689,003	1.92%
LSV Large Cap Value	71,504,942	2.77%	(2,052,663)	3,690,542	69,867,064	2.75%
Small Cap	\$81,007,010	3.14%	\$(5,778,449)	\$7,200,782	\$79,584,677	3.14%
Parametric Clifton Small Cap	44,961,799	1.74%	(5,756,569)	4,344,492	46,373,876	1.83%
PIMCO RAE	36,045,212	1.40%	(21,880)	2,856,291	33,210,801	1.31%
International Equity	\$177,628,784	6.89%	\$(196,641)	\$14,948,692	\$162,876,732	6.42%
Capital Group	3,611	0.00%	(105,938)	1,151	108,399	0.00%
DFA Int'l Small Cap Value	18,652,318	0.72%	0	1,778,946	16,873,372	0.66%
LSV Intl Value	75,214,632	2.92%	(69,833)	5,930,684	69,353,781	2.73%
Vanguard Intl Explorer Fund	18,831,980	0.73%	0	1,463,625	17,368,355	0.68%
William Blair	64,926,242	2.52%	(20,870)	5,774,286	59,172,826	2.33%
Domestic Fixed Income	\$1,088,474,565	42.20%	\$(16,360,385)	\$20,029,102	\$1,084,805,848	42.73%
Declaration Total Return	81,733,279	3.17%	(28,632)	1,725,663	80,036,248	3.15%
PIMCO DiSCO II	85,872,318	3.33%	0	3,421,647	82,450,671	3.25%
PIMCO Bravo II Fund	47,082,300	1.83%	0	0	47,082,300	1.85%
Prudential	111,077,475	4.31%	(1,074,635)	1,706,120	110,445,990	4.35%
SSgA US Govt Credit Bd Idx	140,901,947	5.46%	(3,012,125)	563,422	143,350,650	5.65%
Wells Capital	310,768,674	12.05%	(9,140,328)	7,496,268	312,412,735	12.31%
Western Asset Management	311,038,572	12.06%	(3,104,664)	5,115,982	309,027,255	12.17%
Diversified Real Assets	\$271,775,448	10.54%	\$(1,145,603)	\$4,169,851	\$268,751,199	10.59%
Western Asset Management	116,819,469	4.53%	(38,307)	3,754,302	113,103,474	4.46%
JP Morgan Infrastructure	75,325,818	2.92%	(2)	(2)	75,325,819	2.97%
Eastern Timber Opportunities	59,638,348	2.31%	(491,007)	491,007	59,638,348	2.35%
Grosvenor Cust. Infrastructure	19,991,813	0.78%	(616,287)	(75,458)	20,683,558	0.81%
Real Estate	\$132,270,489	5.13%	\$(54,442)	\$1,040,305	\$131,284,626	5.17%
Invesco Core Real Estate	62,884,208	2.44%	(54,440)	1,040,305	61,898,343	2.44%
JP Morgan RE	69,386,281	2.69%	(2)	(2)	69,386,283	2.73%
Short Term Fixed Income	\$522,286,841	20.25%	\$(181,694)	\$2,102,728	\$520,365,807	20.50%
JP Morgan Short Term Bonds	277,097,315	10.74%	(77,913)	225,438	276,949,790	10.91%
Barings Short Term Bonds	245,189,526	9.51%	(103,781)	1,877,290	243,416,017	9.59%
Cash & Equivalents	\$67,181,191	2.60%	\$15,628,825	\$33,246	\$51,519,120	2.03%
Northern Trust Cash Account	37,171,075	1.44%	(14,371,175)	23,130	51,519,120	2.03%
Bank of ND	30,010,116	1.16%	30,000,000	10,116	-	-
Securities Lending Income	\$0	0.00%	\$(47,428)	\$47,428	-	-
Total Fund	\$2,579,090,317	100.0%	\$(18,835,785)	\$59,387,851	\$2,538,538,251	100.0%

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 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 September 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Domestic Equity					
Gross	5.35%	15.06%	10.67%	17.71%	7.19%
Net	5.20%	14.76%	10.41%	17.42%	6.81%
Large Cap Equity					
Gross	4.11%	14.22%	11.61%	17.76%	6.91%
Net	4.02%	13.98%	11.41%	17.53%	6.58%
Benchmark(1)	4.03%	14.93%	10.78%	16.40%	7.25%
Parametric Clifton Large Cap - Gross	3.92%	16.84%	11.67%	16.98%	-
Parametric Clifton Large Cap - Net	3.73%	16.62%	11.55%	16.84%	-
S&P 500 Index	3.85%	15.43%	11.16%	16.37%	7.24%
L.A. Capital - Gross	3.56%	14.69%	13.08%	18.21%	9.55%
L.A. Capital - Net	3.51%	14.45%	12.87%	17.98%	9.35%
Russell 1000 Growth Index	4.58%	13.76%	11.83%	16.60%	8.85%
L.A. Capital Enhanced - Gross	3.36%	15.64%	11.81%	17.39%	8.74%
L.A. Capital Enhanced - Net	3.33%	15.48%	11.67%	17.24%	8.58%
Russell 1000 Index	4.03%	14.93%	10.78%	16.41%	7.40%
LSV Asset Management - Gross	5.32%	11.21%	9.97%	18.00%	6.90%
LSV Asset Management - Net	5.25%	10.88%	9.67%	17.67%	6.59%
Russell 1000 Value Index	3.48%	16.20%	9.70%	16.15%	5.85%
Small Cap Equity					
Gross	9.09%	17.39%	8.09%	17.59%	7.99%
Net	8.73%	16.92%	7.69%	17.13%	7.47%
Russell 2000 Index	9.05%	15.47%	6.71%	15.82%	7.07%
Parametric Clifton Small Cap - Gross	9.50%	17.07%	8.22%	17.42%	-
Parametric Clifton SmallCap - Net	8.93%	16.46%	7.78%	16.95%	-
Russell 2000 Index	9.05%	15.47%	6.71%	15.82%	7.07%
PIMCO RAE - Gross	8.60%	17.88%	7.65%	17.50%	-
PIMCO RAE - Net	8.53%	17.56%	7.33%	17.08%	-
Russell 2000	9.05%	15.47%	6.71%	15.82%	7.07%
International Equity					
Gross	9.18%	10.17%	2.21%	9.23%	2.39%
Net	9.13%	9.84%	1.87%	8.85%	2.11%
Benchmark(2)	6.29%	6.38%	0.43%	7.36%	1.46%
DFA Intl Small Cap Value - Net	10.54%	10.46%	4.19%	11.47%	-
World ex US SC Va	8.77%	12.08%	2.80%	9.48%	4.04%
LSV Asset Management - Gross	8.55%	7.61%	1.60%	8.51%	1.20%
LSV Asset Management - Net	8.45%	7.20%	1.21%	8.05%	0.89%
Benchmark(3)	6.43%	6.52%	0.48%	7.39%	1.47%
Vanguard Intl Explorer Fund - Net	8.43%	7.95%	5.20%	10.77%	4.27%
BMI, EPAC, <\$2 B	7.90%	13.76%	5.21%	10.18%	4.14%
William Blair - Gross	9.76%	-	-	-	-
William Blair - Net	9.72%	-	-	-	-
MSCI ACWI ex US	6.91%	9.26%	0.18%	6.04%	2.16%

(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 and MSCI World ex-US thereafter.

(3) MSCI EAFE through 9/30/2000; 50% Hedged EAFE through 3/31/2011 and 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 September 30, 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 September 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Domestic Fixed Income					
Gross	1.85%	7.93%	5.84%	6.09%	6.42%
Net	1.82%	7.80%	5.71%	5.93%	6.24%
BB Barclays Aggregate Index	0.46%	5.19%	4.03%	3.08%	4.79%
Declaration Total Return - Net	2.16%	3.88%	-	-	-
Libor-3 Month	0.19%	0.61%	0.37%	0.38%	1.32%
PIMCO DiSCO II - Net	4.15%	8.30%	7.59%	-	-
PIMCO Bravo II Fund - Net	0.00%	7.02%	-	-	-
BB Barclays Aggregate Index	0.46%	5.19%	4.03%	3.08%	4.79%
Prudential - Gross	1.54%	8.20%	5.52%	5.41%	6.65%
Prudential - Net	1.48%	7.91%	5.24%	5.18%	6.53%
BB Barclays Aggregate Index	0.46%	5.19%	4.03%	3.08%	4.79%
Wells Capital - Gross	2.40%	10.24%	6.49%	6.24%	7.48%
Wells Capital - Net	2.35%	10.04%	6.29%	6.03%	7.26%
BB Barclays Baa Credit 3%	1.95%	9.82%	5.80%	5.52%	6.60%
Western Asset - Gross	1.66%	7.67%	5.61%	5.17%	5.81%
Western Asset - Net	1.62%	7.52%	5.47%	5.01%	5.62%
BB Barclays Aggregate	0.46%	5.19%	4.03%	3.08%	4.79%
SSgA US Govt Cr Bd Idx - Gross	0.39%	5.86%	4.22%	-	-
SSgA US Govt Cr Bd Idx - Net	0.39%	5.82%	4.18%	-	-
BB Barclays Govt/Credit Bd	0.40%	5.86%	4.22%	3.24%	4.86%
Diversified Real Assets					
Gross	1.56%	4.54%	3.94%	3.81%	3.98%
Net	1.54%	4.21%	3.64%	3.50%	3.69%
Weighted Benchmark	1.51%	4.15%	2.81%	3.11%	4.47%
Western TIPS - Gross	3.32%	7.61%	3.17%	2.75%	3.89%
Western TIPS - Net	3.29%	7.47%	3.03%	2.59%	3.72%
BB Barclays Gbl Inftn-Linked(1)	3.15%	7.14%	2.52%	2.94%	4.38%
JP Morgan Infrastructure - Gross	0.00%	2.78%	4.24%	5.53%	-
JP Morgan Infrastructure - Net	0.00%	1.82%	3.28%	4.47%	-
CPI-W	0.09%	1.22%	0.71%	1.03%	1.73%
Eastern Timber Opportunities - Net	0.83%	(0.07%)	4.89%	4.39%	-
NCREIF Timberland Index	0.67%	3.28%	7.59%	6.91%	6.37%
Grosvenor Cust. Infrastructure - Net	(0.38%)	8.21%	9.20%	-	-
CPI-W	0.09%	1.22%	0.71%	1.03%	1.73%

(1) Barclays US TIPS through 12/31/2009 and Barclays 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 September 30, 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 September 30, 2016

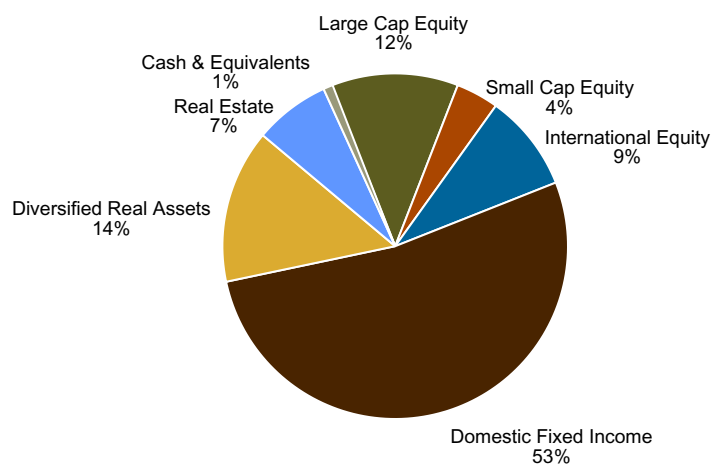
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Real Estate					
Gross	0.79%	9.83%	12.30%	14.57%	3.18%
Net	0.75%	9.02%	11.48%	13.56%	2.08%
NCREIF Total Index	1.77%	9.22%	11.31%	11.18%	7.22%
Invesco Core Real Estate - Gross	1.68%	9.58%	12.52%	-	-
Invesco Core Real Estate - Net	1.59%	9.20%	12.11%	-	-
NCREIF Total Index	1.77%	9.22%	11.31%	11.18%	7.22%
JP Morgan - Gross	0.00%	10.04%	12.15%	15.10%	3.42%
JP Morgan - Net	0.00%	8.85%	11.01%	13.79%	2.19%
NCREIF Total Index	1.77%	9.22%	11.31%	11.18%	7.22%
Short Term Fixed Income					
Gross	0.40%	2.00%	1.86%	1.84%	-
Net	0.37%	1.85%	1.71%	1.71%	-
BB Barclays Gov 1-3 Yr	(0.10%)	0.89%	0.87%	0.72%	2.33%
Barings Short Term Bonds - Gross	0.77%	2.52%	2.39%	2.35%	-
Barings Short Term Bonds - Net	0.73%	2.34%	2.23%	2.20%	-
BB Barclays Gov 1-3 Yr	(0.10%)	0.89%	0.87%	0.72%	2.33%
JP Morgan Short Term Bds - Gross	0.08%	1.55%	1.35%	1.31%	-
JP Morgan Short Term Bds - Net	0.05%	1.44%	1.25%	1.21%	-
BB Barclays Gov/Credit 1-3 Y	0.02%	1.31%	1.09%	1.05%	2.59%
Cash & Equivalents - Net					
Cash Account- Net	0.04%	0.16%	0.06%	0.13%	0.98%
90 Day Treasury Bills	0.10%	0.27%	0.11%	0.10%	0.92%
Total Fund					
Gross	2.33%	7.26%	4.96%	6.01%	4.73%
Net	2.29%	7.04%	4.75%	5.79%	4.48%
Target*	1.51%	5.66%	3.94%	4.38%	4.36%

* Current Quarter Target = 42.5% BB Barclays Aggregate Idx, 20.3% BB Barclays Gov 1-3 Yr, 11.0% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI World ex US, 4.3% NCREIF Total Index, 3.2% Russell 2000 Index and 2.6% 3-month Treasury Bill.

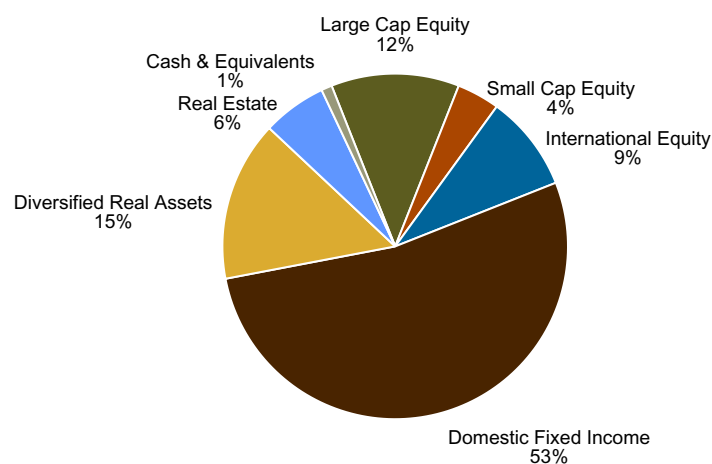
Actual vs Target Asset Allocation As of September 30, 2016

The first chart below shows the Fund's asset allocation as of September 30, 2016. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

Actual Asset Allocation



Target Asset Allocation



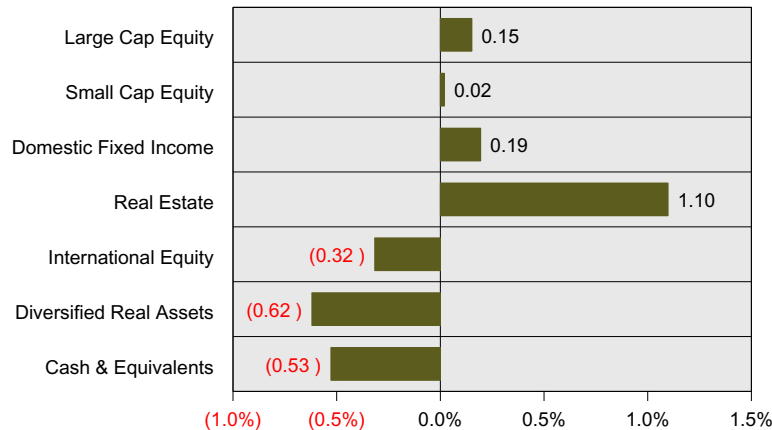
Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap Equity	221,313	11.9%	12.0%	(0.1%)	(1,890)
Small Cap Equity	73,739	4.0%	4.0%	0.0%	(662)
International Equity	169,012	9.1%	9.0%	0.1%	1,610
Domestic Fixed Income	979,575	52.7%	53.0%	(0.3%)	(6,238)
Diversified Real Assets	268,256	14.4%	15.0%	(0.6%)	(10,747)
Real Estate	132,205	7.1%	6.0%	1.1%	20,604
Cash & Equivalents	15,922	0.9%	1.0%	(0.1%)	(2,678)
Total	1,860,023	100.0%	100.0%		

* Current Quarter Target = 53.0% BB Barclays 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.

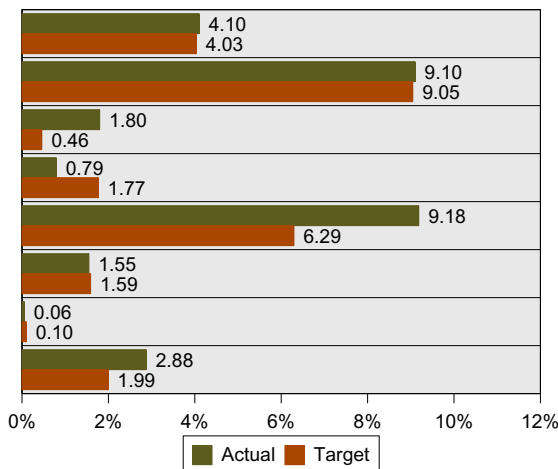
Quarterly Total Fund Relative Attribution - September 30, 2016

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.

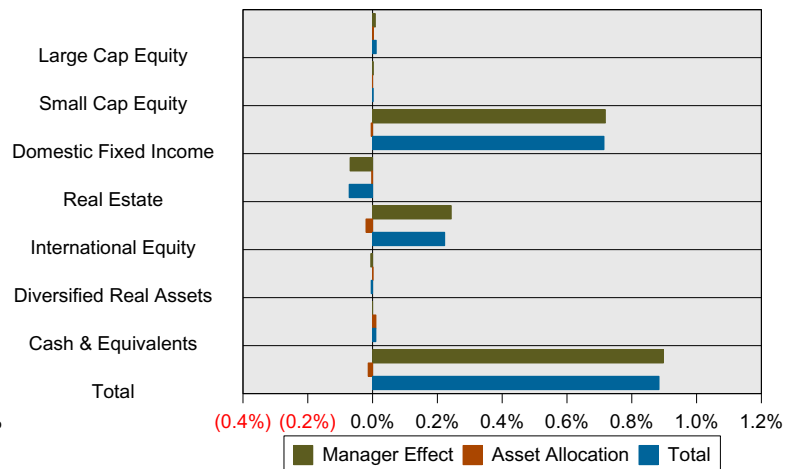
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended September 30, 2016

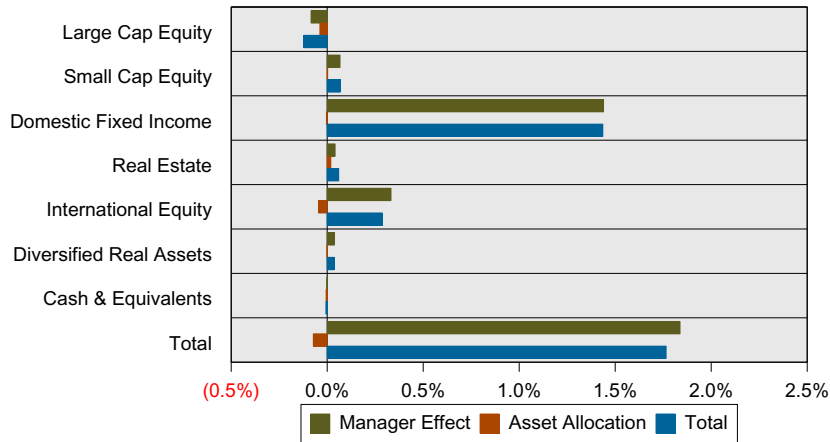
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	12%	12%	4.10%	4.03%	0.01%	0.00%	0.01%
Small Cap Equity	4%	4%	9.10%	9.05%	0.00%	(0.00%)	0.00%
Domestic Fixed Income	53%	53%	1.80%	0.46%	0.72%	(0.00%)	0.71%
Real Estate	7%	6%	0.79%	1.77%	(0.07%)	(0.00%)	(0.07%)
International Equity	9%	9%	9.18%	6.29%	0.24%	(0.02%)	0.22%
Diversified Real Assets	14%	15%	1.55%	1.59%	(0.01%)	0.00%	(0.00%)
Cash & Equivalents	0%	1%	0.06%	0.10%	(0.00%)	0.01%	0.01%
Total			2.88%	1.99%	0.90%	(0.01%)	0.88%

* Current Quarter Target = 53.0% BB Barclays 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.

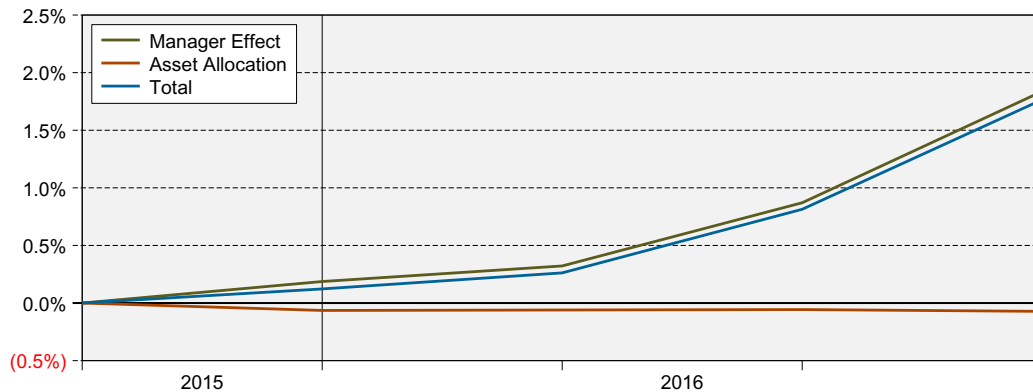
Cumulative Total Fund Relative Attribution - September 30, 2016

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

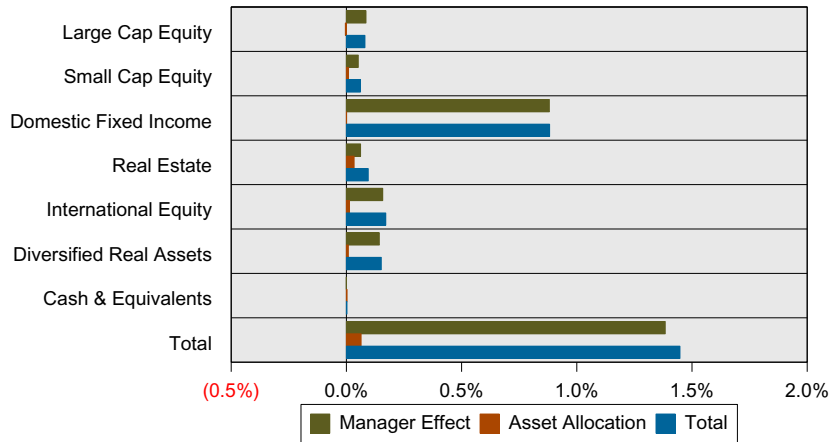
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	12%	12%	14.21%	14.93%	(0.08%)	(0.04%)	(0.12%)
Small Cap Equity	4%	4%	17.37%	15.47%	0.07%	0.00%	0.07%
Domestic Fixed Income	53%	53%	7.94%	5.19%	1.44%	(0.00%)	1.44%
Real Estate	7%	6%	9.83%	9.22%	0.04%	0.02%	0.06%
International Equity	9%	9%	10.18%	6.38%	0.33%	(0.04%)	0.29%
Diversified Real Assets	15%	15%	4.59%	4.33%	0.04%	(0.00%)	0.04%
Cash & Equivalents	1%	1%	0.17%	0.27%	(0.00%)	(0.01%)	(0.01%)
Total			8.85%	7.08%	+ 1.84%	+ (0.07%)	1.77%

* Current Quarter Target = 53.0% BB Barclays 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.

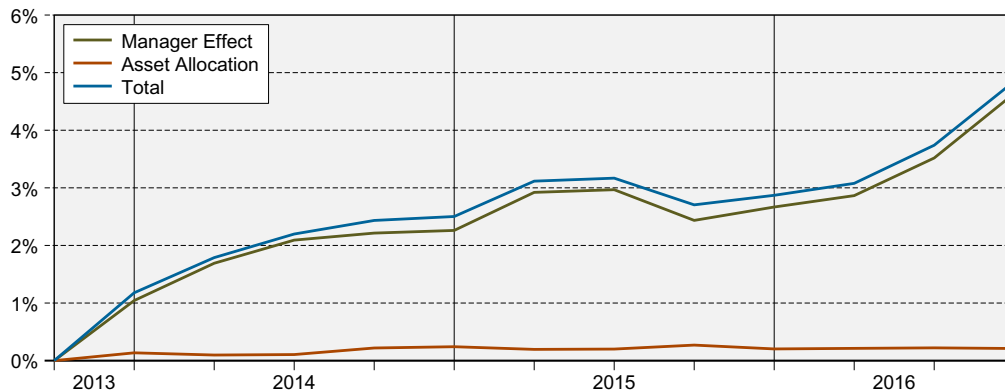
Cumulative Total Fund Relative Attribution - September 30, 2016

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

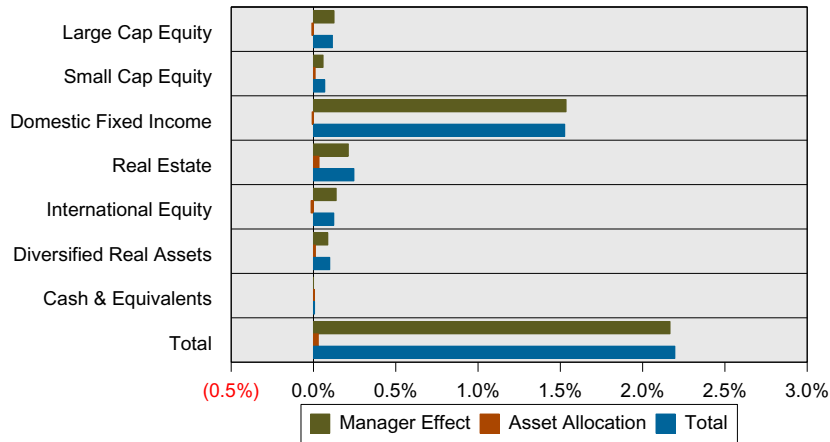
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	12%	11%	11.59%	10.78%	0.08%	(0.00%)	0.08%
Small Cap Equity	4%	4%	8.13%	6.71%	0.05%	0.01%	0.06%
Domestic Fixed Income	52%	52%	5.76%	4.03%	0.88%	0.00%	0.88%
Real Estate	7%	6%	12.29%	11.31%	0.06%	0.03%	0.09%
International Equity	8%	9%	2.15%	0.43%	0.16%	0.01%	0.17%
Diversified Real Assets	16%	17%	4.24%	3.53%	0.14%	0.01%	0.15%
Cash & Equivalents	1%	1%	0.06%	0.11%	(0.00%)	0.00%	0.00%
Total			6.39%	4.94%	+ 1.38%	+ 0.06%	1.45%

* Current Quarter Target = 53.0% BB Barclays 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.

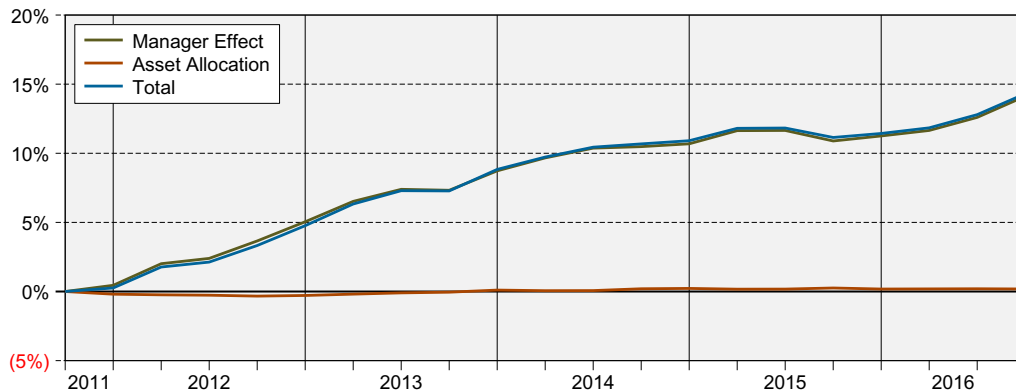
Cumulative Total Fund Relative Attribution - September 30, 2016

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

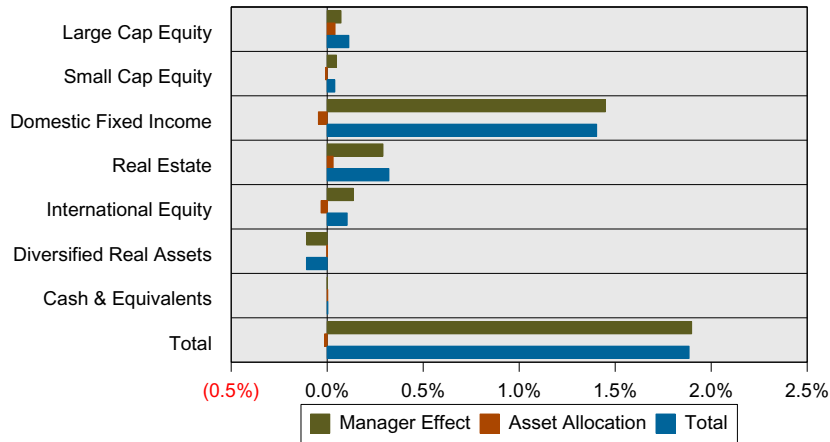
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	11%	11%	17.72%	16.41%	0.12%	(0.01%)	0.12%
Small Cap Equity	4%	4%	17.61%	15.82%	0.06%	0.01%	0.07%
Domestic Fixed Income	52%	52%	6.04%	3.08%	1.53%	(0.01%)	1.53%
Real Estate	7%	6%	14.55%	11.18%	0.21%	0.03%	0.25%
International Equity	8%	8%	9.11%	7.36%	0.14%	(0.01%)	0.12%
Diversified Real Assets	18%	19%	4.00%	3.54%	0.09%	0.01%	0.10%
Cash & Equivalents	1%	1%	0.13%	0.10%	0.00%	0.01%	0.01%
Total			7.94%	5.74%	+ 2.17%	+ 0.03%	2.20%

* Current Quarter Target = 53.0% BB Barclays 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.

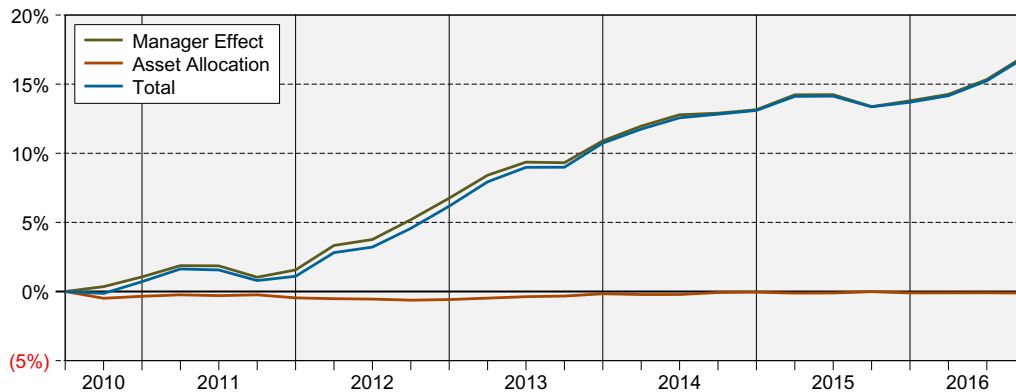
Cumulative Total Fund Relative Attribution - September 30, 2016

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-Quarter Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects

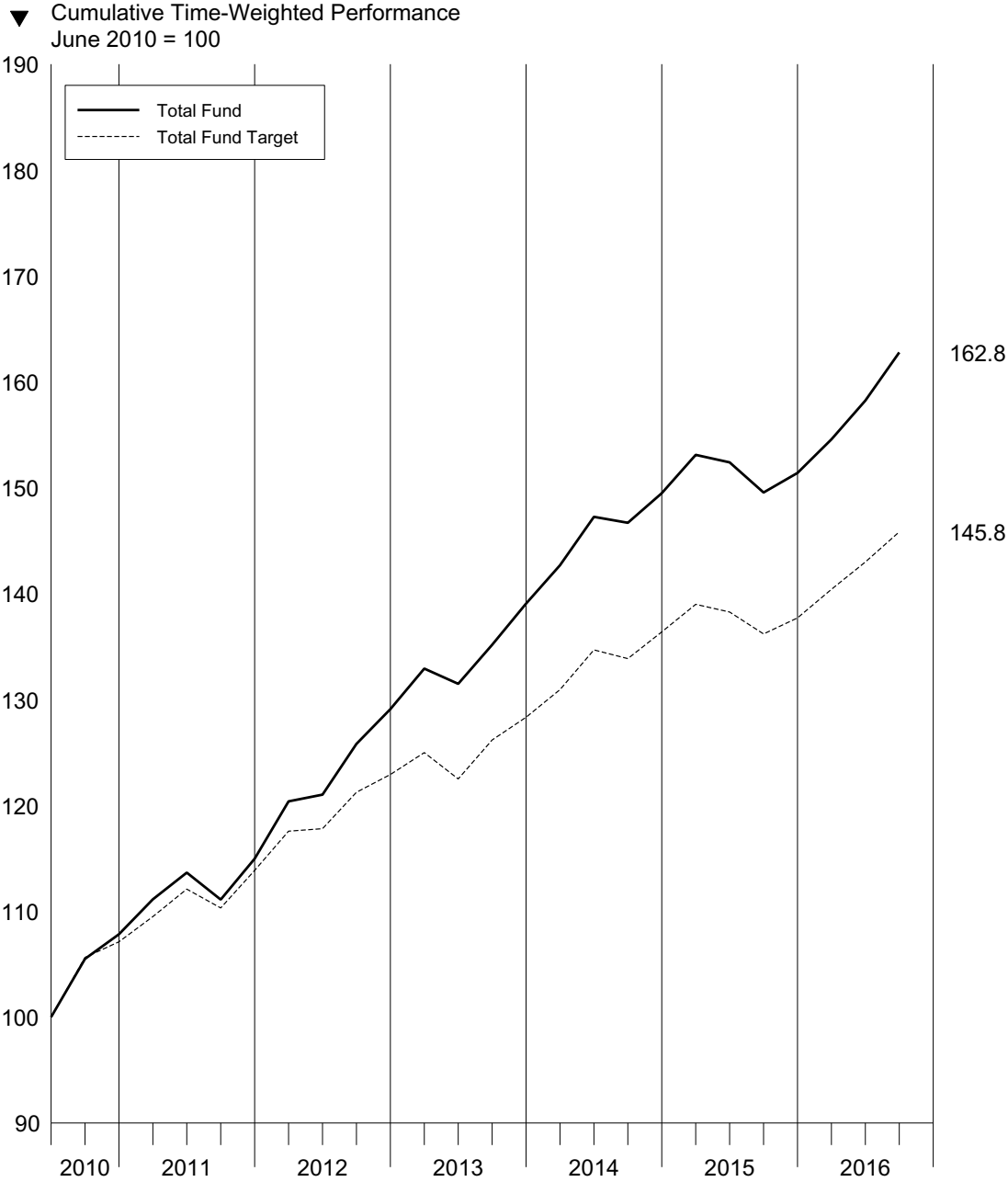


Six and One-Quarter Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	11%	11%	15.78%	15.08%	0.07%	0.04%	0.11%
Small Cap Equity	4%	4%	15.20%	13.76%	0.05%	(0.01)%	0.04%
Domestic Fixed Income	52%	52%	6.48%	3.71%	1.45%	(0.05)%	1.40%
Real Estate	6%	6%	17.12%	12.16%	0.29%	0.03%	0.32%
International Equity	7%	8%	7.59%	5.86%	0.14%	(0.03)%	0.10%
Diversified Real Assets	19%	19%	4.58%	5.13%	(0.11)%	(0.00)%	(0.11)%
Cash & Equivalents	1%	1%	0.17%	0.11%	0.00%	0.00%	0.00%
Total			8.11%	6.22%	+ 1.90%	+ (0.01)%	1.88%

* Current Quarter Target = 53.0% BB Barclays 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.

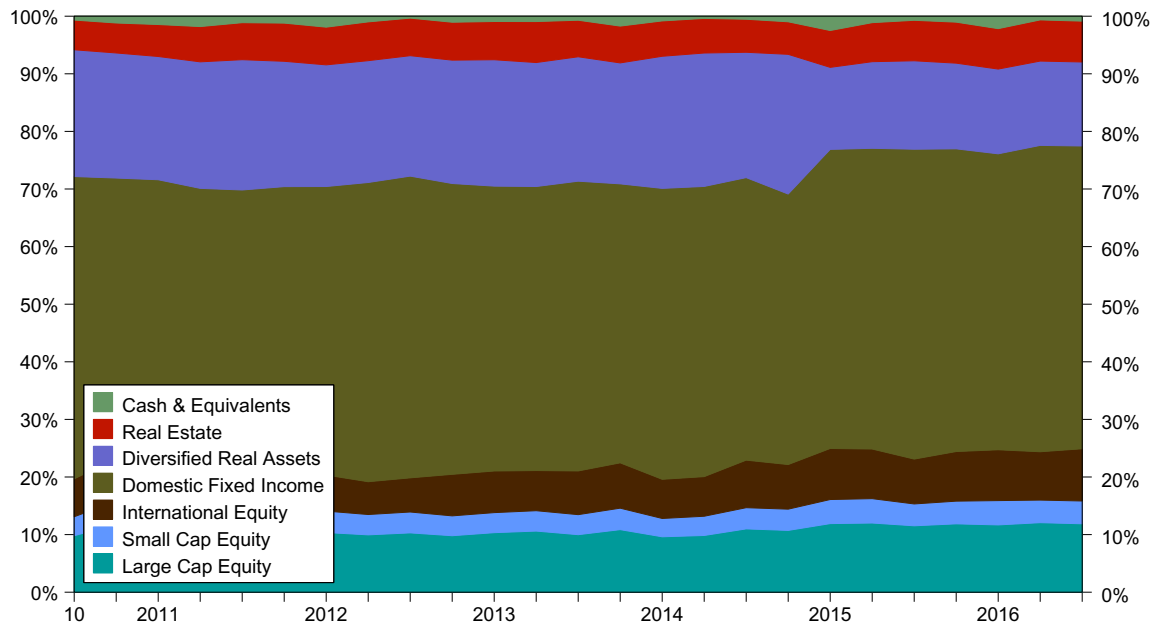
**NDSIB - Workforce Safety & Insurance
Cumulative Results**



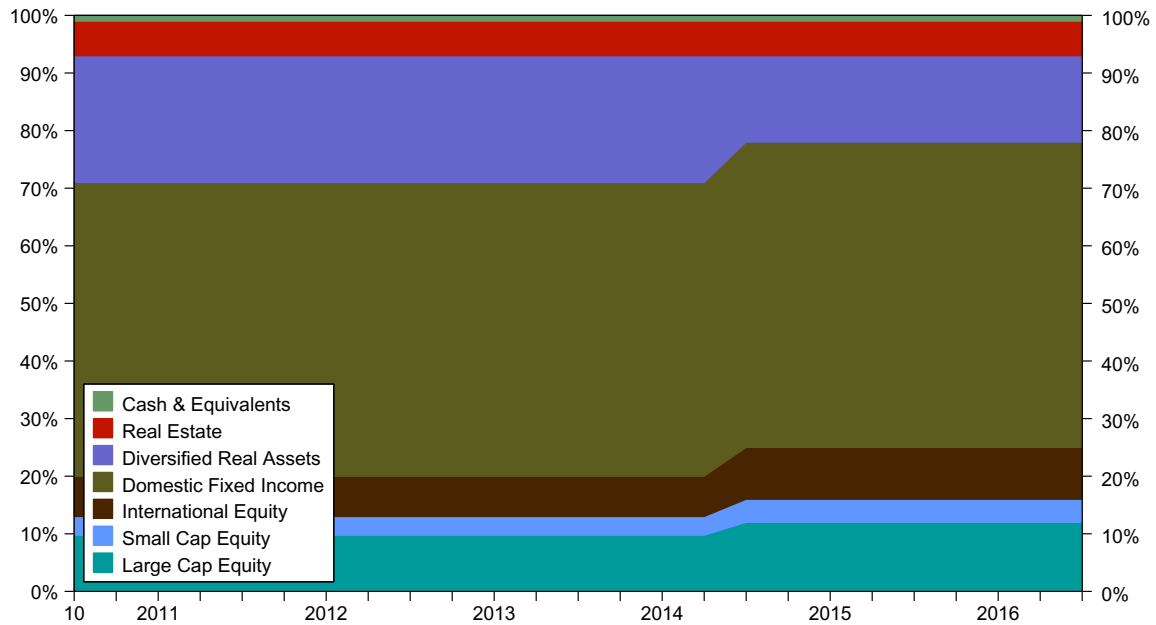
Actual vs Target Historical Asset Allocation

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

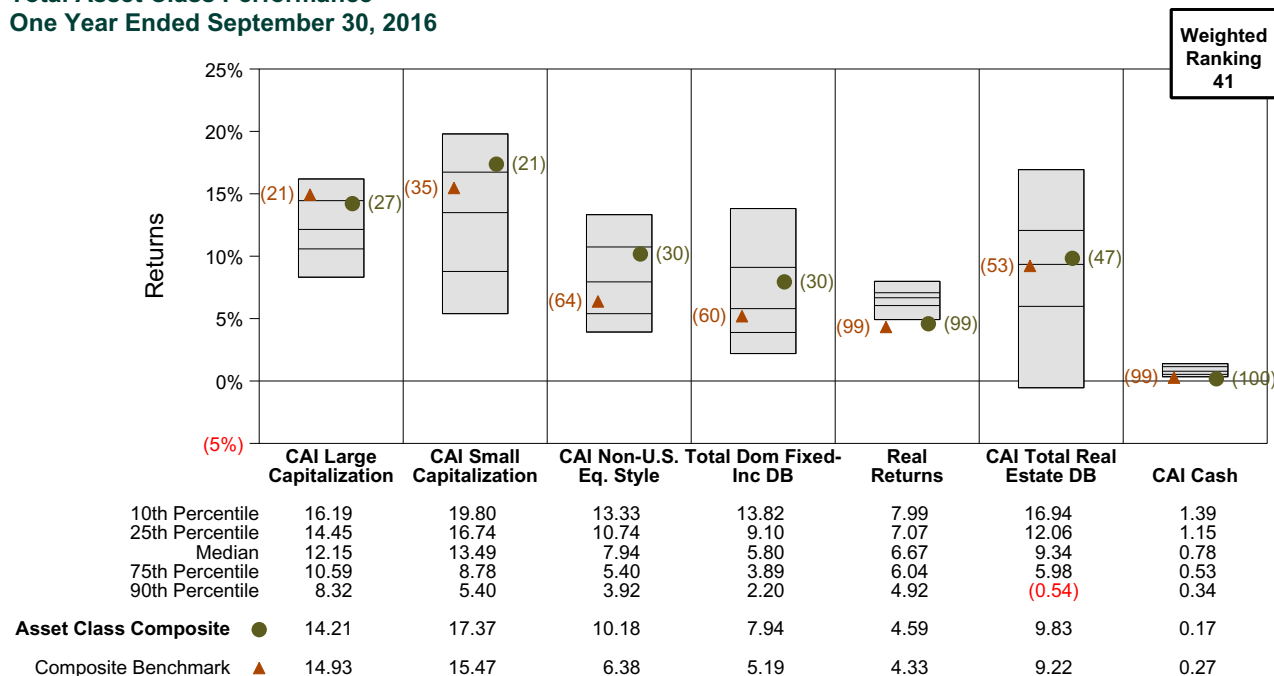


* Current Quarter Target = 53.0% BB Barclays Aggregate Idx, 15.0% NDSIB WSI DRA Weighted Benchmark, 12.0% Russell 1000 Index, 9.0% MSCI World ex US, 6.0% NCREIF Total Index, 4.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

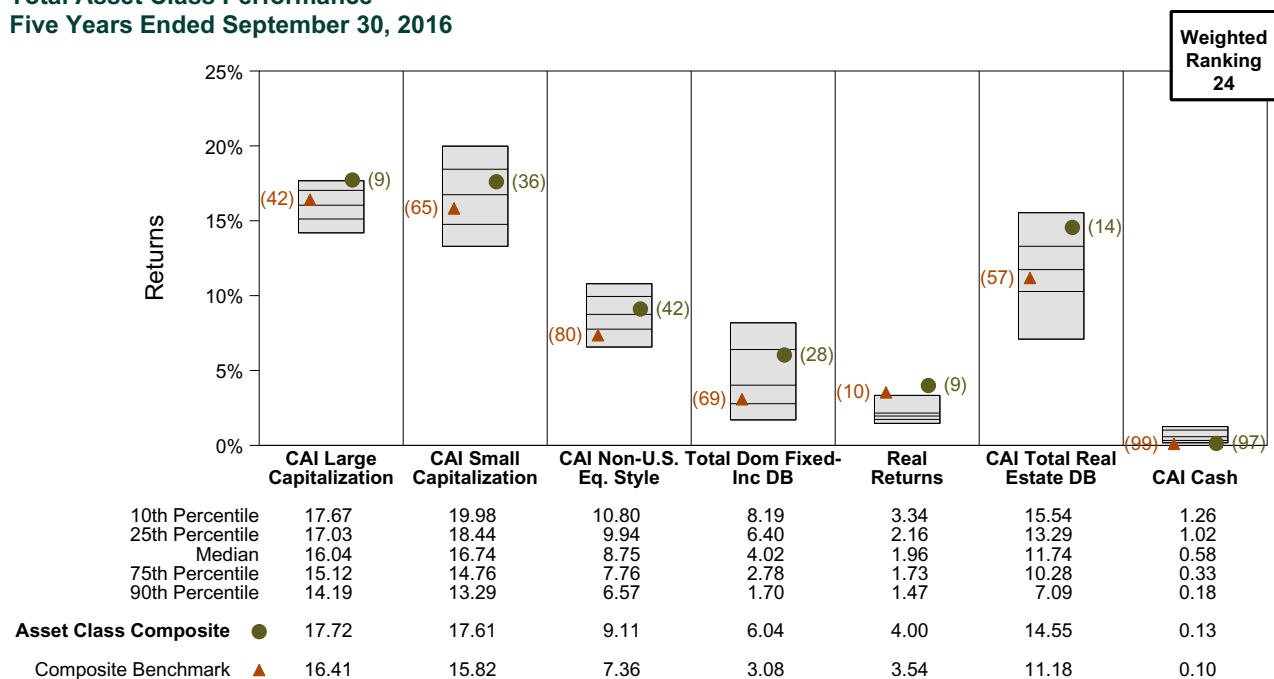
Asset Class Rankings

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 September 30, 2016



Total Asset Class Performance Five Years Ended September 30, 2016



* Current Quarter Target = 53.0% BB Barclays 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 September 30, 2016, with the distribution as of June 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

	September 30, 2016		Net New Inv.	Inv. Return	June 30, 2016	
	Market Value	Weight			Market Value	Weight
Large Cap Equity	\$221,312,984	11.90%	\$(9,404,869)	\$9,090,448	\$221,627,405	12.10%
Small Cap Equity	\$73,739,311	3.96%	\$(4,778,753)	\$6,525,705	\$71,992,360	3.93%
International Equity	\$169,012,464	9.09%	\$833,981	\$14,148,679	\$154,029,804	8.41%
Domestic Fixed Income	\$979,574,772	52.66%	\$(14,516,426)	\$17,546,976	\$976,544,222	53.30%
Diversified Real Assets	\$268,256,161	14.42%	\$(720,120)	\$4,090,278	\$264,886,004	14.46%
Real Estate	\$132,205,319	7.11%	\$(52,837)	\$1,039,405	\$131,218,750	7.16%
Cash & Equivalents	\$15,922,467	0.86%	\$4,112,085	\$4,951	\$11,805,431	0.64%
Securities Lending Income	\$0	0.00%	\$(42,178)	\$42,178	-	-
Total Fund	\$1,860,023,478	100.0%	\$(24,569,117)	\$52,488,619	\$1,832,103,976	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 September 30, 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 September 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6-1/4 Years
Large Cap Equity					
Gross	4.10%	14.21%	11.59%	17.72%	15.78%
Net	4.02%	13.97%	11.39%	17.50%	15.51%
Benchmark(1)	4.03%	14.93%	10.78%	16.40%	15.08%
Small Cap Equity					
Gross	9.10%	17.37%	8.13%	17.61%	15.20%
Net	8.74%	16.91%	7.73%	17.14%	14.57%
Russell 2000	9.05%	15.47%	6.71%	15.82%	13.76%
International Equity					
Gross	9.18%	10.18%	2.15%	9.11%	7.59%
Net	9.13%	9.84%	1.83%	8.73%	7.20%
Benchmark(2)	6.29%	6.38%	0.43%	7.36%	5.86%
Domestic Fixed Income					
Gross	1.80%	7.94%	5.76%	6.04%	6.48%
Net	1.76%	7.80%	5.62%	5.87%	6.31%
BB Barclays Aggregate	0.46%	5.19%	4.03%	3.08%	3.71%
Diversified Real Assets					
Gross	1.55%	4.59%	4.24%	4.00%	4.58%
Net	1.53%	4.25%	3.91%	3.66%	4.22%
Weighted Benchmark	1.59%	4.33%	3.53%	3.54%	5.13%
Real Estate					
Gross	0.79%	9.83%	12.29%	14.55%	17.12%
Net	0.75%	9.02%	11.48%	13.56%	16.08%
NCREIF Total Index	1.77%	9.22%	11.31%	11.18%	12.16%
Cash & Equivalents - Net	0.06%	0.17%	0.06%	0.13%	0.17%
90 Day Treasury Bills	0.10%	0.27%	0.11%	0.10%	0.11%
Total Fund					
Gross	2.88%	8.85%	6.39%	7.94%	8.11%
Net	2.82%	8.59%	6.15%	7.66%	7.81%
Target*	1.99%	7.08%	4.94%	5.74%	6.22%

* Current Quarter Target = 53.0% BB Barclays 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.

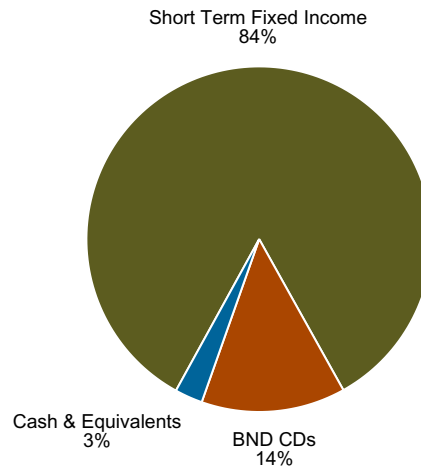
(2) MSCI EAFE through 9/30/2000; 50% Hedged EAFE through 3/31/2011, MSCI EAFE again through 6/30/2016 and MSCI World ex-US thereafter.

PLEASE REFER TO PAGE 37-39 FOR INVESTMENT MANAGER LEVEL RETURNS.

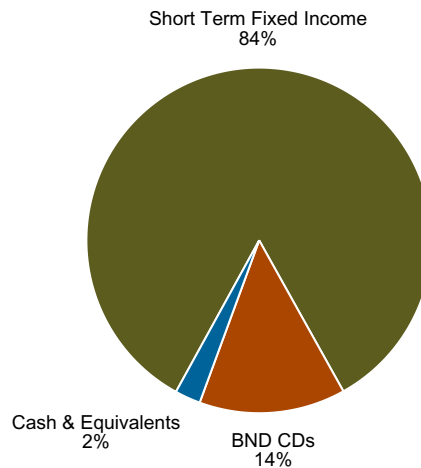
Actual vs Target Asset Allocation As of September 30, 2016

The first chart below shows the Fund's asset allocation as of September 30, 2016. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

Actual Asset Allocation



Target Asset Allocation



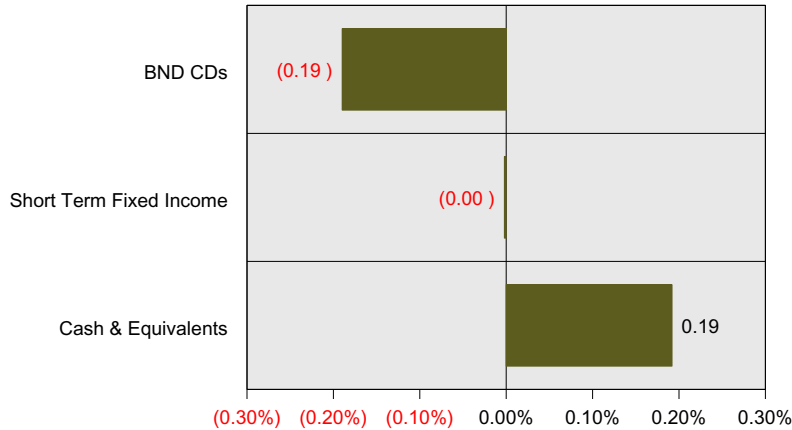
Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Short Term Fixed Income	485,201	83.9%	83.9%	0.0%	(1)
BND CDs	78,098	13.5%	13.7%	(0.2%)	(1,073)
Cash & Equivalents	15,011	2.6%	2.4%	0.2%	1,074
Total	578,310	100.0%	100.0%		

* Current Quarter Target = 83.9% BB Barclays Gov 1-3 Yr, 13.7% NDSIB Budget - Bond CDs and 2.4% 3-month Treasury Bill.

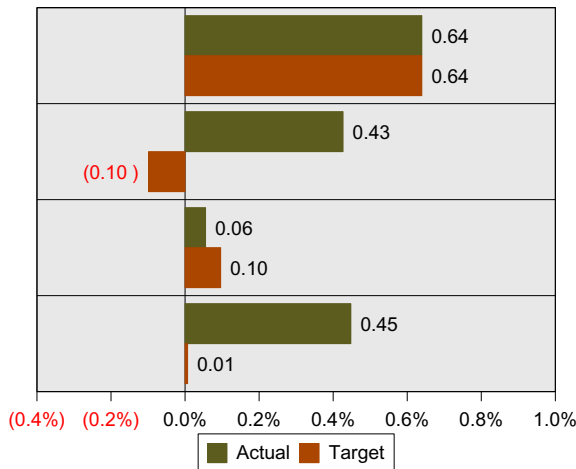
Quarterly Total Fund Relative Attribution - September 30, 2016

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.

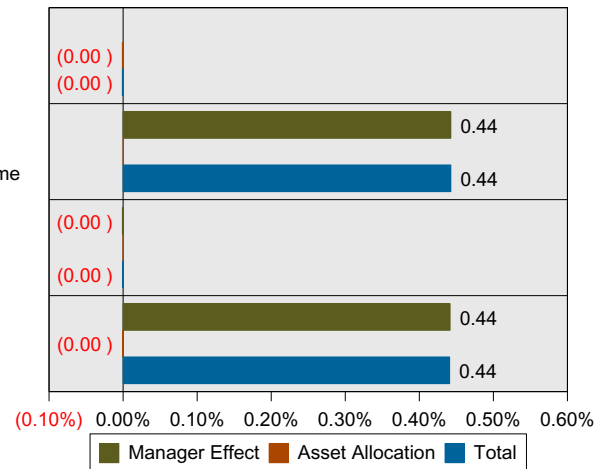
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended September 30, 2016

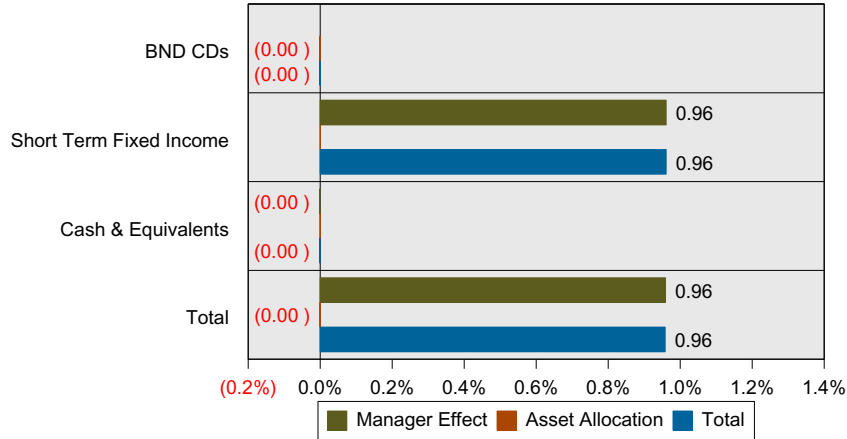
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
BND CDs	14%	14%	0.64%	0.64%	0.00%	(0.00%)	(0.00%)
Short Term Fixed Income	84%	84%	0.43%	(0.10%)	0.44%	0.00%	0.44%
Cash & Equivalents	2%	2%	0.06%	0.10%	(0.00%)	0.00%	(0.00%)
Total			0.45%	0.01%	+ 0.44%	+ (0.00%)	0.44%

* Current Quarter Target = 83.9% BB Barclays Gov 1-3 Yr, 13.7% NDSIB Budget - Bond CDs and 2.4% 3-month Treasury Bill.

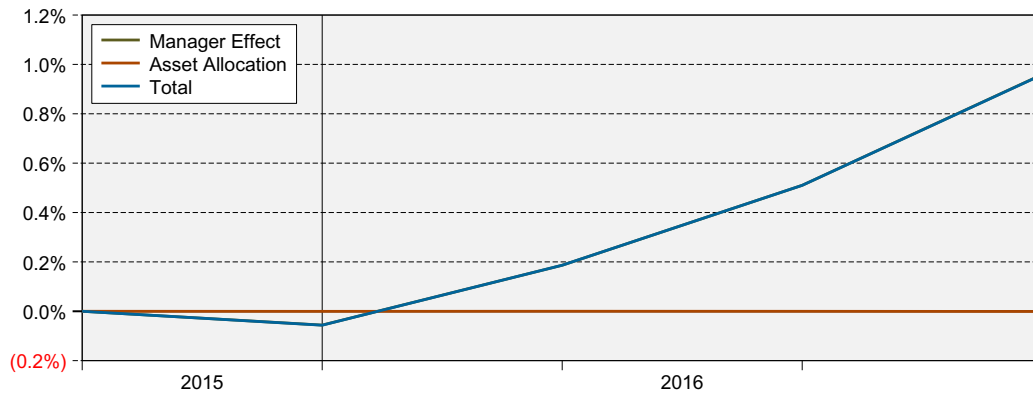
Cumulative Total Fund Relative Attribution - September 30, 2016

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

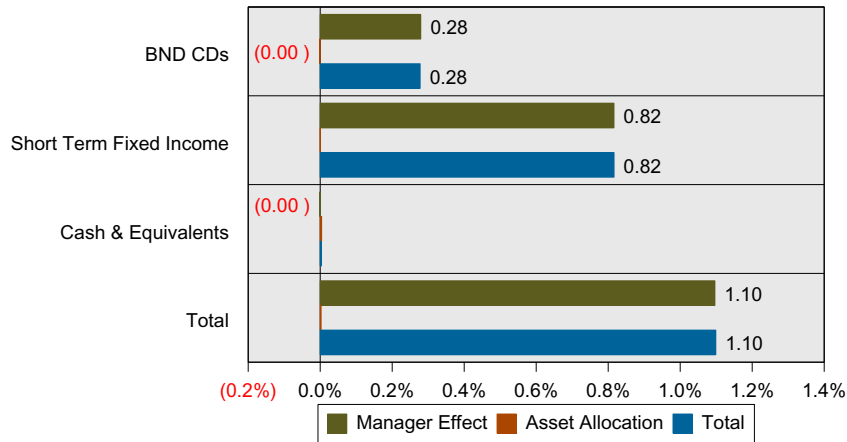
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
BND CDs	15%	15%	2.59%	2.59%	0.00%	(0.00%)	(0.00%)
Short Term Fixed Income	83%	83%	2.03%	0.89%	0.96%	0.00%	0.96%
Cash & Equivalents	2%	2%	0.18%	0.27%	(0.00%)	0.00%	(0.00%)
Total			2.09%	1.13%	+ 0.96%	+ (0.00%)	0.96%

* Current Quarter Target = 83.9% BB Barclays Gov 1-3 Yr, 13.7% NDSIB Budget - Bond CDs and 2.4% 3-month Treasury Bill.

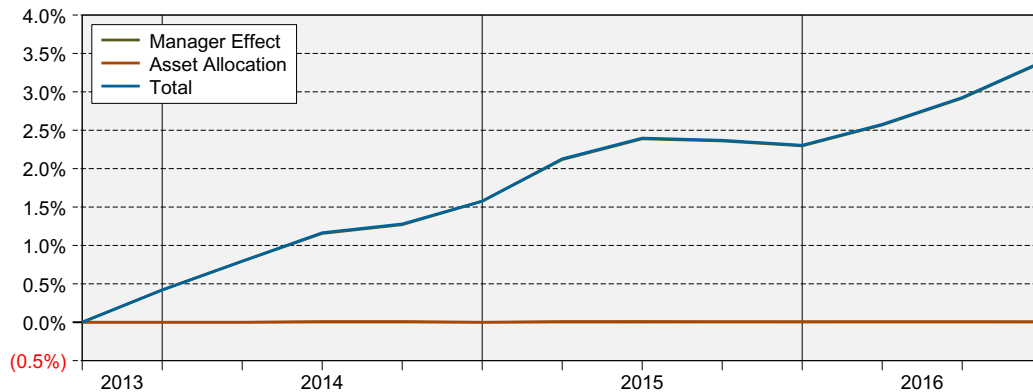
Cumulative Total Fund Relative Attribution - September 30, 2016

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

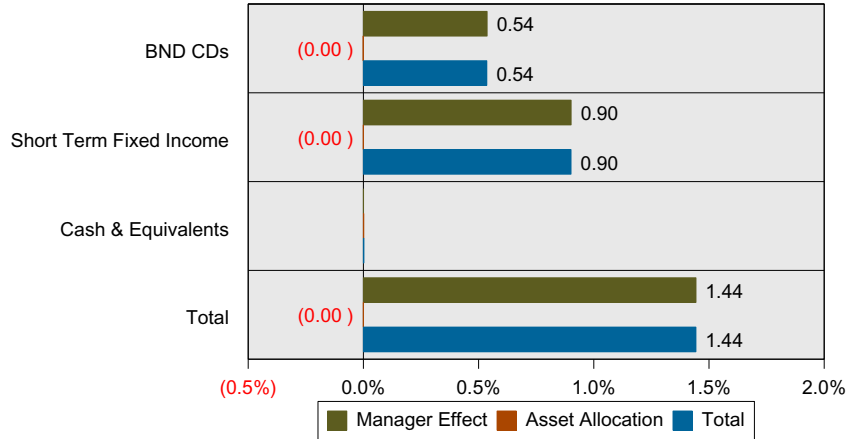
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
BND CDs	17%	17%	2.67%	1.10%	0.28%	(0.00%)	0.28%
Short Term Fixed Income	81%	81%	1.87%	0.87%	0.82%	0.00%	0.82%
Cash & Equivalents	2%	2%	0.07%	0.11%	(0.00%)	0.00%	0.00%
Total			1.97%		0.87%	+ 1.10%	+ 0.00%
							1.10%

* Current Quarter Target = 83.9% BB Barclays Gov 1-3 Yr, 13.7% NDSIB Budget - Bond CDs and 2.4% 3-month Treasury Bill.

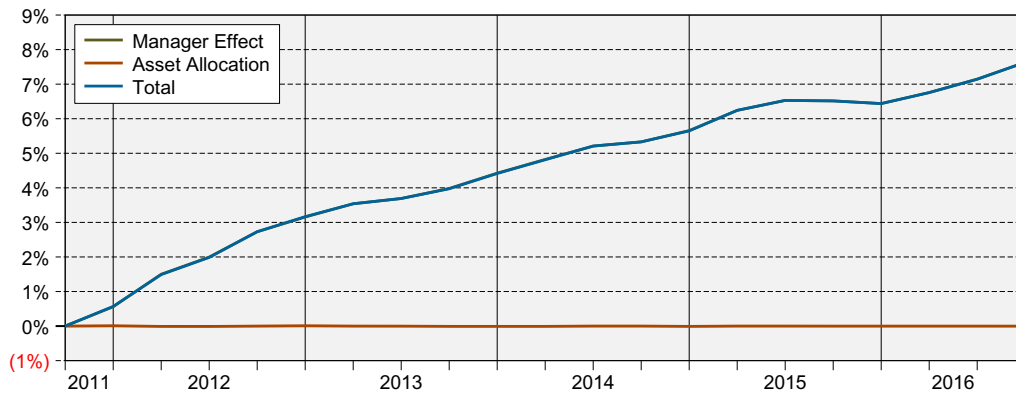
Cumulative Total Fund Relative Attribution - September 30, 2016

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

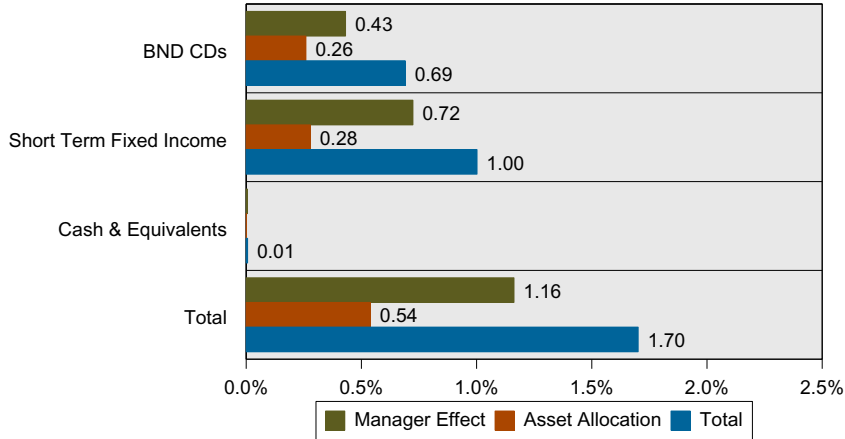
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
BND CDs	20%	20%	3.14%	0.69%	0.54%	(0.00%)	0.54%
Short Term Fixed Income	78%	78%	1.89%	0.72%	0.90%	(0.00%)	0.90%
Cash & Equivalents	2%	2%	0.13%	0.10%	0.00%	0.00%	0.00%
Total			2.13%	0.69%	+ 1.44%	+ (0.00%)	1.44%

* Current Quarter Target = 83.9% BB Barclays Gov 1-3 Yr, 13.7% NDSIB Budget - Bond CDs and 2.4% 3-month Treasury Bill.

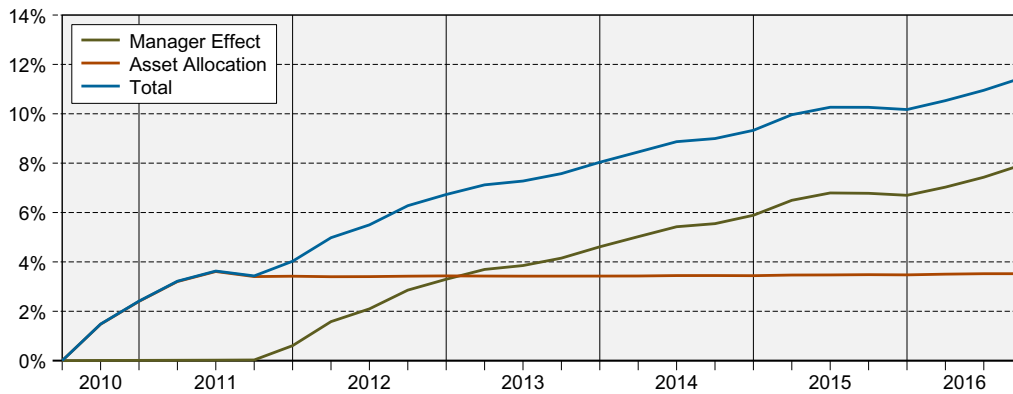
Cumulative Total Fund Relative Attribution - September 30, 2016

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-Quarter Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects

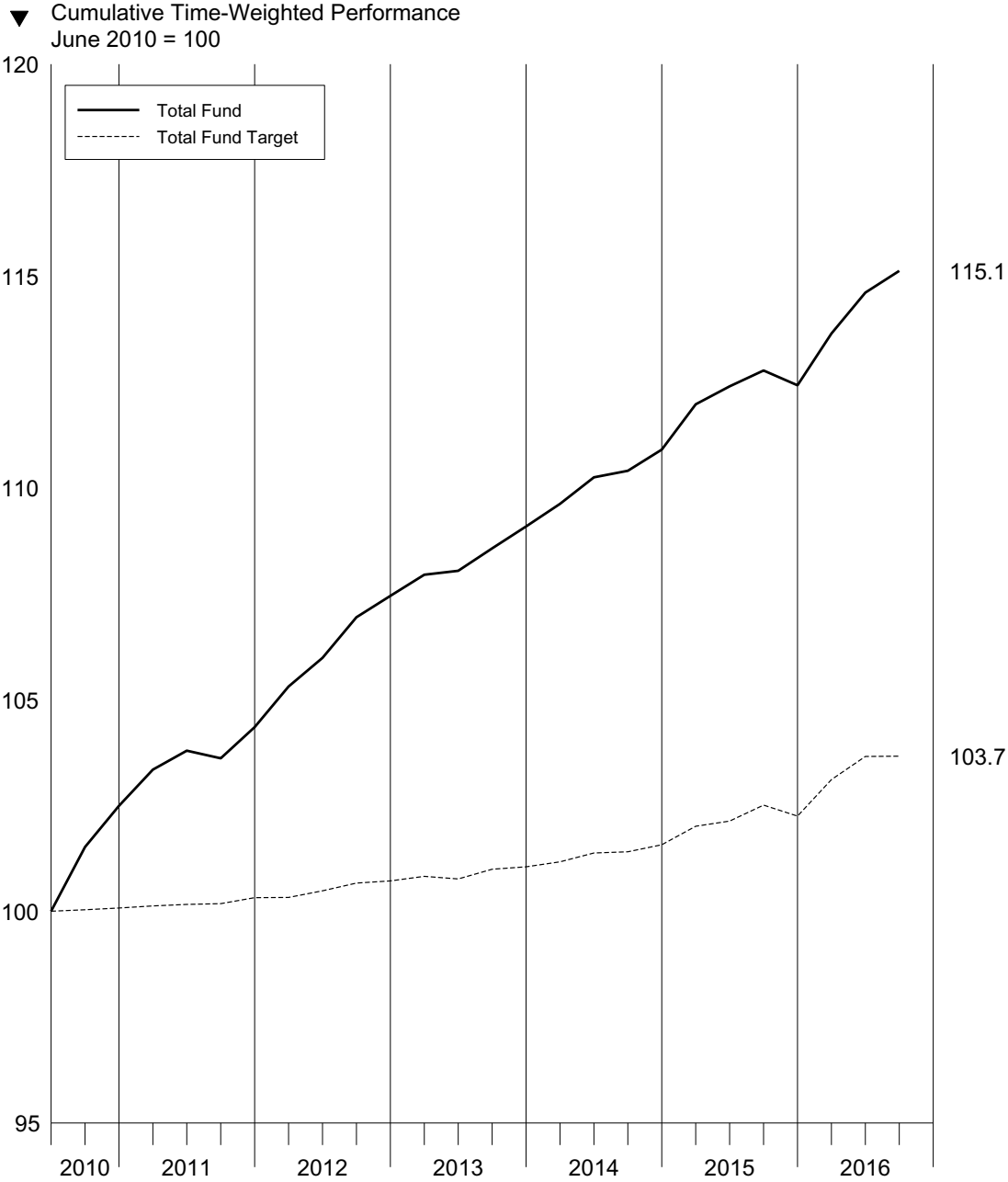


Six and One-Quarter Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
BND CDs	22%	16%	3.39%	1.43%	0.43%	0.26%	0.69%
Short Term Fixed Income	74%	62%	2.01%	1.07%	0.72%	0.28%	1.00%
Cash & Equivalents	4%	21%	0.17%	0.11%	0.00%	0.00%	0.01%
Total			2.28%		0.58%	1.16%	1.70%

* Current Quarter Target = 83.9% BB Barclays Gov 1-3 Yr, 13.7% NDSIB Budget - Bond CDs and 2.4% 3-month Treasury Bill.

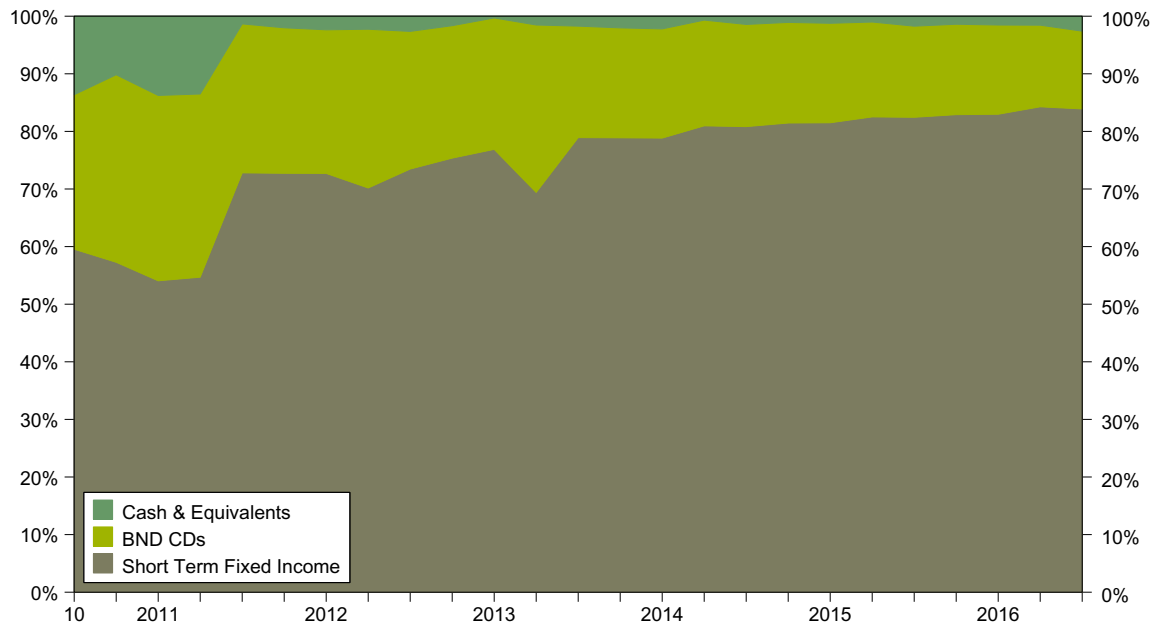
**NDSIB - Budget Stabilization Fund
Cumulative Results**



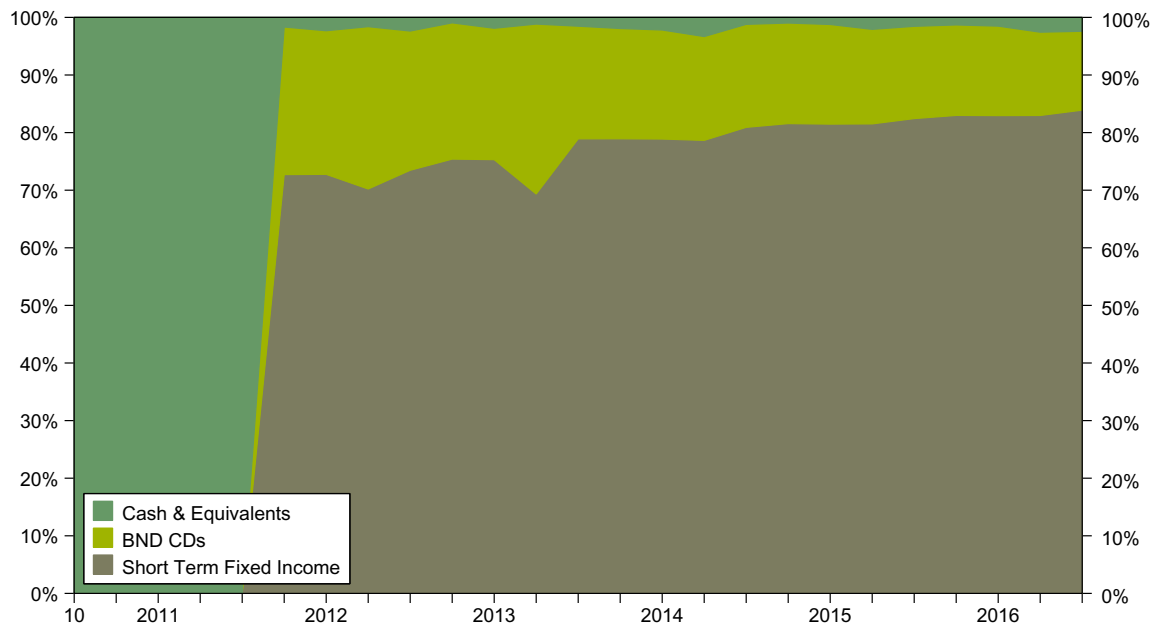
Actual vs Target Historical Asset Allocation

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 = 83.9% BB Barclays Gov 1-3 Yr, 13.7% NDSIB Budget - Bond CDs and 2.4% 3-month Treasury Bill.

Asset Class Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2016, with the distribution as of June 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

	September 30, 2016			Inv. Return	June 30, 2016	
	Market Value	Weight	Net New Inv.		Market Value	Weight
Short Term Fixed Income	\$485,200,912	83.90%	\$(2,183,698)	\$2,066,375	\$485,318,235	84.27%
BND CDs	\$78,097,841	13.50%	\$(4,008,160)	\$502,368	\$81,603,633	14.17%
Cash & Equivalents	\$15,010,779	2.60%	\$6,007,157	\$7,109	\$8,996,513	1.56%
Securities Lending Income	\$0	0.00%	\$(2,120)	\$2,120	-	-
Total Fund	\$578,309,532	100.0%	\$(186,822)	\$2,577,973	\$575,918,381	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 September 30, 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 September 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6-1/4 Years
Short Term Fixed Income					
Gross	0.43%	2.03%	1.87%	1.89%	2.01%
Net	0.39%	1.89%	1.74%	1.76%	1.88%
BB Barclays Gov 1-3 Yr	(0.10%)	0.89%	0.87%	0.72%	0.88%
BND CDs - Net	0.64%	2.59%	2.67%	3.14%	3.39%
Cash & Equivalents - Net	0.06%	0.18%	0.07%	0.13%	0.17%
3-month Treasury Bill	0.10%	0.27%	0.11%	0.10%	0.11%
Total Fund					
Gross	0.45%	2.09%	1.97%	2.13%	2.28%
Net	0.42%	1.97%	1.87%	2.03%	2.19%
Target*	0.01%	1.13%	0.87%	0.69%	0.58%

* Current Quarter Target = 83.9% BB Barclays Gov 1-3 Yr, 13.7% NDSIB Budget - Bond CDs and 2.4% 3-month Treasury Bill.

PLEASE REFER TO PAGES 37-39 FOR INVESTMENT MANAGER LEVEL RETURNS.

Parametric Clifton Large Cap Period Ended September 30, 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.

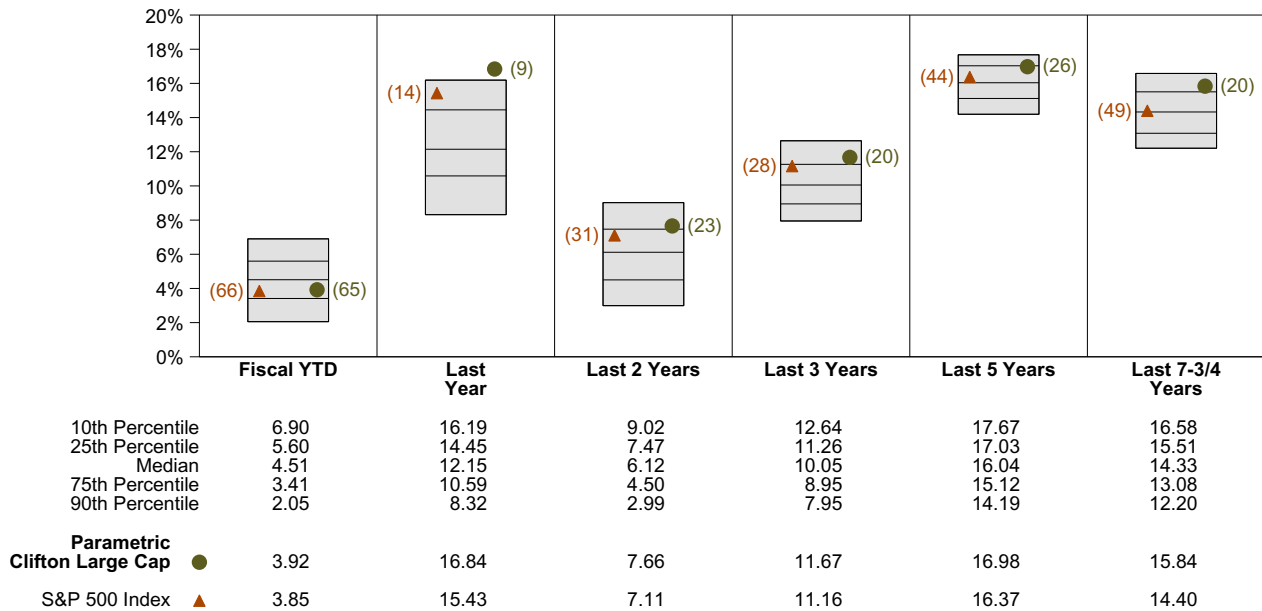
Quarterly Summary and Highlights

- Parametric Clifton Large Cap's portfolio posted a 3.92% return for the quarter placing it in the 65 percentile of the CAI Large Capitalization group for the quarter and in the 9 percentile for the last year.
- Parametric Clifton Large Cap's portfolio outperformed the S&P 500 Index by 0.07% for the quarter and outperformed the S&P 500 Index for the year by 1.41%.

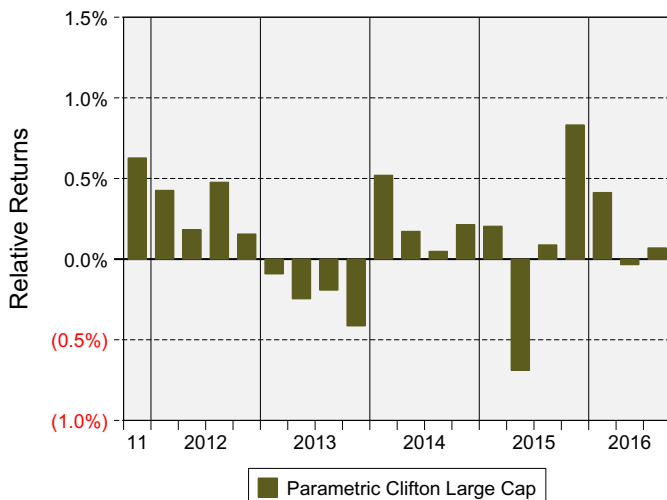
Quarterly Asset Growth

Beginning Market Value	\$48,117,929
Net New Investment	\$-2,092,954
Investment Gains/(Losses)	\$1,886,373
Ending Market Value	\$47,911,347

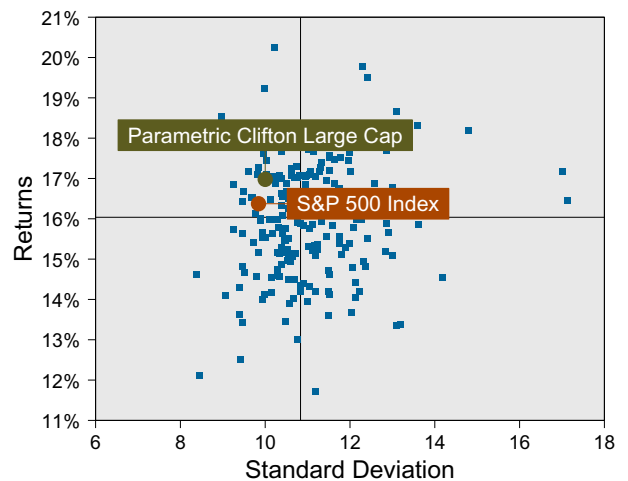
Performance vs CAI Large Capitalization (Gross)



Relative Return vs S&P 500 Index



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



L.A. Capital Period Ended September 30, 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.

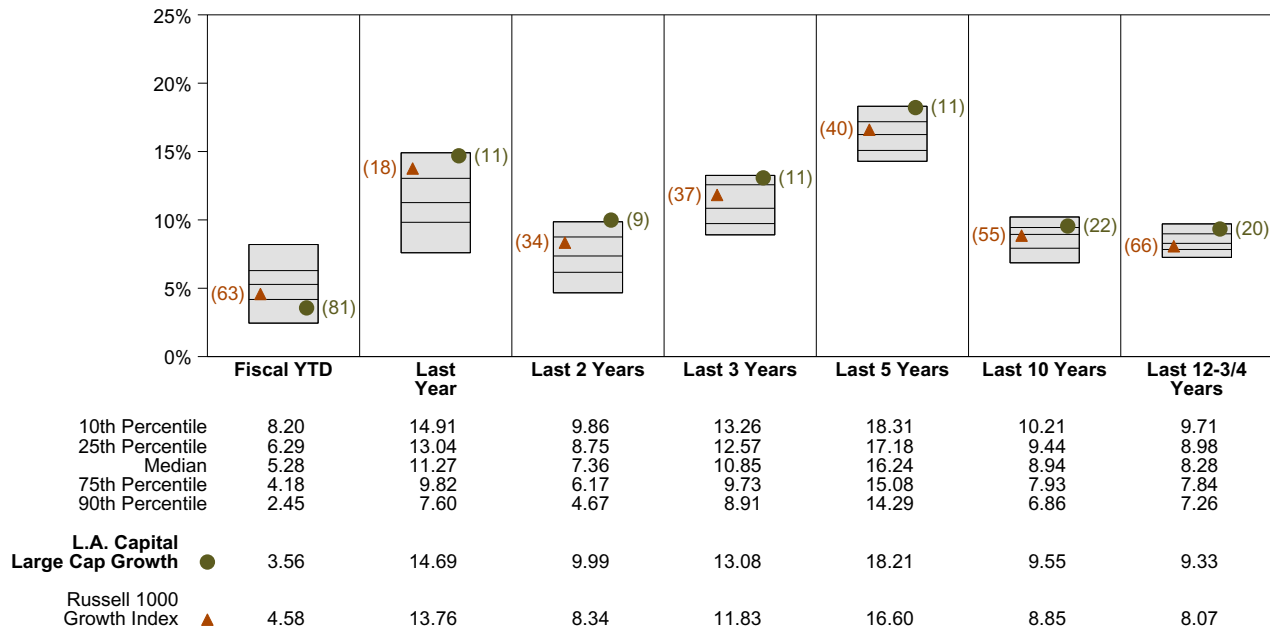
Quarterly Summary and Highlights

- L.A. Capital Large Cap Growth's portfolio posted a 3.56% return for the quarter placing it in the 81 percentile of the CAI Large Cap Growth group for the quarter and in the 11 percentile for the last year.
- L.A. Capital Large Cap Growth's portfolio underperformed the Russell 1000 Growth Index by 1.02% for the quarter and outperformed the Russell 1000 Growth Index for the year by 0.93%.

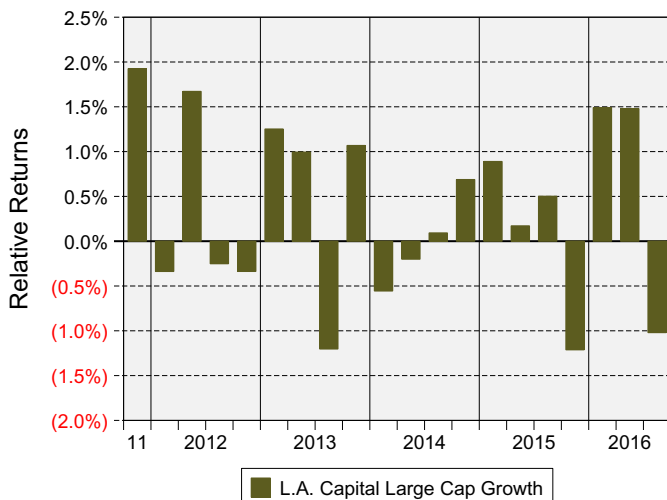
Quarterly Asset Growth

Beginning Market Value	\$72,676,244
Net New Investment	\$-4,037,517
Investment Gains/(Losses)	\$2,601,575
Ending Market Value	\$71,240,303

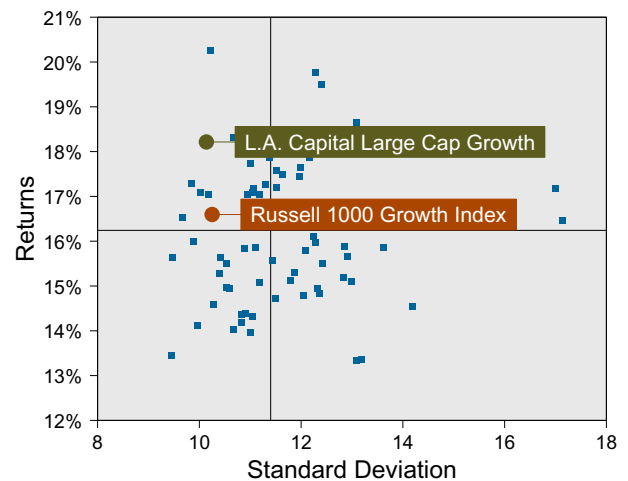
Performance vs CAI Large Cap Growth (Gross)



Relative Return vs Russell 1000 Growth Index



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



L.A. Capital Enhanced Period Ended September 30, 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.

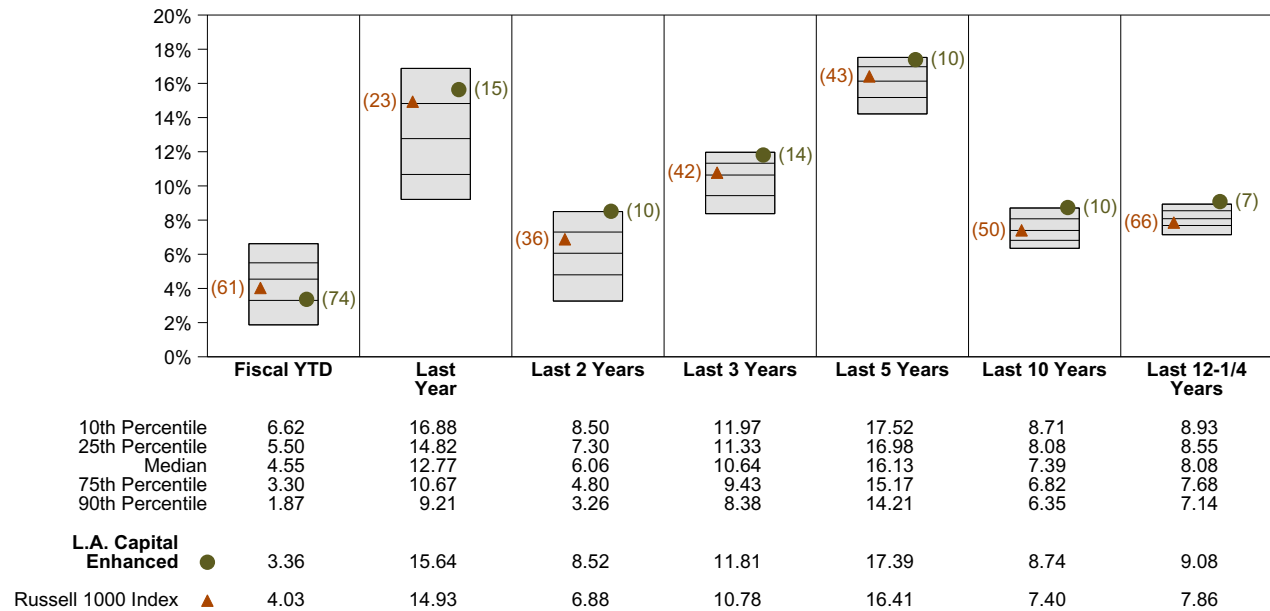
Quarterly Summary and Highlights

- L.A. Capital Enhanced's portfolio posted a 3.36% return for the quarter placing it in the 74 percentile of the CAI Large Cap Core group for the quarter and in the 15 percentile for the last year.
- L.A. Capital Enhanced's portfolio underperformed the Russell 1000 Index by 0.67% for the quarter and outperformed the Russell 1000 Index for the year by 0.70%.

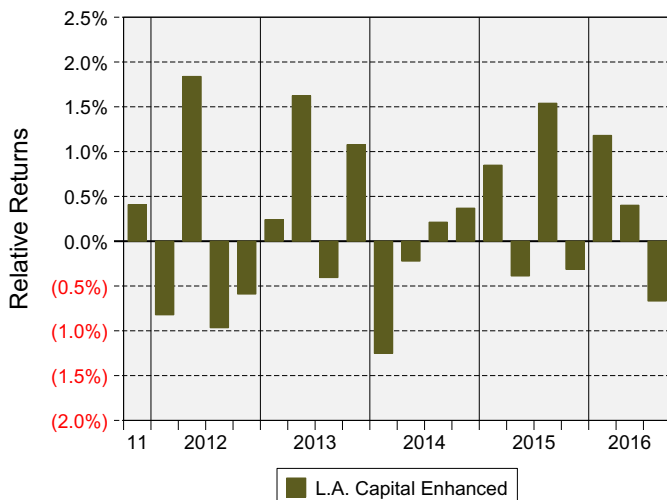
Quarterly Asset Growth

Beginning Market Value	\$48,689,003
Net New Investment	\$-2,516,835
Investment Gains/(Losses)	\$1,637,228
Ending Market Value	\$47,809,396

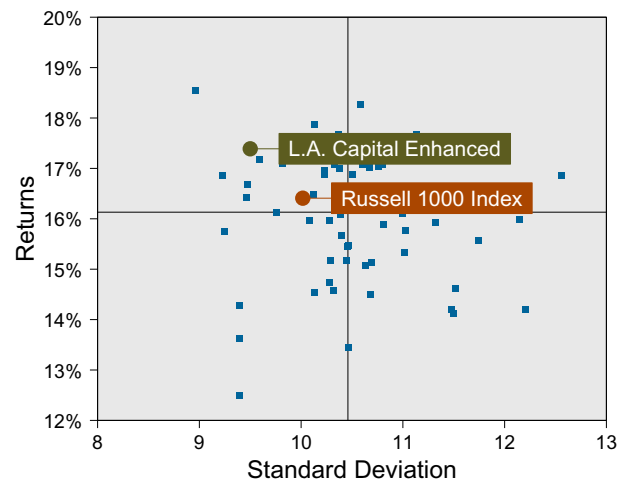
Performance vs CAI Large Cap Core (Gross)



Relative Return vs Russell 1000 Index



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



LSV Asset Management

Period Ended September 30, 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.

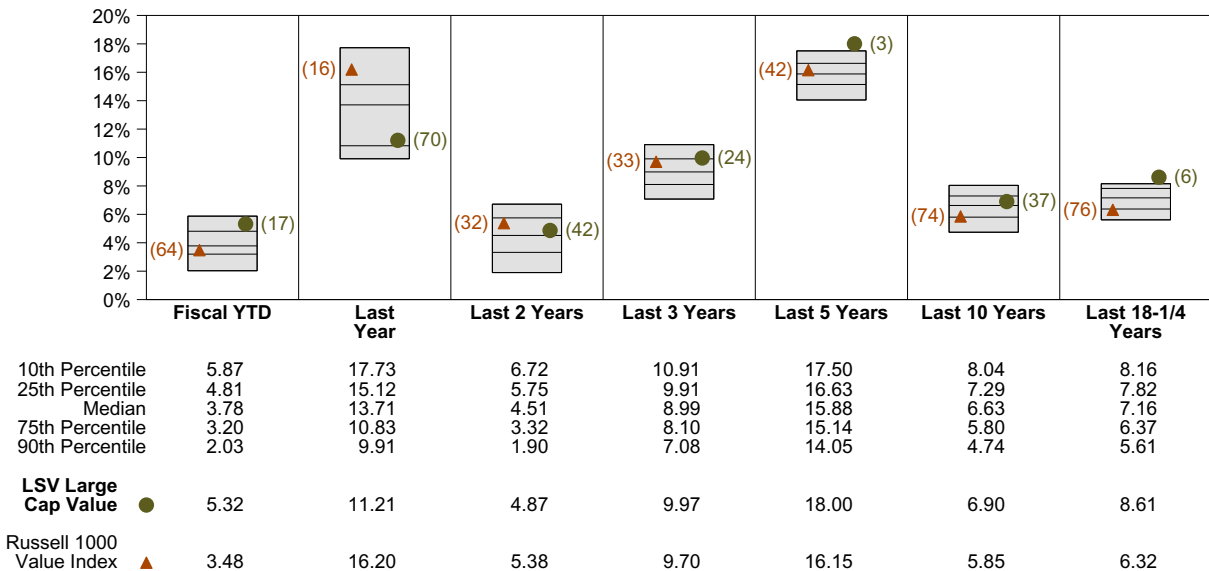
Quarterly Summary and Highlights

- LSV Large Cap Value's portfolio posted a 5.32% return for the quarter placing it in the 17th percentile of the CAI Large Cap Value group for the quarter and in the 70th percentile for the last year.
- LSV Large Cap Value's portfolio outperformed the Russell 1000 Value Index by 1.84% for the quarter and underperformed the Russell 1000 Value Index for the year by 4.99%.

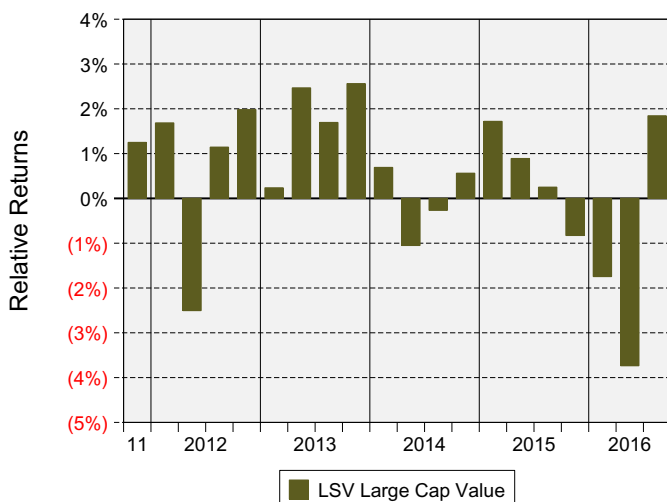
Quarterly Asset Growth

Beginning Market Value	\$69,867,064
Net New Investment	\$-2,052,663
Investment Gains/(Losses)	\$3,690,542
Ending Market Value	\$71,504,942

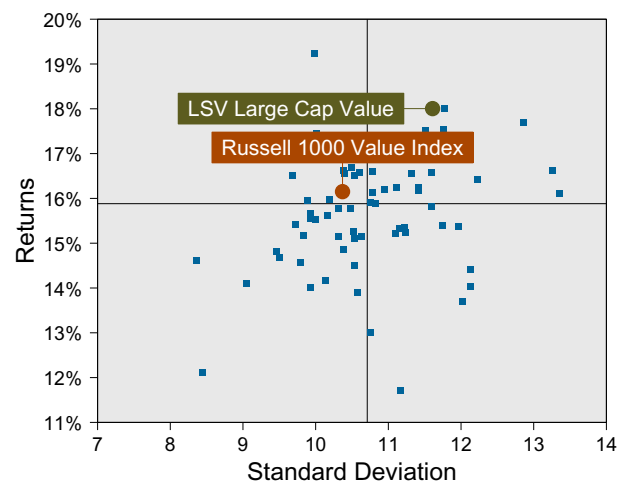
Performance vs CAI Large Cap Value (Gross)



Relative Return vs Russell 1000 Value Index



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



Parametric Clifton SmallCap Period Ended September 30, 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.

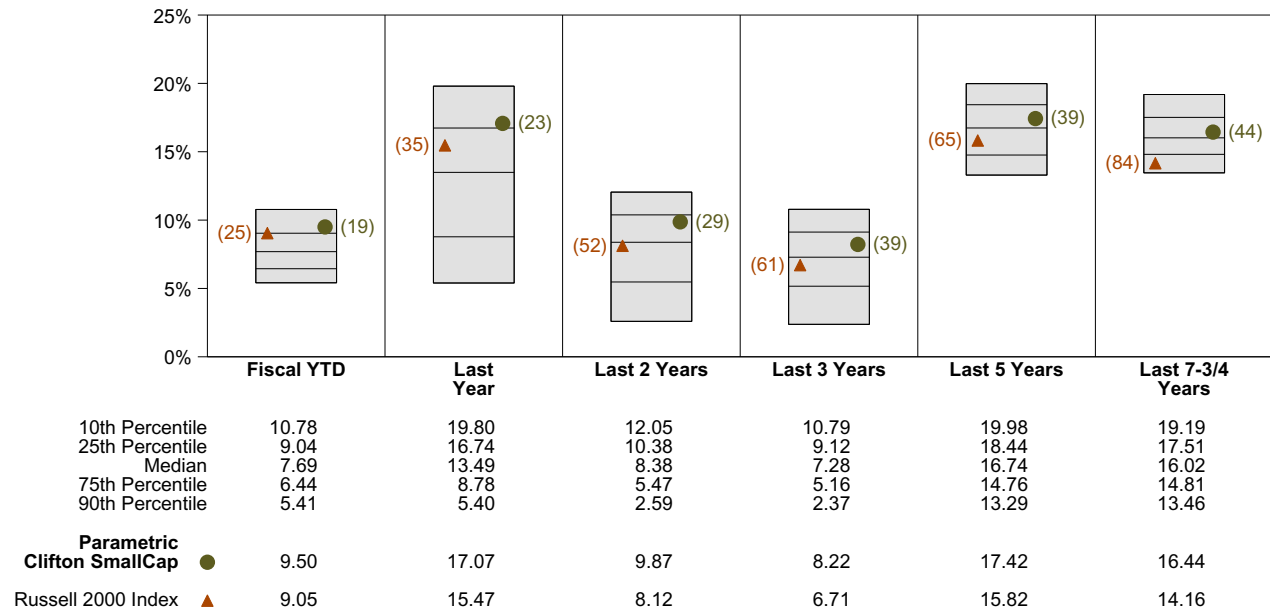
Quarterly Summary and Highlights

- Parametric Clifton SmallCap's portfolio posted a 9.50% return for the quarter placing it in the 19 percentile of the CAI Small Capitalization group for the quarter and in the 23 percentile for the last year.
- Parametric Clifton SmallCap's portfolio outperformed the Russell 2000 Index by 0.45% for the quarter and outperformed the Russell 2000 Index for the year by 1.60%.

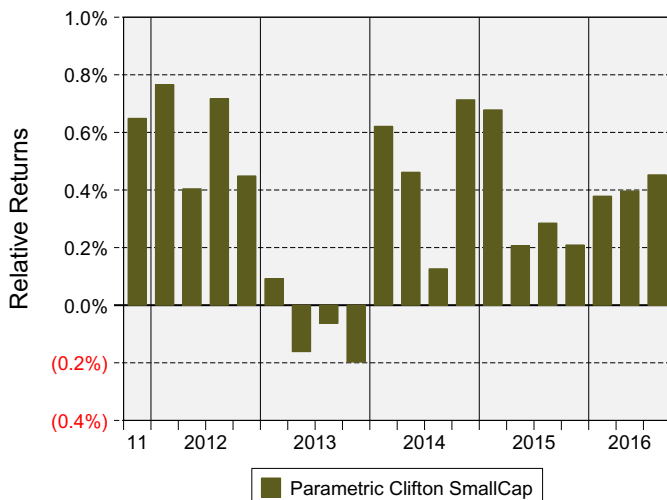
Quarterly Asset Growth

Beginning Market Value	\$46,373,876
Net New Investment	\$-5,756,569
Investment Gains/(Losses)	\$4,344,492
Ending Market Value	\$44,961,799

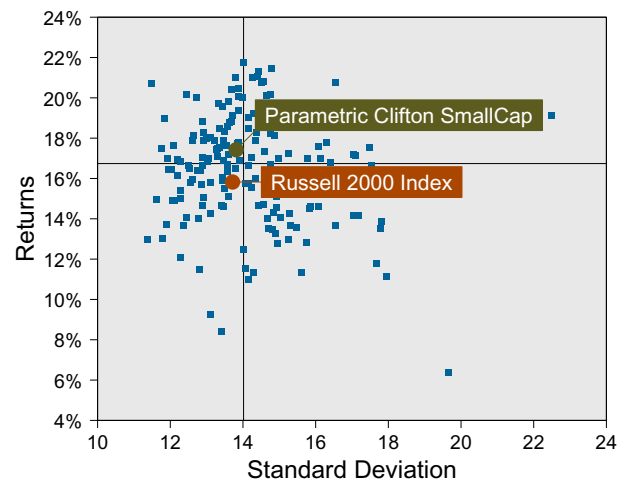
Performance vs CAI Small Capitalization (Gross)



Relative Return vs Russell 2000 Index



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



PIMCO RAE

Period Ended September 30, 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.

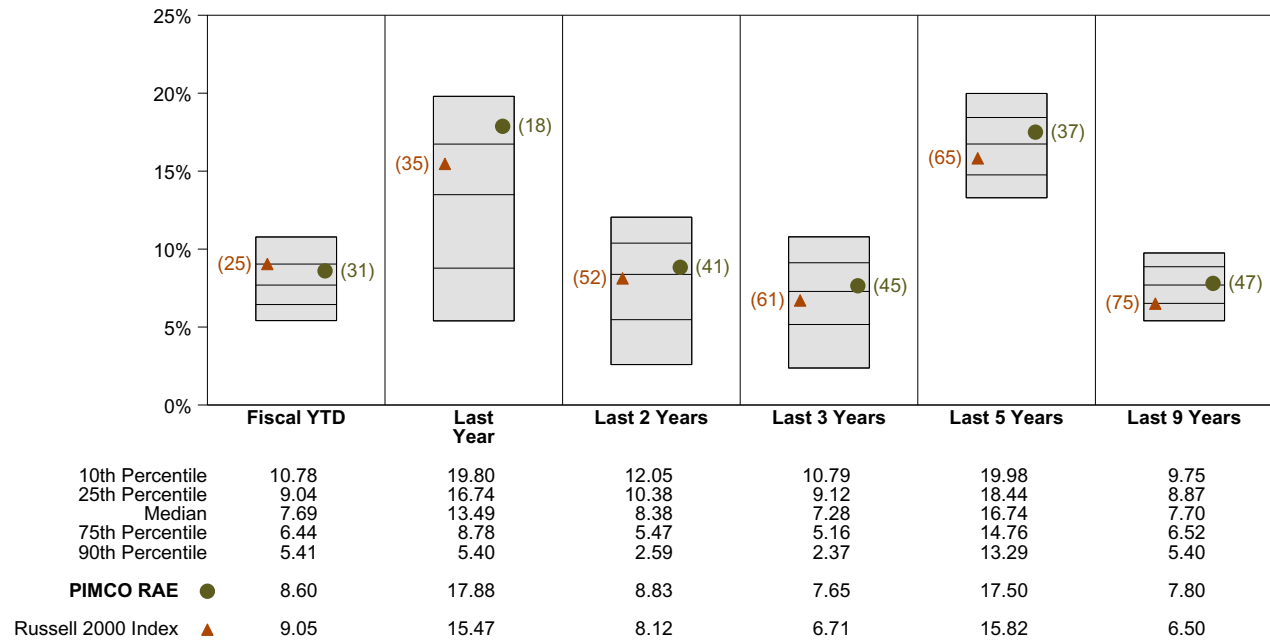
Quarterly Summary and Highlights

- PIMCO RAE's portfolio posted a 8.60% return for the quarter placing it in the 31 percentile of the CAI Small Capitalization group for the quarter and in the 18 percentile for the last year.
- PIMCO RAE's portfolio underperformed the Russell 2000 Index by 0.44% for the quarter and outperformed the Russell 2000 Index for the year by 2.41%.

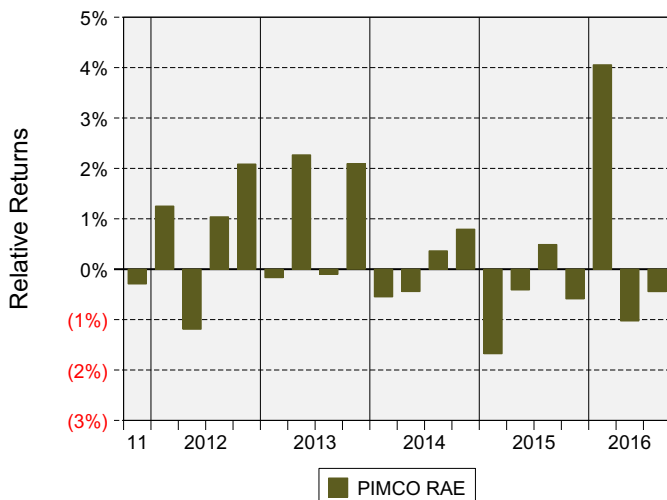
Quarterly Asset Growth

Beginning Market Value	\$33,210,801
Net New Investment	\$-21,880
Investment Gains/(Losses)	\$2,856,291
Ending Market Value	\$36,045,212

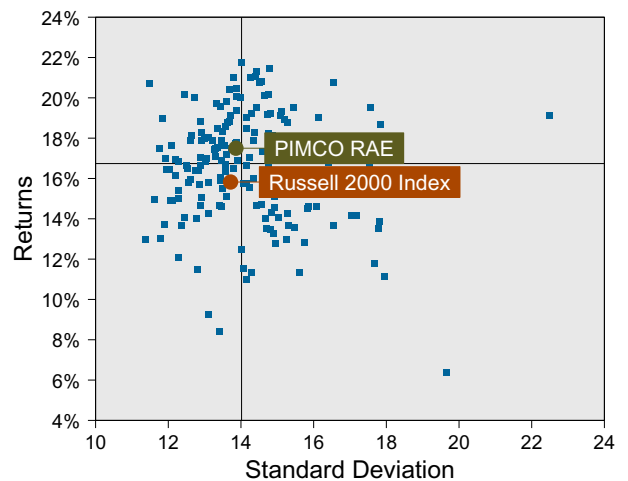
Performance vs CAI Small Capitalization (Gross)



Relative Return vs Russell 2000 Index



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



DFA Intl Small Cap Value Period Ended September 30, 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.

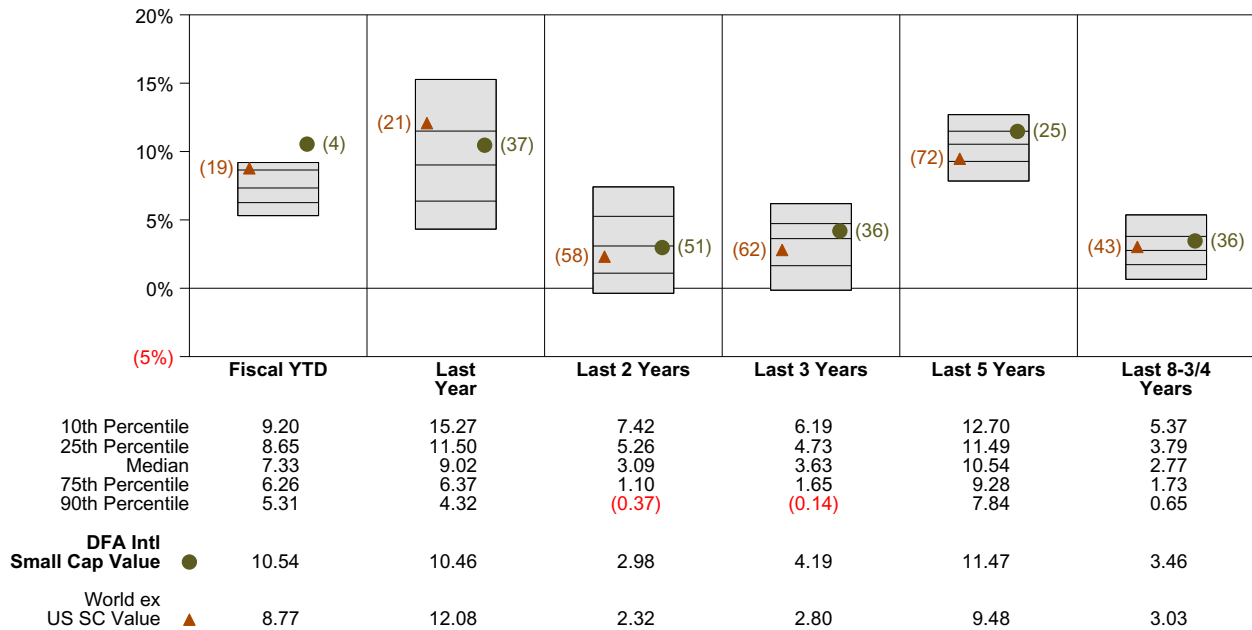
Quarterly Summary and Highlights

- DFA Intl Small Cap Value's portfolio posted a 10.54% return for the quarter placing it in the 4 percentile of the Lipper International Small Cap Funds group for the quarter and in the 37 percentile for the last year.
- DFA Intl Small Cap Value's portfolio outperformed the World ex US SC Value by 1.77% for the quarter and underperformed the World ex US SC Value for the year by 1.62%.

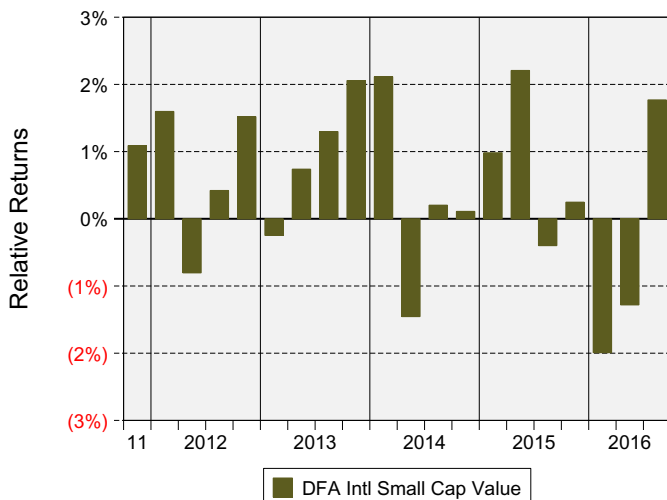
Quarterly Asset Growth

Beginning Market Value	\$16,873,372
Net New Investment	\$0
Investment Gains/(Losses)	\$1,778,946
Ending Market Value	\$18,652,318

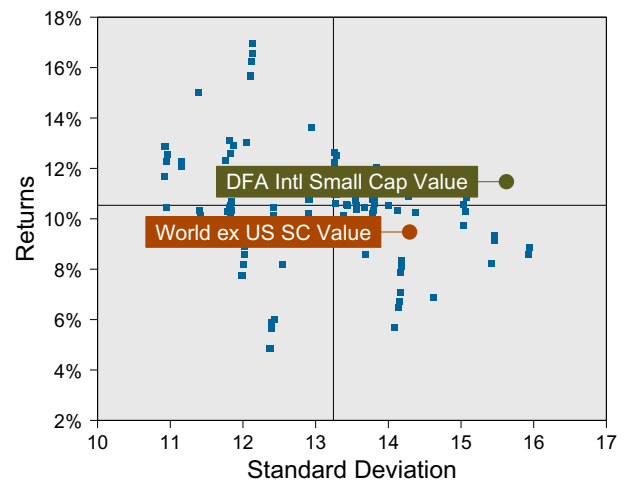
Performance vs Lipper International Small Cap Funds (Net)



Relative Return vs World ex US SC Value



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



LSV Intl Value

Period Ended September 30, 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.**

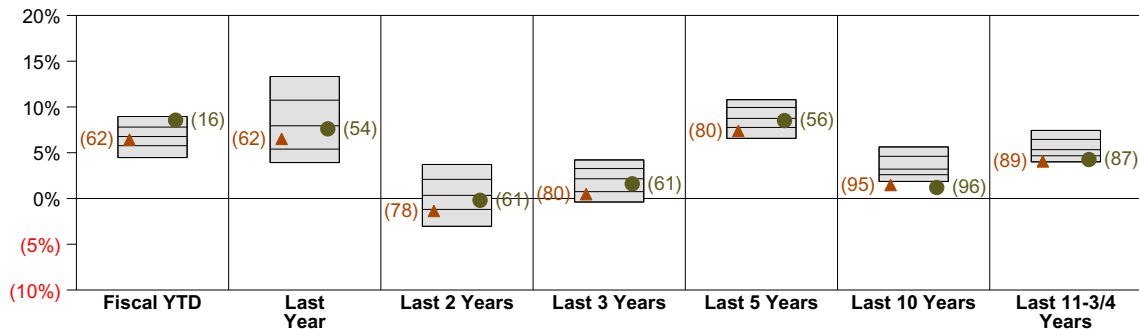
Quarterly Summary and Highlights

- LSV Intl Value's portfolio posted a 8.55% return for the quarter placing it in the 16 percentile of the CAI Non-U.S. Equity Style group for the quarter and in the 54 percentile for the last year.
- LSV Intl Value's portfolio outperformed the Benchmark by 2.12% for the quarter and outperformed the Benchmark for the year by 1.09%.

Quarterly Asset Growth

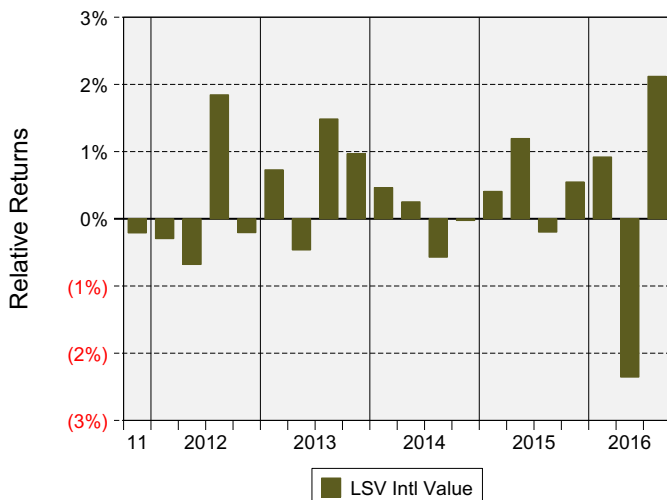
Beginning Market Value	\$69,353,781
Net New Investment	\$-69,833
Investment Gains/(Losses)	\$5,930,684
Ending Market Value	\$75,214,632

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

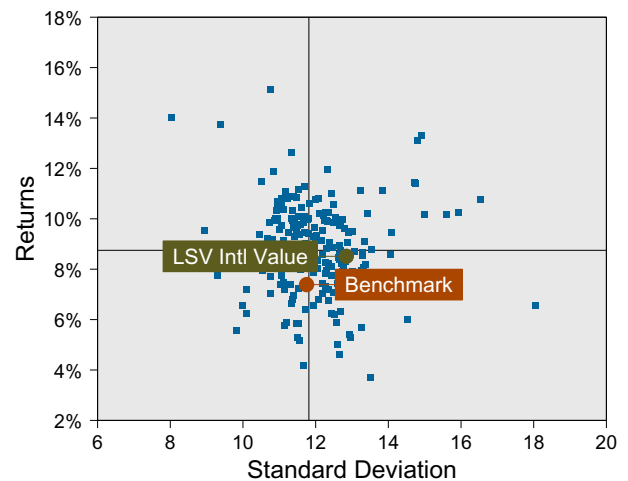


10th Percentile	8.96	13.33	3.72	4.21	10.80	5.64	7.43
25th Percentile	7.80	10.74	2.09	3.27	9.94	4.61	6.45
Median	6.77	7.94	0.34	2.16	8.75	3.20	5.34
75th Percentile	5.77	5.40	(1.19)	0.74	7.76	2.60	4.67
90th Percentile	4.47	3.92	(3.05)	(0.39)	6.57	1.86	4.00
LSV Intl Value	8.55	7.61	(0.20)	1.60	8.51	1.20	4.25
Benchmark	6.43	6.52	(1.36)	0.48	7.39	1.47	4.05

Relative Return vs Benchmark



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



Vanguard Intl Explorer Fund

Period Ended September 30, 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.

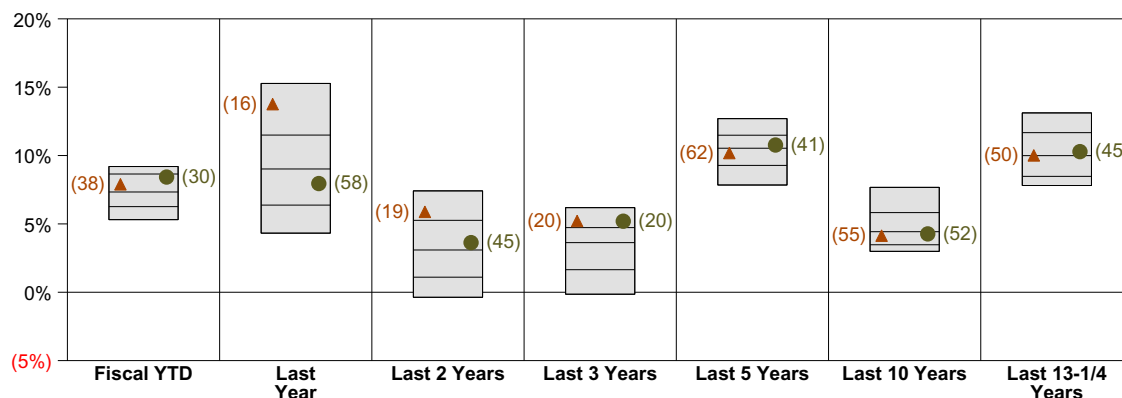
Quarterly Summary and Highlights

- Vanguard Intl Explorer Fund's portfolio posted a 8.43% return for the quarter placing it in the 30 percentile of the Lipper International Small Cap Funds group for the quarter and in the 58 percentile for the last year.
- Vanguard Intl Explorer Fund's portfolio outperformed the S&P BMI EPAC <\$2 B by 0.53% for the quarter and underperformed the S&P BMI EPAC <\$2 B for the year by 5.81%.

Quarterly Asset Growth

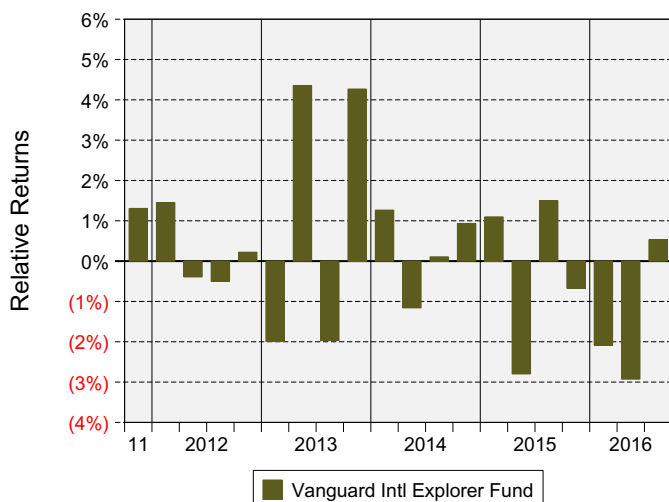
Beginning Market Value	\$17,368,355
Net New Investment	\$0
Investment Gains/(Losses)	\$1,463,625
Ending Market Value	\$18,831,980

Performance vs Lipper International Small Cap Funds (Net)

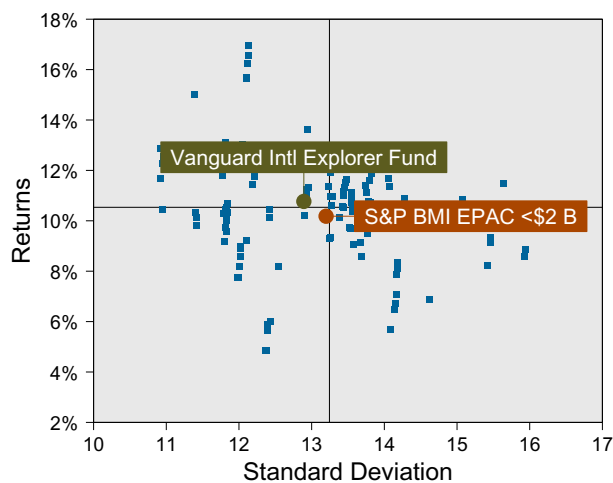


	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 13-1/4 Years
10th Percentile	9.20	15.27	7.42	6.19	12.70	7.67	13.12
25th Percentile	8.65	11.50	5.26	4.73	11.49	5.83	11.67
Median	7.33	9.02	3.09	3.63	10.54	4.43	9.99
75th Percentile	6.26	6.37	1.10	1.65	9.28	3.47	8.48
90th Percentile	5.31	4.32	(0.37)	(0.14)	7.84	2.99	7.81
Vanguard Intl Explorer Fund	● 8.43	7.95	3.63	5.20	10.77	4.27	10.29
S&P BMI EPAC <\$2 B	▲ 7.90	13.76	5.88	5.21	10.18	4.14	10.01

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



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



William Blair

Period Ended September 30, 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.

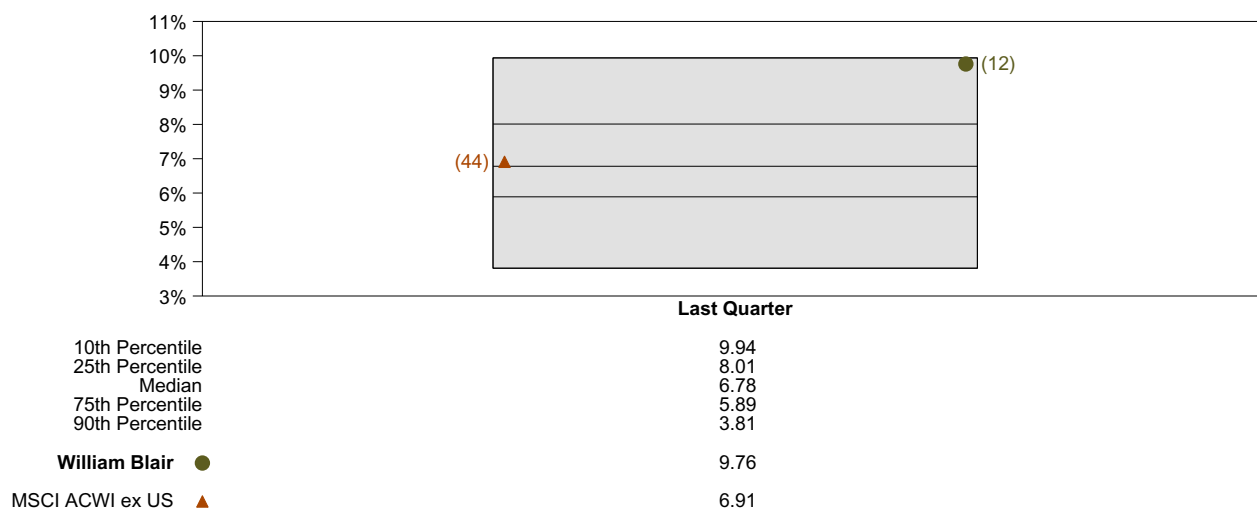
Quarterly Summary and Highlights

- William Blair's portfolio posted a 9.76% return for the quarter placing it in the 12 percentile of the CAI Core+ Growth Int'l Eq Style group for the quarter.
- William Blair's portfolio outperformed the MSCI ACWI ex US by 2.85% for the quarter.

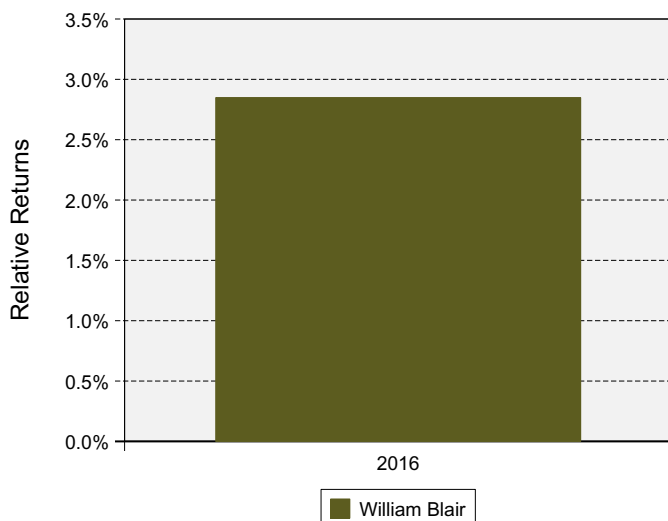
Quarterly Asset Growth

Beginning Market Value	\$59,172,826
Net New Investment	\$-20,870
Investment Gains/(Losses)	\$5,774,286
Ending Market Value	\$64,926,242

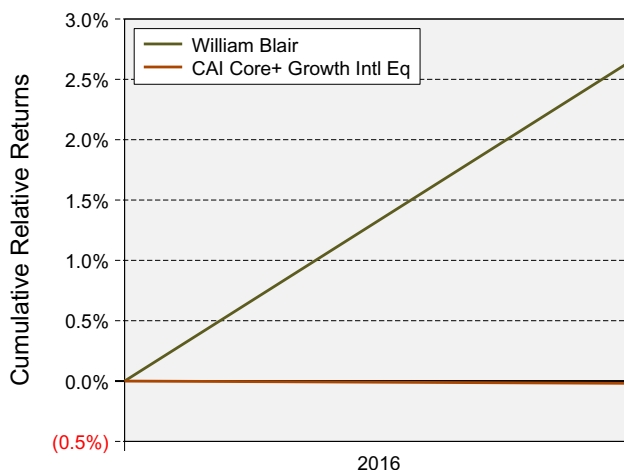
Performance vs CAI Core+ Growth Int'l Eq Style (Gross)



Relative Return vs MSCI ACWI ex US



Cumulative Returns vs MSCI ACWI ex US



Declaration Total Return Period Ended September 30, 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.

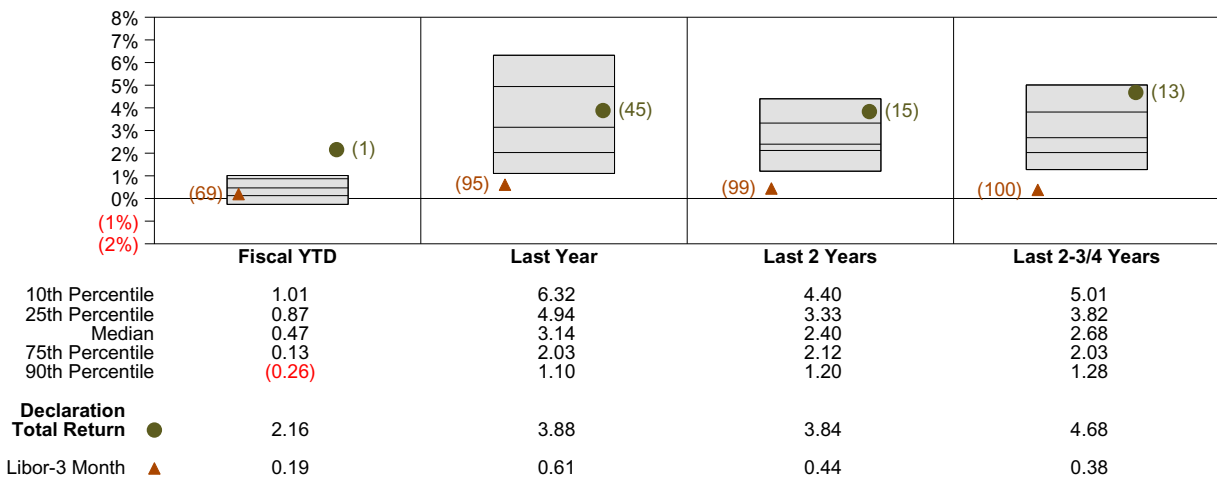
Quarterly Summary and Highlights

- Declaration Total Return's portfolio posted a 2.16% return for the quarter placing it in the 1 percentile of the CAI Intermediate Fixed Income Mut Funds group for the quarter and in the 45 percentile for the last year.
- Declaration Total Return's portfolio outperformed the Libor-3 Month by 1.96% for the quarter and outperformed the Libor-3 Month for the year by 3.27%.

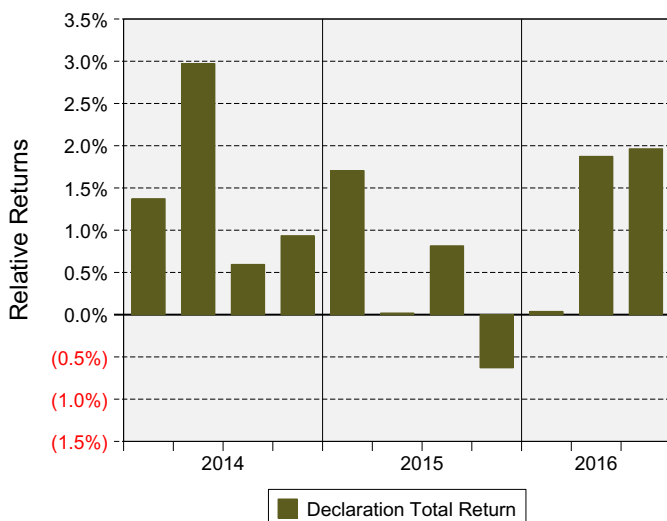
Quarterly Asset Growth

Beginning Market Value	\$80,036,248
Net New Investment	\$-28,632
Investment Gains/(Losses)	\$1,725,663
Ending Market Value	\$81,733,279

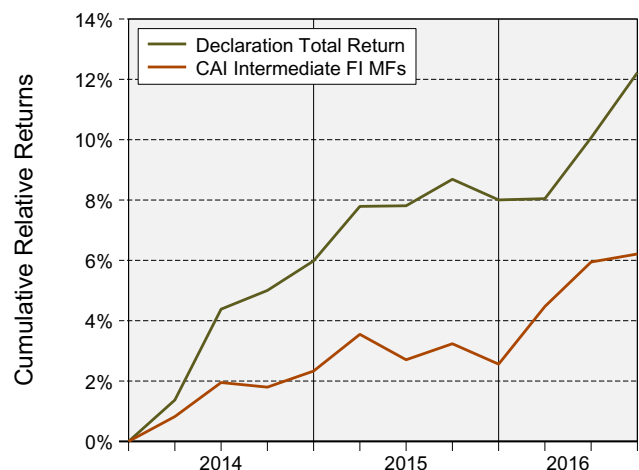
Performance vs CAI Intermediate Fixed Income Mut Funds (Net)



Relative Return vs Libor-3 Month



Cumulative Returns vs Libor-3 Month



PIMCO DiSCO II

Period Ended September 30, 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.

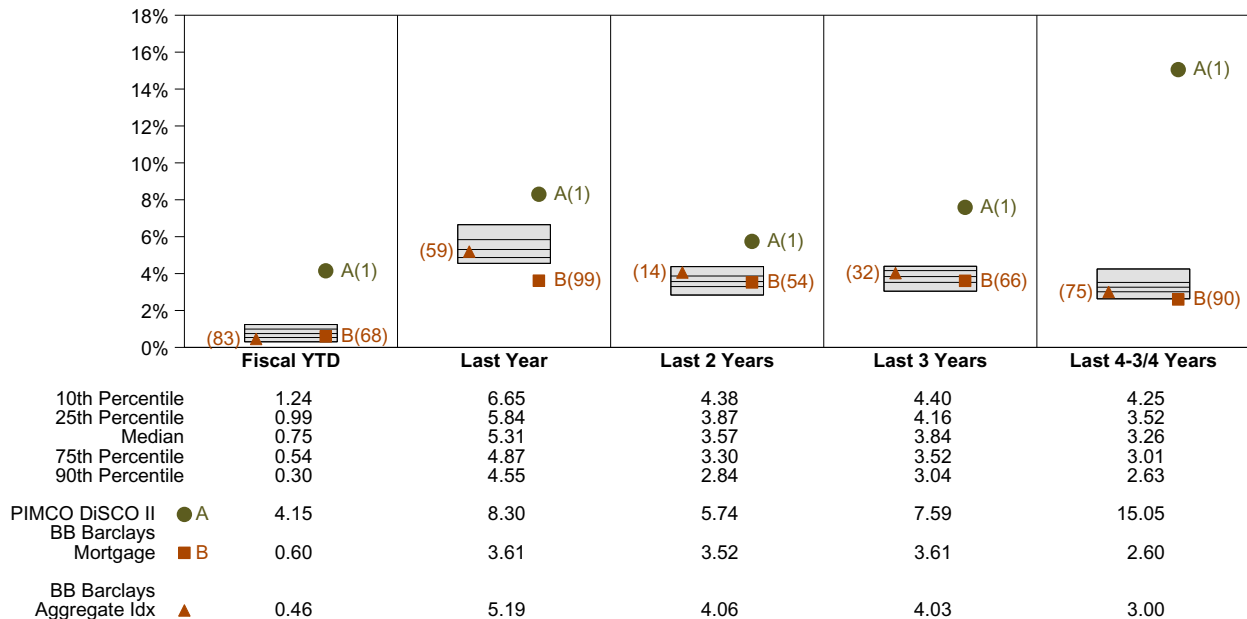
Quarterly Summary and Highlights

- PIMCO DiSCO II's portfolio posted a 4.15% 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 BB Barclays Aggregate Idx by 3.69% for the quarter and outperformed the BB Barclays Aggregate Idx for the year by 3.11%.

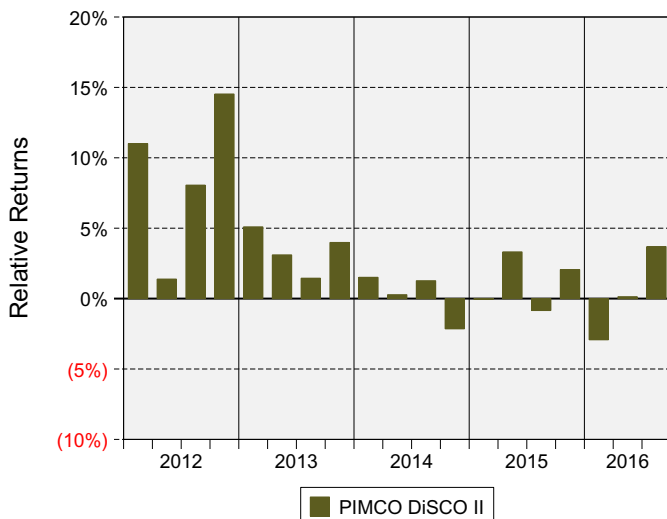
Quarterly Asset Growth

Beginning Market Value	\$82,450,671
Net New Investment	\$0
Investment Gains/(Losses)	\$3,421,647
Ending Market Value	\$85,872,318

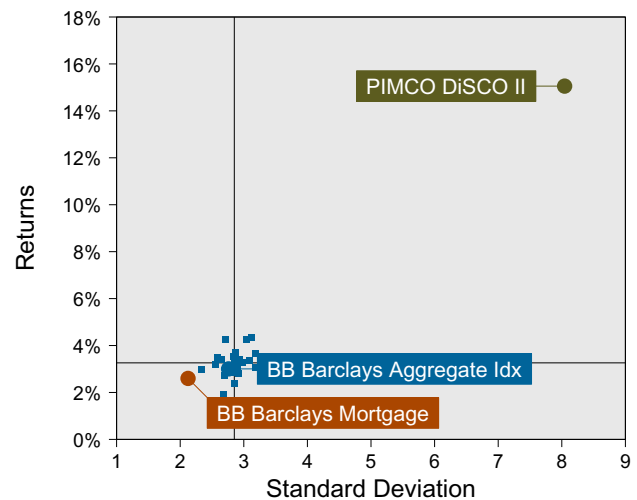
Performance vs CAI Core Bond Mutual Funds (Net)



Relative Return vs BB Barclays Aggregate Idx



CAI Core Bond Mutual Funds (Net) Annualized Four and Three-Quarter Year Risk vs Return



PIMCO Bravo II Fund

Period Ended September 30, 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.

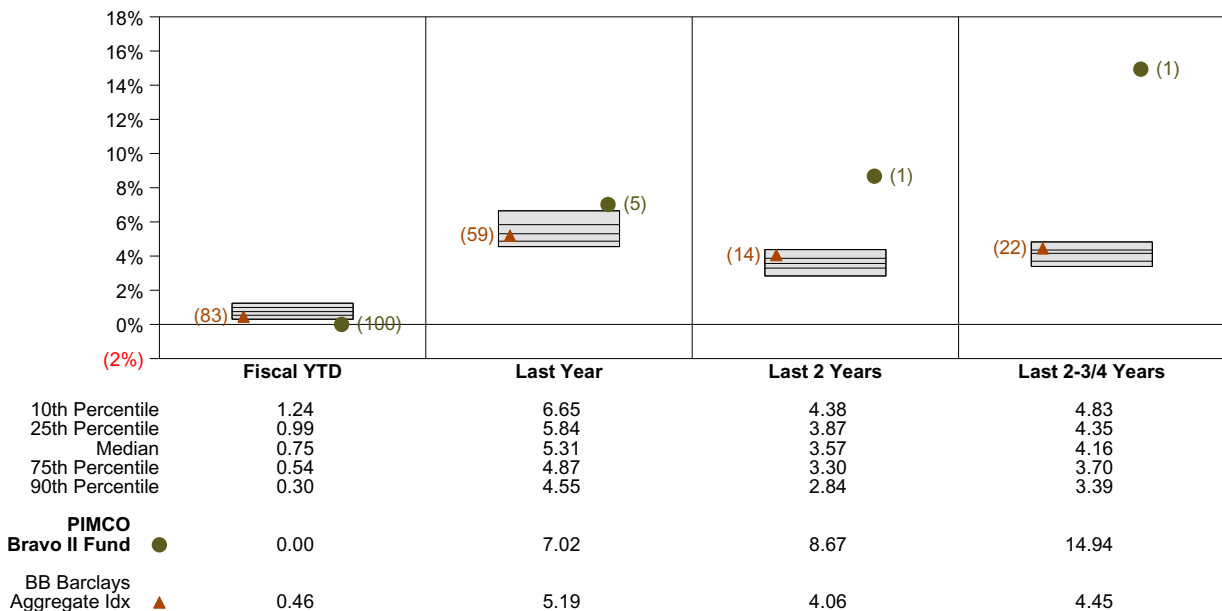
Quarterly Summary and Highlights

- PIMCO Bravo II Fund's portfolio posted a 0.00% return for the quarter placing it in the 100 percentile of the CAI Core Bond Mutual Funds group for the quarter and in the 5 percentile for the last year.
- PIMCO Bravo II Fund's portfolio underperformed the BB Barclays Aggregate Idx by 0.46% for the quarter and outperformed the BB Barclays Aggregate Idx for the year by 1.82%.

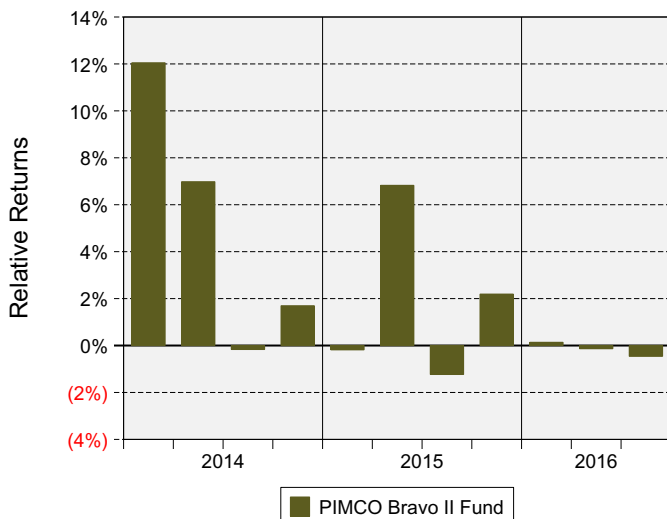
Quarterly Asset Growth

Beginning Market Value	\$47,082,300
Net New Investment	\$0
Investment Gains/(Losses)	\$0
Ending Market Value	\$47,082,300

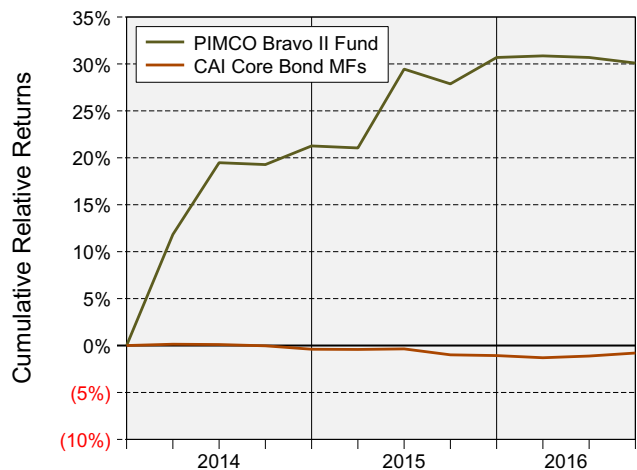
Performance vs CAI Core Bond Mutual Funds (Net)



Relative Return vs BB Barclays Aggregate Idx



Cumulative Returns vs BB Barclays Aggregate Idx



Prudential

Period Ended September 30, 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.

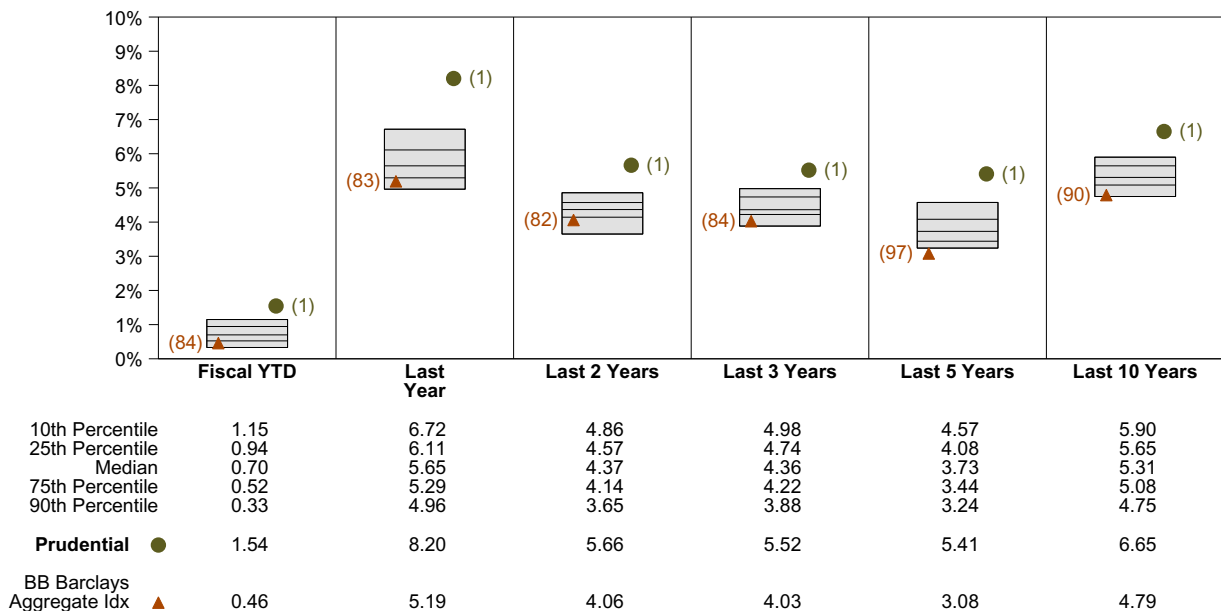
Quarterly Summary and Highlights

- Prudential's portfolio posted a 1.54% return for the quarter placing it in the 1 percentile of the CAI Core Bond Fixed Income group for the quarter and in the 1 percentile for the last year.
- Prudential's portfolio outperformed the BB Barclays Aggregate Idx by 1.09% for the quarter and outperformed the BB Barclays Aggregate Idx for the year by 3.01%.

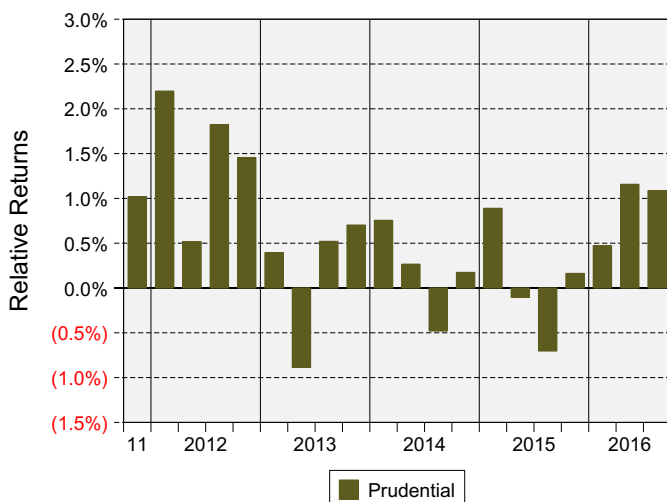
Quarterly Asset Growth

Beginning Market Value	\$110,445,990
Net New Investment	\$-1,074,635
Investment Gains/(Losses)	\$1,706,120
Ending Market Value	\$111,077,475

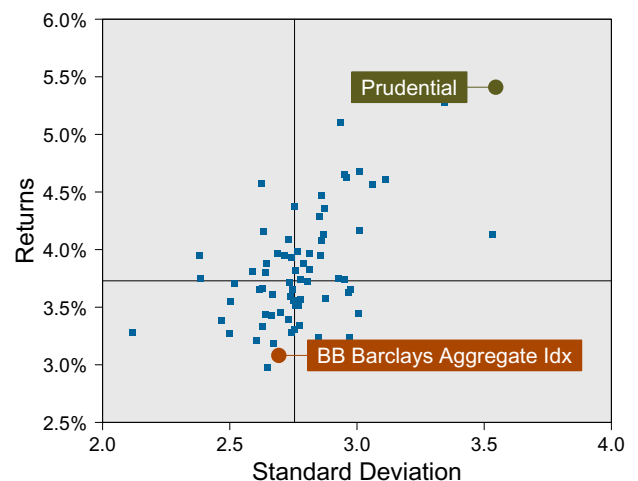
Performance vs CAI Core Bond Fixed Income (Gross)



Relative Return vs BB Barclays Aggregate Idx



CAI Core Bond Fixed Income (Gross) Annualized Five Year Risk vs Return



SSgA US Govt Cr Bd Index Period Ended September 30, 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.

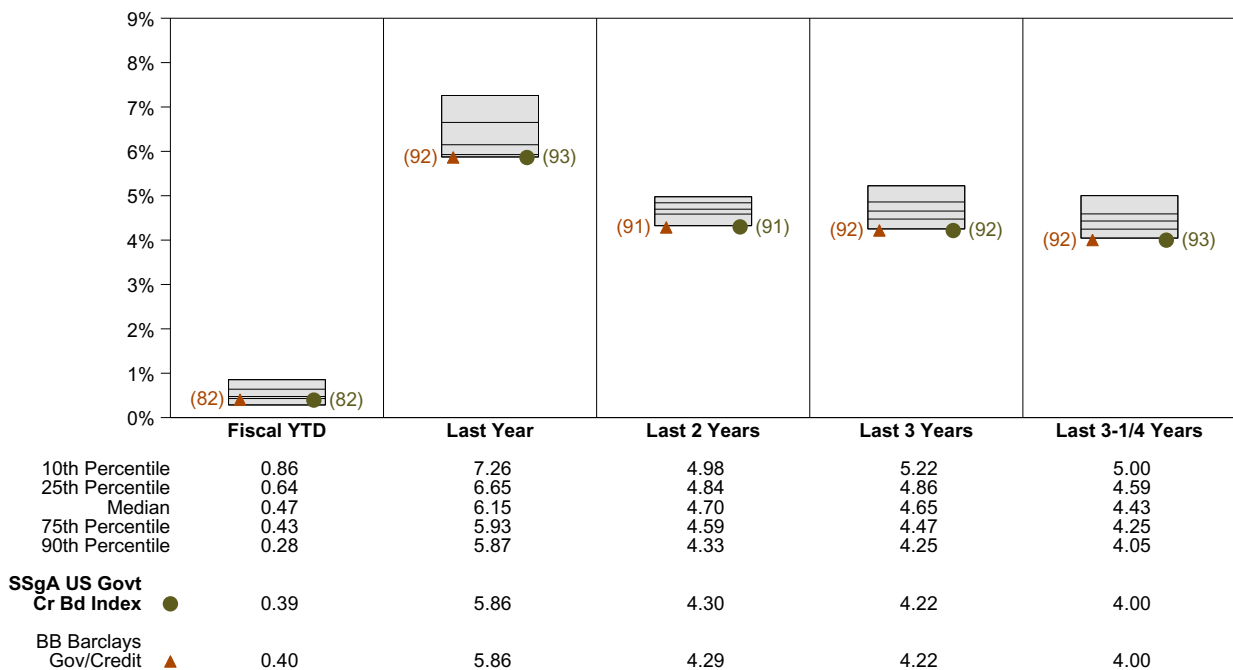
Quarterly Summary and Highlights

- SSgA US Govt Cr Bd Index's portfolio posted a 0.39% return for the quarter placing it in the 82 percentile of the CAI Government/Credit group for the quarter and in the 93 percentile for the last year.
- SSgA US Govt Cr Bd Index's portfolio underperformed the BB Barclays Gov/Credit by 0.01% for the quarter and underperformed the BB Barclays Gov/Credit for the year by 0.00%.

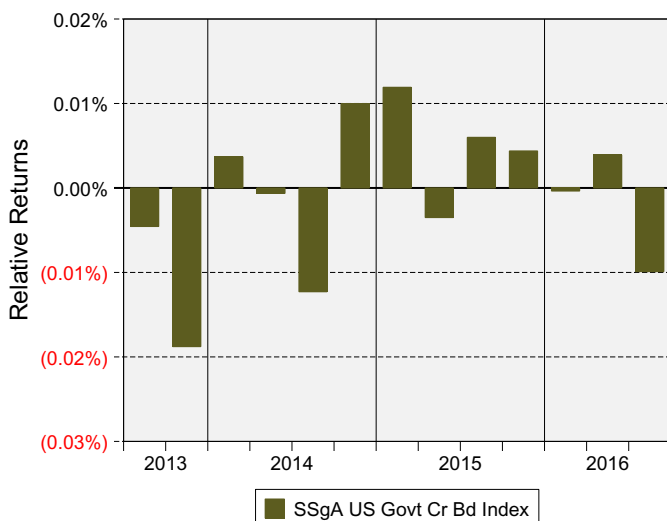
Quarterly Asset Growth

Beginning Market Value	\$143,350,650
Net New Investment	\$-3,012,125
Investment Gains/(Losses)	\$563,422
Ending Market Value	\$140,901,947

Performance vs CAI Government/Credit (Gross)

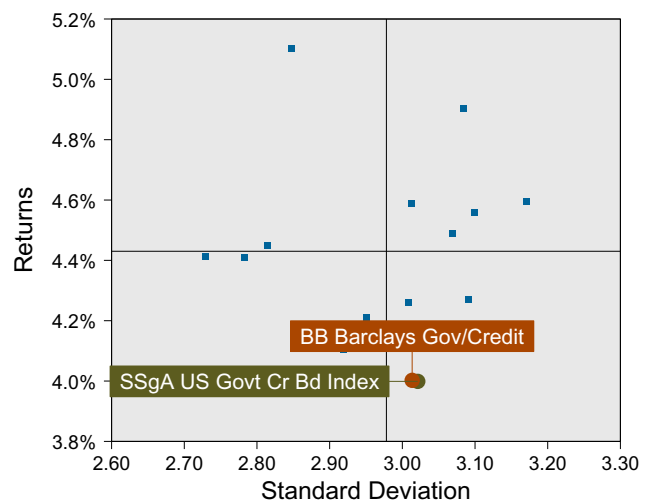


Relative Return vs BB Barclays Gov/Credit



CAI Government/Credit (Gross)

Annualized Three and One-Quarter Year Risk vs Return



Wells Capital Period Ended September 30, 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.

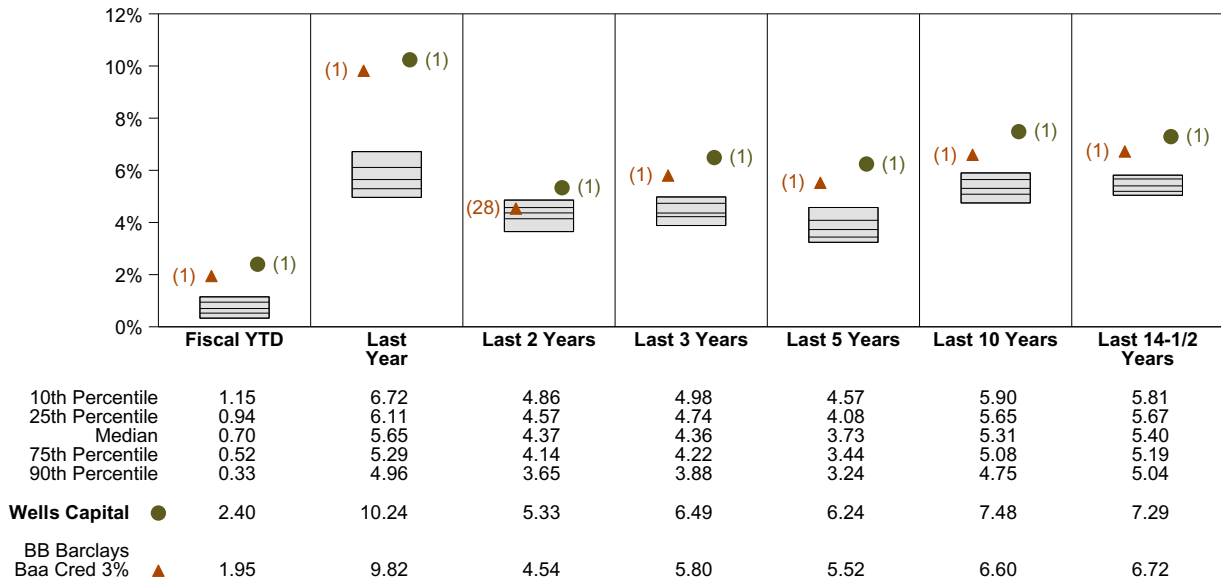
Quarterly Summary and Highlights

- Wells Capital's portfolio posted a 2.40% return for the quarter placing it in the 1 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 BB Barclays Baa Cred 3% by 0.45% for the quarter and outperformed the BB Barclays Baa Cred 3% for the year by 0.42%.

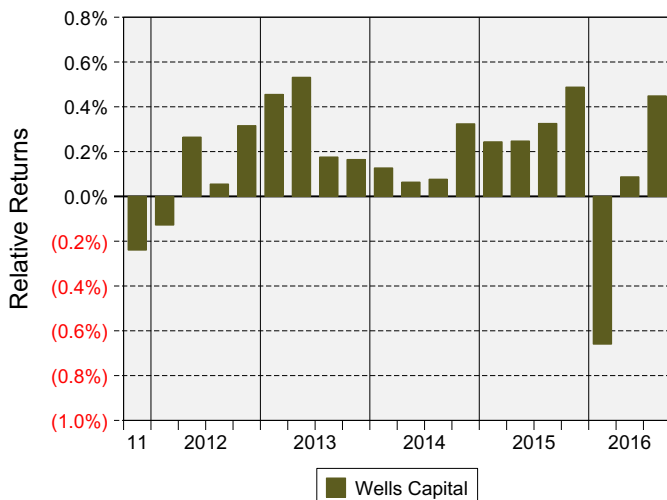
Quarterly Asset Growth

Beginning Market Value	\$312,412,735
Net New Investment	\$-9,140,328
Investment Gains/(Losses)	\$7,496,268
Ending Market Value	\$310,768,674

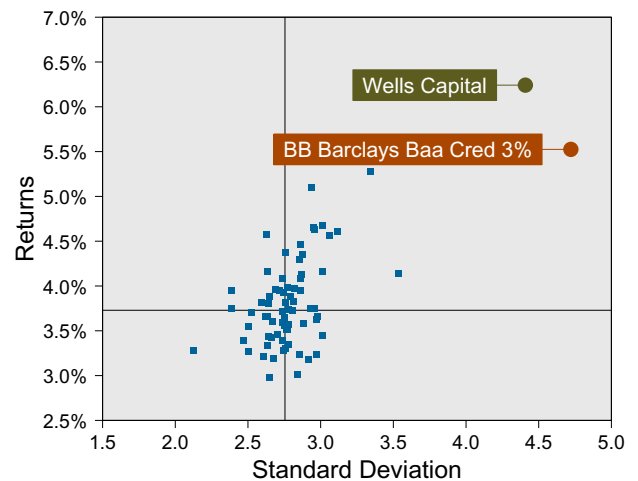
Performance vs CAI Core Bond Fixed Income (Gross)



Relative Return vs BB Barclays Baa Cred 3%



CAI Core Bond Fixed Income (Gross) Annualized Five Year Risk vs Return



Western Asset Management Company

Period Ended September 30, 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.

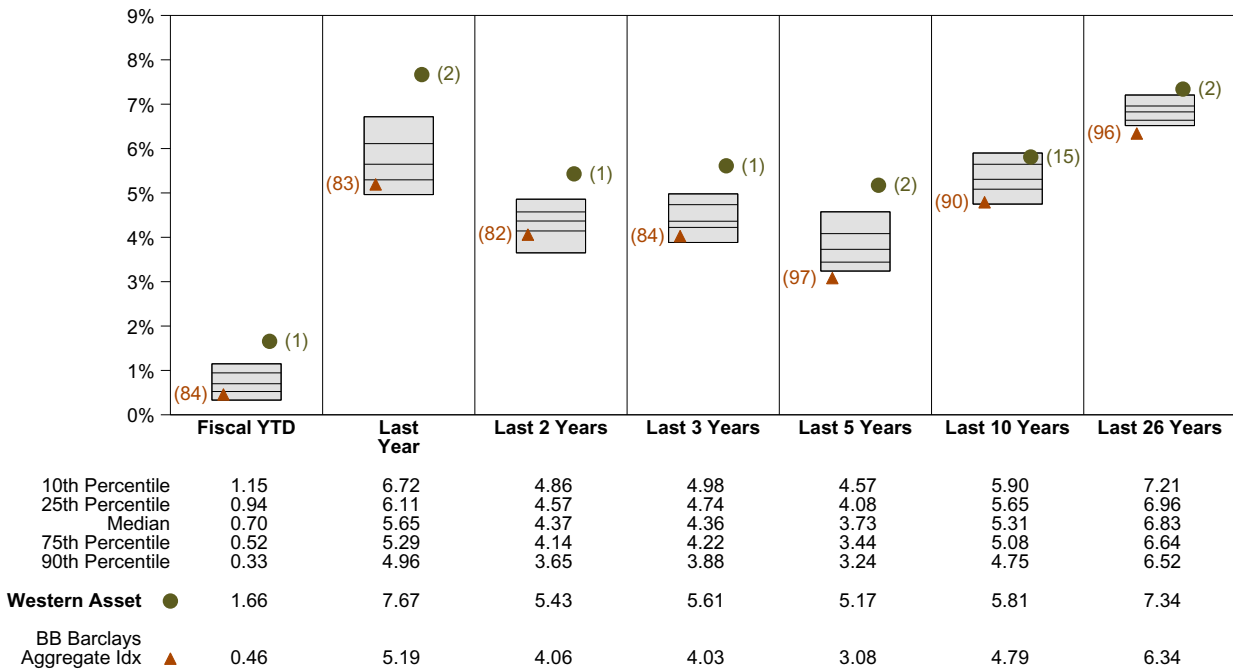
Quarterly Summary and Highlights

- Western Asset's portfolio posted a 1.66% return for the quarter placing it in the 1 percentile of the CAI Core Bond Fixed Income group for the quarter and in the 2 percentile for the last year.
- Western Asset's portfolio outperformed the BB Barclays Aggregate Idx by 1.20% for the quarter and outperformed the BB Barclays Aggregate Idx for the year by 2.47%.

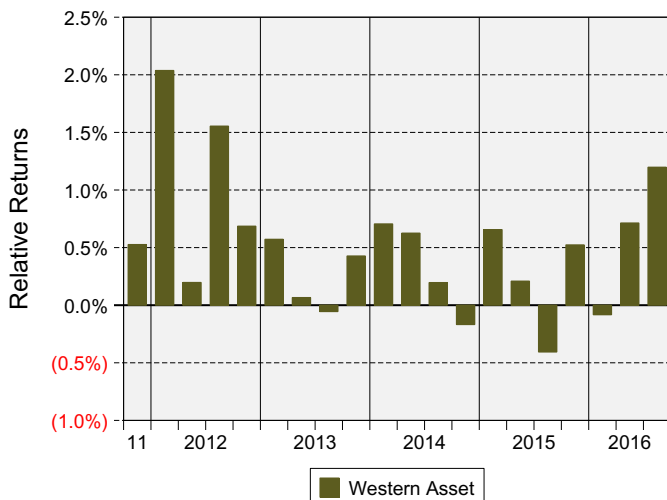
Quarterly Asset Growth

Beginning Market Value	\$309,027,255
Net New Investment	\$-3,104,664
Investment Gains/(Losses)	\$5,115,982
Ending Market Value	\$311,038,572

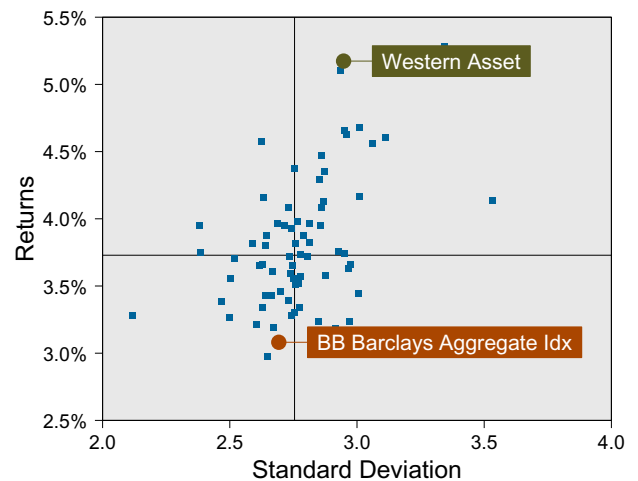
Performance vs CAI Core Bond Fixed Income (Gross)



Relative Return vs BB Barclays Aggregate Idx



CAI Core Bond Fixed Income (Gross) Annualized Five Year Risk vs Return



Western TIPS Period Ended September 30, 2016

Investment Philosophy

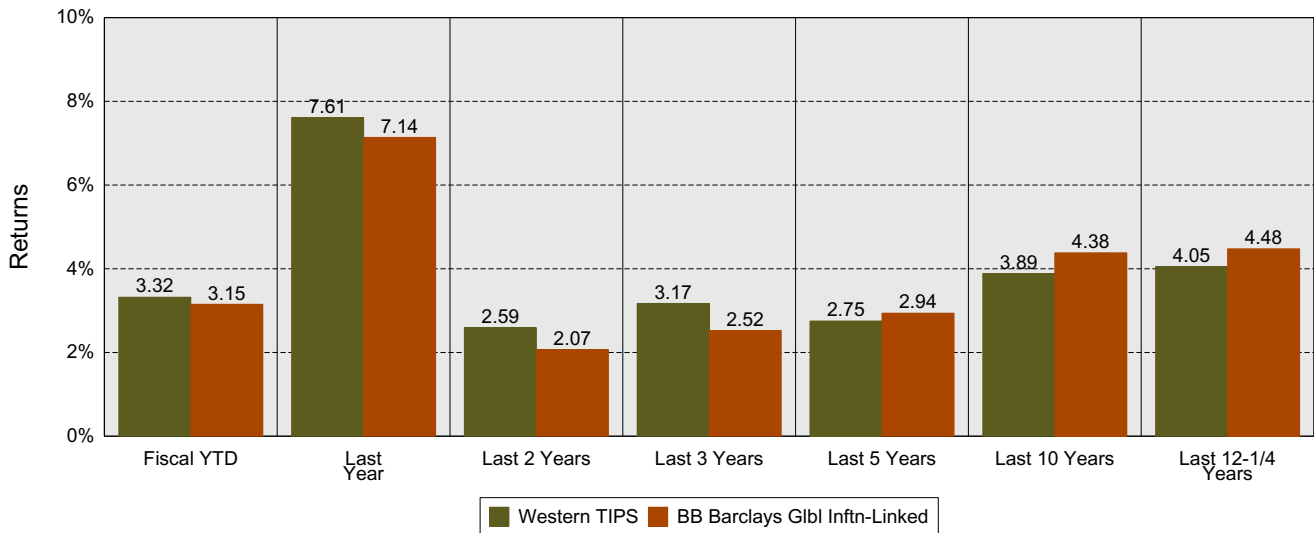
Western Asset's Global Inflation-Linked composite includes portfolios that employ an active, team-managed investment approach around a long-term, value-oriented investment philosophy. Constructed primarily of inflation-indexed securities, these portfolios use diversified strategies in seeking to add value while minimizing risk. Value can be added through country selection, term structure, issue selection, duration management and currency management. **Barclays US TIPS through 12/31/2009 and Barclays Global Inflation-Linked thereafter.**

Quarterly Summary and Highlights

- Western TIPS's portfolio outperformed the BB Barclays Gbl Inftn-Linked by 0.17% for the quarter and outperformed the BB Barclays Gbl Inftn-Linked for the year by 0.48%.

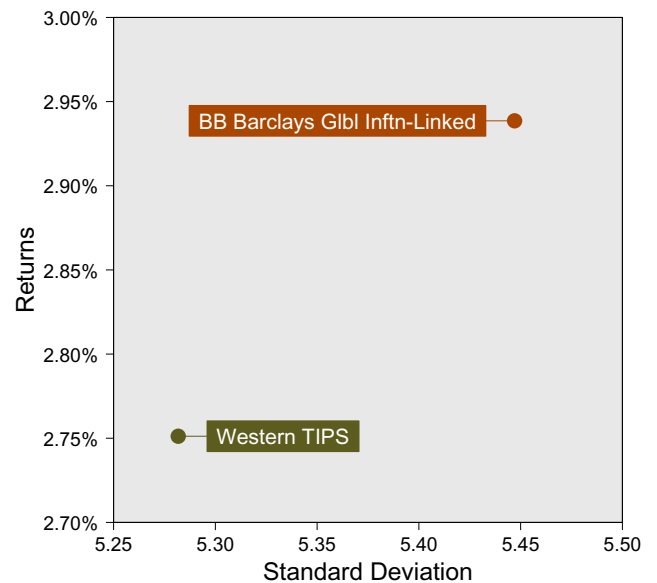
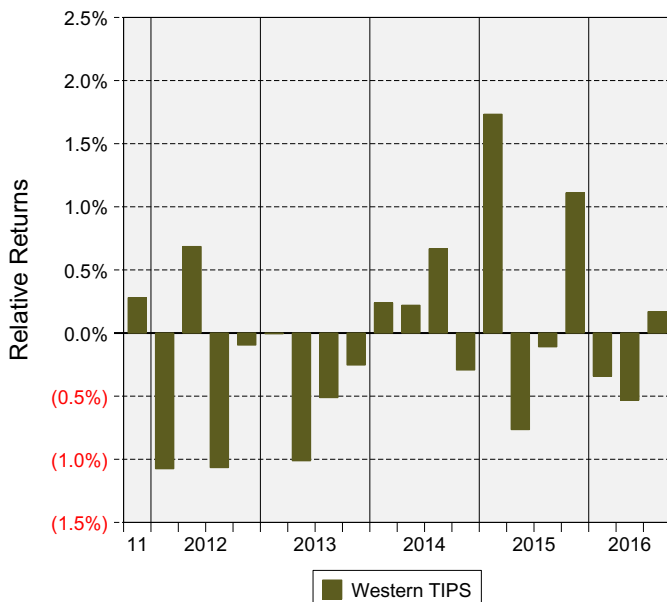
Quarterly Asset Growth

Beginning Market Value	\$113,103,474
Net New Investment	\$-38,307
Investment Gains/(Losses)	\$3,754,302
Ending Market Value	\$116,819,469



Relative Returns vs BB Barclays Gbl Inftn-Linked

Annualized Five Year Risk vs Return



Eastern Timber Opportunities Period Ended September 30, 2016

Investment Philosophy

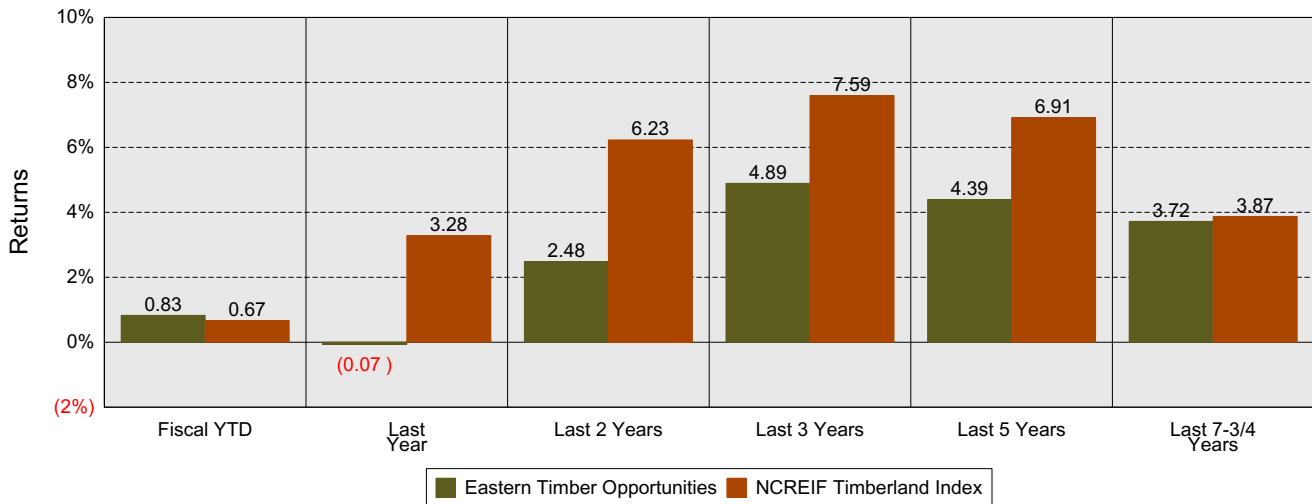
The investment objective of the Eastern Timberland Opportunities fund is to provide competitive timberland investment returns from Eastern US timberland investments by pursuing management strategies to increase timber production and land values through the investment term. TIR will maximize timber values 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

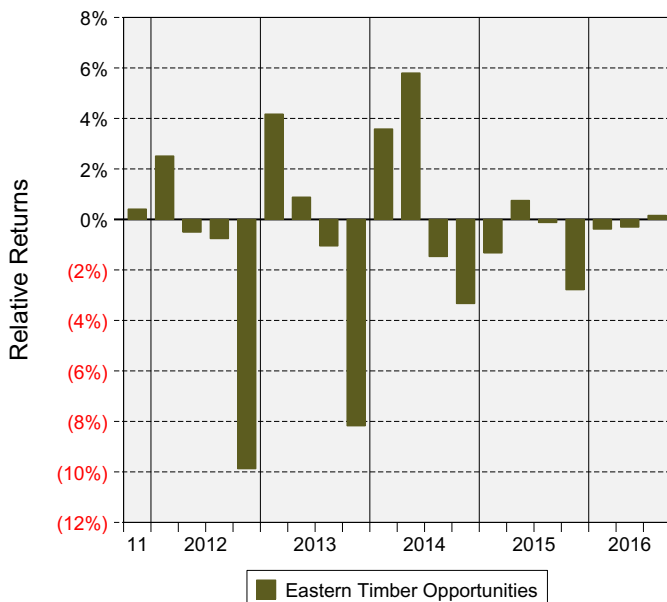
- Eastern Timber Opportunities's portfolio outperformed the NCREIF Timberland Index by 0.16% for the quarter and underperformed the NCREIF Timberland Index for the year by 3.35%.

Quarterly Asset Growth

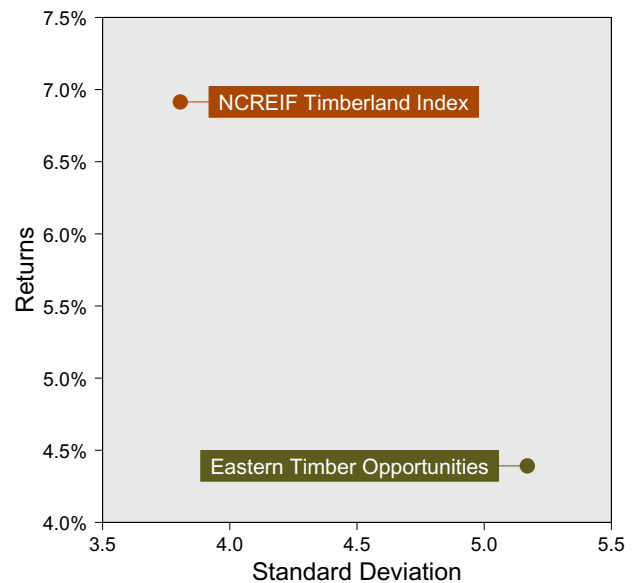
Beginning Market Value	\$59,638,348
Net New Investment	\$-491,007
Investment Gains/(Losses)	\$491,007
Ending Market Value	\$59,638,348



Relative Return vs NCREIF Timberland Index



Annualized Five Year Risk vs Return



JP Morgan Infrastructure Period Ended September 30, 2016

Investment Philosophy

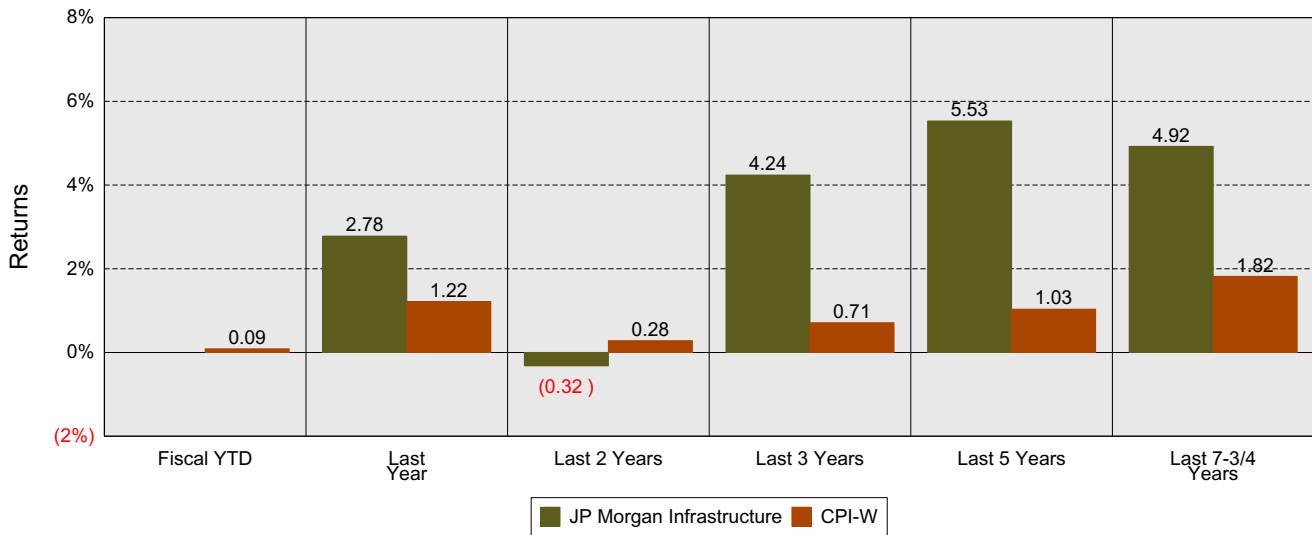
The only open-ended private commingled infrastructure fund in the U.S, the JPMorgan Infrastructure Investments Fund invests in stabilized assets in OECD countries with selected value-added opportunities, across infrastructure industry sub-sectors, including: toll roads, bridges and tunnels; oil and gas 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

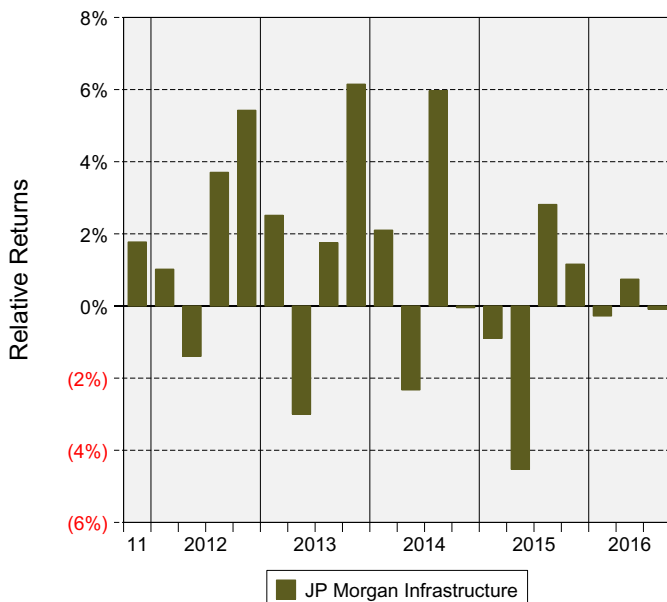
- JP Morgan Infrastructure's portfolio underperformed the CPI-W by 0.09% for the quarter and outperformed the CPI-W for the year by 1.56%.

Quarterly Asset Growth

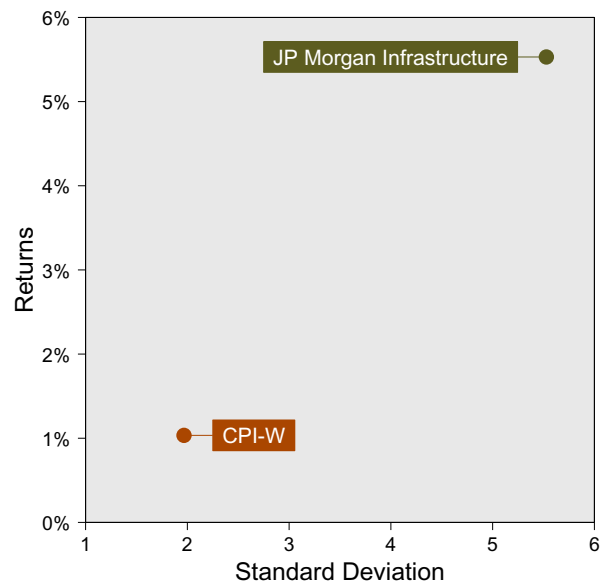
Beginning Market Value	\$75,325,819
Net New Investment	\$-2
Investment Gains/(Losses)	\$0
Ending Market Value	\$75,325,818



Relative Return vs CPI-W



Annualized Five Year Risk vs Return



Grosvenor Cust. Infrastructure Period Ended September 30, 2016

Investment Philosophy

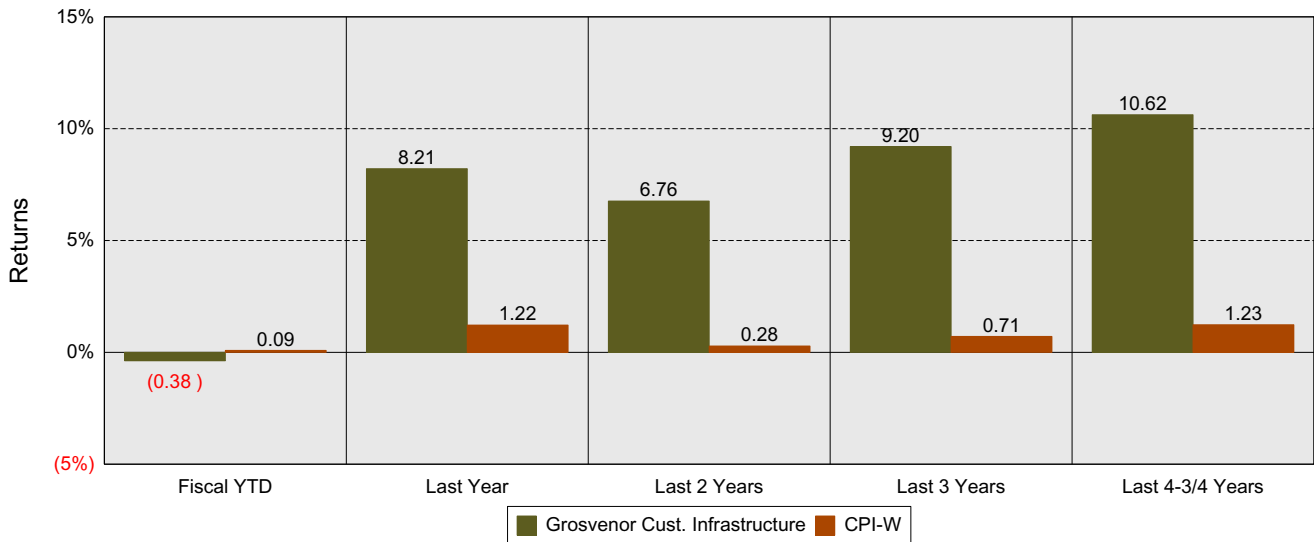
The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified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

Quarterly Summary and Highlights

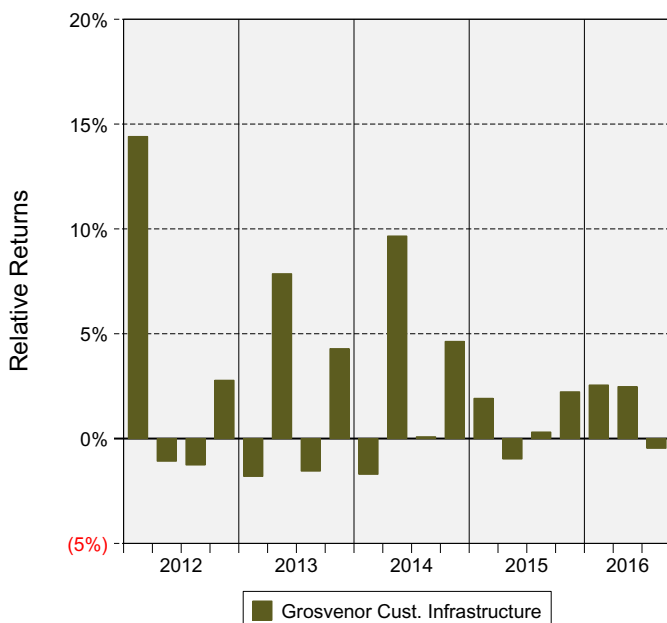
- Grosvenor Cust. Infrastructure's portfolio underperformed the CPI-W by 0.46% for the quarter and outperformed the CPI-W for the year by 6.99%.

Quarterly Asset Growth

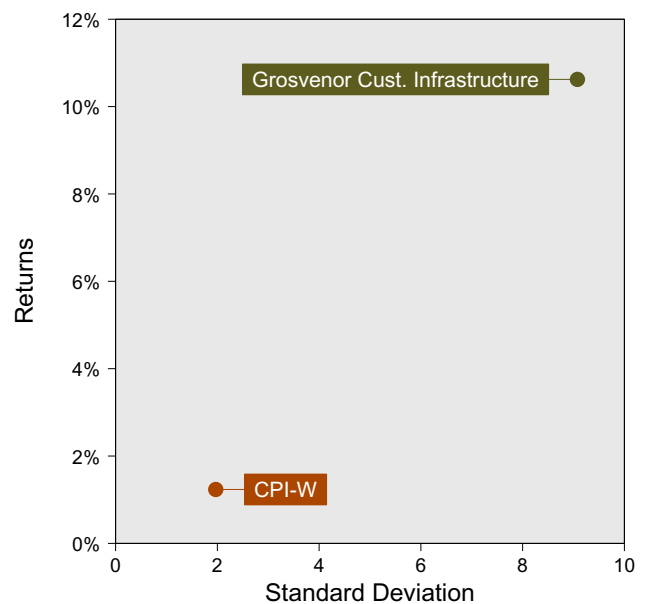
Beginning Market Value	\$20,683,558
Net New Investment	\$-616,287
Investment Gains/(Losses)	\$-75,458
Ending Market Value	\$19,991,813



Relative Return vs CPI-W



Annualized Four and Three-Quarter Year Risk vs Return



Invesco Core Real Estate Period Ended September 30, 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.

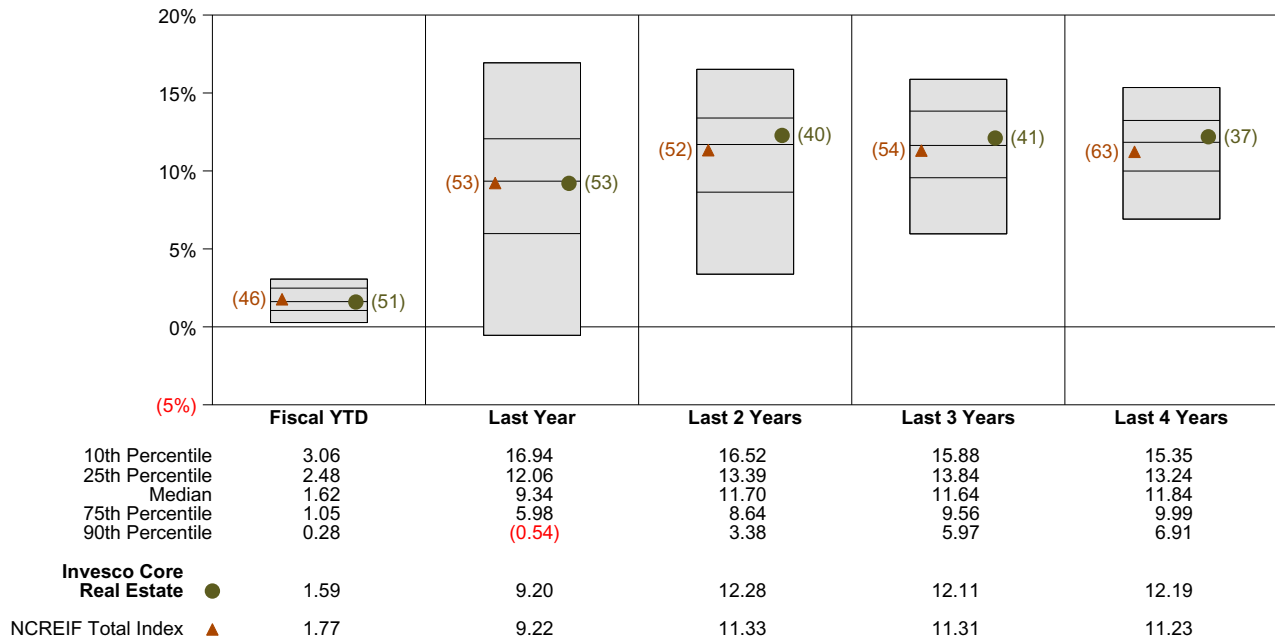
Quarterly Summary and Highlights

- Invesco Core Real Estate's portfolio posted a 1.59% return for the quarter placing it in the 51 percentile of the CAI Total Real Estate Database group for the quarter and in the 53 percentile for the last year.
- Invesco Core Real Estate's portfolio underperformed the NCREIF Total Index by 0.17% for the quarter and underperformed the NCREIF Total Index for the year by 0.02%.

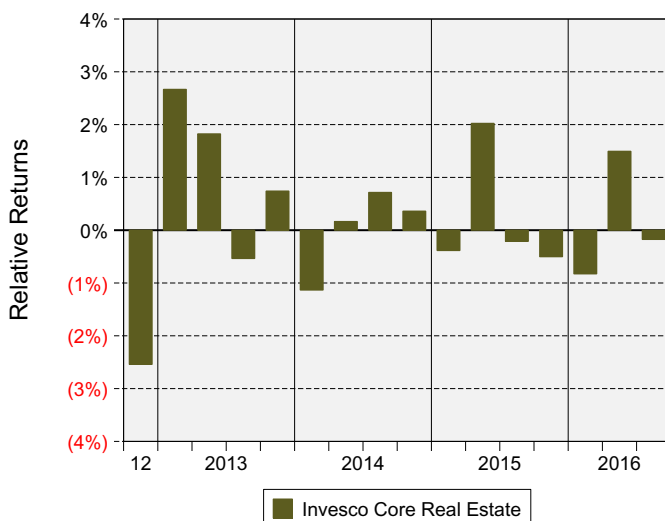
Quarterly Asset Growth

Beginning Market Value	\$61,898,343
Net New Investment	\$-54,440
Investment Gains/(Losses)	\$1,040,305
Ending Market Value	\$62,884,208

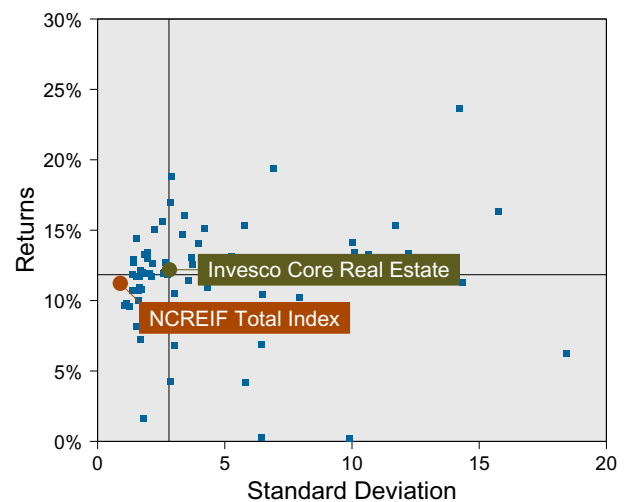
Performance vs CAI Total Real Estate Database (Net)



Relative Return vs NCREIF Total Index



CAI Total Real Estate Database (Net) Annualized Four Year Risk vs Return



JP Morgan Real Estate Period Ended September 30, 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.

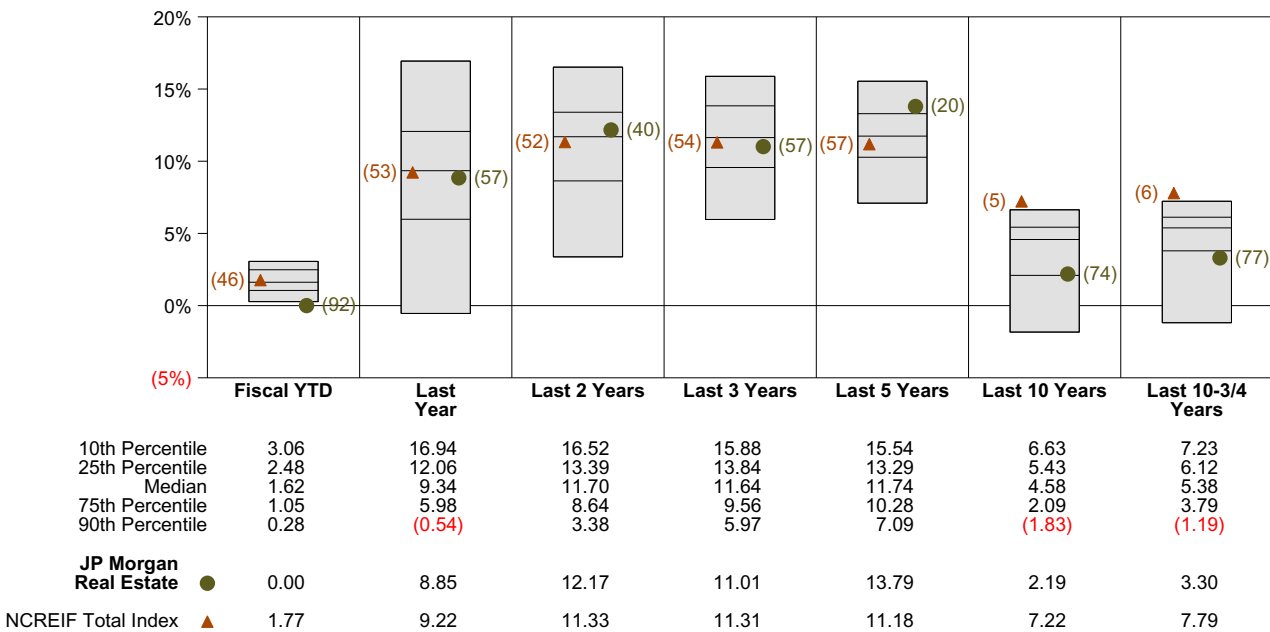
Quarterly Summary and Highlights

- JP Morgan Real Estate's portfolio posted a 0.00% return for the quarter placing it in the 92 percentile of the CAI Total Real Estate Database group for the quarter and in the 57 percentile for the last year.
- JP Morgan Real Estate's portfolio underperformed the NCREIF Total Index by 1.77% for the quarter and underperformed the NCREIF Total Index for the year by 0.38%.

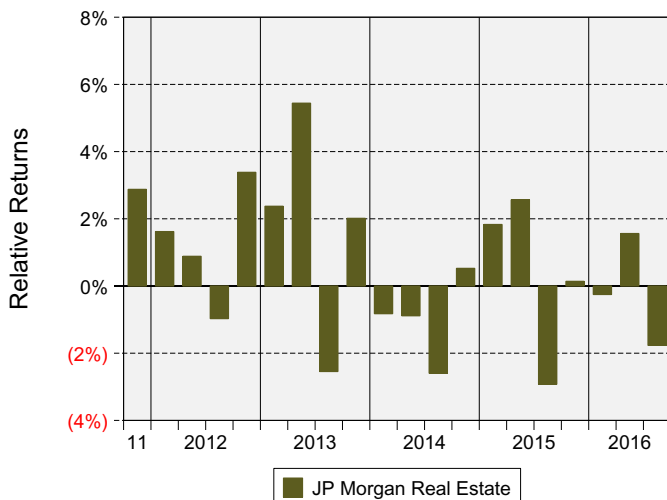
Quarterly Asset Growth

Beginning Market Value	\$69,386,283
Net New Investment	\$-2
Investment Gains/(Losses)	\$0
Ending Market Value	\$69,386,281

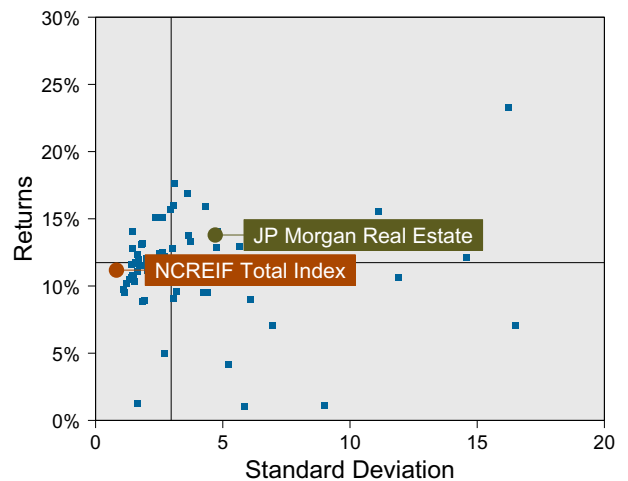
Performance vs CAI Total Real Estate Database (Net)



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 September 30, 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.

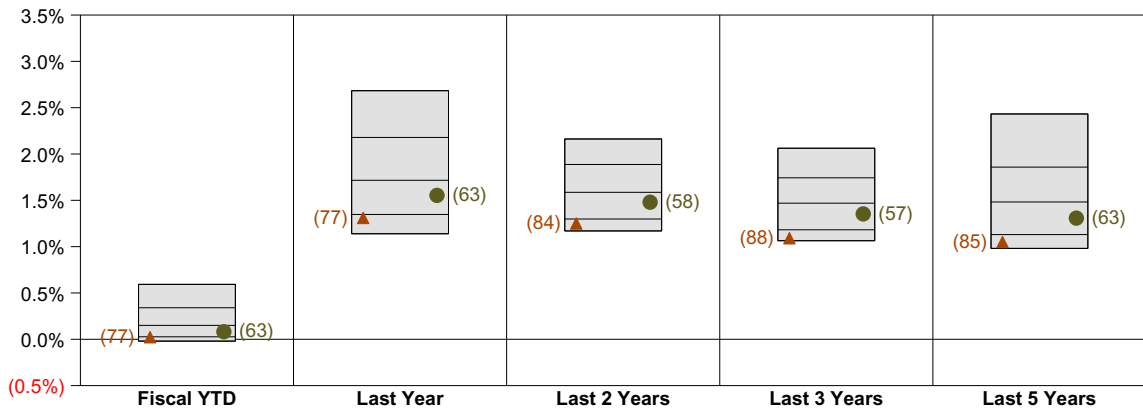
Quarterly Summary and Highlights

- JP Morgan Short Term Bonds's portfolio posted a 0.08% return for the quarter placing it in the 63 percentile of the CAI Defensive Fixed Income group for the quarter and in the 63 percentile for the last year.
- JP Morgan Short Term Bonds's portfolio outperformed the BB Barclays Gov/Cred 1-3Y by 0.06% for the quarter and outperformed the BB Barclays Gov/Cred 1-3Y for the year by 0.24%.

Quarterly Asset Growth

Beginning Market Value	\$276,949,790
Net New Investment	\$-77,913
Investment Gains/(Losses)	\$225,438
Ending Market Value	\$277,097,315

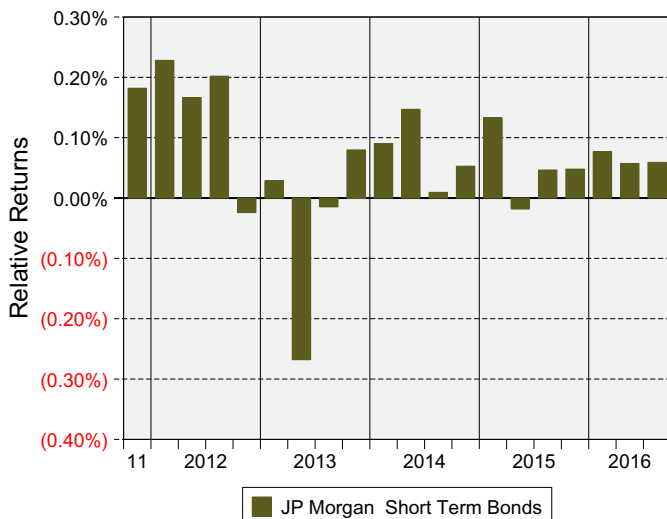
Performance vs CAI Defensive Fixed Income (Gross)



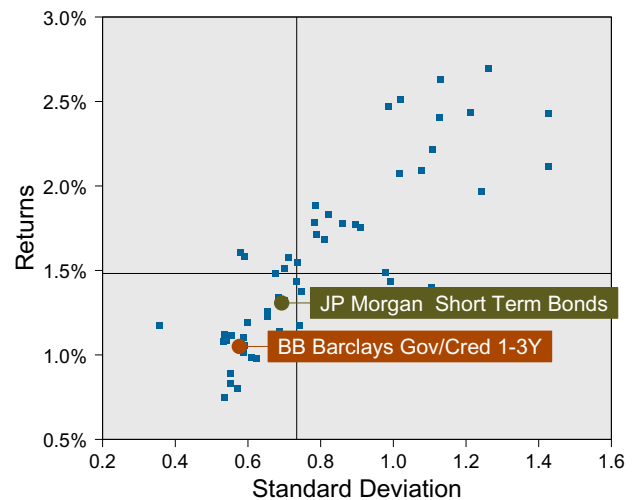
	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years
10th Percentile	0.59	2.68	2.16	2.06	2.43
25th Percentile	0.34	2.18	1.89	1.74	1.86
Median	0.15	1.72	1.59	1.47	1.48
75th Percentile	0.03	1.35	1.30	1.18	1.13
90th Percentile	(0.02)	1.14	1.17	1.06	0.98

	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years
JP Morgan Short Term Bonds ●	0.08	1.55	1.48	1.35	1.31
BB Barclays Gov/Cred 1-3Y ▲	0.02	1.31	1.25	1.09	1.05

Relative Return vs BB Barclays Gov/Cred 1-3Y



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



Barings Short Term Bonds Period Ended September 30, 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.

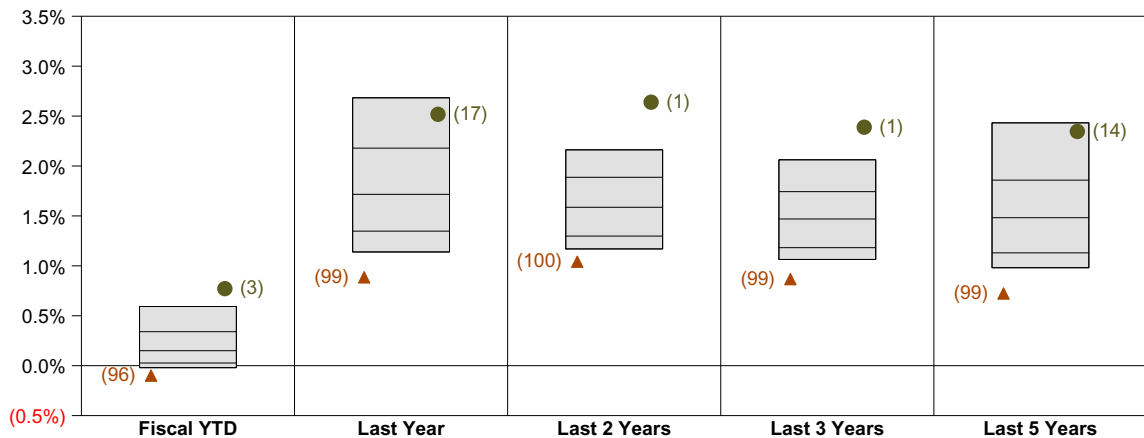
Quarterly Summary and Highlights

- Barings Short Term Bonds's portfolio posted a 0.77% return for the quarter placing it in the 3 percentile of the CAI Defensive Fixed Income group for the quarter and in the 17 percentile for the last year.
- Barings Short Term Bonds's portfolio outperformed the BB Barclays Gov 1-3 Yr by 0.87% for the quarter and outperformed the BB Barclays Gov 1-3 Yr for the year by 1.63%.

Quarterly Asset Growth

Beginning Market Value	\$243,416,017
Net New Investment	\$-103,781
Investment Gains/(Losses)	\$1,877,290
Ending Market Value	\$245,189,526

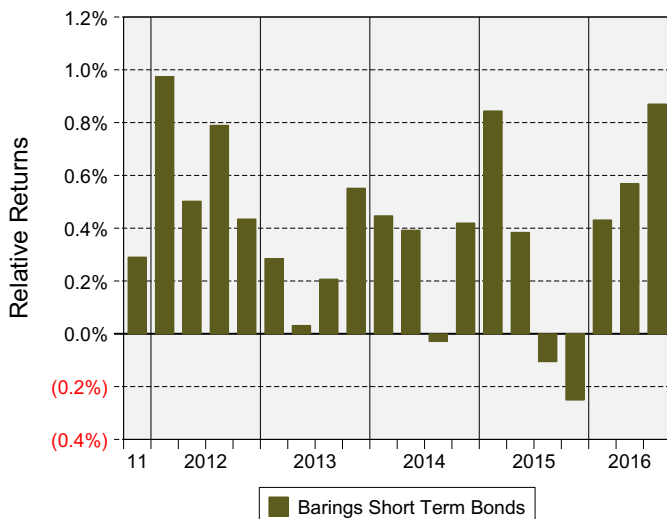
Performance vs CAI Defensive Fixed Income (Gross)



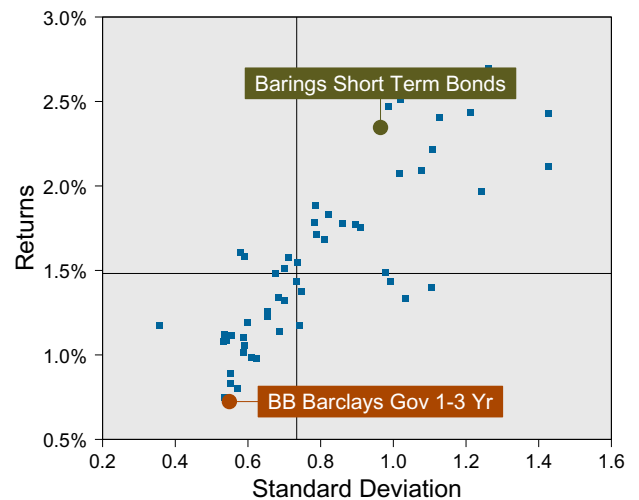
	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years
10th Percentile	0.59	2.68	2.16	2.06	2.43
25th Percentile	0.34	2.18	1.89	1.74	1.86
Median	0.15	1.72	1.59	1.47	1.48
75th Percentile	0.03	1.35	1.30	1.18	1.13
90th Percentile	(0.02)	1.14	1.17	1.06	0.98

Barings Short Term Bonds ●	0.77	2.52	2.64	2.39	2.35
BB Barclays Gov 1-3 Yr ▲	(0.10)	0.89	1.04	0.87	0.72

Relative Return vs BB Barclays Gov 1-3 Yr



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



Research and Educational Programs

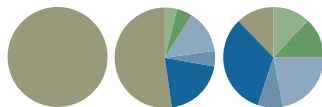
The Callan Institute provides research that updates clients on the latest industry trends while helping them learn through carefully structured educational programs. Visit www.callan.com/research to see all of our publications, or for more information contact Anna West at 415.974.5060 / institute@callan.com.

New Research from Callan's Experts

Built to Last: Strategic Guidance for Effective Investment Committees | Callan offers our high-level strategic advice for investment committees, touching on membership, investment policy statements, review processes, and fiduciary training and ongoing education.

10 Tips From Successful Investment Committees | Callan Chairman and CEO Ron Peyton and Consultant Brady O'Connell, CFA, CAIA, offer 10 tips based on their work with successful investment committees.

Risky Business | Callan research that found investors over the last 20 years have



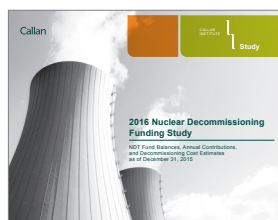
had to take on three times as much risk to earn the same return electrified the institutional investing community. We interviewed Jay Kloepfer and Julia Moriarty, CFA, about how the research was done and its implications.

Managing DC Plan Investments: A Fiduciary Handbook

Lori Lucas, CFA, covers responsibilities for DC plan fiduciaries, including investment structure, investment policy statements, QDIA oversight, and manager performance.

Ethics 101 for Investment Professionals | Callan Chairman and CEO Ron Peyton outlines his thoughts on how to create, instill, and maintain ethical standards for investment professionals. His advice: the right culture creates the best environment to maintain these standards. Firms should develop ethical guidelines that are based on principles, not rules, since the former offer better guidance for employees across the organization.

2016 Nuclear Decommissioning Funding Study | A report



by Julia Moriarty, CFA, covers 27 investor-owned and 27 public power utilities with an ownership interest in the 99 operating nuclear reactors (and 10 of the non-operating reactors) in the U.S.

How Green Is Your Bond? | Callan Analyst Rufash Lama tackles the area of green bonds, which are fixed income instruments issued specifically to support or finance environmental initiatives.

Periodicals

Real Assets Reporter, Summer/Fall 2016 | This edition explores if the boom in commercial real estate may be ending.

Private Markets Trends, Summer 2016 | Author Gary Robertson discusses the recent surge in private equity fundraising, an indication that some investors are establishing a defensive hedge as the five-year bull market pulls in its horns.

DC Observer, 2nd Quarter 2016 | Callan's Defined Contribution Practice Team outlines a framework to evaluate DC transaction fees. We explain how common they are, what they typically cost, and how they are generally paid.

Hedge Fund Monitor, 2nd Quarter 2016 | Jim McKee, director of Callan's Hedge Fund Research group, discusses the appeal of momentum-based investing strategies in the current climate of considerable economic uncertainty.

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 fall **Regional Workshop**, October 25 in New York and October 26 in Chicago, and 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 session is:

Introduction to Investments

San Francisco, April 18-19, 2017

San Francisco, July 25-26, 2017

Chicago, October 24-25, 2017

This session 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
ACR – Alpine Capital Research
AEGON USA Investment Management
AEW Capital 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
ASB Capital Management Inc.
Ativo Capital Management
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
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC
BlackRock
BMO Asset Management, Corp.
BNP Paribas Investment Partners
BNY Mellon Asset Management
Boston Partners

Manager Name
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC
Brown Brothers Harriman & Company
Brown Investment Advisory & Trust Company
Cambiar Investors, LLC
Capital Group
CastleArk Management, LLC
Causeway Capital Management
Chartwell Investment Partners
ClearBridge Investments, LLC
Cohen & Steers Capital Management, Inc.
Columbia Threadneedle Investments
Columbia Wanger Asset Management
Columbus Circle Investors
Conestoga Capital Advisors
Corbin Capital Partners, L.P.
Cornerstone Capital Management
Cramer Rosenthal McGlynn, LLC
Credit Suisse Asset Management
Crestline Investors, Inc.
D.E. Shaw Investment Management, LLC
Delaware Investments
DePrince, Race & Zollo, Inc.
Deutsche Asset Management
Diamond Hill Investments
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
Fisher Investments

Manager Name
Fort Washington Investment Advisors, Inc.
Franklin Templeton Institutional
Fred Alger Management, Inc.
Fuller & Thaler Asset Management, Inc.
GAM (USA) Inc.
GE Asset Management
GMO
Goldman Sachs Asset Management
Grand-Jean Capital Management
Guggenheim Investments
GW&K Investment Management
Harbor Capital Group Trust
Hartford Funds
Hartford Investment Management Co.
Henderson Global Investors
Hotchkis & Wiley Capital Management, LLC
HSBC Global Asset Management
Impax Asset Management Limited
Income Research + Management, Inc.
Insight Investment Management Limited
Institutional Capital LLC
INTECH Investment Management, LLC
Invesco
Investec Asset Management
Investment Counselors of Maryland, LLC
Janus Capital Management, LLC
Jarislowsky Fraser Global Investment Management
Jensen Investment Management
J.P. Morgan Asset Management
KeyCorp
Lazard Asset Management
Legal & General Investment Management America
Lincoln National Corporation
LMCG Investments, LLC
Longview Partners
Loomis, Sayles & Company, L.P.
Lord Abbett & Company
Los Angeles Capital Management
LSV Asset Management
Mackay Shields LLC
Man Investments Inc.
Manulife Asset Management
Martin Currie Inc.
McDonnell Investment Management, LLC
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)
Nikko Asset Management Co., Ltd.
Northern Trust Asset Management
Nuveen Investments, Inc.
OFI Global Asset Management
Old Mutual Asset Management
Opus Capital Management Inc.

Manager Name
O'Shaughnessy Asset Management, LLC
Pacific Alternative Asset Management Co.
Pacific Current Group
Pacific Investment Management Company
Parametric Portfolio Associates
P/E Investments
Peregrine Capital Management, Inc.
PGIM
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.
Riverbridge Partners LLC
Rockefeller & Co., Inc.
Rothschild Asset Management, Inc.
Russell Investments
Santander Global Facilities
Schroder Investment Management North America Inc.
Scout Investments
SEI Investments
Shenkman Capital Management, Inc.
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 Hartford
The London Company
The TCW Group, Inc.
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
Wasatch Advisors, Inc.
WEDGE Capital Management
Wellington Management Company, LLP
Wells Capital Management
Western Asset Management Company
William Blair & Company

September 30, 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 2016 by Callan Associates Inc.

Table of Contents

September 30, 2016

Executive Summary

Active Management Overview	2
Capital Market Review	3

Asset Allocation and Performance

Actual vs Target Asset Allocation	25
Quarterly Total Fund Attribution	26
Cumulative Total Fund Attribution	27
Historical Asset Allocation	30
Asset Class Rankings	31
Asset Class Allocation	32
Asset Class Returns	33

Manager Evaluation

Domestic Equity

Parametric Clifton Large Cap	36
L.A. Capital Large Cap Growth	37
L.A. Capital Enhanced	38
LSV Large Cap Value	39
Parametric Clifton Small Cap	40
PIMCO RAE	41

International Equity

DFA International Small Cap Value	43
LSV International Value	44
Vanguard Intl Explorer Fund	45
William Blair	46

Domestic Fixed Income

Declaration Total Return	48
Prudential	49
SSgA US Government Credit Bond Index	50
Wells Capital	51
Western Asset Management Company	52

Diversified Real Assets

Western Asset Management TIPS	54
JP Morgan Infrastructure	55
Grosvenor Cust. Infrastructure	56

Real Estate

Invesco Core Real Estate	58
JP Morgan RE Income & Growth	59

Table of Contents
September 30, 2016

Callan Research/Education	60
Disclosures	63

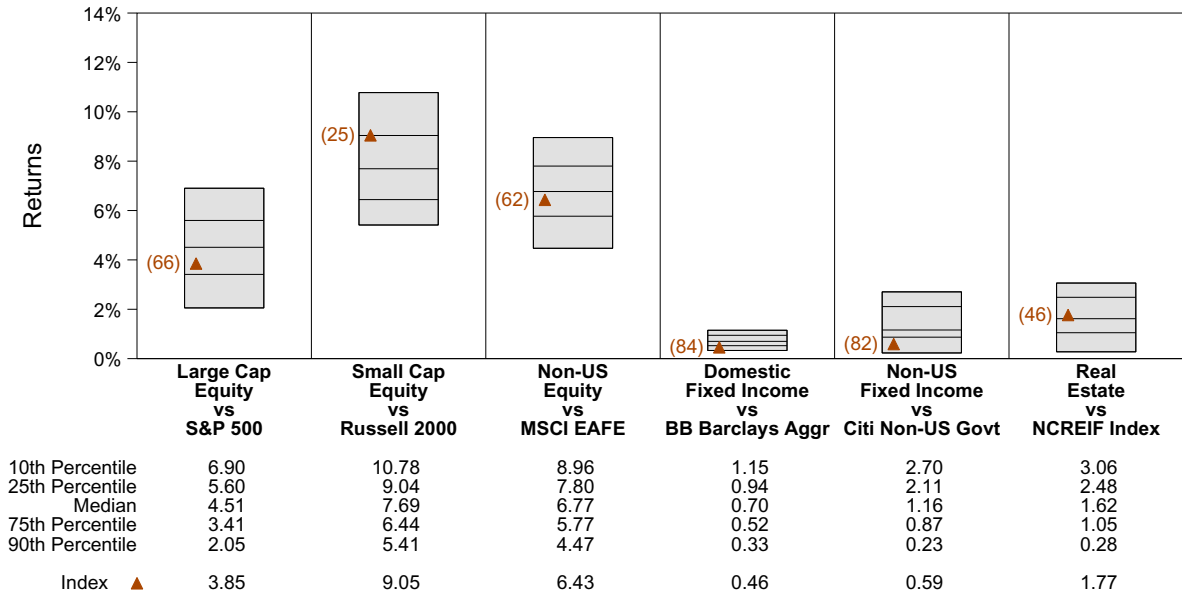
Market Overview

Active Management vs Index Returns

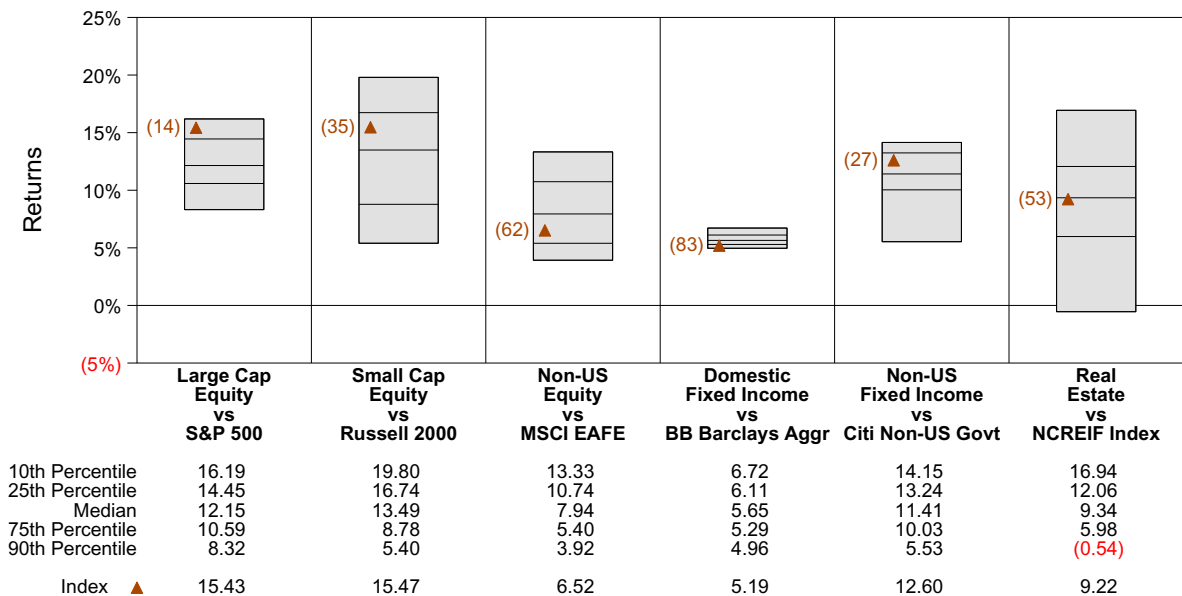
Market Overview

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 September 30, 2016



Range of Separate Account Manager Returns by Asset Class One Year Ended September 30, 2016





Third Quarter 2016

October Surprise

ECONOMY

2 Real GDP grew a surprisingly strong 2.9% in the third quarter, the best rate in two years. But the days of consumers driving the expansion are likely behind us, although investments in nonresidential construction rose after earlier weakness.

With a Little Help From My Friends

FUND SPONSOR

4 The second quarter's worst performer, endowments and foundations, beat other fund types in the third quarter with a 3.69% gain. Last quarter's champs, corporate funds, finished last. Surprisingly, small funds beat large and medium funds.

Broad Market Quarterly Returns



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

Sell in May? No Way!

U.S. EQUITY

6 The **S&P 500 Index** hit a new high and rose every month during the third quarter, ending up 3.85%. Small capitalization companies outperformed large cap (**Russell 2000 Index** +9.05% vs. **Russell 1000 Index** +4.03%), while growth outpaced value in all capitalizations.

Calm After the Storm

NON-U.S. EQUITY

9 Global stock markets hit highs as anxieties about the Brexit vote dwindled; even eurozone markets did well as it became clear that the U.K.'s decision to leave the European Union would not be catastrophic. Consistent with investors' risk-on mentality, emerging markets outpaced their developed peers.

Hut, Hut ... Hike!

U.S. FIXED INCOME

12 The yield on the benchmark 10-year Treasury note hit a record low of 1.37% in July, but ended the third quarter slightly higher. High yield corporates were the strongest performer, while Treasuries ended the quarter in the red. Investment-grade corporate bond issuance set a record.

Globe-Trotting for Yield

NON-U.S. FIXED INCOME

15 Sovereign bond markets strengthened during the third quarter, with emerging market bonds outmuscling the developed markets as investors sought yield. Major currencies were mixed as the British pound suffered following the Brexit. And there is now over \$12 trillion of negative-yielding debt globally.

Returns Take a Summer Vacation

REAL ESTATE

17 Both the **NCREIF Property Index** (+1.77%) and the **NCREIF Open End Diversified Core Equity Index** (+1.83%) turned in their worst performances since the first quarter of 2010. Global REITs did better than U.S. REITs; worries over a Fed rate hike appeared to be stronger than the post-Brexit fallout.

Sticker Shock

PRIVATE EQUITY

19 Markets maintained healthy liquidity in the third quarter. Private equity fundraising fell, but year-to-date numbers are very close to last year's. The number of new buyout investments increased slightly, but venture capital investments fell. And the IPO window for buyouts and VC remained open, if just a crack.

Can't Stop the Feeling

HEDGE FUNDS

20 Hedge funds showed modest returns during the quarter, with emerging markets the best-performing strategy. Choppy markets caught managed-futures funds a bit flat-footed. In Callan's database, the median *Callan Long/Short Equity FOF* (+4.26%) outpaced the *Callan Absolute Return FOF* (+2.10%).

DC Participants Seek Cover

DEFINED CONTRIBUTION

21 DC plan balances increased 1.67% in the second quarter, according to the *Callan DC Index™*. Although the Index rose 1.90%, target date funds outpaced it, gaining 2.02%. Unusually, money flowed out of DC plans, by 23 basis points, rather than into them as typically happens.

October Surprise

ECONOMY | Jay Kloepfer

Real gross domestic product (GDP) grew 2.9% in the third quarter, much stronger than expected, providing a pleasant surprise in a year filled with unpleasant ones. Third-quarter growth was by far the strongest this year and the best quarterly rate in two years. Personal consumption has been driving growth in the U.S. for the past several years, but while consumption accounted for half of the growth in the third quarter, its influence weakened.

Other third-quarter surprises included: a reversal in nonresidential fixed investment; continued growth in software and information processing; an uptick in federal government spending; strength in exports; and a return to inventory investment. Drags came from a decline in residential investment and weakness in state and local government spending, along with an increase in imports, which are a negative in the calculation of GDP.

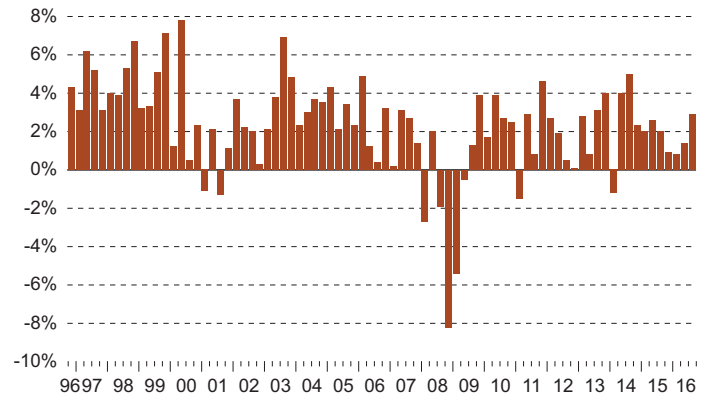
Political and economic shocks—China’s industrial recession, Brexit, the U.S. election—have increased uncertainty and hampered global growth, making many businesses increasingly risk averse. Add the uncertainty stemming from the global monetary policy experiment still underway—not the least of which involves the guessing game regarding the Fed’s interest rate policy—and expectations for U.S. growth soured as the year unfolded.

Real GDP came in very weak in the first quarter and disappointed again in the second, coinciding with the Brexit vote in late June when the U.K. chose to leave the European Union. Consensus expectations for the third quarter had GDP growth falling below 2%, even dipping to 1.5% as recently as September. However, the job market remained sound, consumer sentiment stayed buoyant, and the anticipated turnarounds in inventory and nonresidential fixed investment actually materialized.

The days of consumer spending driving this expansion are likely behind us. Consumption slowed from a robust 4.3% gain in the second quarter to 2.1% in the third; this will likely be the norm going forward. Consumers enjoyed a real shot in the arm from strong job gains for several years and a “dividend” from

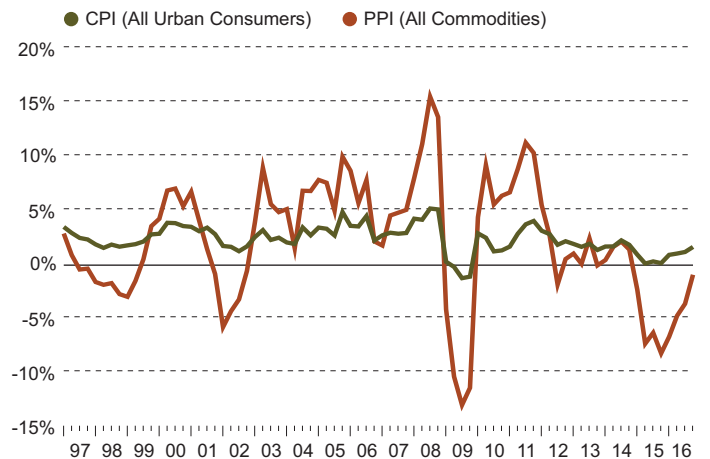
Quarterly Real GDP Growth

(20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

low commodity prices. The U.S. economy created an average of 178,000 jobs per month through the first three quarters of 2016. While solid, this is a deceleration from the 211,000 rate in the first nine months of 2015. Although support from the job market and commodity prices is waning, households are still benefiting from increases in real wages, disposable incomes, and asset values.

Highly anticipated reversals in inventory and nonresidential fixed investing provided meaningful gains to the economy in the third

quarter. The U.S. has suffered through an extended inventory correction, causing an outsized impact on overall growth: inventory contraction cut 1.2% from GDP growth in the second quarter, the fifth straight quarterly hit. Inventory investment turned the corner, adding 0.6% to third-quarter GDP. After a six-quarter collapse, investment in mining and petroleum structures began to revive in the third quarter, and the drilling rig count bounced up from an all-time low in the second quarter. This investment in the energy sector, along with gains in other types of structures, pushed nonresidential fixed investment up 3.1%.

Similar gains eluded residential construction, however, where demand appears robust, but supply and financing constraints are hampering the recovery. Real residential investment had been making progress for five years, but fell 7.7% in the second quarter and 6.2% in the third. Demand for housing appears to be solid, but sales of both existing and new homes fell during the third quarter. Potential homebuyers are still hampered by restricted access to mortgage financing, and homebuilders increasingly report challenges to hiring craft labor for projects.

The Fed refrained from raising interest rates over the summer, concerned about economic uncertainty and negative sentiment in the capital markets. The markets now expect the Fed to raise the short-term federal funds rate 25 basis points in December, and perhaps twice more in 2017, but these are fewer increases than previously predicted. In addition, the long-term equilibrium federal funds rate target has been cut from 3% to 2.6%.

Are central banks around the globe running out of ammunition? Rather than a dearth of ammunition, it seems the effectiveness of monetary policy is diminishing and with it the credibility of central banks. After the Great Recession, central bankers showed

The Long-Term View

Index	2016 3rd Qtr	Periods ended Dec. 31, 2015			
		Year	5 Yrs	10 Yrs	25 Yrs
U.S. Equity					
Russell 3000	4.40	0.48	12.18	7.35	10.03
S&P 500	3.85	1.38	12.57	7.31	9.82
Russell 2000	9.05	-4.41	9.19	6.80	10.50
Non-U.S. Equity					
MSCI EAFE	6.43	-0.81	3.60	3.03	5.40
MSCI Emerging Markets	9.03	-14.92	-4.80	3.61	-
S&P ex-U.S. Small Cap	7.98	5.92	5.51	5.33	6.80
Fixed Income					
Bloomberg Barclays Agg	0.46	0.55	3.25	4.51	6.15
90-Day T-Bill	0.10	0.05	0.07	1.24	2.93
Bloomberg Barclays Long G/C	1.24	-3.30	6.98	6.45	8.08
Citi Non-U.S. Government	0.59	-5.54	-1.30	3.05	5.37
Real Estate					
NCREIF Property	1.77	13.33	12.18	7.76	8.05
FTSE NAREIT Equity	-1.43	3.20	11.96	7.41	12.13
Alternatives					
CS Hedge Fund	1.74	-0.71	3.55	4.97	-
Cambridge PE*	-	8.50	12.41	11.50	15.59
Bloomberg Commodity	-3.86	-24.66	-13.47	-6.43	-
Gold Spot Price	-0.27	-10.46	-5.70	7.41	4.02
Inflation – CPI-U	0.17	0.73	1.53	1.86	2.30

*Private equity data is time-weighted return for period. Most recent quarterly data not available. Sources: Bloomberg Barclays, Bloomberg, Citigroup, Credit Suisse, FTSE, MSCI, NCREIF, Russell Investment Group, Standard & Poor's, Thomson/Cambridge, Bureau of Economic Analysis.

a remarkable willingness to try unorthodox policies, including quantitative easing (QE) and negative interest rates. But persistent banking problems (particularly in Europe and Japan) have made QE less effective, as central bank funds are used to rebuild bank balance sheets rather than for lending. In addition, tight fiscal policies have offset potential gains from monetary stimulus. And all regions have seen a drop in productivity growth, reducing the effectiveness of monetary or fiscal stimulation.

Recent Quarterly Economic Indicators

	3Q16	2Q16	1Q16	4Q15	3Q15	2Q15	1Q15	4Q14
Employment Cost–Total Compensation Growth	2.3%	2.3%	1.9%	2.0%	2.0%	2.0%	2.6%	2.2%
Nonfarm Business–Productivity Growth	0.6%*	-0.6%	-0.6%	-1.7%	2.0%	3.1%	-0.8%	-1.7%
GDP Growth	2.9%	1.4%	0.8%	0.9%	2.0%	2.6%	2.0%	2.3%
Manufacturing Capacity Utilization	75.0%	74.9%	75.3%	75.4%	75.6%	75.5%	75.5%	76.0%
Consumer Sentiment Index (1966=100)	90.3	92.4	91.5	91.3	90.8	94.2	95.5	89.8

*Estimate.

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

With a Little Help From My Friends

FUND SPONSOR | Kitty Lin

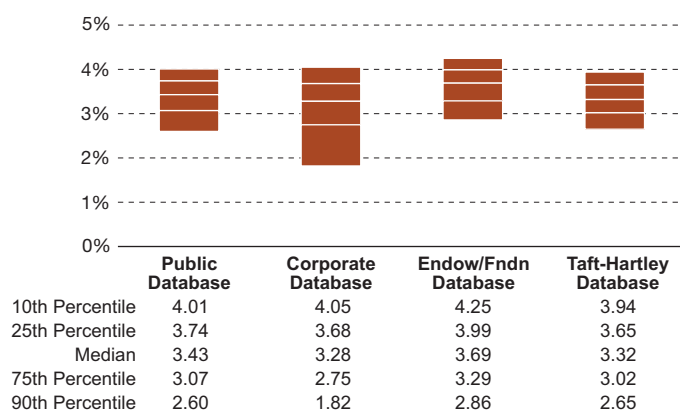
In a sharp shift from last quarter, endowments and foundations turned around and performed better than all other institutional fund types, with a median +3.69% return. Corporate funds, last quarter's best performer, brought up the rear at +3.28%. The median return for all fund types was +3.44%, according to Callan's database.

Interestingly, the rankings shifted slightly when looking at the top 10% of returns. Endowments and foundations still topped the list (+4.25%), but Taft-Hartley funds ranked last (+3.94%). Still, corporate funds and Taft-Hartley funds have done best over longer time periods. Corporates are on top over the last 15 years (+6.89% annualized) while Taft-Hartley funds edged them out over the last five years (+9.84%).

The outperformance from endowments/foundations stemmed from their "friends" in the stock market: non-U.S. equities. The **MSCI ACWI ex-USA Index** gained 6.91% in the third quarter, compared to +4.03% for the **Russell 1000 Index**. That came despite the shock of the U.K.'s Brexit vote to leave the European Union.

The underperformance from corporate funds stemmed from higher allocations to U.S. fixed income; in fact, both U.S. and non-U.S. fixed income markets continued to show lackluster performance (**Bloomberg Barclays Aggregate Index**: +0.46%, **Citi Non-U.S. World Government Bond Index**:

Callan Fund Sponsor Returns for the Quarter



Source: Callan

+0.59%). The decision of central banks in Europe and Japan not to cut rates and the upcoming U.S. election may have contributed to the disappointing returns for both in the quarter. As fixed income markets look less attractive these days, corporate funds increased their allocation of cash compared to the previous quarter.

By size, returns varied much less. Both large (more than \$1 billion in assets) and medium funds (\$100 million to \$1 billion) gained 3.43%, but surprisingly small funds (less than \$100 million) outpaced both, at +3.47%. Over the long haul large funds were the champs, +7.05% over 15 years versus +6.58% for medium funds and +6.35% for small funds.

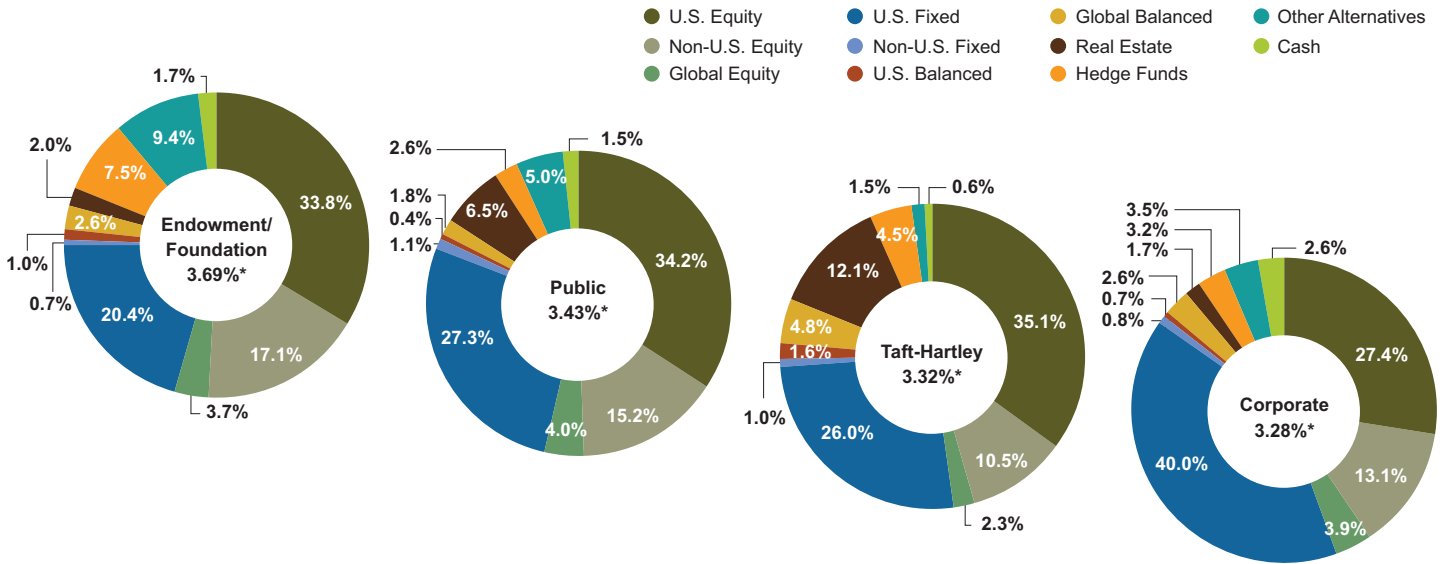
Callan Database Median Returns* for Periods ended September 30, 2016

Fund Sponsor	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Public Funds	3.43	6.65	9.63	6.12	9.30	5.66	6.72
Corporate Funds	3.28	7.64	10.22	6.29	9.22	5.91	6.89
Endowments/Foundations	3.69	6.13	8.81	4.99	8.52	5.39	6.54
Taft-Hartley	3.32	6.49	9.45	6.74	9.84	5.58	6.26

*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.

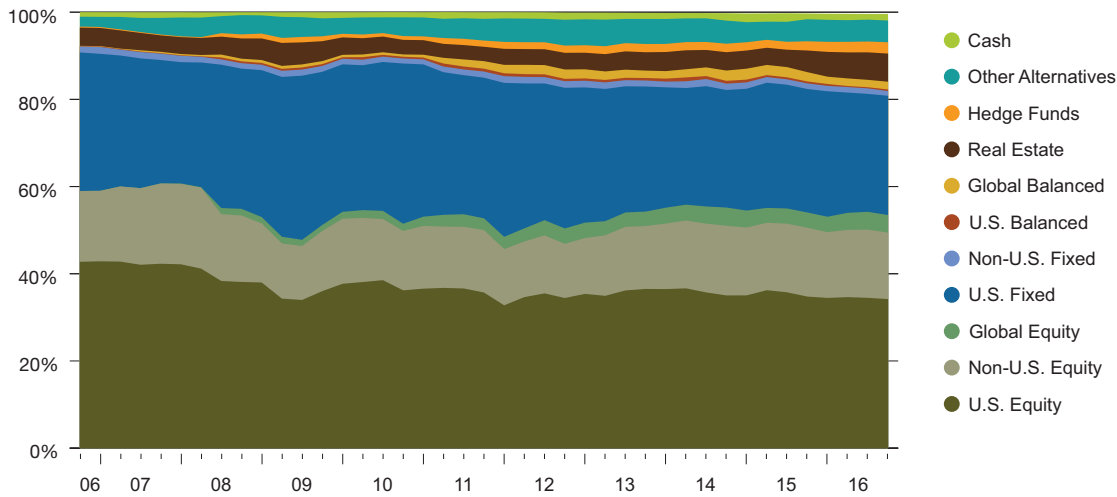
Callan Fund Sponsor Average Asset Allocation



*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.

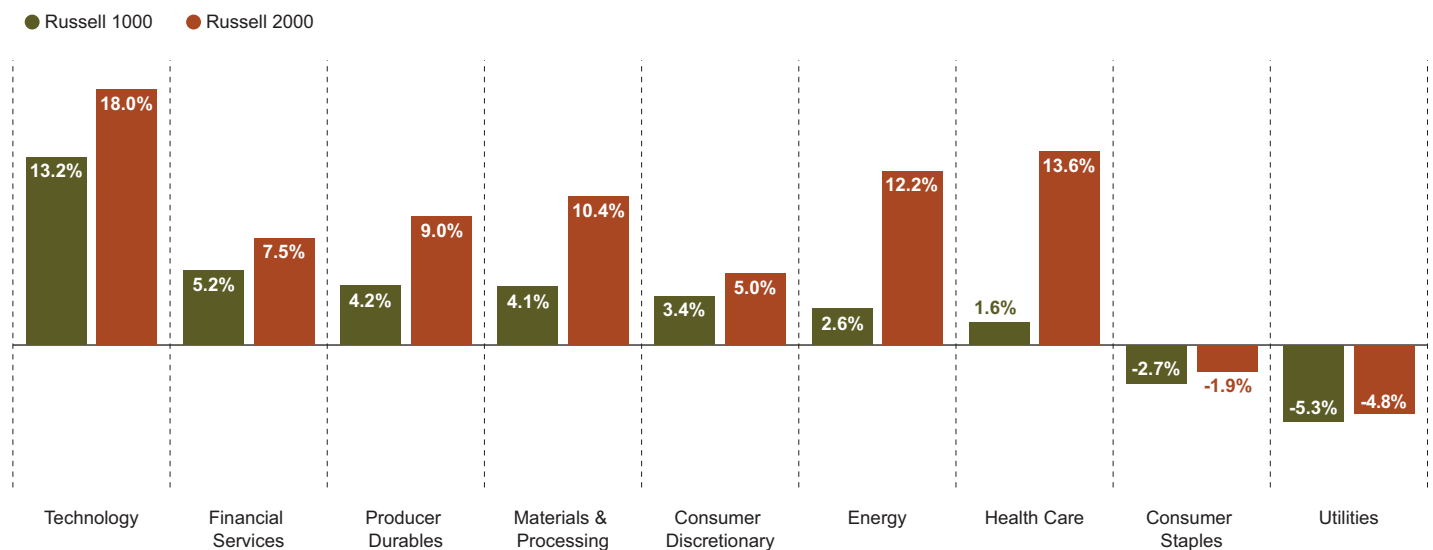
Sell in May? No Way!

U.S. EQUITY | Mark Wood, CFA

The **S&P 500 Index** climbed to its all-time high of 2,193 on August 15 and finished the quarter up 3.85%, ending in positive territory for the fourth quarter in a row. The early days of the quarter were characterized by a strong rebound in equity markets following the late June vote in the U.K. to leave the European Union (Brexit). Market volatility (as measured by VIX) spiked in the immediate aftermath but retreated just as quickly as investors absorbed the shock. The swift pivot, coupled with optimism over U.S. economic prospects and easing fears on China, led to a risk-on environment. July produced the strongest returns of the quarter across market capitalizations; August and September traded in a narrow (but ultimately positive) range as markets anticipated the Fed's interest rate decision in mid-September, which was to forego a rate hike. Foreign developed market indices outperformed the S&P 500 and, consistent with the quarter's risk-on theme, emerging markets were the top performers.

Size was the single biggest determinant of performance. Smaller companies did better—micro, small, and mid-capitalization companies outpaced large-cap stocks (**Russell Microcap Index**: +11.25%, **Russell 2000 Index**: +9.05%, **Russell Midcap Index**: +4.52%, and **Russell 1000 Index**: +4.03%). Additionally, after two strong quarters value underperformed growth in all capitalizations (**Russell 2000 Value Index**: +8.87% and **Russell 2000 Growth Index**: +9.22%). The dispersion in style returns was narrow across market capitalizations, with the widest (110 bps) in large cap (**Russell 1000 Growth** minus **Russell 1000 Value**). Defensive and high-dividend yield exposures sold off during the third quarter but have performed well year-to-date due to the increased global economic uncertainty earlier in 2016.

Economic Sector Quarterly Performance



Source: Russell Investment Group

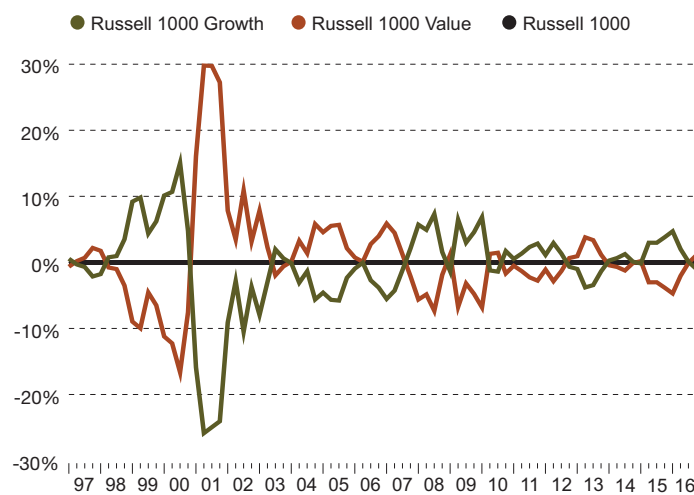
Note: As of the fourth quarter of 2015, the Capital Market Review reports sector-specific returns using the Russell Global Sectors (RGS) classification system rather than the Global Industry Classification Standard (GICS) system. RGS uses a three-tier classification system containing nine sectors; GICS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

Sector performance reflected the shift in risk attitudes. Among the worst-performing sectors in the S&P 500 during the quarter were Utilities (-0.7%), Consumer Staples (-0.7%), and Telecom (+1.0%)—all sectors associated with lower volatility and higher dividend yields. After a strong performance in the second quarter, Energy retreated, posting a 1.9% loss for the quarter. The more growth-oriented, risk-on sectors, Technology (+7.9%) and Health Care (+4.9%), were the top performers. In a new development, REITs and other listed real estate companies were extracted from the Financials sector and elevated to a new Real

Estate sector in the Global Industry Classification Standard (GICS). The new sector, representing 3.1% of the S&P 500, had a tough start, finishing down 2.1%.

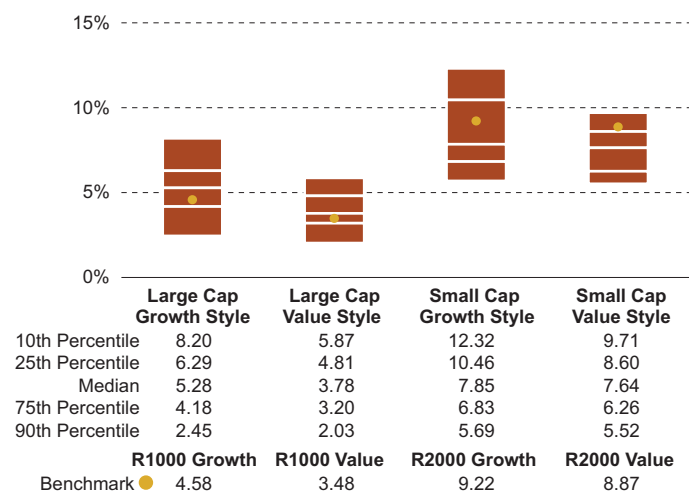
The U.S. equity market continued to rise, even as investor sentiment wavered between positive and negative over the course of the quarter. Active managers continue to find it a difficult environment to outperform as macro factors dominated price activity and performance in equity markets.

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 September 30, 2016

	S&P 500	Rus 3000	Rus 1000	Rus Midcap	Rus 2500	Rus 2000
Number of Issues	507	2,955	994	794	2,459	1,961
Wtd Avg Mkt Cap (\$bn)	134.8	112.6	121.7	12.6	4.0	1.8
Price/Book Ratio	2.7	2.6	2.7	2.4	2.1	2.0
Forward P/E Ratio	16.9	17.4	17.2	18.9	19.2	19.8
Dividend Yield	2.1%	2.0%	2.0%	1.7%	1.6%	1.5%
5-Yr Earnings (forecasted)	12.5%	12.5%	12.5%	11.2%	12.0%	13.5%

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

U.S. EQUITY (Continued)

Callan Style Median and Index Returns* for Periods ended September 30, 2016

Large Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Large Cap Core Style	4.55	5.71	12.77	10.64	16.13	7.39	7.80
Russell 3000	4.40	8.18	14.96	10.44	16.36	7.37	7.61
Russell 1000	4.03	7.92	14.93	10.78	16.41	7.40	7.48
S&P 500	3.85	7.84	15.43	11.16	16.37	7.24	7.15
Large Cap Growth Style	5.28	3.69	11.27	10.85	16.24	8.94	7.55
Russell 1000 Growth	4.58	6.00	13.76	11.83	16.60	8.85	7.35
Large Cap Value Style	3.78	7.61	13.71	8.99	15.88	6.54	8.08
Russell 1000 Value	3.48	10.00	16.20	9.70	16.15	5.85	7.46
Mid Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Mid Cap Core Style	4.98	7.80	11.05	9.88	16.81	8.65	10.96
Russell Midcap	4.52	10.26	14.25	9.70	16.67	8.32	10.44
Mid Cap Growth Style	4.05	4.30	6.98	6.98	14.55	8.62	9.53
Russell Midcap Growth	4.59	6.84	11.24	8.90	15.85	8.51	9.66
Mid Cap Value Style	4.82	9.73	13.35	9.30	16.62	8.48	10.99
Russell Midcap Value	4.45	13.72	17.26	10.49	17.38	7.89	10.72
Small Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Small Cap Core Style	7.62	10.07	14.32	8.51	17.63	8.55	11.31
Russell 2000	9.05	11.46	15.47	6.71	15.82	7.07	9.26
Small Cap Growth Style	7.85	6.52	8.73	5.47	15.82	9.13	9.81
Russell 2000 Growth	9.22	7.48	12.12	6.58	16.15	8.29	8.90
Small Cap Value Style	7.64	12.74	15.90	7.92	17.11	8.05	11.63
Russell 2000 Value	8.87	15.49	18.81	6.77	15.45	5.78	9.38
Smid Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Smid Cap Core Style	6.32	9.21	12.42	7.64	16.34	9.96	-
Russell 2500	6.56	10.80	14.44	7.77	16.30	7.95	10.07
Smid Cap Growth Style	6.03	4.73	8.39	6.01	15.25	9.23	9.85
Russell 2500 Growth	6.98	6.95	11.02	7.43	16.20	8.82	9.52
Smid Cap Value Style	6.39	12.17	14.71	7.37	16.23	8.56	11.41
Russell 2500 Value	6.18	14.51	17.68	8.05	16.29	6.92	10.17
Russell 3000 Sectors	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Consumer Discretionary	3.50	4.52	8.99	9.57	19.01	10.11	-
Consumer Staples	-2.67	7.48	15.77	13.92	15.95	11.57	-
Energy	2.87	17.69	16.60	-4.26	4.72	3.84	-
Financial Services	5.44	4.35	10.18	9.69	17.97	0.87	-
Health Care	2.40	0.92	9.82	14.21	20.52	10.82	-
Materials & Processing	4.98	16.18	25.84	7.17	14.12	6.94	-
Producer Durables	4.61	10.99	18.76	9.54	17.48	7.29	-
Technology	13.49	13.07	22.76	16.28	17.08	10.27	-
Utilities	-5.31	17.12	21.88	11.87	12.44	7.07	-

*Returns less than one year are not annualized.

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

Calm After the Storm

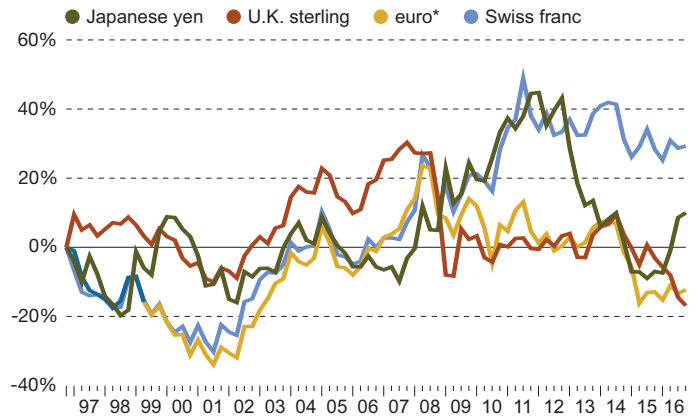
NON-U.S. EQUITY | Irina Sushch

Following two highly volatile quarters, the third quarter of 2016 bucked the trend—volatility was exceptionally low as investors appeared complacent about continued accommodative central bank policies and steady, albeit slow, economic growth. A risk-on rally led to stock market highs as anxieties about the U.K.'s Brexit vote to exit the European Union dwindled.

In this environment, the **MSCI ACWI ex USA Index** rose 6.91%. In contrast to the previous quarter, economically sensitive sectors fared best, particularly Information Technology (+15.50%) and Materials (+12.56%). Health Care was the only sector in the red (-1.96%), although its defensive counterparts, Utilities (+0.20%) and Telecommunications (+0.43%), faltered as well. Consistent with the quarter's risk-on theme, emerging markets (**MSCI Emerging Markets Index**: +9.03%) outpaced their developed peers (**MSCI World ex USA Index**: +6.29%), even excluding Canada (**MSCI EAFE Index**: +6.43%). The **MSCI ACWI ex USA Value Index** (+7.79%) overcame the **MSCI ACWI ex USA Growth Index** (+6.06%) for the first time since the second quarter of 2014. Small-cap stocks shot up into the black (**MSCI ACWI ex USA Small Cap Index**: +7.91%), finishing near the top among major non-U.S. indices.

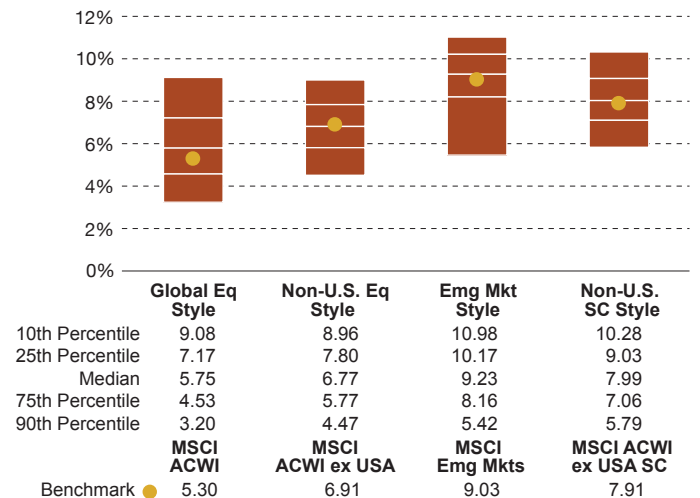
Equity markets across Europe crashed following the unexpected vote for Brexit but regained ground quickly as it became clear that the aftermath of the referendum was not immediately catastrophic. British Prime Minister David Cameron resigned and was replaced by Theresa May, who pledged that the U.K. would go through with exiting the European Union, but not hastily. The Bank of England sprang into action to support the economy, and the European Central Bank offered reassurance that it too would work to bolster growth. The **MSCI Europe Index** climbed 5.40%, with the strong performers including Austria (+16.66%), Germany (+10.01%), Spain (+9.32%), the Netherlands (+9.11%), and even the U.K. (+3.98%). Their vigor was attributed to better-than-expected earnings from Information Technology giants, improving commodity prices, rallying financial stocks, and a swell of M&A activity. European

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



* German mark returns before 1Q99
Source: MSCI

Callan Style Group Quarterly Returns



Sources: Callan, MSCI

Health Care stocks stumbled (-3.09%) due to intensified global scrutiny during the U.S. election; Denmark, where a large health care company makes up approximately 20% of the country's index, was particularly hard hit, dropping 6.27%.

Southeast Asia and the Pacific enjoyed a buoyant quarter as well; the **MSCI Pacific Index** was up 8.46%. Japanese equities rallied during the quarter, ascending 8.60% due to new

NON-U.S. EQUITY (Continued)

central bank policies and a fresh stimulus package. Additionally, Consumer Discretionary, IT, and Materials stocks surged due to strong earnings growth in several gaming and automobile companies. Australia (+7.91%) and New Zealand (+12.44%) also performed well as megabanks and commodities gained ground.

Emerging markets shot up in the accommodative macroeconomic environment (MSCI Emerging Markets Index: +9.03%). The top sector was IT, surging 16.08%. The stocks of smart-phone manufacturers and technology component suppliers soared, boosting the Asian markets, including Taiwan (+11.70%) and South Korea (+10.98%). China was one of the biggest beneficiaries (+13.92%), thanks to its burgeoning internet giants. Latin America was relatively sluggish this quarter (+5.37%) but was propped up by Brazil, which shot up another 11.31%, skyrocketing 62.90% year-to-date. Hopes for economic change run high under Michel Temer, who replaced the impeached Dilma

Quarterly Returns for Non-U.S. Developed Countries

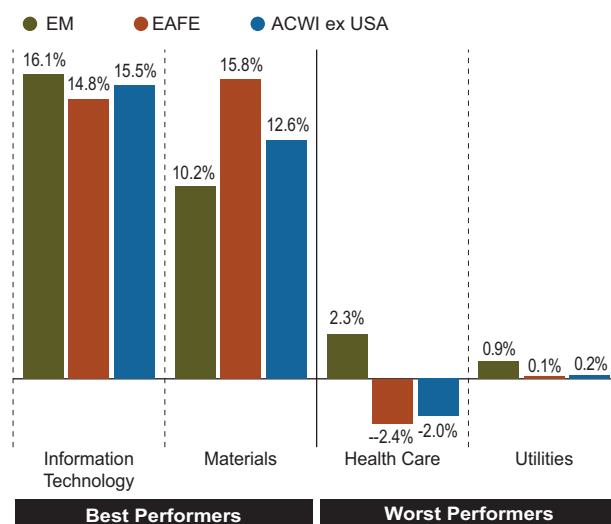
Country	Equity Index			Weight*
	(US\$)	(Local Currency)	Local Currency	
Australia	7.91%	5.00%	2.77%	5.13%
Austria	16.66%	15.32%	1.16%	0.13%
Belgium	5.00%	3.80%	1.16%	0.96%
Canada	4.85%	6.10%	-1.18%	6.72%
Denmark	-6.27%	-7.26%	1.07%	1.23%
Finland	7.42%	6.19%	1.16%	0.70%
France	6.36%	5.14%	1.16%	6.81%
Germany	10.01%	8.75%	1.16%	6.31%
Hong Kong	11.92%	11.89%	0.03%	2.45%
Ireland	7.42%	6.20%	1.16%	0.33%
Israel	-1.97%	-3.96%	2.64%	0.50%
Italy	2.21%	1.04%	1.16%	1.33%
Japan	8.60%	7.20%	1.31%	16.70%
Netherlands	9.11%	7.96%	1.16%	2.35%
New Zealand	12.44%	10.12%	2.11%	0.14%
Norway	6.28%	1.51%	4.70%	0.45%
Portugal	6.28%	5.07%	1.16%	0.10%
Singapore	-0.15%	1.13%	-1.29%	0.89%
Spain	9.32%	8.07%	1.16%	2.13%
Sweden	7.48%	8.68%	-1.11%	1.97%
Switzerland	2.62%	2.12%	0.50%	6.29%
U.K.	3.98%	7.00%	-2.83%	13.23%

*Weight in the MSCI ACWI ex USA Index

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

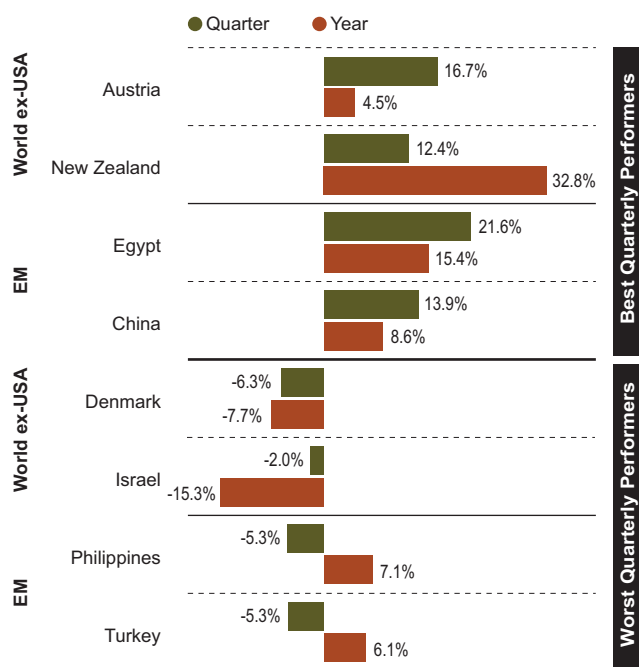
Rousseff as president. Russia (+8.43%) did not miss out on the rally. However, the Philippines, Turkey, and Malaysia were all in the red as political turmoil continued to afflict the countries (-5.33%, -5.26%, and -1.52%, respectively). Mexico also dwindled 2.24% as the peso fell 5% against the dollar.

Quarterly Returns: Strong and Struggling Sectors



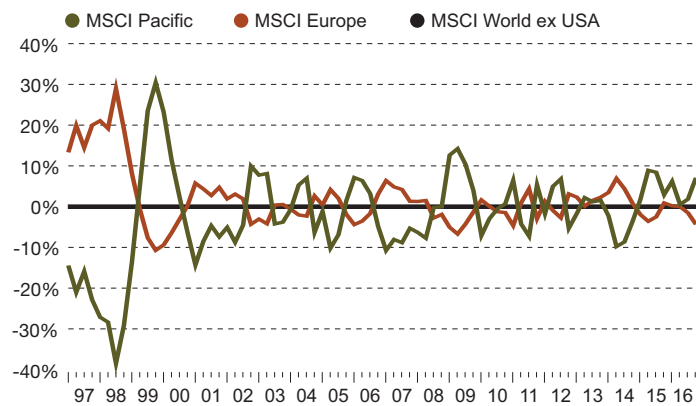
Source: MSCI

Quarterly and Annual Country Performance Snapshot



Source: MSCI

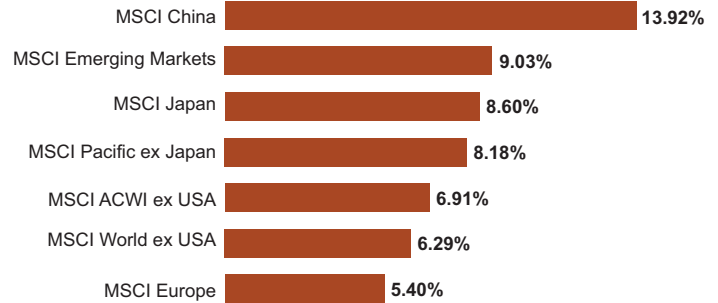
Rolling One-year Relative Returns (vs. MSCI World ex USA)



Source: MSCI

Regional Quarterly Performance

(U.S. Dollar)



Source: MSCI

Callan Style Median and Index Returns* for Periods ended September 30, 2016

Global Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Global Equity Style	5.75	5.48	11.23	6.25	12.38	5.57	7.80
MSCI World	4.87	5.55	11.36	5.85	11.63	4.47	6.29
MSCI ACWI	5.30	6.60	11.96	5.17	10.63	4.34	6.47
Non-U.S. Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Non-U.S. Style	6.77	3.14	7.94	2.16	8.75	3.20	7.81
MSCI World ex USA	6.29	3.12	7.16	0.33	6.89	1.88	5.96
MSCI ACWI ex USA	6.91	5.82	9.26	0.18	6.04	2.16	6.56
Regional Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
MSCI China	13.92	8.58	12.95	3.90	8.24	7.78	13.08
MSCI Europe ex UK	6.03	-0.36	2.90	0.01	8.17	1.53	6.02
MSCI Japan	8.60	2.54	12.13	3.33	7.36	1.05	4.27
MSCI Japan (local)	7.20	-13.68	-5.19	4.42	13.38	-0.49	3.15
MSCI Pacific	8.46	5.26	14.74	2.31	7.31	2.50	6.08
MSCI Pacific (local)	6.97	-7.17	0.77	4.39	11.86	0.99	4.47
MSCI Pacific ex Japan	8.18	10.86	20.05	0.42	7.07	5.85	10.99
MSCI Pacific ex Japan (local)	6.52	7.03	13.34	4.95	10.29	5.31	8.55
MSCI United Kingdom	3.98	0.80	1.53	-1.80	5.99	1.40	5.02
MSCI United Kingdom (local)	7.00	14.37	18.39	5.68	9.91	5.15	5.89
Emerging/Frontier Markets	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Emerging Market Style	9.23	16.44	18.41	0.81	4.83	5.23	12.93
MSCI Emerging Markets	9.03	16.02	16.78	-0.56	3.03	3.94	11.55
MSCI Emerging Markets (local)	7.59	11.30	12.96	4.33	6.95	5.94	11.97
MSCI Frontier Markets	2.65	2.16	0.91	-0.17	4.64	-0.26	-
Global/Non-U.S. Small Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Non-U.S. Small Cap Style	7.99	4.51	11.38	6.12	12.77	6.33	12.20
MSCI World Small Cap	7.24	9.70	14.34	6.18	13.38	6.30	10.31
MSCI ACWI Small Cap	7.28	9.66	14.21	5.67	12.47	6.59	10.52
MSCI World ex USA Small Cap	8.00	7.26	13.50	4.15	9.72	4.11	9.97
MSCI ACWI ex USA Small Cap	7.91	7.70	13.38	3.52	8.60	4.58	10.47

*Returns less than one year are not annualized.

Sources: Callan, MSCI.

Hut, Hut ... Hike!

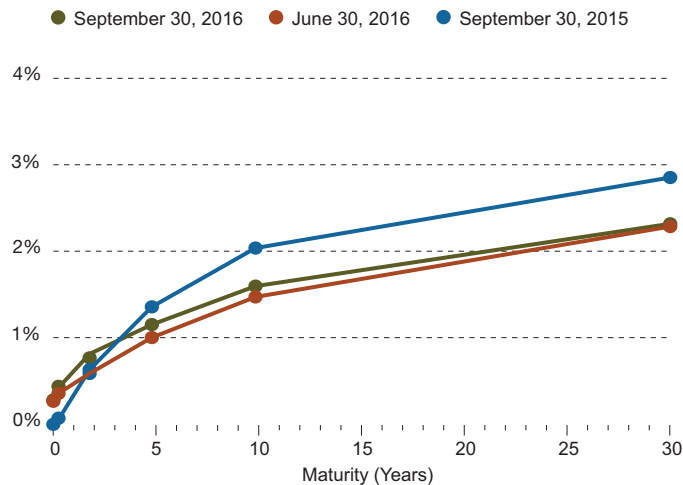
U.S. FIXED INCOME | Rufash Lama

For the quarter, the **Bloomberg Barclays High Yield Index** grew 5.55% while the **Bloomberg Barclays U.S. Aggregate Index** managed to rise a mere 0.46%.

Driven by Brexit-induced concerns, the yield on the benchmark 10-year Treasury note hit a record low of 1.37% in July; however, it rose for the remainder of the quarter and closed at 1.60%. While the Fed left the federal funds rate unchanged in the third quarter, its announcement was noteworthy because of the high level of disagreement; the three dissenting votes were the most since December 2014. Based on federal funds futures contracts, traders are betting there is a 78% chance of a rate hike at the next meeting in December after the Fed's decision to hold rates steady again in November.

Yields varied across the maturity spectrum during the quarter: While Treasury rates rose along the entire yield curve in August, the curve steepened in September as the 2-year fell by 4 basis points to 0.76% and the 30-year rose by 8 basis points to end at 2.32%. Intermediate Treasuries (-0.26%) outperformed long Treasuries (-0.36%) during the quarter.

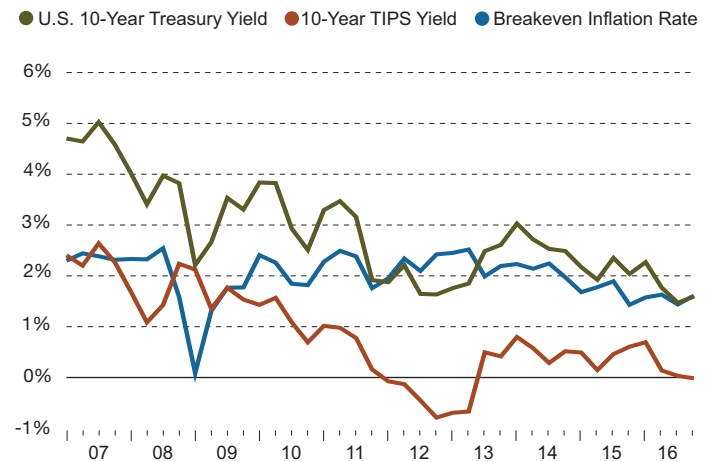
U.S. Treasury Yield Curves



Source: Bloomberg

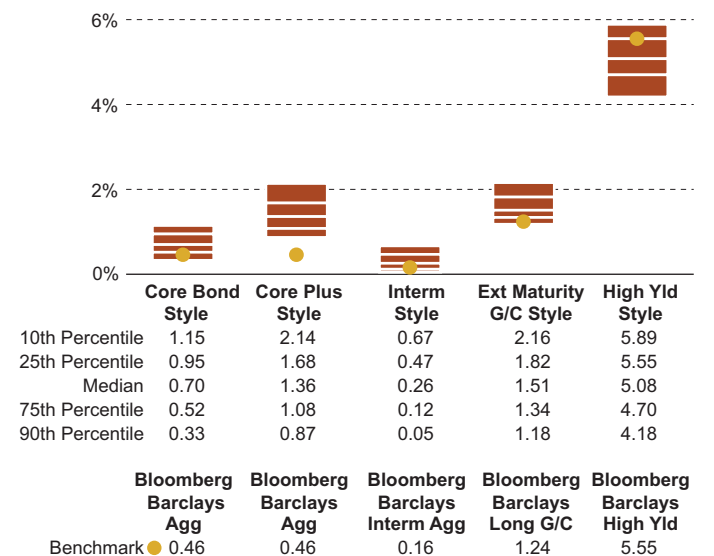
Credit spreads tightened during the quarter and yields inched toward historic lows. Their +5.55% return made high-yield corporates the strongest performer during the quarter. Despite record issuances in August, the credit sector gained 1.23% for the quarter and outperformed MBS (+0.60%) and CMBS (+0.59%). Industrials beat Utilities and Financials on a

Historical 10-Year Yields



Source: Bloomberg

Callan Style Group Quarterly Returns



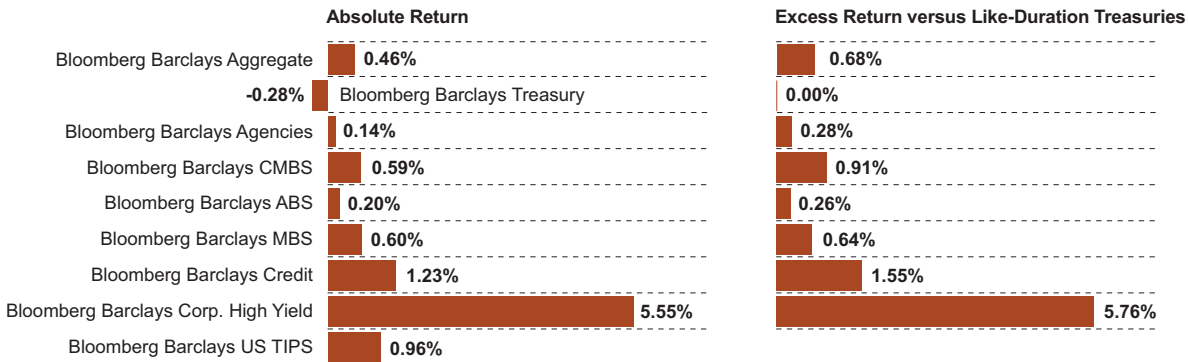
Source: Bloomberg Barclays, Callan

duration-adjusted basis. Further, on a duration-adjusted basis, credit securities outperformed Treasuries by 155 basis points. Treasuries ended the quarter in the red (-0.28%).

Investment-grade corporate issuance totaled \$340 billion for the quarter, setting a record. By the end of September,

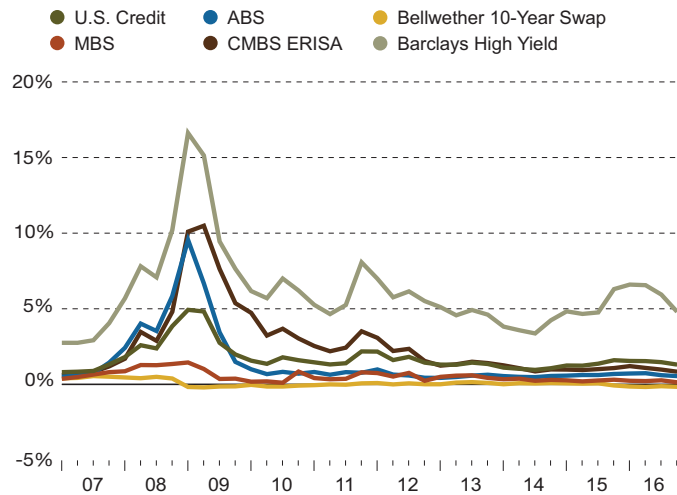
year-to-date corporate investment-grade bond issuance was 8% ahead of last year's pace. And the record supplies were met with strong demand as investors snapped up bonds. CMBS and municipal markets also demonstrated robust supply. And despite low yields and heavy issuance of CMBS securities in September, they outperformed Treasuries by 91 bps.

Fixed Income Index Quarterly Returns



Source: Bloomberg Barclays

Effective Yield Over Treasuries



Source: Bloomberg Barclays

U.S. Fixed Income Index Characteristics as of Sept. 30, 2016

Bloomberg Barclays Indices	Yield to Worst	Mod Adj Duration	Avg Maturity
Bloomberg Barclays Aggregate	1.96	5.51	7.82
Bloomberg Barclays Universal	2.39	5.39	7.68
Bloomberg Barclays Gov/Credit	1.92	6.72	8.99
1-3 Year	1.04	1.91	1.98
Intermediate	1.51	4.09	4.44
Long-Term	3.32	15.57	24.32
Bloomberg Barclays Long Credit	4.04	14.04	23.92
Bloomberg Barclays Corp High Yield	6.17	4.05	6.33
Bloomberg Barclays TIPS	1.62	6.59	8.61
Bloomberg Barclays Muni Bond 1-5 Year	1.15	2.72	3.22
Bloomberg Barclays Muni 1-10 Year	1.38	4.02	5.88
Bloomberg Barclays Municipal	1.82	5.52	13.08

Source: Bloomberg Barclays

U.S. FIXED INCOME (Continued)

Callan Style Median and Index Returns* for Periods ended September 30, 2016

Broad Fixed Income	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Core Bond Style	0.70	6.15	5.65	4.36	3.73	5.31	5.25
Core Bond Plus Style	1.36	7.16	6.55	4.61	4.55	5.77	5.91
Bloomberg Barclays Aggregate	0.46	5.80	5.19	4.03	3.08	4.79	4.80
Bloomberg Barclays Universal	0.96	6.69	6.11	4.27	3.62	5.00	5.12
Long-Term	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Extended Maturity Credit Style	2.50	17.00	16.11	10.05	7.94	8.07	-
Bloomberg Barclays Long Credit	2.26	16.50	15.73	9.53	7.05	7.63	7.74
Extended Maturity Gov/Credit Style	1.51	16.12	15.14	10.30	6.96	8.38	8.01
Bloomberg Barclays Long Gov/Credit	1.24	15.74	14.66	10.08	6.32	7.84	7.61
Intermediate-Term	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Intermediate Style	0.26	4.31	3.83	3.05	2.85	4.62	4.62
Bloomberg Barclays Interm Gov/Credit	0.16	4.24	3.52	2.80	2.45	4.17	4.22
Short-Term	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Defensive Style	0.15	1.94	1.72	1.47	1.48	2.89	3.01
Bloomberg Barclays Gov/Credit 1-3 Yr	0.02	1.68	1.31	1.09	1.05	2.59	2.80
Bank Loans	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Bank Loan Style	2.86	7.43	5.70	3.78	5.55	4.91	5.03
Credit Suisse Leveraged Loans	3.10	7.46	5.35	3.60	5.30	4.24	4.79
High Yield	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
High Yield Style	5.08	12.70	10.86	5.20	8.28	7.64	8.61
Bloomberg Barclays Corp High Yield	5.55	15.11	12.73	5.28	8.34	7.71	8.63
Unconstrained	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Unconstrained Fixed Style	2.21	3.95	4.56	2.36	3.87	4.60	6.44
90 Day T-Bill + 3%	0.84	2.48	3.27	3.12	3.11	3.92	4.38
Stable Value	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Stable Value Style	0.48	1.42	1.88	1.76	1.94	2.85	3.58
iMoneyNet Mutual Fund Avg	0.03	0.08	0.09	0.04	0.03	0.82	-
TIPS	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Inflation-Linked Style	1.00	7.28	6.62	2.40	1.96	4.58	5.50
Bloomberg Barclays TIPS	0.96	7.27	6.58	2.40	1.93	4.48	5.39
Municipal	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Short Municipal Style	-0.04	0.75	0.82	0.83	0.94	1.81	1.96
Bloomberg Barclays Municipal 1-5 Yr	-0.16	1.38	1.59	1.74	1.67	3.07	3.09
Intermediate Municipal Style	-0.26	3.28	4.64	4.13	3.52	3.91	4.00
Bloomberg Barclays Municipal 1-10 Yr	-0.11	2.58	3.40	3.34	2.95	4.04	4.02
Long Municipal Style	-0.21	4.14	5.83	5.74	4.95	5.03	5.19
Bloomberg Barclays Municipal	-0.30	4.01	5.58	5.54	4.48	4.75	4.89

*Returns for less than one year are not annualized.

Sources: Bloomberg Barclays, Callan, Citigroup, Merrill Lynch

Globe-Trotting for Yield

NON-U.S. FIXED INCOME | Kyle Fekete

In an extraordinary effort to stimulate economic growth and inflation, the Bank of Japan introduced a 0% yield-target for 10-year bonds, aiming to exceed its 2% inflation objective. The central bank also intends to maintain its negative short rate stance in an effort to steepen the yield curve and thus help increase profitability for banks. The bank's governor termed the new policy a "reinforcement" of its quantitative easing (QE) program. Central banks have typically targeted short-term rates in QE programs, focusing on maturities of less than a year. Yield on Japan's 10-year government bond settled at -0.09% at the end of the quarter.

Overall, the European sovereign bond market was flat as the European Central Bank left interest rates unchanged. The

Quarterly Returns for Non-U.S. Government Indices

Country	Country Debt (\$)	Country Debt	Local Currency	Weight*
Australia	3.60%	0.80%	2.77%	2.29%
Austria	1.81%	0.65%	1.16%	1.74%
Belgium	1.48%	0.32%	1.16%	2.93%
Canada	-0.67%	0.52%	-1.18%	2.32%
Denmark	0.96%	-0.10%	1.07%	0.82%
Finland	1.67%	0.51%	1.16%	0.67%
France	1.37%	0.21%	1.16%	11.72%
Germany	0.98%	-0.18%	1.16%	8.60%
Ireland	2.28%	1.11%	1.16%	0.95%
Italy	2.31%	1.14%	1.16%	11.07%
Japan	-0.92%	-2.19%	1.31%	34.89%
Malaysia	-0.66%	1.90%	-2.51%	0.53%
Mexico	-4.22%	0.47%	-4.67%	0.98%
Netherlands	1.29%	0.13%	1.16%	2.70%
Norway	3.53%	-1.12%	4.70%	0.30%
Poland	3.81%	0.30%	3.50%	0.71%
Singapore	0.22%	1.52%	-1.29%	0.45%
South Africa	10.29%	3.56%	6.50%	0.55%
Spain	3.39%	2.21%	1.16%	6.45%
Sweden	-0.63%	0.48%	-1.11%	0.52%
Switzerland	-0.08%	-0.57%	0.50%	0.27%
U.K.	-0.37%	2.52%	-2.83%	8.54%

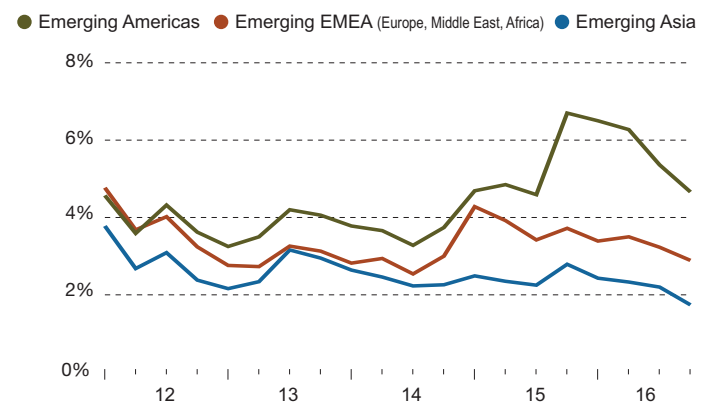
*Weight in the Citi Non-U.S. World Government Bond Index. Source: Citigroup

Bloomberg Barclays Global Aggregate Index rose 0.82% (+0.53% hedged). The ECB committed to a monthly QE program of buying €80 billion in government bonds, asset-backed securities, and corporate debt through March 2017; however, President Mario Draghi announced a review of the program to ensure investable assets would not dry up. Yield on the German 10-year bund notched up a basis point to -0.12%. There is now over \$12 trillion of negative-yielding debt globally, with Japan accounting for nearly half and Western Europe—namely France, Germany, and the Netherlands—the other half. Investors' sustained hunt for yield was evident in European bond pricing as periphery government Treasuries tended to decline more than their core eurozone counterparts. The Spanish and Italian 10-year yields declined 28 bps and 7 bps to 0.88% and 1.91%, respectively. The euro increased 1.16% against the U.S. dollar.

Despite the economic and political uncertainty the Brexit vote left in its wake, when U.K. voters chose to leave the European Union and the British pound plummeted 2.83%, data released showed no immediate negative effect on confidence or productivity. Yield on the 10-year gilt fell 12 bps to +0.75%.

The developing markets advanced for the fourth straight quarter in spite of multiple political headwinds, including the

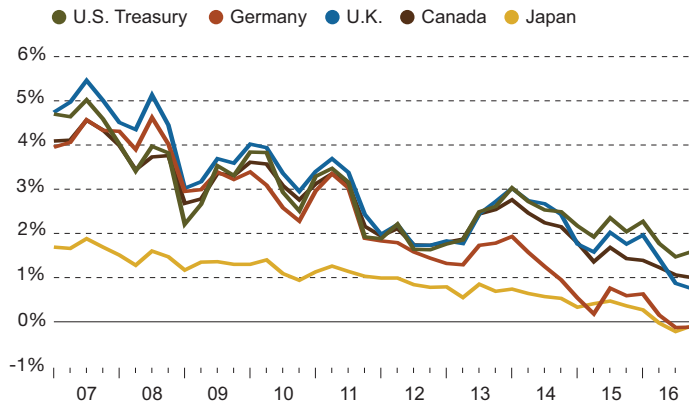
Emerging Spreads Over Developed (By Region)



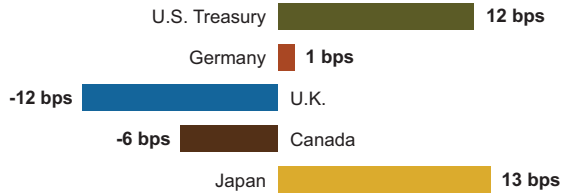
Source: Bloomberg Barclays

NON-U.S. FIXED INCOME (Continued)

10-Year Global Government Bond Yields



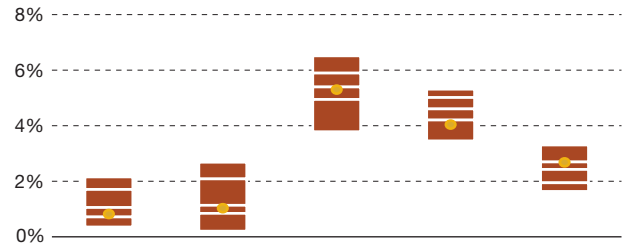
Change in 10-Year Yields from 2Q16 to 3Q16



Source: Bloomberg

impeachment of Brazil's president and the failed Turkish coup. The hard currency **J.P. Morgan EMBI Global Index** climbed 4.04%. Local currency debt, as measured by the **J.P. Morgan GBI-EM Global Diversified Index**, ticked up 2.68%.

Callan Style Group Quarterly Returns



	Global Fixed Style	Non-U.S. Fixed Style	Global High Yld Style	Em Debt Style (US\$)	Em Debt Style (local)
10th Percentile	2.18	2.71	6.54	5.34	3.33
25th Percentile	1.73	2.11	5.92	5.04	2.72
Median	1.08	1.16	5.42	4.63	2.45
75th Percentile	0.74	0.87	4.97	4.23	1.97
90th Percentile	0.38	0.23	3.81	3.48	1.66
Benchmark	0.82	1.03	5.3	4.04	2.68

Sources: Bloomberg Barclays, Callan, JPMorgan Chase

Callan Style Median and Index Returns* for Periods ended September 30, 2016

Global Fixed Income	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Global Fixed Income Style	1.08	9.70	8.88	2.39	2.15	4.91	6.14
Bloomberg Barclays Global Aggregate	0.82	9.85	8.83	2.13	1.74	4.26	5.13
Global Fixed Income Style (hedged)	1.05	6.96	7.26	5.52	4.95	5.44	5.64
Bloomberg Barclays Global Aggregate (hedged)	0.53	6.44	6.54	5.05	4.26	4.73	4.73
High Yield	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Global High Yield Style	5.42	13.65	12.46	3.91	7.61	7.03	9.74
Bloomberg Barclays Global High Yield	5.30	14.49	13.51	4.97	8.56	7.87	9.43
Non-U.S. Fixed Income	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Non-U.S. Fixed Income Style	1.16	12.95	11.41	1.52	2.01	4.48	6.26
Bloomberg Barclays Global Aggregate ex US	1.03	13.09	11.67	0.75	0.70	3.82	5.41
Emerging Markets Fixed Income	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Emerging Debt Style (US\$)	4.63	16.27	18.15	7.02	7.81	8.13	11.06
JPM EMBI Global Diversified	4.04	14.77	16.20	8.20	7.76	7.73	9.57
Emerging Debt Style (local)	2.45	16.95	16.83	-2.14	0.22	5.21	7.25
JPM GBI-EM Global Diversified	2.68	17.07	17.06	-2.58	0.06	5.52	-
Emerging Debt Blend Style	3.59	15.14	16.15	2.13	3.94	8.07	12.69
JPM EMBI GI Div/JPM GBI-EM GI Div	3.36	16.11	16.83	2.81	3.95	6.72	-
Emerging Debt Corporate Style	3.59	12.81	13.05	6.55	8.08	-	-
JPM CEMBI	3.25	12.57	13.34	6.38	7.31	7.16	-

*Returns less than one year are not annualized.

Sources: Bloomberg Barclays, Callan, JPMorgan

Returns Take a Summer Vacation

REAL ESTATE | Kevin Nagy

The **NCREIF Property Index*** gained 1.77% during the second quarter (1.16% from income and 0.60% from appreciation), its worst performance since the first quarter of 2010. In addition, appreciation fell for the sixth consecutive quarter.

In a repeat of the second quarter, Industrial (+2.89%) and Retail (+1.98%) topped property sector performance, and Office (+1.26%) and Hotels (+1.35%) were the worst performers again. The West region led the way (+2.19%) while the Midwest (+1.46%) was the weakest. Transaction volume was \$9.6 billion, a 7% increase over the previous quarter and a 20% increase over the same period in 2015. Appraisal capitalization rates fell to 4.48%, an all-time low. The spread between appraisal capitalization rates and transaction capitalization rates widened to 180 basis points, the largest since the third quarter of 2009.

Occupancy rates continued to climb, setting a new 15-year high at 93.22%. Retail and Apartment occupancy rates fell slightly; Industrial and Office rates increased. Apartments were the only property type to experience a drop year-to-date.

The preliminary return for the **NCREIF Open End Diversified Core Equity Index*** was 1.83%; 0.90% of that was income and 0.94% from appreciation. This surpassed last quarter as the lowest since the first quarter of 2010. Income returns stayed in line with past quarters, but appreciation reached its lowest level since the first quarter of 2010. Low long-term interest rates have been a strong tailwind for U.S. real estate performance in recent quarters, but expectations of a Fed rate increase have sucked the wind from its sails.

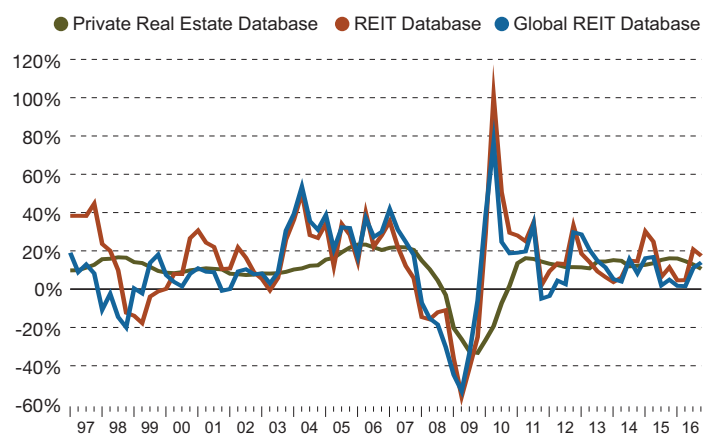
Global real estate investment trusts (REITs), tracked by the **FTSE EPRA/NAREIT Developed REIT Index (USD)**, outperformed their U.S. counterparts and posted a 1.46% return. U.S. REITs, as measured by the **FTSE NAREIT Equity REITs Index**, lost 1.43% for the quarter.

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

In the U.S., REITs started the quarter strong, riding the post-Brexit bounce that followed the U.K.'s surprise vote to leave the European Union. The gains would not last, however, as mixed economic data fueled concerns of a Federal Reserve rate increase. Timber (+7.72%), Industrial (+6.67%), and Office (+3.24%) were the strongest-performing sectors for the quarter. Specialty (-9.93%), Data Centers (-9.02%), and Retail (-2.62%) were some of the laggards. Self-storage (-12.20%) struggled for the second straight quarter and was the worst performing sector. Investors appeared to be shifting money into more economically sensitive U.S. stocks, which generally performed well on the back of modest long-term yield increases. Anticipation of a Fed rate hike also prompted some investors to sell out of crowded defensive positions such as REITs into more cyclical stocks. As of September 30, U.S. REITs were trading at a 12.3% premium to net asset value, more than a 500 basis point increase over the previous quarter.

As the dust settles from the initial shock of Brexit, the impact on U.K. real estate is beginning to be apparent. Transaction evidence shows City of London and West End offices were the most affected due to uncertainty about the city's future as a financial hub. Industrial assets were the least affected. Outside of the U.K., the Nordic countries were the strongest performers.

Rolling One-Year Returns



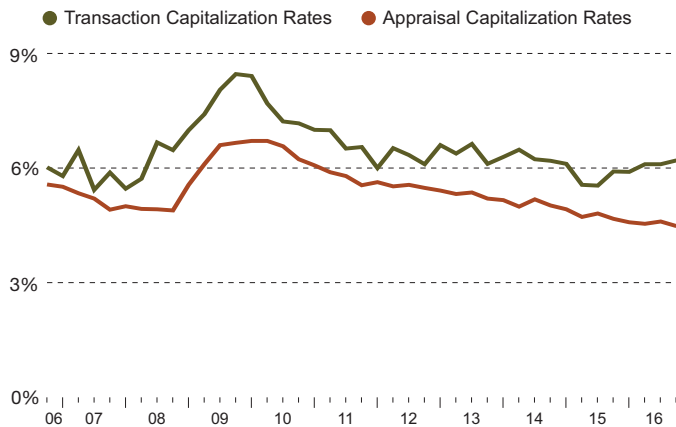
Source: Callan

REAL ESTATE (Continued)

Signs that the economies of Norway and Finland may finally be on the cusp of growth have led to record levels of investment and increases in property value. France also performed well as the economy recovered from a sluggish second quarter and employment growth propelled office returns upward.

Collateralized mortgage-backed securities (CMBS) issuance for the quarter was \$19.5 billion, a huge jump from the \$12.1 billion in the second quarter. While issuance was up quarter-over-quarter, it was still down compared to the third quarter of 2015 (\$25.3 billion).

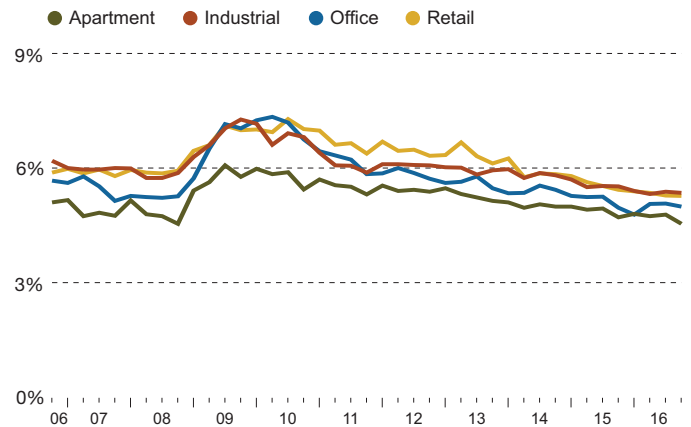
NCREIF Transaction and Appraisal Capitalization Rates



Source: NCREIF

Note: Transaction capitalization rate is equal weighted.

NCREIF Capitalization Rates by Property Type



Source: NCREIF

Note: Capitalization rates are appraisal-based.

Callan Database Median and Index Returns* for Periods ended September 30, 2016

Private Real Estate	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Real Estate Database (net of fees)	1.62	5.85	9.34	11.64	11.74	4.58	7.33
NCREIF Property	1.77	6.13	9.22	11.31	11.18	7.22	8.93
NFI-ODCE (value wtd. net)	1.83	5.80	9.08	11.42	11.34	5.05	7.03
Public Real Estate	Quarter	YTD	Year	3 years	5 Years	10 Years	15 Years
REIT Database	-1.15	9.61	17.67	14.49	16.28	7.05	12.57
FTSE NAREIT Equity	-1.43	11.75	19.86	14.22	15.91	6.35	11.38
Global Public Real Estate	Quarter	YTD	Year	3 years	5 Years	10 Years	15 Years
Global REIT Database	1.36	9.06	13.66	9.14	13.77	4.73	10.87
FTSE EPRA/NAREIT Developed REIT	1.46	10.97	15.85	8.60	13.17	4.16	10.67
Global ex U.S. Public Real Estate	Quarter	YTD	Year	3 years	5 Years	10 Years	15 Years
Global ex-U.S. REIT Database	4.51	7.75	8.49	2.98	11.00	2.41	-
EPRA/NAREIT Dev REITs ex-U.S.	4.28	10.44	11.66	3.21	10.42	2.57	10.59

*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.

Sticker Shock

PRIVATE EQUITY | Gary Robertson

Third-quarter fundraising commitments totaled \$38.6 billion with 143 new partnerships formed, Private Equity Analyst reported. The number of new funds dropped by 27% from 196 in the second quarter, and dollar volume plummeted 62% from \$102.2 billion. But this year is tracking closely to 2015, trailing by only \$3 billion (1%) in commitments and 41 (6%) in new partnerships.

The investment pace by funds into companies maintained momentum, according to Buyouts newsletter, totaling 385 transactions, up 8% from 356 in the second quarter but down 5% from 406 a year ago. The announced aggregate dollar volume was \$39 billion, up 4% from \$37.6 billion in the second quarter and up significantly from the \$11.6 billion a year ago. Just eight deals with announced values of \$1 billion or more closed in the quarter, but that was up from six in the second quarter.

New investments in venture capital companies totaled 1,796 rounds and \$15 billion of announced volume, according to the National Venture Capital Association. The number of rounds decreased 11% from 2,026 in the second quarter, and the dollar volume dropped 32% from \$22.1 billion.

Regarding exits, Buyouts reports there were 142 private M&A exits of buyout-backed companies, with 38 deals disclosing

Funds Closed January 1 to September 30, 2016

Strategy	No. of Funds	Amt (\$mm)	Percent
Venture Capital	274	32,312	17%
Buyouts	171	122,487	63%
Subordinated Debt	11	3,220	2%
Distressed Debt	17	17,250	9%
Secondary and Other	15	12,284	6%
Fund-of-funds	28	6,451	3%
Totals	516	194,004	100%

Source: Private Equity Analyst

values totaling \$27.5 billion. The M&A exits count was up 20% from 118 in the second quarter, and the announced value increased 12% from \$24.6 billion. There were two buyout-backed IPOs floating an aggregate \$551.6 million, down from three floating \$1.6 billion in the second quarter.

Venture-backed M&A exits totaled 192 transactions, with a disclosed dollar volume of \$13.4 billion. The number of private sale exits increased 19% from 161 in the second quarter, but the announced dollar volume declined 17% from the second quarter's \$16.1 billion. There were 14 VC-backed IPOs in the third quarter with a combined float of \$1 billion. For comparison, the second quarter of 2016 had 13 IPOs and total issuance of \$876.1 million.

Private Equity Performance Database (%)

(Pooled Horizon IRRs through March 31, 2016*)

Strategy	3 Months	Year	3 Years	5 Years	10 Years	15 Years	20 Years
All Venture	-2.4	6.6	20.6	15.0	10.4	5.3	23.2
Growth Equity	-0.1	6.0	12.7	10.5	11.1	10.3	13.9
All Buyouts	2.1	9.7	12.8	11.5	10.9	12.3	12.7
Mezzanine	3.0	8.0	9.3	10.2	9.6	8.5	9.4
Distressed	0.6	0.4	7.8	8.3	9.3	10.6	10.6
All Private Equity	0.8	7.5	13.3	11.5	10.6	10.2	13.5
S&P 500	1.4	1.8	11.8	11.6	7.0	6.0	8.0
Russell 3000	1.0	-0.3	11.2	11.0	6.9	6.4	8.0

Private equity returns are net of fees.

Sources: Standard & Poor's, Thomson/Cambridge

*Most recent data available at time of publication.

Note: 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.

Can't Stop the Feeling

HEDGE FUNDS | Jim McKee

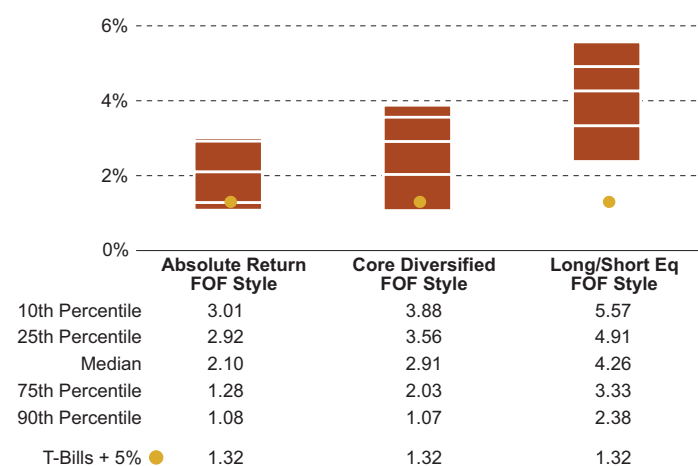
Despite the somber mood spurred by the Brexit vote closing out the prior quarter, capital markets got back on the dance floor in the third quarter. Central bankers let it be known that their music of easy money policies would not stop. **MSCI Emerging Markets** (+9.03%) led the beat upward, but the **S&P 500** (+3.85%) hit another record high. Higher income continued to be alluring as the **Bloomberg Barclays Corporate High Yield Index** jumped 5.55%.

Highlighting raw hedge fund performance without implementation costs, the **Credit Suisse Hedge Fund Index** (CS HFI) rose 1.74% in the third quarter. As a benchmark of actual hedge fund portfolios, the median manager in the **Callan Hedge Fund-of-Funds Database** advanced 2.92%, net of all fees.

Within CS HFI, the best-performing strategy last quarter was *Emerging Markets* (+4.20%), supported by strong debt and equity markets amid growing economies. Tightening credit spreads and improving fundamentals supported *Convertible Arb* (+3.83%), *Event-Driven Multi-Strategy* (+3.06%), and *Distressed* (+2.75%). Aided by strong equity tailwinds, *Long/Short Equity* gained 1.88%. Choppy markets caught the trend-following crowds of *Managed Futures* (-3.23%) a bit flat-footed.

Within Callan's Hedge Fund-of-Funds Database, the median *Callan Long/Short Equity FOF* (+4.26%) outpaced the *Callan Absolute Return FOF* (+2.10%). With diversifying exposures to both non-directional and directional styles, the *Core Diversified FOF* gained 2.91%.

Callan Style Group Quarterly Returns



Sources: Callan, Merrill Lynch

Callan Database Median and Index Returns* for Periods ended September 30, 2016

	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Hedge Fund-of-Funds Database	2.92	0.19	0.55	2.64	5.03	3.70	4.84
CS Hedge Fund Index	1.74	0.09	-0.03	2.53	4.25	4.21	5.81
CS Equity Market Neutral	1.59	-1.98	-2.02	1.17	2.12	-2.45	0.75
CS Convertible Arbitrage	3.83	6.16	5.54	2.14	4.01	3.98	4.55
CS Fixed Income Arbitrage	2.61	2.39	2.42	2.88	4.59	3.50	4.23
CS Multi-Strategy	2.55	3.21	3.74	5.86	7.33	5.66	6.79
CS Distressed	2.75	2.71	0.91	1.59	5.43	4.20	7.02
CS Risk Arbitrage	2.30	5.08	5.93	1.71	2.61	3.59	3.71
CS Event-Driven Multi-Strategy	3.06	-0.51	-3.04	-0.56	3.71	4.11	6.13
CS Long/Short Equity	1.88	-3.23	-1.70	3.99	6.56	4.76	6.12
CS Dedicated Short Bias	-12.06	-18.35	-21.86	-8.80	-15.43	-10.95	-9.05
CS Global Macro	0.58	-0.97	-0.36	1.68	2.34	5.75	7.98
CS Managed Futures	-3.23	-1.26	-2.30	6.80	0.98	4.09	4.93
CS Emerging Markets	4.20	4.74	7.67	3.48	4.99	4.62	8.76

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

DC Participants Seek Cover

DEFINED CONTRIBUTION | Tom Szkwarla

DC plan balances increased a solid 1.67% in the second quarter, according to the Callan DC Index™. But participants sought cover, shifting money from equities into fixed income and stable value. This is atypical behavior. Generally, DC plan participants tend to follow the market, heading to equities when the stock market rises.

Turnover—or net transfer activity levels—has also been below average this year, coming in at 0.55% in the second quarter and 0.45% in the first. Historical turnover since inception is 0.65% for the Index.

Although the Index rose smartly for the quarter—gaining 1.90%—target date funds still managed to marginally outpace the typical DC investor, gaining 2.02%. Since inception, the DC Index has trailed the Age 45 Target Date Fund by 70 basis points annually, averaging a 5.15% annual return.

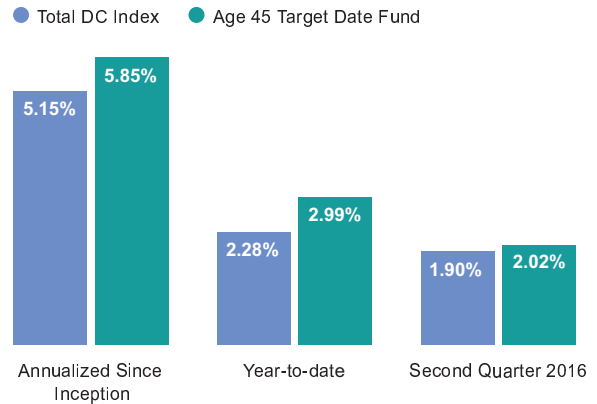
Money flowed out of DC plans during the quarter to the tune of 23 basis points. Historically, inflows (participant and plan sponsor contributions) have accounted for approximately 30% of total growth in plan balances (2.24% annualized). Altogether, participant balances have increased 7.39% annually since inception of the Index.

The DC Index’s allocation to target date funds continued to increase in the quarter, reaching 26.9% of total DC assets. Meanwhile, U.S. large cap equity dropped to its lowest allocation since the fourth quarter of 2011.

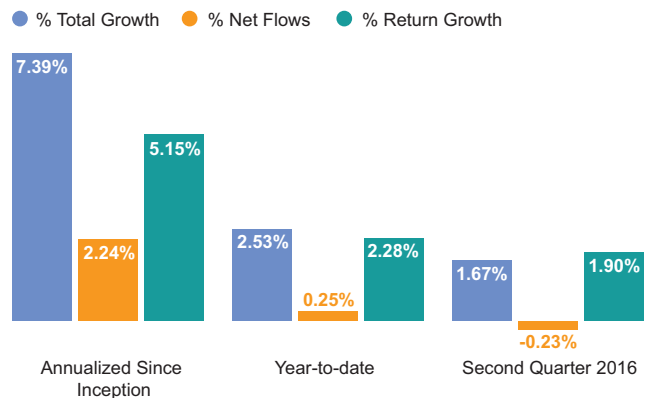
Target date funds are the fifth most prevalent asset class in DC plans (89% offer them), and when offered attract the lion’s share of assets, at 31% on average.

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 (Second Quarter 2016) (Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	47.68%
U.S. Fixed	22.94%
Company Stock	-22.66%
U.S. Large Cap	-39.59%
Total Turnover**	0.55%

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

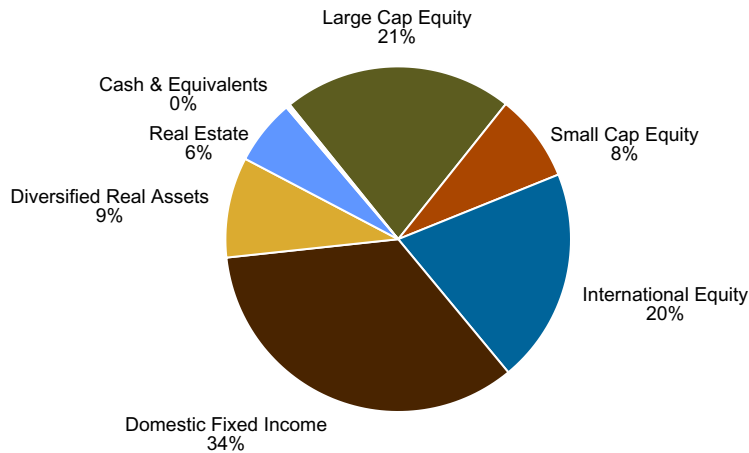
* DC Index inception date is January 2006.

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

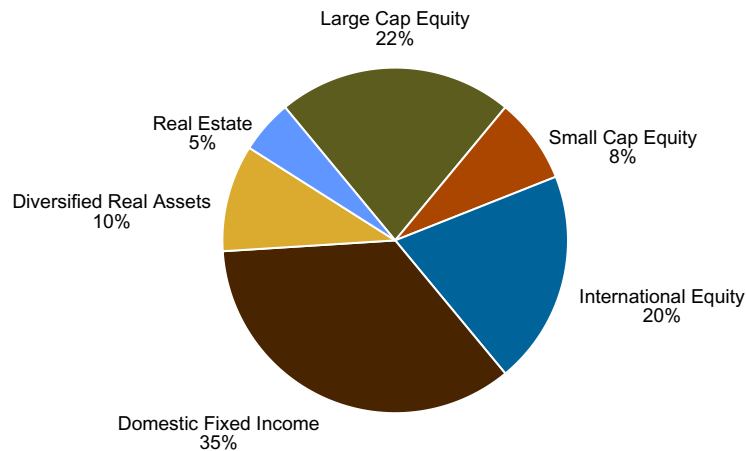
Actual vs Target Asset Allocation As of September 30, 2016

The first chart below shows the Fund's asset allocation as of September 30, 2016. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

Actual Asset Allocation



Target Asset Allocation

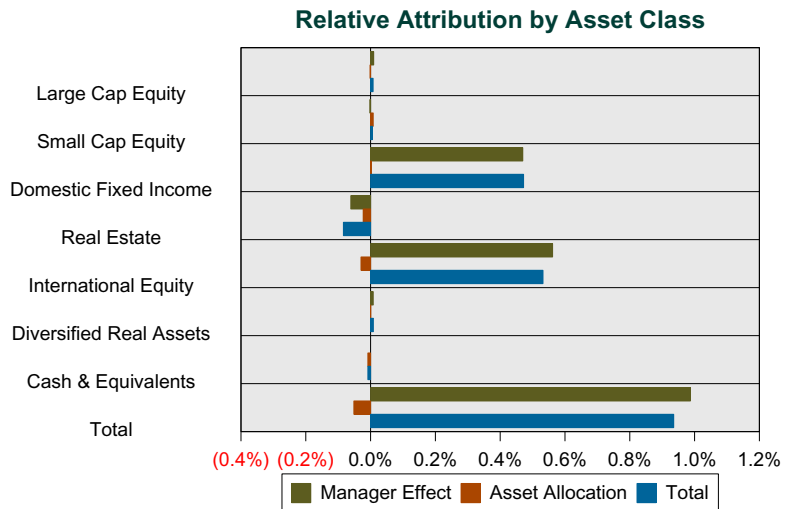
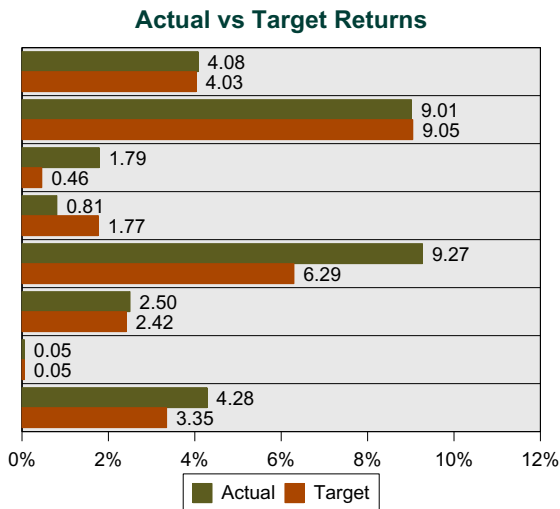
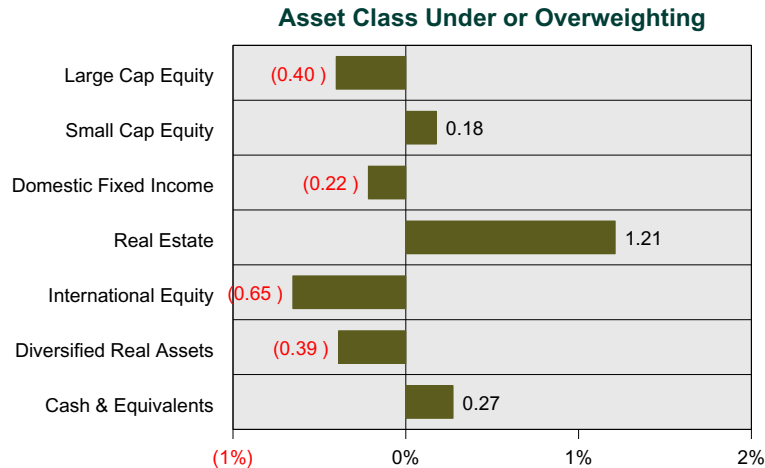


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap Equity	873,301	21.5%	22.0%	(0.5%)	(22,140)
Small Cap Equity	335,594	8.2%	8.0%	0.2%	9,979
International Equity	817,674	20.1%	20.0%	0.1%	3,636
Domestic Fixed Income	1,396,414	34.3%	35.0%	(0.7%)	(28,153)
Diversified Real Assets	383,439	9.4%	10.0%	(0.6%)	(23,580)
Real Estate	246,518	6.1%	5.0%	1.1%	43,008
Cash & Equivalents	17,249	0.4%	0.0%	0.4%	17,249
Total	4,070,190	100.0%	100.0%		

* Current Quarter Target = 35.0% BB Barclays 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 - September 30, 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.



Relative Attribution Effects for Quarter ended September 30, 2016

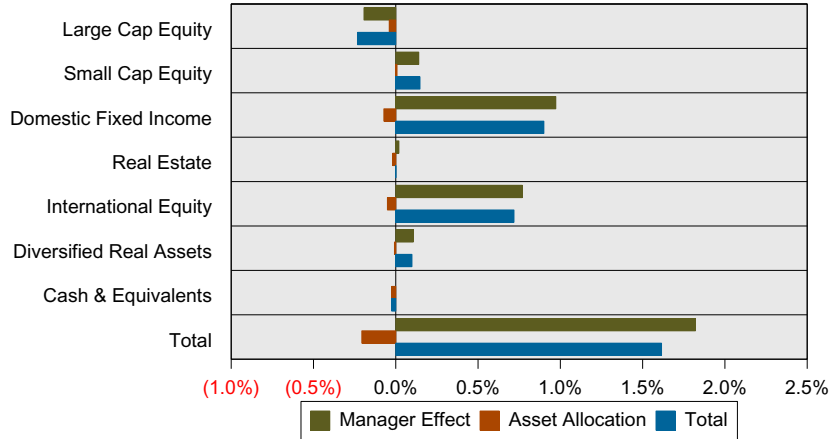
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	22%	22%	4.08%	4.03%	0.01%	(0.00%)	0.01%
Small Cap Equity	8%	8%	9.01%	9.05%	(0.00%)	0.01%	0.01%
Domestic Fixed Income	35%	35%	1.79%	0.46%	0.47%	0.00%	0.47%
Real Estate	6%	5%	0.81%	1.77%	(0.06%)	(0.02%)	(0.08%)
International Equity	19%	20%	9.27%	6.29%	0.56%	(0.03%)	0.53%
Diversified Real Assets	10%	10%	2.50%	2.42%	0.01%	0.00%	0.01%
Cash & Equivalents	0%	0%	0.05%	0.05%	0.00%	(0.01%)	(0.01%)
Total			4.28%	3.35%	+ 0.99%	+ (0.05%)	0.94%

* Current Quarter Target = 35.0% BB Barclays 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.

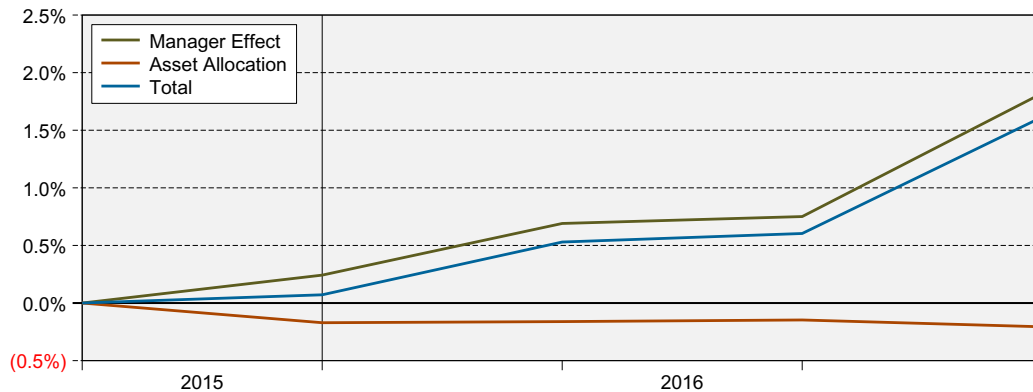
Cumulative Total Fund Relative Attribution - September 30, 2016

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

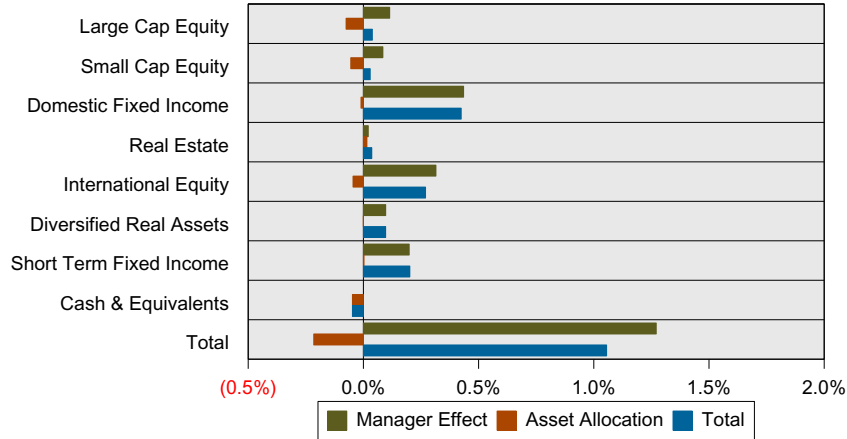
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	22%	22%	14.03%	14.93%	(0.19%)	(0.04%)	(0.23%)
Small Cap Equity	8%	8%	17.50%	15.47%	0.14%	0.01%	0.15%
Domestic Fixed Income	35%	35%	7.98%	5.19%	0.97%	(0.07%)	0.90%
Real Estate	6%	5%	9.69%	9.22%	0.02%	(0.02%)	0.00%
International Equity	19%	20%	10.28%	6.38%	0.77%	(0.05%)	0.72%
Diversified Real Assets	10%	10%	6.68%	5.60%	0.11%	(0.01%)	0.10%
Cash & Equivalents	0%	0%	0.17%	0.17%	0.00%	(0.02%)	(0.02%)
Total			10.45%	8.84%	+ 1.82%	+ (0.21%)	1.61%

* Current Quarter Target = 35.0% BB Barclays 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.

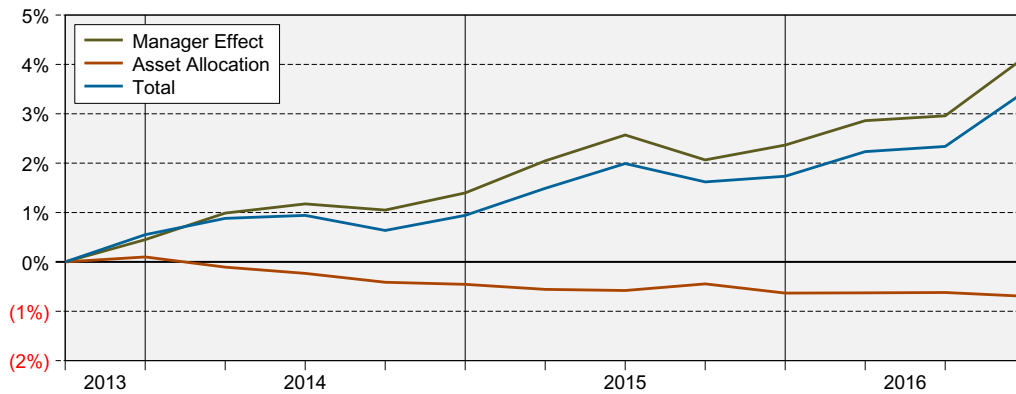
Cumulative Total Fund Relative Attribution - September 30, 2016

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

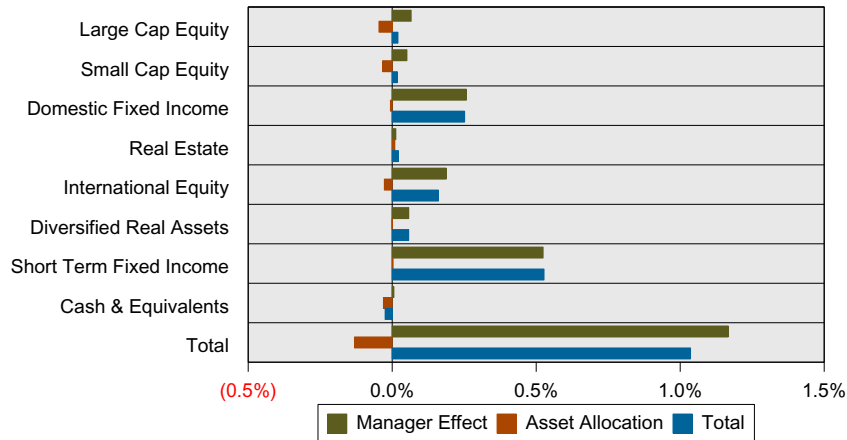
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	19%	19%	11.58%	10.78%	0.11%	(0.08%)	0.04%
Small Cap Equity	7%	7%	8.09%	6.71%	0.08%	(0.05%)	0.03%
Domestic Fixed Income	30%	30%	5.83%	4.22%	0.43%	(0.01%)	0.42%
Real Estate	5%	4%	12.29%	11.31%	0.02%	0.02%	0.04%
International Equity	17%	18%	2.18%	0.43%	0.31%	(0.05%)	0.27%
Diversified Real Assets	7%	7%	-	-	0.10%	(0.00%)	0.10%
Short Term Fixed Income	15%	15%	-	-	0.20%	0.00%	0.20%
Cash & Equivalents	1%	0%	0.06%	0.06%	0.00%	(0.05%)	(0.05%)
Total			4.97%	3.92%	1.27%	(0.22%)	1.06%

* Current Quarter Target = 35.0% BB Barclays 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.

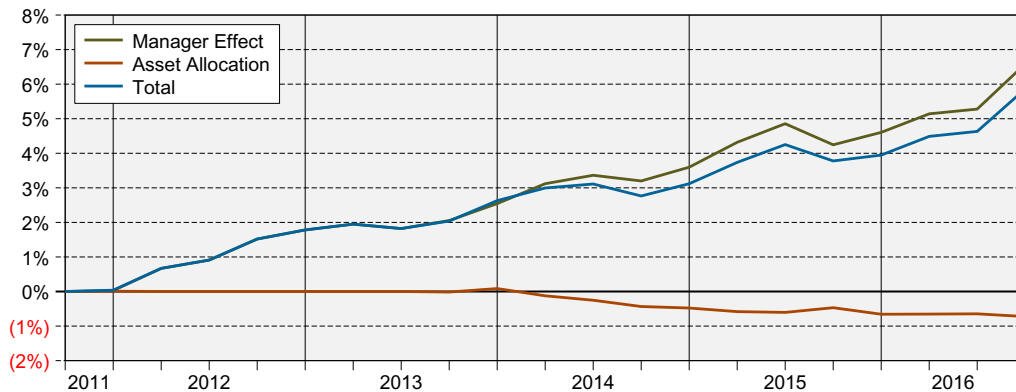
Cumulative Total Fund Relative Attribution - September 30, 2016

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

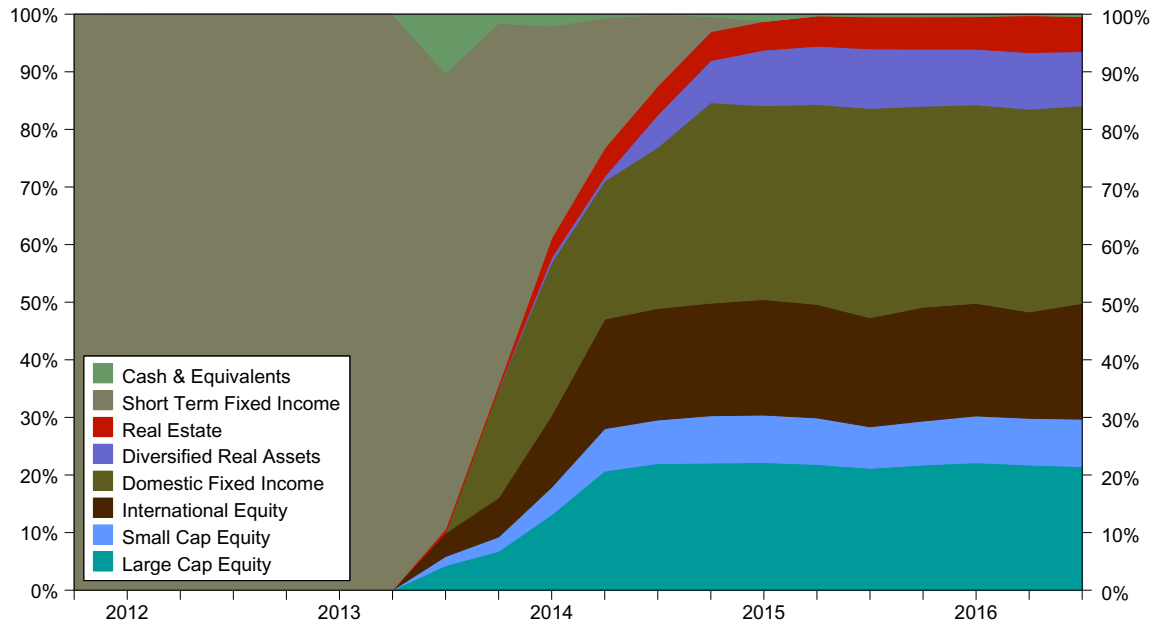
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	12%	12%	-	-	0.07%	(0.05%)	0.02%
Small Cap Equity	4%	4%	-	-	0.05%	(0.03%)	0.02%
Domestic Fixed Income	18%	18%	-	-	0.26%	(0.01%)	0.25%
Real Estate	3%	3%	-	-	0.01%	0.01%	0.02%
International Equity	10%	11%	-	-	0.19%	(0.03%)	0.16%
Diversified Real Assets	4%	4%	-	-	0.06%	(0.00%)	0.06%
Short Term Fixed Income	45%	46%	-	-	0.52%	0.00%	0.53%
Cash & Equivalents	4%	3%	0.11%	0.11%	0.01%	(0.03%)	(0.02%)
Total					3.65%	2.62%	1.17%

* Current Quarter Target = 35.0% BB Barclays 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.

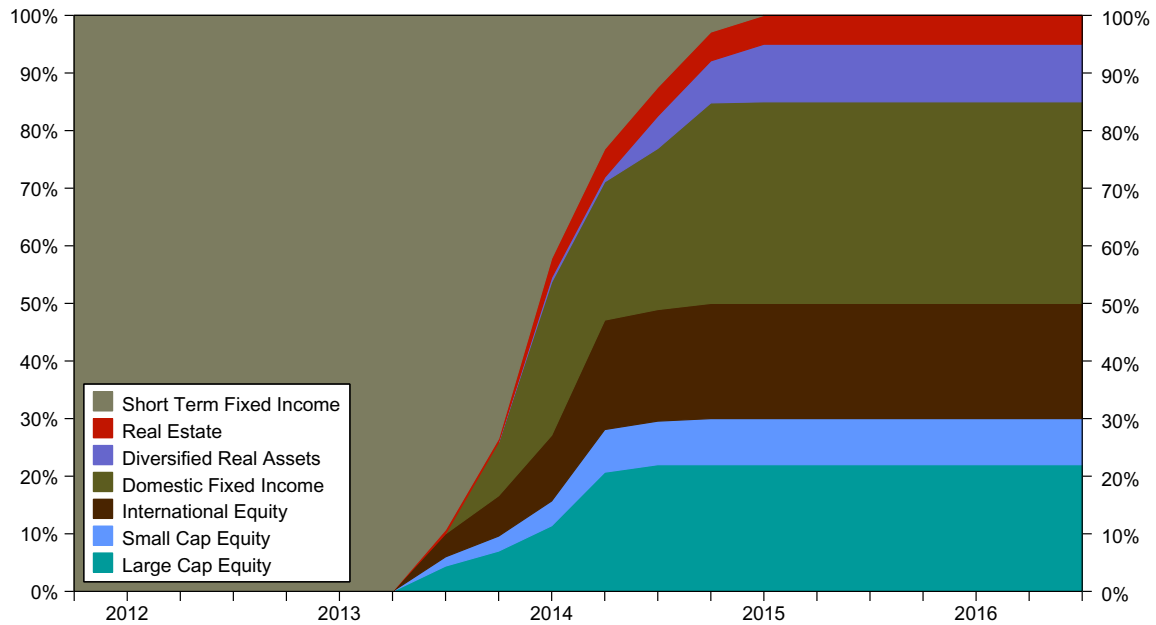
Actual vs Target Historical Asset Allocation

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

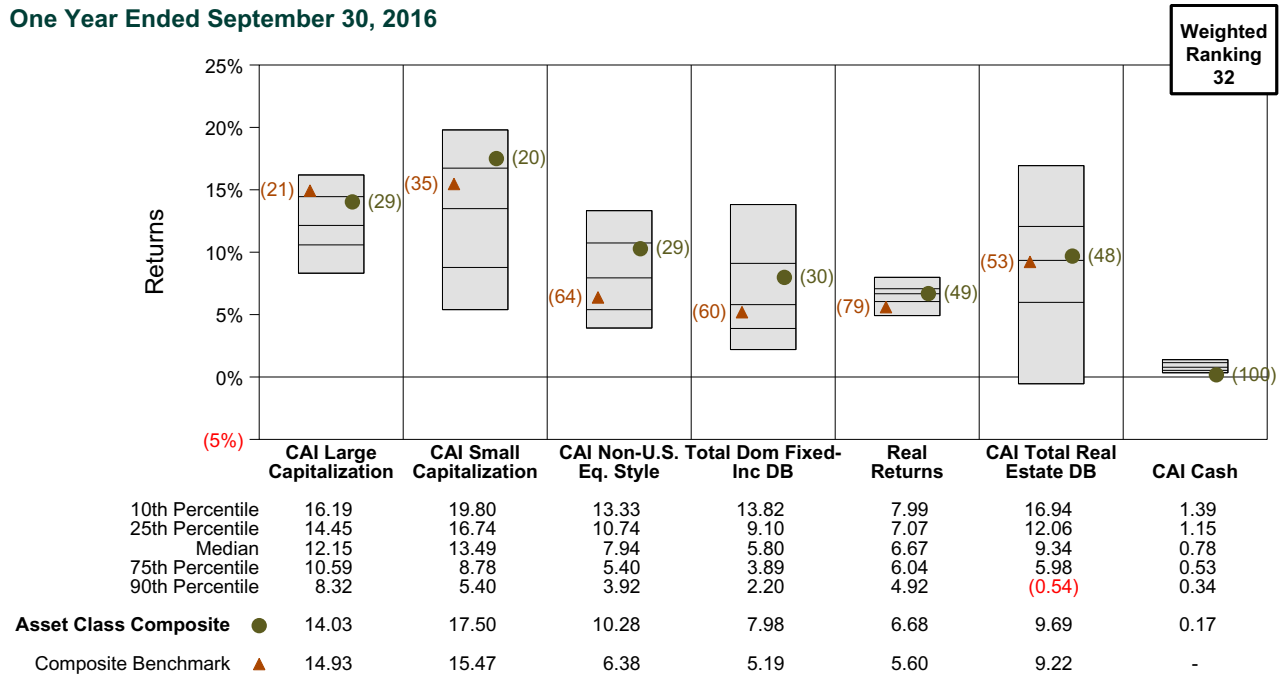


* Current Quarter Target = 35.0% BB Barclays Aggregate Idx, 22.0% Russell 1000 Index, 20.0% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index and 5.0% NCREIF Total Index.

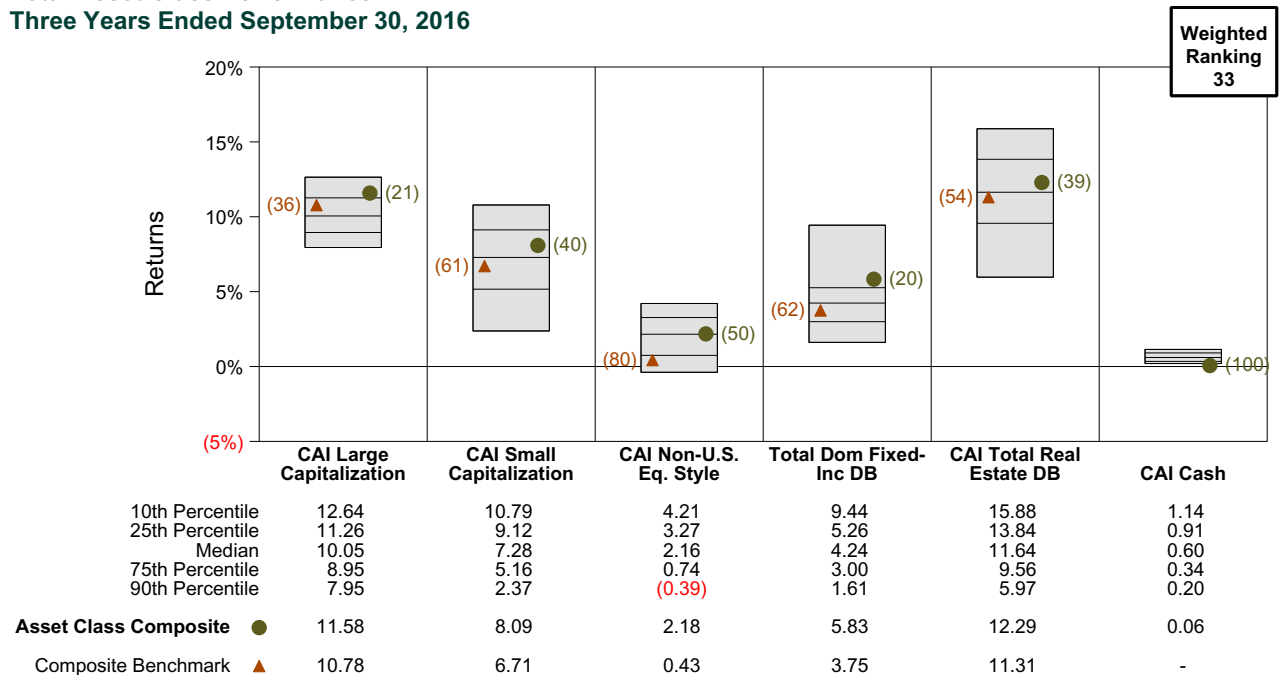
Asset Class Rankings

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 September 30, 2016



Total Asset Class Performance Three Years Ended September 30, 2016



* Current Quarter Target = 35.0% BB Barclays 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 September 30, 2016, with the distribution as of June 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

	September 30, 2016		Net New Inv.	Inv. Return	June 30, 2016	
	Market Value	Weight			Market Value	Weight
Domestic Equity	\$1,208,895,445	29.70%	\$10,238,682	\$61,598,907	\$1,137,057,855	29.85%
Large Cap Equity	\$873,301,271	21.46%	\$11,219,325	\$33,784,904	\$828,297,043	21.74%
L.A. Capital Enhanced	175,125,746	4.30%	1,941,765	5,430,925	167,753,055	4.40%
L.A. Capital Large Cap Growth	262,427,293	6.45%	2,870,949	8,808,028	250,748,315	6.58%
Parametric Clifton Large Cap	174,507,357	4.29%	1,587,972	6,545,960	166,373,425	4.37%
LSV Large Cap Value	261,240,875	6.42%	4,818,638	12,999,990	243,422,247	6.39%
Small Cap Equity	\$335,594,173	8.25%	\$(980,643)	\$27,814,004	\$308,760,812	8.11%
Parametric Clifton SmallCap	182,399,262	4.48%	(887,562)	15,813,968	167,472,856	4.40%
PIMCO RAE	153,194,911	3.76%	(93,081)	12,000,036	141,287,957	3.71%
International Equity	\$817,674,256	20.09%	\$47,431,034	\$66,949,380	\$703,293,842	18.46%
Capital Group	0	0.00%	(181,352)	(25,196)	206,548	0.01%
DFA Intl SmallCap Value	80,376,607	1.97%	2,000,000	7,505,255	70,871,353	1.86%
LSV Intl Value	328,398,806	8.07%	(296,145)	26,141,308	302,553,643	7.94%
Vanguard Intl Explorer Fund	80,264,153	1.97%	4,000,000	5,944,618	70,319,535	1.85%
William Blair	328,634,690	8.07%	41,908,530	27,383,396	259,342,764	6.81%
Domestic Fixed Income	\$1,396,413,804	34.31%	\$31,519,516	\$24,029,691	\$1,340,864,597	35.20%
Declaration Total Return	105,305,428	2.59%	(36,890)	2,223,351	103,118,967	2.71%
Prudential	158,090,200	3.88%	9,901,622	2,607,746	145,580,832	3.82%
SSgA US Govt Credit Bd Idx	194,004,154	4.77%	4,984,134	734,715	188,285,306	4.94%
Wells Capital	436,246,947	10.72%	6,811,505	9,790,481	419,644,961	11.02%
Western Asset Management	437,738,640	10.75%	9,859,145	6,999,863	420,879,632	11.05%
Pooled Fixed Income(1)	65,028,436	1.60%	0	1,673,536	63,354,900	1.66%
Diversified Real Assets	\$383,438,948	9.42%	\$(337,303)	\$9,358,863	\$374,417,388	9.83%
Western TIPS	293,877,868	7.22%	(93,674)	9,444,479	284,527,063	7.47%
JP Morgan Infrastructure	80,265,969	1.97%	(2)	0	80,265,971	2.11%
Grosvenor Cust. Infrastructure	9,295,111	0.23%	(243,628)	(85,616)	9,624,354	0.25%
Real Estate	\$246,517,721	6.06%	\$(103,509)	\$1,973,979	\$244,647,251	6.42%
Invesco Core Real Estate	119,329,030	2.93%	(103,302)	1,973,979	117,458,354	3.08%
JP Morgan RE Inc & Growth	127,188,691	3.12%	(206)	()	127,188,897	3.34%
Cash & Equivalents	\$17,249,351	0.42%	\$8,041,144	\$5,832	\$9,202,374	0.24%
Securities Lending Income	\$0	0.00%	\$(178,272)	\$178,272	-	-
Total Fund	\$4,070,189,524	100.0%	\$96,611,292	\$164,094,925	\$3,809,483,307	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 September 30, 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 September 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Domestic Equity				
Gross	5.42%	15.04%	10.68%	-
Net	5.26%	14.74%	10.43%	-
Large Cap Equity				
Gross	4.08%	14.03%	11.58%	-
Net	3.98%	13.78%	11.37%	-
Russell 1000 Index	4.03%	14.93%	10.78%	16.41%
L.A. Capital Enhanced - Gross	3.24%	15.32%	11.70%	-
L.A. Capital Enhanced - Net	3.20%	15.16%	11.55%	-
Russell 1000 Index	4.03%	14.93%	10.78%	16.41%
L.A. Capital LargeCap Growth - Gross	3.52%	14.15%	12.91%	-
L.A. Capital LargeCap Growth - Net	3.46%	13.92%	12.70%	-
Russell 1000 Growth Index	4.58%	13.76%	11.83%	16.60%
Parametric Clifton Large Cap - Gross	3.93%	16.12%	11.77%	-
Parametric Clifton Large Cap - Net	3.69%	15.85%	11.64%	-
S&P 500 Index	3.85%	15.43%	11.16%	16.37%
LSV Large Cap Value - Gross	5.33%	11.58%	10.04%	-
LSV Large Cap Value - Net	5.26%	11.25%	9.74%	-
Russell 1000 Value Index	3.48%	16.20%	9.70%	16.15%
Small Cap Equity				
Gross	9.01%	17.50%	8.09%	-
Net	8.69%	17.06%	7.71%	-
Russell 2000 Index	9.05%	15.47%	6.71%	15.82%
Parametric Clifton Small Cap - Gross	9.45%	17.23%	8.27%	-
Parametric Clifton Small Cap - Net	8.91%	16.65%	7.85%	-
Russell 2000 Index	9.05%	15.47%	6.71%	15.82%
PIMCO RAE - Gross	8.49%	17.88%	7.57%	-
PIMCO RAE - Net	8.43%	17.57%	7.26%	-
Russell 2000 Index	9.05%	15.47%	6.71%	15.82%
International Equity				
Gross	9.27%	10.28%	2.18%	-
Net	9.22%	9.98%	1.88%	-
Benchmark(1)	6.29%	6.38%	0.43%	7.36%
DFA Intl Small Cap Value	10.54%	10.46%	4.19%	-
World ex US SC Va	8.77%	12.08%	2.80%	9.48%
LSV Intl Value - Gross	8.64%	7.95%	1.75%	-
LSV Intl Value - Net	8.54%	7.55%	1.36%	-
MSCI EAFE Index	6.43%	6.52%	0.48%	7.39%
Vanguard Intl Explorer Fund	8.43%	7.95%	5.20%	-
BMI, EPAC, <\$2 B	7.90%	13.76%	5.21%	10.18%
William Blair - Gross	9.82%	-	-	-
William Blair - Net	9.78%	-	-	-
MSCI ACWI ex US	6.91%	9.26%	0.18%	6.04%

(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 September 30, 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 September 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Domestic Fixed Income				
Gross	1.79%	7.98%	5.83%	-
Net	1.76%	7.84%	5.69%	-
BB Barclays Aggregate Index	0.46%	5.19%	4.03%	3.08%
Declaration Total Return - Net	2.16%	3.88%	-	-
Libor-3 Month	0.19%	0.61%	0.37%	0.38%
Prudential - Gross	1.79%	8.74%	-	-
Prudential - Net	1.72%	8.45%	-	-
BB Barclays Aggregate Index	0.46%	5.19%	4.03%	3.08%
Wells Capital - Gross	2.33%	10.17%	-	-
Wells Capital - Net	2.29%	9.98%	-	-
BB Barclays Baa Credit 3% In	1.95%	9.82%	5.80%	5.52%
Western Asset - Gross	1.66%	7.62%	-	-
Western Asset - Net	1.62%	7.48%	-	-
BB Barclays Aggregate Index	0.46%	5.19%	4.03%	3.08%
SSgA US Govt Credit Bd Idx - Gross	0.39%	5.86%	-	-
SSgA US Govt Credit Bd Idx - Net	0.39%	5.83%	-	-
BB Barclays Govt/Credit Bd	0.40%	5.86%	4.22%	3.24%
Pooled Fixed Income - Net(1)	2.64%	7.81%	-	-
BB Barclays Aggregate Index	0.46%	5.19%	4.03%	3.08%
Diversified Real Assets				
Gross	2.50%	6.68%	-	-
Net	2.47%	6.35%	-	-
Weighted Benchmark	2.42%	5.60%	-	-
Western Asset TIPS - Gross	3.32%	7.61%	-	-
Western Asset TIPS - Net	3.29%	7.47%	-	-
BB Barclays Gbl Inftn-Linked	3.15%	7.14%	2.52%	2.94%
JP Morgan Infrastructure - Gross	0.00%	2.78%	-	-
JP Morgan Infrastructure - Net	0.00%	1.83%	-	-
CPI-W	0.09%	1.22%	0.71%	1.03%
Grosvenor Cust. Infrastructure - Net	(0.89%)	8.34%	-	-
CPI-W	0.09%	1.22%	0.71%	1.03%
Real Estate				
Gross	0.81%	9.69%	12.29%	-
Net	0.76%	8.95%	11.50%	-
NCREIF Total Index	1.77%	9.22%	11.31%	11.18%
Invesco Core Real Estate - Gross	1.68%	9.57%	12.51%	-
Invesco Core Real Estate - Net	1.59%	9.20%	12.11%	-
NCREIF Total Index	1.77%	9.22%	11.31%	11.18%
JP Morgan RE Inc & Growth - Gross	0.00%	10.04%	12.16%	-
JP Morgan RE Inc & Growth - Net	0.00%	8.85%	11.03%	-
NCREIF Total Index	1.77%	9.22%	11.31%	11.18%
Cash & Equivalents - Net				
90 Day Treasury Bills	0.05%	0.17%	0.06%	0.11%
	0.10%	0.27%	0.11%	0.10%
Total Fund				
Gross	4.28%	10.46%	4.97%	3.66%
Net	4.21%	10.18%	4.74%	3.49%
Target*	3.35%	8.84%	3.92%	2.62%

* Current Quarter Target = 35.0% BB Barclays 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 September 30, 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.

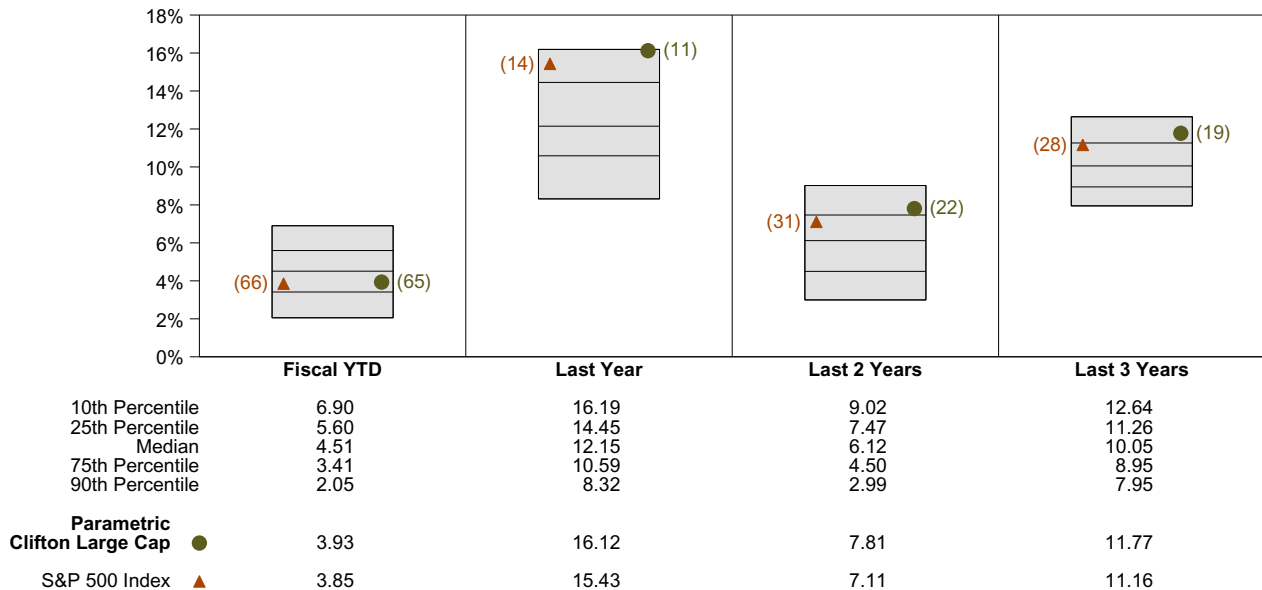
Quarterly Summary and Highlights

- Parametric Clifton Large Cap's portfolio posted a 3.93% return for the quarter placing it in the 65 percentile of the CAI Large Capitalization group for the quarter and in the 11 percentile for the last year.
- Parametric Clifton Large Cap's portfolio outperformed the S&P 500 Index by 0.08% for the quarter and outperformed the S&P 500 Index for the year by 0.69%.

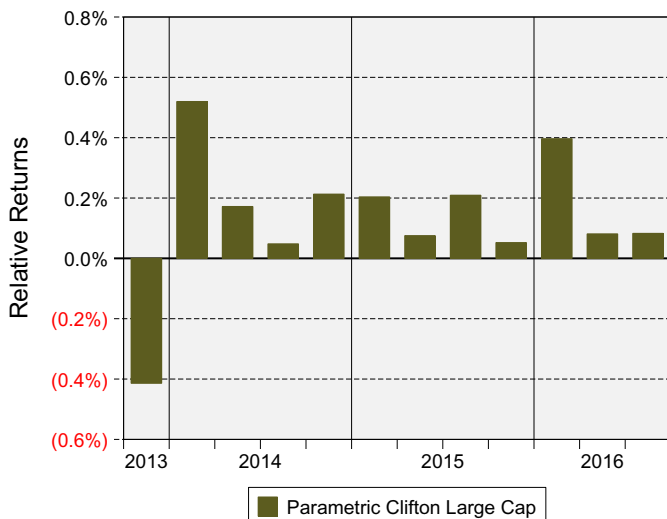
Quarterly Asset Growth

Beginning Market Value	\$166,373,425
Net New Investment	\$1,587,972
Investment Gains/(Losses)	\$6,545,960
Ending Market Value	\$174,507,357

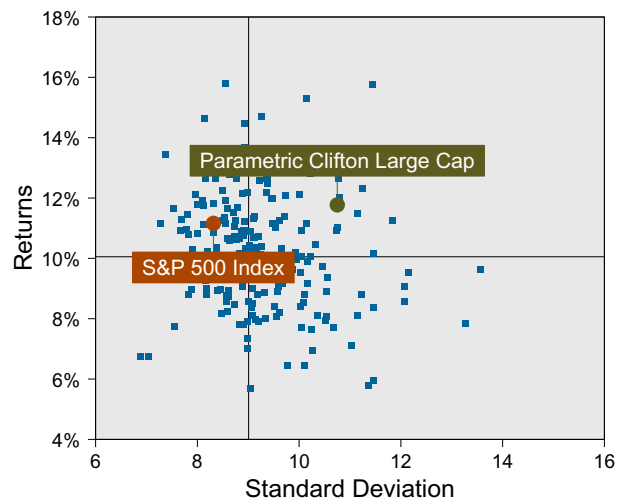
Performance vs CAI Large Capitalization (Gross)



Relative Return vs S&P 500 Index



CAI Large Capitalization (Gross) Annualized Three Year Risk vs Return



L.A. Capital Period Ended September 30, 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.

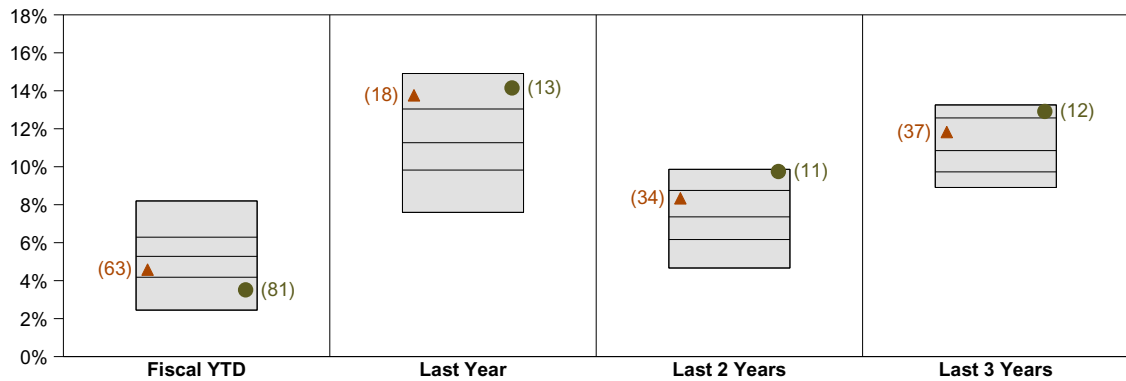
Quarterly Summary and Highlights

- L.A. Capital Large Cap Growth's portfolio posted a 3.52% return for the quarter placing it in the 81 percentile of the CAI Large Cap Growth group for the quarter and in the 13 percentile for the last year.
- L.A. Capital Large Cap Growth's portfolio underperformed the Russell 1000 Growth Index by 1.06% for the quarter and outperformed the Russell 1000 Growth Index for the year by 0.39%.

Quarterly Asset Growth

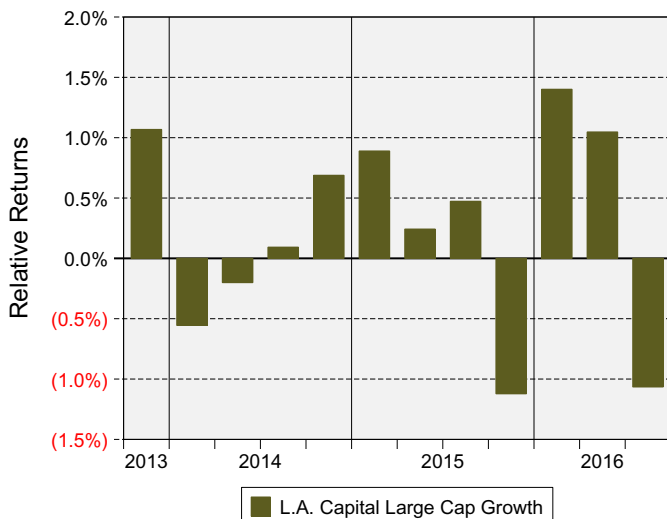
Beginning Market Value	\$250,748,315
Net New Investment	\$2,870,949
Investment Gains/(Losses)	\$8,808,028
Ending Market Value	\$262,427,293

Performance vs CAI Large Cap Growth (Gross)

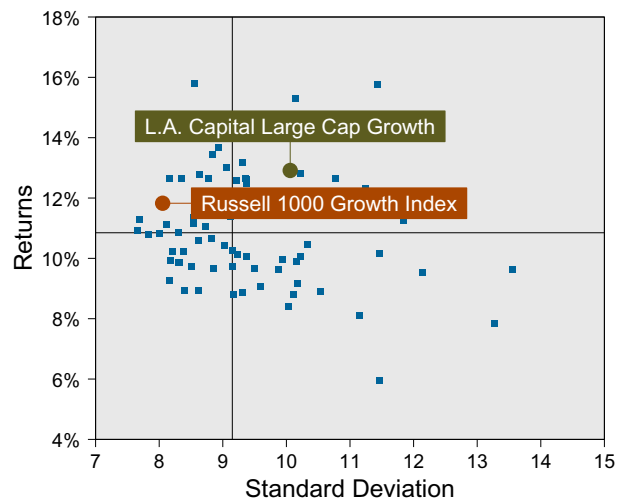


	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years
10th Percentile	8.20	14.91	9.86	13.26
25th Percentile	6.29	13.04	8.75	12.57
Median	5.28	11.27	7.36	10.85
75th Percentile	4.18	9.82	6.17	9.73
90th Percentile	2.45	7.60	4.67	8.91
L.A. Capital Large Cap Growth	3.52	14.15	9.75	12.91
Russell 1000 Growth Index	4.58	13.76	8.34	11.83

Relative Return vs Russell 1000 Growth Index



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



L.A. Capital Enhanced Period Ended September 30, 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.

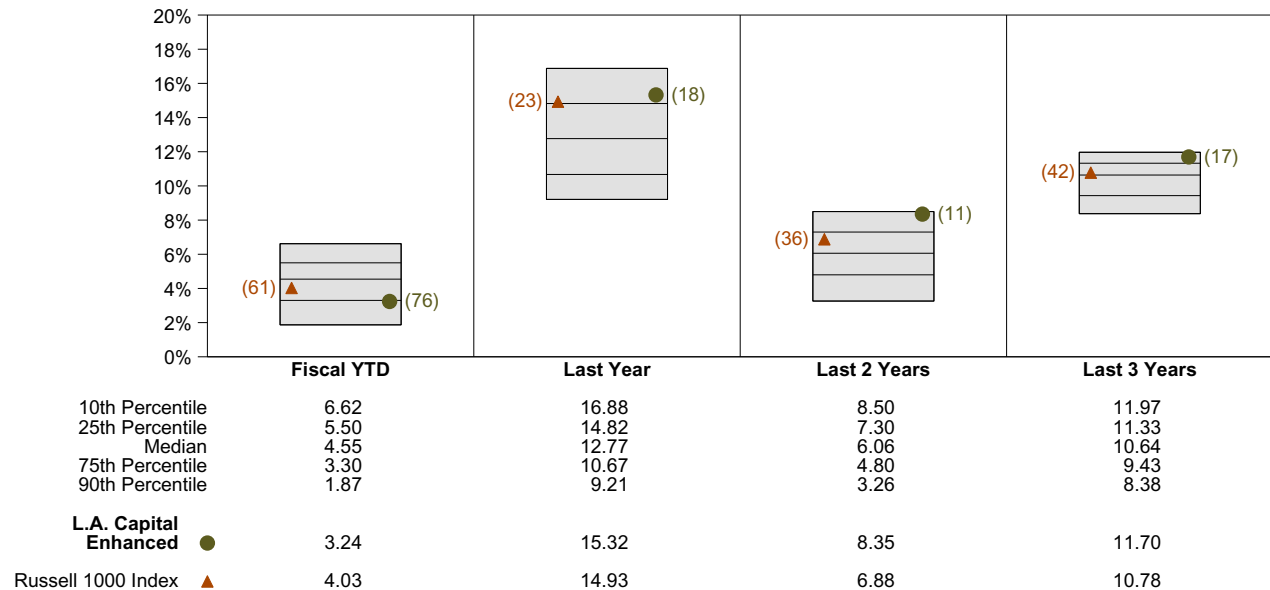
Quarterly Summary and Highlights

- L.A. Capital Enhanced's portfolio posted a 3.24% return for the quarter placing it in the 76 percentile of the CAI Large Cap Core group for the quarter and in the 18 percentile for the last year.
- L.A. Capital Enhanced's portfolio underperformed the Russell 1000 Index by 0.79% for the quarter and outperformed the Russell 1000 Index for the year by 0.39%.

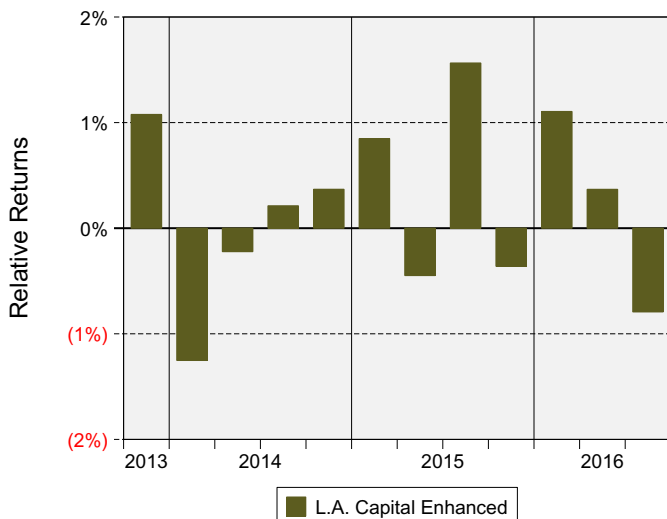
Quarterly Asset Growth

Beginning Market Value	\$167,753,055
Net New Investment	\$1,941,765
Investment Gains/(Losses)	\$5,430,925
Ending Market Value	\$175,125,746

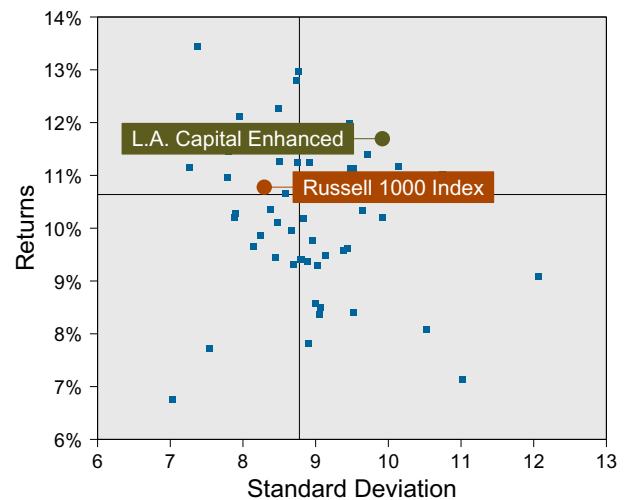
Performance vs CAI Large Cap Core (Gross)



Relative Return vs Russell 1000 Index



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



LSV Asset Management

Period Ended September 30, 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.

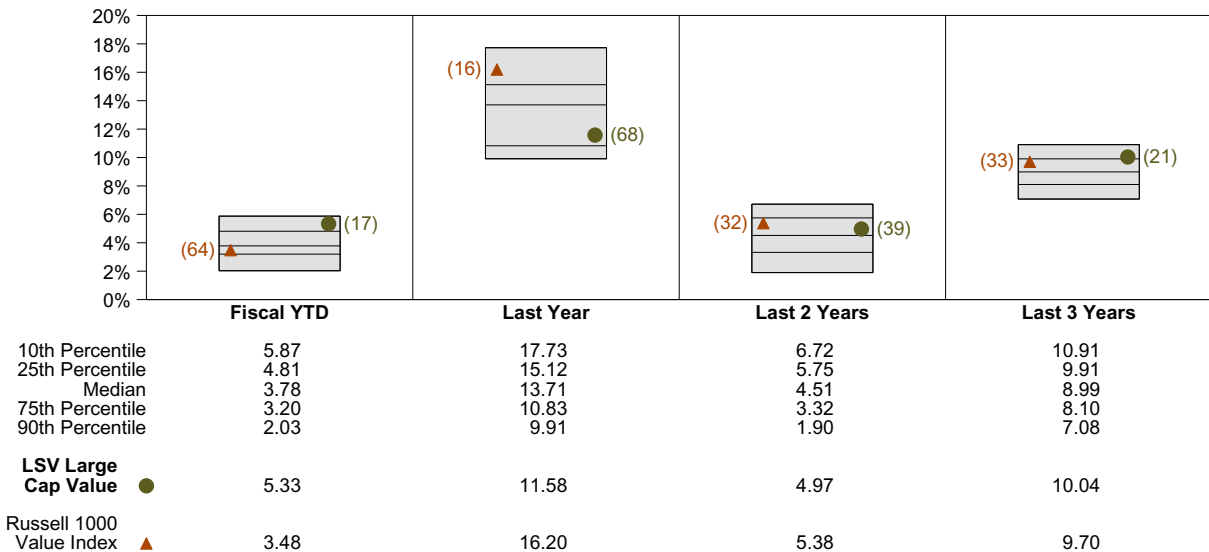
Quarterly Summary and Highlights

- LSV Large Cap Value's portfolio posted a 5.33% return for the quarter placing it in the 17th percentile of the CAI Large Cap Value group for the quarter and in the 68th percentile for the last year.
- LSV Large Cap Value's portfolio outperformed the Russell 1000 Value Index by 1.85% for the quarter and underperformed the Russell 1000 Value Index for the year by 4.62%.

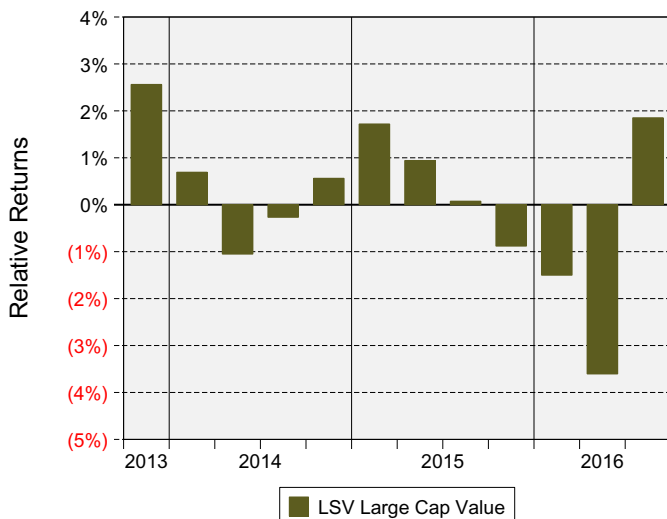
Quarterly Asset Growth

Beginning Market Value	\$243,422,247
Net New Investment	\$4,818,638
Investment Gains/(Losses)	\$12,999,990
Ending Market Value	\$261,240,875

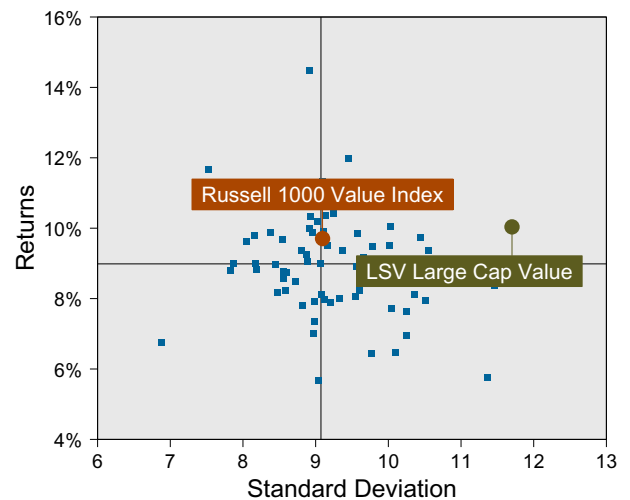
Performance vs CAI Large Cap Value (Gross)



Relative Return vs Russell 1000 Value Index



CAI Large Cap Value (Gross) Annualized Three Year Risk vs Return



Parametric Clifton Small Cap Period Ended September 30, 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.

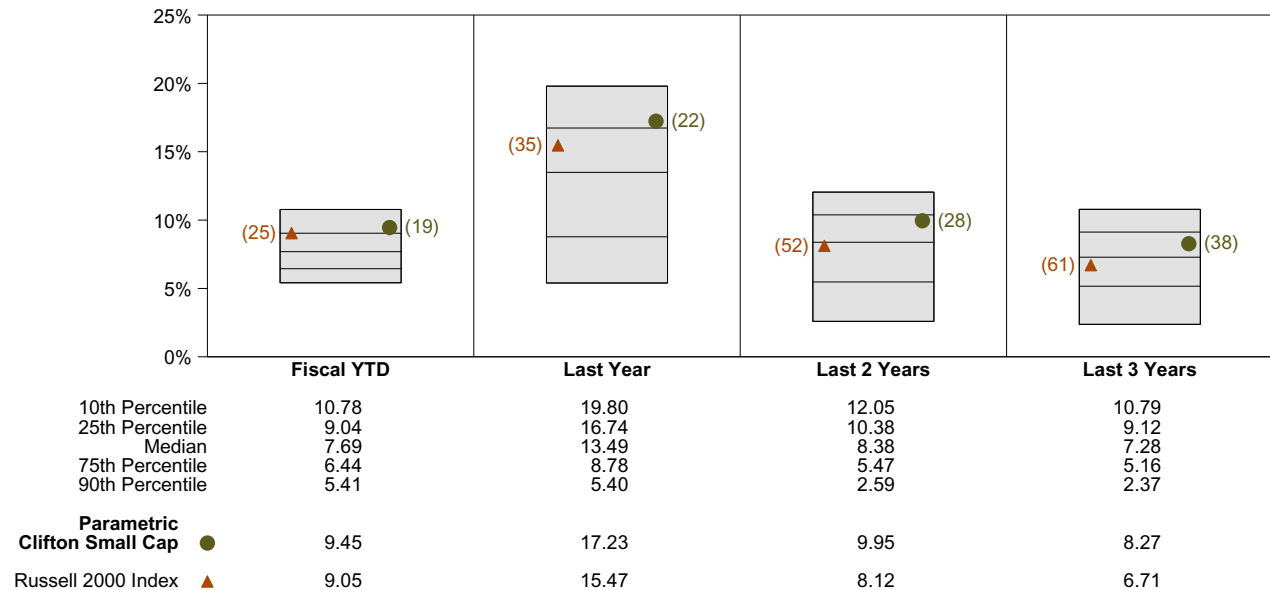
Quarterly Summary and Highlights

- Parametric Clifton Small Cap's portfolio posted a 9.45% return for the quarter placing it in the 19 percentile of the CAI Small Capitalization group for the quarter and in the 22 percentile for the last year.
- Parametric Clifton Small Cap's portfolio outperformed the Russell 2000 Index by 0.41% for the quarter and outperformed the Russell 2000 Index for the year by 1.76%.

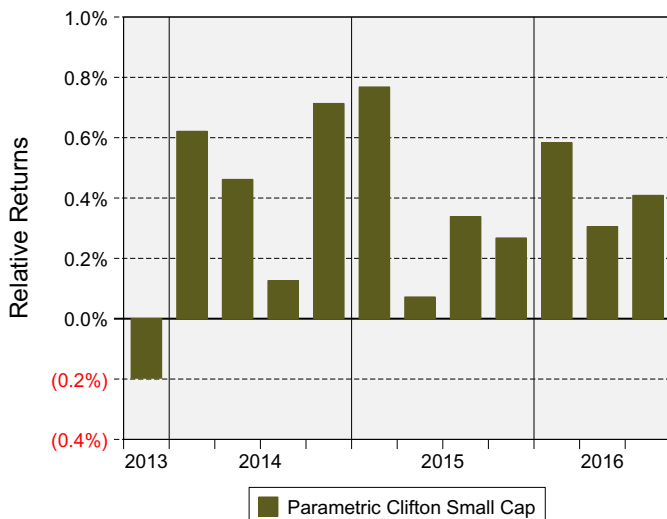
Quarterly Asset Growth

Beginning Market Value	\$167,472,856
Net New Investment	\$-887,562
Investment Gains/(Losses)	\$15,813,968
Ending Market Value	\$182,399,262

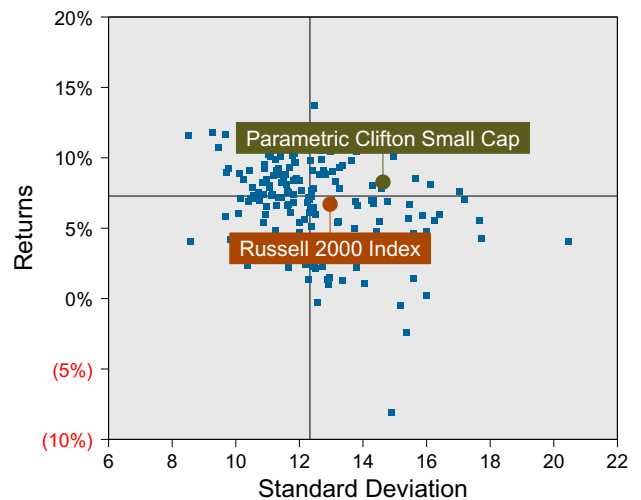
Performance vs CAI Small Capitalization (Gross)



Relative Return vs Russell 2000 Index



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



PIMCO RAE

Period Ended September 30, 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.

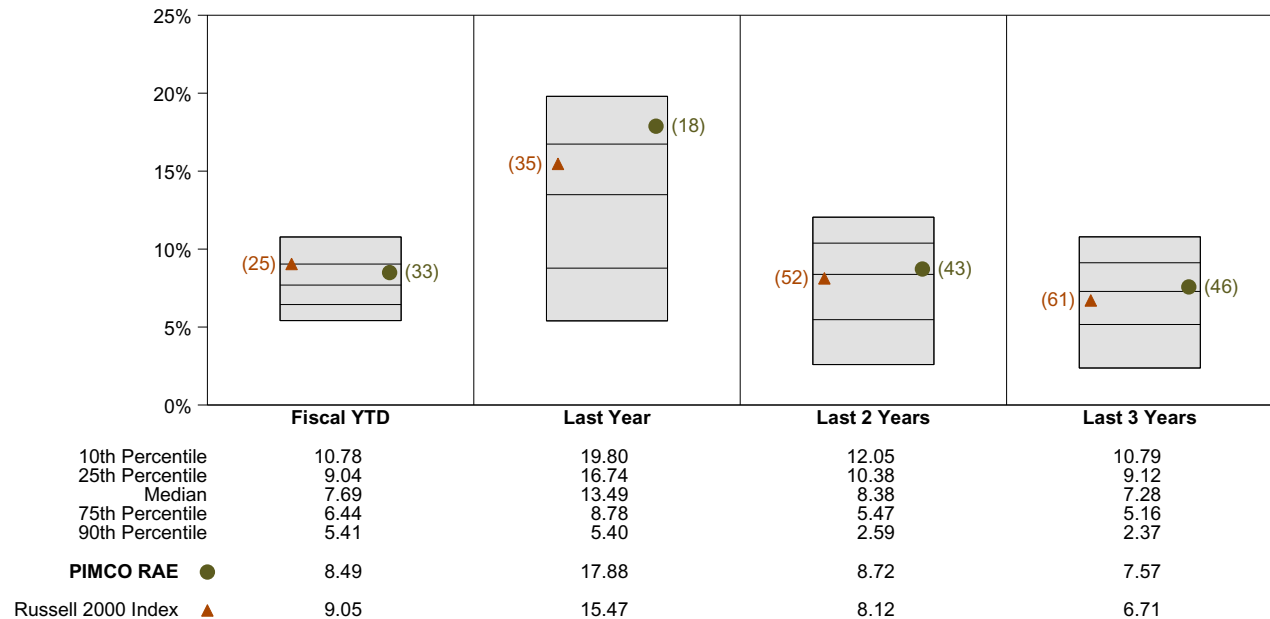
Quarterly Summary and Highlights

- PIMCO RAE's portfolio posted a 8.49% return for the quarter placing it in the 33 percentile of the CAI Small Capitalization group for the quarter and in the 18 percentile for the last year.
- PIMCO RAE's portfolio underperformed the Russell 2000 Index by 0.55% for the quarter and outperformed the Russell 2000 Index for the year by 2.41%.

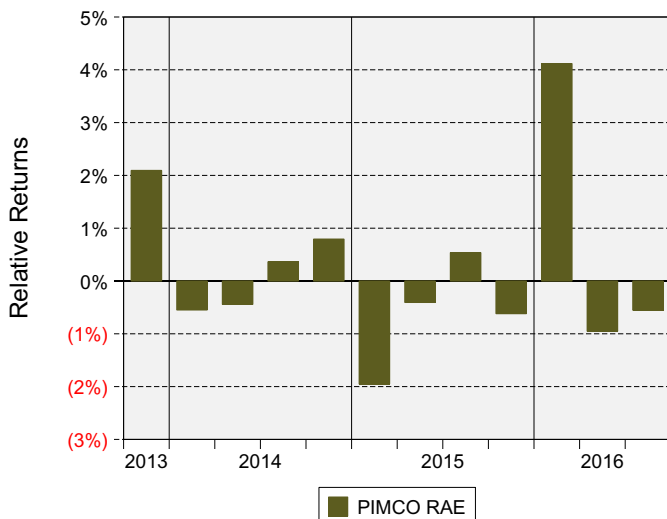
Quarterly Asset Growth

Beginning Market Value	\$141,287,957
Net New Investment	\$-93,081
Investment Gains/(Losses)	\$12,000,036
Ending Market Value	\$153,194,911

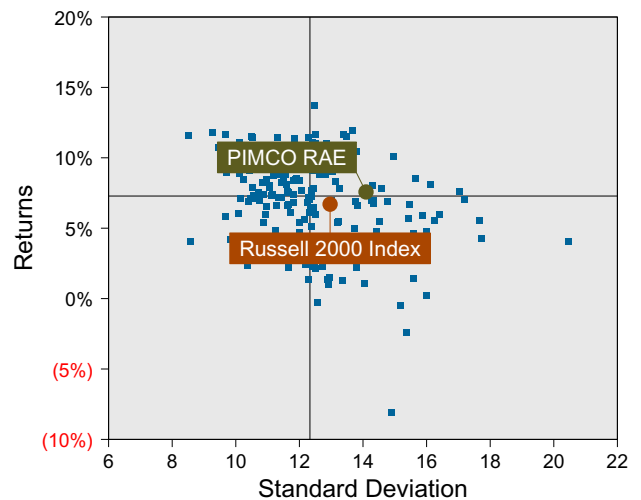
Performance vs CAI Small Capitalization (Gross)



Relative Return vs Russell 2000 Index



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



DFA Intl Small Cap Value Period Ended September 30, 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.

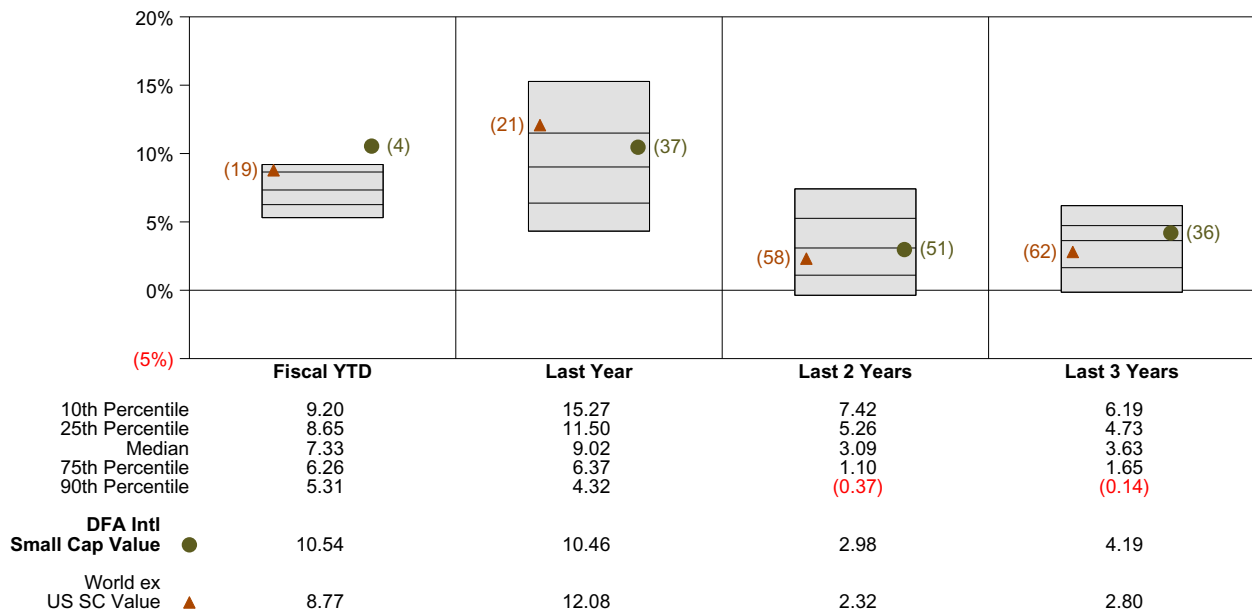
Quarterly Summary and Highlights

- DFA Intl Small Cap Value's portfolio posted a 10.54% return for the quarter placing it in the 4 percentile of the Lipper International Small Cap Funds group for the quarter and in the 37 percentile for the last year.
- DFA Intl Small Cap Value's portfolio outperformed the World ex US SC Value by 1.77% for the quarter and underperformed the World ex US SC Value for the year by 1.62%.

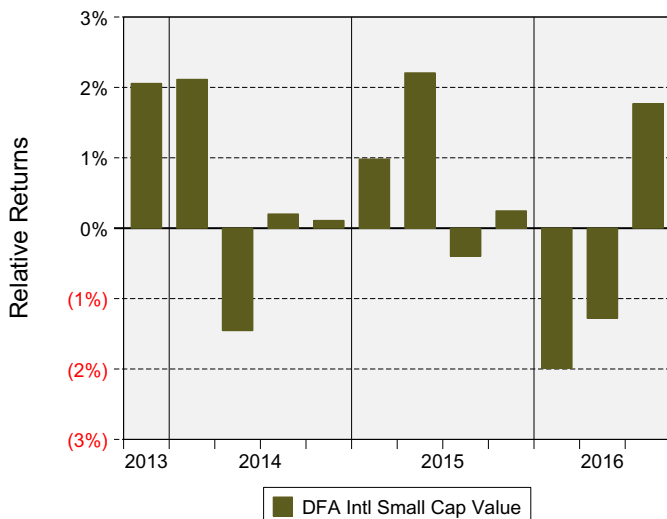
Quarterly Asset Growth

Beginning Market Value	\$70,871,353
Net New Investment	\$2,000,000
Investment Gains/(Losses)	\$7,505,255
Ending Market Value	\$80,376,607

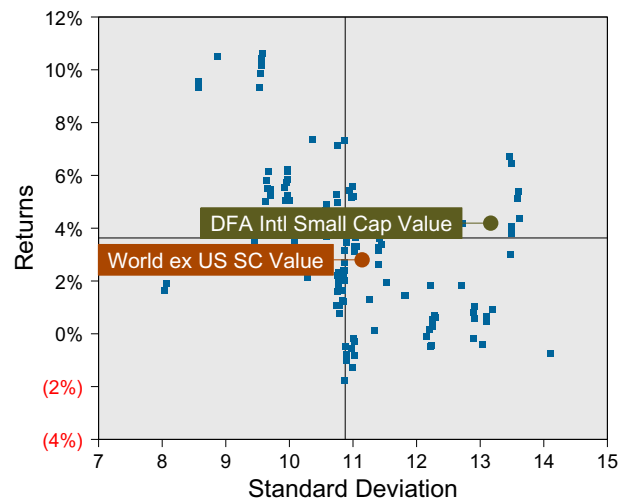
Performance vs Lipper International Small Cap Funds (Net)



Relative Return vs World ex US SC Value



Lipper International Small Cap Funds (Net) Annualized Three Year Risk vs Return



LSV Intl Value

Period Ended September 30, 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.

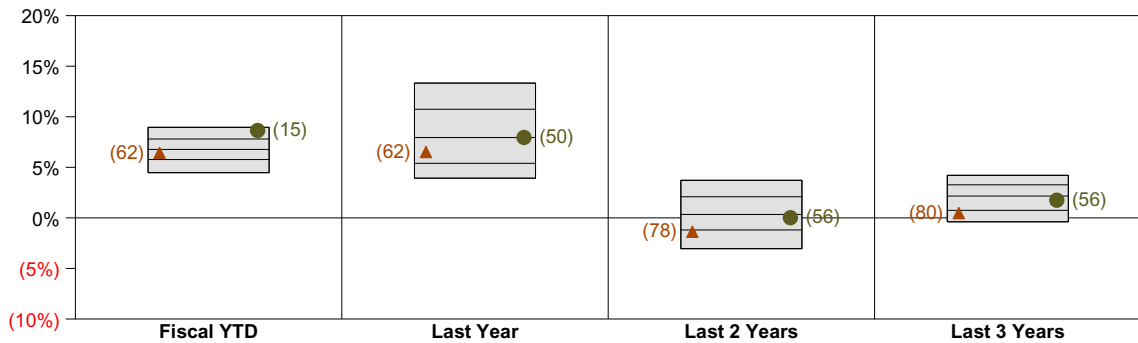
Quarterly Summary and Highlights

- LSV Intl Value's portfolio posted a 8.64% return for the quarter placing it in the 15 percentile of the CAI Non-U.S. Equity Style group for the quarter and in the 50 percentile for the last year.
- LSV Intl Value's portfolio outperformed the MSCI EAFE by 2.21% for the quarter and outperformed the MSCI EAFE for the year by 1.43%.

Quarterly Asset Growth

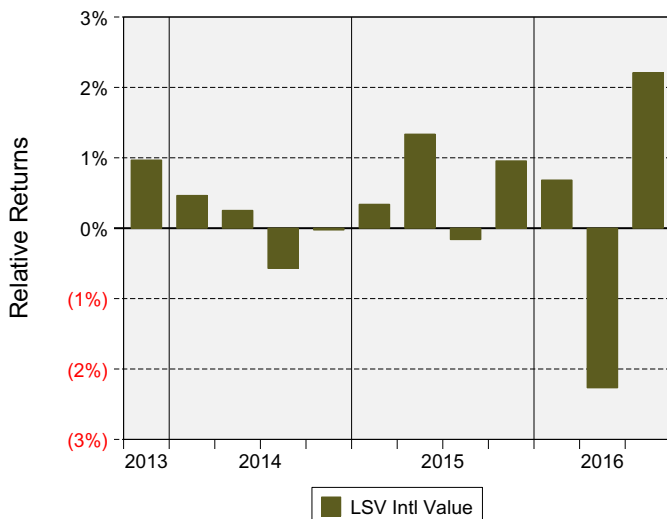
Beginning Market Value	\$302,553,643
Net New Investment	\$-296,145
Investment Gains/(Losses)	\$26,141,308
Ending Market Value	\$328,398,806

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

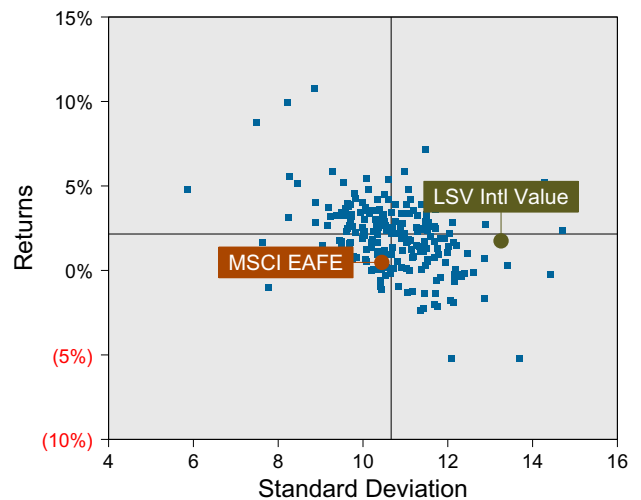


	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years
10th Percentile	8.96	13.33	3.72	4.21
25th Percentile	7.80	10.74	2.09	3.27
Median	6.77	7.94	0.34	2.16
75th Percentile	5.77	5.40	(1.19)	0.74
90th Percentile	4.47	3.92	(3.05)	(0.39)
LSV Intl Value	8.64	7.95	0.01	1.75
MSCI EAFE	6.43	6.52	(1.36)	0.48

Relative Return vs MSCI EAFE



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



Vanguard Intl Explorer Fund

Period Ended September 30, 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.

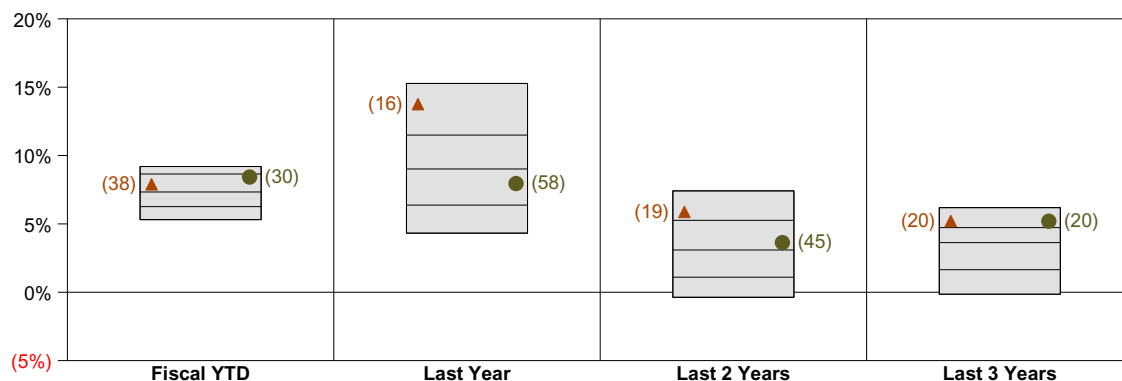
Quarterly Summary and Highlights

- Vanguard Intl Explorer Fund's portfolio posted a 8.43% return for the quarter placing it in the 30 percentile of the Lipper International Small Cap Funds group for the quarter and in the 58 percentile for the last year.
- Vanguard Intl Explorer Fund's portfolio outperformed the S&P BMI EPAC <\$2 B by 0.53% for the quarter and underperformed the S&P BMI EPAC <\$2 B for the year by 5.81%.

Quarterly Asset Growth

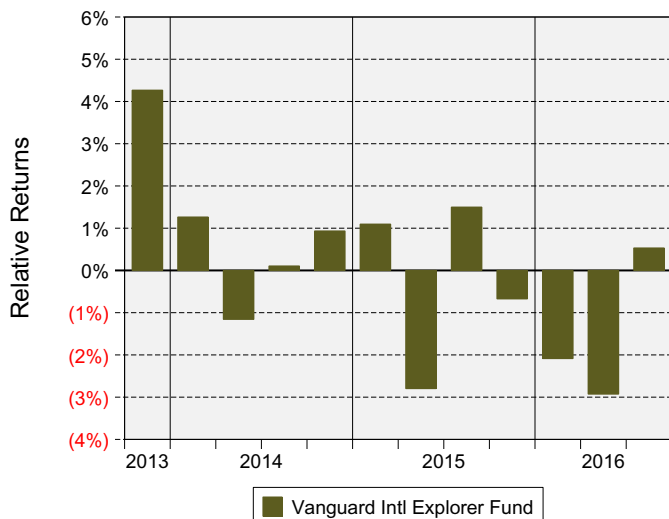
Beginning Market Value	\$70,319,535
Net New Investment	\$4,000,000
Investment Gains/(Losses)	\$5,944,618
Ending Market Value	\$80,264,153

Performance vs Lipper International Small Cap Funds (Net)

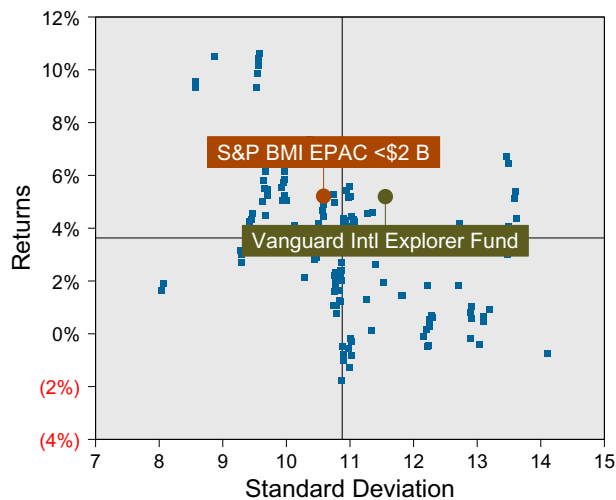


10th Percentile	9.20	15.27	7.42	6.19
25th Percentile	8.65	11.50	5.26	4.73
Median	7.33	9.02	3.09	3.63
75th Percentile	6.26	6.37	1.10	1.65
90th Percentile	5.31	4.32	(0.37)	(0.14)
Vanguard Intl Explorer Fund	8.43	7.95	3.63	5.20
S&P BMI EPAC <\$2 B	7.90	13.76	5.88	5.21

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



Lipper International Small Cap Funds (Net) Annualized Three Year Risk vs Return



William Blair

Period Ended September 30, 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.

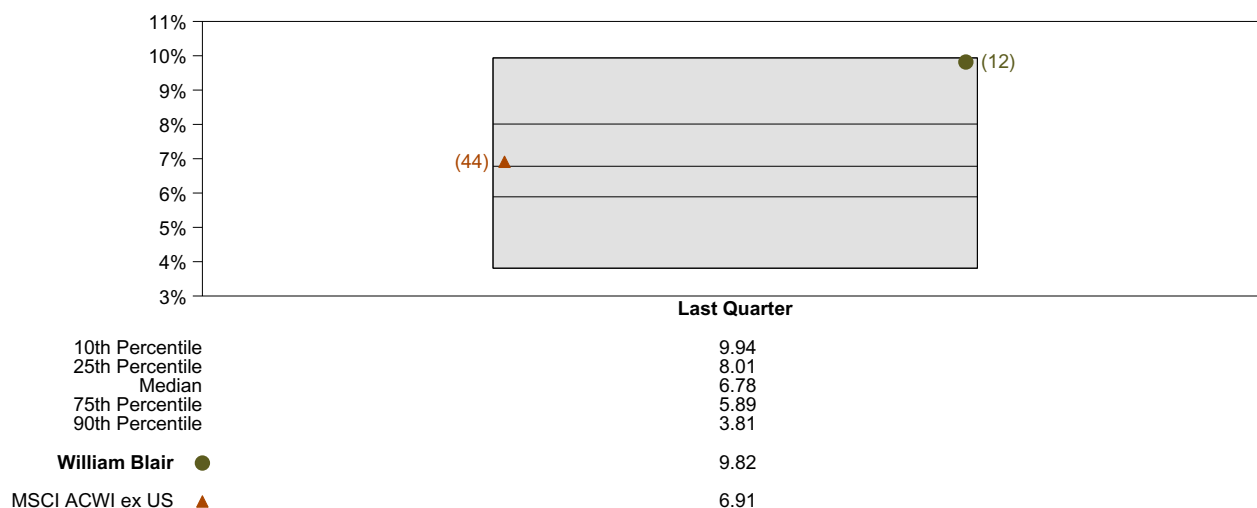
Quarterly Summary and Highlights

- William Blair's portfolio posted a 9.82% return for the quarter placing it in the 12 percentile of the CAI Core+ Growth Int'l Eq Style group for the quarter.
- William Blair's portfolio outperformed the MSCI ACWI ex US by 2.91% for the quarter.

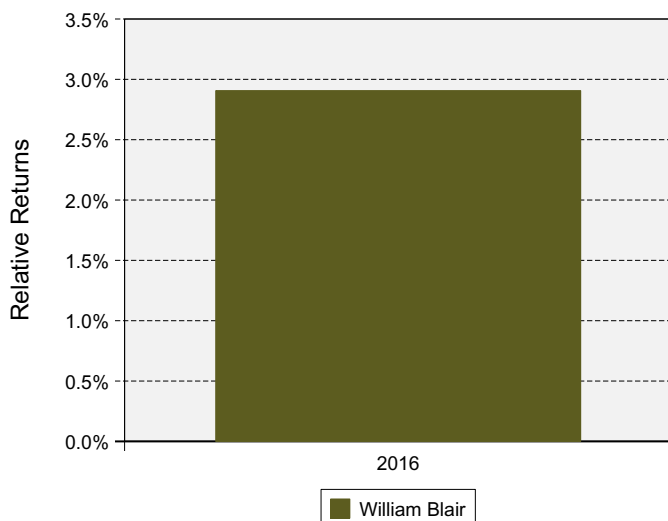
Quarterly Asset Growth

Beginning Market Value	\$259,342,764
Net New Investment	\$41,908,530
Investment Gains/(Losses)	\$27,383,396
Ending Market Value	\$328,634,690

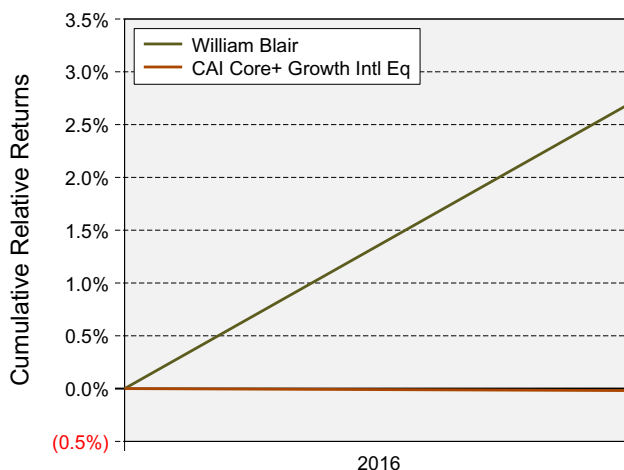
Performance vs CAI Core+ Growth Int'l Eq Style (Gross)



Relative Return vs MSCI ACWI ex US



Cumulative Returns vs MSCI ACWI ex US



Declaration Total Return Period Ended September 30, 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.

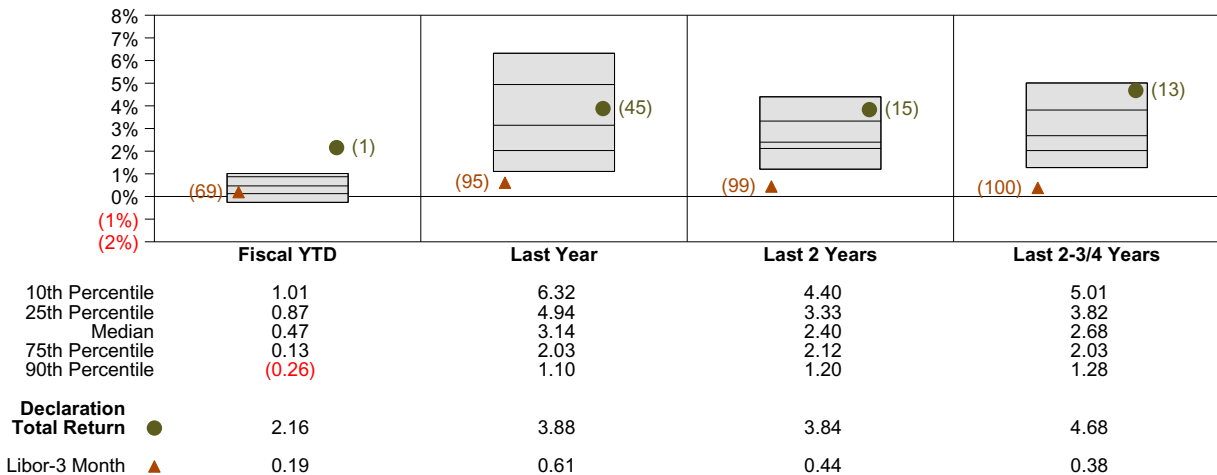
Quarterly Summary and Highlights

- Declaration Total Return's portfolio posted a 2.16% return for the quarter placing it in the 1 percentile of the CAI Intermediate Fixed Income Mut Funds group for the quarter and in the 45 percentile for the last year.
- Declaration Total Return's portfolio outperformed the Libor-3 Month by 1.96% for the quarter and outperformed the Libor-3 Month for the year by 3.27%.

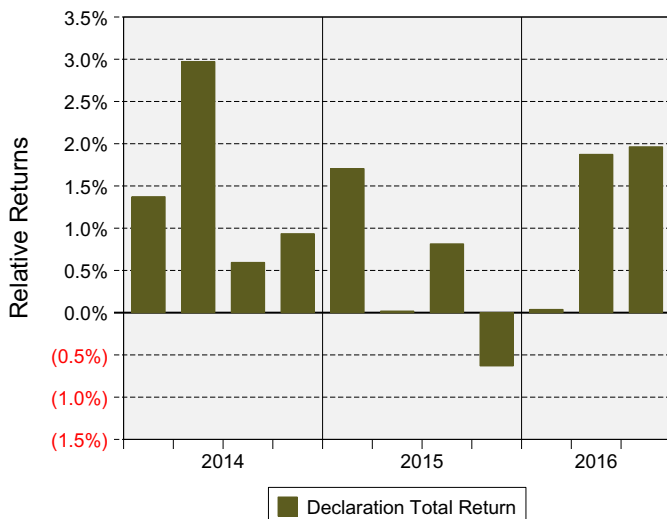
Quarterly Asset Growth

Beginning Market Value	\$103,118,967
Net New Investment	\$-36,890
Investment Gains/(Losses)	\$2,223,351
Ending Market Value	\$105,305,428

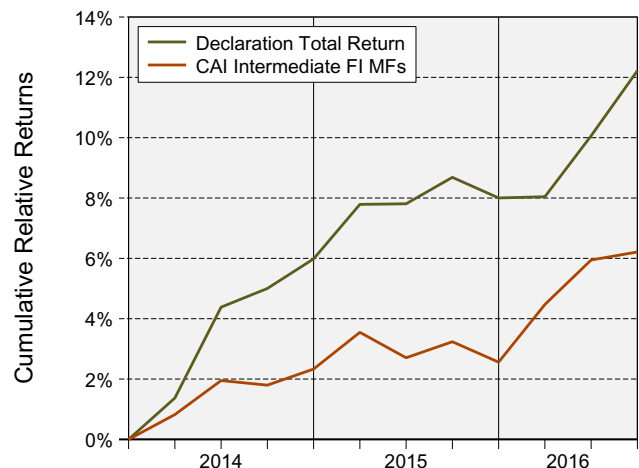
Performance vs CAI Intermediate Fixed Income Mut Funds (Net)



Relative Return vs Libor-3 Month



Cumulative Returns vs Libor-3 Month



Prudential Period Ended September 30, 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.

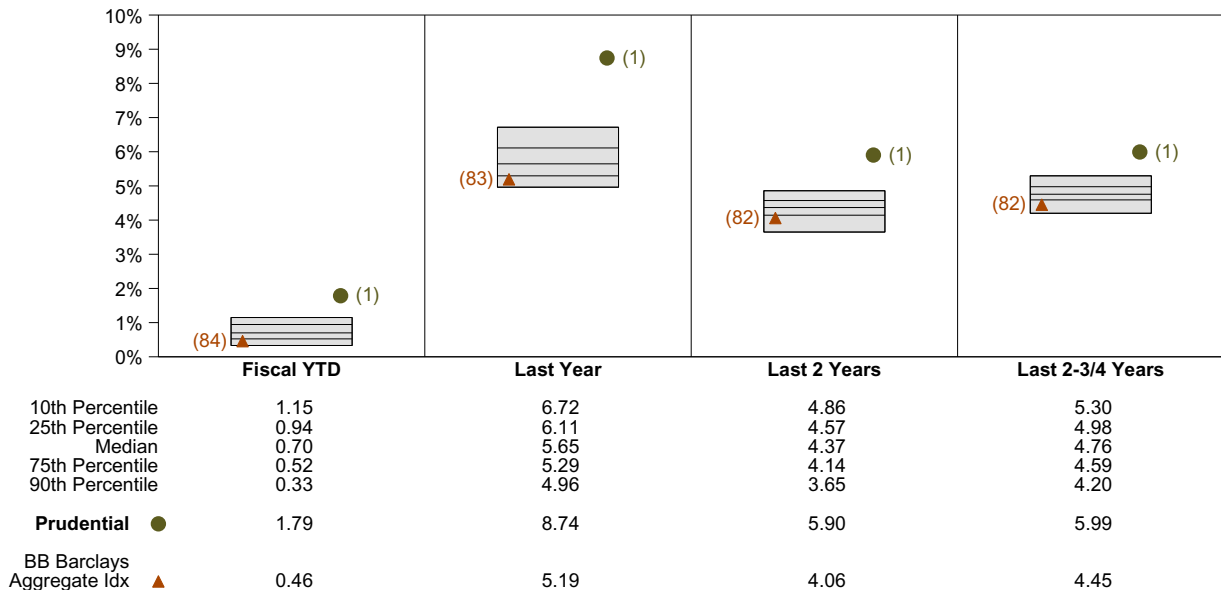
Quarterly Summary and Highlights

- Prudential's portfolio posted a 1.79% return for the quarter placing it in the 1 percentile of the CAI Core Bond Fixed Income group for the quarter and in the 1 percentile for the last year.
- Prudential's portfolio outperformed the BB Barclays Aggregate Idx by 1.33% for the quarter and outperformed the BB Barclays Aggregate Idx for the year by 3.55%.

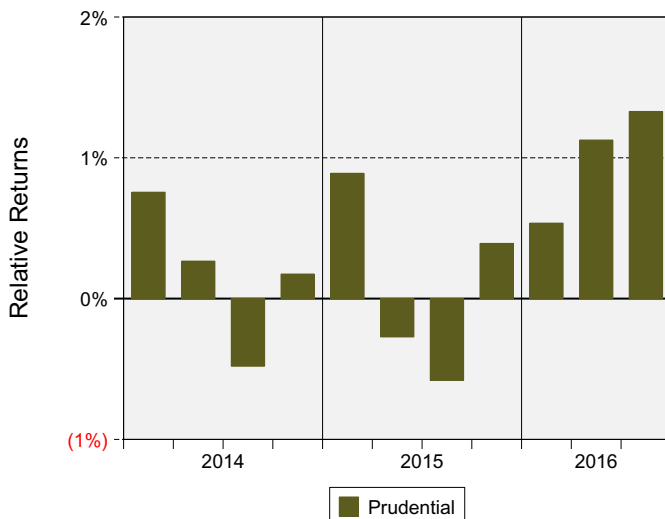
Quarterly Asset Growth

Beginning Market Value	\$145,580,832
Net New Investment	\$9,901,622
Investment Gains/(Losses)	\$2,607,746
Ending Market Value	\$158,090,200

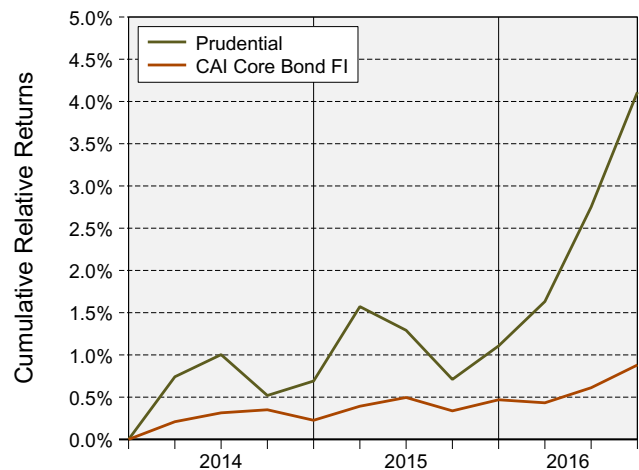
Performance vs CAI Core Bond Fixed Income (Gross)



Relative Return vs BB Barclays Aggregate Idx



Cumulative Returns vs BB Barclays Aggregate Idx



SSgA US Govt Credit Bd Idx Period Ended September 30, 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.

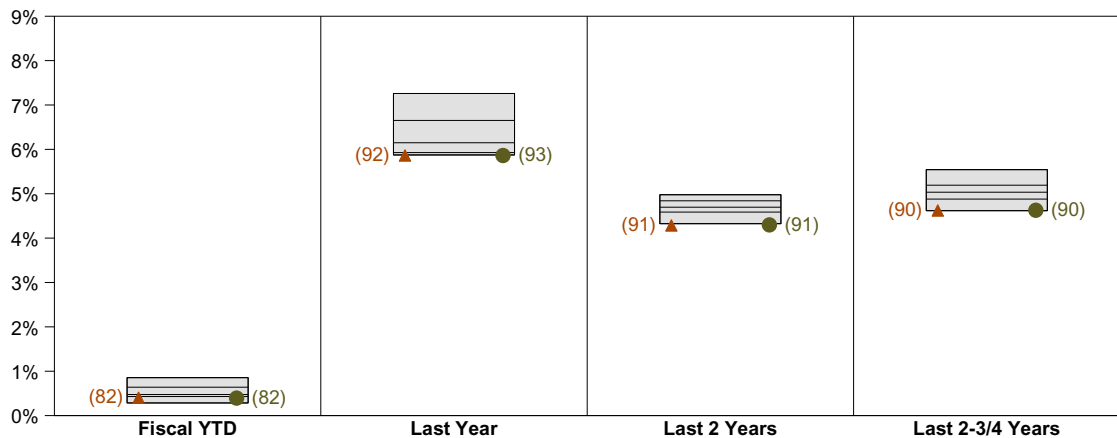
Quarterly Summary and Highlights

- SSgA US Govt Credit Bd Idx's portfolio posted a 0.39% return for the quarter placing it in the 82 percentile of the CAI Government/Credit group for the quarter and in the 93 percentile for the last year.
- SSgA US Govt Credit Bd Idx's portfolio underperformed the BB Barclays Gov/Credit by 0.01% for the quarter and underperformed the BB Barclays Gov/Credit for the year by 0.00%.

Quarterly Asset Growth

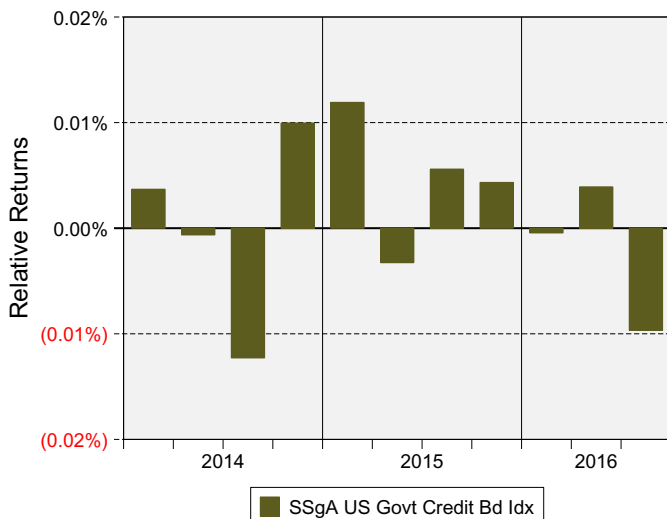
Beginning Market Value	\$188,285,306
Net New Investment	\$4,984,134
Investment Gains/(Losses)	\$734,715
Ending Market Value	\$194,004,154

Performance vs CAI Government/Credit (Gross)

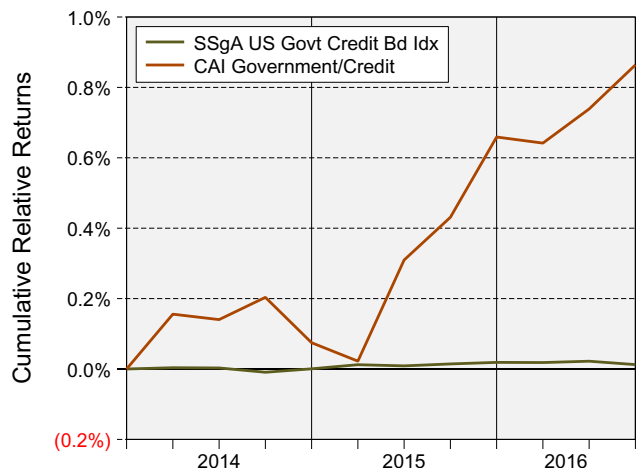


	Fiscal YTD	Last Year	Last 2 Years	Last 2-3/4 Years
10th Percentile	0.86	7.26	4.98	5.54
25th Percentile	0.64	6.65	4.84	5.19
Median	0.47	6.15	4.70	5.03
75th Percentile	0.43	5.93	4.59	4.88
90th Percentile	0.28	5.87	4.33	4.62
SSgA US Govt Credit Bd Idx ●	0.39	5.86	4.30	4.63
BB Barclays Gov/Credit ▲	0.40	5.86	4.29	4.62

Relative Return vs BB Barclays Gov/Credit



Cumulative Returns vs BB Barclays Gov/Credit



Wells Capital Period Ended September 30, 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.

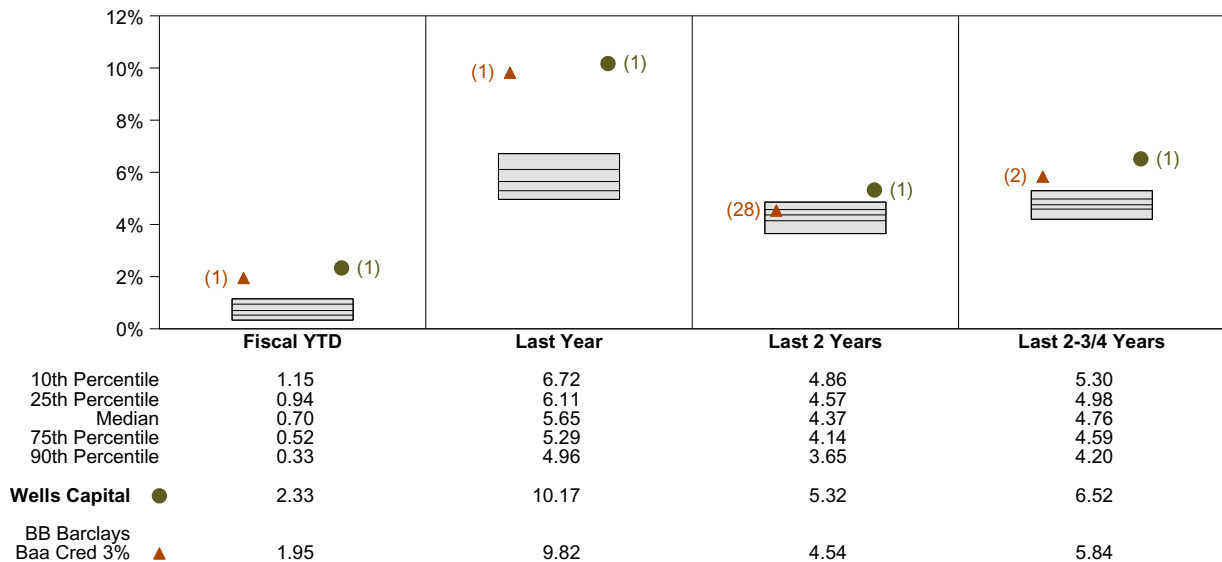
Quarterly Summary and Highlights

- Wells Capital's portfolio posted a 2.33% return for the quarter placing it in the 1 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 BB Barclays Baa Cred 3% by 0.38% for the quarter and outperformed the BB Barclays Baa Cred 3% for the year by 0.35%.

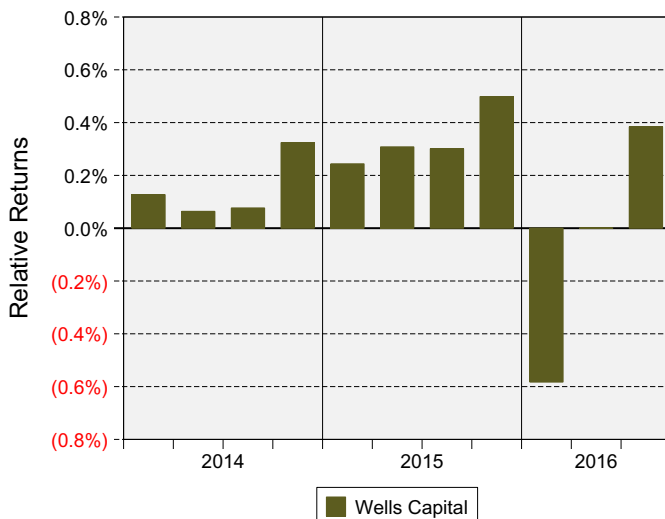
Quarterly Asset Growth

Beginning Market Value	\$419,644,961
Net New Investment	\$6,811,505
Investment Gains/(Losses)	\$9,790,481
Ending Market Value	\$436,246,947

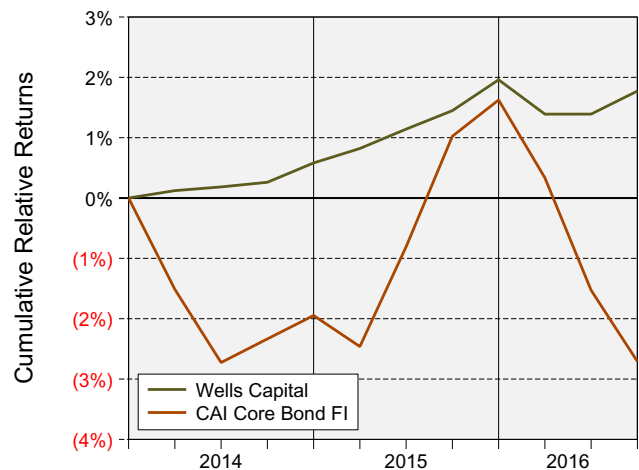
Performance vs CAI Core Bond Fixed Income (Gross)



Relative Return vs BB Barclays Baa Cred 3%



Cumulative Returns vs BB Barclays Baa Cred 3%



Western Asset Management Company

Period Ended September 30, 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.

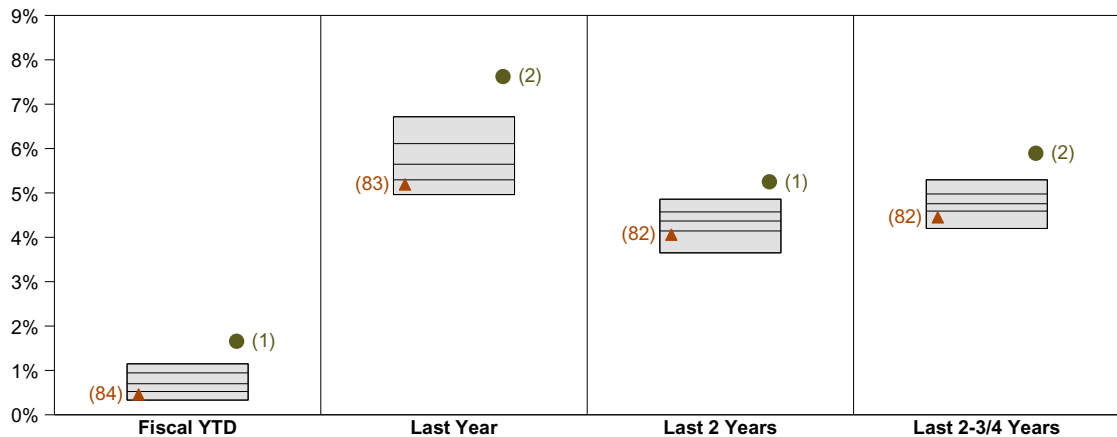
Quarterly Summary and Highlights

- Western Asset's portfolio posted a 1.66% return for the quarter placing it in the 1 percentile of the CAI Core Bond Fixed Income group for the quarter and in the 2 percentile for the last year.
- Western Asset's portfolio outperformed the BB Barclays Aggregate Idx by 1.20% for the quarter and outperformed the BB Barclays Aggregate Idx for the year by 2.43%.

Quarterly Asset Growth

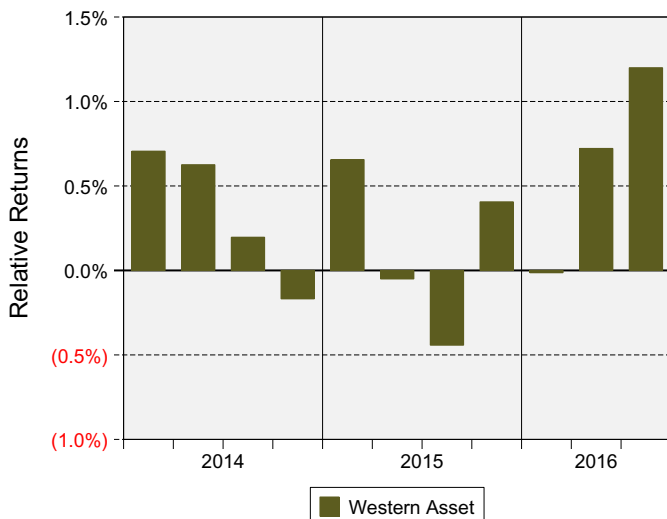
Beginning Market Value	\$420,879,632
Net New Investment	\$9,859,145
Investment Gains/(Losses)	\$6,999,863
Ending Market Value	\$437,738,640

Performance vs CAI Core Bond Fixed Income (Gross)

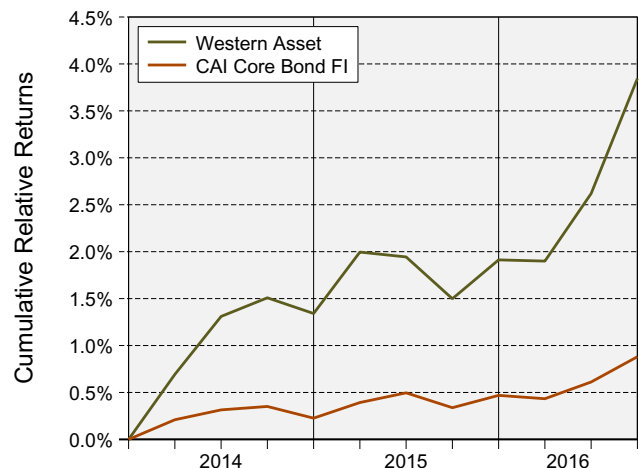


	Fiscal YTD	Last Year	Last 2 Years	Last 2-3/4 Years
10th Percentile	1.15	6.72	4.86	5.30
25th Percentile	0.94	6.11	4.57	4.98
Median	0.70	5.65	4.37	4.76
75th Percentile	0.52	5.29	4.14	4.59
90th Percentile	0.33	4.96	3.65	4.20
Western Asset ●	1.66	7.62	5.25	5.89
BB Barclays Aggregate Idx ▲	0.46	5.19	4.06	4.45

Relative Return vs BB Barclays Aggregate Idx



Cumulative Returns vs BB Barclays Aggregate Idx



Western Asset TIPS Period Ended September 30, 2016

Investment Philosophy

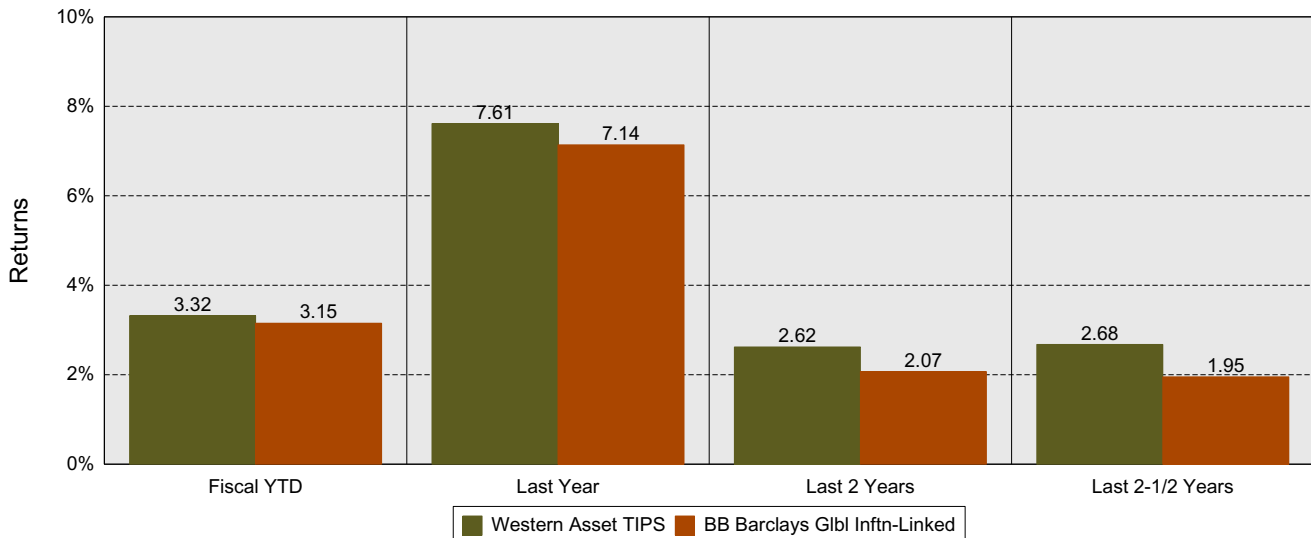
Western Asset's Global Inflation-Linked composite includes portfolios that employ an active, team-managed investment approach around a long-term, value-oriented investment philosophy. Constructed primarily of inflation-indexed securities, these portfolios use diversified strategies in seeking to add 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 outperformed the BB Barclays Gbl Inftn-Linked by 0.17% for the quarter and outperformed the BB Barclays Gbl Inftn-Linked for the year by 0.48%.

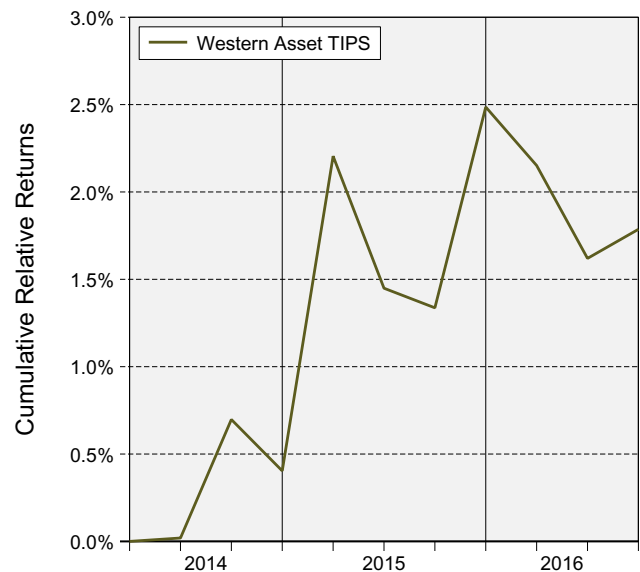
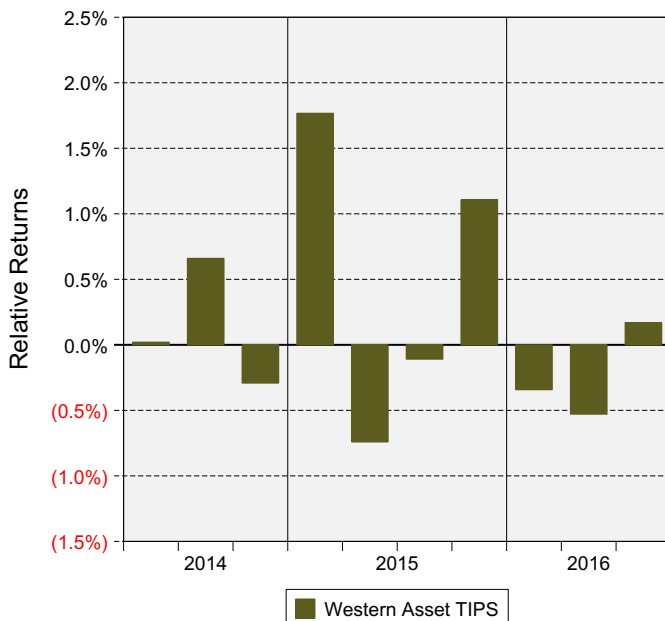
Quarterly Asset Growth

Beginning Market Value	\$284,527,063
Net New Investment	\$-93,674
Investment Gains/(Losses)	\$9,444,479
Ending Market Value	\$293,877,868



Relative Returns vs BB Barclays Gbl Inftn-Linked

Cumulative Returns vs BB Barclays Gbl Inftn-Linked



JP Morgan Infrastructure Period Ended September 30, 2016

Investment Philosophy

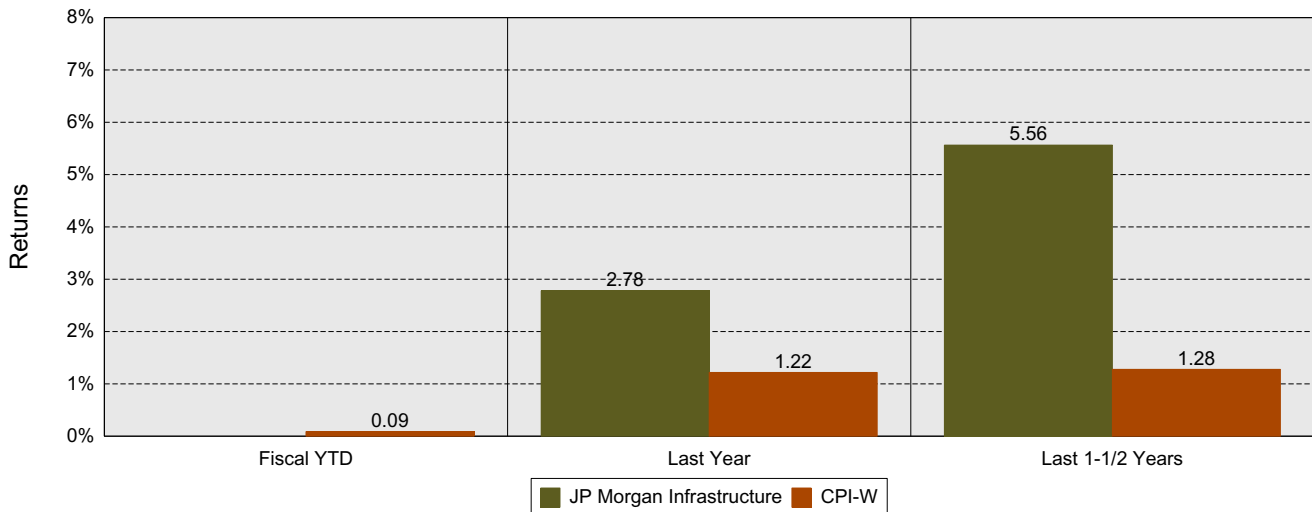
The only open-ended private commingled infrastructure fund in the U.S, the JPMorgan Infrastructure Investments Fund invests in stabilized assets in OECD countries with selected value-added opportunities, across infrastructure industry sub-sectors, including: toll roads, bridges and tunnels; oil and gas 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

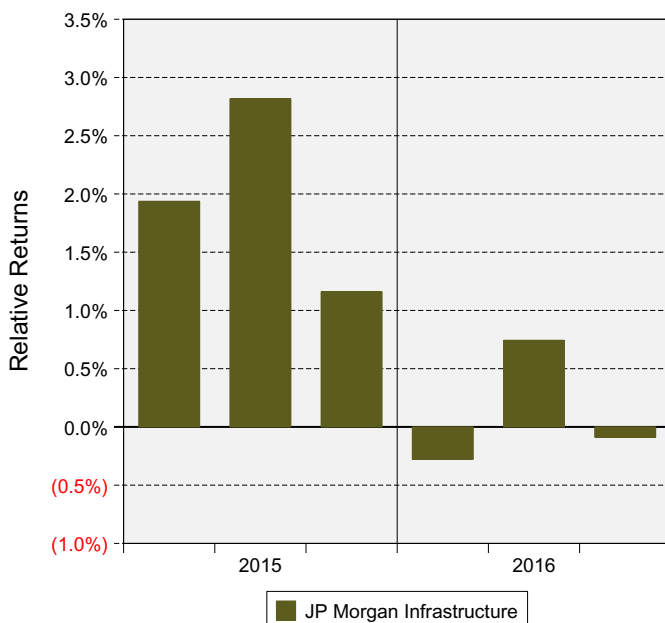
- JP Morgan Infrastructure's portfolio underperformed the CPI-W by 0.09% for the quarter and outperformed the CPI-W for the year by 1.56%.

Quarterly Asset Growth

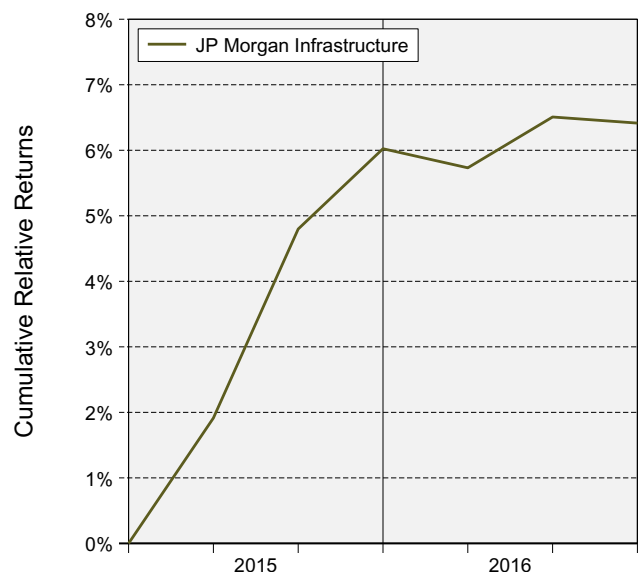
Beginning Market Value	\$80,265,971
Net New Investment	\$-2
Investment Gains/(Losses)	\$0
Ending Market Value	\$80,265,969



Relative Return vs CPI-W



Cumulative Returns vs CPI-W



Grosvenor Cust. Infrastructure Period Ended September 30, 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

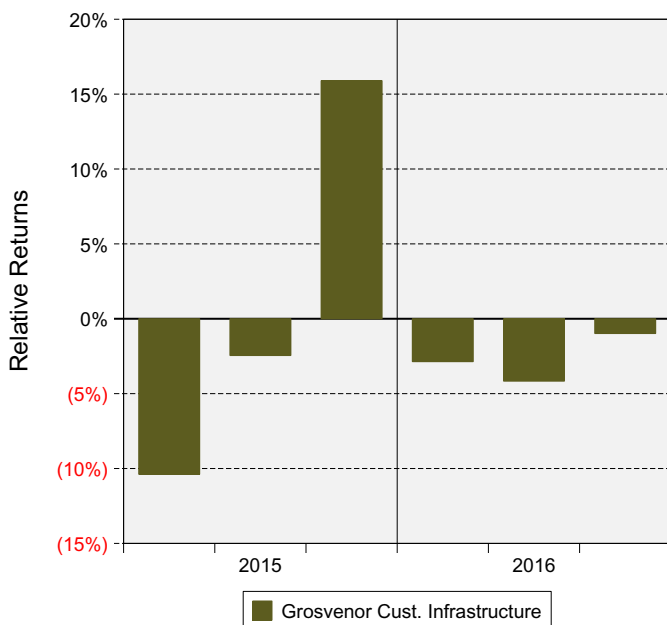
- Grosvenor Cust. Infrastructure's portfolio underperformed the CPI-W by 0.98% for the quarter and outperformed the CPI-W for the year by 7.12%.

Quarterly Asset Growth

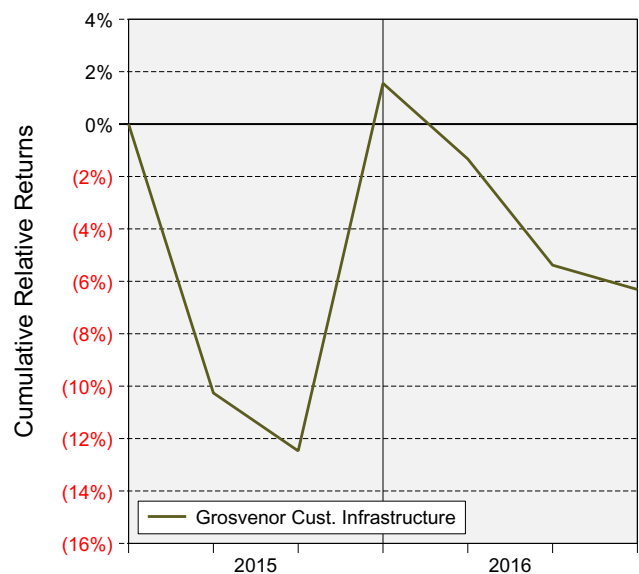
Beginning Market Value	\$9,624,354
Net New Investment	\$-243,628
Investment Gains/(Losses)	\$-85,616
Ending Market Value	\$9,295,111



Relative Return vs CPI-W



Cumulative Returns vs CPI-W



Invesco Core Real Estate Period Ended September 30, 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.

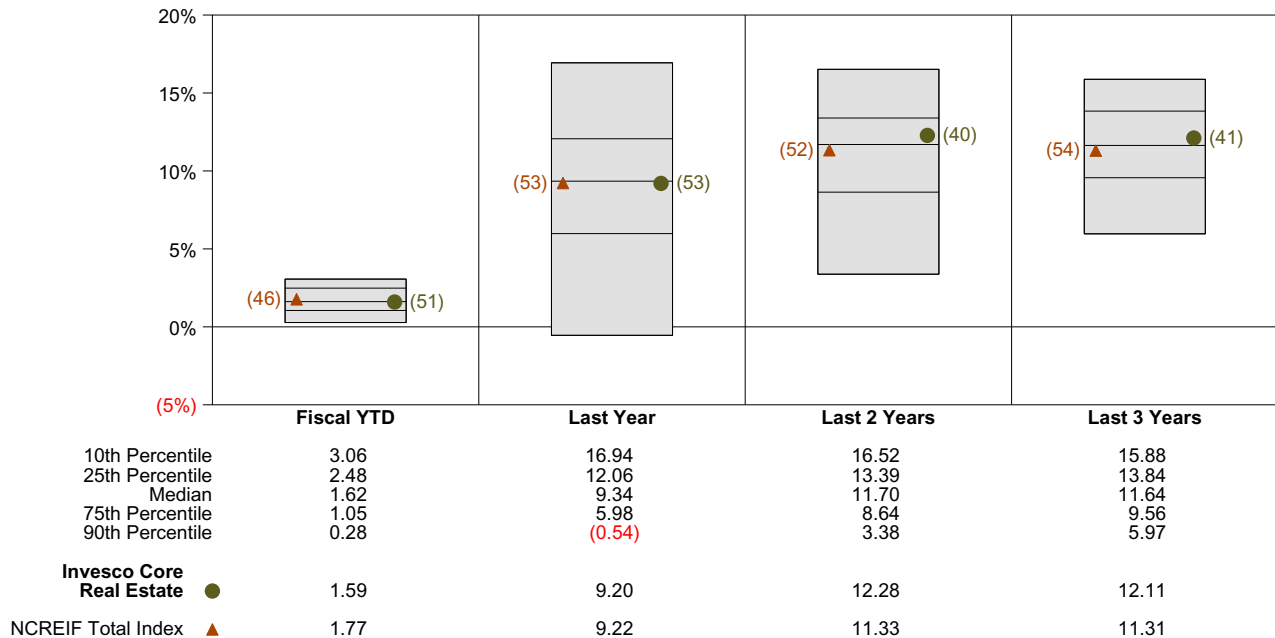
Quarterly Summary and Highlights

- Invesco Core Real Estate's portfolio posted a 1.59% return for the quarter placing it in the 51 percentile of the CAI Total Real Estate Database group for the quarter and in the 53 percentile for the last year.
- Invesco Core Real Estate's portfolio underperformed the NCREIF Total Index by 0.17% for the quarter and underperformed the NCREIF Total Index for the year by 0.02%.

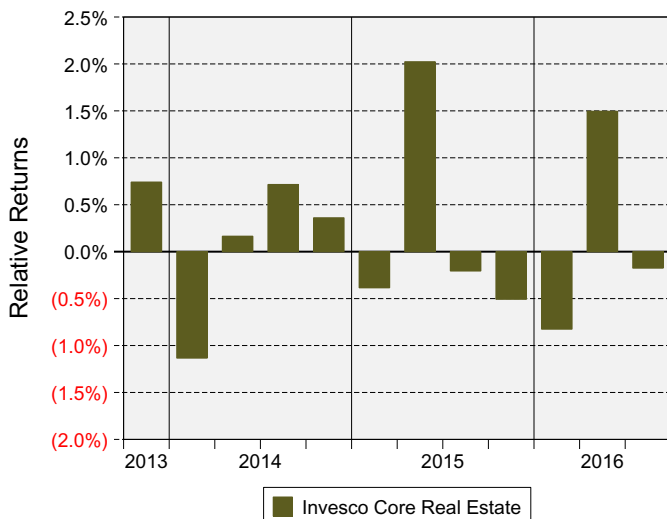
Quarterly Asset Growth

Beginning Market Value	\$117,458,354
Net New Investment	\$-103,302
Investment Gains/(Losses)	\$1,973,979
Ending Market Value	\$119,329,030

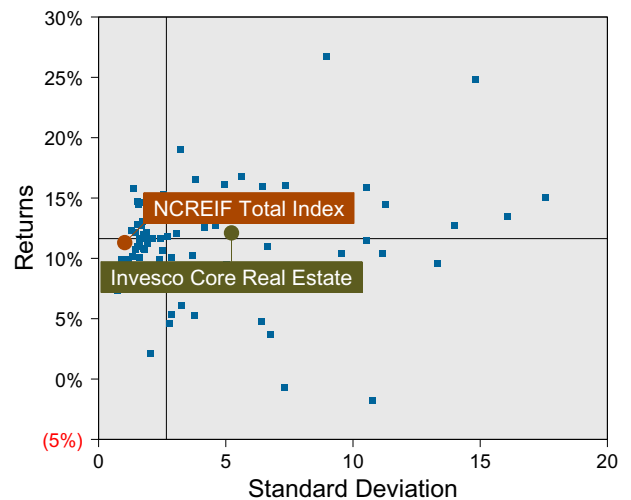
Performance vs CAI Total Real Estate Database (Net)



Relative Return vs NCREIF Total Index



CAI Total Real Estate Database (Net) Annualized Three Year Risk vs Return



JP Morgan RE Inc & Growth Period Ended September 30, 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.

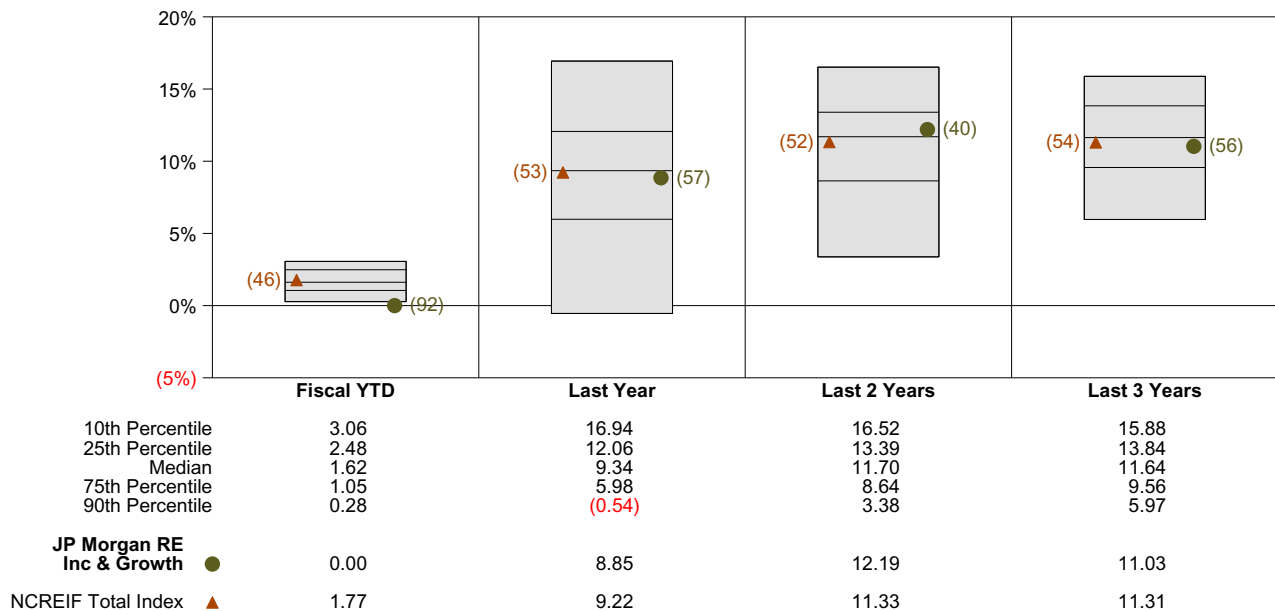
Quarterly Summary and Highlights

- JP Morgan RE Inc & Growth's portfolio posted a 0.00% return for the quarter placing it in the 92 percentile of the CAI Total Real Estate Database group for the quarter and in the 57 percentile for the last year.
- JP Morgan RE Inc & Growth's portfolio underperformed the NCREIF Total Index by 1.77% for the quarter and underperformed the NCREIF Total Index for the year by 0.37%.

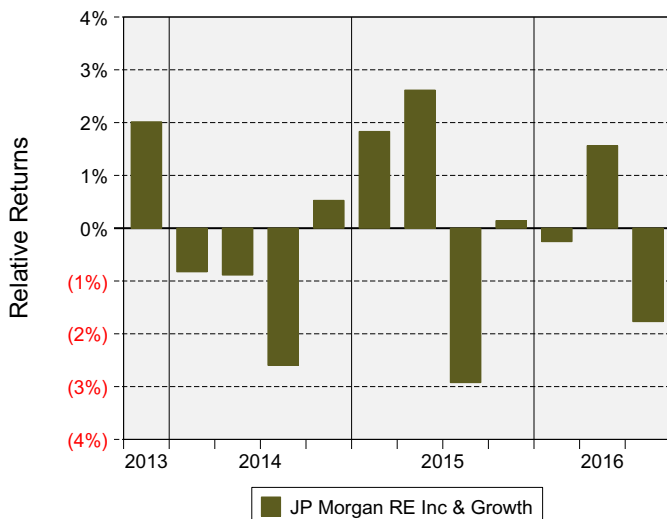
Quarterly Asset Growth

Beginning Market Value	\$127,188,897
Net New Investment	\$-206
Investment Gains/(Losses)	\$0
Ending Market Value	\$127,188,691

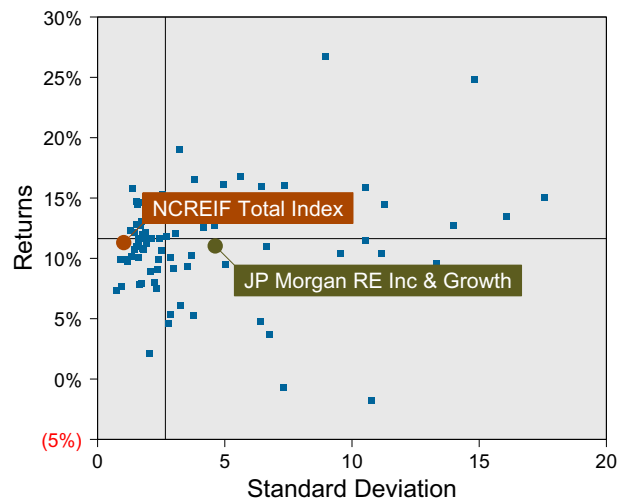
Performance vs CAI Total Real Estate Database (Net)



Relative Return vs NCREIF Total Index



CAI Total Real Estate Database (Net) Annualized Three Year Risk vs Return



Research and Educational Programs

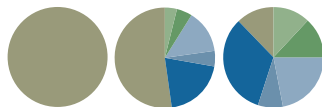
The Callan Institute provides research that updates clients on the latest industry trends while helping them learn through carefully structured educational programs. Visit www.callan.com/research to see all of our publications, or for more information contact Anna West at 415.974.5060 / institute@callan.com.

New Research from Callan's Experts

Built to Last: Strategic Guidance for Effective Investment Committees | Callan offers our high-level strategic advice for investment committees, touching on membership, investment policy statements, review processes, and fiduciary training and ongoing education.

10 Tips From Successful Investment Committees | Callan Chairman and CEO Ron Peyton and Consultant Brady O'Connell, CFA, CAIA, offer 10 tips based on their work with successful investment committees.

Risky Business | Callan research that found investors over the last 20 years have



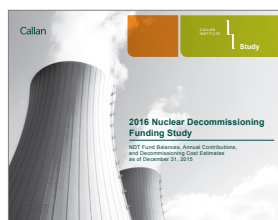
had to take on three times as much risk to earn the same return electrified the institutional investing community. We interviewed Jay Kloepfer and Julia Moriarty, CFA, about how the research was done and its implications.

Managing DC Plan Investments: A Fiduciary Handbook

Lori Lucas, CFA, covers responsibilities for DC plan fiduciaries, including investment structure, investment policy statements, QDIA oversight, and manager performance.

Ethics 101 for Investment Professionals | Callan Chairman and CEO Ron Peyton outlines his thoughts on how to create, instill, and maintain ethical standards for investment professionals. His advice: the right culture creates the best environment to maintain these standards. Firms should develop ethical guidelines that are based on principles, not rules, since the former offer better guidance for employees across the organization.

2016 Nuclear Decommissioning Funding Study | A report



by Julia Moriarty, CFA, covers 27 investor-owned and 27 public power utilities with an ownership interest in the 99 operating nuclear reactors (and 10 of the non-operating reactors) in the U.S.

How Green Is Your Bond? | Callan Analyst Rufash Lama tackles the area of green bonds, which are fixed income instruments issued specifically to support or finance environmental initiatives.

Periodicals

Real Assets Reporter, Summer/Fall 2016 | This edition explores if the boom in commercial real estate may be ending.

Private Markets Trends, Summer 2016 | Author Gary Robertson discusses the recent surge in private equity fundraising, an indication that some investors are establishing a defensive hedge as the five-year bull market pulls in its horns.

DC Observer, 2nd Quarter 2016 | Callan's Defined Contribution Practice Team outlines a framework to evaluate DC transaction fees. We explain how common they are, what they typically cost, and how they are generally paid.

Hedge Fund Monitor, 2nd Quarter 2016 | Jim McKee, director of Callan's Hedge Fund Research group, discusses the appeal of momentum-based investing strategies in the current climate of considerable economic uncertainty.

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 fall **Regional Workshop**, October 25 in New York and October 26 in Chicago, and 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 session is:

Introduction to Investments

San Francisco, April 18-19, 2017

San Francisco, July 25-26, 2017

Chicago, October 24-25, 2017

This session 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
ACR – Alpine Capital Research
AEGON USA Investment Management
AEW Capital 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
ASB Capital Management Inc.
Ativo Capital Management
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
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC
BlackRock
BMO Asset Management, Corp.
BNP Paribas Investment Partners
BNY Mellon Asset Management
Boston Partners

Manager Name
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC
Brown Brothers Harriman & Company
Brown Investment Advisory & Trust Company
Cambiar Investors, LLC
Capital Group
CastleArk Management, LLC
Causeway Capital Management
Chartwell Investment Partners
ClearBridge Investments, LLC
Cohen & Steers Capital Management, Inc.
Columbia Threadneedle Investments
Columbia Wanger Asset Management
Columbus Circle Investors
Conestoga Capital Advisors
Corbin Capital Partners, L.P.
Cornerstone Capital Management
Cramer Rosenthal McGlynn, LLC
Credit Suisse Asset Management
Crestline Investors, Inc.
D.E. Shaw Investment Management, LLC
Delaware Investments
DePrince, Race & Zollo, Inc.
Deutsche Asset Management
Diamond Hill Investments
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
Fisher Investments

Manager Name
Fort Washington Investment Advisors, Inc.
Franklin Templeton Institutional
Fred Alger Management, Inc.
Fuller & Thaler Asset Management, Inc.
GAM (USA) Inc.
GE Asset Management
GMO
Goldman Sachs Asset Management
Grand-Jean Capital Management
Guggenheim Investments
GW&K Investment Management
Harbor Capital Group Trust
Hartford Funds
Hartford Investment Management Co.
Henderson Global Investors
Hotchkis & Wiley Capital Management, LLC
HSBC Global Asset Management
Impax Asset Management Limited
Income Research + Management, Inc.
Insight Investment Management Limited
Institutional Capital LLC
INTECH Investment Management, LLC
Invesco
Investec Asset Management
Investment Counselors of Maryland, LLC
Janus Capital Management, LLC
Jarislowsky Fraser Global Investment Management
Jensen Investment Management
J.P. Morgan Asset Management
KeyCorp
Lazard Asset Management
Legal & General Investment Management America
Lincoln National Corporation
LMCG Investments, LLC
Longview Partners
Loomis, Sayles & Company, L.P.
Lord Abbett & Company
Los Angeles Capital Management
LSV Asset Management
Mackay Shields LLC
Man Investments Inc.
Manulife Asset Management
Martin Currie Inc.
McDonnell Investment Management, LLC
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)
Nikko Asset Management Co., Ltd.
Northern Trust Asset Management
Nuveen Investments, Inc.
OFI Global Asset Management
Old Mutual Asset Management
Opus Capital Management Inc.

Manager Name
O'Shaughnessy Asset Management, LLC
Pacific Alternative Asset Management Co.
Pacific Current Group
Pacific Investment Management Company
Parametric Portfolio Associates
P/E Investments
Peregrine Capital Management, Inc.
PGIM
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.
Riverbridge Partners LLC
Rockefeller & Co., Inc.
Rothschild Asset Management, Inc.
Russell Investments
Santander Global Facilities
Schroder Investment Management North America Inc.
Scout Investments
SEI Investments
Shenkman Capital Management, Inc.
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 Hartford
The London Company
The TCW Group, Inc.
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
Wasatch Advisors, Inc.
WEDGE Capital Management
Wellington Management Company, LLP
Wells Capital Management
Western Asset Management Company
William Blair & Company

INFORMATIONAL

TO: State Investment Board
FROM: Dave Hunter and Darren Schulz
DATE: November 10, 2016
SUBJECT: Annual SIB Client Investment Reviews – 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 **November 3rd**, RIO reviewed recent investment performance including the current investment policy statement of the **Tobacco Prevention and Control Trust Fund** (“TPCT”) with its Executive Director, Jeanne Prom, and Robert M. Yost III, Account Budget Specialist III. Ms. Prom stated she was pleased with the service provided by the SIB and RIO. Ms. Prom stated she intends to share the attached presentation with the TPCT Fund Board.

On **November 4th**, RIO reviewed recent investment performance including the current investment policy statement of the **Cultural Endowment Trust Fund** with its Executive Director, Beth Klingenstein, Robin Bosch, Administrative Officer, and Dee Franklin Smith, Administrative Assistant. Ms. Klingenstein stated she was satisfied with the service provided by the SIB and RIO. Ms. Klingenstein stated she intends to share the attached presentation with the North Dakota Council on the Arts Board.

On **November 9th**, RIO reviewed recent investment performance including the current investment policy statements of the **State Fire and Tornado Fund, State Bonding Fund, Petroleum Tank Release Compensation Fund, and Insurance Regulatory Trust Fund** (“TPCT”) with Rebecca Ternes – Deputy Commissioner, Jeff Bitz – Special Funds Director, Melissa Seifert - Account/Budget Specialist III, and Shelly Weisz – Administrative Officer. Ms. Ternes stated she was pleased with the service provided by the SIB and RIO.

On **November 17th**, RIO intends to review **PERS** recent investment performance with its Executive Director, Sparb Collins, and the PERS Board. RIO previously reviewed recent **TFFR** investment performance with its Chief Retirement Officer, Fay Kopp, and the TFFR board on **October 27th**.

RIO was recently requested to provide an investment performance update to the **Legacy and Budget Stabilization Fund Advisory Board** on **December 5th** at 3:15 pm.

The latest meeting materials shared with each of the above client boards is attached for reference.



Tobacco Prevention and Control Trust Fund

Annual Investment Review

For the Periods Ended June 30, 2016

November 3, 2016

Dave Hunter, Executive Director/CIO
Darren Schulz, Deputy Chief Investment Officer
ND Retirement & Investment Office (RIO)
State Investment Board (SIB)

Review of Prior Discussions

- ▶ In compliance with NDSIB Governance Policy E-13, RIO provided the TPCT Fund with information about becoming a new SIB investment client. Staff was contacted by Jeanne Prom, Executive Director, and Samantha Doll, Business Manager, of the Tobacco Control and Prevention Trust regarding its investment fund. They currently are invested in short-term cash funds with the Bank of North Dakota and earning approximately 6 to 10 bps per annum. They are interested in contracting for investment services with the SIB as allowed under NDCC 21-10-06 and as recommended in a recent audit.
- ▶ The fund has a market value of approximately \$47 million as of December 31, 2014 and is projected to exceed \$50 million over the next two years prior to declining by approximately \$8 million per year between 2018 and 2023. Darren, Connie and I met with Ms. Prom and Ms. Doll on December 3, 2014 and Ms. Doll and Mr. Robert Yost on January 8, 2015 to discuss their investment objectives and risk tolerance and the possible benefits of conducting an asset liability study. Staff has provided additional information as follow-up.
- ▶ Based on the initial discussions, internal staff administrative capacity would not be affected by this small fund and the client's goals and risk tolerances although the non-tobacco investment requirement does not fit within the existing Insurance Trust structure.
- ▶ **RIO Recommendation as of June 19, 2015: As required by Governance Policy E-13, RIO will request approval from the Industrial Commission to allow the SIB to enter into a contract for investment services with the Tobacco Control and Prevention Trust Fund on or before September 30, 2015.**

TPCT Fund Investment Allocation – June 2015

RIO's Approved Recommendation:

- Based on forecasted cash flows provided by the TPCT Fund, RIO worked with BlackRock to complete an asset liability review.
- These results were then shared with our investment consultant (Callan) without issue.
- Based on our review procedures, **RIO recommends the TPCT Fund adopt a target asset allocation of 10% equities and 90% to fixed income/cash.**
- Although higher equity allocations were considered, RIO recommends a 10% equity allocation given that the Fund will commence a seven-year liquidation period in 2018.
- The proposed 10% equity and 90% fixed income allocation did not experience a loss in any year during the past decade (and even posted a +2.4% return in 2008).
- RIO's recommendation was discussed with TPCT Executive Director, Jeanne Prom, on June 17, 2015, without any exceptions other than emphasizing that all investments must be intended to be "tobacco free".
- **Based on this asset allocation, the Fund will have an expected long-term rate of return of approximately 2%** with strong downside risk protection so as to preserve capital and benefit from higher return expectations, which are estimated to be 20 times higher than prior years (e.g. the expected 2.0% return is 20 times higher than the sub 0.1% return earned during the last four years).
- **Future investment income is expected to increase by approximately \$5 million as a result of this policy change.**

North Dakota Tobacco Prevention and Control Trust Fund

As of June 30, 2016

NORTH DAKOTA TOBACCO PREVENTION AND CONTROL TRUST FUND	As of June 30, 2016			Quarter Ended June 30, 2016		Quarter Ended March 31, 2016		Quarter Ended Dec. 31, 2016		Current FYTD	
	Market Value	Allocation		Quarter		Quarter		Quarter		Returns	
		Actual	Policy	Gross	Net	Gross	Net	Gross	Net	Gross	Net
TOTAL TOBACCO TRUST FUND	54,366,538	100%	100%	0.66%	0.65%	0.65%	0.65%	0.29%	0.28%	1.61%	1.59%
<i>POLICY TARGET BENCHMARK</i>				<i>0.64%</i>	<i>0.64%</i>	<i>0.66%</i>	<i>0.66%</i>	<i>0.37%</i>	<i>0.37%</i>		
LARGE CAP DOMESTIC EQUITY											
State Street S&P 500 ex Tobacco	5,446,369	10.0%	10.0%	2.34%	2.34%	4.92%	4.92%	6.79%	6.79%	14.7%	14.7%
S&P 500 Tobacco Free				2.36%	2.36%	4.91%	4.91%	6.78%	6.78%		
SHORT TERM FIXED INCOME											
State Street 1-3 Year US Treasury	40,816,114	75.1%	75.0%	0.54%	0.53%	0.21%	0.20%	-0.44%	-0.44%	0.31%	0.29%
BC 1-3 Year US Gov't Index				0.52%	0.52%	0.19%	0.19%	-0.42%	-0.42%		
CASH											
Northern Trust STIF	8,104,054	14.9%	15.0%	0.06%	0.06%	0.06%	0.06%	0.00%	0.00%	0.12%	0.12%
90 Day T-Bills				0.07%	0.07%	0.07%	0.07%	0.03%	0.03%		

The Fund generated a net investment return of 1.6% from October 1, 2015 to June 30, 2016, noting \$47.3 million was transferred to SIB oversight on Sep. 30, 2015. The funds were then invested in accordance with the board approved asset allocation policy on October 1, 2015. The target (and actual) asset allocation is 10% S&P 500 Tobacco Free Index, 75% Barclays Aggregate U.S. Government 1-3 Year Index and 15% in Short-Term Treasury Bills. In prior years, this Fund earned less than 0.10% per annum.

Actual and Budgeted Investment Income (5.6 to 10 bps)

- During the last biennium, investment income as a % of assets was less than 0.10% per year.
- For 2013-15, investment income was appropriated at 0.085% (or 8.5 basis points) per annum.
- For 2015-17, investment income was budgeted at 0.056% (or 5.6 basis points) per year.

Tobacco Prevention and Control Trust Fund
Status Statement

	2011-13	2013-15		2015-17
	Actual ¹¹	Legislative Appropriation	Revised Estimate	Executive Budget
Beginning Balance	\$29,556,426	\$40,123,720	\$40,123,720 ¹²	\$46,874,286
Revenue:				
Fiscal year 1 payments	\$11,392,521	\$11,327,123	11,205,876 ¹³	11,304,243 ¹⁴
Fiscal year 2 payments	\$11,402,609	11,327,123	11,304,243 ¹⁴	11,304,243 ¹⁴
Investment income	50,000	74,000	56,275	56,521
Total revenue	\$22,855,130	\$22,728,246	\$22,566,394	\$22,665,007
Expenditures:				
Appropriated expenditures	(\$12,287,836)	(\$15,815,828)	(\$15,815,828)	(\$16,109,756)
Total expenditures	(\$12,287,836)	(\$15,815,828)	(\$15,815,828)	(\$16,109,756)
Ending Balance	\$40,123,720	\$47,036,138	\$46,874,286	\$53,429,537

¹¹ Final revenue and expenditures per state accounting system reports dated June 30, 2013.

¹² Actual July 1, 2013 balance.

¹³ Actual revenue received during fiscal year 2014.

¹⁴ Estimated revenues based on average of fiscal year 2013 and 2014 actual amounts.

Notes:

In November 2008, voters approved Measure No. 3, which created a tobacco prevention and control trust fund. All tobacco settlement strategic contribution fund payments received by the state will be deposited in the fund. After 2017, no additional strategic contribution fund payments are anticipated.

2009 House Bill 1015, based on the intent of Measure No. 3, creates the Tobacco Prevention and Control Committee as a state agency. Section 35, appropriates funding for the 2009-11 biennium. Section 36, provides retroactive funding for expenditures that occurred during the period of January 1, 2009, through June 30, 2009. Section 39 changes language in the measure concerning the ability to spend funding from the water development trust fund. The legislature required that water development trust fund moneys may only be spent pursuant to legislative appropriation.

A basis point is equal to one one-hundredth of one percent (or 0.01%) such that 100 basis points is equivalent to 1%.

Historical and Projected Cash Flows (2009 to 2024)

Tobacco Prevention and Control Trust Fund (“TPCT Fund” or “Fund”):

- Since 2009, the Fund has grown from zero to over \$43 million.
- The Fund is expected to peak at over \$53 million during the fiscal year ended June 30, 2017.
- The Fund is expected to decline by approximately \$8 million per year for seven consecutive years (between 2018 and 2024) and decline to zero in the fiscal year ended June 30, 2024.

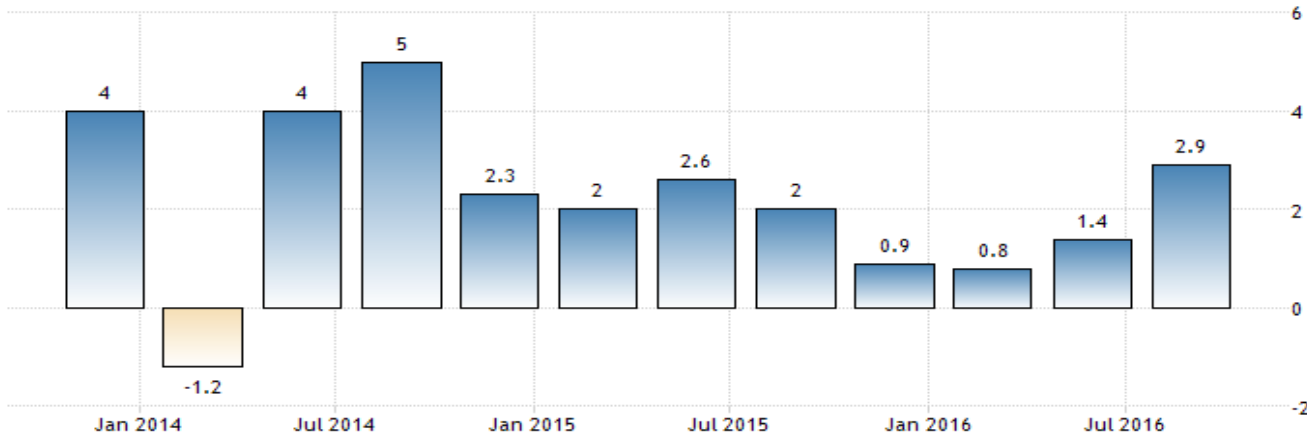
July 1- June 30	Strategic Contribution Fund	CDC Best Practice Recommendation	CDC Tobacco Prevention Grant	Community Health Trust Fund to DOH	Tobacco Prevention and Control Trust Fund	Tobacco Prevention and Control Trust Fund Balance
<u>Fiscal Year</u>	<u>Deposit</u>			<u>80%</u>		
2009	14.1			2.3		14.1
2010	12.2	9.3	1.1	2.1	3.5	22.8
2011	11.2	9.3	1.1	1.9	4.6	29.4
2012	11.4	9.3	1.1	2	5.7	35.1
2013	11.4	9.3	1.1	2	6.8	39.7
2014	11.4	12.2	1	1.6	7.9	43.2
2015	11.4	12.8	0.6	1.6	7.9	46.7
2016	11.4	10.9	0.6	1.6	8	50.1
2017	11.4	11.3	0.6	1.6	8	53.5
2018	0	11.3	0.6	1.6	8	45.5
2019	0	11.3	0.6	1.6	8	37.5
2020	0	11.3	0.6	1.6	8	29.5
2021	0	11.3	0.6	1.6	8	21.5
2022	0	11.3	0.6	1.6	8	13.5
2023	0	11.3	0.6	1.6	8	5.5
2024	0					

Economic and Capital Markets Update

As of June 30, 2016

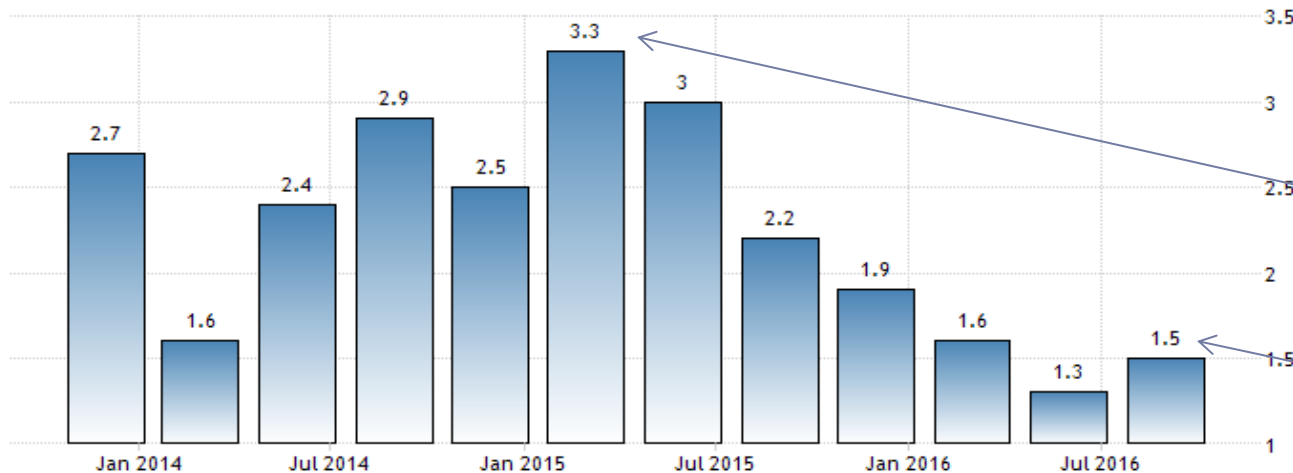
U.S Economy – GDP Growth Rates

US GDP GROWTH RATE



▶ Quarterly GDP Growth Rates (top chart) have not exceeded 3% since the 4Q of 2014, but popped up to 2.9% last quarter.

US GDP ANNUAL GROWTH RATE



▶ Annual GDP Growth Rates (bottom chart) have trended down since peaking at 3.3% during the 1st quarter of 2015 and approximate 1.5% as of the 3rd quarter of 2016.

SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF ECONOMIC ANALYSIS

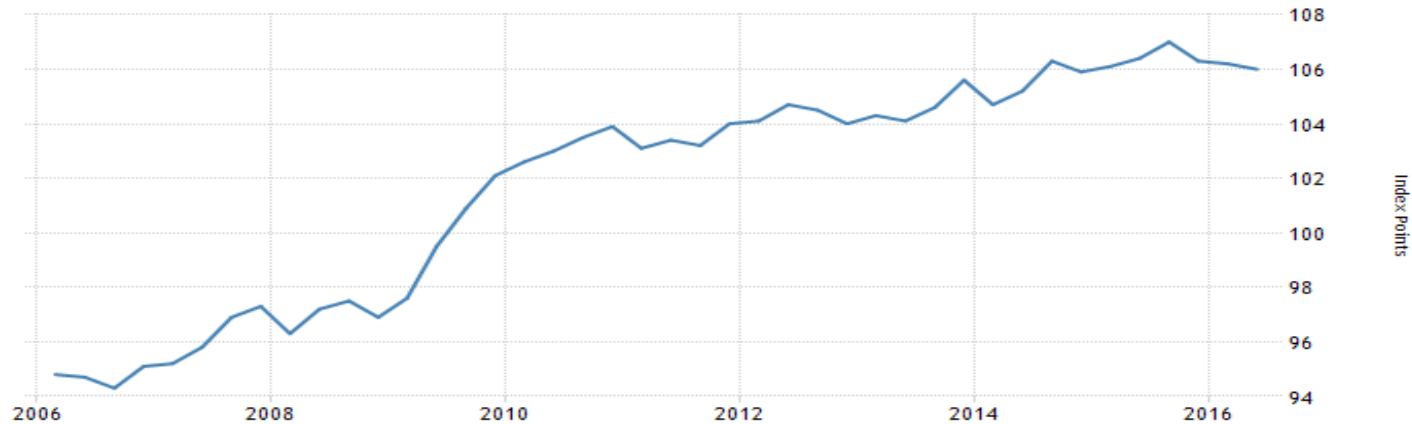
U.S Labor Market – Unemployment Rate and Productivity Index

US UNEMPLOYMENT RATE



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF LABOR STATISTICS

US NONFARM LABOUR PRODUCTIVITY



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF LABOR STATISTICS

U.S. labor markets appear to be improving as the “**Unemployment Rate**” is now **below 5%** since peaking at 10% in October of 2009.

The “**Labor Productivity Index**” has trended upward since 2006, but has declined four consecutive quarters (to 106) since hitting an all-time high of 107 in 3Q of 2015.

Index Points

Source: U.S. Dept. of Labor: Bureau of Labor Statistics

U.S. Labor Market – Wage Growth and Participation Rates

US WAGES AND SALARIES GROWTH



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF ECONOMIC ANALYSIS

U.S. labor markets appear to be improving as “**Wage Growth**” has been averaging **4%** or higher during the two years.

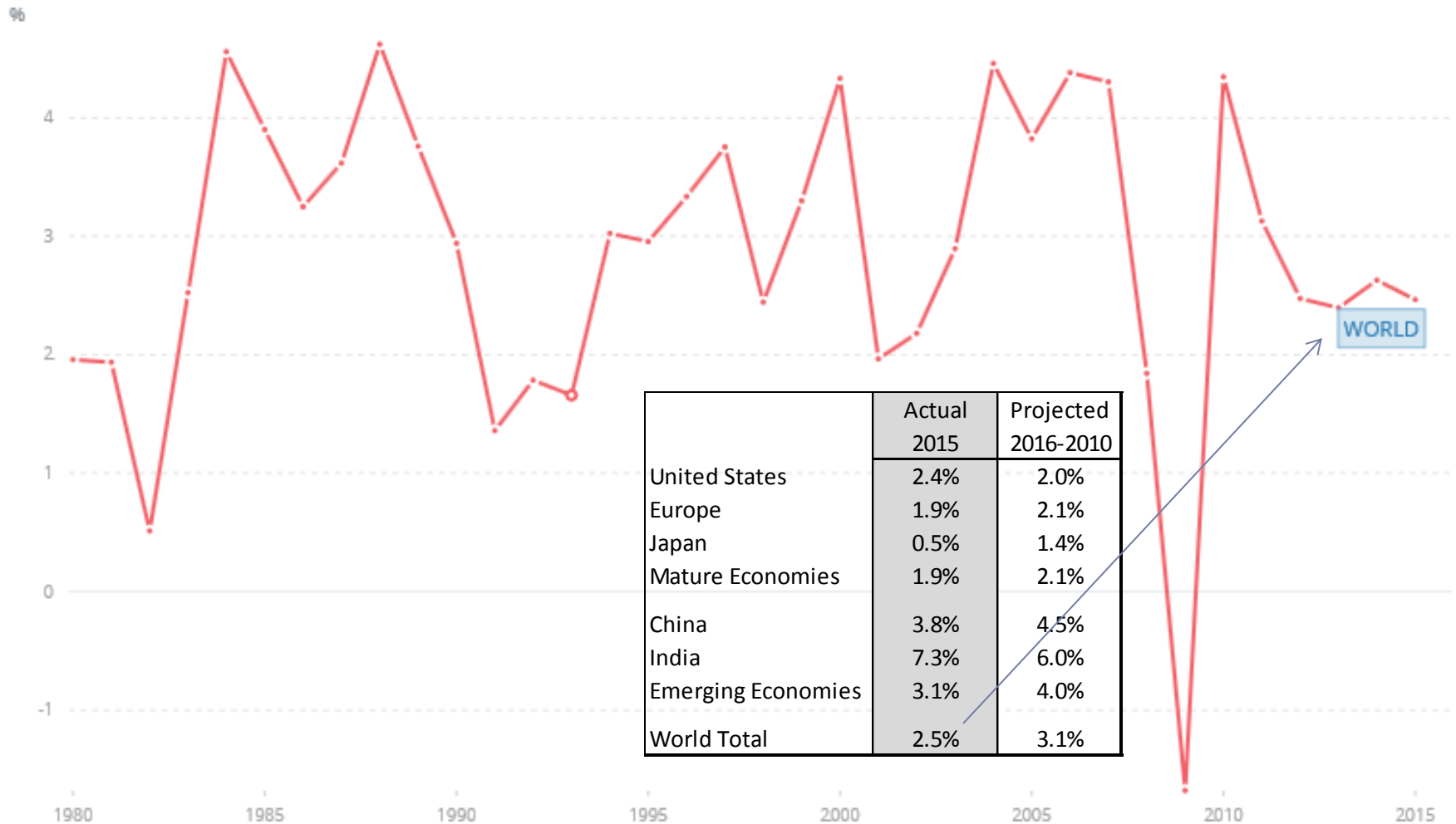
US LABOR FORCE PARTICIPATION RATE



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF LABOR STATISTICS

The “**Labor Participation Rate**” remains below long-term historical averages, but appears to have leveled out at slightly above **62.5%** over the last year.

“World GDP Growth Rates” have declined to 2.5% from 2012 to 2015, with some “Experts” projecting slightly higher future growth rates.

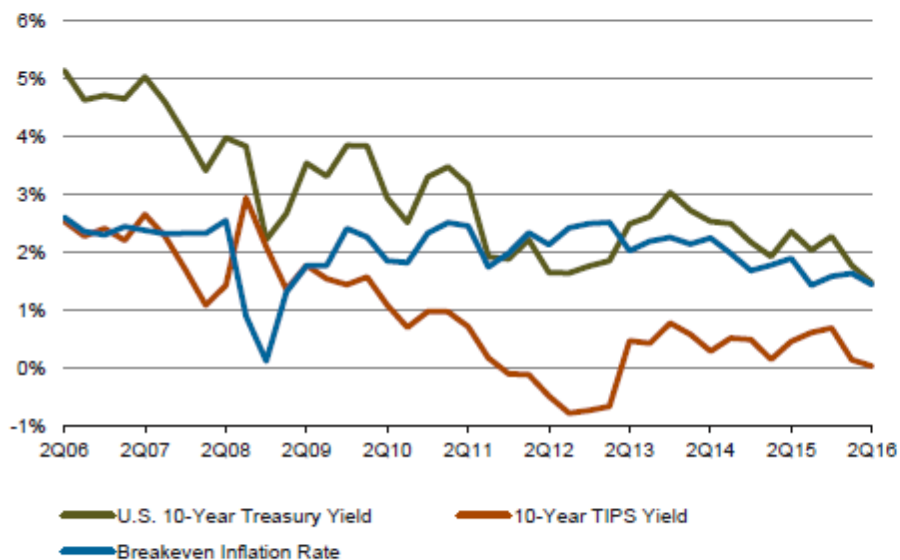


Yield Curve Changes

Key: Long-Term Treasury Rates Fell 0.85% Last Year

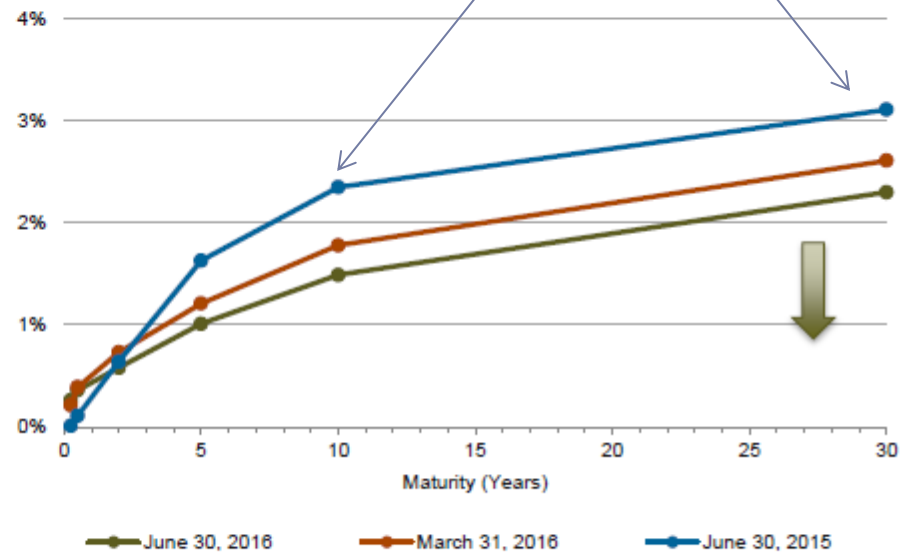
Periods Ending June 30, 2016

Historical 10-Year Yields



Source: Bloomberg

U.S. Treasury Yield Curves



Source: U.S. Department of the Treasury

- Low rates abroad kept demand for U.S. assets strong. The German 10-year sovereign bond traded at a negative yield for the first time ever.
- The decline in Treasury yields boosted returns across all segments, with longer maturities posting the biggest gains. The 10-year dropped 29 basis points to a low not seen since 2012, finishing June at 1.49%.
- Breakeven inflation ended lower despite a climb in oil prices and healthy core inflation numbers.

Historical Asset Class Market Returns – June 30, 2016

		Period Ended June 30, 2016			
Asset Class	Benchmark	1-Year	3-Years	5-Years	10-Years
Large Cap US Stocks	Russell 1000	2.93%	11.48%	11.88%	7.51%
Small Cap US Stocks	Russell 2000	-6.73%	7.09%	8.35%	6.20%
Non-US Stocks (Developed)	MSCI EAFE	-10.16%	2.06%	1.68%	1.58%
Non-US Stocks (Emerging)	MSCI Emerging Markets	-12.05%	-1.56%	-3.78%	3.54%
US Bonds	Barclays Aggregate	6.00%	4.06%	3.76%	5.13%
High Yield Bonds	Barclays Corporate High Yield	1.62%	4.18%	5.84%	7.56%
International Debt	Barclays Global Aggregate Ex-US	11.24%	1.85%	0.34%	4.00%
Inflation Protected	Barclays Global Inflation Linked	2.55%	2.74%	2.27%	4.42%
Real Estate	NCREIF	10.64%	11.61%	11.51%	7.40%

Last 5-Years:

- **U.S. Large Cap Equity (up 11.88%)** has been one of the top performing asset classes in the last 5-years, followed by **Real Estate (up 11.51%)** and **U.S. Small Cap Equity (up 8.35%)**.
- During the last 5-years, **U.S. Bonds (up 3.76%)** and **High Yield (up 5.84%)** performed generally in line with long-term expectations (along with **Inflation Protected Debt, up 2.27%**).
- **Emerging Market Equity (down 3.78%)** and **International Equity (up 1.68%)** and **International Debt (up 0.34%)** performed poorly the last 5-years, although **International Debt surpassed most other major indices last year (up 11.24%)**.



**Preliminary Investment Update -
August 31, 2016**

North Dakota Tobacco Prevention and Control Trust Fund

Preliminary Interim Returns – August 31, 2016

Based on unaudited data, the Fund generated a net return of approximately **0.23%** for the two months ended August 31, 2016. The funds are being invested in accordance with the board approved asset allocation guidelines (plus or minus 1% to 2%).

NORTH DAKOTA TOBACCO PREVENTION AND CONTROL TRUST FUND	As of August 31, 2016			Current FYTD		Prior Partial Yr. FY16	
	Market Value	Allocation		Returns		Returns	
		Actual	Policy	Gross	Net	Gross	Net
TOTAL TOBACCO TRUST FUND	53,287,070	100.0%	100.0%	0.23%	0.23%	1.61%	1.59%
<i>POLICY TARGET BENCHMARK</i>				<i>0.24%</i>	<i>0.24%</i>		
LARGE CAP DOMESTIC EQUITY							
State Street S&P 500 ex Tobacco	5,661,897	10.6%	10.0%	3.97%	3.96%	14.7%	14.7%
<i>S&P 500 Tobacco Free</i>				<i>3.97%</i>	<i>3.97%</i>		
SHORT TERM FIXED INCOME							
State Street 1-3 Year US Treasury	40,721,154	76.4%	75.0%	-0.23%	-0.23%	0.31%	0.29%
<i>BC 1-3 Year US Gov't Index</i>				<i>-0.22%</i>	<i>-0.22%</i>		
CASH							
Northern Trust STIF	6,904,019	13.0%	15.0%	0.03%	0.03%	0.12%	0.12%
<i>90 Day T-Bills</i>				<i>0.05%</i>	<i>0.05%</i>		

The Funds target asset allocation is:

- 10% S&P 500 Tobacco Free Index ;
- 75% Barclays Aggregate U.S. Gov't. 1-3 Year Index;
- 15% Treasury Bill Index (for 90 days)

Appendix of Supporting Materials

SIB Background, Client Returns, Service Providers, Transparency Update, Callan's Capital Market Expectations and Survey Results

State Investment Board Members – August 31, 2016

The **SIB** includes 11 members with **Lieutenant Governor Drew Wrigley** serving as **Chairman** and includes **State Treasurer Kelly Schmidt**, the **Commissioner of University and School Lands Lance Gaebe**, the **Director of Workforce Safety and Insurance designee Cindy Ternes**, the **Insurance Commissioner Adam Hamm**, plus three TFFR board members and three PERS board members.

The TFFR representatives include **Michael Gessner**, **Rob Lech** and **Mel Olson** noting that Mr. Lech also serves as the board parliamentarian.

The PERS representatives include **Mike Sandal**, **Tom Trenbeath** and **Yvonne Smith** noting that Mr. Sandal also serves as *Vice Chairman* of the SIB.

North Dakota Retirement & Investment Office – Background

RIO is an agency of the State of North Dakota. The agency was created by the 1989 Legislative Assembly to capture administrative and investment cost savings in the management of two important long-standing state programs – the retirement program of the Teachers’ Fund for Retirement (TFFR) and the investment program of the State Investment Board (SIB).

The SIB is responsible for setting policies and procedures guiding the investment of over \$11 billion in assets for seven pension funds and 16 other insurance-type funds. Their investments are divided into two investment trust funds and two individual investment accounts. Individual investment guidelines for each fund can be found in the Investment Section. These guidelines include goals and objectives, risk tolerance, liquidity constraints, asset allocation and portfolio restrictions specific to each fund’s unique circumstances. When creating investment pools to implement the asset allocations for each client fund, the SIB takes all of these guidelines into consideration in order to best meet the objectives of each fund and safeguard fund assets.

The pension investment pool is made up of only qualified pension funds whose monies must be invested exclusively for the benefit of their participants. The insurance investment pool is made up of mainly insurance-type funds, but also includes other funds that do not qualify as pension funds and would like to benefit from the cost savings of being pooled with other funds’ assets. All of these funds are invested in accordance with the “Prudent Investor Rule.”

An important aspect of the prudent investor rule is that individual investments are considered not in isolation but in the context of the trust portfolio as a whole. Some new opportunities may appear risky when viewed alone. However, when part of a diversified mix of investments in stocks, bonds and other assets, they can increase returns often without increasing the overall portfolio risk and, in some cases, may help decrease the overall portfolio’s risk.

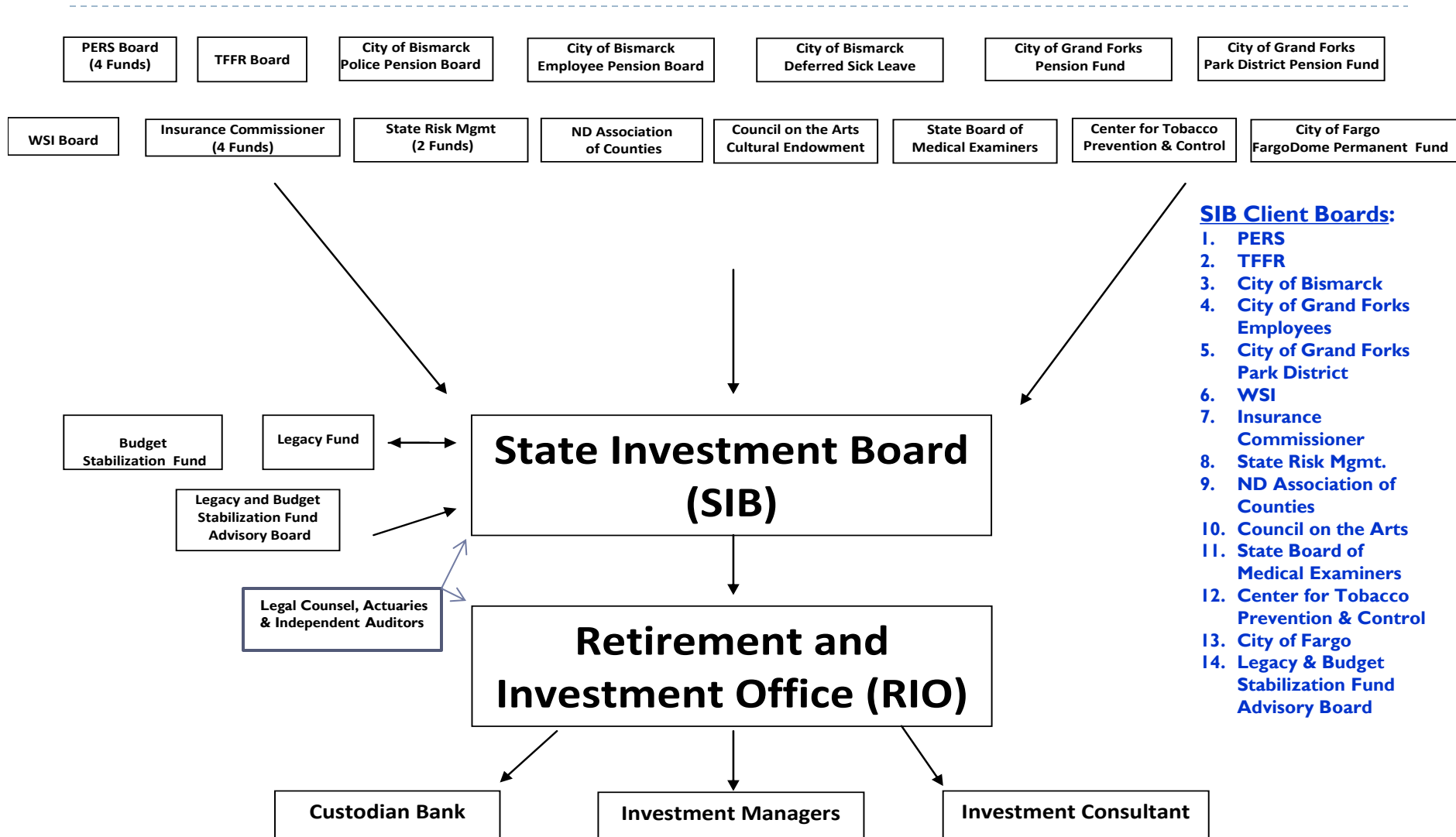
North Dakota Retirement & Investment Office – Awards

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to RIO for its comprehensive annual financial report for the fiscal year ended June 30, 2015. This was the eighteenth consecutive year that RIO has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current comprehensive annual financial report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

TFFR also received the 2015 Public Pension Standards Award for Funding and Administration from the Public Pension Coordinating Council. To receive the award, the retirement system must certify that it meets specific professional standards for a comprehensive benefit program, actuarial valuations, financial reporting, investments, communications to members, and funding adequacy.

State Investment Board Process



State Investment Board Process

Client Responsibilities: (Per NDCC 21-10-02.1) The governing body of each fund (client) shall establish policies on investment goals and objectives and asset allocation that must include:

- Acceptable rates of return, liquidity and levels of risk
- Long-range asset allocation goals

State Investment Board Responsibilities: (Per NDCC 21-10):

- Accept and implement client asset allocations
- Apply Prudent Investor Rule when investing for fund under its supervision
- Approve general types of securities for investment
- Set policies and procedures regulating securities transactions on behalf of the clients
- Select custodian servicer
- Select investment director and/or investment consulting service
- Create investment pools

State Investment Board Process

Retirement and Investment Office Staff Responsibilities (on behalf of SIB):

- Administer overall investment strategy
- Advise SIB on ways to maximize risk/return opportunities within each asset class
- Act as liaison between SIB and managers, consultant and custodian
- Monitor individual clients' investment guidelines and asset allocations
- Maintain separate accounting for client accounts

Investment Manager Responsibilities:

- Accept and implement specific mandates or “investment missions”
- Make buy/sell decisions based on investment guidelines
- Report to RIO Staff on regular basis
- Provide education to SIB

State Investment Board Process

Custodian Bank Responsibilities:

- Safe-keep assets
- Settle trades
- Record-keeper

Investment Consultant Responsibilities:

- Performance measurement of investment managers
- Manager search assistance
- Provide education to SIB
- Special projects

Others Experts:

- Legal Counsel
- Independent Actuaries and Auditors
- Specialists in custody and fee reviews and/or transaction cost analyses

State Investment Board – Client Assets Under Management

Fund Name	Market Values as of 6/30/16 ⁽¹⁾	Market Values as of 6/30/15 ⁽²⁾
Pension Trust Fund		
Public Employees Retirement System (PERS)	2,459,388,086	2,422,579,595
Teachers' Fund for Retirement (TFFR)	2,082,183,640	2,103,807,355
Job Service of North Dakota Pension		96,392,560
City of Bismarck Employees Pension	82,441,003	81,745,817
City of Grand Forks Employees Pension	57,975,758	59,232,375
City of Bismarck Police Pension	33,983,598	35,889,940
Grand Forks Park District	5,720,245	6,035,136
City of Fargo Employees Pension		1,461
Subtotal Pension Trust Fund	4,721,692,330	4,805,684,242
Insurance Trust Fund		
Workforce Safety & Insurance (WSI)	1,832,104,203	1,762,659,138
Budget Stabilization Fund	575,918,381	574,011,151
ND Tobacco Control and Prevention	54,366,538	
PERS Group Insurance Account	37,715,356	39,653,686
City of Fargo FargoDome Permanent Fund	38,782,721	41,007,046
State Fire and Tornado Fund	24,091,203	23,416,232
Petroleum Tank Release Compensation Fund	7,149,512	7,162,837
State Risk Management Fund	6,534,801	6,849,214
State Risk Management Workers Comp Fund	5,516,177	6,224,542
ND Association of Counties (NDACo) Fund	4,048,863	3,833,500
State Bonding Fund	3,296,372	3,180,023
ND Board of Medical Examiners	2,208,667	2,174,703
Insurance Regulatory Trust Fund	1,085,836	2,636,662
Bismarck Deferred Sick Leave Account	642,265	872,177
Cultural Endowment Fund	386,452	383,049
Subtotal Insurance Trust Fund	2,593,847,347	2,474,063,959
Legacy Trust Fund		
Legacy Fund	3,809,485,177	3,328,631,303
PERS Retiree Insurance Credit Fund	101,623,224	97,671,060
Job Service of North Dakota Pension	96,588,333	
Total Assets Under SIB Management	11,323,236,411	10,706,050,563

⁽¹⁾ 6/30/16 market values are unaudited and subject to change.

⁽²⁾ 6/30/15 market values as stated in the Comprehensive Annual Financial Report.

- ▶ SIB client assets grew by approximately 6% (or \$617 million) in the last year with the Legacy Fund creating the largest asset growth of \$481 million primarily due to tax collections.
- ▶ The Legacy Fund generated a net investment gain of 1.06% for the year ended June 30, 2016, slightly exceeding its performance benchmark. Since inception, the Legacy Fund has generated a net annualized return of 2.78% (over the last 4.75 years) exceeding the performance benchmark of 2.05%.
- ▶ The Pension Trust posted a net return of 0.31% in the last year. During the last 5-years, the Pension Trust generated a net annualized return of 6.35%, exceeding the performance benchmark of 5.99%.
- ▶ The Insurance Trust generated a net return of 3.12% in the last year. During the last 5-years, the Insurance Trust posted a net annualized return of 4.83%, exceeding the performance benchmark of 3.81%.
- ▶ SIB client assets exceeded \$11.3 billion as of June 30, 2016, based on unaudited valuations.

**ND RETIREMENT AND INVESTMENT OFFICE
ND STATE INVESTMENT BOARD
INVESTMENT PERFORMANCE SUMMARY
AS OF JUNE 30, 2016**

Investment Performance (net of fees)

Fund Name	Market Values as of 6/30/16	Quarter Ended				FYTD 2016	Fiscal Years ended June 30					Periods ended 6/30/16 (annualized)						
		9/30/15	12/31/15	3/31/16	6/30/16		2015	2014	2013	2012	2011	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
Pension Trust Fund																		
Teachers' Fund for Retirement (TFFR)	2,082,183,640	-4.98%	2.72%	1.31%	1.41%	0.28%	3.52%	16.53%	13.57%	-1.12%	24.05%	6.55%	6.32%	4.45%	5.51%	6.48%	7.48%	7.73%
Public Employees Retirement System (PERS)	2,459,388,086	-5.04%	2.71%	1.33%	1.47%	0.28%	3.53%	16.38%	13.44%	-0.12%	21.27%	6.51%	6.48%	4.81%	5.84%	6.88%	7.86%	7.89%
City of Bismarck Employees Pension	82,441,003	-4.25%	2.17%	1.34%	1.70%	0.82%	3.69%	14.56%	12.41%	1.57%	20.32%	6.20%	6.46%	5.16%	5.84%	6.86%	7.79%	*
City of Bismarck Police Pension	33,983,598	-4.76%	2.34%	1.25%	1.66%	0.32%	3.56%	15.27%	13.03%	1.31%	21.10%	6.19%	6.52%	5.02%	5.73%	6.71%	7.68%	*
Job Service of North Dakota Pension	96,588,333	-3.12%	3.38%	2.95%	2.27%	5.45%	3.30%	13.54%	11.71%	3.09%	16.39%	7.34%	7.33%	6.00%	6.11%	7.57%	*	*
City of Grand Forks Employees Pension	57,975,758	-5.32%	2.80%	1.26%	1.58%	0.11%	3.53%	16.33%	14.01%	1.09%	21.64%	6.43%	6.80%	*	*	*	*	*
Park District of the City of Grand Forks Pension	5,720,245	-4.89%	3.32%	0.88%	1.24%	0.36%	4.22%	16.44%	14.43%	0.86%	20.98%	6.80%	7.05%	*	*	*	*	*
Subtotal Pension Trust Fund	4,818,280,663																	
Insurance Trust Fund																		
Workforce Safety & Insurance (WSI)	1,832,104,203	-1.92%	1.18%	2.04%	2.29%	3.58%	3.26%	11.71%	8.31%	6.17%	13.23%	6.11%	6.56%	5.66%	5.58%	6.78%	7.39%	*
State Fire and Tomado Fund	24,091,203	-2.89%	1.76%	1.79%	2.07%	2.67%	3.16%	12.78%	10.59%	4.93%	14.52%	6.10%	6.75%	5.87%	5.65%	6.43%	6.58%	*
State Bonding Fund	3,296,372	0.21%	-0.11%	1.57%	1.78%	3.48%	1.25%	4.06%	2.96%	5.31%	5.01%	2.92%	3.40%	2.07%	3.24%	4.60%	5.17%	*
Petroleum Tank Release Compensation Fund	7,149,512	0.20%	-0.10%	1.43%	1.62%	3.17%	1.13%	3.68%	2.47%	4.84%	4.97%	2.65%	3.05%	1.82%	2.97%	4.47%	*	*
Insurance Regulatory Trust Fund	1,085,836	-2.58%	1.53%	1.22%	1.33%	1.46%	2.04%	9.88%	8.49%	2.82%	11.61%	4.39%	4.88%	4.63%	4.75%	5.67%	5.68%	*
State Risk Management Fund	6,534,801	-2.08%	1.50%	2.26%	2.78%	4.46%	4.08%	12.29%	10.19%	7.63%	14.36%	6.88%	7.68%	6.59%	5.86%	*	*	*
State Risk Management Workers Comp Fund	5,516,177	-2.65%	1.90%	2.20%	2.78%	4.21%	4.57%	13.68%	11.61%	7.40%	16.23%	7.40%	8.23%	6.74%	*	*	*	*
Cultural Endowment Fund	386,452	-4.39%	3.00%	1.59%	2.14%	2.18%	5.22%	16.94%	15.58%	4.65%	21.33%	7.93%	8.75%	6.33%	*	*	*	*
Budget Stabilization Fund	575,918,381	0.27%	-0.34%	1.06%	0.82%	1.82%	1.86%	1.94%	1.87%	2.03%	3.73%	1.88%	1.91%	2.11%	*	*	*	*
ND Association of Counties (NDACo) Fund	4,048,863	-2.50%	1.49%	1.79%	2.02%	2.76%	2.77%	11.61%	9.46%	1.69%	17.73%	5.63%	5.58%	4.73%	4.97%	*	*	*
Bismarck Deferred Sick Leave Account	642,265	-2.48%	1.47%	2.04%	2.27%	3.26%	2.95%	12.32%	9.83%	5.69%	13.80%	6.09%	6.75%	6.08%	5.86%	*	*	*
City of Fargo FargoDome Permanent Fund	38,782,721	-4.50%	2.40%	1.60%	1.84%	1.19%	3.38%	16.34%	13.46%	3.14%	19.16%	6.76%	7.33%	5.97%	*	*	*	*
State Board of Medicine Fund	2,208,667	-1.66%	0.88%	1.26%	1.16%	1.63%	2.70%	*	*	*	*	*	*	*	*	*	*	*
PERS Group Insurance Account	37,715,356	0.00%	-0.08%	0.94%	0.62%	1.49%	0.01%	0.06%	0.27%	0.24%	0.31%	0.52%	0.41%	1.25%	1.64%	*	*	*
Subtotal Insurance Trust Fund	2,539,480,809																	
Legacy Fund	3,809,485,177	-4.42%	2.46%	1.55%	1.62%	1.06%	3.31%	6.64%	1.15%	*	*	3.65%	*	*	*	*	*	*
Tobacco Control and Prevention Fund	54,366,538	*	*	*	0.65%	*	*	*	*	*	*	*	*	*	*	*	*	*
PERS Retiree Insurance Credit Fund	101,623,224	-5.59%	2.82%	1.56%	2.17%	0.72%	3.06%	16.53%	12.71%	2.62%	21.65%	6.55%	6.95%	5.13%	5.23%	6.40%	7.17%	*
Total Assets Under SIB Management	11,323,236,410																	

* These funds do not have the specified periods of history under SIB management.

Note: Asset allocation largely drives investment performance. Each fund has a unique allocation that takes into consideration return objectives, risk tolerance, liquidity constraints, and unique circumstances. Such considerations must be taken into account when comparing investment returns. All figures are preliminary and subject to revision.

NDRIO – Consulting and Professional Services (June 30, 2016)

Actuary

The Segal Company
Chicago, Illinois

Auditor

CliftonLarsonAllen LLP
Baltimore, Maryland

Legal Counsel

Attorney General's Office
Bismarck, North Dakota

Ice Miller
Chicago, Illinois

K&L Gates
Boston, Massachusetts

Information Technology

Advent Software, Inc.
San Francisco, CA

CPAS Systems Inc.
Toronto, Ontario

Master Custodian

The Northern Trust Company
Chicago, Illinois

Investment Consultant and Performance Measurement

Callan Associates Inc.
San Francisco, California

Mercer LLC
Chicago, Illinois

Novarca North America LLC
Palo Alto, California

Adams Street Partners, LLC
Chicago, Illinois

Investment Managers

Adams Street Partners, LLC
Chicago, Illinois

Investment Managers (cont.)

Axiom International Investors
Greenwich, Connecticut

Babson Capital Management LLC Boston,
Massachusetts

Brandywine Asset Management
Wilmington, Delaware

Callan Associates
San Francisco, California

Capital Group
Los Angeles, California

Corsair Capital
New York, New York

Declaration Mgmt & Research, LLC
McLean, Virginia

Dimensional Fund Advisors
Chicago, Illinois

EIG Energy Partners
Los Angeles, California

Epoch Investment Partners, Inc.
New York, New York

Goldman Sachs Asset Mgmt
New York, New York

Grosvenor Capital Management
New York, NY

Hearthstone Homebuilding Investors, LLC
Encino, California

INVESCO Realty Advisors
Dallas, Texas

InvestAmerica L&C, LLC
Cedar Rapids, Iowa

J.P. Morgan Invest. Mgmt, Inc.
New York, New York

Loomis Sayles & Company
Boston, Massachusetts

Los Angeles Capital Management
Los Angeles, California

LSV Asset Management
Chicago, Illinois

Matlin Patterson Global Advisers LLC
New York, New York

Investment Managers (cont.)

Northern Trust Asset Management
Chicago, Illinois

Parametric Portfolio Associates
DBA The Clifton Group
Minneapolis, Minnesota

PIMCO
Newport Beach, California

Prudential Investment Management
Newark, New Jersey

Quantum Energy Partners
Houston, Texas

Quantum Resources Mgmt, LLC
Denver, Colorado

Research Affiliates, LLC
Newport Beach, California

SEI Investments Management Co.
Oaks, Pennsylvania

State Street Global Advisors
Boston, Massachusetts

Timberland Investment
Resources, LLC
Atlanta, Georgia

UBS Global Asset Management
Chicago, Illinois

The Vanguard Group
Valley Forge, Pennsylvania

Wellington Trust Company, NA
Boston, Massachusetts

Wells Capital Management, Inc.
Menomonee Falls, Wisconsin

Western Asset Management Co.
Pasadena, California

Transparency Enhancement Update – 2016

Strategic Investment Belief / Goal:

Although SIB meetings are open to the public and RIO is committed to adhering to all applicable open records laws, a transparency enhancement initiative was commenced in mid-2015 in order to make it easier for interested parties to gain access to information on RIO's website. RIO believes these actions support our desire to foster trust, understanding and support within our community.

RIO's Stated Action Plan (as stated in our SIB Meeting Materials in 2015 and 2016):

- 1) Enhance public access to our SIB Governance Manual by adding a new hyperlink on our RIO website (hyperlink accessed by clicking on "SIB Governance Manual" under the "SIB / Board" section); <http://www.nd.gov/rio/SIB/Board/GovernanceManual/default.htm>
- 2) Enhance public access to our SIB Meeting Materials by adding a new hyperlink on our RIO website (hyperlink accessed by clicking on "Meeting Materials" under the "SIB / Board" section); <http://www.nd.gov/rio/SIB/Board/SIB%20Meeting%20Materials/default.htm>
- 3) Enhance public access to our SIB's Audit Committee Charter and Meeting Materials by adding a new hyperlink on our RIO website (hyperlinks accessed by clicking on "SIB Audit Charter" or "Meeting Materials" under the "SIB Audit" section).
<http://www.nd.gov/rio/SIB%20Audit/Board/default.htm>

2016 Capital Market Expectations

Return and Risk

- Public market expectations represent passive exposure (beta only).
- Return expectations for private market investments such as real estate and private equity reflect active management premiums.
- Return expectations are net of fees.

Summary of Callan's Long-Term Capital Market Projections (2016 - 2025)

Asset Class	Index	Projected Return*	Projected Risk
Equities			
Broad Domestic Equity	Russell 3000	7.35%	18.70%
Large Cap	S&P 500	7.25%	17.95%
Small/Mid Cap	Russell 2500	7.55%	22.75%
Global ex-US Equity	MSCI ACWI ex USA	7.55%	21.30%
International Equity	MSCI World ex USA	7.25%	20.05%
Emerging Markets Equity	MSCI Emerging Markets	7.60%	27.85%
Fixed Income			
Domestic Fixed	Barclays Aggregate	3.00%	3.75%
TIPS	Barclays TIPS	3.00%	5.30%
High Yield	Barclays High Yield	5.00%	10.50%
Non-US Fixed	Barclays Global Aggregate ex-USD	1.40%	9.20%
Emerging Market Debt	EMBI Global Diversified	4.60%	9.90%
Other			
Real Estate	Callan Real Estate Database	6.00%	16.45%
Timberland	NCREIF Timberland	6.20%	17.50%
Infrastructure	S&P Global Infr / JPM Infr	6.60%	19.00%
Private Equity	TR Post Venture Capital	8.15%	32.80%
Hedge Funds	Callan Hedge FoF Database	5.25%	9.30%
Commodities	Bloomberg Commodity	2.75%	18.50%
Cash Equivalents	90-Day T-Bill	2.25%	0.90%
Inflation	CPI-U	2.25%	1.50%

* Geometric returns are derived from arithmetic returns and the associated risk (standard deviation).

TO: State Investment Board
FROM: Dave Hunter, Executive Director/CIO
DATE: October 20, 2016
SUBJECT: SIB Client Satisfaction Survey – Cover Memo

The Audit Services team conducted the 2016 Customer Satisfaction Survey over the past few months. Survey responses were received from all but one customer board. Several methods were used this year to collect the survey data including customer created paper forms, Survey Monkey, and PDF.

SIB clients assigned a 3.6 overall rating in 2016 which is the comparable to prior years (of 3.7). This numerical score was based on 4.0 rating scale as follows:

Excellent	4.0
Above Average	3.0
Average	2.0
Poor	1.0
Not Applicable	-

**CUSTOMER SATISFACTION SURVEY
NORTH DAKOTA STATE INVESTMENT BOARD
2016**

Evaluation Forms Sent 14
Evaluation Forms Returned 13

1. Telephone calls and/or e-mail handled promptly and professionally.

Excellent	Above Average	Average	Poor	N/A
8	4	0	0	1

2. Clarity and effectiveness of letters, reports, and presentations.

Excellent	Above Average	Average	Poor	N/A
7	5	1	0	0

3. Detail provided on reports.

Excellent	Above Average	Average	Poor	N/A
7	4	2	0	0

4. Delivery of high-quality service.

Excellent	Above Average	Average	Poor	N/A
9	3	1	0	0

5. Accessibility.

Excellent	Above Average	Average	Poor	N/A
9	4	0	0	0

6. Responsiveness.

Excellent	Above Average	Average	Poor	N/A
9	4	0	0	0

7. Efficiency.

Excellent	Above Average	Average	Poor	N/A
10	2	1	0	0

8. Knowledge of investments.

Excellent	Above Average	Average	Poor	N/A
8	4	1	0	0

SIB Customer Survey Results:

SIB Customer Satisfaction Survey scores remain above average with an overall score of 3.6 out of 4.0 in which 3.0 is “Above Average” and 4.0 is “Excellent”. This score is comparable with the prior years in which the overall score was 3.7.

2016 Summary of SIB Client Satisfaction Survey Ratings:

	Excellent	Above Average	Average	Poor	N/A
Totals	67	30	6	0	1
Grade	4	3	2	1	0
Percent	64%	29%	6%	0%	1%
Average	3.6				

2015 Summary of SIB Client Satisfaction Survey Ratings:

	Excellent	Above Average	Average	Poor	N/A
Totals	53	25	0	0	18
Grade	4	3	2	1	0
Percent	55%	26%	0%	0%	19%
Average	3.7				

2014 Summary of SIB Client Satisfaction Survey Ratings:

	Excellent	Above Average	Average	Poor	N/A
Totals	63	25	0	0	8
Grade	4	3	2	1	0
Percent	66%	26%	0%	0%	8%
Average	3.7				

North Dakota Cultural Endowment Fund ("Fund") – Annual Investment Review

For the Periods Ended June 30, 2016

November 4, 2016

Dave Hunter, Executive Director/CIO

Darren Schulz, Deputy Chief Investment Officer

ND Retirement & Investment Office (RIO)

State Investment Board (SIB)

Executive Summary - June 30, 2016

Investment Performance –

- **Asset allocation is the primary driver of returns.** The Fund's asset allocation policy is 55% Equity, 37% Fixed Income, 5% Real Estate and 3% Cash. Over a full market cycle, we estimate this asset allocation should deliver net returns in the 5% to 6% range (with a 5.8% policy target) . This goal has been achieved for the 5- (and 10-) years ended June 30, 2016, although last years net return was less than 2.2%. Last years' disappointing results were largely a function of weak global equity returns due to slowing global growth rates which resulted in China devaluing its currency in August of 2015. Given cautionary growth expectations and growing political uncertainty (in both the developed and emerging markets), risky assets underperformed long-term expectations last year, while high quality investments performed well. As example, long-term U.S. Treasuries returned over 19% last year given that longer term interest rates remained low and noting the 10-year U.S. Treasury rate declined from 2.35% at June 30, 2015, to less than 1.5% at June 30, 2016.
 - **For the five years ended June 30, 2016, the Fund generated a net investment return of 8.75% versus a policy benchmark of 7.39%.** U.S. Equities (45%) represent the plans largest asset allocation and performed very well posting net annual returns in excess of 12% for Large Cap and 9% for Small Cap (over the last 5-years). Fixed Income represents the second largest asset allocation at 37% and performed well (up 6%) due to the aforementioned decline in rates. Modest returns were experienced within International Equity (up 2%) for the 5-years ended June 30, 2016. Real Estate was the best performing sector over the last 5-years generating a net investment returns of nearly 14%.
-

Cultural Endowment Fund – Investment Managers

Equity – June 30, 2016

CULTURAL ENDOWMENT FUND Investment Performance for the fiscal year ended JUNE 30, 2016	June-16			Current FYTD	Prior Year FY15	3 Years Ended 6/30/2016	5 Years Ended 6/30/2016
	Market Value	Allocation Actual Policy		Net	Net	Net	Net
TOTAL FUND	386,452			2.18%	5.22%	7.93%	8.75%
<i>POLICY TARGET</i>				2.13%	4.24%	7.14%	7.39%
LARGE CAP U.S. EQUITY							
Los Angeles Capital <i>Russell 1000 Growth</i>	39,636	10.3%	10.1%	5.24% 3.02%	12.32% 10.56%	14.07% 13.07%	13.58% 12.35%
LSV <i>Russell 1000 Value</i>	38,104	9.9%	10.1%	-3.30% 2.86%	6.87% 4.13%	9.78% 9.87%	11.61% 11.35%
LA Capital <i>Russell 1000</i>	26,554	6.9%	6.8%	5.82% 2.94%	8.31% 7.37%	12.48% 11.48%	12.89% 11.88%
Clifton Group <i>S&P 500</i>	26,242	6.8%	6.8%	5.22% 3.99%	7.10% 7.42%	11.99% 11.66%	12.42% 12.10%
TOTAL LARGE CAP U.S. EQUITY	130,536	33.8%	33.8%	2.72%	8.83%	12.05%	12.65%
<i>Russell 1000</i>				2.94%	7.37%	11.48%	12.11%
SMALL CAP DOMESTIC EQUITY							
PIMCO RAE (formerly Research Affiliates) Clifton	18,463 25,781	4.8% 6.7%	5.6% 5.6%	-4.14% -5.98%	5.18% 8.03%	7.81% 8.04%	9.43% 9.26%
TOTAL SMALL CAP U.S. EQUITY	44,245	11.4%	11.3%	-5.27%	7.23%	8.09%	9.45%
<i>Russell 2000</i>				-6.73%	6.49%	7.09%	8.35%
INTERNATIONAL EQUITY							
Capital Group (2) LSV <i>MSCI EAFE</i>	25 16,159	0.0% 4.2%	4.0% 4.0%	N/A -11.55% -10.16%	-1.73% -3.73% -4.22%	N/A 2.58% 2.06%	N/A 2.00% 1.68%
William Blair <i>MSCI ACWI ex-US IMI (Net)</i>	13,787	3.6%	4.0%	N/A	N/A	N/A	N/A
DFA Vanguard (1) <i>S&P/Citigroup Broad Market Index < \$2BN</i>	3,931 4,047	1.0% 1.0%	1.0% 1.0%	-9.28% -7.27% -3.37%	-3.27% 0.57% 1.14%	6.01% 6.48% 7.29%	3.98% 3.77% 4.37%
TOTAL INTERNATIONAL EQUITY	37,950	9.8%	10.0%	-10.74%	-2.43%	2.94%	2.31%
<i>MSCI EAFE</i>				-10.16%	-4.22%	2.06%	1.68%

The Cultural Endowment Fund earned **2.18%** and **8.75%** for the 1- and 5-years ended June 30, 2016, surpassing their “Policy Targets” by 0.05% and 1.36%, respectively.

Fiscal 2016 results were adversely impacted by poor **International Equity returns which declined over 10% last year.**

U.S. “Large Cap” stocks (\$5+ billion in value) beat “Small Cap” stocks (less than \$2 billion in value) by a wide margin (3% vs -6%).

Every current equity manager outperformed their performance benchmark for the 5-years ended June 30, 2016.

Cultural Endowment Fund – Investment Managers

Fixed Income and Real Estate – June 30, 2016

CULTURAL ENDOWMENT FUND Investment Performance for the fiscal year ended JUNE 30, 2016	June-16			Current FYTD	Prior Year FY15	3 Years Ended 6/30/2016	5 Years Ended 6/30/2016
	Market Value	Allocation Actual	Policy	Net	Net	Net	Net
FIXED INCOME							
Western Asset	43,365	11.2%	11.8%	6.64%	2.62%	5.07%	5.16%
Prudential	15,499	4.0%	3.0%	6.83%	2.05%	5.08%	5.22%
PIMCO (DiSCO II) (1)	5,760	1.5%	1.5%	4.39%	4.32%	N/A	N/A
PIMCO (BRAVO II) (1)	3,289	0.9%	0.9%	7.02%	10.36%	N/A	N/A
BC Aggregate				6.00%	1.85%	4.06%	3.76%
Declaration (Total Return) (1) 3m LIBOR	11,231	2.9%	2.9%	2.59%	3.55%	N/A	N/A
State Street BC Gov/Credit	20,116	5.2%	5.2%	6.68%	1.66%	N/A	N/A
Wells Capital BC US Credit BAA	43,840	11.3%	11.8%	6.99%	0.78%	5.79%	6.01%
TOTAL FIXED INCOME	143,099	37.0%	37.0%	6.29%	2.27%	5.36%	6.07%
BC Aggregate				6.00%	1.85%	4.06%	3.76%
REAL ESTATE							
JP Morgan	10,037	2.6%	2.5%	9.03%	15.44%	11.03%	14.44%
Invesco	8,953	2.3%	2.5%	10.58%	15.97%	N/A	N/A
TOTAL REAL ESTATE	18,990	4.9%	5.0%	9.75%	15.50%	11.51%	13.98%
NCREIF Total Index				10.64%	12.98%	11.61%	11.51%
CASH	11,632	3.0%	3.0%	0.12%	0.01%	0.05%	0.13%
90 Day T-Bill				0.19%	0.02%	0.09%	0.09%

The Cultural Endowment Fund's Fixed Income portfolio earned **6.29%** and **6.07%** for the 1- and 5-years ended June 30, 2016, surpassing their "Policy Targets" by **0.29%** and **2.31%**, respectively.

Real Estate was the top performing asset class for the last 1-, 3- and 5-year periods generating net returns ranging from **9.75%** in Fiscal 2016 to **15.50%** in Fiscal 2015.

Every Fixed Income and Real Estate manager outperformed their performance benchmark for the 5-years ended June 30, 2016.

Investment Fees and Expenses – Preliminary Overview

Note: Investment management fees and expenses for the North Dakota Cultural Endowment Fund are estimated at less than 0.40% per year.

During the last three-years, investment management fees and expenses as a % of average assets under management declined from **0.65%** in fiscal 2013 to **0.51%** in fiscal 2014 to **0.48%** in fiscal 2015 and to less than **0.45%** in fiscal 2016.

<u>All State Investment Board Clients</u>	<u>Investment Fees and Expenses</u> a	<u>Average "Assets Under Management"</u> b	<u>% of "AUM"</u> a / b
Fiscal Year Ended June 30, 2013	\$45 million	\$6.9 billion	0.65%
Fiscal Year Ended June 30, 2014	\$44 million	\$8.6 billion	0.51%
Fiscal Year Ended June 30, 2015	\$48 million	\$10.1 billion	0.48%
Fiscal Year Ended June 30, 2016	\$46 million	\$10.9 billion	0.42%

➤ Based on \$10 billion of average assets under management, this **20+ bps** decline between fiscal 2013 and fiscal 2016 translates into approximately \$20 million of annual incremental savings.

➤ RIO will diligently work to prudently manage all SIB client investment fees and expenses, but acknowledges it will be challenging to reduce fees and expenses below 45 bps (0.45%) per annum in future years. Current fiscal years results were materially impacted by low incentive performance fees.

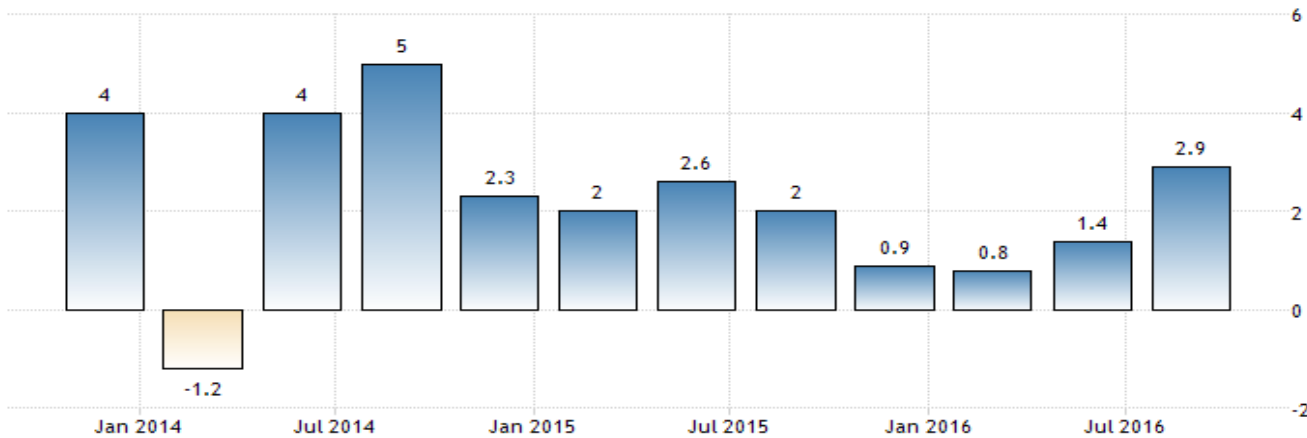
A basis point (or "bp") is equal to one one-hundredth of one percent (or 0.01%) such that 100 basis points ("bps") is equivalent to 1%.

Economic and Capital Markets Update

As of June 30, 2016

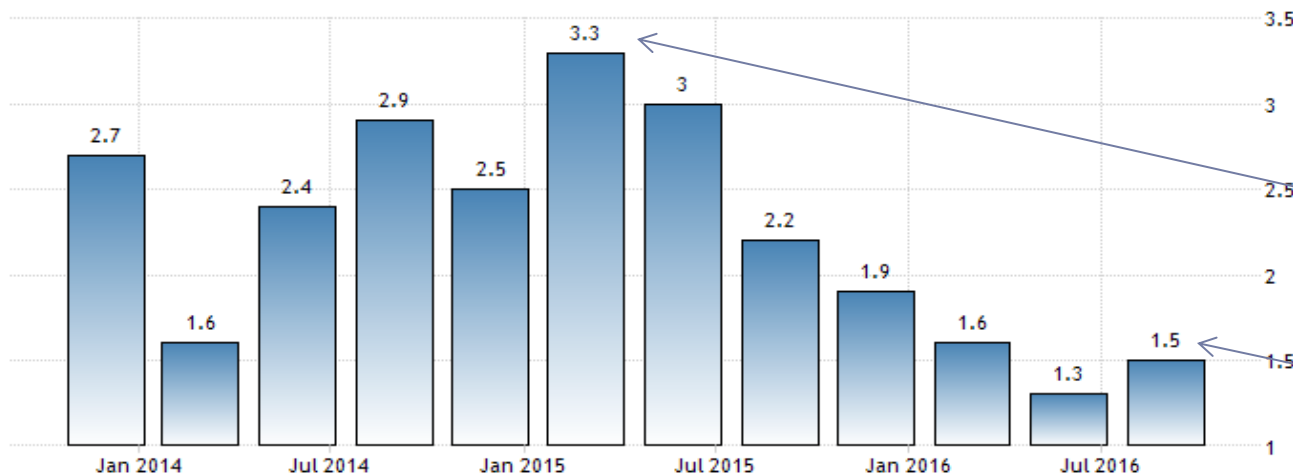
U.S Economy – GDP Growth Rates

US GDP GROWTH RATE



▶ Quarterly GDP Growth Rates (top chart) have not exceeded 3% since the 4Q of 2014, but popped up to 2.9% last quarter.

US GDP ANNUAL GROWTH RATE



▶ Annual GDP Growth Rates (bottom chart) have trended down since peaking at 3.3% during the 1st quarter of 2015 and approximate 1.5% as of the 3rd quarter of 2016.

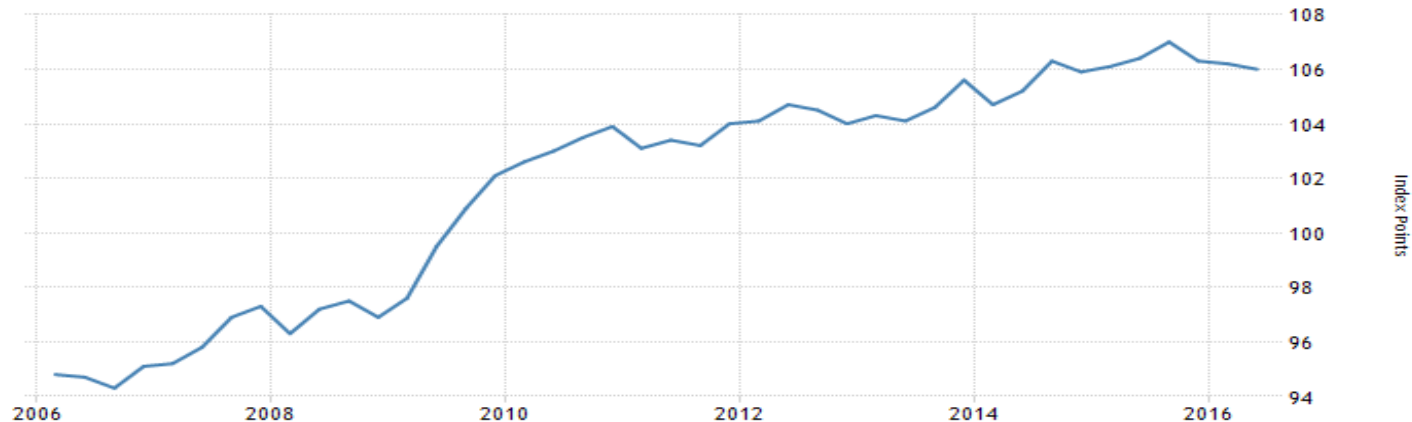
U.S Labor Market – Unemployment Rate and Productivity Index

US UNEMPLOYMENT RATE



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF LABOR STATISTICS

US NONFARM LABOUR PRODUCTIVITY



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF LABOR STATISTICS

U.S. labor markets appear to be improving as the “**Unemployment Rate**” is now **below 5%** since peaking at 10% in October of 2009.

The “**Labor Productivity Index**” has trended upward since 2006, but has declined four consecutive quarters (to 106) since hitting an all-time high of 107 in 3Q of 2015.

Source: U.S. Dept. of Labor: Bureau of Labor Statistics

U.S Labor Market – Wage Growth and Participation Rates

US WAGES AND SALARIES GROWTH



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF ECONOMIC ANALYSIS

U.S. labor markets appear to be improving as “**Wage Growth**” has been averaging **4%** or higher during the two years.

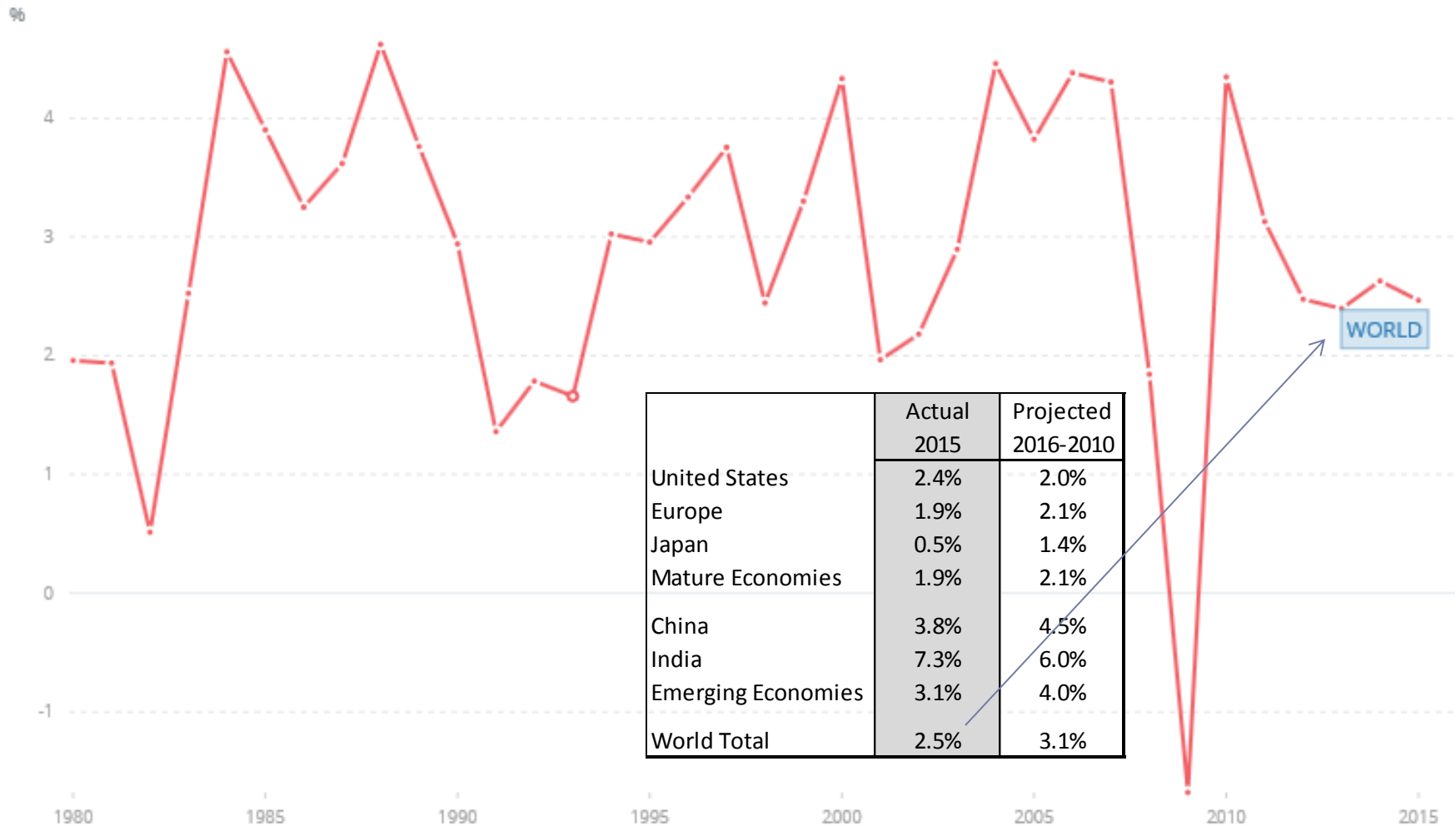
US LABOR FORCE PARTICIPATION RATE



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF LABOR STATISTICS

The “**Labor Participation Rate**” remains below long-term historical averages, but appears to have leveled out at slightly above **62.5%** over the last year.

“World GDP Growth Rates” have declined to 2.5% from 2012 to 2015, with some “Experts” projecting slightly higher future growth rates.

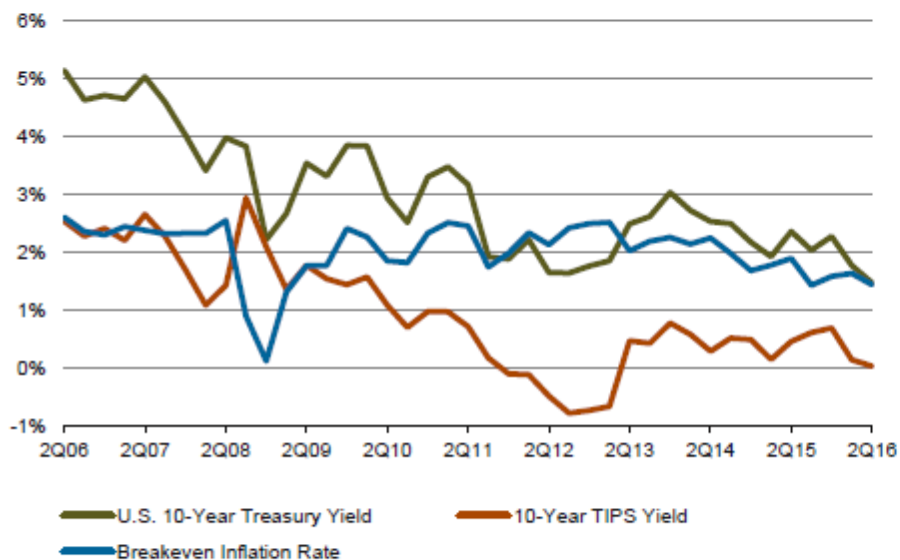


Yield Curve Changes

Key: Long-Term Treasury Rates Fell 0.85% Last Year

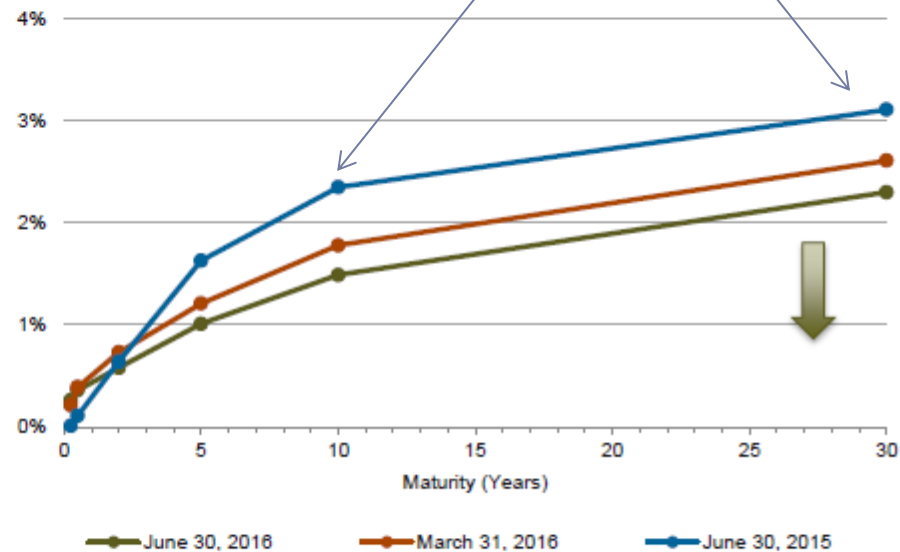
Periods Ending June 30, 2016

Historical 10-Year Yields



Source: Bloomberg

U.S. Treasury Yield Curves




Source: U.S. Department of the Treasury

- Low rates abroad kept demand for U.S. assets strong. The German 10-year sovereign bond traded at a negative yield for the first time ever.
- The decline in Treasury yields boosted returns across all segments, with longer maturities posting the biggest gains. The 10-year dropped 29 basis points to a low not seen since 2012, finishing June at 1.49%.
- Breakeven inflation ended lower despite a climb in oil prices and healthy core inflation numbers.

Asset Class Performance

Periodic Table of Investment Returns
for Periods Ended June 30, 2016



	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
	BLMBRG:Commdty Idx 12.7%	Barclays:Aggregate Index 6.0%	S&P:500 11.7%	S&P:500 12.1%	S&P:500 7.4%
	Russell:2000 Index 3.8%	S&P:500 4.0%	Russell:2000 Index 7.1%	Russell:2000 Index 8.4%	Russell:2000 Index 6.2%
	S&P:500 2.5%	3 Month T-Bill 0.2%	Barclays:Aggregate Index 4.1%	Barclays:Aggregate Index 3.8%	Barclays:Aggregate Index 5.1%
	Barclays:Aggregate Index 2.2%	Russell:2000 Index (6.7%)	MSCI:EAFE 2.1%	MSCI:EAFE 1.7%	MSCI:EM Gross 3.9%
	MSCI:EM Gross 0.8%	MSCI:EAFE (10.2%)	3 Month T-Bill 0.1%	3 Month T-Bill 0.1%	MSCI:EAFE 1.6%
	3 Month T-Bill 0.1%	MSCI:EM Gross (11.7%)	MSCI:EM Gross (1.2%)	MSCI:EM Gross (3.4%)	3 Month T-Bill 1.0%
	MSCI:EAFE (1.5%)	BLMBRG:Commdty Idx (13.5%)	BLMBRG:Commdty Idx (10.6%)	BLMBRG:Commdty Idx (10.9%)	BLMBRG:Commdty Idx (6.5%)

Last Year: U.S. Fixed Income (Barclays Aggregate) returned 6% and the S&P 500 returned 4% last year. In contrast, U.S. Small Cap Equity (Russel 2000) declined 6.7% and International Equity (MSCI EAFE) declined 10.2%. The Bloomberg Commodity Index declined 13.5% during the last fiscal year.

Historical Asset Class Market Returns – June 30, 2016

		Period Ended June 30, 2016			
Asset Class	Benchmark	1-Year	3-Years	5-Years	10-Years
Large Cap US Stocks	Russell 1000	2.93%	11.48%	11.88%	7.51%
Small Cap US Stocks	Russell 2000	-6.73%	7.09%	8.35%	6.20%
Non-US Stocks (Developed)	MSCI EAFE	-10.16%	2.06%	1.68%	1.58%
Non-US Stocks (Emerging)	MSCI Emerging Markets	-12.05%	-1.56%	-3.78%	3.54%
US Bonds	Barclays Aggregate	6.00%	4.06%	3.76%	5.13%
High Yield Bonds	Barclays Corporate High Yield	1.62%	4.18%	5.84%	7.56%
International Debt	Barclays Global Aggregate Ex-US	11.24%	1.85%	0.34%	4.00%
Inflation Protected	Barclays Global Inflation Linked	2.55%	2.74%	2.27%	4.42%
Real Estate	NCREIF	10.64%	11.61%	11.51%	7.40%

Last 5-Years:

- **U.S. Large Cap Equity (up 11.88%)** has been one of the top performing asset classes in the last 5-years, followed by **Real Estate (up 11.51%)** and **U.S. Small Cap Equity (up 8.35%)**.
- During the last 5-years, **U.S. Bonds (up 3.76%)** and **High Yield (up 5.84%)** performed generally in line with long-term expectations (along with **Inflation Protected Debt, up 2.27%**).
- **Emerging Market Equity (down 3.78%)** and **International Equity (up 1.68%)** and **International Debt (up 0.34%)** performed poorly the last 5-years, although **International Debt surpassed most other major indices last year (up 11.24%)**.



**Preliminary Investment Update -
August 31, 2016**

Preliminary Fund Update – August 31, 2016

CULTURAL ENDOWMENT FUND Preliminary Investment Performance for the two month period ended AUGUST 31, 2016	August-16			Current FYTD
	Allocation			
	Market Value	Actual	Policy	Net
TOTAL CULTURAL ENDOWMENT FUND	396,366	100.0%	100.0%	3.47%
<i>POLICY TARGET BENCHMARK</i>				2.98%
Los Angeles Capital <i>Russell 1000 Growth</i>	39,735	10.0%	10.1%	3.23% 4.20%
LSV <i>Russell 1000 Value</i>	41,118	10.4%	10.1%	5.23% 3.70%
LA Capital <i>Russell 1000</i>	26,726	6.7%	6.8%	3.28% 3.95%
Clifton Group <i>S&P 500</i>	26,801	6.8%	6.8%	3.75% 3.83%
TOTAL LARGE CAP DOMESTIC EQUITY <i>Russell 1000</i>	134,379	33.9%	33.8%	3.94% 3.95%
PIMCO RAE (formerly Research Affiliates)	19,575	4.9%	5.6%	7.51%
Clifton	25,969	6.6%	5.6%	7.56%
TOTAL SMALL CAP DOMESTIC EQUITY <i>Russell 2000</i>	45,544	11.5%	11.3%	7.52% 7.84%
LSV <i>MSCI EAFE</i>	17,210	4.3%	4.0%	6.51% 5.14%
William Blair <i>MSCI ACWI ex-US IMI (Net)</i>	14,706	3.7%	4.0%	6.64%
DFA	4,230	1.1%	1.0%	7.60%
Vanguard (1) <i>S&P/Citigroup Broad Market Index < \$2BN</i>	4,267	1.1%	1.0%	5.43% 5.92%
TOTAL INTERNATIONAL EQUITY <i>MSCI EAFE</i>	40,413	10.2%	10.0%	6.55% 5.14%

NOTE: All data is deemed to be materially accurate, but unaudited and subject to change.

Preliminary Fund Update – August 31, 2016

CULTURAL ENDOWMENT FUND Preliminary Investment Performance for the two month period ended AUGUST 31, 2016	August-16			Current FYTD
	Allocation			
	Market Value	Actual	Policy	Net
FIXED INCOME				
Western Asset	45,039	11.4%	11.8%	1.49%
Prudential	16,101	4.1%	3.0%	1.52%
PIMCO (DiSCO II) (1)	5,913	1.5%	1.5%	2.65%
PIMCO (BRAVO II) (1)	3,289	0.8%	0.8%	0.00%
BC Aggregate				0.52%
Declaration (Total Return) (1)	11,673	2.9%	2.9%	1.60%
3m LIBOR				0.12%
State Street	20,706	5.2%	5.2%	0.58%
BC Gov/Credit				0.59%
Wells Capital	45,469	11.5%	11.8%	2.63%
BC US Credit BAA				2.14%
TOTAL FIXED INCOME	148,189	37.4%	37.0%	1.73%
BC Aggregate				0.52%
JP Morgan	10,037	2.5%	2.5%	0.00%
Invesco	8,953	2.3%	2.5%	0.00%
TOTAL REAL ESTATE	18,990	4.8%	5.0%	0.00%
NCREIF Total Index				1.35%
Northern Trust (1)	8,851			0.03%
TOTAL CASH EQUIVALENTS	8,851	2.2%	3.0%	0.03%
90 Day T-Bill				0.05%

Appendix of Supporting Materials

SIB Background, Client Returns, Service Providers, Transparency Update, Callan's Capital Market Expectations and Survey Results

State Investment Board Members – August 31, 2016

The **SIB** includes 11 members with **Lieutenant Governor Drew Wrigley** serving as **Chairman** and includes **State Treasurer Kelly Schmidt**, the **Commissioner of University and School Lands Lance Gaebe**, the **Director of Workforce Safety and Insurance designee Cindy Ternes**, the **Insurance Commissioner Adam Hamm**, plus three TFFR board members and three PERS board members.

The TFFR representatives include **Michael Gessner**, **Rob Lech** and **Mel Olson** noting that Mr. Lech also serves as the board parliamentarian.

The PERS representatives include **Mike Sandal**, **Tom Trenbeath** and **Yvonne Smith** noting that Mr. Sandal also serves as *Vice Chairman* of the SIB.

North Dakota Retirement & Investment Office – Background

RIO is an agency of the State of North Dakota. The agency was created by the 1989 Legislative Assembly to capture administrative and investment cost savings in the management of two important long-standing state programs – the retirement program of the Teachers’ Fund for Retirement (TFFR) and the investment program of the State Investment Board (SIB).

The SIB is responsible for setting policies and procedures guiding the investment of over \$11 billion in assets for seven pension funds and 16 other insurance-type funds. Their investments are divided into two investment trust funds and two individual investment accounts. Individual investment guidelines for each fund can be found in the Investment Section. These guidelines include goals and objectives, risk tolerance, liquidity constraints, asset allocation and portfolio restrictions specific to each fund’s unique circumstances. When creating investment pools to implement the asset allocations for each client fund, the SIB takes all of these guidelines into consideration in order to best meet the objectives of each fund and safeguard fund assets.

The pension investment pool is made up of only qualified pension funds whose monies must be invested exclusively for the benefit of their participants. The insurance investment pool is made up of mainly insurance-type funds, but also includes other funds that do not qualify as pension funds and would like to benefit from the cost savings of being pooled with other funds’ assets. All of these funds are invested in accordance with the “Prudent Investor Rule.”

An important aspect of the prudent investor rule is that individual investments are considered not in isolation but in the context of the trust portfolio as a whole. Some new opportunities may appear risky when viewed alone. However, when part of a diversified mix of investments in stocks, bonds and other assets, they can increase returns often without increasing the overall portfolio risk and, in some cases, may help decrease the overall portfolio’s risk.

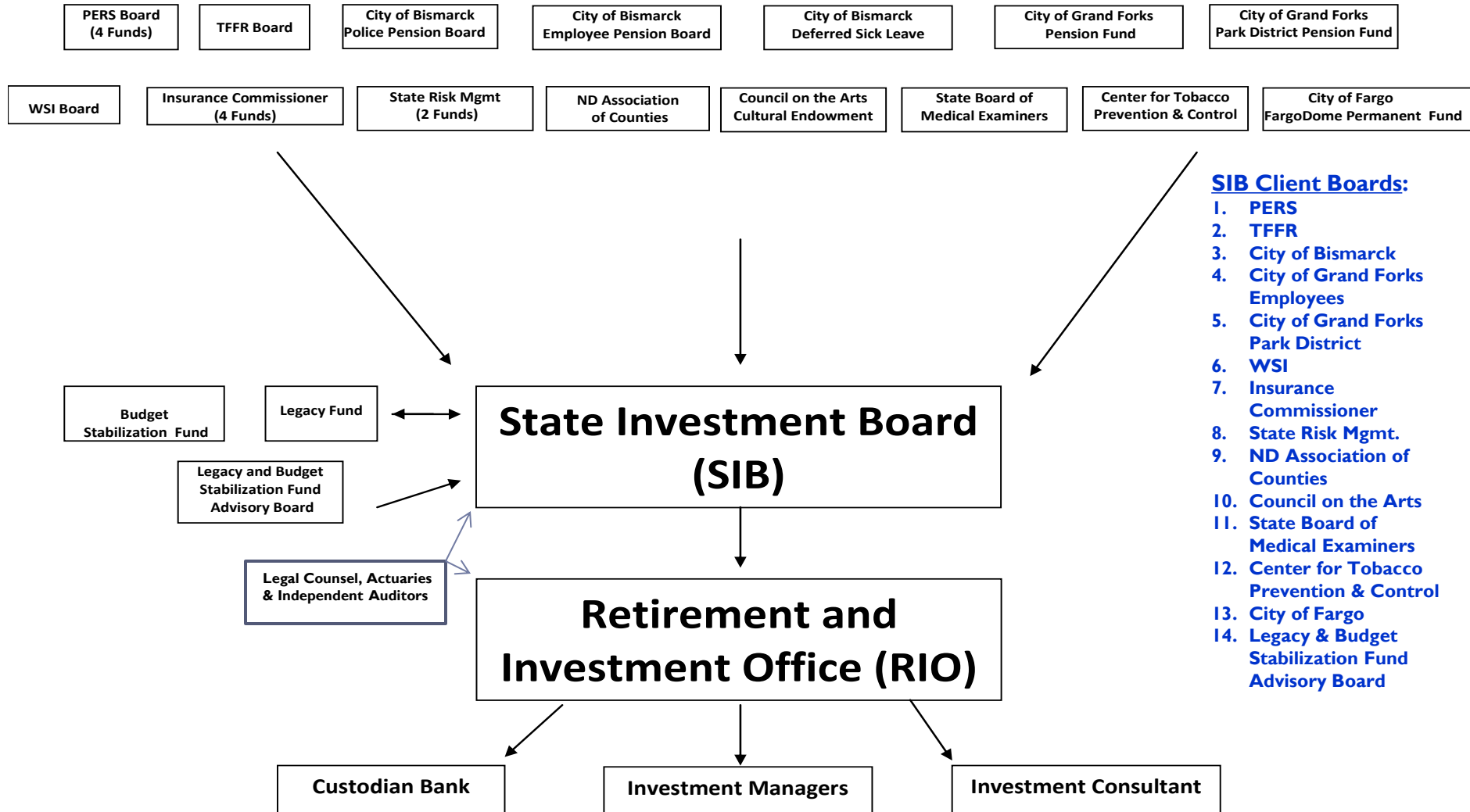
North Dakota Retirement & Investment Office – Awards

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to RIO for its comprehensive annual financial report for the fiscal year ended June 30, 2015. This was the eighteenth consecutive year that RIO has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current comprehensive annual financial report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

TFFR also received the 2015 Public Pension Standards Award for Funding and Administration from the Public Pension Coordinating Council. To receive the award, the retirement system must certify that it meets specific professional standards for a comprehensive benefit program, actuarial valuations, financial reporting, investments, communications to members, and funding adequacy.

State Investment Board Process



State Investment Board Process

Client Responsibilities: (Per NDCC 21-10-02.1) The governing body of each fund (client) shall establish policies on investment goals and objectives and asset allocation that must include:

- Acceptable rates of return, liquidity and levels of risk
- Long-range asset allocation goals

State Investment Board Responsibilities: (Per NDCC 21-10):

- Accept and implement client asset allocations
- Apply Prudent Investor Rule when investing for fund under its supervision
- Approve general types of securities for investment
- Set policies and procedures regulating securities transactions on behalf of the clients
- Select custodian servicer
- Select investment director and/or investment consulting service
- Create investment pools

State Investment Board Process

Retirement and Investment Office Staff Responsibilities (on behalf of SIB):

- Administer overall investment strategy
- Advise SIB on ways to maximize risk/return opportunities within each asset class
- Act as liaison between SIB and managers, consultant and custodian
- Monitor individual clients' investment guidelines and asset allocations
- Maintain separate accounting for client accounts

Investment Manager Responsibilities:

- Accept and implement specific mandates or “investment missions”
- Make buy/sell decisions based on investment guidelines
- Report to RIO Staff on regular basis
- Provide education to SIB

State Investment Board Process

Custodian Bank Responsibilities:

- Safe-keep assets
- Settle trades
- Record-keeper

Investment Consultant Responsibilities:

- Performance measurement of investment managers
- Manager search assistance
- Provide education to SIB
- Special projects

Others Experts:

- Legal Counsel
- Independent Actuaries and Auditors
- Specialists in custody and fee reviews and/or transaction cost analyses

State Investment Board – Client Assets Under Management

Fund Name	Market Values as of 6/30/16 ⁽¹⁾	Market Values as of 6/30/15 ⁽²⁾
Pension Trust Fund		
Public Employees Retirement System (PERS)	2,459,388,086	2,422,579,595
Teachers' Fund for Retirement (TFFR)	2,082,183,640	2,103,807,355
Job Service of North Dakota Pension		96,392,560
City of Bismarck Employees Pension	82,441,003	81,745,817
City of Grand Forks Employees Pension	57,975,758	59,232,375
City of Bismarck Police Pension	33,983,598	35,889,940
Grand Forks Park District	5,720,245	6,035,136
City of Fargo Employees Pension		1,461
Subtotal Pension Trust Fund	4,721,692,330	4,805,684,242
Insurance Trust Fund		
Workforce Safety & Insurance (WSI)	1,832,104,203	1,762,659,138
Budget Stabilization Fund	575,918,381	574,011,151
ND Tobacco Control and Prevention	54,366,538	
PERS Group Insurance Account	37,715,356	39,653,686
City of Fargo FargoDome Permanent Fund	38,782,721	41,007,046
State Fire and Tornado Fund	24,091,203	23,416,232
Petroleum Tank Release Compensation Fund	7,149,512	7,162,837
State Risk Management Fund	6,534,801	6,849,214
State Risk Management Workers Comp Fund	5,516,177	6,224,542
ND Association of Counties (NDACo) Fund	4,048,863	3,833,500
State Bonding Fund	3,296,372	3,180,023
ND Board of Medical Examiners	2,208,667	2,174,703
Insurance Regulatory Trust Fund	1,085,836	2,636,662
Bismarck Deferred Sick Leave Account	642,265	872,177
Cultural Endowment Fund	386,452	383,049
Subtotal Insurance Trust Fund	2,593,847,347	2,474,063,959
Legacy Trust Fund		
Legacy Fund	3,809,485,177	3,328,631,303
PERS Retiree Insurance Credit Fund	101,623,224	97,671,060
Job Service of North Dakota Pension	96,588,333	
Total Assets Under SIB Management	11,323,236,411	10,706,050,563

⁽¹⁾ 6/30/16 market values are unaudited and subject to change.

⁽²⁾ 6/30/15 market values as stated in the Comprehensive Annual Financial Report.

- ▶ SIB client assets grew by approximately 6% (or \$617 million) in the last year with the Legacy Fund creating the largest asset growth of \$481 million primarily due to tax collections.
- ▶ The Legacy Fund generated a net investment gain of 1.06% for the year ended June 30, 2016, slightly exceeding its performance benchmark. Since inception, the Legacy Fund has generated a net annualized return of 2.78% (over the last 4.75 years) exceeding the performance benchmark of 2.05%.
- ▶ The Pension Trust posted a net return of 0.31% in the last year. During the last 5-years, the Pension Trust generated a net annualized return of 6.35%, exceeding the performance benchmark of 5.99%.
- ▶ The Insurance Trust generated a net return of 3.12% in the last year. During the last 5-years, the Insurance Trust posted a net annualized return of 4.83%, exceeding the performance benchmark of 3.81%.
- ▶ SIB client assets exceeded \$11.3 billion as of June 30, 2016, based on unaudited valuations.

**ND RETIREMENT AND INVESTMENT OFFICE
ND STATE INVESTMENT BOARD
INVESTMENT PERFORMANCE SUMMARY
AS OF JUNE 30, 2016**

Investment Performance (net of fees)

Fund Name	Market Values as of 6/30/16	Quarter Ended				FYTD 2016	Fiscal Years ended June 30					Periods ended 6/30/16 (annualized)						
		9/30/15	12/31/15	3/31/16	6/30/16		2015	2014	2013	2012	2011	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
Pension Trust Fund																		
Teachers' Fund for Retirement (TFFR)	2,082,183,640	-4.98%	2.72%	1.31%	1.41%	0.28%	3.52%	16.53%	13.57%	-1.12%	24.05%	6.55%	6.32%	4.45%	5.51%	6.48%	7.48%	7.73%
Public Employees Retirement System (PERS)	2,459,388,086	-5.04%	2.71%	1.33%	1.47%	0.28%	3.53%	16.38%	13.44%	-0.12%	21.27%	6.51%	6.48%	4.81%	5.84%	6.88%	7.86%	7.89%
City of Bismarck Employees Pension	82,441,003	-4.25%	2.17%	1.34%	1.70%	0.82%	3.69%	14.56%	12.41%	1.57%	20.32%	6.20%	6.46%	5.16%	5.84%	6.86%	7.79%	*
City of Bismarck Police Pension	33,983,598	-4.76%	2.34%	1.25%	1.66%	0.32%	3.56%	15.27%	13.03%	1.31%	21.10%	6.19%	6.52%	5.02%	5.73%	6.71%	7.68%	*
Job Service of North Dakota Pension	96,588,333	-3.12%	3.38%	2.95%	2.27%	5.45%	3.30%	13.54%	11.71%	3.09%	16.39%	7.34%	7.33%	6.00%	6.11%	7.57%	*	*
City of Grand Forks Employees Pension	57,975,758	-5.32%	2.80%	1.26%	1.58%	0.11%	3.53%	16.33%	14.01%	1.09%	21.64%	6.43%	6.80%	*	*	*	*	*
Park District of the City of Grand Forks Pension	5,720,245	-4.89%	3.32%	0.88%	1.24%	0.36%	4.22%	16.44%	14.43%	0.86%	20.98%	6.80%	7.05%	*	*	*	*	*
Subtotal Pension Trust Fund	4,818,280,663																	
Insurance Trust Fund																		
Workforce Safety & Insurance (WSI)	1,832,104,203	-1.92%	1.18%	2.04%	2.29%	3.58%	3.26%	11.71%	8.31%	6.17%	13.23%	6.11%	6.56%	5.66%	5.58%	6.78%	7.39%	*
State Fire and Tomado Fund	24,091,203	-2.89%	1.76%	1.79%	2.07%	2.67%	3.16%	12.78%	10.59%	4.93%	14.52%	6.10%	6.75%	5.87%	5.65%	6.43%	6.58%	*
State Bonding Fund	3,296,372	0.21%	-0.11%	1.57%	1.78%	3.48%	1.25%	4.06%	2.96%	5.31%	5.01%	2.92%	3.40%	2.07%	3.24%	4.60%	5.17%	*
Petroleum Tank Release Compensation Fund	7,149,512	0.20%	-0.10%	1.43%	1.62%	3.17%	1.13%	3.68%	2.47%	4.84%	4.97%	2.65%	3.05%	1.82%	2.97%	4.47%	*	*
Insurance Regulatory Trust Fund	1,085,836	-2.58%	1.53%	1.22%	1.33%	1.46%	2.04%	9.88%	8.49%	2.82%	11.61%	4.39%	4.88%	4.63%	4.75%	5.67%	5.68%	*
State Risk Management Fund	6,534,801	-2.08%	1.50%	2.26%	2.78%	4.46%	4.08%	12.29%	10.19%	7.63%	14.36%	6.88%	7.68%	6.59%	5.86%	*	*	*
State Risk Management Workers Comp Fund	5,516,177	-2.65%	1.90%	2.20%	2.78%	4.21%	4.57%	13.68%	11.61%	7.40%	16.23%	7.40%	8.23%	6.74%	*	*	*	*
Cultural Endowment Fund	386,452	-4.39%	3.00%	1.59%	2.14%	2.18%	5.22%	16.94%	15.58%	4.65%	21.33%	7.93%	8.75%	6.33%	*	*	*	*
Budget Stabilization Fund	575,918,381	0.27%	-0.34%	1.06%	0.82%	1.82%	1.86%	1.94%	1.87%	2.03%	3.73%	1.88%	1.91%	2.11%	*	*	*	*
ND Association of Counties (NDA Co) Fund	4,048,863	-2.50%	1.49%	1.79%	2.02%	2.76%	2.77%	11.61%	9.46%	1.69%	17.73%	5.63%	5.58%	4.73%	4.97%	*	*	*
Bismarck Deferred Sick Leave Account	642,265	-2.48%	1.47%	2.04%	2.27%	3.26%	2.95%	12.32%	9.83%	5.69%	13.80%	6.09%	6.75%	6.08%	5.86%	*	*	*
City of Fargo FargoDome Permanent Fund	38,782,721	-4.50%	2.40%	1.60%	1.84%	1.19%	3.38%	16.34%	13.46%	3.14%	19.16%	6.76%	7.33%	5.97%	*	*	*	*
State Board of Medicine Fund	2,208,667	-1.66%	0.88%	1.26%	1.16%	1.63%	2.70%	*	*	*	*	*	*	*	*	*	*	*
PERS Group Insurance Account	37,715,356	0.00%	-0.08%	0.94%	0.62%	1.49%	0.01%	0.06%	0.27%	0.24%	0.31%	0.52%	0.41%	1.25%	1.64%	*	*	*
Subtotal Insurance Trust Fund	2,539,480,809																	
Legacy Fund																		
	3,809,485,177	-4.42%	2.46%	1.55%	1.62%	1.06%	3.31%	6.64%	1.15%	*	*	3.65%	*	*	*	*	*	*
Tobacco Control and Prevention Fund																		
	54,366,538	*	*	*	0.65%	*	*	*	*	*	*	*	*	*	*	*	*	*
PERS Retiree Insurance Credit Fund																		
	101,623,224	-5.59%	2.82%	1.56%	2.17%	0.72%	3.06%	16.53%	12.71%	2.62%	21.65%	6.55%	6.95%	5.13%	5.23%	6.40%	7.17%	*
Total Assets Under SIB Management	11,323,236,410																	

* These funds do not have the specified periods of history under SIB management.

Note: Asset allocation largely drives investment performance. Each fund has a unique allocation that takes into consideration return objectives, risk tolerance, liquidity constraints, and unique circumstances. Such considerations must be taken into account when comparing investment returns. All figures are preliminary and subject to revision.

NDRIO – Consulting and Professional Services (June 30, 2016)

<p>Actuary The Segal Company Chicago, Illinois</p>	<p>Investment Managers (cont.) Axiom International Investors Greenwich, Connecticut</p>	<p>→ LSV Asset Management Chicago, Illinois Matlin Patterson Global Advisers LLC New York, New York</p>
<p>Auditor CliftonLarsonAllen LLP Baltimore, Maryland</p>	<p>Babson Capital Management LLC Boston, Massachusetts Brandywine Asset Management Wilmington, Delaware</p>	<p>Investment Managers (cont.) → Northern Trust Asset Management Chicago, Illinois</p>
<p>Legal Counsel → Attorney General's Office Bismarck, North Dakota Ice Miller Chicago, Illinois K&L Gates Boston, Massachusetts</p>	<p>Callan Associates San Francisco, California</p>	<p>→ Parametric Portfolio Associates DBA The Clifton Group Minneapolis, Minnesota</p>
<p>Information Technology Advent Software, Inc. San Francisco, CA CPAS Systems Inc. Toronto, Ontario</p>	<p>→ Capital Group Los Angeles, California</p>	<p>→ PIMCO Newport Beach, California</p>
<p>Master Custodian → The Northern Trust Company Chicago, Illinois</p>	<p>Corsair Capital New York, New York</p>	<p>→ Prudential Investment Management Newark, New Jersey</p>
<p>Investment Consultant and Performance Measurement → Callan Associates Inc. San Francisco, California</p>	<p>→ Declaration Mgmt & Research, LLC McLean, Virginia</p>	<p>→ Quantum Energy Partners Houston, Texas</p>
<p>Mercer LLC Chicago, Illinois Novarca North America LLC Palo Alto, California Adams Street Partners, LLC Chicago, Illinois</p>	<p>→ Dimensional Fund Advisors Chicago, Illinois</p>	<p>→ Quantum Resources Mgmt, LLC Denver, Colorado</p>
<p>Investment Managers Adams Street Partners, LLC Chicago, Illinois</p>	<p>EIG Energy Partners Los Angeles, California</p>	<p>→ Research Affiliates, LLC Newport Beach, California</p>
	<p>Epoch Investment Partners, Inc. New York, New York</p>	<p>→ SEI Investments Management Co. Oaks, Pennsylvania</p>
	<p>Goldman Sachs Asset Mgmt New York, New York Grosvenor Capital Management New York, NY</p>	<p>→ State Street Global Advisors Boston, Massachusetts</p>
	<p>Hearthstone Homebuilding Investors, LLC Encino, California</p>	<p>Timberland Investment Resources, LLC Atlanta, Georgia</p>
	<p>→ INVESCO Realty Advisors Dallas, Texas</p>	<p>UBS Global Asset Management Chicago, Illinois</p>
	<p>InvestAmerica L&C, LLC Cedar Rapids, Iowa</p>	<p>→ The Vanguard Group Valley Forge, Pennsylvania</p>
	<p>→ J.P. Morgan Invest. Mgmt, Inc. New York, New York</p>	<p>Wellington Trust Company, NA Boston, Massachusetts</p>
	<p>Loomis Sayles & Company Boston, Massachusetts</p>	<p>→ Wells Capital Management, Inc. Menomonee Falls, Wisconsin</p>
	<p>→ Los Angeles Capital Management Los Angeles, California</p>	<p>→ Western Asset Management Co. Pasadena, California</p>

Transparency Enhancement Update – 2016

Strategic Investment Belief / Goal:

Although SIB meetings are open to the public and RIO is committed to adhering to all applicable open records laws, a transparency enhancement initiative was commenced in mid-2015 in order to make it easier for interested parties to gain access to information on RIO's website. RIO believes these actions support our desire to foster trust, understanding and support within our community.

RIO's Stated Action Plan (as stated in our SIB Meeting Materials in 2015 and 2016):

- 1) Enhance public access to our SIB Governance Manual by adding a new hyperlink on our RIO website (hyperlink accessed by clicking on "SIB Governance Manual" under the "SIB / Board" section); <http://www.nd.gov/rio/SIB/Board/GovernanceManual/default.htm>
- 2) Enhance public access to our SIB Meeting Materials by adding a new hyperlink on our RIO website (hyperlink accessed by clicking on "Meeting Materials" under the "SIB / Board" section); <http://www.nd.gov/rio/SIB/Board/SIB%20Meeting%20Materials/default.htm>
- 3) Enhance public access to our SIB's Audit Committee Charter and Meeting Materials by adding a new hyperlink on our RIO website (hyperlinks accessed by clicking on "SIB Audit Charter" or "Meeting Materials" under the "SIB Audit" section).
<http://www.nd.gov/rio/SIB%20Audit/Board/default.htm>

2016 Capital Market Expectations

Return and Risk

- Public market expectations represent passive exposure (beta only).
- Return expectations for private market investments such as real estate and private equity reflect active management premiums.
- Return expectations are net of fees.

Summary of Callan's Long-Term Capital Market Projections (2016 - 2025)

Asset Class	Index	Projected Return*	Projected Risk
Equities			
Broad Domestic Equity	Russell 3000	7.35%	18.70%
Large Cap	S&P 500	7.25%	17.95%
Small/Mid Cap	Russell 2500	7.55%	22.75%
Global ex-US Equity	MSCI ACWI ex USA	7.55%	21.30%
International Equity	MSCI World ex USA	7.25%	20.05%
Emerging Markets Equity	MSCI Emerging Markets	7.60%	27.85%
Fixed Income			
Domestic Fixed	Barclays Aggregate	3.00%	3.75%
TIPS	Barclays TIPS	3.00%	5.30%
High Yield	Barclays High Yield	5.00%	10.50%
Non-US Fixed	Barclays Global Aggregate ex-USD	1.40%	9.20%
Emerging Market Debt	EMBI Global Diversified	4.60%	9.90%
Other			
Real Estate	Callan Real Estate Database	6.00%	16.45%
Timberland	NCREIF Timberland	6.20%	17.50%
Infrastructure	S&P Global Infr / JPM Infr	6.60%	19.00%
Private Equity	TR Post Venture Capital	8.15%	32.80%
Hedge Funds	Callan Hedge FoF Database	5.25%	9.30%
Commodities	Bloomberg Commodity	2.75%	18.50%
Cash Equivalents	90-Day T-Bill	2.25%	0.90%
Inflation	CPI-U	2.25%	1.50%

* Geometric returns are derived from arithmetic returns and the associated risk (standard deviation).

How big is the post-retirement bill?

A relative comparison of the 50 states' payment obligations

The state of the states: how much states spend on debt, pensions and retiree healthcare

% of state revenue collections required to pay the sum of interest on bonds, the state's share of unfunded pension and retiree healthcare liabilities, and defined contribution plan payments



Source: J.P. Morgan Asset Management, state/pension plan Comprehensive Annual Financial Reports, Census, Loop Capital Markets. FY 2015.

- Bars that appear above the **red line** indicate a level at which states face critical challenges in meeting an ability to service their debt and post-retirement benefit obligations.
- Bars that appear below the **green line** identify states that one might view not requiring “a disproportionate share of revenues to service their debts.”
- Note that North Dakota’s overall funding obligations are comparatively low (third from the right).

**Annual Investment Review - State Fire & Tornado Fund,
State Bonding Fund, Petroleum Tank Release
Compensation Fund & Insurance Regulatory Trust Fund**

November 9, 2016

Dave Hunter, Executive Director/CIO
Darren Schulz, CFA, Deputy Chief Investment Officer
ND Retirement & Investment Office (RIO)
State Investment Board (SIB)

Annual Investment Review Agenda

- ▷ **Review of Fund Returns, Risk, Allocations and Fees**
 - ▷ Fire and Tornado Fund
 - ▷ State Bonding Fund
 - ▷ Petroleum Tank Release Compensation Fund
 - ▷ Insurance Regulatory Trust Fund

- ▷ **Supporting Materials (see separate index page)**



State Fire and Tornado Fund

Annual Investment Review

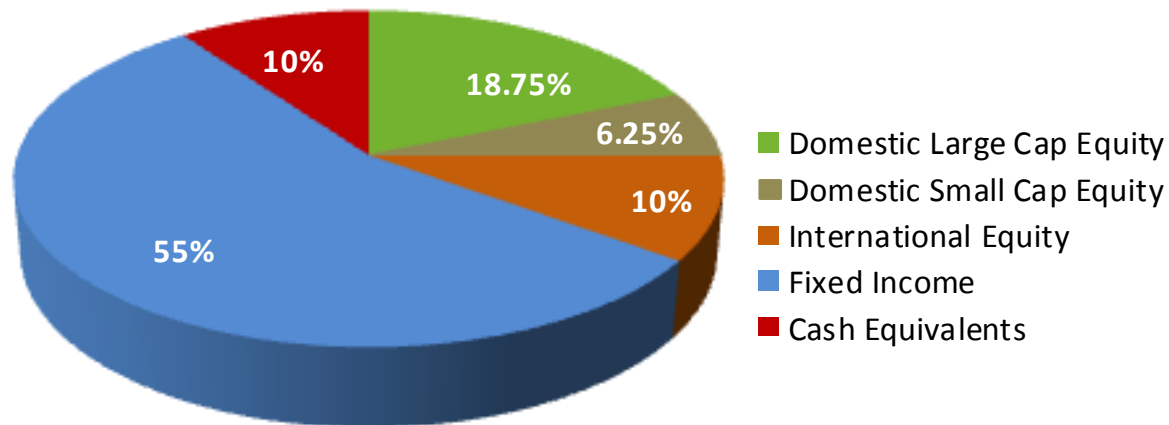
State Fire and Tornado Performance – 6/30/2016

	1 Yr Ended 6/30/2016	3 Yrs Ended 6/30/2016	5 Yrs Ended 6/30/2016	Risk 5 Yrs Ended 6/30/2016	Risk Adj Excess Return 5 Yrs Ended 6/30/2016
FIRE & TORNADO FUND					
Total Fund Return - Net	2.67%	6.10%	6.75%	5.33%	0.35%
<i>Policy Benchmark Return</i>	2.58%	5.20%	5.24%	4.40%	
Excess Return	0.09%	0.90%	1.51%		

- The **Fire and Tornado Fund (\$25 million)** has consistently surpassed its performance benchmark in recent years including a **6.75% net investment return for the 5-years ended June 30, 2016**.
- *Asset allocation decisions are consistently the primary driver of returns and were responsible for “Policy Benchmark Returns” of 5.24% for the 5-years ended June 30, 2016.* Although asset allocation is paramount, the selection of investment managers is important. Successful active management occurs when an investor selects managers which outperform the underlying benchmark index.
- The SIB has been successful in selecting active managers as evidenced by the **Fire and Tornado Fund generating Excess Return of 1.51% for the 5-years ended June 30, 2016.** This translates into nearly \$2 million of incremental income for the Fund over the last 5-years.
- These returns were generated while adhering to prescribed investment guidelines noting that the actual risk (as measured by standard deviation) for the 5-years ended 6/30/2016 was within 1% of investment policy and generated a positive **Risk Adjusted Excess Return of 0.35%**.

State Fire and Tornado Fund Asset Allocation

Policy Allocation



- Asset allocation decisions are consistently the # 1 driver of investment returns. During the past year, actual asset allocations have consistently been within 1% of target allocations.
- The fund generated a net investment return of 2.67% for the year ended June 30, 2016. This was a function of the plan's 55% allocation to Fixed Income which returned 6.3% last year due to sharply lower interest rates. International equity (down 10.7%) and U.S. small cap equity (down 5.3%) detracted from performance noting their allocations of 10% and 6.25%, respectively. U.S. large cap equity generated a modest 2.7% return last year with an 18.75% allocation. Cash returns were negligible at only 0.12%.

OVERALL PERFORMANCE: Net investment returns for the 1-, 3- & 5-years ended June 30, 2016, exceed the Policy Target Benchmarks.	September-16			Three Months Ended Sep. 30, 2016		Fiscal Year Ended June 30, 2016		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	Allocation			Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net
	Market Value	Actual	Policy								
TOTAL FIRE & TORNADO FUND	24,853,937	100%	100%	3.26%	3.20%	2.84%	2.67%	6.28%	6.10%	6.95%	6.75%
<i>POLICY TARGET BENCHMARK</i>				2.21%	2.21%	2.58%	2.58%	5.20%	5.20%	5.24%	5.24%
LARGE CAP DOMESTIC EQUITY											
Los Angeles Capital	1,399,804	5.6%	5.6%	3.56%	3.51%	5.44%	5.24%	14.28%	14.07%	13.79%	13.58%
<i>Russell 1000 Growth</i>				4.58%	4.58%	3.02%	3.02%	13.07%	13.07%	12.35%	12.35%
LSV	1,405,004	5.7%	5.6%	5.32%	5.25%	-3.01%	-3.30%	10.08%	9.78%	11.91%	11.61%
<i>Russell 1000 Value</i>				3.48%	3.48%	2.86%	2.86%	9.87%	9.87%	11.35%	11.35%
LA Capital	939,417	3.8%	3.8%	3.36%	3.33%	5.96%	5.82%	12.61%	12.48%	13.05%	12.89%
<i>Russell 1000</i>				4.03%	4.03%	2.94%	2.94%	11.48%	11.48%	11.88%	11.88%
Clifton Group	941,413	3.8%	3.8%	3.92%	3.73%	5.29%	5.22%	12.07%	11.99%	12.53%	12.42%
<i>S&P 500</i>				3.85%	3.85%	3.99%	3.99%	11.66%	11.66%	12.10%	12.10%
TOTAL LARGE CAP DOMESTIC EQUITY	4,685,638	18.9%	18.8%	4.12%	4.03%	2.91%	2.72%	12.25%	12.05%	12.86%	12.65%
<i>Russell 1000</i>				4.03%	4.03%	2.94%	2.94%	11.48%	11.48%	12.11%	12.11%
SMALL CAP DOMESTIC EQUITY											
PIMCO RAE (formerly Research Affiliates)	697,317	2.8%	3.1%	8.60%	8.53%	-3.87%	-4.14%	8.14%	7.81%	9.82%	9.43%
Clifton	869,813	3.5%	3.1%	9.50%	8.93%	-5.52%	-5.98%	8.43%	8.04%	9.67%	9.26%
TOTAL SMALL CAP DOMESTIC EQUITY	1,567,130	6.3%	6.3%	9.08%	8.73%	-4.85%	-5.27%	8.46%	8.09%	9.86%	9.45%
<i>Russell 2000</i>				9.05%	9.05%	-6.73%	-6.73%	7.09%	7.09%	8.35%	8.35%
INTERNATIONAL EQUITY											
LSV	1,055,334	4.2%	4.0%	8.55%	8.45%	-11.21%	-11.55%	2.98%	2.58%	2.44%	2.00%
<i>MSCI EAFE</i>				6.43%	6.43%	-10.16%	-10.16%	2.06%	2.06%	1.68%	1.68%
William Blair	911,029	3.7%	4.0%	9.76%	9.72%	N/A	N/A	N/A	N/A	N/A	N/A
<i>MSCI ACWI ex-US IMI (Net)</i>											
DFA	261,710	1.1%	1.0%	10.54%	10.54%	-9.28%	-9.28%	6.22%	6.01%	4.41%	3.98%
Vanguard (1)	264,231	1.1%	1.0%	8.43%	8.43%	-7.27%	-7.27%	6.62%	6.48%	4.02%	3.77%
<i>S&P/Citigroup Broad Market Index < \$2BN</i>				9.15%	9.15%	-3.37%	-3.37%	7.29%	7.29%	7.29%	4.37%
TOTAL INTERNATIONAL EQUITY	2,492,303	10.0%	10.0%	9.19%	9.13%	-10.44%	-10.74%	3.31%	2.94%	2.74%	2.31%
<i>MSCI EAFE</i>				6.43%	6.43%	-10.16%	-10.16%	2.06%	2.06%	1.68%	1.68%

OVERALL PERFORMANCE: Net investment returns for the 1-, 3- & 5-years ended June 30, 2016, exceed the Policy Target Benchmarks.	September-16			Three Months Ended Sep. 30, 2016		Fiscal Year Ended June 30, 2016		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	Allocation			Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net
	Market Value	Actual	Policy								
FIXED INCOME											
Western Asset	4,135,741	16.6%	17.4%	1.66%	1.62%	6.79%	6.64%	5.21%	5.07%	5.32%	5.16%
Prudential	1,476,948	5.9%	4.4%	1.55%	1.48%	7.12%	6.83%	5.36%	5.08%	5.51%	5.22%
PIMCO (DiSCO II) (1)	596,478	2.4%	2.4%	4.15%	4.15%	4.39%	4.39%	N/A	N/A	N/A	N/A
PIMCO (BRAVO II) (1)	327,038	1.3%	1.3%	0.00%	0.00%	7.02%	7.02%	N/A	N/A	N/A	N/A
BC Aggregate				0.46%	0.46%	6.00%	6.00%	4.06%	4.06%	3.76%	3.76%
Declaration (Total Return) (1)	1,086,771	4.4%	4.4%	2.16%	2.16%	2.59%	2.59%	N/A	N/A	N/A	N/A
3m LIBOR				0.19%	0.19%	0.49%	0.49%				
State Street	1,873,510	7.5%	7.7%	0.39%	0.39%	6.71%	6.68%	N/A	N/A	N/A	N/A
BC Gov/Credit				0.40%	0.40%	6.70%	6.70%				
Wells Capital	4,132,153	16.6%	17.4%	2.40%	2.35%	7.19%	6.99%	5.98%	5.79%	6.22%	6.01%
BC US Credit BAA				1.94%	1.94%	6.93%	6.93%	4.90%	4.90%	5.33%	5.33%
TOTAL FIXED INCOME	13,628,640	54.8%	55.0%	1.85%	1.82%	6.42%	6.29%	5.50%	5.36%	6.23%	6.07%
BC Aggregate				0.46%	0.46%	6.00%	6.00%	4.06%	4.06%	3.76%	3.76%
Northern Trust (1)	1,372,299			0.04%	0.04%	0.12%	0.12%	N/A	N/A	N/A	N/A
Bank of ND	1,107,927										
TOTAL CASH EQUIVALENTS	2,480,226	10.0%	10.0%	0.06%	0.06%	0.12%	0.12%	0.05%	0.05%	0.13%	0.13%
90 Day T-Bill				0.10%	0.10%	0.19%	0.19%	0.09%	0.09%	0.09%	0.09%

Fixed Income represents the largest asset allocation at 55% and has consistently beat the performance benchmark for the 1-, 3- and 5-years ended June 30, 2016, in addition to the quarter ended September 30, 2016.

Investment Fees and Expenses – Overview

Note: Investment management fees and expenses for Insurance Trust clients range from approximately 0.20% to 0.40% per annum.

During the last three-years, investment management fees and expenses as a % of average assets under management declined from **0.65%** in fiscal 2013 to **0.51%** in fiscal 2014 to **0.48%** in fiscal 2015 and to less than **0.45%** in fiscal 2016.

<u>All State Investment Board Clients</u>	<u>Investment Fees and Expenses</u> a	<u>Average "Assets Under Management"</u> b	<u>% of "AUM"</u> a / b
Fiscal Year Ended June 30, 2013	\$45 million	\$6.9 billion	0.65%
Fiscal Year Ended June 30, 2014	\$44 million	\$8.6 billion	0.51%
Fiscal Year Ended June 30, 2015	\$48 million	\$10.1 billion	0.48%
Fiscal Year Ended June 30, 2016	\$46 million	\$10.9 billion	0.42%

➤ Based on \$10 billion of average assets under management, this **20+ bps** decline between fiscal 2013 and fiscal 2016 translates into approximately \$20 million of annual incremental savings.

➤ RIO will diligently work to prudently manage all SIB client investment fees and expenses, but acknowledges it will be challenging to reduce fees and expenses below 45 bps (0.45%) per annum in future years. Current fiscal years results were materially impacted by low incentive performance fees.

A basis point (or "bp") is equal to one one-hundredth of one percent (or 0.01%) such that 100 basis points ("bps") is equivalent to 1%.

NORTH DAKOTA FIRE AND TORNADO FUND

INVESTMENT POLICY STATEMENT

1. FUND CHARACTERISTICS AND CONSTRAINTS.

The State Fire and Tornado Fund (the Fund) was established in 1919 to insure the various state industries and political subdivisions against direct physical loss to public buildings, fixtures, and permanent contents due to the perils named in 26.1-22-02 of the North Dakota Century Code (NDCC). All state buildings and universities must be covered by the Fund. School districts and counties may participate at their option. Funding is primarily provided by annual premiums charged to policy holders in accordance with NDCC 26.1-22.

Effective August 1993, the state's boiler inspection program was placed under the direction of the Insurance Department. The costs of this program are appropriated from the Fund. Fees collected for boiler inspections and licensing will be the primary source of funding for the program. The 1995 Legislature added anhydrous ammonia storage facilities to the Fund's inspection responsibilities.

A minimum balance of \$12.0 million must be maintained at all times. If reserves drop below this statutory minimum, additional premiums, as specified under NDCC 26.1-22, would be assessed. This situation must be avoided.

The Fund retains liability for the first \$1 million on each and every loss. Any loss over this amount, up to a maximum of \$100 million, is covered by reinsurance through a commercial reinsurance carrier. Reinsurance coverage is bid by the Insurance Department at least once every two years.

Claims paid from the Fund are highly unpredictable. Weather damage accounts for the majority of claims. Fires generally result in the most extensive damage. Generally, there is a two week lead time to prepare for a claim payment. Large claim payments have a longer lead time and are spread out in multiple payments whenever possible.

Operating expenses are paid from the Fund as incurred. These include Fund administration, boiler inspection program, anhydrous ammonia storage facility inspections, State Fire Marshall's Office, and the North Dakota Firefighter's Association.

2. FUND MISSION

The primary mission of the Fund is to maintain an adequate balance in the fund to avoid the necessity of assessing additional premiums to policy holders.

3. RESPONSIBILITIES AND DISCRETION OF THE STATE INVESTMENT BOARD (SIB)

The Fund 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. The SIB is charged with implementing policies and asset allocation and investing the assets of the Fund in the manner

provided in Section 21-10-07 the prudent institutional investor rule. The fiduciaries shall exercise the judgment and care, under the circumstances then prevailing, that an institutional investor of ordinary prudence, discretion, and intelligence exercises in the management of large investments entrusted to it, not in regard to speculation but in regard to the permanent disposition of funds, considering probable safety of capital as well as probable income.

Management responsibility for the investment program not assigned to the SIB in Chapter 21-10 is hereby delegated to the SIB, which must establish written policies for the operation of the investment program consistent with this investment policy.

The SIB may delegate investment responsibility to professional money managers, which are also required to employ investment strategies consistent with the investment policy. Where a money manager has been retained, the SIB's role in determining investment strategy and security selection is supervisory not advisory.

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 pool.

The SIB is responsible for establishing criteria, procedures, and making decisions with respect to hiring, retaining, and terminating money managers. The SIB investment responsibility also includes selecting performance measurement services, consultants, report formats, and frequency of meetings with managers.

The SIB shall notify the board within 30 days of any substantial or notable changes in money managers; performance measurement services; and consultants, including hiring or terminating a money manager, performance measurement service, or a consultant.

The SIB will implement necessary changes to this policy in an efficient and prudent manner.

4. RISK TOLERANCE

The investment objectives of the Fund reflect the long-term nature of the Fund, but also the low risk tolerance and shorter-term liquidity needs.

5. INVESTMENT OBJECTIVES.

The Fund's investment objectives are expressed in terms of reward and risk expectations relative to investable, passive benchmarks. The Fund's policy benchmark is comprised of policy mix weights of appropriate asset class benchmarks as set by the SIB:

- a. The Fund's rate of return, net of fees and expenses, should at least match that of the policy benchmark over a minimum evaluation period of five years.
- b. The Fund's risk, measured by the standard deviation of net returns, should be within 1% of the policy benchmark over a minimum evaluation period of five years. For example, if the policy benchmark is 4%, the Fund's risk should range between 3% and 5% over a five-year period.

- c. The risk-adjusted performance of the Fund, net of fees and expenses, should at least match that of the policy benchmark over a minimum evaluation period of five years.

6. POLICY ASSET MIX

After consideration of all the inputs and discussion of its own risk tolerance, the Fund has chosen the following asset allocation:

Large Cap Domestic Equity	18.75%
Small Cap Domestic Equity	6.25%
International Equity	10.00%
Fixed Income	55.00%
Real Estate	0%
Cash Equivalents	10.00%

Rebalancing of the Fund to this target will be done in accordance with the SIB’s rebalancing policy, but not less than annually.

7. 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. Derivative use will be monitored to ensure that undue risks are not taken by the money managers.
- c. No transaction may be made that would threaten the tax-exempt status of the Fund.
- d. All assets will be held in custody by the State Investment Board’s master custodian or such other custodians as are acceptable to the State Investment Board.
- 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 consideration of socially responsible criteria in the investment or commitment of public fund money for the purpose of obtaining an effect other than a maximized return to the Fund.

- 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 Fund's policy favors investments which will have a positive impact on the economy of North Dakota.

8. 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.

9. EVALUATION AND REVIEW


Investment management of the Fund will be evaluated against the Fund's investment objectives and investment performance standards. Emphasis will be placed on five year results. Evaluation should include an assessment of the continued feasibility of achieving the investment objectives and the appropriateness of the Investment Policy Statement for achieving those objectives.

Performance reports will be provided to the Insurance Department periodically, but not less than annually. Such reports will include asset returns and allocation data as well as information regarding all significant and/or material matters and changes pertaining to the investment of the Fund, including, but not limited to:

1. A list of the advisory services managing investments for the board.
2. A list of investments at market value, compared to previous reporting period, of each fund managed by each advisory service.
3. Earnings, percentage earned, and change in market value of each fund's investments.
4. Comparison of the performance of each fund managed by each advisory service to other funds under the board's control and to generally accepted market indicators.
5. All material legal or legislative proceedings affecting the SIB.
6. Compliance with this investment policy statement.

Approved by:

INSURANCE DEPARTMENT



Adam Hamm
Commissioner of Insurance

Date: 2/17/16

STATE INVESTMENT BOARD



David Hunter
Executive Director/CIO

Date: 2/18/16



State Bonding Fund

Annual Investment Review

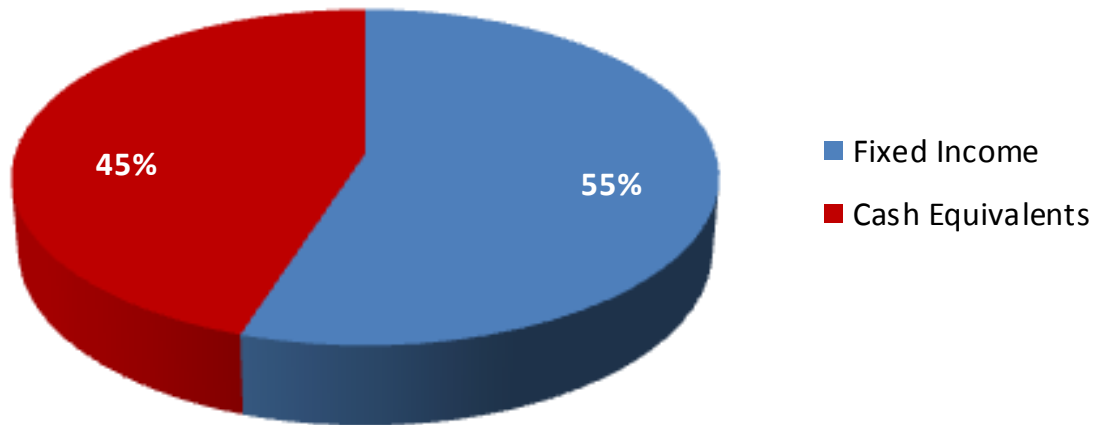
State Bonding Fund Performance – 6/30/2016

	1 Yr Ended 6/30/2016	3 Yrs Ended 6/30/2016	5 Yrs Ended 6/30/2016	Risk 5 Yrs Ended 6/30/2016	Risk Adj Excess Return 5 Yrs Ended 6/30/2016
STATE BONDING FUND					
Total Fund Return - Net	3.48%	2.92%	3.40%	1.86%	0.95%
<i>Policy Benchmark Return</i>	3.35%	2.26%	2.10%	1.66%	
Excess Return	0.13%	0.66%	1.30%		

- The **State Bonding Fund (\$3.3 million)** has posted strong results in recent years including a **Total Fund Return (after fees) of 3.4% for the 5-years ended June 30, 2016.**
- *Asset allocation decisions are consistently the primary driver of returns and were responsible for a “Policy Benchmark Return” of 2.1% for the 5-years ended 6/30/2016.*
- Although asset allocation is paramount, the selection of investment managers is important. Successful active management occurs when an investor selects managers which outperform the underlying benchmark index.
- **The SIB has been successful in selecting active managers as evidenced by the State Bonding Fund generating Excess Return of 1.3% for the 5-years ended June 30, 2016.**
- These returns were generated while adhering to prescribed investment guidelines noting that the actual risk (as measured by standard deviation) for the 5-years ended 6/30/2016 was within **0.2%** of investment policy and generated a positive **Risk Adjusted Excess Return of 0.95%.**

State Bonding Fund Asset Allocation

Policy Allocation



- Asset allocation decisions are consistently the # 1 driver of investment returns.
- During the past year, the fixed income investments within the **State Bonding Fund** generated a **3.48%** return while cash investment income were negligible in the current low interest rate environment particularly for short term funds with high liquidity requirements.

The State Bonding Fund has performed well in recent years noting its 55% allocation to fixed income benefitted from a significant decline in rates in fiscal 2016.

OVERALL PERFORMANCE: Net investment returns for the 1-, 3- & 5-years ended June 30, 2016, exceed the Policy Target Benchmarks.	September-16			Three Months Ended Sep. 30, 2016		Fiscal Year Ended June 30, 2016		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	Allocation			Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net
	Market Value	Actual	Policy								
TOTAL BONDING FUND	3,329,117	100.0%	100.0%	1.04%	1.02%	3.55%	3.48%	3.00%	2.92%	3.49%	3.40%
<i>POLICY TARGET BENCHMARK</i>				<i>0.30%</i>	<i>0.30%</i>	<i>3.35%</i>	<i>3.35%</i>	<i>2.26%</i>	<i>2.26%</i>	<i>2.10%</i>	<i>2.10%</i>
FIXED INCOME											
Western Asset	556,775	16.7%	17.5%	1.66%	1.62%	6.79%	6.64%	5.21%	5.07%	5.32%	5.16%
Prudential	198,835	6.0%	4.4%	1.55%	1.48%	7.12%	6.83%	5.36%	5.08%	5.51%	5.22%
PIMCO (DiSCO II) (1)	77,429	2.3%	2.3%	4.15%	4.15%	4.39%	4.39%	N/A	N/A	N/A	N/A
PIMCO (BRAVO II) (1)	42,453	1.3%	1.3%	0.00%	0.00%	7.02%	7.02%	N/A	N/A	N/A	N/A
BC Aggregate				0.46%	0.46%	6.00%	6.00%	4.06%	4.06%	3.76%	3.76%
Declaration (Total Return) (1)	146,307	4.4%	4.4%	2.16%	2.16%	2.59%	2.59%	N/A	N/A	N/A	N/A
3m LIBOR				0.19%	0.19%	0.49%	0.49%				
State Street	252,222	7.6%	7.7%	0.39%	0.39%	6.71%	6.68%	N/A	N/A	N/A	N/A
BC Gov/Credit				0.40%	0.40%	6.70%	6.70%				
Wells Capital	556,292	16.7%	17.5%	2.40%	2.35%	7.19%	6.99%	5.98%	5.79%	6.22%	6.01%
BC US Credit BAA				1.94%	1.94%	6.93%	6.93%	4.90%	4.90%	5.33%	5.33%
TOTAL FIXED INCOME	1,830,314	55.0%	55.0%	1.85%	1.82%	6.42%	6.29%	5.50%	5.36%	6.23%	6.07%
BC Aggregate				0.46%	0.46%	6.00%	6.00%	4.06%	4.06%	3.76%	3.76%
CASH EQUIVALENTS											
Northern Trust (1)	829,282			0.04%	0.04%	0.12%	0.12%	N/A	N/A	N/A	N/A
Bank of ND	669,522										
TOTAL CASH EQUIVALENTS	1,498,803	45.0%	45.0%	0.06%	0.06%	0.12%	0.12%	0.05%	0.05%	0.13%	0.13%
90 Day T-Bill				0.10%	0.10%	0.19%	0.19%	0.09%	0.09%	0.09%	0.09%

Fixed Income has consistently beat the Barclays Aggregate performance benchmark for the 1-, 3- and 5-years ended June 30, 2016, in addition to the quarter ended September 30, 2016.

NORTH DAKOTA STATE BONDING FUND

INVESTMENT POLICY STATEMENT

1. FUND CHARACTERISTICS AND CONSTRAINTS.

The State Bonding Fund (the Fund) was established for bonding public employees and public officials in accordance with Chapter 26.1-21 of the North Dakota Century Code (NDCC). Annual collections to the Fund are in the form of fees and restitution. However, the primary funding source for the Fund is investment return.

A minimum balance of \$2.0 million must be maintained at all times. If reserves drop below this statutory minimum, premiums will be assessed against all bond holders in accordance with NDCC 26.1-21-09. Such premiums will continue to be charged until the Fund balance reaches \$3.0 million. This situation must be avoided.

Claims paid from the Fund are on an as-needed basis and are highly unpredictable. A judgment against the guilty party is required prior to the Fund making a claim payment. Generally, there is a 60-90 day lead-time to prepare for a claim payment. Appropriations from the Fund are exclusively for administrative costs.

2. FUND MISSION

The primary mission of the Fund is to maintain an adequate balance in the fund to avoid the necessity of assessing premiums to bond holders.

3. RESPONSIBILITIES AND DISCRETION OF THE STATE INVESTMENT BOARD (SIB)

The Fund 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. The SIB is charged with implementing policies and asset allocation and investing the assets of the legacy fund in the manner provided in Section 21-10-07--the prudent institutional investor rule. The fiduciaries shall exercise the judgment and care, under the circumstances then prevailing, that an institutional investor of ordinary prudence, discretion, and intelligence exercises in the management of large investments entrusted to it, not in regard to speculation but in regard to the permanent disposition of funds, considering probable safety of capital as well as probable income.

Management responsibility for the investment program not assigned to the SIB in Chapter 21-10 is hereby delegated to the SIB, which must establish written policies for the operation of the investment program consistent with this investment policy.

The SIB may delegate investment responsibility to professional money managers, which are also required to employ investment strategies consistent with the investment policy. Where a money manager has been retained, the SIB's role in determining investment strategy and security selection is supervisory not advisory.

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 pool.

The SIB is responsible for establishing criteria, procedures, and making decisions with respect to hiring, retaining, and terminating money managers. The SIB investment responsibility also includes selecting performance measurement services, consultants, report formats, and frequency of meetings with managers.

The SIB shall notify the board within 30 days of any substantial or notable changes in money managers; performance measurement services; and consultants, including hiring or terminating a money manager, performance measurement service, or a consultant.

The SIB will implement necessary changes to this policy in an efficient and prudent manner.

4. RISK TOLERANCE

The investment objectives of the Fund reflect the long-term nature of the Fund, but also the low risk tolerance and shorter-term liquidity needs.

5. INVESTMENT OBJECTIVES.

The Fund's investment objectives are expressed in terms of reward and risk expectations relative to investable, passive benchmarks. The Fund's policy benchmark is comprised of policy mix weights of appropriate asset class benchmarks as set by the SIB:

- a. The Fund's rate of return, net of fees and expenses, should at least match that of the policy benchmark over a minimum evaluation period of five years.
- b. The Fund's risk, measured by the standard deviation of net returns, should be within 1% of the policy benchmark over a minimum evaluation period of five years. For example, if the policy benchmark is 4%, the Fund's risk should range between 3% and 5% over a five-year period.
- c. The risk-adjusted performance of the Fund, net of fees and expenses, should at least match that of the policy benchmark over a minimum evaluation period of five years.

6. POLICY ASSET MIX

After consideration of all the inputs and discussion of its own risk tolerance, the Fund has chosen the following asset allocation:

Large Cap Domestic Equity	0%
Small Cap Domestic Equity	0%
International Equity	0%
Fixed Income	55%
Real Estate	0%
Cash Equivalents	45%

Rebalancing of the Fund to this target will be done in accordance with the SIB's rebalancing policy, but not less than annually.

7. 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. Derivative use will be monitored to ensure that undue risks are not taken by the money managers.
- c. No transaction may be made that would threaten the tax-exempt status of the Fund.
- d. All assets will be held in custody by the State Investment Board's master custodian or such other custodians as are acceptable to the State Investment Board.
- 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 consideration of socially responsible criteria in the investment or commitment of public fund money for the purpose of obtaining an effect other than a maximized return to the Fund.

- 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 Fund's policy favors investments which will have a positive impact on the economy of North Dakota.

8. 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.

9. EVALUATION AND REVIEW

Investment management of the Fund will be evaluated against the Fund's investment objectives and investment performance standards. Emphasis will be placed on five year results. Evaluation should include an assessment of the continued feasibility of achieving the investment objectives and the appropriateness of the Investment Policy Statement for achieving those objectives.

Performance reports will be provided to the Insurance Department periodically, but not less than annually. Such reports will include asset returns and allocation data as well as information regarding all significant and/or material matters and changes pertaining to the investment of the Fund, including, but not limited to:

1. A list of the advisory services managing investments for the board.
2. A list of investments at market value, compared to previous reporting period, of each fund managed by each advisory service.
3. Earnings, percentage earned, and change in market value of each fund's investments.
4. Comparison of the performance of each fund managed by each advisory service to other funds under the board's control and to generally accepted market indicators.
5. All material legal or legislative proceedings affecting the SIB.
6. Compliance with this investment policy statement.

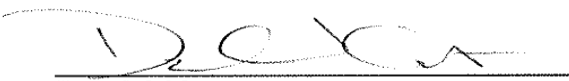
Approved by:

INSURANCE DEPARTMENT



Adam Hamm
Commissioner of Insurance
Date: 2/17/16

STATE INVESTMENT BOARD



David Hunter
Executive Director/CIO
Date: 2/18/16



Petroleum Tank Release Compensation Fund Annual Investment Review

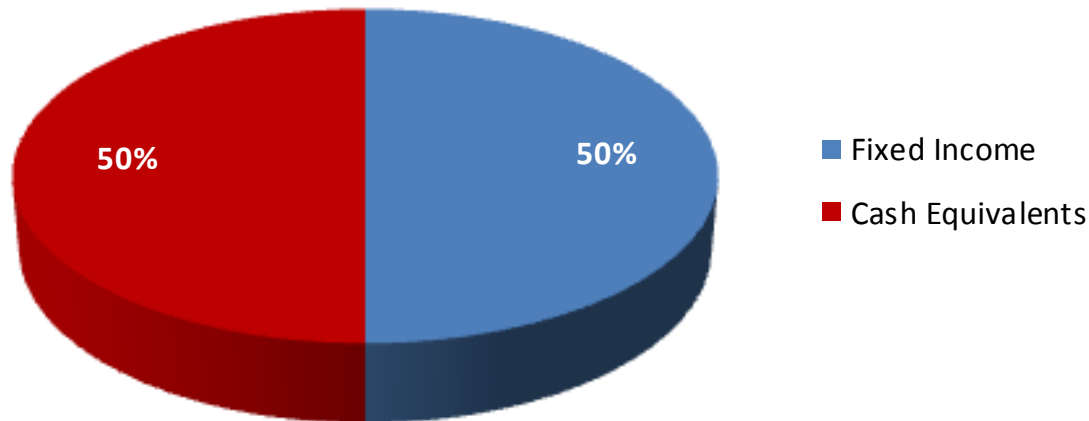
Petroleum Tank Release Fund Performance – 6/30/16

	1 Yr Ended 6/30/2016	3 Yrs Ended 6/30/2016	5 Yrs Ended 6/30/2016	Risk 5 Yrs Ended 6/30/2016	Risk Adj Excess Return 5 Yrs Ended 6/30/2016
PETROLEUM TANK RELEASE COMPENSATION FUND					
Total Fund Return - Net	3.17%	2.66%	3.06%	1.65%	0.88%
<i>Policy Benchmark Return</i>	3.06%	2.06%	1.92%	1.51%	
Excess Return	0.11%	0.60%	1.14%		

- The **Petroleum Tank Release Compensation Fund (\$7.15 million)** has posted strong returns in recent years including an **3.06% net return (after fees) for the 5-years ended June 30, 2016.**
- *Asset allocation decisions are consistently the primary driver of returns and were responsible for “Policy Benchmark Return” of 1.92% for the 5-years ended 6/30/2016.*
- Although asset allocation is paramount, the selection of investment managers is important. Successful active management occurs when an investor selects managers which outperform the underlying benchmark index.
- **The SIB has been successful in selecting active managers as evidenced by the Petroleum Tank Release Fund generating Excess Return of 1.14% for the 5-years ended 6/30/2016.**
- These returns were generated while adhering to prescribed investment guidelines noting that the actual risk (as measured by standard deviation) for the 5-years ended 6/30/2016 was within **0.15%** of investment policy and generated a positive **Risk Adjusted Excess Return of 0.88%.**

Petroleum Tank Release Compensation Fund Asset Allocation

Policy Allocation



- Asset allocation decisions are consistently the # 1 driver of investment returns.
- During the past year, fixed income investments within the **Petroleum Tank Release Compensation Fund** generated a **3.17%** return while cash investment income were negligible in the current low interest rate environment particularly for short term funds with high liquidity requirements.

The Petroleum Tank Release Fund has performed well noting its 55% allocation to fixed income benefitted from a significant decline in rates in fiscal 2016.

OVERALL PERFORMANCE: Net investment returns for the 1-, 3- & 5-years ended June 30, 2016, exceed the Policy Target Benchmarks.	September-16			Three Months Ended Sep. 30, 2016		Fiscal Year Ended June 30, 2016		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	Allocation			Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net
	Market Value	Actual	Policy								
TOTAL PETROLEUM TANK RELEASE FUND	7,214,431	100.0%	100.0%	0.95%	0.94%	3.23%	3.17%	2.72%	2.65%	3.13%	3.05%
<i>POLICY TARGET BENCHMARK</i>				<i>0.28%</i>	<i>0.28%</i>	<i>3.06%</i>	<i>3.06%</i>	<i>2.07%</i>	<i>2.07%</i>	<i>1.92%</i>	<i>1.92%</i>
FIXED INCOME											
Western Asset	1,096,784	15.2%	15.9%	1.66%	1.62%	6.79%	6.64%	5.21%	5.07%	5.32%	5.16%
Prudential	391,681	5.4%	4.0%	1.55%	1.48%	7.12%	6.83%	5.36%	5.08%	5.51%	5.22%
PIMCO (DiSCO II) (1)	152,492	2.1%	2.1%	4.15%	4.15%	4.39%	4.39%	N/A	N/A	N/A	N/A
PIMCO (BRAVO II) (1)	83,609	1.2%	1.2%	0.00%	0.00%	7.02%	7.02%	N/A	N/A	N/A	N/A
BC Aggregate				0.46%	0.46%	6.00%	6.00%	4.06%	4.06%	3.76%	3.76%
Declaration (Total Return) (1)	288,208	4.0%	4.0%	2.16%	2.16%	2.59%	2.59%	N/A	N/A	N/A	N/A
3m LIBOR				0.19%	0.19%	0.49%	0.49%				
State Street	496,849	6.9%	7.0%	0.39%	0.39%	6.71%	6.68%	N/A	N/A	N/A	N/A
BC Gov/Credit				0.40%	0.40%	6.70%	6.70%				
Wells Capital	1,095,833	15.2%	15.9%	2.40%	2.35%	7.19%	6.99%	5.98%	5.79%	6.22%	6.01%
BC US Credit BAA				1.94%	1.94%	6.93%	6.93%	4.90%	4.90%	5.33%	5.33%
TOTAL FIXED INCOME	3,605,457	50.0%	50.0%	1.85%	1.82%	6.42%	6.29%	5.50%	5.36%	6.23%	6.07%
BC Aggregate				0.46%	0.46%	6.00%	6.00%	4.06%	4.06%	3.76%	3.76%
CASH EQUIVALENTS											
Northern Trust (1)	1,996,830			0.04%	0.04%	0.12%	0.12%	N/A	N/A	N/A	N/A
Bank of ND	1,612,144										
TOTAL CASH EQUIVALENTS	3,608,974	50.0%	50.0%	0.06%	0.06%	0.12%	0.12%	0.05%	0.05%	0.13%	0.13%
90 Day T-Bill				0.10%	0.10%	0.19%	0.19%	0.09%	0.09%	0.09%	0.09%

Fixed Income has consistently beat the Barclays Aggregate performance benchmark for the 1-, 3- and 5-years ended June 30, 2016, in addition to the quarter ended September 30, 2016.

NORTH DAKOTA PETROLEUM TANK RELEASE COMPENSATION FUND

INVESTMENT POLICY STATEMENT

1. FUND CHARACTERISTICS AND CONSTRAINTS

The Petroleum Tank Release Compensation Fund (the Fund) was established in 1989 in response to the Environmental Protection Agency's (EPA) requirement that all underground storage tank owners have proof of financial responsibility. Operation of the Fund is in accordance with ND23-37. The Fund's "sunset clause" date of June 30, 2011 has been extended and the time horizon for this Fund is uncertain at this time.

Funding is provided by annual premiums collected for aboveground and underground petroleum storage tanks. Registration of tanks with the Fund is mandatory, although certain types of tanks are excluded.

A statutory minimum balance of \$6.0 million must be maintained in the Fund. Also, a minimum balance of \$2.0 million is required by EPA. In the event reserves drop below this minimum, EPA would evaluate the Fund's ability to pay claims and would in all likelihood disapprove the Fund as a financial responsibility mechanism for North Dakota petroleum tank owners.

If a petroleum release occurs or petroleum contamination is discovered, an eligible tank owner is reimbursed 90% of necessary and reasonable costs between \$5,000 and \$155,000 for cleanup of contamination or third-party liability. The Fund reimburses 100% of costs between \$155,000 and \$1,000,000. Operating expenses are paid from the Fund as incurred.

2. FUND MISSION

The primary mission of the Fund is to maintain the statutory minimum balance in the fund.

3. RESPONSIBILITIES AND DISCRETION OF THE STATE INVESTMENT BOARD (SIB)

The Fund 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. The SIB is charged with implementing policies and asset allocation and investing the assets of the legacy fund in the manner provided in Section 21-10-07--the prudent institutional investor rule. The fiduciaries shall exercise the judgment and care, under the circumstances then prevailing, that an institutional investor of ordinary prudence, discretion, and intelligence exercises in the management of large investments entrusted to it, not in regard to speculation but in regard to the permanent disposition of funds, considering probable safety of capital as well as probable income.

Management responsibility for the investment program not assigned to the SIB in Chapter 21-10 is hereby delegated to the SIB, which must establish written policies for the operation of the investment program consistent with this investment policy.

The SIB may delegate investment responsibility to professional money managers, which are also required to employ investment strategies consistent with the investment policy. Where a money manager has been retained, the SIB's role in determining investment strategy and security selection is supervisory not advisory.

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 pool.

The SIB is responsible for establishing criteria, procedures, and making decisions with respect to hiring, retaining, and terminating money managers. The SIB investment responsibility also includes selecting performance measurement services, consultants, report formats, and frequency of meetings with managers.

The SIB shall notify the board within 30 days of any substantial or notable changes in money managers; performance measurement services; and consultants, including hiring or terminating a money manager, performance measurement service, or a consultant.

The SIB will implement necessary changes to this policy in an efficient and prudent manner.

4. RISK TOLERANCE

The investment objectives of the Fund reflect the long-term nature of the Fund, but also the low risk tolerance and shorter-term liquidity needs.

5. INVESTMENT OBJECTIVES.

The Fund's investment objectives are expressed in terms of reward and risk expectations relative to investable, passive benchmarks. The Fund's policy benchmark is comprised of policy mix weights of appropriate asset class benchmarks as set by the SIB:

- a. The Fund's rate of return, net of fees and expenses, should at least match that of the policy benchmark over a minimum evaluation period of five years.
- b. The Fund's risk, measured by the standard deviation of net returns, should be within 1% of the policy benchmark over a minimum evaluation period of five years. For example, if the policy benchmark is 4%, the Fund's risk should range between 3% and 5% over a five-year period.
- c. The risk-adjusted performance of the Fund, net of fees and expenses, should at least match that of the policy benchmark over a minimum evaluation period of five years.

6. POLICY ASSET MIX

After consideration of all the inputs and discussion of its own risk tolerance, the Fund has chosen the following asset allocation:

Large Cap Domestic Equity	0%
Small Cap Domestic Equity	0%
International Equity	0%
Fixed Income	50%

Real Estate
Cash Equivalents

0%
50%

Rebalancing of the Fund to this target will be done in accordance with the SIB's rebalancing policy, but not less than annually.

7. 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. Derivative use will be monitored to ensure that undue risks are not taken by the money managers.
- c. No transaction may be made that would threaten the tax-exempt status of the Fund.
- d. All assets will be held in custody by the State Investment Board's master custodian or such other custodians as are acceptable to the State Investment Board.
- 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 consideration of socially responsible criteria in the investment or commitment of public fund money for the purpose of obtaining an effect other than a maximized return to the Fund.

- 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 Fund's policy favors investments which will have a positive impact on the economy of North Dakota.

8. 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.

9. EVALUATION AND REVIEW

Investment management of the Fund will be evaluated against the Fund's investment objectives and investment performance standards. Emphasis will be placed on five year results. Evaluation should include an assessment of the continued feasibility of achieving the investment objectives and the appropriateness of the Investment Policy Statement for achieving those objectives.

Performance reports will be provided to the Insurance Department periodically, but not less than annually. Such reports will include asset returns and allocation data as well as information regarding all significant and/or material matters and changes pertaining to the investment of the Fund, including, but not limited to:

1. A list of the advisory services managing investments for the board.
2. A list of investments at market value, compared to previous reporting period, of each fund managed by each advisory service.
3. Earnings, percentage earned, and change in market value of each fund's investments.
4. Comparison of the performance of each fund managed by each advisory service to other funds under the board's control and to generally accepted market indicators.
5. All material legal or legislative proceedings affecting the SIB.
6. Compliance with this investment policy statement.

Approved by:

INSURANCE DEPARTMENT



Adam Hamm
Commissioner of Insurance

Date: 2/17/16

STATE INVESTMENT BOARD



David Hunter
Executive Director/CIO

Date: 2/18/16



Insurance Regulatory Trust Fund

Annual Investment Review

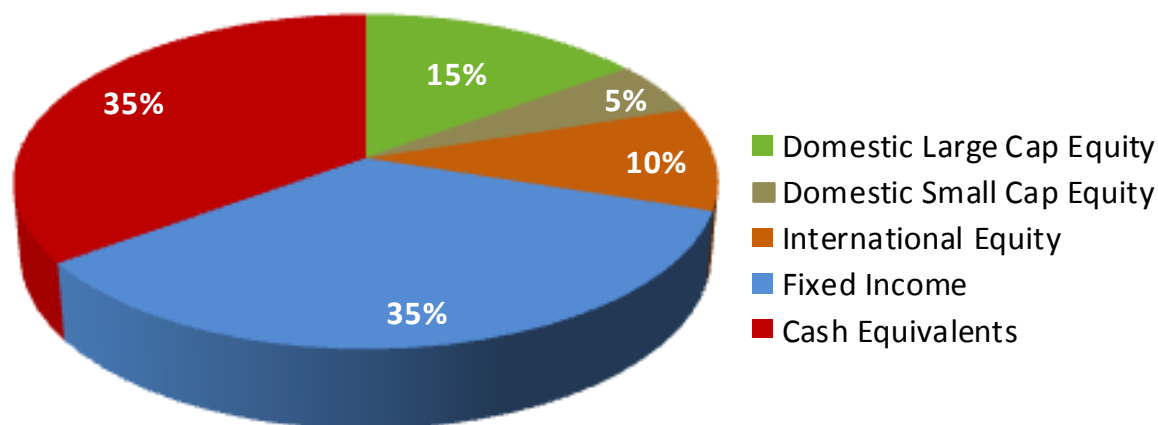
Insurance Regulatory Trust Performance – 6/30/16

	1 Yr Ended 6/30/2016	3 Yrs Ended 6/30/2016	5 Yrs Ended 6/30/2016	Risk 5 Yrs Ended 6/30/2016	Risk Adj Excess Return 5 Yrs Ended 6/30/2016
INSURANCE REGULATORY TRUST FUND (IRTF)					
Total Fund Return - Net	1.46%	4.38%	4.87%	4.46%	0.27%
<i>Policy Benchmark Return</i>	1.40%	3.86%	3.91%	3.82%	
Excess Return	0.06%	0.52%	0.96%		

- The **Insurance Regulatory Trust Fund (\$1.1 million)** has posted strong results in recent years including a **Total Fund Net Return (after fees) of 4.87% for the 5-years ended June 30, 2016.**
- *Asset allocation decisions are consistently the primary driver of returns and were responsible for a “Policy Benchmark Return” of 3.91% for the years ended 6/30/2016.*
- Although asset allocation is paramount, the selection of investment managers is important. Successful active management occurs when an investor selects managers which outperform the underlying benchmark index.
- **The SIB has been successful in selecting active managers as evidenced by the Insurance Regulatory Trust Fund generating Excess Return of 0.96% for the 5-years ended June 30, 2016.**
- These returns were generated while adhering to prescribed investment guidelines noting that the actual risk (as measured by standard deviation) for the 5-years ended 6/30/2016 was within **0.65%** of investment policy and generated a positive **Risk Adjusted Excess Return of 0.27%.**

Insurance Regulatory Trust Fund Asset Allocation

Policy Allocation



- Asset allocation decisions are consistently the # 1 driver of investment returns. During the past year, actual asset allocations have consistently been within 1% of target allocations.
- The fund generated a net investment return of 1.46% for the year ended June 30, 2016. This was largely due to the plan's 35% allocation to both Cash and Fixed Income which returned 0.12% and 6.3%, respectively, last year. International equity (down 10.7%) and U.S. small cap equity (down 5.3%) detracted from performance noting their allocations of 10% and 5%, respectively. U.S. large cap equity generated a modest 2.7% return last year with a 15% allocation.

OVERALL PERFORMANCE: Net investment returns for the 1-, 3- & 5-years ended June 30, 2016, exceed the Policy Target Benchmarks.	September-16			Three Months Ended Sep. 30, 2016		Fiscal Year Ended June 30, 2016		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	Allocation			Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net
	Market Value	Actual	Policy								
TOTAL INSURANCE REGULATORY TRUST	1,232,868	100.0%	100.0%	2.63%	2.59%	1.58%	1.46%	4.52%	4.39%	5.03%	4.88%
<i>POLICY TARGET BENCHMARK</i>				1.88%	1.88%	1.40%	1.40%	3.86%	3.86%	3.92%	3.92%
Los Angeles Capital <i>Russell 1000 Growth</i>	56,631	4.6%	4.5%	3.56%	3.51%	5.44%	5.24%	14.28%	14.07%	13.79%	13.58%
				4.58%	4.58%	3.02%	3.02%	13.07%	13.07%	12.35%	12.35%
LSV <i>Russell 1000 Value</i>	56,841	4.6%	4.5%	5.32%	5.25%	-3.01%	-3.30%	10.08%	9.78%	11.91%	11.61%
				3.48%	3.48%	2.86%	2.86%	9.87%	9.87%	11.35%	11.35%
LA Capital <i>Russell 1000</i>	38,005	3.1%	3.0%	3.36%	3.33%	5.96%	5.82%	12.61%	12.48%	13.05%	12.89%
				4.03%	4.03%	2.94%	2.94%	11.48%	11.48%	11.88%	11.88%
Clifton Group <i>S&P 500</i>	38,086	3.1%	3.0%	3.92%	3.73%	5.29%	5.22%	12.07%	11.99%	12.53%	12.42%
				3.85%	3.85%	3.99%	3.99%	11.66%	11.66%	12.10%	12.10%
TOTAL LARGE CAP DOMESTIC EQUITY	189,564	15.4%	15.0%	4.12%	4.03%	2.91%	2.72%	12.25%	12.05%	12.86%	12.65%
<i>Russell 1000</i>				4.03%	4.03%	2.94%	2.94%	11.48%	11.48%	12.11%	12.11%
PIMCO RAE (formerly Research Affiliates) Clifton	28,466	2.3%	2.5%	8.60%	8.53%	-3.87%	-4.14%	8.14%	7.81%	9.82%	9.43%
	35,508	2.9%	2.5%	9.50%	8.93%	-5.52%	-5.98%	8.43%	8.04%	9.67%	9.26%
TOTAL SMALL CAP DOMESTIC EQUITY	63,974	5.2%	5.0%	9.08%	8.73%	-4.85%	-5.27%	8.46%	8.09%	9.86%	9.45%
<i>Russell 2000</i>				9.05%	9.05%	-6.73%	-6.73%	7.09%	7.09%	8.35%	8.35%
LSV <i>MSCI EAFE</i>	52,834	4.3%	4.0%	8.55%	8.45%	-11.21%	-11.55%	2.98%	2.58%	2.44%	2.00%
				6.43%	6.43%	-10.16%	-10.16%	2.06%	2.06%	1.68%	1.68%
William Blair <i>MSCI ACWI ex-US IMI (Net)</i>	45,610	3.7%	4.0%	9.76%	9.72%	N/A	N/A	N/A	N/A	N/A	N/A
DFA Vanguard (1) <i>S&P/Citigroup Broad Market Index < \$2BN</i>	13,102	1.1%	1.0%	10.54%	10.54%	-9.28%	-9.28%	6.22%	6.01%	4.41%	3.98%
	13,228	1.1%	1.0%	8.43%	8.43%	-7.27%	-7.27%	6.62%	6.48%	4.02%	3.77%
				9.15%	9.15%	-3.37%	-3.37%	7.29%	7.29%	7.29%	4.37%
TOTAL INTERNATIONAL EQUITY	124,774	10.1%	10.0%	9.19%	9.13%	-10.44%	-10.74%	3.31%	2.94%	2.74%	2.31%
<i>MSCI EAFE</i>				6.43%	6.43%	-10.16%	-10.16%	2.06%	2.06%	1.68%	1.68%

The Insurance Regulatory Trust Fund had disappointing returns last year due to weak results in the global equities and negligible Cash income. However, Net Returns for the 3- and 5-years ended June 30, 2016, exceeded 4% per year.

OVERALL PERFORMANCE: Net investment returns for the 1-, 3- & 5-years ended June 30, 2016, exceed the Policy Target Benchmarks.	September-16			Three Months Ended Sep. 30, 2016		Fiscal Year Ended June 30, 2016		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	Market Value	Allocation		Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net
		Actual	Policy								
FIXED INCOME											
Western Asset	133,812	10.9%	11.6%	1.66%	1.62%	6.79%	6.64%	5.21%	5.07%	5.32%	5.16%
Prudential	47,787	3.9%	2.8%	1.55%	1.48%	7.12%	6.83%	5.36%	5.08%	5.51%	5.22%
PIMCO (DiSCO II) (1)	9,742	0.8%	0.8%	4.15%	4.15%	4.39%	4.39%	N/A	N/A	N/A	N/A
PIMCO (BRAVO II) (1)	5,341	0.4%	0.4%	0.00%	0.00%	7.02%	7.02%	N/A	N/A	N/A	N/A
BC Aggregate				0.46%	0.46%	6.00%	6.00%	4.06%	4.06%	3.76%	3.76%
Declaration (Total Return) (1)	35,162	2.9%	2.9%	2.16%	2.16%	2.59%	2.59%	N/A	N/A	N/A	N/A
3m LIBOR				0.19%	0.19%	0.49%	0.49%				
State Street	60,617	4.9%	4.9%	0.39%	0.39%	6.71%	6.68%	N/A	N/A	N/A	N/A
BC Gov/Credit				0.40%	0.40%	6.70%	6.70%				
Wells Capital	133,696	10.8%	11.6%	2.40%	2.35%	7.19%	6.99%	5.98%	5.79%	6.22%	6.01%
BC US Credit BAA				1.94%	1.94%	6.93%	6.93%	4.90%	4.90%	5.33%	5.33%
TOTAL FIXED INCOME	426,158	34.6%	35.0%	1.85%	1.82%	6.42%	6.29%	5.50%	5.36%	6.23%	6.07%
BC Aggregate				0.46%	0.46%	6.00%	6.00%	4.06%	4.06%	3.76%	3.76%
CASH EQUIVALENTS											
Northern Trust (1)	237,031			0.04%	0.04%	0.12%	0.12%	N/A	N/A	N/A	N/A
Bank of ND	191,367										
TOTAL CASH EQUIVALENTS	428,398	34.7%	35.0%	0.06%	0.06%	0.12%	0.12%	0.05%	0.05%	0.13%	0.13%
90 Day T-Bill				0.10%	0.10%	0.19%	0.19%	0.09%	0.09%	0.09%	0.09%

INVESTMENT POLICY STATEMENT

1. FUND CHARACTERISTICS AND CONSTRAINTS

The Insurance Regulatory Trust Fund (the Fund) was established for use by the Insurance Department to defray the expenses incurred in discharging its duties as described in NDCC 26.1.

Funding is provided primarily through the collection of fees and fines as specified in NDCC 26.1-01-07.1. Fees and other collections as well as earnings from investments are funding sources.

There is no statutory minimum balance for this fund. However, the Insurance Department relies entirely on the Fund to meet all operating expenses. Therefore, sufficient liquidity and risk control must be maintained at all times to ensure the solvency of the Insurance Department.

In accordance with NDCC 26.1-01-07.1 any cash balance in the Fund after all current biennium expenditures are met must be carried forward for the succeeding biennium. However, when the balance at the end of the biennium exceeds \$1.0 million, any excess will be transferred to the general fund in the state treasury. Such transfers are generally made at the end of September or during the first two weeks of October. Operating expenses are paid from the Fund as incurred.

2. FUND MISSION

The primary mission of the Fund is to maintain an adequate balance in the fund to meet operating expenses.

3. RESPONSIBILITIES AND DISCRETION OF THE STATE INVESTMENT BOARD (SIB)

The Fund 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. The SIB is charged with implementing policies and asset allocation and investing the assets of the legacy fund in the manner provided in Section 21-10-07--the prudent institutional investor rule. The fiduciaries shall exercise the judgment and care, under the circumstances then prevailing, that an institutional investor of ordinary prudence, discretion, and intelligence exercises in the management of large investments entrusted to it, not in regard to speculation but in regard to the permanent disposition of funds, considering probable safety of capital as well as probable income.

Management responsibility for the investment program not assigned to the SIB in Chapter 21-10 is hereby delegated to the SIB, which must establish written policies for the operation of the investment program consistent with this investment policy.

The SIB may delegate investment responsibility to professional money managers, which are also required to employ investment strategies consistent with the investment policy. Where a

money manager has been retained, the SIB's role in determining investment strategy and security selection is supervisory not advisory.

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 pool.

The SIB is responsible for establishing criteria, procedures, and making decisions with respect to hiring, retaining, and terminating money managers. The SIB investment responsibility also includes selecting performance measurement services, consultants, report formats, and frequency of meetings with managers.

The SIB shall notify the board within 30 days of any substantial or notable changes in money managers; performance measurement services; and consultants, including hiring or terminating a money manager, performance measurement service, or a consultant.

The SIB will implement necessary changes to this policy in an efficient and prudent manner.

4. RISK TOLERANCE

The investment objectives of the Fund reflect the long-term nature of the Fund, but also the low risk tolerance and shorter-term liquidity needs.

5. INVESTMENT OBJECTIVES

The Fund's investment objectives are expressed in terms of reward and risk expectations relative to investable, passive benchmarks. The Fund's policy benchmark is comprised of policy mix weights of appropriate asset class benchmarks as set by the SIB:

- a. The Fund's rate of return, net of fees and expenses, should at least match that of the policy benchmark over a minimum evaluation period of five years.
- b. The Fund's risk, measured by the standard deviation of net returns, should be within 1% of the policy benchmark over a minimum evaluation period of five years. For example, if the policy benchmark is 4%, the Fund's risk should range between 3% and 5% over a five-year period.
- c. The risk-adjusted performance of the Fund, net of fees and expenses, should at least match that of the policy benchmark over a minimum evaluation period of five years.

6. POLICY ASSET MIX

After consideration of all the inputs and discussion of its own risk tolerance, the Fund has chosen the following asset allocation:

Large Cap Domestic Equity	15%
Small Cap Domestic Equity	5%
International Equity	10%
Fixed Income	35%
Real Estate	0%
Cash Equivalents	35%

Rebalancing of the Fund to this target will be done in accordance with the SIB's rebalancing policy, but not less than annually.

7. 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. Derivative use will be monitored to ensure that undue risks are not taken by the money managers.
- c. No transaction may be made that would threaten the tax-exempt status of the Fund.
- d. All assets will be held in custody by the State Investment Board's master custodian or such other custodians as are acceptable to the State Investment Board.
- 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 consideration of socially responsible criteria in the investment or commitment of public fund money for the purpose of obtaining an effect other than a maximized return to the Fund.

- 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 Fund's policy favors investments which will have a positive impact on the economy of North Dakota.

8. 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.

9. EVALUATION AND REVIEW

Investment management of the Fund will be evaluated against the Fund's investment objectives and investment performance standards. Emphasis will be placed on five year results. Evaluation should include an assessment of the continued feasibility of achieving the investment objectives and the appropriateness of the Investment Policy Statement for achieving those objectives.

Performance reports will be provided to the Insurance Department periodically, but not less than annually. Such reports will include asset returns and allocation data as well as information regarding all significant and/or material matters and changes pertaining to the investment of the Fund, including, but not limited to:

1. A list of the advisory services managing investments for the board.
2. A list of investments at market value, compared to previous reporting period, of each fund managed by each advisory service.
3. Earnings, percentage earned, and change in market value of each fund's investments.
4. Comparison of the performance of each fund managed by each advisory service to other funds under the board's control and to generally accepted market indicators.
5. All material legal or legislative proceedings affecting the SIB.
6. Compliance with this investment policy statement.

Approved by:

INSURANCE DEPARTMENT



Adam Hamm
Commissioner of Insurance

Date:

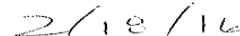


STATE INVESTMENT BOARD



David Hunter
Executive Director/CIO

Date:



Supporting Materials

- ▷ **SIB Client Assets Under Management**
- ▷ **Net Investment Return Comparison**
- ▷ **Investment Consultants and Professional Service Providers**
- ▷ **SIB Members and Processes**
- ▷ **RIO Transparency Enhancements**
- ▷ **SIB Watch List**
- ▷ **Callan Capital Market Expectations**
- ▷ **State Ranking of Fiscal Indebtedness**
- ▷ **Economic and Capital Markets Update**

State Investment Board – Client Assets Under Management

Fund Name	Market Values as of 6/30/16 ⁽¹⁾	Market Values as of 6/30/15 ⁽²⁾
Pension Trust Fund		
Public Employees Retirement System (PERS)	2,459,388,086	2,422,579,595
Teachers' Fund for Retirement (TFFR)	2,082,183,640	2,103,807,355
Job Service of North Dakota Pension		96,392,560
City of Bismarck Employees Pension	82,441,003	81,745,817
City of Grand Forks Employees Pension	57,975,758	59,232,375
City of Bismarck Police Pension	33,983,598	35,889,940
Grand Forks Park District	5,720,245	6,035,136
City of Fargo Employees Pension		1,461
Subtotal Pension Trust Fund	4,721,692,330	4,805,684,242
Insurance Trust Fund		
Workforce Safety & Insurance (WSI)	1,832,104,203	1,762,659,138
Budget Stabilization Fund	575,918,381	574,011,151
ND Tobacco Control and Prevention	54,366,538	
PERS Group Insurance Account	37,715,356	39,653,686
City of Fargo FargoDome Permanent Fund	38,782,721	41,007,046
State Fire and Tornado Fund	24,091,203	23,416,232
Petroleum Tank Release Compensation Fund	7,149,512	7,162,837
State Risk Management Fund	6,534,801	6,849,214
State Risk Management Workers Comp Fund	5,516,177	6,224,542
ND Association of Counties (NDACo) Fund	4,048,863	3,833,500
State Bonding Fund	3,296,372	3,180,023
ND Board of Medical Examiners	2,208,667	2,174,703
Insurance Regulatory Trust Fund	1,085,836	2,636,662
Bismarck Deferred Sick Leave Account	642,265	872,177
Cultural Endowment Fund	386,452	383,049
Subtotal Insurance Trust Fund	2,593,847,347	2,474,063,959
Legacy Trust Fund		
Legacy Fund	3,809,485,177	3,328,631,303
PERS Retiree Insurance Credit Fund	101,623,224	97,671,060
Job Service of North Dakota Pension	96,588,333	
Total Assets Under SIB Management	11,323,236,411	10,706,050,563

⁽¹⁾ 6/30/16 market values are unaudited and subject to change.

⁽²⁾ 6/30/15 market values as stated in the Comprehensive Annual Financial Report.

- ▶ SIB client assets grew by approximately 6% (or \$617 million) in the last year with the Legacy Fund creating the largest asset growth of \$481 million primarily due to tax collections.
- ▶ The Legacy Fund generated a net investment gain of 1.06% for the year ended June 30, 2016, slightly exceeding its performance benchmark. Since inception, the Legacy Fund has generated a net annualized return of 2.78% (over the last 4.75 years) exceeding the performance benchmark of 2.05%.
- ▶ The Pension Trust posted a net return of 0.31% in the last year. During the last 5-years, the Pension Trust generated a net annualized return of 6.35%, exceeding the performance benchmark of 5.99%.
- ▶ The Insurance Trust generated a net return of 3.12% in the last year. During the last 5-years, the Insurance Trust posted a net annualized return of 4.83%, exceeding the performance benchmark of 3.81%.
- ▶ SIB client assets exceeded \$11.3 billion as of June 30, 2016, based on unaudited valuations.

**ND RETIREMENT AND INVESTMENT OFFICE
ND STATE INVESTMENT BOARD
INVESTMENT PERFORMANCE SUMMARY
AS OF JUNE 30, 2016**

Investment Performance (net of fees)

Fund Name	Market Values as of 6/30/16	Quarter Ended				FYTD 2016	Fiscal Years ended June 30					Periods ended 6/30/16 (annualized)						
		9/30/15	12/31/15	3/31/16	6/30/16		2015	2014	2013	2012	2011	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
Pension Trust Fund																		
Teachers' Fund for Retirement (TFFR)	2,082,183,640	-4.98%	2.72%	1.31%	1.41%	0.28%	3.52%	16.53%	13.57%	-1.12%	24.05%	6.55%	6.32%	4.45%	5.51%	6.48%	7.48%	7.73%
Public Employees Retirement System (PERS)	2,459,388,086	-5.04%	2.71%	1.33%	1.47%	0.28%	3.53%	16.38%	13.44%	-0.12%	21.27%	6.51%	6.48%	4.81%	5.84%	6.88%	7.86%	7.89%
City of Bismarck Employees Pension	82,441,003	-4.25%	2.17%	1.34%	1.70%	0.82%	3.69%	14.56%	12.41%	1.57%	20.32%	6.20%	6.46%	5.16%	5.84%	6.86%	7.79%	*
City of Bismarck Police Pension	33,983,598	-4.76%	2.34%	1.25%	1.66%	0.32%	3.56%	15.27%	13.03%	1.31%	21.10%	6.19%	6.52%	5.02%	5.73%	6.71%	7.68%	*
Job Service of North Dakota Pension	96,588,333	-3.12%	3.38%	2.95%	2.27%	5.45%	3.30%	13.54%	11.71%	3.09%	16.39%	7.34%	7.33%	6.00%	6.11%	7.57%	*	*
City of Grand Forks Employees Pension	57,975,758	-5.32%	2.80%	1.26%	1.58%	0.11%	3.53%	16.33%	14.01%	1.09%	21.64%	6.43%	6.80%	*	*	*	*	*
Park District of the City of Grand Forks Pension	5,720,245	-4.89%	3.32%	0.88%	1.24%	0.36%	4.22%	16.44%	14.43%	0.86%	20.98%	6.80%	7.05%	*	*	*	*	*
Subtotal Pension Trust Fund	4,818,280,663																	
Insurance Trust Fund																		
Workforce Safety & Insurance (WSI)	1,832,104,203	-1.92%	1.18%	2.04%	2.29%	3.58%	3.26%	11.71%	8.31%	6.17%	13.23%	6.11%	6.56%	5.66%	5.58%	6.78%	7.39%	*
State Fire and Tomado Fund	24,091,203	-2.89%	1.76%	1.79%	2.07%	2.67%	3.16%	12.78%	10.59%	4.93%	14.52%	6.10%	6.75%	5.87%	5.65%	6.43%	6.58%	*
State Bonding Fund	3,296,372	0.21%	-0.11%	1.57%	1.78%	3.48%	1.25%	4.06%	2.96%	5.31%	5.01%	2.92%	3.40%	2.07%	3.24%	4.60%	5.17%	*
Petroleum Tank Release Compensation Fund	7,149,512	0.20%	-0.10%	1.43%	1.62%	3.17%	1.13%	3.68%	2.47%	4.84%	4.97%	2.65%	3.05%	1.82%	2.97%	4.47%	*	*
Insurance Regulatory Trust Fund	1,085,836	-2.58%	1.53%	1.22%	1.33%	1.46%	2.04%	9.88%	8.49%	2.82%	11.61%	4.39%	4.88%	4.63%	4.75%	5.67%	5.68%	*
State Risk Management Fund	6,534,801	-2.08%	1.50%	2.26%	2.78%	4.46%	4.08%	12.29%	10.19%	7.63%	14.36%	6.88%	7.68%	6.59%	5.86%	*	*	*
State Risk Management Workers Comp Fund	5,516,177	-2.65%	1.90%	2.20%	2.78%	4.21%	4.57%	13.68%	11.61%	7.40%	16.23%	7.40%	8.23%	6.74%	*	*	*	*
Cultural Endowment Fund	386,452	-4.39%	3.00%	1.59%	2.14%	2.18%	5.22%	16.94%	15.58%	4.65%	21.33%	7.93%	8.75%	6.33%	*	*	*	*
Budget Stabilization Fund	575,918,381	0.27%	-0.34%	1.06%	0.82%	1.82%	1.86%	1.94%	1.87%	2.03%	3.73%	1.88%	1.91%	2.11%	*	*	*	*
ND Association of Counties (NDACo) Fund	4,048,863	-2.50%	1.49%	1.79%	2.02%	2.76%	2.77%	11.61%	9.46%	1.69%	17.73%	5.63%	5.58%	4.73%	4.97%	*	*	*
Bismarck Deferred Sick Leave Account	642,265	-2.48%	1.47%	2.04%	2.27%	3.26%	2.95%	12.32%	9.83%	5.69%	13.80%	6.09%	6.75%	6.08%	5.86%	*	*	*
City of Fargo FargoDome Permanent Fund	38,782,721	-4.50%	2.40%	1.60%	1.84%	1.19%	3.38%	16.34%	13.46%	3.14%	19.16%	6.76%	7.33%	5.97%	*	*	*	*
State Board of Medicine Fund	2,208,667	-1.66%	0.88%	1.26%	1.16%	1.63%	2.70%	*	*	*	*	*	*	*	*	*	*	*
PERS Group Insurance Account	37,715,356	0.00%	-0.08%	0.94%	0.62%	1.49%	0.01%	0.06%	0.27%	0.24%	0.31%	0.52%	0.41%	1.25%	1.64%	*	*	*
Subtotal Insurance Trust Fund	2,539,480,809																	
Legacy Fund	3,809,485,177	-4.42%	2.46%	1.55%	1.62%	1.06%	3.31%	6.64%	1.15%	*	*	3.65%	*	*	*	*	*	*
Tobacco Control and Prevention Fund	54,366,538	*	*	*	0.65%	*	*	*	*	*	*	*	*	*	*	*	*	*
PERS Retiree Insurance Credit Fund	101,623,224	-5.59%	2.82%	1.56%	2.17%	0.72%	3.06%	16.53%	12.71%	2.62%	21.65%	6.55%	6.95%	5.13%	5.23%	6.40%	7.17%	*
Total Assets Under SIB Management	11,323,236,410																	

* These funds do not have the specified periods of history under SIB management.

Note: Asset allocation largely drives investment performance. Each fund has a unique allocation that takes into consideration return objectives, risk tolerance, liquidity constraints, and unique circumstances. Such considerations must be taken into account when comparing investment returns. All figures are preliminary and subject to revision.

NDRIO – Consulting and Professional Services (June 30, 2016)

Actuary

The Segal Company
Chicago, Illinois

Auditor

CliftonLarsonAllen LLP
Baltimore, Maryland

Legal Counsel

Attorney General's Office
Bismarck, North Dakota

Ice Miller
Chicago, Illinois

K&L Gates
Boston, Massachusetts

Information Technology

Advent Software, Inc.
San Francisco, CA

CPAS Systems Inc.
Toronto, Ontario

Master Custodian

The Northern Trust Company
Chicago, Illinois

Investment Consultant and Performance Measurement

Callan Associates Inc.
San Francisco, California

Mercer LLC
Chicago, Illinois

Novarca North America LLC
Palo Alto, California

Adams Street Partners, LLC
Chicago, Illinois

Investment Managers

Adams Street Partners, LLC
Chicago, Illinois

Investment Managers (cont.)

Axiom International Investors
Greenwich, Connecticut

Babson Capital Management LLC Boston,
Massachusetts

Brandywine Asset Management
Wilmington, Delaware

Callan Associates
San Francisco, California

Capital Group
Los Angeles, California

Corsair Capital
New York, New York

Declaration Mgmt & Research, LLC
McLean, Virginia

Dimensional Fund Advisors
Chicago, Illinois

EIG Energy Partners
Los Angeles, California

Epoch Investment Partners, Inc.
New York, New York

Goldman Sachs Asset Mgmt
New York, New York

Grosvenor Capital Management
New York, NY

Hearthstone Homebuilding Investors, LLC
Encino, California

INVESCO Realty Advisors
Dallas, Texas

InvestAmerica L&C, LLC
Cedar Rapids, Iowa

J.P. Morgan Invest. Mgmt, Inc.
New York, New York

Loomis Sayles & Company
Boston, Massachusetts

Los Angeles Capital Management
Los Angeles, California

LSV Asset Management
Chicago, Illinois

Matlin Patterson Global Advisers LLC
New York, New York

Investment Managers (cont.)

Northern Trust Asset Management
Chicago, Illinois

Parametric Portfolio Associates
DBA The Clifton Group
Minneapolis, Minnesota

PIMCO
Newport Beach, California

Prudential Investment Management
Newark, New Jersey

Quantum Energy Partners
Houston, Texas

Quantum Resources Mgmt, LLC
Denver, Colorado

Research Affiliates, LLC
Newport Beach, California

SEI Investments Management Co.
Oaks, Pennsylvania

State Street Global Advisors
Boston, Massachusetts

Timberland Investment
Resources, LLC
Atlanta, Georgia

UBS Global Asset Management
Chicago, Illinois

The Vanguard Group
Valley Forge, Pennsylvania

Wellington Trust Company, NA
Boston, Massachusetts

Wells Capital Management, Inc.
Menomonee Falls, Wisconsin

Western Asset Management Co.
Pasadena, California

State Investment Board Members – August 31, 2016

The **SIB** includes 11 members with **Lieutenant Governor Drew Wrigley** serving as **Chairman** and includes **State Treasurer Kelly Schmidt**, the **Commissioner of University and School Lands Lance Gaebe**, the **Director of Workforce Safety and Insurance designee Cindy Ternes**, the **Insurance Commissioner Adam Hamm**, plus three TFFR board members and three PERS board members.

The TFFR representatives include **Michael Gessner**, **Rob Lech** and **Mel Olson** noting that Mr. Lech also serves as the board parliamentarian.

The PERS representatives include **Mike Sandal**, **Tom Trenbeath** and **Yvonne Smith** noting that Mr. Sandal also serves as *Vice Chairman* of the SIB.

North Dakota Retirement & Investment Office – Background

RIO is an agency of the State of North Dakota. The agency was created by the 1989 Legislative Assembly to capture administrative and investment cost savings in the management of two important long-standing state programs – the retirement program of the Teachers’ Fund for Retirement (TFFR) and the investment program of the State Investment Board (SIB).

The SIB is responsible for setting policies and procedures guiding the investment of over \$11 billion in assets for seven pension funds and 16 other insurance-type funds. Their investments are divided into two investment trust funds and two individual investment accounts. Individual investment guidelines for each fund can be found in the Investment Section. These guidelines include goals and objectives, risk tolerance, liquidity constraints, asset allocation and portfolio restrictions specific to each fund’s unique circumstances. When creating investment pools to implement the asset allocations for each client fund, the SIB takes all of these guidelines into consideration in order to best meet the objectives of each fund and safeguard fund assets.

The pension investment pool is made up of only qualified pension funds whose monies must be invested exclusively for the benefit of their participants. The insurance investment pool is made up of mainly insurance-type funds, but also includes other funds that do not qualify as pension funds and would like to benefit from the cost savings of being pooled with other funds’ assets. All of these funds are invested in accordance with the “Prudent Investor Rule.”

An important aspect of the prudent investor rule is that individual investments are considered not in isolation but in the context of the trust portfolio as a whole. Some new opportunities may appear risky when viewed alone. However, when part of a diversified mix of investments in stocks, bonds and other assets, they can increase returns often without increasing the overall portfolio risk and, in some cases, may help decrease the overall portfolio’s risk.

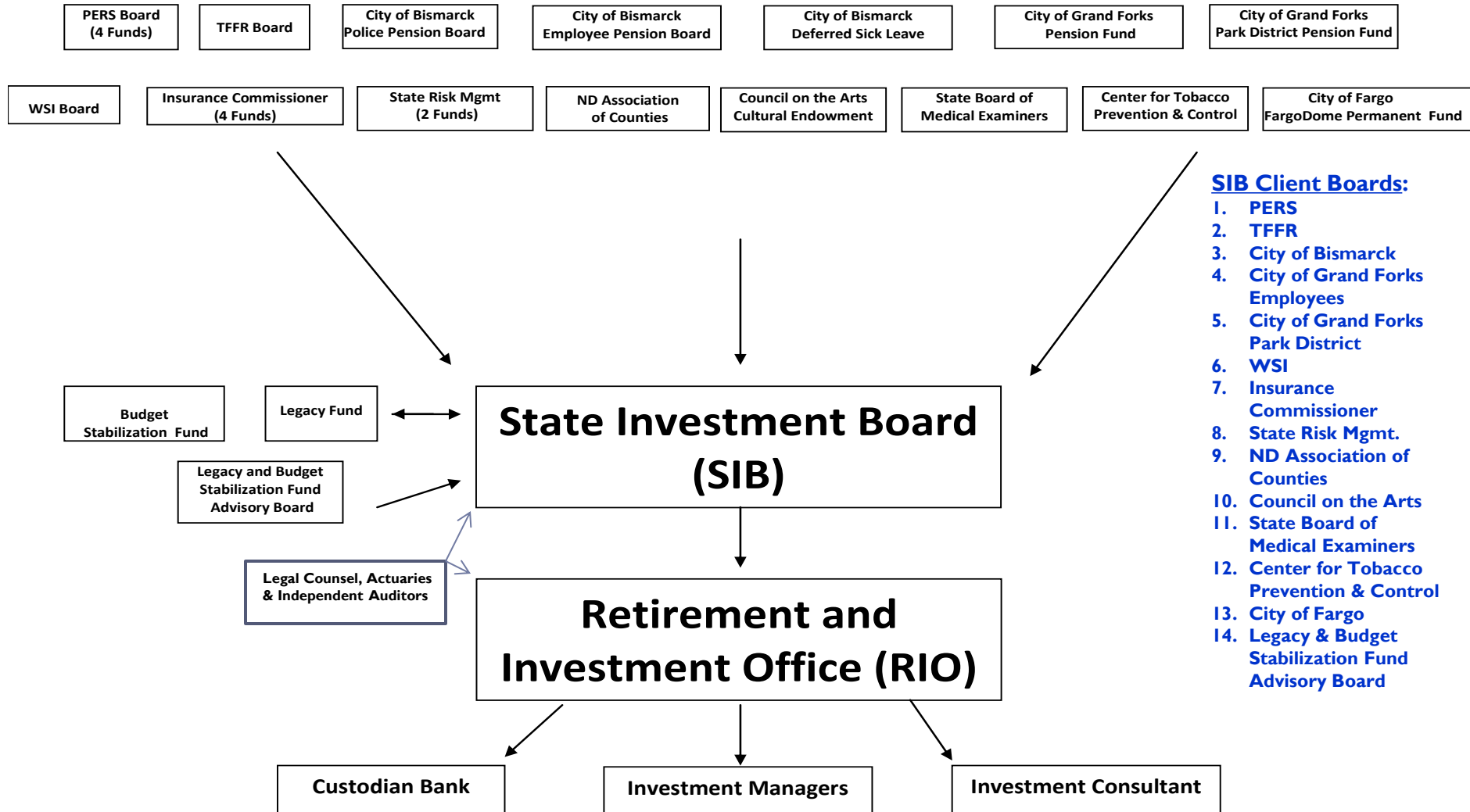
North Dakota Retirement & Investment Office – Awards

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to RIO for its comprehensive annual financial report for the fiscal year ended June 30, 2015. This was the eighteenth consecutive year that RIO has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current comprehensive annual financial report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

TFFR also received the 2015 Public Pension Standards Award for Funding and Administration from the Public Pension Coordinating Council. To receive the award, the retirement system must certify that it meets specific professional standards for a comprehensive benefit program, actuarial valuations, financial reporting, investments, communications to members, and funding adequacy.

State Investment Board Process



State Investment Board Process

Client Responsibilities: (Per NDCC 21-10-02.1) The governing body of each fund (client) shall establish policies on investment goals and objectives and asset allocation that must include:

- Acceptable rates of return, liquidity and levels of risk
- Long-range asset allocation goals

State Investment Board Responsibilities: (Per NDCC 21-10):

- Accept and implement client asset allocations
- Apply Prudent Investor Rule when investing for fund under its supervision
- Approve general types of securities for investment
- Set policies and procedures regulating securities transactions on behalf of the clients
- Select custodian servicer
- Select investment director and/or investment consulting service
- Create investment pools

State Investment Board Process

Retirement and Investment Office Staff Responsibilities (on behalf of SIB):

- Administer overall investment strategy
- Advise SIB on ways to maximize risk/return opportunities within each asset class
- Act as liaison between SIB and managers, consultant and custodian
- Monitor individual clients' investment guidelines and asset allocations
- Maintain separate accounting for client accounts

Investment Manager Responsibilities:

- Accept and implement specific mandates or “investment missions”
- Make buy/sell decisions based on investment guidelines
- Report to RIO Staff on regular basis
- Provide education to SIB

State Investment Board Process

Custodian Bank Responsibilities:

- Safe-keep assets
- Settle trades
- Record-keeper

Investment Consultant Responsibilities:

- Performance measurement of investment managers
- Manager search assistance
- Provide education to SIB
- Special projects

Others Experts:

- Legal Counsel
- Independent Actuaries and Auditors
- Specialists in custody and fee reviews and/or transaction cost analyses

Transparency Enhancement Update – 2016

Strategic Investment Belief / Goal:

Although SIB meetings are open to the public and RIO is committed to adhering to all applicable open records laws, a transparency enhancement initiative was commenced in mid-2015 in order to make it easier for interested parties to gain access to information on RIO's website. RIO believes these actions support our desire to foster trust, understanding and support within our community.

RIO's Stated Action Plan (as stated in our SIB Meeting Materials in 2015 and 2016):

- 1) Enhance public access to our SIB Governance Manual by adding a new hyperlink on our RIO website (hyperlink accessed by clicking on "SIB Governance Manual" under the "SIB / Board" section); <http://www.nd.gov/rio/SIB/Board/GovernanceManual/default.htm>
- 2) Enhance public access to our SIB Meeting Materials by adding a new hyperlink on our RIO website (hyperlink accessed by clicking on "Meeting Materials" under the "SIB / Board" section); <http://www.nd.gov/rio/SIB/Board/SIB%20Meeting%20Materials/default.htm>
- 3) Enhance public access to our SIB's Audit Committee Charter and Meeting Materials by adding a new hyperlink on our RIO website (hyperlinks accessed by clicking on "SIB Audit Charter" or "Meeting Materials" under the "SIB Audit" section).
<http://www.nd.gov/rio/SIB%20Audit/Board/default.htm>

NDSIB Watch List

Data as of 09/30/2016

PIMCO MBS (Pen.)		\$184,437,522	
	Returns	Index ¹	Excess
1 Year	3.82	3.61	0.21
3 Year	3.59	3.61	(0.02)
Inception*	2.66	2.62	0.04

*Funded 3/31/2012

PIMCO Unconstrained (Pen.)		\$63,625,363	
	Returns	Index ²	Excess
1 Year	5.93	0.61	5.32
3 Year	1.90	0.37	1.53
Inception*	2.53	0.36	2.17

*Funded 3/12/2012

JP Morgan MBS (Pen.)		\$123,474,049	
	Returns	Index ¹	Excess
1 Year	3.65	3.61	0.03
Inception*	3.68	3.52	0.16

*Funded 09/30/2014

UBS International Fixed (Pen.)		\$111,580,334	
	Returns	Index ³	Excess
1 Year	12.22	11.67	0.55
3 Year	0.66	0.75	(0.09)
Inception*	6.30	5.99	0.30

*Funded 07/01/1989

Note: There are no investment strategies within the Insurance Trust on Watch List at this time.

- ¹ Barclays Mortgage Index
- ² Libor 3-Month
- ³ Barclays Global Aggregate ex-US

Note: Return data is gross of fee due to data availability

2016 Capital Market Expectations

Return and Risk

- Public market expectations represent passive exposure (beta only).
- Return expectations for private market investments such as real estate and private equity reflect active management premiums.
- Return expectations are net of fees.

Summary of Callan's Long-Term Capital Market Projections (2016 - 2025)

Asset Class	Index	Projected Return*	Projected Risk
Equities			
Broad Domestic Equity	Russell 3000	7.35%	18.70%
Large Cap	S&P 500	7.25%	17.95%
Small/Mid Cap	Russell 2500	7.55%	22.75%
Global ex-US Equity	MSCI ACWI ex USA	7.55%	21.30%
International Equity	MSCI World ex USA	7.25%	20.05%
Emerging Markets Equity	MSCI Emerging Markets	7.60%	27.85%
Fixed Income			
Domestic Fixed	Barclays Aggregate	3.00%	3.75%
TIPS	Barclays TIPS	3.00%	5.30%
High Yield	Barclays High Yield	5.00%	10.50%
Non-US Fixed	Barclays Global Aggregate ex-USD	1.40%	9.20%
Emerging Market Debt	EMBI Global Diversified	4.60%	9.90%
Other			
Real Estate	Callan Real Estate Database	6.00%	16.45%
Timberland	NCREIF Timberland	6.20%	17.50%
Infrastructure	S&P Global Infr / JPM Infr	6.60%	19.00%
Private Equity	TR Post Venture Capital	8.15%	32.80%
Hedge Funds	Callan Hedge FoF Database	5.25%	9.30%
Commodities	Bloomberg Commodity	2.75%	18.50%
Cash Equivalents	90-Day T-Bill	2.25%	0.90%
Inflation	CPI-U	2.25%	1.50%

* Geometric returns are derived from arithmetic returns and the associated risk (standard deviation).

How big is the post-retirement bill?

A relative comparison of the 50 states' payment obligations

The state of the states: how much states spend on debt, pensions and retiree healthcare

% of state revenue collections required to pay the sum of interest on bonds, the state's share of unfunded pension and retiree healthcare liabilities, and defined contribution plan payments



Source: J.P. Morgan Asset Management, state/pension plan Comprehensive Annual Financial Reports, Census, Loop Capital Markets. FY 2015.

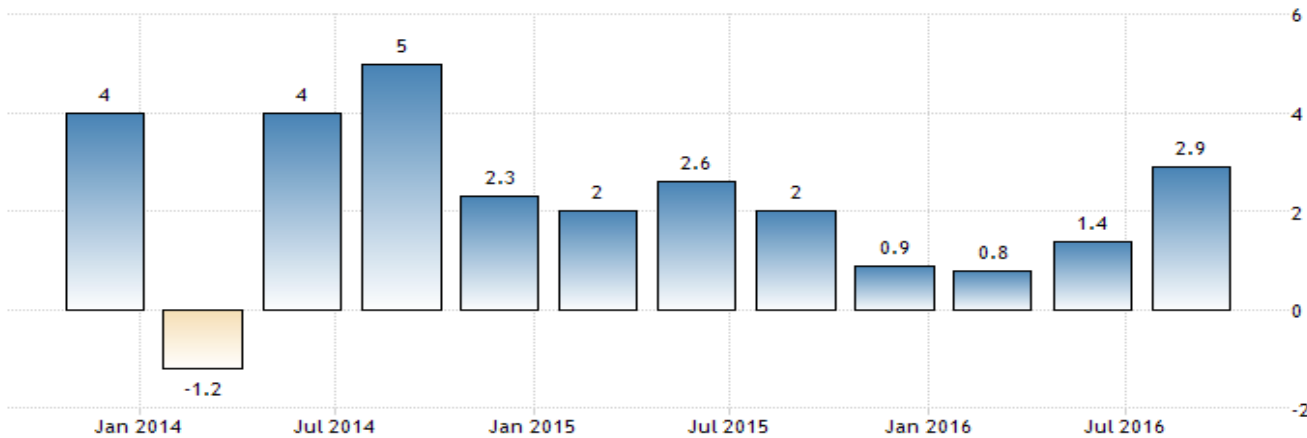
- Bars that appear above the **red line** indicate a level at which states face critical challenges in meeting an ability to service their debt and post-retirement benefit obligations.
- Bars that appear below the **green line** identify states that one might view not requiring “a disproportionate share of revenues to service their debts.”
- Note that North Dakota’s overall funding obligations are comparatively low (third from the right).

Economic and Capital Markets Update

As of June 30, 2016

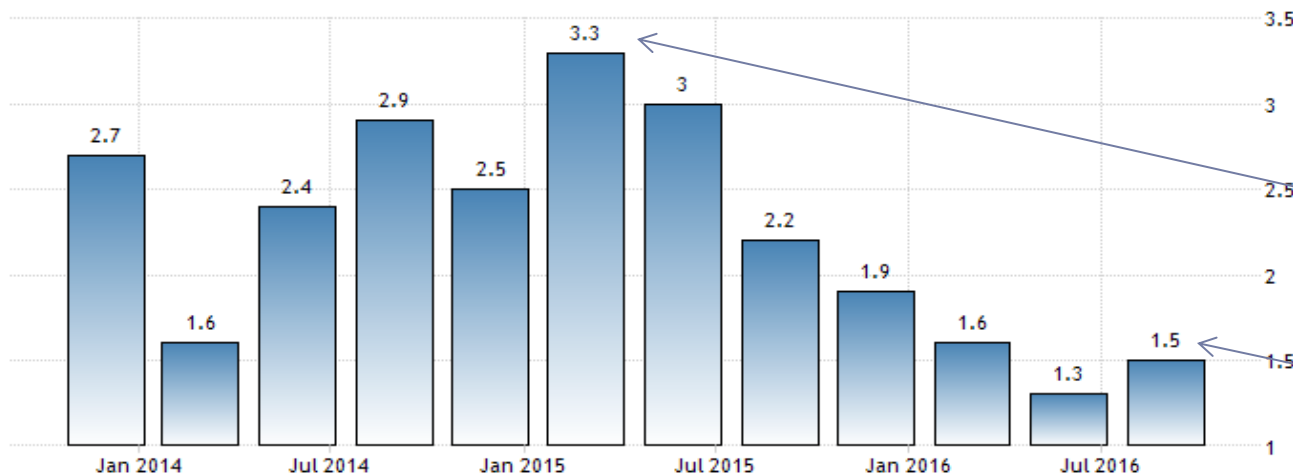
U.S Economy – GDP Growth Rates

US GDP GROWTH RATE



▶ Quarterly GDP Growth Rates (top chart) have not exceeded 3% since the 4Q of 2014, but popped up to 2.9% last quarter.

US GDP ANNUAL GROWTH RATE



▶ Annual GDP Growth Rates (bottom chart) have trended down since peaking at 3.3% during the 1st quarter of 2015 and approximate 1.5% as of the 3rd quarter of 2016.

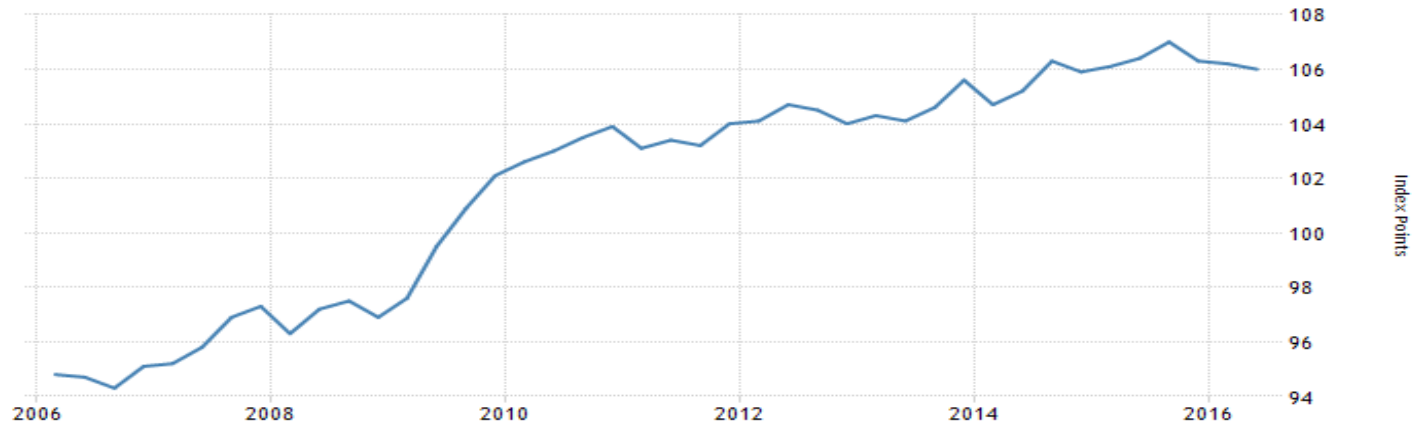
U.S Labor Market – Unemployment Rate and Productivity Index

US UNEMPLOYMENT RATE



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF LABOR STATISTICS

US NONFARM LABOUR PRODUCTIVITY



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF LABOR STATISTICS

U.S. labor markets appear to be improving as the “**Unemployment Rate**” is now **below 5%** since peaking at 10% in October of 2009.

The “**Labor Productivity Index**” has trended upward since 2006, but has declined four consecutive quarters (to 106) since hitting an all-time high of 107 in 3Q of 2015.

Index Points

Source: U.S. Dept. of Labor: Bureau of Labor Statistics

U.S Labor Market – Wage Growth and Participation Rates

US WAGES AND SALARIES GROWTH



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF ECONOMIC ANALYSIS

U.S. labor markets appear to be improving as “**Wage Growth**” has been averaging **4%** or higher during the two years.

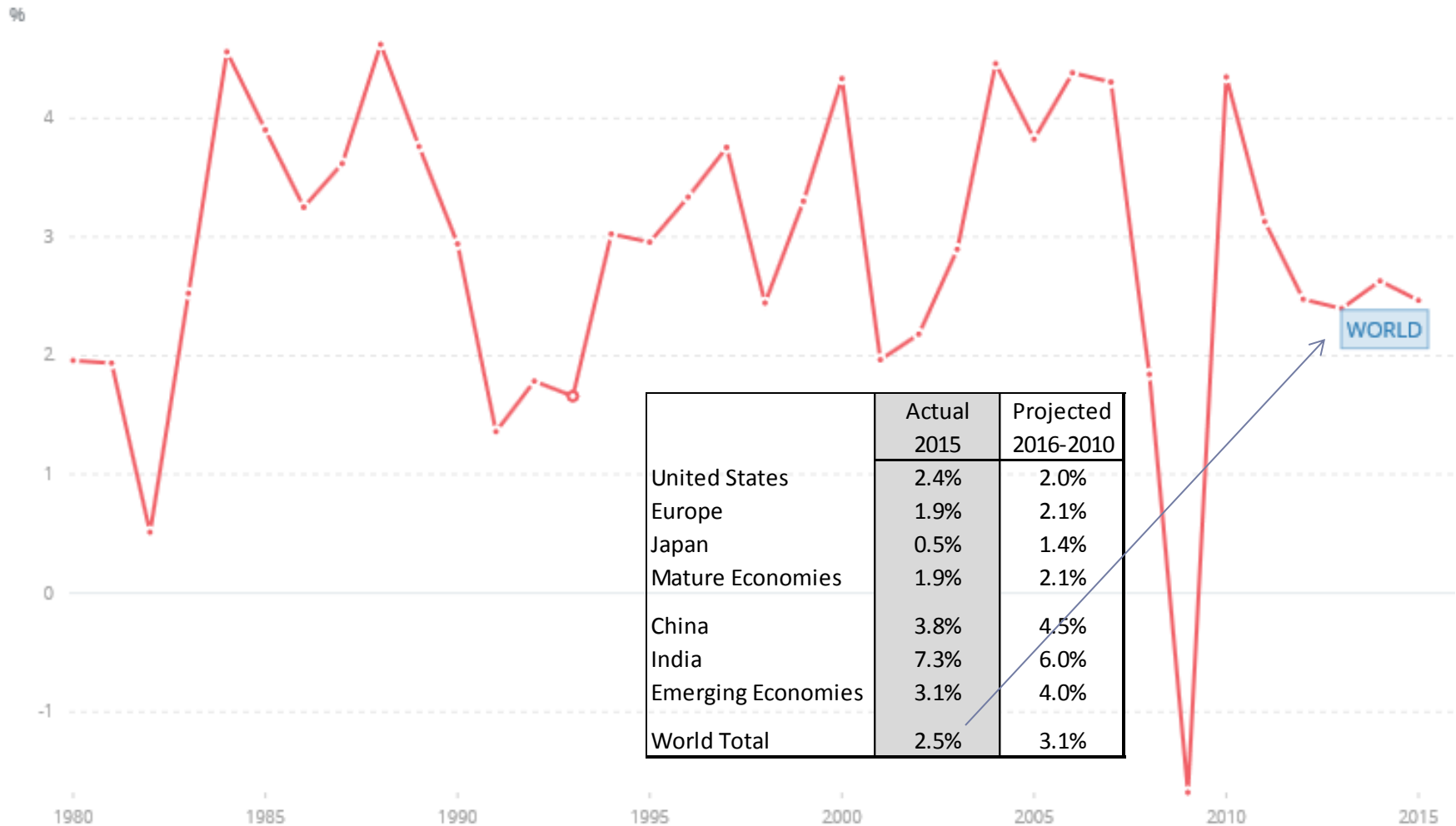
US LABOR FORCE PARTICIPATION RATE



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF LABOR STATISTICS

The “**Labor Participation Rate**” remains below long-term historical averages, but appears to have leveled out at slightly above **62.5%** over the last year.

“World GDP Growth Rates” have declined to 2.5% from 2012 to 2015, with some “Experts” projecting slightly higher future growth rates.

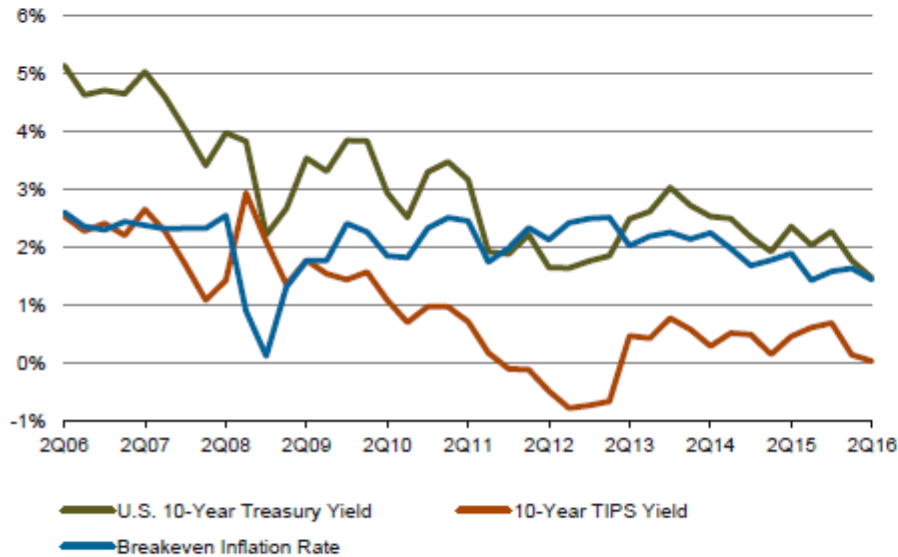


Yield Curve Changes

Key: Long-Term Treasury Rates Fell 0.85% Last Year

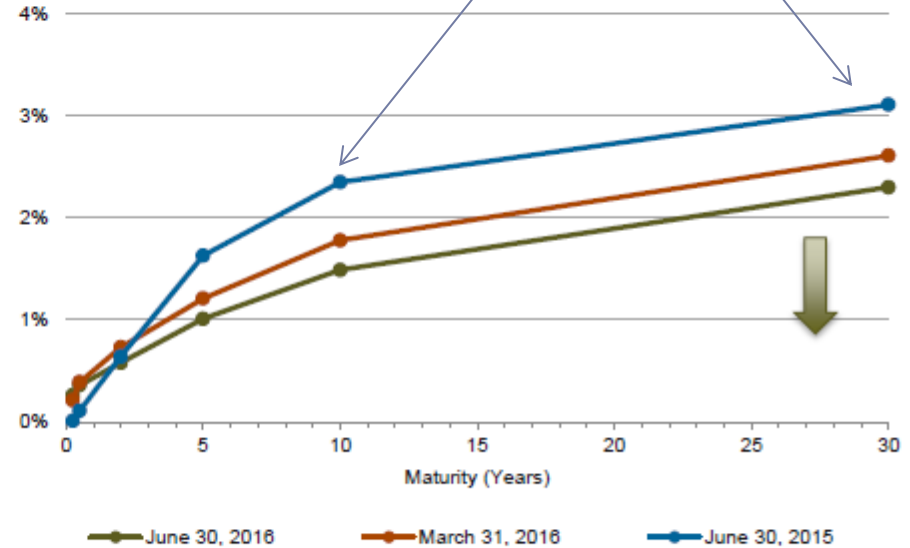
Periods Ending June 30, 2016

Historical 10-Year Yields



Source: Bloomberg

U.S. Treasury Yield Curves




Source: U.S. Department of the Treasury

- Low rates abroad kept demand for U.S. assets strong. The German 10-year sovereign bond traded at a negative yield for the first time ever.
- The decline in Treasury yields boosted returns across all segments, with longer maturities posting the biggest gains. The 10-year dropped 29 basis points to a low not seen since 2012, finishing June at 1.49%.
- Breakeven inflation ended lower despite a climb in oil prices and healthy core inflation numbers.

Asset Class Performance

Periodic Table of Investment Returns
for Periods Ended June 30, 2016



	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
	BLMBRG:Commdty Idx 12.7%	Barclays:Aggregate Index 6.0%	S&P:500 11.7%	S&P:500 12.1%	S&P:500 7.4%
	Russell:2000 Index 3.8%	S&P:500 4.0%	Russell:2000 Index 7.1%	Russell:2000 Index 8.4%	Russell:2000 Index 6.2%
	S&P:500 2.5%	3 Month T-Bill 0.2%	Barclays:Aggregate Index 4.1%	Barclays:Aggregate Index 3.8%	Barclays:Aggregate Index 5.1%
	Barclays:Aggregate Index 2.2%	Russell:2000 Index (6.7%)	MSCI:EAFE 2.1%	MSCI:EAFE 1.7%	MSCI:EM Gross 3.9%
	MSCI:EM Gross 0.8%	MSCI:EAFE (10.2%)	3 Month T-Bill 0.1%	3 Month T-Bill 0.1%	MSCI:EAFE 1.6%
	3 Month T-Bill 0.1%	MSCI:EM Gross (11.7%)	MSCI:EM Gross (1.2%)	MSCI:EM Gross (3.4%)	3 Month T-Bill 1.0%
	MSCI:EAFE (1.5%)	BLMBRG:Commdty Idx (13.5%)	BLMBRG:Commdty Idx (10.6%)	BLMBRG:Commdty Idx (10.9%)	BLMBRG:Commdty Idx (6.5%)

Last Year: U.S. Fixed Income (Barclays Aggregate) returned 6% and the S&P 500 returned 4% last year. In contrast, U.S. Small Cap Equity (Russel 2000) declined 6.7% and International Equity (MSCI EAFE) declined 10.2%. The Bloomberg Commodity Index declined 13.5% during the last fiscal year.

	June-16			Current FYTD		Prior Year FY15		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	Allocation			Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net
	Market Value	Actual	Policy								
TOTAL FIRE & TORNADO FUND	24,091,203	100.0%	100.0%	2.84%	2.67%	3.32%	3.16%	6.28%	6.10%	6.95%	6.75%
<i>POLICY TARGET BENCHMARK</i>				<i>2.58%</i>	<i>2.58%</i>	<i>2.49%</i>	<i>2.49%</i>	<i>5.20%</i>	<i>5.20%</i>	<i>5.24%</i>	<i>5.24%</i>
TOTAL RELATIVE RETURN				0.25%	0.09%	0.83%	0.67%	1.08%	0.90%	1.70%	1.51%
LARGE CAP DOMESTIC EQUITY											
Los Angeles Capital	1,374,550	5.7%	5.6%	5.44%	5.24%	12.53%	12.32%	14.28%	14.07%	13.79%	13.58%
<i>Russell 1000 Growth</i>				3.02%	3.02%	10.56%	10.56%	13.07%	13.07%	12.35%	12.35%
LSV	1,321,419	5.5%	5.6%	-3.01%	-3.30%	7.16%	6.87%	10.08%	9.78%	11.91%	11.61%
<i>Russell 1000 Value</i>				2.86%	2.86%	4.13%	4.13%	9.87%	9.87%	11.35%	11.35%
LA Capital	920,871	3.8%	3.8%	5.96%	5.82%	8.45%	8.31%	12.61%	12.48%	13.05%	12.89%
<i>Russell 1000</i>				2.94%	2.94%	7.37%	7.37%	11.48%	11.48%	11.88%	11.88%
Clifton Group	910,071	3.8%	3.8%	5.29%	5.22%	7.17%	7.10%	12.07%	11.99%	12.53%	12.42%
<i>S&P 500</i>				3.99%	3.99%	7.42%	7.42%	11.66%	11.66%	12.10%	12.10%
TOTAL LARGE CAP DOMESTIC EQUITY	4,526,912	18.8%	18.8%	2.91%	2.72%	9.02%	8.83%	12.25%	12.05%	12.86%	12.65%
<i>Russell 1000</i>				2.94%	2.94%	7.37%	7.37%	11.48%	11.48%	12.11%	12.11%
SMALL CAP DOMESTIC EQUITY											
PIMCO RAE (formerly Research Affiliates)	630,817	2.6%	3.1%	-3.87%	-4.14%	5.51%	5.18%	8.14%	7.81%	9.82%	9.43%
Clifton	880,834	3.7%	3.1%	-5.52%	-5.98%	8.24%	8.03%	8.43%	8.04%	9.67%	9.26%
TOTAL SMALL CAP DOMESTIC EQUITY	1,511,651	6.3%	6.3%	-4.85%	-5.27%	7.46%	7.23%	8.46%	8.09%	9.86%	9.45%
<i>Russell 2000</i>				-6.73%	-6.73%	6.49%	6.49%	7.09%	7.09%	8.35%	8.35%
INTERNATIONAL EQUITY											
Capital Group (2)	1,575	0.0%	0.0%	N/A	N/A	-1.35%	-1.73%	N/A	N/A	N/A	N/A
LSV	1,007,887	4.2%	4.0%	-11.21%	-11.55%	-3.33%	-3.73%	2.98%	2.58%	2.44%	2.00%
<i>MSCI EAFE</i>				-10.16%	-10.16%	-4.22%	-4.22%	2.06%	2.06%	1.68%	1.68%
William Blair	859,932	3.6%	4.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<i>MSCI ACWI ex-US IMI (Net)</i>											
DFA	245,213	1.0%	1.0%	-9.28%	-9.28%	-3.27%	-3.27%	6.22%	6.01%	4.41%	3.98%
Vanguard (1)	252,406	1.0%	1.0%	-7.27%	-7.27%	0.57%	0.57%	6.62%	6.48%	4.02%	3.77%
<i>S&P/Citigroup Broad Market Index < \$2BN</i>				-3.37%	-3.37%	1.14%	1.14%	7.29%	7.29%	7.29%	4.37%
TOTAL INTERNATIONAL EQUITY	2,367,014	9.8%	10.0%	-10.44%	-10.74%	-2.11%	-2.43%	3.31%	2.94%	2.74%	2.31%
<i>MSCI EAFE</i>				-10.16%	-10.16%	-4.22%	-4.22%	2.06%	2.06%	1.68%	1.68%

STATE FIRE AND TORNADO FUND
INVESTMENT PERFORMANCE REPORT AS OF JUNE 30, 2016

	June-16			Current FYTD		Prior Year FY15		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	<u>Allocation</u>			Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net
	Market Value	Actual	Policy								
FIXED INCOME											
Western Asset	4,002,378	16.6%	17.4%	6.79%	6.64%	2.76%	2.62%	5.21%	5.07%	5.32%	5.16%
Prudential	1,430,445	5.9%	4.4%	7.12%	6.83%	2.32%	2.05%	5.36%	5.08%	5.51%	5.22%
PIMCO (DiSCO II) (1)	572,711	2.4%	2.4%	4.39%	4.39%	4.32%	4.32%	N/A	N/A	N/A	N/A
PIMCO (BRAVO II) (1)	327,038	1.4%	1.4%	7.02%	7.02%	10.36%	10.36%	N/A	N/A	N/A	N/A
BC Aggregate				6.00%	6.00%	1.85%	1.85%	4.06%	4.06%	3.76%	3.76%
Declaration (Total Return) (1)	1,036,592	4.3%	4.3%	2.59%	2.59%	3.55%	3.55%	N/A	N/A	N/A	N/A
3m LIBOR				0.49%	0.49%	0.26%	0.26%				
State Street	1,856,611	7.7%	7.7%	6.71%	6.68%	1.70%	1.66%	N/A	N/A	N/A	N/A
BC Gov/Credit				6.70%	6.70%	1.68%	1.68%				
Wells Capital	4,046,225	16.8%	17.4%	7.19%	6.99%	0.96%	0.78%	5.98%	5.79%	6.22%	6.01%
BC US Credit BAA				6.93%	6.93%	-1.37%	-1.37%	4.90%	4.90%	5.33%	5.33%
TOTAL FIXED INCOME	13,272,001	55.1%	55.0%	6.42%	6.29%	2.40%	2.27%	5.50%	5.36%	6.23%	6.07%
BC Aggregate				6.00%	6.00%	1.85%	1.85%	4.06%	4.06%	3.76%	3.76%
CASH EQUIVALENTS											
Northern Trust (1)	2,413,625			0.12%	0.12%	0.01%	0.01%	N/A	N/A	N/A	N/A
TOTAL CASH EQUIVALENTS	2,413,625	10.0%	10.0%	0.12%	0.12%	0.01%	0.01%	0.05%	0.05%	0.13%	0.13%
90 Day T-Bill				0.19%	0.19%	0.02%	0.02%	0.09%	0.09%	0.09%	0.09%

**STATE BONDING FUND
INVESTMENT PERFORMANCE REPORT AS OF JUNE 30, 2016**

	June-16			Current FYTD		Prior Year FY15		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	Allocation			Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net
	Market Value	Actual	Policy								
TOTAL BONDING FUND	3,296,372	100.0%	100.0%	3.55%	3.48%	1.32%	1.25%	3.00%	2.92%	3.49%	3.40%
<i>POLICY TARGET BENCHMARK</i>				<i>3.35%</i>	<i>3.35%</i>	<i>1.04%</i>	<i>1.04%</i>	<i>2.26%</i>	<i>2.26%</i>	<i>2.10%</i>	<i>2.10%</i>
TOTAL RELATIVE RETURN				0.20%	0.13%	0.28%	0.21%	0.74%	0.66%	1.39%	1.30%
FIXED INCOME											
Western Asset	549,036	16.7%	17.5%	6.79%	6.64%	2.76%	2.62%	5.21%	5.07%	5.32%	5.16%
Prudential	196,225	6.0%	4.4%	7.12%	6.83%	2.32%	2.05%	5.36%	5.08%	5.51%	5.22%
PIMCO (DiSCO II) (1)	74,344	2.3%	2.3%	4.39%	4.39%	4.32%	4.32%	N/A	N/A	N/A	N/A
PIMCO (BRAVO II) (1)	42,453	1.3%	1.3%	7.02%	7.02%	10.36%	10.36%	N/A	N/A	N/A	N/A
BC Aggregate				6.00%	6.00%	1.85%	1.85%	4.06%	4.06%	3.76%	3.76%
Declaration (Total Return) (1)	142,197	4.3%	4.3%	2.59%	2.59%	3.55%	3.55%	N/A	N/A	N/A	N/A
3m LIBOR				0.49%	0.49%	0.26%	0.26%				
State Street	254,685	7.7%	7.7%	6.71%	6.68%	1.70%	1.66%	N/A	N/A	N/A	N/A
BC Gov/Credit				6.70%	6.70%	1.68%	1.68%				
Wells Capital	555,051	16.8%	17.5%	7.19%	6.99%	0.96%	0.78%	5.98%	5.79%	6.22%	6.01%
BC US Credit BAA				6.93%	6.93%	-1.37%	-1.37%	4.90%	4.90%	5.33%	5.33%
TOTAL FIXED INCOME	1,813,991	55.0%	55.0%	6.42%	6.29%	2.40%	2.27%	5.50%	5.36%	6.23%	6.07%
BC Aggregate				6.00%	6.00%	1.85%	1.85%	4.06%	4.06%	3.76%	3.76%
CASH EQUIVALENTS											
Northern Trust (1)	1,482,381			0.12%	0.12%	0.01%	0.01%	N/A	N/A	N/A	N/A
TOTAL CASH EQUIVALENTS	1,482,381	45.0%	45.0%	0.12%	0.12%	0.01%	0.01%	0.05%	0.05%	0.13%	0.13%
90 Day T-Bill				0.19%	0.19%	0.02%	0.02%	0.09%	0.09%	0.09%	0.09%

**PETROLEUM TANK RELEASE FUND
INVESTMENT PERFORMANCE REPORT AS OF JUNE 30, 2016**

	June-16			Current FYTD		Prior Year FY15		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	Allocation			Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net
	Market Value	Actual	Policy								
TOTAL PETROLEUM TANK RELEASE	7,149,512	100.0%	100.0%	3.23%	3.17%	1.20%	1.13%	2.72%	2.65%	3.13%	3.05%
<i>POLICY TARGET BENCHMARK</i>				3.06%	3.06%	0.94%	0.94%	2.07%	2.07%	1.92%	1.92%
TOTAL RELATIVE RETURN				0.17%	0.11%	0.25%	0.19%	0.66%	0.59%	1.21%	1.13%
FIXED INCOME											
Western Asset	1,082,899	15.1%	15.9%	6.79%	6.64%	2.76%	2.62%	5.21%	5.07%	5.32%	5.16%
Prudential	387,027	5.4%	4.0%	7.12%	6.83%	2.32%	2.05%	5.36%	5.08%	5.51%	5.22%
PIMCO (DiSCO II) (1)	146,416	2.0%	2.0%	4.39%	4.39%	4.32%	4.32%	N/A	N/A	N/A	N/A
PIMCO (BRAVO II) (1)	83,609	1.2%	1.2%	7.02%	7.02%	10.36%	10.36%	N/A	N/A	N/A	N/A
BC Aggregate				6.00%	6.00%	1.85%	1.85%	4.06%	4.06%	3.76%	3.76%
Declaration (Total Return) (1)	280,464	3.9%	3.9%	2.59%	2.59%	3.55%	3.55%	N/A	N/A	N/A	N/A
3m LIBOR				0.49%	0.49%	0.26%	0.26%				
State Street	502,332	7.0%	7.0%	6.71%	6.68%	1.70%	1.66%	N/A	N/A	N/A	N/A
BC Gov/Credit				6.70%	6.70%	1.68%	1.68%				
Wells Capital	1,094,762	15.3%	15.9%	7.19%	6.99%	0.96%	0.78%	5.98%	5.79%	6.22%	6.01%
BC US Credit BAA				6.93%	6.93%	-1.37%	-1.37%	4.90%	4.90%	5.33%	5.33%
TOTAL FIXED INCOME	3,577,510	50.0%	50.0%	6.42%	6.29%	2.40%	2.27%	5.50%	5.36%	6.23%	6.07%
BC Aggregate				6.00%	6.00%	1.85%	1.85%	4.06%	4.06%	3.76%	3.76%
CASH EQUIVALENTS											
Northern Trust (1)	3,572,002			0.12%	0.12%	0.01%	0.01%	N/A	N/A	N/A	N/A
TOTAL CASH EQUIVALENTS	3,572,002	50.0%	50.0%	0.12%	0.12%	0.01%	0.01%	0.05%	0.05%	0.13%	0.13%
90 Day T-Bill				0.19%	0.19%	0.02%	0.02%	0.09%	0.09%	0.09%	0.09%

INSURANCE REGULATORY TRUST FUND
INVESTMENT PERFORMANCE REPORT AS OF JUNE 30, 2016

	June-16			Current FYTD		Prior Year FY15		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	Allocation			Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net
	Market Value	Actual	Policy								
TOTAL INSURANCE REGULATORY TRUST	1,085,836	100.0%	100.0%	1.58%	1.46%	2.15%	2.04%	4.52%	4.39%	5.03%	4.88%
<i>POLICY TARGET BENCHMARK</i>				1.40%	1.40%	1.75%	1.75%	3.86%	3.86%	3.92%	3.92%
TOTAL RELATIVE RETURN				0.19%	0.06%	0.40%	0.29%	0.66%	0.53%	1.11%	0.96%
LARGE CAP DOMESTIC EQUITY											
Los Angeles Capital	49,533	4.6%	4.5%	5.44%	5.24%	12.53%	12.32%	14.28%	14.07%	13.79%	13.58%
<i>Russell 1000 Growth</i>				3.02%	3.02%	10.56%	10.56%	13.07%	13.07%	12.35%	12.35%
LSV	47,618	4.4%	4.5%	-3.01%	-3.30%	7.16%	6.87%	10.08%	9.78%	11.91%	11.61%
<i>Russell 1000 Value</i>				2.86%	2.86%	4.13%	4.13%	9.87%	9.87%	11.35%	11.35%
LA Capital	33,184	3.1%	3.0%	5.96%	5.82%	8.45%	8.31%	12.61%	12.48%	13.05%	12.89%
<i>Russell 1000</i>				2.94%	2.94%	7.37%	7.37%	11.48%	11.48%	11.88%	11.88%
Clifton Group	32,795	3.0%	3.0%	5.29%	5.22%	7.17%	7.10%	12.07%	11.99%	12.53%	12.42%
<i>S&P 500</i>				3.99%	3.99%	7.42%	7.42%	11.66%	11.66%	12.10%	12.10%
TOTAL LARGE CAP DOMESTIC EQUITY	163,131	15.0%	15.0%	2.91%	2.72%	9.02%	8.83%	12.25%	12.05%	12.86%	12.65%
<i>Russell 1000</i>				2.94%	2.94%	7.37%	7.37%	11.48%	11.48%	12.11%	12.11%
SMALL CAP DOMESTIC EQUITY											
PIMCO RAE (formerly Research Affiliates)	22,905	2.1%	2.5%	-3.87%	-4.14%	5.51%	5.18%	8.14%	7.81%	9.82%	9.43%
Clifton	31,983	2.9%	2.5%	-5.52%	-5.98%	8.24%	8.03%	8.43%	8.04%	9.67%	9.26%
TOTAL SMALL CAP DOMESTIC EQUITY	54,888	5.1%	5.0%	-4.85%	-5.27%	7.46%	7.23%	8.46%	8.09%	9.86%	9.45%
<i>Russell 2000</i>				-6.73%	-6.73%	6.49%	6.49%	7.09%	7.09%	8.35%	8.35%
INTERNATIONAL EQUITY											
Capital Group (2)	71	0.0%	4.0%	N/A	N/A	-1.35%	-1.73%	N/A	N/A	N/A	N/A
LSV	45,463	4.2%	4.0%	-11.21%	-11.55%	-3.33%	-3.73%	2.98%	2.58%	2.44%	2.00%
<i>MSCI EAFE</i>				-10.16%	-10.16%	-4.22%	-4.22%	2.06%	2.06%	1.68%	1.68%
William Blair	38,789	3.6%	4.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<i>MSCI ACWI ex-US IMI (Net)</i>											
DFA	11,061	1.0%	1.0%	-9.28%	-9.28%	-3.27%	-3.27%	6.22%	6.01%	4.41%	3.98%
Vanguard (1)	11,385	1.0%	1.0%	-7.27%	-7.27%	0.57%	0.57%	6.62%	6.48%	4.02%	3.77%
<i>S&P/Citigroup Broad Market Index < \$2BN</i>				-3.37%	-3.37%	1.14%	1.14%	7.29%	7.29%	7.29%	4.37%
TOTAL INTERNATIONAL EQUITY	106,770	9.8%	10.0%	-10.44%	-10.74%	-2.11%	-2.43%	3.31%	2.94%	2.74%	2.31%
<i>MSCI EAFE</i>				-10.16%	-10.16%	-4.22%	-4.22%	2.06%	2.06%	1.68%	1.68%

INSURANCE REGULATORY TRUST FUND
INVESTMENT PERFORMANCE REPORT AS OF JUNE 30, 2016

	June-16			Current FYTD		Prior Year FY15		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	<u>Allocation</u>			Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net
	Market Value	Actual	Policy								
FIXED INCOME											
Western Asset	118,422	10.9%	11.6%	6.79%	6.64%	2.76%	2.62%	5.21%	5.07%	5.32%	5.16%
Prudential	42,324	3.9%	2.8%	7.12%	6.83%	2.32%	2.05%	5.36%	5.08%	5.51%	5.22%
PIMCO (DiSCO II) (1)	9,354	0.9%	0.9%	4.39%	4.39%	4.32%	4.32%	N/A	N/A	N/A	N/A
PIMCO (BRAVO II) (1)	5,341	0.5%	0.5%	7.02%	7.02%	10.36%	10.36%	N/A	N/A	N/A	N/A
BC Aggregate				6.00%	6.00%	1.85%	1.85%	4.06%	4.06%	3.76%	3.76%
Declaration (Total Return) (1)	30,670	2.8%	2.8%	2.59%	2.59%	3.55%	3.55%	N/A	N/A	N/A	N/A
3m LIBOR				0.49%	0.49%	0.26%	0.26%				
State Street	54,933	5.1%	4.9%	6.71%	6.68%	1.70%	1.66%	N/A	N/A	N/A	N/A
BC Gov/Credit				6.70%	6.70%	1.68%	1.68%				
Wells Capital	119,719	11.0%	11.6%	7.19%	6.99%	0.96%	0.78%	5.98%	5.79%	6.22%	6.01%
BC US Credit BAA				6.93%	6.93%	-1.37%	-1.37%	4.90%	4.90%	5.33%	5.33%
TOTAL FIXED INCOME	380,763	35.1%	35.0%	6.42%	6.29%	2.40%	2.27%	5.50%	5.36%	6.23%	6.07%
BC Aggregate				6.00%	6.00%	1.85%	1.85%	4.06%	4.06%	3.76%	3.76%
CASH EQUIVALENTS											
Northern Trust (1)	380,283			0.12%	0.12%	0.01%	0.01%	N/A	N/A	N/A	N/A
TOTAL CASH EQUIVALENTS	380,283	35.0%	35.0%	0.12%	0.12%	0.01%	0.01%	0.05%	0.05%	0.13%	0.13%
90 Day T-Bill				0.19%	0.19%	0.02%	0.02%	0.09%	0.09%	0.09%	0.09%

PERS Annual Investment Report

Periods ended June 30 and September 30, 2016

November 8, 2016

Dave Hunter, Executive Director/CIO

Darren Schulz, Deputy Chief Investment Officer

ND Retirement & Investment Office (RIO)

State Investment Board (SIB)

Executive Summary for periods ended June 30, 2016

Investment Performance and Risk Update –

- **For the fiscal year ended June 30, 2016, PERS generated a net investment return of 0.28% versus a policy benchmark of 0.56%.** Disappointing absolute and relative returns in World Equity (down 7.3% actual vs down 2.8% index) and Fixed Income (+4.5% actual vs +6.2% index) were partially offset by above benchmark results in U.S. Equity (+1.9% actual vs +0.7% index) and International Equity (down 8% actual vs down 10.5% index). Global Real Assets consistently outperformed benchmarks (+8% actual vs +6.3% index) and included Real Estate (+11.3% actual vs +10.6% index), Timber (+4.3% actual vs +3.5% index) and Infrastructure (+2.9% actual vs +0.6% index).
- **Asset allocation is the primary driver of returns over the long-term.** PERS generated a net return of 6.5% for the 5-years ended June 30, 2016, which exceeded the policy benchmark (of 6.1%) by just over 0.40%. During the last 5-years, asset allocation and active management generated over \$670 million (94%) and \$45 million¹ (6%) of PERS net investment income, respectively.
- **PERS's investment returns have consistently ranked in the second quartile of the Callan Public Fund Sponsor Database over the last five years.** On an unadjusted basis, PERS returns ranked in the 33rd percentile for the 3- and 5-years ended June 30, 2016 (thereby outperforming 67% of other U.S. public pension plans).
- **Since 2008, PERS risk (as measured by actual standard deviation divided by the policy benchmark) has declined from over 115% to approximately 105% on a rolling 3- and 5-years basis.**
- **PERS net investment returns have approximated long-term assumptions over the last 30-years.**

Active Management Enhanced Returns by \$45 million in the last 5-years

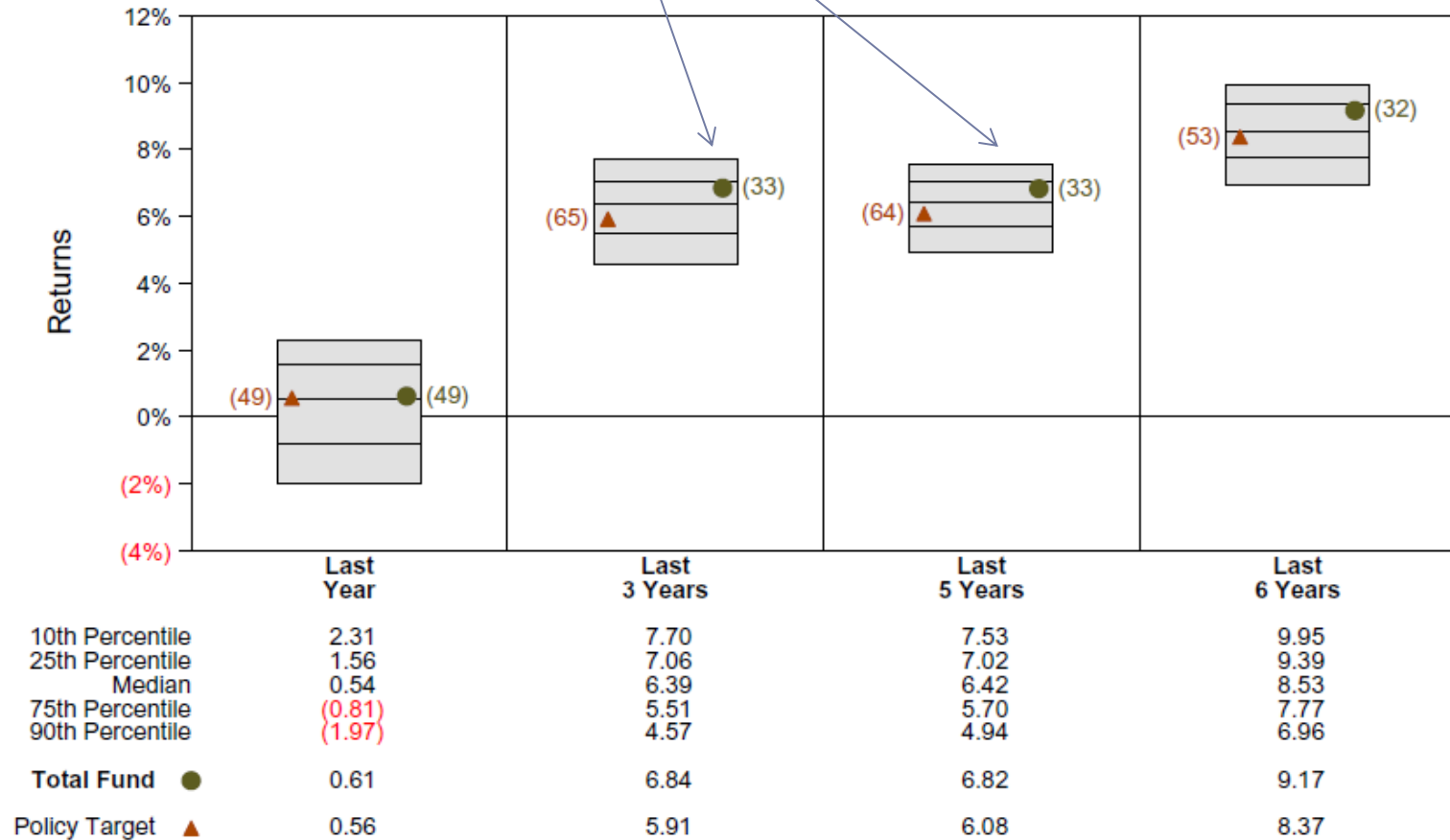
	<u>1 Yr Ended 6/30/2016</u>	<u>3 Yrs Ended 6/30/2016</u>	<u>5 Yrs Ended 6/30/2016</u>	<u>Risk 5 Yrs Ended 6/30/2016</u>	<u>Risk Adj Excess Return 5 Yrs Ended 6/30/2016</u>
PERS (Main Plan)					
\$ 2,459,388,086					
Total Fund Return - Net	0.28%	6.51%	6.49%	7.7%	0.09%
Policy Benchmark Return	0.56%	5.92%	6.08%	7.4%	
Excess Return	-0.28%	0.59%	0.41%	105%	

One-Year Returns: PERS Main Plan posted a net investment return of **0.28%** for the year ended June 30, 2016, which trailed its performance benchmark of 0.56% (by 0.28%). Two large global equity managers, LSV and Epoch which represent \$400 million of investments, were responsible for 0.75% (or 75 bps) of negative attribution. Fixed Income was responsible for an additional 0.40% (or 40 bps) of negative attribution as the portfolio was positioned for a gradual rise in interest rates. In contrast, 10-year U.S. Treasury rates fell from 2.35% to less than 1.50% during the year.

Five-Year Returns: PERS Main Plan posted a net investment return of **6.49%** for the 5-years ended June 30, 2016, largely due to strong results in real estate (up 13%) and U.S. public equities (up 11%). **Despite disappointing absolute and relative returns last year, active management generated \$45 million of incremental income for PERS for the 5-year period ended June 30, 2016.**

PERS Main Plan – 33rd Percentile “Gross Returns” For the 3- and 5-Year Periods Ended June 30, 2016

CAI Public Fund Sponsor Database

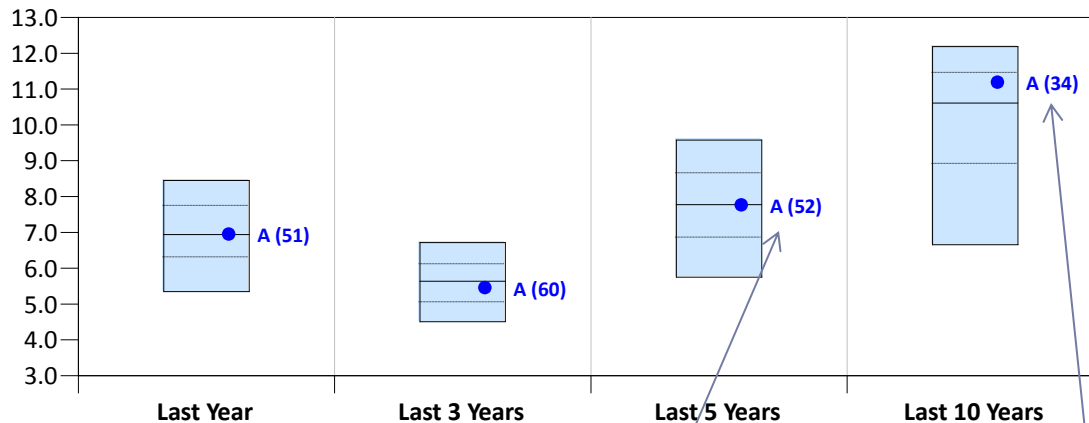


PERS posted returns in the 33rd percentile for the 5-years ended June 30, 2016.

PERS Risk Profile has Migrated Downward over the Last 5-Years

Standard deviation is used to measure investment (or portfolio) volatility whereas a lower standard deviation is generally preferred over a higher standard deviation.

Standard Deviation
for Periods Ended June 30, 2016
Group: CAI Public Fund Sponsor Database



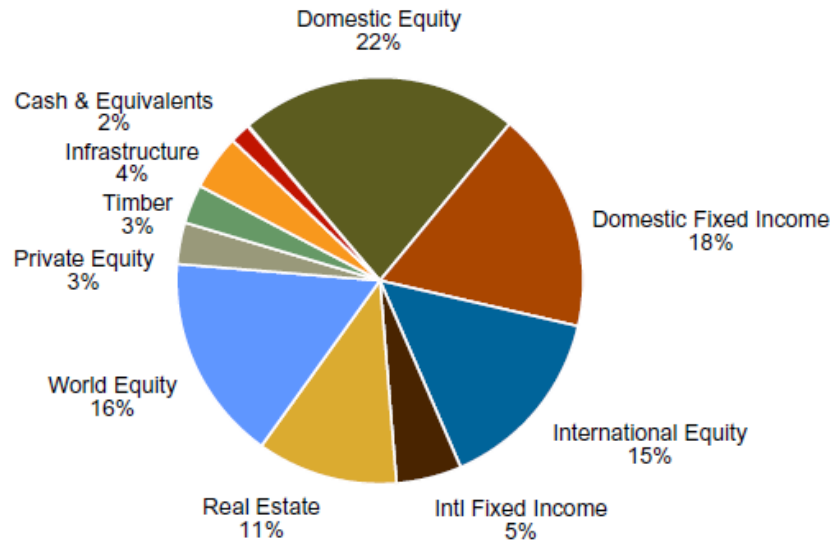
	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	8.5	6.7	9.6	12.2
25th Percentile	7.7	6.1	8.6	11.4
Median	6.9	5.6	7.8	10.6
75th Percentile	6.3	5.0	6.8	8.9
90th Percentile	5.4	4.5	5.8	6.7
Member Count	252	237	219	188
Total Fund-PERS ● A	6.9	5.4	7.7	11.2

Risk, as measured by standard deviation, has declined from the 34th percentile in the “Last 10 Years” down to the 52nd percentile in the “Last 5 Years”.

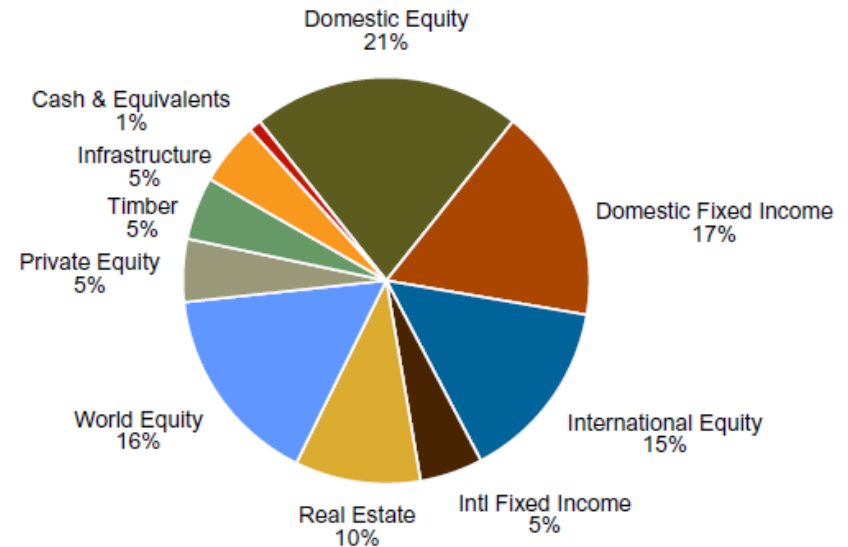
PERS Actual Asset Allocations within 1% to 2% of Target

As of June 30, 2016

Actual Asset Allocation



Target Asset Allocation



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	546,892	22.2%	21.4%	0.8%	20,609
Domestic Fixed Income	433,307	17.6%	17.0%	0.6%	15,232
International Equity	367,297	14.9%	14.6%	0.3%	8,244
Intl Fixed Income	128,666	5.2%	5.0%	0.2%	5,702
Real Estate	275,539	11.2%	10.0%	1.2%	29,612
World Equity	402,558	16.4%	16.0%	0.4%	9,075
Private Equity	79,938	3.3%	5.0%	(1.7%)	(43,025)
Timber	77,460	3.1%	5.0%	(1.9%)	(45,504)
Infrastructure	108,994	4.4%	5.0%	(0.6%)	(13,969)
Cash & Equivalents	38,615	1.6%	1.0%	0.6%	14,023
Total	2,459,266	100.0%	100.0%		

Unaudited amounts subject to change

PERS – Gross Return Attribution

One Year Ended June 30, 2016

One Year Relative Attribution Effects

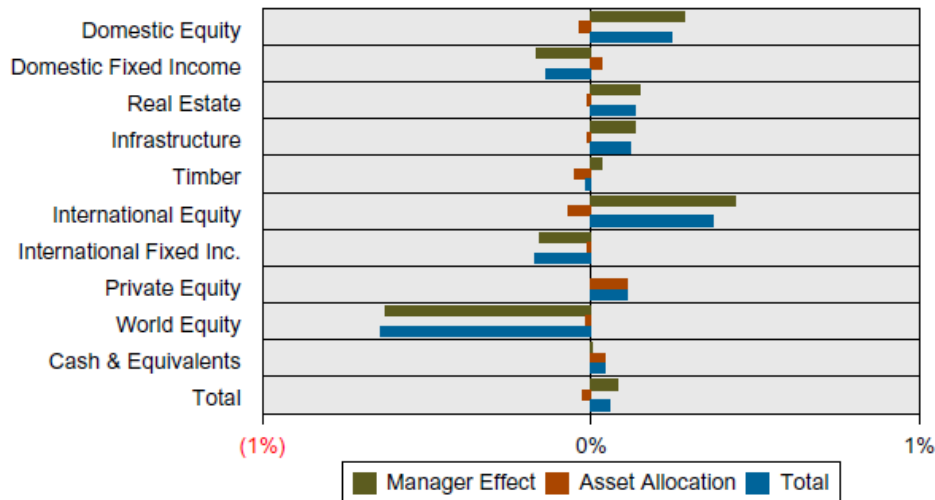
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	2.03%	0.73%	0.28%	(0.03%)	0.25%
Domestic Fixed Income	18%	17%	3.85%	4.77%	(0.17%)	0.03%	(0.14%)
Real Estate	11%	10%	11.96%	10.64%	0.15%	(0.01%)	0.13%
Infrastructure	5%	5%	3.65%	0.64%	0.13%	(0.01%)	0.12%
Timber	3%	5%	4.34%	3.49%	0.03%	(0.05%)	(0.02%)
International Equity	15%	15%	(7.76%)	(10.45%)	0.44%	(0.07%)	0.37%
International Fixed Inc.	5%	5%	7.88%	11.24%	(0.16%)	(0.01%)	(0.17%)
Private Equity	4%	5%	(7.19%)	(7.19%)	0.00%	0.11%	0.11%
World Equity	16%	16%	(6.53%)	(2.78%)	(0.63%)	(0.01%)	(0.64%)
Cash & Equivalents	1%	1%	0.29%	0.19%	0.00%	0.04%	0.04%

Total

0.61% = 0.56% + 0.08% + (0.02%)

0.06%

One Year Relative Attribution Effects



- ▶ **One Year Manager Selection added little value (based on Callan “Gross Return”) during the past year with World Equity (down 0.63%) and Fixed Income (down 0.16% to 0.17%) offsetting favorable manager selection results in US Equity (+0.28%), Real Estate (+0.15%), Infrastructure (+0.13%) and Int’l. Equity (+ 0.44%).**

Source: Callan, gross returns

PERS – Gross Return Attribution

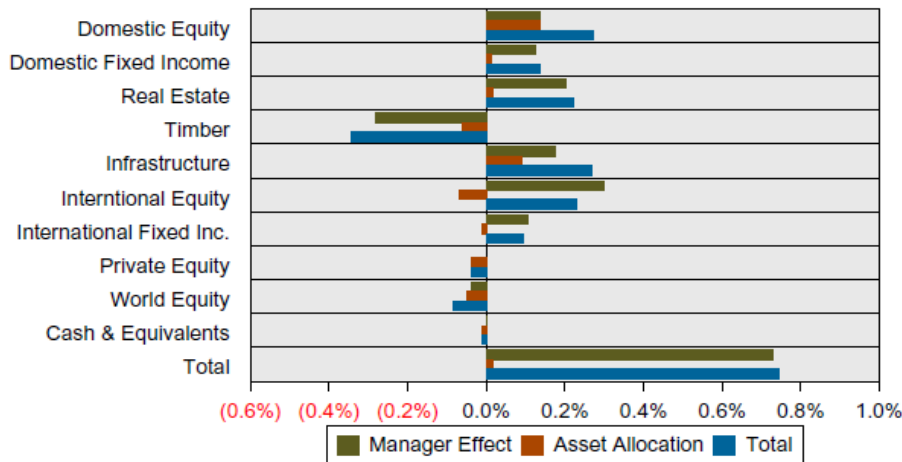
Five- Years Ended June 30, 2016

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	25%	24%	12.03%	11.24%	0.14%	0.14%	0.27%
Domestic Fixed Income	18%	18%	5.80%	4.67%	0.12%	0.01%	0.14%
Real Estate	10%	10%	13.68%	11.51%	0.20%	0.02%	0.22%
Timber	4%	5%	-	-	(0.28%)	(0.06%)	(0.34%)
Infrastructure	4%	5%	-	-	0.18%	0.09%	0.27%
International Equity	16%	16%	2.30%	0.37%	0.30%	(0.07%)	0.23%
International Fixed Inc.	5%	5%	2.29%	0.35%	0.10%	(0.01%)	0.09%
Private Equity	5%	5%	0.46%	0.46%	0.00%	(0.04%)	(0.04%)
World Equity	12%	12%	-	-	(0.04%)	(0.05%)	(0.09%)
Cash & Equivalents	1%	1%	0.11%	0.09%	0.00%	(0.01%)	(0.01%)

Total **6.82% = 6.08% + 0.73% + 0.02%** **0.75%**

Five Year Annualized Relative Attribution Effects



- ▶ **Manager Selection for the last 5 years was 0.75%** (based on Callan’s “Gross Returns”). International Equity generated the most excess return (of 0.30%) followed by Real Estate (0.20%) and Infrastructure (up 0.18%). U.S. Equity and Fixed Income (up 0.14% and 0.12%, respectively) also performed well. **Timber impaired results by 0.28% over the last 5-years.**

Source: Callan, gross returns

* Current Quarter Target = 16.5% Russell 1000 Index, 16.0% MSCI World, 12.7% Barclays Aggregate Index, 11.2% MSCI EAFE, 9.9% NCREIF Total Index, 5.4% NDSIB PEN - Private Equity, 5.4% Barclays Global Agg ex-US, 5.0% CPI-W, 4.9% Russell 2000 Index, 4.6% Barclays US HY Corp 2% Cp, 4.2% NCREIF Timberland Index, 3.2% MSCI EM and 1.0% 3-month Treasury Bill.

TO: State Investment Board (“SIB”) Clients
FROM: Retirement and Investment Office – Dave Hunter, Darren Schulz and Eric Chin
DATE: October 28, 2016
SUBJECT: **SIB Client Watch List Update**

RIO routinely reviews manager performance, organizational structure, investing philosophy/style and fund flows of specific strategies and the firms overall operations. These reviews serve as the basis for Staff recommendations to add, maintain or remove managers from our Watch List.

There are three firms currently on our Watch List including PIMCO (2 strategies), JPMorgan and UBS, all within the Pension Trust’s fixed income allocation.

PIMCO	MBS	\$184 million	JPMorgan	MBS	\$123 million
PIMCO	Unconstrained	64 million	UBS	International	116 million

PIMCO has been on Watch since October of 2014 largely due to significant organizational changes including the departure of PIMCO’s founder, Bill Gross, in late-September of 2014, and the prior departure of Mohamed El-Arian, PIMCO’s former CEO. Since then, there have been additional turnover including the latest announcement that Douglas Hodge, who served as PIMCO’s CEO since Mohamed El-Arian left in early-2014, will now step aside so as to allow Emmanuel Roman to become its next CEO on November 1, 2016. Mr. Roman was previously CEO of Man Group Plc, the world’s largest publicly traded hedge fund manager, since February 2013.

Despite of the above senior management turnover, PIMCO has generally performed in a satisfactory manner with strong results in less liquid strategies (e.g. DiSCO and Bravo) and moderately weak results in the public sector mandates. As a result, RIO has advised the SIB to keep PIMCO’s public mandates on Watch the last two years. During this time, the MBS strategy (\$184 million) has generally provided benchmark returns (after fees), while the Unconstrained Bond mandate has underperformed expectations (generated net returns of approximately 1.9% per annum) although recent performance has been encouraging with a 5.6% net return for the 1-year ended 9/30/2016. Given this mixed performance, **Staff recommends that both PIMCO strategies remain on Watch until RIO completes its fixed income manager review in the Pension Trust in the next few months.**

The JPMorgan Mortgage Backed Securities (MBS) mandate was placed on Watch at the April 22, 2016, board meeting following the departure Henry Song as Co-Portfolio Manager. This event followed the earlier departure of Doug Swanson as Portfolio Manager in September 2015. Although JPMorgan generally maintains strong bench strength across the board, the departure of two highly tenured portfolio managers within eight months is highly unusual. Since April, RIO has met with the new JPMorgan MBS portfolio management team in addition to Henry Song at his successor firm. Staff continues to believe there is no immediate risk to the overall management of this strategy given JPM's bench strength and relatively conservative risk profile of this specific mandate. As such, **RIO recommends that JPMorgan MBS strategy remain on Watch until Staff completes its fixed income manager review in the next few months.** The JPMorgan MBS strategy has generally provided benchmark performance since inception although recent returns trailed the MBS index by approximately 10 bps over the last year.

UBS International Debt strategy was placed on Watch in early-2015 when trailing 1-, 3-, and 5-year returns were over 30 bps below benchmark. During the last year, UBS performance has significantly improved such that inception to date results are now flat to the index (after fees) and 1-year returns (of 12%) beat the benchmark by 25 bps (after fees). **RIO continues to recommend that UBS remain on Watch until Staff completes its fixed income manager review in the next few months.**

Private Equity Update – Watch List Action

October 28, 2016

As a result of increasing concerns over the transparency provided by Adams Street, the SIB placed **Adams Street Partners on Watch** and confirmed Staff's recommendation to pause future investments with ASP until further notice.

Pension Trust Private Equity

As of June 30, 2016
(\$ in millions)

	Vintage Year	Unfunded Commitment	Net Asset Value	% Total Pension	Internal Rates of Return (IRR)				
					Net Returns				
	Commitment	Value		1-year	3-years	5-years	10-years	Inception	
Adams Street Partnerships (ASP)									
Total ASP Private Equity	\$ 213.7	\$ 67.9	\$ 37.5	0.8%	5.8%	13.6%	9.4%	10.4%	10.9%

NDSIB Watch List

Data as of 09/30/2016

PIMCO MBS (Pen.)		\$184,437,522	
	Returns	Index ¹	Excess
1 Year	3.82	3.61	0.21
3 Year	3.59	3.61	(0.02)
Inception*	2.66	2.62	0.04

*Funded 3/31/2012

PIMCO Unconstrained (Pen.)		\$63,625,363	
	Returns	Index ²	Excess
1 Year	5.93	0.61	5.32
3 Year	1.90	0.37	1.53
Inception*	2.53	0.36	2.17

*Funded 3/12/2012

JP Morgan MBS (Pen.)		\$123,474,049	
	Returns	Index ¹	Excess
1 Year	3.65	3.61	0.03
Inception*	3.68	3.52	0.16

*Funded 09/30/2014

UBS International Fixed (Pen.)		\$111,580,334	
	Returns	Index ³	Excess
1 Year	12.22	11.67	0.55
3 Year	0.66	0.75	(0.09)
Inception*	6.30	5.99	0.30

*Funded 07/01/1989

- ¹ Barclays Mortgage Index
- ² Libor 3-Month
- ³ Barclays Global Aggregate ex-US

Note: Return data is gross of fee due to data availability

PERS Long Term Results are Near Long-Term Expectations

The PERS Pension Plan is a Long Term Investor

Net investment returns for PERS Main Plan approximated 6.5% over the past 3-to-5 year periods and **7.9% over the past 25-to-30 year periods** despite challenging conditions in the international equity markets last year (down 10%) and negative rates in many international debt markets.

Fund Name	Market Values as of 6/30/16	FYTD 2016	Fiscal Years ended June 30					Periods ended 6/30/16 (annualized)					
			2015	2014	2013	2012	2011	3 Years	5 Years	15 Years	20 Years	25 Years	30 Years
PERS (Main Plan)	2,459,388,086	0.28%	3.53%	16.38%	13.44%	-0.12%	21.27%	6.51%	6.48%	5.84%	6.88%	7.86%	7.89%
Job Service	96,588,333	5.45%	3.30%	13.54%	11.71%	3.09%	16.39%	7.34%	7.33%	6.11%	7.57%	*	*
Group Insurance	37,715,356	1.49%	0.01%	0.06%	0.27%	0.24%	0.31%	0.52%	0.41%	1.64%	*	*	*
Retiree Insurance	101,623,224	0.72%	3.06%	16.53%	12.71%	2.62%	21.65%	6.55%	6.95%	5.23%	6.40%	7.17%	*

* These funds do not have the specified periods of history under SIB management.

Note: Asset allocation largely drives investment performance. Each fund has a unique allocation that takes into consideration return objectives, risk tolerance, liquidity constraints, and unique circumstances. Such considerations must be taken into account when comparing investment returns. **All figures are preliminary and subject to revision.**

PERS Activity from June 30, 2015 to June 30, 2016

		<u>PERS</u>	
Net Investment Position - June 30, 2015		\$2,419	a
Net Contributions (over Benefit Payments & Admin. Exp.)		\$26	b
Investment Earnings	c	\$24	
Investment Expenses	d	<u>(\$12)</u>	
Net Investment Earnings	(c - d)	\$12	e
Net Investment Position - June 30, 2016		<u><u>\$2,457</u></u>	f
Change in Net Investment Position	(f - a)	<u><u>\$38</u></u>	g

PERS Net Position increased by \$38 million (g) last year as Contributions exceeded Benefit Payments and Administrative Expenses by \$26 million (b), while Net Investment Earnings (e) were only \$12 million (after investment expenses).

How big is the post-retirement bill?

A relative comparison of the 50 states' payment obligations

The state of the states: how much states spend on debt, pensions and retiree healthcare

% of state revenue collections required to pay the sum of interest on bonds, the state's share of unfunded pension and retiree healthcare liabilities, and defined contribution plan payments



Source: J.P. Morgan Asset Management, state/pension plan Comprehensive Annual Financial Reports, Census, Loop Capital Markets. FY 2015.

- Bars that appear above the **red line** indicate a level at which states face critical challenges in meeting an ability to service their debt and post-retirement benefit obligations.
- Bars that appear below the **green line** identify states that one might view not requiring “a disproportionate share of revenues to service their debts.”
- Note that North Dakota’s overall funding obligations are comparatively low (third from the right).

	June-16	Current Fiscal YTD		Prior Year FY15		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	Market Value	Gross ⁽⁷⁾	Net	Gross ⁽⁷⁾	Net	Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net
TOTAL FUND	2,459,388,086	0.61%	0.28%	3.86%	3.53%	6.84%	6.51%	6.82%	6.49%
<i>POLICY TARGET BENCHMARK</i>		<i>0.56%</i>	<i>0.56%</i>	<i>2.16%</i>	<i>2.16%</i>	<i>5.92%</i>	<i>5.92%</i>	<i>6.08%</i>	<i>6.08%</i>
TOTAL RELATIVE RETURN		0.05%	-0.28%	1.71%	1.38%	0.92%	0.59%	0.74%	0.41%
GLOBAL EQUITIES	1,396,685,126	-3.59%	-3.90%	3.58%	3.24%	6.89%	6.53%	7.79%	7.50%
<i>Benchmark</i>		<i>-3.86%</i>	<i>-3.86%</i>	<i>1.54%</i>	<i>1.54%</i>	<i>5.98%</i>	<i>5.98%</i>	<i>7.00%</i>	<i>7.00%</i>
Epoch (1)	177,644,686	-5.93%	-6.53%	8.58%	7.85%	6.49%	5.78%	7.57%	6.80%
LSV	224,913,378	-7.05%	-7.85%	1.94%	1.03%	6.58%	5.84%	N/A	N/A
Total Global Equities	402,558,064	-6.53%	-7.27%	4.67%	3.83%	6.44%	5.70%	7.14%	6.55%
<i>MSCI World</i>		<i>-2.78%</i>	<i>-2.78%</i>	<i>1.43%</i>	<i>1.43%</i>	<i>6.95%</i>	<i>6.95%</i>	<i>7.72%</i>	<i>7.72%</i>
Domestic - broad	546,891,977	2.03%	1.90%	8.64%	8.46%	11.55%	11.33%	11.47%	11.28%
<i>Benchmark</i>		<i>0.72%</i>	<i>0.72%</i>	<i>7.26%</i>	<i>7.26%</i>	<i>10.54%</i>	<i>10.54%</i>	<i>10.49%</i>	<i>10.49%</i>
Large Cap Domestic									
LA Capital	158,610,932	5.17%	4.95%	12.76%	12.52%	14.27%	14.03%	13.62%	13.40%
<i>Russell 1000 Growth</i>		<i>3.02%</i>	<i>3.02%</i>	<i>10.56%</i>	<i>10.56%</i>	<i>13.07%</i>	<i>13.07%</i>	<i>12.35%</i>	<i>12.35%</i>
LA Capital	98,390,650	6.04%	5.92%	8.26%	8.12%	12.62%	12.48%	13.07%	12.90%
<i>Russell 1000</i>		<i>2.94%</i>	<i>2.94%</i>	<i>7.37%</i>	<i>7.37%</i>	<i>11.48%</i>	<i>11.48%</i>	<i>11.88%</i>	<i>11.88%</i>
Northern Trust	73,847,274	1.76%	1.76%	6.26%	5.89%	11.10%	10.70%	12.55%	12.16%
Clifton	88,640,704	4.60%	4.60%	7.43%	7.41%	11.89%	11.88%	12.45%	12.39%
<i>S&P 500</i>		<i>3.99%</i>	<i>3.99%</i>	<i>7.42%</i>	<i>7.42%</i>	<i>11.66%</i>	<i>11.66%</i>	<i>12.10%</i>	<i>12.10%</i>
Total Large Cap Domestic	419,489,561	4.63%	4.52%	9.48%	9.30%	12.77%	12.60%	12.86%	12.64%
<i>Russell 1000 (2)</i>		<i>2.94%</i>	<i>2.94%</i>	<i>7.37%</i>	<i>7.37%</i>	<i>11.48%</i>	<i>11.48%</i>	<i>12.09%</i>	<i>12.09%</i>
Small Cap Domestic									
Atlanta Capital	58,383,178	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Callan (5) (6)	-	N/A	N/A	3.98%	3.98%	N/A	N/A	N/A	N/A
Clifton	69,019,238	-5.49%	-5.85%	7.58%	7.17%	8.31%	7.84%	9.61%	9.13%
Total Small Cap Domestic	127,402,416	-6.86%	-7.04%	5.77%	5.57%	7.22%	6.86%	9.40%	8.95%
<i>Russell 2000</i>		<i>-6.73%</i>	<i>-6.73%</i>	<i>6.49%</i>	<i>6.49%</i>	<i>7.09%</i>	<i>7.09%</i>	<i>8.35%</i>	<i>8.35%</i>

PERS Main Plan underperformed by 0.28% last year

in part due to the fixed income portfolio being positioned for a gradual rise in interest rates.

Epoch and LSV posted sharply disappointing results as Epoch lost 6.53% and LSV lost 7.85%, while the MSCI World Index was only down 2.78%.

Despite the very poor performance by Epoch and LSV, the Global Equity portfolio still created 0.50% (7.50% vs 7.00%) of positive excess return the last 5-yrs.

	June-16	Current Fiscal YTD		Prior Year FY15		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	Market Value	Gross ⁽⁷⁾	Net	Gross ⁽⁷⁾	Net	Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net
International - broad Benchmark	367,296,626	-7.76%	-7.95%	-2.53%	-2.71%	3.46%	3.20%	5.30%	5.01%
		-10.46%	-10.46%	-4.37%	-4.37%	1.29%	1.29%	3.58%	3.58%
Developed International Capital Group (7) MSCI EAFE (3)	47,576	N/A	N/A	-1.78%	-2.20%	N/A	N/A	N/A	N/A
				-4.22%	-4.22%				
NTGI MSCI World Ex US	129,390,499	-9.50%	-9.54%	-4.98%	-5.01%	N/A	N/A	N/A	N/A
		-9.84%	-9.84%	-5.28%	-5.28%				
William Blair MSCI ACWI ex-US (Net)	61,876,297	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DFA (5)	36,469,074	-9.28%	-9.28%	-3.27%	-3.27%	6.24%	6.01%	4.42%	3.99%
Wellington	41,342,082	1.90%	1.06%	0.53%	-0.31%	9.80%	8.90%	9.09%	8.18%
S&P/Citigroup BMI EPAC < \$2BN		-3.37%	-3.37%	1.14%	1.14%	7.29%	7.29%	4.37%	4.37%
Total Developed International MSCI EAFE (3)	269,125,528	-7.66%	-7.92%	-3.10%	-3.34%	4.16%	3.87%	3.11%	2.71%
		-10.16%	-10.16%	-4.22%	-4.22%	2.06%	2.06%	1.68%	1.68%
Emerging Markets									
Axiom	72,803,238	-10.32%	-10.32%	N/A	N/A	N/A	N/A	N/A	N/A
DFA (5)	25,367,860	-5.64%	-5.64%	-1.73%	-1.73%	2.65%	2.43%	-0.21%	-0.66%
Total Emerging Markets MSCI Emerging Markets	98,171,098	-9.26%	-9.26%	-0.86%	-0.88%	0.46%	0.28%	-0.77%	-1.17%
		-12.06%	-12.06%	-5.13%	-5.13%	-1.56%	-1.56%	-3.78%	-3.78%
Private Equity									
Total Private Equity (5)	79,938,460	-7.19%	-7.20%	-5.37%	-5.39%	-2.96%	-2.98%	0.49%	0.48%

International Equity returns have surpassed benchmarks, but underperformed versus long-term expectations. **Private Equity** has consistently underperformed in recent years which led to a major restructuring 2016.

	June-16	Current Fiscal YTD		Prior Year FY15		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	Market Value	Gross ⁽⁷⁾	Net	Gross ⁽⁷⁾	Net	Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net
GLOBAL FIXED INCOME Benchmark	562,072,624	4.76%	4.50%	0.65%	0.40%	4.44%	4.19%	3.83%	3.63%
		6.21%	6.21%	-2.22%	-2.22%	3.63%	3.63%	2.35%	2.35%
Domestic Fixed Income Benchmark	433,307,321	3.85%	3.63%	3.40%	3.17%	5.02%	4.80%	4.49%	4.33%
		4.77%	4.77%	1.21%	1.21%	4.14%	4.14%	2.91%	2.91%
Investment Grade Fixed									
PIMCO (DiSCO II) (5)	45,551,535	4.39%	4.39%	4.32%	4.32%	6.84%	6.84%	N/A	N/A
BC Aggregate		6.00%	6.00%	1.85%	1.85%	4.06%	4.06%		
State Street	33,297,688	19.28%	19.23%	6.31%	6.28%	10.44%	10.40%	N/A	N/A
BC Long Treasuries		19.30%	19.30%	6.32%	6.32%	10.46%	10.46%		
PIMCO Unconstrained	30,632,861	-0.64%	-0.95%	1.34%	0.93%	N/A	N/A	N/A	N/A
3m LIBOR		0.49%	0.49%	0.26%	0.26%				
Declaration (Total Return) (42,992,248	2.59%	2.59%	3.63%	3.63%	4.30%	4.30%	N/A	N/A
3m LIBOR		0.49%	0.49%	0.26%	0.26%	0.33%	0.33%		
JP Morgan	56,570,641	4.60%	4.32%	N/A	N/A	N/A	N/A	N/A	N/A
PIMCO	90,984,090	4.42%	4.24%	2.33%	2.15%	3.60%	3.42%	N/A	N/A
BC Mortgage Backed Securities Index		4.34%	4.34%	2.28%	2.28%	3.76%	3.76%		
Total Investment Grade F	300,029,063	5.15%	5.01%	3.66%	3.53%	4.81%	4.69%	5.16%	5.02%
BC Aggregate		6.00%	6.00%	1.85%	1.85%	4.06%	4.06%	3.76%	3.76%
Below Investment Grade									
Loomis Sayles	104,681,154	-0.25%	-0.75%	1.33%	0.83%	4.61%	4.10%	5.77%	5.27%
PIMCO (BRAVO II) (5)	26,520,830	7.02%	7.02%	10.36%	10.36%	N/A	N/A	N/A	N/A
Goldman Sachs 2006 Fund	619,615	3.00%	3.00%	25.65%	25.65%	17.57%	17.57%	8.95%	8.95%
Goldman Sachs Fund V (5)	1,456,659	-5.12%	-5.12%	14.43%	14.43%	6.11%	6.11%	8.41%	8.41%
Total Below Investment G	133,278,258	0.69%	0.28%	2.53%	2.09%	5.43%	4.98%	6.70%	6.26%
BC High Yield 2% Issuer Constrained Inde		1.65%	1.65%	-0.39%	-0.39%	4.20%	4.20%	5.84%	5.84%
International Fixed Income Benchmark	128,765,303	7.88%	7.50%	-9.37%	-9.73%	2.01%	1.65%	1.37%	1.09%
		11.24%	11.24%	-13.19%	-13.19%	1.85%	1.85%	0.41%	0.41%
Developed Investment G									
UBS Global (Brinson)	55,102,330	11.43%	11.07%	-13.46%	-13.82%	1.52%	1.20%	0.03%	-0.28%
BC Global Aggregate ex-US (4)		11.24%	11.24%	-13.19%	-13.19%	1.85%	1.85%	0.28%	0.28%
Brandywine	73,662,972	5.12%	4.73%	-5.38%	-5.74%	2.66%	2.26%	4.50%	4.09%
BC Global Aggregate (ex-US)		8.87%	8.87%	-7.10%	-7.10%	2.79%	2.79%	1.77%	1.77%
Total Developed Investm	128,765,303	7.88%	7.50%	-9.37%	-9.73%	2.01%	1.65%	2.29%	1.93%
BC Global Aggregate ex-US		11.24%	11.24%	-13.19%	-13.19%	1.85%	1.85%	0.28%	0.28%

Global Fixed Income has performed well over the last 5-years generating **1.28%** of excess return and a **3.63%** per annum return the last 5-years.

Current fiscal year returns were adversely impacted by the portfolio being positioned for a gradual rise in interest rates. **In contrast, interest rates fell sharply during the year** with the 10-year U.S. Treasury declining from **2.35%** at June 30, 2015 to **1.49%** at June 30, 2016.

U.S. Fixed Income underperformed by **1.14%** last year, but **outperformed** by **1.42%** per annum the last 5-years.

International Debt underperformed by **3.74%** last year, although **absolute returns were strong (7.5%)**.

	June-16	Current Fiscal YTD		Prior Year FY15		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	Market Value	Gross ⁽⁷⁾	Net	Gross ⁽⁷⁾	Net	Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net
GLOBAL REAL ASSETS Benchmark	462,014,998	8.53%	7.99%	9.48%	9.07%	9.80%	9.34%	7.46%	7.11%
		6.28%	6.28%	8.78%	8.78%	7.86%	7.86%	6.28%	6.28%
Global Real Estate									
INVESCO - Core	123,754,987	10.96%	10.59%	16.38%	15.97%	12.72%	12.32%	12.09%	11.65%
INVESCO - Fund II (5)	4,594,312	6.65%	6.65%	6.23%	6.23%	9.06%	9.06%	15.56%	15.56%
INVESCO - Fund III (5)	15,542,118	14.25%	14.25%	18.70%	18.70%	17.06%	17.06%	N/A	N/A
INVESCO - Fund IV (6)	10,713,159	4.66%	4.66%	N/A	N/A	N/A	N/A	N/A	N/A
INVESCO - Asia Real Estate	948,688	121.40%	121.40%	16.19%	16.19%	43.66%	43.66%	23.12%	23.12%
INVESCO - Asia Real Estate	4,675,018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
J.P. Morgan Strategic & Sp	103,261,920	12.25%	10.95%	14.71%	13.64%	14.01%	12.87%	14.00%	12.93%
J.P. Morgan Alternative Pro	172,924	2.80%	2.80%	-33.28%	-33.28%	-10.60%	-10.60%	1.01%	0.94%
J.P. Morgan Greater Europ	5,550,934	24.44%	24.44%	16.90%	16.90%	34.32%	34.32%	N/A	N/A
J.P. Morgan Greater China	6,346,954	16.24%	16.24%	16.74%	16.74%	32.27%	32.27%	16.18%	16.18%
Total Global Real Estate	275,561,014	11.96%	11.34%	15.79%	15.25%	14.82%	14.26%	13.68%	13.15%
NCREIF TOTAL INDEX		10.64%	10.64%	12.98%	12.98%	11.60%	11.60%	11.51%	11.51%
Timber									
TIR - Teredo	17,083,529	9.29%	9.29%	15.52%	15.52%	10.42%	10.42%	6.70%	6.70%
TIR - Springbank	60,376,094	2.97%	2.97%	-1.98%	-1.98%	0.38%	0.38%	-1.38%	-1.38%
Total Timber (5)	77,459,623	4.34%	4.34%	3.94%	3.94%	3.63%	3.63%	2.28%	2.28%
NCREIF Timberland Index		3.49%	3.49%	10.02%	10.02%	7.77%	7.77%	6.72%	6.72%
Infrastructure									
JP Morgan (Asian) (5)	14,184,664	-9.66%	-9.66%	-2.58%	-2.58%	-3.00%	-3.00%	1.61%	1.61%
JP Morgan (IIF)	71,935,420	5.11%	3.93%	1.06%	0.23%	5.27%	4.26%	6.17%	5.09%
Grosvenor (formerly Credit S	20,927,239	8.42%	8.42%	5.37%	5.37%	8.85%	8.85%	N/A	N/A
Grosvenor CIS II (6)	1,947,038	6.10%	6.10%	N/A	N/A	N/A	N/A	N/A	N/A
Total Infrastructure	108,994,361	3.66%	2.89%	1.23%	0.72%	4.74%	4.09%	5.24%	4.71%
CPI		0.64%	0.64%	-0.38%	-0.38%	0.76%	0.76%	0.81%	0.81%
Cash Equivalents									
Northern Trust STIF	38,615,338	0.29%	0.29%	0.06%	0.06%	0.13%	0.13%	0.12%	0.12%
Total Cash Equivalents	38,615,338	0.29%	0.29%	0.06%	0.06%	0.13%	0.13%	0.12%	0.12%
90 Day T-Bill		0.19%	0.19%	0.02%	0.02%	0.09%	0.09%	0.09%	0.09%

Global Real Assets have

consistently performed above benchmark with 1- and 5-year excess returns ranging from 1.71% to 0.83%, respectively.

Real Estate was the best performing sector up 11% last year and up 13% p.a. the last 5 years.

Timber returns benefitted from a one-time \$3 million fee reversal in fiscal 2016.

Infrastructure has also performed well with a 5-year net annual return of 4.71%.

Job Service, Retiree Health and Group Insurance - June 30, 2016

	1 Yr Ended 6/30/2016	3 Yrs Ended 6/30/2016	5 Yrs Ended 6/30/2016	Risk 5 Yrs Ended 6/30/2016	Risk Adj Excess Return 5 Yrs Ended 6/30/2016
JOB SERVICE PENSION PLAN					
\$	96,588,333				
Total Fund Return - Net	5.45%	7.35%	7.33%	6.0%	1.01%
Policy Benchmark Return	2.20%	5.48%	5.70%	5.5%	
Excess Return	3.24%	1.87%	1.63%	109%	
PERS RETIREE HEALTH					
\$	101,623,224				
Total Fund Return - Net	0.72%	6.55%	6.94%	8.6%	-0.80%
Policy Benchmark Return	1.60%	6.97%	7.11%	7.8%	
Excess Return	-0.88%	-0.42%	-0.17%		
PERS GROUP INSURANCE					
\$	37,715,356				
Total Fund Return - Net	1.49%	0.51%	0.41%	0.5%	0.04%
Policy Benchmark Return	1.56%	0.54%	0.36%	0.5%	
Excess Return	-0.07%	-0.03%	0.05%		

Asset Allocation:

Job Service (40% Equity / 60% Bonds) performed well due to its de-risking strategy which included low-volatility equities and core fixed income.

Retiree Health (60% Equity / 40% Bonds) had underperformed its benchmarks, but generated reasonable absolute returns due to large cap tilt and no private equity.

Group Insurance (90% short-term bonds and 10% cash) has generally met expectations.



Investment Fee Update

As of June 30, 2016

Investment Fees and Expenses – Overview

During the last three-years, investment management fees and expenses as a % of average assets under management declined from **0.65%** in fiscal 2013 to **0.51%** in fiscal 2014 to **0.48%** in fiscal 2015 and to less than **0.45%** in fiscal 2016.

<u>All State Investment Board Clients</u>	<u>Investment Fees and Expenses</u> a	<u>Average "Assets Under Management"</u> b	<u>% of "AUM"</u> a / b
Fiscal Year Ended June 30, 2013	\$45 million	\$6.9 billion	0.65%
Fiscal Year Ended June 30, 2014	\$44 million	\$8.6 billion	0.51%
Fiscal Year Ended June 30, 2015	\$48 million	\$10.1 billion	0.48%
Fiscal Year Ended June 30, 2016	\$46 million	\$10.9 billion	0.42%

➤ Based on \$10 billion of average assets under management, this **20+ bps** decline between fiscal 2013 and fiscal 2016 translates into approximately \$20 million of annual incremental savings.

➤ RIO will diligently work to prudently manage all SIB client investment fees and expenses, but acknowledges it will be challenging to reduce fees and expenses below 45 bps (0.45%) per annum in future years. Current fiscal years results were materially impacted by low incentive performance fees.

A basis point (or "bp") is equal to one one-hundredth of one percent (or 0.01%) such that 100 basis points ("bps") is equivalent to 1%.

ND Public Employees Retirement System Schedule of Investment Expenses

	FY 2016				FY 2015			
	Average Market Value	Fees in \$	Fees in %	Contribution to Total Fees	Average Market Value	Fees in \$	Fees in %	Contribution to Total Fees
Investment managers' fees:								
Global equity managers	381,723,510	1,463,105	0.38%	0.06%	367,748,943	2,847,819	0.77%	0.12%
Domestic large cap equity managers	415,066,060	1,042,600	0.25%	0.04%	424,019,221	610,866	0.14%	0.03%
Domestic small cap equity managers	117,678,274	661,525	0.56%	0.03%	121,601,493	550,418	0.45%	0.02%
Developed international equity managers	268,317,607	1,087,387	0.41%	0.05%	265,970,201	911,722	0.34%	0.04%
Emerging markets equity managers	88,000,359	717,641	0.82%	0.03%	83,685,353	692,265	0.83%	0.03%
Investment grade domestic fixed income managers	301,575,217	1,164,370	0.39%	0.05%	312,406,325	1,176,165	0.38%	0.05%
Below investment grade fixed income managers	128,662,524	1,349,888	1.05%	0.06%	128,164,584	1,440,432	1.12%	0.06%
Developed international fixed income managers	121,049,255	428,095	0.35%	0.02%	115,019,321	421,044	0.37%	0.02%
Real estate managers	256,587,200	2,470,029	0.96%	0.10%	226,488,804	2,631,744	1.16%	0.11%
Timber managers	80,540,706	(1,054,317)	-1.31%	-0.04%	93,271,813	351,187	0.38%	0.01%
Infrastructure managers	108,898,046	1,148,047	1.05%	0.05%	100,057,644	1,150,098	1.15%	0.05%
Private equity managers	84,636,554	1,524,925	1.80%	0.06%	97,531,474	1,579,453	1.62%	0.07%
Cash & equivalents managers	34,951,692	34,800	0.10%	0.00%	33,606,169	36,755	0.11%	0.00%
Total investment managers' fees	2,387,687,004	12,038,095	0.50%		2,369,571,345	14,399,967	0.61%	
Custodian fees		227,822	0.01%	0.01%		238,481	0.01%	0.01%
Investment consultant fees		150,745	0.01%	0.01%		189,876	0.01%	0.01%
Total investment expenses		12,416,661	0.52%			14,828,324	0.63%	

➤ **PERS fees declined to 52 bps from 63 bps in the last year due to various fee reduction initiatives which have benefitted from strong asset growth in North Dakota. SIB client assets under management have increased by 51% (or \$3.8 billion) in the last three years.**

Note: All amounts are deemed to be materially accurate, but are unaudited and subject to change.

A basis point is equal to one one-hundredth of one percent (or 0.01%) such that 100 basis points is equivalent to 1%.




Investment Performance Update

As of September 30, 2016

Returns improved sharply from the 1-year ended June 30, 2016, to the 1-year ended September 30, 2016.


PERS Performance for the 1-year ended June 30, 2016:

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%)**

PERS Performance for the 1-year ended September 30, 2016:

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	22%	21%	14.65%	15.11%	(0.11%)	0.04%	(0.07%)
Domestic Fixed Income	18%	17%	7.17%	7.41%	(0.06%)	(0.04%)	(0.09%)
Real Estate	11%	10%	10.81%	9.22%	0.18%	(0.03%)	0.15%
Infrastructure	5%	5%	2.14%	1.22%	0.05%	0.03%	0.08%
Timber	3%	5%	4.32%	3.28%	0.05%	0.07%	0.12%
International Equity	15%	15%	12.60%	8.90%	0.56%	(0.04%)	0.52%
International Fixed Inc.	5%	5%	11.91%	11.67%	0.01%	(0.01%)	(0.00%)
Private Equity	3%	5%	(5.77%)	(5.77%)	0.00%	0.20%	0.20%
World Equity	16%	16%	9.45%	11.36%	(0.30%)	(0.03%)	(0.33%)
Cash & Equivalents	1%	1%	0.39%	0.27%	0.00%	0.01%	0.01%

Total  **9.79% = 9.21% + 0.37% + 0.20%** **0.57%**

PERS Net Returns > 8% for 5-years ended 9/30/16

Returns for Periods Ended September 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6-1/4 Years
Total Fund					
Gross	3.76%	9.79%	6.44%	9.80%	9.43%
Net	3.68%	9.49%	6.12%	9.45%	9.08%
Target*	3.61%	9.21%	5.46%	8.85%	8.63%

	September-16			Current Fiscal YTD		Prior Year FY16		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	<u>Allocation</u>			Gross ⁽⁴⁾	Net	Gross ⁽⁴⁾	Net	Gross ⁽⁴⁾	Net	Gross ⁽⁴⁾	Net
	Market Value	Actual	Policy								
TOTAL FUND	2,548,430,036	100.0%	100.0%	3.76%	3.68%	0.61%	0.28%	6.84%	6.51%	6.82%	6.49%
POLICY BENCHMARK				3.61%	3.61%	0.56%	0.56%	5.92%	5.92%	6.08%	6.08%
GLOBAL EQUITIES	1,473,368,642	57.8%	58.0%	5.42%	5.32%	-3.59%	-3.90%	6.89%	6.53%	7.79%	7.50%
Benchmark				5.27%	5.27%	-3.86%	-3.86%	5.98%	5.98%	7.00%	7.00%
GLOBAL FIXED INCOME	578,897,676	22.7%	23.0%	2.23%	2.16%	4.76%	4.50%	4.44%	4.19%	3.83%	3.63%
Benchmark				1.72%	1.72%	6.21%	6.21%	3.63%	3.63%	2.35%	2.35%
GLOBAL REAL ASSETS	474,876,466	18.6%	19.0%	0.89%	0.81%	8.53%	7.99%	9.80%	9.34%	7.46%	7.11%
Benchmark				1.07%	1.07%	6.25%	6.25%	7.85%	7.85%	6.28%	6.28%
GLOBAL CASH	21,287,252	0.8%	0.0%	0.12%	0.12%	0.29%	0.29%	0.13%	0.13%	0.12%	0.12%
Benchmark				0.10%	0.10%	0.19%	0.19%	0.09%	0.09%	0.09%	0.09%

PERS Asset Allocations – June 30 to Sep. 30, 2016

PERS “Total Fund” up \$89 million for the quarter ended Sep. 30, 2016

Asset Class Allocation

	September 30, 2016			June 30, 2016		
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
GLOBAL EQUITY	\$1,473,368,419	57.82%	\$906,320	\$75,776,976	\$1,396,685,124	56.79%
Domestic Equity	\$568,369,740	22.30%	\$(2,171,743)	\$23,649,509	\$546,891,974	22.24%
Large Cap	435,332,058	17.08%	76,432	15,766,067	419,489,559	17.06%
Small Cap	133,037,682	5.22%	(2,248,175)	7,883,442	127,402,415	5.18%
International Equity	\$403,486,478	15.83%	\$6,486,409	\$29,703,443	\$367,296,626	14.94%
Developed Intl Equity	296,054,467	11.62%	5,961,409	20,967,530	269,125,528	10.94%
Emerging Markets	107,432,011	4.22%	525,000	8,735,913	98,171,098	3.99%
World Equity	\$423,238,786	16.61%	\$(294,859)	\$20,975,580	\$402,558,064	16.37%
Private Equity	\$78,273,416	3.07%	\$(3,113,488)	\$1,448,444	\$79,938,460	3.25%
GLOBAL FIXED INCOME	\$578,885,727	22.72%	\$4,582,762	\$12,329,890	\$561,973,075	22.85%
Domestic Fixed Income	\$448,419,094	17.60%	\$4,670,382	\$10,441,391	\$433,307,321	17.62%
Inv. Grade Fixed Income	317,499,224	12.46%	12,797,431	4,672,730	300,029,063	12.20%
Below Inv. Grade Fixed Income	130,919,870	5.14%	(8,127,049)	5,768,662	133,278,258	5.42%
International Fixed Income	\$130,466,633	5.12%	\$(87,620)	\$1,888,499	\$128,665,754	5.23%
GLOBAL REAL ASSETS	\$474,874,827	18.63%	\$8,586,917	\$4,295,014	\$461,992,896	18.79%
Real Estate	289,571,257	11.36%	9,576,170	4,456,175	275,538,912	11.20%
Timber	77,075,733	3.02%	(383,891)	()	77,459,623	3.15%
Infrastructure	108,227,837	4.25%	(605,363)	(161,161)	108,994,361	4.43%
Cash & Equivalents	\$21,287,252	0.84%	\$(17,355,182)	\$27,096	\$38,615,338	1.57%
Securities Lending Income	\$0	0.00%	\$(69,197)	\$69,197	-	-
Total Fund	\$2,548,416,225	100.0%	\$(3,348,381)	\$92,498,174	\$2,459,266,432	100.0%

Callan Performance Attribution – Sep. 30, 2016

Callan “Actual Returns” used for 3- and 5-years ended 9/30/16

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%	10.61%	9.92%	0.15%	0.04%	0.19%
Domestic Fixed Income	18%	17%	5.55%	4.43%	0.20%	(0.01%)	0.19%
Real Estate	10%	10%	14.42%	11.31%	0.28%	(0.04%)	0.25%
Infrastructure	4%	5%	4.36%	0.71%	0.14%	0.04%	0.19%
Timber	4%	5%	3.62%	7.59%	(0.17%)	(0.02%)	(0.19%)
International Equity	15%	15%	2.56%	0.30%	0.35%	(0.03%)	0.32%
International Fixed Inc.	5%	5%	1.85%	0.75%	0.05%	0.00%	0.05%
Private Equity	4%	5%	(2.09%)	(2.09%)	0.00%	0.07%	0.07%
World Equity	16%	16%	5.38%	5.85%	(0.08%)	(0.00%)	(0.08%)
Cash & Equivalents	1%	1%	0.17%	0.11%	0.00%	0.01%	0.01%

Total	6.44%	=	5.46%	+	0.93%	+	0.06%	0.99%
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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%	17.23%	16.33%	0.20%	0.13%	0.32%
Domestic Fixed Income	18%	17%	6.41%	4.64%	0.32%	(0.02%)	0.30%
Real Estate	10%	10%	13.55%	11.18%	0.22%	(0.02%)	0.20%
Timber	5%	5%	1.35%	6.91%	(0.29%)	(0.05%)	(0.34%)
Infrastructure	4%	5%	5.59%	1.03%	0.18%	0.10%	0.28%
International Equity	16%	16%	8.31%	6.40%	0.29%	(0.08%)	0.21%
International Fixed Inc.	5%	5%	2.44%	0.70%	0.09%	(0.01%)	0.08%
Private Equity	5%	5%	0.73%	0.73%	0.00%	(0.01%)	(0.01%)
World Equity	13%	13%	-	-	(0.02%)	(0.05%)	(0.08%)
Cash & Equivalents	1%	1%	0.13%	0.10%	0.00%	(0.02%)	(0.02%)

Total	9.80%	=	8.85%	+	0.98%	+	(0.03%)	0.95%
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Economic and Capital Markets Update

As of June 30, 2016

Historical Asset Class Market Returns – June 30, 2016


		Period Ended June 30, 2016			
Asset Class	Benchmark	1-Year	3-Years	5-Years	10-Years
Large Cap US Stocks	Russell 1000	2.93%	11.48%	11.88%	7.51%
Small Cap US Stocks	Russell 2000	-6.73%	7.09%	8.35%	6.20%
Non-US Stocks (Developed)	MSCI EAFE	-10.16%	2.06%	1.68%	1.58%
Non-US Stocks (Emerging)	MSCI Emerging Markets	-12.05%	-1.56%	-3.78%	3.54%
US Bonds	Barclays Aggregate	6.00%	4.06%	3.76%	5.13%
High Yield Bonds	Barclays Corporate High Yield	1.62%	4.18%	5.84%	7.56%
International Debt	Barclays Global Aggregate Ex-US	11.24%	1.85%	0.34%	4.00%
Inflation Protected	Barclays Global Inflation Linked	2.55%	2.74%	2.27%	4.42%
Real Estate	NCREIF	10.64%	11.61%	11.51%	7.40%

Last 5-Years:

- **U.S. Large Cap Equity (up 11.88%)** has been one of the top performing asset classes in the last 5-years, followed by **Real Estate (up 11.51%)** and **U.S. Small Cap Equity (up 8.35%)**.
- During the last 5-years, **U.S. Bonds (up 3.76%)** and **High Yield (up 5.84%)** performed generally in line with long-term expectations (along with **Inflation Protected Debt, up 2.27%**).
- **Emerging Market Equity (down 3.78%)** and **International Equity (up 1.68%)** and **International Debt (up 0.34%)** performed poorly the last 5-years, although **International Debt surpassed most other major indices last year (up 11.24%)**.

Asset Class Performance

Periodic Table of Investment Returns
for Periods Ended June 30, 2016

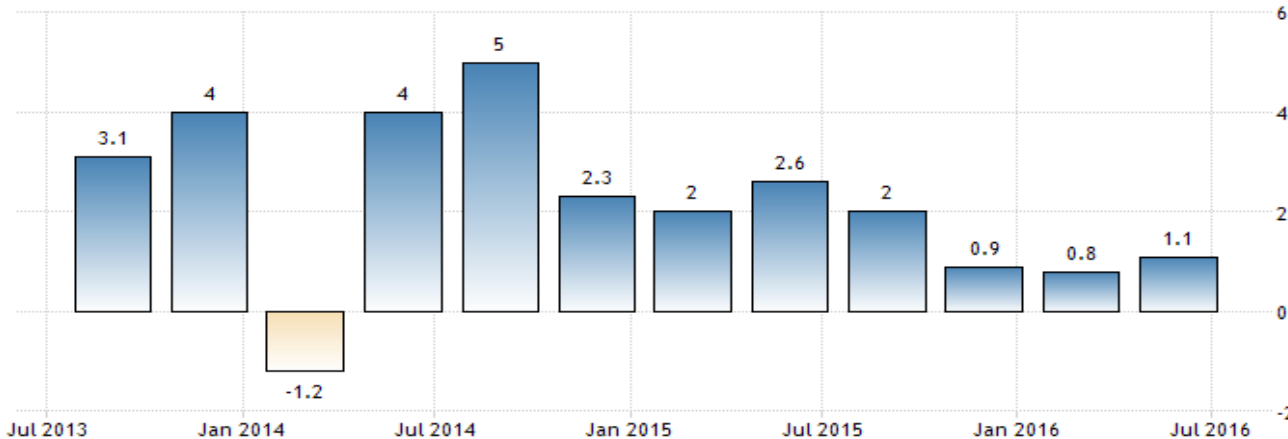


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
	BLMBRG:Commdty Idx 12.7%	Barclays:Aggregate Index 6.0%	S&P:500 11.7%	S&P:500 12.1%	S&P:500 7.4%
	Russell:2000 Index 3.8%	S&P:500 4.0%	Russell:2000 Index 7.1%	Russell:2000 Index 8.4%	Russell:2000 Index 6.2%
	S&P:500 2.5%	3 Month T-Bill 0.2%	Barclays:Aggregate Index 4.1%	Barclays:Aggregate Index 3.8%	Barclays:Aggregate Index 5.1%
	Barclays:Aggregate Index 2.2%	Russell:2000 Index (6.7%)	MSCI:EAFE 2.1%	MSCI:EAFE 1.7%	MSCI:EM Gross 3.9%
	MSCI:EM Gross 0.8%	MSCI:EAFE (10.2%)	3 Month T-Bill 0.1%	3 Month T-Bill 0.1%	MSCI:EAFE 1.6%
	3 Month T-Bill 0.1%	MSCI:EM Gross (11.7%)	MSCI:EM Gross (1.2%)	MSCI:EM Gross (3.4%)	3 Month T-Bill 1.0%
	MSCI:EAFE (1.5%)	BLMBRG:Commdty Idx (13.5%)	BLMBRG:Commdty Idx (10.6%)	BLMBRG:Commdty Idx (10.9%)	BLMBRG:Commdty Idx (6.5%)

Last Year: U.S. Fixed Income (Barclays Aggregate) returned 6% and the S&P 500 returned 4% last year. In contrast, U.S. Small Cap Equity (Russel 2000) declined 6.7% and International Equity (MSCI EAFE) declined 10.2%. The Bloomberg Commodity Index declined 13.5% during the last fiscal year.

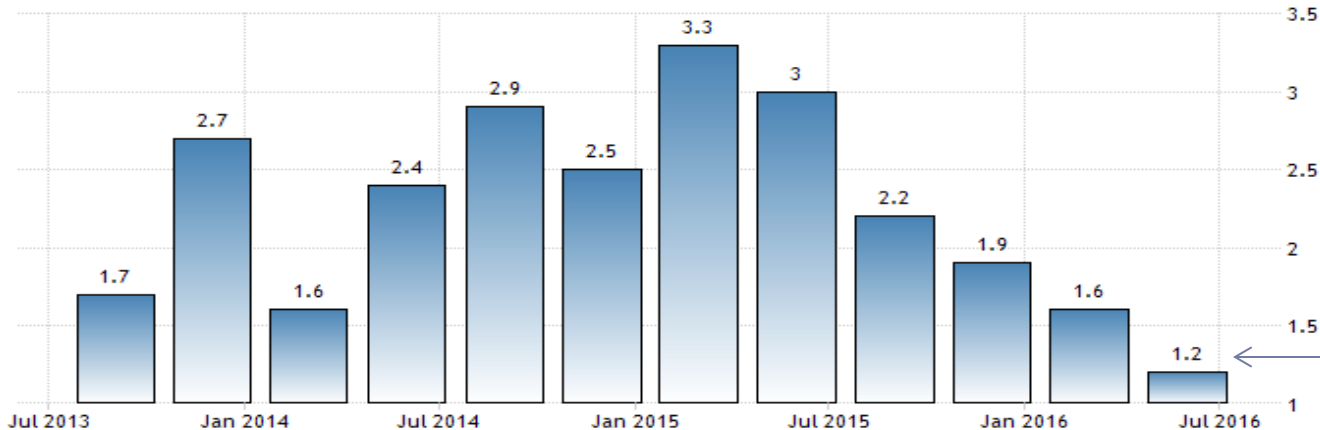
U.S Economy – GDP Growth Rates

US GDP GROWTH RATE



Quarterly GDP Growth Rates (top chart) have not exceeded 3% since the 4Q of 2014 and not exceeded 2% in the last year.

US GDP ANNUAL GROWTH RATE



Annual GDP Growth Rates (bottom chart) have trended down since peaking at 3.3% during the 1st quarter of 2015 and approximate 1.2% as of the 2nd quarter of 2016.

SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF ECONOMIC ANALYSIS

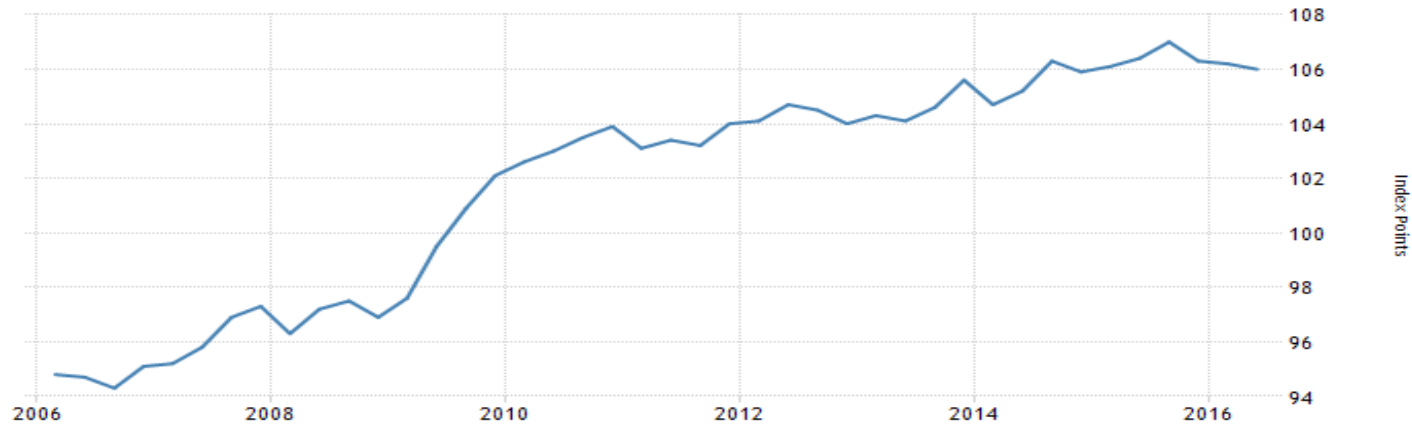
U.S Labor Market – Unemployment Rate and Productivity Index

US UNEMPLOYMENT RATE



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF LABOR STATISTICS

US NONFARM LABOUR PRODUCTIVITY



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF LABOR STATISTICS

U.S. labor markets appear to be improving as the “**Unemployment Rate**” is now **below 5%** since peaking at 10% in October of 2009.

The “**Labor Productivity Index**” has trended upward since 2006, but has declined four consecutive quarters (to 106) since hitting an all-time high of 107 in 3Q of 2015.

Index Points

Source: U.S. Dept. of Labor: Bureau of Labor Statistics

U.S. Labor Market – Wage Growth and Participation Rates

US WAGES AND SALARIES GROWTH



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF ECONOMIC ANALYSIS

US LABOR FORCE PARTICIPATION RATE

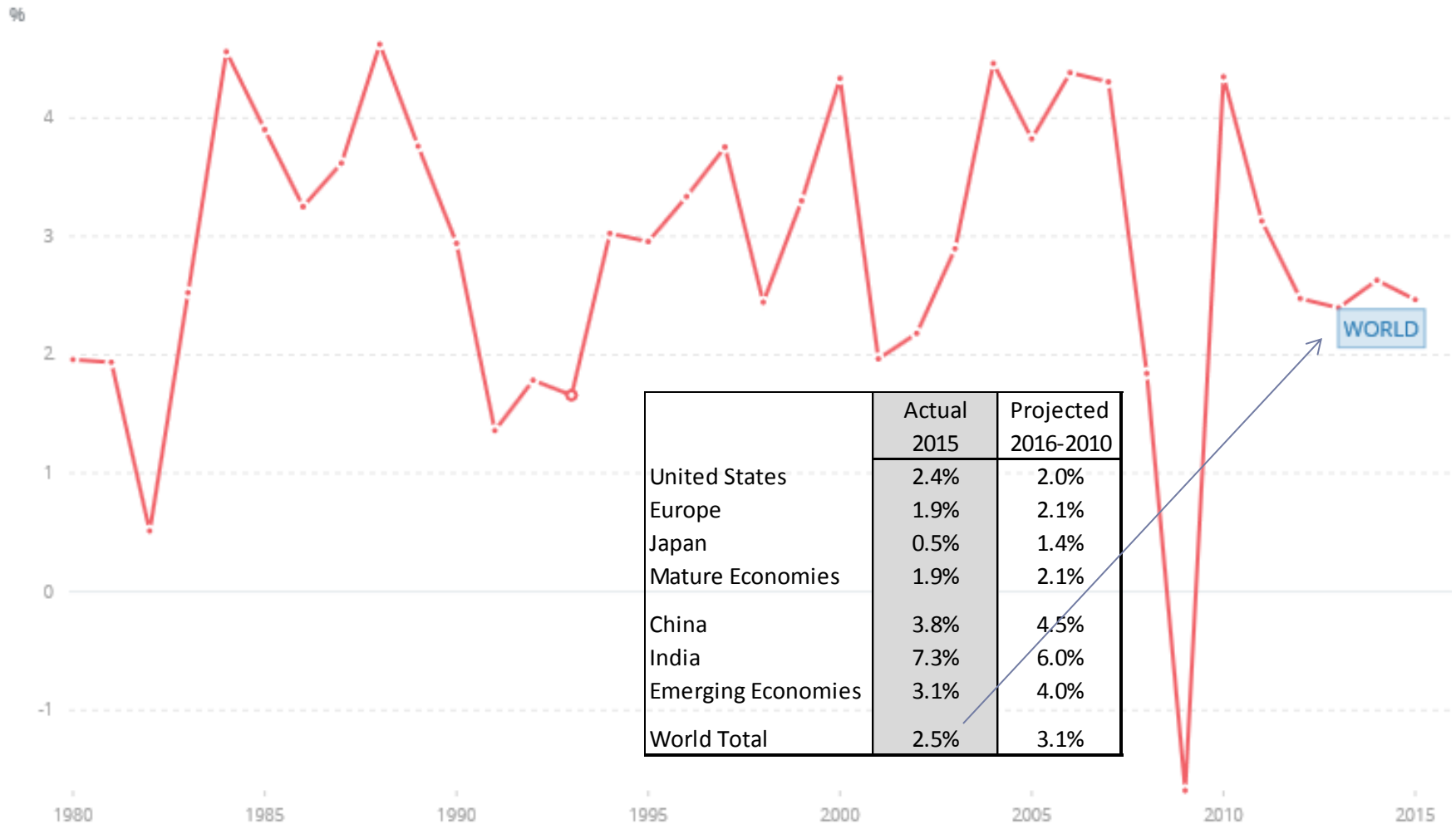


SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF LABOR STATISTICS

U.S. labor markets appear to be improving as “**Wage Growth**” has been averaging **4%** or higher during the two years.

The “**Labor Participation Rate**” remains below long-term historical averages, but appears to have leveled out at slightly above **62.5%** over the last year.

“World GDP Growth Rates” have declined to 2.5% from 2012 to 2015, with some “Experts” projecting slightly higher future growth rates.



Appendix of Supporting Materials

For PERS Annual Investment Report - June 30, 2016

PERS related asset allocation policies effective July of 2016:

SIB Accepted July 22, 2016	PERS	Job Service	Retiree Health	Group Insurance
Global Equity	58%	40%	60%	0%
- Public	51%	40%	60%	0%
- Private	7%	0%	0%	0%
Global Fixed Income	23%	60%	40%	90%
- Investment Grade	18%	54%	32%	90%
- Other	5%	6%	8%	0%
Global Real Assets	19%	0%	0%	0%
- Real Estate	11%	0%	0%	0%
- Infrastructure/Timber	8%	0%	0%	0%
Cash	0%	0%	0%	10%
Total	100%	100%	100%	100%

Global Equity, Fixed Income and Real Asset Valuations

Asset Class Allocation

	June 30, 2016			Inv. Return	March 31, 2016	
	Market Value	Weight	Net New Inv.		Market Value	Weight
GLOBAL EQUITY	\$1,396,685,124	56.79%	\$(21,187,815)	\$12,555,687	\$1,405,317,251	58.02%
Domestic Equity	\$546,891,974	22.24%	\$(16,173,669)	\$13,100,658	\$549,964,985	22.71%
Large Cap	419,489,559	17.06%	(16,231,544)	8,079,788	427,641,315	17.66%
Small Cap	127,402,415	5.18%	57,875	5,020,871	122,323,669	5.05%
International Equity	\$367,296,626	14.94%	\$(8,418,997)	\$194,574	\$375,521,049	15.50%
Developed Intl Equity	269,125,528	10.94%	(7,323,997)	(2,700,860)	279,150,385	11.53%
Emerging Markets	98,171,098	3.99%	(1,095,000)	2,895,434	96,370,664	3.98%
World Equity	\$402,558,064	16.37%	\$5,321,484	\$(815,057)	\$398,051,637	16.43%
Private Equity	\$79,938,460	3.25%	\$(1,916,632)	\$75,512	\$81,779,580	3.38%
GLOBAL FIXED INCOME	\$561,973,075	22.85%	\$301,200	\$16,082,094	\$545,589,781	22.53%
Domestic Fixed Income	\$433,307,321	17.62%	\$288,939	\$12,861,980	\$420,156,402	17.35%
Inv. Grade Fixed Income	300,029,063	12.20%	372,576	6,588,287	293,068,200	12.10%
Below Inv. Grade Fixed Income	133,278,258	5.42%	(83,637)	6,273,693	127,088,202	5.25%
International Fixed Income	\$128,665,754	5.23%	\$12,262	\$3,220,113	\$125,433,379	5.18%
GLOBAL REAL ASSETS	\$461,992,896	18.79%	\$6,228,856	\$8,489,376	\$447,274,664	18.47%
Real Estate	275,538,912	11.20%	7,806,233	8,083,615	259,649,063	10.72%
Timber	77,459,623	3.15%	0	(1,388,349)	78,847,973	3.26%
Infrastructure	108,994,361	4.43%	(1,577,377)	1,794,110	108,777,628	4.49%
Cash & Equivalents	\$38,615,338	1.57%	\$14,776,628	\$33,278	\$23,805,431	0.98%
Securities Lending Income	\$0	0.00%	\$(119,687)	\$119,687	-	-
Total Fund	\$2,459,266,432	100.0%	\$(817)	\$37,280,122	\$2,421,987,127	100.0%

Actual versus Benchmark Return Comparisons – Equity

Returns for Periods Ended June 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6 Years
Global Equity					
Gross	0.89%	(3.60%)	6.87%	-	-
Net	0.84%	(3.90%)	6.53%	-	-
Wtd Avg Global Equity Benchmark	1.10%	(3.86%)	5.93%	-	-
Domestic Equity					
Gross	2.41%	2.03%	11.52%	12.03%	15.13%
Net	2.39%	1.90%	11.33%	11.81%	14.88%
Wtd Avg Domestic Equity Benchmark	2.82%	0.73%	10.54%	11.24%	14.52%
Large Cap Equity					
Gross	1.93%	4.63%	12.77%	12.87%	15.65%
Net	1.91%	4.52%	12.60%	12.65%	15.39%
Benchmark(1)	2.54%	2.93%	11.48%	12.09%	15.00%
Small Cap Equity					
Gross	4.10%	(6.86%)	7.11%	9.28%	13.28%
Net	4.10%	(7.04%)	6.86%	9.03%	13.05%
Russell 2000 Index	3.79%	(6.73%)	7.09%	8.35%	12.73%
International Equity					
Gross	0.01%	(7.76%)	3.43%	2.30%	6.41%
Net	(0.04%)	(7.95%)	3.20%	2.01%	6.09%
Wtd Avg Intl Equity Benchmark	(0.90%)	(10.45%)	1.29%	0.37%	4.14%
Developed Intl Equity					
Gross	(1.09%)	(7.68%)	4.12%	2.94%	7.15%
Net	(1.15%)	(7.92%)	3.86%	2.65%	6.83%
Benchmark(2)	(1.46%)	(10.16%)	2.06%	1.68%	5.04%
Emerging Markets					
Gross	3.05%	(9.26%)	0.43%	(0.73%)	3.54%
Net	3.05%	(9.26%)	0.29%	(1.03%)	3.20%
Benchmark(3)	0.66%	(12.05%)	(1.56%)	(3.78%)	0.93%
World Equity					
Gross	(0.20%)	(6.53%)	6.44%	-	-
Net	(0.29%)	(7.27%)	5.70%	-	-
MSCI World Index	1.01%	(2.78%)	6.95%	6.63%	10.28%
Private Equity					
Net	0.12%	(7.20%)	(2.98%)	0.41%	2.67%

Overview:
Global Equity returns beat performance benchmarks over the last 3- and 5-year periods, but underperformed in the last year primarily due to LSV and Epoch in World Equity generating 0.63% of negative excess return.

Actual vs Benchmark Returns – Fixed Income and Real Assets

Overview:
Net returns for most fixed income and real asset classes exceed the stated policy benchmark for the 3- and 5-year periods ended June 30, 2016, except Timber and International Fixed Income.

Returns for Periods Ended June 30, 2016

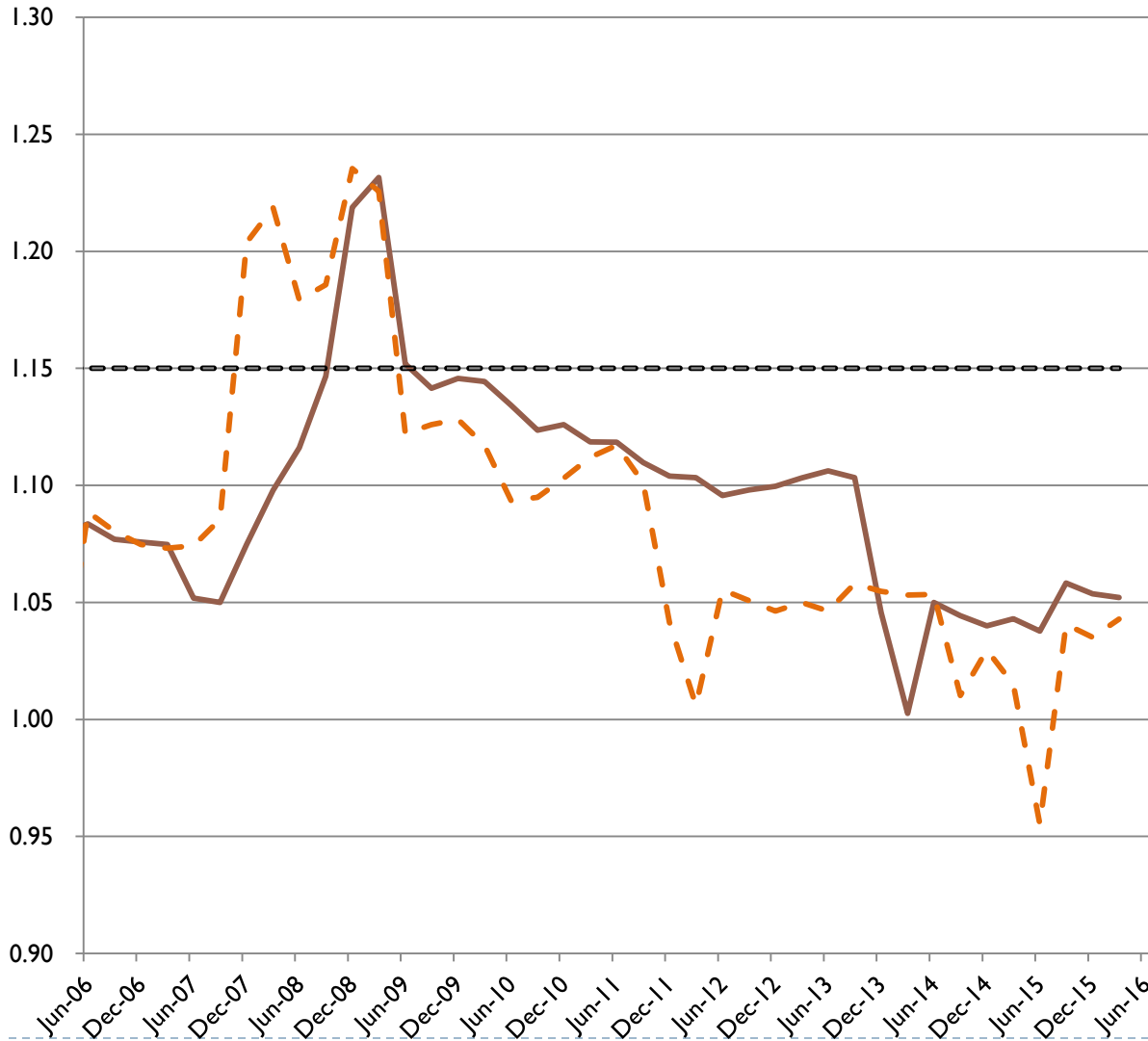
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6 Years
Global Fixed Income					
Gross	2.95%	4.76%	4.44%	-	-
Net	2.88%	4.50%	4.19%	-	-
Wtd Avg Global Fixed Income Benchmark	3.23%	6.22%	3.65%	-	-
Domestic Fixed Income					
Gross	3.06%	3.85%	5.03%	5.80%	6.18%
Net	3.00%	3.63%	4.81%	5.56%	5.93%
Wtd Avg Domestic FI Benchmark	3.19%	4.77%	4.14%	4.67%	4.86%
Inv. Grade Fixed Income					
Gross	2.25%	5.15%	4.81%	5.16%	5.32%
Net	2.21%	5.00%	4.69%	5.01%	5.15%
Barclays Aggregate Index	2.21%	6.00%	4.06%	3.76%	3.79%
Below Inv. Grade Fixed Income					
Gross	4.94%	0.69%	5.43%	6.70%	8.54%
Net	4.84%	0.28%	4.98%	6.26%	8.10%
Barclays HY Corp 2% Issue	5.52%	1.65%	4.20%	5.84%	7.39%
International Fixed Income					
Gross	2.57%	7.88%	2.02%	2.29%	4.43%
Net	2.48%	7.50%	1.65%	1.93%	4.06%
Wtd Avg Intl Fixed Income Benchmark	3.40%	11.24%	1.85%	0.35%	2.71%
Global Real Assets					
Gross	1.87%	8.53%	9.80%	-	-
Net	1.71%	7.99%	9.34%	-	-
Wtd Avg Global Real Assets Benchmark	1.62%	6.29%	7.89%	-	-
Real Estate					
Gross	3.00%	11.96%	14.82%	13.68%	15.46%
Net	2.87%	11.34%	14.26%	13.13%	14.89%
NCREIF Total Index	2.03%	10.64%	11.61%	11.51%	12.37%
Timber					
Net	(1.76%)	4.34%	3.63%	-	-
NCREIF Timberland Index	1.09%	3.49%	7.77%	6.72%	5.66%
Infrastructure					
Gross	1.67%	3.65%	4.74%	-	-
Net	1.34%	2.88%	4.09%	-	-
CPI-W	1.33%	0.64%	0.76%	1.12%	1.61%
Cash & Equivalents - Net	0.12%	0.29%	0.13%	0.11%	0.12%
3-month Treasury Bill	0.07%	0.19%	0.09%	0.09%	0.10%
Total Fund					
Gross	1.54%	0.61%	6.84%	6.82%	9.17%
Net	1.47%	0.28%	6.51%	6.49%	8.82%
Target*	1.69%	0.56%	5.91%	6.08%	8.37%

PERS Private Equity Performance – June 30, 2016

	June-16			Current Fiscal YTD		Prior Year FY15		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	Market Value	Allocation		Gross ⁽⁷⁾	Net	Gross ⁽⁷⁾	Net	Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net
		Actual	Policy								
Private Equity											
Brinson 1998 Partnership Fund	63,112	0.0%		4.14%	4.14%	-0.68%	-0.68%	1.77%	1.77%	0.95%	0.95%
Brinson 1999 Partnership Fund	169,561	0.0%		12.03%	12.03%	-17.94%	-17.94%	2.61%	2.61%	2.21%	2.21%
Brinson 2000 Partnership Fund	470,603	0.0%		-1.75%	-1.75%	-10.71%	-10.71%	-1.74%	-1.74%	1.43%	1.43%
Brinson 2001 Partnership Fund	760,798	0.0%		-10.11%	-10.11%	-0.25%	-0.25%	2.31%	2.31%	4.78%	4.78%
Brinson 2002 Partnership Fund	370,462	0.0%		9.43%	9.43%	-19.50%	-19.50%	1.65%	1.65%	4.69%	4.69%
Brinson 2003 Partnership Fund	179,919	0.0%		-2.55%	-2.55%	13.43%	13.43%	13.28%	13.28%	7.77%	7.77%
Total Brinson Partnership Funds	2,014,456	0.1%		-1.98%	-1.98%	-7.11%	-7.11%	1.87%	1.87%	3.69%	3.69%
Brinson 1999 Non-US Partnership Fund	201,255	0.0%		13.44%	13.44%	-13.15%	-13.15%	1.29%	1.29%	5.77%	5.77%
Brinson 2000 Non-US Partnership Fund	356,052	0.0%		-7.68%	-7.68%	-4.91%	-4.91%	-2.64%	-2.64%	-2.51%	-2.51%
Brinson 2001 Non-US Partnership Fund	85,249	0.0%		23.36%	23.36%	16.96%	16.96%	24.09%	24.09%	12.41%	12.41%
Brinson 2002 Non-US Partnership Fund	515,859	0.0%		29.09%	29.09%	-7.15%	-7.15%	8.10%	8.10%	5.92%	5.92%
Brinson 2003 Non-US Partnership Fund	283,492	0.0%		18.08%	18.08%	-2.02%	-2.02%	11.09%	11.09%	9.99%	9.99%
Brinson 2004 Non-US Partnership Fund	202,141	0.0%		-8.26%	-8.26%	-6.29%	-6.29%	5.80%	5.80%	3.35%	3.35%
Total Brinson Non-US Partnership Fund	1,644,048	0.1%		10.65%	10.65%	-4.47%	-4.47%	6.97%	6.97%	5.26%	5.26%
Adams Street 2008 Non-US Partnership Fd	3,746,686	0.2%		11.84%	11.84%	7.59%	7.59%	12.71%	12.71%	9.22%	9.22%
Brinson BVCF IV	1,888,686	0.1%		-1.65%	-1.65%	42.11%	42.11%	18.20%	18.20%	29.22%	29.22%
Adams Street Direct Co-investment Fund	2,796,519	0.1%		8.30%	8.04%	22.50%	22.23%	16.34%	15.92%	13.24%	13.00%
Adams Street 2010 Direct Fund	678,078	0.0%		7.48%	7.48%	4.61%	4.61%	15.27%	15.27%	13.88%	13.88%
Adams Street 2010 Non-US Emerging Mkts	647,480	0.0%		10.50%	10.50%	21.80%	21.80%	11.83%	11.83%	0.77%	0.77%
Adams Street 2010 Non-US Developed Mkts	1,319,772	0.1%		9.63%	9.63%	-2.43%	-2.43%	6.70%	6.70%	7.21%	7.21%
Adams Street 2010 Partnership Fund	2,765,892	0.1%		6.18%	6.18%	18.37%	18.37%	13.70%	13.70%	12.03%	12.03%
Total Adams Street 2010 Funds	5,411,222	0.2%		7.80%	7.80%	10.63%	10.63%	12.22%	12.22%	10.71%	10.71%
Adams Street 2015 Global Fund	759,021	0.0%		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matlin Patterson Global Opportunities	1	0.0%		12.99%	12.99%	1.12%	1.12%	4.54%	4.54%	1.18%	1.18%
Matlin Patterson Global Opportunities II	815,701	0.0%		7.27%	7.27%	19.60%	19.60%	3.19%	3.19%	-27.34%	-27.34%
Matlin Patterson Global Opportunities III	13,531,512	0.6%		-5.66%	-5.66%	-2.43%	-2.43%	-1.30%	-1.30%	22.01%	22.01%
InvestAmerica (Lewis and Clark Fund)	667,195	0.0%		-51.19%	-51.19%	-32.09%	-32.09%	-35.55%	-35.55%	-19.67%	-19.67%
L&C II	4,822,765	0.2%		1.88%	1.88%	-14.35%	-14.35%	-6.77%	N/A	-5.56%	N/A
Hearthstone MSII	6,418	0.0%		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Hearthstone MSIII	2,218,171	0.1%		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	27.65%	27.65%
Corsair III	6,719,925	0.3%		34.22%	34.22%	-8.84%	-8.84%	7.06%	7.06%	1.57%	1.35%
Corsair III - ND Investors LLC	5,980,979	0.2%		6.41%	6.41%	-5.27%	-5.27%	-0.10%	-0.10%	2.58%	2.53%
Corsair IV	8,581,238	0.3%		-2.38%	-2.38%	29.73%	29.73%	13.58%	13.58%	6.12%	6.00%
Capital International (CIPEF V)	3,922,718	0.2%		-25.52%	-25.52%	-13.33%	-13.33%	-10.61%	-10.61%	-9.35%	-9.35%
Capital International (CIPEF VI)	8,970,450	0.4%		1.06%	1.06%	-21.71%	-21.71%	-9.32%	-9.32%	N/A	N/A
EIG (formerly TCW)	2,341,021	0.1%		-67.59%	-67.59%	-23.62%	-23.62%	-38.29%	-38.29%	-24.04%	-24.04%
Quantum Resources	25,905	0.0%		N/A	N/A	-42.83%	-42.83%	N/A	N/A	N/A	N/A
Quantum Energy Partners	3,073,824	0.1%		-22.63%	-22.63%	-19.31%	-19.31%	-6.45%	-6.45%	4.85%	4.85%
Total Private Equity (5)	79,938,460	3.3%	5.0%	-7.19%	-7.20%	-5.37%	-5.39%	-2.96%	-2.98%	0.49%	0.48%

Standard Deviation Relative to Policy Benchmark

10 Years Ended June 30, 2016



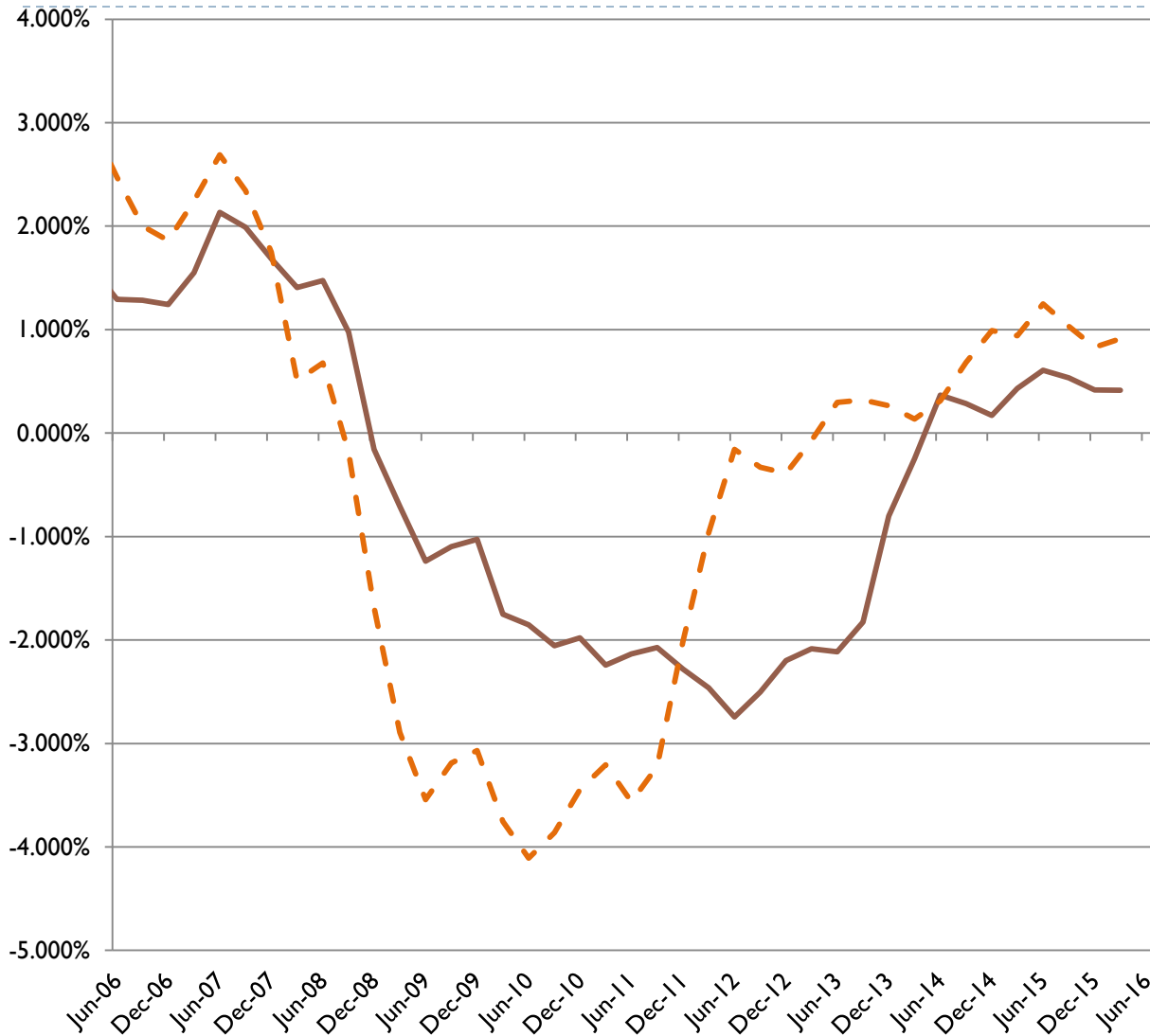
PERS risk, as measured by standard deviation, has declined from over 120% in 2008 to approximately 105% since 2014. Risk remains within board approved guidelines of 1.15 of the policy benchmark for the last 5 years.

— PERS Rolling 20 Quarters
 - - - PERS Rolling 12 Quarters
 - - - Reference

PERS standard deviation for the 5-years ended June 30, 2016 was 7.7% which exceeded the policy benchmark of 7.4% by 105%.

Excess Return Relative to Policy Benchmark

10 Years Ended June 30, 2016

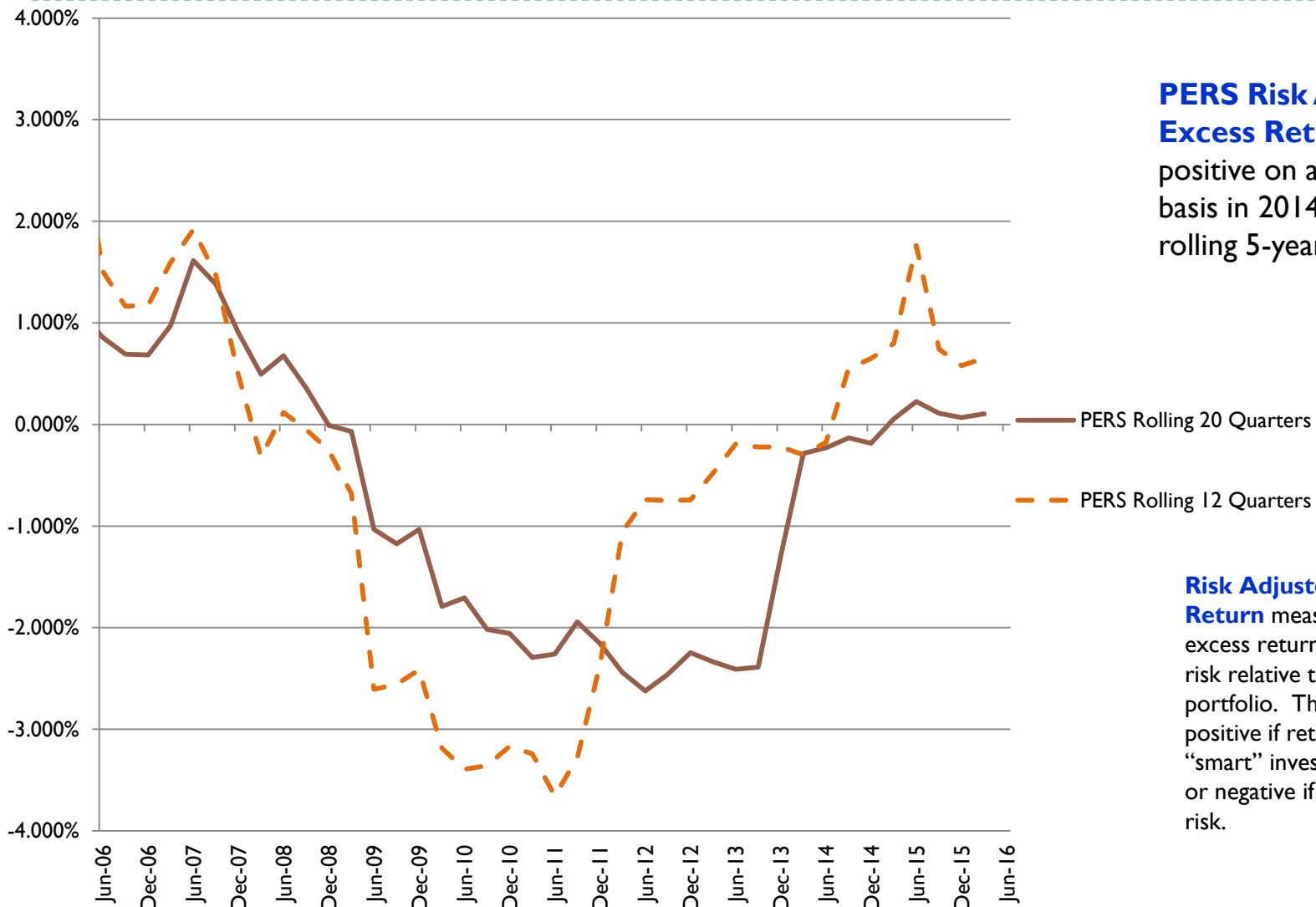


Excess Return for the 5-years ended June 30, 2016 was 0.41% and turned positive in 2014.

— PERS Rolling 20 Quarters
 - - - PERS Rolling 12 Quarters

Excess Return results when incremental income generated from active management exceeds investment management fees.

Risk Adjusted Excess Return 10 Years Ended June 30, 2016



PERS Risk Adjusted Excess Return turned positive on a rolling 3-year basis in 2014 and on a rolling 5-year basis in 2015.

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.

TFFR Investment Update

For the Periods Ended June 30, 2016

September 15, 2016

Note: This document contains unaudited data as of June 30, 2016, which is deemed to be materially accurate, but is subject to change.

Dave Hunter, Executive Director/CIO

Darren Schulz, Deputy Chief Investment Officer

ND Retirement & Investment Office (RIO)

State Investment Board (SIB)

Executive Summary for periods ended June 30, 2016

Investment Performance –

- **For the fiscal year ended June 30, 2016, TFFR generated a net investment return of 0.28% versus a policy benchmark of 0.62%.** Disappointing returns in World Equity (-7.3% actual vs -2.8% index) and Fixed Income (+4.5% actual vs +6.4% index) were partially offset by above benchmark results in U.S. Equity (+1.9% actual vs +0.73% index) and International Equity (-7.9% actual vs -10.4% index). Global Real Assets consistently outperformed the relative benchmark (+7.8% actual vs +6.3% index) and included Real Estate (+11.3% actual vs +10.6% index), Timber (+4.3% actual vs +3.5% index) and Infrastructure (+2.9% actual vs +0.64% index).
- **Asset allocation is the primary driver of returns over the long-term.** TFFR generated a net return of 6.3% for the 5-years ended June 30, 2016, which exceeded the policy benchmark (of 5.7%) by over 0.50%. During the last 5-years, asset allocation and active management generated over \$515 million (92%) and \$45 million₁ (8%) of TFFR's net investment income, respectively.
- **TFFR's investment returns have consistently ranked in the second quartile of the Callan Public Fund Sponsor Database over the last five years.** On an unadjusted basis, TFFR's returns ranked in the 32nd and 37th percentile for the 3- and 5-year periods ended June 30, 2016.

Risk Update –

- Since 2008, TFFR risk (as measured by actual standard deviation divided by the policy benchmark) has declined from over 115% to approximately 105% on a rolling 3- and 5-years basis.

TFFR Investment Ends – June 30, 2016

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 rate of return, (b) standard deviation and (c) risk adjusted excess return, to the client’s policy benchmark over 5 years.

	<u>1 Yr Ended 6/30/2016</u>	<u>3 Yrs Ended 6/30/2016</u>	<u>5 Yrs Ended 6/30/2016</u>	<u>Risk 5 Yrs Ended 6/30/2016</u>	<u>Risk Adj Excess Return 5 Yrs Ended 6/30/2016</u>
TFFR					
Total Fund Return - Net	0.28%	6.55%	6.32%	8.2%	0.31%
Policy Benchmark Return	0.62%	5.95%	5.73%	7.9%	
Excess Return	-0.34%	0.60%	0.59%	105%	

Net Return: TFFR’s net investment rate of return for the 5-year period ended June 30, 2016 was **6.32%** versus a policy benchmark of **5.73%** resulting in an **Excess Return of 0.59% (or 59 bps)**.

Risk: TFFR’s standard deviation for the 5-year period ended June 30, 2016 was 8.2% versus a policy benchmark of 7.9% resulting in a **portfolio risk ratio of 105%**. This is within TFFR’s stated risk tolerance which indicates this ratio should **not exceed 115%**.

The Risk-Adjusted Excess Return of TFFR’s portfolio (net of fees and expenses) was **0.31%** for the 5-year period ended June 30, 2016, thereby exceeding the stated policy benchmark.

TFFR Long Term Results are Near Long-Term Assumptions

**ND RETIREMENT AND INVESTMENT OFFICE
ND STATE INVESTMENT BOARD
INVESTMENT PERFORMANCE SUMMARY
AS OF JUNE 30, 2016**

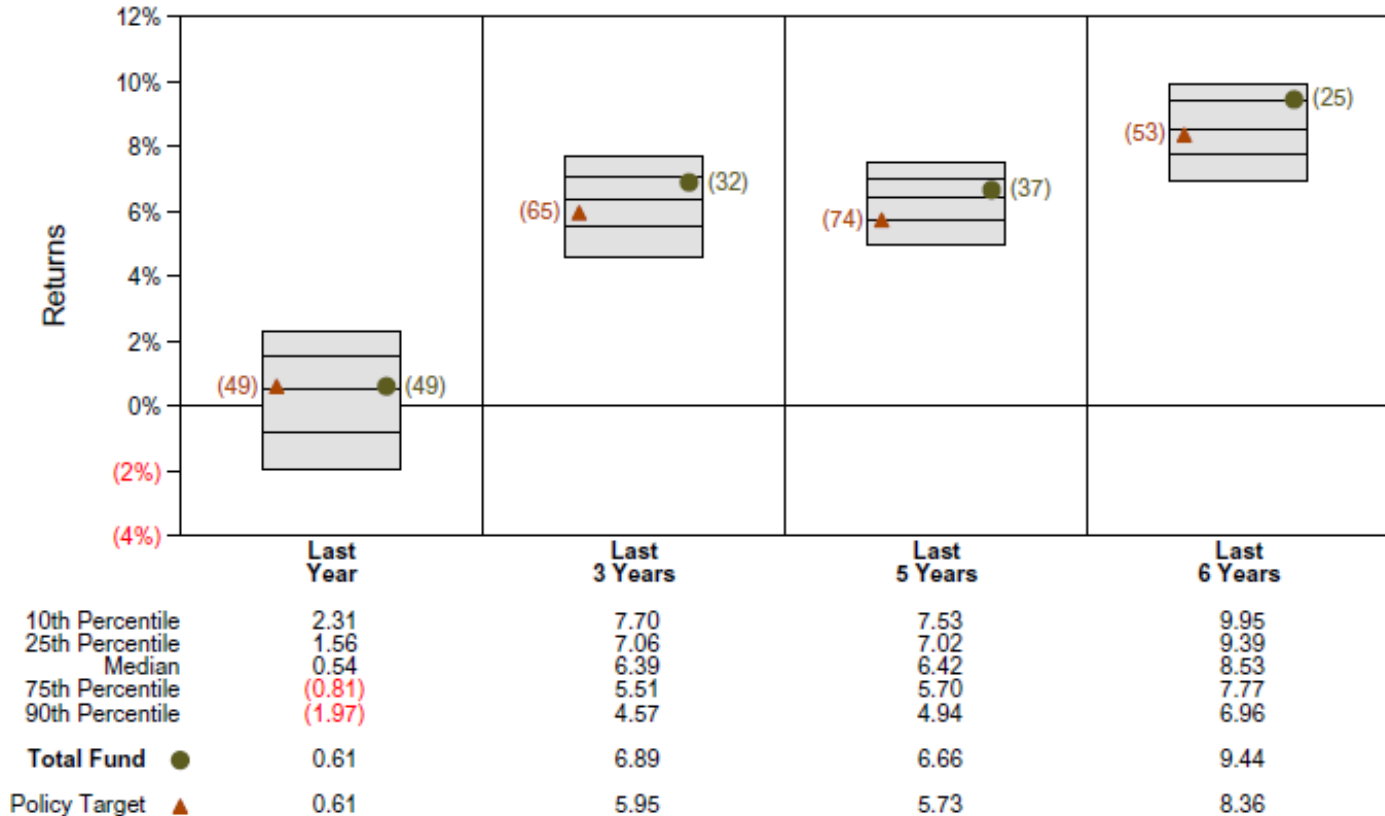
Fund Name	Investment Performance (net of fees)													
	Quarter Ended				Fiscal Years ended June 30					Periods ended 6/30/16 (annualized)				
	9/30/15	12/31/15	3/31/16	6/30/16	2016	2015	2014	2013	2012	3 Years	5 Years	10 Years	20 Years	30 Years
TFFR	-4.98%	2.72%	1.31%	1.41%	0.28%	3.52%	16.53%	13.57%	-1.12%	6.55%	6.32%	4.45%	6.48%	7.73%

The TFFR Pension Plan is a Long Term Investor

Net investment returns for the TFFR Pension Plan have approximated 7.73% for the last 30-years which is materially consistent with the plan’s long term actuarial assumption of 7.75%.

TFFR – Above Median Returns with Below Median Risk in Last 3 Years

CAI Public Fund Sponsor Database

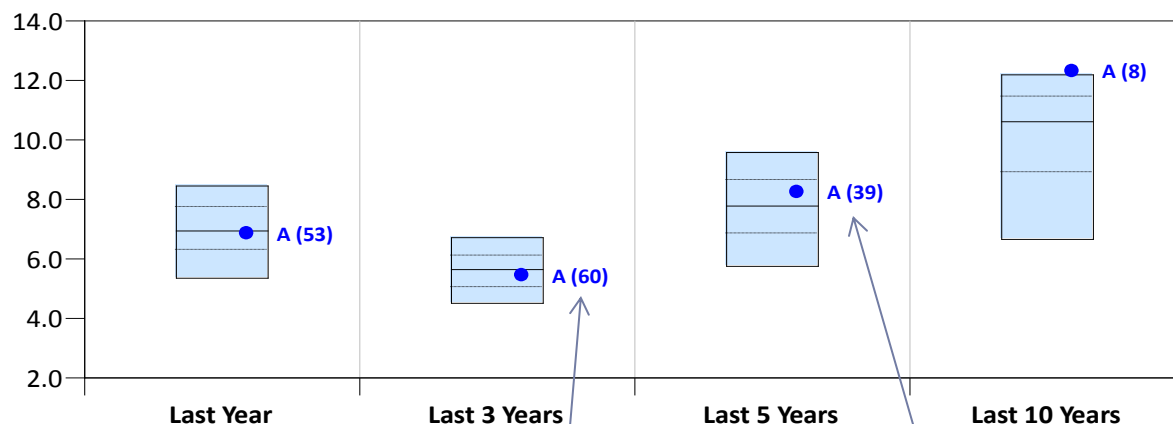


TFFR generated 2nd quartile gross returns over the Last 5 Years. TFFR returns ranked in the 32nd percentile with 60th percentile risk (see next slide) over the Last 3 Years.

TFFR - 2nd Quartile Returns with 3rd Quartile Risk in “Last 3 Years”

Standard Deviation is a commonly used risk metric used to monitor volatility.

Standard Deviation
for Periods Ended June 30, 2016
Group: CAI Public Fund Sponsor Database



	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	8.5	6.7	9.6	12.2
25th Percentile	7.7	6.1	8.6	11.4
Median	6.9	5.6	7.8	10.6
75th Percentile	6.3	5.0	6.8	8.9
90th Percentile	5.4	4.5	5.8	6.7
Member Count	252	237	219	188
Total Fund-TFFR ● A	6.8	5.4	8.2	12.3

Risk, as measured by standard deviation, has declined from the 39th percentile in the “Last 5 Years” to the 60th percentile in the “Last 3 Years”.

TFFR Activity from June 30, 2015 to June 30, 2016

			<u>TFFR</u>	
Net Investment Position - June 30, 2015			\$2,142	a
Benefit Payments	b	(\$186)		
Contributions	c	\$162		
Net Contributions	(b - c)		(\$24)	d
Investment Earnings	e	\$19		
Investment Expenses	f	(\$11)		
Net Investment Earnings	(e - f)		\$8	g
Administrative Expenses			(\$2)	h
Net Investment Position - June 30, 2016			<u>\$2,124</u>	i
Change in Net Investment Position	(i - a)		<u>(\$18)</u>	j

TFFR's Net Position declined by \$18 million (j) last year as Benefit Payments (b) exceeded Contributions (c) by \$24 million (d), while Net Investment Earnings (g) were only \$8 million (after investment expenses).

TFFR: Investment Manager Fees by Asset Class

ND Teachers' Fund for Retirement Schedule of Investment Expenses

	FY 2016				FY 2015			
	Average Market Value	Fees in \$	Fees as % of Average MV	Contribution to Total Fees	Average Market Value	Fees in \$	Fees as % of Average MV	Contribution to Total Fees
Investment managers' fees:								
Global equity managers	321,572,579	1,230,533	0.38%	0.06%	321,891,600	2,485,008	0.77%	0.12%
Domestic large cap equity managers	358,363,312	903,523	0.25%	0.04%	361,755,481	522,029	0.14%	0.03%
Domestic small cap equity managers	100,948,962	563,542	0.56%	0.03%	101,678,471	460,633	0.45%	0.02%
Developed international equity managers	241,176,848	977,198	0.41%	0.05%	242,786,431	825,671	0.34%	0.04%
Emerging markets equity managers	64,914,247	529,699	0.82%	0.03%	61,770,280	510,947	0.83%	0.03%
Investment grade domestic fixed income managers	257,980,949	1,005,950	0.39%	0.05%	264,435,526	994,837	0.38%	0.05%
Below investment grade fixed income managers	105,033,618	1,078,620	1.03%	0.05%	114,424,543	1,285,910	1.12%	0.06%
Developed international fixed income managers	105,997,529	376,723	0.36%	0.02%	101,497,930	369,873	0.36%	0.02%
Real estate managers	217,214,225	2,053,698	0.95%	0.10%	205,843,933	2,391,856	1.16%	0.12%
Timber managers	73,053,142	(956,302)	-1.31%	-0.05%	84,600,686	318,538	0.38%	0.02%
Infrastructure managers	97,501,541	1,027,901	1.05%	0.05%	89,786,228	1,031,424	1.15%	0.05%
Private equity managers	77,686,695	1,355,652	1.75%	0.07%	89,522,760	1,449,758	1.62%	0.07%
Cash & equivalents managers	19,020,916	23,185	0.12%	0.00%	25,407,621	26,995	0.11%	0.00%
Total investment management fees	2,040,464,564	10,169,922	0.50%		2,065,401,488	12,673,478	0.61%	
Custodian fees		197,310	0.01%	0.01%		210,361	0.01%	0.01%
Investment consultant fees		204,752	0.01%	0.01%		169,068	0.01%	0.01%
Total investment expenses		10,571,984	0.52%			13,052,907	0.63%	
Actual Investment Performance (Net of Fees)			0.28%				3.52%	
Policy Benchmark			0.62%				2.16%	
Outperformance/(Underperformance)			-0.34%				1.36%	

➤ TFFR's fees declined to **52 bps** from **63 bps** in the last year (and 81 bps in fiscal 2013) due to various fee reduction initiatives which have benefitted from strong asset growth in North Dakota. SIB client assets under management have increased by 51% (or \$3.8 billion) in the last two years.

Note: All amounts are deemed to be materially accurate, but are unaudited and subject to change.

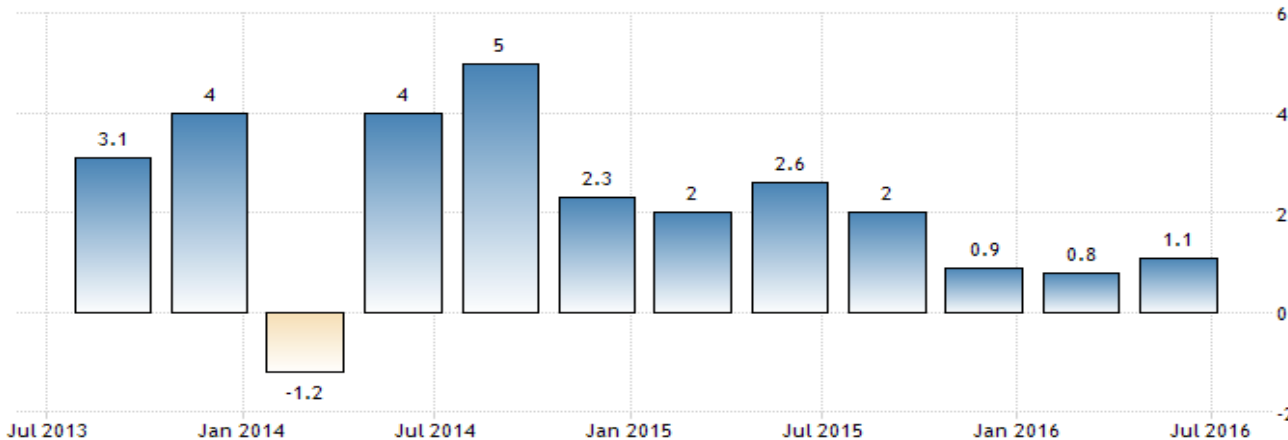
A basis point is equal to one one-hundredth of one percent (or 0.01%) such that 100 basis points is equivalent to 1%.

Economic and Capital Markets Update

As of June 30, 2016

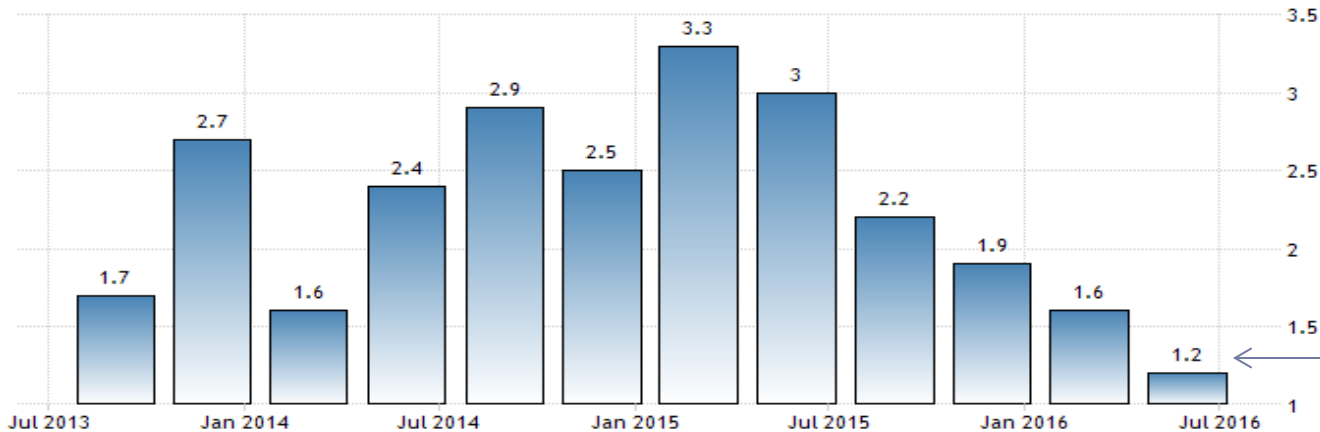
U.S Economy – GDP Growth Rates

US GDP GROWTH RATE



Quarterly GDP Growth Rates (top chart) have not exceeded 3% since the 4Q of 2014 and not exceeded 2% in the last year.

US GDP ANNUAL GROWTH RATE



Annual GDP Growth Rates (bottom chart) have trended down since peaking at 3.3% during the 1st quarter of 2015 and approximate 1.2% as of the 2nd quarter of 2016.

SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF ECONOMIC ANALYSIS

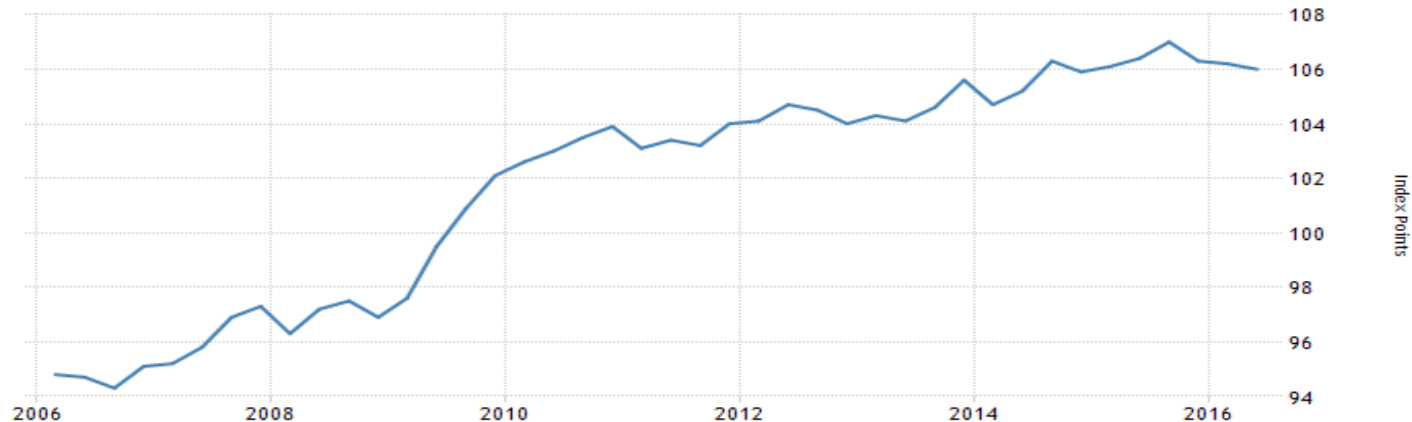
U.S Labor Market – Unemployment Rate and Productivity Index

US UNEMPLOYMENT RATE



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF LABOR STATISTICS

US NONFARM LABOUR PRODUCTIVITY



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF LABOR STATISTICS

U.S. labor markets appear to be improving as the “**Unemployment Rate**” is now **below 5%** since peaking at 10% in October of 2009.

The “**Labor Productivity Index**” has trended upward since 2006, but has declined four consecutive quarters (to 106) since hitting an all-time high of 107 in 3Q of 2015.

Index Points

Source: U.S. Dept. of Labor: Bureau of Labor Statistics

U.S. Labor Market – Wage Growth and Participation Rates

US WAGES AND SALARIES GROWTH



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF ECONOMIC ANALYSIS

U.S. labor markets appear to be improving as “**Wage Growth**” has been averaging **4%** or higher during the two years.

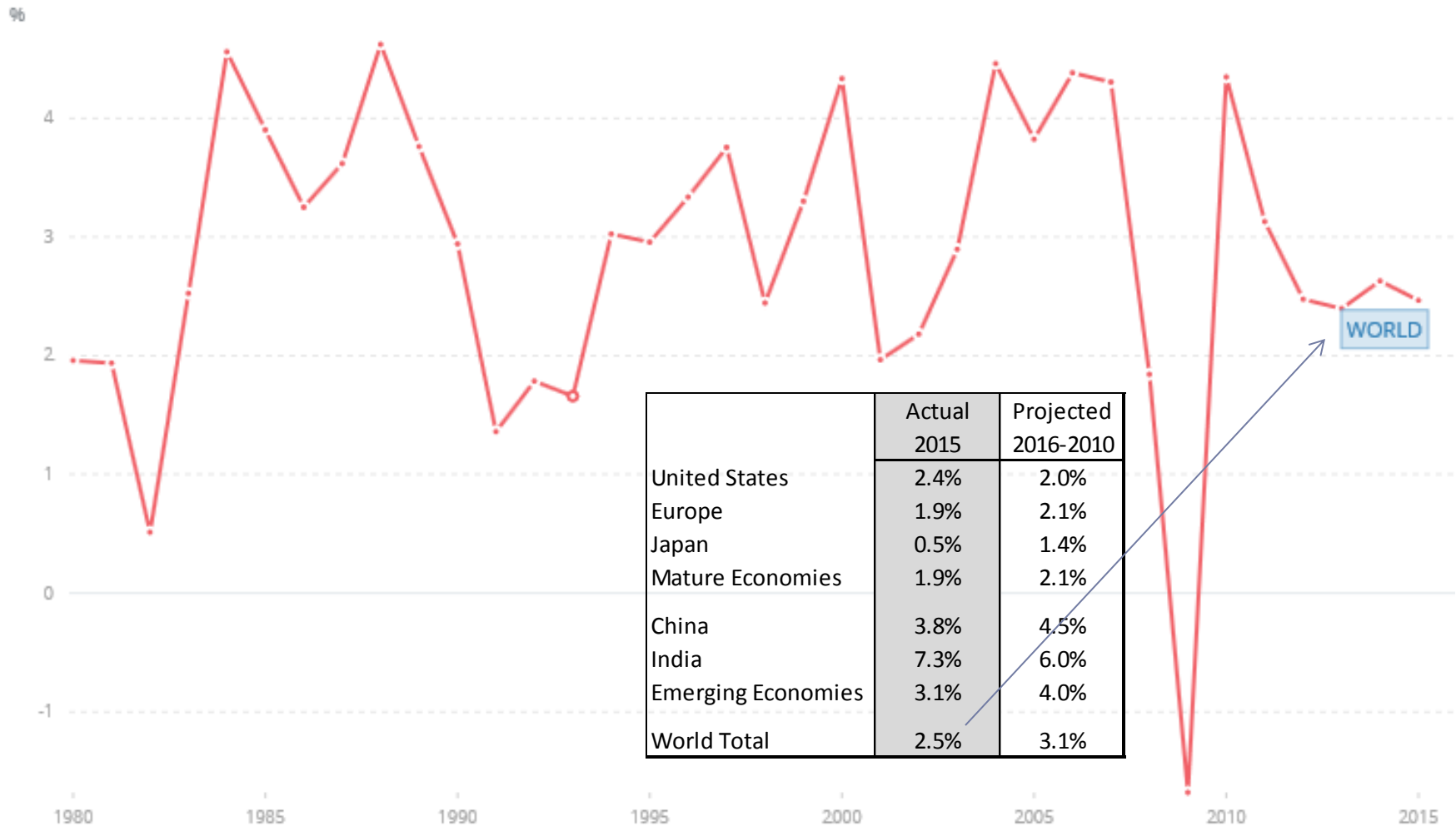
US LABOR FORCE PARTICIPATION RATE



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF LABOR STATISTICS

The “**Labor Participation Rate**” remains below long-term historical averages, but appears to have leveled out at slightly above **62.5%** over the last year.

“World GDP Growth Rates” have declined to 2.5% from 2012 to 2015, with some “Experts” projecting slightly higher future growth rates.

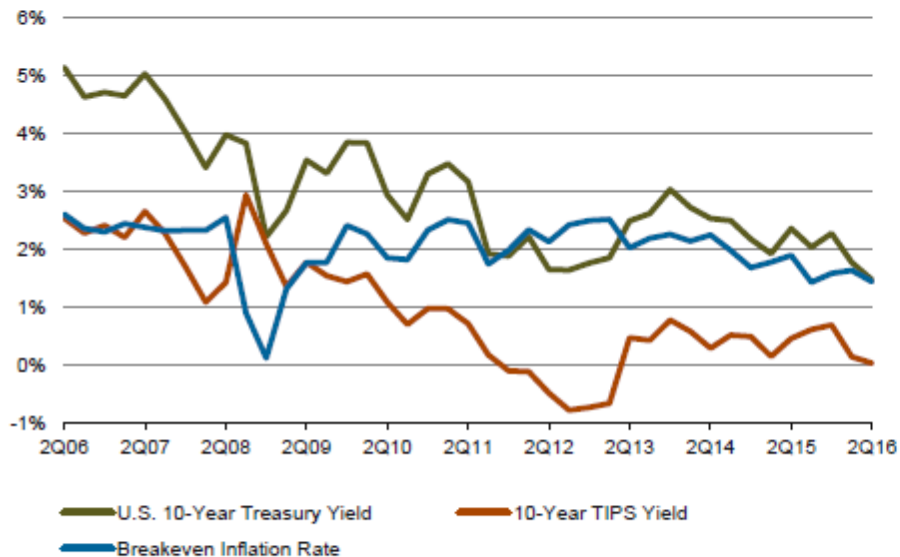


Yield Curve Changes

Key: Long-Term Treasury Rates Fell 0.85% Last Year

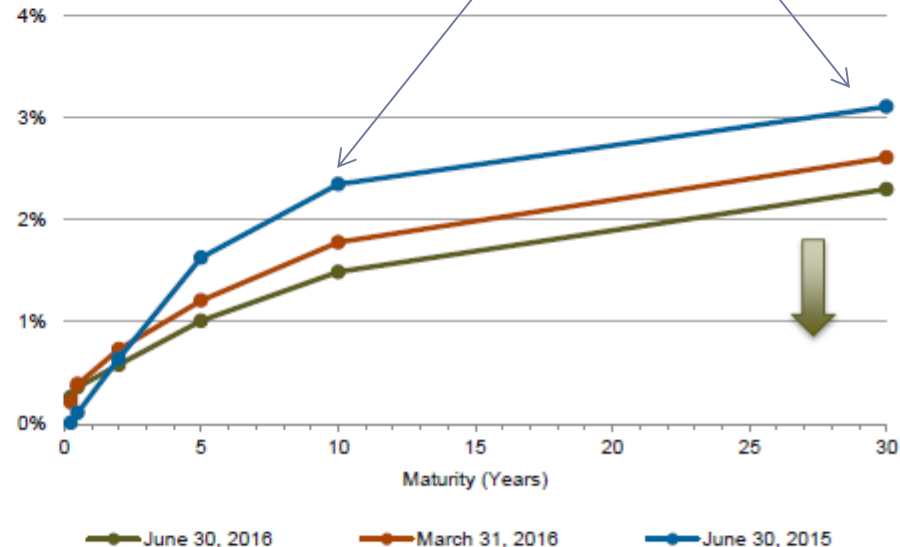
Periods Ending June 30, 2016

Historical 10-Year Yields



Source: Bloomberg

U.S. Treasury Yield Curves



Source: U.S. Department of the Treasury

- Low rates abroad kept demand for U.S. assets strong. The German 10-year sovereign bond traded at a negative yield for the first time ever.
- The decline in Treasury yields boosted returns across all segments, with longer maturities posting the biggest gains. The 10-year dropped 29 basis points to a low not seen since 2012, finishing June at 1.49%.
- Breakeven inflation ended lower despite a climb in oil prices and healthy core inflation numbers.

Asset Class Performance

Periodic Table of Investment Returns
for Periods Ended June 30, 2016

Best



Worst

Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
BLMBRG:Commdty Idx 12.7%	Barclays:Aggregate Index 6.0%	S&P:500 11.7%	S&P:500 12.1%	S&P:500 7.4%
Russell:2000 Index 3.8%	S&P:500 4.0%	Russell:2000 Index 7.1%	Russell:2000 Index 8.4%	Russell:2000 Index 6.2%
S&P:500 2.5%	3 Month T-Bill 0.2%	Barclays:Aggregate Index 4.1%	Barclays:Aggregate Index 3.8%	Barclays:Aggregate Index 5.1%
Barclays:Aggregate Index 2.2%	Russell:2000 Index (6.7%)	MSCI:EAFE 2.1%	MSCI:EAFE 1.7%	MSCI:EM Gross 3.9%
MSCI:EM Gross 0.8%	MSCI:EAFE (10.2%)	3 Month T-Bill 0.1%	3 Month T-Bill 0.1%	MSCI:EAFE 1.6%
3 Month T-Bill 0.1%	MSCI:EM Gross (11.7%)	MSCI:EM Gross (1.2%)	MSCI:EM Gross (3.4%)	3 Month T-Bill 1.0%
MSCI:EAFE (1.5%)	BLMBRG:Commdty Idx (13.5%)	BLMBRG:Commdty Idx (10.6%)	BLMBRG:Commdty Idx (10.9%)	BLMBRG:Commdty Idx (6.5%)

Last Year: U.S. Fixed Income (Barclays Aggregate) returned 6% and the S&P 500 returned 4% last year. In contrast, U.S. Small Cap Equity (Russel 2000) declined 6.7% and International Equity (MSCI EAFE) declined 10.2%. The Bloomberg Commodity Index declined 13.5% during the last fiscal year.

Historical Asset Class Market Returns – June 30, 2016

		Period Ended June 30, 2016			
Asset Class	Benchmark	1-Year	3-Years	5-Years	10-Years
Large Cap US Stocks	Russell 1000	2.93%	11.48%	11.88%	7.51%
Small Cap US Stocks	Russell 2000	-6.73%	7.09%	8.35%	6.20%
Non-US Stocks (Developed)	MSCI EAFE	-10.16%	2.06%	1.68%	1.58%
Non-US Stocks (Emerging)	MSCI Emerging Markets	-12.05%	-1.56%	-3.78%	3.54%
US Bonds	Barclays Aggregate	6.00%	4.06%	3.76%	5.13%
High Yield Bonds	Barclays Corporate High Yield	1.62%	4.18%	5.84%	7.56%
International Debt	Barclays Global Aggregate Ex-US	11.24%	1.85%	0.34%	4.00%
Inflation Protected	Barclays Global Inflation Linked	2.55%	2.74%	2.27%	4.42%
Real Estate	NCREIF	10.64%	11.61%	11.51%	7.40%

Last 5-Years:

- **U.S. Large Cap Equity (up 11.88%)** has been one of the top performing asset classes in the last 5-years, followed by **Real Estate (up 11.51%)** and **U.S. Small Cap Equity (up 8.35%)**.
- During the last 5-years, **U.S. Bonds (up 3.76%)** and **High Yield (up 5.84%)** performed generally in line with long-term expectations (along with **Inflation Protected Debt, up 2.27%**).
- **Emerging Market Equity (down 3.78%)** and **International Equity (up 1.68%)** and **International Debt (up 0.34%)** performed poorly the last 5-years, although **International Debt surpassed most other major indices last year (up 11.24%)**.

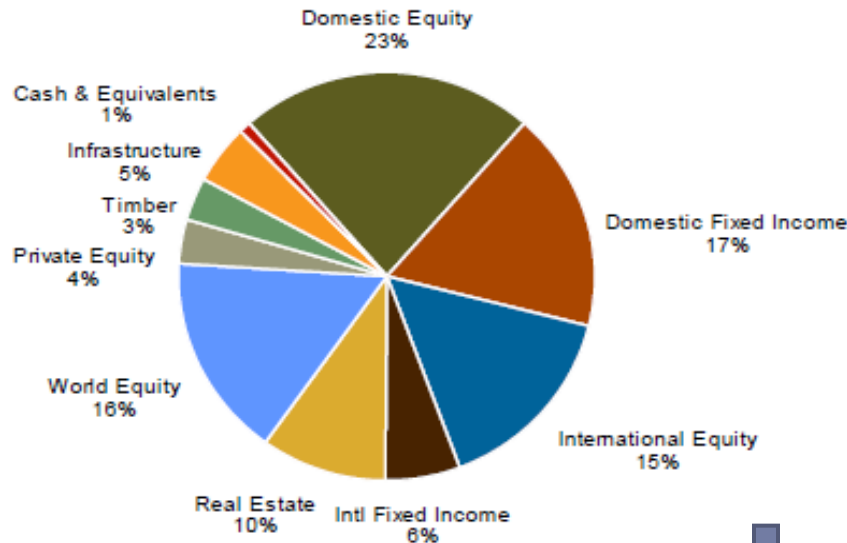


TFFR Investment Review

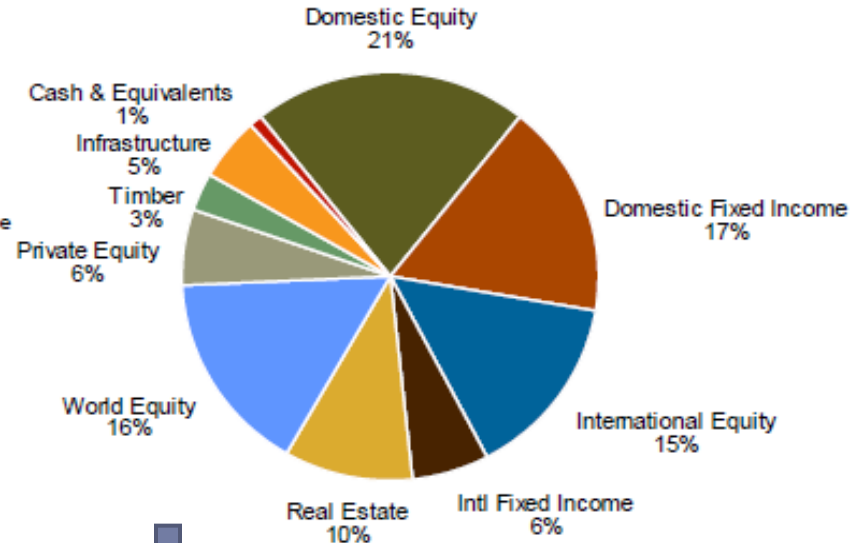
As of June 30, 2016

TFFR Actual Allocations are within 1% to 3% of Target Allocations

Actual Asset Allocation



Target Asset Allocation



Asset Class	\$000s Actual	Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	478,122	23.0%	21.4%	1.6%	32,554
Domestic Fixed Income	361,707	17.4%	17.0%	0.4%	7,751
International Equity	321,177	15.4%	14.6%	0.8%	17,192
Intl Fixed Income	121,443	5.8%	6.0%	(0.2%)	(3,483)
Real Estate	204,184	9.8%	10.0%	(0.2%)	(4,025)
World Equity	335,715	16.1%	16.0%	0.1%	2,580
Private Equity	73,374	3.5%	6.0%	(2.5%)	(51,551)
Timber	70,258	3.4%	3.0%	0.4%	7,796
Infrastructure	97,588	4.7%	5.0%	(0.3%)	(6,517)
Cash & Equivalents	18,522	0.9%	1.0%	(0.1%)	(2,299)
Total	2,082,090	100.0%	100.0%		

TFFR – Net Investment Returns – June 30, 2016

	Market Value as of June 30, 2016	Fiscal Year Ended 6/30/2016	3 Years Ended 6/30/2016	5 Years Ended 6/30/2016
TOTAL FUND	2,082,183,640	0.28%	6.55%	6.32%
<i>Benchmark</i>		0.62%	5.96%	5.73%
NET EXCESS RETURN		-0.34%	0.59%	0.59%
GLOBAL EQUITIES	1,208,387,567	-3.93%	6.53%	7.53%
<i>Benchmark</i>	58%	-3.76%	6.05%	7.08%
GLOBAL FIXED INCOME	483,243,200	4.49%	4.15%	3.61%
<i>Benchmark</i>	23%	6.36%	3.68%	2.38%
GLOBAL REAL ASSETS	372,030,580	7.83%	9.30%	7.10%
<i>Benchmark</i>	18%	6.29%	7.87%	6.29%
CASH EQUIVALENTS	18,522,293	0.29%	0.13%	0.12%
<i>Benchmark</i>	1%	0.19%	0.09%	0.09%

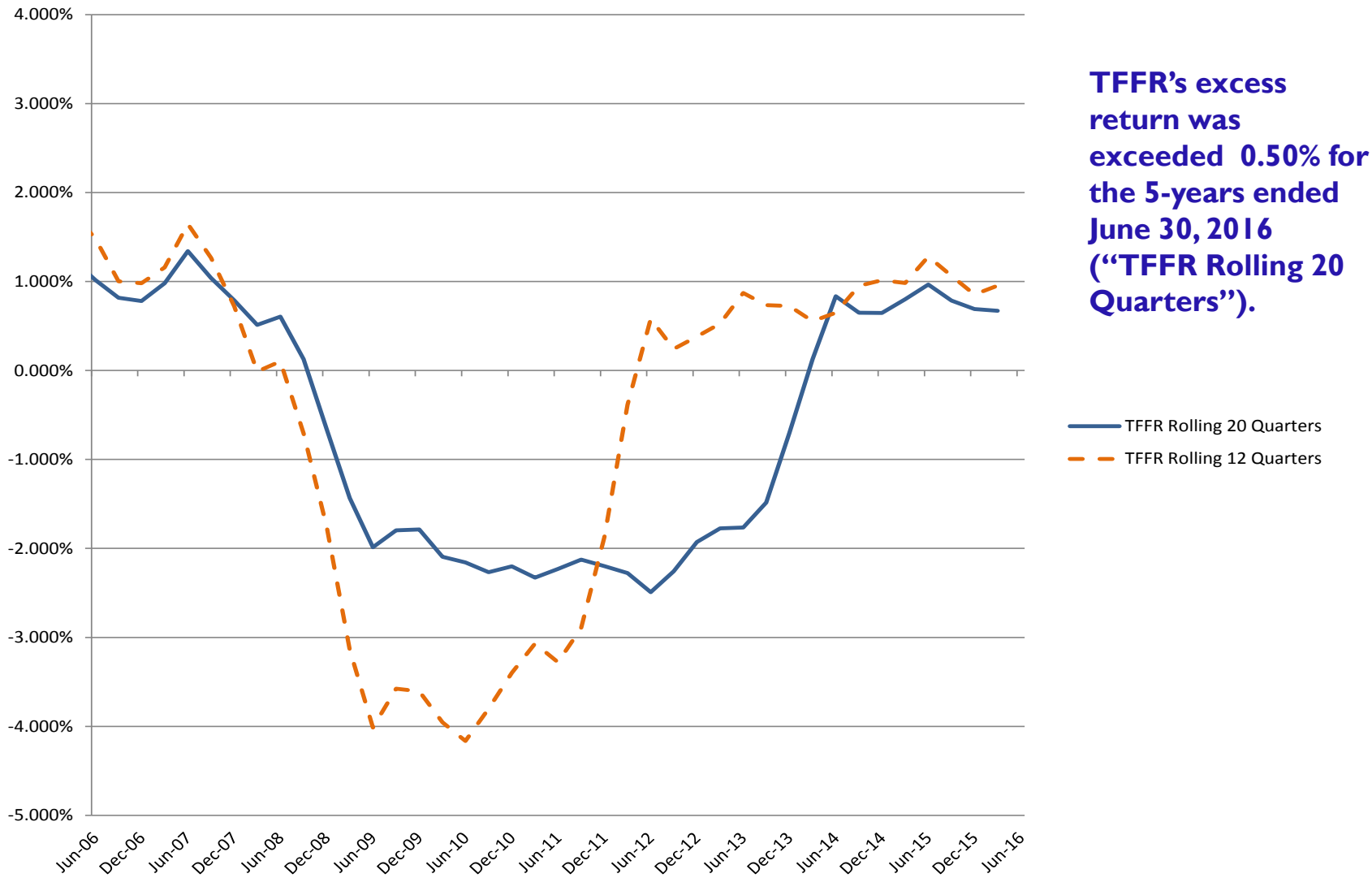
TFFR New Target Asset Allocation:

Global Equity	58%
Fixed Income	23%
Real Assets	18%
Cash Equiv.	1%
Total	100%

For the current fiscal year ended June 30, 2016, TFFR generated a net return of 0.28%, largely due to slowing global growth rates and significant political uncertainty in many markets. As a result, Global Equities, with a 58% allocation, declined by **3.9%** last year. On a positive note, Fixed Income and Real Assets displayed strong gains as both benchmarks increased by 6.3% in the last fiscal year. TFFR Fixed Income (with a 23% allocation) underperformed as the portfolio was positioned for a gradual rise in rates during a period when rates declined, while Real Assets (up **7.83%**) was TFFR's top asset class.

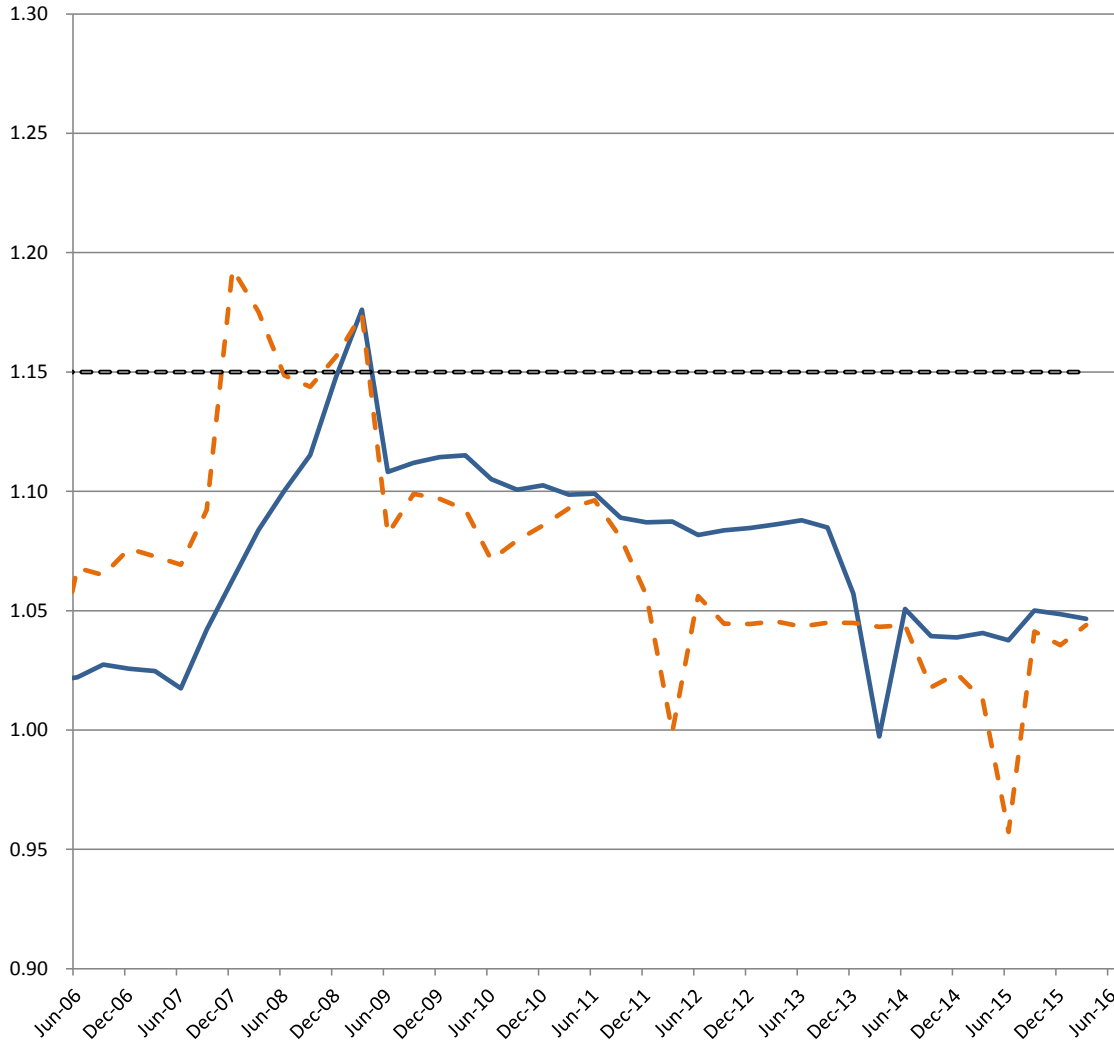
Excess Return Relative to Policy Benchmark

10 Years Ended **6/30/2016**



Relative Standard Deviation Relative to Policy Benchmark

10 Years Ended 6/30/2016



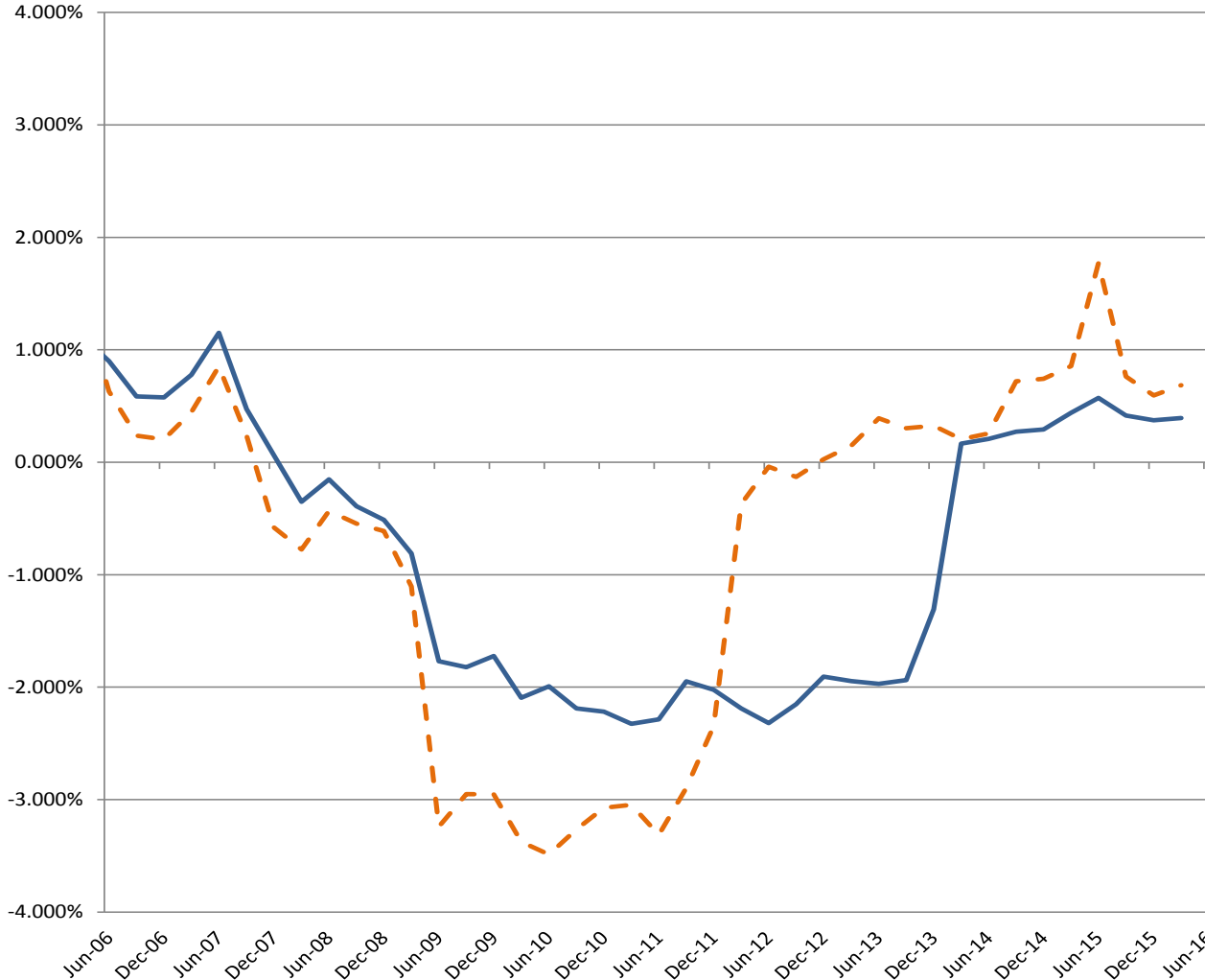
TFFR's standard deviation remains within investment guidelines of 1.15 (or 115% of the policy benchmark over the last 5 years).

— TFFR Rolling 20 Quarters
 - - - TFFR Rolling 12 Quarters
 - - - Reference

TFFR's standard deviation for the 5-years ended June 30, 2016 was 8.2%, which was 105% of the policy benchmark of 7.9%.

Risk Adjusted Excess Return

10 Years Ended 6/30/2016



TFFR's risk adjusted excess return turned positive on a rolling 3-year basis in 2013 (dashed line) and on a rolling 5-year basis (solid line) in 2014.

— TFFR Rolling 20 Quarters
 - - - TFFR Rolling 12 Quarters

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.



Appendix of Supporting Materials

For TFFR Investment Update as of June 30, 2016

Global Equity, Fixed Income and Real Asset Valuations

Asset Class Allocation

	June 30, 2016		Net New Inv.	Inv. Return	March 31, 2016	
	Market Value	Weight			Market Value	Weight
GLOBAL EQUITY	\$1,208,387,564	58.04%	\$7,389,596	\$10,165,019	\$1,190,832,950	57.88%
Domestic Equity	\$478,121,552	22.96%	\$(501,473)	\$11,264,785	\$467,358,240	22.72%
Large Cap	370,687,777	17.80%	(415,114)	7,029,723	364,073,168	17.70%
Small Cap	107,433,775	5.16%	(86,359)	4,235,063	103,285,072	5.02%
International Equity	\$321,176,957	15.43%	\$6,299,809	\$(487,611)	\$315,364,760	15.33%
Developed Intl Equity	247,919,083	11.91%	5,394,809	(2,670,853)	245,195,128	11.92%
Emerging Markets	73,257,874	3.52%	905,000	2,183,242	70,169,632	3.41%
World Equity	\$335,714,674	16.12%	\$3,350,510	\$(681,467)	\$333,045,631	16.19%
Private Equity	\$73,374,381	3.52%	\$(1,759,250)	\$69,312	\$75,064,319	3.65%
GLOBAL FIXED INCOME	\$483,149,237	23.21%	\$15,650,156	\$13,675,879	\$453,823,202	22.06%
Fixed Income Comp	\$361,706,587	17.37%	\$2,805,270	\$10,707,745	\$348,193,572	16.92%
Investment Grade Fixed	268,380,865	12.89%	22,952,474	5,712,454	239,715,936	11.65%
Below Inv. Grade Fixed Income	93,325,722	4.48%	(20,147,204)	4,995,290	108,477,636	5.27%
International Fixed Income	\$121,442,651	5.83%	\$12,844,886	\$2,968,134	\$105,629,631	5.13%
GLOBAL REAL ASSETS	\$372,030,580	17.87%	\$(30,413,206)	\$6,472,174	\$395,971,612	19.25%
Real Estate	204,184,309	9.81%	(29,000,906)	6,125,103	227,060,113	11.04%
Timber	70,258,495	3.37%	0	(1,259,280)	71,517,775	3.48%
Infrastructure	97,587,776	4.69%	(1,412,300)	1,606,351	97,393,725	4.73%
Cash & Equivalents	\$18,522,293	0.89%	\$1,730,621	\$24,583	\$16,767,088	0.81%
Securities Lending Income	\$0	0.00%	\$(100,710)	\$100,710	-	-
Total Fund	\$2,082,089,674	100.0%	\$(5,743,543)	\$30,438,365	\$2,057,394,852	100.0%

Actual versus Benchmark Return Comparisons – Equity

Overview:
Global Equity
returns beat
performance
benchmarks
over the last 3-
and 5-year
periods, but
underperformed
in the last year
primarily due to
LSV and Epoch
in World Equity
generating
0.63% of
negative excess
return.

	Returns for Periods Ended June 30, 2016			
	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Global Equity				
Gross	0.85%	(3.62%)	6.86%	-
Net	0.81%	(3.93%)	6.52%	-
Wtd Avg Global Equity Benchmark	1.10%	(3.88%)	5.92%	-
Domestic Equity				
Gross	2.41%	2.02%	11.53%	12.02%
Net	2.39%	1.90%	11.34%	11.79%
Wtd Avg Domestic Equity Benchmark	2.82%	0.73%	10.54%	11.21%
Large Cap Equity				
Gross	1.93%	4.63%	12.77%	12.85%
Net	1.91%	4.52%	12.60%	12.63%
Benchmark(1)	2.54%	2.93%	11.48%	12.09%
Small Cap Equity				
Gross	4.10%	(6.86%)	7.11%	9.27%
Net	4.10%	(7.04%)	6.87%	9.03%
Russell 2000 Index	3.79%	(6.73%)	7.09%	8.35%
International Equity				
Gross	(0.15%)	(7.71%)	3.57%	2.48%
Net	(0.20%)	(7.90%)	3.33%	2.19%
Wtd Avg Intl Equity Benchmark	(1.01%)	(10.39%)	1.45%	0.68%
Developed Intl Equity				
Gross	(1.09%)	(7.68%)	4.12%	3.10%
Net	(1.15%)	(7.92%)	3.86%	2.81%
Benchmark(2)	(1.46%)	(10.16%)	2.06%	1.68%
Emerging Markets				
Gross	3.05%	(9.25%)	0.43%	(0.77%)
Net	3.05%	(9.25%)	0.29%	(1.06%)
Benchmark(3)	0.66%	(12.05%)	(1.56%)	(3.78%)
World Equity				
Gross	(0.20%)	(6.53%)	6.44%	-
Net	(0.29%)	(7.27%)	5.70%	-
MSCI World Index	1.01%	(2.78%)	6.95%	6.63%
Private Equity				
Net	0.12%	(7.20%)	(2.98%)	0.41%

Actual vs Benchmark Returns – Fixed Income and Real Assets

Overview:
Net returns for most fixed income and real asset classes exceed the stated policy benchmark for the 3- and 5-year periods ended June 30, 2015, except Timber and International Fixed Income.

Returns for Periods Ended June 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Global Fixed Income				
Gross	2.96%	4.75%	4.41%	-
Net	2.89%	4.49%	4.16%	-
Wtd Avg Global Fixed Inc. Benchmark	3.36%	6.36%	3.68%	-
Domestic Fixed Income				
Gross	3.06%	3.82%	5.02%	5.34%
Net	3.01%	3.59%	4.80%	5.25%
Wtd Avg Domestic FI Benchmark	3.24%	4.83%	4.16%	4.27%
Inv. Grade Fixed Income				
Gross	2.25%	5.15%	4.81%	5.15%
Net	2.21%	5.00%	4.69%	5.01%
Barclays Aggregate Index	2.21%	6.00%	4.06%	3.76%
Below Inv. Grade Fixed Income				
Gross	4.94%	0.69%	5.43%	6.70%
Net	4.84%	0.28%	4.98%	6.25%
Barclays HY Corp 2% Issue	5.52%	1.65%	4.20%	5.84%
International Fixed Income				
Gross	2.57%	7.88%	2.02%	2.29%
Net	2.48%	7.50%	1.65%	1.93%
Wtd Avg Intl Fixed Income Benchmark	3.40%	11.24%	1.85%	0.35%
Global Real Assets				
Gross	1.72%	8.37%	9.76%	-
Net	1.57%	7.83%	9.30%	-
Wtd Avg Global Real Assets Benchmark	1.64%	6.29%	7.86%	-
Real Estate				
Gross	3.00%	11.96%	14.82%	13.67%
Net	2.87%	11.34%	14.26%	13.13%
NCREIF Total Index	2.03%	10.64%	11.61%	11.51%
Timber				
Net	(1.76%)	4.34%	3.63%	-
NCREIF Timberland Index	1.09%	3.49%	7.77%	6.72%
Infrastructure				
Gross	1.67%	3.65%	4.74%	-
Net	1.34%	2.88%	4.09%	-
CPI-W	1.33%	0.64%	0.76%	1.12%
Cash & Equivalents - Net	0.12%	0.29%	0.13%	0.11%
3-month Treasury Bill	0.07%	0.19%	0.09%	0.09%
Total Fund				
Gross	1.48%	0.61%	6.89%	6.66%
Net	1.41%	0.28%	6.56%	6.32%
Target*	1.71%	0.61%	5.95%	5.73%

TFFR Investment Performance Report – June 30, 2016

	June-16			Current Fiscal YTD		Prior Year FY15		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	Market Value	Allocation		Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net
		Actual	Policy								
TOTAL FUND	2,082,183,640	100.0%	100.0%	0.61%	0.27%	3.86%	3.52%	6.89%	6.55%	6.66%	6.32%
<i>POLICY TARGET BENCHMARK</i>				<i>0.62%</i>	<i>0.62%</i>	<i>2.16%</i>	<i>2.16%</i>	<i>5.96%</i>	<i>5.96%</i>	<i>5.73%</i>	<i>5.73%</i>
GLOBAL EQUITIES	1,208,387,567	58.0%	58.0%	-3.62%	-3.93%	3.51%	3.17%	6.88%	6.53%	7.81%	7.53%
<i>Benchmark</i>				<i>-3.76%</i>	<i>-3.76%</i>	<i>1.55%</i>	<i>1.55%</i>	<i>6.05%</i>	<i>6.05%</i>	<i>7.08%</i>	<i>7.08%</i>
Epoch (1)	148,147,393	7.1%	7.0%	-5.93%	-6.53%	8.58%	7.85%	6.49%	5.78%	7.57%	6.80%
LSV	187,567,281	9.0%	9.0%	-7.05%	-7.85%	1.94%	1.03%	6.58%	5.84%	N/A	N/A
Total Global Equities	335,714,674	16.1%	16.0%	-6.53%	-7.27%	4.68%	3.84%	6.44%	5.70%	7.14%	6.55%
<i>MSCI World</i>				<i>-2.78%</i>	<i>-2.78%</i>	<i>1.43%</i>	<i>1.43%</i>	<i>6.95%</i>	<i>6.95%</i>	<i>7.72%</i>	<i>7.72%</i>
Domestic - broad	478,121,554	23.0%	21.5%	2.02%	1.90%	8.65%	8.47%	11.55%	11.33%	11.48%	11.29%
<i>Benchmark</i>				<i>0.72%</i>	<i>0.72%</i>	<i>7.26%</i>	<i>7.26%</i>	<i>10.54%</i>	<i>10.54%</i>	<i>10.49%</i>	<i>10.49%</i>
Large Cap Domestic											
LA Capital	140,158,754	6.7%	6.6%	5.17%	4.95%	12.76%	12.52%	14.27%	14.03%	13.62%	13.40%
<i>Russell 1000 Growth</i>				<i>3.02%</i>	<i>3.02%</i>	<i>10.56%</i>	<i>10.56%</i>	<i>13.07%</i>	<i>13.07%</i>	<i>12.35%</i>	<i>12.35%</i>
LA Capital	86,944,265	4.2%	3.3%	6.04%	5.92%	8.26%	8.12%	12.62%	12.48%	13.07%	12.90%
<i>Russell 1000</i>				<i>2.94%</i>	<i>2.94%</i>	<i>7.37%</i>	<i>7.37%</i>	<i>11.48%</i>	<i>11.48%</i>	<i>11.88%</i>	<i>11.88%</i>
Northern Trust	65,256,170	3.1%	3.3%	1.76%	1.76%	6.26%	5.89%	11.10%	10.70%	12.55%	12.16%
Clifton	78,328,590	3.8%	3.3%	4.60%	4.60%	7.43%	7.41%	11.89%	11.88%	12.45%	12.39%
<i>S&P 500</i>				<i>3.99%</i>	<i>3.99%</i>	<i>7.42%</i>	<i>7.42%</i>	<i>11.66%</i>	<i>11.66%</i>	<i>12.10%</i>	<i>12.10%</i>
Total Large Cap Domestic	370,687,779	17.8%	16.6%	4.63%	4.52%	9.48%	9.30%	12.77%	12.60%	12.86%	12.64%
<i>Russell 1000 (2)</i>				<i>2.94%</i>	<i>2.94%</i>	<i>7.37%</i>	<i>7.37%</i>	<i>11.48%</i>	<i>11.48%</i>	<i>12.09%</i>	<i>12.09%</i>
Small Cap Domestic											
Atlanta Capital	49,232,389	2.4%	2.4%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Callan (5) (6)	-	0.0%	0.0%	N/A	N/A	3.98%	3.98%	N/A	N/A	N/A	N/A
Clifton	58,201,387	2.8%	2.4%	-5.49%	-5.85%	7.58%	7.17%	8.31%	7.84%	9.61%	9.13%
Total Small Cap Domestic	107,433,775	5.2%	4.8%	-6.86%	-7.04%	5.77%	5.57%	7.22%	6.87%	9.40%	8.95%
<i>Russell 2000</i>				<i>-6.73%</i>	<i>-6.73%</i>	<i>6.49%</i>	<i>6.49%</i>	<i>7.09%</i>	<i>7.09%</i>	<i>8.35%</i>	<i>8.35%</i>

NOTE: All data is deemed to be materially accurate, but unaudited and subject to change.

TFFR Investment Performance Report – June 30, 2016

	June-16			Current Fiscal YTD		Prior Year FY15		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	Market Value	Allocation		Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net
		Actual	Policy								
International - broad Benchmark	321,176,957	15.4%	14.5%	-7.72%	-7.91%	-2.62%	-2.82%	3.60%	3.34%	5.53%	5.24%
				-10.38%	-10.38%	-4.34%	-4.34%	1.46%	1.46%	3.82%	3.82%
Developed International											
Capital Group (7)	43,828	0.0%	0.0%	N/A	N/A	-1.78%	-2.20%	N/A	N/A	N/A	N/A
MSCI EAFE (3)						-4.22%	-4.22%				
NTGI	119,194,839	5.7%	5.9%	-9.50%	-9.54%	-4.98%	-5.01%	N/A	N/A	N/A	N/A
MSCI World Ex US				-9.84%	-9.84%	-5.28%	-5.28%				
William Blair	57,000,593	2.7%	3.5%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MSCI ACWI ex-US (Net)											
DFA (5)	33,595,399	1.6%	1.2%	-9.28%	-9.28%	-3.27%	-3.27%	6.24%	6.01%	4.42%	3.99%
Wellington	38,084,425	1.8%	1.2%	1.90%	1.06%	0.53%	-0.31%	9.80%	8.90%	9.09%	8.18%
S&P/Citigroup BMI EPAC < \$2BN				-3.37%	-3.37%	1.14%	1.14%	7.29%	7.29%	4.37%	4.37%
Total Developed International	247,919,083	11.9%	11.8%	-7.68%	-7.92%	-3.10%	-3.34%	4.15%	3.86%	3.11%	2.71%
MSCI EAFE (3)				-10.16%	-10.16%	-4.22%	-4.22%	2.06%	2.06%	1.68%	1.68%
Emerging Markets											
Axiom	54,327,705	2.6%	2.1%	-10.32%	-10.32%	N/A	N/A	N/A	N/A	N/A	N/A
DFA (5)	18,930,169	0.9%	0.7%	-5.64%	-5.64%	-1.73%	-1.73%	2.65%	2.43%	-0.21%	-0.66%
Total Emerging Markets	73,257,874	3.5%	2.8%	-9.25%	-9.25%	-0.86%	-0.88%	0.46%	0.29%	-0.77%	-1.17%
MSCI Emerging Markets				-12.06%	-12.06%	-5.13%	-5.13%	-1.56%	-1.56%	-3.78%	-3.78%

TFFR Investment Performance Report – June 30, 2016

	June-16			Current Fiscal YTD		Prior Year FY15		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	Allocation			Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net
	Market Value	Actual	Policy								
Private Equity											
Brinson 1998 Partnership Fund	57,930	0.0%		4.14%	4.14%	-0.68%	-0.68%	1.77%	1.77%	0.95%	0.95%
Brinson 1999 Partnership Fund	155,638	0.0%		12.03%	12.03%	-17.94%	-17.94%	2.61%	2.61%	2.21%	2.21%
Brinson 2000 Partnership Fund	431,959	0.0%		-1.75%	-1.75%	-10.71%	-10.71%	-1.74%	-1.74%	1.43%	1.43%
Brinson 2001 Partnership Fund	698,326	0.0%		-10.11%	-10.11%	-0.25%	-0.25%	2.31%	2.31%	4.78%	4.78%
Brinson 2002 Partnership Fund	340,042	0.0%		9.43%	9.43%	-19.50%	-19.50%	1.65%	1.65%	4.69%	4.69%
Brinson 2003 Partnership Fund	165,145	0.0%		-2.55%	-2.55%	13.43%	13.43%	13.28%	13.28%	7.77%	7.77%
Total Brinson Partnership Funds	1,849,041	0.1%		-1.98%	-1.98%	-7.11%	-7.11%	1.87%	1.87%	3.69%	3.69%
Brinson 1999 Non-US Partnership Fund	184,730	0.0%		13.44%	13.44%	-13.15%	-13.15%	1.29%	1.29%	5.77%	5.77%
Brinson 2000 Non-US Partnership Fund	326,815	0.0%		-7.68%	-7.68%	-4.91%	-4.91%	-2.64%	-2.64%	-2.51%	-2.51%
Brinson 2001 Non-US Partnership Fund	78,249	0.0%		23.36%	23.36%	16.96%	16.96%	24.09%	24.09%	12.41%	12.41%
Brinson 2002 Non-US Partnership Fund	473,499	0.0%		29.09%	29.09%	-7.15%	-7.15%	8.10%	8.10%	5.92%	5.92%
Brinson 2003 Non-US Partnership Fund	260,213	0.0%		18.08%	18.08%	-2.02%	-2.02%	11.09%	11.09%	9.99%	9.99%
Brinson 2004 Non-US Partnership Fund	185,543	0.0%		-8.26%	-8.26%	-6.29%	-6.29%	5.80%	5.80%	3.35%	3.35%
Total Brinson Non-US Partnership Fund	1,509,049	0.1%		10.65%	10.65%	-4.47%	-4.47%	6.97%	6.97%	5.26%	5.26%
Adams Street 2008 Non-US Partnership Fd	3,439,030	0.2%		11.84%	11.84%	7.59%	7.59%	12.71%	12.71%	9.22%	9.22%
Brinson BVCF IV	1,733,599	0.1%		-1.65%	-1.65%	42.11%	42.11%	18.20%	18.20%	29.22%	29.22%
Adams Street Direct Co-investment Fund	2,566,885	0.1%		8.30%	8.04%	22.50%	22.23%	16.34%	15.92%	13.24%	13.00%
Adams Street 2010 Direct Fund	622,399	0.0%		7.48%	7.48%	4.61%	4.61%	15.27%	15.27%	13.88%	13.88%
Adams Street 2010 Non-US Emerging Mkts	594,312	0.0%		10.50%	10.50%	21.80%	21.80%	11.83%	11.83%	0.77%	0.77%
Adams Street 2010 Non-US Developed Mkts	1,211,400	0.1%		9.63%	9.63%	-2.43%	-2.43%	6.70%	6.70%	7.21%	7.21%
Adams Street 2010 Partnership Fund	2,538,773	0.1%		6.18%	6.18%	18.37%	18.37%	13.70%	13.70%	12.03%	12.03%
Total Adams Street 2010 Funds	4,966,884	0.2%		7.80%	7.80%	10.63%	10.63%	12.22%	12.22%	10.71%	10.71%
Adams Street 2015 Global Fund	696,694	0.0%		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matlin Patterson Global Opportunities	0	0.0%		12.99%	12.99%	1.12%	1.12%	4.54%	4.54%	1.18%	1.18%
Matlin Patterson Global Opportunities II	748,720	0.0%		7.27%	7.27%	19.60%	19.60%	3.19%	3.19%	-27.34%	-27.34%
Matlin Patterson Global Opportunities III	12,420,383	0.6%		-5.66%	-5.66%	-2.43%	-2.43%	-1.30%	-1.30%	22.01%	22.01%
InvestAmerica (Lewis and Clark Fund)	612,409	0.0%		-51.19%	-51.19%	-32.09%	-32.09%	-35.55%	-35.55%	-19.67%	-19.67%
L&C II	4,426,748	0.2%		1.88%	1.88%	-14.35%	-14.35%	-6.77%	N/A	-5.56%	N/A
Hearthstone MSII	5,891	0.0%		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Hearthstone MSIII	2,036,028	0.1%		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	27.65%	27.65%
Corsair III	6,168,124	0.3%		34.22%	34.22%	-8.84%	-8.84%	7.06%	7.06%	1.57%	1.35%
Corsair III - ND Investors LLC	5,489,856	0.3%		6.41%	6.41%	-5.27%	-5.27%	-0.10%	-0.10%	2.58%	2.53%
Corsair IV	7,876,597	0.4%		-2.38%	-2.38%	29.73%	29.73%	13.58%	13.58%	6.12%	6.00%
Capital International (CIPEF V)	3,600,607	0.2%		-25.52%	-25.52%	-13.33%	-13.33%	-10.61%	-10.61%	-9.35%	-9.35%
Capital International (CIPEF VI)	8,233,850	0.4%		1.06%	1.06%	-21.71%	-21.71%	-9.32%	-9.32%	N/A	N/A
EIG (formerly TCW)	2,148,790	0.1%		-67.59%	-67.59%	-23.62%	-23.62%	-38.29%	-38.29%	-24.04%	-24.04%
Quantum Resources	23,777	0.0%		N/A	N/A	-42.83%	-42.83%	N/A	N/A	N/A	N/A
Quantum Energy Partners	2,821,419	0.1%		-22.63%	-22.63%	-19.31%	-19.31%	-6.45%	-6.45%	4.85%	4.85%
Total Private Equity (5)	73,374,381	3.5%	6.0%	-7.19%	-7.20%	-5.37%	-5.38%	-2.95%	-2.97%	0.50%	0.48%

TFFR Investment Performance Report – June 30, 2016

	June-16			Current Fiscal YTD		Prior Year FY15		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	Market Value	Allocation		Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net
		Actual	Policy								
GLOBAL FIXED INCOME Benchmark	483,243,200	23.2%	23.0%	4.75% 6.36%	4.49% 6.36%	0.56% -2.22%	0.30% -2.22%	4.40% 3.68%	4.15% 3.68%	3.81% 2.38%	3.61% 2.38%
Domestic Fixed Income Benchmark	361,706,587	17.4%	17.0%	3.82% 4.83%	3.59% 4.83%	3.39% 1.21%	3.16% 1.21%	5.01% 4.15%	4.79% 4.15%	4.49% 2.92%	4.32% 2.92%
Investment Grade Fixed Income											
PIMCO (DiSCO II) (5) BC Aggregate	40,746,587	2.0%	2.0%	4.39% 6.00%	4.39% 6.00%	4.32% 1.85%	4.32% 1.85%	6.84% 4.06%	6.84% 4.06%	N/A	N/A
State Street BC Long Treasuries	29,785,322	1.4%	1.3%	19.28% 19.30%	19.23% 19.30%	6.31% 6.32%	6.28% 6.32%	10.44% 10.46%	10.40% 10.46%	N/A	N/A
PIMCO Unconstrained 3m LIBOR	27,401,591	1.3%	1.7%	-0.64% 0.49%	-0.95% 0.49%	1.34% 0.26%	0.93% 0.26%	N/A	N/A	N/A	N/A
Declaration (Total Return) (5) 3m LIBOR	38,457,263	1.8%	1.6%	2.59% 0.49%	2.59% 0.49%	3.63% 0.26%	3.63% 0.26%	4.30% 0.33%	4.30% 0.33%	N/A	N/A
JP Morgan PIMCO BC Mortgage Backed Securities Index	50,603,356 81,386,745	2.4% 3.9%	2.6% 3.9%	4.60% 4.34%	4.32% 4.34%	N/A 2.28%	N/A 2.28%	N/A 3.76%	N/A 3.76%	N/A	N/A
Total Investment Grade Fixed Income BC Aggregate	268,380,865	12.9%	13.0%	5.15% 6.00%	5.01% 6.00%	3.65% 1.85%	3.51% 1.85%	4.81% 4.06%	4.69% 4.06%	5.16% 3.76%	5.02% 3.76%
Below Investment Grade Fixed Income											
Loomis Sayles PIMCO (BRAVO II) (5)	73,301,110 18,570,738	3.5% 0.9%	3.0% 0.9%	-0.25% 7.02%	-0.75% 7.02%	1.33% 10.36%	0.83% 10.36%	4.61% N/A	4.10% N/A	5.77% N/A	5.27% N/A
Goldman Sachs 2006 Fund (5)	433,875	0.0%	0.0%	3.00%	3.00%	25.65%	25.65%	17.57%	17.57%	8.95%	8.95%
Goldman Sachs Fund V (5)	1,020,000	0.0%	0.0%	-5.12%	-5.12%	14.43%	14.43%	6.11%	6.11%	8.41%	8.41%
Total Below Investment Grade Fixed Income BC High Yield 2% Issuer Constrained Index	93,325,722	4.5%	4.0%	0.70% 1.65%	0.29% 1.65%	2.53% -0.39%	2.09% -0.39%	5.43% 4.20%	4.98% 4.20%	6.71% 5.84%	6.27% 5.84%

TFFR Investment Performance Report – June 30, 2016

	June-16			Current Fiscal YTD		Prior Year FY15		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	Market Value	Allocation		Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net
		Actual	Policy								
International Fixed Income Benchmark	121,536,613	5.8%	6.0%	7.88%	7.50%	-9.37%	-9.73%	2.01%	1.65%	1.37%	1.09%
				11.24%	11.24%	-13.19%	-13.19%	1.85%	1.85%	0.41%	0.41%
Developed Investment Grade Int'l FI											
UBS Global (Brinson)	52,008,969	2.5%	3.0%	11.43%	11.07%	-13.46%	-13.82%	1.52%	1.20%	0.03%	-0.28%
BC Global Aggregate ex-US (4)				11.24%	11.24%	-13.19%	-13.19%	1.85%	1.85%	0.28%	0.28%
Brandywine	69,527,644	3.3%	3.0%	5.12%	4.73%	-5.38%	-5.74%	2.66%	2.26%	4.50%	4.09%
BC Global Aggregate (ex-US)				8.87%	8.87%	-7.10%	-7.10%	2.79%	2.79%	1.77%	1.77%
Total Developed Investment Grade Int'l FI	121,536,613	5.8%	6.0%	7.88%	7.50%	-9.37%	-9.73%	2.01%	1.65%	2.29%	1.93%
BC Global Aggregate ex-US				11.24%	11.24%	-13.19%	-13.19%	1.85%	1.85%	0.28%	0.28%
Cash Equivalents											
Northern Trust STIF	18,522,293			0.29%	0.29%	0.06%	0.06%	0.13%	0.13%	0.12%	0.12%
Total Cash Equivalents	18,522,293	0.9%	1.0%	0.29%	0.29%	0.06%	0.06%	0.13%	0.13%	0.12%	0.12%
90 Day T-Bill				0.19%	0.19%	0.02%	0.02%	0.09%	0.09%	0.09%	0.09%

NOTE: Monthly returns and market values are preliminary and subject to change.

New asset class structure began October 1, 2011. Composite returns for new composites not available prior to that date.

Portfolios moved between asset classes will show historical returns in new position.

TFFR Investment Performance Report – June 30, 2016

	June-16			Current Fiscal YTD		Prior Year FY15		3 Years Ended 6/30/2016		5 Years Ended 6/30/2016	
	Market Value	Allocation Actual	Policy	Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net	Gross ⁽⁵⁾	Net
GLOBAL REAL ASSETS	372,030,580	17.9%	18.0%	8.37%	7.83%	9.51%	9.11%	9.76%	9.30%	7.44%	7.10%
Benchmark				6.29%	6.29%	8.78%	8.78%	7.87%	7.87%	6.29%	6.29%
Global Real Estate											
INVESCO - Core	91,699,570			10.96%	10.59%	16.38%	15.97%	12.72%	12.32%	12.09%	11.65%
INVESCO - Fund II (5)	3,404,279			6.65%	6.65%	6.23%	6.23%	9.06%	9.06%	15.56%	15.56%
INVESCO - Fund III (5)	11,516,349			14.25%	14.25%	18.70%	18.70%	17.06%	17.06%	N/A	N/A
INVESCO - Fund IV (6)	7,938,202			4.66%	4.66%	N/A	N/A	N/A	N/A	N/A	N/A
INVESCO - Asia Real Estate Fund (5)	702,956			121.40%	121.40%	16.19%	16.19%	43.66%	43.66%	23.12%	23.12%
INVESCO - Asia Real Estate Fund III (6)	3,464,080			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
J.P. Morgan Strategic & Special Funds	76,514,684			12.25%	10.95%	14.71%	13.64%	14.01%	12.87%	14.00%	12.93%
J.P. Morgan Alternative Property Fund	128,133			2.80%	2.80%	-33.28%	-33.28%	-10.60%	-10.60%	1.01%	0.94%
J.P. Morgan Greater Europe Fund (5)	4,113,113			24.44%	24.44%	16.90%	16.90%	34.32%	34.32%	N/A	N/A
J.P. Morgan Greater China Property Fund (5)	4,702,945			16.24%	16.24%	16.74%	16.74%	32.27%	32.27%	16.18%	16.18%
Total Global Real Estate	204,184,309	9.8%	10.0%	11.96%	11.34%	15.79%	15.25%	14.82%	14.26%	13.68%	13.15%
NCREIF TOTAL INDEX				10.64%	10.64%	12.98%	12.98%	11.60%	11.60%	11.51%	11.51%
Timber											
TIR - Teredo	15,495,338	0.7%		9.29%	9.29%	15.52%	15.52%	10.42%	10.42%	6.70%	6.70%
TIR - Springbank	54,763,157	2.6%		2.97%	2.97%	-1.98%	-1.98%	0.38%	0.38%	-1.38%	-1.38%
Total Timber (5)	70,258,495	3.4%	3.0%	4.34%	4.34%	3.95%	3.95%	3.63%	3.63%	2.28%	2.28%
NCREIF Timberland Index				3.49%	3.49%	10.02%	10.02%	7.77%	7.77%	6.72%	6.72%
Infrastructure											
JP Morgan (Asian) (5)	12,700,196	0.6%		-9.66%	-9.66%	-2.58%	-2.58%	-3.00%	-3.00%	1.61%	1.61%
JP Morgan (IIF)	64,407,164	3.1%		5.11%	3.93%	1.06%	0.23%	5.27%	4.26%	6.17%	5.09%
Grosvenor (formerly Credit Suisse) (5)	18,737,141	0.9%		8.42%	8.42%	5.37%	5.37%	8.85%	8.85%	N/A	N/A
Grosvenor CIS II (6)	1,743,274	0.1%		6.10%	6.10%	N/A	N/A	N/A	N/A	N/A	N/A
Total Infrastructure	97,587,776	4.7%	5.0%	3.66%	2.89%	1.23%	0.72%	4.74%	4.09%	5.24%	4.71%
CPI				0.64%	0.64%	-0.38%	-0.38%	0.76%	0.76%	0.81%	0.81%

How big is the post-retirement bill?

A relative comparison of the 50 states' payment obligations

The state of the states: how much states spend on debt, pensions and retiree healthcare

% of state revenue collections required to pay the sum of interest on bonds, the state's share of unfunded pension and retiree healthcare liabilities, and defined contribution plan payments



Source: J.P. Morgan Asset Management, state/pension plan Comprehensive Annual Financial Reports, Census, Loop Capital Markets. FY 2015.

- Bars that appear above the **red line** indicate a level at which states face critical challenges in meeting an ability to service their debt and post-retirement benefit obligations.
- Bars that appear below the **green line** identify states that one might view not requiring “a disproportionate share of revenues to service their debts.”
- Note that North Dakota’s overall funding obligations are comparatively low (third from the right).

INFORMATIONAL

TO: State Investment Board (“SIB”) Clients
FROM: Dave Hunter
DATE: November 15, 2016
SUBJECT: **Investment Fee Reviews – Summary Memo**

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 includes 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) in the upcoming months.

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 \$220 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.

**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)

n.a. or n.m. = not available or not meaningful
bp = basis point (1 basis point = 1/100th of 1%)

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.

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.



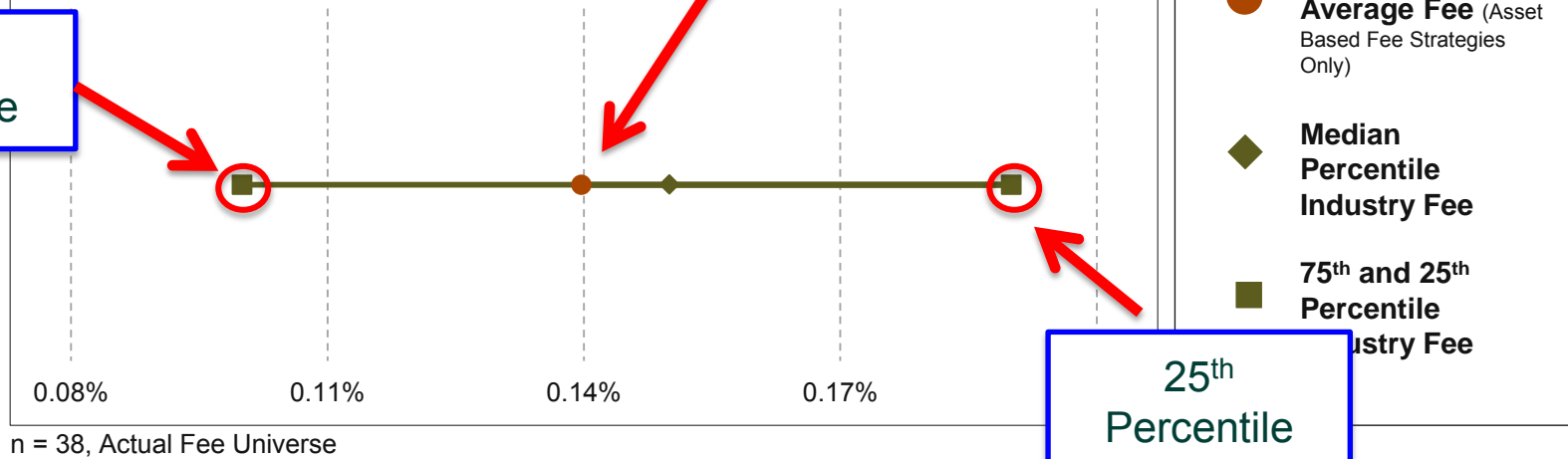
Guide to Charts and Tables

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

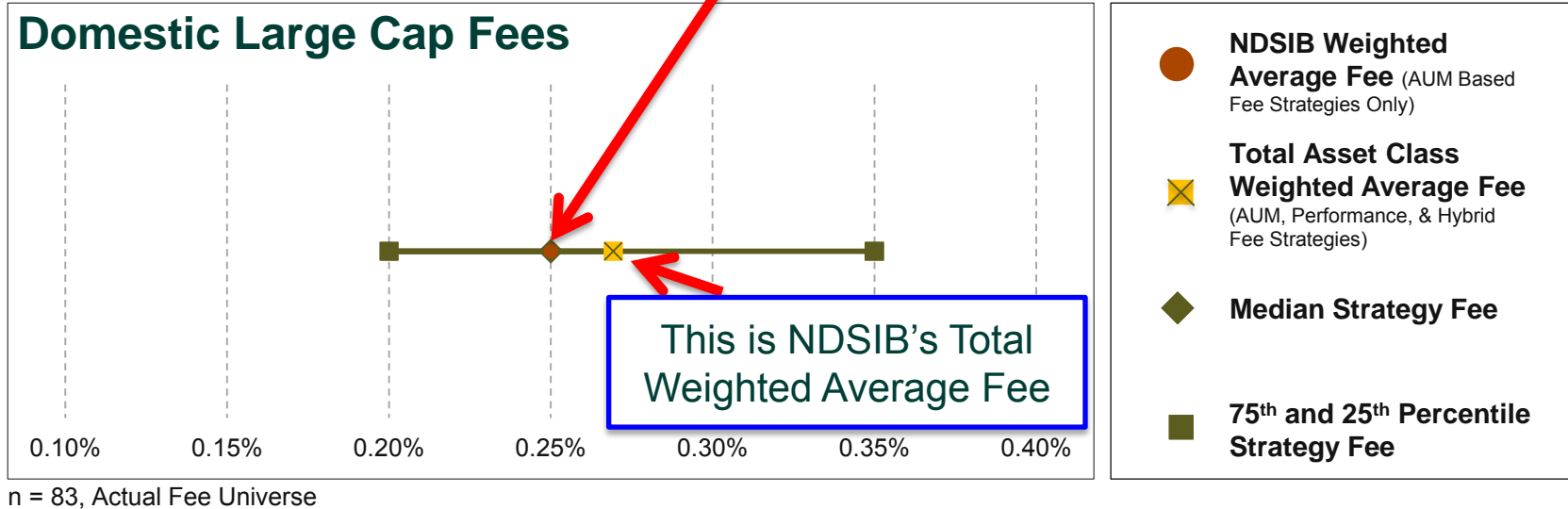
Sometimes, no universe exists

- 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%

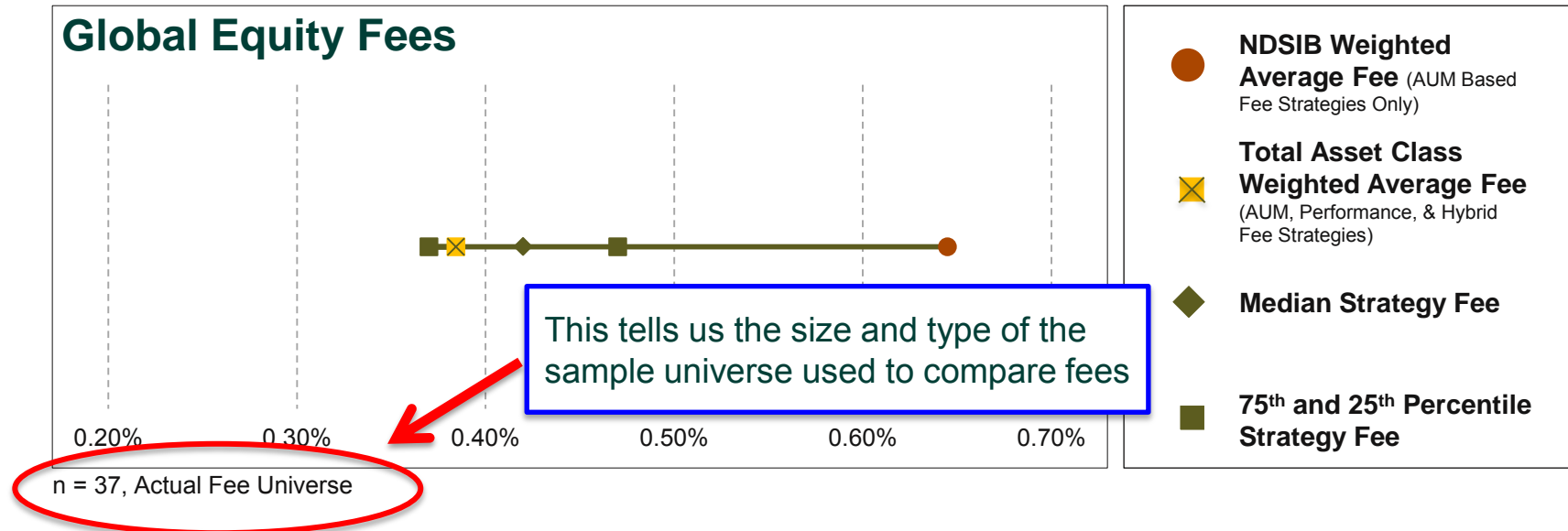
AUM Based Fees

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

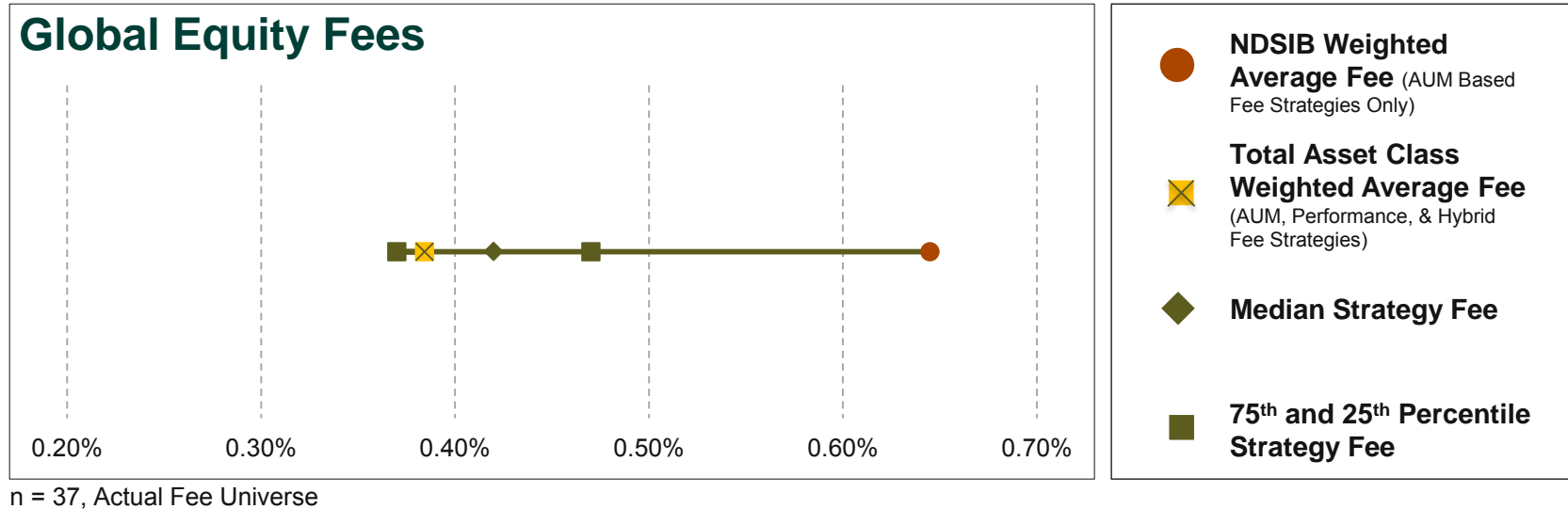
Pension Trust

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

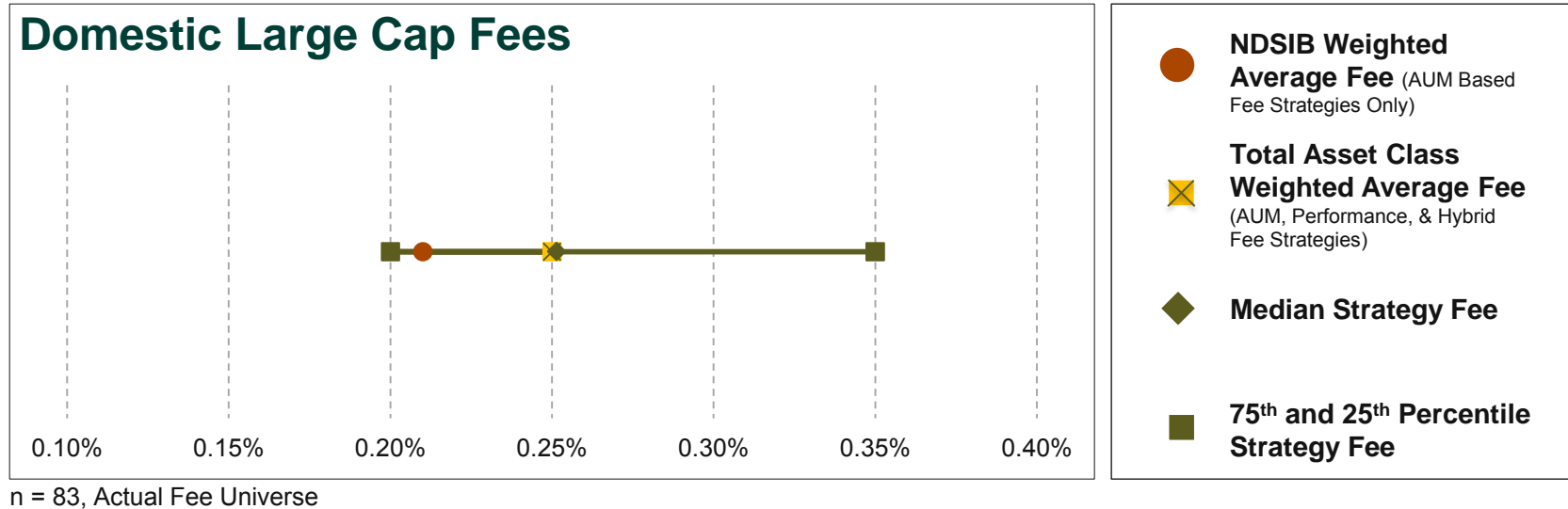
Pension Trust

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

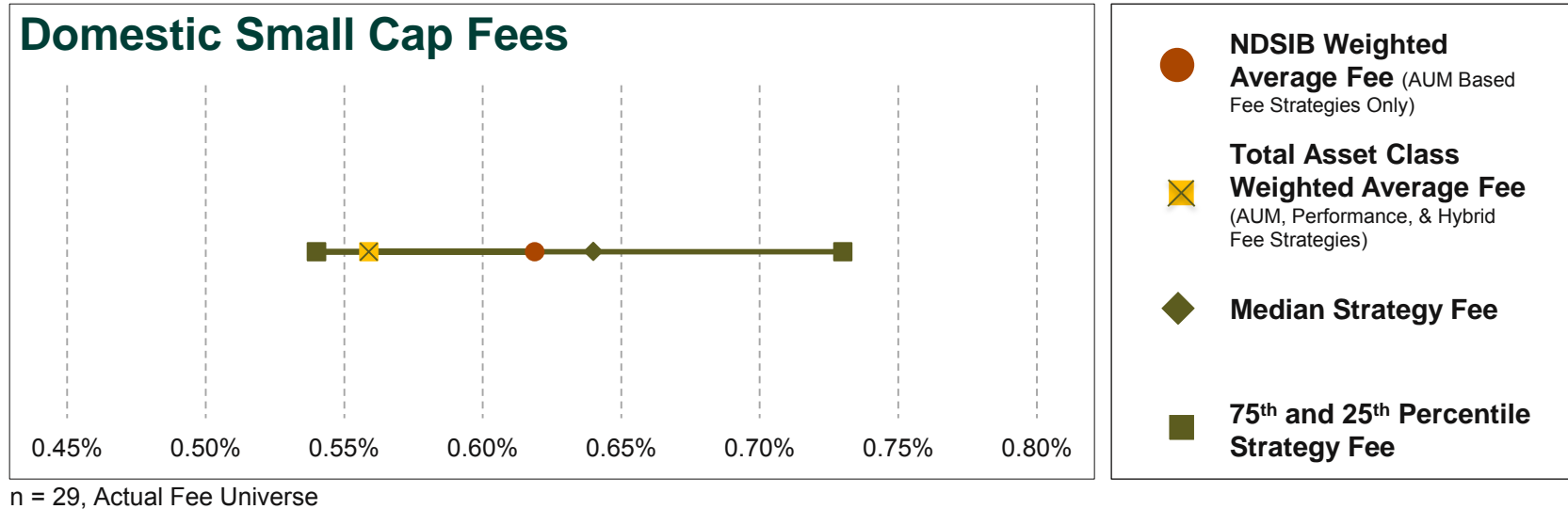
Pension Trust

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

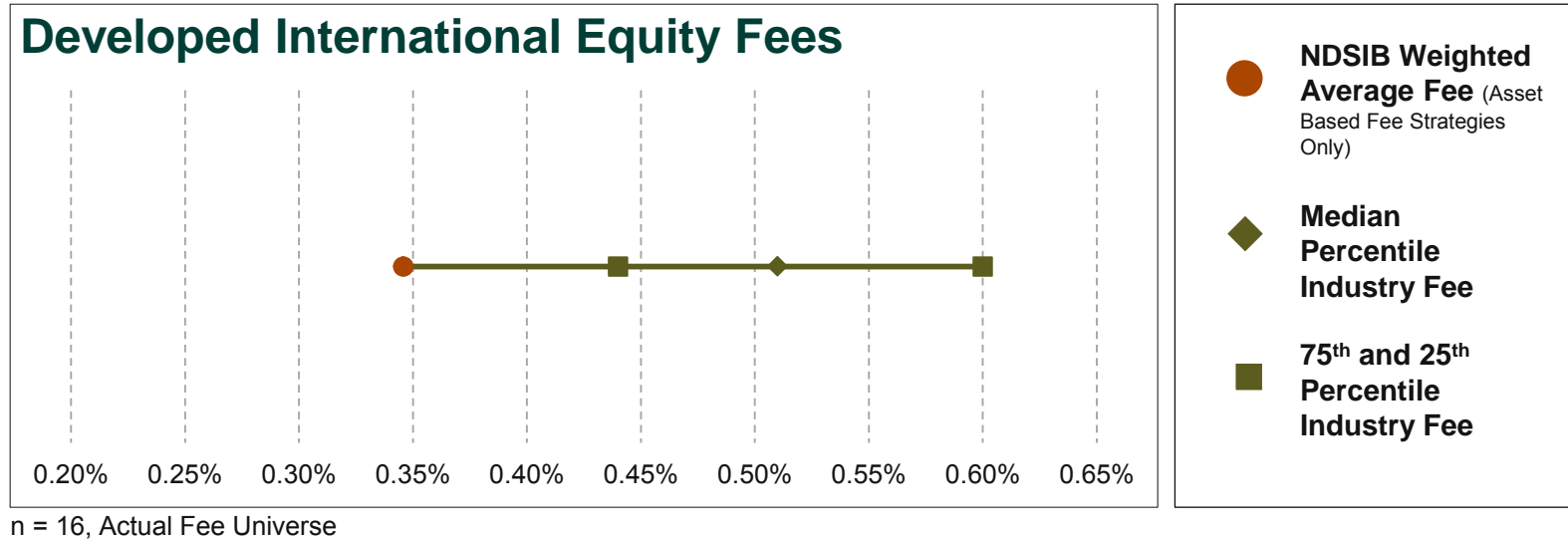
Pension Trust

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

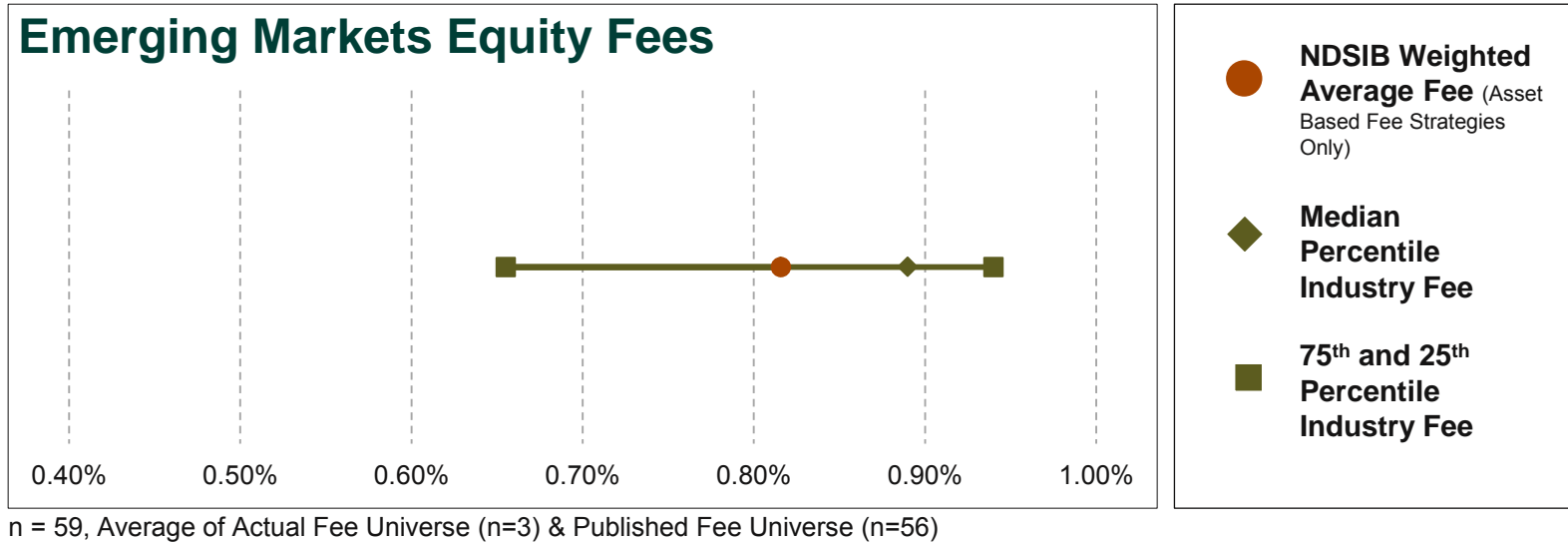
Pension Trust

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%
Industry Fee - 25 th Percentile	0.60%
Industry Fee - Median	0.51%
Industry Fee - 75 th Percentile	0.44%
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

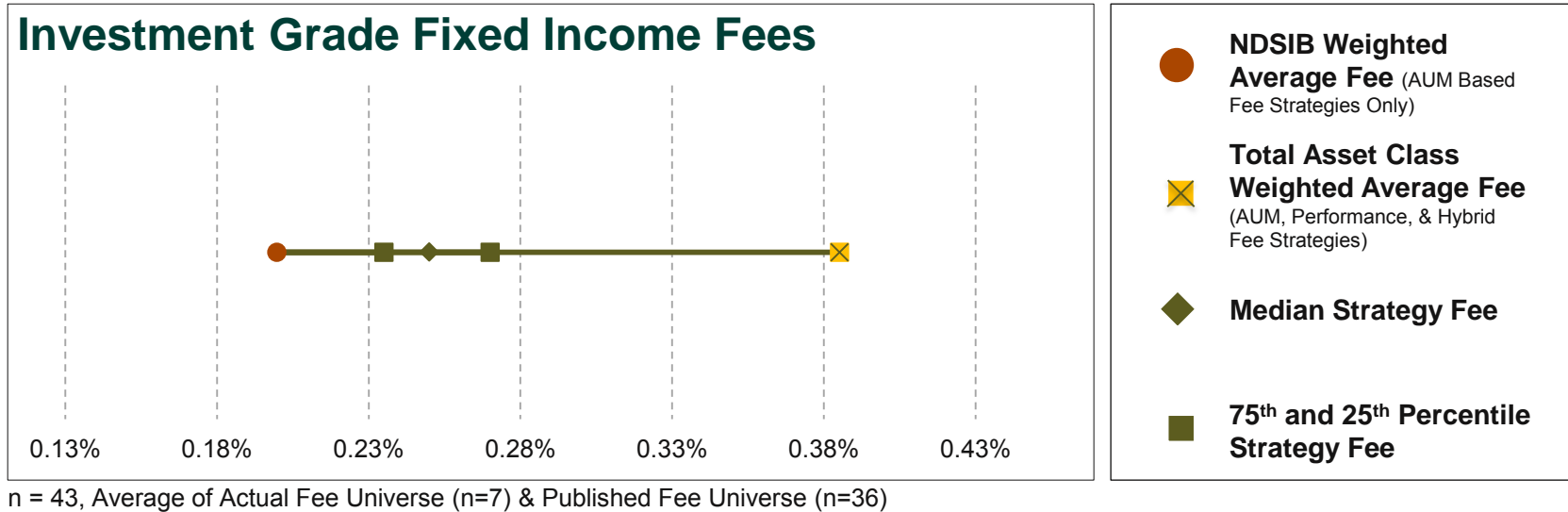
Pension Trust

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

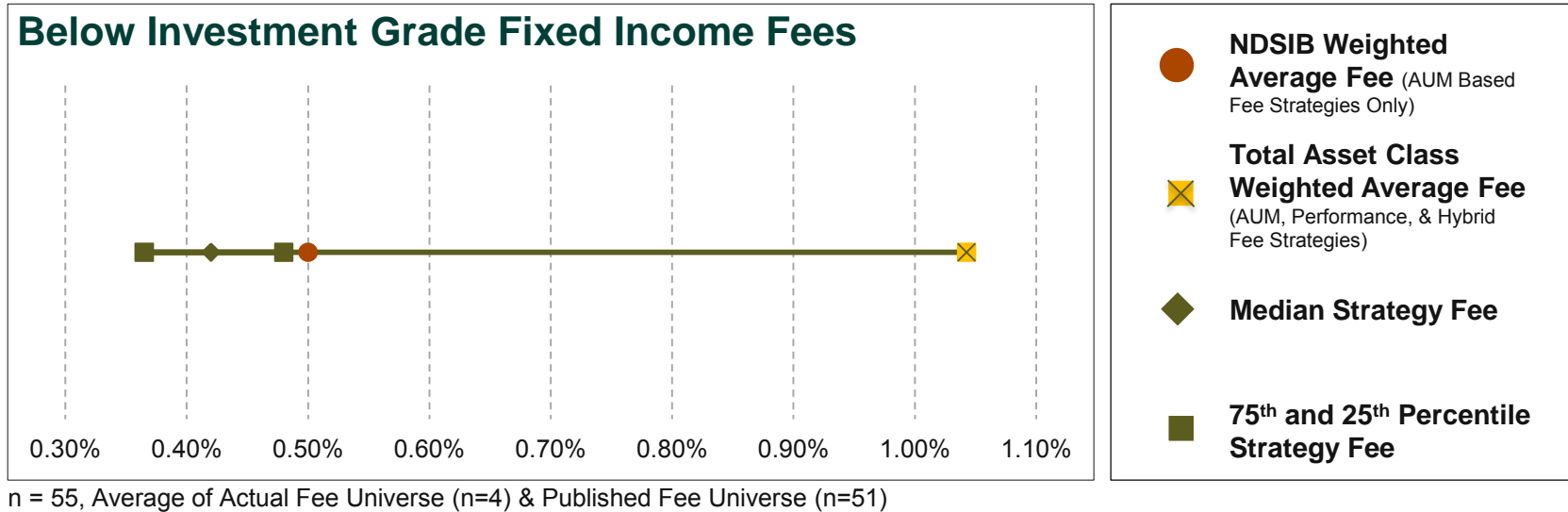
Pension Trust

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

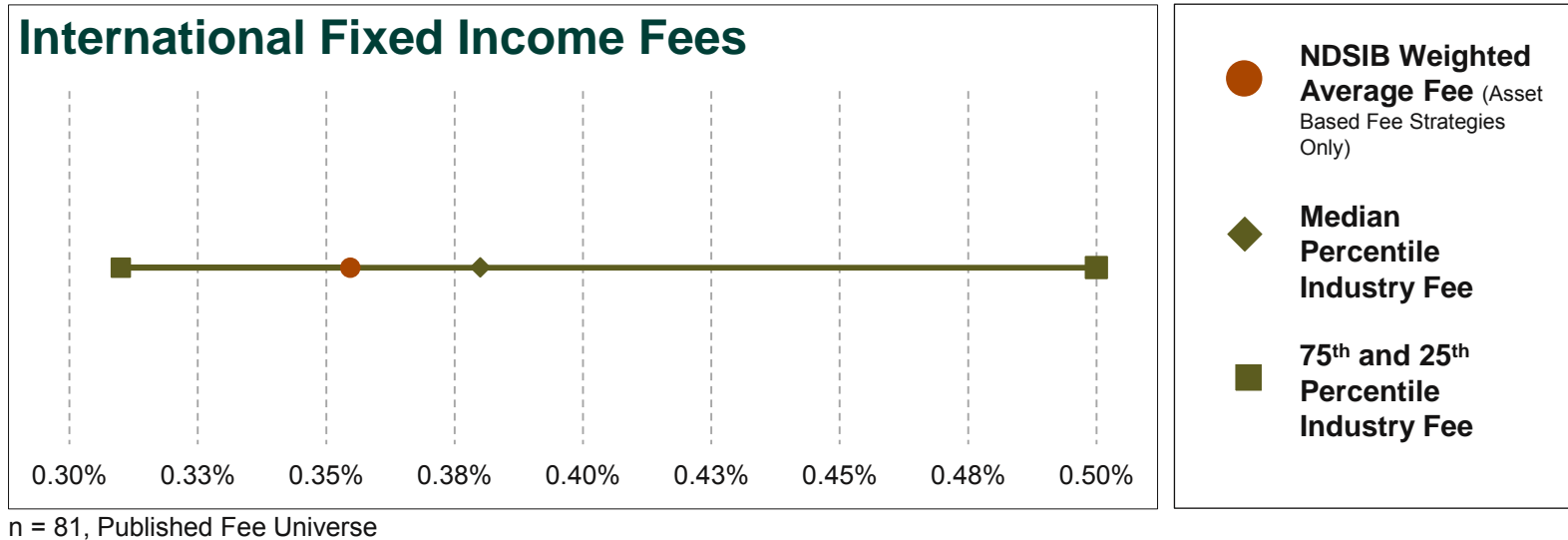
Pension Trust

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

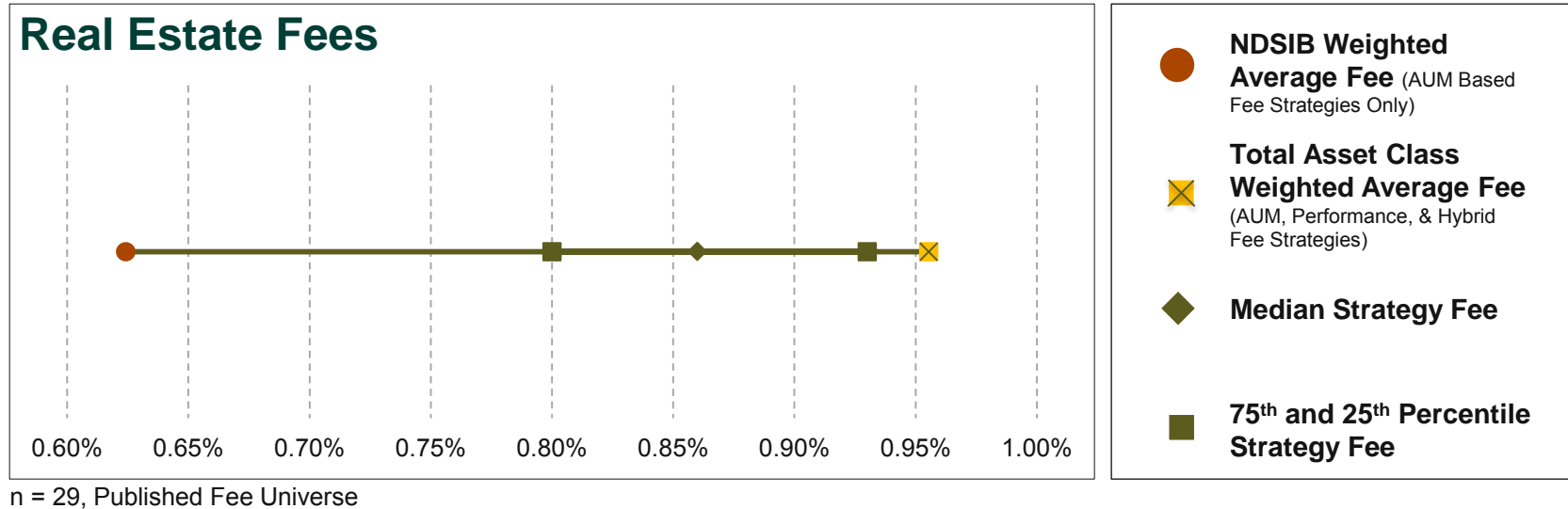
Pension Trust

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

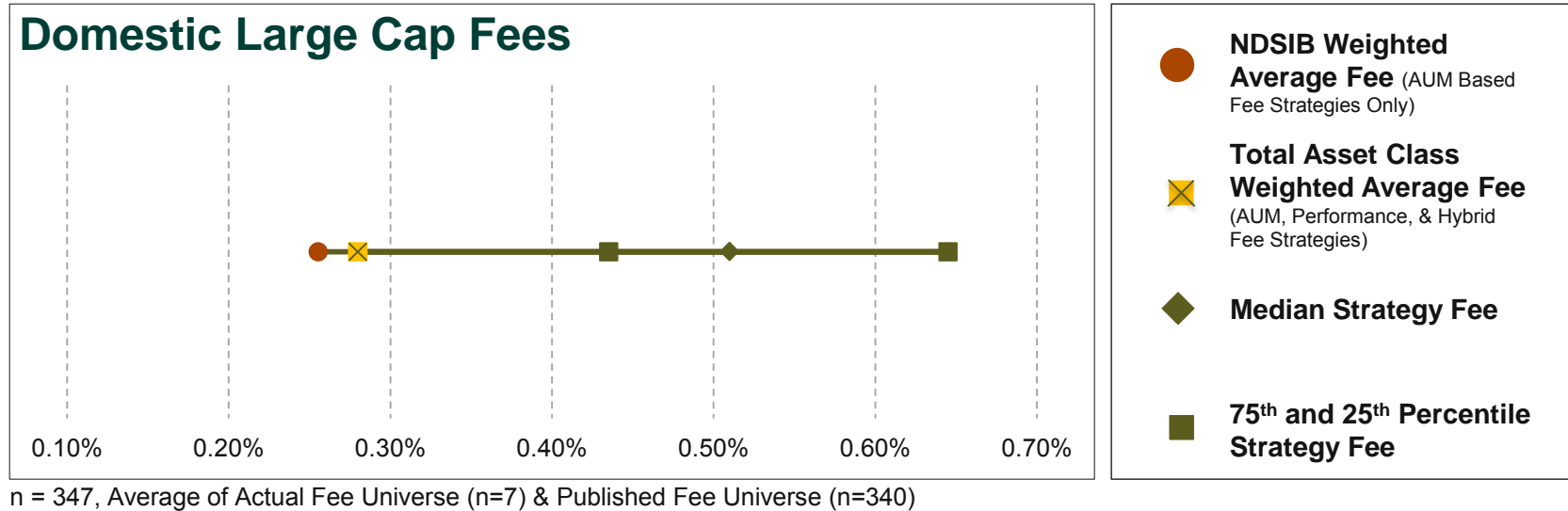
Insurance Trust

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

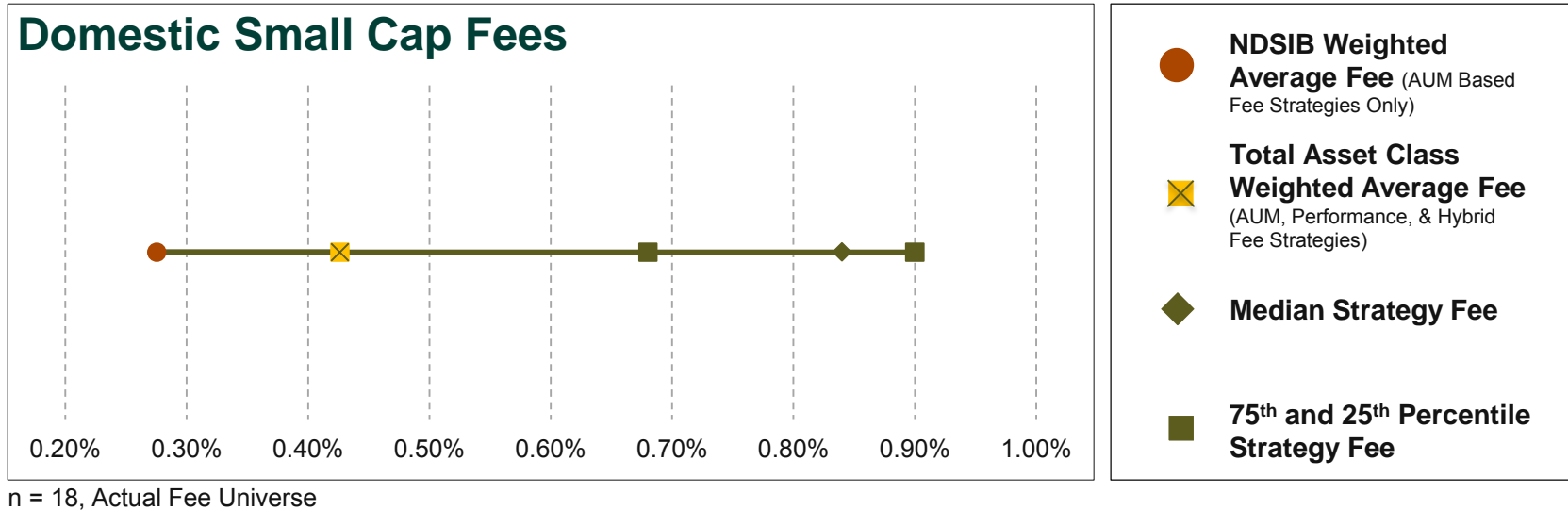
Insurance Trust

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

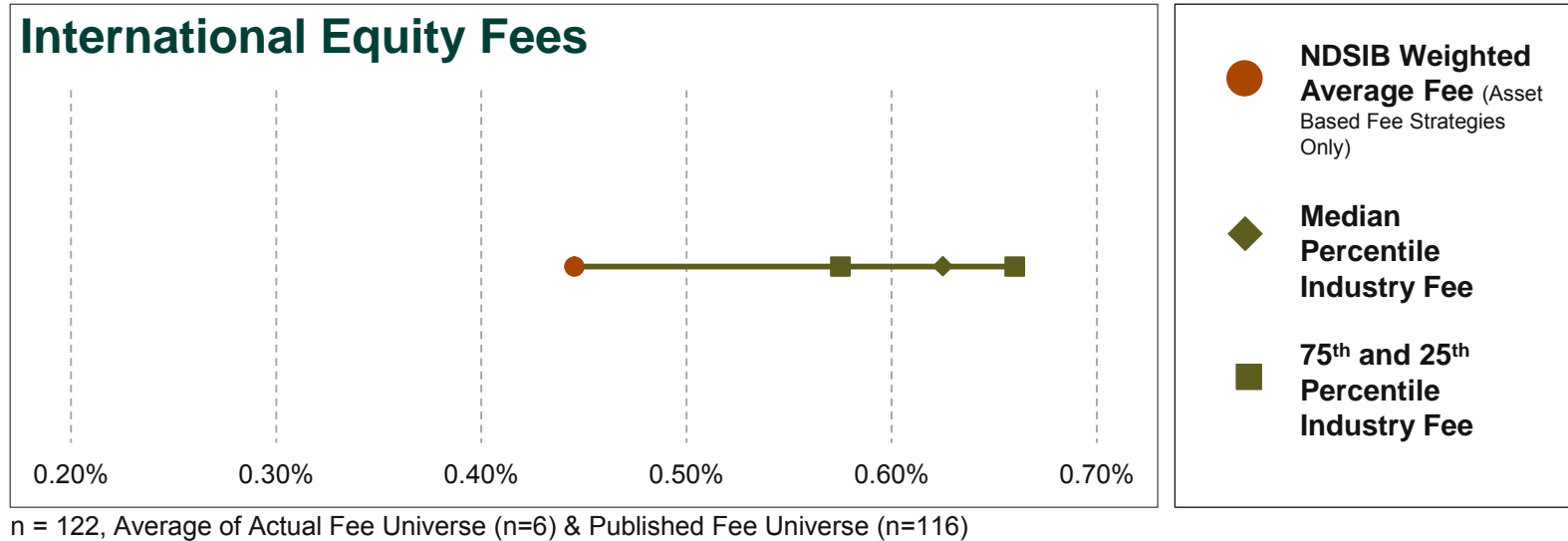
Insurance Trust

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

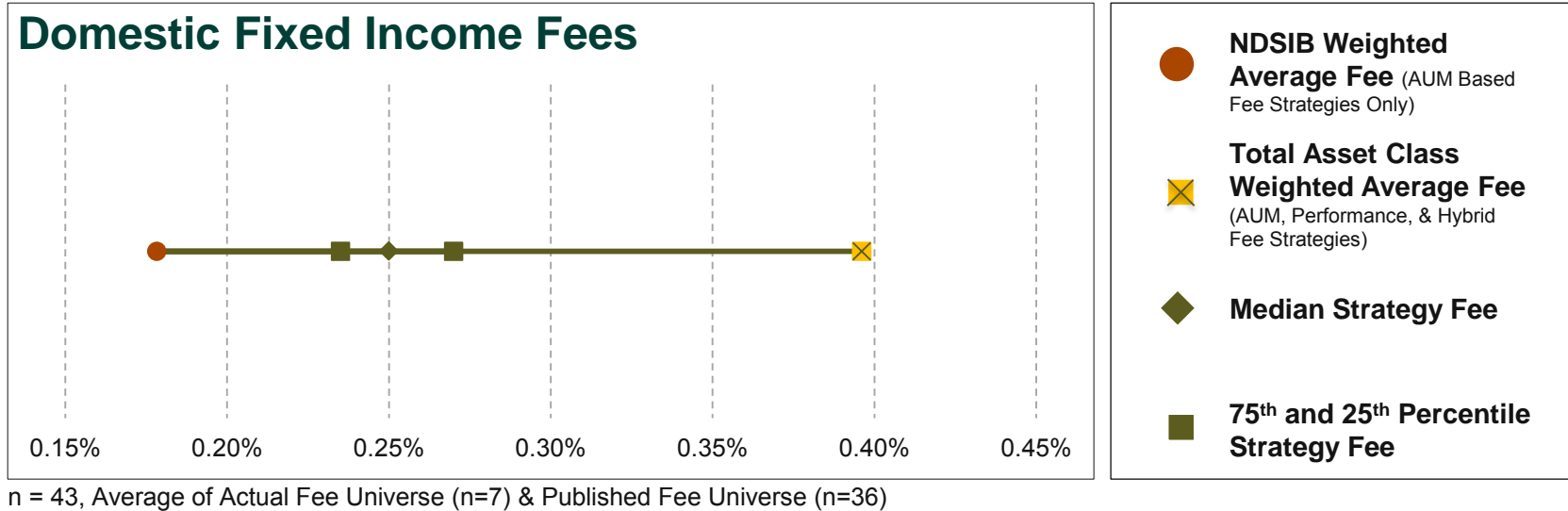
Insurance Trust

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

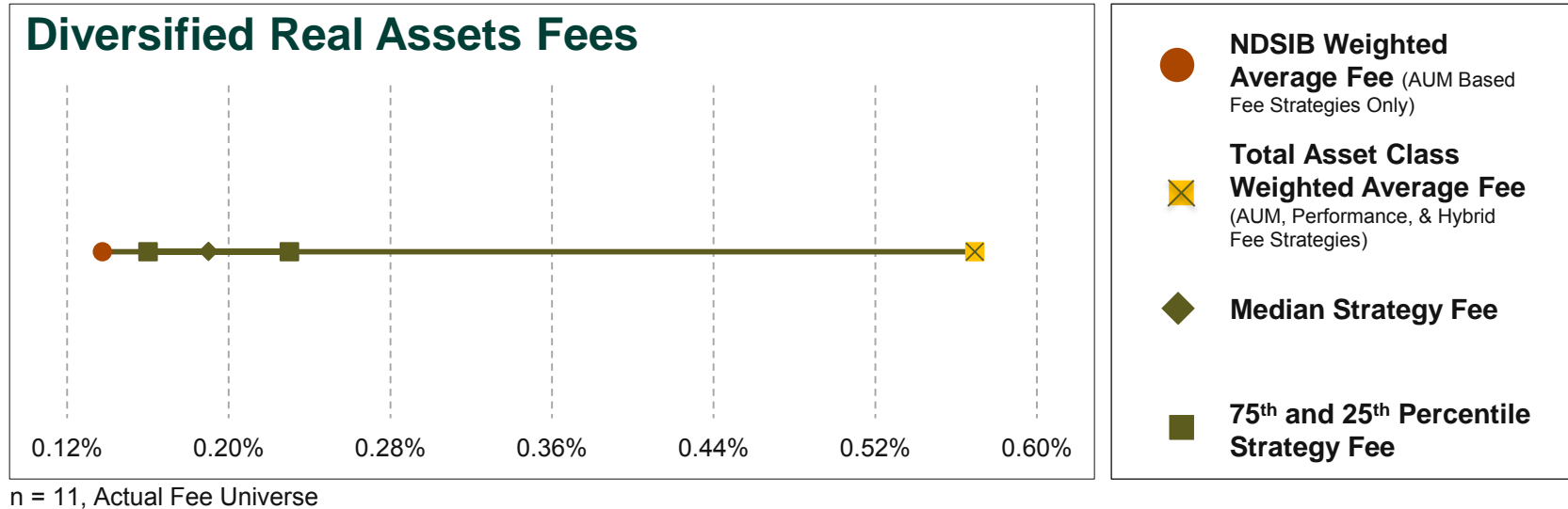
Insurance Trust

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

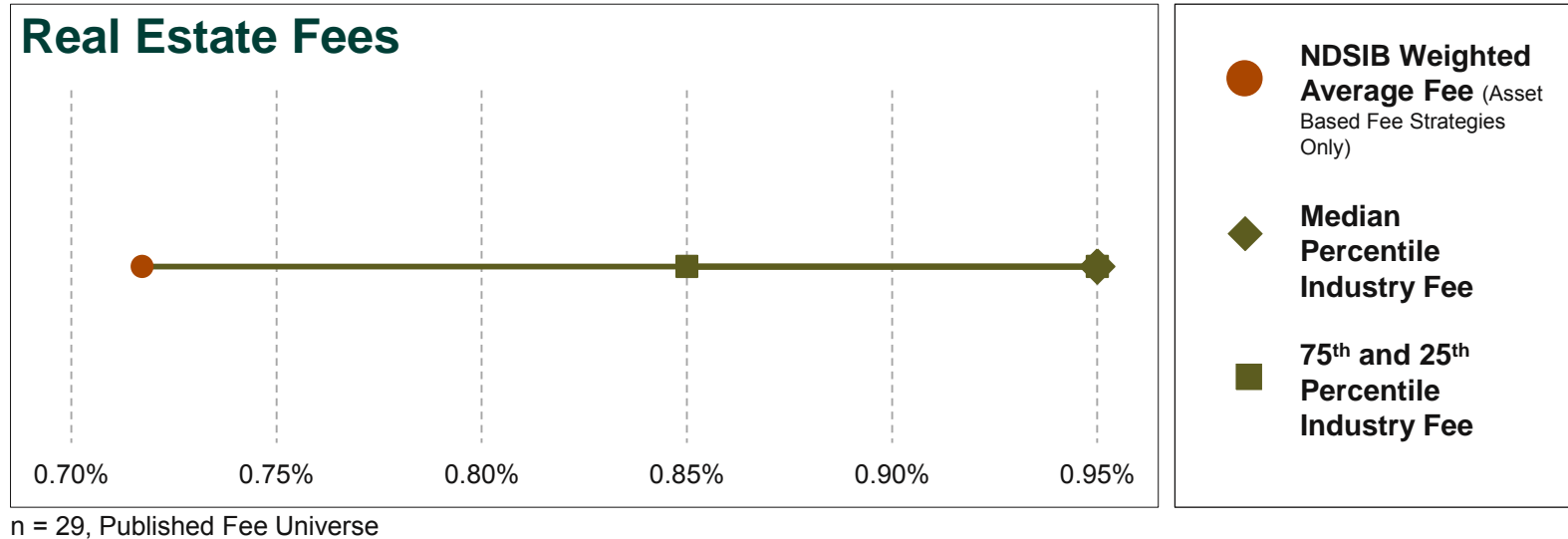
Insurance Trust

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

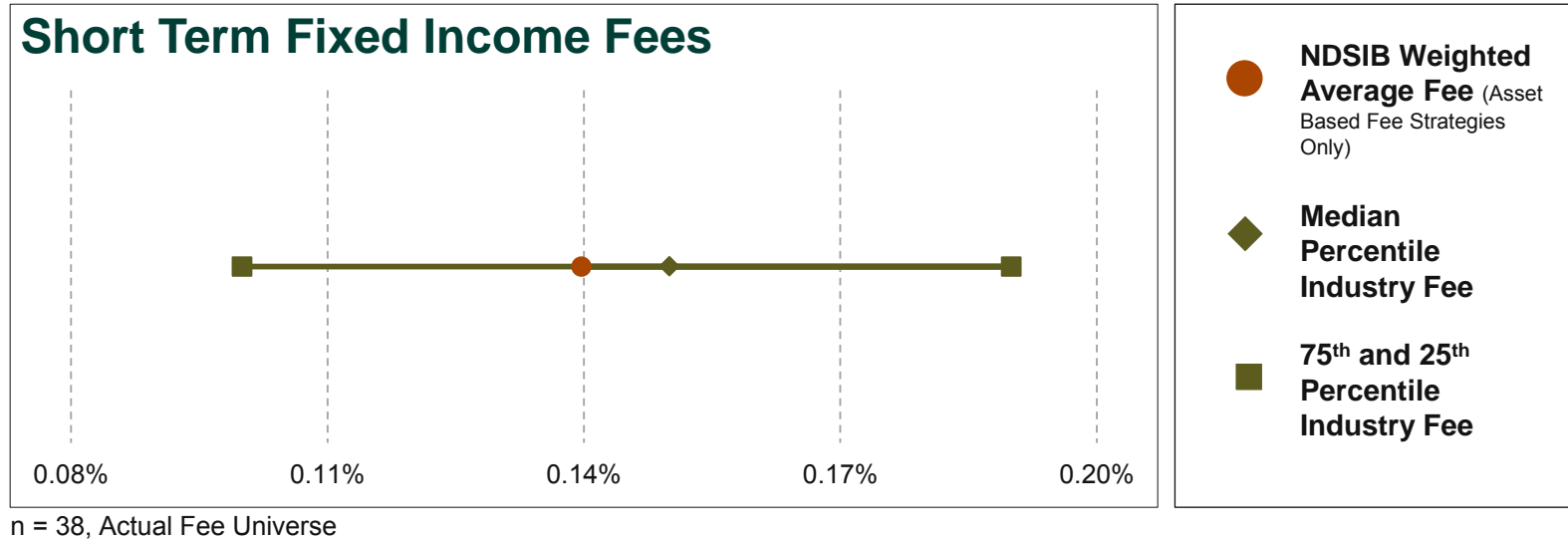
Insurance Trust

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

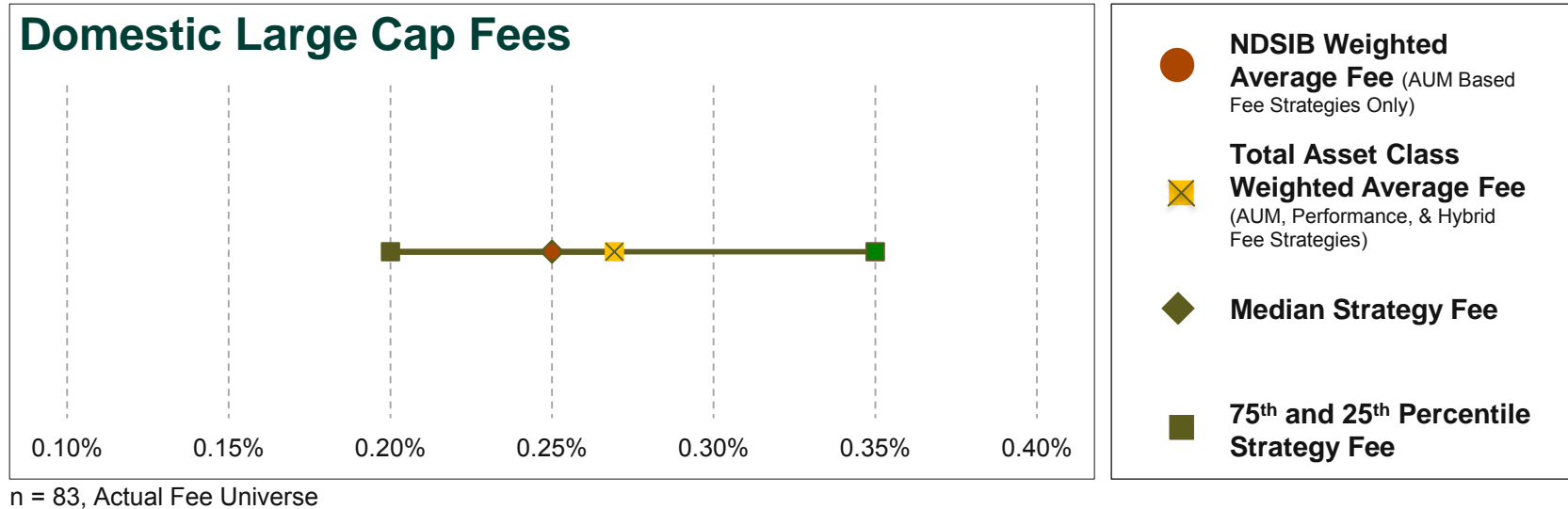
Legacy Trust

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

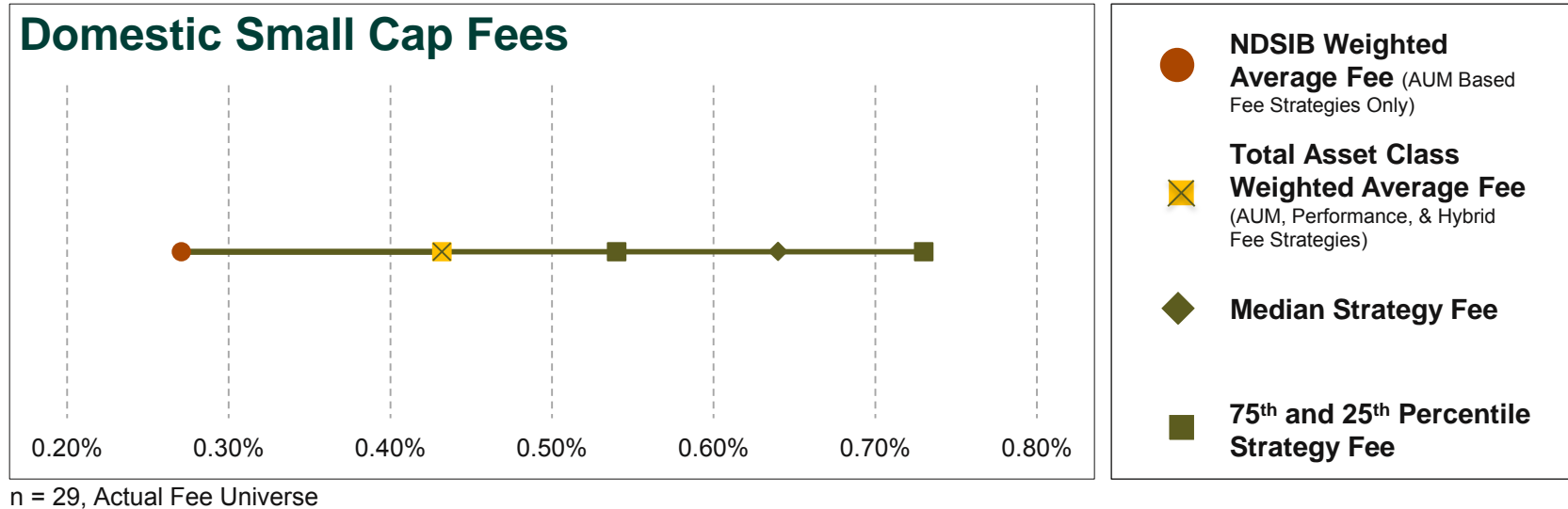
Legacy Fund

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

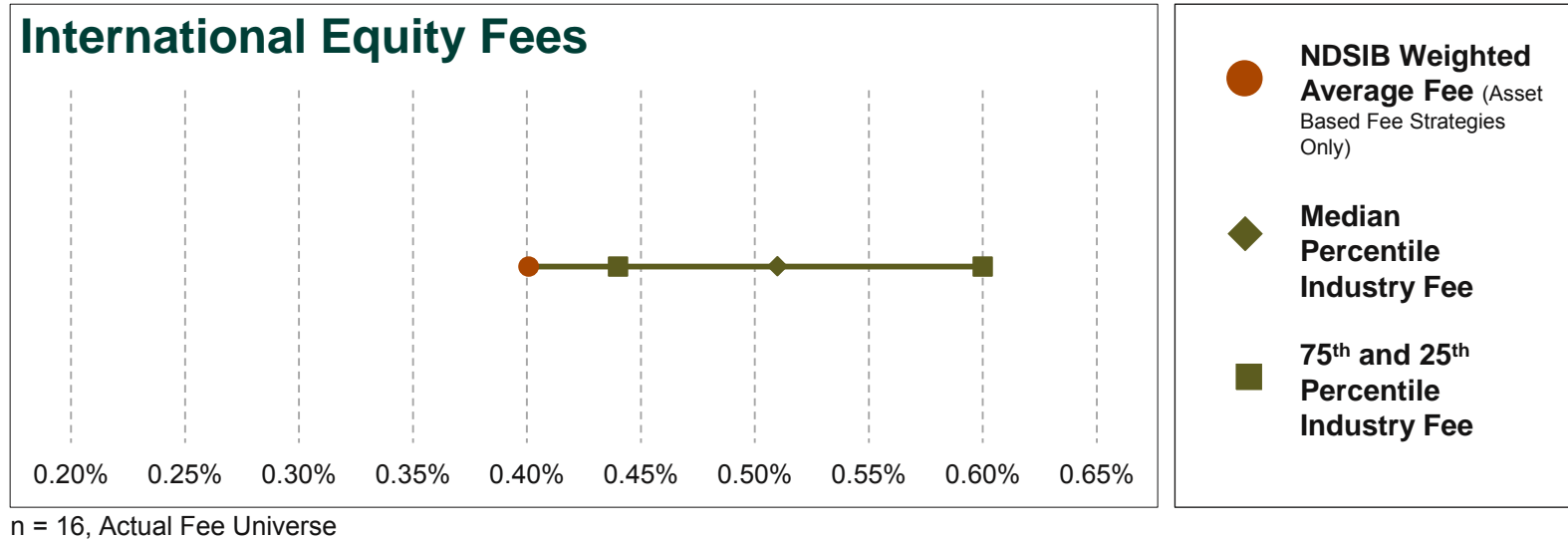
Legacy Fund

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

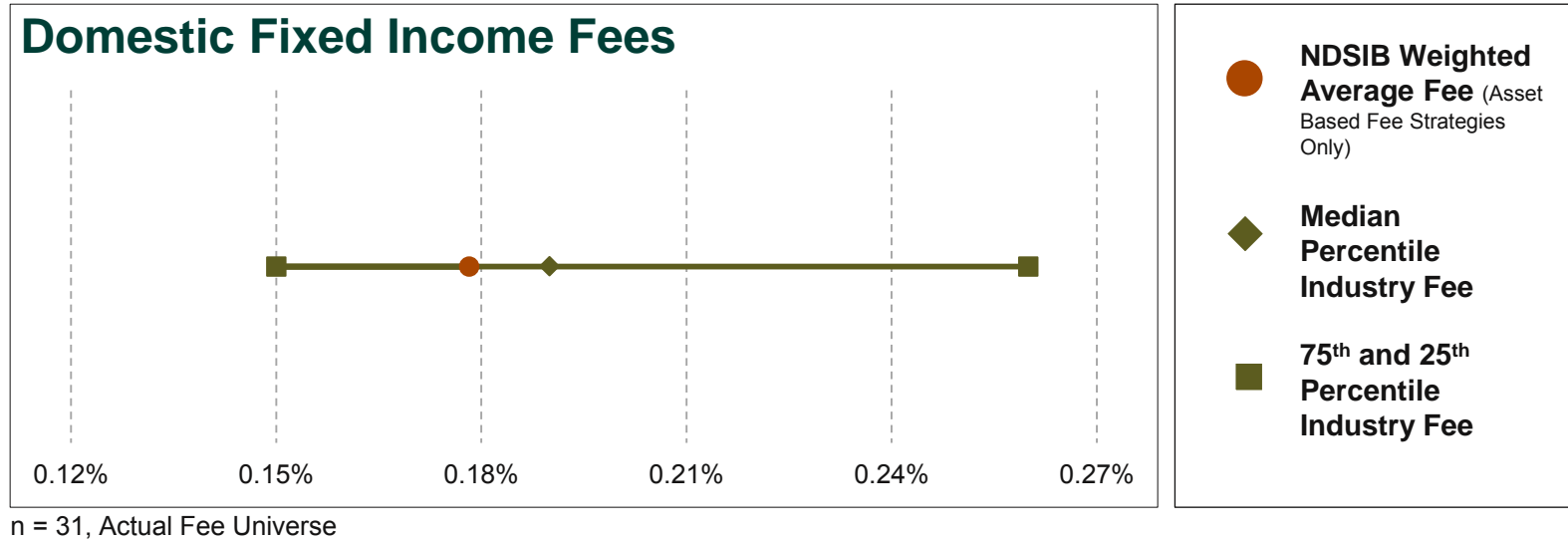
Legacy Fund

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

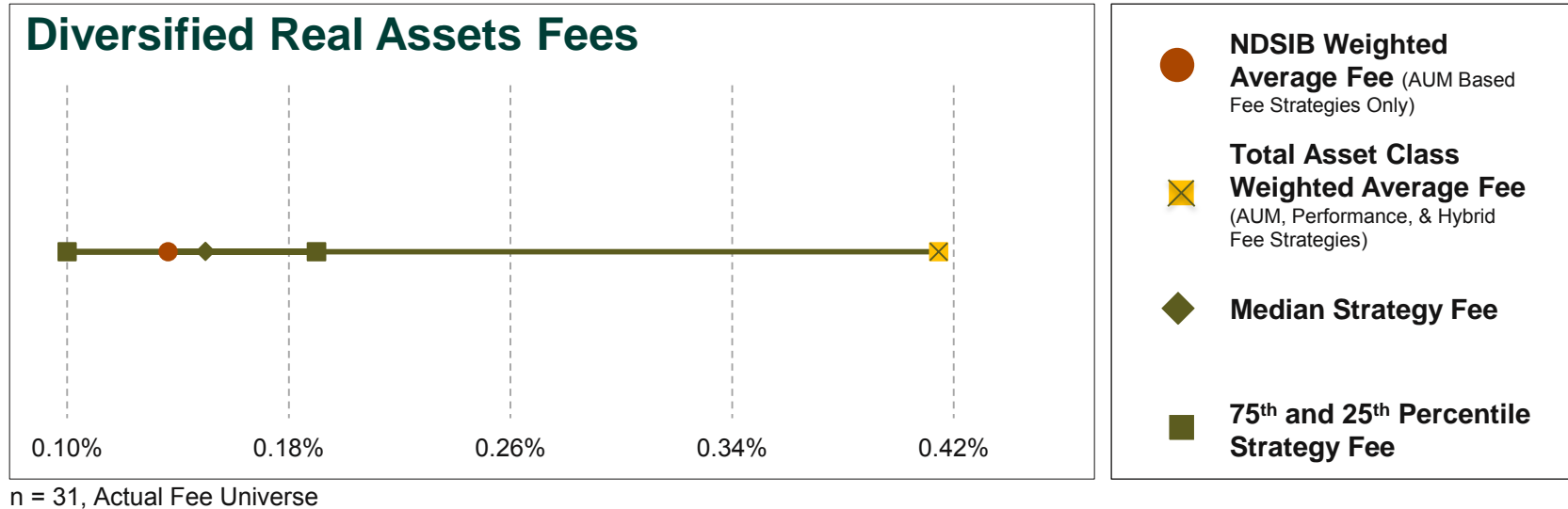
Legacy Fund

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

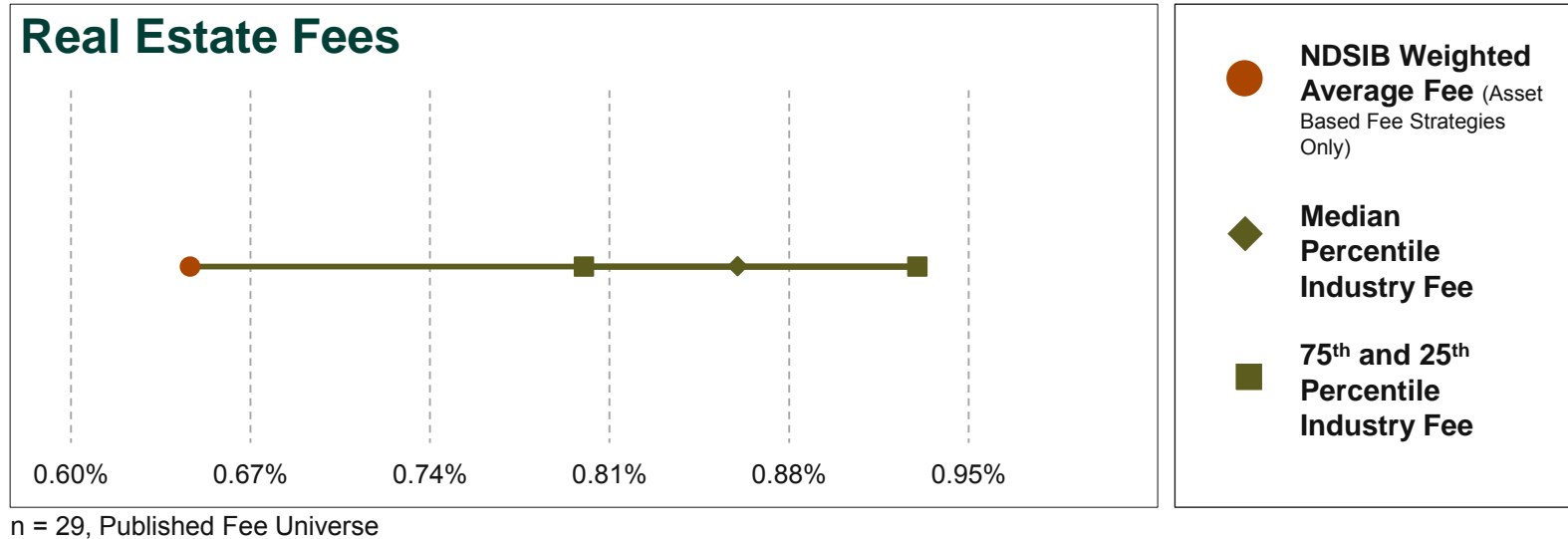
Legacy Fund

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.

INFORMATIONAL

TO: State Investment Board
FROM: Connie Flanagan, Darren Schulz and Dave Hunter
DATE: November 14, 2016
SUBJECT: **Bank of North Dakota Update**

RIO is currently investing approximately \$40 million of short-term cash with the Bank of North Dakota in order to improve risk adjusted rates of return for our clients. BND is willing to pay one-month LIBOR minus 0.10% on these cash deposits. The \$40 million allocation includes \$30 million in the Insurance Trust and \$10 million in the Pension Trust.

AGENDA ITEM III. G.

INFORMATIONAL

TO: State Investment Board (“SIB”) Clients
FROM: Dave Hunter, Darren Schulz and Eric Chin
DATE: November 14, 2016
SUBJECT: [Watch List Commentary](#)

RIO routinely reviews investment manager performance, organizational structure, investing philosophy/style and fund flows of specific investment mandates and the overall operations of our investment firms. These reviews serve as the basis for Staff recommendations to add, maintain or remove individual investment strategies (and/or management firms) from our Watch List.

At our October 28 board meeting, the SIB placed Adams Street Partners on Watch due to transparency concerns and temporarily paused future investments. Based on recent conversations, RIO is pleased to report that it has reached an understanding with Adams Street to obtain modified investment reporting. Upon receiving the modified reporting package for two consecutive quarters, RIO looks forward to recommending that Adams Street Partners be removed from the Watch List.

AGENDA ITEM IV. A.

BOARD ACCEPTANCE REQUESTED

TO: State Investment Board
FROM: Dave Hunter, Connie Flanagan and Terra Miller-Bowley
DATE: November 10, 2016
SUBJECT: **RIO Financial Audit and Audit Committee Report – Cover Memo**

On November 17, 2016, the SIB Audit Committee will be requested to accept the results of CliftonLarsonAllen’s audit of RIO’s financial statements as of June 30, 2016, which includes an unmodified (or clean) opinion. The agenda for the November 17th Audit Committee Meeting is attached for reference as well as the minutes from the prior SIB Audit Committee Meeting held on September 23, 2016.

The CliftonLarsonAllen report dated November 7, 2016, notes the financial statements “... present fairly, in all material respects, the financial position of RIO as of June 30, 2016, and the respective changes in financial position for the year then ended in accordance with accounting principles generally accepted”. The opinion also states “the combining and individual fund financial statements ... present fairly, in all material respects, the financial position of each of the individual funds of RIO as of June 30, 2016, and the respective changes in financial position for the year then ended”.

RIO notes the CliftonLarsonAllen report contains no management recommendations and states there were “no significant difficulties in dealing with management in performing and completing our audit” and “no disagreements with management arose during our audit”.

State Investment Board
Teachers' Fund for Retirement
North Dakota Retirement and Investment Office
1930 Burnt Boat Drive
Bismarck, ND 58507-7100

We have audited the financial statements of the North Dakota Retirement and Investment Office (RIO) as of and for the year ended June 30, 2016, and have issued our report thereon dated November 7, 2016. We have previously communicated to you information about our responsibilities under auditing standards generally accepted in the United States of America, as well as certain information related to the planned scope and timing of our audit. Professional standards also require that we communicate to you the following information related to our audit.

Significant audit findings

Qualitative aspects of accounting practices

Accounting policies

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by RIO are described in Note 1 to the financial statements.

For the year ended June 30, 2016, the financial statements include the impact of adoption of Governmental Accounting Standards Board (GASB) Statement Number 72.

GASB 72, *Fair Value Measurement and Application*, is effective for fiscal years beginning after June 15, 2015. This statement addresses accounting and financial reporting requirements related to fair value measurements. GASB 72 requires measurement of certain assets and liabilities at fair value using a consistent and detailed definition of fair value and accepted valuation techniques. It also enhances disclosures about fair value measurements, the level of fair value hierarchy, and valuation techniques. Additional disclosures are also required for investments in certain entities that calculate net asset value per share (or its equivalent).

We noted no transactions entered into by RIO during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. There were significant estimates in the valuation of alternative investments and the calculation of the actuarial information included in the footnotes and required supplementary information.

The valuation of alternative investments, including private equity and real asset investments, are a management estimate which is primarily based upon net asset values reported by the investment managers and comprise 18% of the total investment portfolio. The values for these investments are reported based upon the most recent financial data available and are adjusted for cash flows through

June 30, 2016. Our audit procedures validated this approach through the use of confirmations sent directly to a sample of investment managers and the review of the most recent audited financial statements for these sampled funds. Furthermore, we reviewed management's estimate and found it to be reasonable.

The actuarially calculated information was based on the assumptions and methods adopted by the Board, including an expected investment rate of return of 7.75% per annum compounded annually. The valuation takes into account all of the promised benefits required by the Retirement Code to which members are entitled as of July 1, 2016. Our audit procedures included reviewing the actuarial valuation and related assumptions used therein and we believe the estimate to be reasonable.

Financial statement disclosures

Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. There were no particularly sensitive financial statement disclosures.

The financial statement disclosures are neutral, consistent, and clear.

Difficulties encountered in performing the audit

We encountered no significant difficulties in dealing with management in performing and completing our audit.

Uncorrected misstatements

Professional standards require us to accumulate all misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. Management did not identify and we did not notify them of any uncorrected financial statement misstatements.

Corrected misstatements

Management did not identify and we did not notify them of any financial statement misstatements detected as a result of audit procedures.

Disagreements with management

For purposes of this letter, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditors' report. No such disagreements arose during our audit.

Management representations

We have requested certain representations from management that are included in the attached management representation letter dated November 7, 2016.

Management consultations with other independent accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the entity's financial statements or a determination of the type of auditors' opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Significant issues discussed with management prior to engagement

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to engagement as RIO's auditors. However,

these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our engagement.

Other information in documents containing audited financial statements

With respect to the required supplementary information (RSI) accompanying the financial statements, we made certain inquiries of management about the methods of preparing the RSI, including whether the RSI has been measured and presented in accordance with prescribed guidelines, whether the methods of measurement and preparation have been changed from the prior period and the reasons for any such changes, and whether there were any significant assumptions or interpretations underlying the measurement or presentation of the RSI. We compared the RSI for consistency with management's responses to the foregoing inquiries, the basic financial statements, and other knowledge obtained during the audit of the basic financial statements. Because these limited procedures do not provide sufficient evidence, we did not express an opinion or provide any assurance on the RSI.

With respect to the schedules of administrative expenses, consultant expenses, investment expenses, and appropriations – budget basis – fiduciary funds (collectively, the supplementary information) accompanying the financial statements, on which we were engaged to report in relation to the financial statements as a whole, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period or the reasons for such changes, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves. We have issued our report thereon dated November 7, 2016.

Other information is being included in documents containing the audited financial statements and the auditors' report thereon. Our responsibility for such other information does not extend beyond the financial information identified in our auditors' report. We have no responsibility for determining whether such other information is properly stated and do not have an obligation to perform any procedures to corroborate other information contained in such documents. As required by professional standards, we read the introductory, investment, actuarial and statistical sections of the comprehensive annual financial report (the other information) in order to identify material inconsistencies between the audited financial statements and the other information. We did not identify any material inconsistencies between the other information and the audited financial statements.

Our auditors' opinion, the audited financial statements, and the notes to financial statements should only be used in their entirety. Inclusion of the audited financial statements in a document you prepare, such as an annual report, should be done only with our prior approval and review of the document.

* * *

This communication is intended solely for the information and use of the State Investment Board, the Board of the Teachers' Fund for Retirement and management of RIO and is not intended to be, and should not be, used by anyone other than these specified parties.



CliftonLarsonAllen LLP

Baltimore, Maryland
November 7, 2016

ND Retirement and Investment Office

*State Investment Board
Teachers' Fund for Retirement*

1930 Burnt Boat Driv
P.O. Box 710
Bismarck, ND 58507-710
Telephone 701-328-988
Toll Free 800-952-297
Fax 701-328-989
www.nd.gov/ri



November 7, 2016

CliftonLarsonAllen LLP
9515 Deereco Road, Suite 500
Timonium, Maryland 21093

This representation letter is provided in connection with your audit of the financial statements of North Dakota Retirement and Investment Office (RIO), which comprise the financial position of the entity as of June 30, 2016, and the changes in financial position for the year then ended, and the related notes to the financial statements, for the purpose of expressing opinions on whether the financial statements are presented fairly, in all material respects, in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP).

Certain representations in this letter are described as being limited to matters that are material. Items are considered material, regardless of size, if they involve an omission or misstatement of accounting information that, in light of surrounding circumstances, makes it probable that the judgment of a reasonable person relying on the information would be changed or influenced by the omission or misstatement.

We confirm, to the best of our knowledge and belief, as of November 7, 2016, the following representations made to you during your audit.

Financial Statements

- We have fulfilled our responsibilities, as set out in the terms of the Contract between the State of North Dakota and CliftonLarsonAllen LLP dated March 30, 2015, for the preparation and fair presentation of the financial statements in accordance with U.S. GAAP. The financial statements include all properly classified funds and other financial information of the primary government and all component units required by generally accepted accounting principles to be included in the financial reporting entity.
- We acknowledge and have fulfilled our responsibility for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.
- We acknowledge our responsibility for the design, implementation, and maintenance of internal control to prevent and detect fraud.
- All significant plan amendments, adopted during the period or subsequent to the date of the financial statements, and their effects on benefits and financial status have been disclosed in the financial statements.
- The values of non-readily marketable investments represent good faith estimates of fair value. The methods and significant assumptions used result in a measure of fair value appropriate for financial measurement and disclosure purposes.
- Significant estimates have been appropriately accounted for and disclosed in accordance with the requirements of U.S. GAAP. Significant estimates are estimates at the financial statement date that could change materially within the next year.
- No events, including instances of noncompliance, have occurred subsequent to the financial statement date and through the date of this letter that would require adjustment to, or disclosure in, the financial statements.

- We have not identified or been notified of any uncorrected financial statement misstatements.
- The effects of all known actual or possible litigation, claims, and assessments have been accounted for and disclosed in accordance with U.S. GAAP.
- Guarantees, whether written or oral, under which the entity is contingently liable, if any, have been properly recorded or disclosed in accordance with U.S. GAAP.
- We have no plans or intentions that may materially affect the carrying value or classification of assets and liabilities.
- With respect to actuarial assumptions and valuations:
 - Management agrees with the actuarial methods and assumptions used by the actuary for funding purposes and for determining the total pension liability and has no knowledge or belief that would make such methods or assumptions inappropriate in the circumstances. We did not give any, nor cause any, instructions to be given to RIO's actuary with respect to values or amounts derived, and we are not aware of any matters that have impacted the independence or objectivity of RIO's actuary.
 - There were no omissions from the participant data provided to the actuary for the purpose of determining the total pension liability and other actuarially determined amounts in the financial statements.
 - There have been no changes in the actuarial methods or assumptions used in calculating the amounts recorded or disclosed in the financial statements. There have been no changes in plan provisions between the actuarial valuation date and the date of this letter.
- We believe the plan and trust established under the plan is qualified under the appropriate section of The North Dakota Century Code, and we intend to continue them as a qualified plan and trust.

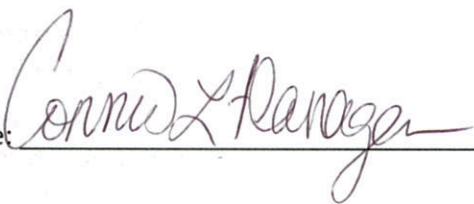
Information Provided

- We have provided you with:
 - Access to all information, of which we are aware, that is relevant to the preparation and fair presentation of the financial statements such as records, documentation, and other matters.
 - Additional information that you have requested from us for the purpose of the audit.
 - Unrestricted access to persons within the entity from whom you determined it necessary to obtain audit evidence.
 - Complete minutes of the meetings of the governing board and related committees, or summaries of actions of recent meetings for which minutes have not yet been prepared.
 - All actuarial reports prepared for the plan during the year.
- All material transactions have been recorded in the accounting records and are reflected in the financial statements.
- We have disclosed to you the results of our assessment of the risk that the financial statements may be materially misstated as a result of fraud.
- We have no knowledge of any fraud or suspected fraud that affects the entity and involves:
 - Management;

- Employees who have significant roles in internal control; or
 - Others when the fraud could have a material effect on the financial statements.
- We have no knowledge of any allegations of fraud, or suspected fraud, affecting the entity's financial statements communicated by employees, former employees, regulators, or others.
 - We have no knowledge of any instances of noncompliance or suspected noncompliance with laws and regulations and provisions of contracts, or abuse whose effects should be considered when preparing financial statements.
 - We have disclosed to you all known actual or possible litigation, claims, and assessments whose effects should be considered when preparing the financial statements.
 - There are no other material liabilities or gain or loss contingencies that are required to be accrued or disclosed in accordance with U.S. GAAP.
 - We have disclosed to you the identity of the entity's related parties and all the related party relationships and transactions of which we are aware.
 - We are responsible for compliance with the laws, regulations, and provisions of contracts applicable to RIO, and we have identified and disclosed to you all laws, regulations, and provisions of contracts that we believe have a direct and material effect on the determination of financial statement amounts or other financial data significant to the audit objectives, including legal and contractual provisions for reporting specific activities in separate funds.
 - There are no violations or possible violations of budget ordinances, laws and regulations (including those pertaining to adopting, approving, and amending budgets), provisions of contracts, or any debt covenants whose effects should be considered for disclosure in the financial statements, or as a basis for recording a loss contingency, or for reporting on noncompliance.
 - The entity has complied with all aspects of contractual agreements that would have a material effect on the financial statements in the event of noncompliance.
 - We have followed all applicable laws and regulations in adopting, approving, and amending budgets.
 - Investments, derivative instruments, and land and other real estate held by RIO are properly valued.
 - Expenses have been appropriately classified the statement of changes in net position, and allocations have been made on a reasonable basis.
 - Revenues are appropriately classified in the statement of changes in net position.
 - Interfund, internal, and intra-entity activity and balances have been appropriately classified and reported.
 - Deposits and investment securities and derivative instruments are properly classified as to risk and are properly valued and disclosed.
 - Capital assets, including infrastructure and intangible assets, are properly capitalized, reported, and, if applicable, depreciated.
 - We acknowledge our responsibility for the required supplementary information (RSI). The RSI is measured and presented within prescribed guidelines and the methods of measurement and presentation have not changed from those used in the prior period. We have disclosed to you any significant assumptions and interpretations underlying the measurement and presentation of the RSI.

- We acknowledge our responsibility for presenting the schedules (the supplementary information) in accordance with U.S. GAAP, and we believe the supplementary information, including its form and content, is fairly presented in accordance with U.S. GAAP. The methods of measurement and presentation of the supplementary information have not changed from those used in the prior period, and we have disclosed to you any significant assumptions or interpretations underlying the measurement and presentation of the supplementary information. If the supplementary information is not presented with the audited financial statements, we will make the audited financial statements readily available to the intended users of the supplementary information no later than the date we issue the supplementary information and the auditors' report thereon.

Signature:  Title: Executive Director/CIO

Signature:  Title: Fiscal + Investment
ops Mgr.

**NORTH DAKOTA RETIREMENT
AND INVESTMENT OFFICE**

FINANCIAL STATEMENTS

YEAR ENDED JUNE 30, 2016

PAGE

INDEPENDENT AUDITORS' REPORT	1
REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH <i>GOVERNMENT AUDITING STANDARDS</i>	4
SCHEDULE OF FINDINGS AND RESPONSES	6
MANAGEMENT'S DISCUSSION AND ANALYSIS	7
FINANCIAL STATEMENTS	
Statement of Net Position – Fiduciary Funds.....	13
Statement of Changes in Net Position – Fiduciary Funds.....	14
Notes to Combined Financial Statements.....	15
REQUIRED SUPPLEMENTARY INFORMATION	
Schedule of Changes in NPL and Related Ratios – ND Teachers' Fund for Retirement.....	46
Schedule of Employer Contributions – ND Teachers' Fund for Retirement.....	47
Schedule of Investment Returns – ND Teachers' Fund for Retirement.....	48
Schedule of Employer's Share of NPL – ND Public Employees Retirement System.....	49
Schedule of Employer Contributions – ND Public Employees Retirement System.....	49
SUPPLEMENTARY INFORMATION	
Combining Statement of Net Position – Investment Trust Funds – Fiduciary Funds.....	50
Combining Statement of Changes in Net Position – Investment Trust Funds – Fiduciary Funds.....	52
Pension and Investment Trust Funds – Schedule of Administrative Expenses.....	54
Pension and Investment Trust Funds – Schedule of Consultant Expenses.....	55
Pension and Investment Trust Funds – Schedule of Investment Expenses.....	56
Schedule of Appropriations – Budget Basis – Fiduciary Funds.....	57
SPECIAL COMMENTS REQUESTED BY THE LEGISLATIVE AUDIT AND FISCAL REVIEW COMMITTEE YEAR ENDED JUNE 30, 2016	58
AUDIT COMMITTEE COMMUNICATIONS	59

INDEPENDENT AUDITORS' REPORT

Governor Jack Dalrymple
The Legislative Assembly
David Hunter, Executive Director/CIO
State Investment Board
Teachers' Fund for Retirement Board
North Dakota Retirement and Investment Office

Report on the Financial Statements

We have audited the accompanying financial statements of the North Dakota Retirement and Investment Office (RIO), a department of the State of North Dakota, which comprise the statement of net position – fiduciary funds as of June 30, 2016, and the related statement of changes in net position – fiduciary funds for the year then ended, and the related notes to the financial statements, which collectively comprise RIO's basic financial statements, and the combining and individual fund financial statements as of and for the year ended June 30, 2016, as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of RIO as of June 30, 2016, and the respective changes in financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America. Also, in our opinion, the combining and individual fund financial statements referred to above present fairly, in all material respects, the financial position of each of the individual funds of RIO as of June 30, 2016, and the results of the changes in financial position of such funds for the year then ended, in conformity with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note 1, the financial statements of RIO are intended to present the financial position and the changes in financial position of only that portion of the State of North Dakota that is attributable to the transactions of RIO. They do not purport to, and do not, present fairly the financial position of the State of North Dakota as of June 30, 2016, and the changes in its financial position for the year then ended in conformity with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and the schedules of changes in NPL and related ratios - ND Teachers' Fund for Retirement and employer contributions - ND Teachers' Fund for Retirement, investment returns - ND Teachers' Fund for Retirement, employer's share of NPL – ND Public Employees Retirement System and employer contributions – ND Public Employees Retirement System and related notes, as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise RIO's basic financial statements and the combining and individual fund financial statements. The schedules of administrative expenses, consultant expenses, investment expenses, and appropriations – budget basis – fiduciary funds, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

These schedules are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements

or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The Introductory, Investment, Actuarial and Statistical Section, as listed in the table of contents, have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Audit Standards*, we have also issued our report dated November 7, 2016, on our consideration of RIO's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering RIO's internal control over financial reporting.

A handwritten signature in cursive script that reads "CliftonLarsonAllen LLP".

CliftonLarsonAllen LLP

Baltimore, Maryland
November 7, 2016



**INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER
FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED
ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE
WITH GOVERNMENT AUDITING STANDARDS**

Governor Jack Dalrymple
The Legislative Assembly
David Hunter, Executive Director/CIO
State Investment Board
Teacher's Fund for Retirement Board
North Dakota Retirement and Investment Office

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the schedule of employer allocations and the total for all entities of the columns titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense as of and for the year ended June 30, 2016 (specified column totals), included in the schedule of pension amounts by employer of the North Dakota Retirement and Investment Office - North Dakota Teachers' Fund for Retirement (TFFR), and have issued our report thereon dated November 7, 2016.

Internal Control over Financial Reporting

Management of TFFR is responsible for establishing and maintaining effective internal control over financial reporting. In planning and performing our audits, we considered TFFR's internal control over financial reporting as a basis for designing our auditing procedures for the purpose of expressing our opinion on the schedule of employer allocations and the specified column totals included in the schedule of pension amounts by employer, but not for the purpose of expressing an opinion on the effectiveness of TFFR's internal control over financial reporting. Accordingly, we do not express an opinion on the effectiveness of TFFR's internal control over financial reporting.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's schedule of employer allocations and the specified column totals included in the schedule of pension amounts by employer will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audits we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether TFFR's schedule of employer allocations and the specified column totals included in the schedule of pension amounts by employer are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of the schedule of employer allocations and the specified column totals included in the schedule of pension amounts by employer amounts. However, providing an opinion on compliance with those provisions was not an objective of our audits, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the result of that testing, and not to provide an opinion on the effectiveness of TFFR's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering TFFR's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

CliftonLarsonAllen LLP

Baltimore, Maryland
November 7, 2016

We did not identify any findings that are required to be reported in accordance with *Government Auditing Standards*.

Our discussion and analysis of the ND Retirement and Investment Office's (RIO) financial performance provides an overview of RIO's financial activities for the fiscal year ended June 30, 2016. Please read it in conjunction with the basic financial statements, which follow this discussion.

RIO administers two fiduciary funds, a pension trust fund for the ND Teachers' Fund for Retirement (TFFR) and an investment trust fund for the ND State Investment Board (SIB) consisting of 23 investment clients in two investment pools and four individual investment accounts.

Financial Highlights

Total net position increased in the fiduciary funds by \$623.3 million or 5.8% from the prior year. Approximately 78% of that increase is due to the growth of the Legacy Fund and the addition of the assets of the Tobacco Prevention and Control Fund. The Legacy Fund was created by a constitutional amendment in 2010. The amendment provides that 30% of oil and gas gross production and oil extraction taxes on oil produced after June 30, 2011, be transferred to the Legacy Fund. Transfers into the Legacy Fund totaled \$434.9 million during the fiscal year. The Tobacco Prevention and Control Fund had a net contribution of \$53.5 million during its first fiscal year within the SIB investment program.

Additions in the fiduciary funds for the year decreased \$654.8 million or 37.8% from the previous year. There was a significant decrease (\$476.7 million) in new purchases of units in the investment program mainly due to the slowdown of oil and gas tax collections in the Legacy Fund. Net investment income decreased by \$189.0 million and total contributions increased \$9.5 million.

Deductions in the fiduciary funds increased over the prior year by \$30.1 million or 7.1%. Payments to TFFR members in the form of benefits and refunds increased by \$13.7 million or 8.0%. This increase represented a rise in the total number of retirees drawing retirement benefits from the pension fund as well as an increase in the retirement salaries on which the benefits of new retirees are based. The redemption of units from the investment trust increased by \$16.3 million or 6.6%.

As of June 30, 2016, the TFFR pension plan had a Net Pension Liability (NPL) of \$1.47 billion and Plan Fiduciary Net Position as a percent of Total Pension Liability (TPL) of 59.2%.

Overview of the Financial Statements

This report consists of four parts – management's discussion and analysis (this section), the basic financial statements, required supplementary information, and additional supplementary information that presents combining statements for the investment trust funds. The basic financial statements include fund financial statements that focus on individual parts of RIO's activities (fiduciary funds).

The financial statements also include notes that explain some of the information in the financial statements and provide more detailed data. The statements are followed by a section of required supplementary information that further explains and supports the information in the financial statements. In addition to these required elements, we have included additional supplementary information, including combining statements that provide details about our investment trust funds, each of which are added together and presented in single columns in the basic financial statements.

Fund Financial Statements

The fund financial statements provide detailed information about RIO's activities. Funds are accounting devices that RIO uses to keep track of specific sources of funding and spending for particular purposes.

RIO uses fiduciary funds as RIO is the trustee, or fiduciary, for TFFR (a pension plan) and SIB (investment trust funds). RIO is responsible for ensuring that the assets reported in these funds are used for their intended purposes. All of RIO's fiduciary activities are reported in a statement of net position and a statement of changes in net position.

Financial Analysis

RIO's fiduciary fund total assets as of June 30, 2016, were \$11.5 billion and were comprised mainly of investments. Total assets increased by \$736.6 million or 6.9% from the prior year primarily due to the growth of the Legacy Fund and addition of the Tobacco Prevention and Control Fund, as well as securities lending collateral from the program added during the fiscal year.

Total liabilities as of June 30, 2016, were \$126.7 million. The majority of the liabilities was comprised of the securities lending collateral payable due to the addition of the program during the fiscal year. Total liabilities increased by \$113.4 million or 860.4% from the prior year due entirely to the securities lending collateral.

RIO's fiduciary fund total net position was \$11.4 billion at the close of fiscal year 2016.

North Dakota Retirement and Investment Office Net Position – Fiduciary Funds (In Millions)

	<u>2016</u>	<u>2015</u>	<u>Total % Change</u>
Assets			
Investments	\$ 11,278.3	\$ 10,668.6	5.7%
Securities Lending Collateral	116.6	-	100.0%
Receivables	70.5	61.1	15.3%
Cash & Other	19.9	19.0	4.5%
Total Assets	<u>11,485.3</u>	<u>10,748.7</u>	6.9%
Deferred Outflows of Resources			
Deferred outflows related to pensions	<u>0.3</u>	<u>0.1</u>	128.8%
Liabilities			
Obligations under Securities Lending	116.6	-	100.0%
Accounts Payable & Accrued Expenses	<u>10.1</u>	<u>13.2</u>	-23.7%
Total Liabilities	<u>126.7</u>	<u>13.2</u>	860.4%
Deferred Inflows of Resources			
Deferred inflows related to pensions	<u>0.1</u>	<u>0.2</u>	-25.4%
Total Net Position	<u>\$ 11,358.8</u>	<u>\$ 10,735.5</u>	5.8%

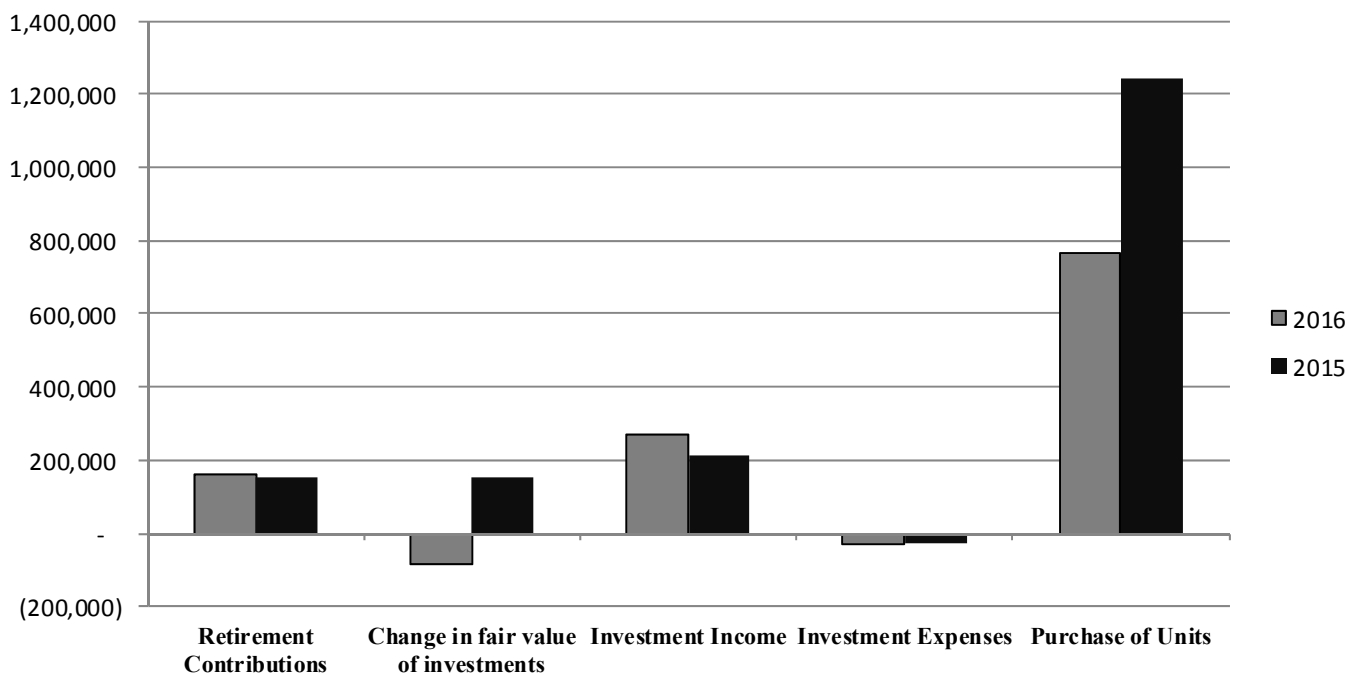
**North Dakota Retirement and Investment Office
Changes in Net Position – Fiduciary Funds
(In Millions)**

	2016	2015	Total % Change
Additions:			
Contributions	\$ 162.0	\$ 152.5	6.3%
Net Investment Income	151.0	340.0	-55.6%
Net Securities Lending Income	1.4	-	100.0%
Purchase of Units	763.2	1,239.9	-38.4%
Total Additions	1,077.6	1,732.4	-37.8%
Deductions:			
Payments to TFFR members	186.0	172.2	8.0%
Administrative Expenses	2.9	2.9	1.9%
Redemption of Units	265.4	249.1	6.6%
Total Deductions	454.3	424.2	7.1%
Total Change in Net Position	\$ 623.3	\$ 1,308.2	-52.4%

Statement of Changes in Net Position – Additions

Contributions collected by the pension trust fund increased by \$9.5 million or 6.3% over the previous fiscal year due to both an increase in the number of active members contributing to the fund and an increase in the average salary of active members. Net investment income (net of investment expenses) decreased by \$189.0 million or 55.6% from last year. This was the result of weak financial markets during the fiscal year. Deposits of funds into the investment trust fund (purchase of units) decreased by \$476.7 million or 38.4% due mainly to lower oil and gas tax collections affecting the Legacy Fund.

**Additions to Net Position
(in thousands)**

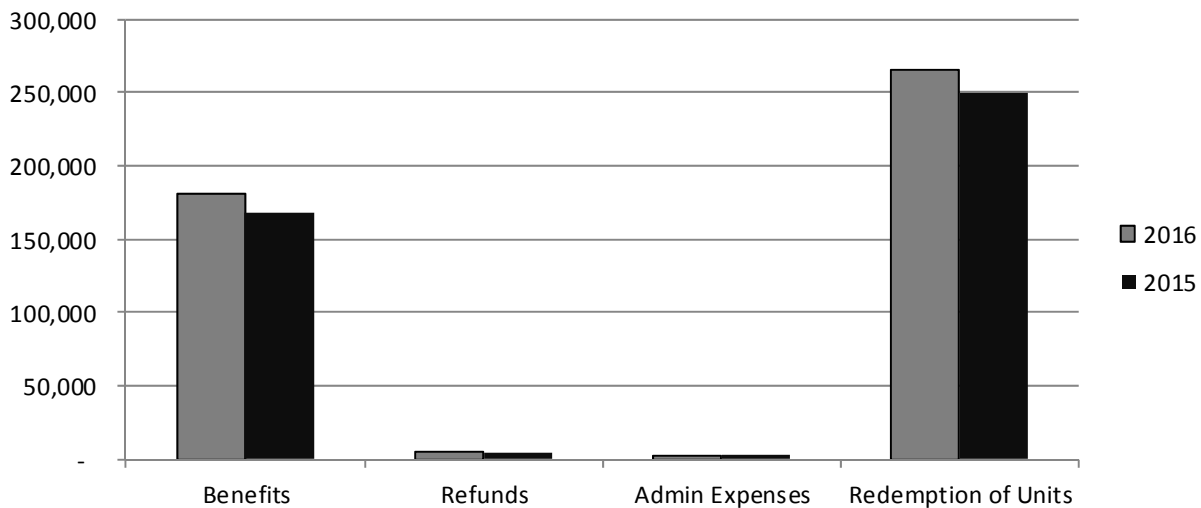


Statement of Changes in Net Position – Deductions

Benefits paid to TFFR plan participants, including partial lump-sum distributions, increased by \$12.3 million or 7.3% during the fiscal year ended June 30, 2016. This was due to an increase in the total number of retirees in the plan as well as an increased retirement salary on which the benefits are based upon. Refunds increased in fiscal year 2016 by \$1.5 million or 37.6%.

Administrative expenses remained relatively steady in fiscal year 2016, showing a modest 1.9% increase over the previous fiscal year.

**Deductions from Net Position
(in thousands)**



Conclusion

Net returns were positive despite challenging global economic conditions and heightened volatility in the capital markets last year. China's currency devaluation on August 11, 2015, and the U.K. Brexit vote on June 23, 2016, contributed to this increased volatility. Although the U.S. economy appeared stronger than the broader global markets, GDP growth rates in the U.S. have declined for four consecutive quarters on an annualized basis. For the fiscal year ended June 30, 2016, the TFFR pension plan generated a net investment return of 0.3% which trailed the investment policy benchmark of 0.6%. Strong returns in real estate (up 11%) and international fixed income (up 7%) were largely offset by muted returns in U.S. equities (up 2%) and sharply disappointing results in world, international and private equities (down over 7%). U.S. fixed income and other real assets (including infrastructure and timber) posted net investment returns of less than 4% for fiscal year 2016.

While cumulative returns in the post-credit crisis era have been strong, investors today face numerous challenges in the future that may limit the potential for high market returns and amplify investment risk. First, one could argue that many asset classes and strategies no longer offer compelling valuations for investors. Second, the ever-growing debt burden from unprecedented monetary policy and muted economic growth in a range of economies makes it less and less likely that authorities will be in a position to provide a cushion in a downturn when it occurs. Finally, the specter of the Federal Reserve raising short-term interest rates in the near future does pose a challenge to certain asset classes and strategies to varying degrees. To meet this challenge, the State Investment Board will continue to research strategies and investment options that mitigate and diversify the sources of risk accepted to address funding issues in the challenging years ahead.

TFFR's funding objective is to meet long-term pension benefit obligations through contributions and investment income. To address TFFR's funding shortfall, the ND State Legislature took action in 2011 and approved legislation to increase contributions (4% member and 4% employer) and modify certain benefits for non-grandfathered members. Increased contribution rates will be in effect until TFFR reaches 100% funding on an actuarial basis. This comprehensive funding recovery plan, along with solid investment performance in the future, is expected to improve TFFR's funding level over the long term.

As of July 1, 2016, TFFR's funding level was 62.1% on an actuarial basis (and 59.2% on a market basis). Because recent investment performance has been less than assumed, TFFR's funded status is expected to decline as these losses are recognized over the next few years due to the plan's five-year asset smoothing method. However, over the long term, the plan's funding level is expected to gradually improve with full funding expected in 30-40 years, if all actuarial assumptions are met in the future, including the 7.75% investment return assumption. Protecting the long term solvency of the pension plan is the TFFR Board's fiduciary responsibility. The Board will continue to proactively address TFFR funding issues so the plan will be financially strong and sustainable for past, present, and future ND educators.

Contacting RIO Financial Management

This financial report is designed to provide our Boards, our membership, our clients and the general public with a general overview of RIO's finances and to demonstrate RIO's accountability for the money we receive. If you have any questions about this report or need additional information, contact the North Dakota Retirement and Investment Office, PO Box 7100, Bismarck, ND 58507-7100.

North Dakota Retirement and Investment Office
Statement of Net Position – Fiduciary Funds
June 30, 2016

	Pension Trust	Investment Trust	Total
Assets:			
Investments, at fair value			
Equities	\$ -	\$ 1,900,710,606	\$ 1,900,710,606
Equity pool	1,131,917,482	1,921,253,074	3,053,170,556
Fixed income	-	1,415,525,781	1,415,525,781
Fixed income pool	479,086,760	2,285,945,327	2,765,032,087
Real assets	-	615,513,449	615,513,449
Real assets pool	369,771,496	889,167,336	1,258,938,832
Private equity pool	73,374,321	85,965,628	159,339,949
Cash pool	18,515,640	91,516,800	110,032,440
Total investments	<u>2,072,665,699</u>	<u>9,205,598,001</u>	<u>11,278,263,700</u>
Invested securities lending collateral	19,859,451	96,710,963	116,570,414
Receivables:			
Investment income	9,517,943	35,454,773	44,972,716
Contributions	25,494,939	-	25,494,939
Miscellaneous	7,963	13,880	21,843
Total receivables	<u>35,020,845</u>	<u>35,468,653</u>	<u>70,489,498</u>
Cash and cash equivalents	<u>19,747,422</u>	<u>168,372</u>	<u>19,915,794</u>
Total assets	<u>2,147,293,417</u>	<u>9,337,945,989</u>	<u>11,485,239,406</u>
Deferred outflows of resources			
Deferred outflows related to pensions	<u>168,324</u>	<u>113,380</u>	<u>281,704</u>
Liabilities:			
Accounts payable	118,477	38,269	156,746
Investment expenses payable	1,713,404	6,349,541	8,062,945
Securities lending collateral	19,859,451	96,710,963	116,570,414
Accrued expenses	1,354,756	443,950	1,798,706
Miscellaneous payable	-	17,233	17,233
Due to other state agencies	10,055	7,234	17,289
Total liabilities	<u>23,056,143</u>	<u>103,567,190</u>	<u>126,623,333</u>
Deferred inflows of resources			
Deferred inflows related to pensions	<u>70,310</u>	<u>42,271</u>	<u>112,581</u>
Net position:			
Restricted for pensions	2,124,335,288	-	2,124,335,288
Held in trust for external investment pool participants:			
Pension pool	-	2,637,238,130	2,637,238,130
Insurance pool	-	2,538,236,673	2,538,236,673
Held in trust for individual investment accounts			
	<u>-</u>	<u>4,058,975,105</u>	<u>4,058,975,105</u>
Total net position	<u>\$ 2,124,335,288</u>	<u>\$ 9,234,449,908</u>	<u>\$ 11,358,785,196</u>
Each participant unit is valued at \$1.00			
Participant units outstanding		9,234,449,908	9,234,449,908

The accompanying notes are an integral part of these financial statements.

North Dakota Retirement and Investment Office
Statement of Changes in Net Position – Fiduciary Funds
For the year ended June 30, 2016

	Pension Trust	Investment Trust	Total
Additions:			
Contributions:			
Employer contributions	\$ 82,839,932	\$ -	\$ 82,839,932
Member contributions	76,342,685	-	76,342,685
Purchased service credit	2,768,245	-	2,768,245
Interest, penalties and other	44,966	-	44,966
Total contributions	<u>161,995,828</u>	<u>-</u>	<u>161,995,828</u>
Investment income:			
Net change in fair value of investments	(35,952,316)	(51,056,400)	(87,008,716)
Interest, dividends and other income	49,982,337	217,167,354	267,149,691
	<u>14,030,021</u>	<u>166,110,954</u>	<u>180,140,975</u>
Less investment expenses	6,034,689	23,130,811	29,165,500
Net investment income	<u>7,995,332</u>	<u>142,980,143</u>	<u>150,975,475</u>
Securities lending activity:			
Securities lending income	304,571	1,465,052	1,769,623
Less securities lending expenses	(60,907)	(292,852)	(353,759)
Net securities lending income	<u>243,664</u>	<u>1,172,200</u>	<u>1,415,864</u>
Purchase of units (\$1 per unit)	-	763,176,205	763,176,205
Total additions	<u>170,234,824</u>	<u>907,328,548</u>	<u>1,077,563,372</u>
Deductions:			
Benefits paid to participants	179,625,551	-	179,625,551
Partial lump-sum distributions	992,233	-	992,233
Refunds	5,350,896	-	5,350,896
Administrative expenses	1,851,656	1,066,070	2,917,726
Redemption of units (\$1 per unit)	-	265,411,054	265,411,054
Total deductions	<u>187,820,336</u>	<u>266,477,124</u>	<u>454,297,460</u>
Change in net position	(17,585,512)	640,851,424	623,265,912
Net position:			
Beginning of year	<u>2,141,920,800</u>	<u>8,593,598,484</u>	<u>10,735,519,284</u>
End of Year	<u>\$ 2,124,335,288</u>	<u>\$ 9,234,449,908</u>	<u>\$ 11,358,785,196</u>

The accompanying notes are an integral part of these financial statements.

Note 1 - Summary of Significant Accounting Policies

RIO is an agency of the State of North Dakota operating through the legislative authority of North Dakota Century Code (NDCC) Chapter 54-52.5 and is considered part of the State of North Dakota financial reporting entity and included in the State of North Dakota's Comprehensive Annual Financial Report.

For financial reporting purposes, RIO has included all funds, and has considered all potential component units for which RIO is financially accountable, and other organizations for which the nature and significance of their relationship with RIO are such that exclusion would cause RIO's financial statements to be misleading or incomplete. The Governmental Accounting Standards Board has set forth criteria to be considered in determining financial accountability. This criteria includes appointing a voting majority of an organization's governing body and (1) the ability of RIO to impose its will on that organization or (2) the potential for the organization to provide specific financial benefits to, or impose specific financial burdens on RIO.

Based upon these criteria, there are no component units to be included within RIO as a reporting entity and RIO is part of the State of North Dakota as a reporting entity.

Fund Financial Statement

All activities of RIO are accounted for within the pension and investment trust funds and are shown, by fund, in the fiduciary fund financial statements.

Measurement Focus, Basis of Accounting and Financial Statement Presentation

The financial statements of RIO are reported using the economic resources measurement focus and the accrual basis of accounting.

This measurement focus includes all assets and liabilities associated with the operations of the fiduciary funds on the statements of net position. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows.

New Accounting Standards

In fiscal year 2016, the Plan implemented GASB Statement No. 72, Fair Value Measurement and Application, ("GASB 72"). This statement defines fair value and describes how state and local governments should define and measure fair value, what assets and liabilities should be measured at fair value, and what information about fair value should be disclosed in the notes to the financial statements. GASB 72 enhances transparency through new note disclosures as reflected in Note 3 Investments - Fair Value Measurement.

Fiduciary Fund

A pension trust fund and investment trust funds have been established to account for the assets held by RIO in a trustee capacity for TFFR and as an agent for other governmental units or funds which have placed certain investment assets under the management of SIB. The SIB manages two external investment pools and four individual investment accounts. The two external investment pools consist of a pension pool and insurance pool. SIB manages the investments of the North Dakota Public Employees Retirement System, Bismarck City Employees and Police, City of Grand Forks Employees and City of Grand Forks Park District Employees pension plans in the pension pool. The investments of Workforce Safety and Insurance, State Fire & Tornado,

State Bonding, Petroleum Tank Release Compensation Fund, Insurance Regulatory Trust, North Dakota Association of Counties Fund, Risk Management, Risk Management Workers Comp, PERS Group Insurance, City of Bismarck Deferred Sick Leave, City of Fargo FargoDome Permanent Fund, Cultural Endowment Fund, ND State Board of Medicine, and Budget Stabilization Fund are managed in the insurance pool. The Legacy Fund, Job Service of North Dakota, Tobacco Prevention and Control Fund, and PERS Retiree Health investments are managed by SIB in individual investment accounts; except for a small portion of the Legacy Fund fixed income assets that will remain pooled until they are liquidated at a future date and their cash allocation that will remain pooled for operational efficiency.

RIO has no statutory authority over, nor responsibility for, these investment trust funds other than the investment responsibility provided for by statute or through contracts with the individual agencies. The funds that are required to participate according to statute are: Public Employees Retirement System, Workforce Safety and Insurance, State Fire and Tornado, State Bonding, Petroleum Tank Release Compensation Fund, Insurance Regulatory Trust, Risk Management, Risk Management Workers Comp, Cultural Endowment Fund, Legacy Fund and Budget Stabilization Fund.

RIO follows the pronouncements of the Governmental Accounting Standards Board (GASB), which is the nationally accepted standard setting body for establishing accounting principles generally accepted in the United States of America for governmental entities.

Pension and Investment Trust Funds are accounted for using the accrual basis of accounting. Member contributions are recognized in the period in which they are due. Employer contributions are recognized when due and the employer has made a formal commitment to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the NDCC.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

RIO utilizes various investment instruments. Investment securities, in general, are exposed to various risks, such as interest rate, credit, and overall market volatility. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the values of investment securities will occur in the near term and that such change could materially affect the amounts reported in the statements of net position.

Budgetary Process

RIO operates through a biennial appropriation, which represents appropriations recommended by the Governor and presented to the General Assembly (the Assembly) at the beginning of each legislative session. The Assembly enacts RIO's budget through passage of a specific appropriation bill. The State of North Dakota's budget is prepared principally on a modified accrual basis. The Governor has line item veto power over all legislation, subject to legislative override.

Once passed and signed, the appropriation bill becomes RIO's financial plan for the next two years. Changes to the appropriation are limited to Emergency Commission authorization, initiative, or referendum action. The Emergency Commission can authorize receipt of federal or other moneys not appropriated by the Assembly if the Assembly did not indicate intent to reject the money. The Emergency Commission may authorize pass-

through federal funds from one state agency to another. The Emergency Commission may authorize the transfer of expenditure authority between appropriated line items, however RIO has specific authority as a special fund to transfer between the contingency line item and other line items. Unexpended appropriations lapse at the end of each biennium, except certain capital expenditures covered under the NDCC section 54-44.1-11.

RIO does not use encumbrance accounting. The legal level of budgetary control is at the agency, appropriation and expenditure line item level. RIO does not formally budget revenues and it does not budget by fund. The statement of revenues, expenditures and changes in fund balances - budget and actual is not prepared because revenues are not budgeted.

Capital Assets and Depreciation

Capital asset expenditures greater than \$5,000 are capitalized at cost in accordance with Section 54-27-21 of the NDCC. Depreciation is computed using the straight-line method over the estimated useful lives of the assets. The estimated useful lives are as follows:

	<u>Years</u>
Office equipment	5
Furniture and fixtures	5

Investments

NDCC Section 21-10-07 states that the SIB shall apply the prudent investor rule when investing funds under its supervision. The prudent investor rule means that in making investments, the fiduciaries shall exercise the judgment and care, under the circumstances then prevailing, that an institutional investor of ordinary prudence, discretion and intelligence exercises in the management of large investments entrusted to it, not in regard to speculation, but in regard to the permanent disposition of funds, considering probable safety of capital as well as probable income.

The pension fund belonging to TFFR and investment trust funds attributable to the City of Bismarck Employee Pension Plan, the City of Bismarck Police Pension Plan, Job Service of North Dakota, City of Grand Forks Employee Pension Plan, City of Grand Forks Park District Pension Plan and the Public Employees Retirement System (PERS) must be invested exclusively for the benefit of their members. All investments are made in accordance with the respective fund's long-term investment objectives and performance goals.

Pooled Investments

Most funds whose investments are under the supervision of the SIB participate in pooled investments. The agencies transfer money into the investment pools and receive an appropriate percentage ownership of the pooled portfolio based upon fair value. All activities of the investment pools are allocated to the agencies based upon their respective ownership percentages. Each participant unit is valued at \$1.00 per unit.

Investment Valuation and Income Recognition

Investments are reported at fair value. Quoted market prices, when available, have been used to value investments. The fair values for securities that have no quoted market price represent estimated fair value. International securities are valued based upon quoted foreign market prices and translated into U.S. dollars at the exchange rate in effect at June 30. In general, corporate debt securities have been valued at quoted market prices

or, if not available, values are based on yields currently available on comparable securities of issuers with similar credit ratings. Mortgages have been valued on the basis of their future principal and interest payments discounted at prevailing interest rates for similar instruments. The fair value of real estate investments, including timberland, is based on appraisals plus fiscal year-to-date capital transactions. Publicly traded alternative investments are valued based on quoted market prices. When not readily available, alternative investment securities are valued using current estimates of fair value from the investment manager. Such valuations consider variables such as financial performance of the issuer, comparison of comparable companies' earnings multiples, cash flow analysis, recent sales prices of investments, withdrawal restrictions, and other pertinent information. Because of the inherent uncertainty of the valuation for these other alternative investments, the estimated fair value may differ from the values that would have been used had a ready market existed.

The net change in fair value of investments consists of the realized gains or losses and the unrealized increase or decrease in fair value of investments during the year. Realized gains and losses on sales of investments are computed based on the difference between the sales price and the original cost of the investment sold. Realized gains and losses on investments that had been held in more than one fiscal year and sold in the current fiscal year were included as a change in the fair value of investments reported in the prior year(s) and the current year.

Unrealized gains and losses are computed based on changes in the fair value of investments between years. Security transactions are accounted for on a trade date basis. Interest income is recognized when earned. Dividend income is recorded on the ex-dividend date.

Pensions

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the ND Public Employees Retirement System (NDPERS) and additions to/deductions from NDPERS' fiduciary net position have been determined on the same basis as they are reported by NDPERS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Note 2 - Cash and Cash Equivalents

Custodial Credit Risk

State law generally requires that all state funds be deposited in the Bank of North Dakota. NDCC 21-04-01 provides that public funds belonging to or in the custody of the state shall be deposited in the Bank of North Dakota. Also, NDCC 6-09-07 states, "[a]ll state funds ... must be deposited in the Bank of North Dakota" or must be deposited in accordance with constitutional and statutory provisions.

Pension Trust Fund

Deposits held by the Pension Trust Fund at June 30, 2016 were deposited in the Bank of North Dakota. At June 30, 2016, the carrying amount of TFFR's deposits was \$19,747,422 and the bank balance was \$19,799,474. The difference results from checks outstanding or deposits not yet processed by the bank. These deposits are exposed to custodial credit risk as uninsured and uncollateralized. However, these deposits at the Bank of North Dakota are guaranteed by the State of North Dakota through NDCC Section 6-09-10.

Investment Trust Funds

Certificates of deposit are recorded as investments and have a cost and carrying value of \$81,143,786 at June 30, 2016. In addition these funds carry cash and cash equivalents totaling \$168,372 at June 30, 2016. These deposits are exposed to custodial credit risk as uninsured and uncollateralized. However, these deposits held at the Bank of North Dakota are guaranteed by the State of North Dakota through NDCC Section 6-09-10.

Note 3 - Investments

The investment policy of the SIB is governed by NDCC 21-10. The SIB shall apply the prudent investor rule in investing for funds under its supervision. The “prudent investor rule” means that in making investments, the fiduciaries shall exercise the judgment and care, under the circumstances then prevailing, that an institutional investor of ordinary prudence, discretion, and intelligence exercises in the management of large investments entrusted to it, not in regard to speculation but in regard to the permanent disposition of funds, considering probable safety of capital as well as probable income. The retirement funds belonging to the teachers’ fund for retirement and the public employees’ retirement system must be invested exclusively for the benefit of their members and in accordance with the respective funds’ investment goals and objectives.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates of debt securities will adversely affect the fair value of an investment. The price of a debt security typically moves in the opposite direction of the change in interest rates. The SIB does not have a formal investment policy that limits investment maturities as a means of managing its exposure to potential fair value losses arising from future changes in interest rates.

At June 30, 2016, the following tables show the investments by investment type and maturity (expressed in thousands).

North Dakota Retirement and Investment Office
Notes to Combined Financial Statements
June 30, 2016

	Total Fair Value	Less than 1 Year	1-6 Years	6-10 Years	More than 10 Years
Asset Backed Securities	\$ 214,093	\$ 1,354	\$ 73,333	\$ 35,566	\$ 103,840
Bank Loans	7,523	-	5,407	2,116	-
Collateralized Bonds	-	-	-	-	-
Commercial Mortgage-Backed	143,357	67	17	5,760	137,513
Commercial Paper	-	-	-	-	-
Corporate Bonds	1,292,451	56,049	432,650	433,705	370,047
Corporate Convertible Bonds	8,502	-	6,629	190	1,683
Government Agencies	68,113	5,900	44,149	8,266	9,798
Government Bonds	567,638	26,480	273,899	107,544	159,715
Gov't Mortgage Backed and CMB	715,219	256	27,624	36,868	650,471
Repurchase Agreements	(14,482)	(14,482)	-	-	-
Index Linked Government Bonds	34,183	5,903	-	7,456	20,824
Municipal/Provincial Bonds	36,951	154	5,845	9,704	21,248
Non-Government Backed CMOs	60,641	-	8,303	900	51,438
Other Fixed Income	6,528	1,455	5,073	-	-
Short Term Bills and Notes	17,161	17,161	-	-	-
Funds/Pooled Investments	1,713,792	172,187	701,969	442,005	397,631
Total Debt Securities	\$ 4,871,670	\$ 272,484	\$ 1,584,898	\$ 1,090,080	\$ 1,924,208

In the table above, the fair values of inflation indexed bonds are reflected in the columns based on their stated maturity dates. The principal balances of these bonds are adjusted every six months based on the inflation index for that period.

Some investments are more sensitive to interest rate changes than others. Variable and floating rate collateralized mortgage obligations (CMOs), asset-backed securities (ABS), interest-only and principal-only securities are examples of investments whose fair values may be highly sensitive to interest rate changes.

Interest-only (IO) and principal-only (PO) strips are transactions which involve the separation of the interest and principal components of a security. They are highly sensitive to prepayments by mortgagors, which may result from a decline in interest rates. The SIB held IOs valued at \$7.7 million and POs valued at \$6.7 million at June 30, 2016. The SIB has no policy regarding IO or PO strips.

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The State Investment Board maintains a highly diversified portfolio of debt securities encompassing a wide range of credit ratings. Although the SIB has no overall policy regarding credit risk, each debt securities manager is given a specific set of guidelines to invest within based on the mandate for which it was hired. The guidelines specify in which range of credit the manager may invest. These ranges include investment grade and below investment grade categories. The following table presents the SIB's ratings as of June 30, 2016 (expressed in thousands).

North Dakota Retirement and Investment Office
Notes to Combined Financial Statements
June 30, 2016

2016	Total Fair Value	Credit Rating*										
		AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
Asset Backed Securities	\$ 213,219	\$ 123,092	\$ 21,414	\$ 30,455	\$ 19,980	\$ 3,822	\$ 2,797	\$ 9,202	\$ 1,804	\$ -	\$ 653	\$ -
Bank Loans	7,523	-	-	-	2,977	2,305	2,241	-	-	-	-	-
Commercial Mortgage Backed	111,063	47,154	23,370	10,891	9,682	5,798	6,791	6,618	-	-	759	-
Corporate Bonds	1,292,451	2,026	45,795	218,343	783,700	165,038	64,841	9,969	471	-	2,268	-
Corporate Convertible Bonds	8,502	-	-	-	34	2,689	3,905	1,477	-	-	397	-
Gov't Agencies	63,908	4,305	44,179	1,066	14,358	-	-	-	-	-	-	-
Gov't Bonds	128,745	8,315	12,427	34,160	41,997	28,531	3,315	-	-	-	-	-
Gov't Issued Commercial & Gov't Mortgage Backed	507,990	2,587	505,403	-	-	-	-	-	-	-	-	-
Municipal/Provincial Bonds	36,951	4,517	16,036	7,456	8,788	-	-	-	-	-	-	154
Non-Gov't Backed CMOs	59,280	7,493	6,533	18,982	8,676	699	4,242	4,664	2,924	-	5,067	-
Other Fixed Income	6,528	-	6,528	-	-	-	-	-	-	-	-	-
Repurchase Agreements	(14,482)	3,700	(18,182)	-	-	-	-	-	-	-	-	-
Short Term Bills & Notes	15,697	-	15,697	-	-	-	-	-	-	-	-	-
Funds/Pooled Investments	1,713,792	107,858	940,656	418,236	190,616	49,459	6,967	-	-	-	-	-
Total Credit Risk of Debt Securities	4,151,167	\$ 311,047	\$ 1,619,856	\$ 739,589	\$ 1,080,808	\$ 258,341	\$ 95,099	\$ 31,930	\$ 5,199	\$ -	\$ 9,144	\$ 154
US Gov't & Agencies **	720,503											
Total Debt Securities	\$ 4,871,670											

- * Ratings are determined in the following order:
1. S&P rating
 2. Moody's rating
 3. Fitch rating
 4. Manager-determined rating (internal rating)
 5. If no ratings available using steps 1-4, then shown as not rated.

** US government agency securities explicitly guaranteed by the US government are categorized here. Credit ratings of US government agency securities that are only implicitly guaranteed by the US government are categorized accordingly in the main body of this table. Implicitly guaranteed agency securities included in the *Gov't Issued Commercial & Gov't Mortgage Backed*, *Gov't Agencies*, and *Short Term Bills and Notes* categories are issued by FNMA, FDIC, FHLB, FHLMC, FICO, FAMC and NCUA and TVA.

Concentration of Credit Risk

Concentration of credit risk is the risk of loss that may be attributed to the magnitude of an investment in a single issuer. As of June 30, 2016, the SIB's portfolio has no single issuer exposure that comprises 5% or more of the overall portfolio, excluding investments issued or explicitly guaranteed by the U.S. government and investments in mutual funds, external investment pools, and other pooled investments. Therefore, there is no concentration of credit risk.

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. Although the SIB does not have a formal investment policy governing foreign currency risk, the SIB does manage its exposure to fair value loss by requiring their international securities investment managers to maintain diversified portfolios to limit foreign currency and security risk. The SIB's exposure to foreign currency risk is presented in the following table as of June 30, 2016 (expressed in thousands).

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2016

Currency	Short-Term	Debt	Equity	Total
Australian dollar	\$ 508	\$ 11,044	\$ 40,740	\$ 52,292
Brazilian real	560	7,856	4,035	12,451
British pound sterling	(839)	8,370	194,291	201,822
Canadian dollar	48	-	22,605	22,653
Chilean peso	54	9,704	853	10,611
Chinese yuan renminbi	(17)	-	-	(17)
Columbian peso	-	2,184	-	2,184
Czech koruna	-	-	743	743
Israeli shekel	46	-	5,332	5,378
Danish krone	70	-	12,863	12,933
Euro	(9,287)	12,557	287,286	290,556
Hong Kong dollar	419	-	67,721	68,140
Hungarian forint	3	5,619	1,912	7,534
Indian rupee	6,858	-	-	6,858
Indonesian Rupiah	33	6,771	1,051	7,855
Japanese yen	2,582	397	190,320	193,299
Malaysian Ringgit	59	6,469	-	6,528
Mexican peso	(304)	25,778	7,358	32,832
New Zealand dollar	28	5,187	2,476	7,691
Norwegian krone	4,735	-	12,551	17,286
Polish zloty	-	2,952	1,177	4,129
Russian ruble	(546)	-	-	(546)
Singapore dollar	113	-	6,049	6,162
South African rand	93	4,540	9,775	14,408
South Korean won	486	-	18,227	18,713
Swedish krona	9,995	-	27,601	37,596
Swiss franc	62	-	68,795	68,857
Taiwan dollar	9	-	2,807	2,816
Thai baht	387	-	3,838	4,225
Turkish lira	42	-	1,173	1,215
International commingled funds (various currencies)	-	110,368	762,502	872,870
Total international investment securities	<u>\$ 16,197</u>	<u>\$ 219,796</u>	<u>\$ 1,754,081</u>	<u>\$ 1,990,074</u>

Negative amounts represent short positions.

Derivative Securities

Derivatives are financial arrangements between two parties whose payments are based on, or “derived” from, the performance of some agreed upon benchmark. The investment policies of the SIB’s clients allow the use of derivative securities to hedge or replicate underlying exposures but not for speculation. All derivatives are considered investment derivative instruments. The fair value of all derivative securities is reported in the statement of net position. At June 30, 2016, the SIB had four types of derivative securities: futures, options, swaps and currency forwards.

Futures

Futures represent commitments to purchase (asset) or sell (liability) securities at a future date and at a specific price. Futures contracts are traded on organized exchanges (exchange traded) thereby minimizing the SIB’s counterparty risk. The net change in the futures contracts’ value is settled daily in cash with the exchanges. Net gains or losses resulting from the daily settlements are included in net change in fair value of investments in the statement of changes in net position and totaled \$(7.5) million for fiscal year 2016. At June 30, 2016, the SIB investment portfolio had the notional futures balances shown below (expressed in thousands).

<u>Futures</u>	<u>Notional Value</u> <u>June 30, 2016</u>
Cash & Cash Equivalent Derivative Futures	
Long	\$ 37,736
Short	(946,602)
Equity Derivative Futures	
Long	623,571
Fixed Income Derivative Futures	
Long	509,240
Short	(290,226)
Total Futures	<u>\$ (66,281)</u>

Options

Options represent or give buyers the right, but not the obligation, to buy (call) or sell (put) an asset at a preset price over a specified period. Options are traded on organized exchanges (exchange traded) thereby minimizing the SIB’s counterparty credit risk. The option’s price is usually a small percentage of the underlying asset’s value. As a seller of a financial option, the SIB, through its investment manager, receives a premium at the beginning of the agreement and bears the risk of an unfavorable change in the price of the financial instrument underlying the option. As a buyer of a financial option, the SIB, through its investment manager, pays a premium at the beginning of the agreement and the counterparty bears the risk of an unfavorable change in the price of the financial instrument underlying the option. Gains and losses on options are determined based on fair values and recorded with the net change in fair value of investments in the statement of changes in net position and totaled \$0.4 million for fiscal year 2016. At June 30, 2016, the SIB investment portfolio had the following option balances (expressed in thousands).

<u>Options</u>	<u>Fair Value</u> <u>June 30, 2016</u>
Cash & Other Options	
Call	\$ (72)
Put	72
Fixed Income Options	
Call	(37)
Put	(1)
Total Options	<u>\$ (38)</u>

Swaps

A swap is a derivative in which counterparties exchange certain benefits of one party's financial instrument for those of the other party's financial instrument. Specifically, the two counterparties agree to exchange one stream of cash flows for another stream. The SIB, through its investment managers, has entered into various swap agreements in an attempt to manage its exposure to interest rate, inflation, credit, currency risk and total return.

Interest rate risk represents the exposure to fair value losses arising from future changes in prevailing market interest rates. In the most common type of interest rate swap arrangement, one party agrees to pay fixed interest payments on designated dates to a counterparty, who in turn agrees to make return interest payments that float with some reference rate.

Inflation risk represents the exposure to fair value losses arising from future changes in prevailing market inflation. In an inflation swap, one party pays a fixed rate on a notional principal amount, while the other party pays a floating rate linked to an inflation index, such as the Consumer Price Index (CPI).

Credit risk represents the exposure to fair value losses arising from a credit event such as default, failure to pay, restructuring or bankruptcy. In a credit default swap (CDS) contract, the protection buyer of the CDS makes a series of payments to the protection seller and, in exchange, receives a payoff if the credit instrument experiences a credit event. CDS contracts are also used to establish exposure to a desired credit instrument.

Currency risk represents the exposure to fair value losses arising from the change in price of one currency against another. A currency swap is a foreign-exchange agreement between two parties to exchange principal and interest in one currency for the same in another currency.

A total return swap is an agreement in which one party makes payments based on a set rate, either fixed or variable, while the other party makes payments based on the return of an underlying asset (income and capital gains). The underlying asset, or reference asset, is owned by the party receiving the set rate payment.

Gains and losses on swaps are determined based on fair values and are recorded with the net change in fair value of investments in the statement of changes in net position and totaled \$(10.7) million for fiscal year 2016. The maximum loss that would be recognized at June 30, 2016, if all counterparties failed to perform as contracted is \$3.25 million. Swap fair values are determined by a third party pricing source. At June 30, 2016, the SIB's investment portfolio had the swap fair value balances as shown below (expressed in thousands).

North Dakota Retirement and Investment Office
Notes to Combined Financial Statements
June 30, 2016

Credit Default Swaps

Counterparty/Moody's Rating	Notional Amount		Fair Value
	June 30, 2016	Expiration Date Range	June 30, 2016
Bank of America/A3 (1 contract)	\$ (2,600)	12/2018	\$ 40
Barclays/A2 (1 contract)	(100)	9/2019	1
BNP Paribas/A2 (2 contracts)	(450)	12/2016 - 6/2019	(44)
Citibank/A3 (4 contracts)	(11,050)	12/2018 - 12/2019	105
Citigroup Global Markets/A1	(6,500)	12/2018	75
Credit Suisse First Boston/A1 (2 contracts)	4,340	6/2021	(81)
Deutsche Bank/A2 (2 contracts)	2,400	6/2017	(18)
Goldman Sachs/A3 (5 contracts)	(1,850)	12/2016 - 3/2020	(2)
JP Morgan Chase/Aa3 (14 contracts)	2,181	12/2016 - 11/2045	(51)
Total Credit Default Swaps	\$ (13,629)		\$ 25

The notional amount may be positive or negative, depending on whether the position is long or short, respectively.

Currency Swaps

Counterparty/Moody's Rating	Notional Amount		Fair Value
	June 30, 2016	Expiration Date Range	June 30, 2016
Deutsche Bank London/A2	\$ 281	5/2017	\$ 1
Goldman Sachs/A3	150	1/2017	5
JP Morgan Chase/Aa3 (8 contracts)	181,560	11/2016 - 11/2024	-
Total Currency Swaps	\$ 181,991		\$ 6

The notional amount may be positive or negative, depending on whether the position is long or short, respectively.

Interest Rate Swaps

Counterparty/Moody's Rating	Notional Amount		Fair Value
	June 30, 2016	Expiration Date Range	June 30, 2016
Bank of America/A3 (1 contract)	\$ 6,243	1/2018	\$ (50)
Citigroup Global Markets/A1 (3 contracts)	(3,055)	8/2020	(178)
Credit Suisse First Boston/A1 (24 contracts)	(235,092)	12/2017 - 6/2046	(3,353)
Credit Suisse International/A1 (4 contracts)	8,137	1/2018 - 1/2021	(76)
Deutsche Bank/A2 (4 contracts)	6,697	1/2018 - 1/2021	(18)
Goldman Sachs/A3 (3 contracts)	7,850	1/2021 - 6/2026	(69)
HSBC Bank/A1 (2 contracts)	20,500	3/2020 - 9/2033	(4)
JP Morgan Chase/Aa3 (86 contracts)	(4,765)	2/2019 - 6/2046	(3,799)
Morgan Stanley/Baa1 (1 contract)	3,900	5/2022	8
Total Interest Rate Swaps	\$ (189,585)		\$ (7,539)

The notional amount may be positive or negative, depending on whether the position is long (fixed rate payer) or short (floating rate payer), respectively.

North Dakota Retirement and Investment Office
Notes to Combined Financial Statements
June 30, 2016

Inflation Swaps

<u>Counterparty/Moody's Rating</u>	<u>Notional Amount</u>		<u>Expiration Date</u> Range	<u>Fair Value</u>	
	June 30, 2016	June 30, 2016		June 30, 2016	June 30, 2016
Bank of America/A3 (7 contracts)	\$	700	1/2020	\$	(10)
BNP Paribas/A2 (3 contracts)		600	1/2020		(8)
Citibank/A3 (4 contracts)		520	3/2020 - 6/2030		(11)
Deutsche Bank/A2 (1 contract)		206	11/2030		16
Goldman Sachs/A3 (11 contracts)		4,430	1/2020 - 1/2030		(52)
Total Inflation Swaps	\$	<u>6,456</u>		\$	<u>(65)</u>

The notional amount may be positive or negative, depending on whether the position is long (fixed rate payer) or short (floating rate payer), respectively.

Total Return Swaps

<u>Counterparty/Moody's Rating</u>	<u>Notional Amount</u>		<u>Expiration Date</u> Range	<u>Fair Value</u>	
	June 30, 2016	June 30, 2016		June 30, 2016	June 30, 2016
Credit Suisse International/A1 (2 contracts)	\$	2,252	1/2041	\$	(26)
Total Total Return Swaps	\$	<u>2,252</u>		\$	<u>(26)</u>

The notional amount may be positive or negative, depending on whether the position is long (fixed rate payer) or short (floating rate payer), respectively.

Currency Forwards

Currency forwards represent forward exchange contracts that are entered into in order to manage the exposure to changes in currency exchange rates on the currency denominated portfolio holdings. A forward exchange contract is a commitment to purchase (positive) or sell (negative) a currency at a future date at a negotiated forward rate. The gain or loss arising from the difference between the original contracts and the closing of such contracts is included in the net change in fair value of investments in the statements of changes in net position and totaled \$0.9 million for fiscal year 2016. At June 30, 2016, the SIB's investment portfolio included the currency forwards balances shown below (expressed in thousands).

					Fair Value
	Currency	Cost	Purchases	Sales	6/30/2016
AUD	Australian dollar	\$ (60)	\$ -	\$ (60)	\$ (60)
BRL	Brazilian real	208	471	(263)	230
GBP	British pound sterling	(1,323)	-	(1,323)	(1,222)
CAD	Canadian dollar	(85)	87	(172)	(84)
CLP	Chilean peso	9,404	9,404	-	9,704
CNY	Chinese yuan renminbi	(4,588)	-	(4,588)	(4,492)
EUR	Euro	(8,067)	2,565	(10,632)	(7,919)
HKD/CNH	Hong Kong dollar	4,598	6,210	(1,612)	4,475
HUF	Hungarian forint	(20)	-	(20)	(19)
INR	Indian rupee	6,920	6,920	-	6,858
JPY	Japanese yen	(2,192)	2,558	(4,750)	(2,353)
MXN	Mexican peso	(470)	-	(470)	(467)
NOK	Norwegian krone	4,162	4,162	-	4,099
RUB	Russian ruble	(540)	678	(1,218)	(546)
SEK	Swedish krona	10,368	10,368	-	9,986
USD	United States dollar	(18,315)	25,108	(43,423)	(18,315)
	Total forwards subject to currency risk				<u>\$ (125)</u>

Derivative Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the value of an interest rate-based derivative investment. The SIB does not have a formal investment policy regarding such derivative investments. At June 30, 2016, the tables below show the SIB's derivative investments subject to interest rate risk (expressed in thousands).

	Total Notional Value					Greater than
	3 months or less	3 to 6 months	6 to 12 months	1-5 years	5 years	
Futures-interest rate contracts	\$ (586,165)	\$ (93,571)	\$ 37,736	\$ (47,852)	\$ -	
Options-margined interest rate contracts	(2)	-	-	-	-	
Total	\$ (586,167)	\$ (93,571)	\$ 37,736	\$ (47,852)	\$ -	

	Total Fair Value					Greater than
	3 months or less	3 to 6 months	6 to 12 months	1-5 years	5 years	
Options on interest rate futures	\$ (37)	\$ -	\$ -	\$ -	\$ -	
Options - interest rate contracts	-	-	-	-	-	
Options - credit contracts	(1)	-	-	-	-	
Swaps - interest rate contracts	(7,602)	-	-	(1,103)	(6,499)	
Swaps - credit contracts	24	1	(16)	83	(44)	
Total	\$ (7,616)	\$ 1	\$ (16)	\$ (1,020)	\$ (6,543)	

Fair Value Measurement

The SIB categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and give the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1 measurements) and the lowest priority to unobservable inputs (level 3 measurements).

Level 1 Unadjusted quoted prices for identical instruments in active markets.

Level 2 Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable.

Level 3 Valuations derived from valuation techniques in which significant inputs are unobservable.

Investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not classified in the fair value hierarchy.

The following table shows the fair value leveling of the SIB's investment portfolio at June 30, 2016 (expressed in thousands).

North Dakota Retirement and Investment Office
Notes to Combined Financial Statements
June 30, 2016

	Fair Value Measures Using			
	Fair Value 6/30/16	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by fair value level				
Short Term Securities				
Short Term Bills and Notes	\$ 17,161	\$ -	\$ 17,161	\$ -
Short Term Securities	17,161	-	17,161	-
Fixed income investments				
Asset Backed Securities	214,093	-	212,013	2,080
Bank Loans	7,524	-	7,524	-
Commercial Mortgage-Backed	143,357	-	141,957	1,400
Corporate Bonds	1,292,451	-	1,289,656	2,795
Corporate Convertible Bonds	8,502	-	8,312	190
Funds - Fixed Income ETF	29,531	29,531	-	-
Government Agencies	68,113	-	68,113	-
Government Bonds	567,638	-	567,638	-
Government Mortgage Backed Securities	657,728	-	656,882	846
Gov't-issued Commercial Mortgage-Backed	57,491	-	57,491	-
Index Linked Government Bonds	34,183	-	34,183	-
Municipal/Provincial Bonds	36,951	-	36,951	-
Non-Government Backed C.M.O.s	60,641	-	55,099	5,542
Other Fixed Income	6,528	-	6,528	-
Total fixed income investments	3,184,731	29,531	3,142,347	12,853
Equity investments				
Common Stock	3,136,055	3,130,843	4,375	837
Convertible Equity	1,495	899	596	-
Funds - Common Stock	22,430	22,430	-	-
Funds - Equities ETF	84,030	84,030	-	-
Preferred Stock	2,550	2,550	-	-
Rights/Warrants	12	-	-	12
Stapled Securities	2,228	2,228	-	-
Total equity investments	3,248,800	3,242,980	4,971	849
Derivative investments				
Exchange Cleared Swaps	(6,584)	-	(6,584)	-
Options	(38)	(52)	14	-
Swaps	(1,015)	-	(1,018)	3
Total derivative investments	(7,637)	(52)	(7,588)	3
Total investments by fair value level	\$ 6,443,055	\$ 3,272,459	\$ 3,156,891	\$ 13,705

North Dakota Retirement and Investment Office
Notes to Combined Financial Statements
June 30, 2016

Investments measured at the net asset value (NAV)	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Commingled Funds-Debt	\$ 1,510,097	\$ -	Daily, monthly
Commingled Funds-Equities	885,713	-	Daily, monthly
Distressed Debt	268,329	21,735	Quarterly, Not eligible
Long/Short	167,752	-	Monthly
Mezzanine Debt	3,686	13,147	Not eligible
Private Equity	159,340	105,293	Not eligible
Real Assets	1,457,778	212,297	Quarterly, Not eligible
Total investments measured at the NAV	\$ 4,452,695	\$ 352,472	
Investments at other than fair value			
Cash and adjustments to cash	\$ 315,852		
Bank Certificates of Deposit	81,144		
Repurchase Agreements	(14,482)		
Total investments at other than fair value	\$ 382,514		
Total investments	<u>\$ 11,278,264</u>		

Securities classified in Level 1 are valued using quoted prices in active markets for those securities. Securities classified in Level 2 and Level 3 are valued using methodologies such as various bid evaluations, market averages and other matrix pricing techniques as well as values derived from associated traded securities or last trade data. In instances where inputs used to measure fair value fall into different levels, the fair value is categorized based on the lowest level input that is significant to the valuation.

Investments valued at the net asset value (NAV) per share (or its equivalent) have been classified separately in the table above and include investments considered to be Alternative Investments as defined by the AICPA. The definition includes investments for which a readily determinable fair value does not exist (that is, investments not listed on national exchanges or over-the-counter markets, or for which quoted market prices are not available from sources such as financial publications, the exchanges, or NASDAQ). These types of investments can be held within any of the asset classes used by the SIB based on underlying portfolio holdings and analysis of risk and return relationships. These investments can be structured in different ways, including limited partnerships, limited liability companies, common trusts and mutual funds. Some are closed-ended with a specific life and capital commitment while others are open-ended with opportunity for ad hoc contributions or withdrawals and termination upon proper notice.

Commingled/Mutual Funds — These types of funds are open-ended funds and may be utilized in equity or fixed income asset classes. They are funds made up of underlying securities that have readily available fair values (publicly traded stocks or bonds). The SIB owns units of these funds rather than the individual securities. Contributions or withdrawals from these funds can be made as needed, generally with daily or monthly liquidity, with a notice period of one to fifteen days. Because they are liquid funds, there are no unfunded commitments for these types of investments.

Private Equity — Private Equity investments are typically private interests in corporations across different areas of the capital structure and in different stages of the corporations' development via limited partnership vehicles. Private Equity investments are illiquid and long term in nature (10-12 years), typically held until maturity. Private Equity portfolios generally have a "J-Curve Effect" whereby there are low to negative

returns in the initial years due to the payment of investment management fees and initial funding of investments made by the General Partner during a period when investments are typically carried at cost and returns have not been realized. To diversify the program, Private Equity investments are made across business cycles, vintage years, and different strategies. The SIB has a dedicated asset class for private equity investments. The SIB does not have the option to request redemptions from its private equity funds. The General Partner distributes earnings and proceeds from the sale of the underlying investments as transactions occur. The SIB has \$105.3 million in unfunded private equity commitments as of June 30, 2016.

Venture Capital — these include investments in companies in a range of stages of development from start-up/seed stage, early stage, and later/expansion stage. Investments are typically made in years one through six and returns typically occur in years four through ten.

Buyouts — these include investments in funds that seek out and purchase underperforming or undervalued companies in order to improve them and sell them or take them public many years later. These funds are also often involved in management buyouts, which are buyouts conducted by the management of the company being purchased, and they often play key roles in leveraged buyouts, which are buyouts that are funded with borrowed money.

Distressed Debt — these include investments in the debt instruments of companies which may be publicly traded or privately held that are financially distressed and are either in bankruptcy or likely candidates for bankruptcy. Typical holdings are senior and subordinated debt instruments, mortgages and bank loans. The SIB is including these types of investments in its fixed income and private equity asset classes. As of June 30, 2016, unfunded commitments in two of the four distressed debt funds totaled \$21.7 million. Those two funds are not eligible for redemptions. Of the other two funds, one is in wind-down with final distributions expected in the next 12-18 months and the other fund is eligible for redemptions with quarterly liquidity and 60 days notice. Neither has an unfunded commitment.

Mezzanine Debt — This strategy is a hybrid of debt and equity financing. It is basically debt capital that gives the lender the rights to convert to an ownership or equity interest in the company if the loan is not paid back in time and in full. It is generally subordinated to senior debt. The SIB utilizes this strategy, through a limited partnership structure, in its below investment grade fixed income allocation. The two funds in this category are not eligible for redemptions, have remaining lives of 3-6 years, and unfunded commitments of \$13.2 million as of June 30, 2016.

Equity Long/Short — This strategy is a combination of long and short positions, primarily in publicly traded equities. The SIB utilizes this strategy, through a limited partnership structure, within its US equity allocations. This is an open-ended fund with monthly liquidity with a notice period of 15 days. There was no unfunded commitment as of June 30, 2016.

Real Estate and Real “Tangible” Assets — These investments are intended to provide allocations to tangible assets that are expected to be inflation protected and provide performance above the inflation rate as indicated by the CPI. Investments are generally structured as limited partnerships or limited liability companies. Investments in Real Estate and Real Assets include:

Real Estate — includes investments in private vehicles through limited partnerships or commingled vehicles that have an ownership interest in direct real estate properties. The investment strategies may

include “value added” strategies, which derive their return from both income and appreciation, “opportunistic”, which derive their return primarily through appreciation, and “alternative” which invest in less traditional types of property. Both domestic and international real estate funds are utilized. The SIB has a dedicated asset class for these types of investments. There are currently 10 different real estate funds in the portfolio. Two of those funds are open-ended vehicles that accept redemption requests quarterly with a 30-90 day notification period. One fund is in wind-down and will be distributing the final proceeds within the next 12-18 months. The remaining seven funds are closed-ended limited partnerships that are not eligible for redemptions. Those seven funds have a combined unfunded commitment of \$112.2 million.

Timberland — includes investments in limited liability companies that have an ownership interest in properties where the value of the property is derived mainly from income-producing timber but also from the “higher and better use” value of the underlying land. The SIB has a dedicated asset class for these types of investments. There are three funds in the portfolio and they have no unfunded commitments. The funds are not eligible for redemption other than distributions of income and/or proceeds as determined by the investment manager. The funds have remaining lives of 3-9 years.

Infrastructure — includes investments in limited partnerships that have an ownership interest in transportation assets such as toll roads, tunnels and bridges; and regulated assets such as electricity transmission, gas and oil distribution and wastewater collection. Other possible investments would include communication assets and social infrastructure. The SIB has a dedicated asset class for these types of investments. The infrastructure investments in the portfolio as of June 30, 2016, include both open and closed-ended funds. The open-ended funds have no unfunded commitments and are eligible for redemptions quarterly with 90 days notice. There may be a 3-12 month queue for receiving redemptions. The closed-ended funds have unfunded commitments of \$100.1 million at June 30, 2016 and are not eligible for redemptions.

Securities Lending

State statutes permit and the SIB has authorized the use of securities lending – loans of securities to broker-dealers and other entities for collateral with a simultaneous agreement to return the collateral for the same securities in the future. Northern Trust is the securities lending agent for the SIB. Securities are loaned versus collateral that may include cash, U.S. government securities and irrevocable letters of credit. U.S. securities are loaned versus collateral valued at 102% of the market value of the securities plus any accrued interest. Non-U.S. securities are loaned versus collateral valued at 105% of the market value of the securities plus any accrued interest.

Non-cash collateral cannot be pledged or sold unless the borrower defaults. All securities loans can be terminated on demand by either the lender or the borrower, although the average term of SIB loans was approximately 69 days as of June 30, 2016. Cash open collateral is invested in a short term investment pool, which had an interest sensitivity of 1 day as of this statement date. This pool is valued based on amortized cost. There were no violations of legal or contractual provisions, no borrower or lending agent default losses known to the securities lending agent. There are no dividends or coupon payments owing on the securities lent. Securities lending earnings are credited to participating clients on approximately the fifteenth day of the following month.

Indemnification deals with the situation in which a client's securities are not returned due to the insolvency of a borrower and Northern Trust has failed to live up to its contractual responsibilities relating to the lending of

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2016

those securities. Northern Trust's responsibilities include performing appropriate borrower and collateral investment credit analyses, demanding adequate types and levels of collateral, and complying with applicable Department of Labor and Federal Financial Institutions Examination Council regulations concerning securities lending.

For securities loaned at fiscal year end, the SIB has no credit risk exposure to borrowers because the amounts the SIB owes the borrowers exceeds the amounts the borrowers owe the SIB.

The following represents the balances relating to the securities lending transactions at June 30, 2016 (expressed in thousands).

	Securities Lent	Non-Cash Collateral Value	Cash Collateral Investment Value
Lent for cash collateral:			
US agency securities	\$ 10	\$ -	\$ 10
US government securities	10,435	-	10,603
US corporate fixed income securities	29,492	-	29,954
Global government fixed income securities	2,992	-	3,125
US equities	65,991	-	66,969
Global equities	5,603	-	5,909
Lent for non-cash collateral:			
US agency securities	-	-	-
US government securities	212	216	-
US corporate fixed income securities	1,574	1,599	-
US equities	18,636	18,949	-
Global equities	20,525	21,776	-
Total	\$ 155,470	\$ 42,540	\$ 116,570

Note 4 - Capital Assets

	June 30, 2015	Additions	Retirements	June 30, 2016
Office equipment	\$19,321	\$ -	\$ -	\$19,321
Less accumulated depreciation on office equipment	(19,321)	-	-	(19,321)
Software	1,213,500	-	-	1,213,500
Less accumulated depreciation on software	(1,213,500)	-	-	(1,213,500)
	\$0			\$0

Note 5 - State Agency Transactions

Due From/To Other State Agencies

Amounts due from/to other state agencies are as follows as of June 30, 2016:

	2016
Due To	
Information Technology Department	\$ 8,469
Office of Attorney General	8,666
Office of Management and Budget	154
Total due to other state agencies	\$ 17,289

These balances are a result of a time lag between the dates that services are provided, the payments are made, and the transactions are entered into the accounting system.

Note 6 - Operating Leases

RIO leases office space under an operating lease effective July 1, 2015 through June 30, 2017. RIO also incurs rent expense at other locations on a temporary basis to sponsor retirement education for TFFR members. Rent expense totaled \$81,886 for fiscal 2016. Minimum payments under the lease for fiscal 2017 are \$80,806.

Note 7 - Changes in Noncurrent Liabilities

Changes in noncurrent liabilities for the years ended June 30, 2016 are summarized as follows:

	Beginning Balance 7/1/2015	Additions	Reductions	Ending Balance 6/30/2016	Amounts Due Within One Year
Accrued Leave	\$155,443	\$138,889	(\$122,829)	\$171,503	\$96,470

Pension and Investment Trust Funds liquidate the accrued annual leave.

Note 8 - North Dakota Teachers' Fund for Retirement

Administration

The following brief description of TFFR is provided for general information purposes only. Participants should refer to NDCC Chapter 15-39.1 for more complete information.

TFFR is a cost-sharing multiple-employer defined benefit pension plan covering all North Dakota public teachers and certain other teachers who meet various membership requirements. TFFR provides for pension, death and disability benefits. The cost to administer the TFFR plan is financed by investment income and contributions.

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2016

Responsibility for administration of the TFFR benefits program is assigned to a seven-member Board of Trustees (Board). The Board consists of the State Treasurer, the Superintendent of Public Instruction, and five members appointed by the Governor. The appointed members serve five-year terms which end on June 30 of alternate years. The appointed Board members must include two active teachers, one active school administrator, and two retired members. The TFFR Board submits any necessary or desirable changes in statutes relating to the administration of the fund, including benefit terms, to the Legislative Assembly for consideration. The Legislative Assembly has final authority for changes to benefit terms and contribution rates.

Membership

As of June 30, 2016 and 2015 and 2015 and 2015 and 2015 and 2015 and 2015 and 2015 and 2015 and 2015 and 2015, the number of participating employer units was 214, consisting of the following:

	June 30, 2016
Public School Districts	176
County Superintendents	6
Special Education Units	19
Vocational Education Units	5
Other	8
Total	214

TFFR's membership consisted of the following:

	2016
Retirees and beneficiaries currently receiving benefits	8,249
Terminated employees - vested	1,601
Terminated employees - nonvested	779
Total	10,629
Current employees	
Vested	7,433
Nonvested	3,380
Total	10,813

Member and Employer Contributions

Member and employer contributions paid to TFFR are set by NDCC Section 15-39.1-09. Every eligible teacher in the State of North Dakota is required to be a member of TFFR and is assessed at a rate of 11.75% of salary as defined by NDCC Section 15-39.1-04. Every governmental body employing a teacher must also pay into TFFR a sum equal to 12.75% of the teacher's salary. Member and employer contributions will be reduced to 7.75% each when the fund reaches 100% funded ratio on an actuarial basis.

A vested member who terminates covered employment may elect a refund of contributions paid plus 6% interest or defer payment until eligible for pension benefits. A nonvested member who terminates covered employment must claim a refund of contributions paid before age 70½. Refunded members forfeit all service credits under TFFR. These service credits may be repurchased upon return to covered employment under certain circumstances, as defined by the NDCC.

Pension Benefits

For purposes of determining pension benefits, members are classified within one of three categories. Tier 1 grandfathered and Tier 1 non-grandfathered members are those with service credit on file as of July 1, 2008. Tier 2 members are those newly employed and returning refunded members on or after July 1, 2008.

Tier 1 Grandfathered

A Tier 1 grandfathered member is entitled to receive unreduced benefits when three or more years of credited service as a teacher in North Dakota have accumulated, the member is no longer employed as a teacher and the member has reached age 65, or the sum of age and years of service credit equals or exceeds 85. TFFR permits early retirement from ages 55 to 64, with benefits actuarially reduced by 6% per year for every year the member's retirement age is less than 65 years or the date as of which age plus service equal 85. In either case, benefits may not exceed the maximum benefits specified in Section 415 of the Internal Revenue Code.

Pension benefits paid by TFFR are determined by NDCC Section 15-39.1-10. Monthly benefits under TFFR are equal to the three highest annual salaries earned divided by 36 months and multiplied by 2.00% times the number of service credits earned. Retirees may elect payment of benefits in the form of a single life annuity, 100% or 50% joint and survivor annuity, ten or twenty-year term certain annuity, partial lump-sum option or level income with Social Security benefits. Members may also qualify for benefits calculated under other formulas.

Tier 1 Non-grandfathered

A Tier 1 non-grandfathered member is entitled to receive unreduced benefits when three or more years of credited service as a teacher in North Dakota have accumulated, the member is no longer employed as a teacher and the member has reached age 65, or has reached age 60 and the sum of age and years of service credit equals or exceeds 90. TFFR permits early retirement from ages 55 to 64, with benefits actuarially reduced by 8% per year from the earlier of age 60/Rule of 90 or age 65. In either case, benefits may not exceed the maximum benefits specified in Section 415 of the Internal Revenue Code.

Pension benefits paid by TFFR are determined by NDCC Section 15-39.1-10. Monthly benefits under TFFR are equal to the three highest annual salaries earned divided by 36 months and multiplied by 2.00% times the number of service credits earned. Retirees may elect payment of benefits in the form of a single life annuity, 100% or 50% joint and survivor annuity, ten or twenty-year term certain annuity, partial lump-sum option or level income with Social Security benefits. Members may also qualify for benefits calculated under other formulas.

Tier 2

A Tier 2 member is entitled to receive unreduced benefits when five or more years of credited service as a teacher in North Dakota have accumulated, the member is no longer employed as a teacher and the member has reached age 65, or has reached age 60 and the sum of age and years of service credit equals or exceeds 90. TFFR permits early retirement from ages 55 to 64, with benefits actuarially reduced by 8% per year from the earlier of age 60/Rule of 90 or age 65. In either case, benefits may not exceed the maximum benefits specified in Section 415 of the Internal Revenue Code.

Pension benefits paid by TFFR are determined by NDCC Section 15-39.1-10. Monthly benefits under TFFR are equal to the five highest annual salaries earned divided by 60 months and multiplied by 2.00% times the number of service credits earned. Retirees may elect payment of benefits in the form of a single life annuity, 100% or 50% joint and survivor annuity, ten or twenty-year term certain annuity, partial lump-sum option or level income with Social Security benefits. Members may also qualify for benefits calculated under other formulas.

Death and Disability Benefits

Death benefits may be paid to a member's designated beneficiary. If a member's death occurs before retirement, the benefit options available are determined by the member's vesting status prior to death. If a member's death occurs after retirement, the death benefit received by the beneficiary (if any) is based on the retirement plan the member selected at retirement.

An active member is eligible to receive disability benefits when: (a) a total disability lasting 12 months or more does not allow the continuation of teaching, (b) the member has accumulated five years of credited service in North Dakota, and (c) the Board of Trustees of TFFR has determined eligibility based upon medical evidence. The amount of the disability benefit is computed by the retirement formula in NDCC Section 15-39.1-10 without consideration of age and uses the member's actual years of credited service. There is no actuarial reduction for reason of disability retirement.

Investment Policy

The TFFR Board is responsible for establishing investment policy for the fund assets under NDCC 15-39.1-05.2. Benefit payments are projected to occur over a long period of time. This allows TFFR to adopt a long-term investment horizon and asset allocation policy for the management of fund assets. Asset allocation policy is critical because it defines the basic risk and return characteristics of the investment portfolio. Asset allocation targets are established using an asset-liability analysis designed to assist the Board in determining an acceptable volatility target for the fund and an optimal asset allocation policy mix. This asset-liability analysis considers both sides of the plan balance sheet, utilizing both quantitative and qualitative inputs, in order to estimate the potential impact of various asset class mixes on key measures of total plan risk, including the resulting estimated impact of funded status and contribution rates. The following was the TFFR Board's adopted asset allocation policy as of June 30, 2016.

Asset Class	Target Allocation
Global Equity	58.0%
Global Fixed Income	23.0%
Global Real Assets	18.0%
Cash Equivalents	1.0%
Total	100.0%

Private equity is included in the Global Equity asset class.

Investment Rate of Return

The annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 0.39% for the year ended June 30, 2016. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Realized Gains and Losses

Realized gains and losses on sales of investments are components of net change in fair value of investments and are computed as described in Note 1. For the years ended June 30, 2016, TFFR had net realized gains of \$60,426,737.

Net Pension Liability

The components of the net pension liability of TFFR at June 30, 2016 (expressed in thousands), were as follows:

Total pension liability	3,589,394
Plan fiduciary net position	(2,124,335)
Net pension liability (NPL)	1,465,059
Plan fiduciary net position as a percentage of the total pension liability	59.2%

Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of July 1, 2016, using the following actuarial assumptions:

Valuation date	July 1, 2016
Inflation	2.75%
Salary increases	4.25% to 14.50%; varying by service, including inflation and productivity
Cost of living adjustments	None
Investment rate of return	7.75% net of investment expenses

Mortality rates were based on the following:

For active and inactive members, mortality rates were based on the RP-2014 Employee Mortality Table, projected generationally using Scale MP-2014. For healthy retirees, mortality rates were based on the RP-2014 Healthy Annuitant Mortality Table set back one year, multiplied by 50% for ages under 75 and grading up to 100% by age 80, projected generationally using Scale MP-2014. For disabled retirees, mortality rates were based on the RP-2014 Disabled Mortality Table set forward four years.

The actuarial assumptions used in the July 1, 2016 valuation were based on the results of an actuarial experience study dated April 30, 2015, for the period July 1, 2009 – June 30, 2014. An actuarial experience study is generally conducted every five years.

The long-term expected rate of return on TFFR investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the TFFR target asset allocation as of June 30, 2016 and 2015 (see the discussion of TFFR investment policy) are summarized in the following table:

Asset Class	Long-Term Expected Real Rate of Return
Global Equity	7.3%
Global Fixed Income	0.9%
Global Real Assets	5.3%
Cash Equivalents	0.0%

Discount Rate

The discount rate used to measure the total pension liability was 7.75% as of June 30, 2016. The projection of cash flows used to determine the discount rate assumed that member and employer contributions will be made at rates equal to those based on the July 1, 2016 Actuarial Valuation Report. For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs of future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, TFFR's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members as of July 1, 2016. Therefore, the long-term expected rate of return on TFFR investments was applied to all periods of projected benefit payments to determine the total pension liability as of June 30, 2016.

Sensitivity of Net Pension Liability

The following presents the net pension liability of the TFFR employers calculated using the discount rate of 7.75% as of June 30, 2016, as well as what the employers' net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate:

	1% Decrease (6.75%)	Current Discount Rate (7.75%)	1% Increase (8.75%)
Employers' net pension liability	\$ 1,900,291,033	\$ 1,465,058,563	\$ 1,102,551,032

Note 9 - Public Employees Retirement System (PERS)

Permanent employees of RIO participate in PERS, which is also an agency of the State of North Dakota financial reporting entity and is included in the State of North Dakota's Comprehensive Annual Financial Report. The following brief description of NDPERS is provided for general information purposes only. Participants should refer to NDCC Chapter 54-52 for more complete information.

NDPERS is a cost-sharing multiple-employer defined benefit pension plan that covers substantially all employees of the State of North Dakota, its agencies and various participating political subdivisions (Main System). NDPERS provides for pension, death and disability benefits. The cost to administer the plan is financed through the contributions and investment earnings of the plan.

Responsibility for administration of the NDPERS defined benefit pension plan is assigned to a Board comprised of seven members. The Board consists of a Chairman, who is appointed by the Governor, one member appointed by the Attorney General; one member appointed by the State Health Officer; three members elected by the active membership of the NDPERS system; and one member elected by the retired public employees. Effective July 1, 2015, the board was expanded to include two members of the legislative assembly appointed by the chairman of the legislative management.

Pension Benefits

Benefits are set by statute. NDPERS has no provisions or policies with respect to automatic and ad hoc post-retirement benefit increases. Members of the Main System are entitled to unreduced monthly pension benefits beginning when the sum of age and years of credited service equal or exceed 85 (Rule of 85), or at normal retirement age (65). For members hired on or after January 1, 2016 the Rule of 85 will be replaced with the Rule of 90 with a minimum age of 60. The monthly pension benefit is equal to 2.00% of their average monthly salary, using the highest 36 months out of the last 180 months of service, for each year of service. The plan permits early retirement at ages 55-64 with three or more years of service.

Members may elect to receive the pension benefits in the form of a single life, joint and survivor, term-certain annuity, or partial lump sum with ongoing annuity. Members may elect to receive the value of their accumulated contributions, plus interest, as a lump sum distribution upon retirement or termination, or they may elect to receive their benefits in the form of an annuity. For each member electing an annuity, total payment will not be less than the members' accumulated contributions plus interest.

Death and Disability Benefits

Death and disability benefits are set by statute. If an active member dies with less than three years of service, a death benefit equal to the value of the member's accumulated contributions, plus interest, is paid to the member's beneficiary. If the member has earned more than three years of credited service, the surviving spouse will be entitled to a single payment refund, life-time monthly payment in an amount equal to 50% of the member's accrued normal retirement benefit, or monthly payments in an amount equal to the member's accrued 100% Joint and Survivor retirement benefit if the member had reached normal retirement age prior to date of death. If the surviving spouse dies before the member's accumulated pension benefits are paid, the balance will be payable to the surviving spouse's beneficiary.

Eligible members, who become totally disabled after a minimum of 180 days of service, receive monthly disability benefits equal to 25% of their final average salary with a minimum benefit of \$100. To qualify under this section, the member has to become disabled during the period of eligible employment and apply for benefits within one year of termination. The definition for disabled is set by the System in the North Dakota Administrative Code.

Refunds of Member Contributions

Upon termination, if a member is not vested (is not 65 or does not have three years of service credited for the NDPERS) they will receive the accumulated member contributions plus interest, or may elect to receive this amount at a later date. If a member has vested, they have the option of applying for a refund or can remain as a terminated vested participant. If a member terminated and withdrew their accumulated member contributions and is subsequently reemployed, they have the option of repurchasing their previous service.

Member and Employer Contributions

Member and employer contributions paid to NDPERS are set by statute and are established as a percent of salaries and wages. Member contribution rates are 7% and employer contribution rates are 7.12% of covered compensation.

The member's account balance includes the vested employer contributions equal to the member's contributions to an eligible deferred compensation plan. The minimum member contribution is \$25 and the maximum may not exceed the following:

- 1 to 12 months of service – Greater of one percent of monthly salary or \$25
- 13 to 24 months of service – Greater of two percent of monthly salary or \$25
- 25 to 36 months of service – Greater of three percent of monthly salary or \$25
- Longer than 36 months of service – Greater of four percent of monthly salary or \$25

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At June 30, 2016, RIO reported a liability of \$989,688 for its proportionate share of the net pension liability. The net pension liability was measured as of June 30, 2015, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. RIO's proportion of the net pension liability was based on RIO's share of covered payroll in the pension plan relative to the covered payroll of all participating NDPERS Main System employers. At June 30, 2015, RIO's proportion was 0.145546 percent.

North Dakota Retirement and Investment Office
Notes to Combined Financial Statements
June 30, 2016

For the year ended June 30, 2016, RIO recognized pension expense of \$122,885. At June 30, 2016, RIO reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 28,712	\$ -
Changes in assumptions	-	88,177
Net differences between projected and actual earnings on pension plan investments	-	20,892
Changes in proportion and differences between employer contributions and proportionate share of contributions	145,647	3,512
Employer contributions subsequent to the measurement date	107,345	-
Total	\$ 281,704	\$ 112,581

Deferred outflows of resources related to pensions resulting from employer contributions subsequent to the measurement date in the amount of \$107,345 will be recognized as a reduction of the net pension liability in the year ended June 30, 2017.

Other amounts reported as deferred outflows of resources and (deferred inflows of resources) related to pensions will be recognized in pension expense as follows:

Year Ended June 30		
2017	\$	1,746
2018		1,746
2019		1,746
2020		44,917
2021		11,613
	\$	61,768

Actuarial assumptions

The total pension liability in the July 1, 2015 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	3.50%
Salary increase (Payroll Growth)	4.50% per annum
Investment Rate of Return	8.00%, net of investment expenses
Cost of Living Adjustment	None

For active members, inactive members and healthy retirees, mortality rates were based on the RP-2000 Combined Healthy Mortality Table set back two years for males and three years for females, projected generationally using the SSA 2014 Intermediate Cost scale from 2014. For disabled retirees, mortality rates were based on the RP-2000 Disabled Mortality Table set back one year for males (no setback for females) multiplied by 125%.

The actuarial assumptions used were based on the results of an actuarial experience study completed in 2015. They are the same as the assumptions used in the July 1, 2015, funding actuarial valuation for NDPERS.

As a result of the 2015 actuarial experience study, the NDPERS Board adopted several changes to the actuarial assumptions effective July 1, 2015. This includes changes to the mortality tables, disability incidence rates, retirement rates, administrative expenses, salary scale, and percent married assumption.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the Fund's target asset allocation are summarized in the following table:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
Global Equity	58%	7.5%
Global Fixed Income	23%	1.3%
Global Real Assets	18%	5.4%
Cash Equivalents	1%	0.0%

Discount rate

The discount rate used to measure the total pension liability was 8 percent as of June 30, 2015. The projection of cash flows used to determine the discount rate assumes that member and employer contributions will be made at rates equal to those based on the July 1, 2015 Actuarial Valuation Report. For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included.

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2016

Projected employer contributions that are intended to fund the service costs of future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments for current plan members as of June 30, 2015. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability as of June 30, 2015.

Sensitivity of the Employer's proportionate share of the net pension liability to changes in the discount rate

The following presents the Employer's proportionate share of the net pension liability calculated using the discount rate of 8 percent, as well as what the Employer's proportionate share of the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (7 percent) or 1-percentage-point higher (9 percent) than the current rate:

	1% Decrease (7%)	Current Discount Rate (8%)	1% Increase (9%)
Employers' net pension liability	\$ 1,517,637	\$ 989,688	\$ 557,730

Pension plan fiduciary net position

Detailed information about the pension plan's fiduciary net position is available in the separately issued NDPERS Comprehensive Annual Financial Report. This report can be accessed on the NDPERS website at <http://www.nd.gov/ndpers/forms-and-publications/index.html>.

Note 10 - Related Parties

As stated in Note 1, RIO is an agency of the State of North Dakota; as such, other agencies of the state are related parties.

Note 11 - Contingencies/Litigation

The State Investment Board has been named as a defendant in two cases, arising out of the Tribune and General Motors bankruptcy proceedings, relating to securities that were purchased by external investment managers in one or more portfolios held by the SIB on behalf of its investment client funds. Outside counsel has been retained for both cases, in addition to assistance received from the ND Office of Attorney General. As of June 30, 2016, no liability has been recorded as it is too early in the litigation process to reasonably determine whether any payments will be required.

REQUIRED SUPPLEMENTARY INFORMATION

North Dakota Retirement and Investment Office
Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios
North Dakota Teachers' Fund for Retirement
Last 10 Fiscal Years*
(Dollars in thousands)

	2016	2015	2014
Total pension liability			
Service cost	\$ 68,239	\$ 60,618	\$ 56,752
Interest	265,440	249,064	237,821
Changes of benefit terms	-	-	-
Differences between expected and actual experience	(8,093)	2,209	9,347
Changes of assumptions	-	171,325	-
Benefit payments, including refunds of member contributions	(185,969)	(172,239)	(162,259)
Net change in total pension liability	139,617	310,977	141,661
Total pension liability - beginning	3,449,777	3,138,800	2,997,139
Total pension liability - ending (a)	\$3,589,394	\$3,449,777	\$ 3,138,800
Plan fiduciary net position			
Contributions - employer	\$ 82,840	\$ 78,422	\$ 62,355
Contributions - member	76,343	72,268	56,555
Contributions - purchased service credit	2,768	1,601	2,034
Contributions - other	45	172	48
Net investment income	8,239	73,205	294,246
Benefit payments, including refunds of member contributions	(185,969)	(172,239)	(162,259)
Administrative expenses	(1,852)	(1,923)	(1,586)
Net change in plan fiduciary net position	(17,586)	51,506	251,393
Plan fiduciary net position - beginning **	2,141,921	2,090,415	1,839,584
Plan fiduciary net position - ending (b)	\$2,124,335	\$2,141,921	\$ 2,090,977
Plan's net pension liability - ending (a) - (b)	\$1,465,059	\$1,307,856	\$ 1,047,823
Plan fiduciary net position as a percentage of the total pension liability	59.2%	62.1%	66.6%
Covered-employee payroll	\$ 649,725	\$ 615,105	\$ 580,053
Plan's net pension liability as a percentage of covered-employee payroll	225.5%	212.6%	180.6%

Notes to Schedule:

* Complete data for this schedule is not available prior to 2014.

** Restated in 2015 due to GASB 68 implementation.

Changes of assumptions: In 2015, amounts reported as changes of assumptions resulted primarily from a decrease in the investment return assumption from 8% to 7.75% and an updated mortality improvement scale.

North Dakota Retirement and Investment Office
Required Supplementary Information

**Schedule of Employer Contributions
North Dakota Teachers' Fund for Retirement
Last 10 Fiscal Years
(Dollars in thousands)**

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Actuarially determined contribution	84,724	71,168	59,513	52,396	69,374	65,113	52,053	41,986	44,115	50,532
Contributions in relation to the actuarially determined contribution	82,840	78,422	62,355	59,301	46,126	44,545	39,837	37,488	33,684	31,865
Contribution deficiency (excess)	1,884	(7,254)	(2,842)	(6,905)	23,248	20,568	12,216	4,498	10,431	18,667
Covered-employee payroll	649,725	615,105	580,053	551,656	527,156	509,091	482,868	454,396	434,626	411,167
Contributions as a percentage of covered-employee payroll	12.75%	12.75%	10.75%	10.75%	8.75%	8.75%	8.25%	8.25%	7.75%	7.75%

Notes to Schedule

Valuation Date: Actuarially determined contributions for each fiscal year are based on the actuarial valuation as of the beginning of the year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Actuarial cost method	Entry age
Amortization method	Level percentage of payroll, closed
Remaining amortization period	27 years
Asset valuation method	5-year smoothed market
Inflation	2.75%; decreased from 3% prior to July 1, 2015.
Salary increases	4.25% - 14.5%, including inflation and productivity; 4.5% - 14.75% prior to July 1, 2015.
Investment rate of return	7.75%, net of investment expenses, including inflation. Rate was decreased from 8% beginning July 1, 2015.
Retirement age	In the 2015 valuation, rates of retirement were changed to better reflect anticipated future experience. In the 2010 valuation, expected retirement ages of plan members were adjusted to more closely reflect actual experience.
Mortality	In the 2015 valuation, assumed life expectancies were adjusted as a result of adopting the RP-2014 mortality tables with generational improvement. In prior years, those assumptions were based on percentages of GRS post termination non-disabled tables and RP-2000 disabled-life tables.

Schedule of Investment Returns
North Dakota Teachers' Fund for Retirement
Last 10 Fiscal Years*

	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
Annual money-weighted rate of return, net of investment expense	0.39%	3.56%	16.35%	13.60%

*Note: Annual money-weighted rates of return not available prior to 2013.

North Dakota Retirement and Investment Office
Required Supplementary Information

**Schedule of Employer's Share of Net Pension Liability
ND Public Employees Retirement System
Last 10 Fiscal Years*
(Dollars in thousands)**

	2016	2015
RIO's proportion of NDPERS net pension liability (asset)	0.145546%	0.121849%
RIO's proportionate share of NDPERS net pension liability (asset)	\$ 990	\$ 773
RIO's covered-employee payroll	\$ 1,297	\$ 1,026
RIO's proportionate share of NDPERS net pension liability (asset) as a percentage of its covered-employee payroll	76.33%	75.34%
NDPERS Plan fiduciary net position as a percentage of the total pension liability	77.15%	77.70%

**Schedule of Employer Contributions
ND Public Employees Retirement System
Last 10 Years*
(Dollars in thousands)**

	2016	2015
RIO's Statutorily required contributions	\$ 98	\$ 73
RIO's Contributions in relation to the actuarially determined contribution	94	73
Contribution deficiency (excess)	\$ 4	\$ -
RIO's Covered-employee payroll	\$ 1,297	\$ 1,026
RIO's Contributions as a percentage of covered-employee payroll	7.25%	7.12%

Notes to schedules:

*Complete data for these schedules is not available prior to 2015.

Amounts presented for each fiscal year have a measurement date of the previous fiscal year end.

	Pension Pool Participants					Insurance Pool Participants						
	Public	Bismarck	Bismarck	City of				Petroleum	Insurance			
	Employees	City	City	Grand Forks	City of	Workforce	State	Tank	Regulatory	Cultural		
	Retirement	Employee	Police	Employee	Grand Forks	Safety &	Fire &	State	Release	Trust	Endowment	Risk
System	Pension Plan	Pension Plan	Pension Plan	Park District	Insurance	Tomado	Bonding	Comp. Fund	Fund	Fund	Mgmt	
Assets:												
Investments												
Equities	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Equity pool	1,313,879,825	35,455,137	15,999,867	32,428,872	3,508,133	446,262,045	8,372,416	-	-	325,475	212,359	1,960,610
Fixed income	-	-	-	-	-	-	-	-	-	-	-	-
Fixed income pool	561,288,209	28,038,870	9,874,331	13,930,739	1,486,259	970,969,515	13,165,969	1,789,154	3,523,663	370,465	143,381	4,201,817
Reassets												
Reassets pool	459,762,805	16,202,424	6,721,270	8,670,751	487,946	393,406,291	-	-	-	-	18,858	-
Private equity pool	79,938,588	2,279,387	1,266,397	2,265,631	215,625	-	-	-	-	-	-	-
Cash pool	38,598,744	334,159	55,819	615,004	16,822	11,801,374	2,413,138	1,482,077	3,571,271	380,209	11,630	326,346
Total investments	2,453,468,171	82,309,977	33,917,684	57,910,997	5,714,785	1,822,439,225	23,951,523	3,271,231	7,094,934	1,076,149	386,228	6,488,773
Invested sec lending collateral	24,703,417	795,849	337,005	603,943	44,106	17,214,543	284,132	17,459	34,435	9,584	5,738	86,602
Investment income receivable	5,919,911	131,024	65,916	64,763	5,457	9,664,982	139,678	25,138	54,576	9,686	219	46,029
Operating Cash	58,769	-	-	-	-	44,480	850	947	889	656	280	1,143
Miscellaneous receivable	3,944	-	-	-	-	2,933	38	5	11	2	1	10
Due from other state agency	-	-	-	-	-	-	-	-	-	-	-	-
Total assets	2,484,154,212	83,236,850	34,320,605	58,579,703	5,764,348	1,849,366,163	24,376,221	3,314,780	7,184,845	1,096,077	392,466	6,622,557
Deferred outflows of resources												
Deferred outflows related to pensions	32,365	-	-	-	-	24,049	318	43	94	14	5	86
Liabilities:												
Investment expenses payable	2,033,481	68,689	29,337	49,976	4,056	902,230	16,077	653	1,296	574	349	4,492
Securities lending collateral	24,703,417	795,849	337,005	603,943	44,106	17,214,543	284,132	17,459	34,435	9,584	5,738	86,602
Accounts payable	11,497	-	-	-	-	8,332	118	14	31	6	2	28
Accrued expenses	147,685	-	-	-	-	109,961	1,781	210	479	75	24	415
Miscellaneous payable	-	2,737	1,132	1,826	250	-	-	-	-	-	-	-
Due to other state agencies	2,055	-	-	-	-	1,529	20	3	6	1	-	5
Total liabilities	26,898,135	867,275	367,474	655,745	48,412	1,823,659	302,128	18,339	36,247	10,240	6,113	91,542
Deferred inflows of resources												
Deferred inflows related to pensions	12,912	-	-	-	-	9,491	140	18	39	3	2	38
Net position held in trust for external investment pool participants												
	\$ 2,457,275,530	\$ 82,369,575	\$ 33,953,131	\$ 57,923,958	\$ 5,715,936	\$ 1,831,144,126	\$ 24,074,271	\$ 3,296,466	\$ 7,148,653	\$ 1,085,848	\$ 386,356	\$ 6,531,063
Each participant unit is valued at \$ 100												
Participant units outstanding	2,457,275,530	82,369,575	33,953,131	57,923,958	5,715,936	1,831,144,126	24,074,271	3,296,466	7,148,653	1,085,848	386,356	6,531,063

North Dakota Retirement and Investment Office
Combining Statement of Net Position – Investment Trust Funds – Fiduciary Funds
June 30, 2016 (with Comparative Totals for 2015)

Insurance Pool Participants							Individual Investment Accounts					Totals	
Risk Mgmt Workers' Comp	ND Ass'n. of Counties Fund	PERS Group Insurance	Budget Stabilization Fund	City of Bismarck Deferred Sick Leave	City of Fargo Fargo Dome Fund	State Board of Medicine	Legacy Fund	Job Service of North Dakota	Tobacco Prevention and Control Fund	PERS Retiree Health Credit Fund	2016	2015	
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,835,361,022	\$ -	\$ 5,446,369	\$ 59,903,215	\$ 1,900,710,606	\$ 1,708,243,680	
2,039,929	1,207,624	-	-	191,332	19,311,569	460,484	-	39,637,397	-	-	1,921,253,074	1,899,373,890	
-	-	-	-	-	-	-	1,333,087,521	-	40,816,114	41,622,146	1,415,525,781	1,186,979,426	
3,306,740	2,313,171	33,598,449	564,094,702	417,733	15,173,457	1,699,775	-	56,558,928	-	-	2,285,945,327	2,202,727,271	
-	-	-	-	-	3,850,123	46,868	615,513,449	-	-	-	615,513,449	509,958,485	
-	-	-	-	-	-	-	-	-	-	-	889,167,336	843,179,560	
-	-	-	-	-	-	-	-	-	-	-	85,965,628	95,675,581	
165,642	526,438	4,098,901	8,994,897	31,692	396,841	2,149	9,199,026	391,845	8,102,776	-	91,516,800	127,180,135	
5,512,311	4,047,233	37,697,350	573,089,599	640,757	38,731,990	2,209,276	3,793,161,018	96,588,170	54,365,259	101,525,361	9,205,598,001	8,573,318,028	
79,306	44,080	45,991	2,571,110	7,375	557,673	18,340	49,250,275	-	-	-	96,710,963	-	
3,863	1,633	18,010	2,828,790	1,507	50,730	(610)	16,324,166	163	1,280	97,862	35,454,773	28,925,179	
1,141	-	-	13,286	-	-	-	45,931	-	-	-	168,372	90,692	
10	-	-	944	-	-	-	5,982	-	-	-	13,880	13,084	
-	-	-	-	-	-	-	-	-	-	-	-	57	
5,596,631	4,092,946	37,761,351	578,503,729	649,639	39,340,393	2,227,006	3,858,787,372	96,588,333	54,366,539	101,623,223	9,337,945,989	8,602,347,040	
79	-	-	7,772	-	-	-	48,555	-	-	-	113,380	47,146	
4,289	2,431	13,304	183,727	399	35,220	1,199	2,861,410	57,023	5,751	73,578	6,349,541	8,326,400	
79,306	44,080	45,991	2,571,110	7,375	557,673	18,340	49,250,275	-	-	-	96,710,963	-	
26	-	-	2,471	-	-	-	15,744	-	-	-	38,269	49,697	
364	-	-	35,273	-	-	-	147,683	-	-	-	443,950	342,998	
-	250	1,264	-	236	1,309	250	-	3,289	1,467	3,223	17,233	16,497	
5	-	-	492	-	-	-	3,118	-	-	-	7,234	2,314	
83,990	46,761	60,559	2,793,073	8,010	594,202	19,789	52,278,230	60,312	7,218	76,801	103,567,190	8,737,906	
35	-	-	3,237	-	-	-	16,356	-	-	-	42,271	57,796	
\$ 5,512,685	\$ 4,046,185	\$ 37,700,792	\$ 575,715,191	\$ 641,629	\$ 38,746,191	\$ 2,207,217	\$ 3,806,541,341	\$ 96,528,021	\$ 54,359,321	\$ 101,546,422	\$ 9,234,449,908	\$ 8,593,598,484	
5,512,685	4,046,185	37,700,792	575,715,191	641,629	38,746,191	2,207,217	3,806,541,341	96,528,021	54,359,321	101,546,422	9,234,449,908	8,593,598,484	

	Pension Pool Participants						Insurance Pool Participants					
	Public Employees Retirement System	Bismarck City Employee Pension Plan	Bismarck City Police Pension Plan	City of Fargo Employee Pension Plan	City of Grand Forks Employee Pension Plan	City of Grand Forks Park District Employee Pension Plan	Workforce Safety & Insurance	State Fire & Tornado	State Bonding	Petroleum Tank Release Comp. Fund	Insurance Regulatory Trust Fund	Cultural Endowment Fund
Additions:												
Investment income:												
Net change in fair value of investments	\$ (39,399,793)	\$ (962,485)	\$ (604,855)	\$ -	\$ (1,154,709)	\$ (86,854)	\$ 22,777,732	\$ 150,447	\$ 68,582	\$ 133,864	\$ (14,307)	\$ 59
Interest, dividends and other income	58,071,997	1,944,554	821,724	41,431	1,271,401	120,995	46,504,149	567,145	51,284	108,926	26,821	9,737
	18,672,204	982,069	216,869	41,431	116,692	34,141	69,281,881	717,592	119,866	242,790	12,514	9,796
Less investment expenses	6,981,023	240,726	101,614	242	158,797	13,850	4,461,210	43,877	2,589	5,204	1,759	960
Net investment income	11,691,181	741,343	115,255	41,189	(42,105)	20,291	64,820,671	673,715	117,277	237,586	10,755	8,836
Securities lending activity:												
Securities lending income	358,681	11,452	4,809	-	8,076	805	213,849	3,631	85	170	160	76
Less Securities lending expenses	(71,724)	(2,291)	(961)	-	(1,615)	(160)	(42,729)	(725)	(17)	(34)	(33)	(15)
Net securities lending income	286,957	9,161	3,848	-	6,461	645	171,120	2,906	68	136	127	61
Purchase of units (\$ 1 per unit)	29,500,000	-	-	-	4,057,319	286,925	28,000,000	-	-	-	-	-
Total Additions	41,478,138	750,504	119,103	41,189	4,021,675	307,861	92,991,791	676,621	117,345	237,722	10,882	8,897
Deductions:												
Administrative Expenses	333,608	-	-	-	-	-	220,265	2,936	1,025	1,055	1,009	565
Redemption of units (\$ 1 per unit)	2,800,000	-	2,000,000	42,648	5,245,008	619,394	23,000,000	-	-	250,000	1,560,000	5,000
Total Deductions	3,133,608	-	2,000,000	42,648	5,245,008	619,394	23,220,265	2,936	1,025	251,055	1,561,009	5,565
Change in net position	38,344,530	750,504	(1,880,897)	(1,459)	(1,223,333)	(311,533)	69,771,526	673,685	116,320	(13,333)	(1,550,127)	3,332
Net position:												
Beginning of year	2,418,931,000	816,19,071	35,834,028	1,459	59,147,291	6,027,469	1,761,372,600	23,400,586	3,180,146	7,161,986	2,635,975	383,024
Restatement due to implementation of GASB 68	-	-	-	-	-	-	-	-	-	-	-	-
Beginning of year, as restated	2,418,931,000	816,19,071	35,834,028	1,459	59,147,291	6,027,469	1,761,372,600	23,400,586	3,180,146	7,161,986	2,635,975	383,024
End of year	\$ 2,457,275,530	\$ 82,369,575	\$ 33,953,131	\$ -	\$ 57,923,958	\$ 5,715,936	\$ 1,831,144,126	\$ 24,074,271	\$ 3,296,466	\$ 7,148,653	\$ 1,085,848	\$ 386,356

North Dakota Retirement and Investment Office
Combining Statement of Changes in Net Position – Investment Trust Funds – Fiduciary Funds
Year Ended June 30, 2016 (with Comparative Totals for 2015)

Insurance Pool Participants												Individual Investment Accounts			Totals	
Risk Mgmt	Risk Mgmt	ND Ass'n of Counties Fund	PERS Group Insurance	Budget Stabilization Fund	City of Bismarck Deferred Sick Leave	City of Fargo Fargo Dome Fund	State Board of Medicine	Legacy Fund	Job Service of North Dakota	Tobacco Prevention and Control Fund	PERS Retiree Health Credit Fund	2016	2015			
\$ 142,283	\$ 110,474	\$ 32,045	\$ 208,951	\$ (2,598,566)	\$ 4,725	\$ (402,921)	\$ (13,650)	\$ (31,454,851)	\$ 2,352,098	\$ 840,505	\$ (1,185,174)	\$ (5,105,640)	\$ 115,453,148			
154,478	142,278	90,580	389,887	14,079,730	17,577	970,497	53,273	86,798,282	2,650,945	8,255	2,271,408	217,167,354	173,270,874			
296,761	252,752	122,625	598,838	11,481,164	22,302	567,576	39,623	55,343,431	5,003,043	848,760	1,086,234	166,110,954	288,724,022			
10,962	10,678	7,974	42,532	734,828	2,153	97,132	5,270	9,728,057	166,226	20,328	292,820	23,130,811	21,929,066			
285,799	242,074	114,651	556,306	10,746,336	20,149	470,444	34,353	45,615,374	4,836,817	828,432	793,414	142,980,143	266,794,956			
751	796	558	230	12,354	94	8,671	216	835,193	4,395	-	-	1,465,052	-			
(151)	(160)	(113)	(45)	(2,469)	(19)	(1,732)	(44)	(166,936)	(879)	-	-	(292,852)	-			
600	636	445	185	9,885	75	6,939	172	668,257	3,516	-	-	1,172,200	-			
-	-	100,000	203,692,122	-	-	-	-	434,853,950	-	58,780,889	3,905,000	763,176,205	1,239,909,653			
286,399	242,710	215,096	204,248,613	10,756,221	20,224	477,383	34,525	481,137,581	4,840,333	59,609,321	4,698,414	907,328,548	1,506,704,609			
1,048	1,046	-	-	71,562	-	-	-	431,951	-	-	-	1,066,070	939,798			
600,000	950,000	-	206,200,000	8,606,169	250,000	2,700,000	-	-	4,582,835	5,250,000	750,000	265,411,054	249,087,335			
601,048	951,046	-	206,200,000	8,677,731	250,000	2,700,000	-	431,951	4,582,835	5,250,000	750,000	266,477,124	250,027,133			
(314,649)	(708,336)	215,096	(1,951,387)	2,078,490	(229,776)	(2,222,617)	34,525	480,705,630	257,498	54,359,321	3,948,414	640,851,424	1,256,677,476			
6,845,712	6,221,021	3,831,089	39,652,179	573,636,701	871,405	40,968,808	2,172,692	3,325,835,711	96,270,523	-	97,598,008	8,593,598,484	7,337,180,888			
-	-	-	-	-	-	-	-	-	-	-	-	-	(259,880)			
6,845,712	6,221,021	3,831,089	39,652,179	573,636,701	871,405	40,968,808	2,172,692	3,325,835,711	96,270,523	-	97,598,008	8,593,598,484	7,336,921,008			
\$ 6,531,063	\$ 5,512,685	\$ 4,046,185	\$ 37,700,792	\$ 575,715,191	\$ 641,629	\$ 38,746,191	\$ 2,207,217	\$ 3,806,541,341	\$ 96,528,021	\$ 54,359,321	\$ 101,546,422	\$ 9,234,449,908	\$ 8,593,598,484			

North Dakota Retirement and Investment Office
Pension and Investment Trust Funds – Schedule of Administrative Expenses
Year Ended June 30, 2016

	Pension Trust	Investment Trust
Salaries and wages:		
Salaries and wages	\$ 759,748	\$ 766,619
Fringe benefits	318,254	250,520
Total salaries and wages	1,078,002	1,017,139
Operating expenses:		
Travel	28,153	37,121
Supplies	2,746	1,083
Postage and Mailing Services	53,804	31,194
Printing	15,057	6,743
Small Office Equipment and Furniture	2,655	1,557
Insurance	401	230
Rent/Lease of Building Space	50,841	31,045
Repairs	-	12
Information Technology and Communications	71,447	16,231
IT Contractual Services	17,575	61,061
Professional Development	16,052	7,477
Operating Fees and Services	16,535	7,115
Professional Fees and Services	10,242	13,019
Consultant Services	270,302	52,887
Total operating expenses	555,810	266,775
Pension trust portion of investment program expenses	217,844	(217,844)
Total administrative expenses	1,851,656	1,066,070
Less - nonappropriated items:		
Consultant Services	270,302	52,887
Other operating fees paid under continuing appropriation	37,530	121,645
Accrual adjustments to employee benefits	22,352	13,046
Total nonappropriated items	330,184	187,578
Total appropriated expenditures	\$ 1,521,472	\$ 878,492

The accompanying notes are an integral part of these statements.

North Dakota Retirement and Investment Office
Pension and Investment Trust Funds – Schedule of Consultant Expenses
Year Ended June 30, 2016

	Pension Trust	Investment Trust
Actuary fees:		
Segal Company	\$ 144,633	\$ -
Auditing/Accounting fees:		
CliftonLarsonAllen LLP	104,507	27,993
Disability consulting fees:		
Sanford Health	300	-
Legal fees:		
K&L Gates LLP	2,598	3,401
ND Attorney General	18,264	21,493
Total legal fees:	20,862	24,894
Total consultant expenses	\$ 270,302	\$ 52,887

North Dakota Retirement and Investment Office
Pension and Investment Trust Funds – Schedule of Investment Expenses
Year Ended June 30, 2016

	<u>Pension Trust</u>	<u>Investment Trust</u>
Investment managers' fees:		
Global equity managers	\$ 1,230,533	\$ 1,594,767
Domestic large cap equity managers	903,523	3,847,413
Domestic small cap equity managers	563,542	2,268,783
International equity managers	977,198	4,609,027
Emerging markets equity managers	529,699	770,162
Domestic fixed income managers	1,005,950	7,607,743
Below investment grade fixed income managers	1,082,779	1,462,837
Diversified Real Assets	-	3,001,349
International fixed income managers	376,723	457,845
Real estate managers	2,053,698	4,873,012
Infrastructure managers	1,027,901	1,241,458
Timber managers	(956,302)	(1,130,962)
Private equity managers	1,399,707	1,639,900
Short term fixed income managers	-	719,134
Cash & equivalents managers	23,185	149,960
Balanced account managers	-	642,747
Total investment managers' fees	<u>\$ 10,218,136</u>	<u>\$ 33,755,175</u>
Custodian fees	197,310	831,889
Investment consultant fees	204,752	475,338
SIB Service Fees	-	60,211
Total investment expenses	<u><u>\$ 10,620,198</u></u>	<u><u>\$ 35,122,613</u></u>

Reconciliation of investment expenses to financial statements

Investment expenses as reflected in the financial statement: \$ 6,034,689 \$ 23,130,811

Plus investment management fees included in investment income

Domestic large cap equity managers	354,231	872,120
Domestic small cap equity managers	207,192	267,457
International equity managers	216,778	1,121,711
Emerging markets equity managers	529,699	770,162
Domestic fixed income managers	727,899	4,282,647
Below investment grade fixed income managers	660,499	901,054
Inflation protected assets managers	-	1,093,122
Real estate managers	999,958	1,245,203
Infrastructure managers	453,976	548,295
Timber managers	(956,302)	(1,130,962)
Private equity managers	1,391,579	1,630,377
Cash equivalents managers	-	113,080
Balanced account managers	-	277,536
Investment expenses per schedule	<u><u>\$ 10,620,198</u></u>	<u><u>\$ 35,122,613</u></u>

Timber manager fees include a refund of incentive-based fees from prior years that were renegotiated in FY2016.

North Dakota Retirement and Investment Office
 Schedule of Appropriations – Budget Basis – Fiduciary Funds
 July 1, 2015 to June 30, 2017 Biennium

	Approved 2015-2017 Appropriation	2015-2017 Appropriation Adjustment	Adjusted 2015-2017 Appropriation	Fiscal 2016 Expenses	Unexpended Appropriations
All Fund Types:					
Salaries and wages	\$ 4,340,551	\$ 2,250	\$ 4,342,801	\$ 2,059,743	\$ 2,283,058
Operating expenses	990,874	-	990,874	340,221	650,653
Contingency	82,000	-	82,000	-	82,000
Total	<u>\$ 5,413,425</u>	<u>\$ 2,250</u>	<u>\$ 5,415,675</u>	<u>\$ 2,399,964</u>	<u>\$ 3,015,711</u>

NOTE: Only those expenses for which there are appropriations are included in this statement.

Reconciliation of Administrative Expenses
to Appropriated Expenditures

	<u>2016</u>
Administrative expenses as reflected in the financial statements	\$ 2,917,726
Less:	
Professional fees*	(323,189)
Other operating fees paid under continuing appropriations*	(159,175)
Changes in benefit accrual amounts	<u>(35,398)</u>
Total appropriated expenses	<u>\$2,399,964</u>

* North Dakota Century Code 21-10-06.2 and 15-39.1-05.2 provide authorization for the continuing appropriation.

**Special Comments Requested by the Legislative Audit
and Fiscal Review Committee
Year Ended June 30, 2016**

The Legislative Audit and Fiscal Review Committee requires that certain items be addressed by auditors performing audits of state agencies. These items and our responses are as follows:

Audit Report Communications

1. What type of opinion was issued on the financial statements?

Unmodified

2. Was there compliance with statutes, laws, rules, regulations under which the agency was created and is functioning?

Yes

3. Was internal control adequate and functioning effectively?

Yes

4. Were there any indications of lack of efficiency in financial operations and management of the agency?

No

5. Has action been taken on findings and recommendations included in prior year reports?

There were no prior year findings or recommendations.

6. Was a management letter issued? If so, provide a summary below, including any recommendations and the management response.

No

Audit Committee Communications

1. Identify any significant changes in accounting policies, any management conflicts of interest, any contingent liabilities, or any significant unusual transactions.

For the year ended June 30, 2016, the financial statements include the impact of adoption of Governmental Accounting Standards Board (GASB) Statement number 72.

GASB 72, *Fair Value Measurement and Application*, is effective for fiscal years beginning after June 15, 2015. This statement addresses accounting and financial reporting requirements related to fair value measurements. GASB 72 requires measurement of certain assets and liabilities at fair value using a consistent and detailed definition of fair value and accepted valuation techniques. It also enhances disclosures about fair value measurements, the level of fair value hierarchy, and valuation techniques. Additional disclosures are also required for investments in certain entities that calculate net asset value per share (or its equivalent).

2. Identify any significant accounting estimates, the process used by management to formulate the accounting estimates, and the basis for the auditor's conclusions regarding the reasonableness of those estimates.

The valuation of alternative investments, including private equity and real asset investments, are a management estimate which is primarily based upon net asset values reported by the investment managers and comprise 18% of the total investment portfolio. The values for these investments are reported based upon the most recent financial data available and are adjusted for cash flows through June 30, 2016. Our audit procedures validated this approach through the use of confirmations sent directly to a sample of investment managers and the review of the most recent audited financial statements for these funds. Furthermore, we reviewed management's estimate and found it to be reasonable.

The actuarial valuation was based on the actuarial assumptions and methods adopted by the Board, including an actuarial expected investment rate of return of 7.75% per annum compounded annually. The valuation takes into account all of the promised benefits to which members are entitled as of July 1, 2016 as required by the North Dakota Century Code. The valuation provides certain information required by GASB to be disclosed in the financial statements. Additionally, the valuation is used to determine the adequacy of the current employer contribution rate. Our audit procedures included reviewing the actuarial valuation and related assumptions used therein and we believe the estimate to be reasonable.

3. Identify any significant audit adjustments.

None

4. Identify any disagreements with management, whether or not resolved to the auditor's satisfaction, relating to financial accounting, reporting, or auditing matters that could be significant to the financial statements.

None

5. Identify any significant difficulties encountered in performing the audit.

None

6. Identify any major issues discussed with management prior to retention.

None

7. Identify any management consultations with other accounts about auditing and accounting matters.

None

8. Identify any high-risk information technology systems critical to operations based on the auditor's overall assessment of the importance of the system to the agency and its mission or whether any exceptions identified in the six audit report questions addressed above are directly related to the operations of an information technology system.

Based on the audit procedures performed, the Retirement and Investment Office's critical information technology system is the CPAS system. There were no exceptions identified that were directly related to this application.

This report is intended solely for the information and use of the audit committee, management, the Legislative Audit and Fiscal Review Committee, and other state officials, and is not intended to be and should not be used by anyone other than these specified parties.

CliftonLarsonAllen LLP

Baltimore, Maryland
November 7, 2016

**ND STATE INVESTMENT BOARD
AUDIT COMMITTEE MEETING**

Thursday November 17, 2016 – 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 September 23, 2016 Minutes – Chair (committee action)(5 minutes)
3. Presentation of June 30, 2016 Financial Audit Report of RIO + Update on GASB 68 Schedule Audit – CliftonLarsonAllen, LLP (to follow)(committee action)(60 minutes)
4. 2016 – 2017 First Quarter Audit Activities Report – Terra Miller Bowley (committee action)(20 minutes)
5. Other – Next SIB Audit Committee Meeting

Workforce Safety & Insurance (WSI)
Thursday February 23, 2017 @ 3:00 PM
1600 E Century Ave, Bismarck, ND 58503

6. 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
SEPTEMBER 23, 2016, MEETING**

COMMITTEE MEMBERS PRESENT: Rebecca Dorwart, Chair
Mike Gessner, TFFR Board
Mike Sandal, PERS Board
Cindy Ternes, Workforce Safety & Insurance
Josh Wiens, External Representative

STAFF PRESENT: Bonnie Heit, Assist to the Audit Committee
David Hunter, ED/CIO
Fay Kopp, Dep ED/CRO
Terra Miller Bowley, Suprv Audit Services
Cody Schmidt, Compliance Officer
Dottie Thorsen, Internal Auditor

CALL TO ORDER:

Ms. Dorwart called the State Investment Board (SIB) Audit Committee meeting to order at 12:52 p.m., on Friday, September 23, 2016, at the State Capitol, Peace Garden Room, Bismarck, ND.

A quorum was present for the purpose of conducting business.

The Committee welcomed Mr. Josh Wiens. Mr. Wiens will serve as an independent participant on the Committee. Mr. Wiens is a CPA who currently serves as Chief Financial Officer for Shiloh Christian School and McDonalds of Bismarck/Mandan.

AGENDA:

IT WAS MOVED BY MR. SANDAL AND SECONDED BY MS. TERNES AND CARRIED ON A VOICE VOTE TO APPROVE THE AGENDA FOR THE SEPTEMBER 23, 2016, MEETING AS DISTRIBUTED.

**AYES: MR. SANDAL, MS. TERNES, MR. WIENS, MR. GESSNER, AND MS. DORWART
NAYS: NONE
MOTION CARRIED**

MINUTES:

IT WAS MOVED BY MS. TERNES AND SECONDED BY MR. GESSNER AND CARRIED ON A VOICE VOTE TO ACCEPT THE MAY 19, 2016, MINUTES AS DISTRIBUTED.

**AYES: MR. GESSNER, MR. SANDAL, MS. TERNES, MR. WIENS, AND MS. DORWART
NAYS: NONE
MOTION CARRIED**

ELECTION OF OFFICERS:

IT WAS MOVED BY MR. SANDAL AND SECONDED BY MS. TERNES AND CARRIED BY A ROLL CALL VOTE TO CONTINUE WITH THE CURRENT SLATE OF OFFICERS: MS. DORWART, CHAIR, MR. GESSNER, VICE CHAIR/LIAISON, FOR THE PERIOD OF JULY 1, 2016 - JUNE 30, 2017.

AYES: MS. TERNES, MR. WIENS, MR. SANDAL, MR. GESSNER, AND MS. DORWART

NAYS: NONE

MOTION CARRIED

CODE OF CONDUCT:

Mr. Schmidt reviewed the SIB Board Members' Code of Conduct Policy B-8, which details the code of ethical responsibility applicable to members of the SIB. The SIB is required to affirm their understanding of the policy on an annual basis. As a standing committee of the SIB, the SIB Audit Committee is required to adhere to any applicable policies contained within the SIB Governance Manual. Committee members were advised to affirm their understanding of the policy by signing and returning the acknowledgment to Mr. Schmidt.

AUDIT REPORT - YEAR END:

Ms. Miller Bowley reviewed activities of the Audit Division for the period of July 1, 2015 - June 30, 2016.

A total of 22 employer audits were completed (21 Compliance and 1 Not in Compliance). Nine employer audits were in progress at fiscal year-end, which included two employers from the third audit cycle and seven from the fourth audit cycle. Seven audits in the fourth audit cycle were pending along with audit information from three employers who had been notified of an upcoming audit. A total of 25 employers received audit notifications.

The Audit Division completed the following audits - Benefits Payments Audit, Teachers' Fund for Retirement (TFFR) File Maintenance Audit, Annual Salary Verification Project, and Executive Limitation Audit.

The Audit Division was not able to complete work on the following audits - Regional Education Association Audits, Investment Performance Summary Review, Schedule of Investment Fees Review, and Investment Management Fees Review. The hours allocated to these audits were reallocated to other audit activities that were of higher importance.

Ms. Miller Bowley stated the TFFR Cost Effective Benefit Payments/Benefit Recalculation 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 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. Ms. Miller Bowley stated the internship program went very well and would definitely recommend future programs.

The Audit Division continues to make progress on their procedures manual.

Staff also attends local Institute of Internal Audit (IIA) meetings as well as regional conferences and other misc. seminars and webinars. Ms. Miller Bowley is pursuing a Certified Internal Auditor designation.

IT WAS MOVED BY MR. GESSNER AND SECONDED BY MR. WIENS TO APPROVE THE 2015-16 AUDIT ACTIVITIES REPORT.

AYES: MR. SANDAL, MS. TERNES, MR. WIENS, MR. GESSNER, AND MS. DORWART

NAYS: NONE

MOTION CARRIED

AUDIT REPORT - SIB:

Ms. Miller Bowley reviewed the annual report to the SIB, which will be on their October 28, 2016, agenda. The Committee requested language be added to the report regarding the process taken when employers are not in compliance.

IT WAS MOVED BY MR. SANDAL AND SECONDED BY MR. GESSNER AND CARRIED BY A VOICE VOTE TO APPROVE THE ANNUAL REPORT TO THE SIB.

AYES: MR. GESSNER, MR. WIENS, MR. SANDAL, MS. TERNES, AND MS. DORWART

NAYS: NONE

MOTION CARRIED

AUDIT REPORT - FIRST QUARTER:

Ms. Miller Bowley reviewed Audit Services activities from July 1 - August 26, 2016. Five employer audits had been completed, nine were in progress, five were pending and not yet started, and one special audit on Parshall was in progress. RIO personnel had concerns regarding the accuracy of reporting from Parshall following the completion of an employer audit in June 2016 and year-end closing activities. The audit will conclude as soon as possible in an effort to correct current and future reporting errors.

As of September 23, 2016, an additional five employer audits had been completed. The Audit Division is in the process of completing third cycle audits of Ft. Totten and White Shield Public School Districts.

Ms. Miller Bowley also indicated staff will be conducting a 100 percent audit on Ft. Yates Public School for the 2013-14, 2014-15 and 2015-16 school years. Ft. Yates was able to close the 2015-16 school year but because of reporting discrepancies, items remain outstanding. There are 35 employees and Audit Services estimates it will take a full year to complete the audit.

Discussion took place on verification of retirement salaries.

Ms. Miller Bowley stated Williston, Minnewaukan, and McClusky will receive audit notifications next week as the Employers' status has been Not In Compliance for some time.

Discussion took place on the support and education available to the Employers and in particular to the Business Managers.

The Benefits Payment Audit for 2015-16 was completed on August 26, 2016. No findings were noted but two recommendations for future actions were provided.

The TFFR Cost Effective Benefit Payments/Benefit Recalculation Audit is underway and will be completed in fiscal year 2017.

The SIB customer satisfaction survey was facilitated in July 2016 and the results will be provided to the SIB at their October 28, 2016, meeting.

Audit Services is providing support to CliftonLarsonAllen for the 2016 financial audit of RIO. Audit Services notified 17 employers of upcoming GASB 68 Census Data audits in August 2016. The GASB 68 Census Data audits are currently underway and requests for supporting documentation have been sent to selected employers.

The internship program concluded on August 19, 2016. Primarily the Supervisor of Audit Services along with the Retirement Program Manager gave support and assistance to the intern.

Ms. Miller Bowley has also been assisting RIO personnel and the TFFR Board with special projects, e.g. the retiree substitute teaching issue.

Ms. Miller Bowley completed the requirement for a Certified Internal Auditor (CIA) designation in July 2016.

The Audit Committee congratulated Ms. Miller Bowley on her designation and the progress made by both members of the Audit Division.

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 1:50 p.m.

Respectfully Submitted:

Ms. Rebecca Dorwart, Chair
SIB Audit Committee

Bonnie Heit
Assistant to the Audit Committee

BOARD APPROVAL REQUESTED

TO: State Investment Board
FROM: Dave Hunter
DATE: November 10, 2016
SUBJECT: Governance Policy Amendment (Section B-10) [Second Reading](#)

In accordance with Section B-7 of the SIB Governance Manual, the Board Planning Cycle should include an “Annual Review of the Governance Manual” each September. The SIB conducted this review over the last two months. A subsequent review of **Section B-10 “Policy Introduction / Amendment Passage”**, however, identified some ambiguity which could be eliminated by adopting clarifying language. The SIB completed a “First Reading” of the proposed revision to Section B-10 on October 28th.

RIO requests the SIB to approve the modified language (shown on the next page) at the November 18th meeting.

Policy Type: Governance Process

Policy Type: Policy Introduction / Amendment Passage

New policies or policy amendments may be proposed by the Executive Director or a Board member. All new policies or amendments may be submitted to the Board's Legal Counsel for drafting in the approved style.

Upon request of the Executive Director or a Board member a new policy or amendment shall be placed on the Board's agenda for action as follows:

1. Introduction and first reading. A brief explanation or summary of the new policy or amendment shall be presented to the Board. Upon approval of introduction and first reading, the measure shall be placed on the agenda of the next scheduled meeting of the Board for second reading and adoption. When appropriate, the measure shall be distributed to interested parties.
2. *Second reading and adoption. Interested parties and the public shall be allowed an opportunity to comment on the policy or amendment before final action by the Board. The measure shall take effect immediately following second reading and adoption by the Board, unless a different effective date is stated.*
3. Amendments. Amendments may be proposed at any time before final adoption of the measure. Upon determination by the Board that adoption of an amendment constitutes a substantive change that significantly changes the meaning or effect of the measure, the Board shall continue consideration of second reading and adoption to the next meeting to permit further review and comment.

Emergency measures. The Board may, upon determination that an emergency or other circumstances calling for expeditious action exists, waive the requirement of a second ~~meeting reading~~ and immediately approve ~~second reading and adoption~~ ~~the new policy or amendment~~ following introduction and first reading.

Policy Implemented: February 27, 2009

Policy Revised: November 18, 2016



The AMBACHTSHEER Letter

Sustainable Pension Design • Effective Pension Management

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November 2016

NDRIO

DESIGNING AND DELIVERING EFFECTIVE WORKPLACE PENSION PLANS:

WHAT THE FINANCIAL SERVICES INDUSTRY COULD, AND SHOULD BE DOING

"A study by the U.S. Government Accountability Office (GAO) showed that most DC pension plans do not offer products and services that could help participants turn their savings into a retirement income stream."

PLANSPONSOR Magazine
September 9, 2016

Three Pension Design Problems

It is a great privilege to tour the world talking about the three messages in my new book THE FUTURE OF PENSION MANAGEMENT:

1. Pension design matters
2. Pension governance matters
3. Pension investing matters

A fourth message is that we must get better at integrating these three messages into a holistic view of what an effective retirement income system should aspire to, and what needs to be done for it to achieve its intended purpose.

A good place to start the 'pension design matters' conversation is with the World Bank's 3-pillar model for national retirement income systems:

1. Pillar 1: a universal base pension for all citizens funded through the tax system.
2. Pillar 2: a web of workplace-based pension plans pre-funded through dedicated contribution streams and retirement savings pools.
3. Pillar 3: a collection of mechanisms that permit individuals to accumulate retirement savings on their own.

This structure is useful for asking what is working in retirement income systems around the world, and what is not. The book's three headline assertions are:

1. Pillar 3 retirement savings mechanisms are generally dysfunctional, with the financial services industry providing savers too little value at too high a cost. A public policy implication is to make Pillar 3 as small as possible, with the bulk of retirement income provision generated by Pillars 1 and 2. Another public policy implication is to require financial advisors to act as fiduciaries and to be actually qualified to provide financial advice.
2. Traditional Pillar 2 DB and DC plan designs have the design fault of trying to accomplish two goals with one instrument. In the case of DB plans, that means forcing all plan participants, regardless of age, to adopt the same benefit accumulation formula, the same contribution rate, and the same amount of balance sheet mismatch risk. However, who actually bears that risk is often not clear.

In the case of DC plans, it typically means placing participants in an investment choice overload situation, and not providing them with an efficient 'backend' conversion mechanism to a lifetime income stream.

3. Critical Pillar 1 success requirements are system transparency and sustainability. People should understand the base pension they are entitled to and successive generations of citizens should have confidence it will be there for them when they retire. The big Pillar 1 design challenges involve the retirement age question, and whether (and how) to subject benefits to income/wealth testing.

The focus of this *Letter* is the role the commercial financial services industry could/should be playing in raising the effectiveness of the Pillar 2 and 3 components of retirement income systems around the world.

Pillar 3 Problems and Solutions

Our May 2016 *Letter* ("Workers and Efficient Retirement Savings: Why 'Fiduciary Rules' Are Not Enough") cited new research which confirmed once again that, on average, people who save for retirement through Pillar 3 arrangements achieve poor investment returns. Specifically, their retirement savings returns underperform comparable market index returns by an average 3%/yr. Why? For two reasons: 1. The implementation costs are too high (too many people are paid too much in the implementation chain), and 2. The portfolio performance of the average 'financial advisor' in the implementation chain is worse than that of their clients. The implication is that the average 'financial advisor' is not qualified to be a financial advisor.ⁱ

Given that the fate of \$multi-billions of retirement savings are at stake, the current situation should surely rank as an urgent public policy issue requiring a timely solution. These solutions are taking two forms around the world:

1. Introduce formal 'fiduciary rules' to guide the conduct of financial advisors (two obvious examples: (a) prohibit advisors from benefitting financially from their advice, and (b) raise the professional certification standards for advisors). Some countries are well along in establishing these rules (e.g., Australia and the UK), while others are moving in that direction (e.g., USA and Canada).
2. Require that employers offer a qualifying workplace pension plan. The logic is simple: collective investment programs managed by Pillar 2 fiduciary pension organizations should produce materially better long-term investment results than retirement savings being 'managed' in a high-cost, asymmetric information, Pillar 3 environment. Research from the CEM Benchmarking Inc. databases confirm this logic: the average pension fund in the CEM database marginally outperforms comparable market index returns net of costs, in sharp contrast to the material average -3%/yr. underperformance experience in Pillar 3 retail mutual funds.ⁱⁱ This 'must offer' rule has already been in place for quite some time in countries like Denmark, Netherlands, Australia, Finland, Sweden and Switzerland. Not surprisingly, these countries rank #1 to #6 in quality out of a total of 27 countries in the Melbourne-Mercer Global Pension Index. This confirms the logic of the 'must offer' rule as a powerful lever in raising pension delivery quality and cost-effectiveness.

Given that the financial services industry generates material revenues from today's Pillar 3 arrangements around the world, what should its stance be on Pillar 3's current state of dysfunction and the two proposed solutions to it?

It seems to me that depends very much on the time frame used to address the question. A 'short-termism' mindset would lead to obstructing/delaying progress along the two solution tracks as long as possible (i.e., "it will hurt our short-term profitability"). Taking a longer view would lead financial services firms to ask how they could become part of the solution rather than the problem (e.g., "offering quality services is our best route to long-term success").

Clearly, some firms are taking this second 'longer view' route:

1. Supporting the 'Fiduciary Rules' track: The number of lower-cost solutions to both financial advice (e.g., robo-advisors) and investing (e.g., ETFs) is on the rise. At the same time, progressive financial services firms are recognizing it is in their long-term financial interest that the quality of financial advice must be raised above the current generally low levels. As a consequence, they will increasingly associate themselves only with advisors with widely-recognized advice (e.g., CFP/certified/chartered financial planner) and investment (e.g., CFA/chartered financial analyst) designations.
2. Supporting the 'Qualifying Workplace Pension Plan' track: many commercial financial services organizations have all the tools needed to create a functional 21st Century workplace pension plan. Its key features were set out in the cited May 2016 *Letter*, and are reproduced below. Pension plans and organizations with these key features exist in the fiduciary/not-for-profit space. Is it inconceivable that these features could also be offered through a commercial financial services organization? Based on a number of conversations, there are definitely people who think it is indeed inconceivable. The question is: are they right? Or are these people just incapable of thinking outside their corporate boxes?

Enough on Pillar 3 problems and solutions. Let's have a look at Pillar 2 next.

Pillar 2 Problems and Solutions

The passage of time has taught us a lot about current problems with the design and management of workplace pension plans. The six key features of an effective 21st Century workplace pension plan and organization were described in the cited May 2016 *Letter* as:

- Clear fiduciary mission and arms-length legal platform
- Plan design recognizes the dimensions of ambition, safety, and simplicity
- Competent, high-trust governance
- Sensible investment beliefs
- Right-scaled for cost effectiveness, ability to attract and retain requisite executive/professional talent, and create incentives based on 'value-for-money' outcomes
- Strong stakeholder communication/relations function

If this is the ideal, where are the gaps between it and actual workplace pension plan and management realities today? Some observations in the same 'key features' order set out above:

- Mission: workplace pension plans and how they are managed can be hi-jacked by their sponsoring organization(s) and serve goals other than the cost-effective delivery of retirement income.
- Plan Design: balancing ambition and safety in DB and DC plans can be materially simplified by moving to the Tinbergen 2 goals-2 instruments model with the appropriate decision default/choice mix.ⁱⁱⁱ One instrument offers long-term return compounding, the other payment safety. Very few plan designs currently embody these realities.
- Governance: competent, high-trust governance is critical to the success of any organization. This reality is still too often ignored in the pensions space.
- Investment Beliefs: must be based on long-term financial realities and the research findings of behavioral economics rather than either folklore or doctrinaire investment theory. This will require a complete overhaul of the investment function in many organizations.
- Cost-Effective Service Delivery: scale matters in pension investing and benefit administration. Insufficient scale leads to possibly material agency and outsourcing costs.
- Stakeholder Communications: focus on who the real stakeholders are, and on what they need to know and when.

Finally, given this commentary on the current challenges in the design and delivery of workplace pension plans, what are the comparative disadvantages/advantages of commercial financial services organizations in this space?

- Possible Disadvantages: inability to think 'outside-the-box', lack of trust by clients to do the right thing, dysfunctional investment beliefs
- Possible Advantages: good governance, sensible investment beliefs, scale economies and cost-effective, quality service delivery

I see a material 'first mover' advantage for the right commercial financial services organization that can lever the listed advantages and neutralize the disadvantages.

Three Key Elements of a 'First Mover' Strategic Plan

Let's assume the right commercial financial services organization exists, and that it sees the benefits of exploiting 'first mover' advantage. What should be the key elements in its strategic plan? Three come to mind:

1. Scope out the size of the market place: it is potentially very large, consisting of all but the largest corporate employers in the developed (and even developing) world. Most of these corporate employers would love to have access to a well-designed, measurably cost-effective workplace pension plan managed by a reputable financial institution willing to act as the named fiduciary on their behalf. The market could even expand to include non-corporate employers and unions without the scale to in-source the key investment and benefit administration functions.
2. Design the plan: see the list of the six desirable features above. Key elements for the organization's new Integrated Workplace Pension Plan (IWPP) will include: (a) a credible governance function, (b) separate long-term return compounding and payment safety-for-life investment instruments, (c) a life-cycle-based participant default path for contribution rates and exposures to the return compounding and payment-safety instruments, and (d) an independently measured 'value-for-money' feedback loop for the investment and benefit administration functions. A practical requirement will be ensure the IWPP meets the requisite local legal and regulatory requirements.
3. Start with the low-hanging fruit: the right commercial financial services organization will already have an existing clientele for its current record-keeping and investment management services. Among this existing clientele will be the organization's likely 'first movers' to the new Integrated Workplace Pension Plan offering.

Is there a 'first mover' financial services organization out there somewhere?

Keith Ambachtsheer

Endnotes:

- i. See Linnainmaa, Melzer, and Previtera (2015), "Costly Financial Advice: Conflicts of Interest, or Misguided Investment Beliefs?", Working Paper, and Bogle (2014), "The Arithmetic of 'All In' Investment Expenses", *Financial Analysts Journal*, Jan-Feb.
- ii. See Beath (2015), "Value-Added by Large Institutional Investors Between 1992-2013", CEM Benchmarking Inc. website.
- iii. This topic receives a lot of attention in my book *THE FUTURE OF PENSION MANAGEMENT*, and in the recent February and June Letters.

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