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Los Angeles City Employees' Retirement Systems

Portfolio Performance Review Quarter Ending September 30, 2017

November 28, 2017

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Market Outlook



Q3 Market Summary

Macro			Equity			Credit			Real Assets		
US Dollar	VIX	US 10-Yr	S&P 500	MSCI EAFE	MSCI EM	US Agg.	High Yield	Dollar EMD	Oil	Gold	REITS
											
-2.7%	-1.7	3 bps	4.5%	5.4%	7.9%	0.8%	2.0%	2.4%	12.2%	3.1%	1.3%

- **Equities continued to push higher with supportive macroeconomic data, robust earnings, and accommodative central banks**
 - Emerging markets continued their outperformance led by strong returns in China
- **Bond yields were little changed over the quarter – reflecting minimal volatility seen in US economic growth and inflation rates**
- **Reflecting the pro-risk environment, the US dollar declined relative to both the euro and yuan while volatility remained near historic lows**

Market segment (index representation) as follows: US Dollar (DXY Index), VIX (CBOE Volatility Index), US 10-Year (US 10-Year Treasury Yield), S&P 500 (US Equity), MSCI EAFE Index (International Developed Equity), MSCI Emerging Markets (Emerging Markets Equity), US Agg (Barclays US Aggregate Bond Index), High Yield (Barclays US High Yield Index), Dollar EMD (JPM Emerging Market Bond Index), Crude Oil (WTI Crude Oil Spot), Gold (Gold Price Spot), and REITs (NAREIT Composite Index).

Macro Performance Overview

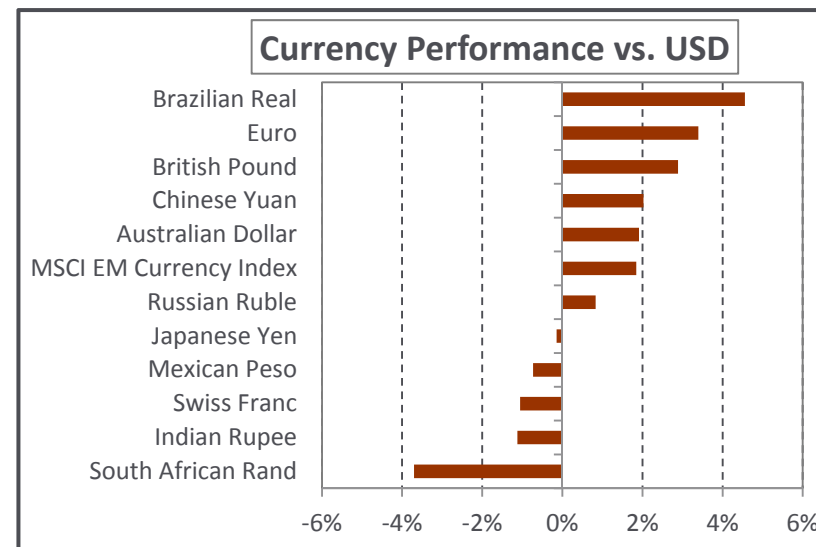
Q3 Macro Market Summary

- **US, Europe, Japan, and China continue to grow modestly in a synchronized economic expansion**
- **Long-term US interest rates were largely unchanged and reflect the low volatility of inflation**
- **The US Treasury curve flattened slightly as the 2 year rate rose**

	Yield 6/30/17	Yield 9/30/17	Δ
US 10-Yr	2.30%	2.33%	+0.03%
US 30-Yr	2.84%	2.86%	+0.02%
US Real 10-Yr	0.58%	0.49%	-0.09%
German 10-Yr	0.47%	0.46%	-0.01%
Japan 10-Yr	0.08%	0.06%	-0.02%
China 10-Yr	3.56%	3.62%	+0.06%
EM Local Debt	6.15%	5.99%	-0.16%

Source: Bloomberg

Central Banks	Current Rate	CPI YOY	Notes from the Quarter
Federal Reserve	1.00% - 1.25%	1.9%	Program to reduce Fed balance sheet is set to begin in October. As of quarter-end, market's probability of a Dec '17 rate hike is 70%
European Central Bank	0.0%	1.5%	An accommodative monetary policy likely remains necessary in a persistent low inflation environment
Bank of Japan	-0.10%	0.7%	The BoJ will continue its QE program as part of their yield curve control policy to keep long-term interest rates near zero



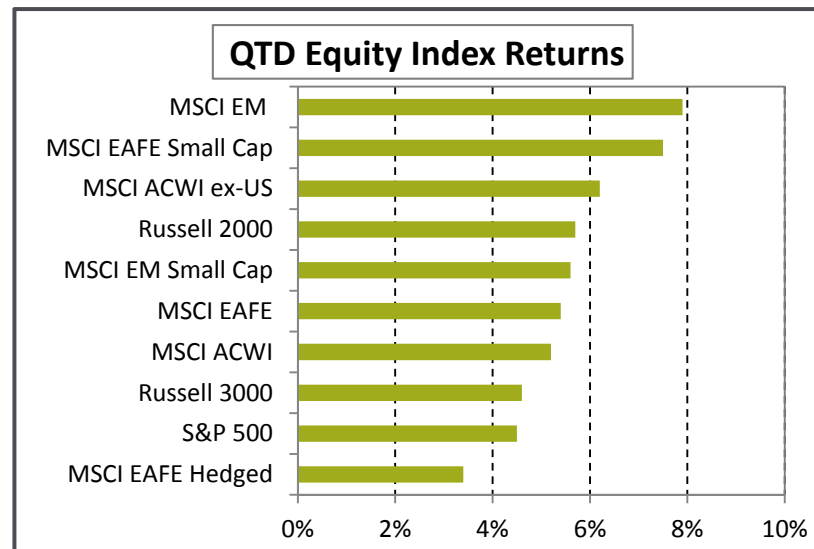
Source: Bloomberg

Q3 Equity Market Summary

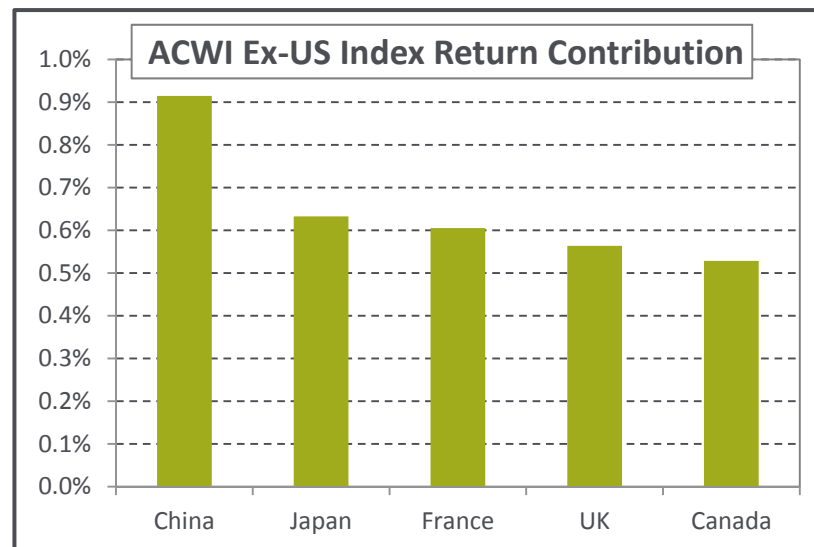
- **US small caps rallied as the outlook for US tax reform improved during the quarter**
- **Corporate earnings growth has accelerated over the last 12 months led by small-caps in Europe/Japan and the technology sector for the US and EM**

Russell 3000 QTD Sector Return Contribution	
Information Technology	1.8%
Industrials	0.9%
Financials	0.7%
Health Care	0.5%
Energy	0.4%
Consumer Discretionary	0.22%
Materials	0.19%
Utilities	0.13%
Telecommunication	0.05%
Real Estate	-0.08%
Consumer Staples	-0.14%

Source: Russell, Bloomberg



Source: MSCI, Russell, S&P, Bloomberg



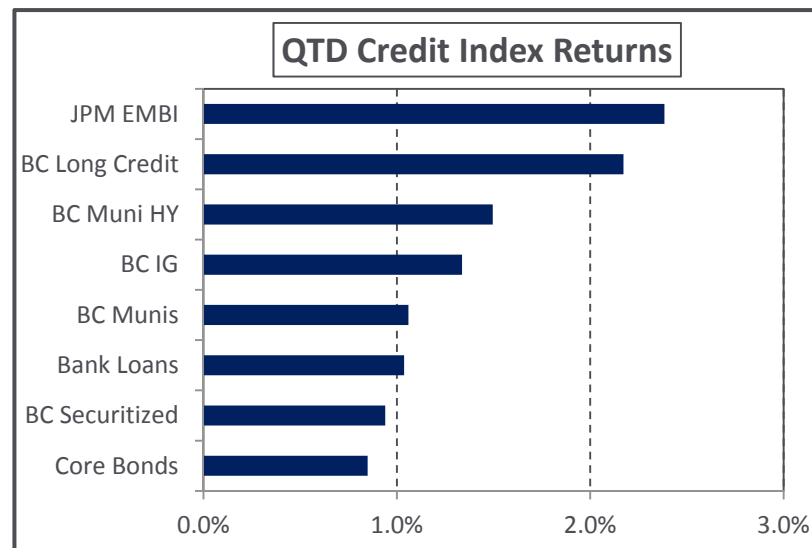
Source: MSCI, Bloomberg. QTD top country contributors to index return

Q3 Credit Market Summary

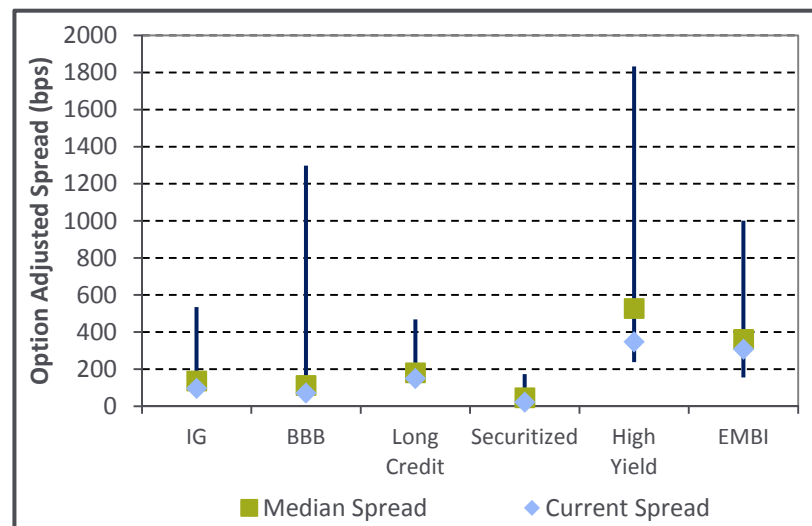
- Credit spreads continue to grind lower across all areas of the credit markets
- High yield and dollar EMD credit spread declines support a broad reduction in exposure
- Long credit continues to benefit from strong demand as spreads remain near long-term averages

Credit Spread (Basis Points)	06/30/17	9/30/17	Δ
BC IG Credit	103	96	-7
BC Long Credit	157	149	-8
BC Securitized	35	26	-9
BC High Yield	364	347	-17
Muni HY	386	309	-77
JPM EMBI	328	308	-20
Bank Loans - Libor	346	349	+3

Source: Barclays, Merrill Lynch, JPM, Bloomberg, NEPC



Source: Barclays, JPM, S&P, Bloomberg



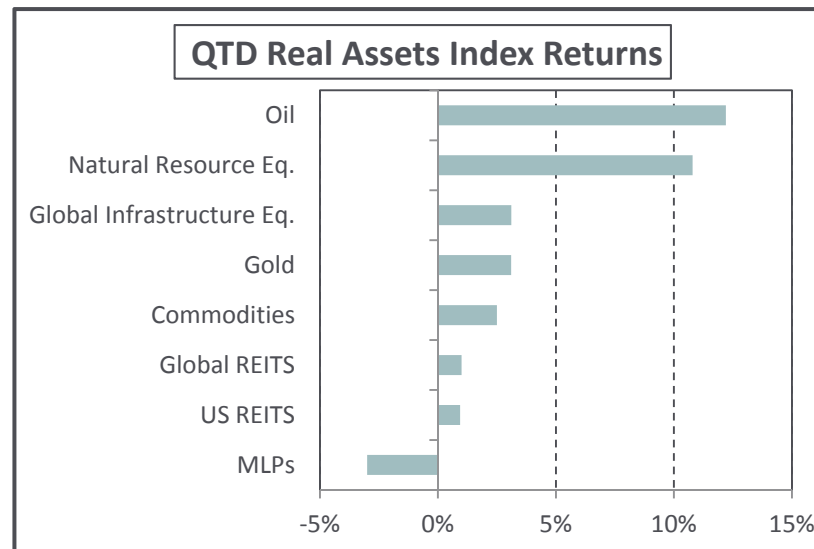
Source: Barclays, JPM, S&P, Bloomberg. As of 01/31/2000

Q3 Real Assets Market Summary

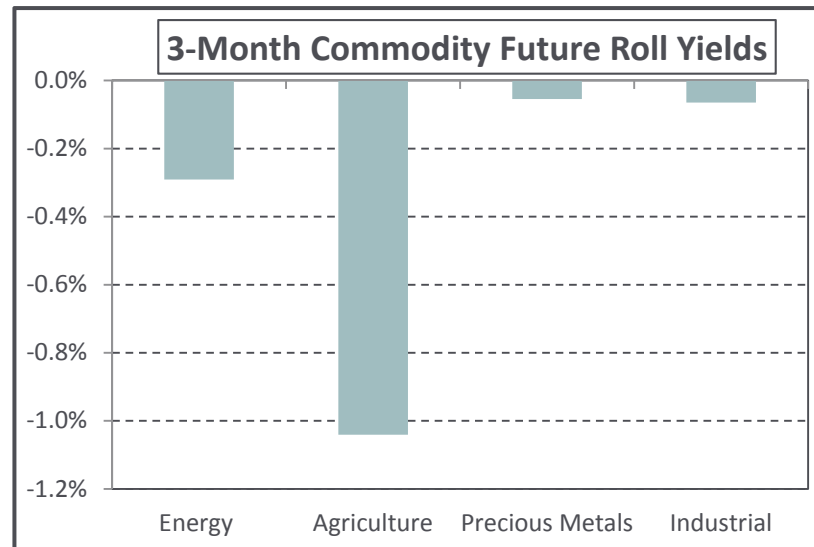
- **Oil prices rebounded over the quarter and appear range bound between \$50 to \$60 a barrel**
- **Gold prices improved and likely benefited from a weaker dollar and geopolitical concerns**
- **Commodity index roll yield is more negative than the previous quarter, though oil futures are slightly positive**

Real Asset Yields	6/30/17	9/30/17
MLPs	7.3%	7.8%
Core Real Estate	4.7%	4.7%
US REITs	4.1%	4.0%
Global REITs	3.7%	3.4%
Global Infrastructure Equities	3.9%	3.9%
Natural Resource Equities	3.5%	3.3%
US 10-Yr Breakeven Inflation	1.7%	1.9%
Commodity Index Roll Yield	-0.4%	-1.5%

Source: NCREIF, Alerian, NAREIT, S&P, Bloomberg



Source: S&P, NAREIT, Alerian, Bloomberg



Source: Bloomberg, NEPC Calculated as of 10/23/2017

Los Angeles City Employees' Retirement System

Investment Market Update: As of September 30, 2017

Domestic Equity Benchmarks		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
Large Core	S&P 500	4.5%	14.2%	18.6%	10.8%	14.2%	7.4%
Small Core	Russell 2000	5.7%	10.9%	20.7%	12.2%	13.8%	7.8%
Small Growth	Russell 2000 Growth	6.2%	16.8%	21.0%	12.2%	14.3%	8.5%
Small Value	Russell 2000 Value	5.1%	5.7%	20.5%	12.1%	13.3%	7.1%
Large Core	Russell 1000	4.5%	14.2%	18.5%	10.6%	14.3%	7.5%
Large Growth	Russell 1000 Growth	5.9%	20.7%	21.9%	12.7%	15.3%	9.1%
Large Value	Russell 1000 Value	3.1%	7.9%	15.1%	8.5%	13.2%	5.9%
Mid Core	S&P Mid Cap 400	3.2%	9.4%	17.5%	11.2%	14.4%	9.0%
REIT	NAREIT Composite	1.3%	6.8%	3.6%	10.2%	9.6%	5.9%
Int'l Equity Benchmarks		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
International Developed	MSCI EAFE	5.4%	20.0%	19.1%	5.0%	8.4%	1.3%
Emerging Equity	MSCI EM	7.9%	27.8%	22.5%	4.9%	4.0%	1.3%
Small Cap Int'l	S&P EPAC SmallCap	7.0%	25.9%	21.7%	11.1%	13.0%	4.4%
World ex-US	MSCI ACWI ex-US	6.2%	21.1%	19.6%	4.7%	7.0%	1.3%
Domestic FI Benchmarks		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
Core Bonds	Barclays Aggregate	0.8%	3.1%	0.1%	2.7%	2.1%	4.3%
Municipal Bond	Barclays Municipal	1.1%	4.7%	0.9%	3.2%	3.0%	4.5%
High Yield	Barclays US High Yield	2.0%	7.0%	8.9%	5.8%	6.4%	7.8%
Intermediate Gov/Cred	Barclays Intern. Gov/Credit	0.6%	2.3%	0.2%	2.1%	1.6%	3.6%
Long Gov/Credit	Barclays Long Gov/Credit	1.5%	7.7%	-0.8%	5.5%	3.9%	7.4%
Long Credit	Barclays Long Credit	2.2%	8.7%	2.9%	6.0%	4.7%	7.6%
Long Treasuries	Barclays US 20+ Yr Treas	0.6%	6.3%	-6.7%	5.1%	2.9%	7.0%
Cash	BofA ML US 3-Month T-Bill	0.3%	0.6%	0.7%	0.3%	0.2%	0.5%
Inflation	Barclays US TIPS 1-10 Yr	0.7%	1.4%	-0.1%	1.3%	0.1%	3.3%
Global Inflation	Barclays Global ILB	2.2%	5.7%	-0.0%	1.4%	1.4%	3.5%
STRIPS	Barclays 20+ Yr STRIPS	0.7%	8.7%	-9.4%	6.8%	3.8%	9.5%
Global FI Benchmarks		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
World Gov. Bonds	Citigroup WGBI	1.8%	6.4%	-2.7%	0.9%	-0.4%	3.0%
Em. Mkt. Bonds (Local)	JPM GBI-EM Glob. Div.	3.6%	14.3%	7.3%	0.3%	-0.9%	3.8%
Diversified Benchmark		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
Diversified	Diversified*	3.5%	10.9%	11.9%	7.2%	8.8%	5.5%
Alternative Benchmarks		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
Commodities	Bloomberg Commodity Index	2.5%	-2.9%	-0.3%	-10.4%	-10.5%	-6.8%
Real Estate	NCREIF Property Index**	1.8%	3.3%	7.0%	10.2%	10.5%	6.4%

* 35% LC, 10% SC, 12% Int'l, 3% Emerging, 25% FI, 5% HY, 5% Global FI, 5% REITS

Note: See appendix for abbreviation definitions

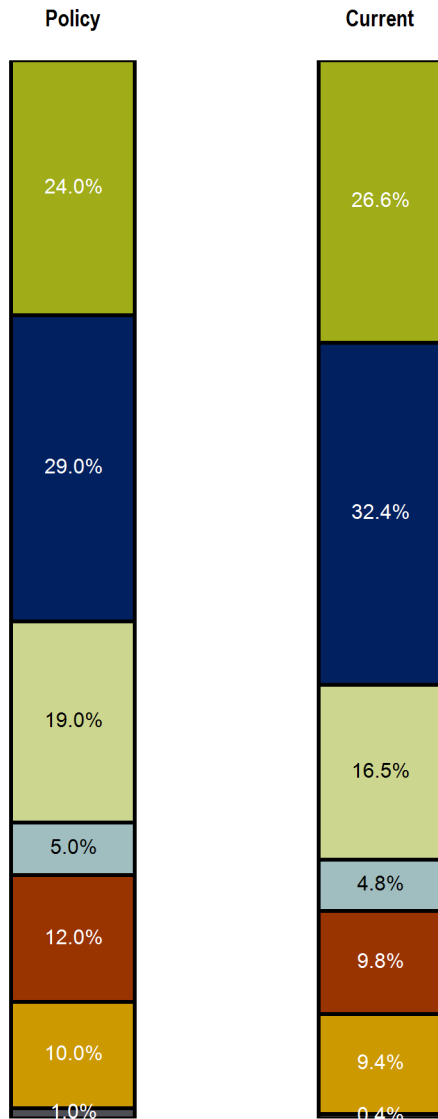
**As of 06/30/2017

Asset Class Policy Overview



Los Angeles City Employees' Retirement System

Total Fund Asset Allocation vs. Policy Targets



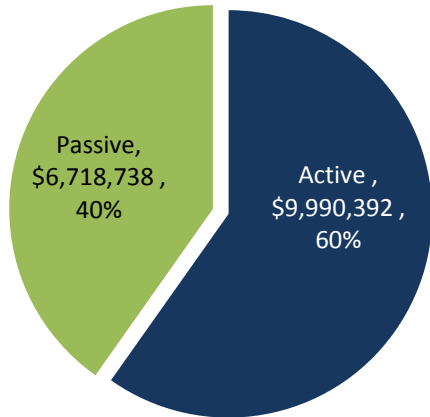
Asset Allocation vs. Target

	Current	Policy	Current Difference*	Policy Range	Within Range	
U.S. Equity	\$4,449,496,677	24.00%	26.63%	2.63%	19.00% - 29.00%	Yes
Non-US Equity	\$5,410,230,469	29.00%	32.38%	3.38%	24.00% - 34.00%	Yes
Core Fixed Income	\$2,760,609,081	19.00%	16.52%	-2.48%	15.00% - 22.00%	Yes
Opportunistic Credit	\$805,124,020	5.00%	4.82%	-0.18%	0.00% - 10.00%	Yes
Private Equity	\$1,635,739,759	12.00%	9.79%	-2.21%	0.00% - 100.00%	Yes
Real Assets	\$1,573,705,574	10.00%	9.42%	-0.58%	7.00% - 13.00%	Yes
Cash	\$74,224,225	1.00%	0.44%	-0.56%	0.00% - 2.00%	Yes
Total	\$16,709,129,807	100.00%	100.00%			

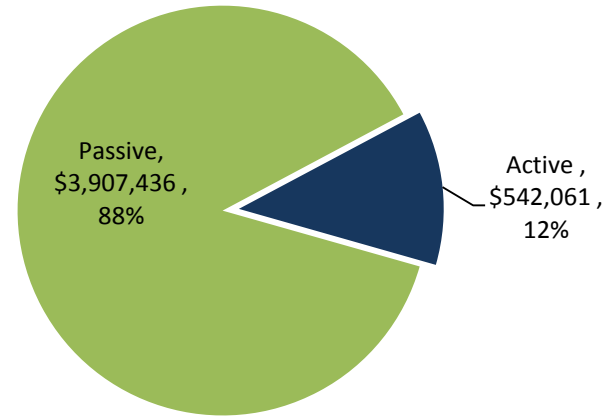
*Difference between Policy and Current Allocation

Active vs. Passive Manager Breakdown

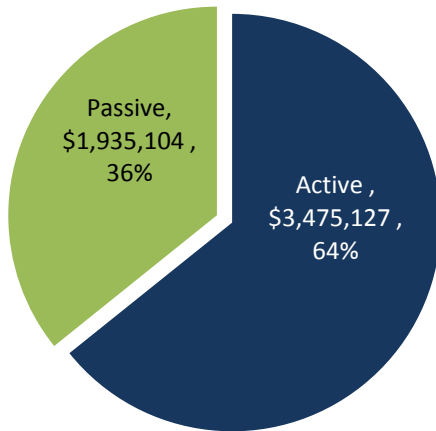
Total Fund



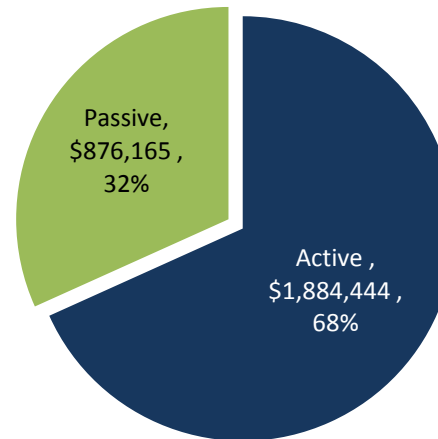
U.S. Equity



Non-U.S. Equity



Core Fixed Income



- Of the Total Fund, LACERS allocated 60% to active managers and 40% to passive managers.
- Credit Opportunities, Private Equity, and Real Assets programs are active and therefore are not shown.

Note: Market values shown in millions \$(000).

Performance Overview



Los Angeles City Employees' Retirement System

Total Fund Performance Summary (Gross of Fees)

	Market Value	3 Mo Rank	YTD Rank	1 Yr Rank	3 Yrs Rank	5 Yrs Rank	10 Yrs Rank	15 Yrs Rank	Return Since								
LACERS Master Trust	\$16,709,129,807	3.99%	5	13.04%	2	13.41%	13	7.25%	30	9.52%	9	5.49%	62	8.80%	1	8.36%	Oct-94
<i>Policy Index</i>		3.99%	5	12.86%	2	13.77%	10	7.19%	34	8.99%	33	5.51%	61	8.57%	1	8.30%	Oct-94
<i>InvestorForce Public DB \$5-50B Gross Median</i>		3.16%		10.75%		11.52%		7.05%		8.31%		5.82%		7.04%		6.34%	Oct-94

Over the past five years, the Fund returned 9.52% per annum, outperforming the policy index by 0.53% and ranked in the 9th percentile of the InvestorForce Public Funds \$5 Billion- \$50 Billion universe. The Fund's volatility was 6.03% and ranks in the 65th percentile of its peers over this period. The Fund's risk-adjusted performance, as measured by the Sharpe Ratio, ranks in the 13th percentile of its peers.

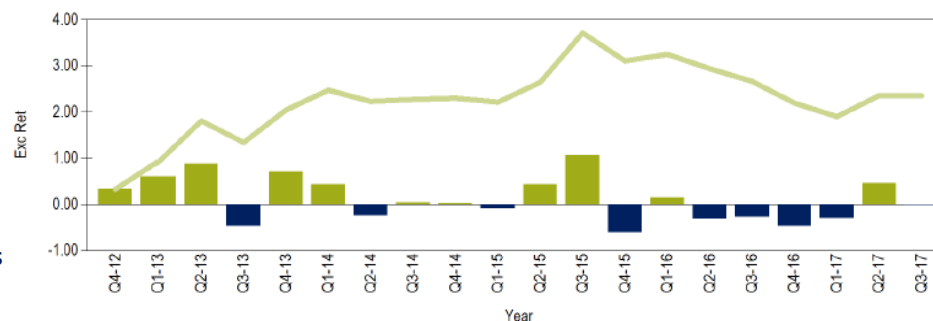
Over the past three years, the Fund returned 7.25% per annum, outperforming the policy index by 0.06% and ranked in the 30th percentile in its peer group. Over the past three years, the Fund's volatility ranks in the 54th percentile resulting in a three-year Sharpe Ratio of 1.12 and ranks in the 56th percentile.

For the one year ended September 30, 2017, the Fund experienced a net investment gain of \$1.95 billion, which includes a net investment gain of \$640.1 million during the third calendar quarter. Assets increased from \$14.95 billion twelve months ago to \$16.71 billion on September 30, 2017. The Fund returned 13.41%, underperforming the policy index by 0.36% and ranked in the 13th percentile of its peers.

All asset classes were within policy range as of September 30, 2017.

The InvestorForce Public Funds \$5 Billion- \$50 Billion Universe contains 50 observations for the period ending September 30, 2017.

Quarterly and Cumulative Excess Performance



5 Years Ending September 30, 2017

	Annualized Return (%)	Rank	Annualized Standard Deviation	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
LACERS Master Trust	9.52%	9	6.03%	65	1.54	13	2.74	22
Policy Index	8.99%	33	6.68%	92	1.31	76	2.17	71
InvestorForce Public DB \$5-50B Gross Median	8.31%	--	5.77%	--	1.39	--	2.28	--

3 Years Ending September 30, 2017

	Annualized Return (%)	Rank	Annualized Standard Deviation	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
LACERS Master Trust	7.25%	30	6.17%	54	1.12	56	1.78	26
Policy Index	7.19%	34	7.04%	92	0.98	82	1.44	79
InvestorForce Public DB \$5-50B Gross Median	7.05%	--	6.00%	--	1.14	--	1.64	--

Los Angeles City Employees' Retirement System

Total Fund Performance Detail (Net of Fees)

	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return* (%)	Since
LACERS Master Trust	16,709,129,807	100.00	3.94	12.89	13.21	7.06	9.32	5.29	8.36	Oct-94
Policy Index			<u>3.99</u>	<u>12.86</u>	<u>13.77</u>	<u>7.19</u>	<u>8.99</u>	<u>5.51</u>	<u>8.30</u>	Oct-94
Over/Under			-0.05	0.03	-0.56	-0.13	0.33	-0.22	0.06	
Allocation Index			4.20	13.16	13.91	7.34	--	--	--	Oct-94
U.S. Equity	4,449,496,678	26.63	4.83	13.59	18.94	10.77	14.40	7.37	10.48	Oct-94
U.S. Equity Blend			<u>4.57</u>	<u>13.91</u>	<u>18.71</u>	<u>10.74</u>	<u>14.22</u>	<u>7.57</u>	<u>9.32</u>	Oct-94
Over/Under			0.26	-0.32	0.23	0.03	0.18	-0.20	1.16	
Non-U.S. Equity	5,410,230,470	32.38	6.49	22.98	19.95	6.25	8.55	2.12	7.41	Aug-01
MSCI ACWI ex USA			<u>6.16</u>	<u>21.13</u>	<u>19.61</u>	<u>4.70</u>	<u>6.97</u>	<u>1.28</u>	<u>6.55</u>	Aug-01
Over/Under			0.33	1.85	0.34	1.55	1.58	0.84	0.86	
Core Fixed Income	2,760,609,081	16.52	0.88	3.36	0.58	2.95	2.64	--	3.23	Jul-12
Core Fixed Income Blend			<u>0.85</u>	<u>3.14</u>	<u>0.07</u>	<u>2.71</u>	<u>2.17</u>	<u>4.38</u>	<u>2.45</u>	Jul-12
Over/Under			0.03	0.22	0.51	0.24	0.47	--	0.78	
Credit Opportunities	805,124,020	4.82	2.25	8.24	7.67	5.10	--	--	6.26	Jun-13
Credit Opportunities Blend			<u>2.21</u>	<u>7.70</u>	<u>7.39</u>	<u>6.10</u>	--	--	<u>6.66</u>	Jun-13
Over/Under			0.04	0.54	0.28	-1.00	--	--	-0.40	
Real Assets	1,573,705,574	9.42	1.36	4.09	4.22	6.47	8.51	0.07	6.37	Nov-94
CPI + 5% (Unadjusted)			<u>1.99</u>	<u>6.03</u>	<u>7.34</u>	<u>6.27</u>	<u>6.36</u>	<u>6.78</u>	<u>7.32</u>	Nov-94
Over/Under			-0.63	-1.94	-3.12	0.20	2.15	-6.71	-0.95	
Public Real Assets	747,145,486	4.47	1.46	1.54	-0.34	1.31	--	--	0.67	Jun-14
Public Real Assets Blend			<u>0.84</u>	<u>0.51</u>	<u>-0.51</u>	<u>-1.29</u>	--	--	<u>-2.30</u>	Jun-14
Over/Under			0.62	1.03	0.17	2.60	--	--	2.97	
Private Real Estate	805,842,945	4.82	1.32	6.32	8.25	10.15	10.86	1.15	6.85	Oct-94
Real Estate Blend			<u>2.07</u>	<u>6.06</u>	<u>8.52</u>	<u>11.72</u>	<u>11.92</u>	<u>7.04</u>	<u>9.99</u>	Oct-94
Over/Under			-0.75	0.26	-0.27	-1.57	-1.06	-5.89	-3.14	
Private Equity	1,635,739,759	9.79	2.50	11.01	14.77	8.46	12.01	8.56	10.25	Nov-95
Private Equity Blend			<u>5.34</u>	<u>16.43</u>	<u>22.22</u>	<u>14.03</u>	<u>17.61</u>	<u>11.29</u>	<u>12.94</u>	Nov-95
Over/Under			-2.84	-5.42	-7.45	-5.57	-5.60	-2.73	-2.69	
Cash	74,224,225	0.44								

* Since Inception returns are gross of fees.

- Returns are net of fees

- Policy Index = 24% Russell 3000 / 29% MSCI ACWI ex USA / 19% BBgBarc US Aggregate TR / 5% Credit Opportunities Blend / 10% Real Assets Policy Benchmark / 12% Private Equity Blend / 1% 91 Day T-Bills

- U.S. Equity Blend = Russell 3000 from 1/1/2000 to present; 33.75% S&P 500/ 35% Russell 1000 Value/ 12.50% Russell 1000 Growth/ 12.50% Russell 2000 Value/ 6.25% Russell 2000 Growth prior to

- Credit Opportunities Blend = 65% BBgBarc US High Yield 2% Issuer Cap TR / 35% JP Morgan EMBI Global Diversified 7/01/2014 to present; BBgBarc US High Yield 2% Issuer Cap TR prior to

- Public Real Assets Blend = 60% BBgBarc US TIPS TR / 20% Bloomberg Commodity Index TR / 10% Alerian MLP TR / 10% FTSE NAREIT All REIT

- Real Estate Blend = NCREIF-ODCE + 80bps 7/1/2014 to present; NCREIF Property Index 1 Qtr Lag plus 100bps 7/1/2012 - 6/30/2014; NCREIF Property Index prior to

- Private Equity Blend = Russell 3000 + 3% 6/30/2012 - Present; Russell 3000 + 4% prior to



Los Angeles City Employees' Retirement System

Total Fund Risk Statistics

3 Years Ending September 30, 2017

	% of Total MV (%)	Annualized Return (%)	Rank	Annualized Standard Deviation	Rank	Annualized Alpha Jensen (%)	Rank	Information Ratio	Rank	Sortino Ratio RF	Rank	Tracking Error	Rank
LACERS Master Trust	100.00%	7.06%	49	6.17%	54	0.74%	33	-0.12	73	1.68	45	1.05%	64
U.S. Equity	26.63%	10.77%	27	10.34%	44	-0.05%	29	0.05	22	1.42	31	0.66%	7
Non-U.S. Equity	32.38%	6.25%	56	11.85%	70	1.71%	58	1.35	3	0.86	43	1.15%	4
Developed ex-U.S.	24.79%	6.09%	--	11.62%	--	1.33%	--	0.70	--	0.83	--	1.50%	--
Emerging Markets	7.59%	4.83%	27	16.12%	97	-0.17%	47	-0.06	35	0.52	45	1.05%	1
Core Fixed Income	16.52%	2.95%	80	2.71%	53	0.40%	74	0.44	44	1.34	73	0.55%	15
Credit Opportunities	4.82%	5.10%	--	5.30%	--	-0.91%	--	-1.02	--	1.66	--	0.98%	--
Real Assets	9.42%	6.47%	--	2.28%	--	4.46%	--	0.08	--	22.45	--	2.39%	--
Public Real Assets	4.47%	1.31%	--	4.52%	--	2.12%	--	0.89	--	0.58	--	2.90%	--
Private Real Estate	4.82%	10.15%	41	1.82%	17	12.03%	3	-0.28	84	--	--	5.72%	96
Private Equity	9.79%	8.46%	86	3.35%	1	8.46%	58	-0.51	96	8.23	60	11.00%	63

5 Years Ending September 30, 2017

	% of Total MV (%)	Annualized Return (%)	Rank	Annualized Standard Deviation	Rank	Annualized Alpha Jensen (%)	Rank	Information Ratio	Rank	Sortino Ratio RF	Rank	Tracking Error	Rank
LACERS Master Trust	100.00%	9.32%	15	6.03%	66	1.25%	1	0.31	34	2.60	34	1.06%	57
U.S. Equity	26.63%	14.40%	11	9.93%	31	0.03%	15	0.25	8	2.34	27	0.73%	11
Non-U.S. Equity	32.38%	8.55%	40	11.36%	70	1.73%	37	1.23	1	1.28	31	1.28%	9
Developed ex-U.S.	24.79%	9.04%	--	11.23%	--	1.06%	--	0.49	--	1.38	--	1.36%	--
Emerging Markets	7.59%	3.28%	81	15.08%	97	-0.85%	93	-0.35	86	0.34	90	2.04%	10
Core Fixed Income	16.52%	2.64%	52	2.93%	55	0.46%	65	0.72	50	1.08	64	0.65%	26
Real Assets	9.42%	8.51%	--	2.27%	--	6.46%	--	0.91	--	29.46	--	2.37%	--
Private Real Estate	4.82%	10.86%	45	1.88%	21	13.09%	3	-0.19	81	--	--	5.70%	95
Private Equity	9.79%	12.01%	85	3.88%	4	11.66%	59	-0.54	97	12.66	55	10.46%	52

Sortino Ratio RF = Sortino Ratio Risk Free. The risk free rate is the Citi 91 Day T-Bill Index.

Private Equity	10 Year IRR	Since Inception IRR	Since Inception TVPI
Aggregate Portfolio	8.55%	11.03%	1.51x
Core Portfolio	9.10%	11.61%	1.54x
Specialized Portfolio	2.16%	1.83%	1.11x
Russell 3000 + 300 bps	10.52%	10.46%	N/A

Real Estate	10 Year Return (Net)	Since Inception Return (Net)
Total Portfolio (TWR) ¹	0.56%	5.90%
NFI-ODCE + 80 basis points (TWR)	5.08%	7.11%

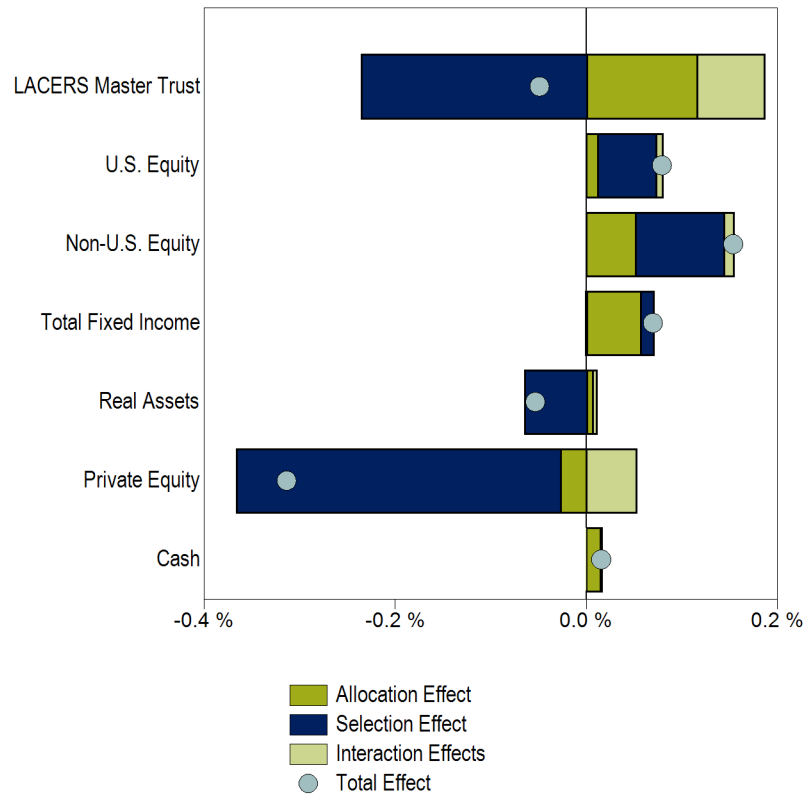
Note: The Total Value to Paid-In Ratio (TVPI) is a multiple that relates the current value of the private equity portfolio plus all distributions received to date with the total amount of capital contributed.

1 - IRR is not available for the Real Estate portfolio and therefore only time weighted returns (TWR) are reported.

Los Angeles City Employees' Retirement System

Total Fund Attribution Analysis (Net of Fees)

Attribution Effects
3 Months Ending September 30, 2017



Attribution Summary
3 Months Ending September 30, 2017

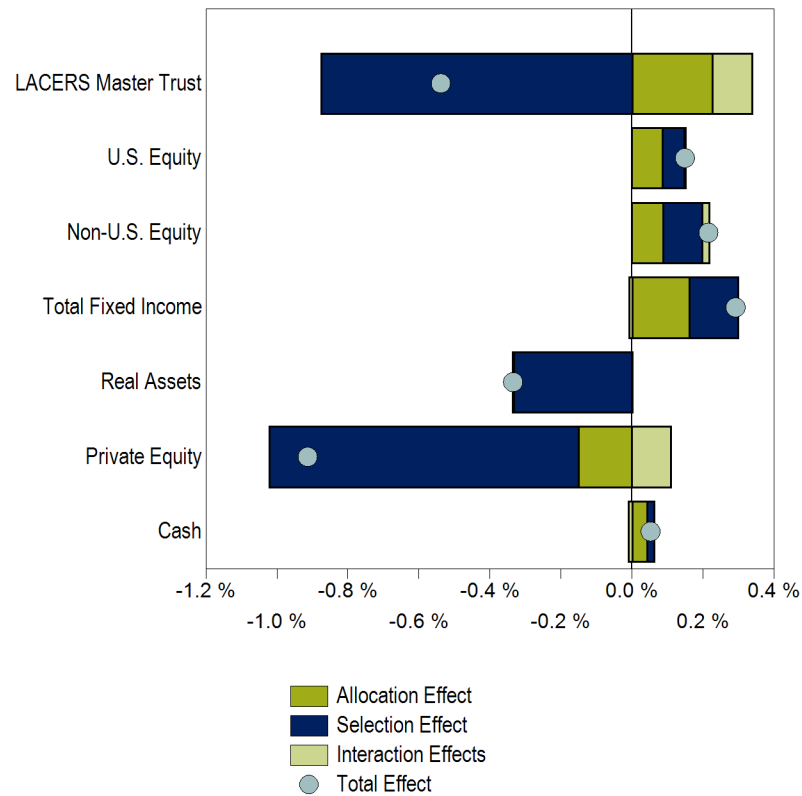
	Policy Weight	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
U.S. Equity	24.0%	4.8%	4.6%	0.3%	0.1%	0.0%	0.0%	0.1%
Non-U.S. Equity	29.0%	6.5%	6.2%	0.3%	0.1%	0.1%	0.0%	0.2%
Total Fixed Income	24.0%	1.2%	1.1%	0.1%	0.0%	0.1%	0.0%	0.1%
Real Assets	10.0%	1.4%	2.0%	-0.6%	-0.1%	0.0%	0.0%	-0.1%
Private Equity	12.0%	2.5%	5.3%	-2.8%	-0.3%	0.0%	0.1%	-0.3%
Cash	1.0%	0.3%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%
Total	100.0%	3.9%	4.0%	0.0%	-0.2%	0.1%	0.1%	0.0%

Wtd. = Weighted

Los Angeles City Employees' Retirement System

Total Fund Attribution Analysis (Net of Fees)

Attribution Effects
1 Year Ending September 30, 2017



Attribution Summary
1 Year Ending September 30, 2017

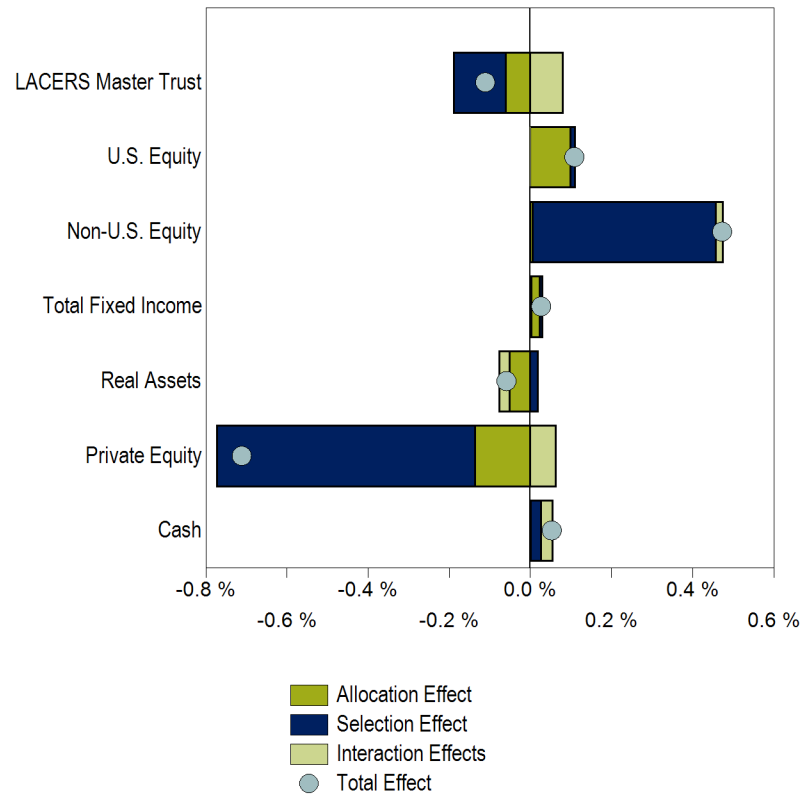
	Policy Weight	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
U.S. Equity	24.0%	18.9%	18.7%	0.2%	0.1%	0.1%	0.0%	0.1%
Non-U.S. Equity	29.0%	19.9%	19.6%	0.3%	0.1%	0.1%	0.0%	0.2%
Total Fixed Income	24.0%	2.1%	1.6%	0.5%	0.1%	0.2%	0.0%	0.3%
Real Assets	10.0%	4.2%	7.3%	-3.1%	-0.3%	0.0%	0.0%	-0.3%
Private Equity	12.0%	14.8%	22.2%	-7.4%	-0.9%	-0.2%	0.1%	-0.9%
Cash	1.0%	2.4%	0.7%	1.6%	0.0%	0.0%	0.0%	0.1%
Total	100.0%	13.2%	13.8%	-0.5%	-0.9%	0.2%	0.1%	-0.5%

Wtd. = Weighted

Los Angeles City Employees' Retirement System

Total Fund Attribution Analysis (Net of Fees)

Attribution Effects
3 Years Ending September 30, 2017

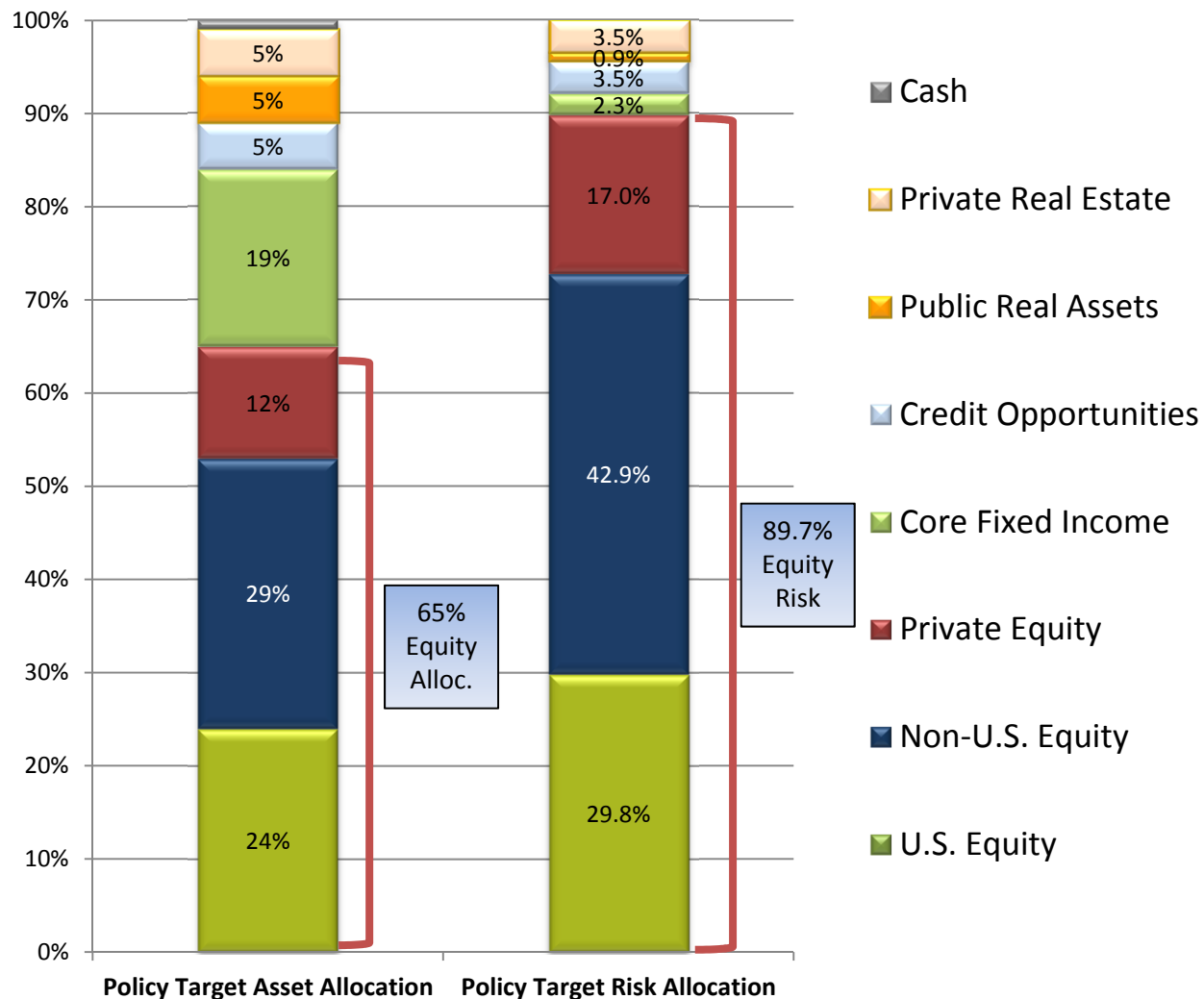


Attribution Summary
3 Years Ending September 30, 2017

	Policy Weight	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
U.S. Equity	24.0%	10.8%	10.7%	0.0%	0.0%	0.1%	0.0%	0.1%
Non-U.S. Equity	29.0%	6.3%	4.7%	1.5%	0.5%	0.0%	0.0%	0.5%
Total Fixed Income	24.0%	3.5%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Real Assets	10.0%	6.5%	6.3%	0.2%	0.0%	-0.1%	0.0%	-0.1%
Private Equity	12.0%	8.5%	14.0%	-5.6%	-0.6%	-0.1%	0.1%	-0.7%
Cash	1.0%	2.8%	0.3%	2.4%	0.0%	0.0%	0.0%	0.1%
Total	100.0%	7.1%	7.2%	-0.1%	-0.1%	-0.1%	0.1%	-0.1%

Wtd. = Weighted

Total Fund Risk Allocation – Asset Allocation vs. Risk Allocation



- Public and Private Equity policy target asset allocation is 65%; accounts for 89.7% of the policy target portfolio risk.
- Core Fixed Income and Credit Opportunities policy allocation is 24%, accounting for 5.8% of the policy target portfolio risk.
- Real Assets (Private Real Estate and Public Real Assets) policy allocation is 10%, accounting for 4.4% of policy target portfolio risk.

Public Markets Asset Class	Target Risk Budget	Actual 3 Yr Tracking Error
U.S. Equity	0.50%	0.66%
Non-U.S. Equity	1.20%	1.15%
Core Fixed Income	1.00%	0.55%
Credit Opportunities	1.50%	0.98%
Public Real Assets*	3.00%	2.90%

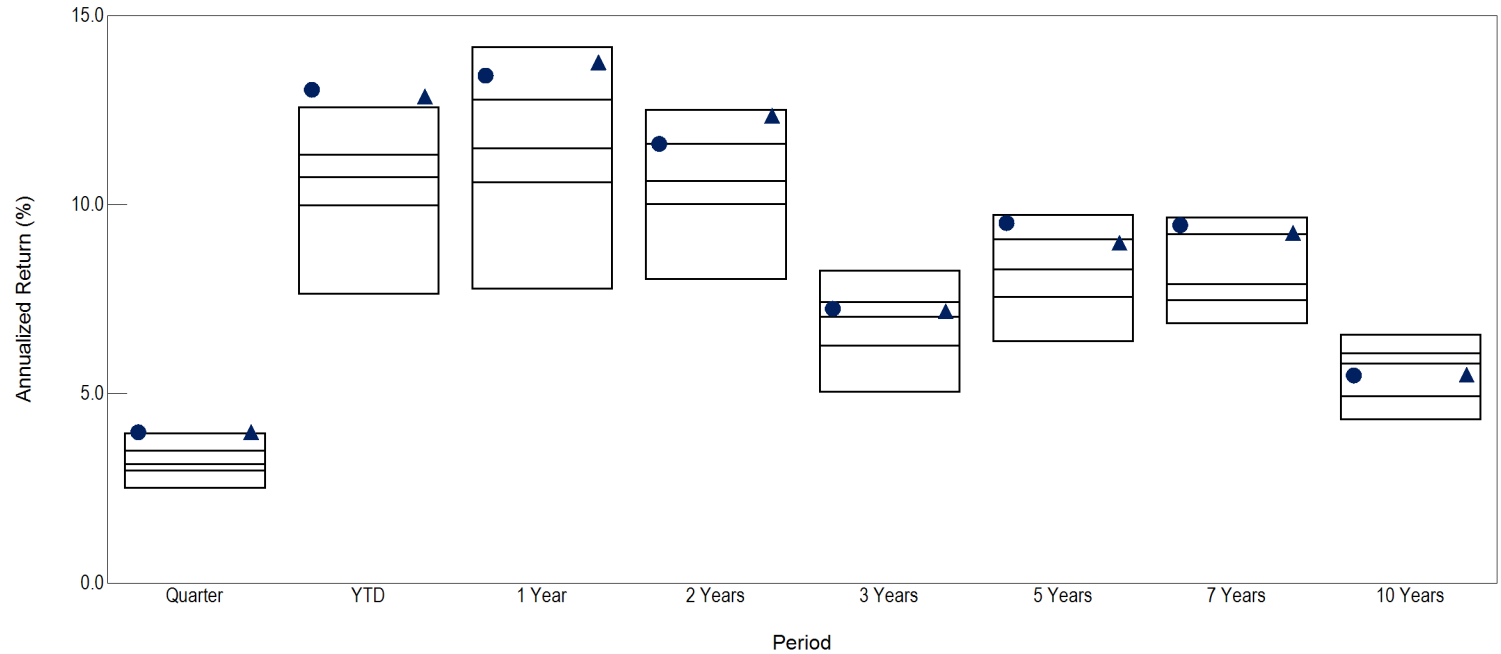
- Current LACERS public market asset class composite tracking errors are compared to asset class target risk budgets to ensure active risks are within expectations.
- Risk budgets are to be evaluated over three-year periods, at minimum, to reflect a full market cycle.
- All equity public markets asset classes are within an appropriately narrow range of their respective risk budgets.
- Both Core Fixed Income and Credit Opportunities have exhibited lower than expected active risk.
- The LACERS Public Real Assets composite is not yet at its target strategy allocation

* The benchmark for the Public Real Assets composite is a custom policy benchmark that is comprised of the target weights of the public real asset components. The public real asset benchmark weights are 60% TIPS, 20% Commodities, 10% REITs, and 10% MLPs.

Los Angeles City Employees' Retirement System

Total Fund Return Summary vs. Peer Universe

LACERS Master Trust vs. InvestorForce Public DB \$5-50B Gross

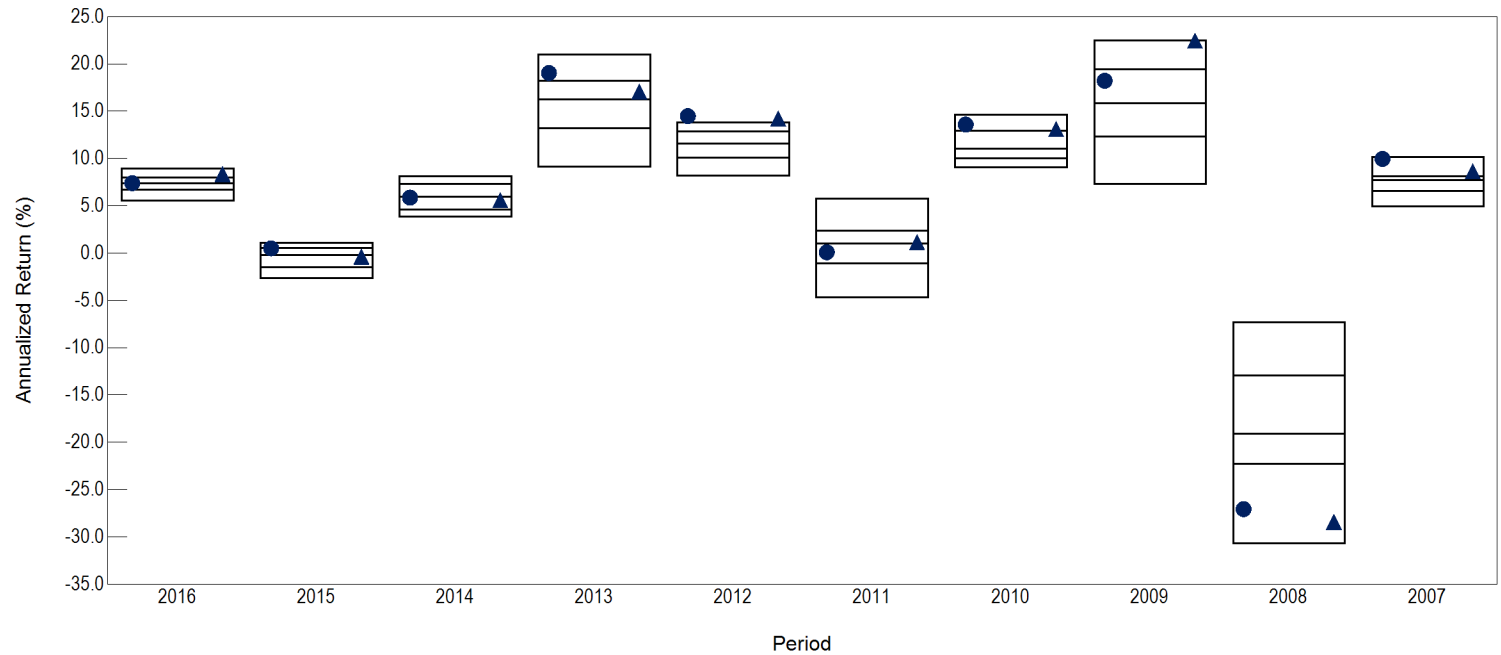


	Return (Rank)															
5th Percentile	3.96	12.57	14.16	12.50	8.25	9.72	9.65	6.56								
25th Percentile	3.52	11.34	12.79	11.63	7.44	9.10	9.24	6.09								
Median	3.16	10.75	11.52	10.65	7.05	8.31	7.91	5.82								
75th Percentile	2.99	10.00	10.61	10.03	6.30	7.58	7.49	4.95								
95th Percentile	2.53	7.66	7.79	8.05	5.08	6.42	6.89	4.35								
# of Portfolios	50	50	50	48	44	32	24	20								
● LACERS Master Trust	3.99	(5)	13.04	(2)	13.41	(13)	11.61	(26)	7.25	(30)	9.52	(9)	9.46	(15)	5.49	(62)
▲ Policy Index	3.99	(5)	12.86	(2)	13.77	(10)	12.35	(8)	7.19	(34)	8.99	(33)	9.26	(22)	5.51	(61)

Los Angeles City Employees' Retirement System

Total Fund Return Summary vs. Peer Universe

LACERS Master Trust vs. InvestorForce Public DB \$5-50B Gross

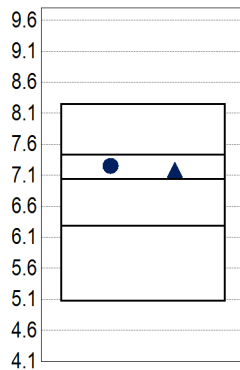


	Return (Rank)																			
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
5th Percentile	8.95	1.11	8.14	20.99	13.81	5.76	14.59	22.49	-7.31	10.16										
25th Percentile	8.04	0.60	7.36	18.25	12.94	2.46	12.96	19.52	-12.84	8.20										
Median	7.47	-0.13	6.01	16.34	11.65	1.10	11.10	15.93	-19.02	7.81										
75th Percentile	6.75	-1.44	4.70	13.28	10.17	-1.02	10.11	12.39	-22.18	6.64										
95th Percentile	5.59	-2.60	3.92	9.20	8.23	-4.64	9.15	7.38	-30.63	4.97										
# of Portfolios	65	62	53	49	45	34	31	31	29	27										
● LACERS Master Trust	7.38 (58)	0.49 (30)	5.85 (57)	19.03 (18)	14.47 (3)	0.08 (62)	13.58 (17)	18.21 (35)	-27.07 (91)	9.95 (7)										
▲ Policy Index	8.35 (17)	-0.39 (55)	5.58 (60)	17.06 (43)	14.23 (4)	1.17 (50)	13.11 (24)	22.44 (6)	-28.43 (92)	8.65 (21)										

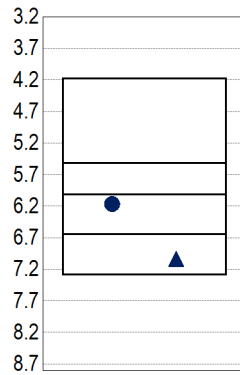
Total Fund Risk Statistics vs. Peer Universe

LACERS Master Trust vs. InvestorForce Public DB \$5-50B Gross
3 Years

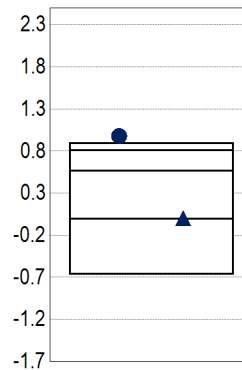
Annualized Return (%)



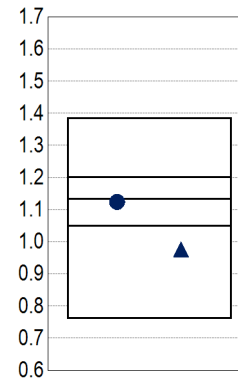
Annualized Standard Deviation



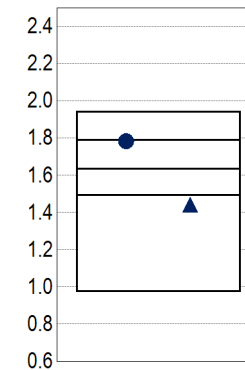
Annualized Alpha (%)



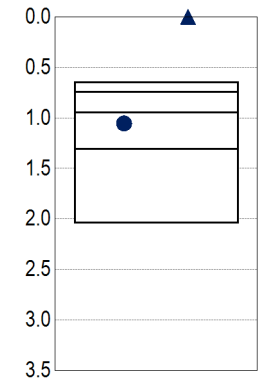
Sharpe Ratio



Sortino Ratio Risk Free



Tracking Error



● LACERS Master Trust

Value	7.25
Rank	30
▲ Policy Index	
Value	7.19
Rank	34

Universe	
5th %tile	8.25
25th %tile	7.44
Median	7.05
75th %tile	6.30
95th %tile	5.08

● LACERS Master Trust

Value	6.17
Rank	54
▲ Policy Index	
Value	7.04
Rank	92

Universe	
5th %tile	4.18
25th %tile	5.50
Median	6.00
75th %tile	6.63
95th %tile	7.28

● LACERS Master Trust

Value	0.98
Rank	2
▲ Policy Index	
Value	0.00
Rank	76

Universe	
5th %tile	0.89
25th %tile	0.82
Median	0.58
75th %tile	0.00
95th %tile	-0.66

● LACERS Master Trust

Value	1.12
Rank	56
▲ Policy Index	
Value	0.98
Rank	82

Universe	
5th %tile	1.39
25th %tile	1.20
Median	1.14
75th %tile	1.05
95th %tile	0.77

● LACERS Master Trust

Value	1.78
Rank	26
▲ Policy Index	
Value	1.44
Rank	79

Universe	
5th %tile	1.94
25th %tile	1.79
Median	1.64
75th %tile	1.50
95th %tile	0.98

● LACERS Master Trust

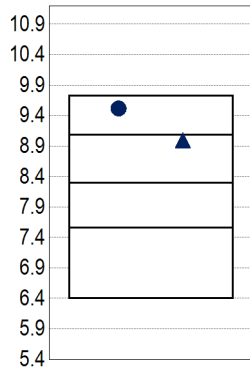
Value	1.06
Rank	65
▲ Policy Index	
Value	0.00
Rank	1

Universe	
5th %tile	0.65
25th %tile	0.74
Median	0.94
75th %tile	1.30
95th %tile	2.03

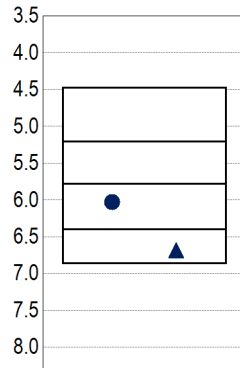
Sortino Ratio RF = Sortino Ratio Risk Free. The risk free rate is the Citi 91 Day T-Bill Index.

LACERS Master Trust vs. InvestorForce Public DB \$5-50B Gross
5 Years

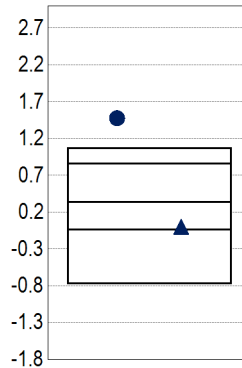
Annualized Return (%)



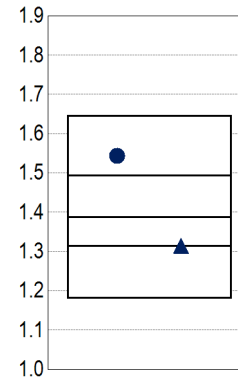
Annualized Standard Deviation



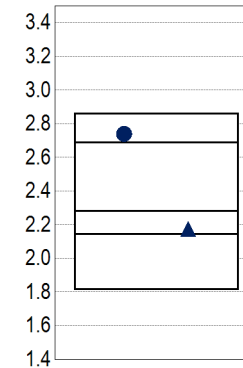
Annualized Alpha (%)



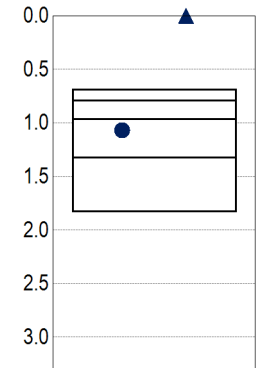
Sharpe Ratio



Sortino Ratio Risk Free



Tracking Error



● LACERS Master Trust	
Value	9.52
Rank	9
▲ Policy Index	
Value	8.99
Rank	33
Universe	
5th %tile	9.72
25th %tile	9.10
Median	8.31
75th %tile	7.58
95th %tile	6.42

● LACERS Master Trust	
Value	6.03
Rank	65
▲ Policy Index	
Value	6.68
Rank	92
Universe	
5th %tile	4.48
25th %tile	5.20
Median	5.77
75th %tile	6.39
95th %tile	6.85

● LACERS Master Trust	
Value	1.47
Rank	1
▲ Policy Index	
Value	0.00
Rank	75
Universe	
5th %tile	1.07
25th %tile	0.87
Median	0.34
75th %tile	-0.03
95th %tile	-0.76

● LACERS Master Trust	
Value	1.54
Rank	13
▲ Policy Index	
Value	1.31
Rank	76
Universe	
5th %tile	1.65
25th %tile	1.50
Median	1.39
75th %tile	1.32
95th %tile	1.18

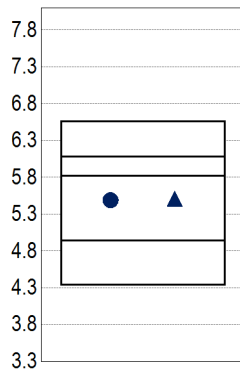
● LACERS Master Trust	
Value	2.74
Rank	22
▲ Policy Index	
Value	2.17
Rank	71
Universe	
5th %tile	2.86
25th %tile	2.69
Median	2.28
75th %tile	2.15
95th %tile	1.82

● LACERS Master Trust	
Value	1.07
Rank	58
▲ Policy Index	
Value	0.00
Rank	1
Universe	
5th %tile	0.69
25th %tile	0.79
Median	0.96
75th %tile	1.32
95th %tile	1.82

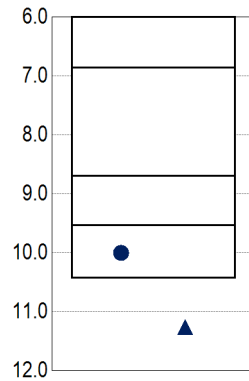
Sortino Ratio RF = Sortino Ratio Risk Free. The risk free rate is the Citi 91 Day T-Bill Index.

LACERS Master Trust vs. InvestorForce Public DB \$5-50B Gross
10 Years

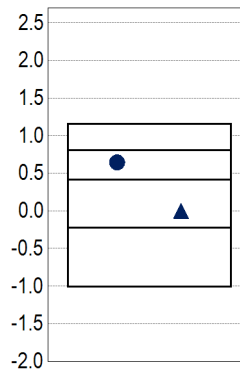
Annualized Return (%)



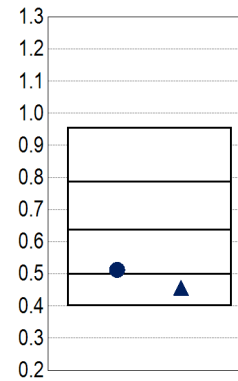
Annualized Standard Deviation



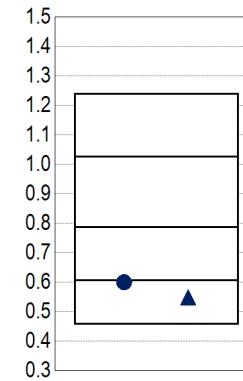
Annualized Alpha (%)



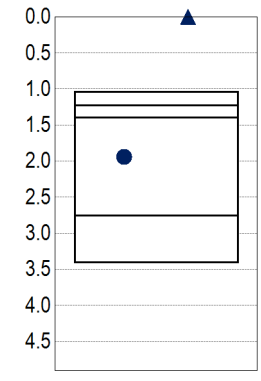
Sharpe Ratio



Sortino Ratio Risk Free



Tracking Error



● LACERS Master Trust

Value 5.49
Rank 62
▲ Policy Index
Value 5.51
Rank 61

Universe
5th %tile 6.56
25th %tile 6.09
Median 5.82
75th %tile 4.95
95th %tile 4.35

● LACERS Master Trust

Value 10.01
Rank 91
▲ Policy Index
Value 11.27
Rank 99

Universe
5th %tile 6.00
25th %tile 6.85
Median 8.69
75th %tile 9.53
95th %tile 10.42

● LACERS Master Trust

Value 0.64
Rank 33
▲ Policy Index
Value 0.00
Rank 71

Universe
5th %tile 1.16
25th %tile 0.82
Median 0.43
75th %tile -0.22
95th %tile -1.00

● LACERS Master Trust

Value 0.51
Rank 75
▲ Policy Index
Value 0.46
Rank 78

Universe
5th %tile 0.95
25th %tile 0.79
Median 0.64
75th %tile 0.50
95th %tile 0.40

● LACERS Master Trust

Value 0.60
Rank 76
▲ Policy Index
Value 0.55
Rank 78

Universe
5th %tile 1.24
25th %tile 1.03
Median 0.79
75th %tile 0.61
95th %tile 0.46

● LACERS Master Trust

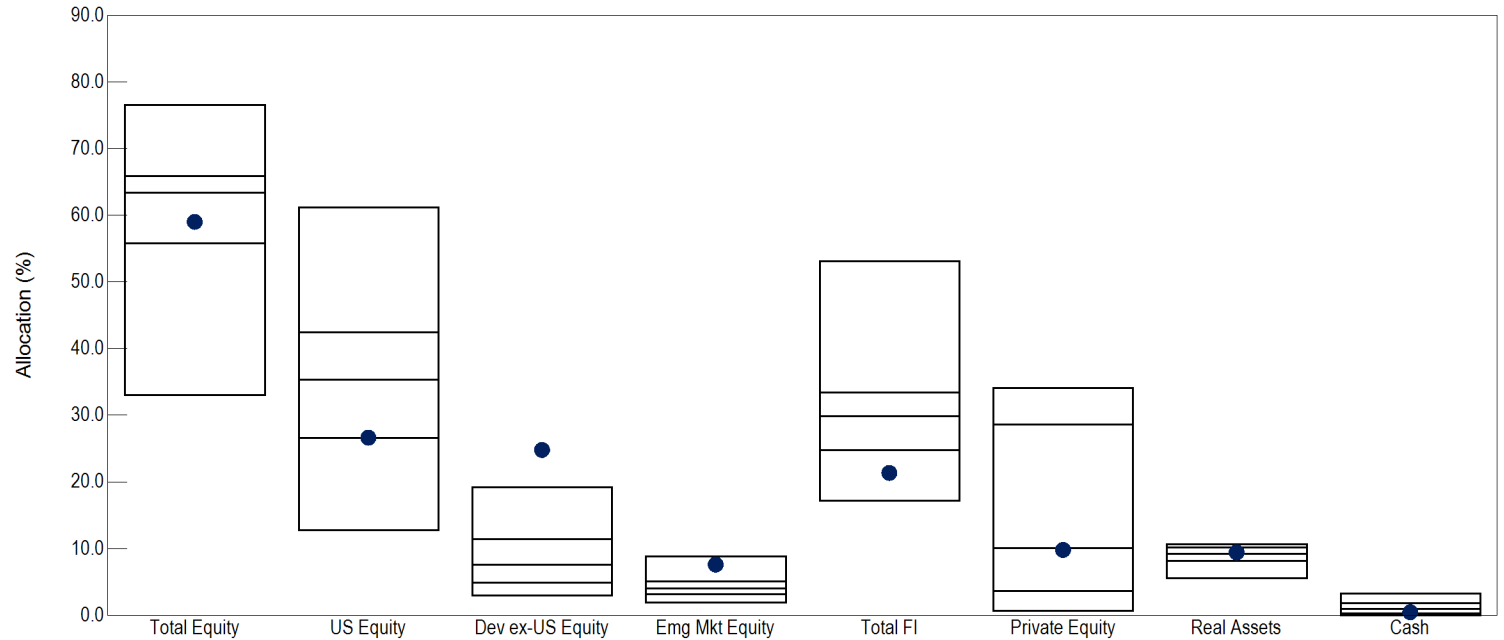
Value 1.94
Rank 61
▲ Policy Index
Value 0.00
Rank 1

Universe
5th %tile 1.04
25th %tile 1.22
Median 1.38
75th %tile 2.75
95th %tile 3.39

Sortino Ratio RF = Sortino Ratio Risk Free. The risk free rate is the Citi 91 Day T-Bill Index.

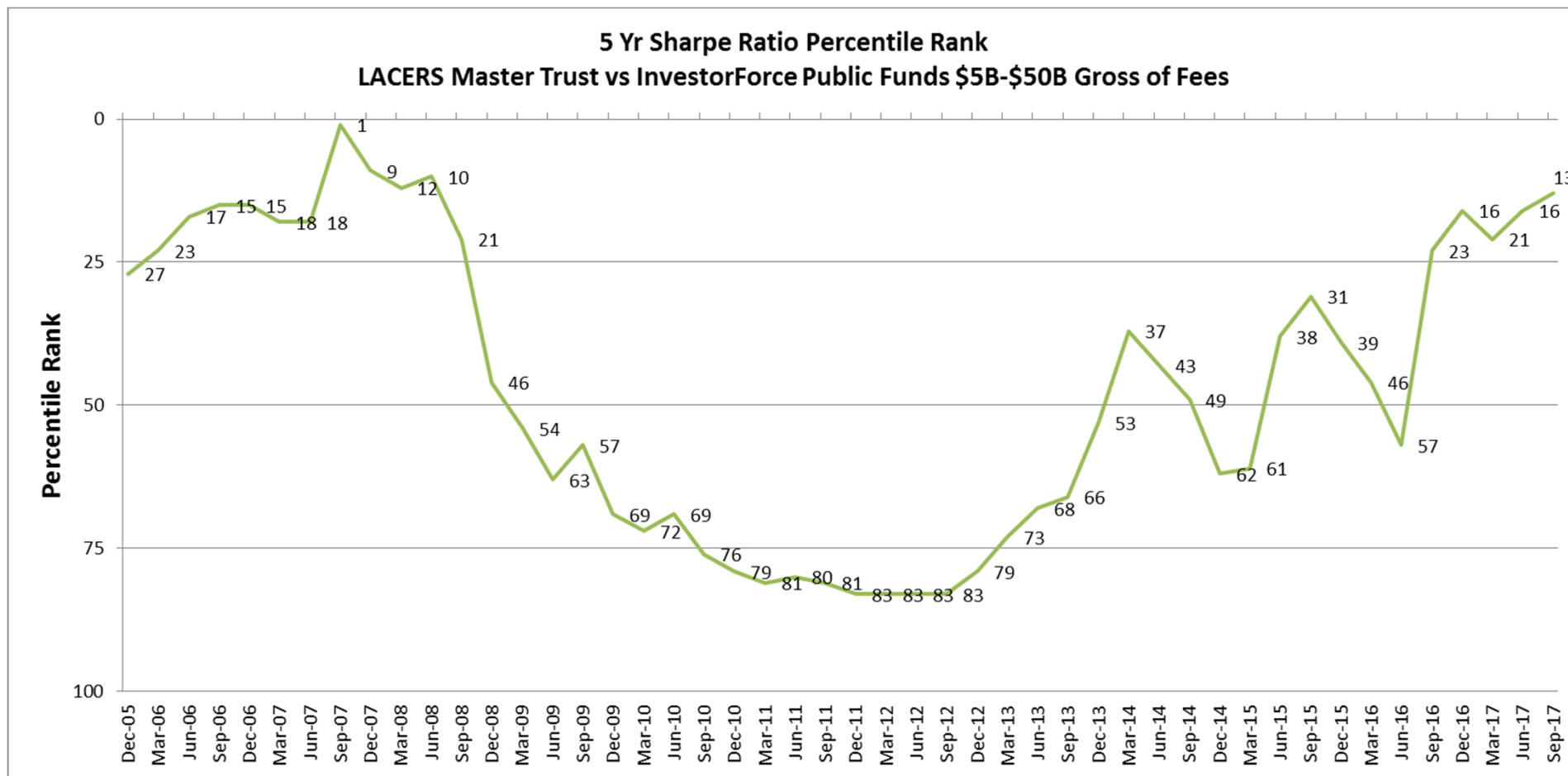
Total Fund Allocations vs. Peer Universe

Total Plan Allocation vs. InvestorForce Public DB \$5-50B Gross



	Allocation (Rank)															
5th Percentile	76.55	61.13	19.20	8.77	53.09	34.08	10.62	3.26								
25th Percentile	65.97	42.50	11.51	5.21	33.49	28.74	10.28	1.92								
Median	63.51	35.41	7.63	4.12	29.90	10.19	9.32	0.99								
75th Percentile	55.87	26.66	4.99	3.28	24.83	3.70	8.20	0.33								
95th Percentile	33.15	12.88	3.01	2.01	17.24	0.75	5.68	0.02								
# of Portfolios	50	31	19	14	47	6	5	43								
● LACERS Master Trust	59.01	(60)	26.63	(76)	24.79	(2)	7.59	(10)	21.34	(86)	9.79	(52)	9.42	(48)	0.44	(70)

Historical Risk Adjusted Return Universe Comparison



- Total Plan ranks in the 10th percentile versus other large public plans on a Sharpe Ratio basis.
 - Overweight to non-U.S. equities with favorable Sharpe Ratio rank.
 - Use of passive investment strategies within U.S. Equity has contributed to the overall Sharpe Ratio rank.
 - Five year Sharpe Ratio for Emerging Market Equities has near median results ranking 51st.

U.S. Equity



Los Angeles City Employees' Retirement System

U.S. Equity (Net of Fees*)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return* (%)	Since
U.S. Equity	4,449,496,678	100.00	4.83	32	13.59	41	18.94	41	10.77	27	14.40	11	7.37	48	10.48	Oct-94
<i>U.S. Equity Blend</i>			<u>4.57</u>	38	<u>13.91</u>	32	<u>18.71</u>	50	<u>10.74</u>	30	<u>14.22</u>	24	<u>7.57</u>	32	<u>9.32</u>	Oct-94
Over/Under			0.26		-0.32		0.23		0.03		0.18		-0.20		1.16	
<i>InvestorForce Public DB > \$1 Billion US Equity Net Median</i>			4.40		12.89		18.65		10.45		13.82		7.36			Oct-94
Aronson, Johnson & Ortiz	175,515,749	3.94	4.38	36	8.21	77	18.08	39	6.72	79	12.55	59	6.05	64	8.76	Oct-01
<i>Russell 1000 Value</i>			<u>3.11</u>	79	<u>7.92</u>	81	<u>15.12</u>	71	<u>8.53</u>	47	<u>13.20</u>	45	<u>5.92</u>	70	<u>8.02</u>	Oct-01
Over/Under			1.27		0.29		2.96		-1.81		-0.65		0.13		0.74	
<i>eA US Large Cap Value Equity Net Median</i>			3.96		10.13		17.10		8.38		12.92		6.33			Oct-01
Rhumblin Advisors Russell 2000 ¹	298,272,259	6.70	5.68	43	10.96	44	20.68	48	--	--	--	--	--	--	9.07	Mar-15
<i>Russell 2000</i>			<u>5.67</u>	44	<u>10.94</u>	44	<u>20.74</u>	47	<u>12.18</u>	44	<u>13.79</u>	55	<u>7.85</u>	54	<u>9.18</u>	Mar-15
Over/Under			0.01		0.02		-0.06								-0.11	
<i>eA US Small Cap Equity Net Median</i>			5.26		10.04		20.49		11.75		13.98		7.99			Mar-15
Rhumblin Advisors Russell 2000 Growth ¹	124,790,543	2.80	6.22	46	16.80	60	20.89	54	--	--	--	--	--	--	9.34	Jan-15
<i>Russell 2000 Growth</i>			<u>6.22</u>	46	<u>16.81</u>	60	<u>20.98</u>	54	<u>12.17</u>	50	<u>14.28</u>	45	<u>8.47</u>	40	<u>9.46</u>	Jan-15
Over/Under			0.00		-0.01		-0.09								-0.12	
<i>eA US Small Cap Growth Equity Net Median</i>			5.94		18.48		21.09		12.17		13.91		8.01			Jan-15
Rhumblin Advisors Russell 2000 Value ¹	125,318,737	2.82	5.11	45	5.69	63	20.53	44	--	--	--	--	--	--	28.11	Mar-16
<i>Russell 2000 Value</i>			<u>5.11</u>	45	<u>5.68</u>	63	<u>20.55</u>	44	<u>12.12</u>	36	<u>13.27</u>	60	<u>7.14</u>	72	<u>28.22</u>	Mar-16
Over/Under			0.00		0.01		-0.02								-0.11	
<i>eA US Small Cap Value Equity Net Median</i>			4.95		6.56		19.77		11.02		13.98		7.88			Mar-16
EAM Investors	105,976,990	2.38	11.08	2	18.28	19	20.25	52	--	--	--	--	--	--	12.96	Sep-15
<i>Russell 2000 Growth</i>			<u>6.22</u>	32	<u>16.81</u>	23	<u>20.98</u>	44	<u>12.17</u>	44	<u>14.28</u>	45	<u>8.47</u>	37	<u>16.47</u>	Sep-15
Over/Under			4.86		1.47		-0.73								-3.51	
<i>eA US Small Cap Equity Net Median</i>			5.26		10.04		20.49		11.75		13.98		7.99			Sep-15
PanAgora	120,771,453	2.71	3.55	75	1.10	97	15.06	87	11.32	44	14.91	28	8.05	47	7.67	Feb-06
<i>Russell 2000 Value</i>			<u>5.11</u>	45	<u>5.68</u>	63	<u>20.55</u>	44	<u>12.12</u>	36	<u>13.27</u>	60	<u>7.14</u>	72	<u>7.09</u>	Feb-06
Over/Under			-1.56		-4.58		-5.49		-0.80		1.64		0.91		0.58	
<i>eA US Small Cap Value Equity Net Median</i>			4.95		6.56		19.77		11.02		13.98		7.88			Feb-06
Principal Global Investors ¹	139,796,619	3.14	6.08	9	19.09	15	20.43	21	13.05	6	--	--	--	--	13.33	Aug-14
<i>Russell MidCap</i>			<u>3.47</u>	57	<u>11.74</u>	51	<u>15.32</u>	62	<u>9.54</u>	47	<u>14.26</u>	39	<u>8.08</u>	51	<u>9.47</u>	Aug-14
Over/Under			2.61		7.35		5.11		3.51						3.86	
<i>eA US Mid Cap Equity Net Median</i>			3.70		11.87		16.37		9.39		13.49		8.10			Aug-14

- Returns are net of fees.

¹ Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

* Since inception returns are gross of fees.

- U.S. Equity Blend = Russell 3000 from 1/1/2000 to present; 33.75% S&P 500/ 35% Russell 1000 Value/ 12.50% Russell 1000 Growth/ 12.50% Russell 2000 Value/ 6.25% Russell 2000 Growth prior to

eA = eVestment Alliance

Los Angeles City Employees' Retirement System

U.S. Equity (Net of Fees*)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return* (%)	Since
Rhumblin Advisors S&P 500	3,187,138,706	71.63	4.45	51	14.18	45	18.60	46	10.74	26	14.17	33	7.52	44	9.65	Feb-93
S&P 500			<u>4.48</u>	49	<u>14.24</u>	44	<u>18.61</u>	46	<u>10.81</u>	25	<u>14.22</u>	32	<u>7.44</u>	45	<u>9.48</u>	Feb-93
Over/Under			-0.03		-0.06		-0.01		-0.07		-0.05		0.08		0.17	
eA US Large Cap Equity Net Median			4.46		13.60		18.16		9.39		13.38		7.25			Feb-93
Rhumblin Advisors Russell 1000 Growth ¹	171,915,622	3.86	5.89	37	20.68	47	22.06	32	12.60	21	--	--	--	--	15.41	Jun-13
Russell 1000 Growth			<u>5.90</u>	36	<u>20.72</u>	47	<u>21.94</u>	33	<u>12.69</u>	19	<u>15.26</u>	18	<u>9.08</u>	21	<u>15.48</u>	Jun-13
Over/Under			-0.01		-0.04		0.12		-0.09						-0.07	
eA US Large Cap Growth Equity Net Median			5.33		20.23		20.40		11.00		14.23		8.19			Jun-13

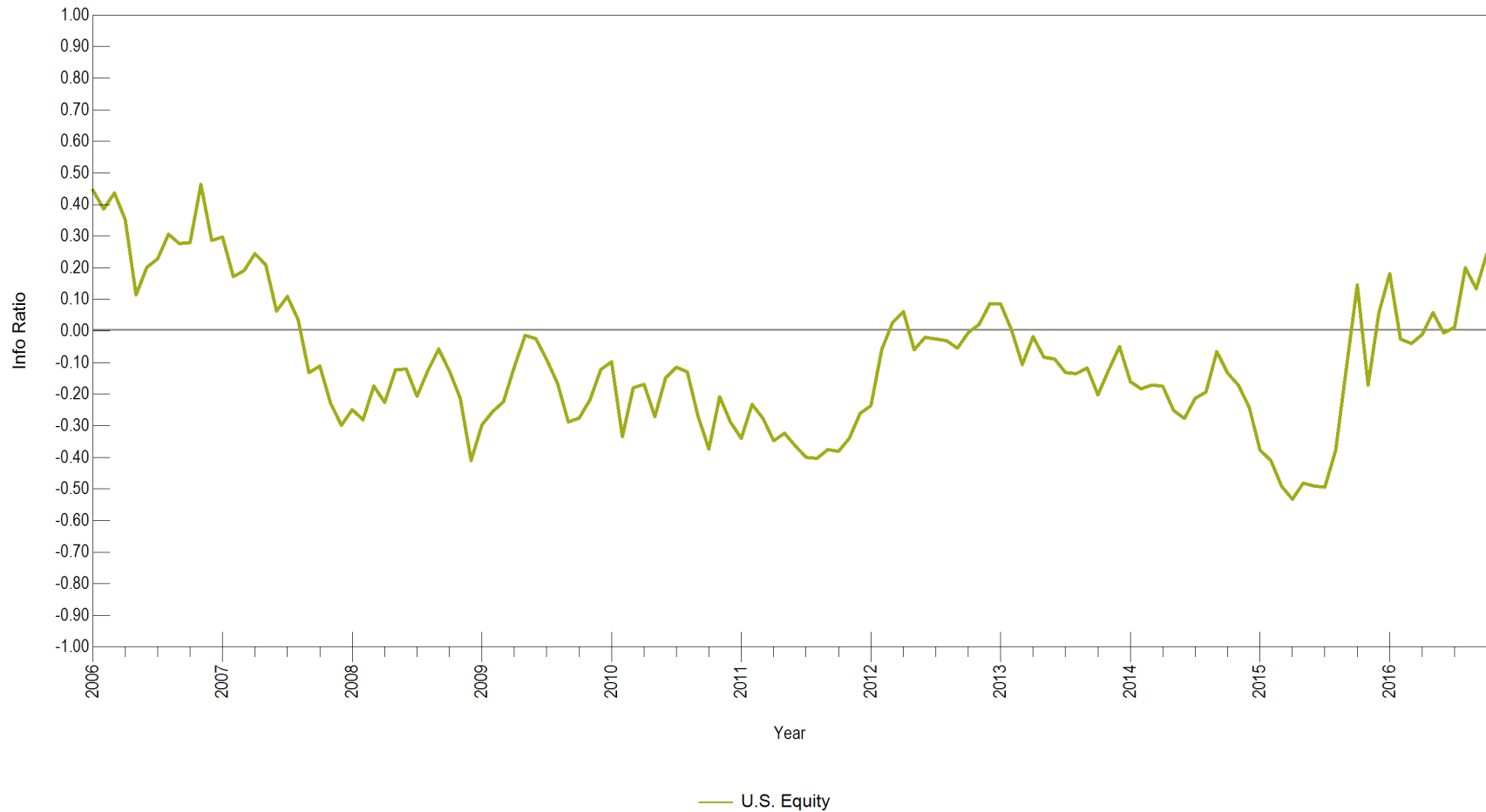
- Returns are net of fees.

1- Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

* Since inception returns are gross of fees.

U.S. Equity Rolling 5 Year Information Ratio

Rolling 5 Year Information Ratio



*Returns are net of fees.

Los Angeles City Employees' Retirement System

Manager Report Card

U.S. Equity Managers	Inception Date	Mandate	Current Quarter (Net)		One Year (Net)		Three Years (Net)		Five Years (Net)		Since Inception (Net)	Annual Mgt Fee Paid \$ (000)	Comments
			Index	Universe	Index	Universe	Index	Universe	Index	Universe	Index		
AJO	Oct-01	Large Cap Value	✓	✓	✓	✓	*	*	*	*	✓	449.7	Performance compliant with LACERS' Manager Monitoring Policy
Principal Global Investors	Jul-14	Mid Cap	✓	✓	✓	✓	✓	✓	N/A	N/A	✓	563.0	LACERS' Manager Monitoring Policy requires at least 3 years of track record to evaluate performance
EAM Investors	Sep-15	Small Cap Growth	✓	✓	*	*	N/A	N/A	N/A	N/A	*	501.2	LACERS' Manager Monitoring Policy requires at least 3 years of track record to evaluate performance
PanAgora	Feb-06	Small Cap Value	*	*	*	*	*	✓	✓	✓	✓	647.8	Performance compliant with LACERS' Manager Monitoring Policy
Rhumblin (Passive)	Feb-93	S&P 500	*	*	*	✓	*	✓	*	✓	✓✓	100.9	Performance compliant with LACERS' Manager Monitoring Policy
Rhumblin (Passive)	Jun-13	R1000 Growth	*	✓	✓	✓	*	✓	N/A	N/A	*	8.8	Performance compliant with LACERS' Manager Monitoring Policy
Rhumblin (Passive)	Jun-15	R2000	✓	✓	*	✓	N/A	N/A	N/A	N/A	*	11.9	LACERS' Manager Monitoring Policy requires at least 3 years of track record to evaluate performance
Rhumblin (Passive)	Jun-15	R2000 Growth	=	✓	*	*	N/A	N/A	N/A	N/A	*	5.9	LACERS' Manager Monitoring Policy requires at least 3 years of track record to evaluate performance
Rhumblin (Passive)	Feb-16	R2000 Value	=	✓	*	✓	N/A	N/A	N/A	N/A	*	2.2	LACERS' Manager Monitoring Policy requires at least 3 years of track record to evaluate performance

Note: Managers are placed on Watch List for concerns with organization, process and performance. Managers are normally on the Watch List for 12 months though may be longer if manager issues remain but not severe enough to warrant termination recommendation.

- Annual Management Fee Paid as of fiscal year ending June 30, 2017.
- * Where net of fees performance is not available gross of fee returns are evaluated.

Legend	
✓	Outperformed
*	Underperformed
=	Equal to
✓✓	Gross Return

Non-U.S. Equity



Los Angeles City Employees' Retirement System

Non-U.S. Equity (Net of Fees*)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return* (%)	Since
Non-U.S. Equity	5,410,230,470	100.00	6.49	37	22.98	49	19.95	51	6.25	56	8.55	40	2.12	37	7.41	Aug-01
MSCI ACWI ex USA			<u>6.16</u>	55	<u>21.13</u>	75	<u>19.61</u>	53	<u>4.70</u>	93	<u>6.97</u>	91	<u>1.28</u>	76	<u>6.55</u>	Aug-01
Over/Under			0.33		1.85		0.34		1.55		1.58		0.84		0.86	
InvestorForce Public DB > \$1 Billion Global ex-US Equity Net Median			6.26		22.86		19.99		6.35		8.26		1.81			Aug-01
Developed ex-U.S.	4,142,063,501	76.56	6.07	--	21.56	--	19.09	--	6.09	--	9.04	--	--	--	10.40	Jun-12
MSCI EAFE			<u>5.40</u>	--	<u>19.96</u>	--	<u>19.10</u>	--	<u>5.04</u>	--	<u>8.38</u>	--	<u>1.34</u>	--	<u>9.35</u>	Jun-12
Over/Under			0.67		1.60		-0.01		1.05		0.66				1.05	
AQR Capital ²	392,204,238	7.25	8.43	47	26.49	69	20.99	78	11.90	43	--	--	--	--	8.31	Feb-14
MSCI EAFE Small Cap			<u>7.46</u>	77	<u>25.42</u>	78	<u>21.84</u>	75	<u>11.13</u>	52	<u>12.85</u>	70	<u>4.63</u>	57	<u>7.24</u>	Feb-14
Over/Under			0.97		1.07		-0.85		0.77						1.07	
eA EAFE Small Cap Equity Net Median			8.37		27.86		24.22		11.33		13.86		4.69			Feb-14
Barrow Hanley ²	545,196,325	10.08	5.91	41	19.99	45	22.70	33	3.55	88	--	--	--	--	4.43	Nov-13
MSCI EAFE Value			<u>5.87</u>	42	<u>17.63</u>	65	<u>22.55</u>	36	<u>3.50</u>	89	<u>7.80</u>	70	<u>0.49</u>	91	<u>2.94</u>	Nov-13
Over/Under			0.04		2.36		0.15		0.05						1.49	
eA EAFE Value Equity Net Median			5.56		19.66		19.77		5.88		9.04		2.95			Nov-13
Lazard Asset Management ²	553,754,280	10.24	5.76	55	19.14	75	13.45	90	4.08	89	--	--	--	--	4.55	Nov-13
MSCI EAFE			<u>5.40</u>	65	<u>19.96</u>	68	<u>19.10</u>	58	<u>5.04</u>	75	<u>8.38</u>	69	<u>1.34</u>	81	<u>3.95</u>	Nov-13
Over/Under			0.36		-0.82		-5.65		-0.96						0.60	
eA All EAFE Equity Net Median			5.91		21.39		19.72		6.33		9.39		2.66			Nov-13
MFS Institutional Advisors	545,649,375	10.09	4.53	93	24.09	74	17.96	74	8.13	55	--	--	--	--	6.48	Oct-13
MSCI ACWI ex USA Growth			<u>6.33</u>	69	<u>24.82</u>	73	<u>17.68</u>	76	<u>6.43</u>	73	<u>7.87</u>	83	<u>1.89</u>	89	<u>5.16</u>	Oct-13
Over/Under			-1.80		-0.73		0.28		1.70						1.32	
eA ACWI ex-US Growth Equity Net Median			7.86		27.19		20.63		8.23		9.56		3.78			Oct-13
Oberweis Asset Mgmt ²	170,155,518	3.15	9.26	26	31.29	12	21.13	78	12.26	35	--	--	--	--	10.76	Jan-14
MSCI EAFE Small Cap			<u>7.46</u>	77	<u>25.42</u>	78	<u>21.84</u>	75	<u>11.13</u>	52	<u>12.85</u>	70	<u>4.63</u>	57	<u>8.66</u>	Jan-14
Over/Under			1.80		5.87		-0.71		1.13						2.10	
eA EAFE Small Cap Equity Net Median			8.37		27.86		24.22		11.33		13.86		4.69			Jan-14
SSgA World ex US IMI	1,935,103,764	35.77	5.92	55	20.12	68	19.33	57	5.61	67	8.64	67	2.09	63	6.01	Aug-93
MSCI World ex USA IMI NR USD ¹			<u>5.86</u>	58	<u>19.82</u>	72	<u>18.98</u>	61	<u>5.23</u>	74	<u>8.25</u>	75	<u>1.65</u>	71	<u>5.75</u>	Aug-93
Over/Under			0.06		0.30		0.35		0.38		0.39		0.44		0.26	
eA EAFE Core Equity Net Median			6.28		21.79		20.36		6.33		9.63		2.56			Aug-93

- Returns are net of fees.

1- Since inception index return sourced from SSgA.

2- Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

* Since inception returns are gross of fees.

eA = eVestment Alliance

Los Angeles City Employees' Retirement System

Non-U.S. Equity (Net of Fees*)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return* (%)	Since
Emerging Markets	1,268,166,969	23.44	7.86	18	27.88	24	22.86	22	4.83	27	3.28	81	--	--	5.26	Jun-12
MSCI Emerging Markets			<u>7.89</u>	18	<u>27.78</u>	24	<u>22.46</u>	27	<u>4.90</u>	27	<u>3.99</u>	33	<u>1.32</u>	69	<u>5.28</u>	Jun-12
Over/Under			-0.03		0.10		0.40		-0.07		-0.71				-0.02	
InvestorForce Public DB > \$1 Billion Emg Mkt Eq Net Median			5.56		24.24		18.56		4.17		3.65		1.59			Jun-12
Axiom Emerging Markets	410,251,276	7.58	9.81	19	31.68	25	23.21	40	7.06	22	--	--	--	--	6.63	Mar-14
MSCI Emerging Markets Growth NR USD			<u>10.19</u>	17	<u>36.03</u>	9	<u>26.35</u>	19	<u>8.12</u>	13	<u>6.55</u>	26	<u>1.97</u>	54	<u>7.64</u>	Mar-14
Over/Under			-0.38		-4.35		-3.14		-1.06						-1.01	
eA Emg Mkts Equity Net Median			7.76		28.41		21.88		5.29		5.21		2.31			Mar-14
DFA Emerging Markets ²	399,161,373	7.38	5.53	75	22.90	82	21.60	54	3.33	81	--	--	--	--	1.08	Jul-14
MSCI Emerging Markets Value NR USD			<u>5.47</u>	75	<u>19.87</u>	94	<u>18.55</u>	70	<u>1.62</u>	92	<u>1.34</u>	96	<u>0.79</u>	88	<u>-0.45</u>	Jul-14
Over/Under			0.06		3.03		3.05		1.71						1.53	
eA Emg Mkts Equity Net Median			7.76		28.41		21.88		5.29		5.21		2.31			Jul-14
QMA Emerging Markets ²	458,754,320	8.48	8.21	42	29.10	44	23.65	38	4.69	63	--	--	--	--	6.04	Apr-14
MSCI Emerging Markets			<u>7.89</u>	46	<u>27.78</u>	55	<u>22.46</u>	45	<u>4.90</u>	59	<u>3.99</u>	77	<u>1.32</u>	79	<u>5.06</u>	Apr-14
Over/Under			0.32		1.32		1.19		-0.21						0.98	
eA Emg Mkts Equity Net Median			7.76		28.41		21.88		5.29		5.21		2.31			Apr-14

Since inception returns are gross of fees.

2- Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance

-Returns are net of fees.

-Note: The Emerging Markets composite includes performance from terminated managers.

*

eA = eVestment Alliance

Los Angeles City Employees' Retirement System

Non-U.S. Equity Country Allocation

Versus MSCI ACWI ex USA - Quarter Ending September 30, 2017

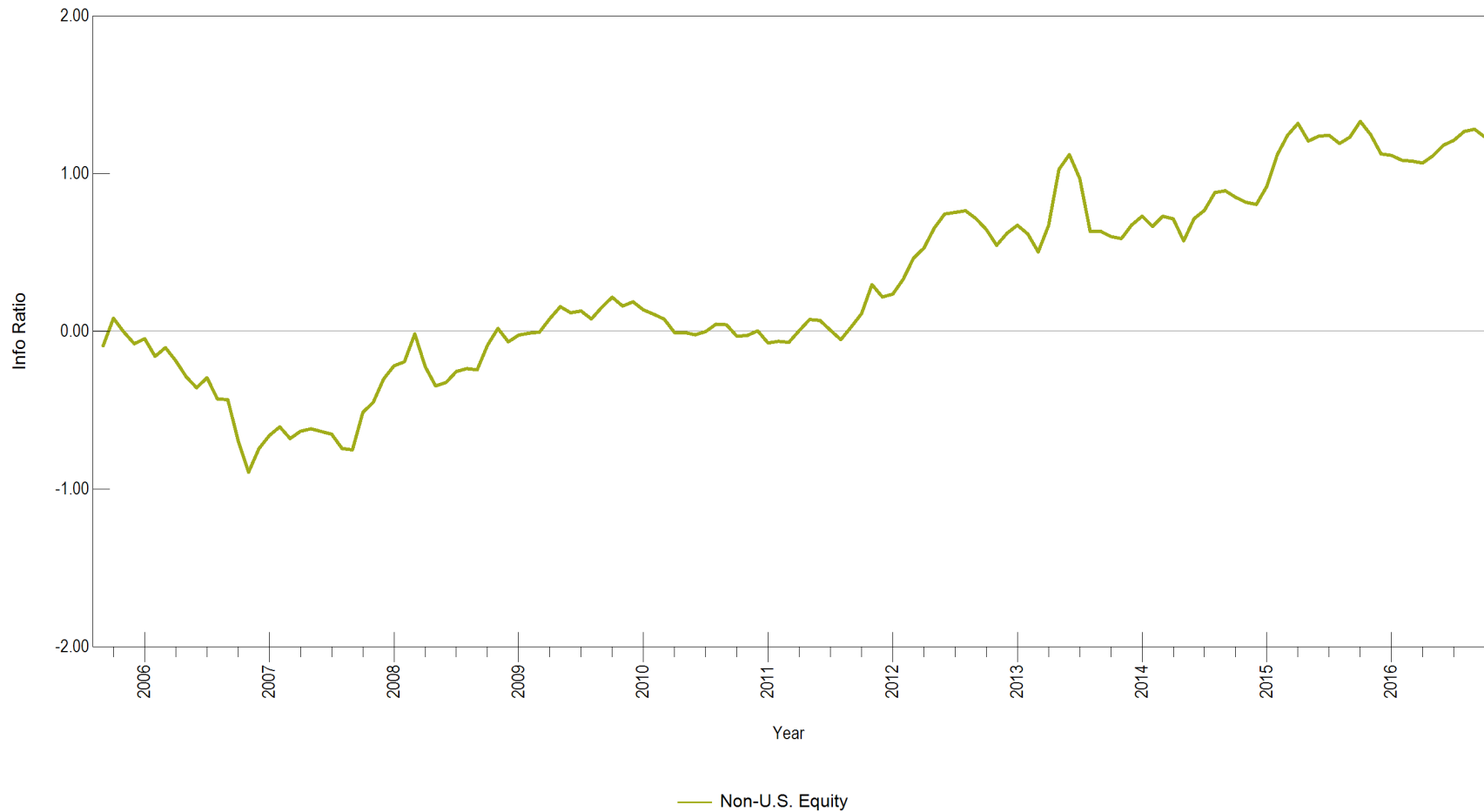
	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Americas		
Argentina**	0.0%	0.0%
Brazil*	2.1%	1.8%
Canada	4.0%	6.7%
Chile*	0.2%	0.3%
Colombia*	0.1%	0.1%
Mexico*	1.1%	0.8%
Peru*	0.1%	0.1%
United States	1.2%	0.0%
Total-Americas	8.8%	9.9%
Europe		
Austria	0.4%	0.2%
Belgium	1.0%	0.8%
Bulgaria**	0.0%	0.0%
Croatia**	0.0%	0.0%
Czech Republic*	0.0%	0.0%
Denmark	1.6%	1.3%
Estonia**	0.0%	0.0%
Finland	1.0%	0.7%
France	7.1%	7.4%
Germany	5.1%	6.7%
Greece*	0.0%	0.1%
Hungary*	0.1%	0.1%
Ireland	0.5%	0.3%
Italy	1.9%	1.7%
Lithuania**	0.0%	0.0%
Luxembourg	0.1%	0.0%
Netherlands	2.4%	2.6%
Norway	0.8%	0.5%
Poland*	0.2%	0.3%
Portugal	0.1%	0.1%
Romania**	0.0%	0.0%
Russia*	0.9%	0.8%
Serbia**	0.0%	0.0%
Slovenia**	0.0%	0.0%
Spain	1.6%	2.4%
Sweden	2.1%	2.0%
Switzerland	5.8%	5.7%
United Kingdom	13.4%	12.3%
Total-Europe	46.1%	46.1%

Versus MSCI ACWI ex USA - Quarter Ending September 30, 2017

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
AsiaPacific		
Australia	3.7%	4.7%
China*	3.4%	7.1%
Hong Kong	4.1%	2.4%
India*	2.5%	2.0%
Indonesia*	0.7%	0.5%
Japan	15.3%	16.0%
Korea*	3.8%	3.6%
Malaysia*	0.5%	0.6%
New Zealand	0.2%	0.1%
Philippines*	0.5%	0.3%
Singapore	1.1%	0.9%
Taiwan*	3.1%	2.8%
Thailand*	0.9%	0.5%
Total-AsiaPacific	39.8%	41.6%
Other		
Egypt*	0.1%	0.0%
Israel	0.9%	0.3%
Other Countries	0.0%	0.0%
Qatar*	0.0%	0.1%
South Africa*	1.7%	1.5%
Turkey*	0.6%	0.3%
United Arab Emirates*	0.2%	0.2%
Total-Other	3.4%	2.5%
Totals		
Developed	75.3%	76.0%
Emerging*	22.7%	24.0%
Other	0.0%	
Cash	2.0%	

Non-U.S. Equity Rolling 5 Year Information Ratio

Rolling 5 Year Information Ratio



*Returns are net of fees

Los Angeles City Employees' Retirement System

Manager Report Card

Non-U.S. Equity Managers	Inception Date	Mandate	Current Quarter (Net)		One Year (Net)		Three Years (Net)		Five Years (Net)		Since Inception (Net)	Annual Mgt Fee Paid \$ (000)	Comments
			Index	Universe	Index	Universe	Index	Universe	Index	Universe	Index		
Axiom International	Mar-14	Emerging Markets	* ✓	✓	* ✓	✓	* ✓	✓	N/A	N/A	* ✓	1,866.9	Performance compliant with LACERS' Manager Monitoring Policy
Q.M.A.	Apr-14	Emerging Markets	✓ ✓	✓	✓ ✓	✓	* *	* *	N/A	N/A	✓	1,219.4	Performance compliant with LACERS' Manager Monitoring Policy
DFA Emerging Markets	Jul-14	Emerging Markets	✓ *	✓	✓ *	✓	✓ *	✓ *	N/A	N/A	✓	1,188.2	Performance compliant with LACERS' Manager Monitoring Policy
AQR	Feb-14	Non-U.S. Developed	✓ ✓	✓	* *	* *	✓ ✓	✓ ✓	N/A	N/A	✓	2,314.2	Performance compliant with LACERS' Manager Monitoring Policy
Oberweis Asset Mgt.	Jan-14	Non-U.S. Developed	✓ ✓	✓	* *	* *	✓ ✓	✓ ✓	N/A	N/A	✓	568.5	Performance compliant with LACERS' Manager Monitoring Policy
Barrow, Hanley, Mewhinney & Strauss	Nov-13	Non-U.S. Developed	✓ ✓	✓	✓ ✓	✓	✓ *	✓ *	N/A	N/A	✓	2,097.9	Performance compliant with LACERS' Manager Monitoring Policy
Lazard Asset Mgt.	Nov-13	Non-U.S. Developed	✓ *	✓	* *	* *	* *	* *	N/A	N/A	✓	2,467.4	Performance compliant with LACERS' Manager Monitoring Policy
MFS Institutional Advisors	Oct-13	Non-U.S. Developed	* *	✓	✓ *	✓	✓ *	✓ *	N/A	N/A	✓	2,313.6	Performance compliant with LACERS' Manager Monitoring Policy
SsgA (Passive)	Aug-93	Non-U.S. Developed	✓ *	✓	✓ *	✓	✓ *	✓ *	✓ *	✓ *	✓✓✓*	368.9	Performance compliant with LACERS' Manager Monitoring Policy

Note: Managers are placed on Watch List for concerns with organization, process and performance. Managers are normally on the Watch List for 12 months though may be longer if manager issues remain but not severe enough to warrant termination recommendation.

- Annual Management Fee Paid as of fiscal year ending June 30, 2017.
- * Where net of fees performance is not available gross of fee returns are evaluated.

Legend	
✓	Outperformed
*	Underperformed
=	Equal to
✓✓	Gross Return

Core Fixed Income



Los Angeles City Employees' Retirement System

Core Fixed Income (Net of Fees*)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return* (%)	Since
Core Fixed Income	2,760,609,081	100.00	0.88	84	3.36	85	0.58	83	2.95	80	2.64	52	--	--	3.23	Jul-12
<i>Core Fixed Income Blend</i>			<u>0.85</u>	86	<u>3.14</u>	89	<u>0.07</u>	87	<u>2.71</u>	85	<u>2.17</u>	83	<u>4.38</u>	80	<u>2.45</u>	<i>Jul-12</i>
Over/Under			0.03		0.22		0.51		0.24		0.47				0.78	
<i>InvestorForce Public DB > \$1 Billion US Fixed Income Net Median</i>			1.09		4.26		2.27		3.28		2.73		5.00			<i>Jul-12</i>
Baird Advisors	216,720,975	7.85	0.68	85	2.68	89	0.67	35	2.67	64	2.34	41	4.31	75	4.49	Mar-05
<i>BBgBarc US Govt/Credit Int TR</i>			<u>0.60</u>	91	<u>2.34</u>	95	<u>0.23</u>	61	<u>2.13</u>	94	<u>1.61</u>	95	<u>3.64</u>	94	<u>3.79</u>	<i>Mar-05</i>
Over/Under			0.08		0.34		0.44		0.54		0.73		0.67		0.70	
<i>eA US Core Fixed Inc Net Median</i>			0.86		3.30		0.36		2.85		2.26		4.55			<i>Mar-05</i>
LM Capital	275,501,438	9.98	1.04	12	3.67	25	0.91	28	3.14	26	2.52	33	4.61	49	4.81	Mar-05
<i>Core Fixed Income Blend</i>			<u>0.85</u>	52	<u>3.14</u>	64	<u>0.07</u>	73	<u>2.71</u>	61	<u>2.17</u>	57	<u>4.38</u>	68	<u>4.47</u>	<i>Mar-05</i>
Over/Under			0.19		0.53		0.84		0.43		0.35		0.23		0.34	
<i>eA US Core Fixed Inc Net Median</i>			0.86		3.30		0.36		2.85		2.26		4.55			<i>Mar-05</i>
Loomis Sayles	701,867,092	25.42	0.97	23	3.95	11	1.36	12	3.43	14	3.20	8	5.32	14	9.31	Jul-80
<i>Core Fixed Income Blend</i>			<u>0.85</u>	52	<u>3.14</u>	64	<u>0.07</u>	73	<u>2.71</u>	61	<u>2.17</u>	57	<u>4.38</u>	68	--	<i>Jul-80</i>
Over/Under			0.12		0.81		1.29		0.72		1.03		0.94			
<i>eA US Core Fixed Inc Net Median</i>			0.86		3.30		0.36		2.85		2.26		4.55			<i>Jul-80</i>
Neuberger Berman	690,354,813	25.01	0.84	57	3.15	63	0.31	54	2.78	57	2.39	38	5.53	10	5.96	Sep-01
<i>Core Fixed Income Blend</i>			<u>0.85</u>	52	<u>3.14</u>	64	<u>0.07</u>	73	<u>2.71</u>	61	<u>2.17</u>	57	<u>4.38</u>	68	<u>4.74</u>	<i>Sep-01</i>
Over/Under			-0.01		0.01		0.24		0.07		0.22		1.15		1.22	
<i>eA US Core Fixed Inc Net Median</i>			0.86		3.30		0.36		2.85		2.26		4.55			<i>Sep-01</i>
SSgA U.S. Aggregate Bond¹	876,164,762	31.74	0.85	51	3.13	65	0.06	73	2.70	62	--	--	--	--	2.73	Jul-14
<i>BBgBarc US Aggregate TR</i>			<u>0.85</u>	52	<u>3.14</u>	64	<u>0.07</u>	73	<u>2.71</u>	61	<u>2.06</u>	66	<u>4.27</u>	78	<u>2.70</u>	<i>Jul-14</i>
Over/Under			0.00		-0.01		-0.01		-0.01						0.03	
<i>eA US Core Fixed Inc Net Median</i>			0.86		3.30		0.36		2.85		2.26		4.55			<i>Jul-14</i>

- Returns are net of fees.

*Since Inception returns are gross of fees.

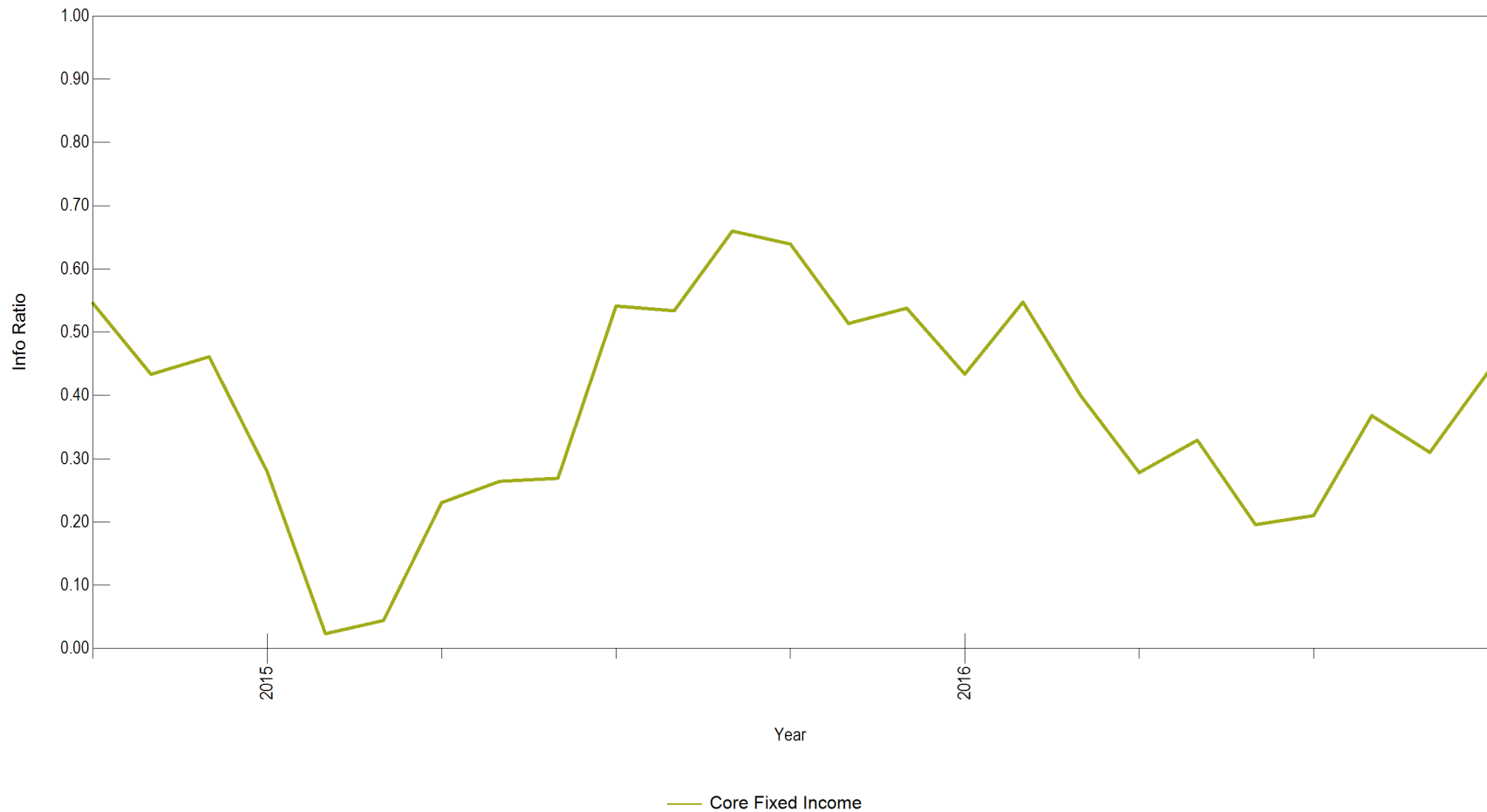
1- Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

BBgBarc = Bloomberg Barclays

Los Angeles City Employees' Retirement System

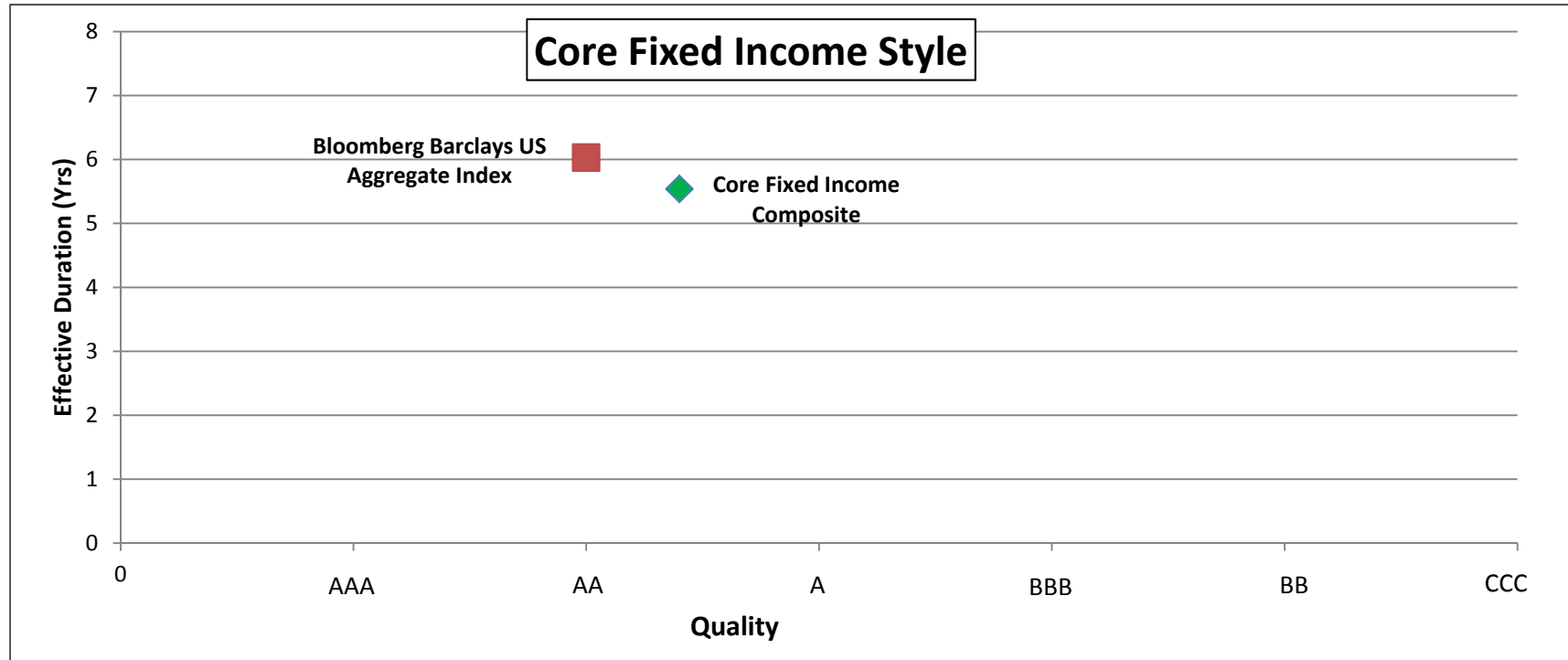
Core Fixed Income 3 Year Information Ratio

Rolling 3 Year Information Ratio



*Returns are net of fees

Core Fixed Income Style Analysis



- LACERS has a slightly lower duration (interest rate risk) than its benchmark.
- The Core Fixed Income Composite has slightly lower average quality rating than its benchmark.

Los Angeles City Employees' Retirement System

Manager Report Card

Core Fixed Income Managers	Inception Date	Mandate	Current Quarter (Net)		One Year (Net)		Three Years (Net)		Five Years (Net)		Since Inception (Net)	Annual Mgt Fee Paid \$ (000)	Comments
			Index	Universe	Index	Universe	Index	Universe	Index	Universe			
Neuberger Berman	Sep-01	Core	✘	✘	✓	✘	✓	✘	✓	✓	✓	1010.3	Performance compliant with LACERS' Manager Monitoring Policy
Loomis Sayles	Jul-80	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓✓	863.0	Performance compliant with LACERS' Manager Monitoring Policy
Baird Advisors	Mar-05	Intermediate	✓	✘	✓	✓	✓	✘	✓	✓	✓	291.7	Performance compliant with LACERS' Manager Monitoring Policy
LM Capital Group	Mar-05	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	240.1	Performance compliant with LACERS' Manager Monitoring Policy
SSgA (Passive)	Jul-14	Core	=	✘	✘	✘	✘	✘	N/A	N/A	✘	369.3	Performance compliant with LACERS' Manager Monitoring Policy

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Legend	
✓	Outperformed
✘	Underperformed
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✓✓	Gross Return

Credit Opportunities



Los Angeles City Employees' Retirement System

Credit Opportunities (Net of Fees*)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return* (%)	Since
Credit Opportunities	805,124,020	100.00	2.25	--	8.24	--	7.67	--	5.10	--	--	--	--	--	6.26	Jun-13
<i>Credit Opportunities Blend</i>			<u>2.21</u>	--	<u>7.70</u>	--	<u>7.39</u>	--	<u>6.10</u>	--	--	--	--	--	<u>6.66</u>	<i>Jun-13</i>
Over/Under			0.04		0.54		0.28		-1.00						-0.40	
AEGON USA	404,521,896	50.24	1.75	59	7.28	17	8.97	30	6.08	18	--	--	--	--	6.77	Jun-13
<i>BBgBarc US High Yield 2% Issuer Cap TR</i>			<u>1.98</u>	35	<u>7.00</u>	27	<u>8.87</u>	34	<u>5.84</u>	26	<u>6.37</u>	26	<u>7.92</u>	13	<u>6.37</u>	<i>Jun-13</i>
Over/Under			-0.23		0.28		0.10		0.24						0.40	
<i>eA US High Yield Fixed Inc Net Median</i>			1.85		6.52		8.12		5.03		5.72		6.96			<i>Jun-13</i>
Prudential Emerging Markets	308,020,972	38.26	3.28	61	10.89	65	6.56	61	6.92	5	--	--	--	--	6.48	May-14
<i>JP Morgan EMBI Global Diversified</i>			<u>2.63</u>	83	<u>8.99</u>	84	<u>4.61</u>	93	<u>6.50</u>	8	<u>4.91</u>	16	<u>7.46</u>	26	<u>5.76</u>	<i>May-14</i>
Over/Under			0.65		1.90		1.95		0.42						0.72	
<i>eA Emg Mkt Fixed Inc Hedged Net Median</i>			3.50		12.01		7.85		4.20		2.55		6.83			<i>May-14</i>
Bain Capital Sr Loan Fund, L.P.	92,548,047	11.49	0.94	70	3.30	16	5.61	18	--	--	--	--	--	--	3.86	Jun-15
<i>Credit Suisse Leveraged Loans</i>			<u>1.06</u>	37	<u>3.04</u>	23	<u>5.36</u>	21	<u>3.96</u>	45	<u>4.40</u>	26	<u>4.43</u>	36	<u>4.17</u>	<i>Jun-15</i>
Over/Under			-0.12		0.26		0.25								-0.31	
<i>eA Float-Rate Bank Loan Net Median</i>			1.01		2.69		4.62		3.80		4.04		4.20			<i>Jun-15</i>

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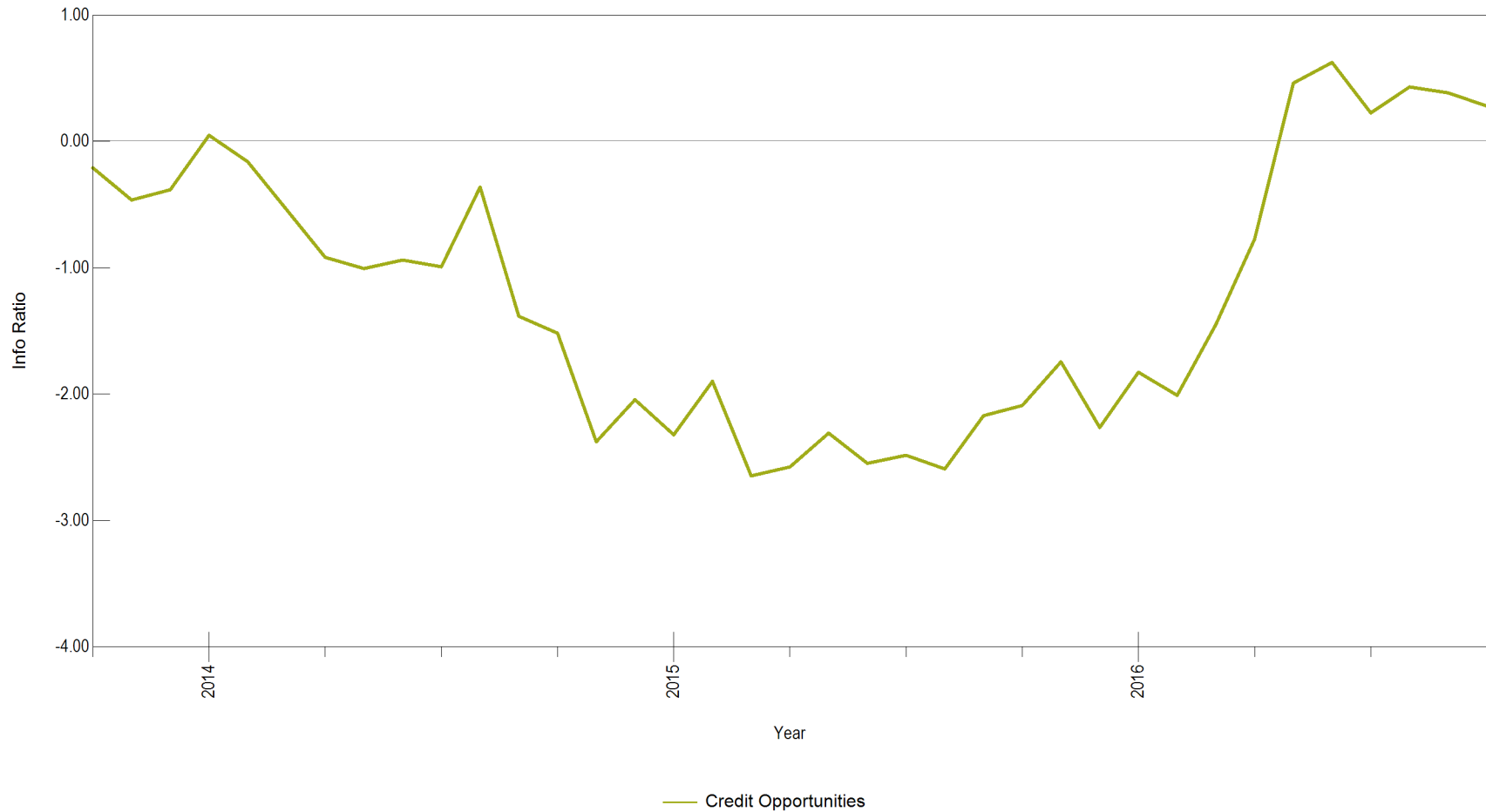
- Credit Opportunities Blend = 65% BBgBarc US High Yield 2% Issuer Cap TR / 35% JP Morgan EMBI Global Diversified 7/01/2014 to present; BBgBarc US High Yield 2% Issuer Cap TR prior to

eA = eVestment Alliance

BBgBarc = Bloomberg Barclays

Credit Opportunities Rolling 1 Year Information Ratio

Rolling 1 Year Information Ratio



*Returns are net of fees

Los Angeles City Employees' Retirement System

Manager Report Card

Credit Opportunities Managers	Inception Date	Mandate	Current Quarter (Net)		One Year (Net)		Three Years (Net)		Five Years (Net)		Since Inception (Net)	Annual Mgt Fee Paid \$ (000)	Comments
			Index	Universe	Index	Universe	Index	Universe	Index	Universe	Index		
AEGON USA	Jun-13	High Yield Bonds	*	*	✓	✓	✓	✓	N/A	N/A	✓	781.6	Watch pursuant to LACERS' Manager Monitoring Policy for a period of one year ending October 5, 2018 Performance compliant with LACERS' Manager Monitoring Policy LACERS' Manager Monitoring Policy requires at least 3 years of track record to evaluate performance
Prudential	May-14	Emerging Market Debt	✓	*	✓	*	✓	✓	N/A	N/A	✓	1230.2	
Bain Capital	Jun-15	Bank Loans	*	*	✓	✓	N/A	N/A	N/A	N/A	*	330.0	

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Legend	
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✓✓	Gross Return

Real Assets



Los Angeles City Employees' Retirement System

Real Assets (Net of Fees*)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return* (%)	Since
Real Assets	1,573,705,574	100.00	1.36	--	4.09	--	4.22	--	6.47	--	8.51	--	0.07	--	6.37	Nov-94
<i>CPI + 5% (Unadjusted)</i>			<u>1.99</u>	--	<u>6.03</u>	--	<u>7.34</u>	--	<u>6.27</u>	--	<u>6.36</u>	--	<u>6.78</u>	--	<u>7.32</u>	<i>Nov-94</i>
Over/Under			-0.63		-1.94		-3.12		0.20		2.15		-6.71		-0.95	
Public Real Assets	747,145,486	47.48	1.46	--	1.54	--	-0.34	--	1.31	--	--	--	--	--	0.67	Jun-14
<i>Public Real Assets Blend</i>			<u>0.84</u>	--	<u>0.51</u>	--	<u>-0.51</u>	--	<u>-1.29</u>	--	--	--	--	--	<u>-2.30</u>	<i>Jun-14</i>
Over/Under			0.62		1.03		0.17		2.60						2.97	
TIPS	505,970,267	32.15	0.93	--	2.12	--	-0.75	--	1.61	--	--	--	--	--	0.82	Jul-14
<i>BBgBarc US TIPS TR</i>			<u>0.86</u>	--	<u>1.72</u>	--	<u>-0.73</u>	--	<u>1.62</u>	--	<u>0.02</u>	--	<u>3.90</u>	--	<u>0.86</u>	<i>Jul-14</i>
Over/Under			0.07		0.40		-0.02		-0.01						-0.04	
<i>DFA US TIPS¹</i>	505,970,267	32.15	0.93	39	2.12	21	-0.75	61	1.85	10	--	--	--	--	1.05	Jul-14
<i>BBgBarc US TIPS TR</i>			<u>0.86</u>	52	<u>1.72</u>	45	<u>-0.73</u>	60	<u>1.62</u>	25	<u>0.02</u>	47	<u>3.90</u>	67	<u>0.86</u>	<i>Jul-14</i>
Over/Under			0.07		0.40		-0.02		0.23						0.19	
<i>eA TIPS / Infl Indexed Fixed Inc Net Median</i>			0.88		1.67		-0.67		1.43		-0.01		4.02			<i>Jul-14</i>
REITS	93,174,709	5.92	1.54	--	5.41	--	1.55	--	--	--	--	--	--	--	7.08	Mar-15
<i>FTSE NAREIT All Equity REIT</i>			<u>1.11</u>	--	<u>6.04</u>	--	<u>2.57</u>	--	<u>10.18</u>	--	<u>9.97</u>	--	<u>6.06</u>	--	<u>5.35</u>	<i>Mar-15</i>
Over/Under			0.43		-0.63		-1.02								1.73	
<i>CenterSquare US Real Estate¹</i>	93,174,709	5.92	1.54	12	5.41	11	1.55	28	--	--	--	--	--	--	8.70	Apr-15
<i>FTSE NAREIT All Equity REIT</i>			<u>1.11</u>	34	<u>6.04</u>	9	<u>2.57</u>	18	<u>10.18</u>	29	<u>9.97</u>	26	<u>6.06</u>	60	<u>7.78</u>	<i>Apr-15</i>
Over/Under			0.43		-0.63		-1.02								0.92	
<i>eA US REIT Net Median</i>			0.65		3.40		0.46		9.68		9.40		6.15			<i>Apr-15</i>
Commodities	148,000,510	9.40	3.14	--	-2.41	--	-0.17	--	--	--	--	--	--	--	-7.34	Jun-15
<i>Bloomberg Commodity Index TR USD</i>			<u>2.52</u>	--	<u>-2.87</u>	--	<u>-0.29</u>	--	<u>-10.41</u>	--	<u>-10.47</u>	--	<u>-6.83</u>	--	<u>-7.90</u>	<i>Jun-15</i>
Over/Under			0.62		0.46		0.12								0.56	
<i>Core Commodity Mgmt¹</i>	148,000,510	9.40	3.14	--	-2.41	--	-0.17	--	--	--	--	--	--	--	-7.34	Jun-15
<i>Bloomberg Commodity Index TR USD</i>			<u>2.52</u>	--	<u>-2.87</u>	--	<u>-0.29</u>	--	<u>-10.41</u>	--	<u>-10.47</u>	--	<u>-6.83</u>	--	<u>-7.90</u>	<i>Jun-15</i>
Over/Under			0.62		0.46		0.12								0.56	
Private Real Estate	805,842,945	51.21	1.32	77	6.32	16	8.25	36	10.15	41	10.86	45	1.15	99	6.85	Oct-94
<i>Real Estate Blend</i>			<u>2.07</u>	17	<u>6.06</u>	19	<u>8.52</u>	33	<u>11.72</u>	3	<u>11.92</u>	2	<u>7.04</u>	1	<u>9.99</u>	<i>Oct-94</i>
Over/Under			-0.75		0.26		-0.27		-1.57		-1.06		-5.89		-3.14	
<i>InvestorForce Public DB Real Estate Priv Net Median</i>			1.64		5.30		7.12		9.77		10.78		4.02			<i>Oct-94</i>
Timber	20,717,143	1.32	0.00	--	3.85	--	3.31	--	3.48	--	7.57	--	6.35	--	10.10	Sep-99

* Since inception returns are gross of fees.

1- Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

- Public Real Assets Custom Benchmark = 60% BBgBarc US TIPS TR / 20% Bloomberg Commodity Index TR USD / 10% Alerian MLP TR USD / 10% FTSE NAREIT All REIT

- Real Estate Blend = NCREIF-ODCE + 80bps 7/1/2014 to present; NCREIF Property Index 1 Qtr Lag plus 100bps 7/1/2012 - 6/30/2014; NCREIF Property Index prior to

eA = eVestment Alliance

Los Angeles City Employees' Retirement System

Manager Report Card

Real Assets Managers	Inception Date	Mandate	Current Quarter (Net)		One Year (Net)		Three Years (Net)		Five Years (Net)		Since Inception (Net)	Annual Mgt Fee Paid \$ (000)	Comments
			Index	Universe	Index	Universe	Index	Universe	Index	Universe	Index		
DFA	Jul-14	U.S. TIPS	✓	✓	✗	✗	✓	✓	N/A	N/A	✓	194.6	Performance compliant with LACERS' Manager Monitoring Policy
CenterSquare	Apr-15	REITS	✓	✓	✗	✓	N/A	N/A	N/A	N/A	✓	399.8	LACERS' Manager Monitoring Policy requires at least 3 years of track record to evaluate performance
CoreCommodity Mgt	Jul-15	Commodities	✓	N/A	✓	N/A	N/A	N/A	N/A	N/A	✗	860.4	LACERS' Manager Monitoring Policy requires at least 3 years of track record to evaluate performance

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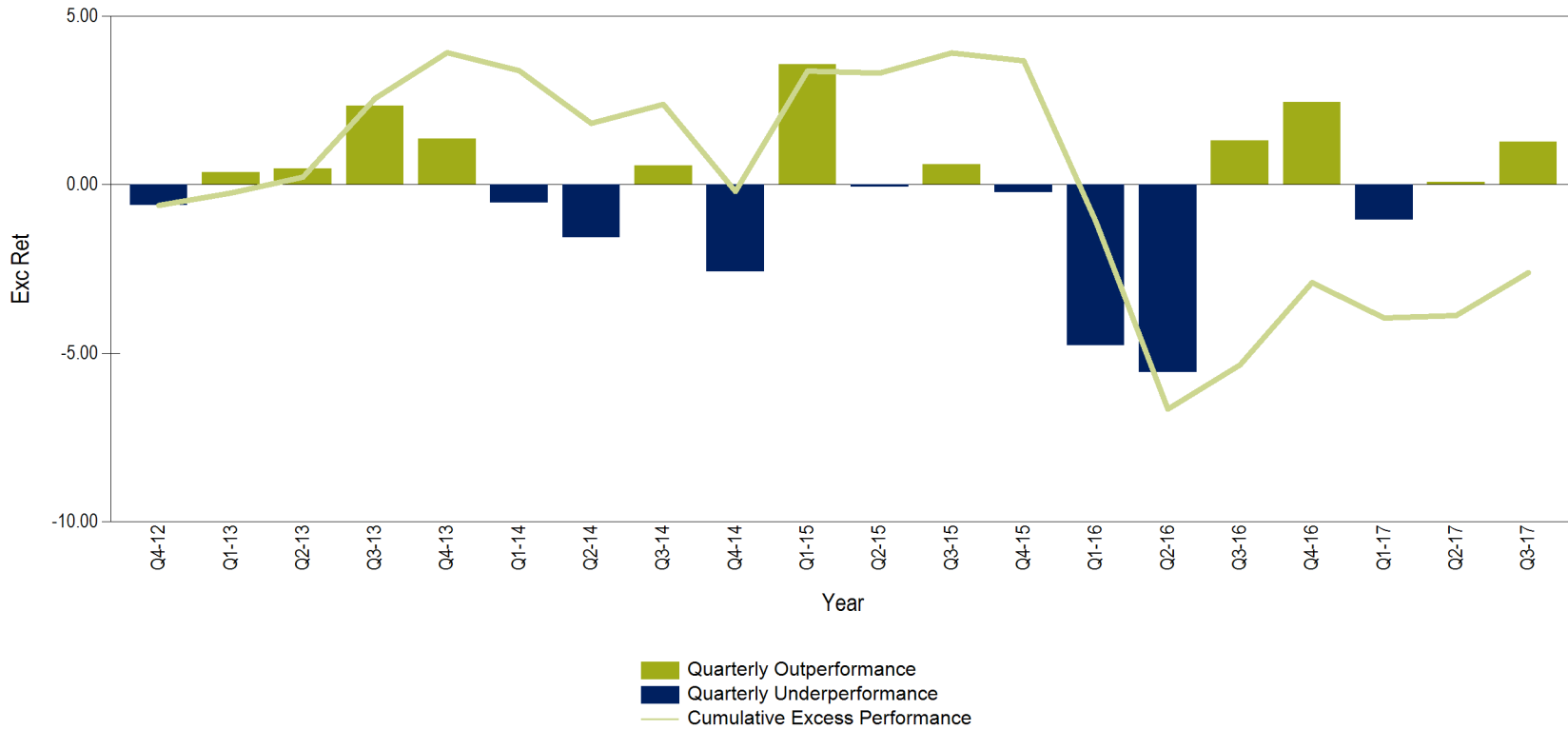
Appendix



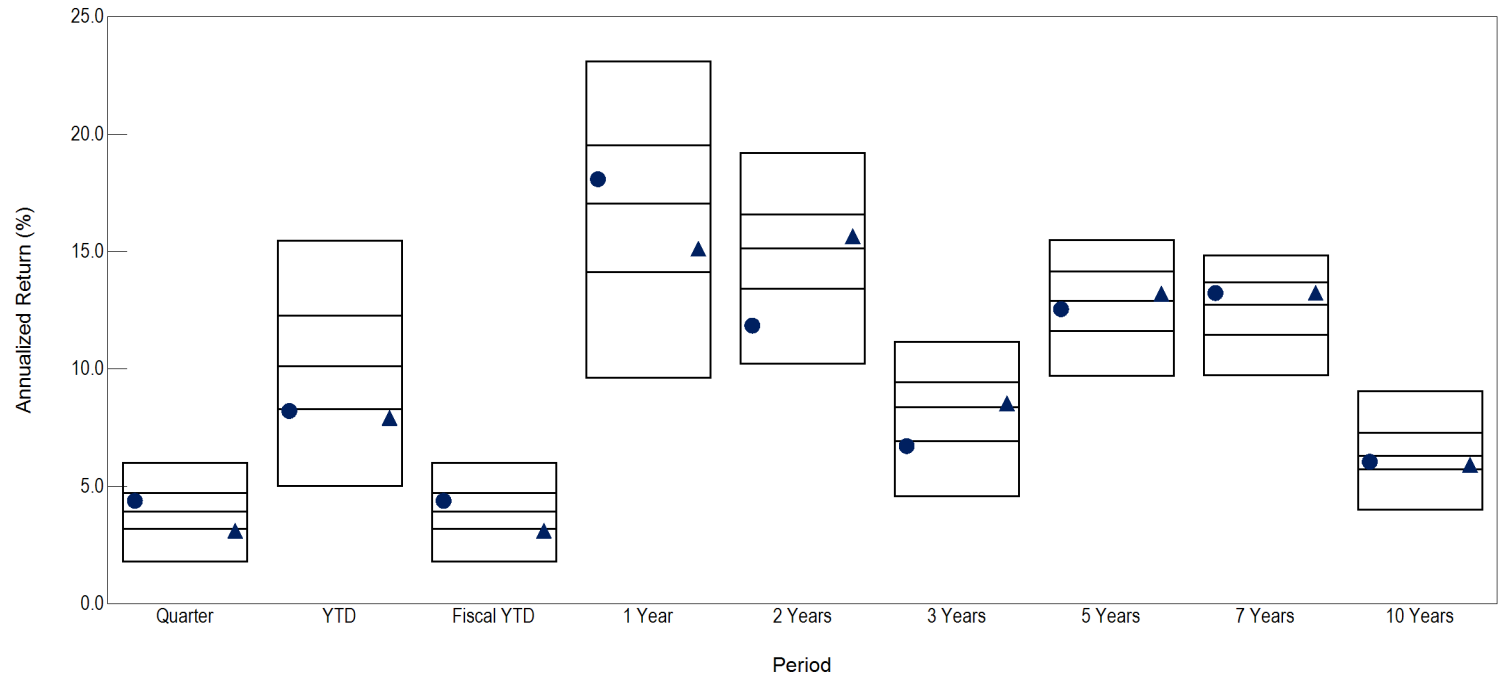
U.S. Equity Manager Performance



Quarterly and Cumulative Excess Performance

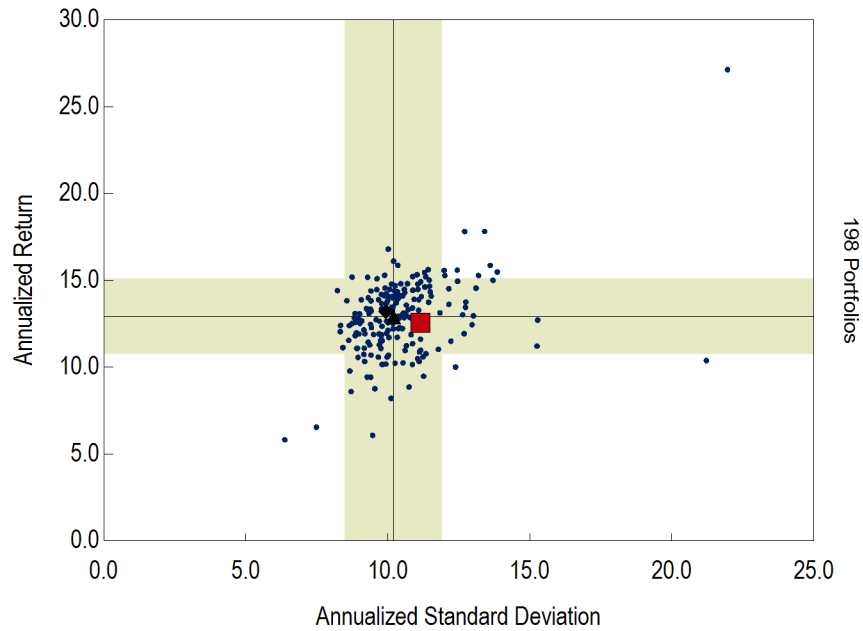


Aronson, Johnson & Ortiz vs. eA US Large Cap Value Equity Net

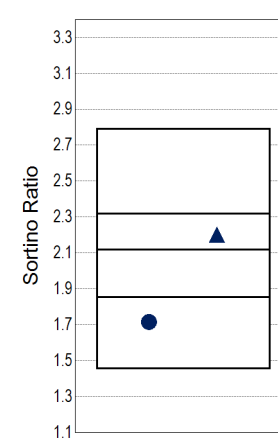
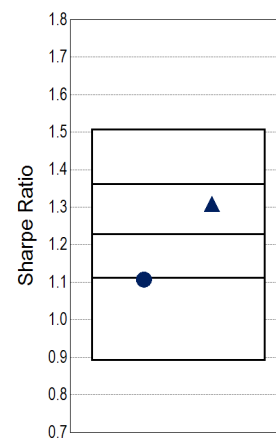
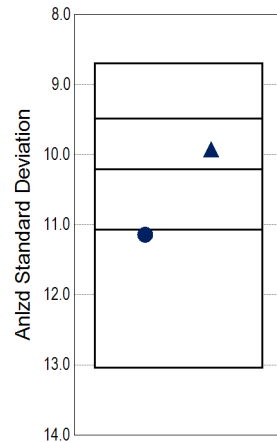
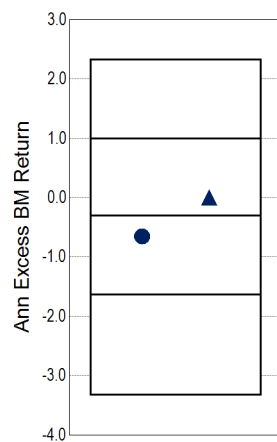
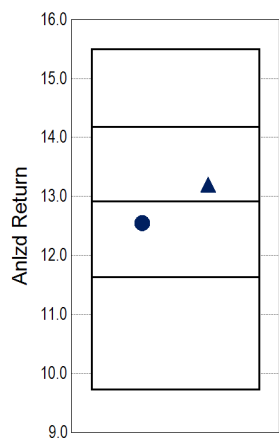
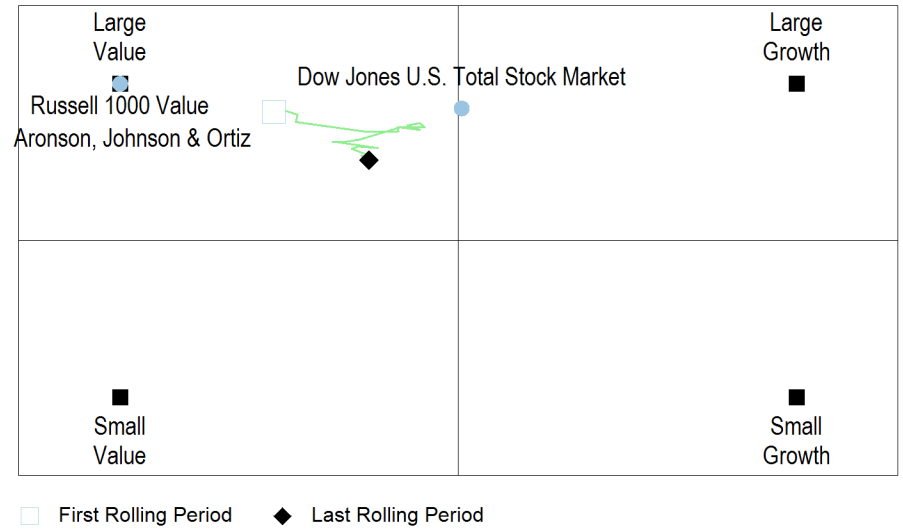


	Return (Rank)									
5th Percentile	5.99	15.46	5.99	23.09	19.20	11.15	15.50	14.85	9.06	
25th Percentile	4.74	12.29	4.74	19.56	16.61	9.45	14.19	13.71	7.30	
Median	3.95	10.14	3.95	17.06	15.15	8.39	12.92	12.77	6.33	
75th Percentile	3.22	8.31	3.22	14.14	13.46	6.95	11.64	11.48	5.76	
95th Percentile	1.81	5.06	1.81	9.65	10.26	4.60	9.74	9.77	4.05	
# of Portfolios	220	220	220	220	219	211	198	175	148	
● Aronson, Johnson & Ortiz	4.38 (36)	8.21 (77)	4.38 (36)	18.08 (39)	11.85 (89)	6.72 (80)	12.55 (60)	13.24 (41)	6.05 (64)	
▲ Russell 1000 Value	3.11 (79)	7.92 (80)	3.11 (79)	15.12 (70)	15.66 (42)	8.53 (48)	13.20 (45)	13.24 (41)	5.92 (70)	

5 Year Risk Return

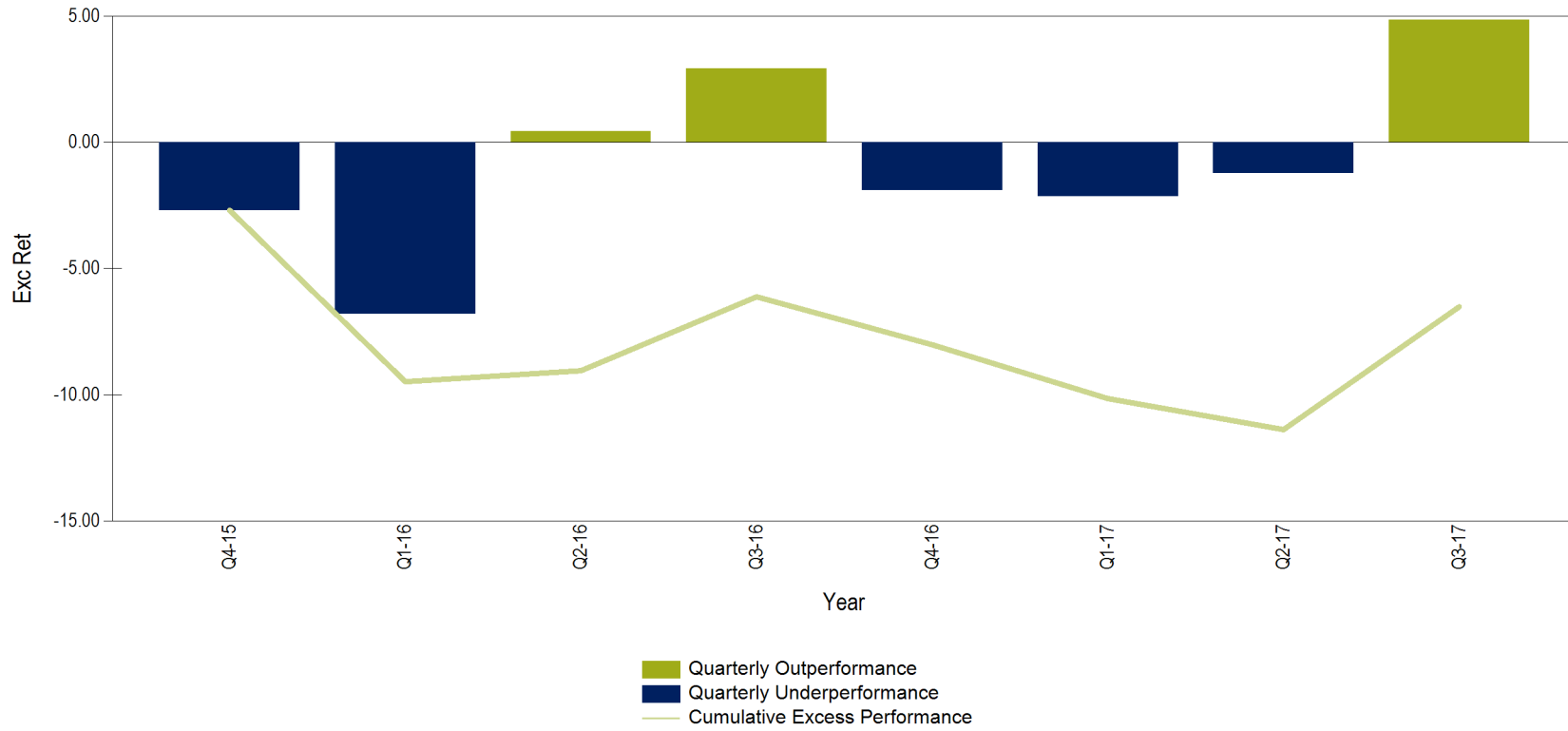


5 Year Style Map

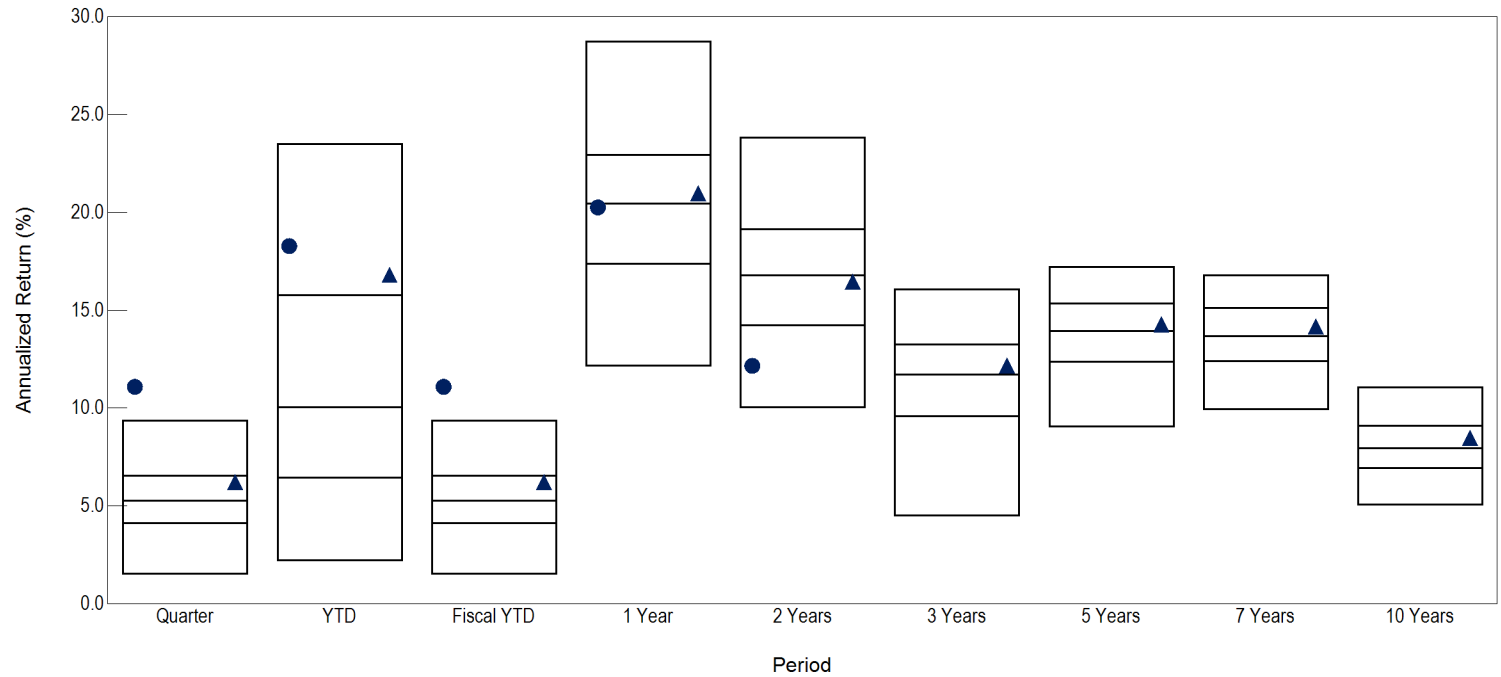


- Aronson, Johnson & Ortiz
- ▲ Russell 1000 Value
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

Quarterly and Cumulative Excess Performance

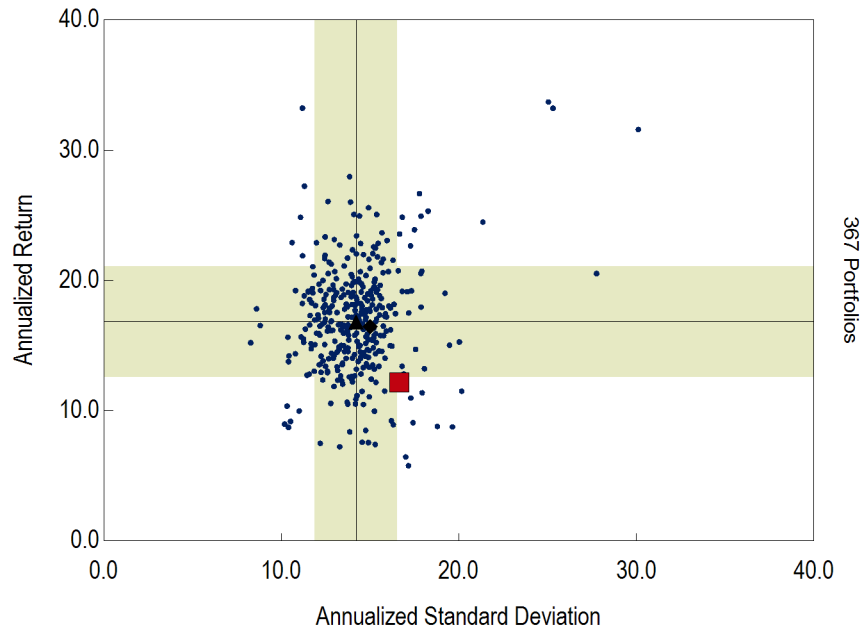


EAM Investors vs. eA US Small Cap Equity Net

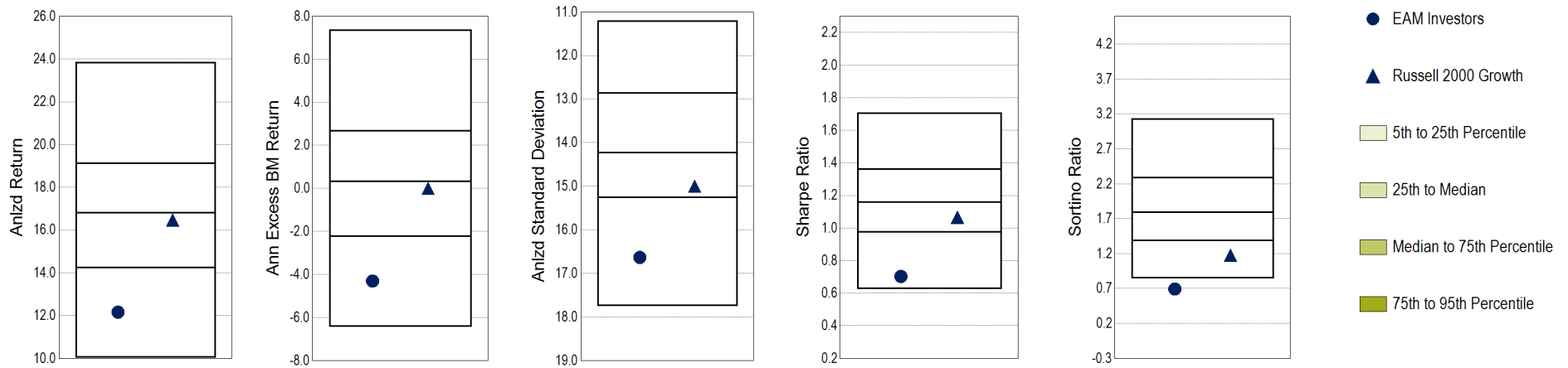
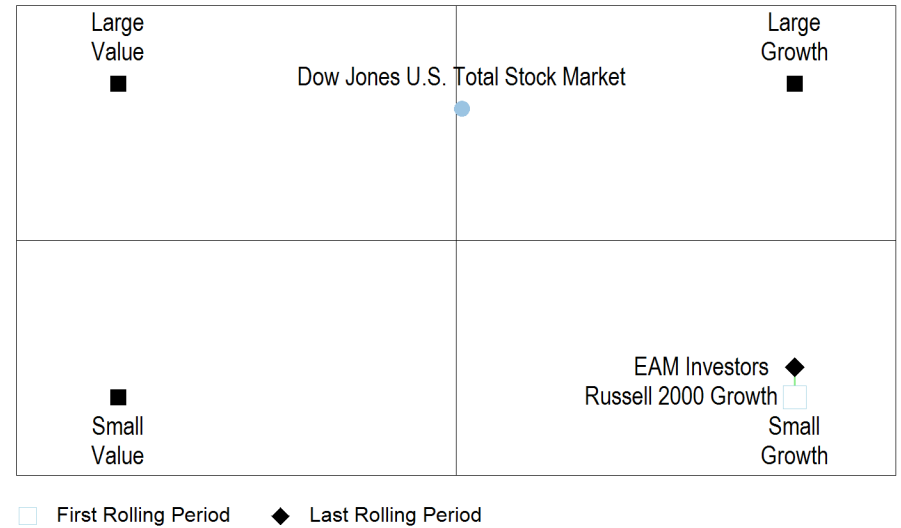


	Return (Rank)																	
5th Percentile	9.34	23.49	9.34	28.74	23.82	16.08	17.22	16.79	11.08									
25th Percentile	6.58	15.80	6.58	22.96	19.16	13.30	15.36	15.16	9.12									
Median	5.30	10.07	5.30	20.47	16.83	11.74	13.96	13.72	7.99									
75th Percentile	4.17	6.48	4.17	17.42	14.27	9.63	12.39	12.43	6.97									
95th Percentile	1.58	2.26	1.58	12.20	10.09	4.56	9.10	9.96	5.11									
# of Portfolios	381	380	381	379	367	353	331	309	264									
● EAM Investors	11.08	(2)	18.28	(19)	11.08	(2)	20.25	(52)	12.16	(90)	--	(--)	--	(--)	--	(--)		
▲ Russell 2000 Growth	6.22	(32)	16.81	(23)	6.22	(32)	20.98	(44)	16.47	(56)	12.17	(43)	14.28	(45)	14.17	(42)	8.47	(37)

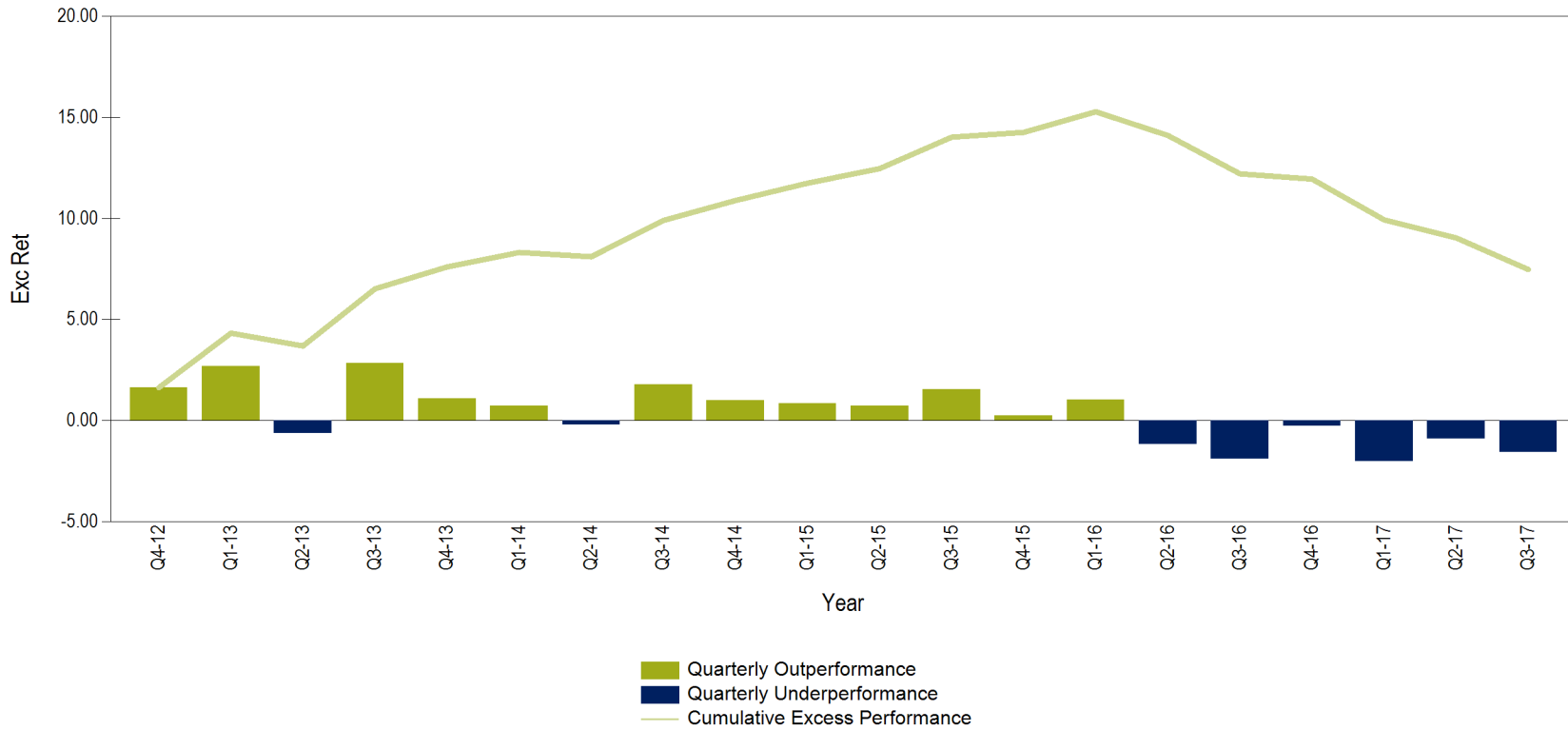
Since Inception Risk Return



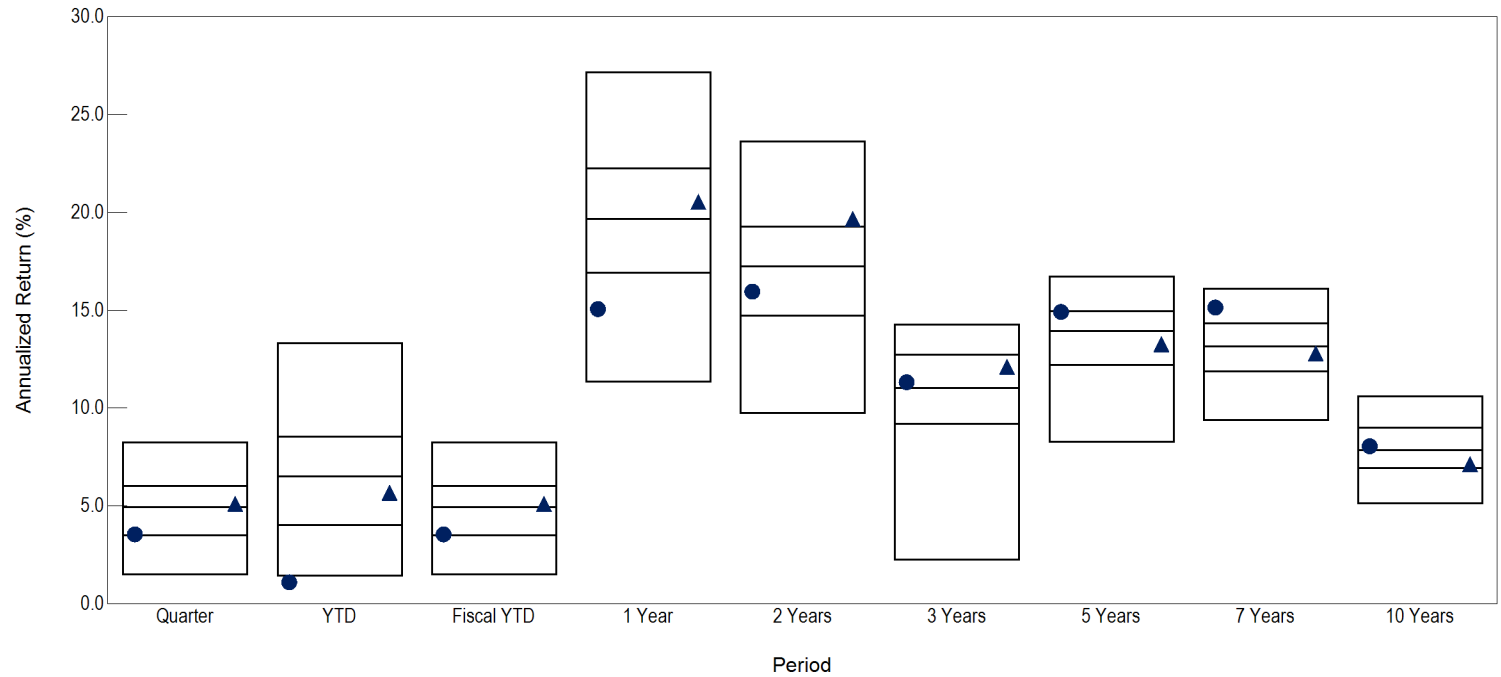
Since Inception Style Map



Quarterly and Cumulative Excess Performance

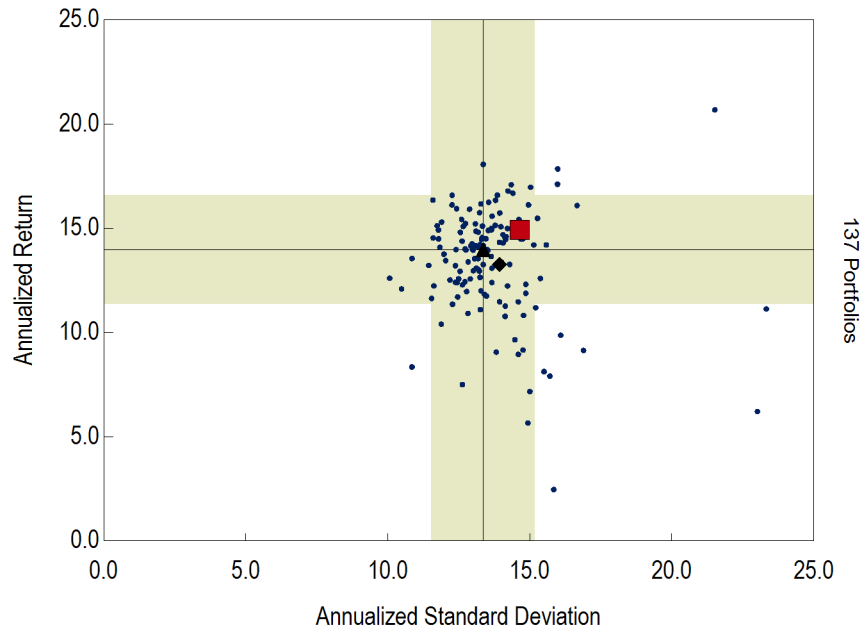


PanAgora vs. eA US Small Cap Value Equity Net

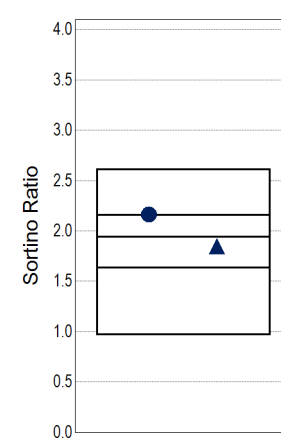
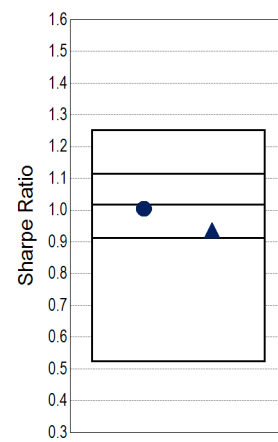
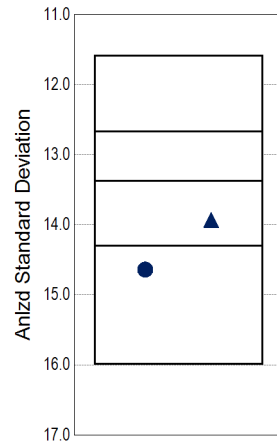
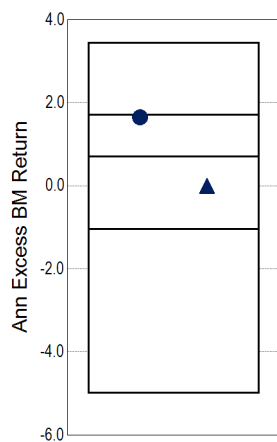
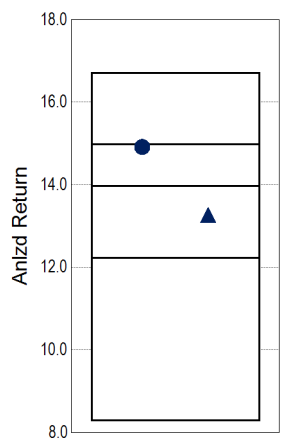
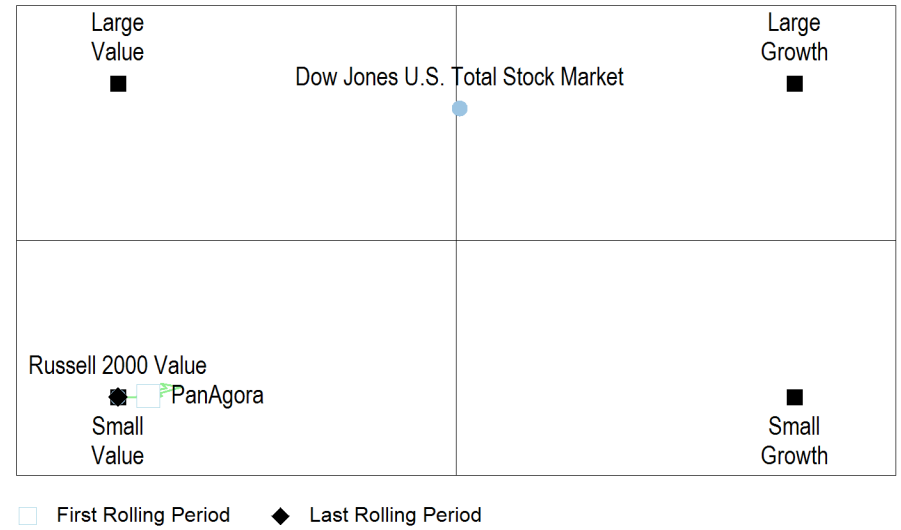


	Return (Rank)																	
5th Percentile	8.24	13.31	8.24	27.17	23.61	14.28	16.71	16.09	10.61									
25th Percentile	6.06	8.56	6.06	22.28	19.29	12.75	14.99	14.35	9.05									
Median	4.96	6.53	4.96	19.69	17.27	11.07	13.98	13.17	7.89									
75th Percentile	3.54	4.07	3.54	16.95	14.76	9.22	12.24	11.91	6.97									
95th Percentile	1.54	1.48	1.54	11.38	9.78	2.28	8.30	9.42	5.18									
# of Portfolios	159	159	159	158	151	146	137	127	111									
● PanAgora	3.55	(75)	1.10	(96)	3.55	(75)	15.06	(86)	15.95	(64)	11.32	(44)	14.91	(28)	15.14	(17)	8.05	(47)
▲ Russell 2000 Value	5.11	(46)	5.68	(62)	5.11	(46)	20.55	(43)	19.68	(22)	12.12	(36)	13.27	(60)	12.80	(58)	7.14	(73)

5 Year Risk Return

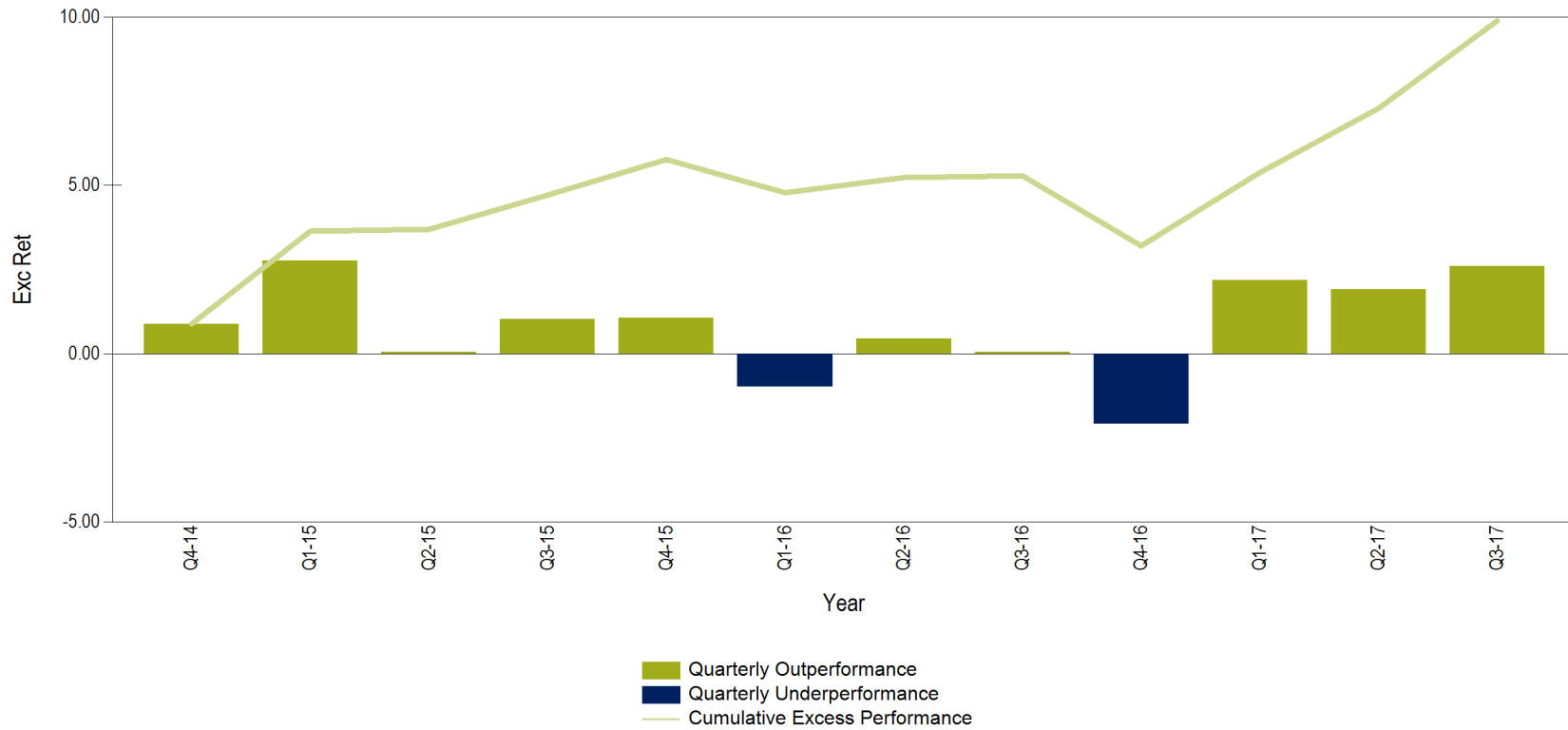


5 Year Style Map

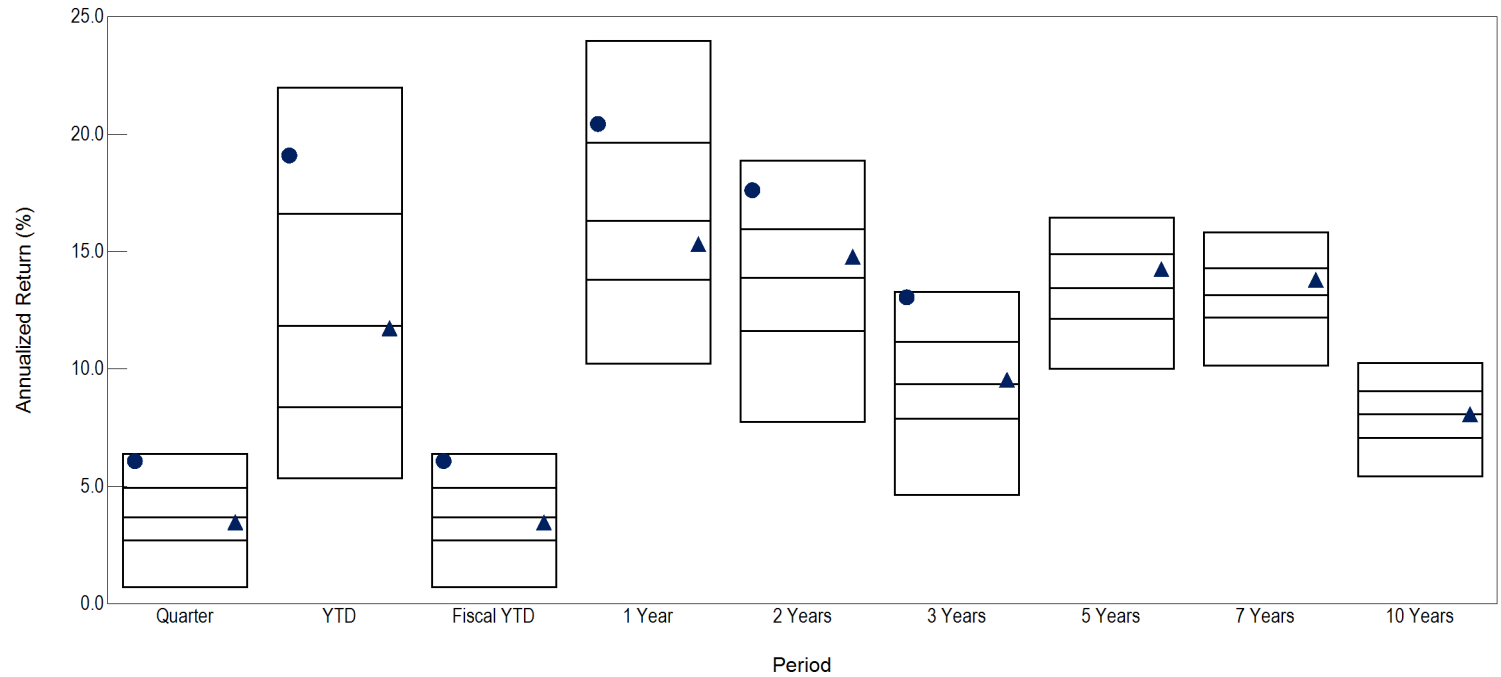


- PanAgora
- ▲ Russell 2000 Value
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

Quarterly and Cumulative Excess Performance

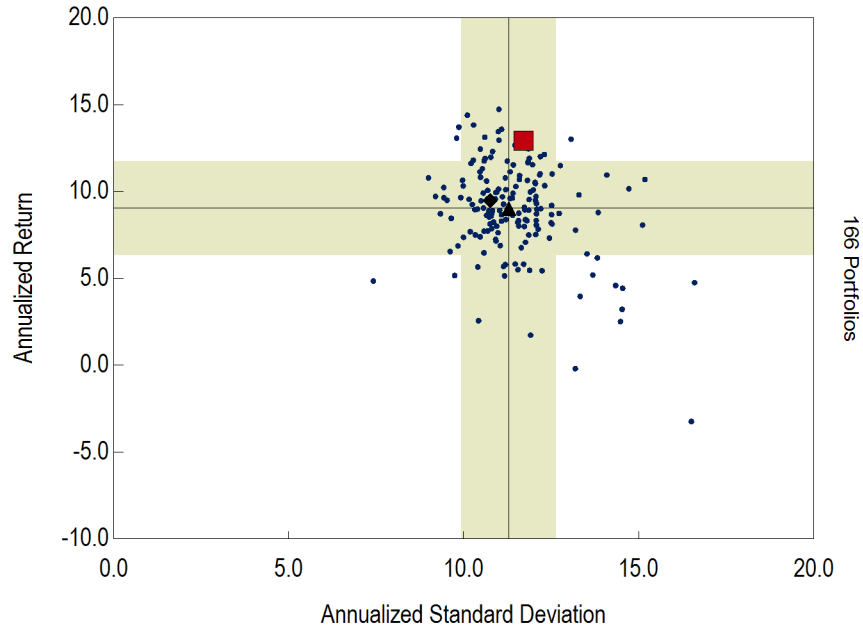


Principal Global Investors vs. eA US Mid Cap Equity Net

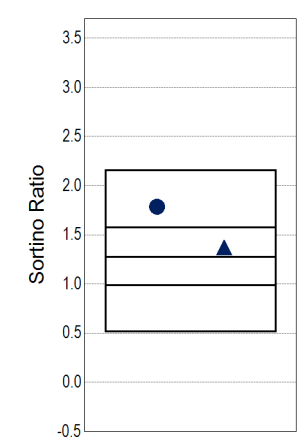
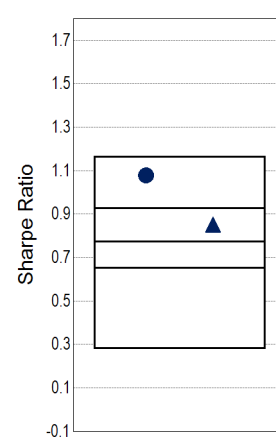
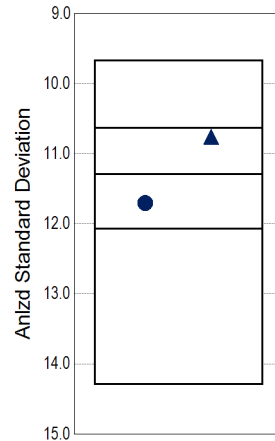
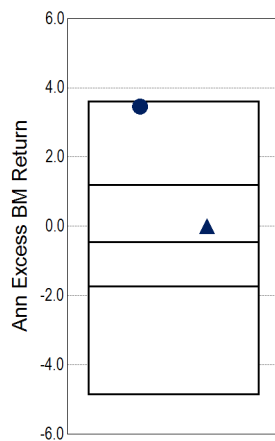
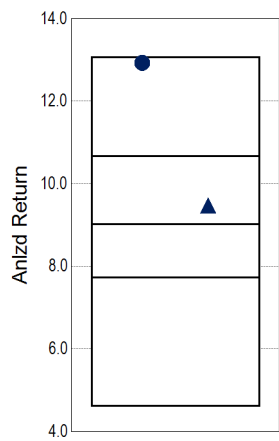
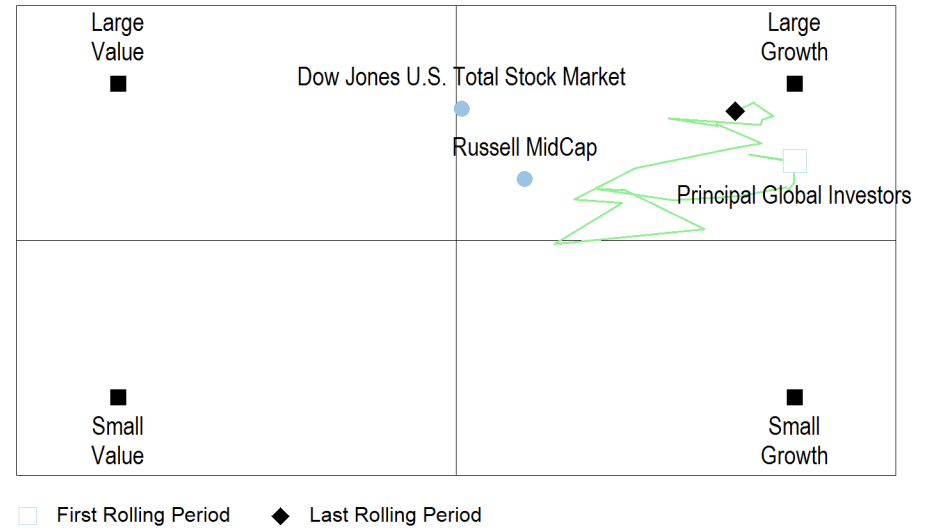


	Return (Rank)																	
5th Percentile	6.39		21.97		6.39		23.98		18.86		13.28		16.45		15.82		10.27	
25th Percentile	4.97		16.64		4.97		19.66		15.98		11.18		14.91		14.33		9.08	
Median	3.72		11.85		3.72		16.32		13.90		9.37		13.48		13.18		8.10	
75th Percentile	2.72		8.40		2.72		13.83		11.63		7.91		12.17		12.21		7.08	
95th Percentile	0.75		5.37		0.75		10.26		7.78		4.67		10.03		10.16		5.47	
# of Portfolios	172		172		172		171		170		168		151		141		118	
● Principal Global Investors	6.08	(9)	19.09	(16)	6.08	(9)	20.43	(22)	17.61	(10)	13.05	(6)	--	(--)	--	(--)	--	(--)
▲ Russell MidCap	3.47	(57)	11.74	(51)	3.47	(57)	15.32	(62)	14.78	(43)	9.54	(47)	14.26	(39)	13.80	(37)	8.08	(51)

Since Inception Risk Return

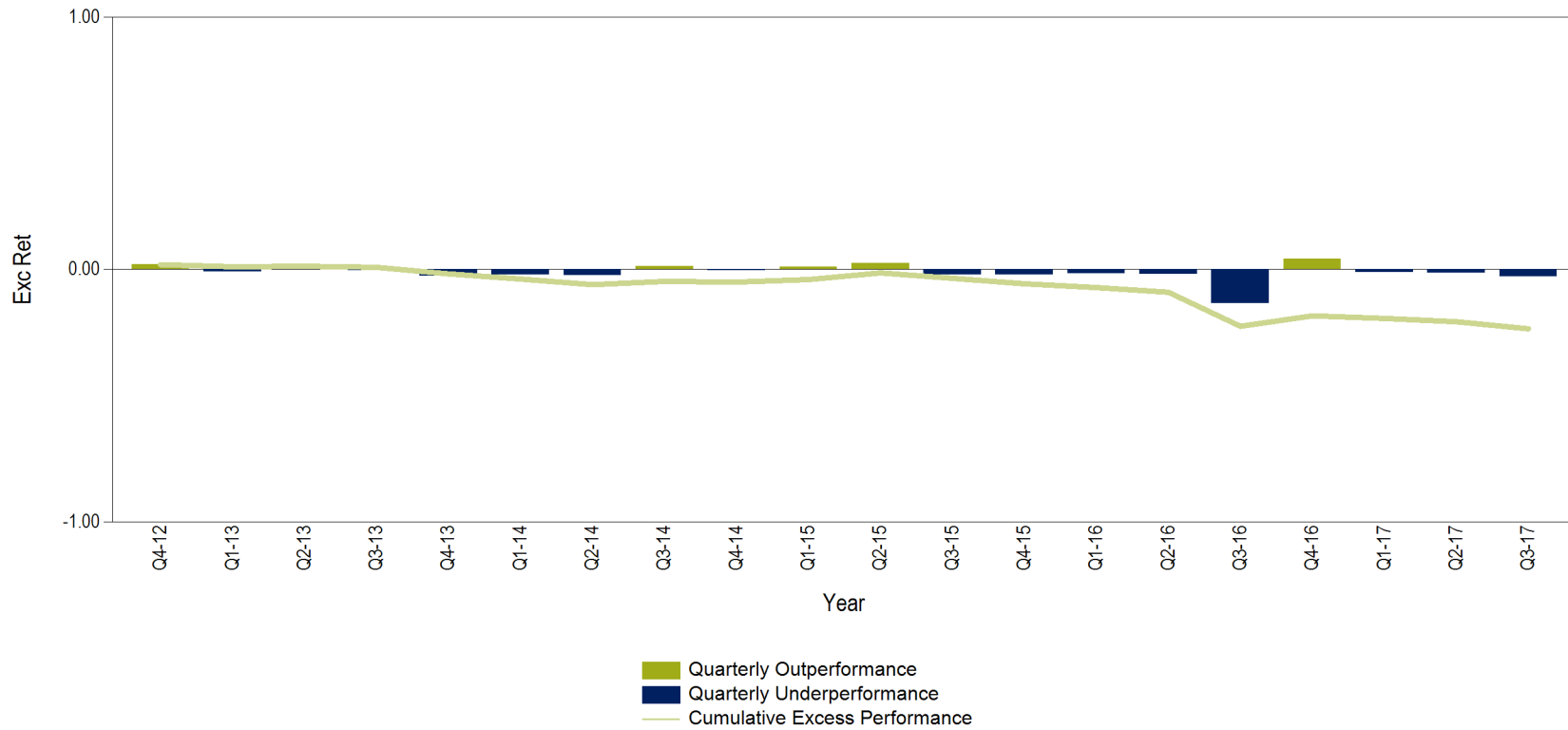


Since Inception Style Map

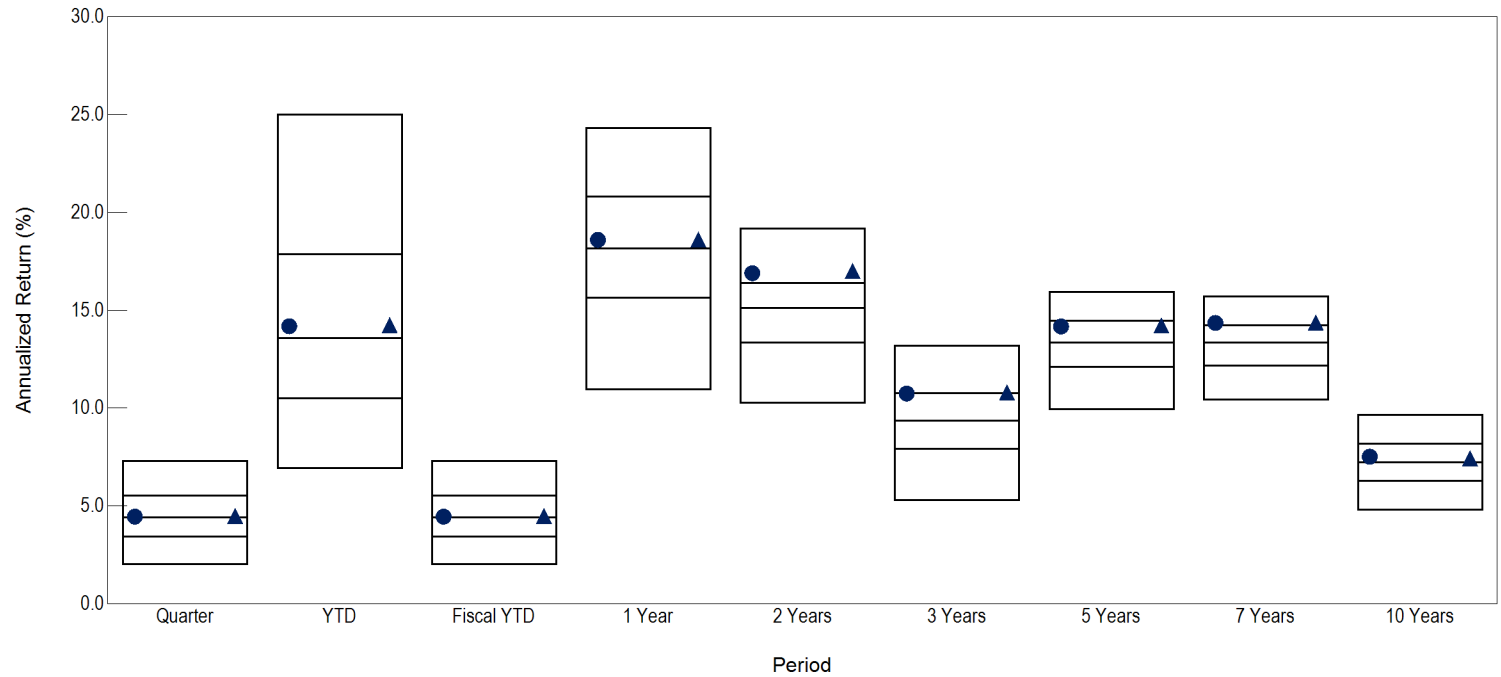


- Principal Global Investors
- ▲ Russell MidCap
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

Quarterly and Cumulative Excess Performance

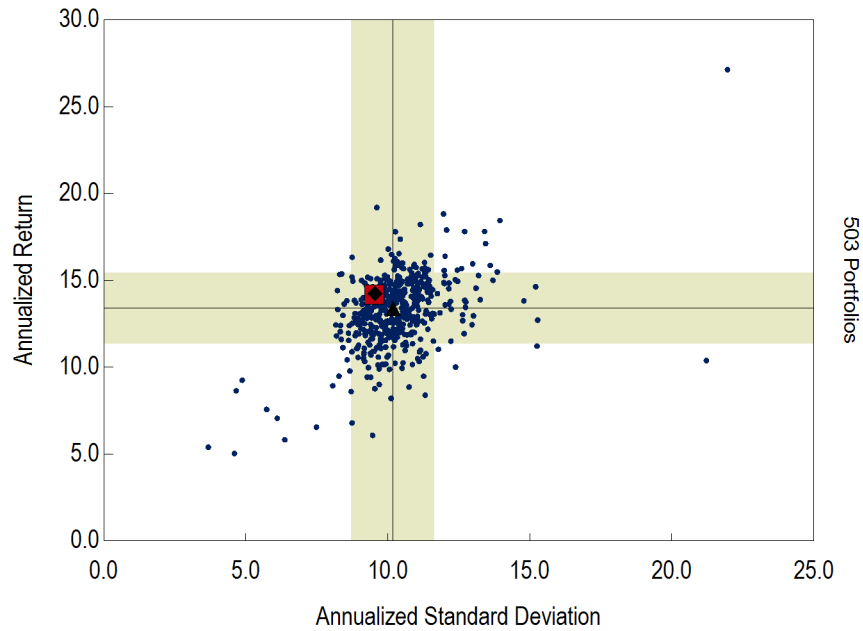


Rhumblin Advisors S&P 500 vs. eA US Large Cap Equity Net

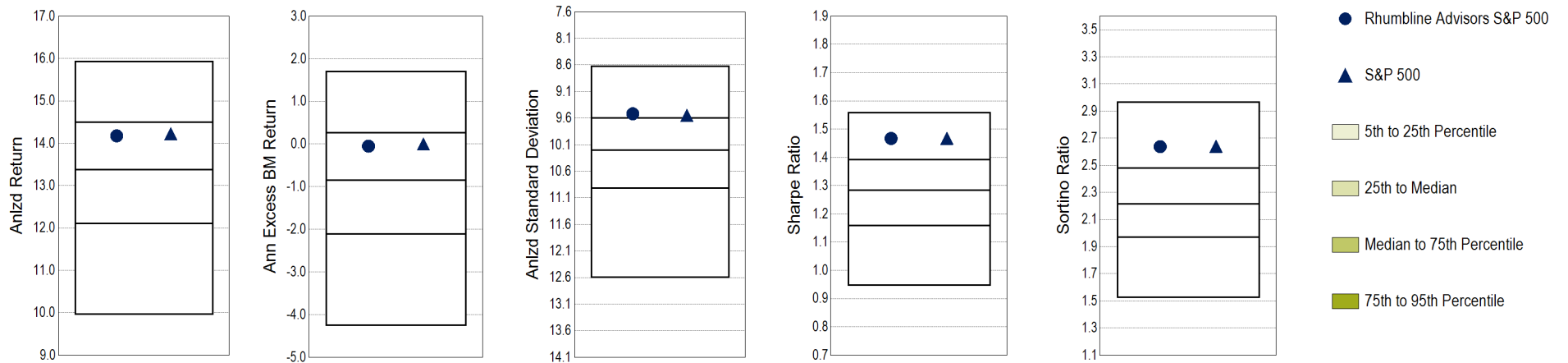
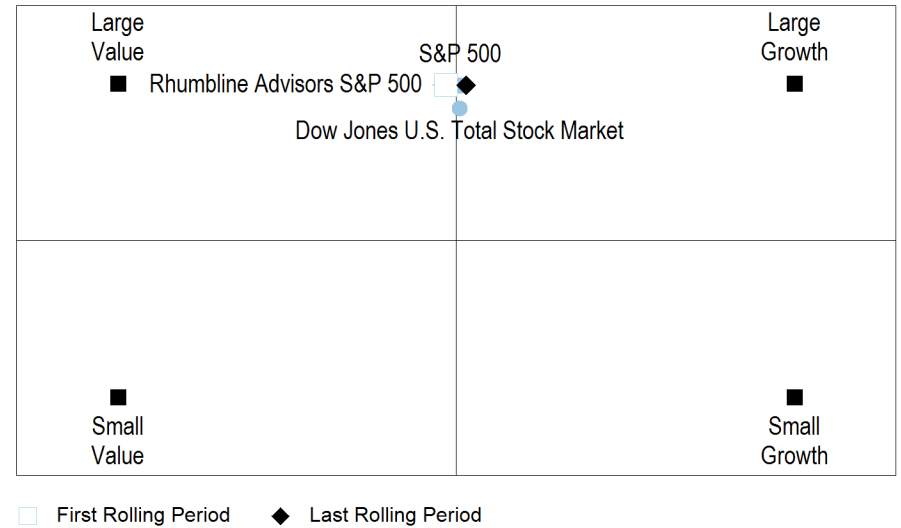


	Return (Rank)																	
5th Percentile	7.31	25.00	7.31	24.30	19.19	13.19	15.92	15.70	9.66									
25th Percentile	5.56	17.91	5.56	20.84	16.43	10.81	14.50	14.28	8.21									
Median	4.46	13.63	4.46	18.19	15.14	9.39	13.39	13.38	7.25									
75th Percentile	3.48	10.53	3.48	15.68	13.40	7.95	12.13	12.20	6.31									
95th Percentile	2.06	6.97	2.06	11.00	10.31	5.32	9.98	10.48	4.84									
# of Portfolios	571	571	571	570	559	546	503	454	393									
● Rhumblin Advisors S&P 500	4.45	(52)	14.18	(45)	4.45	(52)	18.60	(47)	16.90	(21)	10.74	(26)	14.17	(33)	14.35	(23)	7.52	(44)
▲ S&P 500	4.48	(50)	14.24	(45)	4.48	(50)	18.61	(47)	17.01	(20)	10.81	(25)	14.22	(33)	14.38	(22)	7.44	(45)

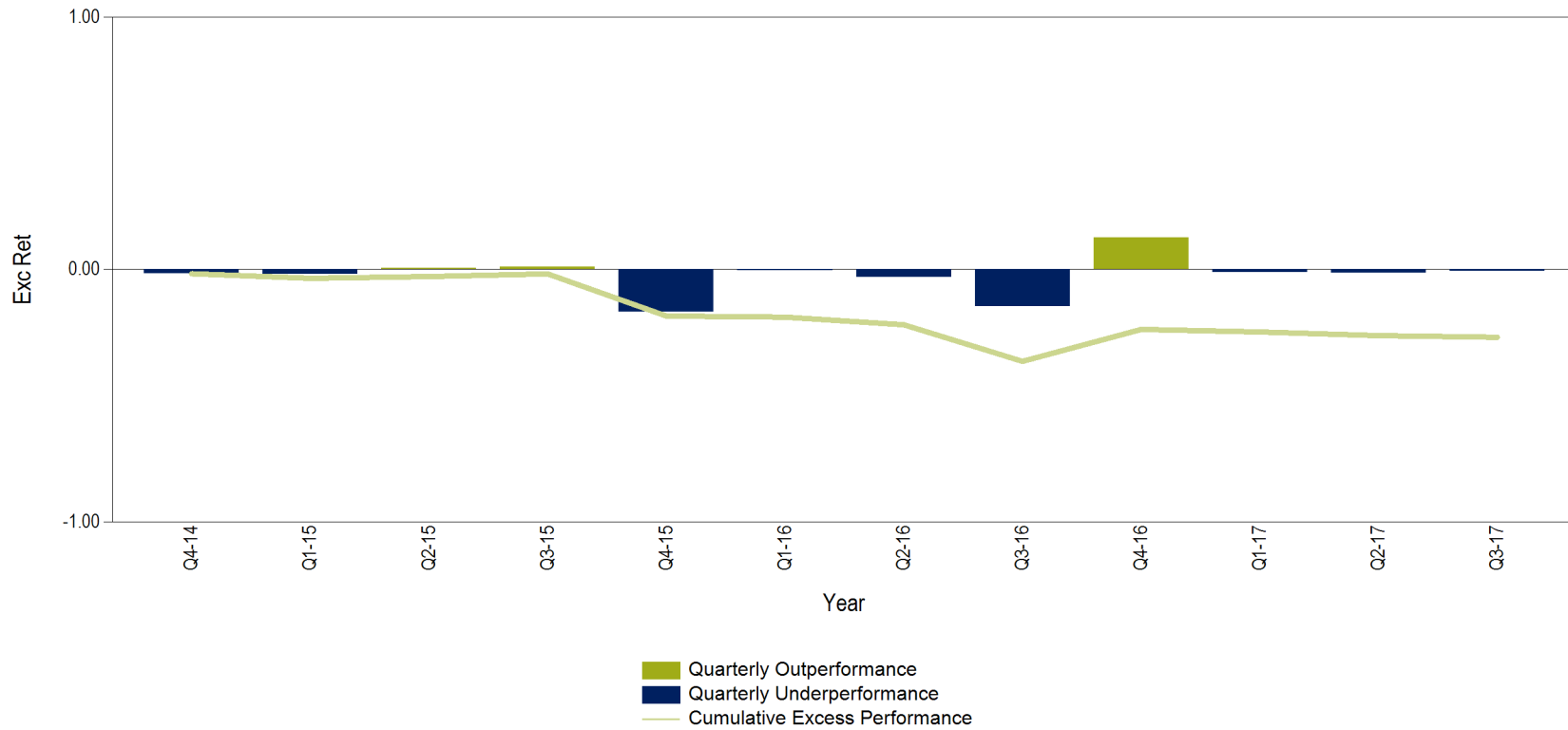
5 Year Risk Return



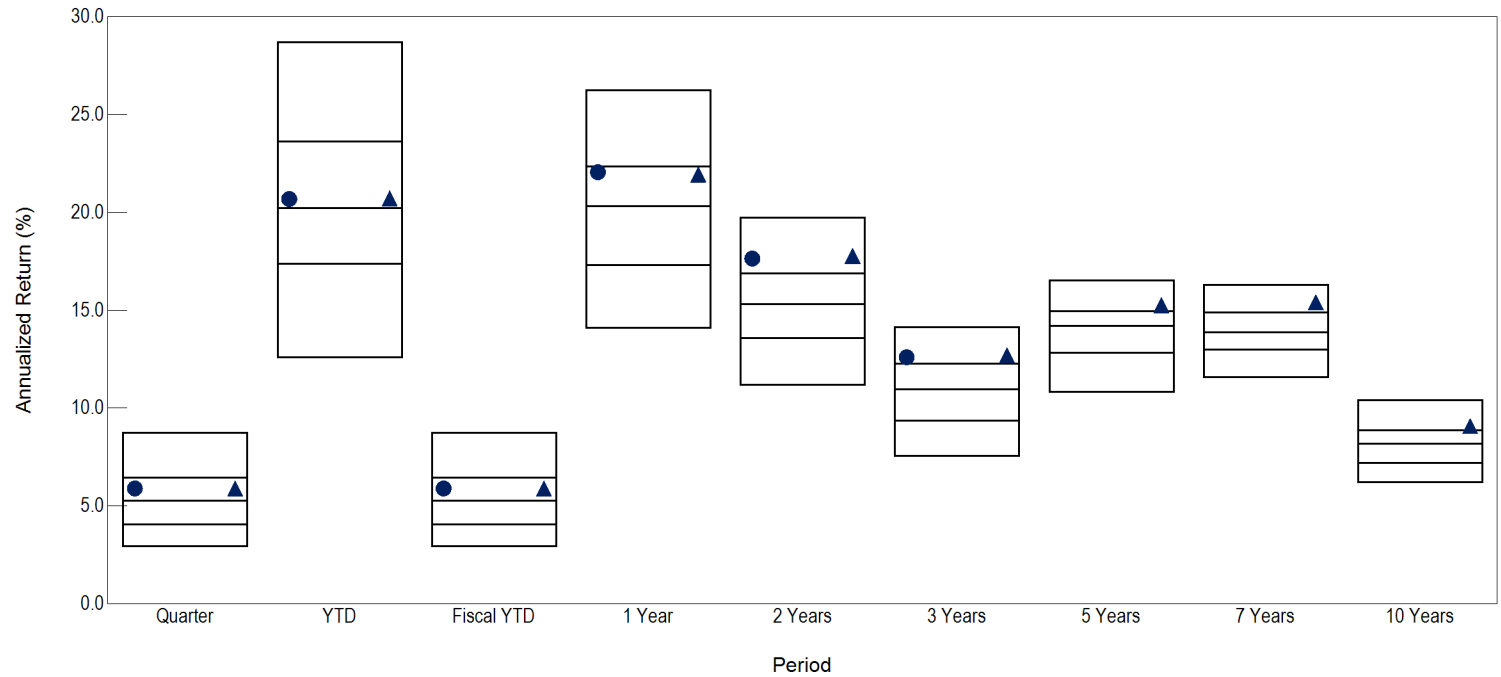
5 Year Style Map



Quarterly and Cumulative Excess Performance



Rhumblin Advisors Russell 1000 Growth vs. eA US Large Cap Growth Equity Net

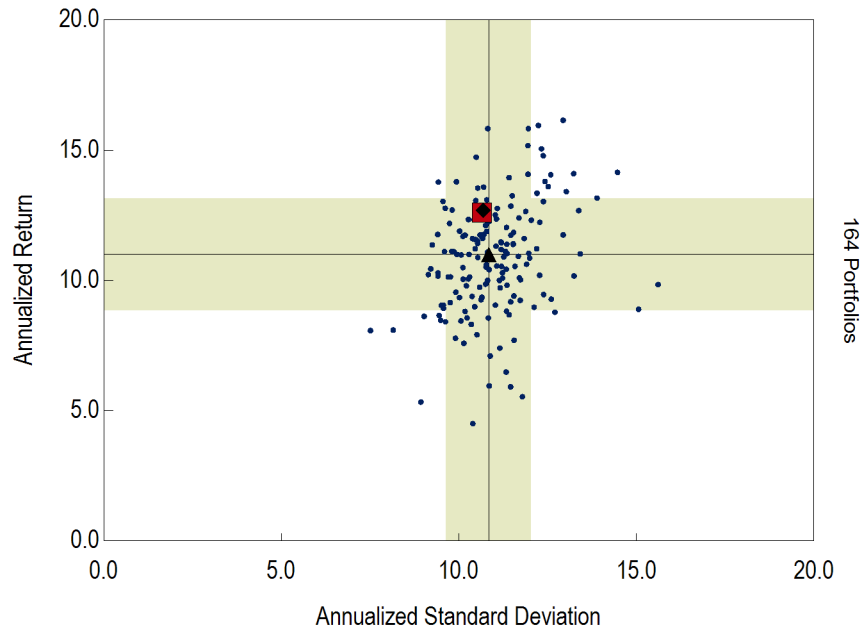


	Return (Rank)																	
5th Percentile	8.74	28.70	8.74	26.25	19.73	14.14	16.52	16.29	10.39									
25th Percentile	6.49	23.66	6.49	22.37	16.93	12.31	14.99	14.92	8.90									
Median	5.30	20.26	5.30	20.36	15.36	11.00	14.23	13.90	8.21									
75th Percentile	4.10	17.41	4.10	17.35	13.60	9.40	12.87	13.02	7.22									
95th Percentile	2.97	12.62	2.97	14.15	11.21	7.60	10.88	11.63	6.24									
# of Portfolios	171	171	171	171	166	164	151	141	123									
● Rhumblin Advisors Russell 1000 Growth	5.89	(36)	20.68	(47)	5.89	(36)	22.06	(31)	17.64	(17)	12.60	(21)	--	(--)	--	(--)	--	(--)
▲ Russell 1000 Growth	5.90	(36)	20.72	(47)	5.90	(36)	21.94	(32)	17.78	(15)	12.69	(19)	15.26	(19)	15.41	(15)	9.08	(22)

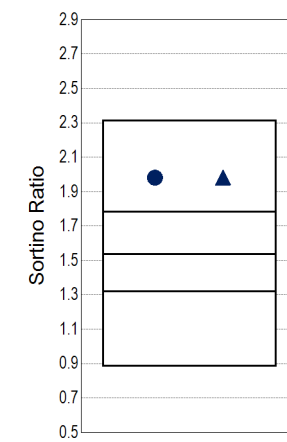
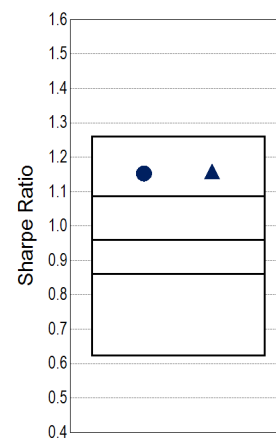
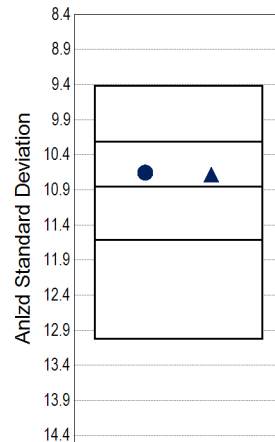
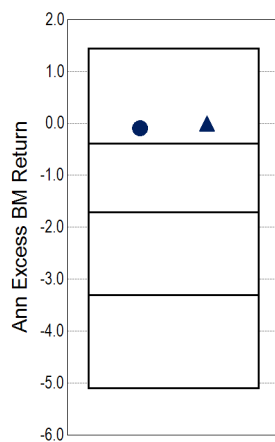
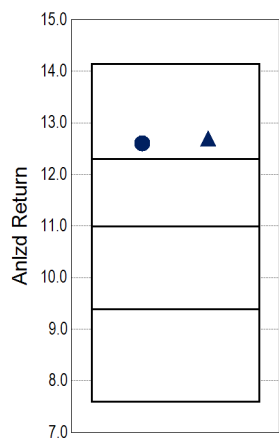
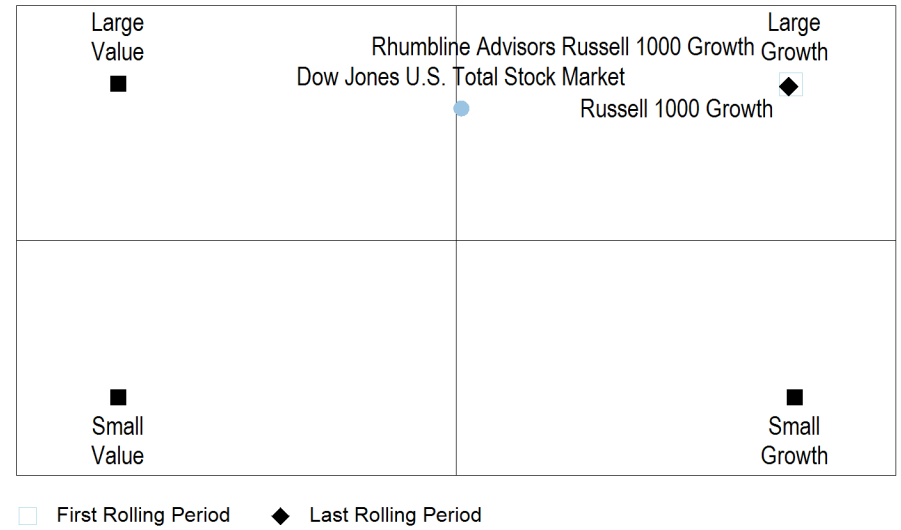
Los Angeles City Employees' Retirement System

Rhumblin Advisors Russell 1000 Growth

3 Year Risk Return

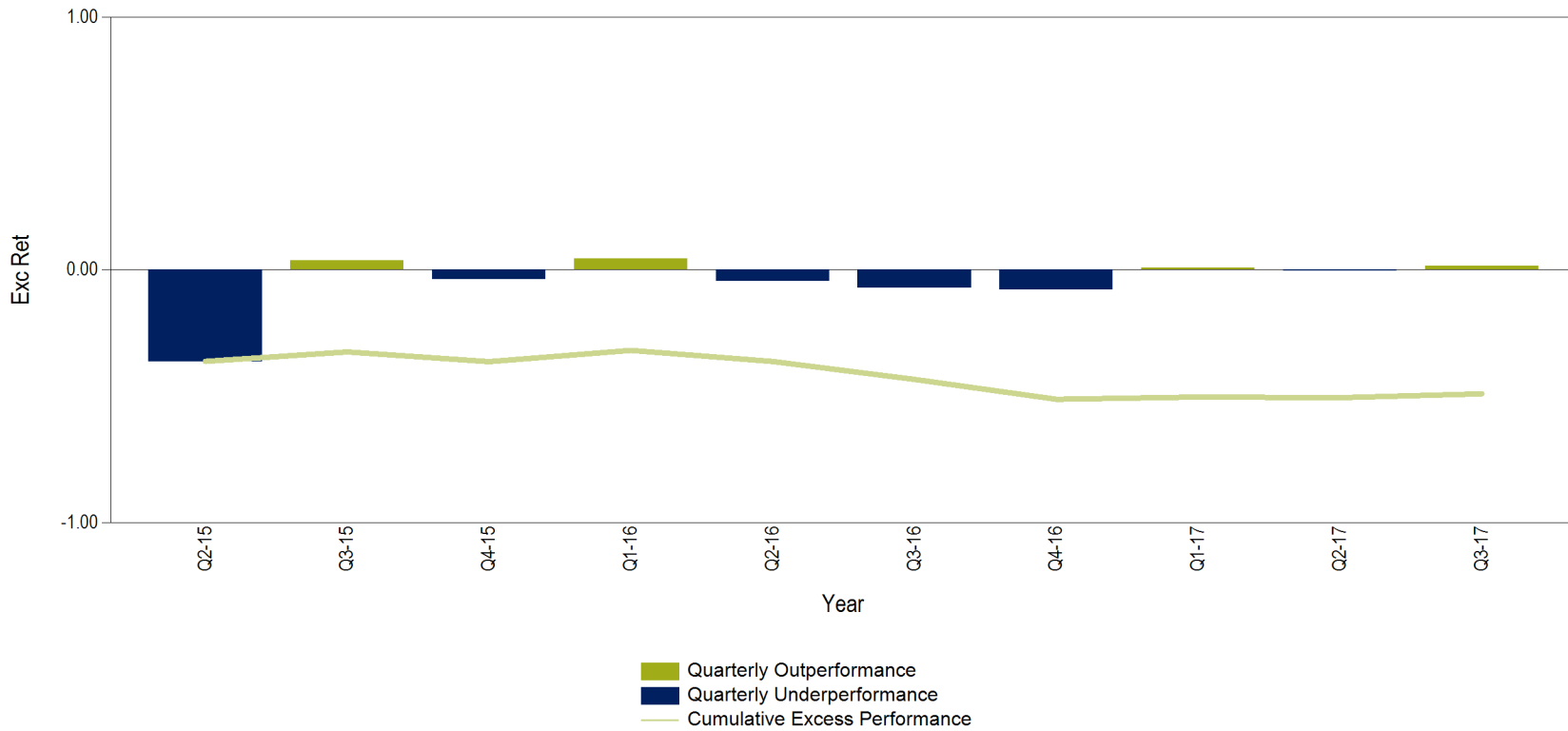


3 Year Style Map

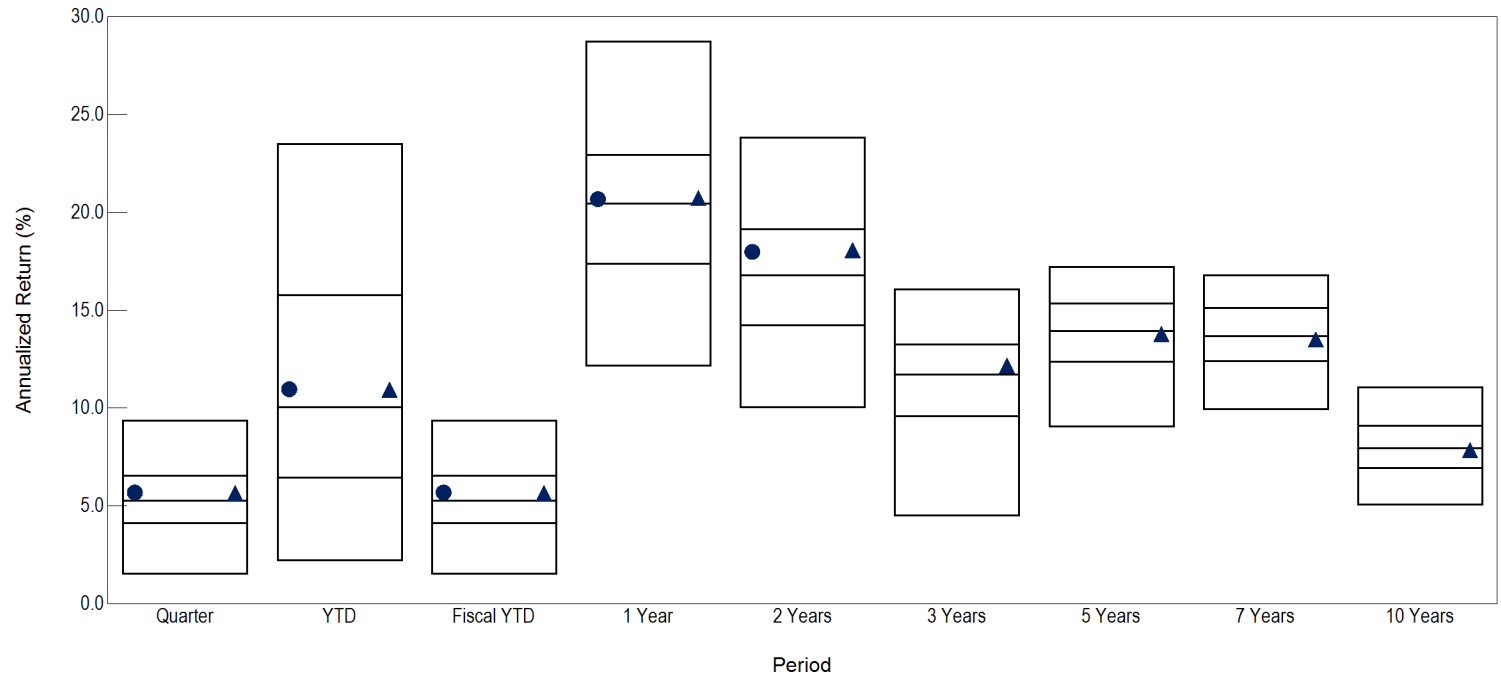


- Rhumblin Advisors Russell 1000 Growth
- ▲ Russell 1000 Growth
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

Quarterly and Cumulative Excess Performance

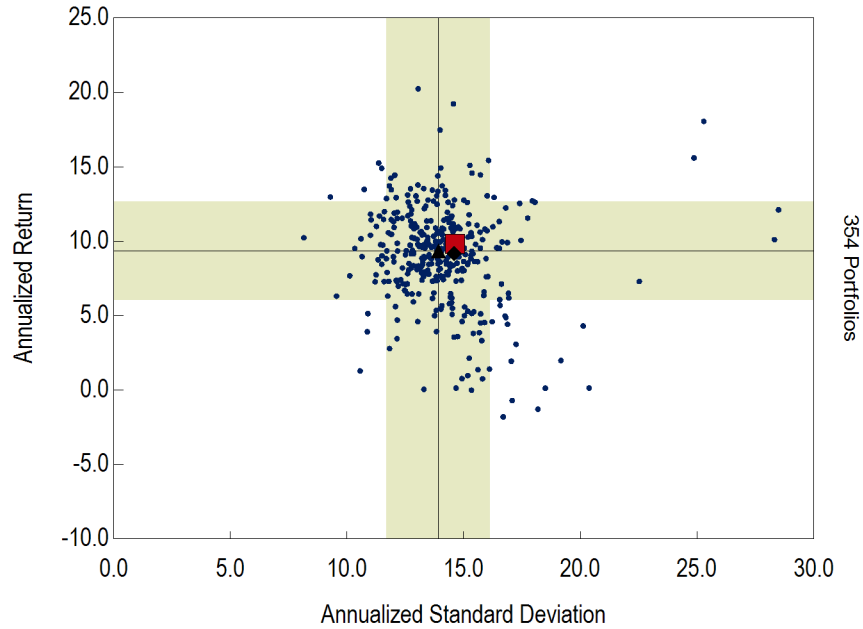


Rhumblin Advisors Russell 2000 vs. eA US Small Cap Equity Net

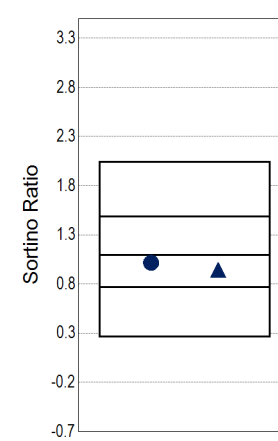
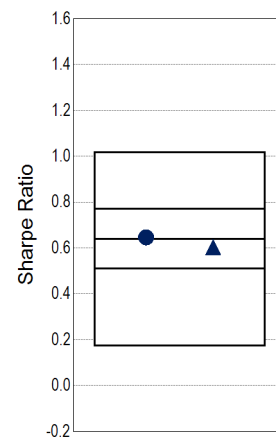
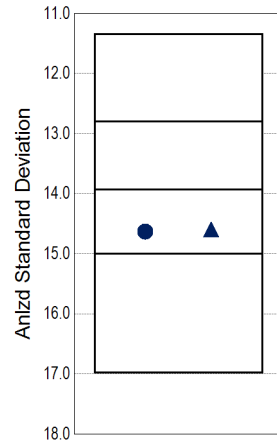
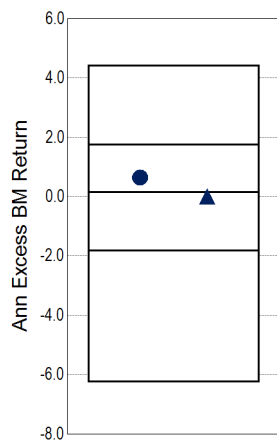
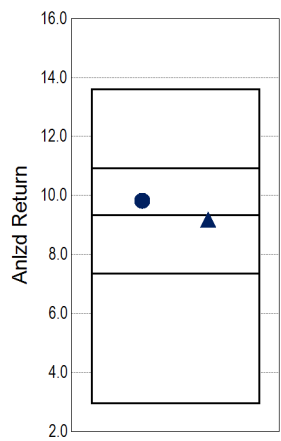
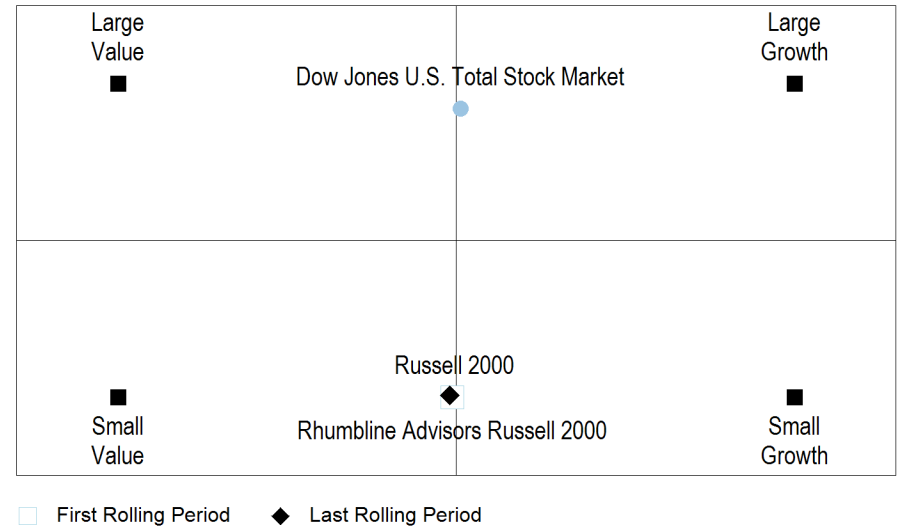


	Return (Rank)															
5th Percentile	9.34	23.49	9.34	28.74	23.82	16.08	17.22	16.79	11.08							
25th Percentile	6.58	15.80	6.58	22.96	19.16	13.30	15.36	15.16	9.12							
Median	5.30	10.07	5.30	20.47	16.83	11.74	13.96	13.72	7.99							
75th Percentile	4.17	6.48	4.17	17.42	14.27	9.63	12.39	12.43	6.97							
95th Percentile	1.58	2.26	1.58	12.20	10.09	4.56	9.10	9.96	5.11							
# of Portfolios	381	380	381	379	367	353	331	309	264							
● Rhumblin Advisors Russell 2000	5.68 (43)	10.96 (45)	5.68 (43)	20.68 (48)	17.99 (38)	-- (--)	-- (--)	-- (--)	-- (--)							
▲ Russell 2000	5.67 (44)	10.94 (45)	5.67 (44)	20.74 (47)	18.07 (36)	12.18 (43)	13.79 (54)	13.51 (54)	7.85 (54)							

Since Inception Risk Return

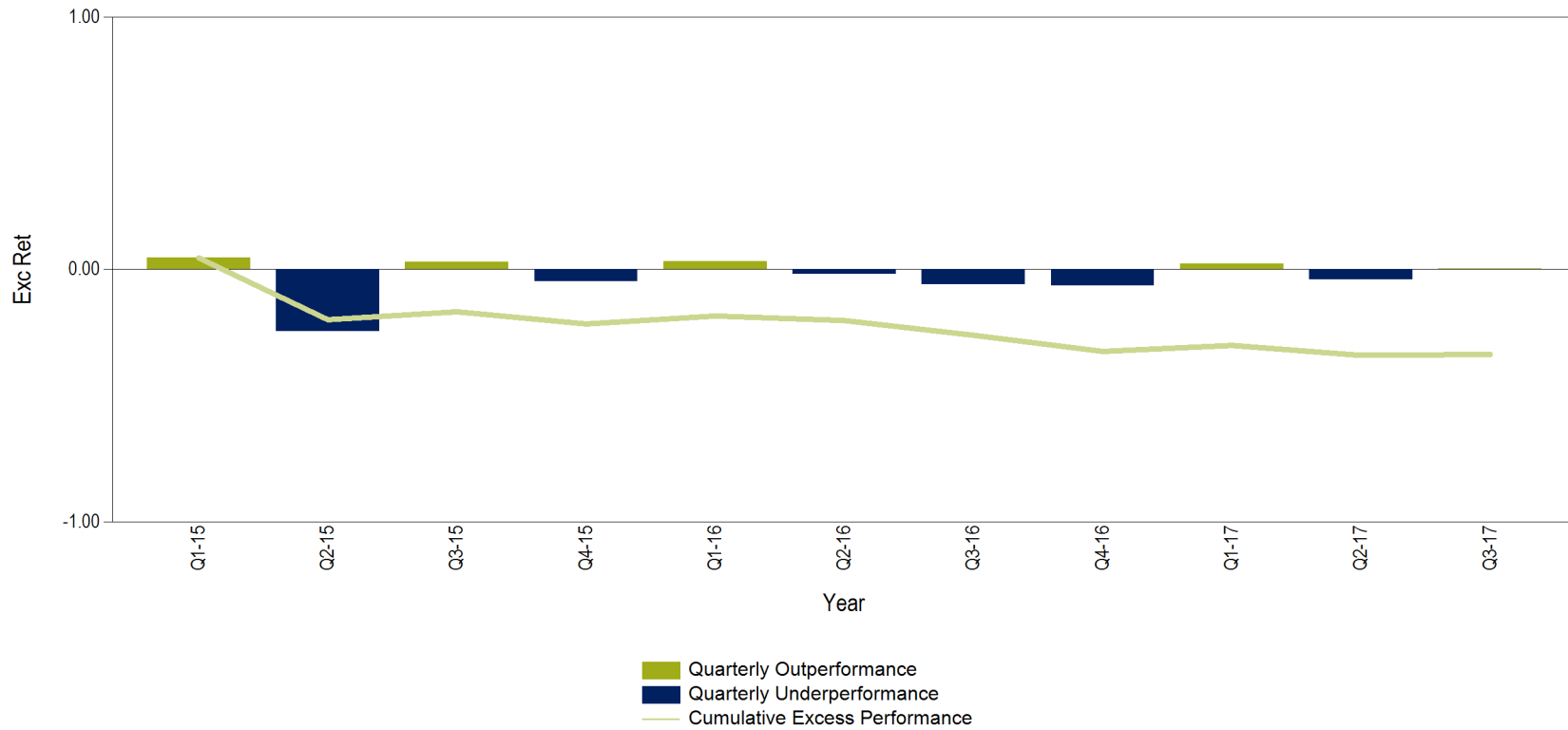


Since Inception Style Map

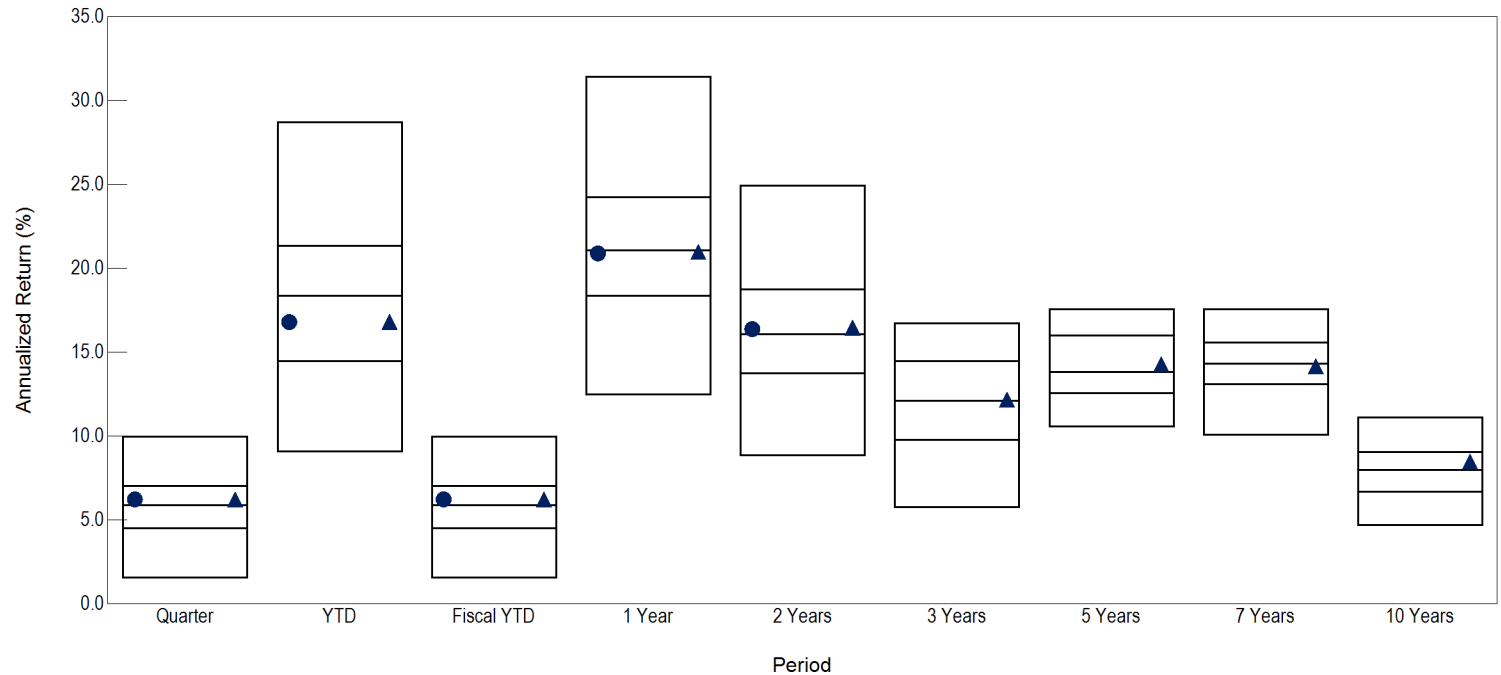


- Rhumblin Advisors Russell 2000
- ▲ Russell 2000
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

Quarterly and Cumulative Excess Performance



Rhumblin Advisors Russell 2000 Growth vs. eA US Small Cap Growth Equity Net

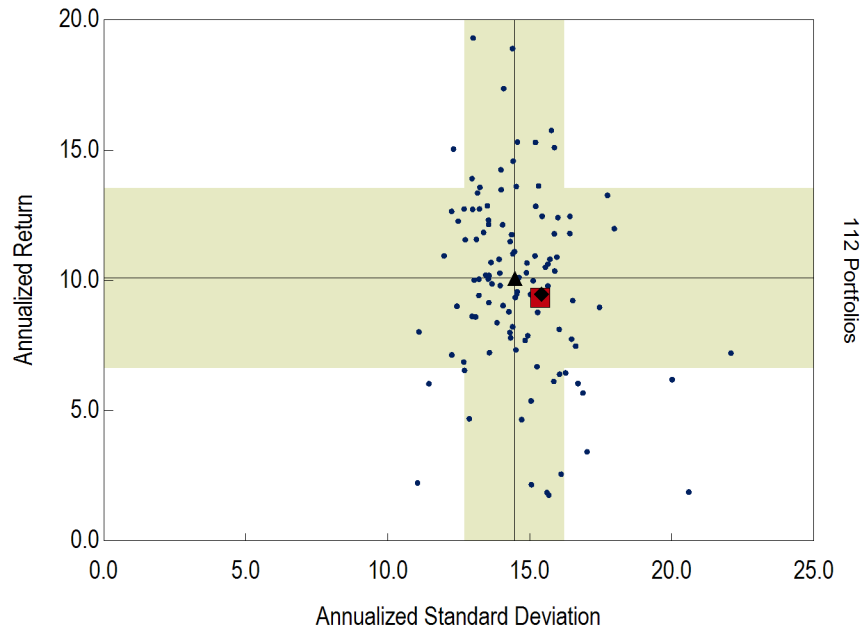


	Return (Rank)																	
5th Percentile	9.98	28.71	9.98	31.41	24.94	16.70	17.56	17.55	11.10									
25th Percentile	7.05	21.37	7.05	24.27	18.80	14.49	16.05	15.61	9.09									
Median	5.93	18.40	5.93	21.09	16.13	12.13	13.88	14.36	8.01									
75th Percentile	4.54	14.52	4.54	18.42	13.78	9.81	12.59	13.15	6.71									
95th Percentile	1.59	9.11	1.59	12.54	8.90	5.80	10.60	10.11	4.73									
# of Portfolios	122	122	122	122	118	111	105	101	90									
● Rhumblin Advisors Russell 2000 Growth	6.22	(46)	16.80	(60)	6.22	(46)	20.89	(54)	16.38	(48)	--	(--)	--	(--)	--	(--)		
▲ Russell 2000 Growth	6.22	(46)	16.81	(60)	6.22	(46)	20.98	(53)	16.47	(47)	12.17	(50)	14.28	(44)	14.17	(56)	8.47	(40)

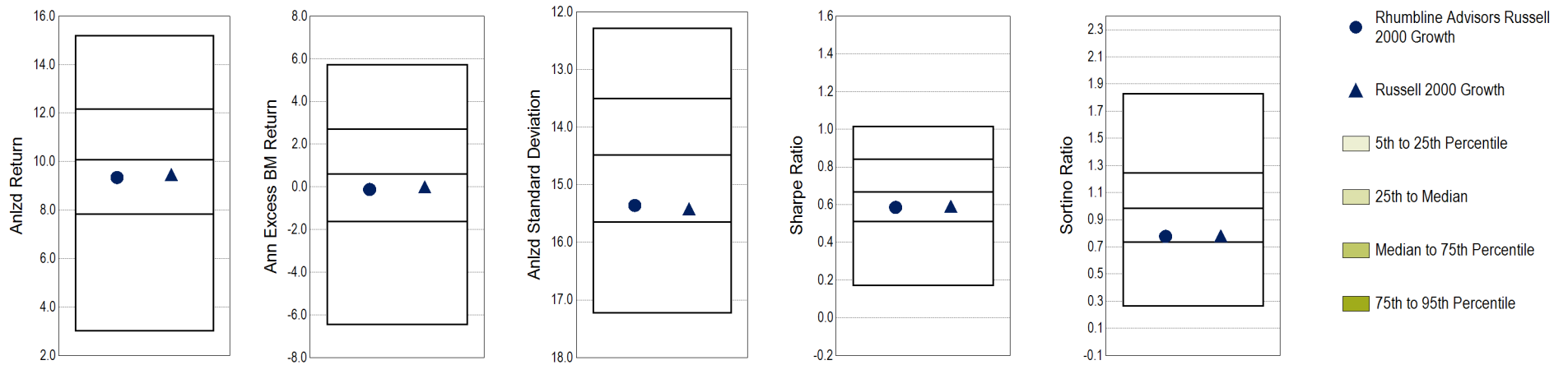
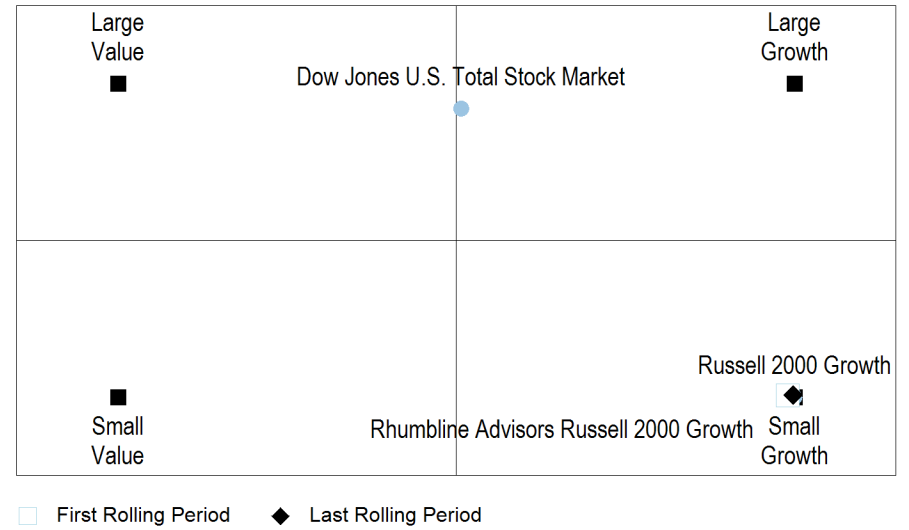
Los Angeles City Employees' Retirement System

Rhumblin Advisors Russell 2000 Growth

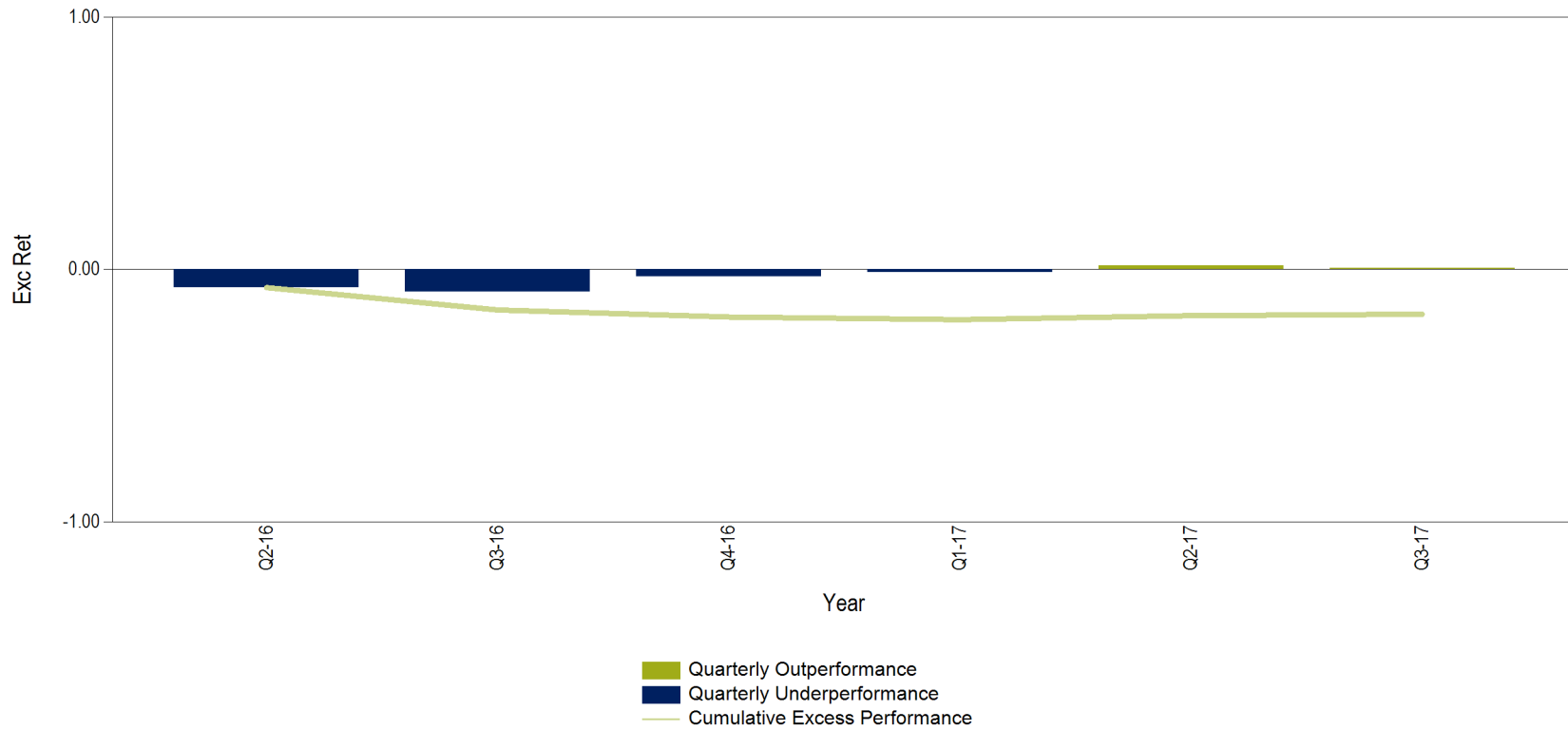
Since Inception Risk Return



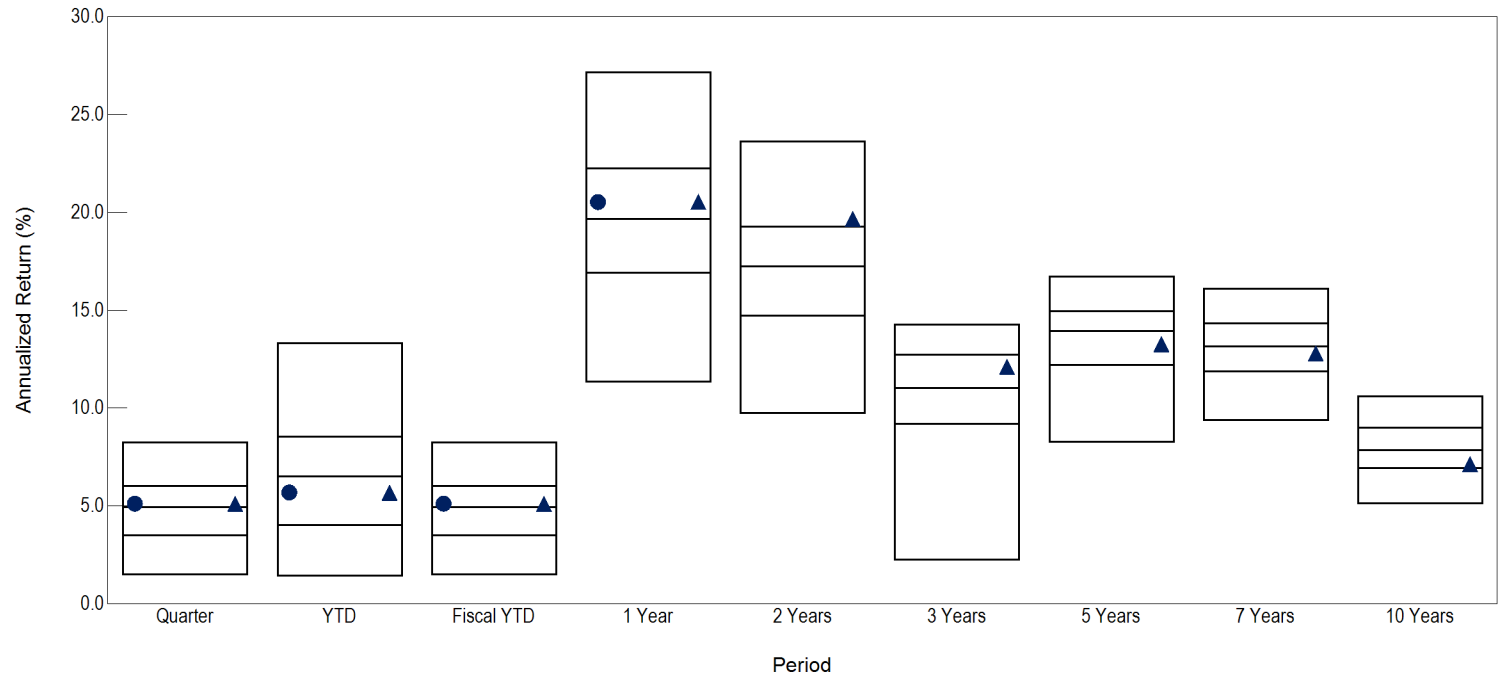
Since Inception Style Map



Quarterly and Cumulative Excess Performance

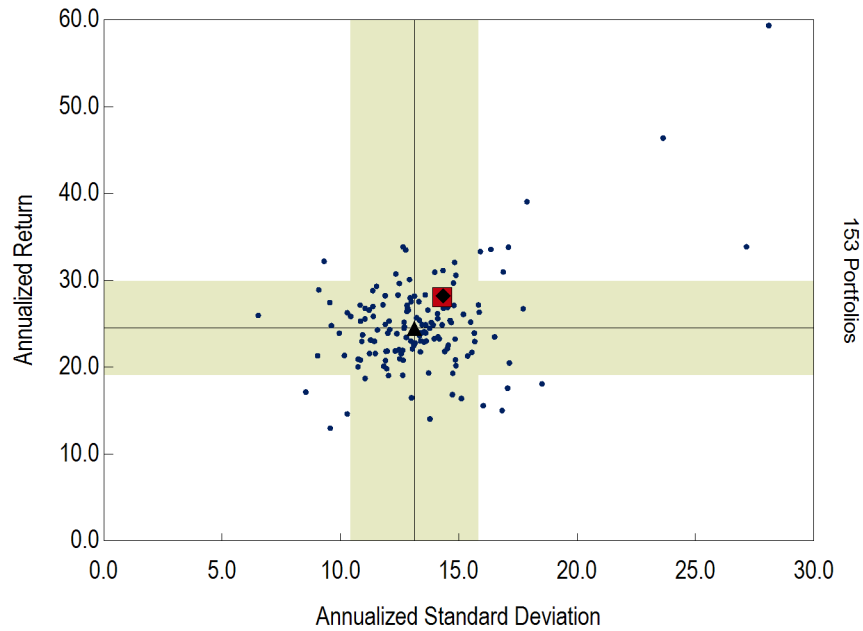


Rhumblin Advisors Russell 2000 Value vs. eA US Small Cap Value Equity Net

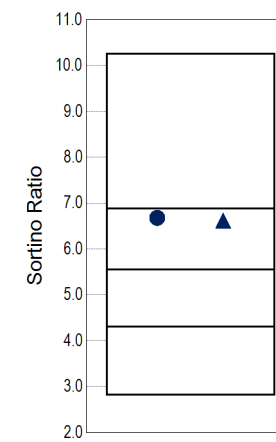
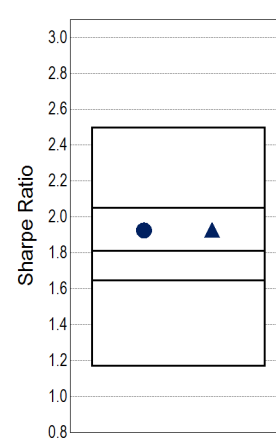
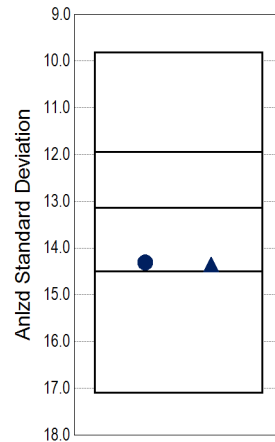
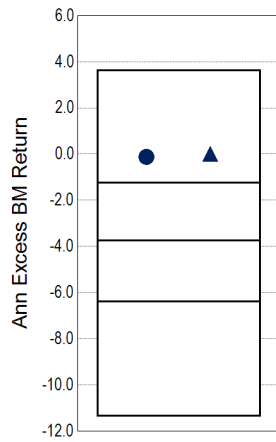
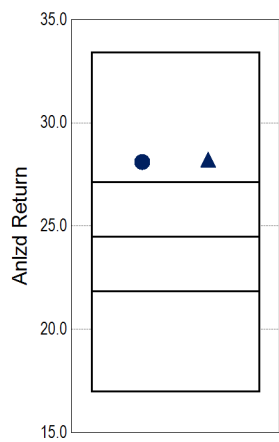
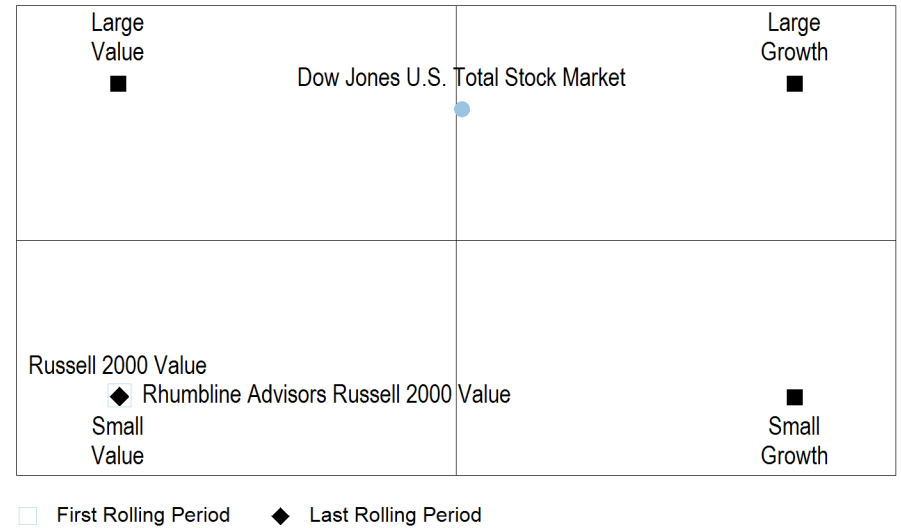


	Return (Rank)																	
5th Percentile	8.24	13.31	8.24	27.17	23.61	14.28	16.71	16.09	10.61									
25th Percentile	6.06	8.56	6.06	22.28	19.29	12.75	14.99	14.35	9.05									
Median	4.96	6.53	4.96	19.69	17.27	11.07	13.98	13.17	7.89									
75th Percentile	3.54	4.07	3.54	16.95	14.76	9.22	12.24	11.91	6.97									
95th Percentile	1.54	1.48	1.54	11.38	9.78	2.28	8.30	9.42	5.18									
# of Portfolios	159	159	159	158	151	146	137	127	111									
● Rhumblin Advisors Russell 2000 Value	5.11	(46)	5.69	(62)	5.11	(46)	20.53	(44)	--	(--)	--	(--)	--	(--)	--	(--)		
▲ Russell 2000 Value	5.11	(46)	5.68	(62)	5.11	(46)	20.55	(43)	19.68	(22)	12.12	(36)	13.27	(60)	12.80	(58)	7.14	(73)

Since Inception Risk Return



Since Inception Style Map

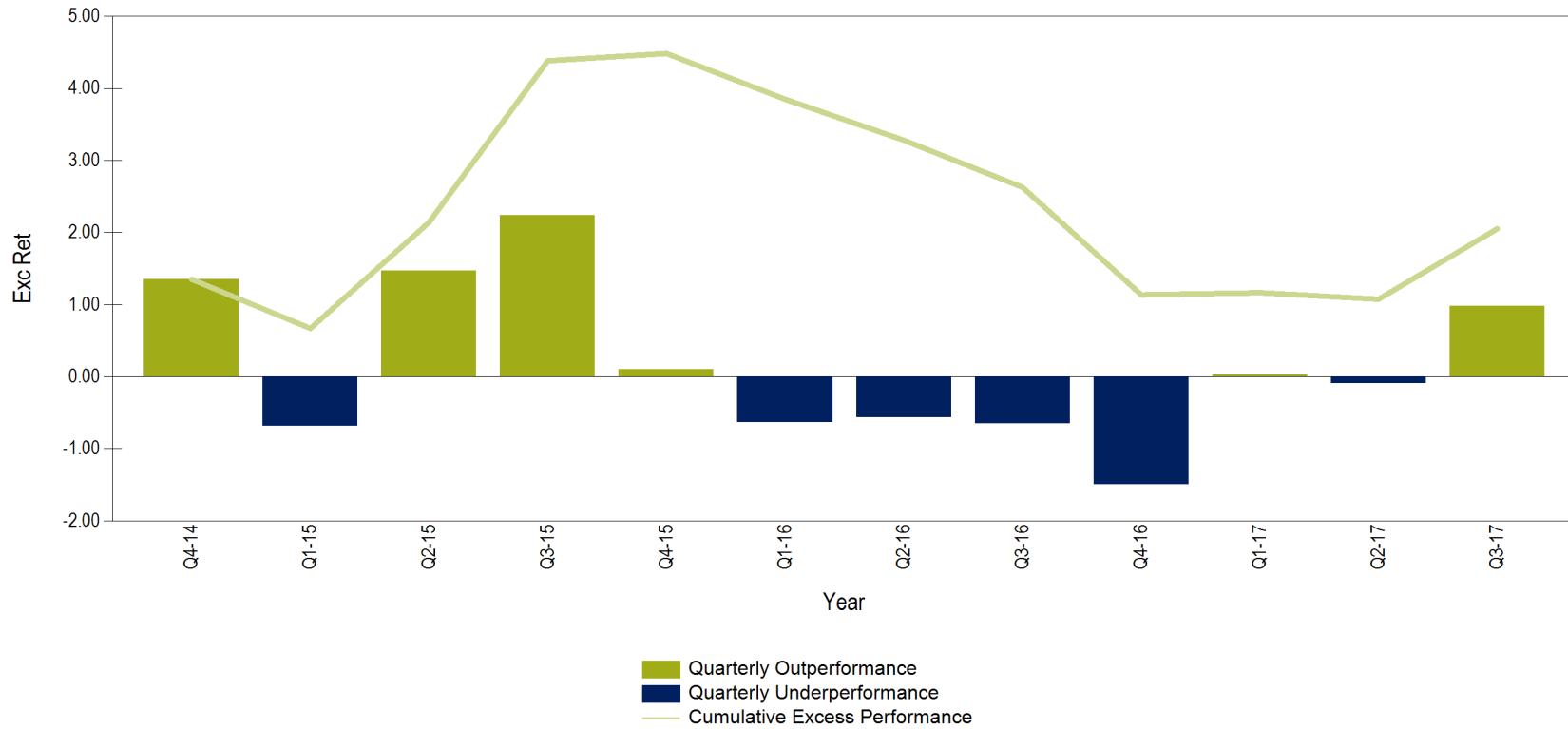


- Rhumblin Advisors Russell 2000 Value
- ▲ Russell 2000 Value
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

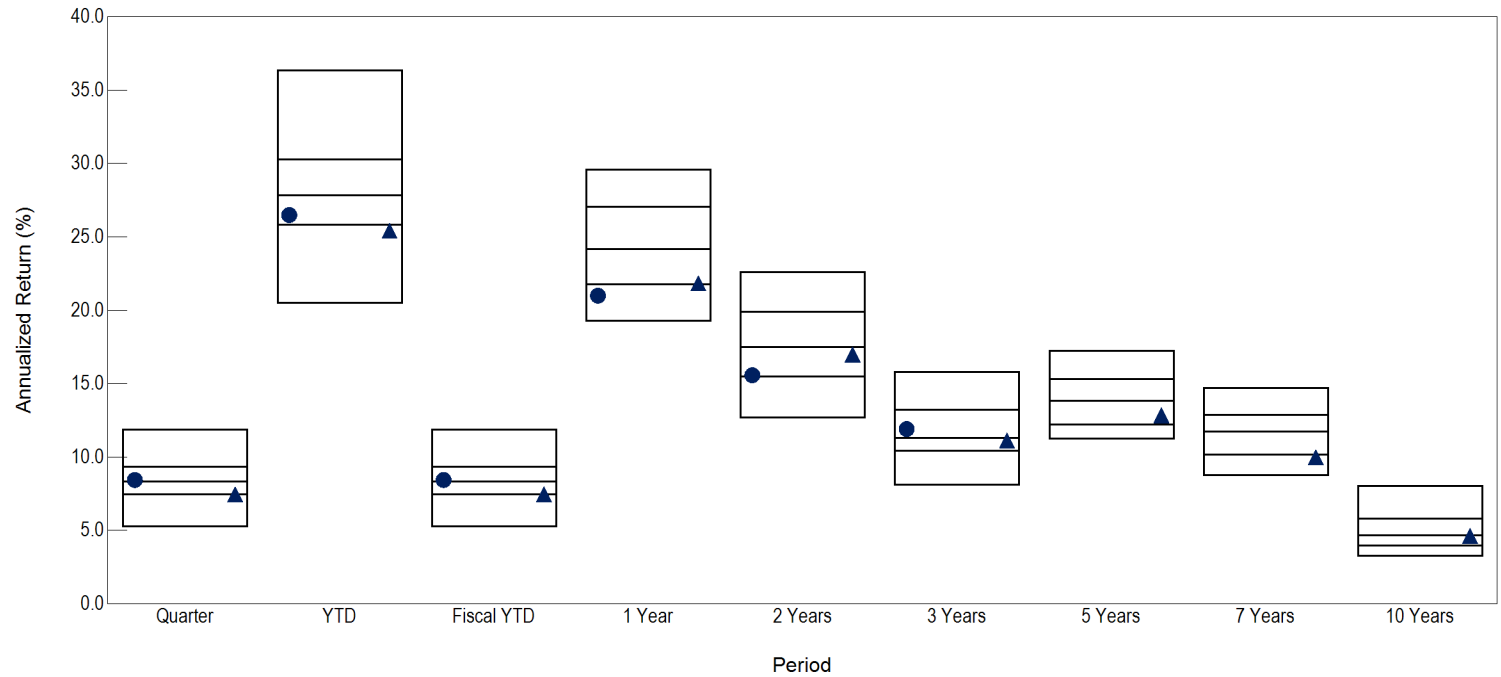
Non-U.S. Equity Manager Performance



Quarterly and Cumulative Excess Performance

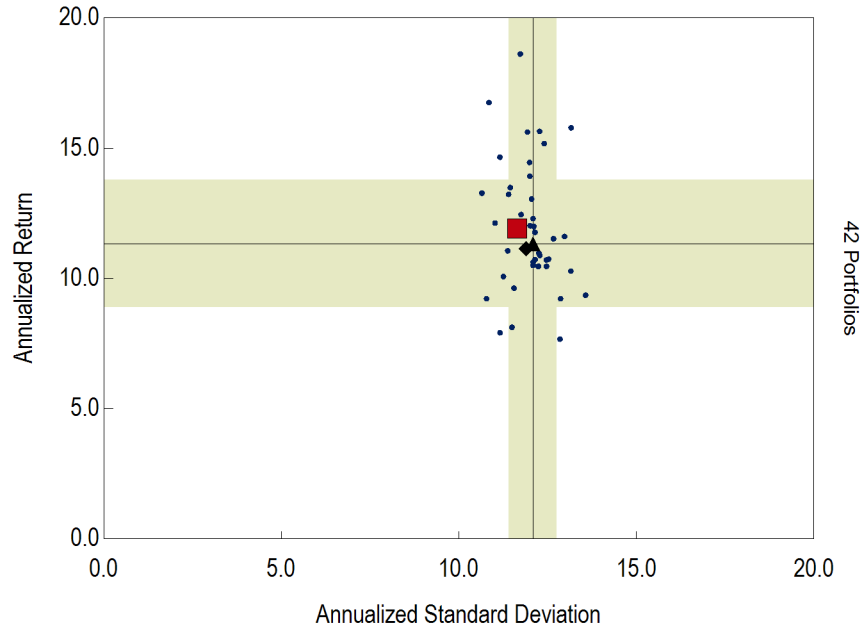


AQR Capital vs. eA EAFE Small Cap Equity Net

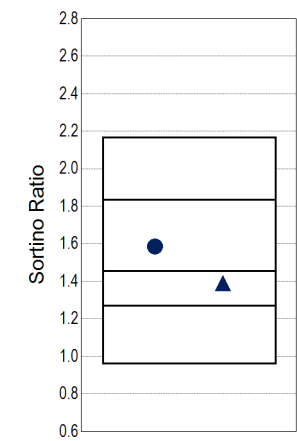
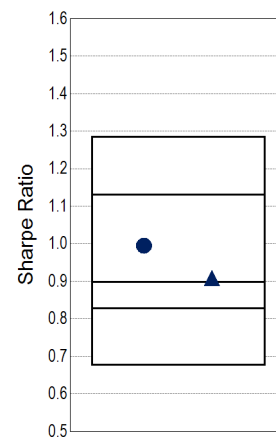
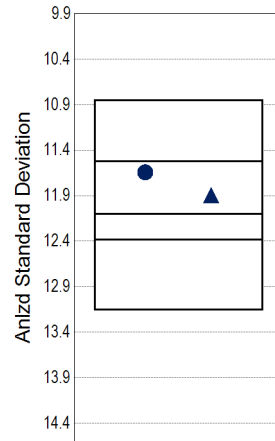
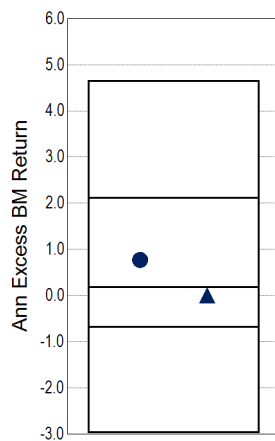
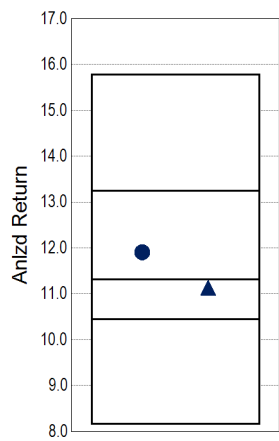
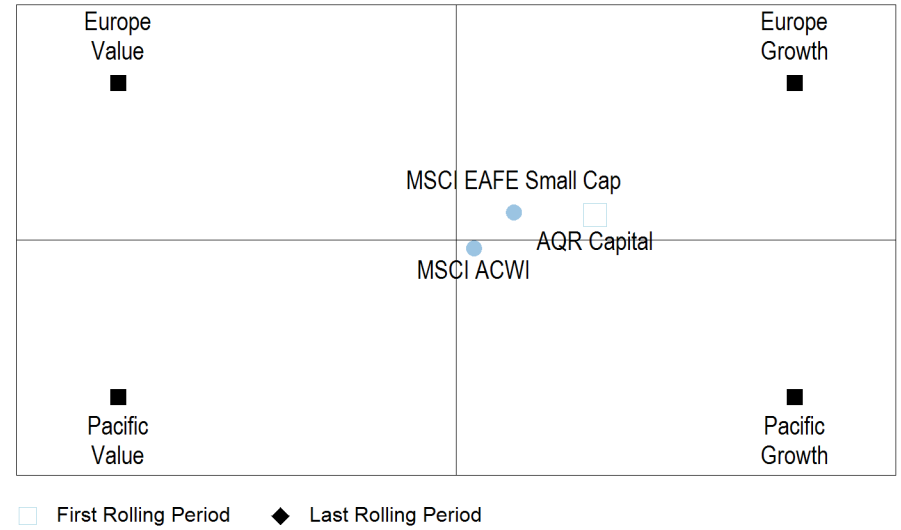


	Return (Rank)																	
5th Percentile	11.86	36.34	11.86	29.57	22.58	15.78	17.24	14.68	8.04									
25th Percentile	9.38	30.34	9.38	27.10	19.92	13.26	15.37	12.91	5.85									
Median	8.37	27.86	8.37	24.22	17.53	11.33	13.86	11.79	4.69									
75th Percentile	7.52	25.88	7.52	21.84	15.51	10.46	12.26	10.19	4.00									
95th Percentile	5.33	20.55	5.33	19.34	12.72	8.18	11.30	8.83	3.30									
# of Portfolios	50	50	50	50	47	42	33	27	21									
● AQR Capital	8.43	(47)	26.49	(69)	8.43	(47)	20.99	(78)	15.57	(75)	11.90	(43)	--	(--)	--	(--)	--	(--)
▲ MSCI EAFE Small Cap	7.46	(77)	25.42	(78)	7.46	(77)	21.84	(75)	16.99	(61)	11.13	(52)	12.85	(70)	9.98	(84)	4.63	(57)

3 Year Risk Return

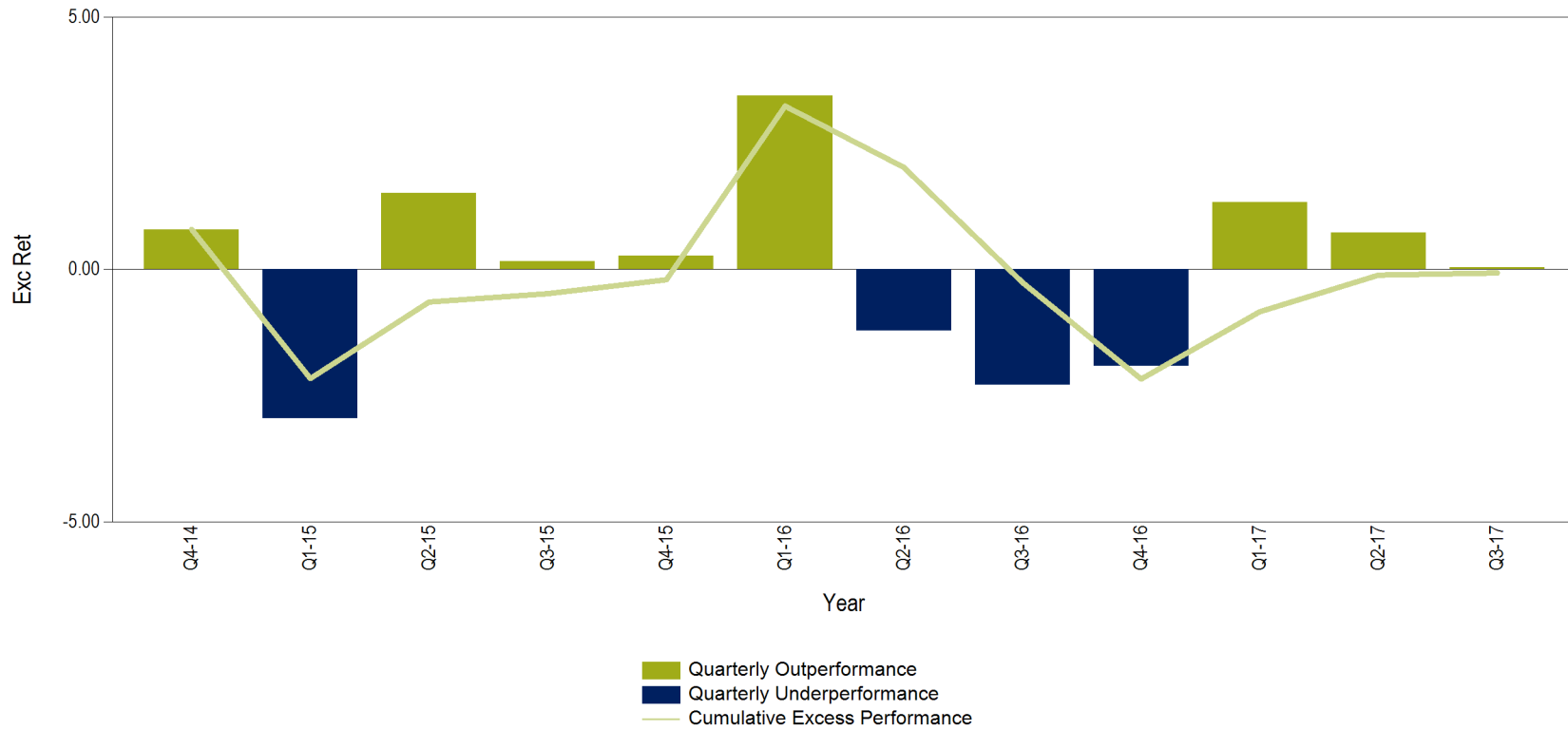


3 Year Style Map

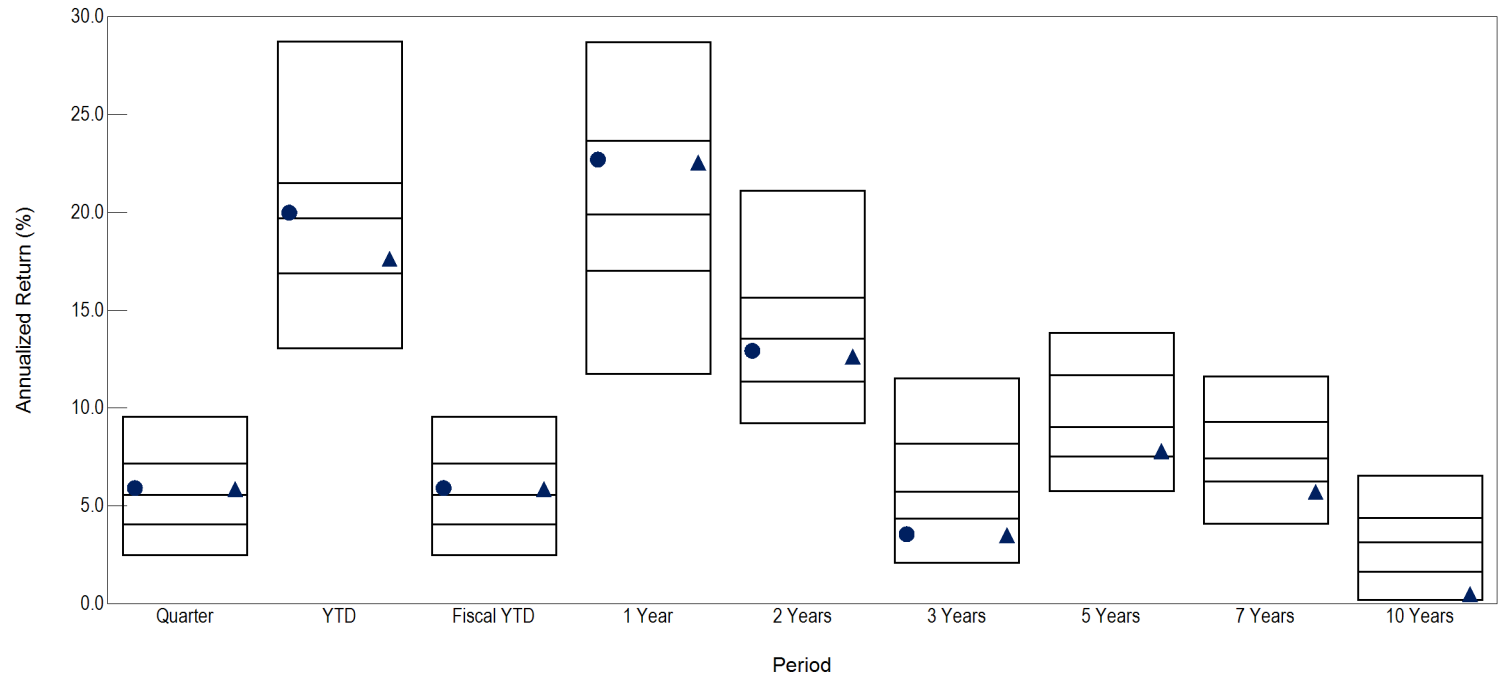


- AQR Capital
- ▲ MSCI EAFE Small Cap
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

Quarterly and Cumulative Excess Performance

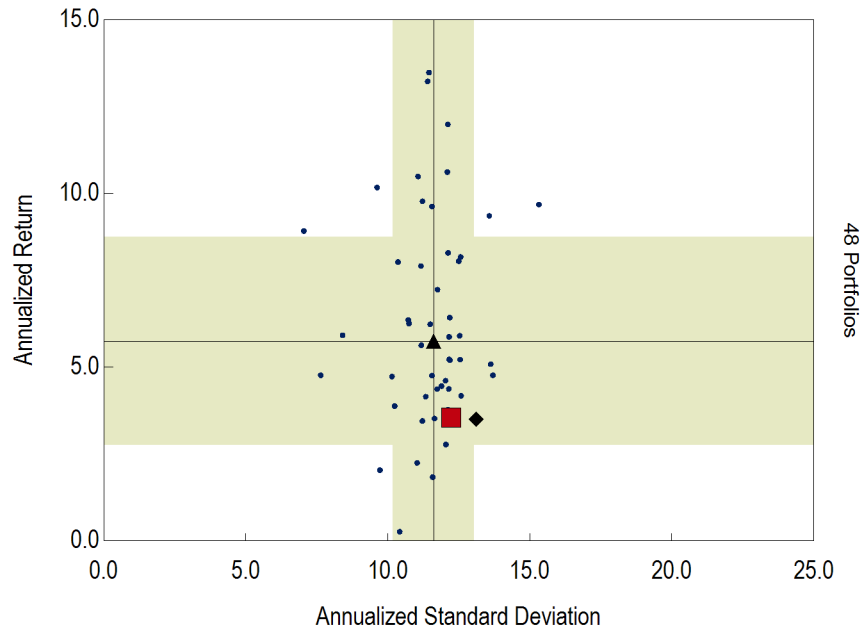


Barrow Hanley vs. eA EAFE Value Equity Net

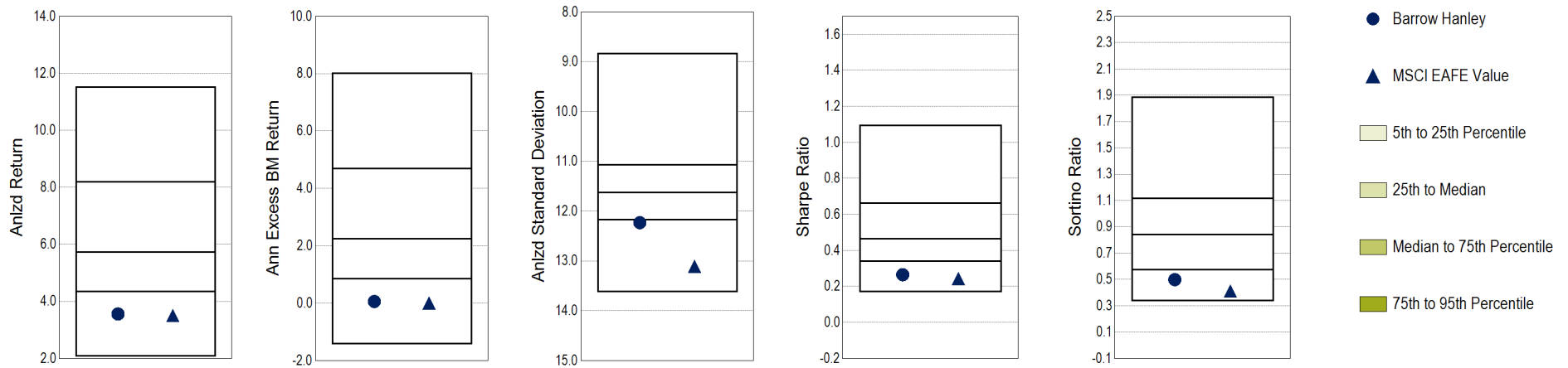
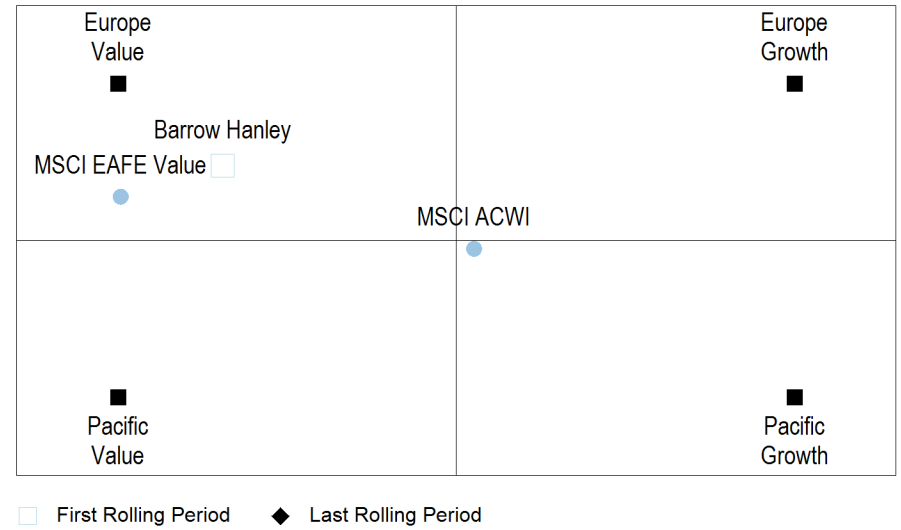


	Return (Rank)																	
5th Percentile	9.54	28.75	9.54	28.69	21.12	11.51	13.83	11.61	6.55									
25th Percentile	7.20	21.54	7.20	23.69	15.68	8.20	11.72	9.34	4.40									
Median	5.58	19.73	5.58	19.93	13.59	5.75	9.06	7.47	3.18									
75th Percentile	4.08	16.91	4.08	17.04	11.40	4.37	7.57	6.27	1.66									
95th Percentile	2.52	13.09	2.52	11.78	9.26	2.11	5.79	4.13	0.22									
# of Portfolios	54	54	54	54	52	48	42	40	34									
● Barrow Hanley	5.91	(42)	19.99	(46)	5.91	(42)	22.70	(34)	12.93	(56)	3.55	(87)	--	(--)	--	(--)	--	(--)
▲ MSCI EAFE Value	5.87	(43)	17.63	(67)	5.87	(43)	22.55	(36)	12.63	(60)	3.50	(89)	7.80	(70)	5.71	(85)	0.49	(91)

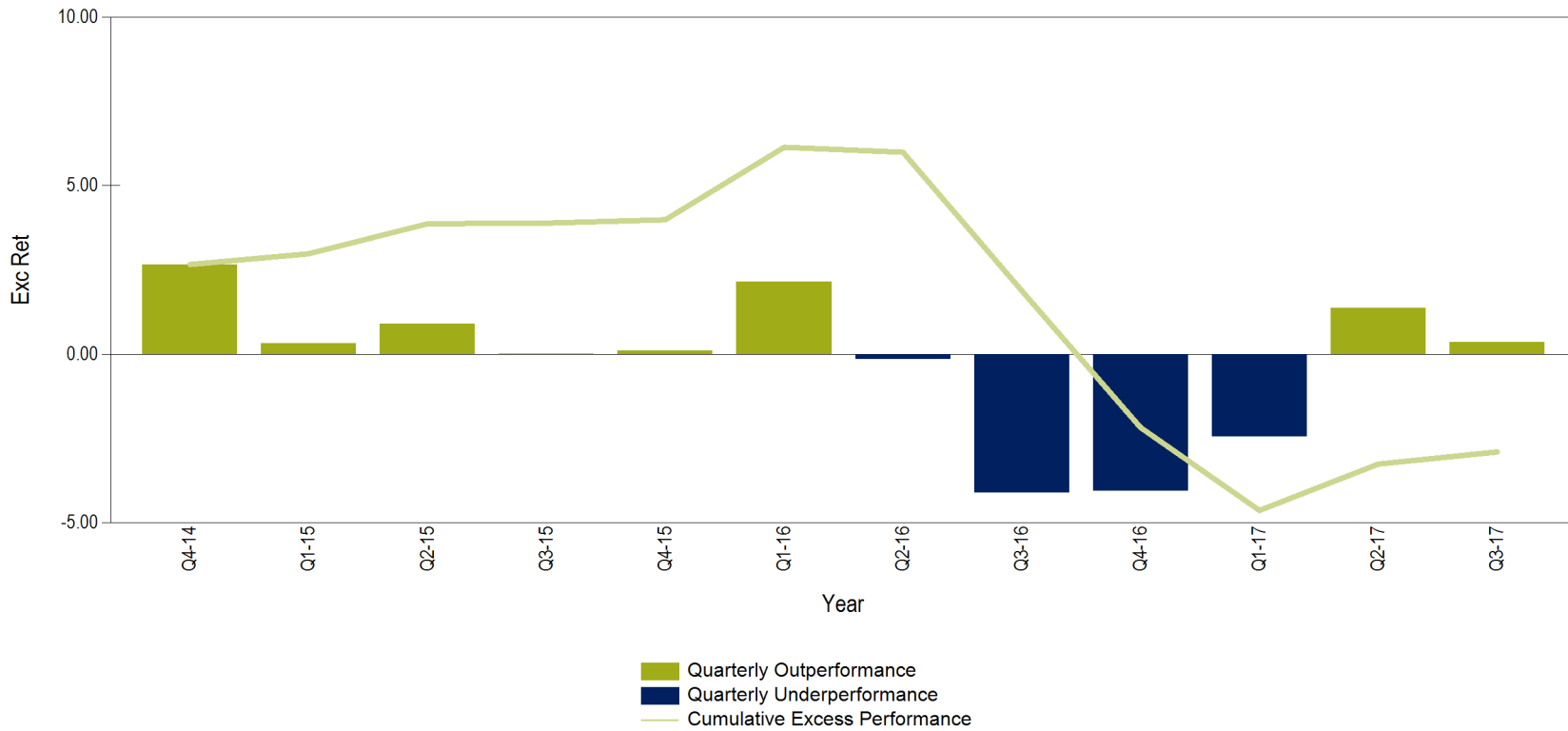
3 Year Risk Return



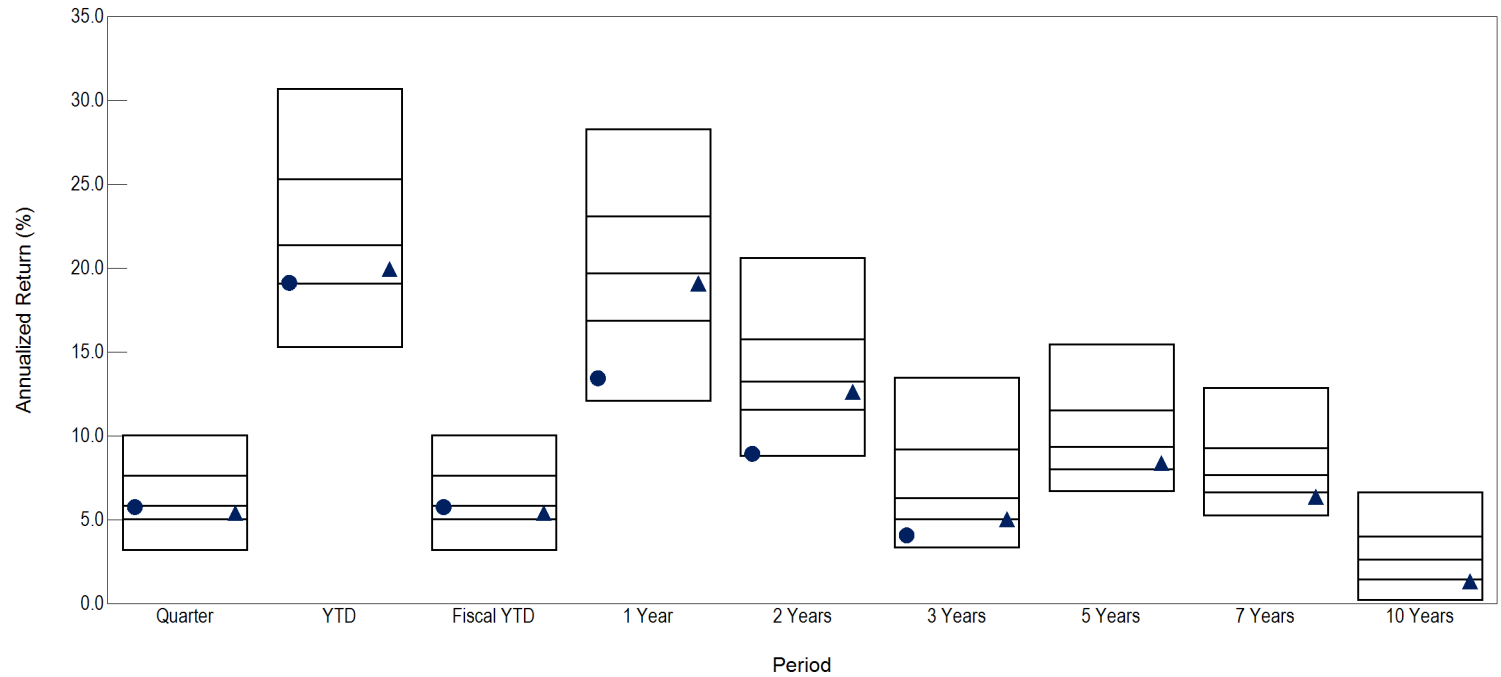
3 Year Style Map



Quarterly and Cumulative Excess Performance

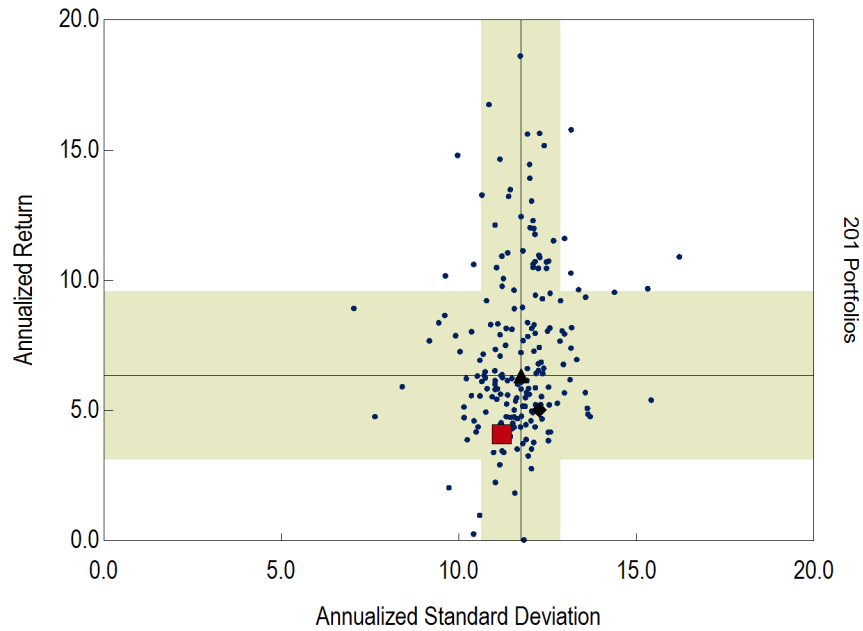


Lazard Asset Management vs. eA All EAFE Equity Net

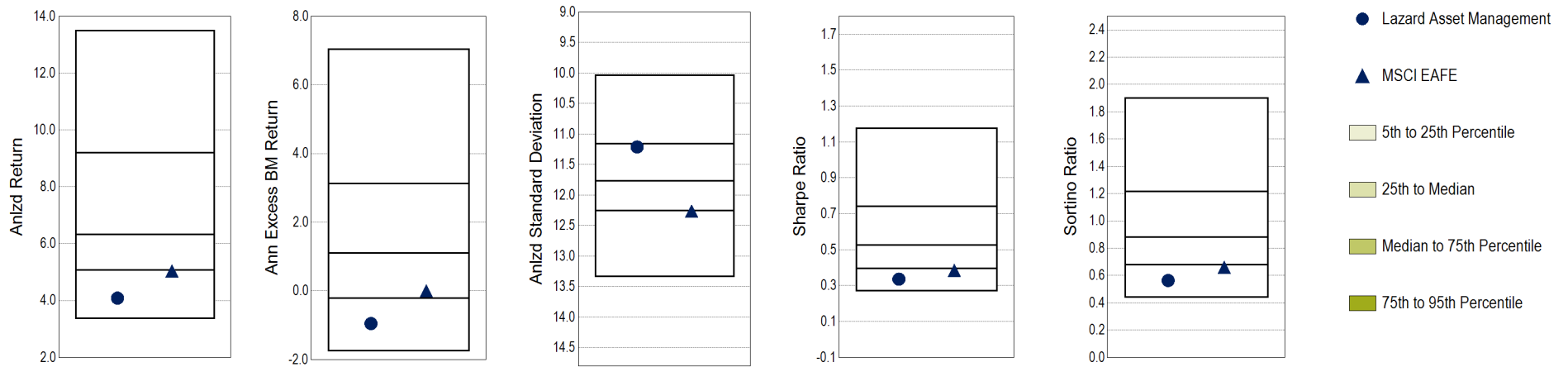
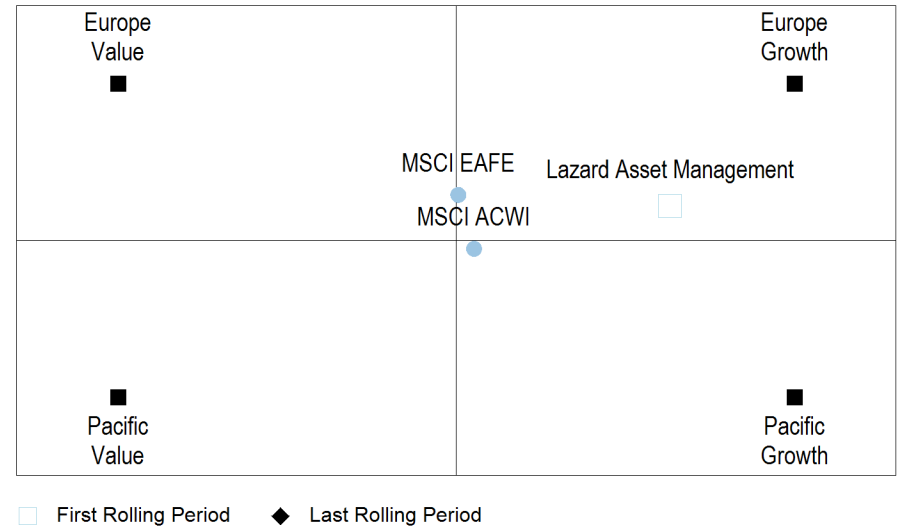


	Return (Rank)																	
5th Percentile	10.04	30.71	10.04	28.30	20.62	13.49	15.46	12.87	6.66									
25th Percentile	7.67	25.33	7.67	23.14	15.79	9.22	11.57	9.32	4.06									
Median	5.90	21.42	5.90	19.72	13.28	6.35	9.41	7.73	2.68									
75th Percentile	5.08	19.13	5.08	16.91	11.61	5.09	8.07	6.68	1.50									
95th Percentile	3.25	15.33	3.25	12.14	8.85	3.40	6.77	5.32	0.26									
# of Portfolios	227	227	227	227	216	201	173	158	128									
● Lazard Asset Management	5.76	(54)	19.14	(75)	5.76	(54)	13.45	(90)	8.94	(95)	4.08	(90)	--	(--)	--	(--)	--	(--)
▲ MSCI EAFE	5.40	(64)	19.96	(69)	5.40	(64)	19.10	(58)	12.63	(60)	5.04	(76)	8.38	(70)	6.38	(81)	1.34	(81)

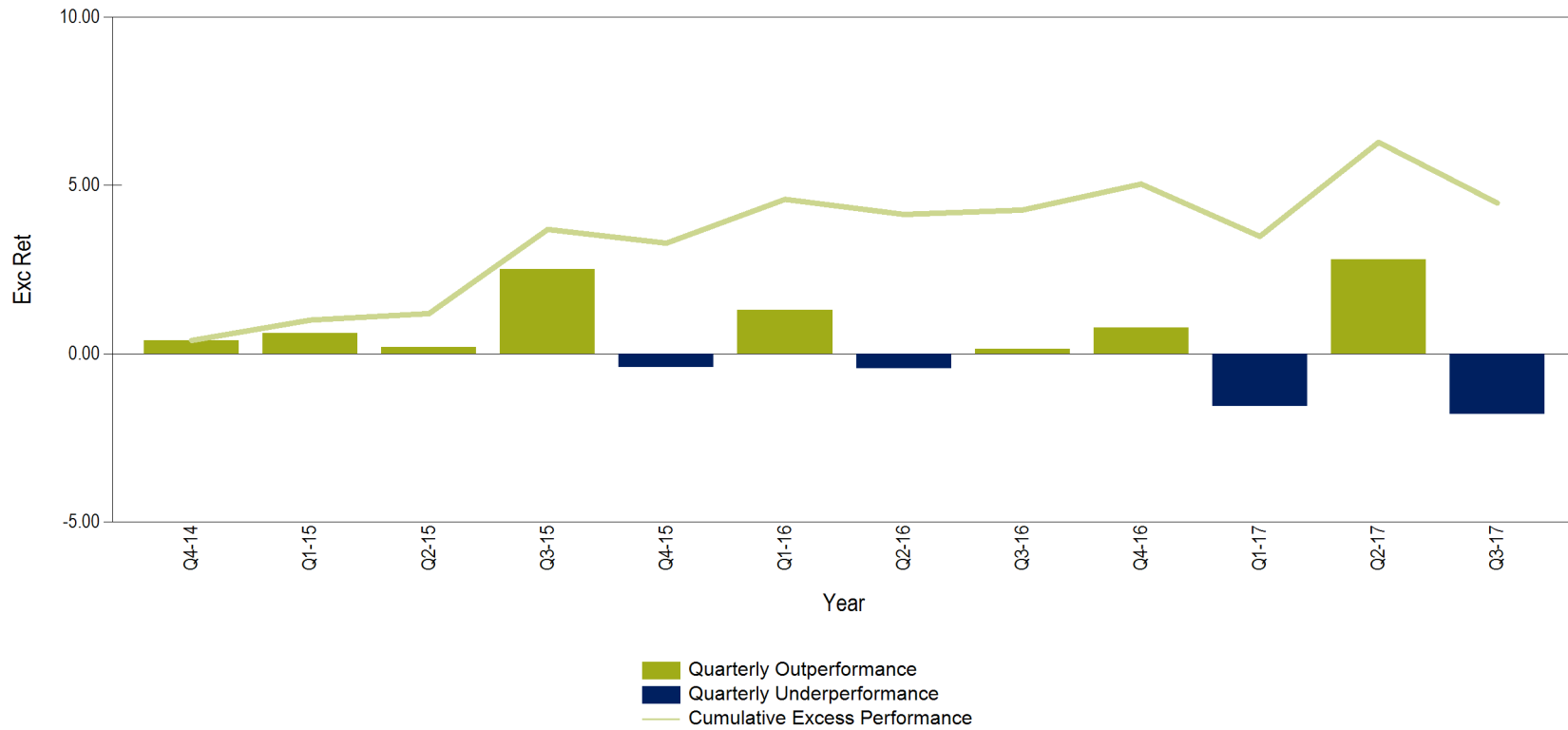
3 Year Risk Return



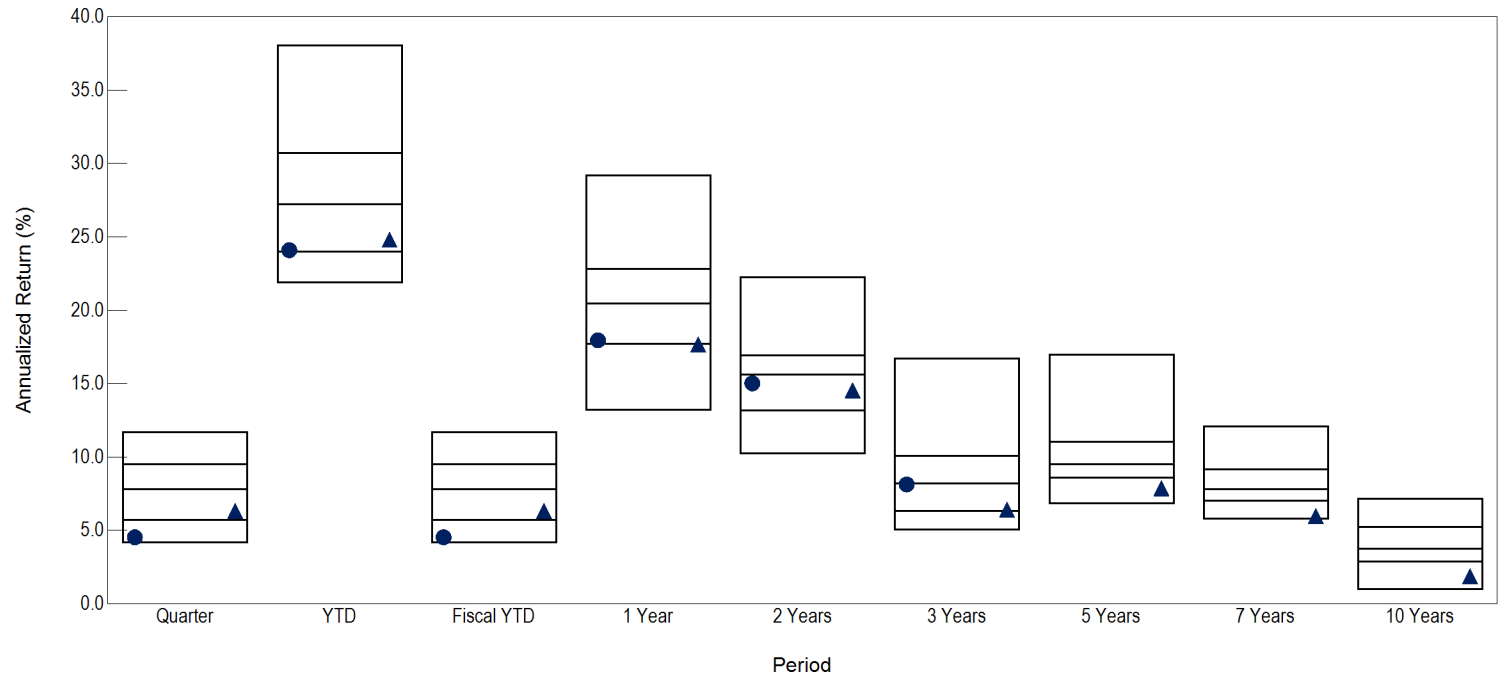
3 Year Style Map



Quarterly and Cumulative Excess Performance

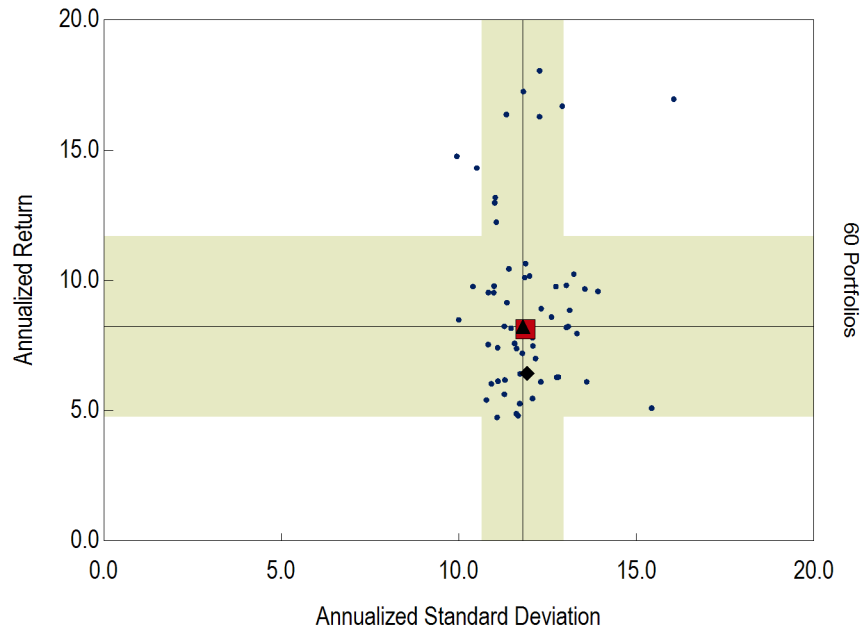


MFS Institutional Advisors vs. eA ACWI ex-US Growth Equity Net

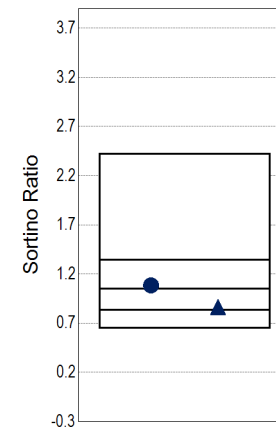
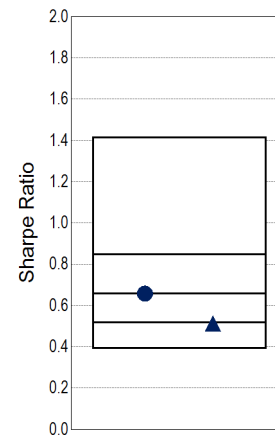
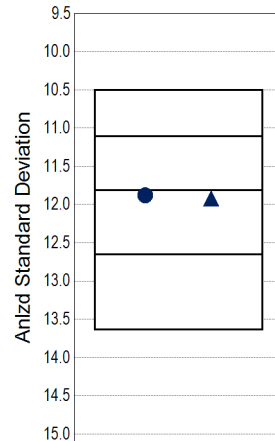
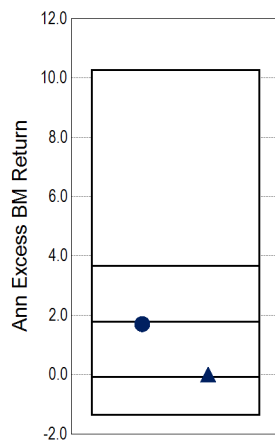
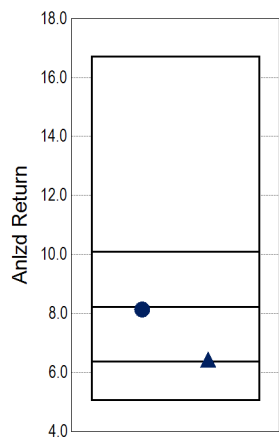
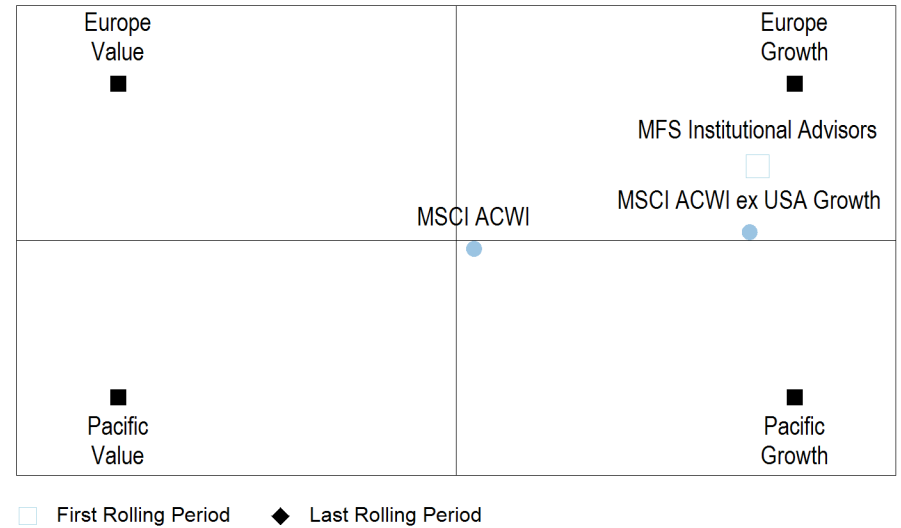


	Return (Rank)															
5th Percentile	11.71	38.04	11.71	29.18	22.26	16.70	16.98	12.11	7.17							
25th Percentile	9.56	30.75	9.56	22.85	16.97	10.12	11.08	9.22	5.28							
Median	7.87	27.25	7.87	20.51	15.65	8.23	9.56	7.86	3.78							
75th Percentile	5.75	24.03	5.75	17.76	13.22	6.38	8.65	7.08	2.92							
95th Percentile	4.23	21.95	4.23	13.28	10.28	5.09	6.89	5.85	1.06							
# of Portfolios	70	70	70	70	67	60	55	47	38							
● MFS Institutional Advisors	4.53 (93)	24.09 (74)	4.53 (93)	17.96 (74)	15.02 (56)	8.13 (55)	-- (--)	-- (--)	-- (--)							
▲ MSCI ACWI ex USA Growth	6.33 (67)	24.82 (73)	6.33 (67)	17.68 (76)	14.55 (58)	6.43 (74)	7.87 (85)	5.98 (93)	1.89 (89)							

3 Year Risk Return

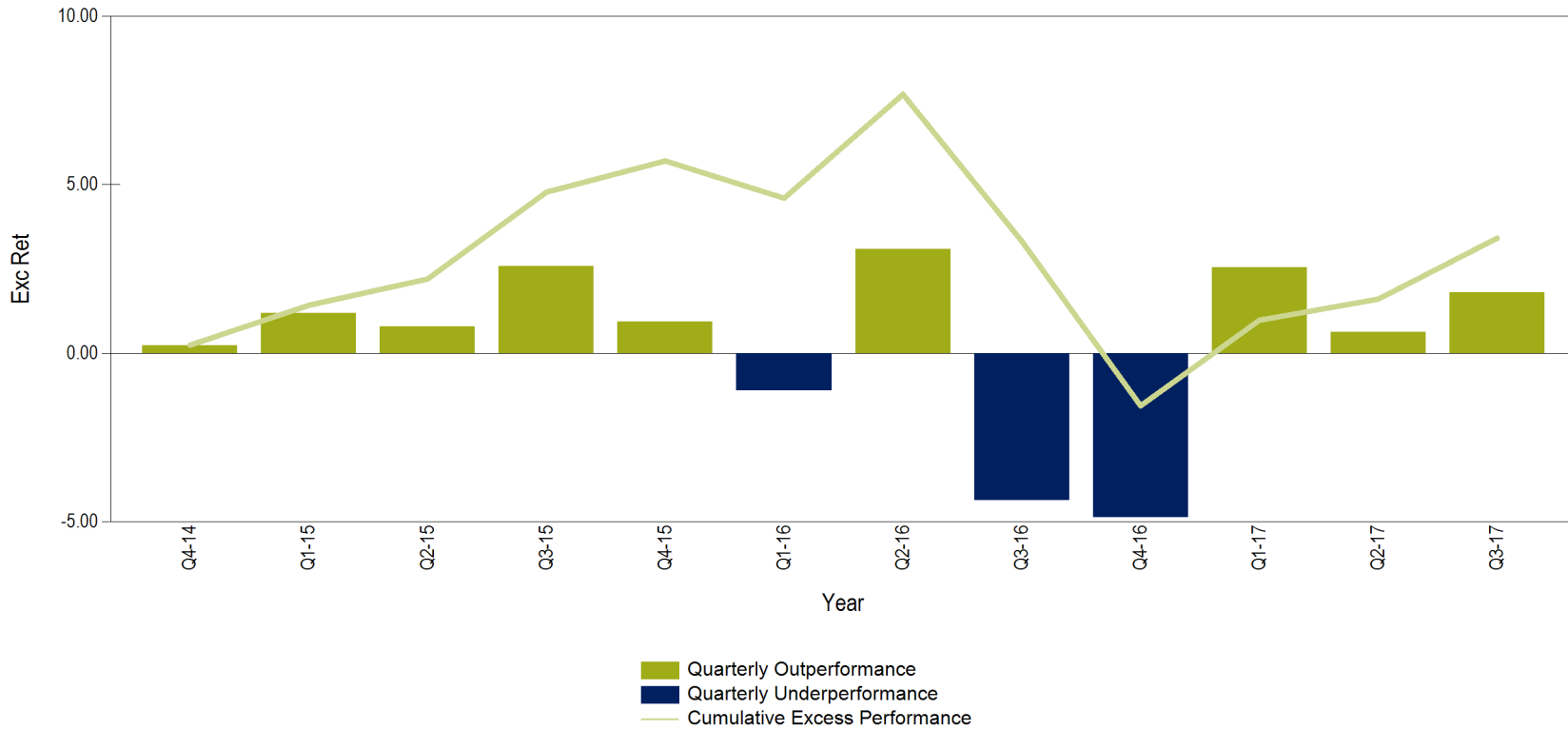


3 Year Style Map



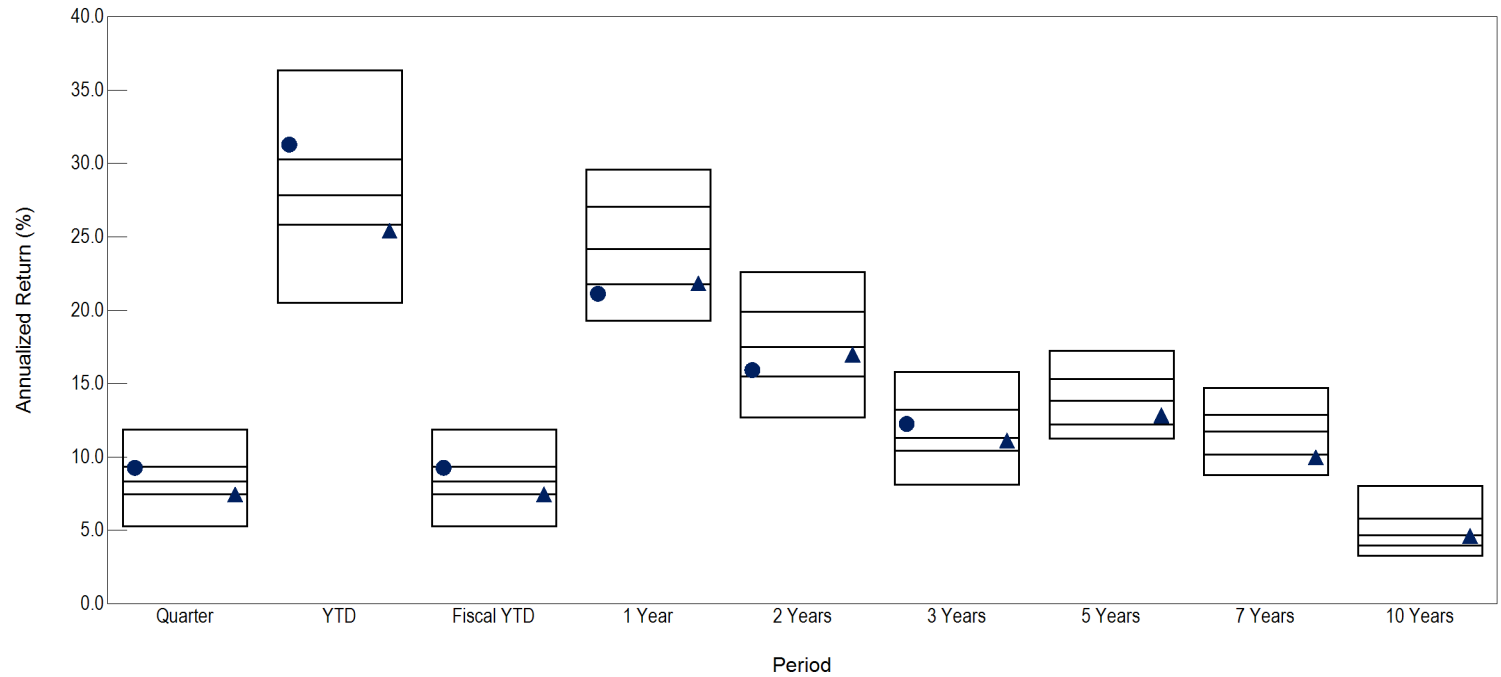
- MFS Institutional Advisors
- ▲ MSCI ACWI ex USA Growth
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

Quarterly and Cumulative Excess Performance



Oberweis Asset Mgmt

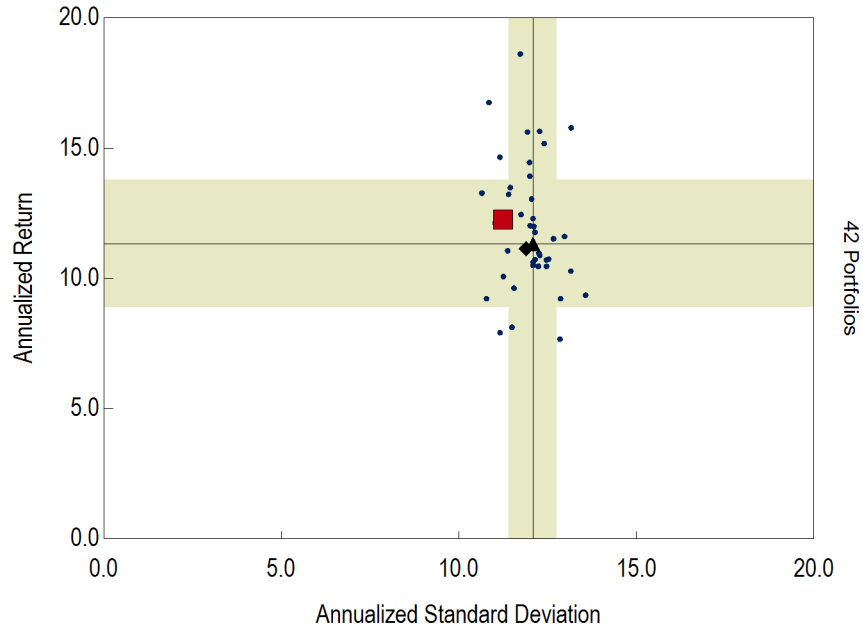
Oberweis Asset Mgmt vs. eA EAFE Small Cap Equity Net



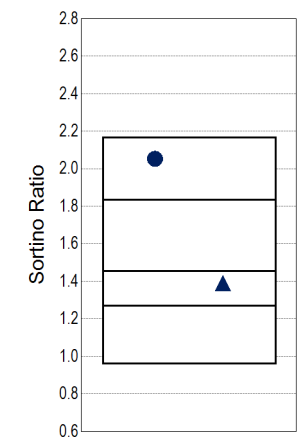
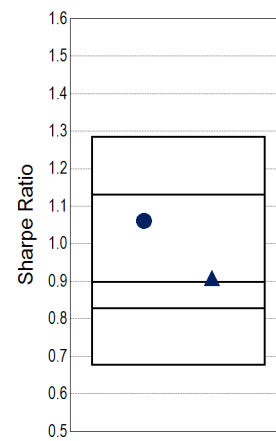
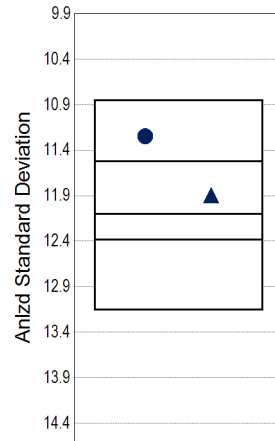
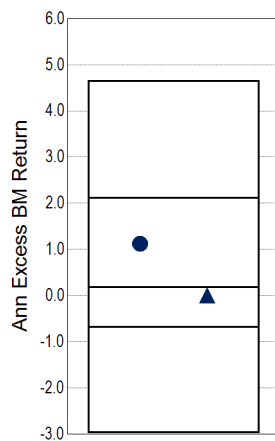
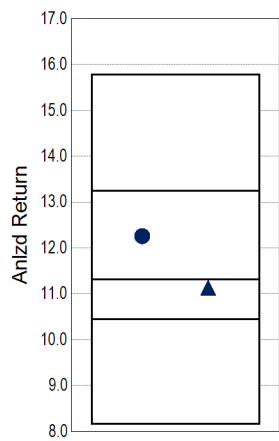
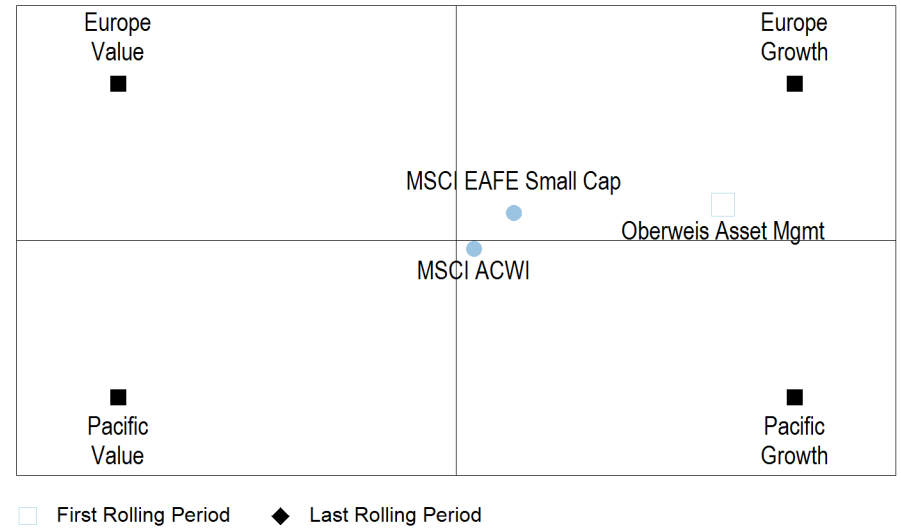
	Return (Rank)																	
5th Percentile	11.86	36.34	11.86	29.57	22.58	15.78	17.24	14.68	8.04									
25th Percentile	9.38	30.34	9.38	27.10	19.92	13.26	15.37	12.91	5.85									
Median	8.37	27.86	8.37	24.22	17.53	11.33	13.86	11.79	4.69									
75th Percentile	7.52	25.88	7.52	21.84	15.51	10.46	12.26	10.19	4.00									
95th Percentile	5.33	20.55	5.33	19.34	12.72	8.18	11.30	8.83	3.30									
# of Portfolios	50	50	50	50	47	42	33	27	21									
● Oberweis Asset Mgmt	9.26	(27)	31.29	(12)	9.26	(27)	21.13	(78)	15.92	(73)	12.26	(35)	--	(--)	--	(--)	--	(--)
▲ MSCI EAFE Small Cap	7.46	(77)	25.42	(78)	7.46	(77)	21.84	(75)	16.99	(61)	11.13	(52)	12.85	(70)	9.98	(84)	4.63	(57)

Oberweis Asset Mgmt

3 Year Risk Return



3 Year Style Map

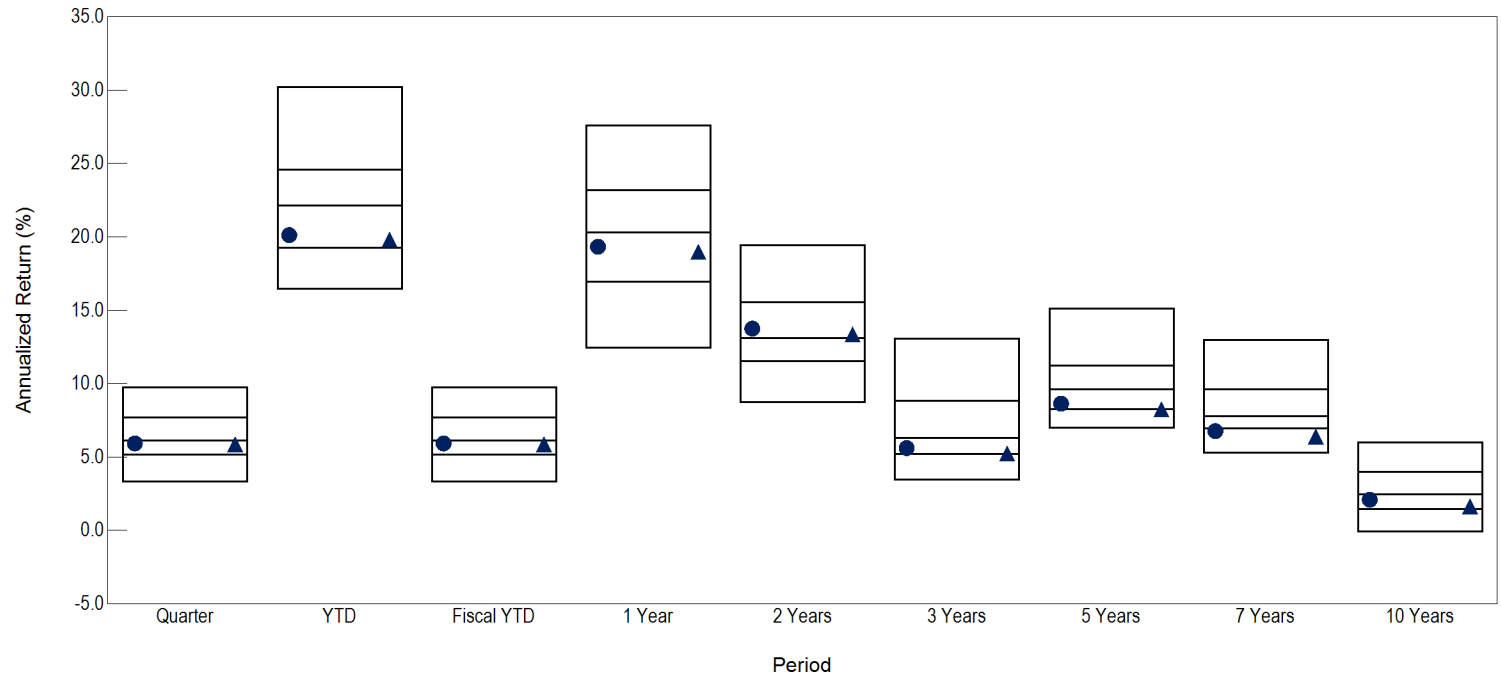


- Oberweis Asset Mgmt
- ▲ MSCI EAFE Small Cap
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

Quarterly and Cumulative Excess Performance



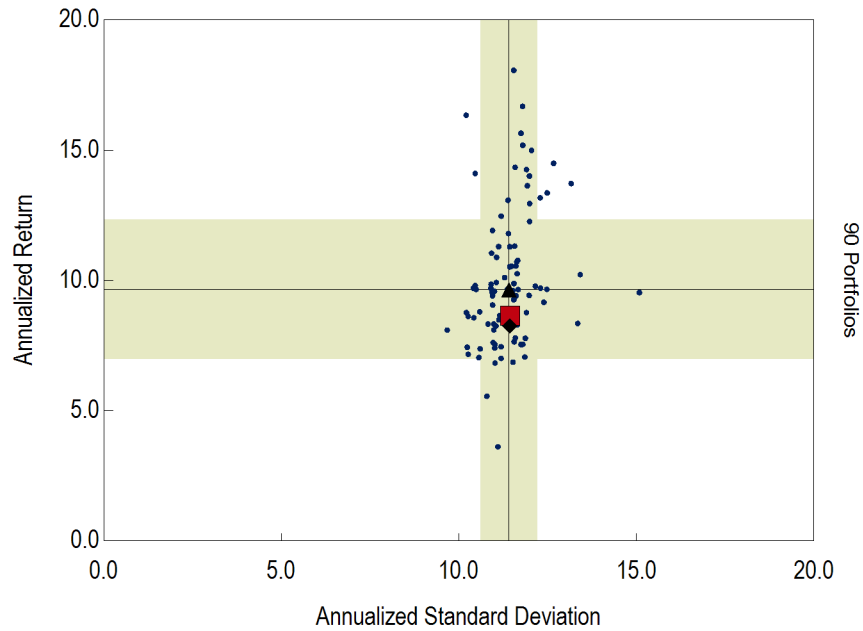
SSgA World ex US IMI vs. eA EAFE Core Equity Net



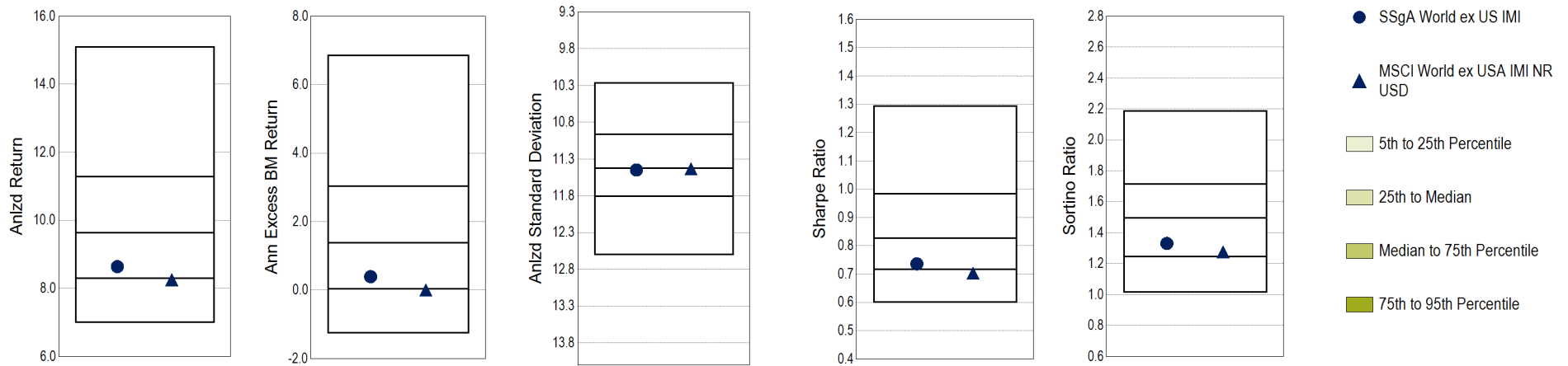
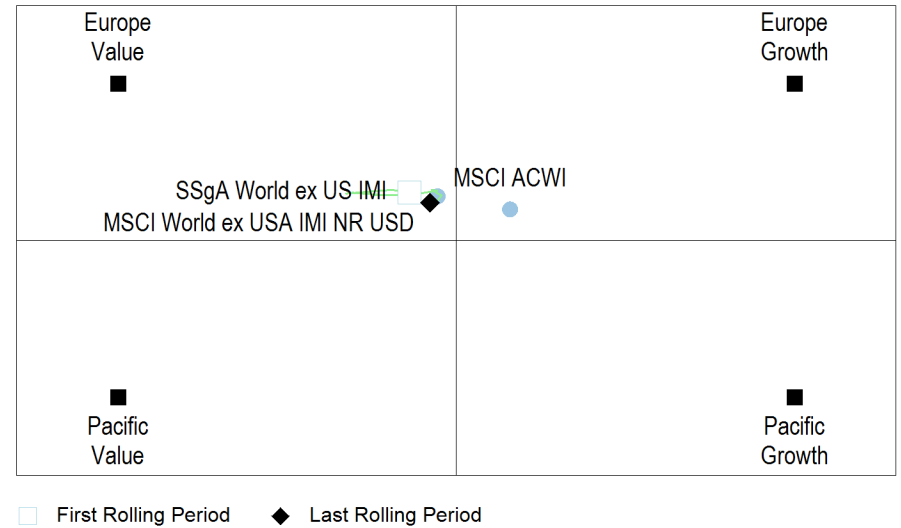
	Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)			
5th Percentile	9.75	30.22	9.75	27.58	19.43	13.07	15.10	12.99	5.99									
25th Percentile	7.75	24.62	7.75	23.21	15.61	8.89	11.30	9.65	4.04									
Median	6.19	22.20	6.19	20.33	13.16	6.33	9.65	7.82	2.52									
75th Percentile	5.20	19.32	5.20	16.98	11.59	5.24	8.31	7.02	1.49									
95th Percentile	3.38	16.49	3.38	12.50	8.78	3.51	7.02	5.35	-0.02									
# of Portfolios	121	121	121	121	114	106	90	78	62									
● SSgA World ex US IMI	5.92	(54)	20.12	(69)	5.92	(54)	19.33	(57)	13.75	(43)	5.61	(68)	8.64	(68)	6.77	(80)	2.09	(63)
▲ MSCI World ex USA IMI NR USD	5.86	(57)	19.82	(72)	5.86	(57)	18.98	(60)	13.36	(47)	5.23	(76)	8.25	(77)	6.38	(85)	1.65	(72)

SSgA World ex US IMI

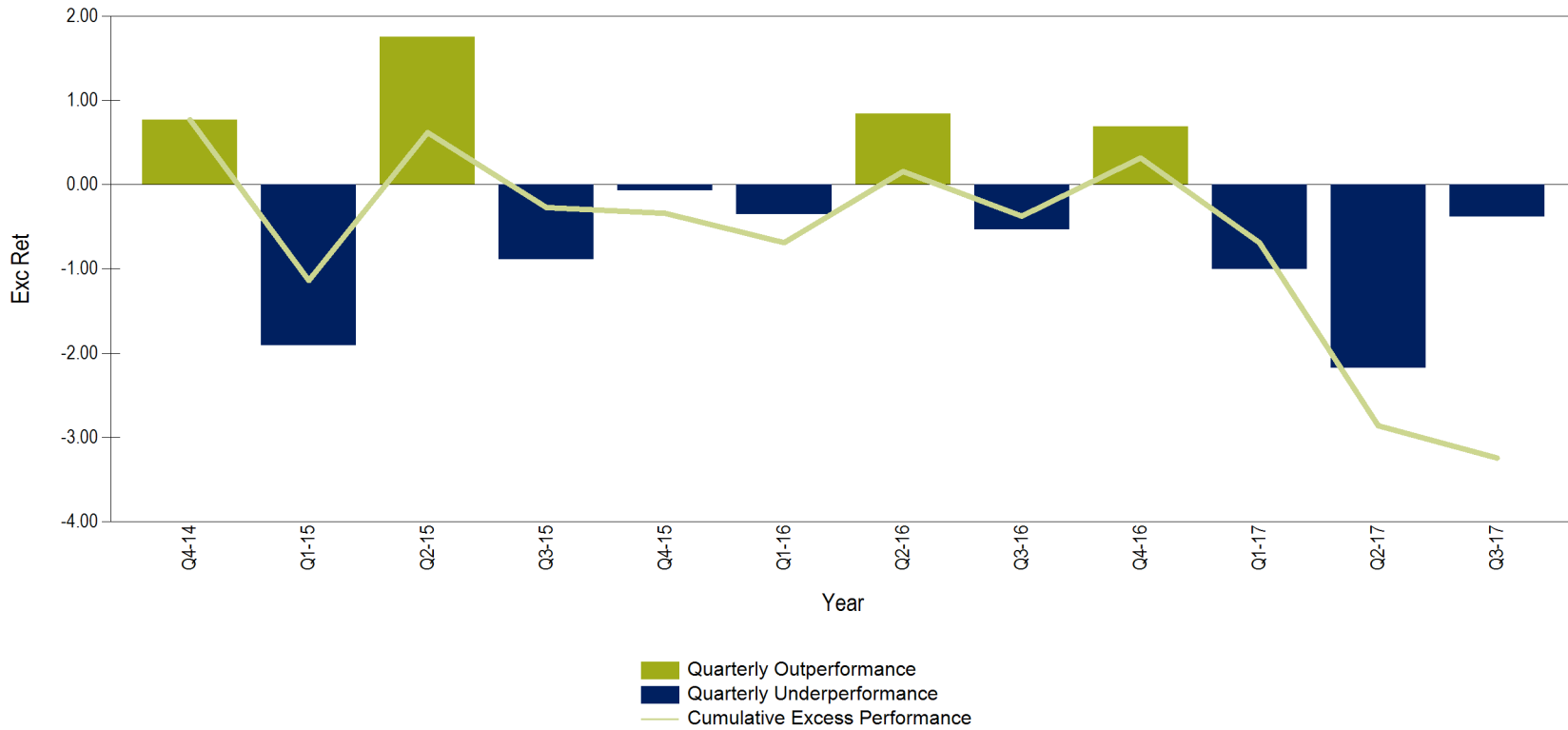
5 Year Risk Return



5 Year Style Map

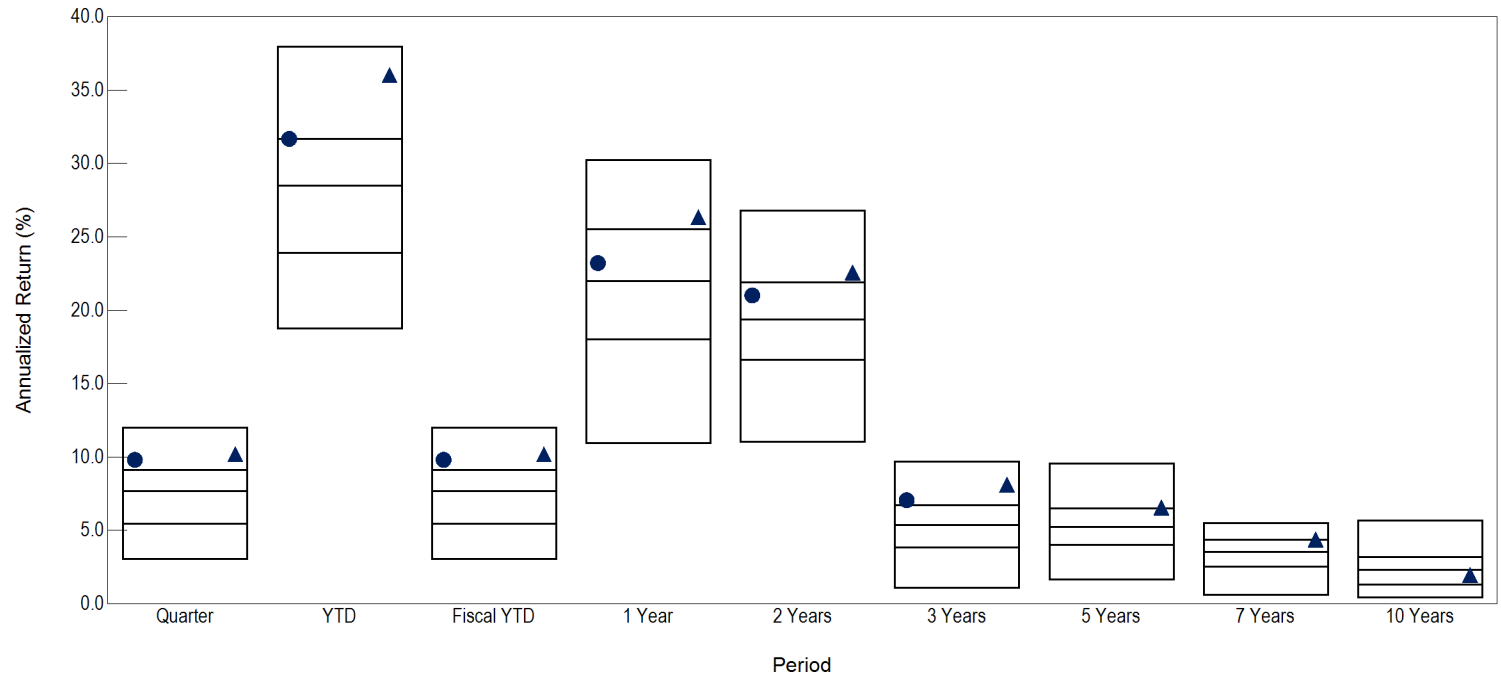


Quarterly and Cumulative Excess Performance



Axiom Emerging Markets

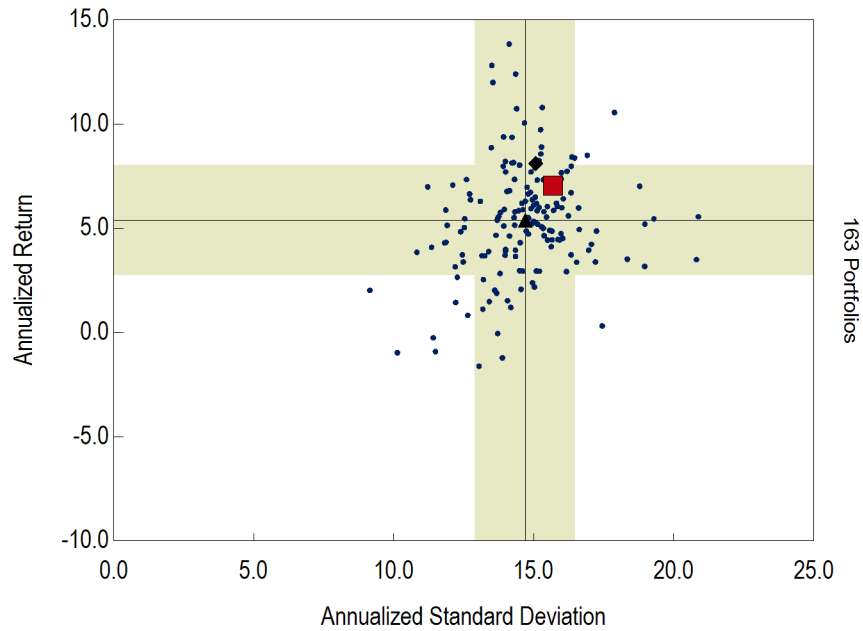
Axiom Emerging Markets vs. eA Emg Mkts Equity Net



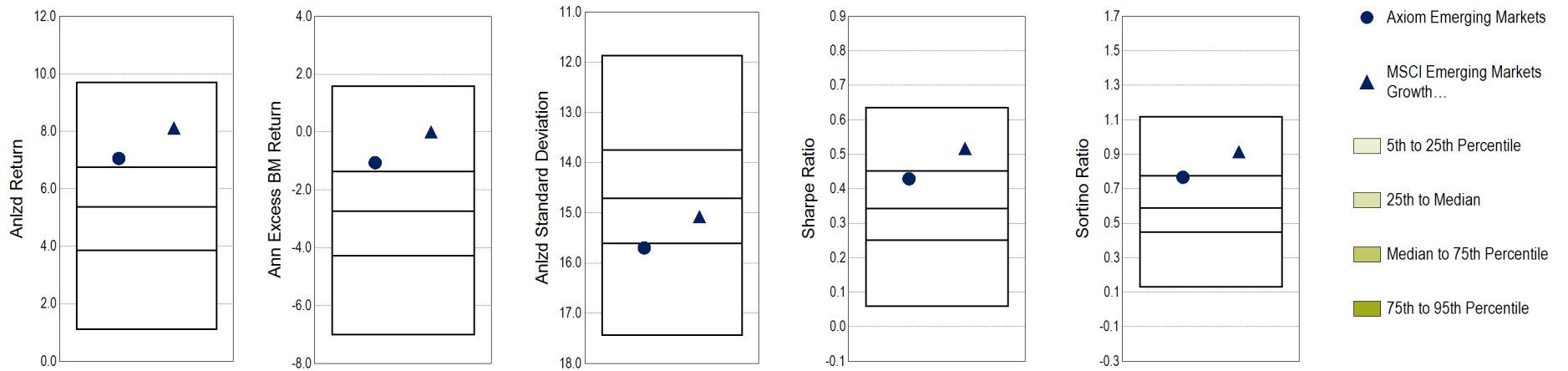
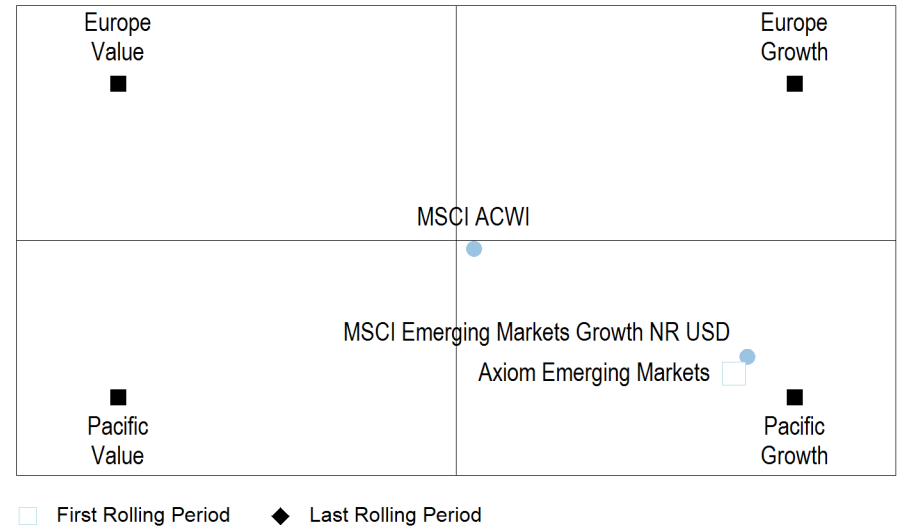
	Return (Rank)															
5th Percentile	11.98	37.95	11.98	30.26	26.78	9.70	9.57	5.51	5.67							
25th Percentile	9.17	31.71	9.17	25.55	21.93	6.77	6.54	4.41	3.23							
Median	7.71	28.53	7.71	22.02	19.43	5.40	5.26	3.58	2.33							
75th Percentile	5.49	23.94	5.49	18.08	16.65	3.87	4.07	2.58	1.34							
95th Percentile	3.10	18.82	3.10	10.99	11.08	1.13	1.68	0.65	0.47							
# of Portfolios	181	177	181	177	173	163	132	86	56							
● Axiom Emerging Markets	9.81	(19)	31.68	(26)	9.81	(19)	23.21	(41)	21.01	(31)	7.06	(22)	--	(--)	--	(--)
▲ MSCI Emerging Markets Growth NR USD	10.19	(17)	36.03	(9)	10.19	(17)	26.35	(19)	22.58	(22)	8.12	(13)	6.55	(25)	4.38	(26)

Axiom Emerging Markets

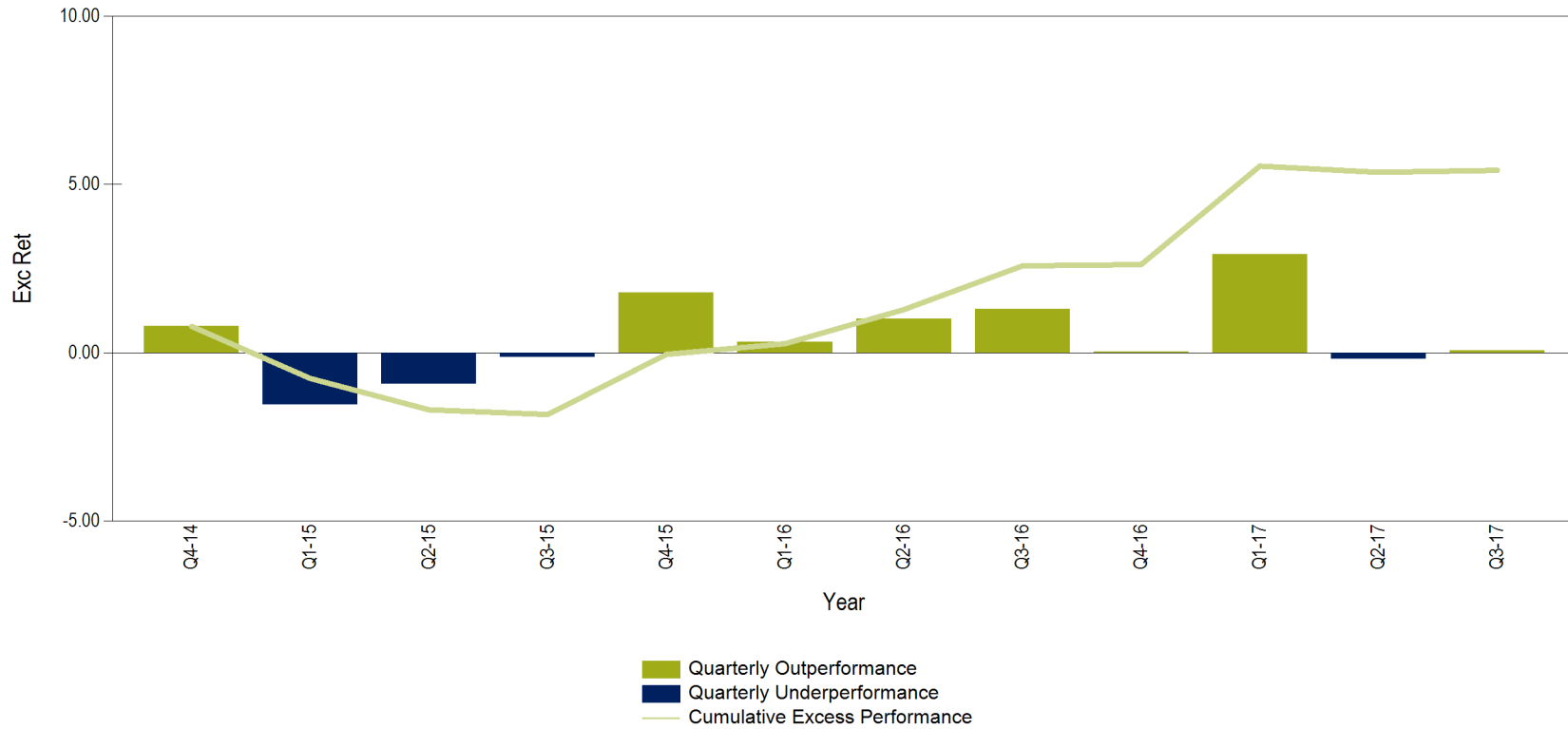
3 Year Risk Return



3 Year Style Map

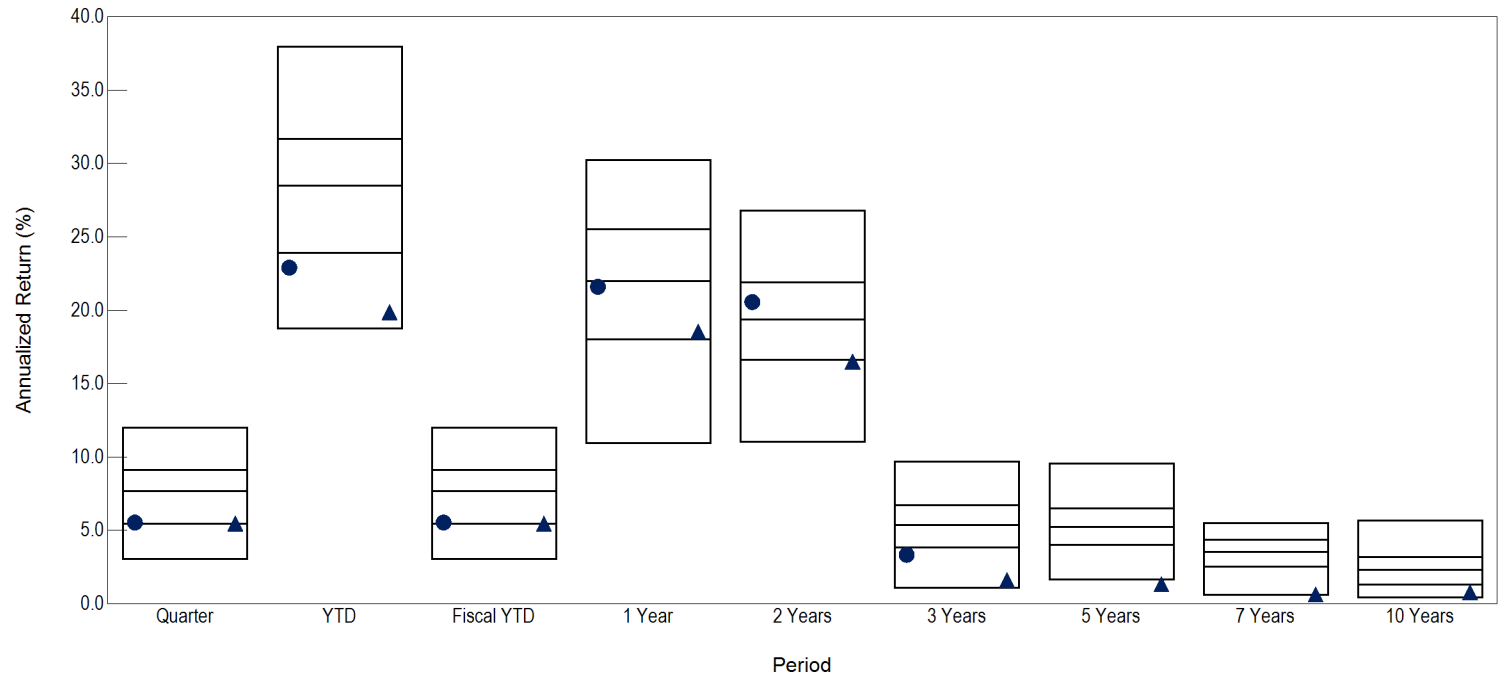


Quarterly and Cumulative Excess Performance



DFA Emerging Markets

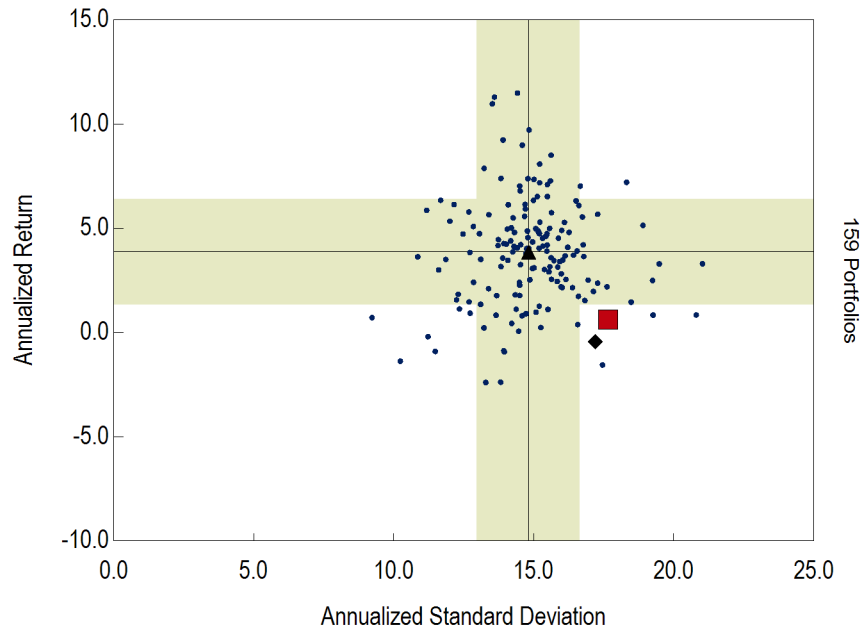
DFA Emerging Markets vs. eA Emg Mkts Equity Net



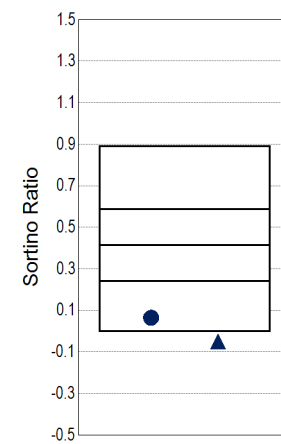
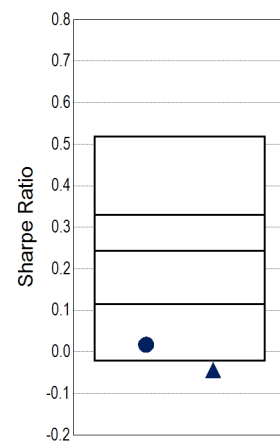
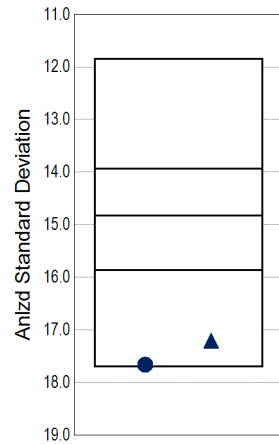
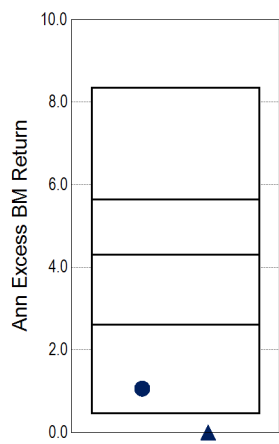
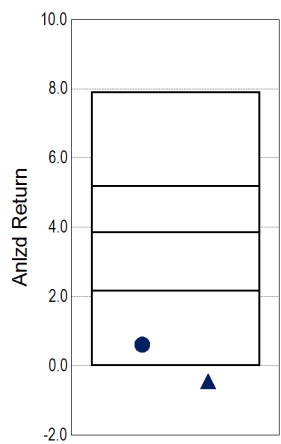
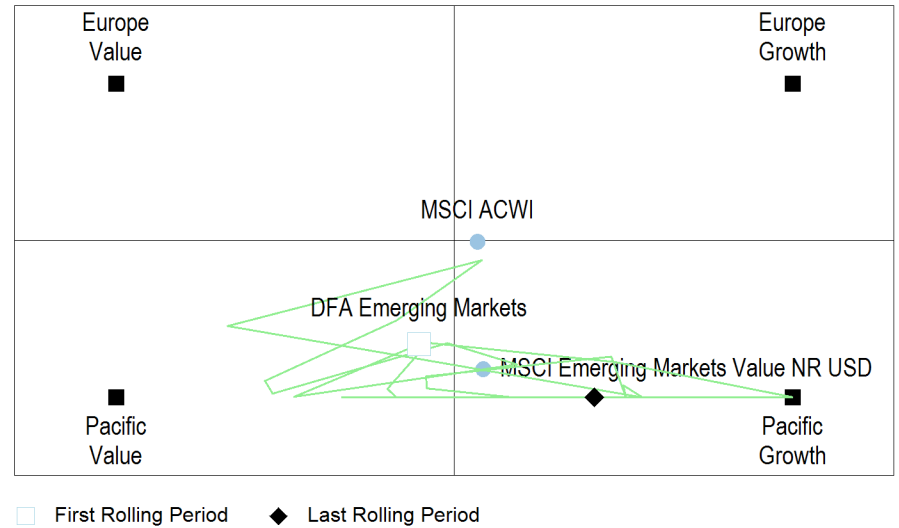
	Return (Rank)																	
5th Percentile	11.98	37.95	11.98	30.26	26.78	9.70	9.57	5.51	5.67									
25th Percentile	9.17	31.71	9.17	25.55	21.93	6.77	6.54	4.41	3.23									
Median	7.71	28.53	7.71	22.02	19.43	5.40	5.26	3.58	2.33									
75th Percentile	5.49	23.94	5.49	18.08	16.65	3.87	4.07	2.58	1.34									
95th Percentile	3.10	18.82	3.10	10.99	11.08	1.13	1.68	0.65	0.47									
# of Portfolios	181	177	181	177	173	163	132	86	56									
● DFA Emerging Markets	5.53	(75)	22.90	(83)	5.53	(75)	21.60	(55)	20.56	(38)	3.33	(83)	--	(--)	--	(--)	--	(--)
▲ MSCI Emerging Markets Value NR USD	5.47	(76)	19.87	(94)	5.47	(76)	18.55	(71)	16.51	(77)	1.62	(93)	1.34	(96)	0.63	(96)	0.79	(88)

DFA Emerging Markets

Since Inception Risk Return

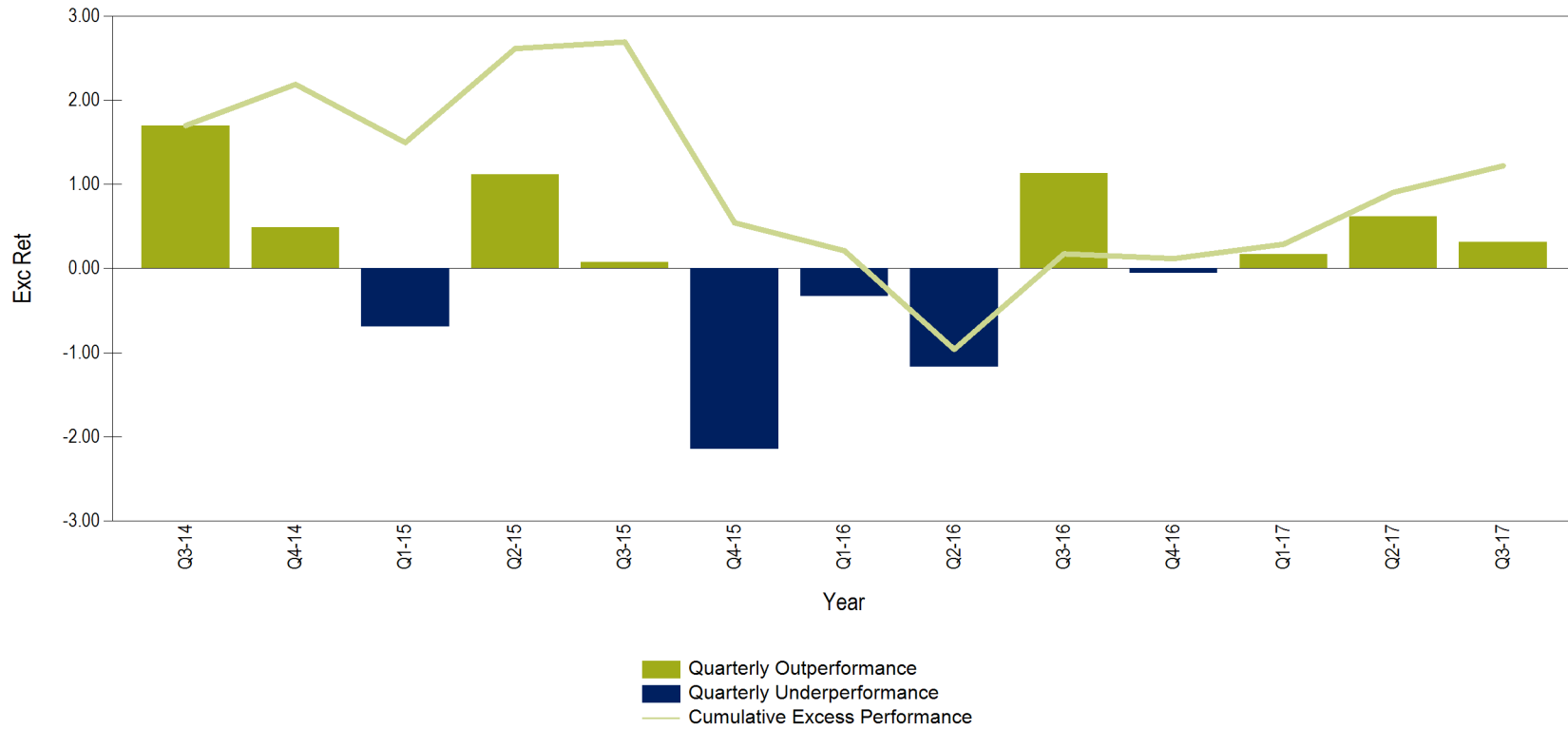


Since Inception Style Map



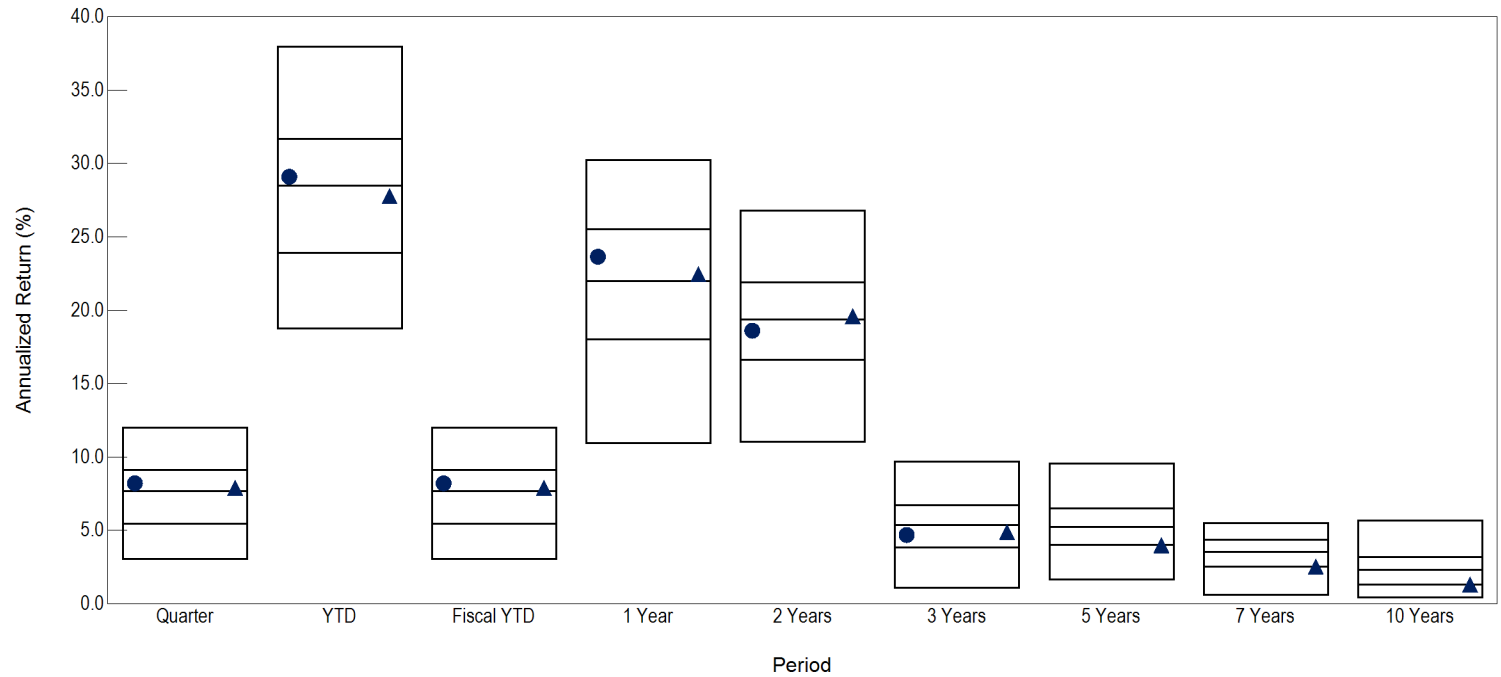
- DFA Emerging Markets
- ▲ MSCI Emerging Markets Value NR USD
- 5th to 25th Percentile
- ▒ 25th to Median
- ▓ Median to 75th Percentile
- 75th to 95th Percentile

Quarterly and Cumulative Excess Performance



QMA Emerging Markets

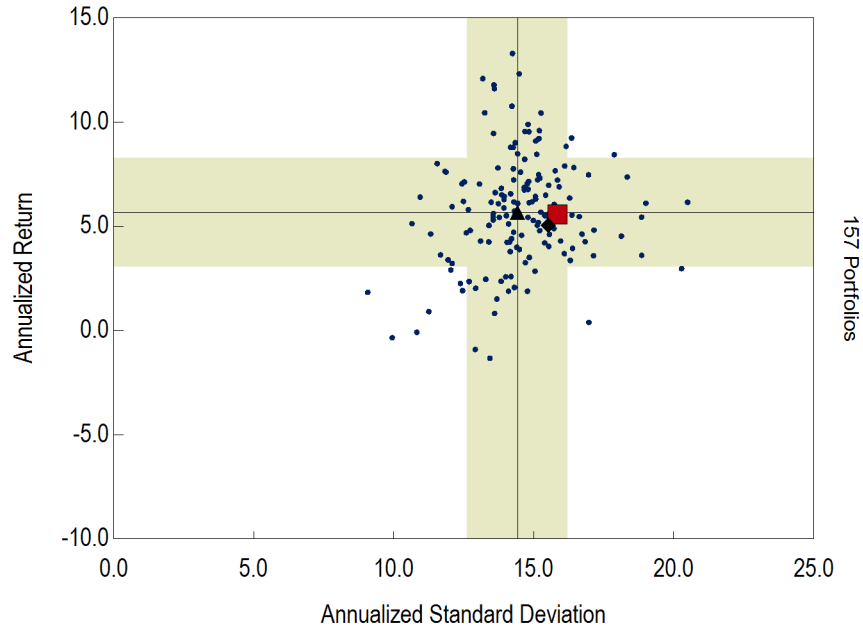
QMA Emerging Markets vs. eA Emg Mkts Equity Net



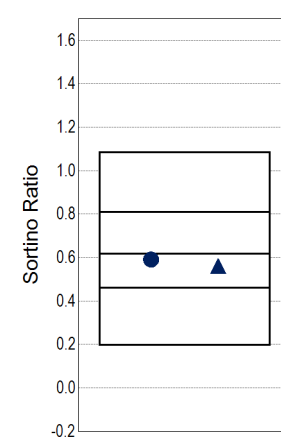
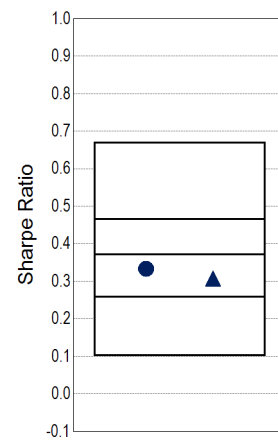
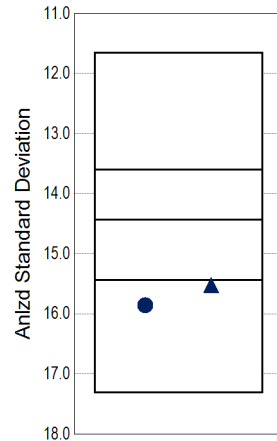
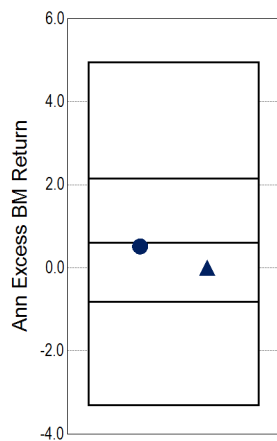
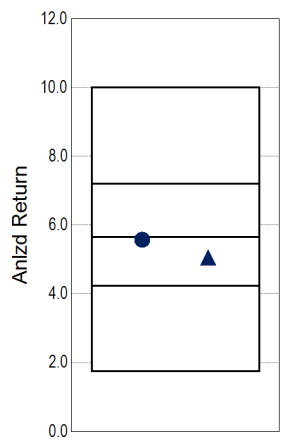
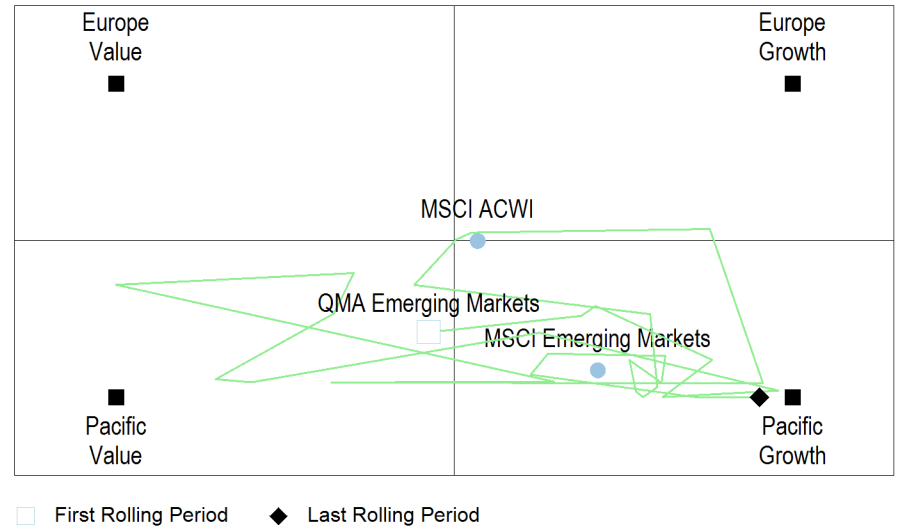
	Return (Rank)																	
5th Percentile	11.98	37.95	11.98	30.26	26.78	9.70	9.57	5.51	5.67									
25th Percentile	9.17	31.71	9.17	25.55	21.93	6.77	6.54	4.41	3.23									
Median	7.71	28.53	7.71	22.02	19.43	5.40	5.26	3.58	2.33									
75th Percentile	5.49	23.94	5.49	18.08	16.65	3.87	4.07	2.58	1.34									
95th Percentile	3.10	18.82	3.10	10.99	11.08	1.13	1.68	0.65	0.47									
# of Portfolios	181	177	181	177	173	163	132	86	56									
● QMA Emerging Markets	8.21	(41)	29.10	(45)	8.21	(41)	23.65	(39)	18.61	(59)	4.69	(64)	--	(--)	--	(--)	--	(--)
▲ MSCI Emerging Markets	7.89	(46)	27.78	(56)	7.89	(46)	22.46	(46)	19.59	(48)	4.90	(60)	3.99	(77)	2.54	(77)	1.32	(79)

QMA Emerging Markets

Since Inception Risk Return



Since Inception Style Map

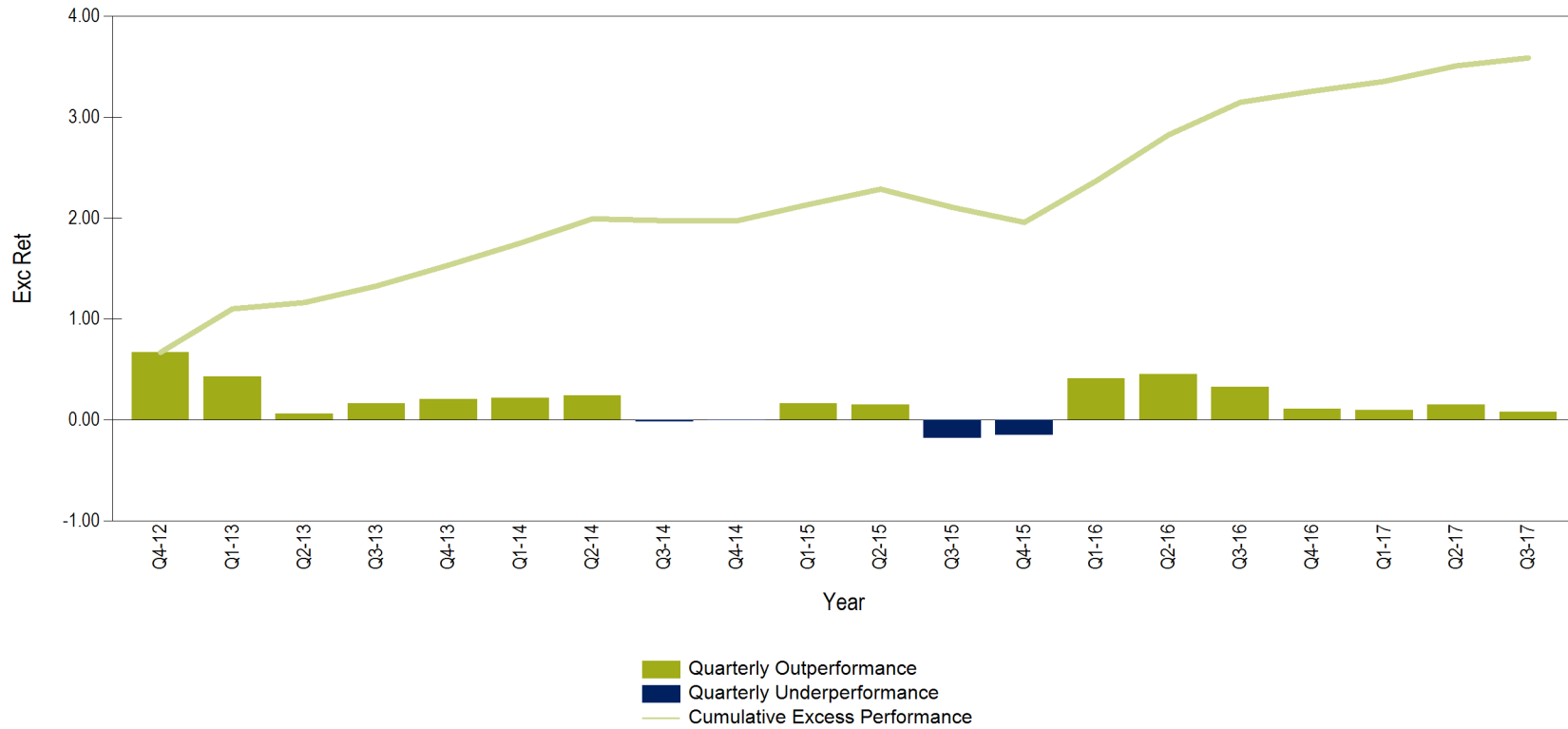


- QMA Emerging Markets
- ▲ MSCI Emerging Markets
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

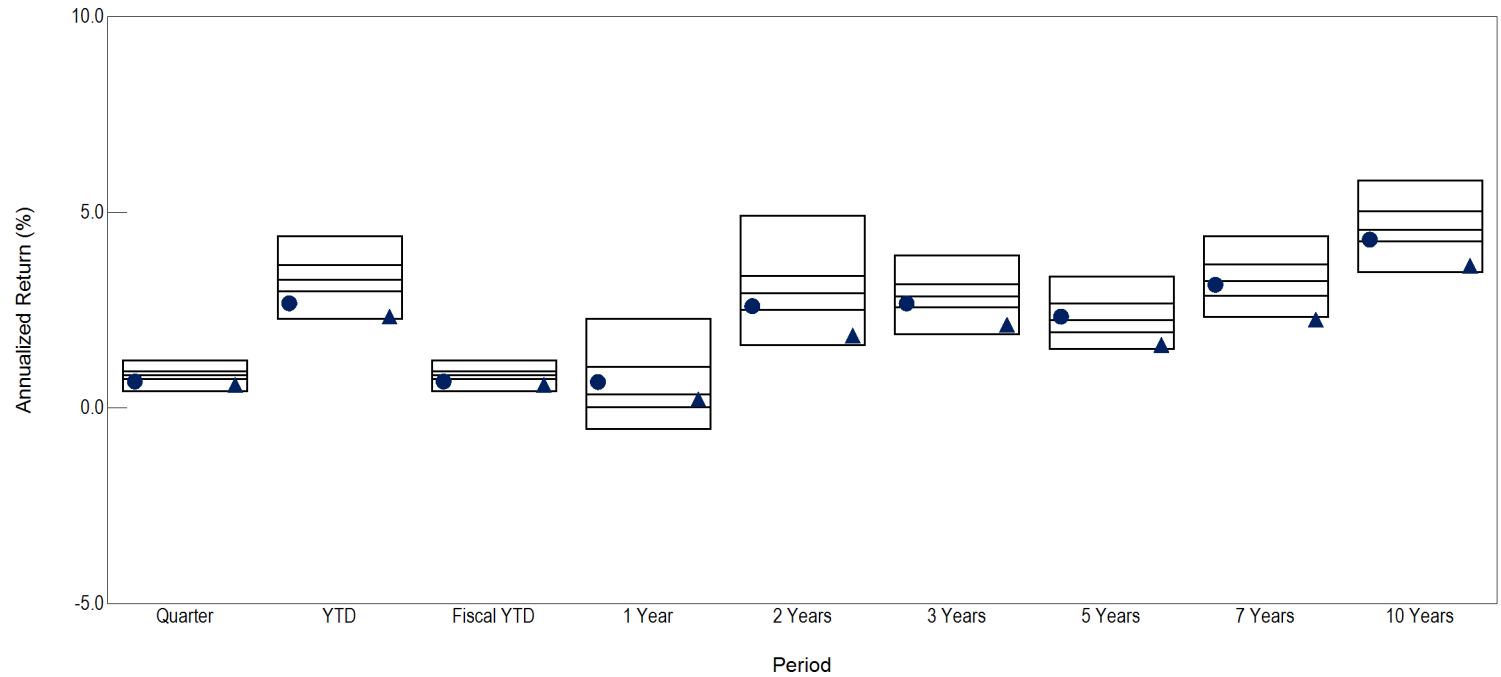
Core Fixed Income Manager Performance



Quarterly and Cumulative Excess Performance

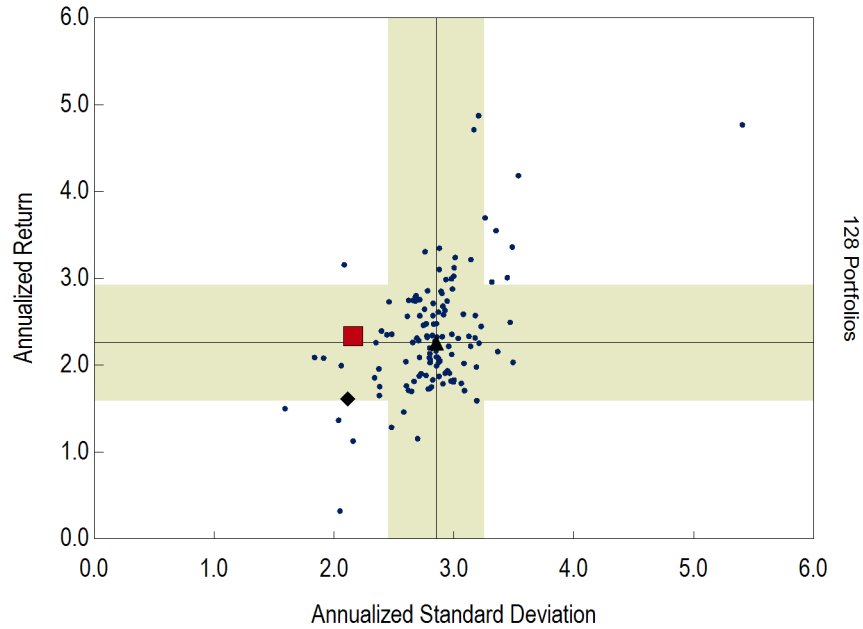


Baird Advisors vs. eA US Core Fixed Inc Net

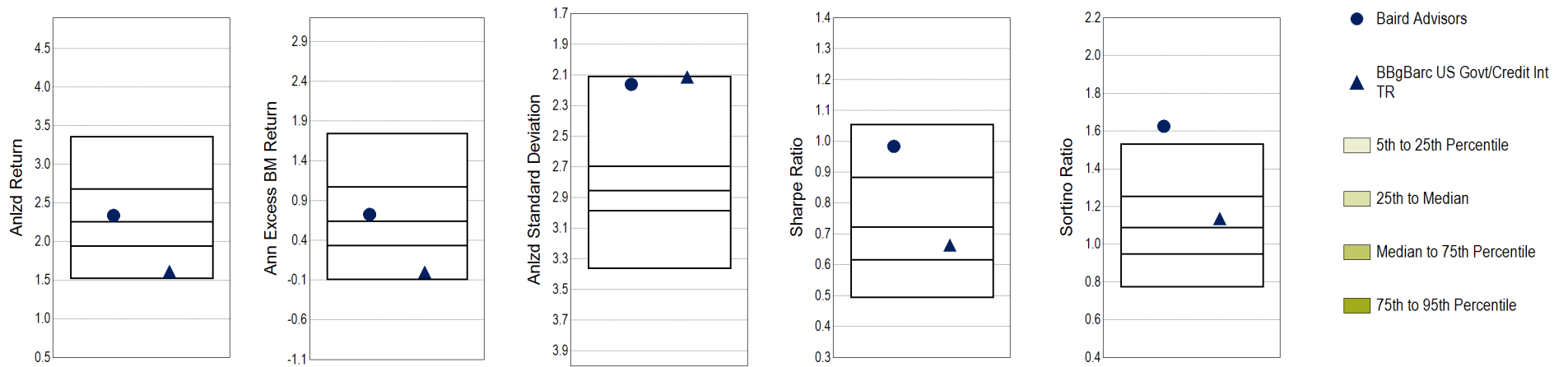
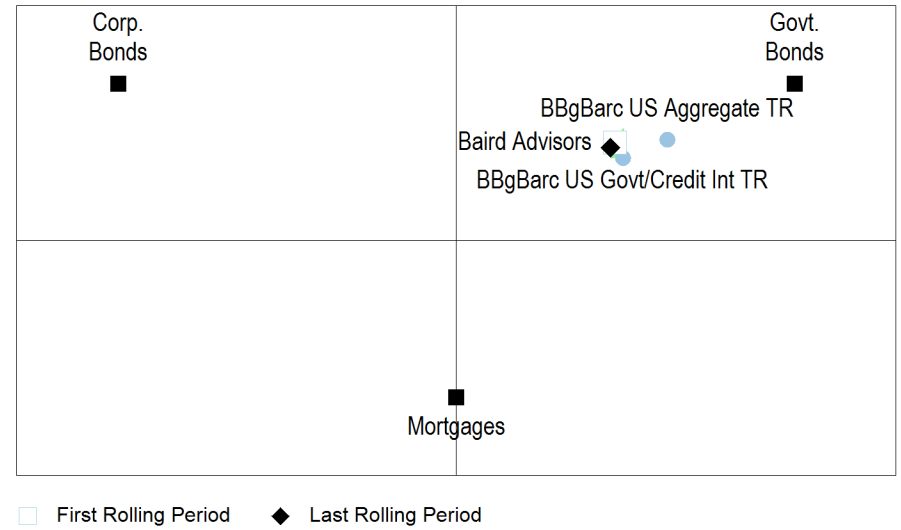


	Return (Rank)									
5th Percentile	1.21	4.39	1.21	2.29	4.92	3.90	3.36	4.39	5.81	
25th Percentile	0.96	3.67	0.96	1.07	3.39	3.17	2.69	3.69	5.04	
Median	0.86	3.30	0.86	0.37	2.96	2.86	2.26	3.26	4.58	
75th Percentile	0.76	3.00	0.76	0.04	2.53	2.58	1.95	2.88	4.28	
95th Percentile	0.45	2.30	0.45	-0.51	1.63	1.91	1.53	2.35	3.50	
# of Portfolios	133	133	133	133	130	130	128	120	105	
● Baird Advisors	0.68 (85)	2.68 (89)	0.68 (85)	0.67 (36)	2.60 (72)	2.67 (65)	2.34 (42)	3.15 (57)	4.31 (74)	
▲ BBgBarc US Govt/Credit Int TR	0.60 (90)	2.34 (95)	0.60 (90)	0.23 (62)	1.86 (94)	2.13 (94)	1.61 (95)	2.26 (96)	3.64 (94)	

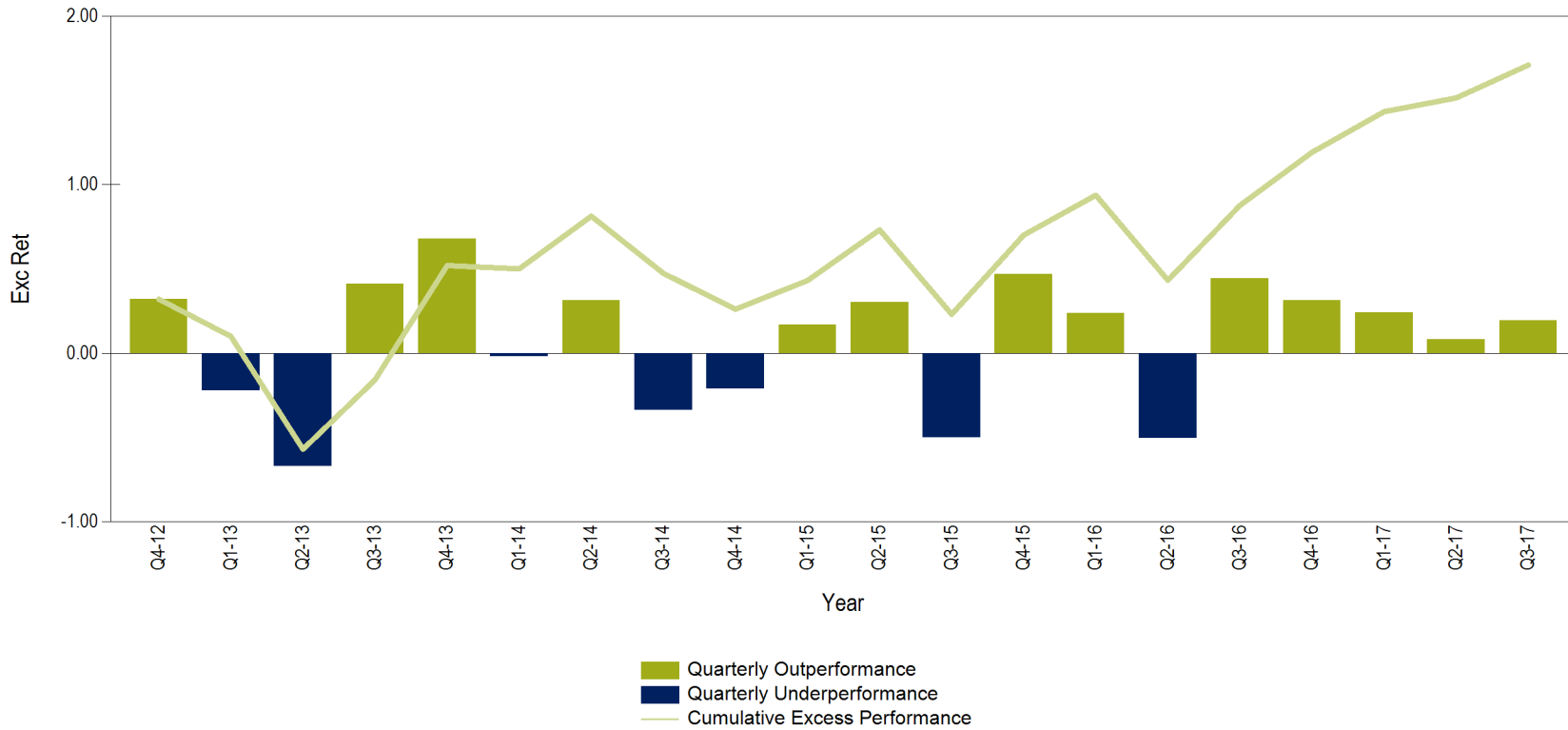
5 Year Risk Return

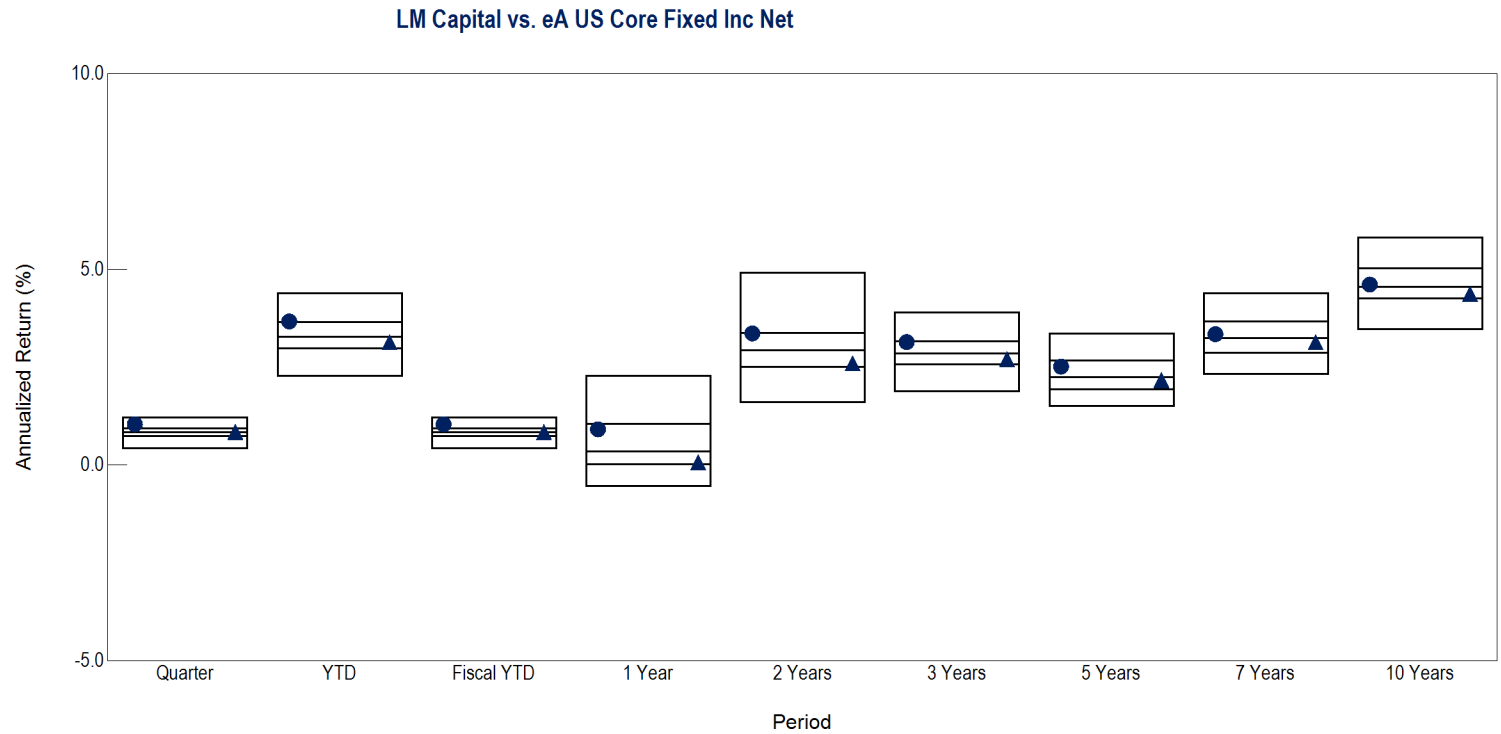


5 Year Style Map



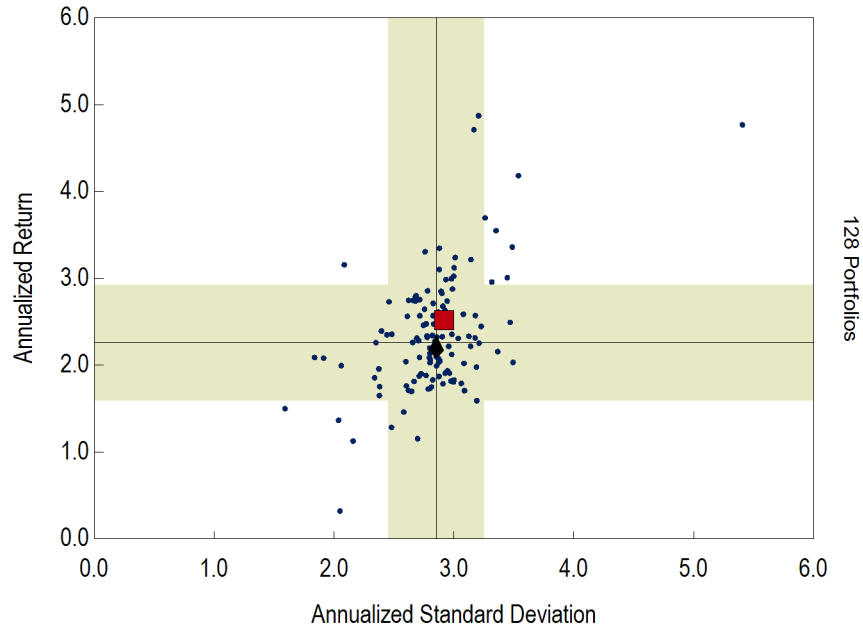
Quarterly and Cumulative Excess Performance



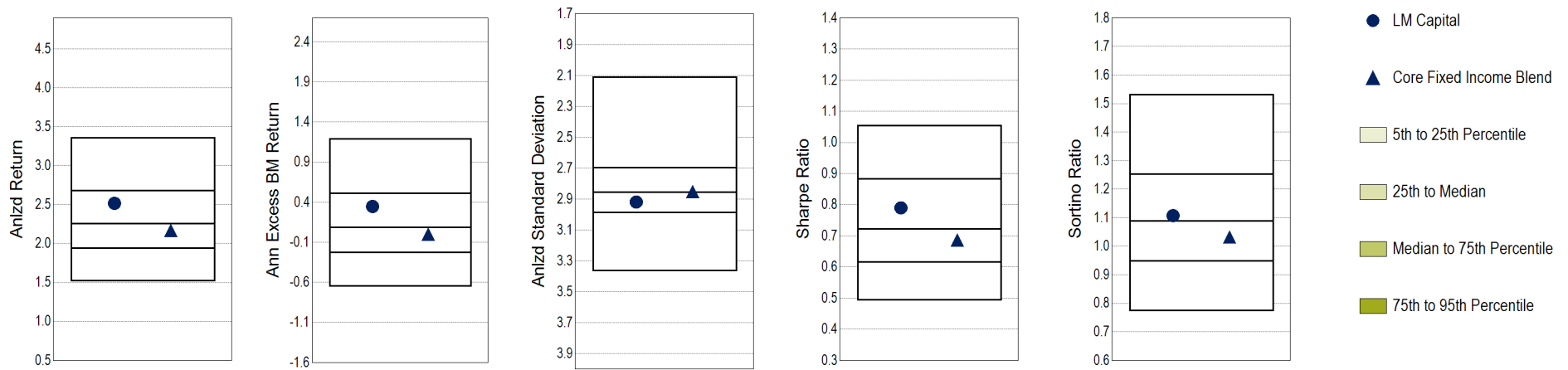
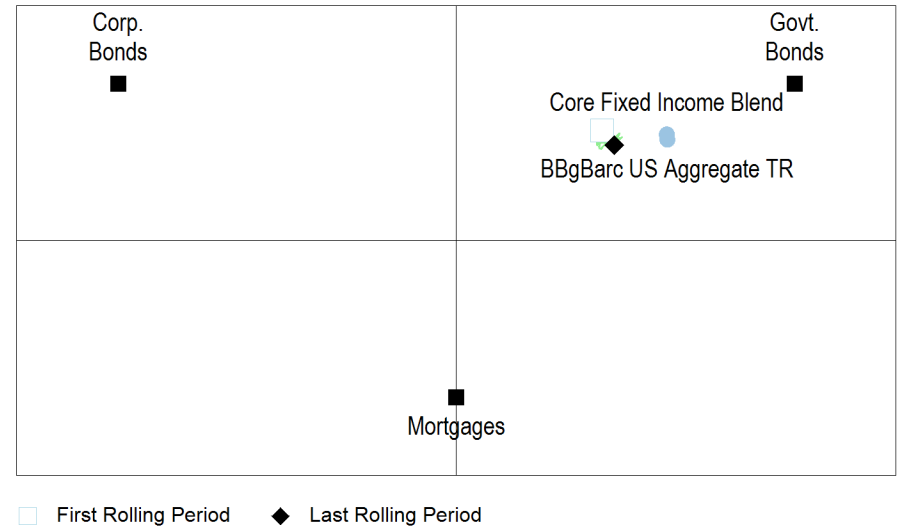


	Return (Rank)																	
5th Percentile	1.21	4.39	1.21	2.29	4.92	3.90	3.36	4.39	5.81									
25th Percentile	0.96	3.67	0.96	1.07	3.39	3.17	2.69	3.69	5.04									
Median	0.86	3.30	0.86	0.37	2.96	2.86	2.26	3.26	4.58									
75th Percentile	0.76	3.00	0.76	0.04	2.53	2.58	1.95	2.88	4.28									
95th Percentile	0.45	2.30	0.45	-0.51	1.63	1.91	1.53	2.35	3.50									
# of Portfolios	133	133	133	133	130	130	128	120	105									
● LM Capital	1.04	(13)	3.67	(25)	1.04	(13)	0.91	(29)	3.37	(28)	3.14	(26)	2.52	(33)	3.35	(46)	4.61	(50)
▲ Core Fixed Income Blend	0.85	(53)	3.14	(65)	0.85	(53)	0.07	(74)	2.60	(72)	2.71	(62)	2.17	(58)	3.14	(57)	4.38	(68)

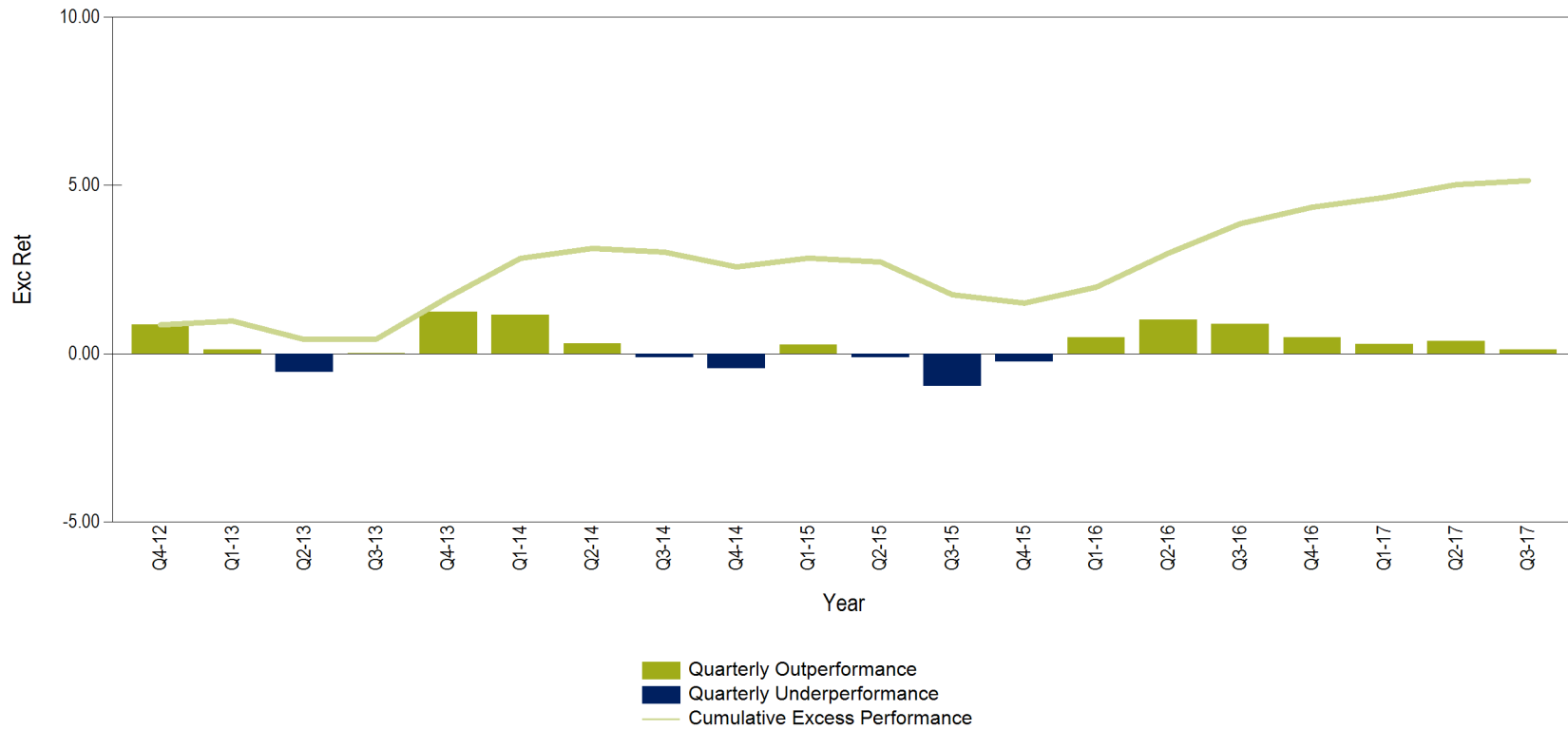
5 Year Risk Return



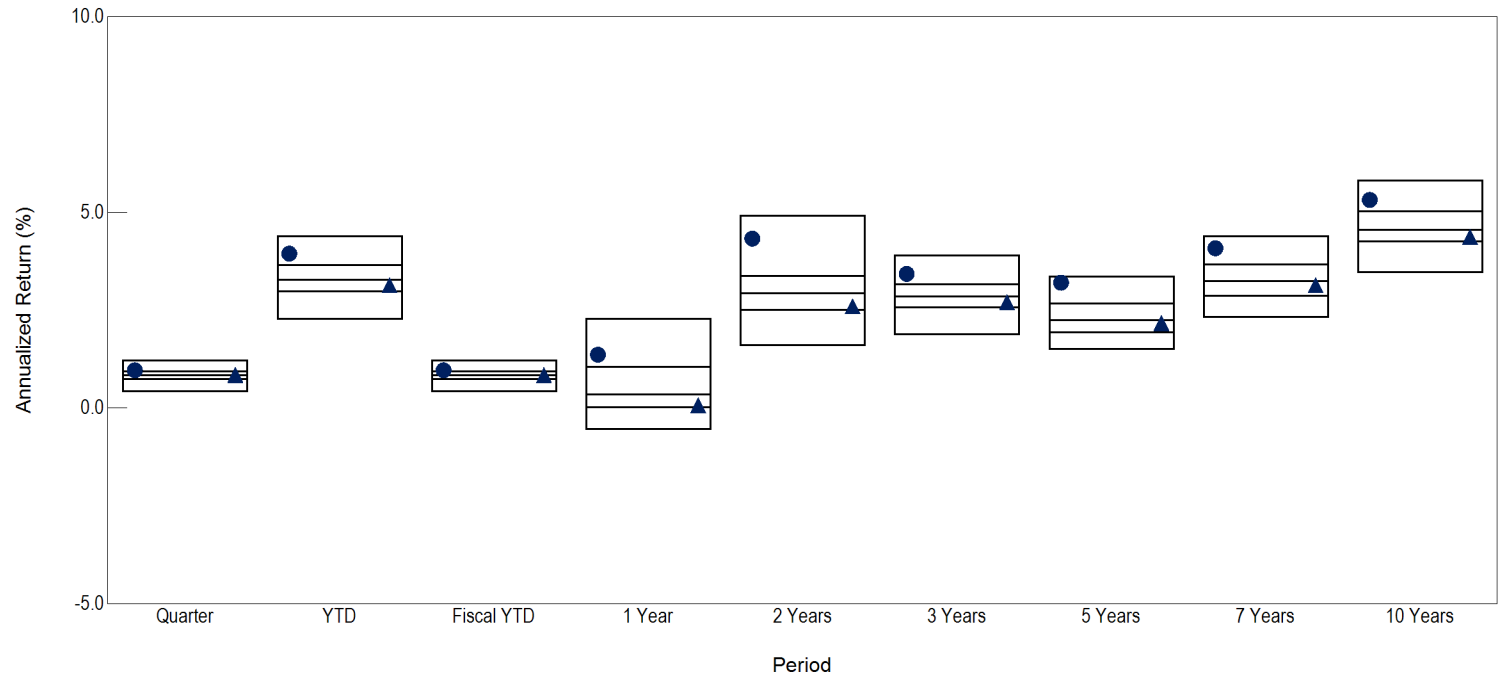
5 Year Style Map



Quarterly and Cumulative Excess Performance

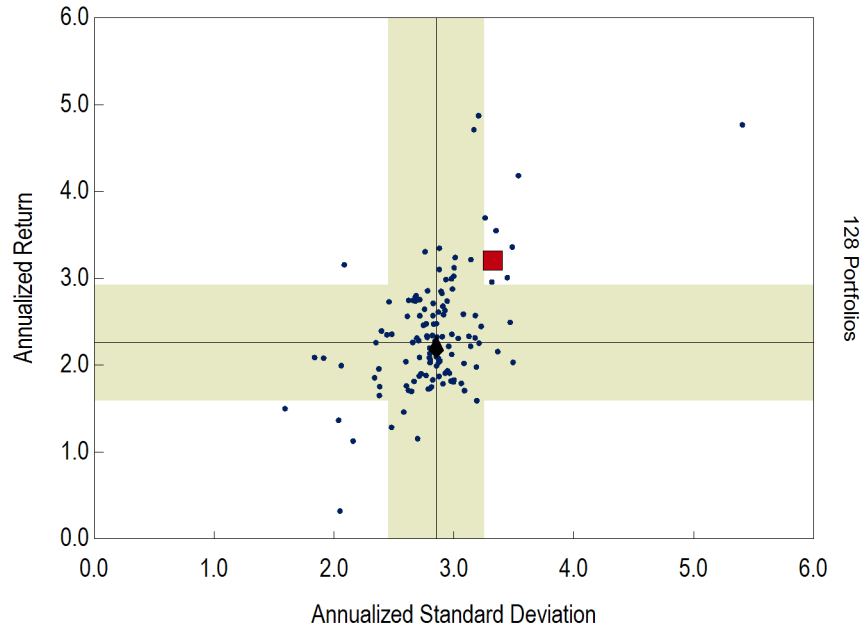


Loomis Sayles vs. eA US Core Fixed Inc Net

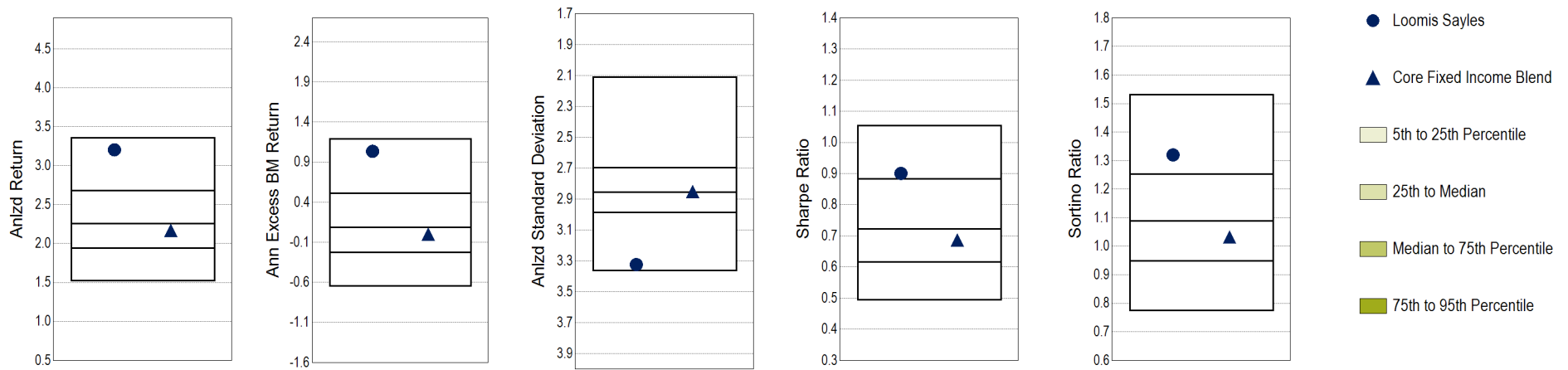
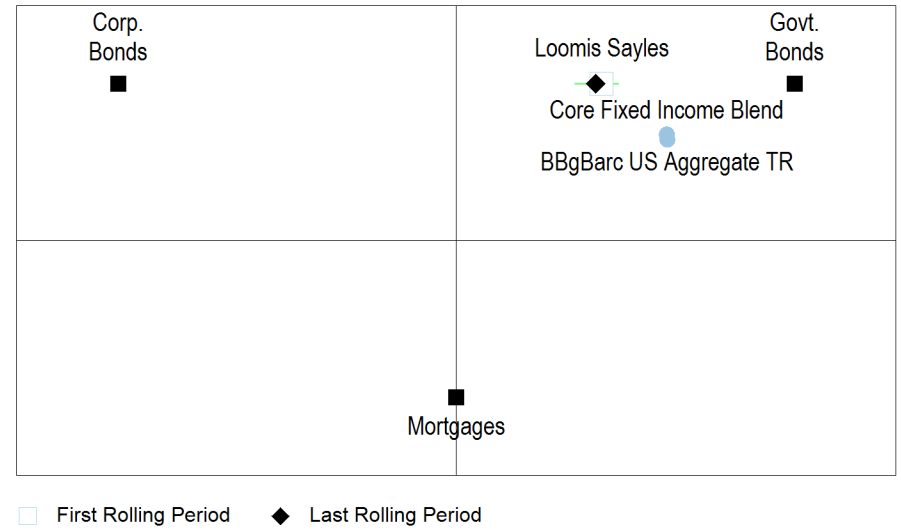


	Return (Rank)																	
5th Percentile	1.21	4.39	1.21	2.29	4.92	3.90	3.36	4.39	5.81									
25th Percentile	0.96	3.67	0.96	1.07	3.39	3.17	2.69	3.69	5.04									
Median	0.86	3.30	0.86	0.37	2.96	2.86	2.26	3.26	4.58									
75th Percentile	0.76	3.00	0.76	0.04	2.53	2.58	1.95	2.88	4.28									
95th Percentile	0.45	2.30	0.45	-0.51	1.63	1.91	1.53	2.35	3.50									
# of Portfolios	133	133	133	133	130	130	128	120	105									
● Loomis Sayles	0.97	(24)	3.95	(12)	0.97	(24)	1.36	(12)	4.33	(9)	3.43	(14)	3.20	(9)	4.09	(14)	5.32	(14)
▲ Core Fixed Income Blend	0.85	(53)	3.14	(65)	0.85	(53)	0.07	(74)	2.60	(72)	2.71	(62)	2.17	(58)	3.14	(57)	4.38	(68)

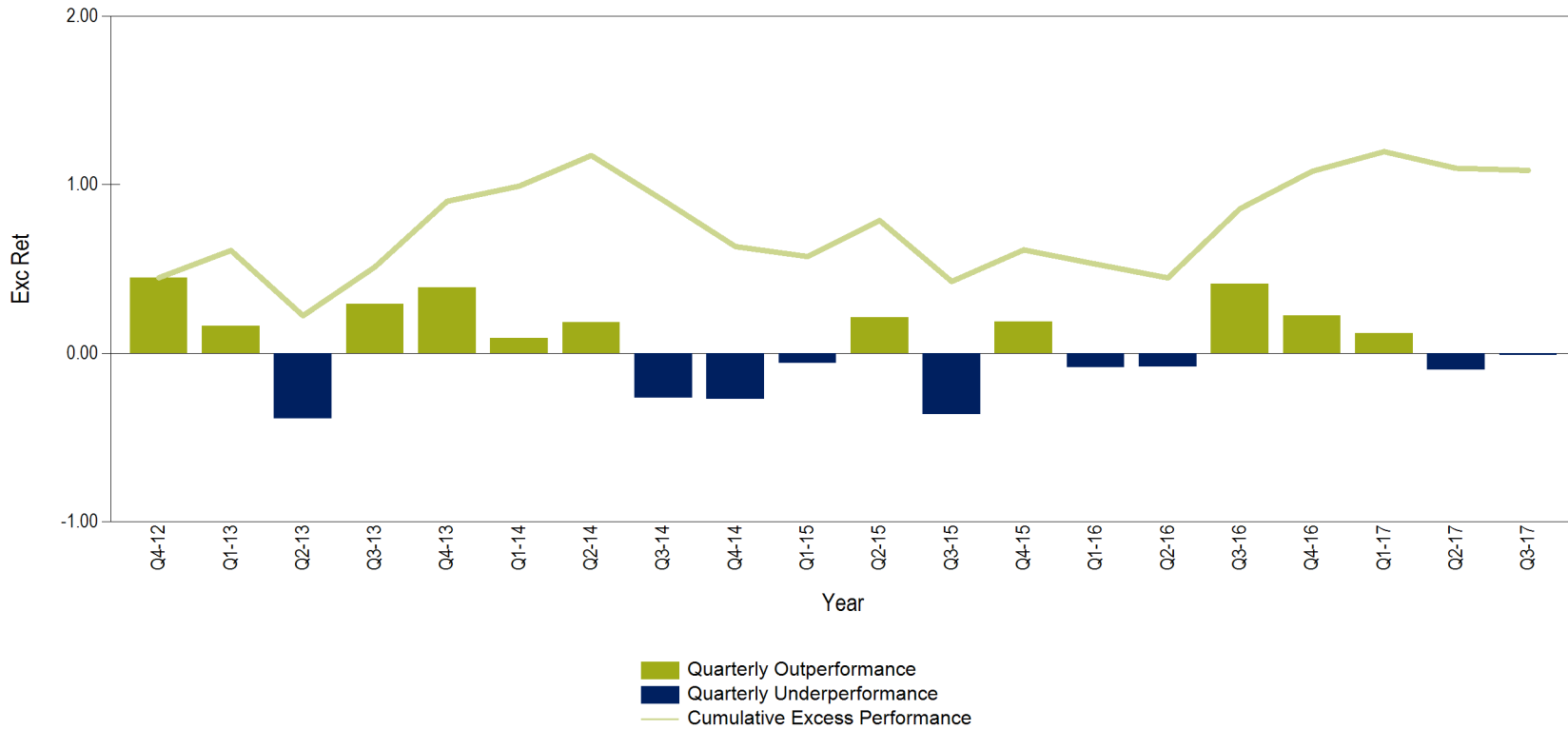
5 Year Risk Return



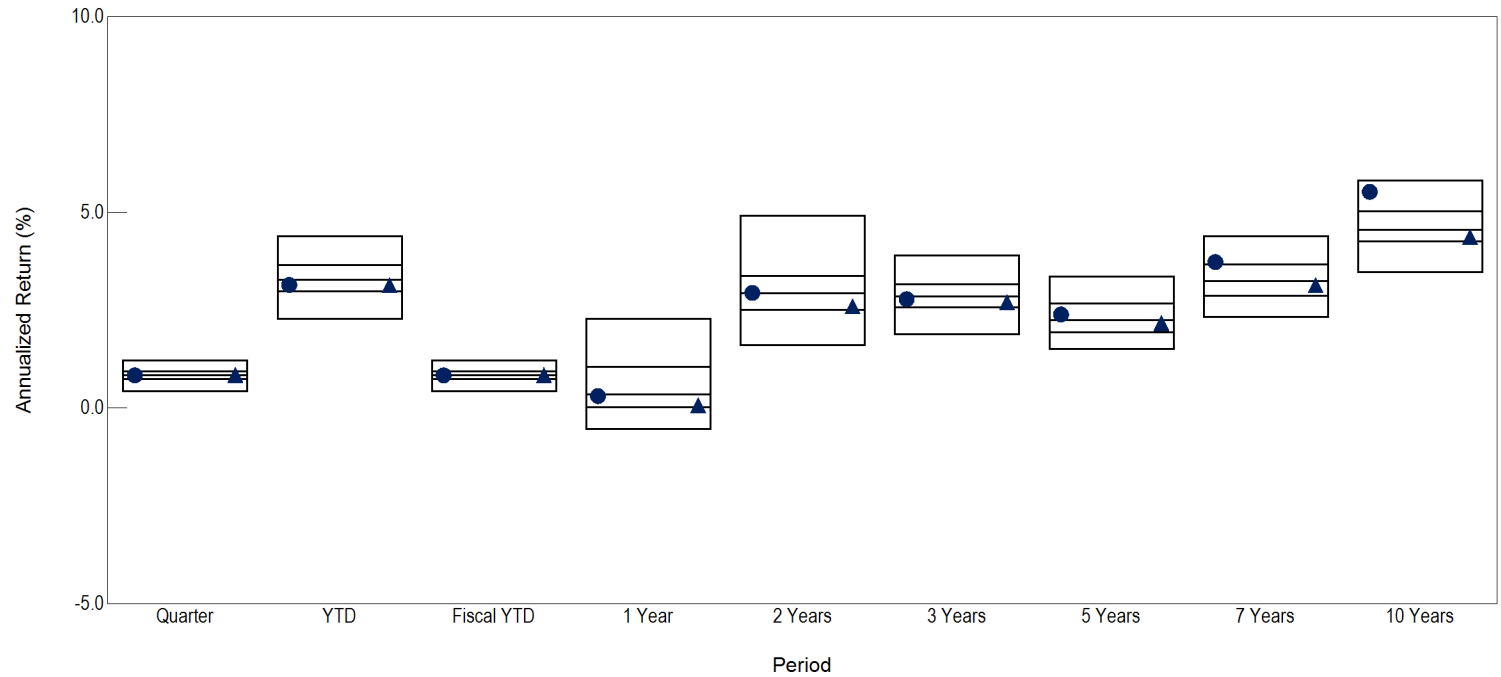
5 Year Style Map



Quarterly and Cumulative Excess Performance

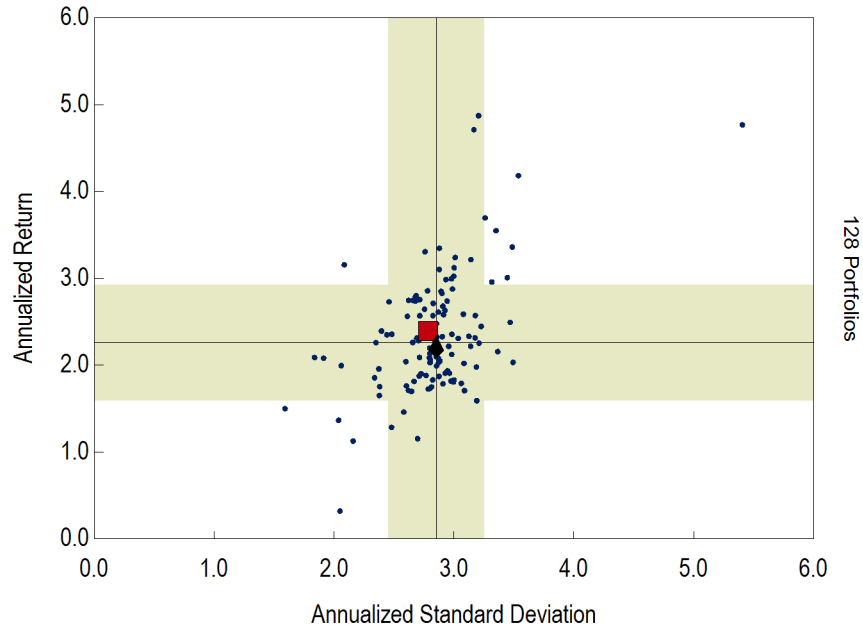


Neuberger Berman vs. eA US Core Fixed Inc Net

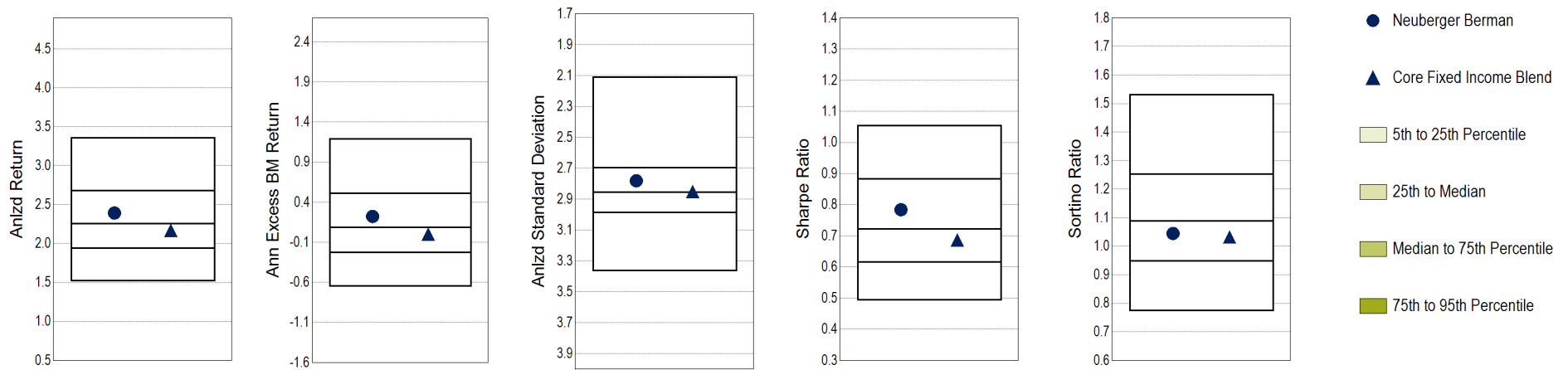
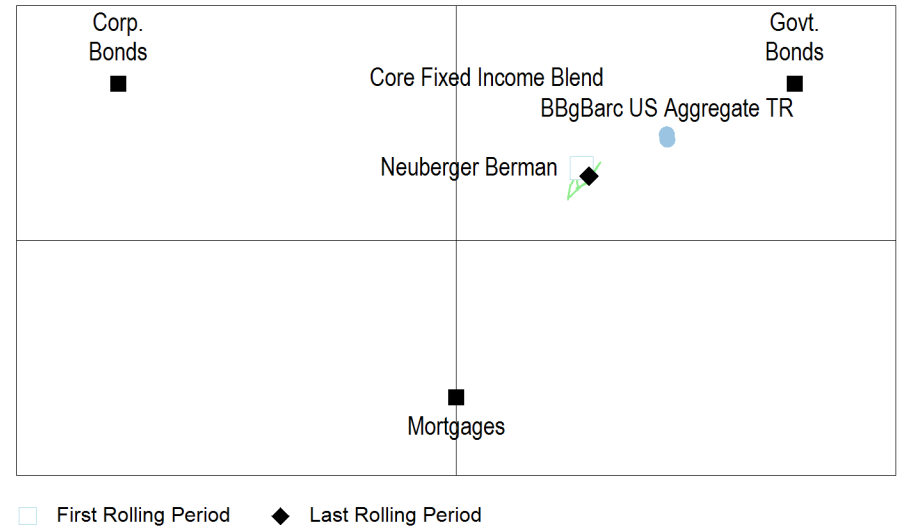


	Return (Rank)									
5th Percentile	1.21	4.39	1.21	2.29	4.92	3.90	3.36	4.39	5.81	
25th Percentile	0.96	3.67	0.96	1.07	3.39	3.17	2.69	3.69	5.04	
Median	0.86	3.30	0.86	0.37	2.96	2.86	2.26	3.26	4.58	
75th Percentile	0.76	3.00	0.76	0.04	2.53	2.58	1.95	2.88	4.28	
95th Percentile	0.45	2.30	0.45	-0.51	1.63	1.91	1.53	2.35	3.50	
# of Portfolios	133	133	133	133	130	130	128	120	105	
● Neuberger Berman	0.84 (58)	3.15 (64)	0.84 (58)	0.31 (55)	2.94 (51)	2.78 (58)	2.39 (38)	3.73 (24)	5.53 (11)	
▲ Core Fixed Income Blend	0.85 (53)	3.14 (65)	0.85 (53)	0.07 (74)	2.60 (72)	2.71 (62)	2.17 (58)	3.14 (57)	4.38 (68)	

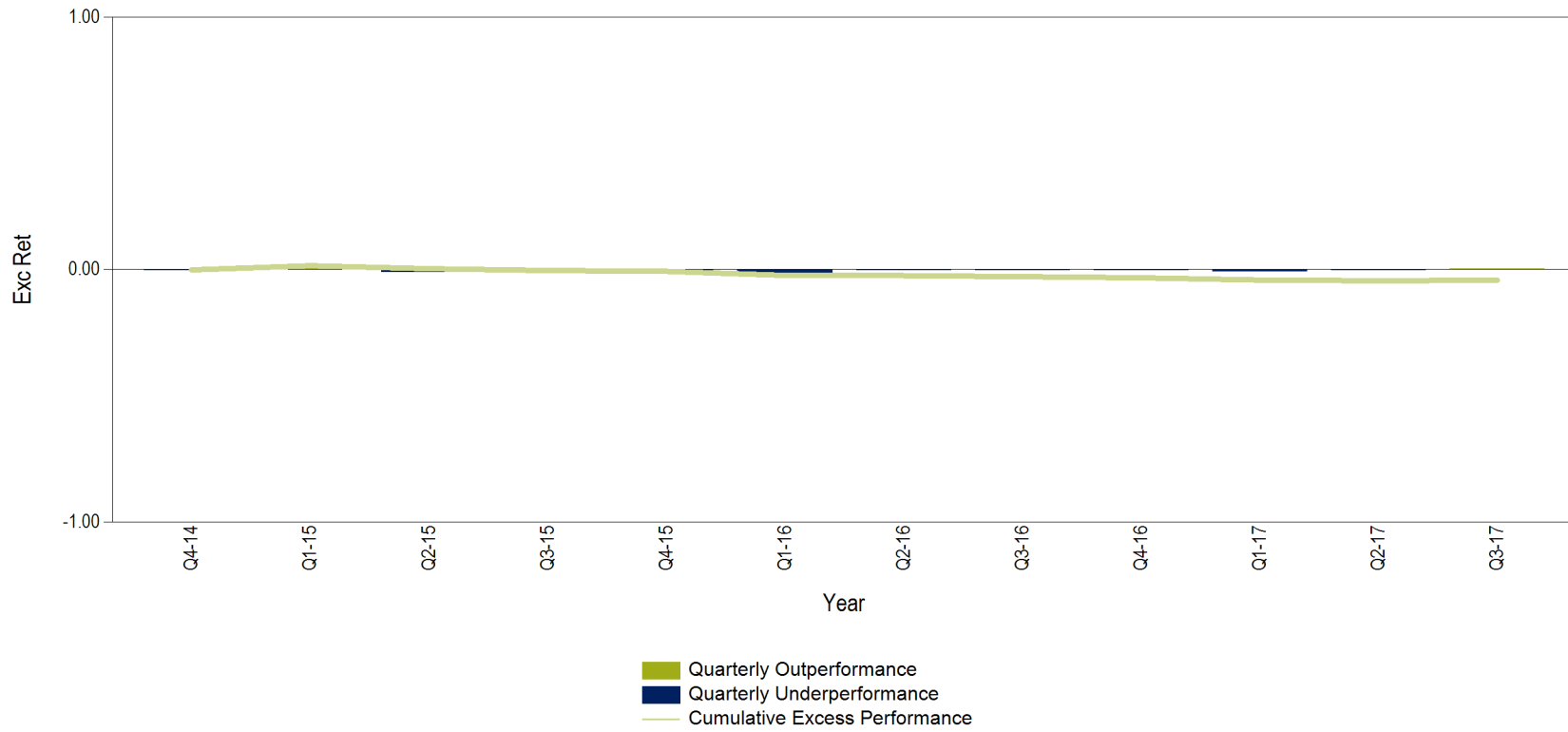
5 Year Risk Return



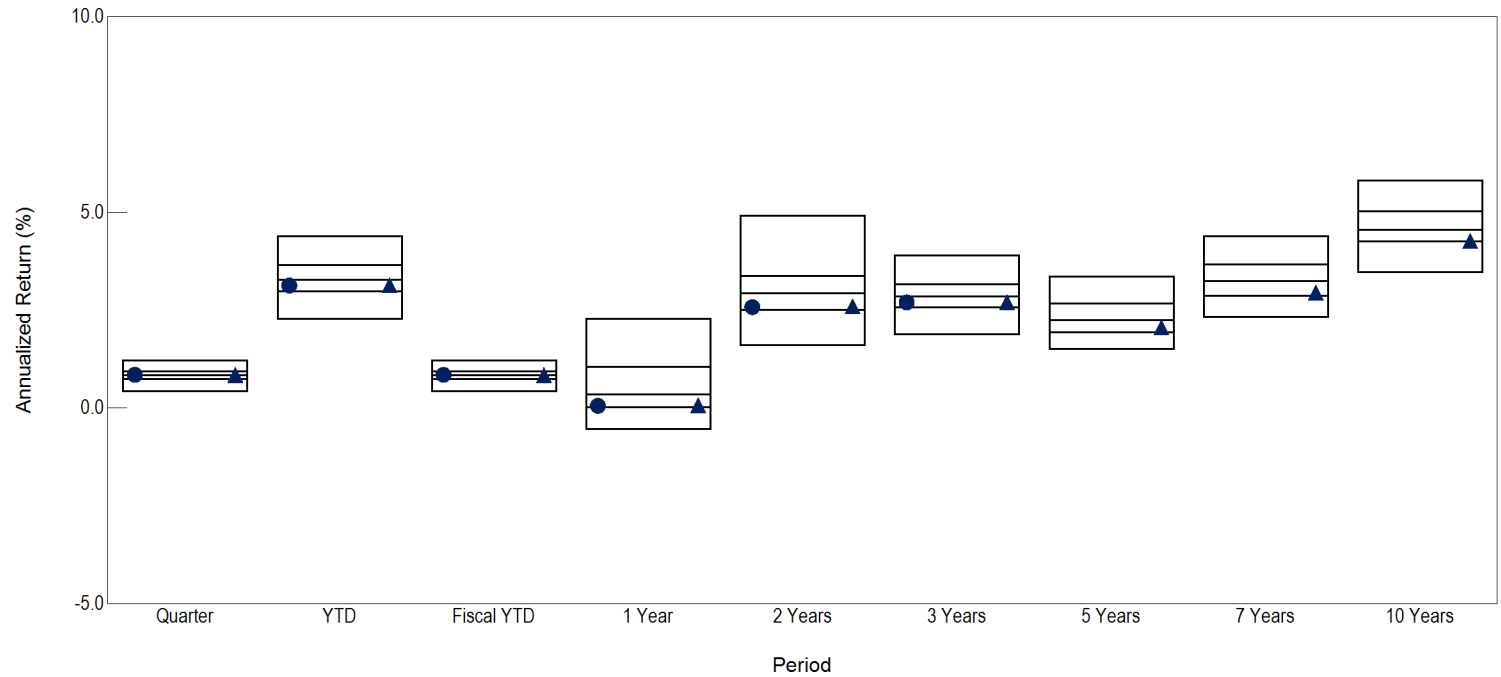
5 Year Style Map



Quarterly and Cumulative Excess Performance

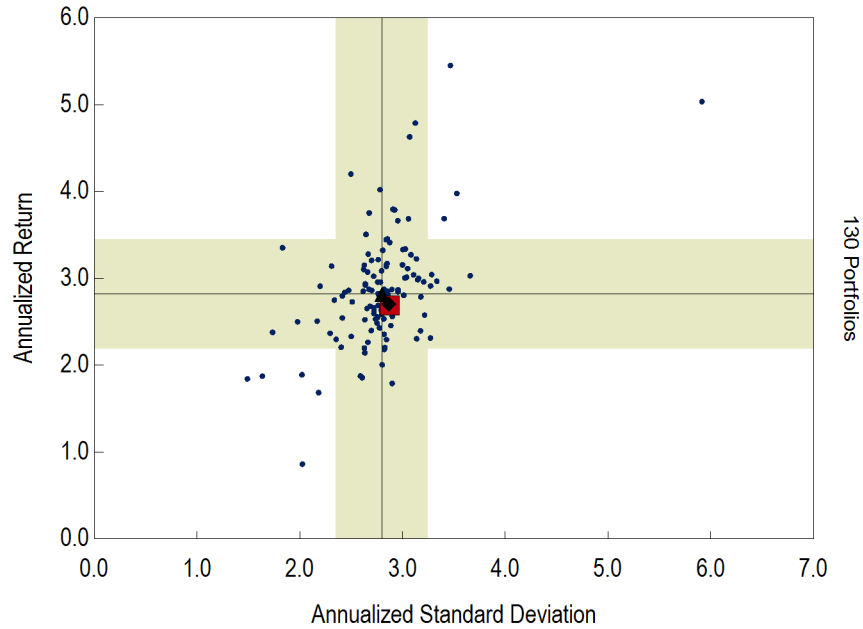


SSgA U.S. Aggregate Bond vs. eA US Core Fixed Inc Net

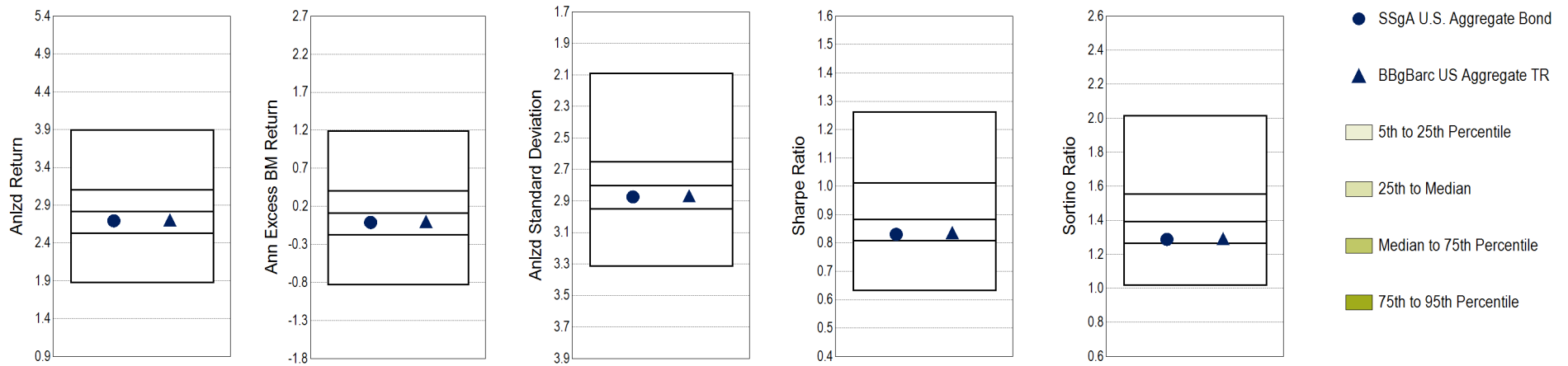
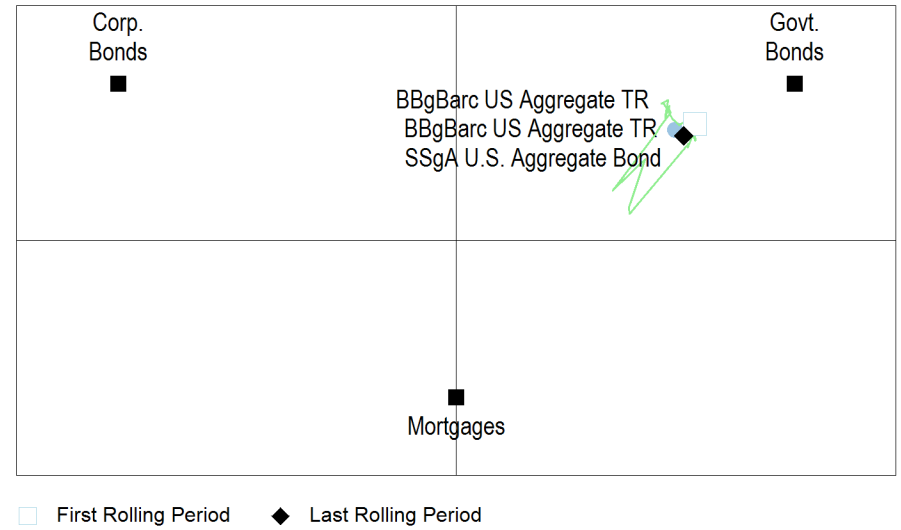


	Return (Rank)																	
5th Percentile	1.21	4.39	1.21	2.29	4.92	3.90	3.36	4.39	5.81									
25th Percentile	0.96	3.67	0.96	1.07	3.39	3.17	2.69	3.69	5.04									
Median	0.86	3.30	0.86	0.37	2.96	2.86	2.26	3.26	4.58									
75th Percentile	0.76	3.00	0.76	0.04	2.53	2.58	1.95	2.88	4.28									
95th Percentile	0.45	2.30	0.45	-0.51	1.63	1.91	1.53	2.35	3.50									
# of Portfolios	133	133	133	133	130	130	128	120	105									
● SSgA U.S. Aggregate Bond	0.85	(53)	3.13	(66)	0.85	(53)	0.06	(75)	2.58	(74)	2.70	(62)	--	(--)	--	(--)	--	(--)
▲ BBgBarc US Aggregate TR	0.85	(53)	3.14	(65)	0.85	(53)	0.07	(74)	2.60	(72)	2.71	(62)	2.06	(67)	2.95	(71)	4.27	(77)

Since Inception Risk Return



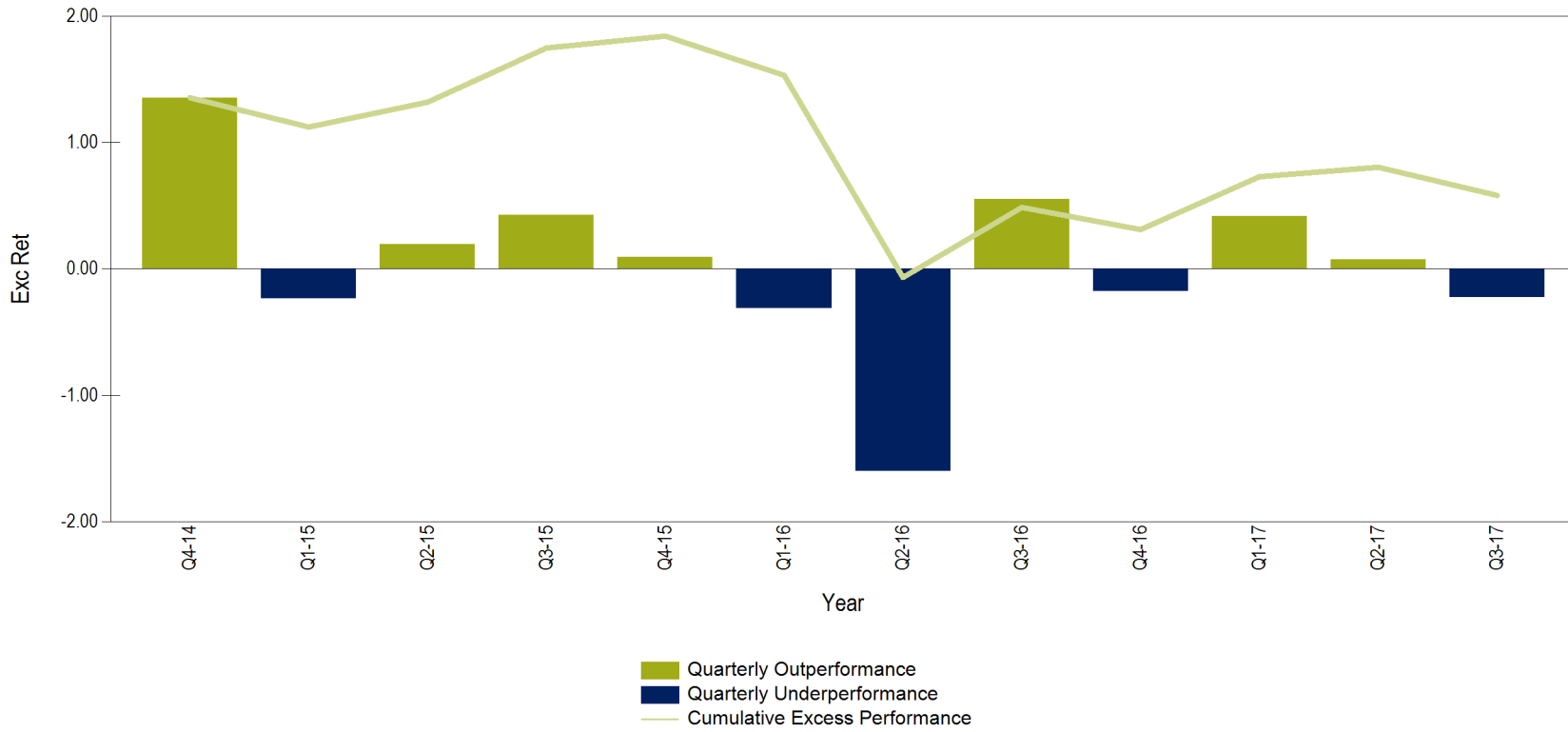
Since Inception Style Map



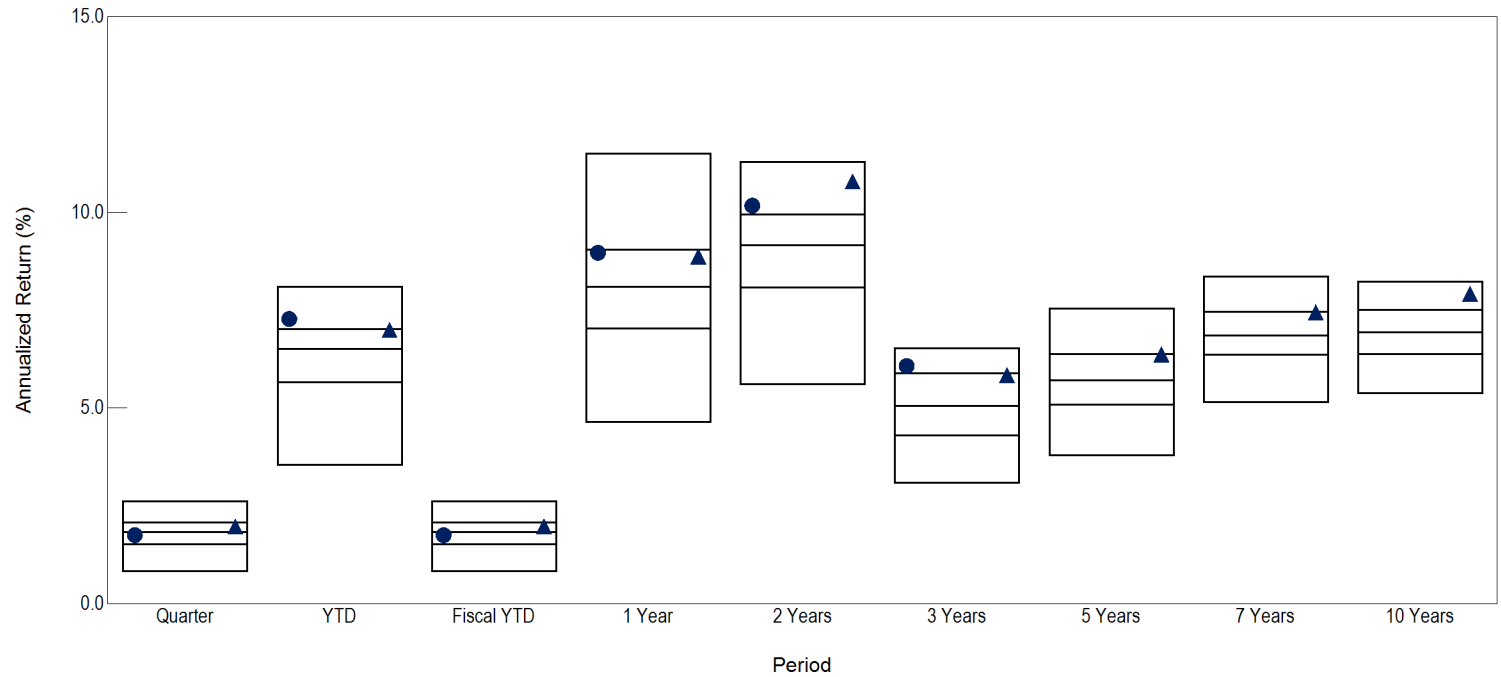
Credit Opp. Manager Performance



Quarterly and Cumulative Excess Performance

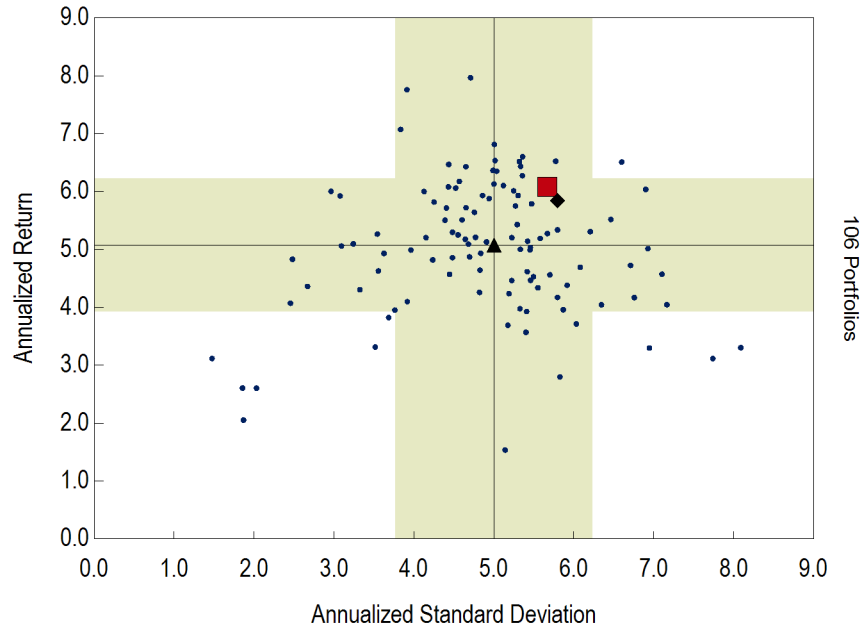


AEGON USA vs. eA US High Yield Fixed Inc Net

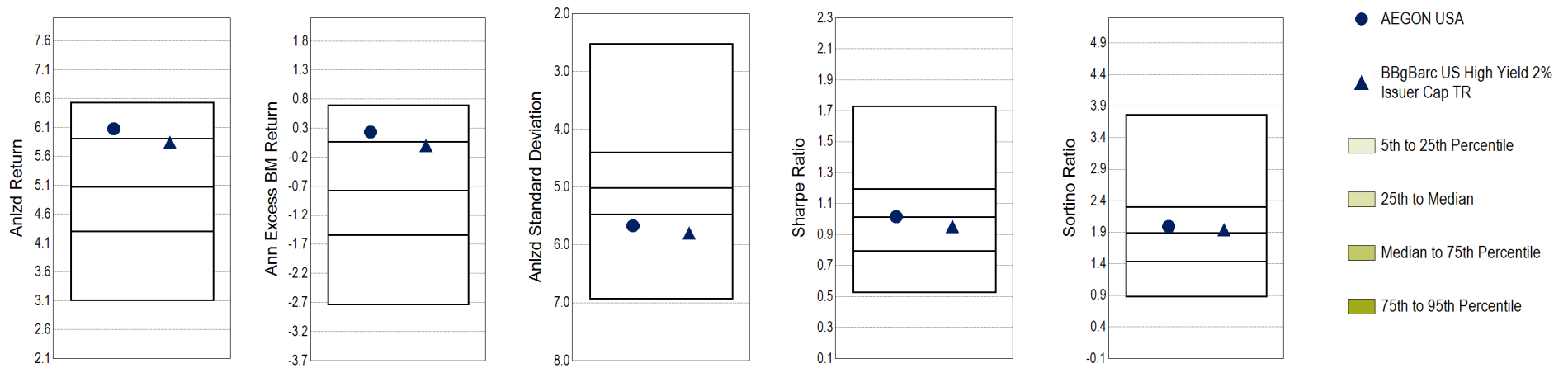
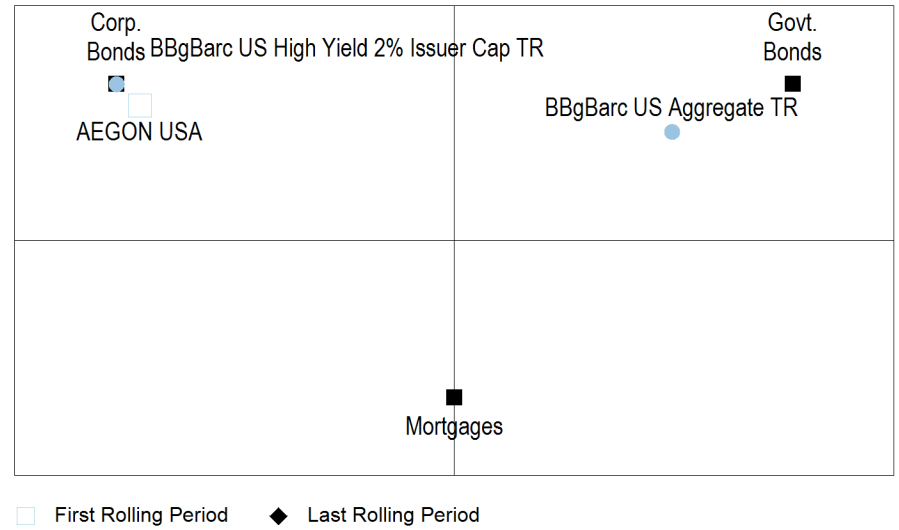


	Return (Rank)																	
5th Percentile	2.62	8.10	2.62	11.50	11.28	6.53	7.55	8.37	8.23									
25th Percentile	2.10	7.04	2.10	9.07	9.96	5.91	6.40	7.47	7.52									
Median	1.85	6.52	1.85	8.12	9.18	5.08	5.72	6.87	6.96									
75th Percentile	1.54	5.69	1.54	7.06	8.10	4.31	5.11	6.38	6.39									
95th Percentile	0.85	3.56	0.85	4.67	5.64	3.12	3.82	5.17	5.40									
# of Portfolios	118	117	118	116	114	106	94	79	63									
● AEGON USA	1.75	(61)	7.28	(18)	1.75	(61)	8.97	(30)	10.17	(22)	6.08	(18)	--	(--)	--	(--)	--	(--)
▲ BBgBarc US High Yield 2% Issuer Cap TR	1.98	(35)	7.00	(27)	1.98	(35)	8.87	(34)	10.79	(10)	5.84	(27)	6.37	(26)	7.45	(26)	7.92	(12)

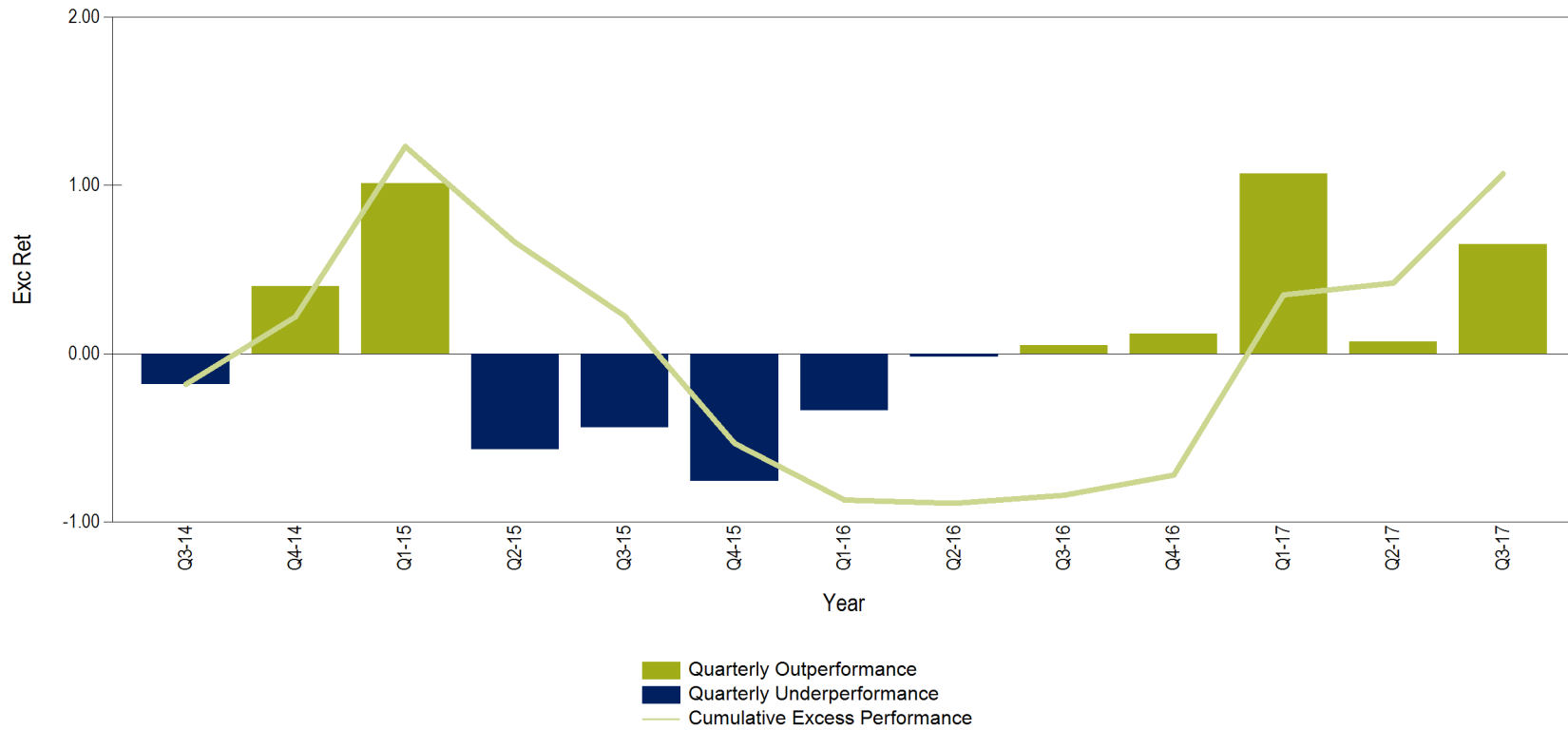
3 Year Risk Return



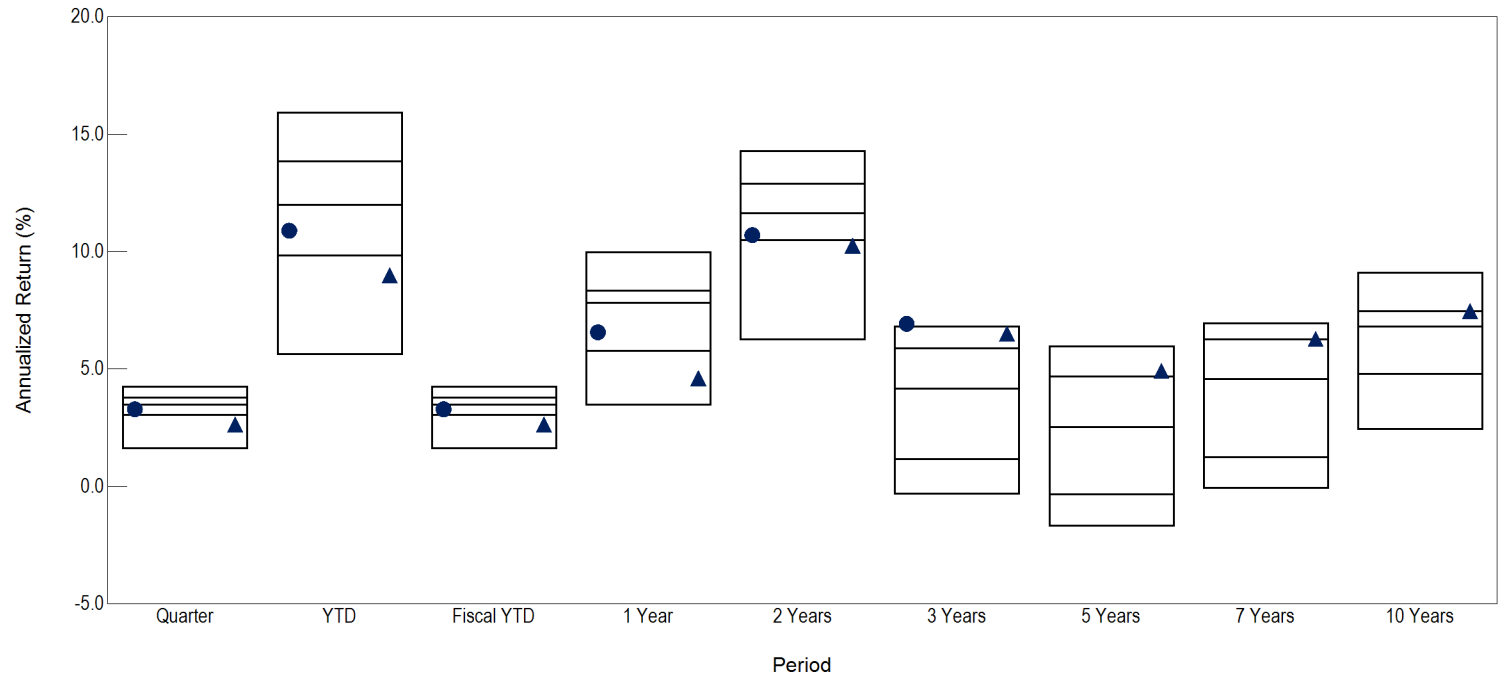
3 Year Style Map



Quarterly and Cumulative Excess Performance



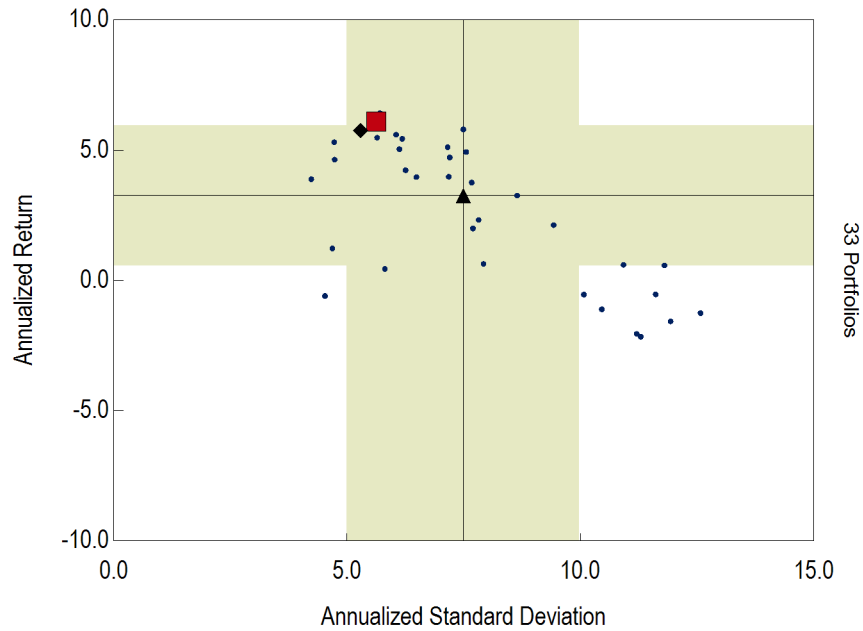
Prudential Emerging Markets vs. eA Emg Mkt Fixed Inc Hedged Net



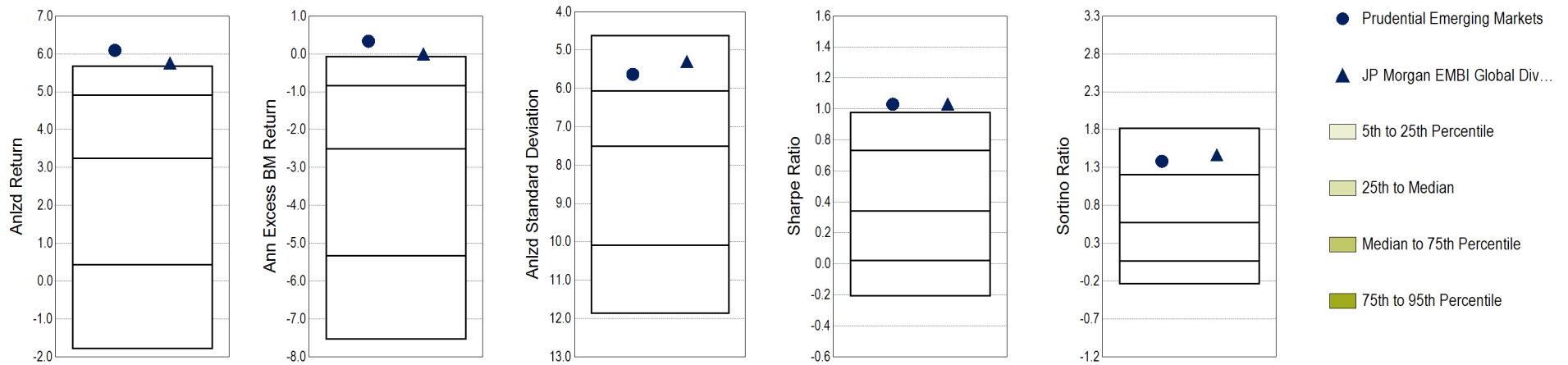
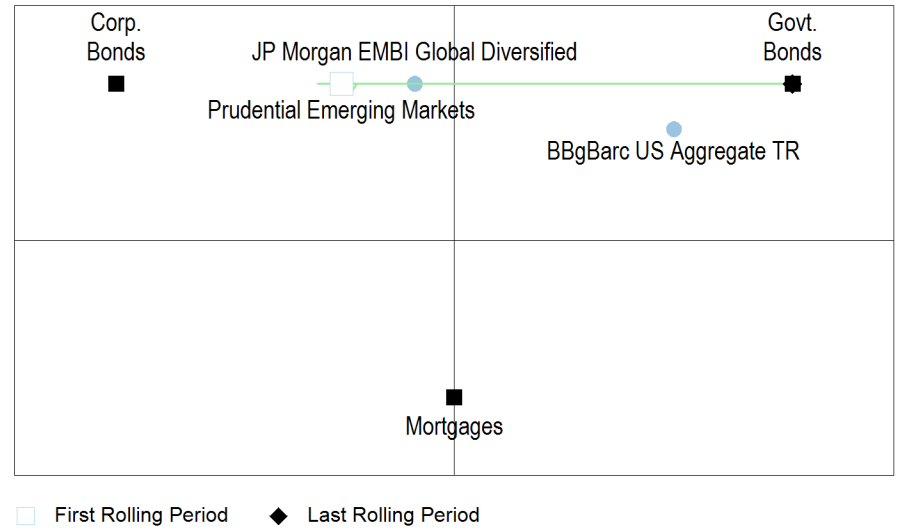
	Return (Rank)															
5th Percentile	4.25	15.92	4.25	9.97	14.27	6.81	5.96	6.95	9.11							
25th Percentile	3.82	13.86	3.82	8.36	12.93	5.91	4.70	6.29	7.48							
Median	3.50	12.01	3.50	7.85	11.67	4.20	2.55	4.59	6.83							
75th Percentile	3.08	9.87	3.08	5.79	10.52	1.18	-0.30	1.27	4.82							
95th Percentile	1.64	5.66	1.64	3.51	6.30	-0.29	-1.66	-0.03	2.47							
# of Portfolios	42	42	42	42	39	33	28	20	15							
● Prudential Emerging Markets	3.28	(61)	10.89	(65)	3.28	(61)	6.56	(61)	10.70	(71)	6.92	(5)	--	(--)	--	(--)
▲ JP Morgan EMBI Global Diversified	2.63	(83)	8.99	(84)	2.63	(83)	4.61	(93)	10.25	(77)	6.50	(8)	4.91	(16)	6.28	(27)

Prudential Emerging Markets

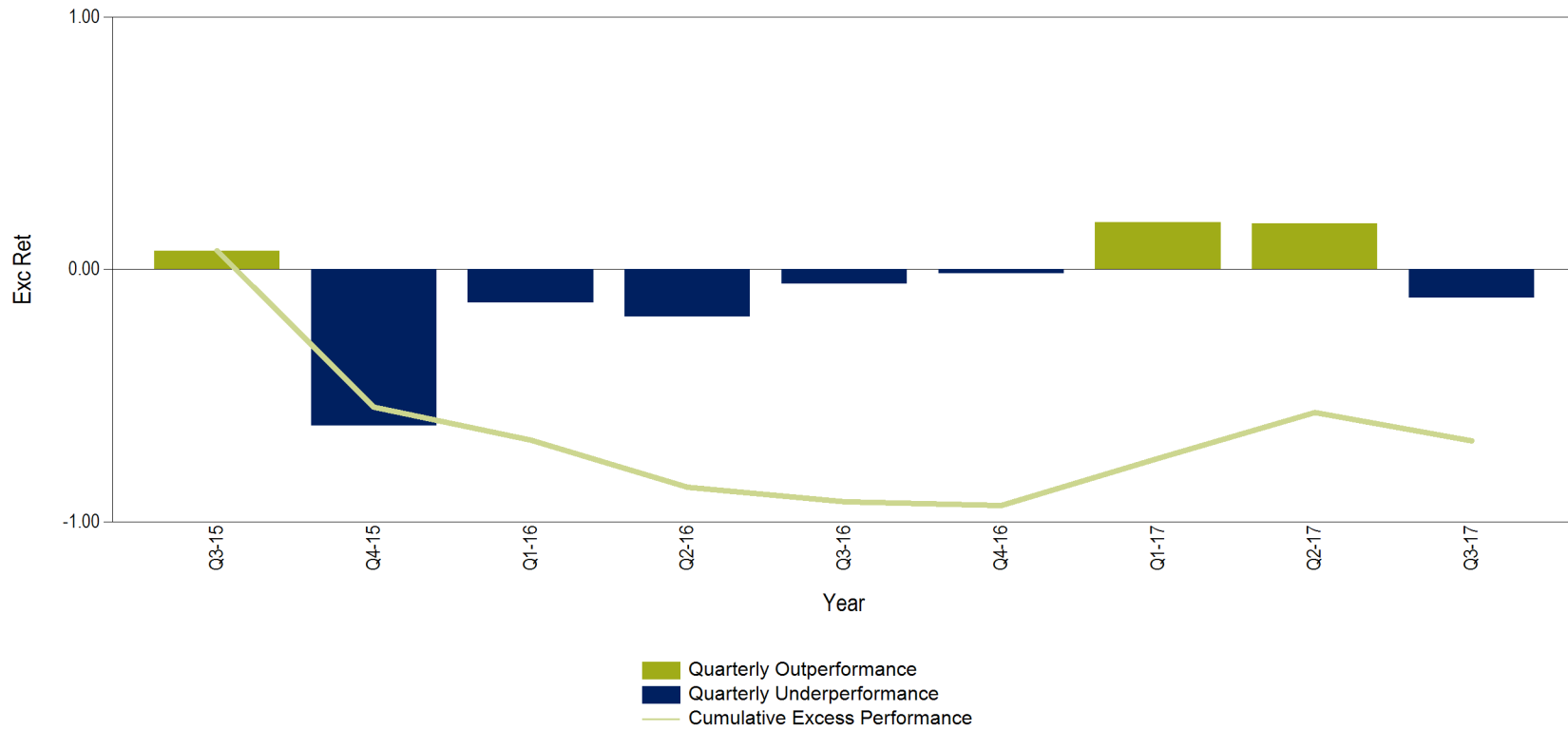
Since Inception Risk Return



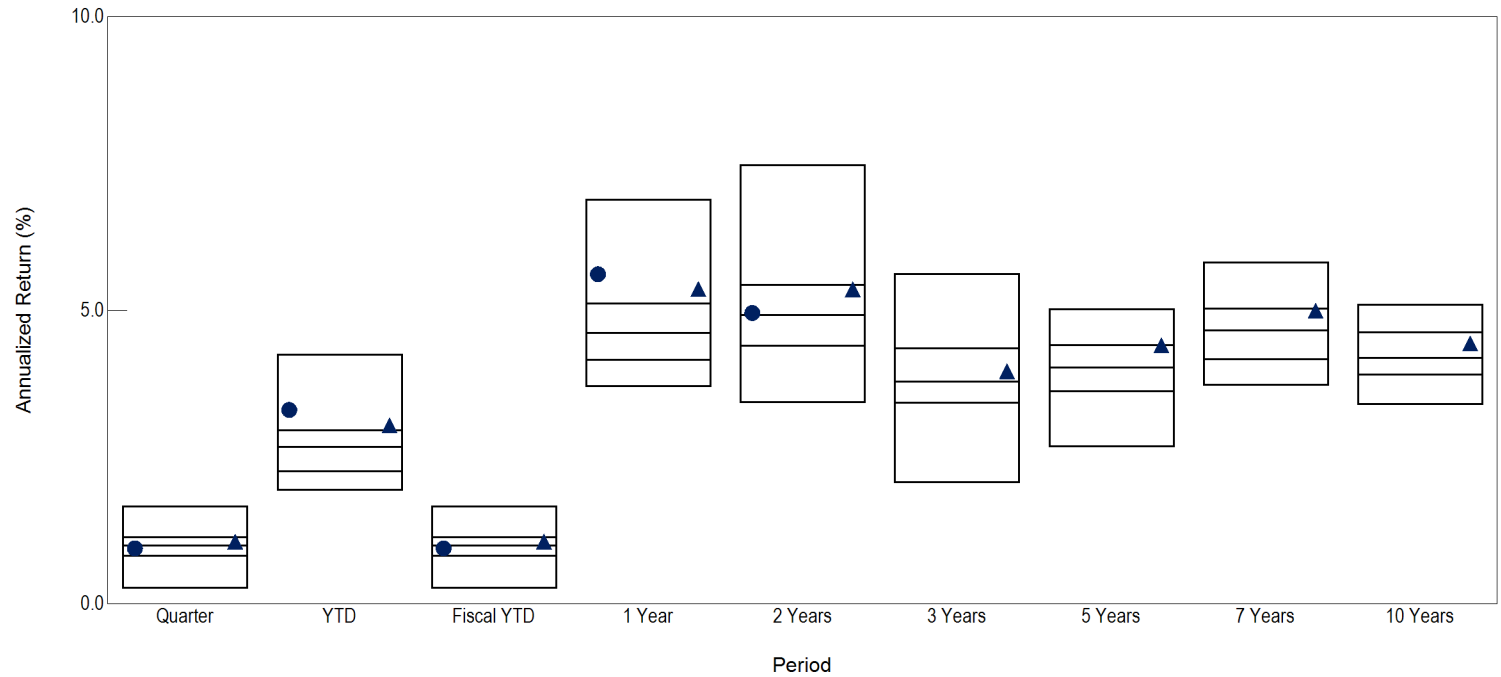
Since Inception Style Map



Quarterly and Cumulative Excess Performance

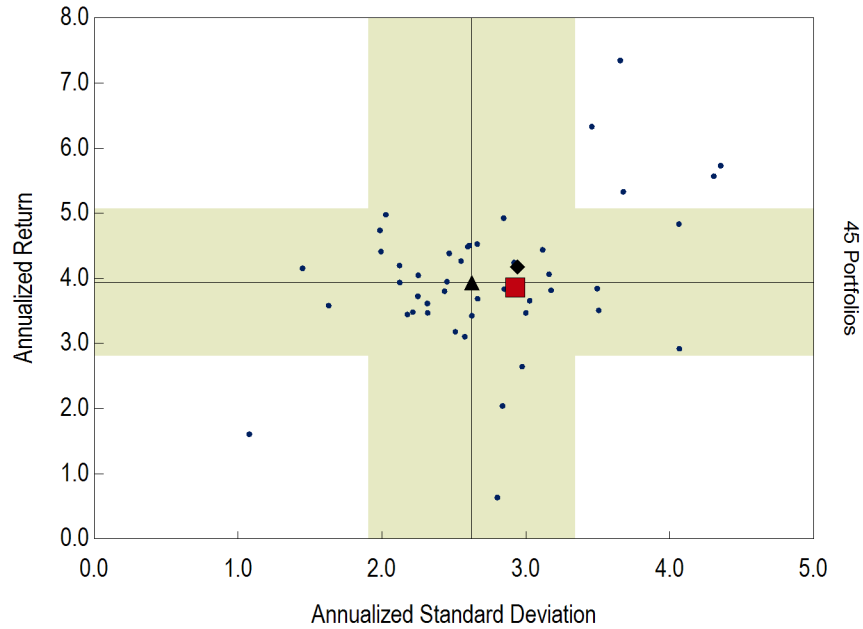


Bain Capital Senior Loan Fund, LP vs. eA Float-Rate Bank Loan Net

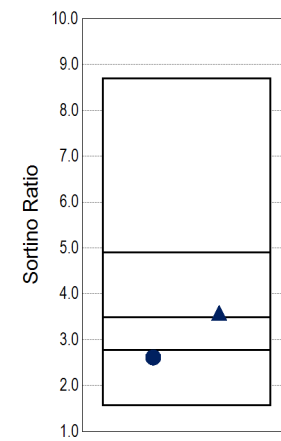
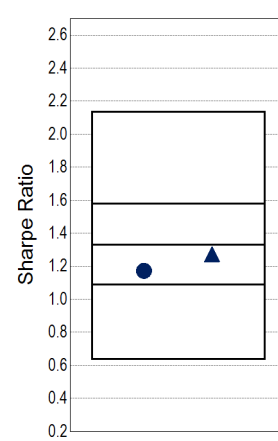
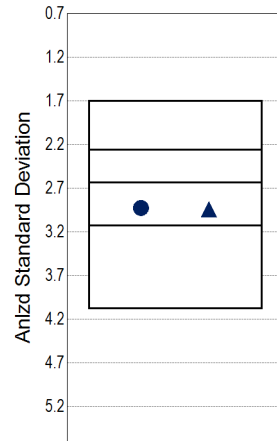
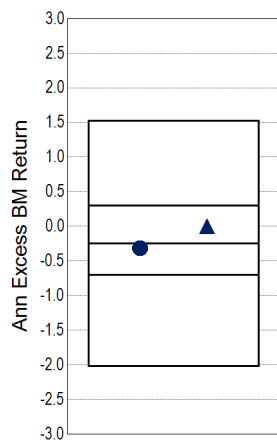
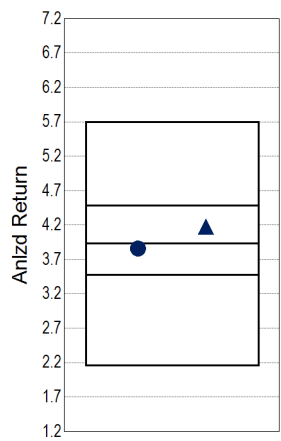
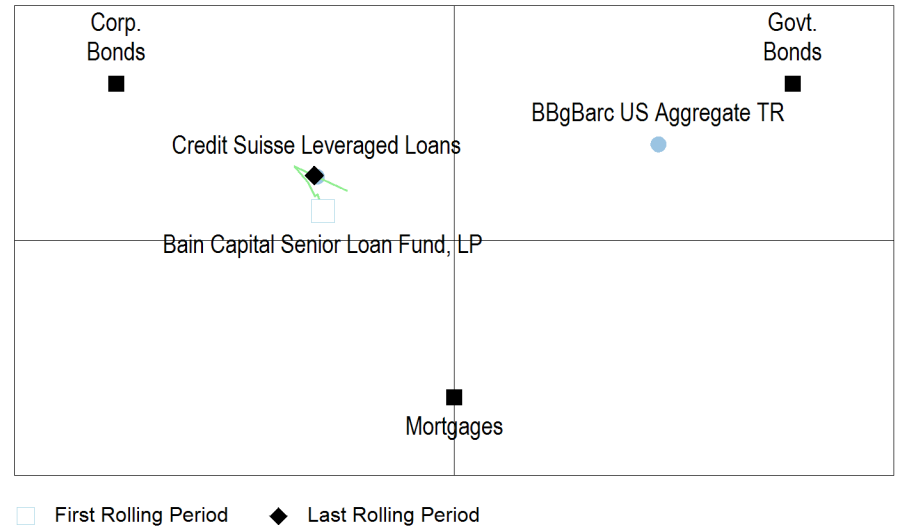


	Return (Rank)															
5th Percentile	1.66	4.24	1.66	6.88	7.47	5.62	5.02	5.81	5.10							
25th Percentile	1.15	2.97	1.15	5.12	5.44	4.36	4.42	5.04	4.64							
Median	1.01	2.69	1.01	4.62	4.94	3.80	4.04	4.66	4.20							
75th Percentile	0.83	2.27	0.83	4.17	4.41	3.44	3.63	4.17	3.92							
95th Percentile	0.28	1.95	0.28	3.72	3.44	2.09	2.70	3.74	3.42							
# of Portfolios	46	46	46	46	45	45	38	28	18							
● Bain Capital Senior Loan Fund, LP	0.94	(70)	3.30	(16)	0.94	(70)	5.61	(18)	4.95	(48)	--	(--)	--	(--)	--	(--)
▲ Credit Suisse Leveraged Loans	1.06	(37)	3.04	(23)	1.06	(37)	5.36	(21)	5.35	(29)	3.96	(45)	4.40	(26)	4.99	(28)

Since Inception Risk Return



Since Inception Style Map

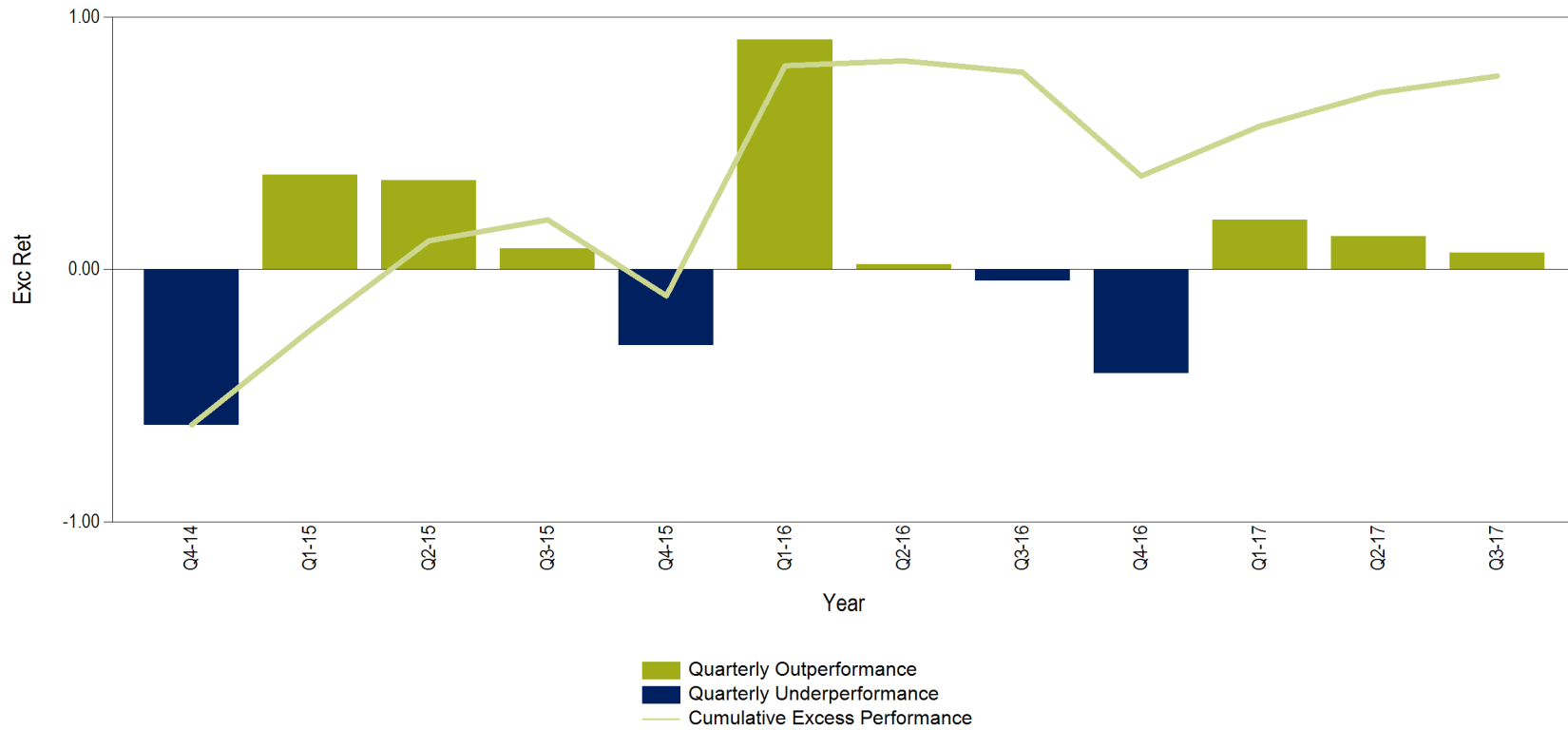


- Bain Capital Senior Loan Fund, LP
- ▲ Credit Suisse Leveraged Lo...
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

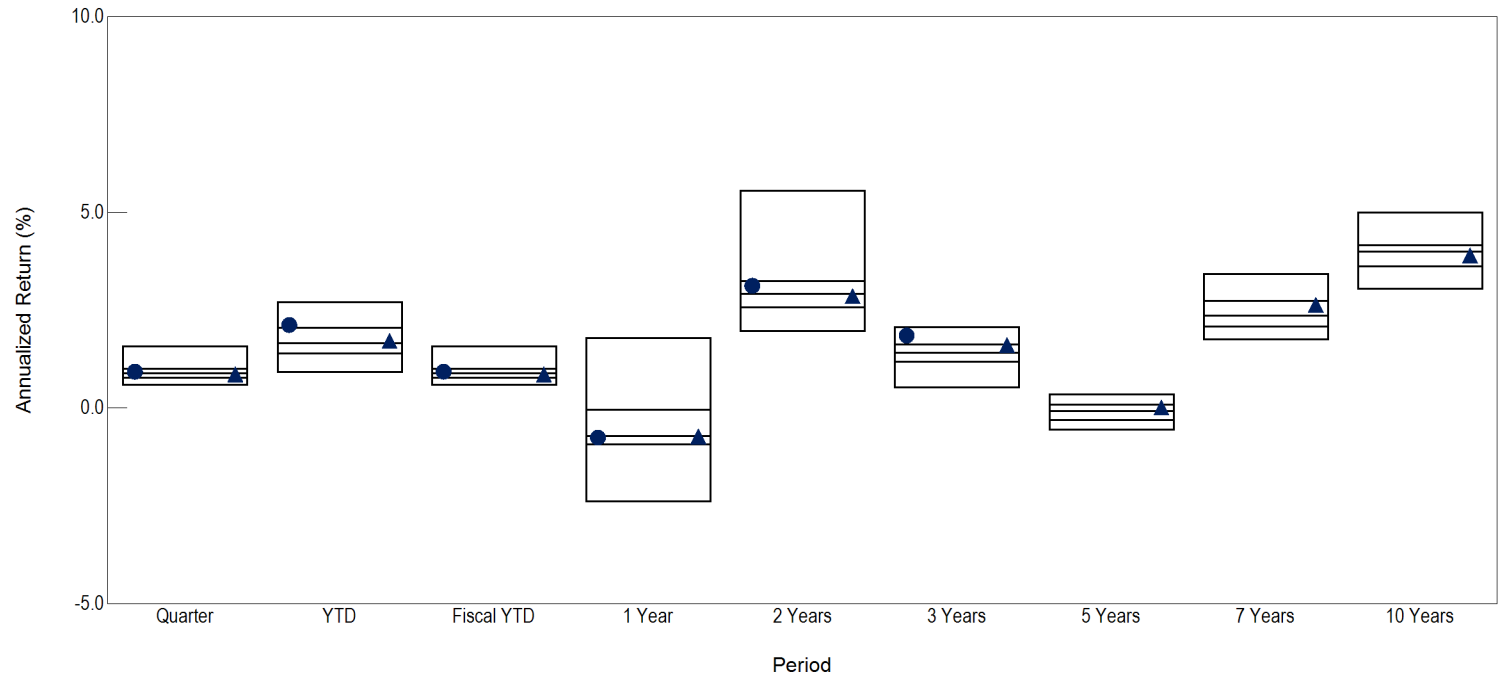
Real Assets Manager Performance



Quarterly and Cumulative Excess Performance

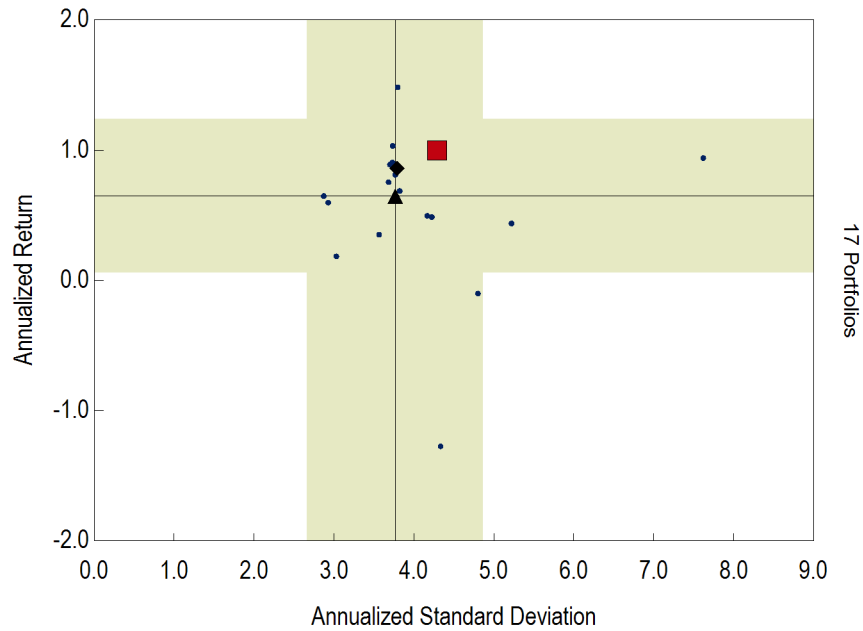


DFA US TIPS vs. eA TIPS / Infl Indexed Fixed Inc Net

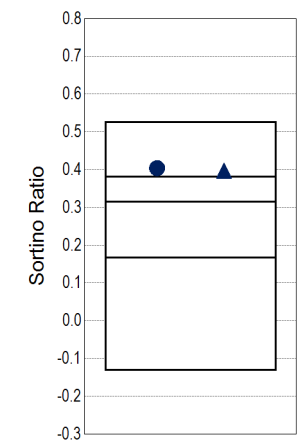
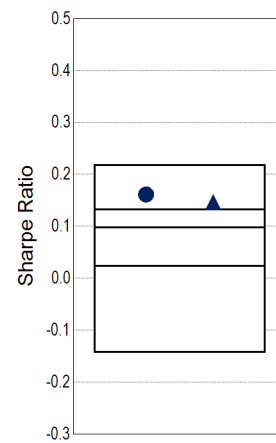
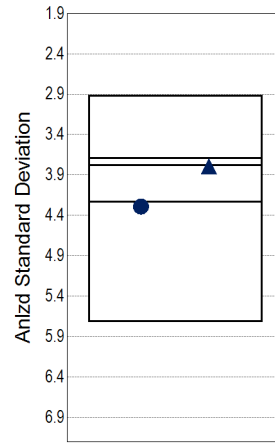
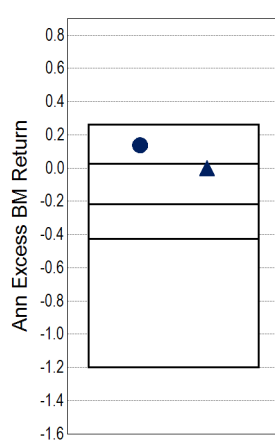
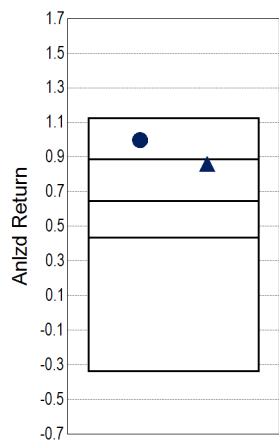
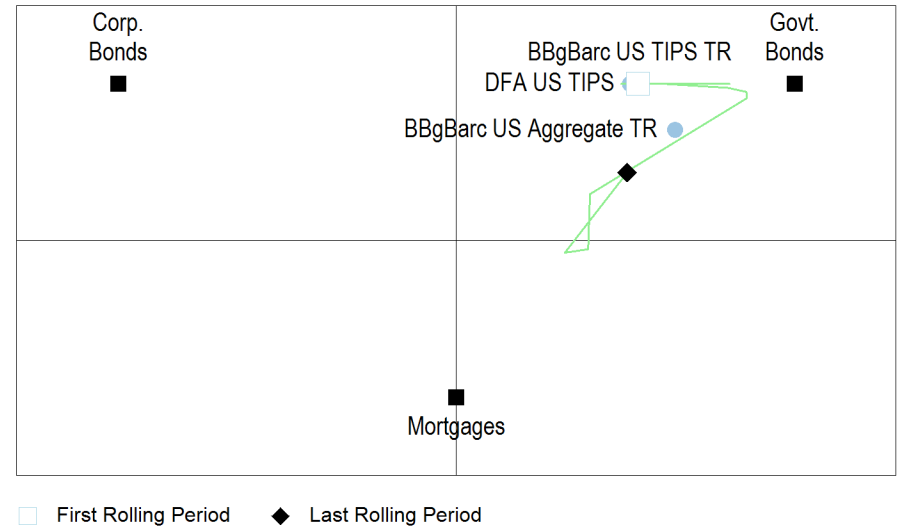


	Return (Rank)																	
5th Percentile	1.58	2.70	1.58	1.79	5.55	2.07	0.35	3.43	4.99									
25th Percentile	1.02	2.08	1.02	-0.02	3.26	1.64	0.10	2.76	4.18									
Median	0.91	1.67	0.91	-0.70	2.93	1.44	-0.06	2.38	4.02									
75th Percentile	0.79	1.42	0.79	-0.91	2.60	1.19	-0.29	2.10	3.63									
95th Percentile	0.61	0.94	0.61	-2.36	1.98	0.54	-0.53	1.77	3.07									
# of Portfolios	19	19	19	19	19	17	16	14	10									
● DFA US TIPS	0.93	(41)	2.12	(22)	0.93	(41)	-0.75	(59)	3.13	(28)	1.85	(11)	--	(--)	--	(--)	--	(--)
▲ BBgBarc US TIPS TR	0.86	(55)	1.72	(47)	0.86	(55)	-0.73	(57)	2.86	(58)	1.62	(27)	0.02	(44)	2.64	(30)	3.90	(67)

Since Inception Risk Return

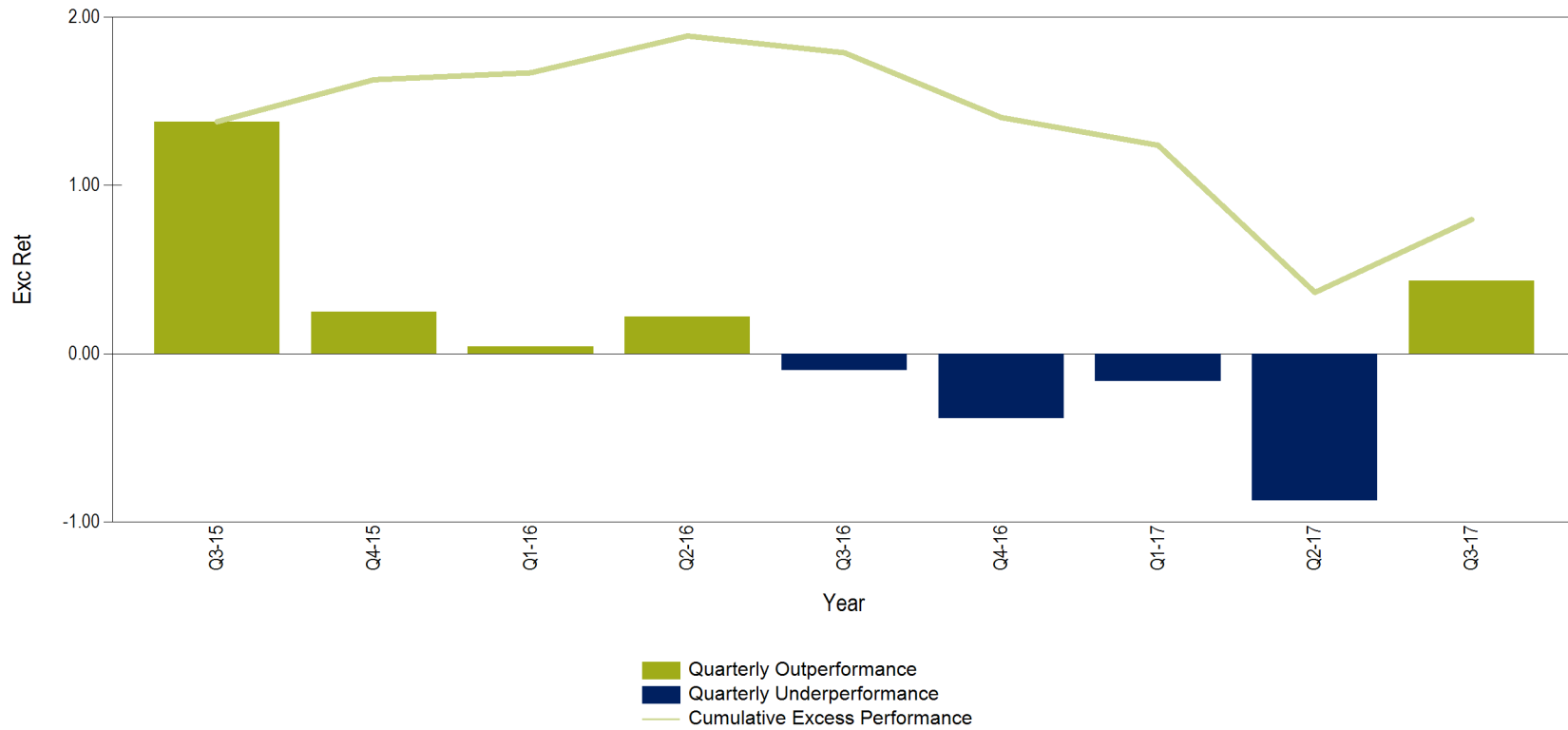


Since Inception Style Map

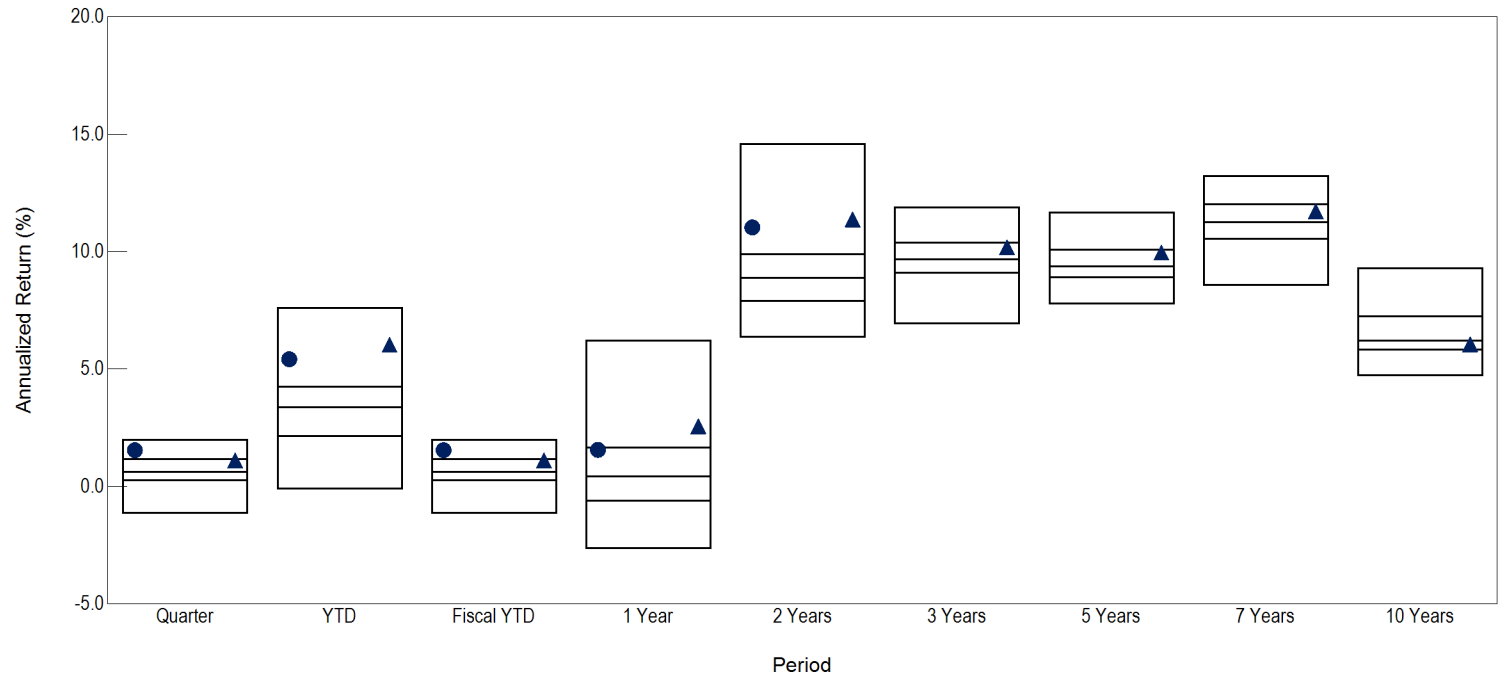


- DFA US TIPS
- ▲ BBgBarc US TIPS TR
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

Quarterly and Cumulative Excess Performance

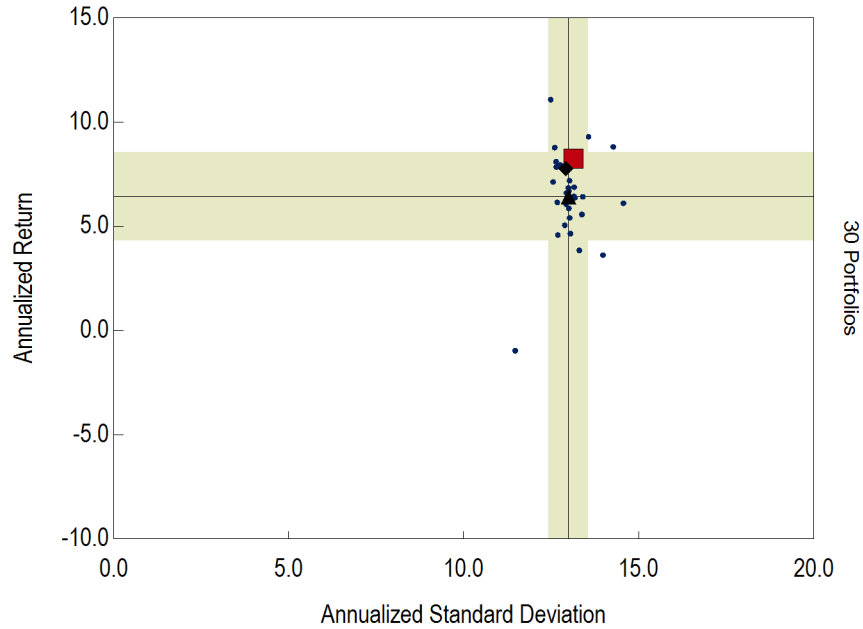


CenterSquare US Real Estate vs. eA US REIT Net

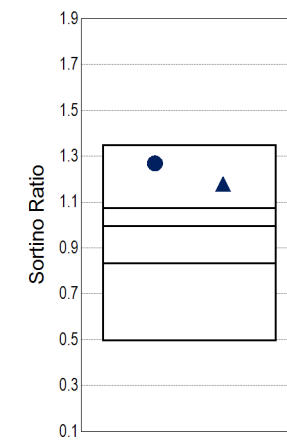
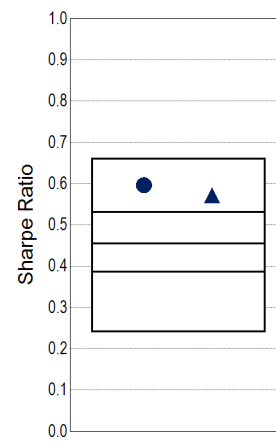
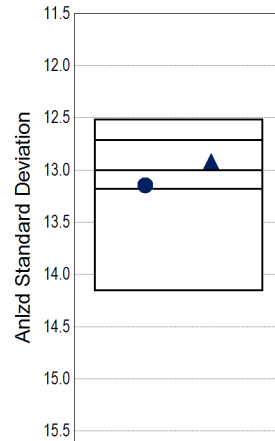
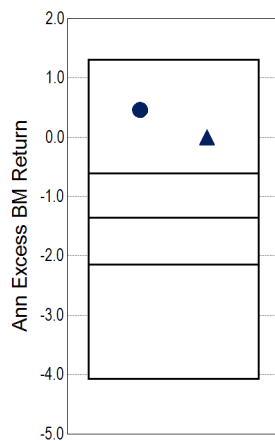
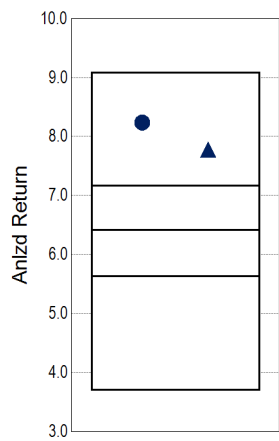
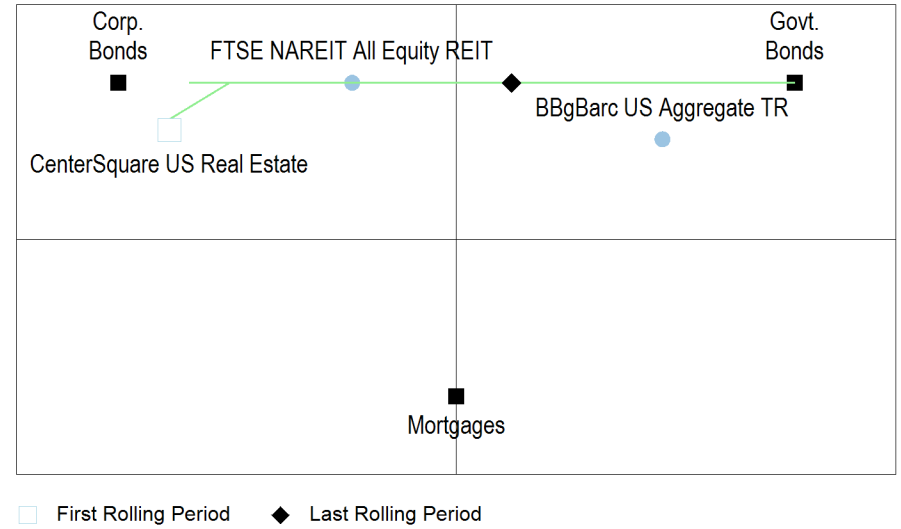


	Return (Rank)															
5th Percentile	1.98	7.59	1.98	6.20	14.59	11.87	11.66	13.22	9.30							
25th Percentile	1.18	4.26	1.18	1.67	9.93	10.39	10.12	12.05	7.28							
Median	0.65	3.40	0.65	0.46	8.90	9.69	9.40	11.28	6.24							
75th Percentile	0.29	2.17	0.29	-0.57	7.94	9.14	8.94	10.58	5.86							
95th Percentile	-1.10	-0.07	-1.10	-2.61	6.40	6.98	7.82	8.60	4.76							
# of Portfolios	31	31	31	31	30	29	29	26	23							
● CenterSquare US Real Estate	1.54	(13)	5.41	(11)	1.54	(13)	1.55	(27)	11.03	(17)	--	(--)	--	(--)	--	(--)
▲ FTSE NAREIT All Equity REIT	1.11	(33)	6.04	(9)	1.11	(33)	2.57	(19)	11.37	(16)	10.18	(31)	9.97	(28)	11.72	(35)

Since Inception Risk Return

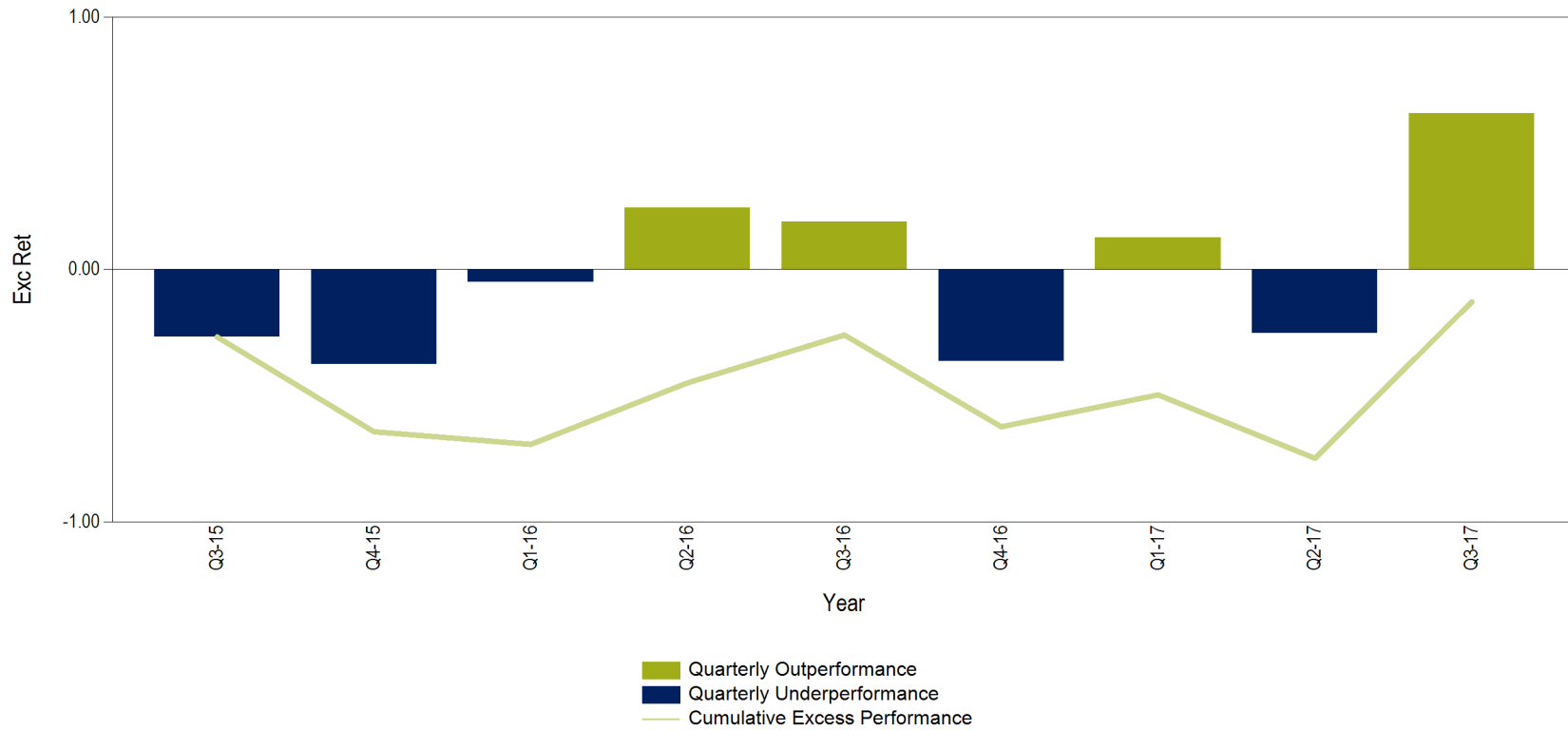


Since Inception Style Map



- CenterSquare US Real Estate
- ▲ FTSE NAREIT All Equity REIT
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

Quarterly and Cumulative Excess Performance

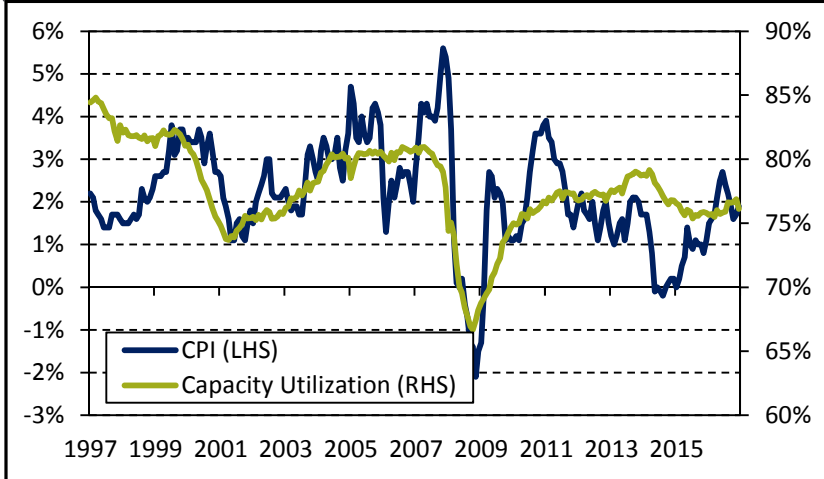


Market Environment



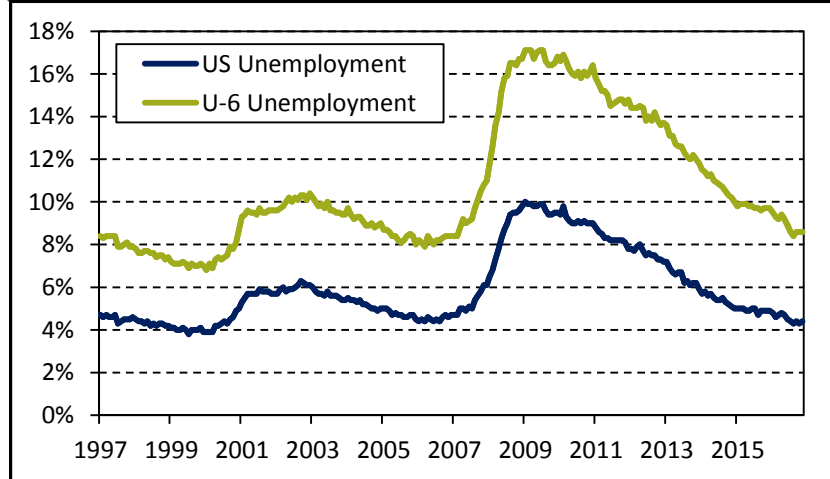
US Economic Indicators

Inflation has ticked modestly higher



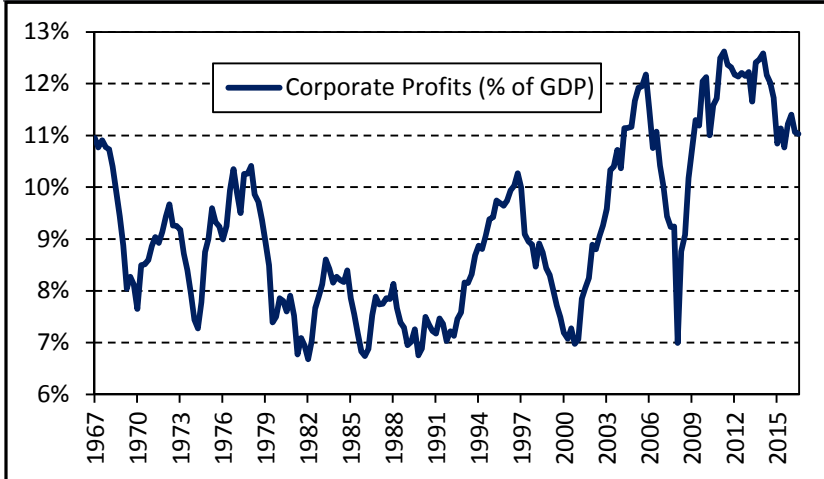
Source: Bloomberg, Federal Reserve, Bureau of Labor Statistics

Unemployment remains near historic lows



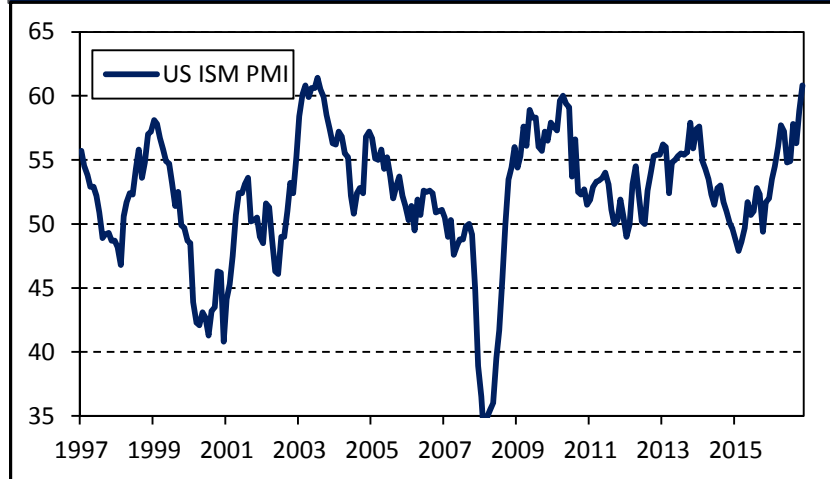
Source: Bloomberg, Bureau of Labor Statistics

With recent increases in GDP, corporate profits (%) have declined



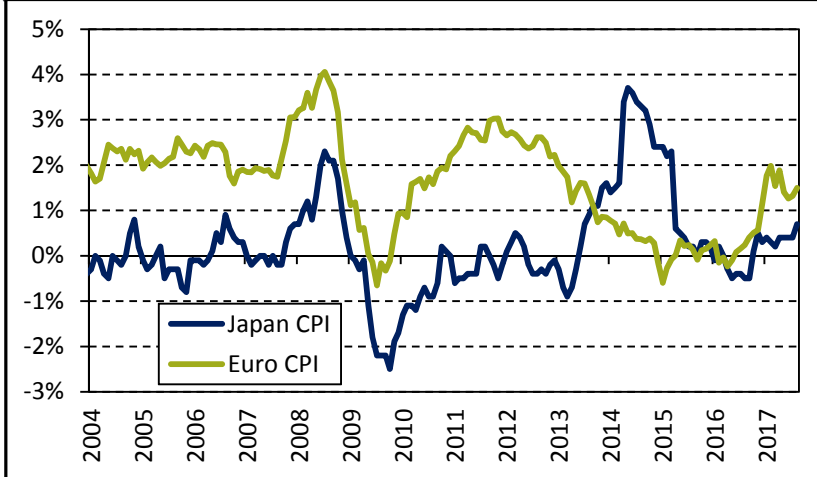
Source: Bloomberg, Bureau of Economic Analysis

Manufacturing shows continued strength



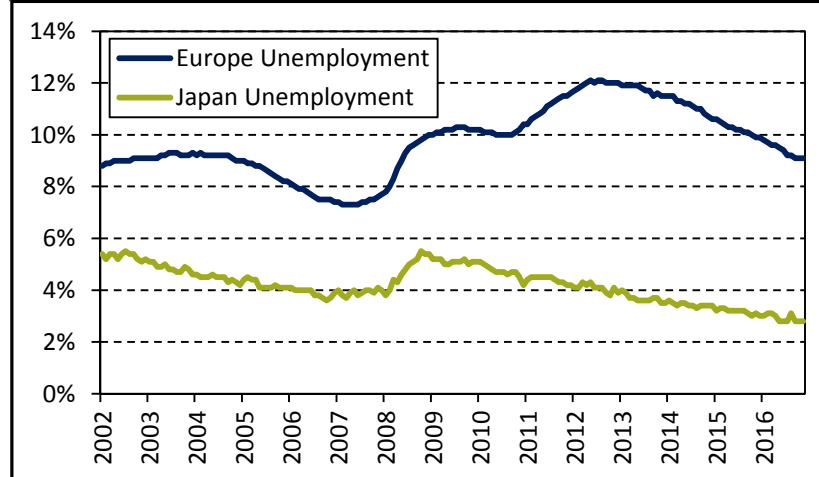
Source: Bloomberg, Institute for Supply Management

Eurozone and Japan inflation are on an upswing



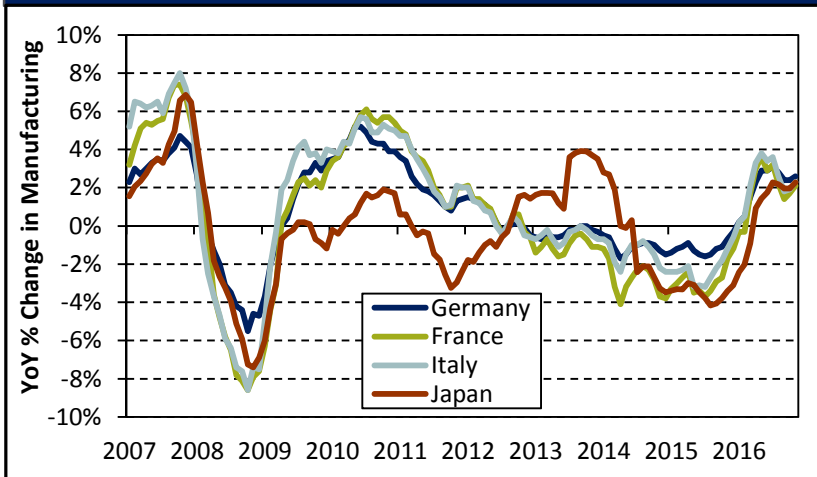
Source: Bloomberg, Japan Ministry of Internal Affairs and Communications, Eurostat

Unemployment has steadied



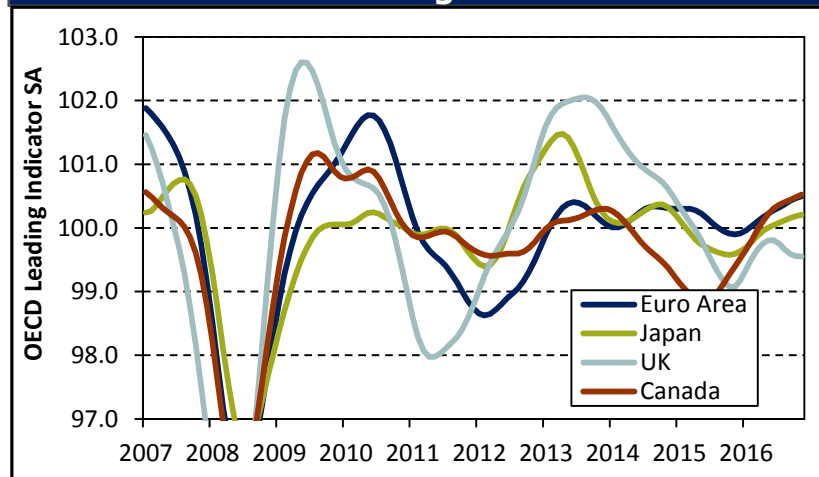
Source: Bloomberg, Japan Ministry of Internal Affairs and Communications, Eurostat

Manufacturing shows continued strength



Source: Bloomberg, OECD, Eurostat

Ex-UK, leading indicators are trending higher

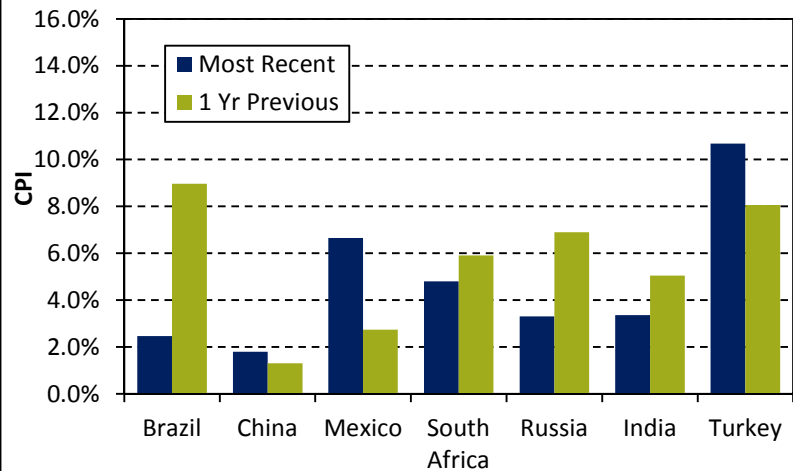


Source: Bloomberg, OECD

Los Angeles City Employees' Retirement System

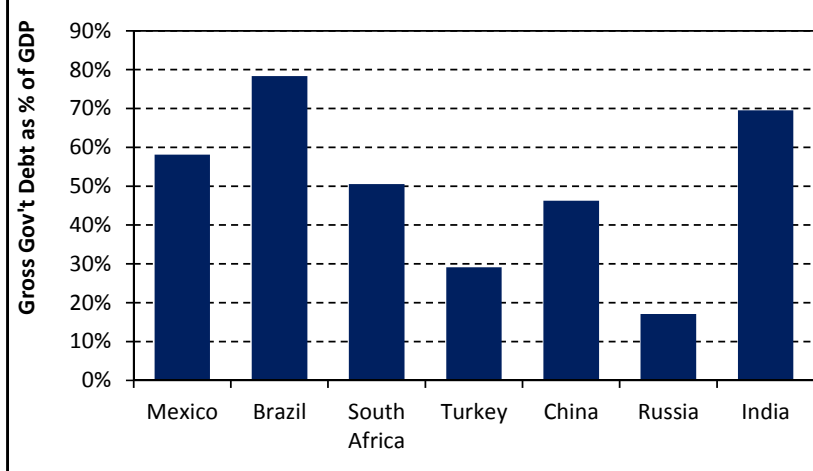
Emerging Market Economic Indicators

EM inflation varies by country



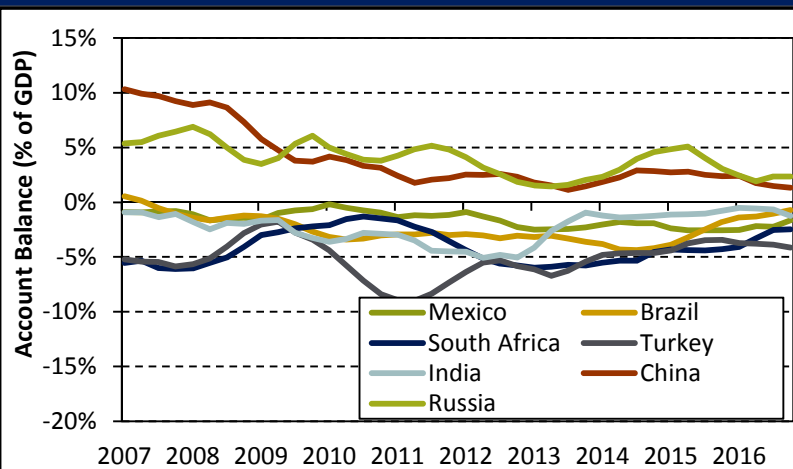
Source: Bloomberg

Relatively healthy debt/GDP ratios



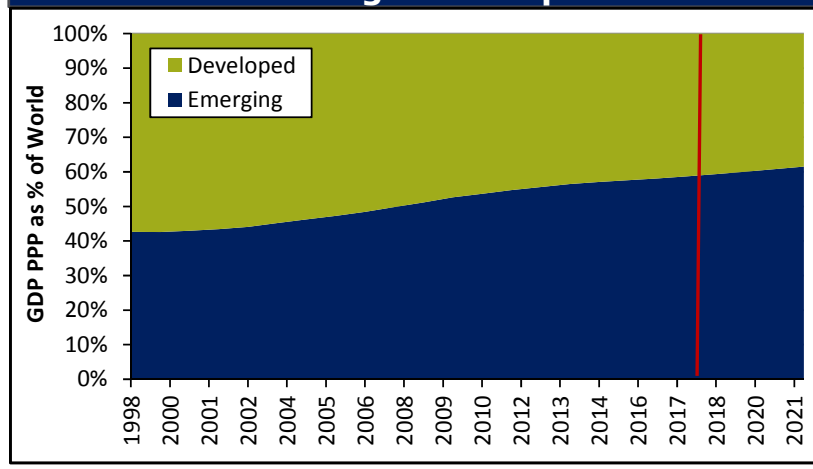
Source: Bloomberg, IMF

Account balances remain steady



Source: Bloomberg

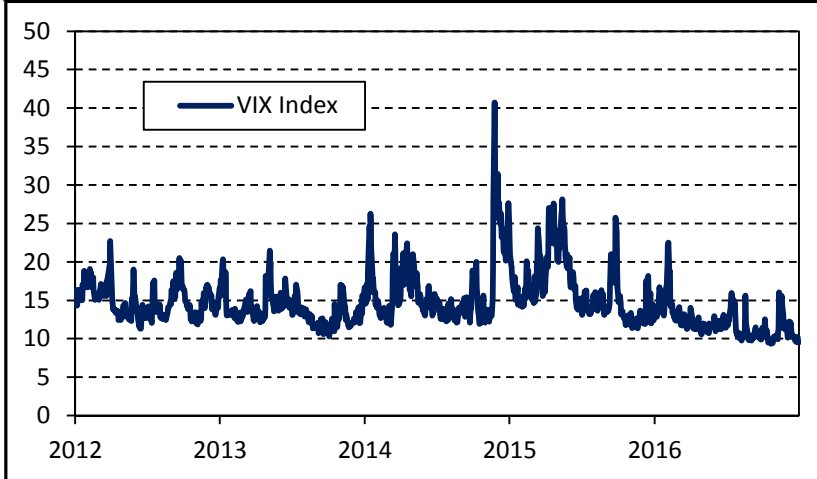
EM continues trending higher as a percent of global output



Source: Bloomberg, IMF

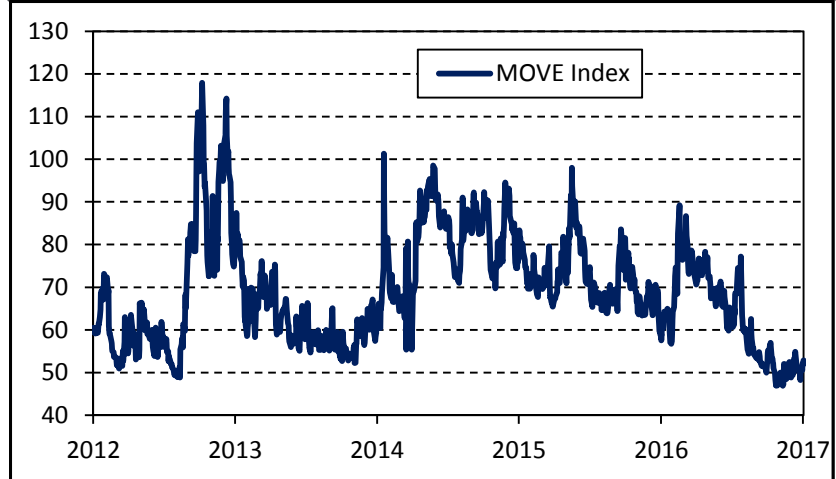
Volatility

Equity volatility remains near historic lows



Source: Bloomberg, CBOE

Treasury volatility has increased slightly off recent lows



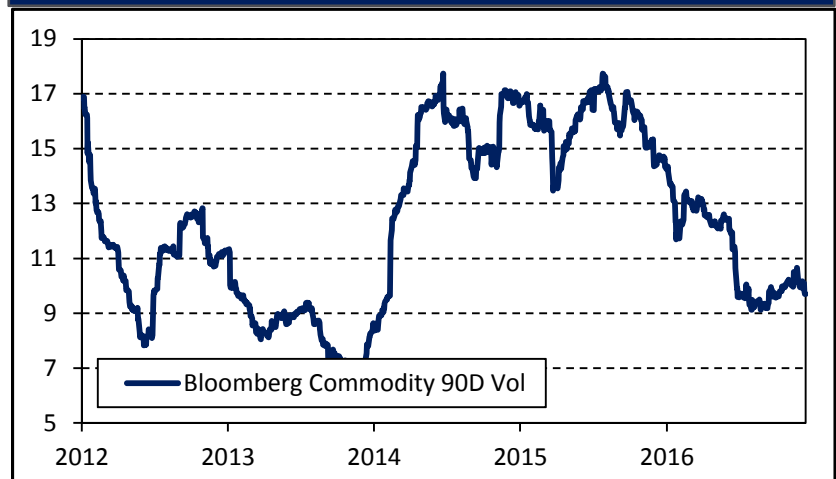
Source: Bloomberg, Merrill Lynch

Currency volatility has modestly declined



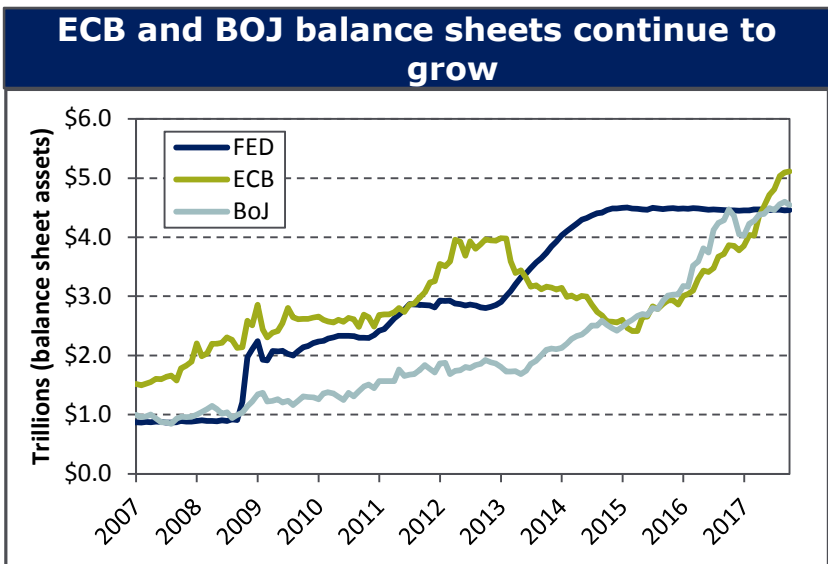
Source: Bloomberg, Deutsche Bank

Commodity volatility is trending downward

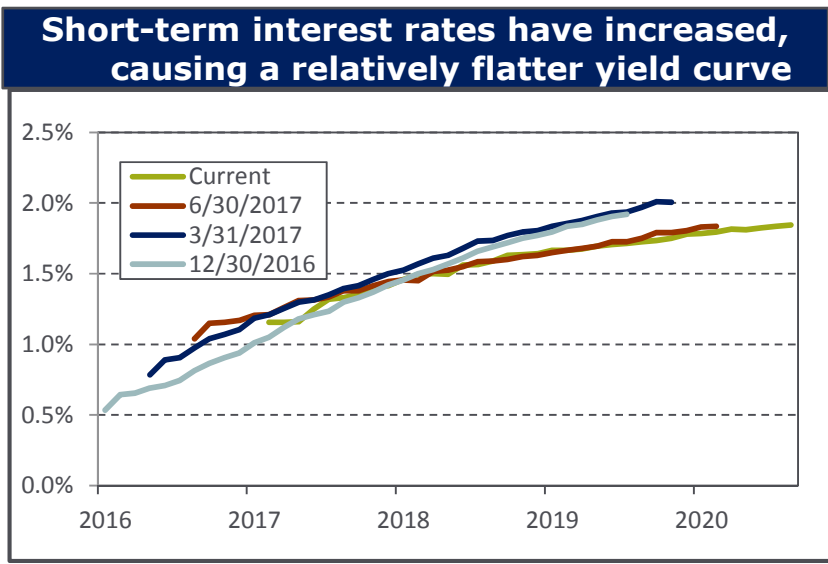


Source: Bloomberg, Merrill Lynch

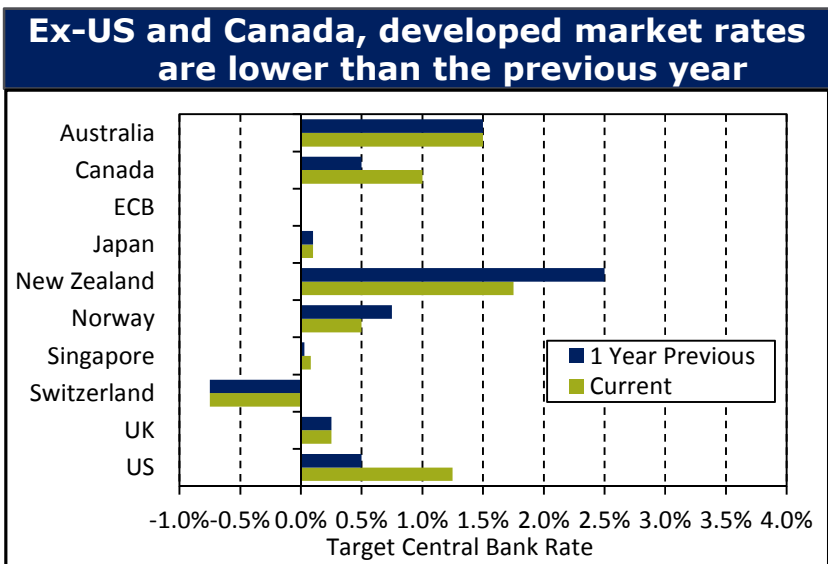
Central Banks



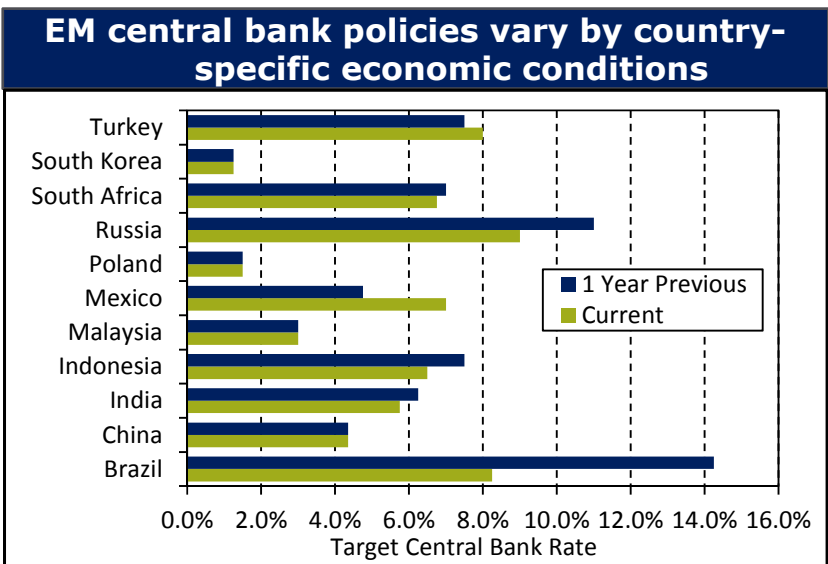
Source: Bloomberg, Federal Reserve, Bank of Japan, ECB, NEPC



Source: Bloomberg, Federal Reserve

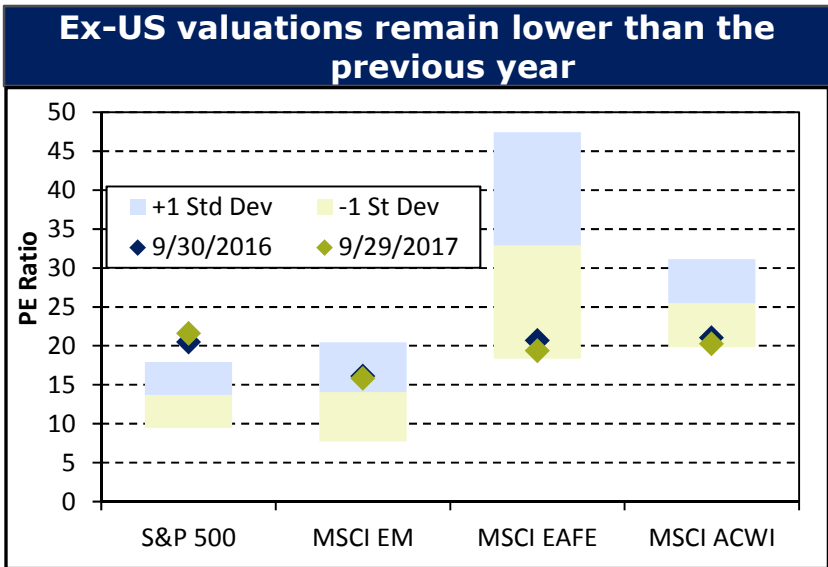


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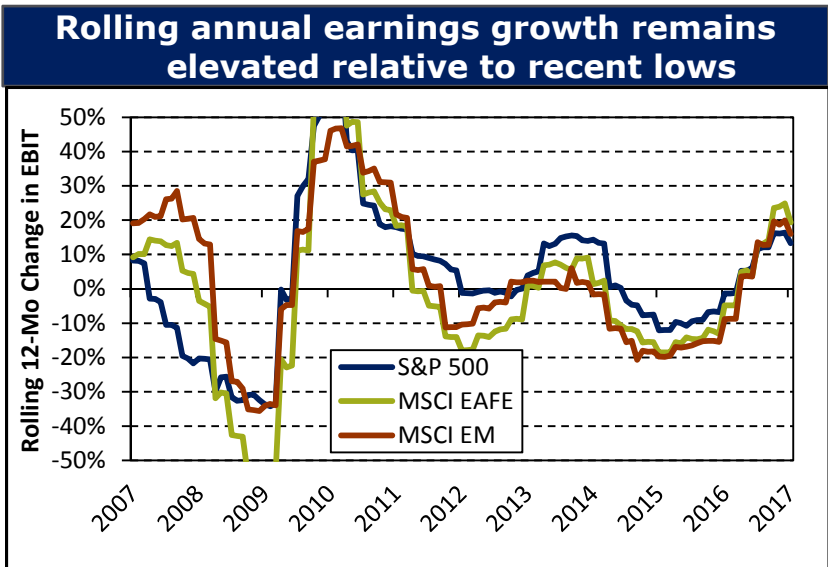


Source: Bloomberg

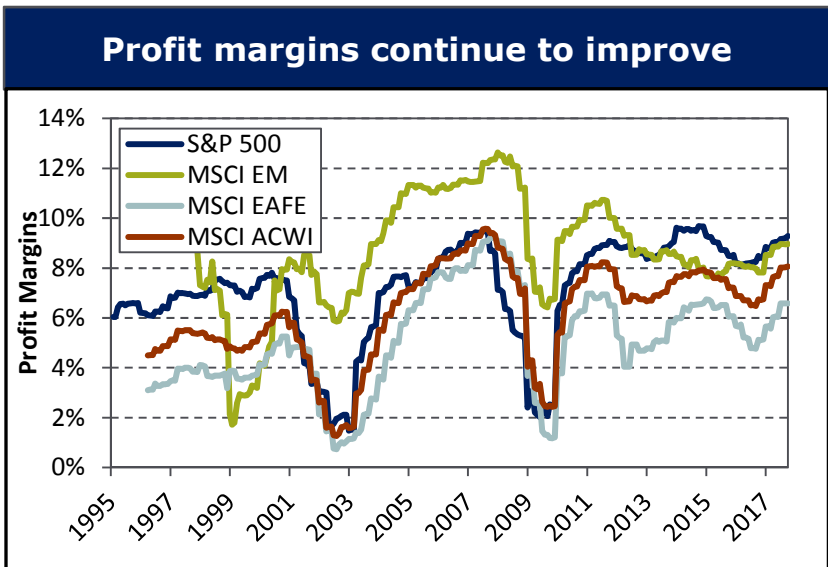
Global Equity



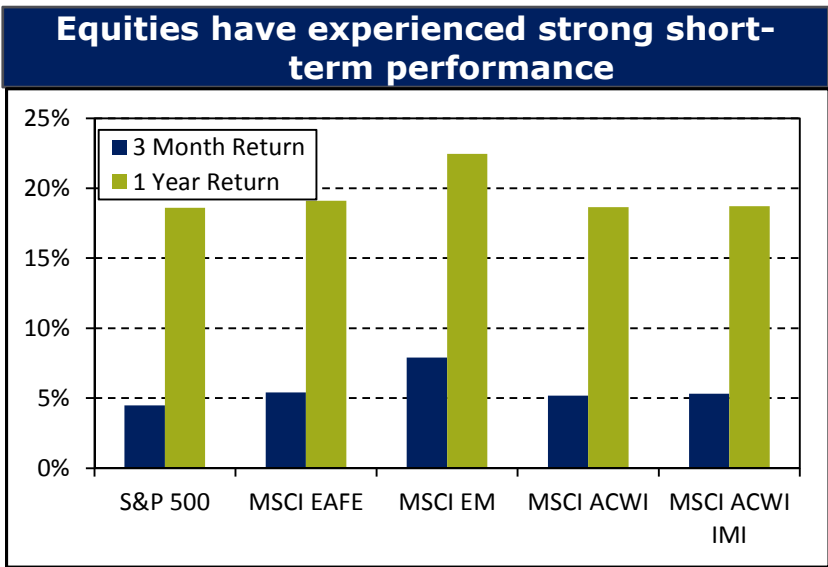
Source: Bloomberg, Standard and Poors, MSCI *MSCI EAFE is ex UK Telecom
*Standard deviation calculations on 20 years of data except S&P 500 (30 years)



Source: Bloomberg, Standard and Poors, MSCI

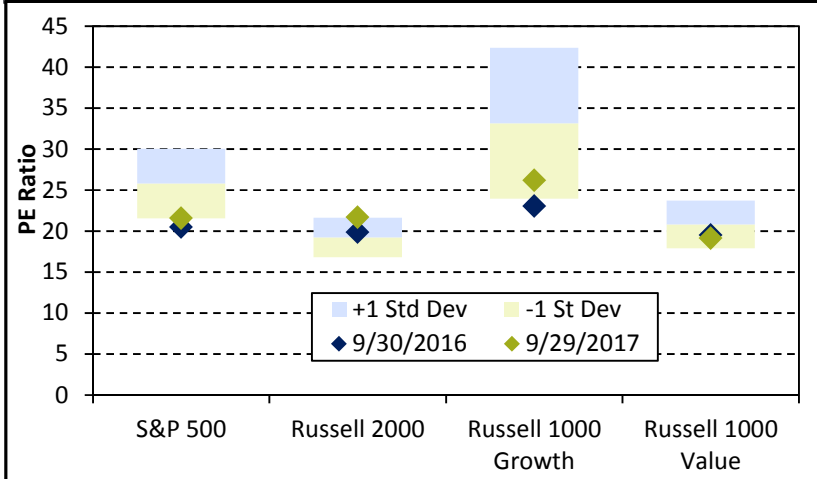


Source: Bloomberg, MSCI



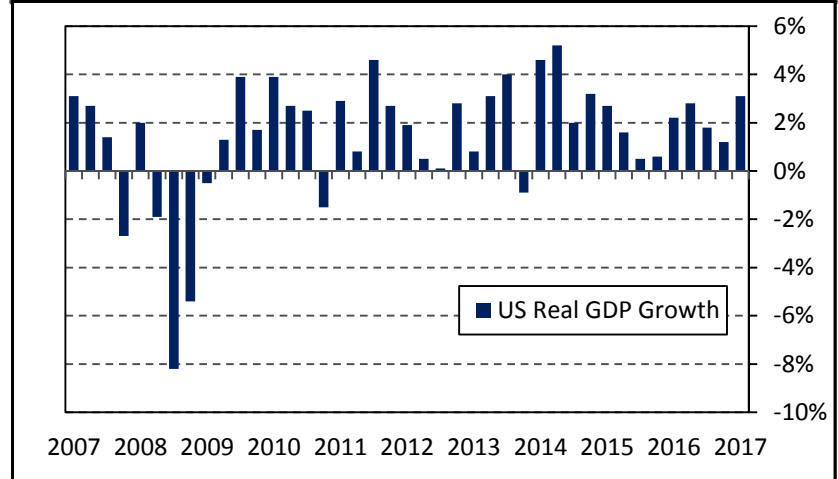
Source: Bloomberg, MSCI

Ex-Value, equity valuations remain elevated relative to last year



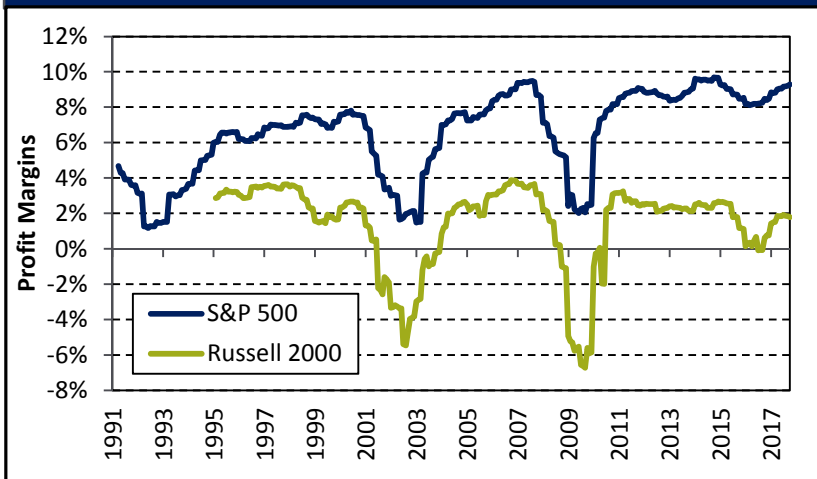
Source: Bloomberg, Standard and Poors, Russell *Russell 2000 PE is index adjusted positive* Standard deviation calculations based on 20 years of data

Real GDP growth strengthened in Q2



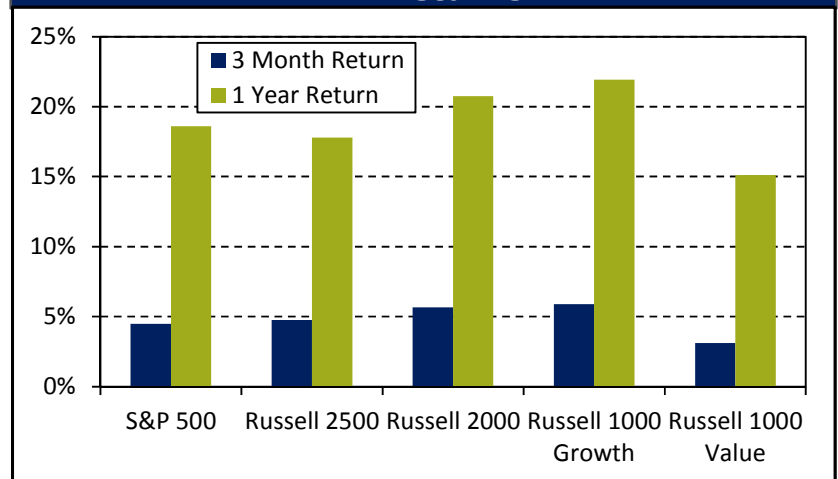
Source: Bloomberg, Bureau of Economic Analysis

S&P profit margins experience an uptick



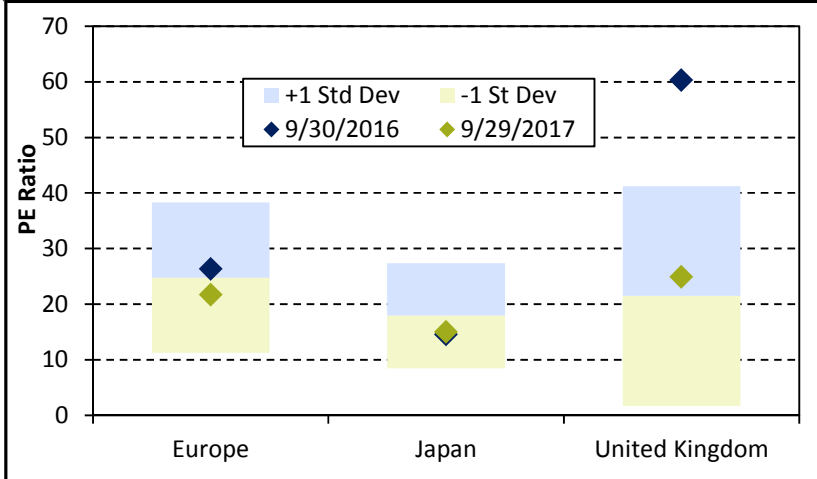
Source: Bloomberg, Standard and Poors, Russell

US equities continue to post positive returns



Source: Bloomberg, Standard and Poors, Russell

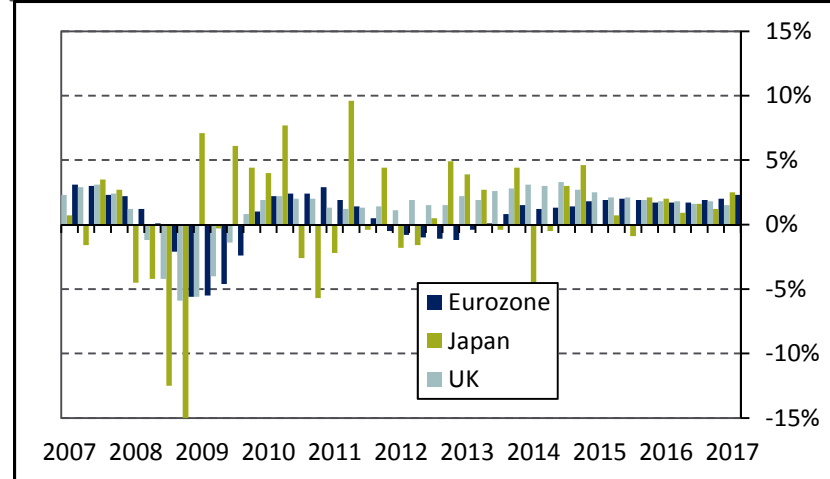
UK and Europe PEs remain below previous year levels



Source: Bloomberg, MSCI, FTSE *UK represented by FTSE 100 Index

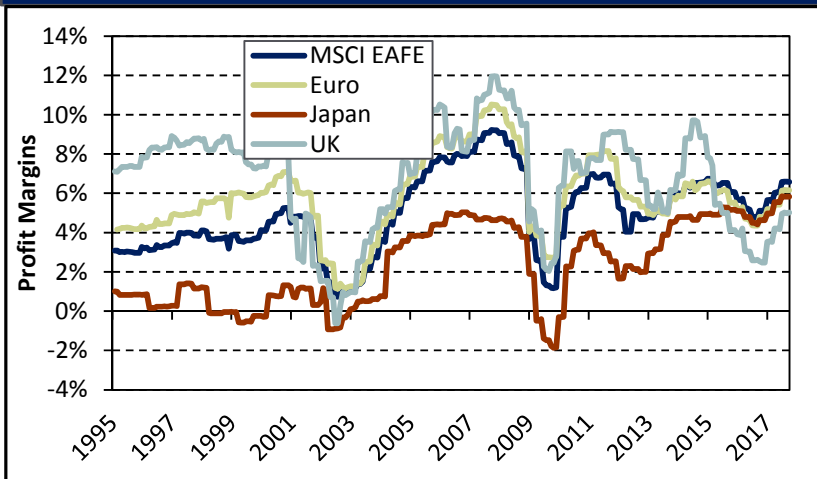
*Standard deviation calculations based on 20 years of data, with Europe since 12/1998

Eurozone and Japan growth increased, while UK growth slowed



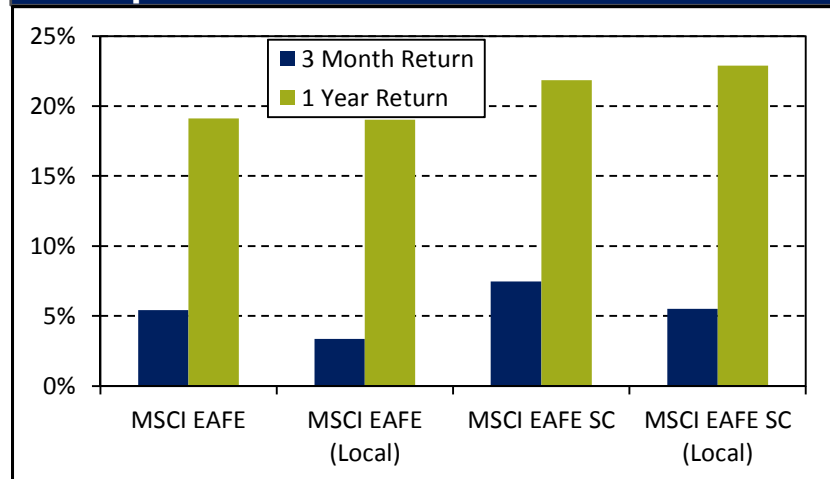
Source: Bloomberg

Profit margins continue trending higher



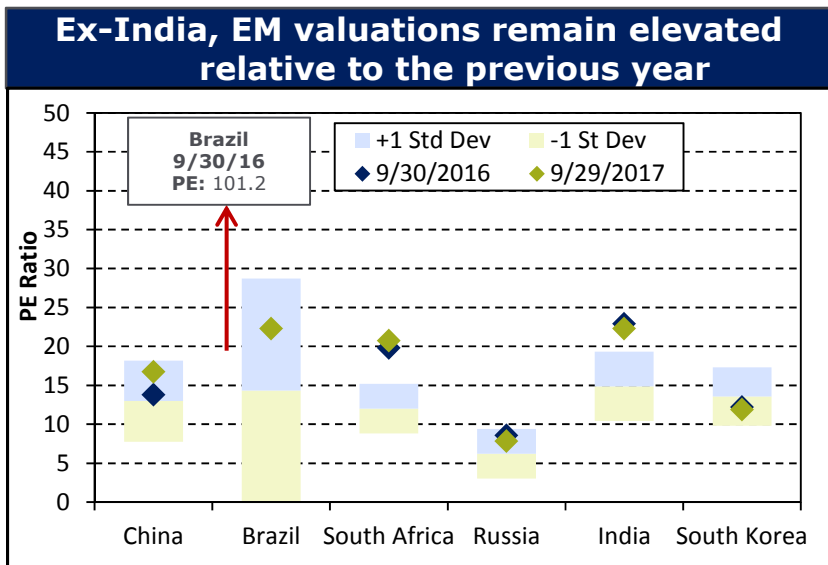
Source: Bloomberg, MSCI

Dollar weakness boosted short-term performance relative to local indices



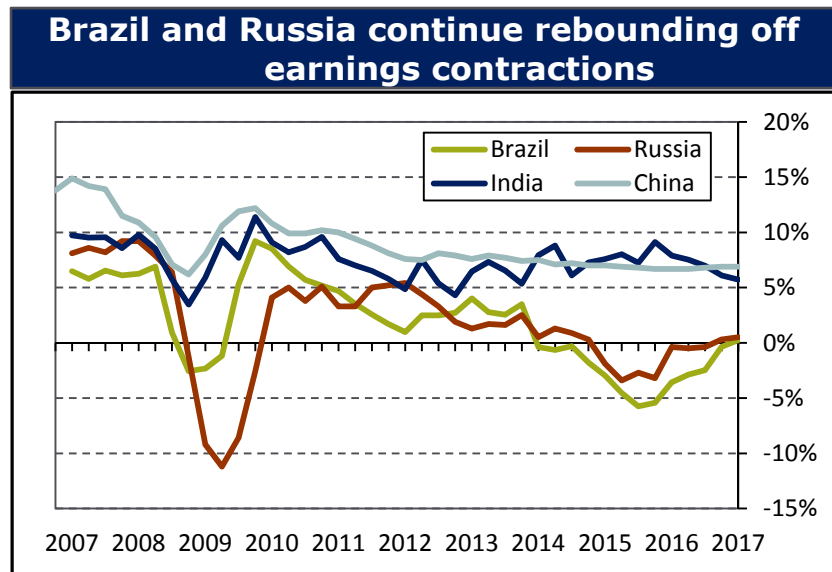
Source: Bloomberg, MSCI

Emerging Markets Equity

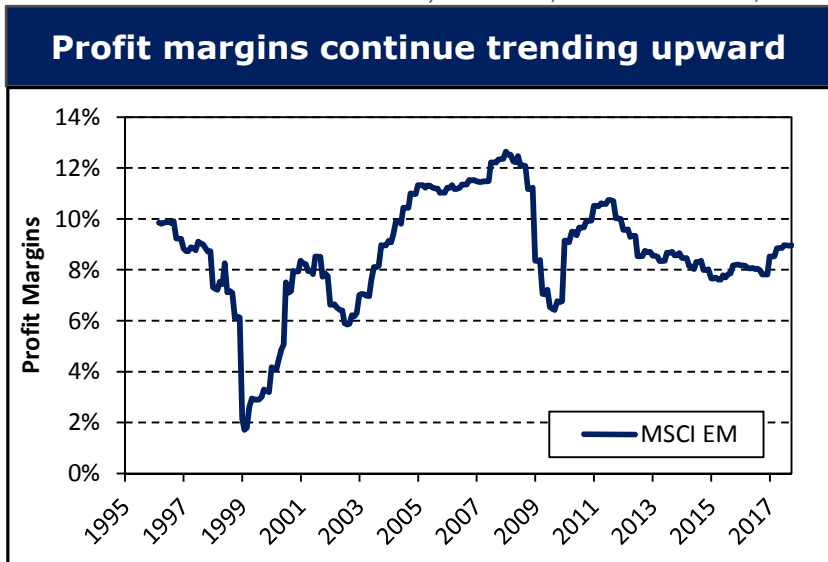


Source: Bloomberg, MSCI

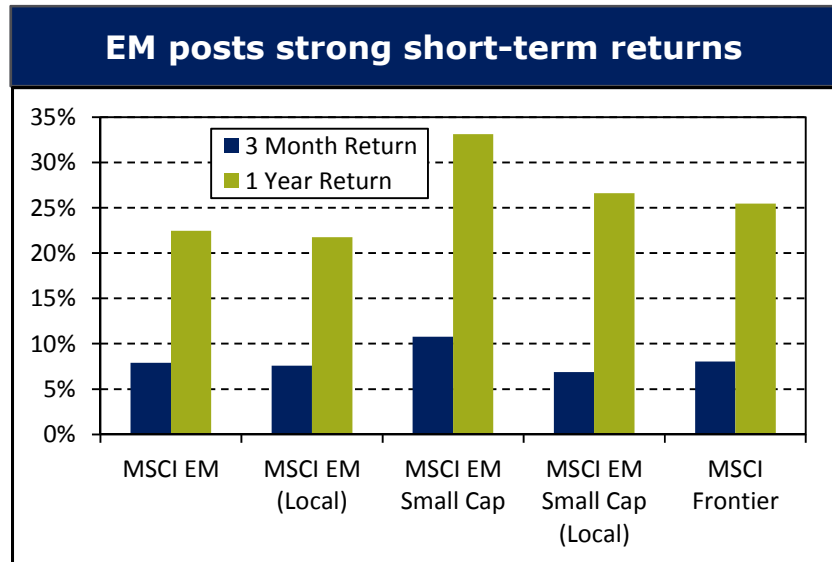
*Standard deviation calculations based on 20 years of data, with Russia since 01/1998



Source: Bloomberg

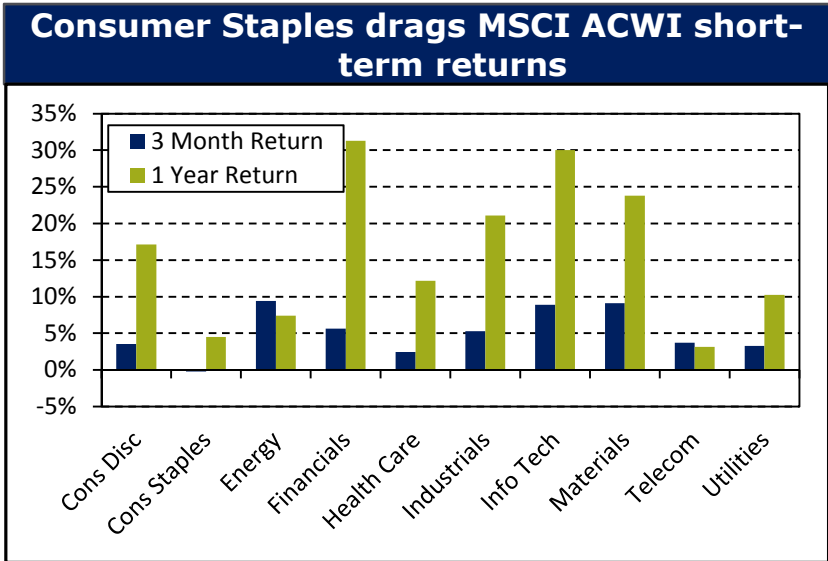


Source: Bloomberg, MSCI

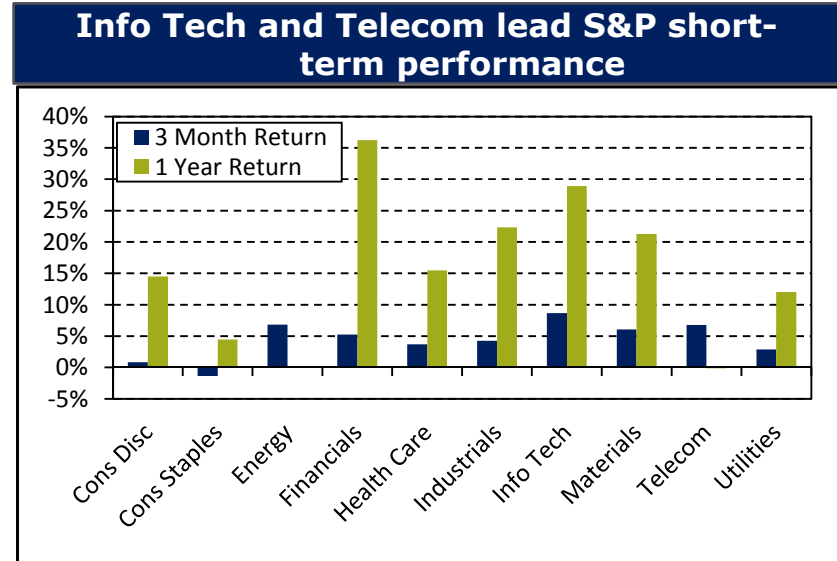


Source: Bloomberg, MSCI

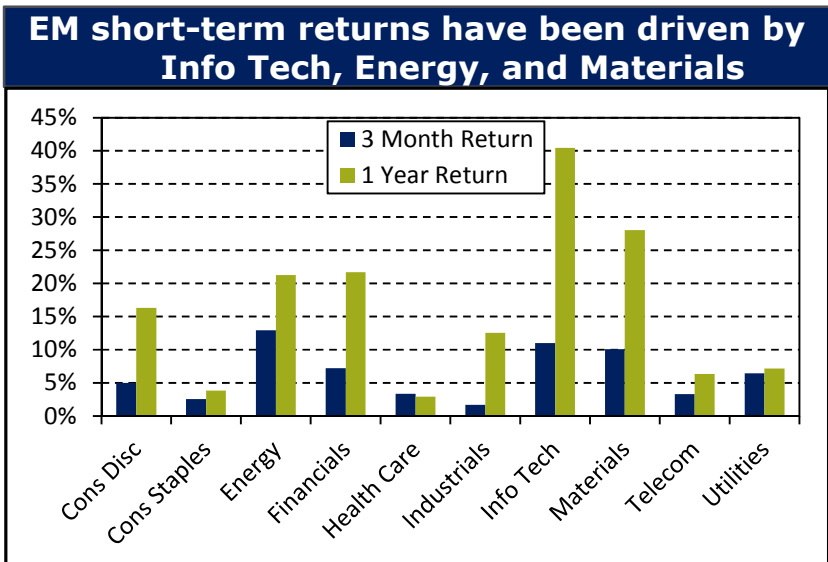
Global Equity by Sector



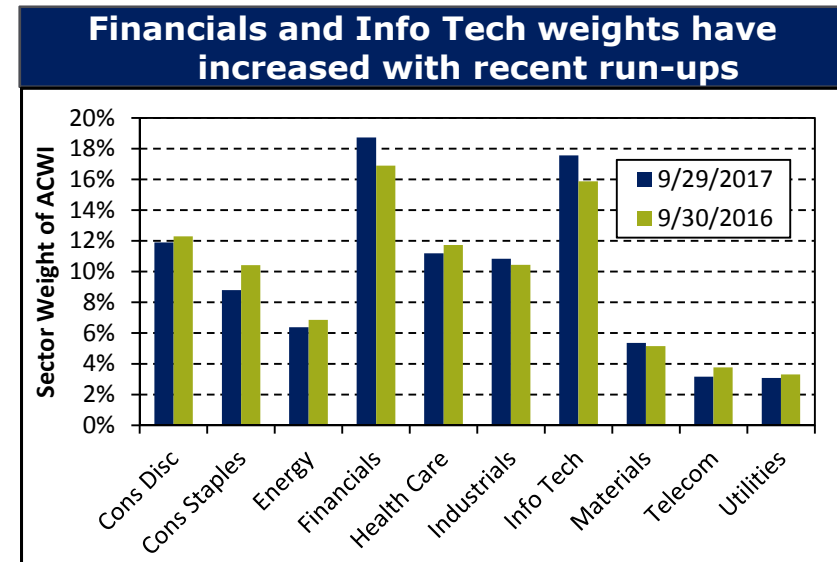
Source: Bloomberg, MSCI



Source: Bloomberg, Standard and Poors



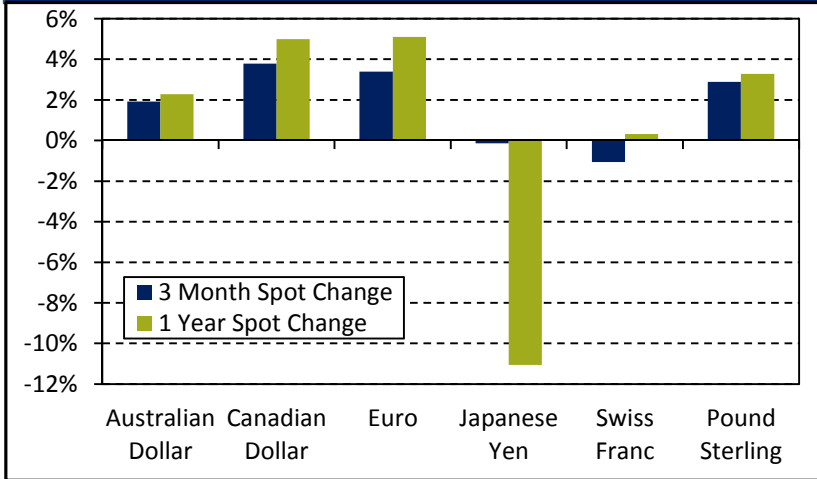
Source: Bloomberg, MSCI



Source: Bloomberg, MSCI

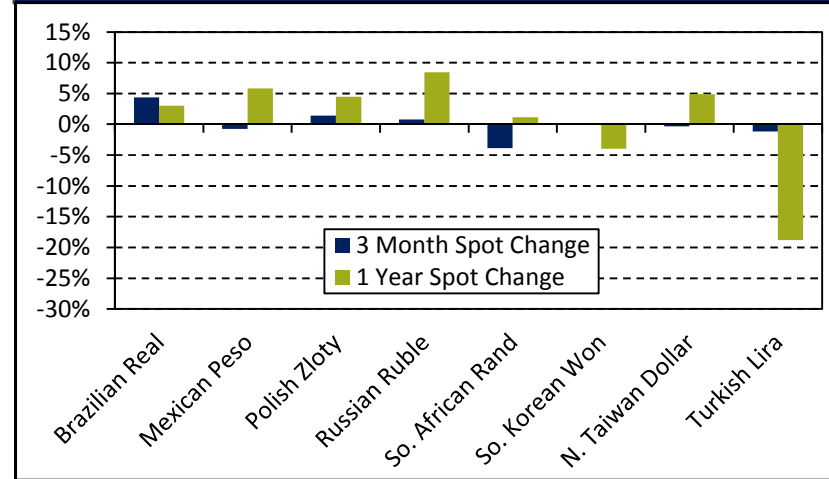
Currencies

Currencies have appreciated against the dollar with recent USD weakness



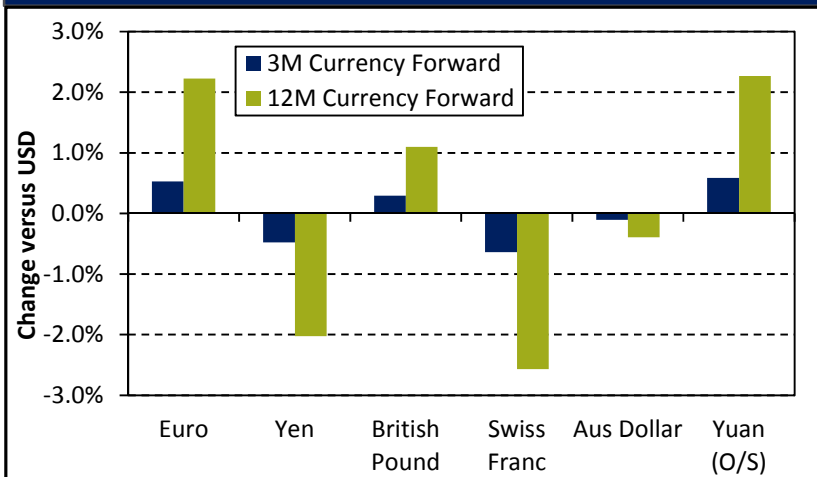
Source: Bloomberg

EM currencies remain mixed relative to the dollar



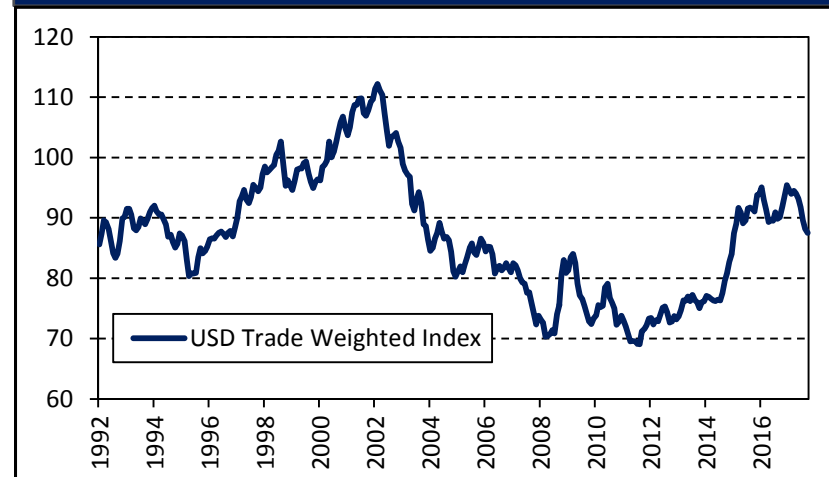
Source: Bloomberg

USD expectations vary across developed markets

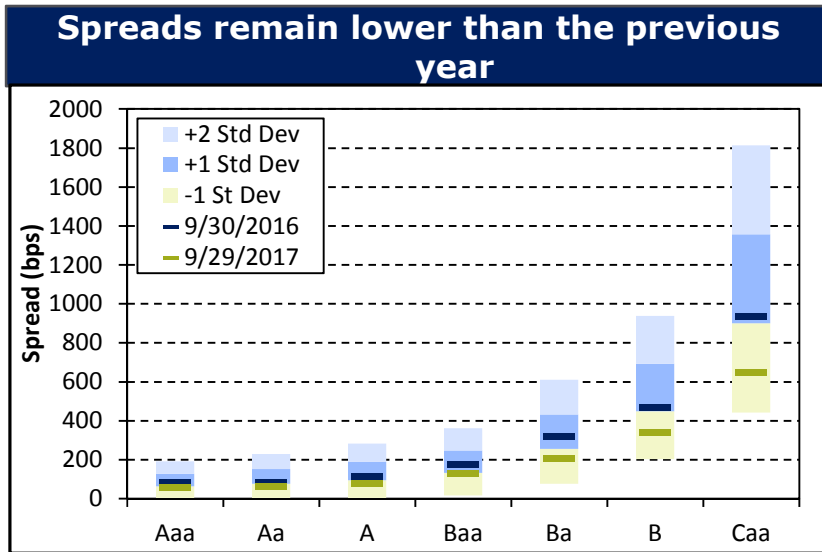


Source: Bloomberg

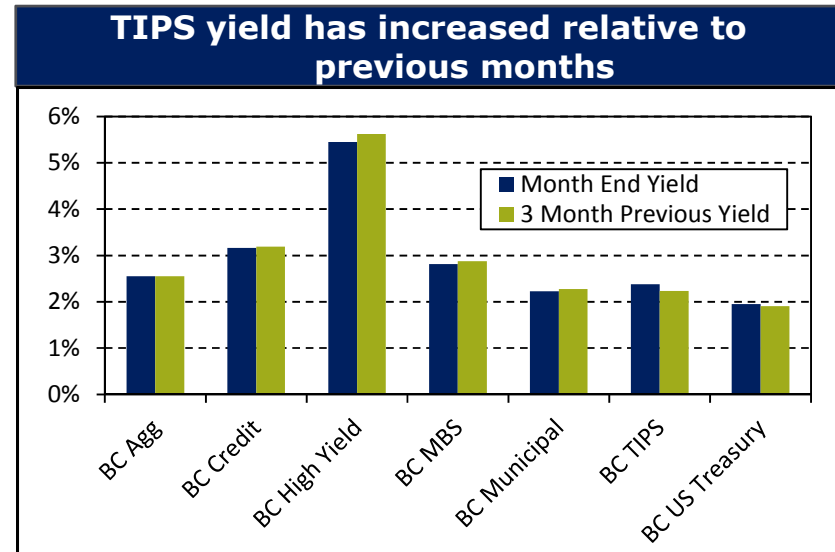
The dollar continues trending downward



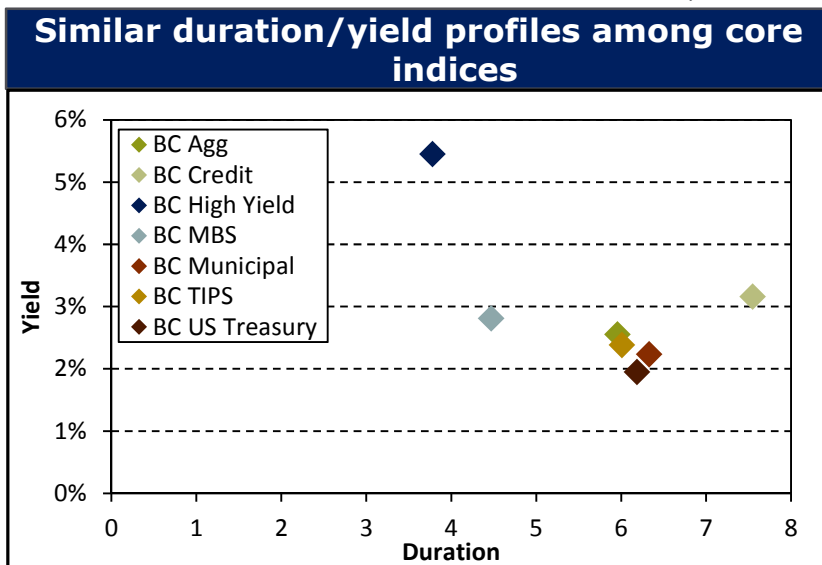
Source: Bloomberg, Federal Reserve



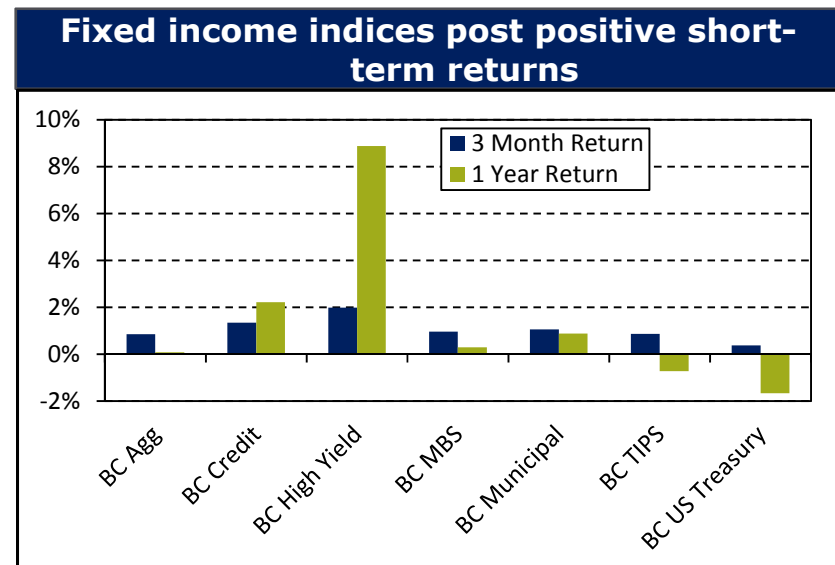
Source: Bloomberg, Barclays
 *Standard deviation calculations based on 20 years of data



Source: Bloomberg, Barclays

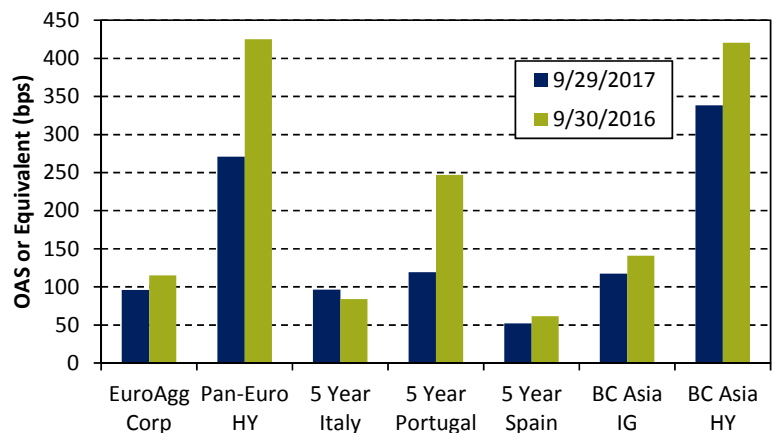


Source: Bloomberg, Barclays



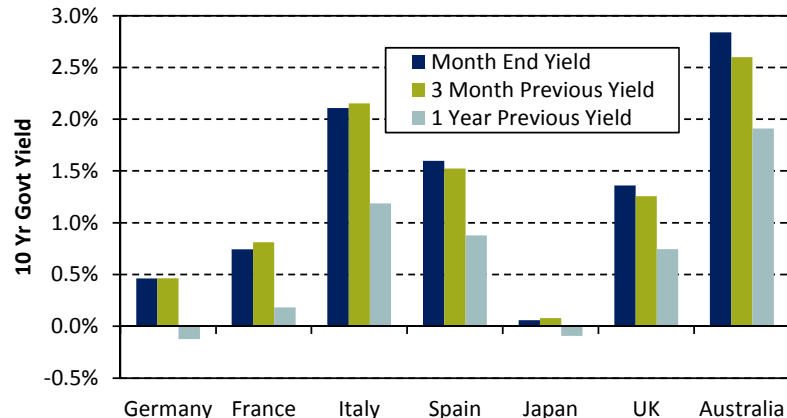
Source: Bloomberg, Barclays

Periphery yields have broadly declined over the year relative to Germany



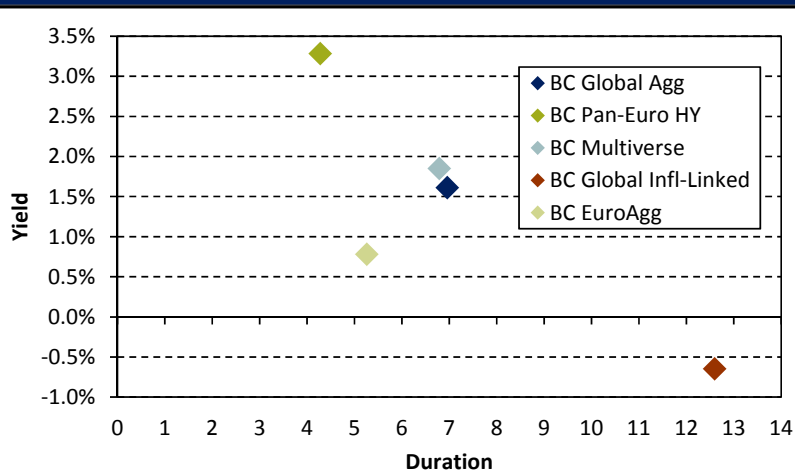
Source: Barclays, Bloomberg, *European periphery spreads are over equivalent German Bund

Yields are significantly higher relative to last year



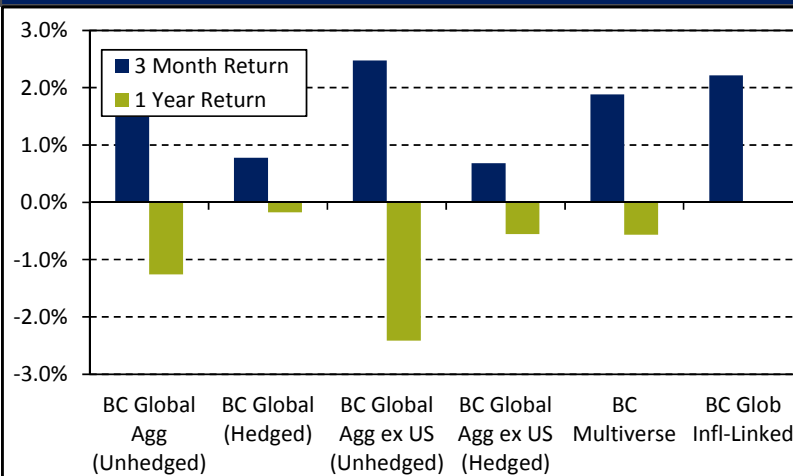
Source: Bloomberg

Low yields persist in global bond universe



Source: Bloomberg, Citigroup, Barclays

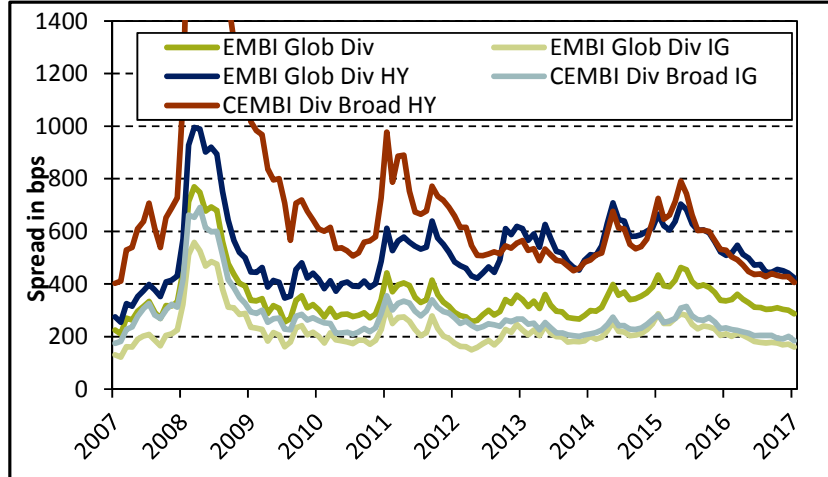
Global bonds post strong short-term returns



Source: Bloomberg, Citigroup, Barclays

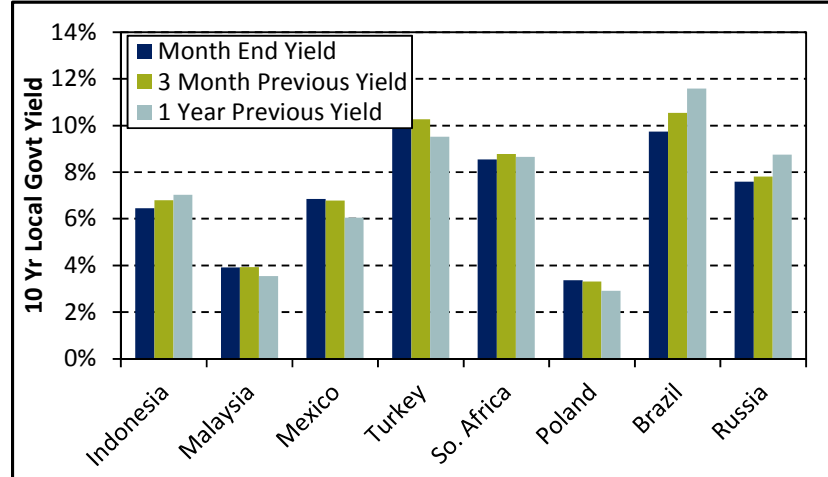
Emerging Markets Fixed Income

EM spreads continue to compress



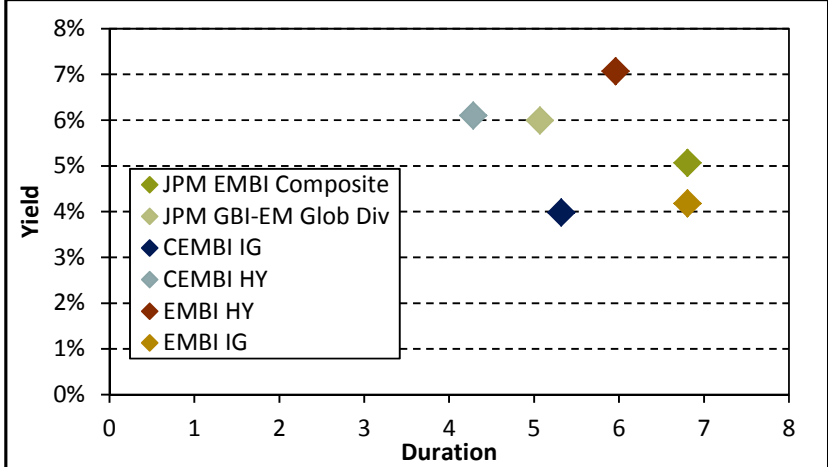
Source: Bloomberg, JP Morgan

Yields have broadly declined relative to previous months



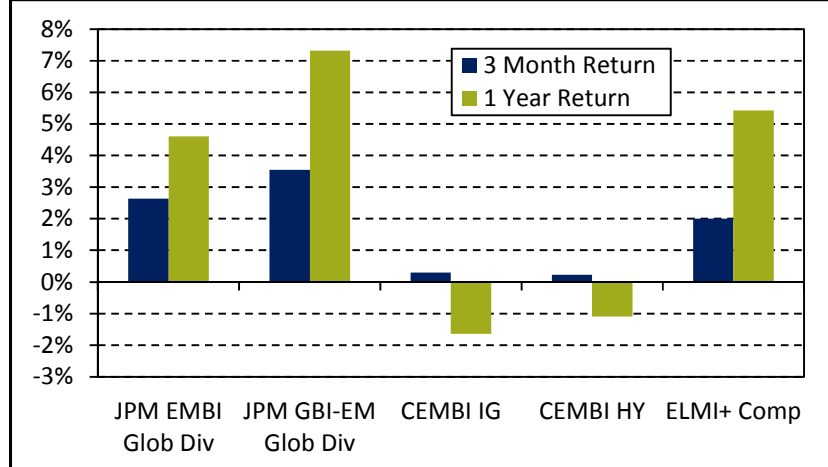
Source: Bloomberg

EM yields appear attractive relative to global counterparts



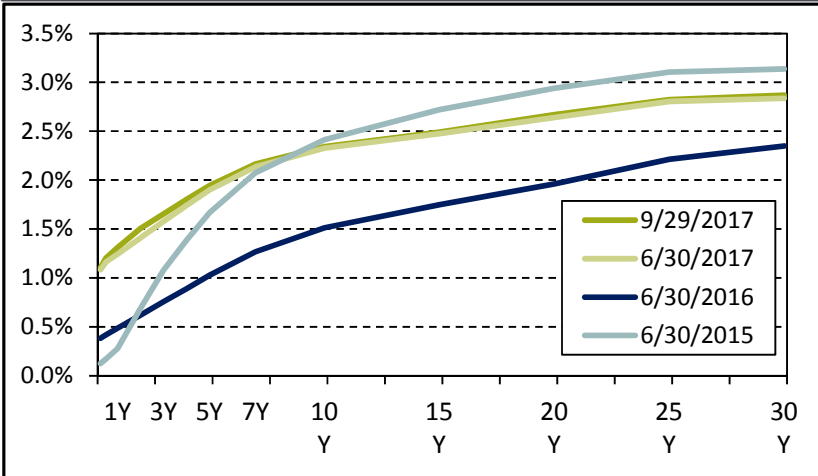
Source: Bloomberg, JP Morgan

EM debt posts strong positive short-term returns



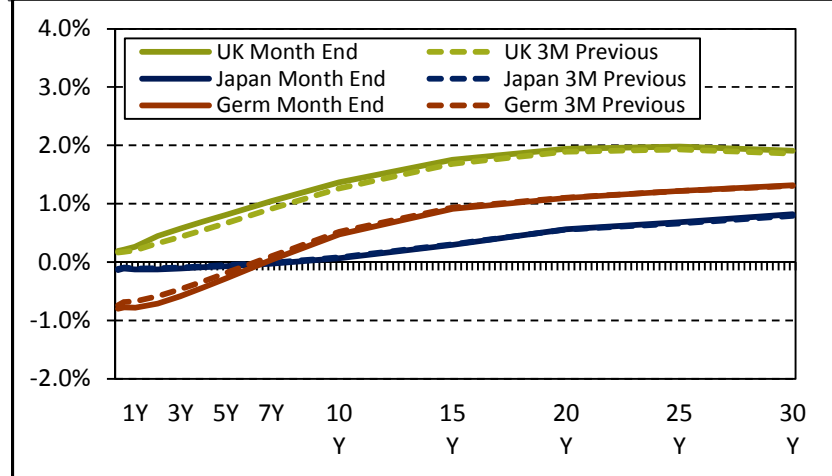
Source: Bloomberg, JP Morgan

The curve remains mostly unchanged from three months prior



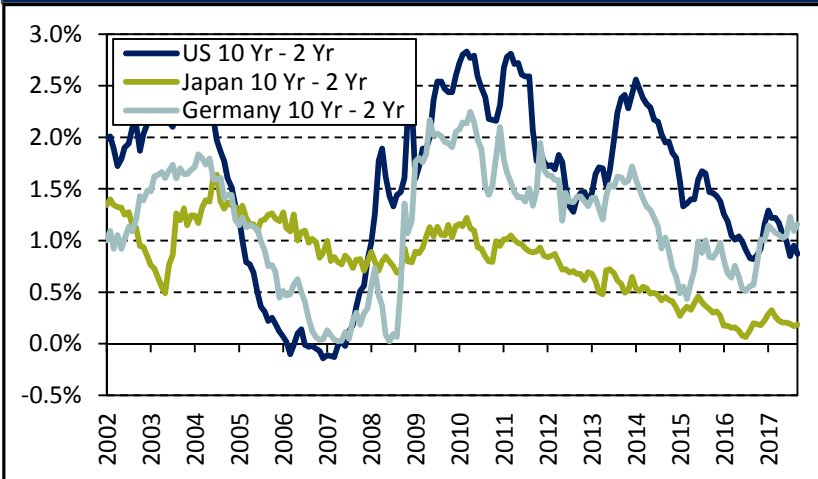
Source: Bloomberg

Interest rate expectations remain similar to previous months



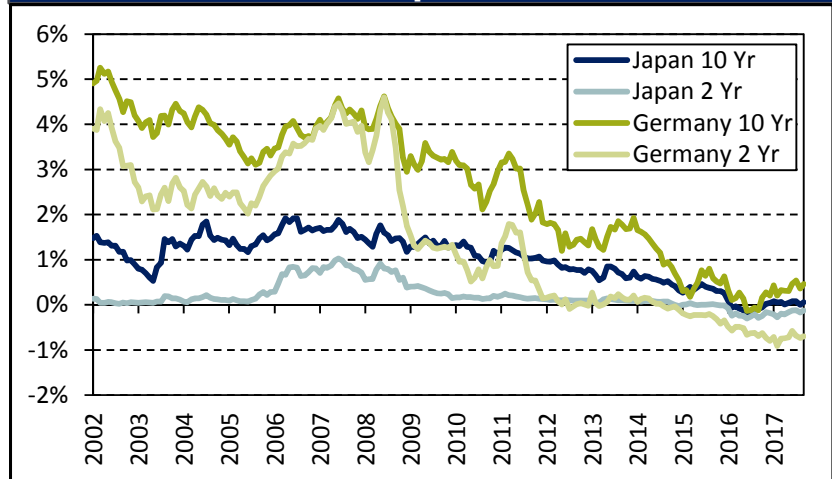
Source: Bloomberg

US and German 10-2 spreads have spiked in the near term



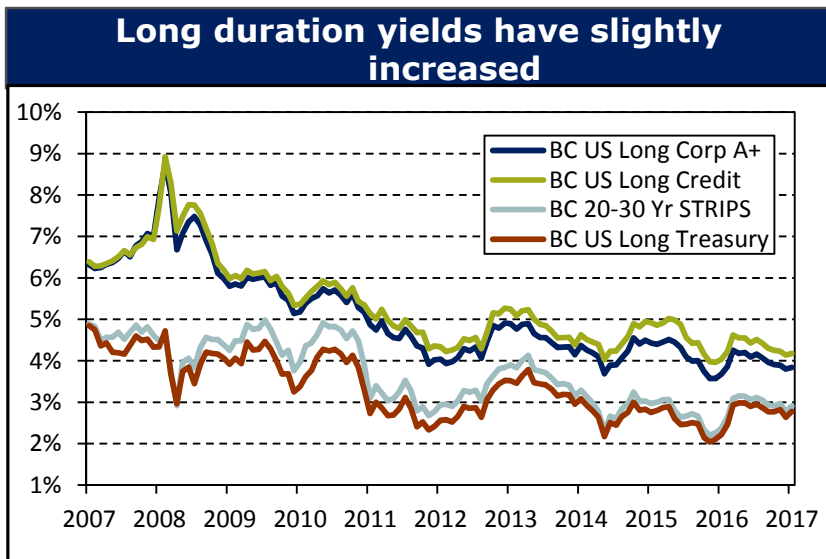
Source: Bloomberg

Sovereign bond yields continue to trend upward

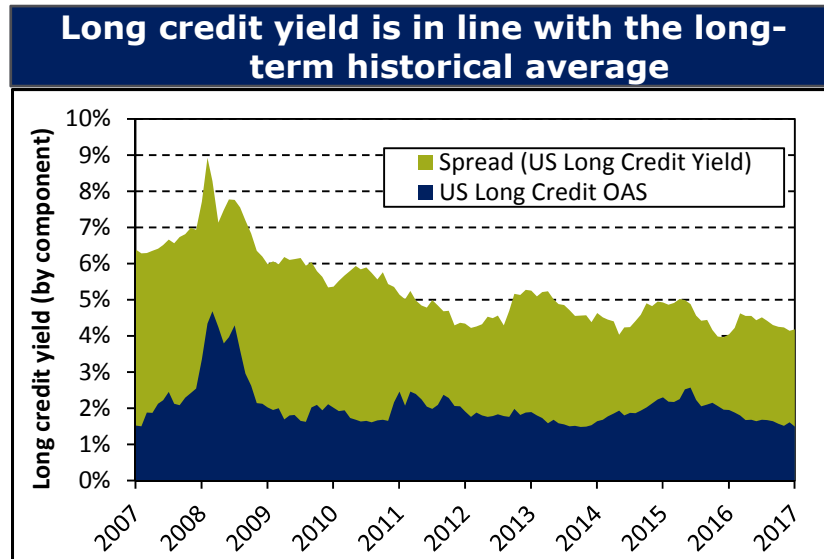


Source: Bloomberg

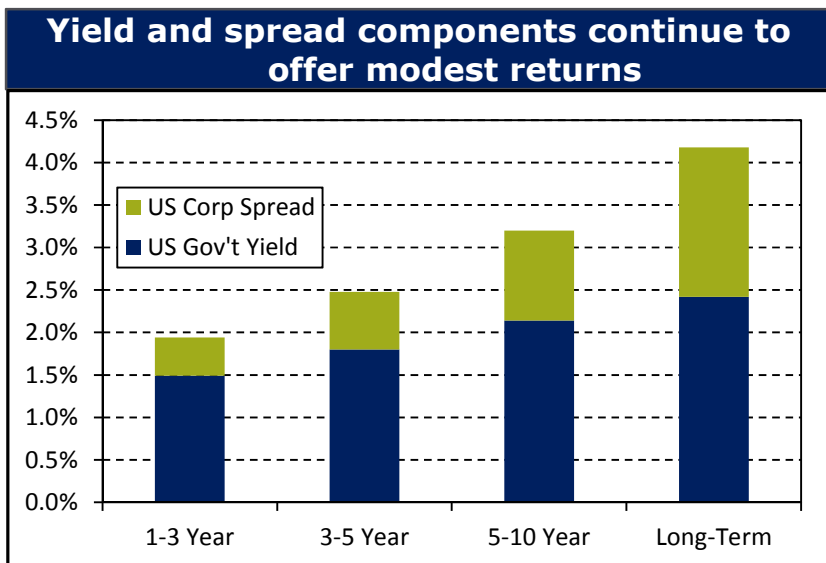
Long Rates and Liability



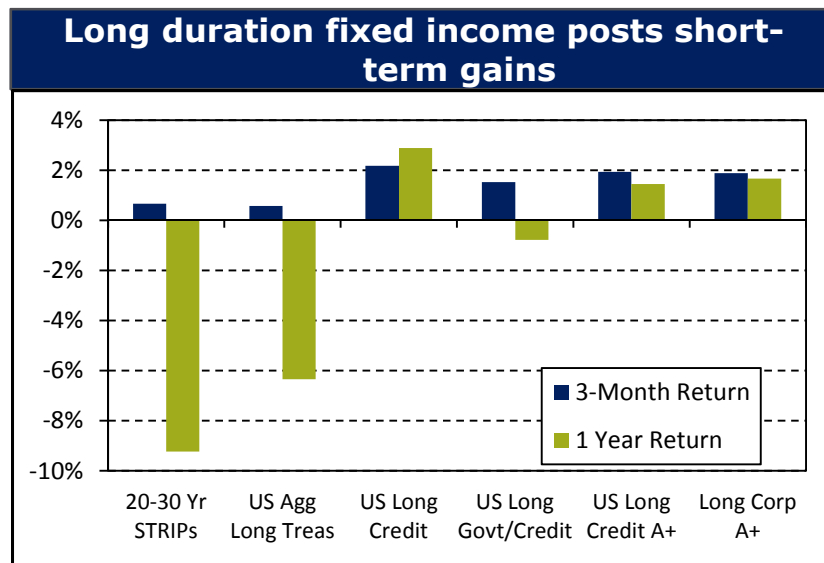
Source: Bloomberg, Citigroup, Barclays



Source: Bloomberg, US Treasury, Barclays, NEPC

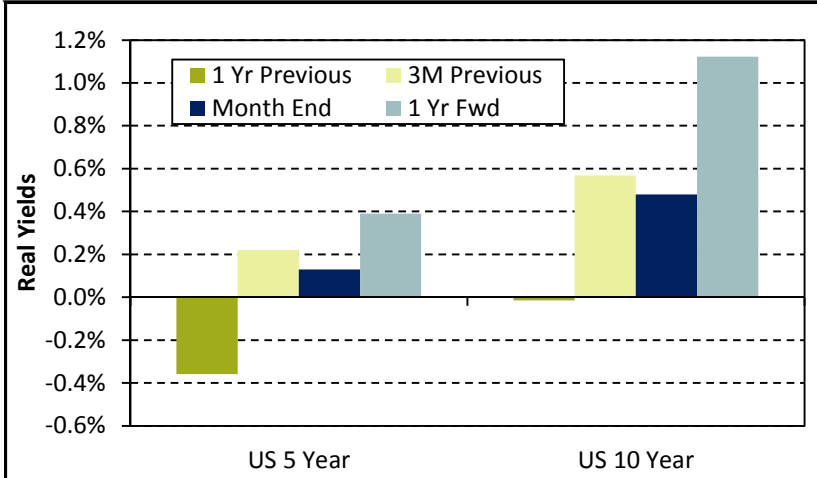


Source: Bloomberg, Barclays



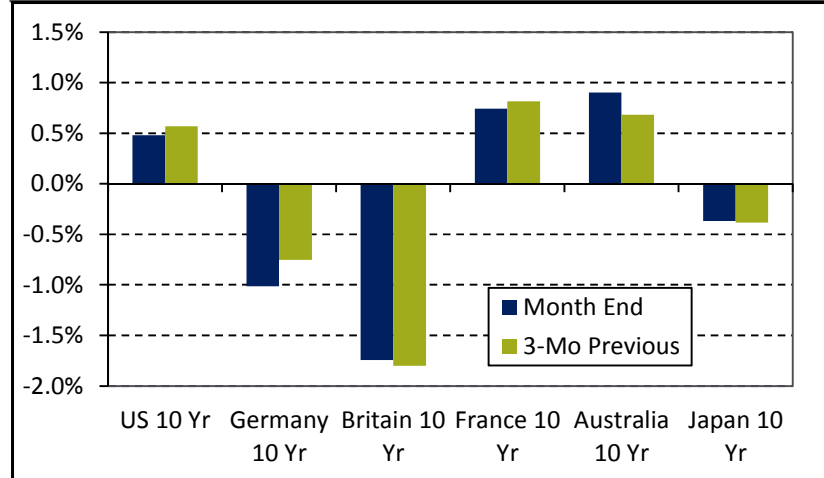
Source: Bloomberg, Barclays

US real yields have declined in recent months



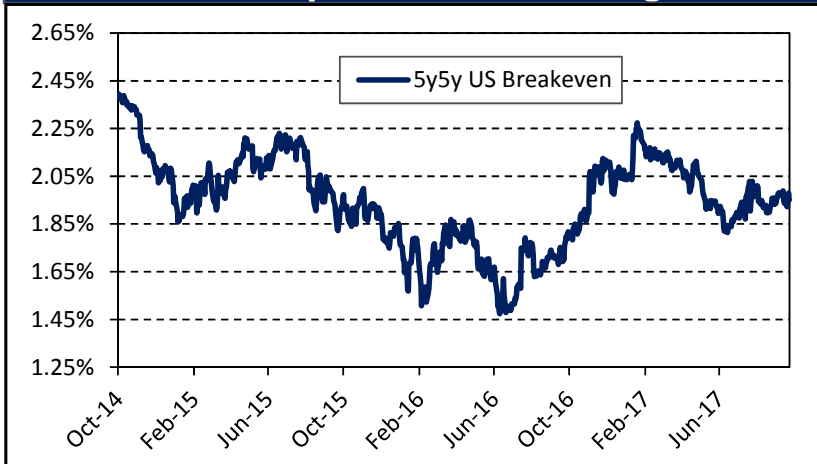
Source: Bloomberg

Real yields have broadly declined in developed markets



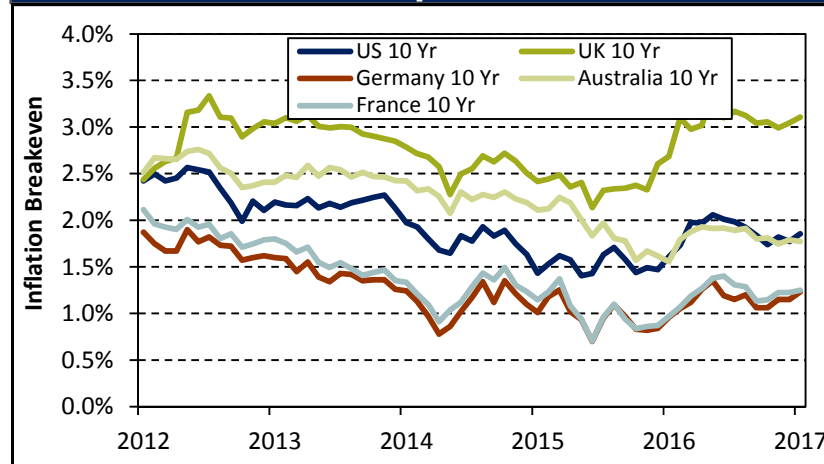
Source: Bloomberg

US inflation expectations have decreased off of post US election highs



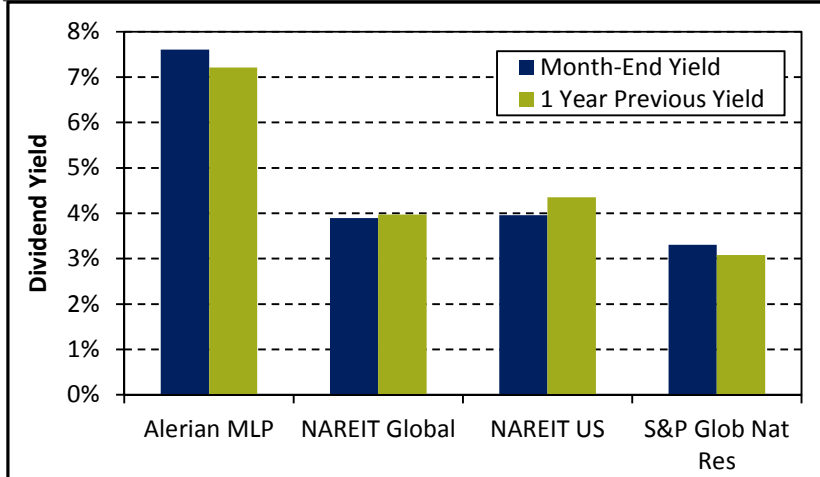
Source: Bloomberg

Inflation expectations have begun trending upward



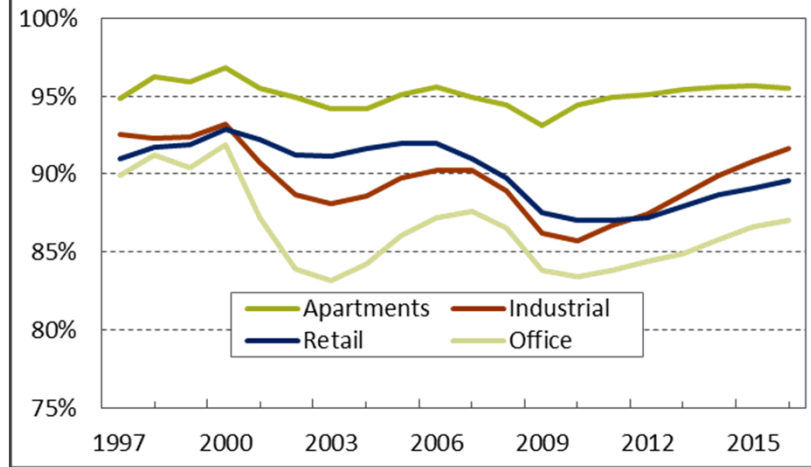
Source: Bloomberg

Yields remain in line with the previous year



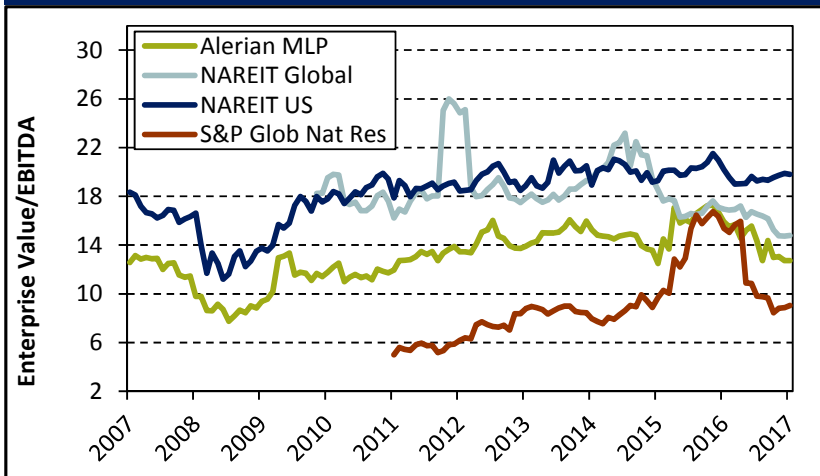
Source: Bloomberg, Alerian, Nareit, Standard and Poors

Sustained recovery in commercial real estate occupancy rates



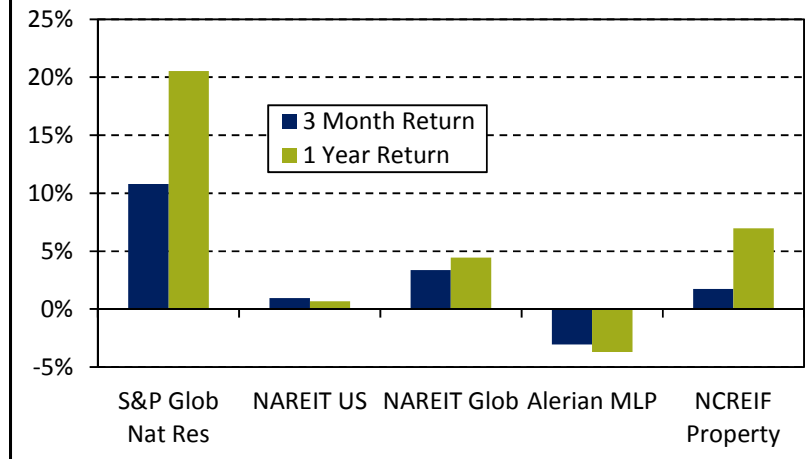
Source: CBRE

US REIT valuations have steadied



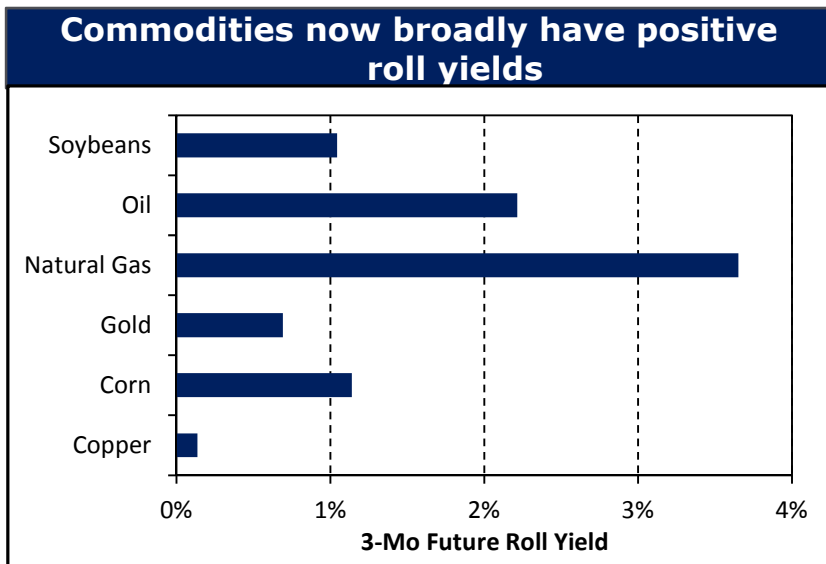
Source: Bloomberg, US Census Bureau

Mixed short-term performance for inflation-sensitive growth assets

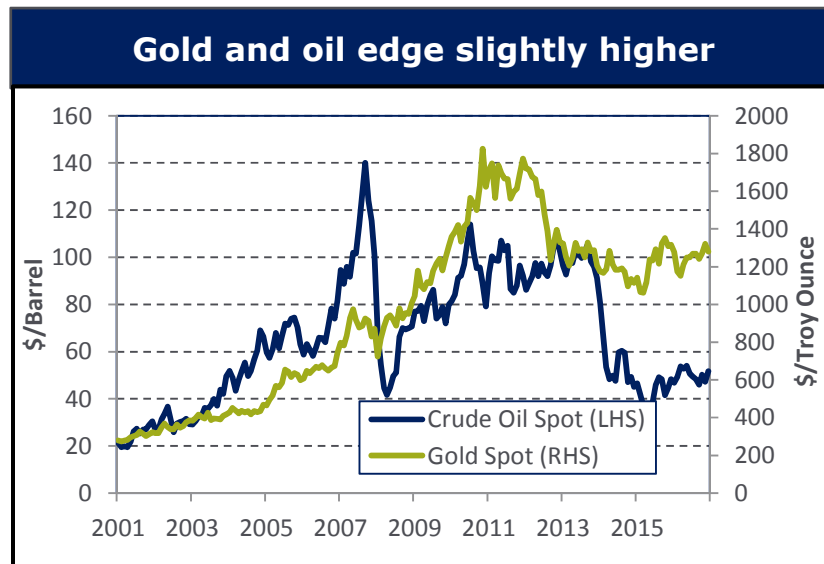


Source: Bloomberg, Alerian, Nareit, Standard and Poors

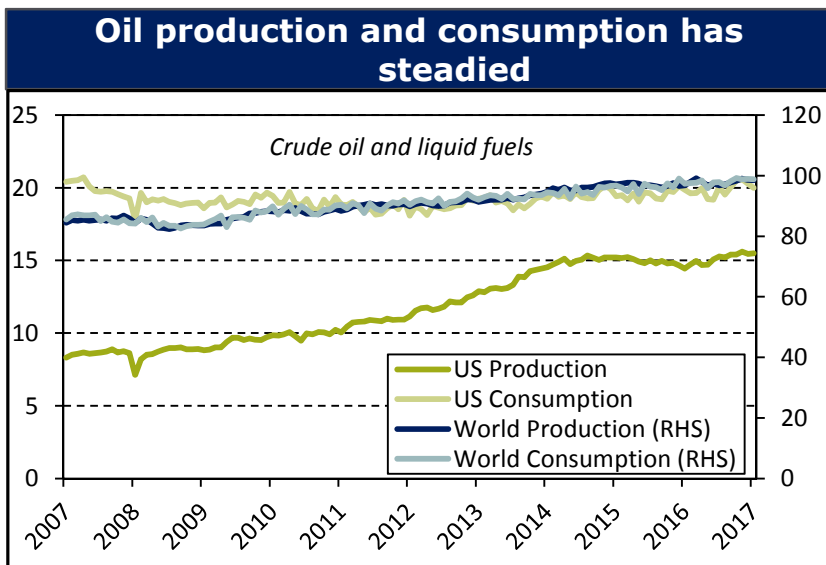
Commodities



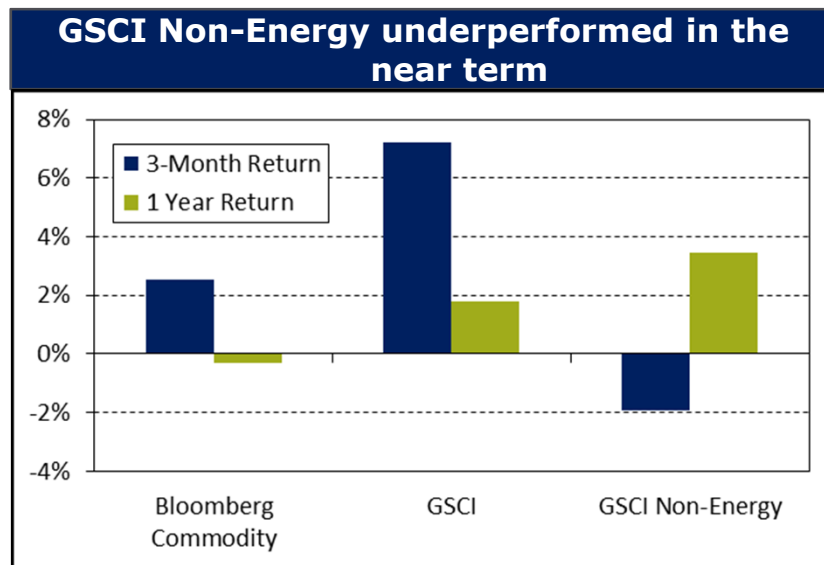
Source: Bloomberg



Source: Bloomberg



Source: Bloomberg, US Department of Energy *Crude oil and liquid fuels



Source: Bloomberg, Standard and Poors

Definitions



Policy Index Definitions

Policy Index: Current (adopted January 10, 2012) 24% Russell 3000 Index, 29% MSCI ACWI ex USA Net Index, 19% Bbg Barclays U.S. Aggregate Bond Index, 5% Credit Opportunities Blend, 10% Real Assets Blend, 12% Private Equity Blend, 1% Citi 3 Month T-Bill Index

U.S. Equity Blend: July 1, 2011 - Current: Russell 3000 Index; September 30, 1994 - December 31, 1999 S&P 500 Index 33.75, Russell 1000 Value Index 35%, Russell 1000 Growth 12.5%, Russell 2000 Value 12.5%, Russell 2000 Growth 6.25%

Core Fixed Income Blend: July 1, 2013 – Current: Bbg Barclays U.S. Aggregate Bond Index

Credit Opportunities Blend: 65% Bbg Barclays U.S. HY 2% Cap Index, 35% JPM EMBIGD Index

Public Real Assets Blend: 60% Bbg Barclays U.S. TIPS Index, 20% Bbg Commodity Index, 10% FTSE NAREIT All Equity Index, 10% Alerian MLP Index

Real Estate Blend: July 1, 2014 - Current NCREIF ODCE + 0.80%; July 1, 2012 - June 30, 2014 NCREIF Property Index Lagged +1%; October 1, 1994 - June 30, 2012 NCREIF Property Index Lagged

Private Equity Blend: February 1, 2012 – current: Russell 3000 + 3%; Inception – January 31, 2012: Russell 3000 + 4%

Note: See Investment Policy for a full description of the indices listed.

Index Definitions

Standard & Poor's 500 Index: The primary objective of the S&P 500 is to be the performance benchmark for the U.S. equity markets. It is important to note, however, that the S&P 500 does not contain the 500 largest stocks. Although many of the stocks in the Index are among the largest, there are also many relatively small companies in the Index. This is because the 500 is a "bottom-up" Index constructed by industry groups. Important industry groups within the U.S. economy are identified and then a representative sample of stocks within each important industry group are allocated to the Index. The Index can therefore be used as a proxy for the whole market and also for individual industry groups. The Index was founded in 1923, although there were only 233 companies in the Index at the time.

Russell 3000 Index: Measures the performance of the 3,000 largest U.S. companies based on total market capitalization, which represents approximately 98% of the investable U.S. equity market.

Russell 1000 Index: An index of the largest 1000 companies ranked by market capitalization in the Russell 3000 Index.

Russell 1000 Growth Index: Measures the performance of those Russell 1000 companies with higher price/book ratios and higher forecasted growth values.

Russell 1000 Value Index: Measures the performance of those Russell 1000 companies with lower price/book ratios and lower forecasted growth values.

Russell 2000 Index: Generally considered to be representative of small capitalization stocks in U.S. markets. It represents stocks that rank from 1001 to 3000 in market capitalization.

Russell 2000 Growth Index: Measures the performance of those Russell 2000 companies with higher price/book ratios and higher forecasted growth values.

Russell 2000 Value Index: Measures the performance of those Russell 2000 companies with lower price/book ratios and lower forecasted growth values.

MSCI ACWI ex USA: Captures large and mid cap representation across 22 of 23 Developed Markets (DM) countries (excluding the US) and 24 Emerging Markets (EM) countries. The index covers approximately 85% of the global equity opportunity set outside the US.

MSCI EAFE: Captures large and mid cap representation across Developed Markets countries around the world, excluding the US and Canada. The index covers approximately 85% of the free float-adjusted market capitalization in each country.

MSCI EAFE Small Cap Index: Captures small cap representation across Developed Markets countries around the world, excluding the US and Canada. The index covers approximately 14% of the free float-adjusted market capitalization in each country.

MSCI EAFE Value Index: Captures large and mid cap securities exhibiting overall value style characteristics across Developed Markets countries around the world, excluding the US and Canada. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield. The index targets 50% coverage of the free float-adjusted market capitalization of the MSCI EAFE Index.

Source: FTSE Russell, MSCI

Index Definitions

MSCI EAFE Value Index: Captures large and mid cap securities exhibiting overall value style characteristics across Developed Markets countries around the world, excluding the US and Canada. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield. The index targets 50% coverage of the free float-adjusted market capitalization of the MSCI EAFE Index

MSCI ACWI ex USA Growth Index: Captures large and mid cap securities exhibiting overall growth style characteristics across 22 Developed Markets (DM) countries and 24 Emerging Markets (EM) countries. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend.

MSCI World ex USA Index: Captures large and mid cap representation across 22 of 23 Developed Markets (DM) countries excluding the United States. The index covers approximately 85% of the free float-adjusted market capitalization in each country.

MSCI Emerging Markets Index: Captures large and mid cap representation across 24 Emerging Markets (EM) countries. The index covers approximately 85% of the free float-adjusted market capitalization in each country.

MSCI Emerging Markets Growth Index: Captures large and mid cap securities exhibiting overall growth style characteristics across 24 Emerging Markets (EM) countries. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend.

MSCI Emerging Markets Value Index: Captures large and mid cap securities exhibiting overall value style characteristics across 24 Emerging Markets (EM) countries. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield.

Bloomberg Barclays US Aggregate Index: Measures the investment grade, US dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM pass-throughs), ABS and CMBS (agency and nonagency). The US Aggregate Index was created in 1986 with history backfilled to January 1, 1976.

Bloomberg Barclays US Government/Credit Index: Measures non-securitized component of the US aggregate Index. It includes investment grade, US dollar-denominated, fixed-rate Treasuries, government-related and corporate securities. The index was launched on January 1, 1979, with history backfilled to 1973.

Bloomberg Barclays US Corporate High Yield 2% Issuer Cap Index: Measures the USD-denominated, high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch and S&P is Ba1/BB+/BB+ or below. Index weights are capped at 2% for each issuer.

JPM EMBI Global Diversified Index: Tracks total returns for US-dollar denominated Brady Bonds, Eurobonds, traded loans and local market debt instruments issues by sovereign and quasi-sovereign entities of emerging markets countries. The index limits the weights of countries with larger debt stocks by including specified portions of countries eligible current face amounts of debt outstanding.

Source: MSCI, Bloomberg Barclays

Index Definitions

JPM EMBI Global Diversified Index: Tracks total returns for US-dollar denominated Brady Bonds, Eurobonds, traded loans and local market debt instruments issues by sovereign and quasi-sovereign entities of emerging markets countries. The index limits the weights of countries with larger debt stocks by including specified portions of countries eligible current face amounts of debt outstanding.

Credit Suisse Leveraged Loan Index: Designed to mirror the investable universe of the \$US-denominated leveraged loan market. The index inception is January 1992. The index frequency is monthly. New loans are added to the index on their effective date if they qualify according to the following criteria: Loans must be rated "5B" or lower; only fully-funded term loans are included; the tenor must be at least one year; and the Issuers must be domiciled in developed countries (Issuers from developing countries are excluded). Fallen angels are added to the index subject to the new loan criteria. Loans are removed from the index when they are upgraded to investment grade, or when they exit the market (for example, at maturity, refinancing or bankruptcy workout). Note that issuers remain in the index following default. Total return of the index is the sum of three components: principal, interest, and reinvestment return. The cumulative return assumes that coupon payments are reinvested into the index at the beginning of each period.

Barclays US Treasury Inflation-Linked Bond Index: Measures the performance of the US Treasury Inflation Protected Securities (TIPS) market. Federal Reserve holdings of US TIPS are not index eligible and are excluded from the face amount outstanding of each bond in the index.

FTSE NAREIT All Equity REITs Index: Designed to present investors with a comprehensive family of REIT performance indexes that spans the commercial real estate space across the US economy. The index contains all tax-qualified REITs with more than 50 percent of total assets in qualifying real estate assets other than mortgages secured by real property that also meet minimum size and liquidity criteria. Stocks are free-float weighted to ensure that only the investable opportunity set is included within the indexes.

Bloomberg Commodity Index: Made up of 22 exchange-traded futures on physical commodities. The index currently represents 20 commodities, which are weighted to account for economic significance and market liquidity. Weighting restrictions on individual commodities and commodity groups promote diversification. Commodity weightings are based on production and liquidity, subject to weighting restrictions applied annually such that no related group of commodities constitutes more than 33% of the index and no single commodity constitutes more than 15%. Between rebalancings, weightings may fluctuate to levels outside these limits. To avoid the physical delivery of commodities from the underlying futures, the indexes' roll from current to subsequent contracts during the roll period defined in the methodology, which typically falls within the 6th-10th business day of each month. Re-weighted and re-balanced annually.

Alerian MLP Index: Float-adjusted, capitalization-weighted index, whose constituents represent approximately 85% of total float-adjusted market capitalization in the MLP space and is disseminated real-time.

Source: Credit Suisse, Bloomberg Barclays, FTSE Russell, Bloomberg, Alerian

Index Definitions

Alerian MLP Index: Float-adjusted, capitalization-weighted index, whose constituents represent approximately 85% of total float-adjusted market capitalization in the MLP space and is disseminated real-time.

NCREIF Open End Diversified Core Equity Index (NFI-ODCE): Capitalization-weighted, time-weighted return index with an inception date of December 31, 1977. Open-end funds are generally defined as infinite-life vehicles consisting of multiple investors who have the ability to enter or exit the fund on a periodic basis, subject to contribution and/or redemption requests, thereby providing a degree of potential investment liquidity. The term Diversified Core Equity style typically reflects lower risk investment strategies utilizing low leverage and generally represented by equity ownership positions in stable U.S. operating properties diversified across regions and property types.

Russell 3000 Index plus 3%: Measures the performance of the 3,000 largest U.S. companies based on total market capitalization, which represents approximately 98% of the investable U.S. equity market. Plus three percent is an annual percent addition to the market index return and represents the private equity illiquidity premium.

Citi 91 day US Treasury-Bill Index: Measure return equivalents of yield averages. The instruments are not marked to market. For example, the US three-Month Treasury Bill Index is an average of the last three three-month Treasury bill month-end rates.

Consumer Price Index (CPI): As calculated by the Bureau of Labor Statistics (BLS) is a measure of the change in prices of goods and services purchased by urban consumers for a market basket of consumer goods and services.

Source: FTSE Russell, Alerian, NCREIF , Citi Yieldbook, Bureau of Labor Statistics

Universe Construction Methodology

InvestorForce Universe: Total membership of over 2,500 plans as of 6/30/2017. Plans are submitted by over 42 leading investment consulting firms and anonymous custodian(s) and represents over \$3.5 trillion in assets. Universe members sourced from both the InvestorForce Performance Reporting platform and InvestorForce Plan Universes Data Exchange clients are assembled and breakpoints calculated. When a universe is constructed, the system assembles the members based on the designated client and plan type and group asset class assignments required for the universe. Only plans designated as ready for inclusion in the construction can be brought into the membership of the universe. InvestorForce requires a minimum of 14 members match ALL of the criteria for a given universe before a universe is created. With the appropriate members present, the return streams for each period are used to calculate the median (50th percentile), the 5th, 25th, 75th and 95th percentile return breakpoints and all other percentile breakpoints for each universe time period. When a performance universe is calculated, all historical periods as of that period end date are calculated. Once universes are calculated for a given period end date, they remain fixed and are not recalculated for that period end date. New or deleted plans are reflected only in the next period construction and thereafter. With each new cut of plan universes, the entire set of historical universes with that new period end date is constructed and stored. When a performance universe is calculated, the trailing periods with the new period end date are also calculated. Once universes are calculated for a given period end date, they remain fixed and are not recalculated for the period end date. New or deleted plans are reflected only in the next period construction and thereafter. With each new construction of performance universes, the entire set of universe time periods is constructed as of that period end date.

eVestment Universe: The construction of wide-ranging universes that are both pure in style and consistent over time is an important process at eVestment. Each quarter, eVestment draws upon a mix of qualitative and quantitative factors to assess new database products and evaluate current eVestment Universe constituents. Importantly, eVestment Universe classifications are not simply "manager reported style" lists. Instead, eVestment reviews a number of key criteria, as further described below, to make a determination of fit within a peer group and consistency of a product's attributes within a designated style classification. Numerous tools are used in these efforts, including access to the wide-ranging information of the industry's most comprehensive database, the eVestment Database. The minimum criteria necessary for inclusion in an eVestment Universe are 1) Minimum of one year of performance history, and 2) Updated portfolio characteristics for the product. All products meeting the criteria are evaluated for inclusion. For the purposes of greater purity in its universes, eVestment attempts to generate "base-level" universes that split universes into more specific sub-groupings (i.e. separating micro cap, small cap, small-mid and mid cap universes), with some "roll-up universes" that combine a related group of base-level universes (i.e. Large Cap Equity = Large Core + Large Growth + Large Value). On an ongoing basis, all eVestment Universes are updated & scrubbed approximately 45 days after quarter-end, where several factors are considered, including:

- Screening of fundamental portfolio characteristics vs. universe medians; emphasis on outliers, data trends & accuracy
- Analysis of sector allocations vs. existing eVestment style universes; emphasis on significant over/under-exposures to key "style" sectors (technology, financials, etc.)
- Statistical performance and risk screening versus appropriate benchmarks and universe medians, such as returns, standard deviation, tracking error & correlation coefficients over annualized and rolling three-year time periods
- Review of product narratives detailing a manager's investment strategy, screening process, portfolio construction methodologies and buy/sell disciplines
- Manager reported capitalization and style emphasis, or duration, quality and style emphasis and product benchmark



Universe Definitions

eVestment US Large Cap Core Equity: US Equity products that invest primarily in large capitalization stocks with fundamental characteristics between growth and value or products that invest in a relatively even mix of growth and value stocks/sectors. The expected benchmarks for this universe would include the Russell 1000, or S&P 500. Managers in this category will typically indicate a "Primary Capitalization Emphasis" equal to Large Cap and a "Primary Style Emphasis" equal to Core.

eVestment US Large Cap Value Equity: US Equity products that invest primarily in large capitalization stocks with fundamental characteristics showing them to be under-priced or in slower growing economic sectors. The expected benchmarks for this universe would include the Russell 1000 Value, S&P 500 or the S&P/BARRA Value. Managers in this category will typically indicate a "Primary Capitalization Emphasis" equal to Large Cap and a "Primary Style Emphasis" equal to Value.

eVestment US Large Cap Growth Equity: US Equity products that invest primarily in large capitalization stocks with fundamental characteristics showing high earnings growth expectations or in fast-growing economic sectors. The expected benchmarks for this universe would include the Russell 1000 Growth, S&P 500 or the S&P/BARRA Growth. Managers in this category will typically indicate a "Primary Capitalization Emphasis" equal to Large Cap and a "Primary Style Emphasis" equal to Growth.

eVestment US Mid Cap Core Equity: US Equity products that invest primarily in middle capitalization stocks with fundamental characteristics between growth and value or products that invest in a relatively even mix of growth and value stocks/sectors. The expected benchmarks for this universe would include the Russell Midcap, or the S&P 400. Managers in this category typically indicate a "Primary Cap Emphasis" equal to Mid Cap and a "Primary Style Emphasis" equal to Core.

eVestment US Small Cap Core Equity: US Equity products that invest primarily in small capitalization stocks with fundamental characteristics between growth and value or products that invest in a relatively even mix of growth and value stocks/sectors. The expected benchmarks for this universe would include the Russell 2000. Managers in this category will typically indicate a "Primary Capitalization Emphasis" equal to Small Cap and a "Primary Style Emphasis" equal to Core.

eVestment US Small Cap Growth Equity: US Equity products that invest primarily in small capitalization stocks with fundamental characteristics showing high earnings growth expectations or in fast-growing economic sectors. The expected benchmarks for this universe would include the Russell 2000, S&P 600, or Russell 2000 Growth. Managers in this category will typically indicate a "Primary Capitalization Emphasis" equal to Small Cap and a "Primary Style Emphasis" equal to Growth.

eVestment US Small Cap Value Equity: US Equity products that invest primarily in small capitalization stocks with fundamental characteristics showing them to be under-priced or in slower growing economic sectors. The expected benchmarks for this universe would include the Russell 2000, or Russell 2000 Value. Managers in this category will typically indicate a "Primary Capitalization Emphasis" equal to Small Cap and a "Primary Style Emphasis" equal to Value.

Source: eVestment

Universe Definitions

eVestment ACWI ex-US: ACWI ex-US Equity products that invest primarily in equity stocks and do not employ any type of hedging in the portfolio. The expected benchmark for this universe is the MSCI ACWI ex-US. Managers in this category will typically indicate a "Hedging Strategy" equal to Un-Hedged.

eVestment EAFE Equity: EAFE Equity (Non-US) products that invest primarily in equity stocks but never employ any type of hedging in the portfolio. The expected benchmark for this universe would include the MSCI EAFE. Managers in this category will typically indicate a "Hedging Strategy" equal to Un-Hedged.

eVestment EAFE Small Cap Core Equity: EAFE Equity (Non-US) products that invest primarily in small capitalization stocks with fundamental characteristics between growth and value or products that invest in a relatively even mix of growth and value stocks/sectors. The expected benchmarks for this universe would include the Citigroup EMI World ex-US, or MSCI EAFE Small Cap (ND). Managers in this category will typically indicate a "Primary Capitalization Emphasis" equal to Small Cap and a "Primary Style Emphasis" equal to Core.

eVestment EAFE All Cap Value Equity: EAFE Equity (Non-US) products that invest primarily in small, mid, and large capitalization stocks with fundamental characteristics showing them to be under-priced or in slower growing economic sectors. The expected benchmarks for this universe would include the MSCI EAFE (ND), MSCI EAFE (GD), or MSCI All Country World ex-US. Managers in this category will typically indicate a "Primary Capitalization Emphasis" equal to All Cap and a "Primary Style Emphasis" equal to Value.

eVestment US Core Fixed Income: US Fixed Income products that invest in High Quality debt (as rated by Moody's or Standard & Poor's). Expected benchmarks for this universe would include the Barclays Capital Aggregate and Barclays Capital Govt/Credit. Managers in this category will typically indicate a "Fixed Income Style Emphasis" equal to Core and a "Product Duration Emphasis" equal to Core or Intermediate.

eVestment US High Yield Fixed Income: US Fixed Income products that invest primarily in High Yield debt (as rated by Moody's or Standard & Poor's). The expected benchmarks for this universe would include the Barclays Capital High Yield, Credit Suisse High Yield, or Merrill Lynch High Yield Master. Managers in this category will typically indicate a "Fixed Income Style Emphasis" equal to High Yield and a "Product Duration Emphasis" equal to Core or Intermediate.

eVestment US Floating-Rate Bank Loan Fixed Income: US Fixed Income products that invest primarily in bank loans. The expected benchmarks for this universe would include the Credit Suisse Leveraged Loan. Managers in this category will typically indicate a "Fixed Income Style Emphasis" equal to High Yield.

Source: eVestment

Universe Definitions

eVestment US TIPS/Inflation Indexed Fixed Income: US Fixed Income products that invest in Treasury Inflation Protected Securities and inflation linked bonds. The expected benchmarks for this universe would include the Barclays Capital US TIPS or the Barclays Capital 1-10 Yr US TIPS. Managers in this category will typically indicate a "Fixed Income Style Emphasis" equal to Inflation Index and/or "Portfolio Management Strategy" equal to Active.

eVestment US REIT: US Equity products that invest primarily in REIT/Real Estate securities. The expected benchmarks for this universe would include the MSCI REIT, Dow Jones US Select REIT, or the Wilshire REIT. Managers in this category will typically indicate a "Primary Style Emphasis" equal to REIT and/or "Product Sub-Type" equal to REIT.

InvestorForce Public DB > \$1B: "Public" is defined as sponsors of plans from federal, state, municipality and county government organizations. The universe includes defined benefit plans with assets greater than \$1 billion.

InvestorForce Public DB > \$1B (asset class): Plan sponsor self-identified asset class composite universes. These universes include: InvestorForce Public DB > \$1 Billion US Equity Net Median, InvestorForce Public DB > \$1 Billion Global ex-US Equity, InvestorForce Public DB > \$1 Billion Dev Mkt ex-US Eq, InvestorForce Public DB > \$1 Billion Emg Mkt Eq Net, InvestorForce Public DB > \$1 Billion Real Assets/Commodities Net Median, InvestorForce Public DB Real Estate Priv Net Median, InvestorForce Public DB > \$1 Billion US Equity Net Median, InvestorForce Public DB > \$1 Billion Global ex-US Equity Net.

Source: eVestment

Disclosures



Information Disclaimer and Reporting Methodology

Information Disclaimer

- Past performance is no guarantee of future results.
- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
- NEPC's source for portfolio pricing, calculation of accruals, and transaction information is the plan's custodian bank. Information on market indices and security characteristics is received from other sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
- Some index returns displayed in this report or used in calculation of a policy, allocation or custom benchmark may be preliminary and subject to change.
- This report is provided as a management aid for the client's internal use only. Information contained in this report does not constitute a recommendation by NEPC.
- This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

Reporting Methodology

- The client's custodian bank is NEPC's preferred data source unless otherwise directed. NEPC generally reconciles custodian data to manager data. If the custodian cannot provide accurate data, manager data may be used.
- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.
- For managers funded in the middle of a month, the "since inception" return will start with the first full month, although actual inception dates and cash flows are taken into account in all Composite calculations.
- This report may contain forward-looking statements that are based on NEPC's estimates, opinions and beliefs, but NEPC cannot guarantee that any plan will achieve its targeted return or meet other goals.