FUND EVALUATION REPORT

San Jose Federated City Employees' Retirement System

Quarterly Review

As of June 30, 2019

MEKETA INVESTMENT GROUP

Boston Massachusetts | Chicago Illinois | Miami Florida | New York New York | Portland Oregon | San Diego California | London United Kingdom

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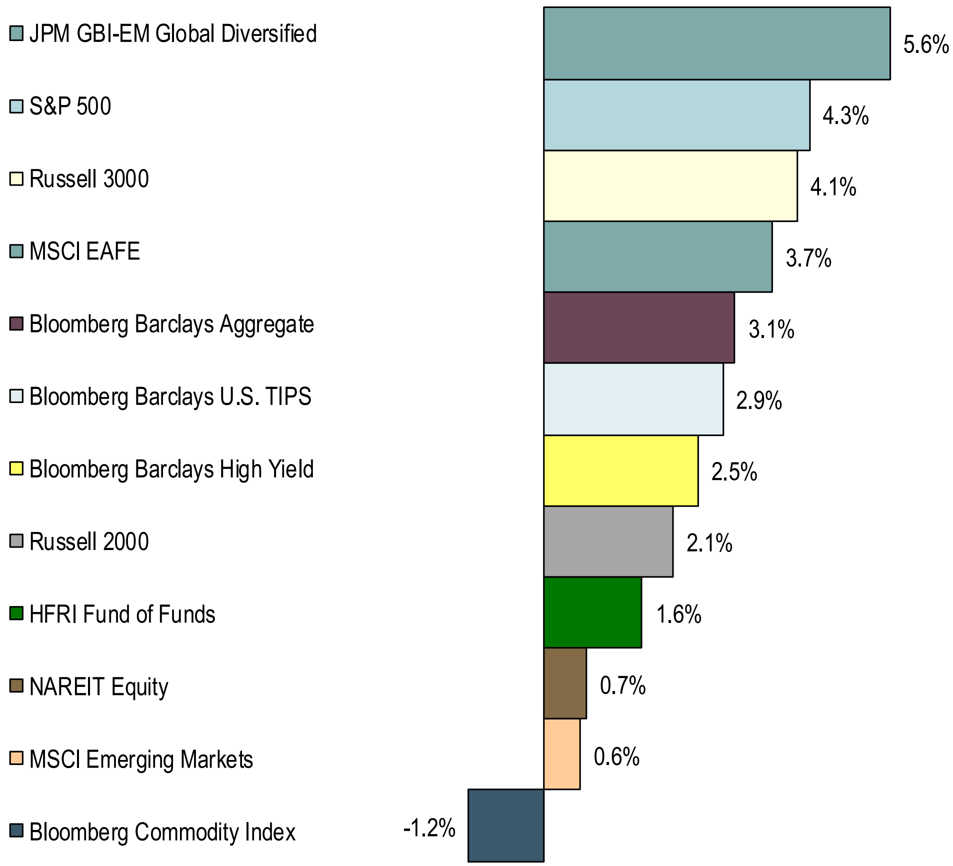
The World Markets
Second Quarter of 2019

The World Markets[1]
Second Quarter of 2019



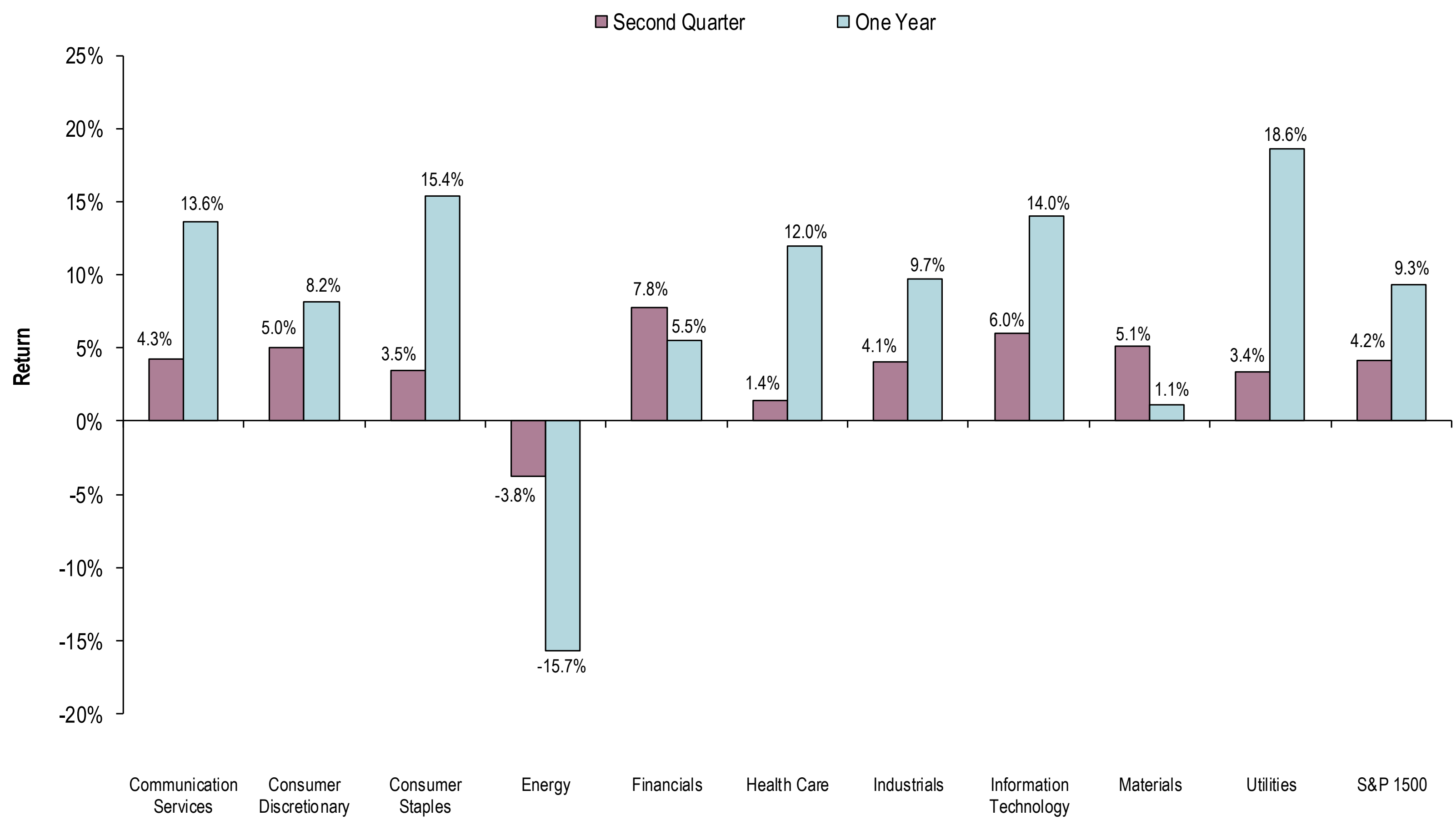
[1] Source: InvestorForce.

Index Returns[1]

	2Q19 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
Domestic Equity					
S&P 500	4.3	10.4	14.2	10.7	14.7
Russell 3000	4.1	9.0	14.0	10.2	14.7
Russell 1000	4.2	10.0	14.1	10.5	14.8
Russell 1000 Growth	4.6	11.6	18.1	13.4	16.3
Russell 1000 Value	3.8	8.5	10.2	7.5	13.2
Russell MidCap	4.1	7.8	12.2	8.6	15.2
Russell MidCap Growth	5.4	13.9	16.5	11.1	16.0
Russell MidCap Value	3.2	3.7	8.9	6.7	14.6
Russell 2000	2.1	-3.3	12.3	7.1	13.4
Russell 2000 Growth	2.7	-0.5	14.7	8.6	14.4
Russell 2000 Value	1.4	-6.2	9.8	5.4	12.4
Foreign Equity					
MSCI ACWI (ex. U.S.)	3.0	1.3	9.4	2.2	6.5
MSCI EAFE	3.7	1.1	9.1	2.2	6.9
MSCI EAFE (Local Currency)	2.8	2.2	9.8	5.9	8.3
MSCI EAFE Small Cap	1.7	-6.3	9.1	4.4	9.7
MSCI Emerging Markets	0.6	1.2	10.7	2.5	5.8
MSCI Emerging Markets (Local Currency)	7.4	9.4	13.8	7.6	8.6
Fixed Income					
Bloomberg Barclays Universal	3.1	8.1	2.8	3.2	4.4
Bloomberg Barclays Aggregate	3.1	7.9	2.3	2.9	3.9
Bloomberg Barclays U.S. TIPS	2.9	4.8	2.1	1.8	3.6
Bloomberg Barclays High Yield	2.5	7.5	7.5	4.7	9.2
JPM GBI-EM Global Diversified	5.6	9.0	4.2	-0.5	3.4
Other					
NAREIT Equity	0.7	10.1	3.8	7.7	15.3
Bloomberg Commodity Index	-1.2	-6.8	-2.2	-9.1	-3.7
HFRI Fund of Funds	1.6	1.3	4.3	2.2	3.2

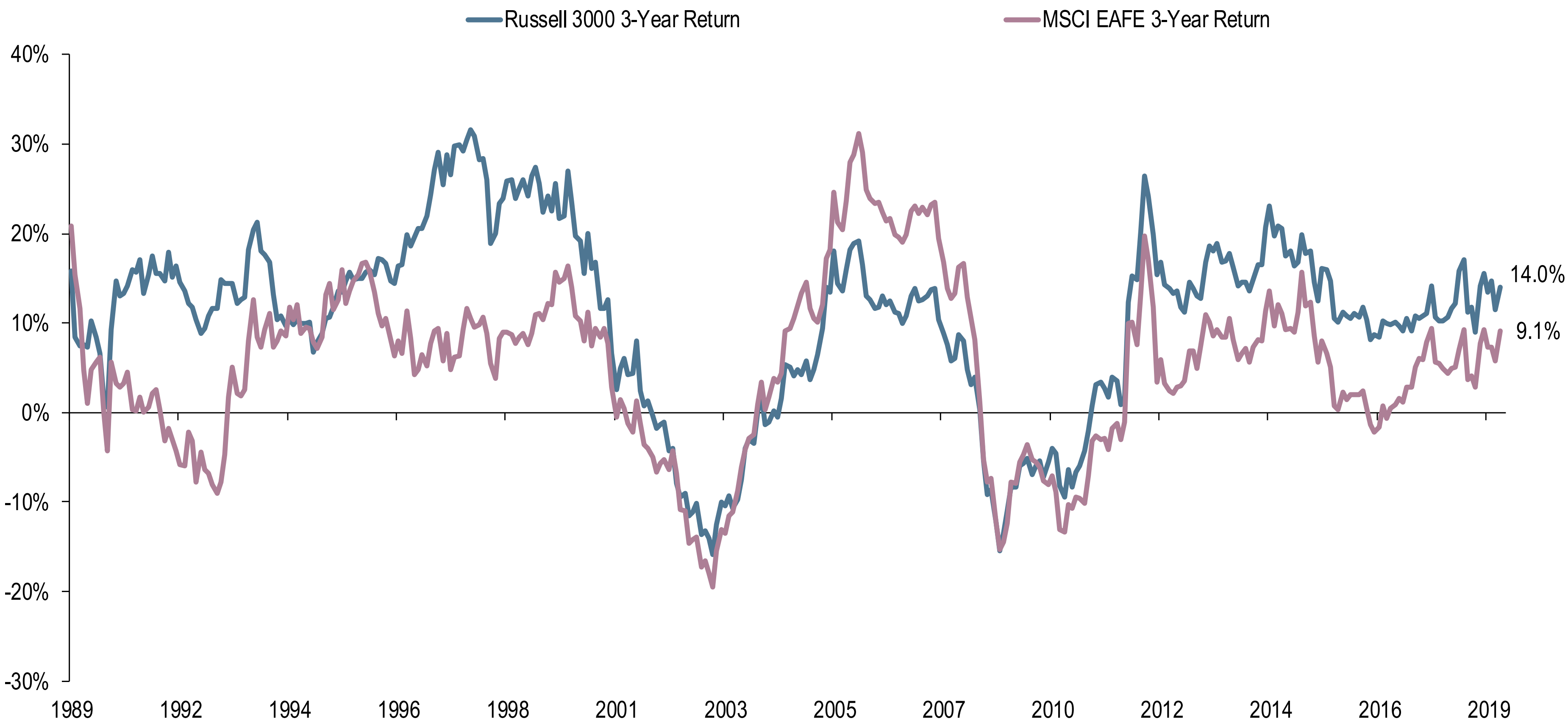
1 Source: InvestorForce.

S&P Sector Returns[1]



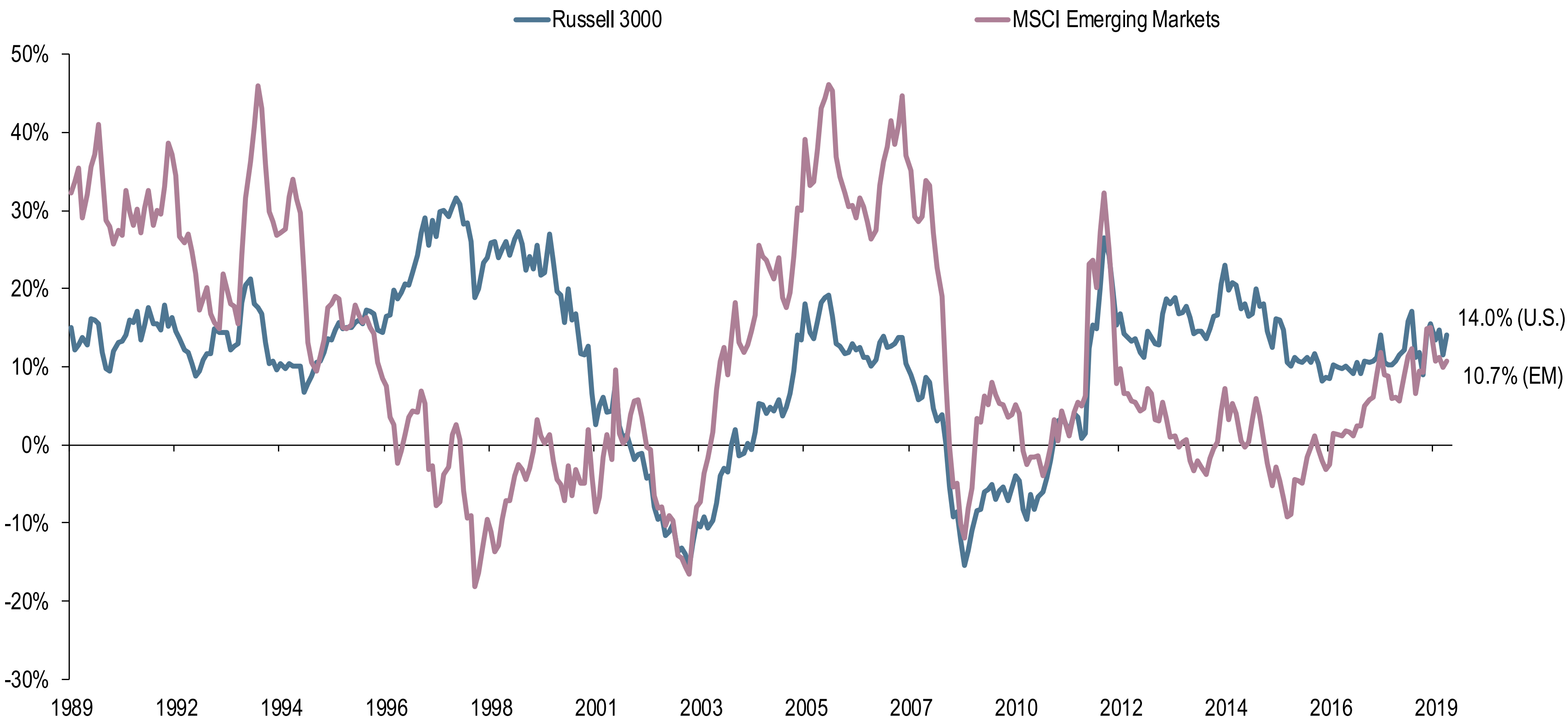
1 Source: InvestorForce. Represents S&P 1500 (All Cap) data.

U.S. and Developed Market Foreign Equity Rolling Three-Year Returns[1]



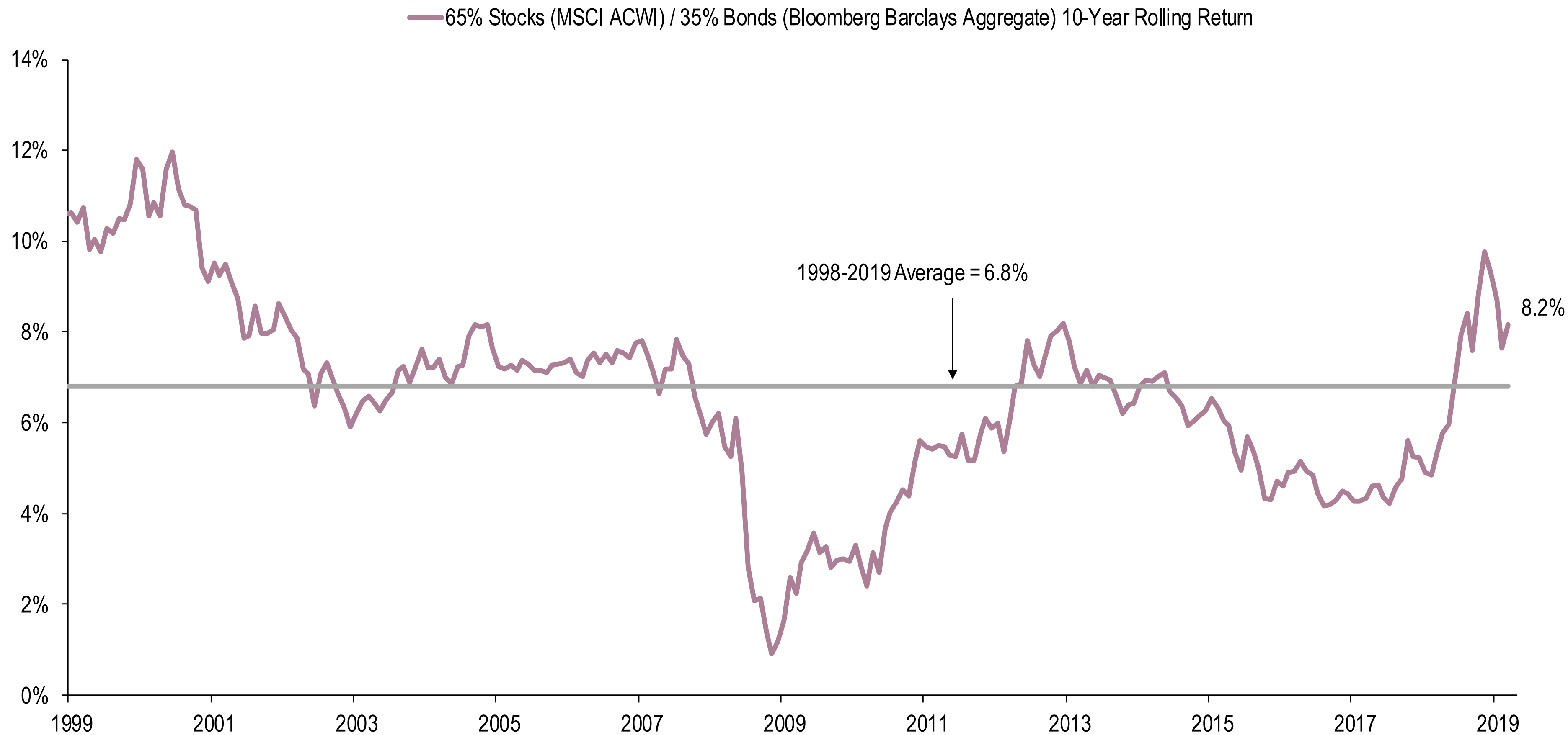
1 Source: InvestorForce.

U.S. and Emerging Market Equity Rolling Three-Year Returns[1]



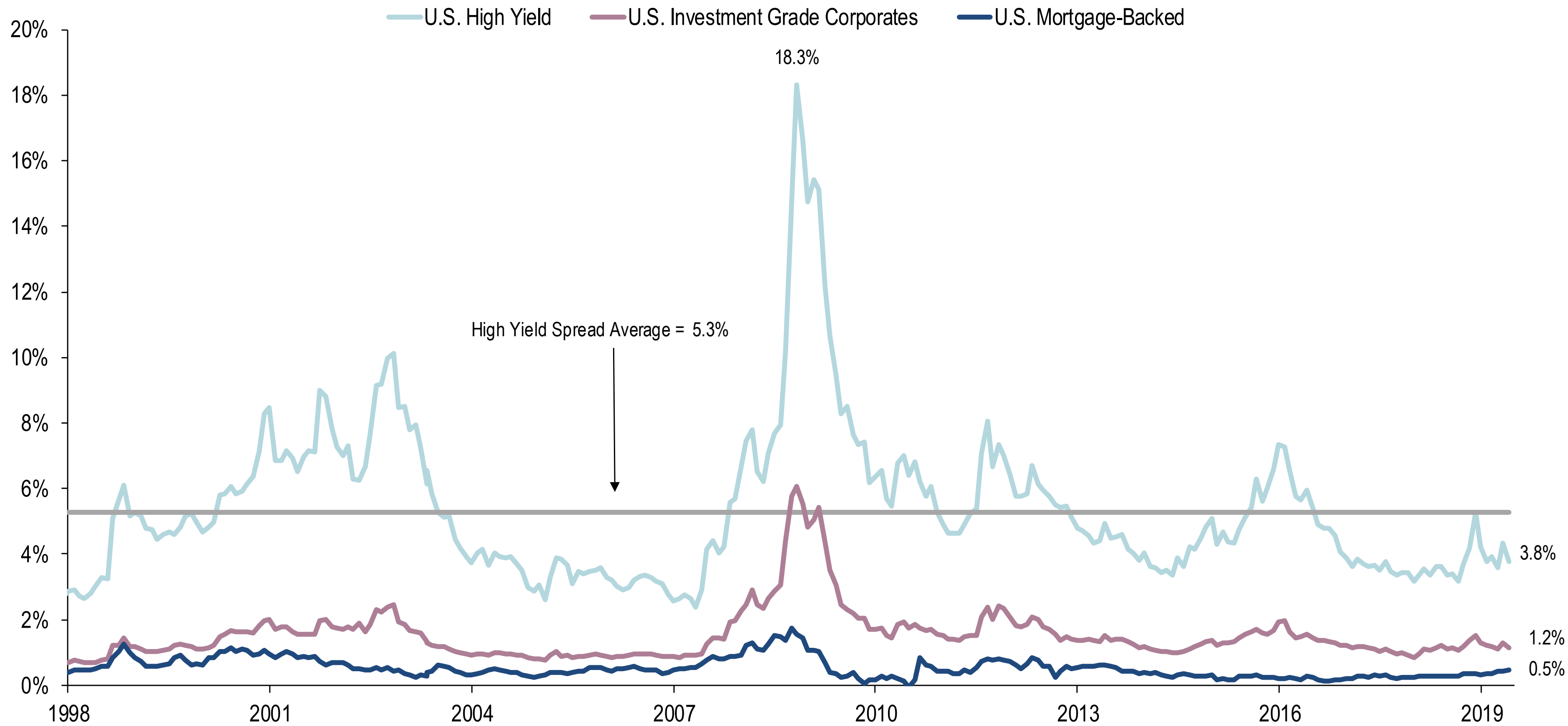
1 Source: InvestorForce.

Rolling Ten-Year Returns: 65% Stocks and 35% Bonds[1]



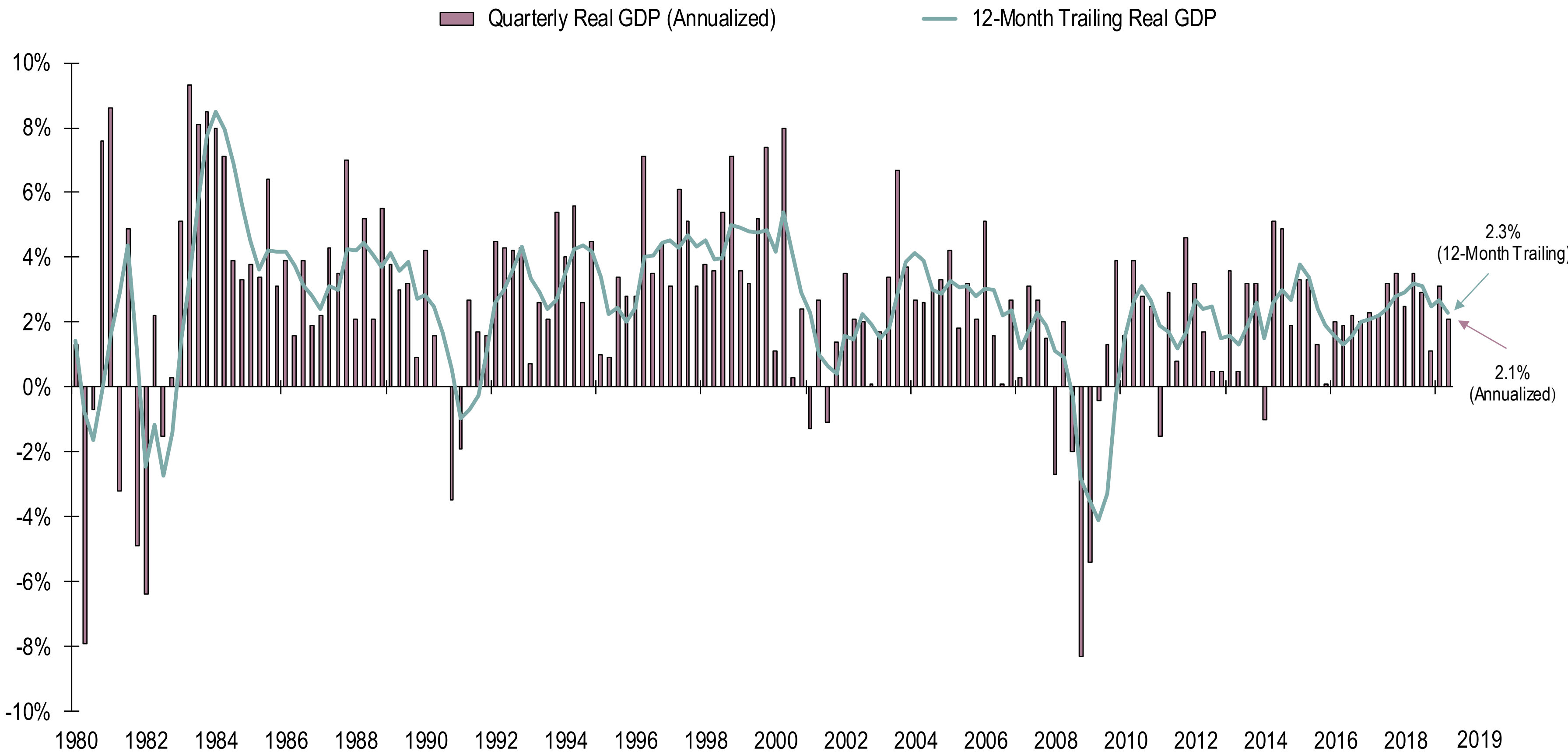
1 Source: InvestorForce.

Credit Spreads vs. U.S. Treasury Bonds[1,2]



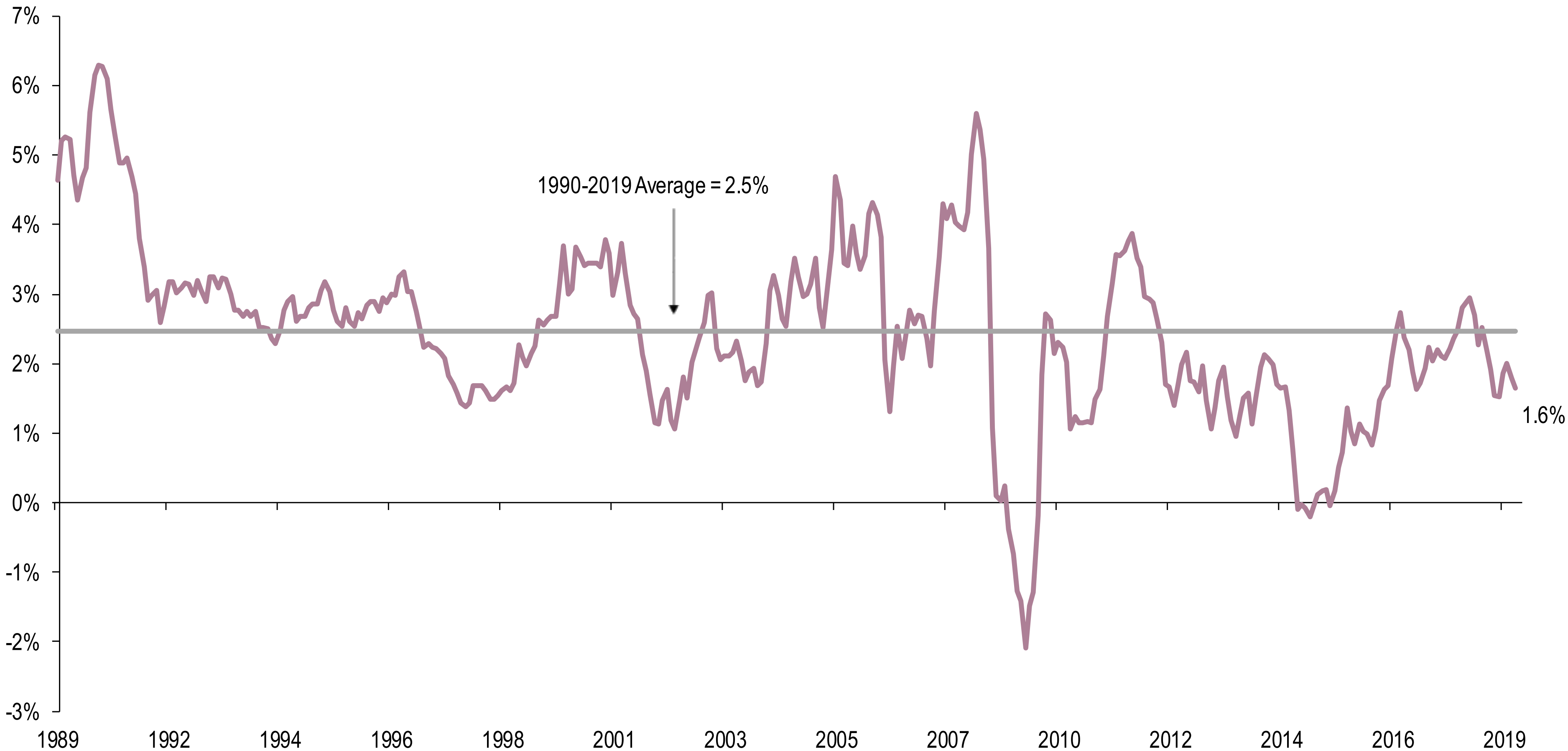
1 Source: Barclays Live.
2 The median high yield spread was 4.8% from 1997-2019.

U.S. Real Gross Domestic Product (GDP) Growth[1]



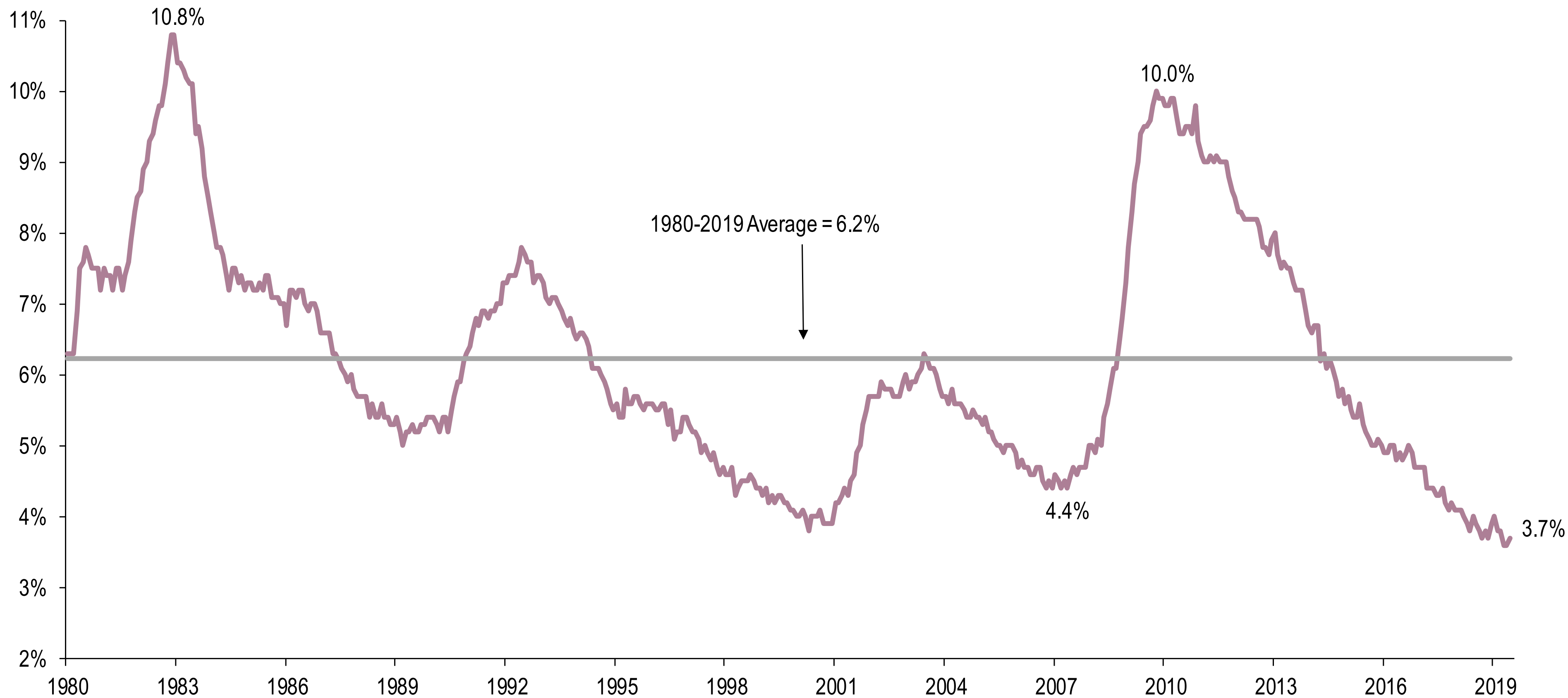
1 Source: Bureau of Economic Analysis. Data is as of Q2 2019 and represents the first estimate.

U.S. Inflation (CPI)
Trailing Twelve Months[1]



1 Source: Bureau of Labor Statistics. Data is non-seasonally adjusted CPI, which may be volatile in the short-term. Data is as of June 30, 2019.

U.S. Unemployment[1]



[1] Source: Bureau of Labor Statistics. Data is as of June 30, 2019.

Executive Summary
As of June 30, 2019

The value of the San Jose Federated City Employees' Retirement System assets was $2.1 billion on June 30, 2019, an increase of approximately $16.7 million from the end of the prior quarter. The System had net cash outflows of $38.4 million during the quarter.

- The Retirement System's net of fees performance for the quarter was +2.5%, outperforming the Policy Benchmark and Investable Benchmark Portfolio returns of +2.1%, and underperforming the peer median return of +2.9%.
- The Retirement System returned +4.3% in the fiscal year-to-date period, compared to +3.9% for the Policy Benchmark, +3.7% for the Investable Benchmark Portfolio, and +5.4% for the peer median. The Retirement System's standard deviation of returns was 8.1% over the fiscal year-to-date period, exhibiting lower volatility than the peer median (8.8%).
  - Growth returned +3.3% for the quarter and +5.7% over the fiscal year-to-date period, versus +3.0% and +5.7% for the Growth Benchmark over the same periods, respectively.
  - Zero Beta returned +1.5% for the quarter and +4.1% over the fiscal year-to-date period, versus +0.7% and +2.1% for the Zero Beta Benchmark over the same periods, respectively.
  - Other returned +0.9% for the quarter and +2.8% over the fiscal year-to-date period, versus +0.5% and +0.5% for the Other Benchmark over the same periods, respectively.
- The Retirement System added four investment managers during the quarter: Clarion Lion Properties Fund (Core Real Estate), Cross Ocean USD ESS Fund III LP (Private Debt), Iguazu Partners LP Fund (Emerging Markets Debt), and Insight Immunized Cash Flow (Immunized Cash Flows).

Artisan

- Artisan Global Opportunities returned +6.2% for the quarter, outperforming the MSCI ACWI Growth NR benchmark by 130 basis points. Compared to peers, Artisan ranks in the 12th and 20th percentiles for the quarter and since inception periods, respectively. Technology holdings were a noteworthy source of strength in the second quarter within the portfolio with several holdings benefitting from the secular trend toward digital payments.

Cove Street

- Cove Street Small Cap Value returned +4.3% for the quarter and +8.5% over the fiscal year-to-date period, outperforming the Russell 2000 Value benchmark by 290 and 1,470 basis points, respectively. Compared to peers, Cove Street ranks in the 17th and 38th percentiles for the quarter and since inception periods, respectively. The largest contributor to portfolio returns in the second quarter came from an insurance company which underwent a management and systems transformation which has begun to gain traction in the market.

GQG

- GQG Partners Global Emerging Markets returned +6.6% for the quarter and +8.9% over the fiscal year-to-date period, outperforming the MSCI Emerging Markets benchmark by 600 and 770 basis points, respectively. Compared to peers, GQG ranks in the 1st and 3rd percentiles for the quarter and since inception periods, respectively. The portfolios largest contributor to overall performance was Housing Development Finance Corp, a retail bank in Mumbai, while its largest negative contributor overall was Reliance Industries Limited, a multinational conglomerate.

Credit Suisse

- Credit Suisse Risk Parity Commodity Fund returned -1.5% for the quarter, underperforming the Bloomberg Commodity Index by 30 basis points. Since inception in April 2011, Credit Suisse has outperformed the index by 340 basis points.

[1] Net of management fees.

Investment Manager	Asset Class	Changes/ Announcements	Performance Concerns	Meketa Recommendation[1]	Comments
Artisan Global Value	Global Equity	Yes	---	Hold	Personnel Changes
Artisan Global Opportunities	Global Equity	Yes	---	Hold	Personnel Changes
Cove Street Small Cap Value	U.S. Equity	---	Yes	---	Watch List
Oberweis International Opps.	International Equity	---	Yes	---	Watch List
Dimensional EM Value	Emerging Markets Equity	Yes	---	Hold	Personnel Changes
Comgest Global EM	Emerging Markets Equity	---	Yes	---	Watch List
GQG Partners Global EM	Emerging Markets Equity	---	---	---	---
Senator Global Opportunity	Long-Short Equity	---	---	---	---
Sandler Plus	Long-Short Equity	---	---	---	---
Marshall Wace	Long-Short Equity	---	---	---	---
BlueBay EM Select Debt	Emerging Markets Debt	Yes	Yes	Hold	Watch List
Iguazu Partners LP Fund	Emerging Markets Debt	---	---	---	---
Credit Suisse Risk Parity	Commodities	---	---	---	---

[1] The Meketa Investment Group recommendations are based on the noted organizational or resource changes at each manager.

Artisan

- In the second quarter, within the Artisan Partners Growth Team, one investment professional was promoted to analyst and a research associate was hired.
- Subsequent to the second quarter, within the Artisan Partners Value Team, one analyst left the firm.

Cove Street

- Over the five-year period, Cove Street (+5.1%) has underperformed the Russell 2000 Value by 30 basis points. Since inception May 2014, Cove Street has outperformed the benchmark by 20 basis points per year, on average and ranked in the 38th percentile compared to peers.

Oberweis

- Over the three-year period, Oberweis (+8.5%) has underperformed the MSCI World ex USA Small Cap Growth by 50 basis points. Since inception in November 2015, Oberweis has outperformed the benchmark by 20 basis points per year, on average and ranked in the 30th percentile compared to peers.

Dimensional

- In the second quarter, there were two departures on the portfolio management team.

Comgest

- Since inception in March 2017, Comgest (-2.3%) has underperformed the MSCI Emerging Markets SMID Cap by 640 basis points per year, on average and ranked in the 99th percentile compared to peers.

BlueBay

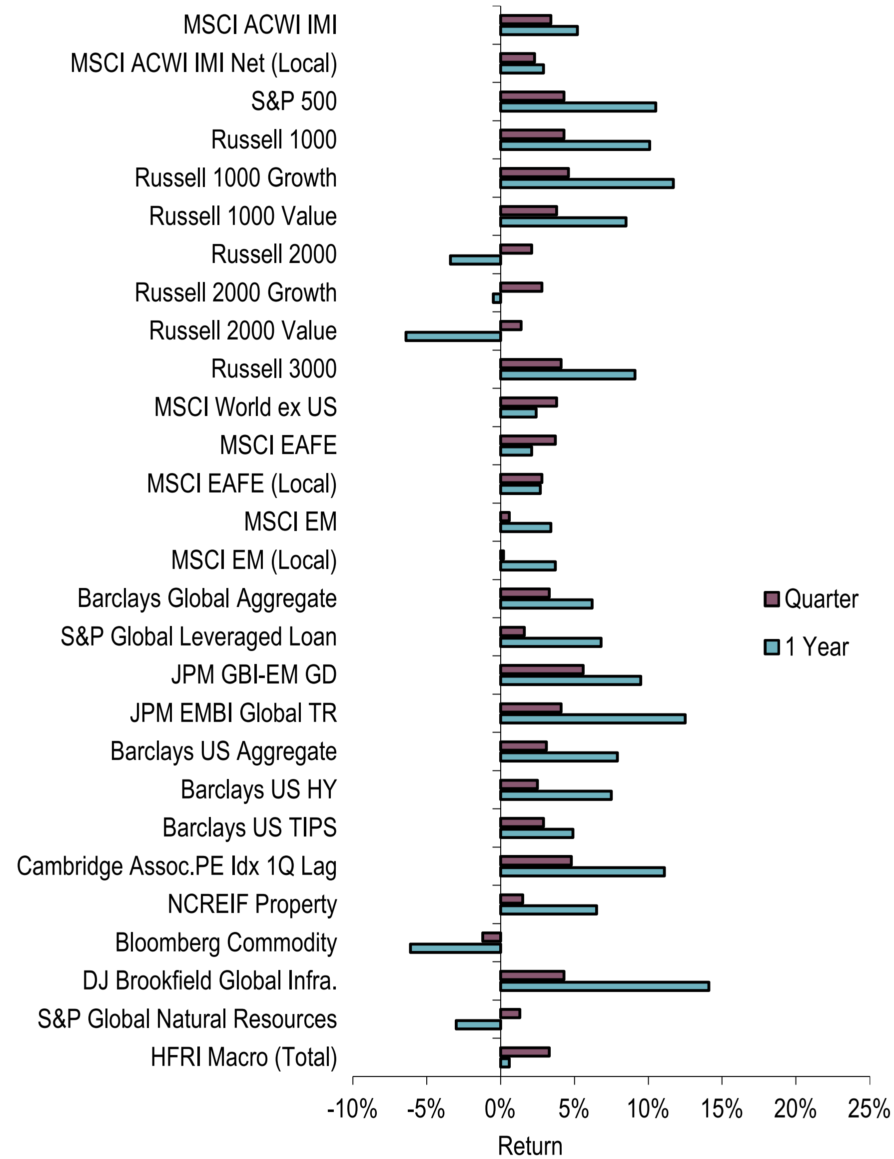
- Over the three-year period, BlueBay (+3.8%) has underperformed the JPM Blended Emerging Markets Index by 110 basis points. Since inception in July 2015, BlueBay (+3.4%) has underperformed the blended benchmark by 180 basis points per year, on average and ranked in the 84th percentile compared to peers.

Watch List[1,2]

Investment Manager	Asset Class	Watch List Status	Comments
Cove Street Small Cap Value	U.S. Equity	Monitoring	Underperformance
Oberweis International Opp	International Equity	Monitoring	Underperformance
Comgest Global EM	Emerging Markets Equity	Monitoring	Underperformance
BlueBay EM Select Debt	Emerging Markets Debt	Monitoring	Underperformance
DE Shaw	Absolute Return	Monitoring	Transparency Concerns

1 Watch List excludes Private Markets and Passive Funds.
2 Placement on the Watch List includes qualitative reasons and manager underperformance versus the appropriate benchmark over a three and or five year period as outlined in the Investment Policy Statement.

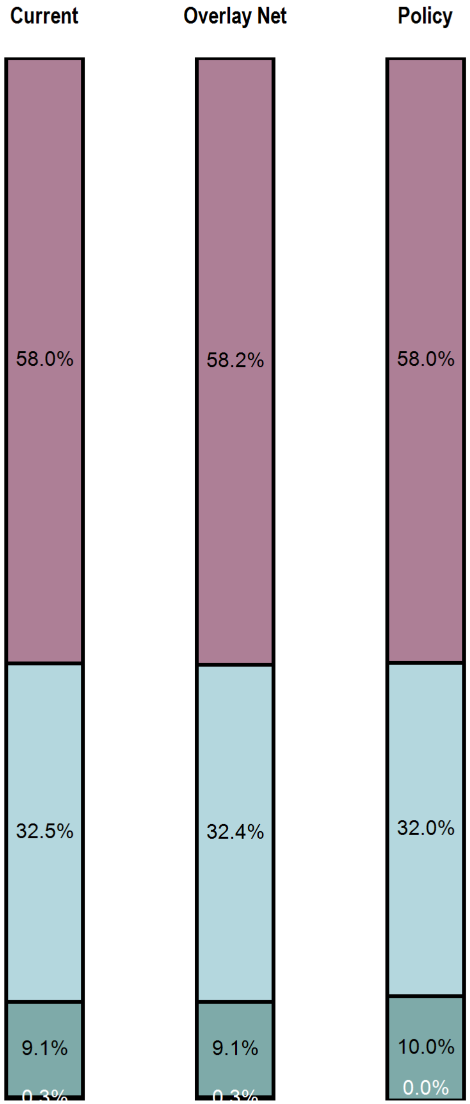
Benchmark	Scope	2Q19 (%)	1 YR (%)	3 YR (%)	5YR (%)	10 YR (%)
Global Equity						
MSCI ACWI IMI	World	3.4	5.2	12.6	6.1	10.3
MSCI ACWI IMI Net (Local)	World (Local Currency)	2.3	2.9	9.6	5.8	8.8
Domestic Equity						
S&P 500	Large Core	4.3	10.5	15.3	10.7	14.7
Russell 1000	Large Core	4.3	10.1	15.3	10.5	14.8
Russell 1000 Growth	Large Growth	4.6	11.7	19.1	13.4	16.3
Russell 1000 Value	Large Value	3.8	8.5	11.4	7.5	13.2
Russell 2000	Small Core	2.1	-3.4	13.8	7.1	13.3
Russell 2000 Growth	Small Growth	2.8	-0.5	16.1	8.7	14.3
Russell 2000 Value	Small Value	1.4	-6.4	11.3	5.4	12.3
Russell 3000	All Cap Core	4.1	9.1	15.2	10.2	14.7
International Equity						
MSCI World ex US	World ex-US	3.8	2.4	10.4	2.1	6.7
MSCI EAFE	International Developed	3.7	2.1	10.5	2.3	6.9
MSCI EAFE (Local)	International Developed (Local Currency)	2.8	2.7	11.1	5.8	8.4
MSCI EM	Emerging Markets	0.6	3.4	12.0	2.6	5.8
MSCI EM (Local)	Emerging Markets (Local Currency)	0.2	3.7	12.0	6.2	7.8
Global Fixed Income						
Barclays Global Aggregate	Global Core Bonds	3.3	6.2	1.7	1.2	2.9
S&P Global Leveraged Loan	Bank Loans	1.6	6.8	5.0	3.1	5.7
JPM GBI-EM GD	Emerging Markets Bonds (Local Currency)	5.6	9.5	5.0	-0.4	3.5
JPM EMBI Global TR	Emerging Market Bonds	4.1	12.5	5.8	5.3	7.8
Domestic Fixed Income						
Barclays US Aggregate	Core Bonds	3.1	7.9	2.3	3.0	3.9
Barclays US HY	High Yield	2.5	7.5	7.8	4.7	9.3
Barclays US TIPS	Inflation	2.9	4.9	2.1	1.8	3.7
Other						
Cambridge Associates PE Index 1Qtr Lag	Private Equity	4.8	11.1	13.8	10.7	13.7
NCREIF Property	Real Estate	1.5	6.5	6.9	8.8	9.2
Bloomberg Commodity	Commodities	-1.2	-6.1	-2.0	-9.3	-3.9
DJ Brookfield Global Infrastructure	Infrastructure	4.3	14.1	9.0	4.5	12.1
S&P Global Natural Resources	Natural Resources	1.3	-3.0	12.9	0.8	3.5
HFRI Macro	Hedge Funds	3.3	0.6	-0.1	0.5	-1.1



2Q19 Review

Total Fund Aggregate

As of June 30, 2019



Allocation vs. Targets and Policy

	Current Balance	Current Allocation	Russell Overlay Net Position	Policy	Policy Range	Within IPS Range?
Growth	**$1,234,121,772**	**58.0%**	**58.2%**	**58.0%**	**50.0% - 70.0%**	**Yes**
Public Equity	$636,755,776	29.9%	30.1%	30.0%	20.0% - 40.0%	Yes
Private Markets	$526,949,574	24.8%	24.8%	25.0%	20.0% - 30.0%	Yes
Emerging Markets Debt	$70,416,422	3.3%	3.3%	3.0%	0.0% - 5.0%	Yes
Zero Beta	**$692,061,128**	**32.5%**	**32.4%**	**32.0%**	**10.0% - 35.0%**	**Yes**
Absolute Return	$173,111,981	8.1%	8.1%	7.0%	0.0% - 10.0%	Yes
Short-Term IG Bonds	$395,548,003	18.6%	18.6%	20.0%	5.0% - 25.0%	Yes
Immunized Cash Flows	$104,987,892	4.9%	4.9%	5.0%	4.5% - 5.5%	Yes
Cash	$18,413,252	0.9%	0.7%	0.0%	0.0% - 5.0%	Yes
Other	**$193,895,513**	**9.1%**	**9.1%**	**10.0%**	**5.0% - 15.0%**	**Yes**
Core Real Estate	$88,017,739	4.1%	4.1%	5.0%	0.0% - 8.0%	Yes
Commodities	$61,454,680	2.9%	2.9%	3.0%	0.0% - 8.0%	Yes
TIPS	$44,423,093	2.1%	2.1%	2.0%	0.0% - 8.0%	Yes
Overlay	**$7,141,239**	**0.3%**	**0.3%**	**0.0%**	**0.0% - 0.0%**	**--**
Total	**$2,127,219,653**	**100.0%**	**100.0%**	**100.0%**		

[1] Data in the column titled "Russell Overlay Net Position" is based on physical exposures, adjusted for synthetic positions provided by Russell Investments.
[2] Cash composite includes the cash account, cash collateral in the Russell Investments Overlay program, and residuals from terminated manager assets.

Asset Class Net Performance Summary

	Market Value ($)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund Aggregate	**2,127,219,653**	**100.0**	**2.5**	**8.9**	**4.3**	**4.3**	**5.9**	**3.2**	**6.5**	**6.6**	**Jan-94**
Policy Benchmark			*2.1*	*8.4*	*3.9*	*3.9*	*6.5*	*3.4*	*7.2*	*6.9*	*Jan-94*
Investable Benchmark Portfolio			*2.1*	*8.3*	*3.7*	*3.7*	*5.6*	*3.1*	*6.3*	*--*	*Jan-94*
60/40 MSCI ACWI/BBgBarc Global Aggregate			*3.6*	*12.0*	*6.1*	*6.1*	*7.7*	*4.3*	*7.4*	*6.4*	*Jan-94*
Low-Cost Passive Portfolio			*2.0*	*10.0*	*--*	*--*	*--*	*--*	*--*	*--*	*Jan-94*
Liability Benchmark Portfolio			*6.0*	*11.0*	*--*	*--*	*--*	*--*	*--*	*--*	*Jan-94*
InvMetrics Public DB > $1B Net Median			*2.9*	*10.3*	*5.4*	*5.4*	*8.7*	*5.6*	*9.0*	*7.2*	*Jan-94*
InvMetrics Public DB > $1B Net Rank			*79*	*89*	*85*	*85*	*99*	*99*	*99*	*80*	*Jan-94*
Growth	**1,234,121,772**	**58.0**	**3.3**	**13.1**	**5.7**	**5.7**	**8.8**	**--**	**--**	**6.2**	**Jul-15**
Growth Benchmark			*3.0*	*13.2*	*5.7*	*5.7*	*10.3*	*--*	*--*	*7.7*	*Jul-15*
Public Equity	**636,755,776**	**29.9**	**3.4**	**15.0**	**3.9**	**3.9**	**10.1**	**5.2**	**--**	**8.0**	**May-10**
Public Equity Benchmark			*2.7*	*14.8*	*5.2*	*5.2*	*11.7*	*6.2*	*--*	*8.3*	*May-10*
Global Equity	**191,499,219**	**9.0**	**5.0**	**18.8**	**6.4**	**6.4**	**13.0**	**--**	**--**	**9.0**	**Jul-15**
MSCI ACWI IMI Net USD			*3.4*	*16.1*	*4.6*	*4.6*	*11.4*	*--*	*--*	*7.4*	*Jul-15*
eV All Global Equity Net Median			*3.4*	*16.1*	*5.2*	*5.2*	*10.4*	*6.1*	*10.7*	*7.1*	*Jul-15*
eV All Global Equity Net Rank			*24*	*31*	*42*	*42*	*25*	*--*	*--*	*27*	*Jul-15*
US Equity	**119,712,010**	**5.6**	**3.9**	**18.4**	**7.8**	**7.8**	**12.7**	**--**	**--**	**9.6**	**Jul-15**
MSCI USA IMI GR USD			*4.0*	*18.8*	*9.0*	*9.0*	*14.0*	*--*	*--*	*11.0*	*Jul-15*
eV All US Equity Net Median			*3.8*	*18.0*	*5.8*	*5.8*	*12.2*	*8.3*	*13.9*	*8.7*	*Jul-15*
eV All US Equity Net Rank			*48*	*46*	*40*	*40*	*45*	*--*	*--*	*40*	*Jul-15*

[1] Fiscal Year begins July 1.
[2] Please see the Appendix for composition of the Policy Benchmark, Low-Cost Passive Portfolio, Liability Benchmark Portfolio, Growth Benchmark, and Public Equity Benchmark.
[3] Returns for the Public Equity Aggregate are gross of fees through June 2015 and net of fees thereafter.

Total Fund Aggregate

As of June 30, 2019

	Market Value ($)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
International Equity	**77,657,194**	**3.7**	**3.9**	**16.7**	**-2.2**	**-2.2**	**8.6**	**--**	**--**	**4.0**	**Jul-15**
MSCI World ex USA IMI NR USD			*3.5*	*14.4*	*0.2*	*0.2*	*8.9*	*--*	*--*	*4.1*	*Jul-15*
eV ACWI ex-US All Cap Equity Net Median			*3.7*	*15.3*	*-0.1*	*-0.1*	*9.5*	*3.4*	*8.5*	*4.6*	*Jul-15*
eV ACWI ex-US All Cap Equity Net Rank			*46*	*39*	*76*	*76*	*67*	*--*	*--*	*58*	*Jul-15*
Emerging Markets Equity	**182,931,405**	**8.6**	**1.1**	**10.9**	**-0.1**	**-0.1**	**6.6**	**--**	**--**	**2.1**	**Jul-15**
MSCI Emerging Market IMI Net			*0.4*	*10.2*	*0.5*	*0.5*	*10.0*	*--*	*--*	*4.0*	*Jul-15*
eV Emg Mkts Equity Net Median			*1.4*	*12.0*	*0.9*	*0.9*	*9.9*	*2.5*	*6.7*	*4.6*	*Jul-15*
eV Emg Mkts Equity Net Rank			*57*	*59*	*61*	*61*	*87*	*--*	*--*	*93*	*Jul-15*
Marketable Alternative Equity	**64,955,947**	**3.1**	**3.5**	**7.7**	**3.0**	**3.0**	**6.7**	**--**	**--**	**5.7**	**Oct-14**
HFRI Equity Hedge (Total) Index			*1.6*	*9.3*	*0.3*	*0.3*	*6.8*	*--*	*--*	*3.9*	*Oct-14*
Private Markets	**526,949,574**	**24.8**	**3.2**	**11.5**	**7.3**	**7.3**	**8.0**	**--**	**--**	**6.4**	**Jul-15**
Private Markets Benchmark			*3.2*	*11.5*	*6.0*	*6.0*	*11.1*	*--*	*--*	*9.1*	*Jul-15*
MSCI ACWI IMI + 100bps			*3.6*	*16.6*	*5.6*	*5.6*	*12.5*	*--*	*--*	*8.4*	*Jul-15*
Private Markets ex Russell 3000	**236,300,589**	**11.1**	**2.1**	**2.1**	**7.6**	**7.6**	**7.8**	**--**	**--**	**6.3**	**Jul-15**
Private Markets Benchmark			*3.2*	*11.5*	*6.0*	*6.0*	*11.1*	*--*	*--*	*9.1*	*Jul-15*
Private Equity	**384,243,389**	**18.1**	**3.7**	**15.2**	**9.1**	**9.1**	**9.5**	**8.9**	**--**	**--**	**Jan-06**
San Jose Custom Private Equity Benchmark			*5.0*	*3.4*	*11.1*	*11.1*	*15.5*	*11.8*	*--*	*--*	*Jan-06*
Private Equity ex Russell 3000	**100,173,624**	**4.7**	**2.4**	**2.7**	**15.0**	**15.0**	**11.4**	**9.9**	**11.8**	**7.5**	**Jan-06**
Northern Trust Russell 3000	**284,069,765**	**13.4**	**4.1**	**18.8**	**9.0**	**9.0**	**--**	**--**	**--**	**9.0**	**Jun-18**
Russell 3000			*4.1*	*18.7*	*9.0*	*9.0*	*--*	*--*	*--*	*8.9*	*Jun-18*
Private Debt	**67,981,152**	**3.2**	**-0.8**	**0.2**	**-4.5**	**-4.5**	**-2.5**	**0.0**	**--**	**3.2**	**Dec-10**
S&P Global Leveraged Loan Index +2%			*2.3*	*5.9*	*5.2*	*5.2*	*7.3*	*4.9*	*--*	*6.3*	*Dec-10*

[1] Returns for the Fixed income, Private Debt, and Real Assets Aggregates are gross of fees through June 2015 and net of fees thereafter.
[2] Prior to 7/1/2015, Fixed Income Custom Benchmark was 100% Barclays Global Aggregate. After 7/1/2015, Fixed Income Custom Benchmark consists of 80% Barclays Global Aggregate, 5% JPM GBI-EM GD, 5% JPM EMBI GD, 5% S&P Global Leveraged Loan, and 5% BAML Global HY Index.
[3] Please see the Appendix for composition of the Private Markets Benchmark.

	Market Value ($)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Real Estate	**52,448,370**	**2.5**	**2.1**	**4.2**	**15.6**	**15.6**	**17.5**	**--**	**--**	**18.0**	**Jul-15**
NCREIF Property Index			*1.5*	*3.3*	*6.5*	*6.5*	*6.9*	*--*	*--*	*7.8*	*Jul-15*
Private Real Assets	**22,276,663**	**1.0**	**10.7**	**0.9**	**12.3**	**12.3**	**10.8**	**--**	**--**	**7.4**	**Jul-15**
Emerging Markets Debt	**70,416,422**	**3.3**	**3.7**	**9.1**	**8.2**	**8.2**	**3.4**	**--**	**--**	**3.1**	**Jul-15**
50% JPM EMBI GD / 50% JPM GBI-EM			*4.9*	*10.0*	*10.8*	*10.8*	*4.9*	*--*	*--*	*5.2*	*Jul-15*
eV All Emg Mkts Fixed Inc Net Median			*4.2*	*10.0*	*10.1*	*10.1*	*5.2*	*3.1*	*6.8*	*5.2*	*Jul-15*
eV All Emg Mkts Fixed Inc Net Rank			*73*	*74*	*82*	*82*	*89*	*--*	*--*	*85*	*Jul-15*
Zero Beta	**692,061,129**	**32.5**	**1.5**	**3.0**	**4.1**	**4.1**	**2.9**	**--**	**--**	**2.2**	**Jul-15**
Zero Beta Benchmark			*0.7*	*1.4*	*2.1*	*2.1*	*0.3*	*--*	*--*	*0.6*	*Jul-15*
Short-Term IG Bonds	**395,548,003**	**18.6**	**0.7**	**1.3**	**--**	**--**	**--**	**--**	**--**	**1.9**	**Oct-18**
ICE BofAML 91 Days T-Bills TR			*0.6*	*1.2*	*--*	*--*	*--*	*--*	*--*	*1.8*	*Oct-18*
Immunized Cash Flows	**104,987,892**	**4.9**	**1.3**	**2.3**	**--**	**--**	**--**	**--**	**--**	**3.7**	**Oct-18**
Immunized Cash Flows Benchmark			*1.3*	*2.3*	*--*	*--*	*--*	*--*	*--*	*3.7*	*Oct-18*
Absolute Return	**173,111,981**	**8.1**	**3.6**	**7.3**	**7.7**	**7.7**	**4.6**	**3.7**	**--**	**4.1**	**Nov-12**
Absolute Return Benchmark			*0.6*	*1.3*	*1.9*	*1.9*	*0.2*	*1.3*	*--*	*1.2*	*Nov-12*
Macro	**84,548,227**	**4.0**	**5.5**	**8.8**	**7.8**	**7.8**	**3.7**	**--**	**--**	**2.7**	**Oct-14**
HFRI Macro (Total) Index			*2.5*	*4.8*	*2.4*	*2.4*	*0.3*	*--*	*--*	*1.0*	*Oct-14*
Relative Value	**88,563,754**	**4.2**	**1.8**	**5.9**	**7.8**	**7.8**	**5.8**	**--**	**--**	**4.7**	**Oct-14**
HFRI Relative Value (Total) Index			*1.6*	*5.5*	*3.3*	*3.3*	*5.0*	*--*	*--*	*3.4*	*Oct-14*
Cash	**18,413,252**	**0.9**	**0.6**	**1.1**	**2.0**	**2.0**	**1.3**	**0.9**	**--**	**--**	**Jan-06**
ICE BofAML 91 Days T-Bills TR			*0.6*	*1.2*	*2.3*	*2.3*	*1.4*	*0.9*	*--*	*--*	*Jan-06*
Other	**193,895,513**	**9.1**	**0.9**	**3.6**	**2.8**	**2.8**	**2.6**	**1.2**	**1.5**	**2.1**	**Jul-04**
Other Benchmark			*0.5*	*3.5*	*0.5*	*0.5*	*1.4*	*--*	*--*	*--*	*Jul-04*

[1] Cash composite includes the cash account, cash collateral in the Russell Investments Overlay program, and residuals from terminated manager assets.
[2] Please see the Appendix for composition of the Zero Beta Benchmark, Immunized Cash Flows Benchmark, Absolute Return Benchmark, and Other Benchmark.

Total Fund Aggregate

As of June 30, 2019

	Market Value ($)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Core Real Estate	**88,017,739**	**4.1**	**1.8**	**3.8**	**7.8**	**7.8**	**7.4**	**9.6**	**9.1**	**7.1**	**Jul-04**
NCREIF ODCE Equal Weighted (Net)			*1.1*	*2.6*	*6.0*	*6.0*	*7.0*	*9.1*	*8.8*	*6.9*	*Jul-04*
Commodities	**61,454,680**	**2.9**	**-1.5**	**3.6**	**-5.0**	**-5.0**	**0.9**	**-7.6**	**--**	**-3.4**	**May-10**
Bloomberg Commodity Index TR USD			*-1.2*	*5.1*	*-6.8*	*-6.8*	*-2.2*	*-9.1*	*--*	*-5.1*	*May-10*
TIPS	**44,423,093**	**2.1**	**1.6**	**3.4**	**3.4**	**3.4**	**1.7**	**1.0**	**--**	**1.0**	**Jul-14**
BBgBarc U.S. TIPS 0-5 Years			*1.6*	*3.3*	*3.2*	*3.2*	*1.7*	*0.9*	*--*	*0.9*	*Jul-14*
Overlay	**7,141,239**	**0.3**									

Trailing Net Performance

	Market Value ($)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund Aggregate	**2,127,219,653**	**100.0**	**2.5**	**8.9**	**4.3**	**4.3**	**5.9**	**3.2**	**6.5**	**6.6**	**Jan-94**
Policy Benchmark			*2.1*	*8.4*	*3.9*	*3.9*	*6.5*	*3.4*	*7.2*	*6.9*	*Jan-94*
Investable Benchmark Portfolio			*2.1*	*8.3*	*3.7*	*3.7*	*5.6*	*3.1*	*6.3*	*--*	*Jan-94*
60/40 MSCI ACWI/BBgBarc Global Aggregate			*3.6*	*12.0*	*6.1*	*6.1*	*7.7*	*4.3*	*7.4*	*6.4*	*Jan-94*
Low-Cost Passive Portfolio			*2.0*	*10.0*	*--*	*--*	*--*	*--*	*--*	*--*	*Jan-94*
Liability Benchmark Portfolio			*6.0*	*11.0*	*--*	*--*	*--*	*--*	*--*	*--*	*Jan-94*
InvMetrics Public DB > $1B Net Median			*2.9*	*10.3*	*5.4*	*5.4*	*8.7*	*5.6*	*9.0*	*7.2*	*Jan-94*
InvMetrics Public DB > $1B Net Rank			*79*	*89*	*85*	*85*	*99*	*99*	*99*	*80*	*Jan-94*
Growth	**1,234,121,772**	**58.0**	**3.3**	**13.1**	**5.7**	**5.7**	**8.8**	**--**	**--**	**6.2**	**Jul-15**
Growth Benchmark			*3.0*	*13.2*	*5.7*	*5.7*	*10.3*	*--*	*--*	*7.7*	*Jul-15*
Public Equity	**636,755,776**	**29.9**	**3.4**	**15.0**	**3.9**	**3.9**	**10.1**	**5.2**	**--**	**8.0**	**May-10**
Public Equity Benchmark			*2.7*	*14.8*	*5.2*	*5.2*	*11.7*	*6.2*	*--*	*8.3*	*May-10*
Global Equity	**191,499,219**	**9.0**	**5.0**	**18.8**	**6.4**	**6.4**	**13.0**	**--**	**--**	**9.0**	**Jul-15**
MSCI ACWI IMI Net USD			*3.4*	*16.1*	*4.6*	*4.6*	*11.4*	*--*	*--*	*7.4*	*Jul-15*
eV All Global Equity Net Median			*3.4*	*16.1*	*5.2*	*5.2*	*10.4*	*6.1*	*10.7*	*7.1*	*Jul-15*
eV All Global Equity Net Rank			*24*	*31*	*42*	*42*	*25*	*--*	*--*	*27*	*Jul-15*
Artisan Global Value	129,889,500	6.1	4.4	16.6	5.3	5.3	11.9	6.7	--	10.6	Mar-11
MSCI ACWI Value NR USD			*2.3*	*12.4*	*4.3*	*4.3*	*9.4*	*3.8*	*--*	*5.7*	*Mar-11*
eV All Global Equity Net Median			*3.4*	*16.1*	*5.2*	*5.2*	*10.4*	*6.1*	*10.7*	*7.8*	*Mar-11*
eV All Global Equity Net Rank			*31*	*45*	*50*	*50*	*36*	*40*	*--*	*13*	*Mar-11*

[1] Returns for the Equity Aggregate are gross of fees through June 2015 and net of fees thereafter.
[2] Please see final page of the performance report for composition of the Policy Benchmark.

	Market Value ($)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Artisan Global Opportunities	61,609,719	2.9	6.2	23.7	8.4	8.4	--	--	--	11.6	Jul-17
MSCI ACWI Growth NR USD			*4.9*	*20.1*	*7.2*	*7.2*	*--*	*--*	*--*	*11.5*	*Jul-17*
eV All Global Equity Net Median			*3.4*	*16.1*	*5.2*	*5.2*	*10.4*	*6.1*	*10.7*	*7.6*	*Jul-17*
eV All Global Equity Net Rank			*12*	*8*	*28*	*28*	*--*	*--*	*--*	*20*	*Jul-17*
US Equity	**119,712,010**	**5.6**	**3.9**	**18.4**	**7.8**	**7.8**	**12.7**	**--**	**--**	**9.6**	**Jul-15**
MSCI USA IMI GR USD			*4.0*	*18.8*	*9.0*	*9.0*	*14.0*	*--*	*--*	*11.0*	*Jul-15*
eV All US Equity Net Median			*3.8*	*18.0*	*5.8*	*5.8*	*12.2*	*8.3*	*13.9*	*8.7*	*Jul-15*
eV All US Equity Net Rank			*48*	*46*	*40*	*40*	*45*	*--*	*--*	*40*	*Jul-15*
Northern Trust Russell 1000	87,718,819	4.1	4.3	18.9	10.2	10.2	--	--	--	15.4	Nov-16
Russell 1000			*4.2*	*18.8*	*10.0*	*10.0*	*--*	*--*	*--*	*15.2*	*Nov-16*
Northern Tr Russell 2000 Value	13,089,626	0.6	1.4	13.6	-6.1	-6.1	--	--	--	-0.5	Jan-18
Russell 2000 Value			*1.4*	*13.5*	*-6.2*	*-6.2*	*--*	*--*	*--*	*-0.8*	*Jan-18*
Cove Street Small Cap Value	18,903,565	0.9	4.3	20.1	8.5	8.5	10.1	5.1	--	6.4	May-14
Russell 2000 Value			*1.4*	*13.5*	*-6.2*	*-6.2*	*9.8*	*5.4*	*--*	*6.2*	*May-14*
eV US Small Cap Value Equity Net Median			*2.0*	*14.9*	*-5.4*	*-5.4*	*8.9*	*5.0*	*12.8*	*5.9*	*May-14*
eV US Small Cap Value Equity Net Rank			*17*	*9*	*2*	*2*	*32*	*48*	*--*	*38*	*May-14*
International Equity	**77,657,194**	**3.7**	**3.9**	**16.7**	**-2.2**	**-2.2**	**8.6**	**--**	**--**	**4.0**	**Jul-15**
MSCI World ex USA IMI NR USD			*3.5*	*14.4*	*0.2*	*0.2*	*8.9*	*--*	*--*	*4.1*	*Jul-15*
eV ACWI ex-US All Cap Equity Net Median			*3.7*	*15.3*	*-0.1*	*-0.1*	*9.5*	*3.4*	*8.5*	*4.6*	*Jul-15*
eV ACWI ex-US All Cap Equity Net Rank			*46*	*39*	*76*	*76*	*67*	*--*	*--*	*58*	*Jul-15*
Northern Trust MSCI World ex US	49,598,026	2.3	4.1	14.9	1.5	1.5	--	--	--	8.9	Nov-16
MSCI World ex USA			*3.8*	*14.6*	*1.3*	*1.3*	*--*	*--*	*--*	*8.5*	*Nov-16*

	Market Value ($)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Oberweis Intl Opportunities	28,059,168	1.3	3.7	20.3	-8.3	-8.3	8.5	--	--	7.8	Nov-15
MSCI World ex USA Small Cap Growth NR USD			*2.6*	*15.6*	*-5.9*	*-5.9*	*9.0*	*--*	*--*	*7.6*	*Nov-15*
eV ACWI ex-US All Cap Equity Net Median			*3.7*	*15.3*	*-0.1*	*-0.1*	*9.5*	*3.4*	*8.5*	*6.1*	*Nov-15*
eV ACWI ex-US All Cap Equity Net Rank			*53*	*18*	*98*	*98*	*67*	*--*	*--*	*30*	*Nov-15*
Emerging Markets Equity	**182,931,405**	**8.6**	**1.1**	**10.9**	**-0.1**	**-0.1**	**6.6**	**--**	**--**	**2.1**	**Jul-15**
MSCI Emerging Market IMI Net			*0.4*	*10.2*	*0.5*	*0.5*	*10.0*	*--*	*--*	*4.0*	*Jul-15*
eV Emg Mkts Equity Net Median			*1.4*	*12.0*	*0.9*	*0.9*	*9.9*	*2.5*	*6.7*	*4.6*	*Jul-15*
eV Emg Mkts Equity Net Rank			*57*	*59*	*61*	*61*	*87*	*--*	*--*	*93*	*Jul-15*
Northern Trust MSCI EM IMI	86,422,446	4.1	0.3	10.1	--	--	--	--	--	1.7	Oct-18
MSCI Emerging Market IMI Net			*0.4*	*10.2*	*--*	*--*	*--*	*--*	*--*	*2.0*	*Oct-18*
Dimensional Fund Adv EM Value	40,119,047	1.9	0.0	7.1	1.6	1.6	--	--	--	7.9	Nov-16
MSCI Emerging Markets Value NR USD			*1.0*	*8.9*	*5.0*	*5.0*	*--*	*--*	*--*	*7.5*	*Nov-16*
eV Emg Mkts Equity Net Median			*1.4*	*12.0*	*0.9*	*0.9*	*9.9*	*2.5*	*6.7*	*7.9*	*Nov-16*
eV Emg Mkts Equity Net Rank			*87*	*94*	*45*	*45*	*--*	*--*	*--*	*51*	*Nov-16*
Comgest Global EM Promising Co	14,218,220	0.7	0.0	8.6	-8.7	-8.7	--	--	--	-2.3	Mar-17
MSCI Emerging Markets SMID Cap			*0.2*	*7.6*	*-2.3*	*-2.3*	*--*	*--*	*--*	*4.6*	*Mar-17*
eV Emg Mkts Small Cap Equity Net Median			*0.5*	*9.9*	*-3.1*	*-3.1*	*7.0*	*2.5*	*9.2*	*5.2*	*Mar-17*
eV Emg Mkts Small Cap Equity Net Rank			*65*	*75*	*90*	*90*	*--*	*--*	*--*	*99*	*Mar-17*
GQG Global Emerging Markets	42,171,692	2.0	6.6	19.2	8.9	8.9	--	--	--	9.4	Jul-17
MSCI Emerging Markets			*0.6*	*10.6*	*1.2*	*1.2*	*--*	*--*	*--*	*4.6*	*Jul-17*
eV Emg Mkts Equity Net Median			*1.4*	*12.0*	*0.9*	*0.9*	*9.9*	*2.5*	*6.7*	*4.0*	*Jul-17*
eV Emg Mkts Equity Net Rank			*1*	*5*	*4*	*4*	*--*	*--*	*--*	*3*	*Jul-17*

	Market Value ($)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Marketable Alternative Equity	**64,955,947**	**3.1**	**3.5**	**7.7**	**3.0**	**3.0**	**6.7**	**--**	**--**	**5.7**	**Oct-14**
HFRI Equity Hedge (Total) Index			*1.6*	*9.3*	*0.3*	*0.3*	*6.8*	*--*	*--*	*3.9*	*Oct-14*
Senator Global Opportunity, LP	21,523,756	1.0	6.0	14.7	4.5	4.5	7.4	4.1	--	6.3	Apr-13
HFRI Event-Driven (Total) Index			*1.3*	*5.5*	*1.2*	*1.2*	*6.3*	*2.8*	*--*	*4.3*	*Apr-13*
Sandler Plus Offshore Fund Ltd	20,076,148	0.9	1.7	1.1	2.7	2.7	8.3	9.6	--	8.0	May-13
HFRI Equity Hedge (Total) Index			*1.6*	*9.3*	*0.3*	*0.3*	*6.8*	*3.4*	*--*	*4.7*	*May-13*
Marshall Wace Eureka Fund	23,356,043	1.1	2.9	7.6	2.0	2.0	7.9	7.8	--	7.5	Apr-14
HFRI Equity Hedge (Total) Index			*1.6*	*9.3*	*0.3*	*0.3*	*6.8*	*3.4*	*--*	*3.7*	*Apr-14*
Private Markets	**526,949,574**	**24.8**	**3.2**	**11.5**	**7.3**	**7.3**	**8.0**	**--**	**--**	**6.4**	**Jul-15**
Private Markets Benchmark			*3.2*	*11.5*	*6.0*	*6.0*	*11.1*	*--*	*--*	*9.1*	*Jul-15*
MSCI ACWI IMI + 100bps			*3.6*	*16.6*	*5.6*	*5.6*	*12.5*	*--*	*--*	*8.4*	*Jul-15*
Private Markets ex Russell 3000	**236,300,589**	**11.1**	**2.1**	**2.1**	**7.6**	**7.6**	**7.8**	**--**	**--**	**6.3**	**Jul-15**
Private Markets Benchmark			*3.2*	*11.5*	*6.0*	*6.0*	*11.1*	*--*	*--*	*9.1*	*Jul-15*
Private Equity	**384,243,389**	**18.1**	**3.7**	**15.2**	**9.1**	**9.1**	**9.5**	**8.9**	**--**	**--**	**Jan-06**
San Jose Custom Private Equity Benchmark			*5.0*	*3.4*	*11.1*	*11.1*	*15.5*	*11.8*	*--*	*--*	*Jan-06*
Private Equity ex Russell 3000	**100,173,624**	**4.7**	**2.4**	**2.7**	**15.0**	**15.0**	**11.4**	**9.9**	**11.8**	**7.5**	**Jan-06**
PE Strategic Partnership, LP	58,184,273	2.7	2.1	5.0	18.9	18.9	--	--	--	6.1	Aug-17
Cambridge PE Composite BM			*5.0*	*3.4*	*11.1*	*11.1*	*--*	*--*	*--*	*15.4*	*Aug-17*
Pathway Private Eq Fund VIII	2,951,260	0.1	-4.5	-10.8	-10.8	-10.8	-1.7	0.9	8.6	8.6	Jul-09
Cambridge PE Composite BM			*5.0*	*3.4*	*11.1*	*11.1*	*13.8*	*10.7*	*13.7*	*13.7*	*Jul-09*

	Market Value ($)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Pantheon USA Fund VII, LP	15,959,709	0.8	3.1	-1.0	7.1	7.1	--	--	--	9.8	Jun-18
Cambridge PE Composite BM			*5.0*	*3.4*	*11.1*	*11.1*	*--*	*--*	*--*	*12.9*	*Jun-18*
Pantheon Global Secondary III	4,247,118	0.2	5.7	1.2	19.6	19.6	7.6	3.9	5.4	5.4	Jul-09
Cambridge PE Composite BM			*5.0*	*3.4*	*11.1*	*11.1*	*13.8*	*10.7*	*13.7*	*13.7*	*Jul-09*
Great Hill Equity Partners IV	2,605,261	0.1	4.5	23.0	65.3	65.3	58.9	44.8	32.6	32.6	Jul-09
Cambridge PE Composite BM			*5.0*	*3.4*	*11.1*	*11.1*	*13.8*	*10.7*	*13.7*	*13.7*	*Jul-09*
Partners Group Secondary 2008	1,194,221	0.1	2.9	-3.1	-0.2	-0.2	5.1	2.6	8.7	8.7	Jul-09
Cambridge PE Composite BM			*5.0*	*3.4*	*11.1*	*11.1*	*13.8*	*10.7*	*13.7*	*13.7*	*Jul-09*
Partners Group Secondary 2011	7,712,685	0.4	2.8	1.5	3.6	3.6	9.9	12.6	--	19.6	Nov-12
Cambridge PE Composite BM			*5.0*	*3.4*	*11.1*	*11.1*	*13.8*	*10.7*	*--*	*12.9*	*Nov-12*
Innovation Endeavors III	1,503,606	0.1	3.0	4.8	-26.9	-26.9	--	--	--	-25.1	Jun-18
Cambridge PE Composite BM			*5.0*	*3.4*	*11.1*	*11.1*	*--*	*--*	*--*	*12.9*	*Jun-18*
Crestline Portfolio Financing	5,815,491	0.3	2.9	3.2	8.4	8.4	--	--	--	7.7	Jun-18
Cambridge PE Composite BM			*5.0*	*3.4*	*11.1*	*11.1*	*--*	*--*	*--*	*12.9*	*Jun-18*
Northern Trust Russell 3000	**284,069,765**	**13.4**	**4.1**	**18.8**	**9.0**	**9.0**	**--**	**--**	**--**	**9.0**	**Jun-18**
Russell 3000			*4.1*	*18.7*	*9.0*	*9.0*	*--*	*--*	*--*	*8.9*	*Jun-18*

	Market Value ($)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Debt	**67,981,152**	**3.2**	**-0.8**	**0.2**	**-4.5**	**-4.5**	**-2.5**	**0.0**	**--**	**3.2**	**Dec-10**
S&P Global Leveraged Loan Index +2%			*2.3*	*5.9*	*5.2*	*5.2*	*7.3*	*4.9*	--	*6.3*	*Dec-10*
White Oak Direct Lending	10,942,467	0.5	-3.0	4.1	-16.5	-16.5	-14.4	-6.2	--	-1.3	Feb-11
S&P Global Leveraged Loan Index +2%			*2.3*	*5.9*	*5.2*	*5.2*	*7.3*	*4.9*	--	*6.0*	*Feb-11*
Blackstone/GSO Cap Partners	8,625,266	0.4	-2.0	-1.9	9.9	9.9	9.2	2.7	--	7.5	Mar-11
S&P Global Leveraged Loan Index +2%			*2.3*	*5.9*	*5.2*	*5.2*	*7.3*	*4.9*	--	*5.9*	*Mar-11*
Medley Opportunity Fund II LP	22,496,913	1.1	-3.6	-3.9	-11.8	-11.8	-3.5	-0.1	--	2.9	Jun-11
S&P Global Leveraged Loan Index +2%			*2.3*	*5.9*	*5.2*	*5.2*	*7.3*	*4.9*	--	*6.0*	*Jun-11*
Cross Ocean USD ESS Fund II LP	10,028,678	0.5	2.8	0.8	2.5	2.5	--	--	--	10.3	Aug-16
S&P Global Leveraged Loan Index +2%			*2.3*	*5.9*	*5.2*	*5.2*	--	--	--	*6.8*	*Aug-16*
ArrowMark Co-Investment	5,166,796	0.2	3.4	6.8	14.2	14.2	--	--	--	13.7	Jan-18
S&P Global Leveraged Loan Index +2%			*2.3*	*5.9*	*5.2*	*5.2*	--	--	--	*4.9*	*Jan-18*
Octagon CLO Opp Fund III	6,468,080	0.3	4.7	--	--	--	--	--	--	4.7	Feb-19
S&P Global Leveraged Loan Index +2%			*2.3*	--	--	--	--	--	--	*3.4*	*Feb-19*
Crestline Co-Investment	1,552,952	0.1	0.0	--	--	--	--	--	--	0.0	Mar-19
S&P Global Leveraged Loan Index +2%			*2.3*	--	--	--	--	--	--	*2.0*	*Mar-19*
Cross Ocean USD ESS Fund III, L.P.	2,700,000	0.1	--	--	--	--	--	--	--	--	Jun-19

[1] Returns for the Private Debt and Real Assets Aggregates are gross of fees through June 2015 and net of fees thereafter.

	Market Value ($)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Real Estate	**52,448,370**	**2.5**	**2.1**	**4.2**	**15.6**	**15.6**	**17.5**	**--**	**--**	**18.0**	**Jul-15**
NCREIF Property Index			*1.5*	*3.3*	*6.5*	*6.5*	*6.9*	--	--	*7.8*	*Jul-15*
DRA Growth & Income Fund VI	641,044	0.0	2.3	3.9	2.0	2.0	3.0	12.7	10.5	8.6	Jan-08
NCREIF Property Index			*1.5*	*3.3*	*6.5*	*6.5*	*6.9*	*8.8*	*9.2*	*6.2*	*Jan-08*
DRA Growth & Income Fund VII	2,886,475	0.1	1.8	7.3	33.9	33.9	32.2	27.3	--	23.4	Apr-12
NCREIF Property Index			*1.5*	*3.3*	*6.5*	*6.5*	*6.9*	*8.8*	--	*9.5*	*Apr-12*
DRA Growth & Income Fund VIII	11,782,540	0.6	1.3	3.1	9.6	9.6	11.9	--	--	11.4	Jan-15
NCREIF Property Index			*1.5*	*3.3*	*6.5*	*6.5*	*6.9*	--	--	*8.5*	*Jan-15*
Tristan - EPISO IV	11,587,186	0.5	4.2	8.4	10.7	10.7	7.4	--	--	9.0	Jan-16
NCREIF Property Index			*1.5*	*3.3*	*6.5*	*6.5*	*6.9*	--	--	*7.2*	*Jan-16*
DRA Growth & Income Fund IX	15,513,287	0.7	1.7	3.4	15.9	15.9	--	--	--	14.0	Feb-17
NCREIF Property Index			*1.5*	*3.3*	*6.5*	*6.5*	--	--	--	*7.1*	*Feb-17*
GEM Realty Fund VI	865,455	0.0	-3.3	-2.9	25.0	25.0	--	--	--	1.5	Dec-17
NCREIF Property Index			*1.5*	*3.3*	*6.5*	*6.5*	--	--	--	*7.6*	*Dec-17*
Torchlight Debt Opportunity VI	9,061,241	0.4	1.7	-14.2	-0.9	-0.9	--	--	--	-0.7	Apr-18
NCREIF Property Index			*1.5*	*3.3*	*6.5*	*6.5*	--	--	--	*6.7*	*Apr-18*
Tristan - EPISO V	111,141	0.0	--	--	--	--	--	--	--	1.6	Apr-19

[1] Returns for the Private Debt and Real Assets Aggregates are gross of fees through June 2015 and net of fees thereafter.

	Market Value ($)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Real Assets	**22,276,663**	**1.0**	**10.7**	**0.9**	**12.3**	**12.3**	**10.8**	**--**	**--**	**7.4**	**Jul-15**
Global Infra Part III-A/B, LP	20,273,897	1.0	10.1	0.8	15.2	15.2	--	--	--	0.9	Sep-16
DJ Brookfield Global Infrastructure Net TR USD			*4.3*	*20.7*	*12.7*	*12.7*	*--*	*--*	*--*	*8.4*	*Sep-16*
Lime Rock Partners VIII	2,002,766	0.1	17.0	2.1	--	--	--	--	--	2.1	Dec-18
DJ Brookfield Global Infrastructure Net TR USD			*4.3*	*20.7*	*--*	*--*	*--*	*--*	*--*	*14.9*	*Dec-18*
Emerging Markets Debt	**70,416,422**	**3.3**	**3.7**	**9.1**	**8.2**	**8.2**	**3.4**	**--**	**--**	**3.1**	**Jul-15**
50% JPM EMBI GD / 50% JPM GBI-EM			*4.9*	*10.0*	*10.8*	*10.8*	*4.9*	*--*	*--*	*5.2*	*Jul-15*
eV All Emg Mkts Fixed Inc Net Median			*4.2*	*10.0*	*10.1*	*10.1*	*5.2*	*3.1*	*6.8*	*5.2*	*Jul-15*
eV All Emg Mkts Fixed Inc Net Rank			*73*	*74*	*82*	*82*	*89*	*--*	*--*	*85*	*Jul-15*
BlueBay EM Select Bond	37,670,246	1.8	4.9	10.3	9.4	9.4	3.8	--	--	3.4	Jul-15
50% JPM EMBI GD / 50% JPM GBI-EM			*4.9*	*10.0*	*10.8*	*10.8*	*4.9*	*--*	*--*	*5.2*	*Jul-15*
eV All Emg Mkts Fixed Inc Net Median			*4.2*	*10.0*	*10.1*	*10.1*	*5.2*	*3.1*	*6.8*	*5.2*	*Jul-15*
eV All Emg Mkts Fixed Inc Net Rank			*30*	*44*	*66*	*66*	*87*	*--*	*--*	*84*	*Jul-15*
Iguazu Partners LP Fund	32,746,176	1.5	--	--	--	--	--	--	--	2.3	May-19
50% JPM EMBI GD / 50% JPM GBI-EM			*--*	*--*	*--*	*--*	*--*	*--*	*--*	*4.8*	*May-19*
Zero Beta	**692,061,129**	**32.5**	**1.5**	**3.0**	**4.1**	**4.1**	**2.9**	**--**	**--**	**2.2**	**Jul-15**
Zero Beta Benchmark			*0.7*	*1.4*	*2.1*	*2.1*	*0.3*	*--*	*--*	*0.6*	*Jul-15*
Short-Term IG Bonds	**395,548,003**	**18.6**	**0.7**	**1.3**	**--**	**--**	**--**	**--**	**--**	**1.9**	**Oct-18**
ICE BofAML 91 Days T-Bills TR			*0.6*	*1.2*	*--*	*--*	*--*	*--*	*--*	*1.8*	*Oct-18*

	Market Value ($)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
BlackRock 3-Month T-Bill	395,548,003	18.6	0.7	1.3	--	--	--	--	--	1.9	Oct-18
ICE BofAML 91 Days T-Bills TR			*0.6*	*1.2*	--	--	--	--	--	*1.8*	*Oct-18*
Immunized Cash Flows	**104,987,892**	**4.9**	**1.3**	**2.3**	**--**	**--**	**--**	**--**	**--**	**3.7**	**Oct-18**
Immunized Cash Flows Benchmark			*1.3*	*2.3*	--	--	--	--	--	*3.7*	*Oct-18*
Insight Immunized Cash Flow	104,987,892	4.9	--	--	--	--	--	--	--	--	Jun-19
Absolute Return	**173,111,981**	**8.1**	**3.6**	**7.3**	**7.7**	**7.7**	**4.6**	**3.7**	**--**	**4.1**	**Nov-12**
Absolute Return Benchmark			*0.6*	*1.3*	*1.9*	*1.9*	*0.2*	*1.3*	--	*1.2*	*Nov-12*
Macro	**84,548,227**	**4.0**	**5.5**	**8.8**	**7.8**	**7.8**	**3.7**	**--**	**--**	**2.7**	**Oct-14**
HFRI Macro (Total) Index			*2.5*	*4.8*	*2.4*	*2.4*	*0.3*	--	--	*1.0*	*Oct-14*
Kepos Alpha Fund, Ltd	14,581,157	0.7	13.4	23.2	19.1	19.1	0.8	2.7	--	1.3	Mar-13
HFRI Macro: Systematic Diversified Index			*3.5*	*5.7*	*2.9*	*2.9*	*-1.5*	*1.4*	--	*0.9*	*Mar-13*
Dymon Asia Macro Fund, Ltd	15,421,469	0.7	1.2	-1.4	-3.8	-3.8	-0.1	--	--	0.2	Sep-15
HFRI Macro (Total) Index			*2.5*	*4.8*	*2.4*	*2.4*	*0.3*	--	--	*0.9*	*Sep-15*
Keynes Lev Quant Strat, Ltd	11,206,876	0.5	9.4	16.8	16.5	16.5	6.1	--	--	4.4	Jan-16
Barclay BTOP50 Index TR USD			*3.5*	*4.9*	*4.0*	*4.0*	*-1.9*	--	--	*-1.5*	*Jan-16*
Pharo Management, Ltd.	23,206,919	1.1	4.9	8.4	8.1	8.1	9.6	--	--	10.6	Apr-16
HFRI Macro (Total) Index			*2.5*	*4.8*	*2.4*	*2.4*	*0.3*	--	--	*0.7*	*Apr-16*
AHL Partners LLP	10,737,687	0.5	1.3	3.8	3.0	3.0	6.0	--	--	6.0	Jun-16
Barclay BTOP50 Index TR USD			*3.5*	*4.9*	*4.0*	*4.0*	*-1.9*	--	--	*-1.9*	*Jun-16*
Systematica	9,394,119	0.4	3.8	5.6	9.1	9.1	--	--	--	4.9	Jul-17
Barclay BTOP50 Index TR USD			*3.5*	*4.9*	*4.0*	*4.0*	--	--	--	*2.1*	*Jul-17*

	Market Value ($)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Relative Value	**88,563,754**	**4.2**	**1.8**	**5.9**	**7.8**	**7.8**	**5.8**	**--**	**--**	**4.7**	**Oct-14**
HFRI Relative Value (Total) Index			*1.6*	*5.5*	*3.3*	*3.3*	*5.0*	*--*	*--*	*3.4*	*Oct-14*
Pine River Fund, Ltd	1,393,415	0.1	17.8	18.2	17.0	17.0	5.9	3.1	--	4.2	Jan-13
HFRI Relative Value (Total) Index			*1.6*	*5.5*	*3.3*	*3.3*	*5.0*	*3.3*	*--*	*4.4*	*Jan-13*
DE Shaw Composite Fund, LLC	30,538,220	1.4	1.4	8.0	10.3	10.3	9.3	10.4	--	11.2	Apr-13
HFRI Fund Weighted Composite Index			*1.7*	*7.2*	*1.3*	*1.3*	*4.9*	*2.9*	*--*	*3.7*	*Apr-13*
JD Capital	14,678,988	0.7	1.9	3.5	6.5	6.5	--	--	--	6.3	Oct-16
HFRI Relative Value (Total) Index			*1.6*	*5.5*	*3.3*	*3.3*	*--*	*--*	*--*	*4.4*	*Oct-16*
Pine River Volatility Arb	16,003,680	0.8	0.2	5.0	4.6	4.6	--	--	--	0.3	Mar-17
HFRI Relative Value (Total) Index			*1.6*	*5.5*	*3.3*	*3.3*	*--*	*--*	*--*	*3.5*	*Mar-17*
Hudson Bay	25,949,452	1.2	2.4	4.2	7.7	7.7	--	--	--	6.1	Aug-17
HFRI Relative Value (Total) Index			*1.6*	*5.5*	*3.3*	*3.3*	*--*	*--*	*--*	*3.5*	*Aug-17*
Cash	**18,413,252**	**0.9**	**0.6**	**1.1**	**2.0**	**2.0**	**1.3**	**0.9**	**--**	**--**	**Jan-06**
ICE BofAML 91 Days T-Bills TR			*0.6*	*1.2*	*2.3*	*2.3*	*1.4*	*0.9*	*--*	*--*	*Jan-06*
Other	**193,895,513**	**9.1**	**0.9**	**3.6**	**2.8**	**2.8**	**2.6**	**1.2**	**1.5**	**2.1**	**Jul-04**
Other Benchmark			*0.5*	*3.5*	*0.5*	*0.5*	*1.4*	*--*	*--*	*--*	*Jul-04*
Core Real Estate	**88,017,739**	**4.1**	**1.8**	**3.8**	**7.8**	**7.8**	**7.4**	**9.6**	**9.1**	**7.1**	**Jul-04**
NCREIF ODCE Equal Weighted (Net)			*1.1*	*2.6*	*6.0*	*6.0*	*7.0*	*9.1*	*8.8*	*6.9*	*Jul-04*
Prudential PRISA, LP	1,830,835	0.1	1.4	3.0	6.9	6.9	7.9	10.0	10.0	7.2	Jul-04
NCREIF ODCE Equal Weighted (Net)			*1.1*	*2.6*	*6.0*	*6.0*	*7.0*	*9.1*	*8.8*	*6.9*	*Jul-04*

	Market Value ($)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
American Core Realty Fund, LLC	31,285,774	1.5	2.8	5.0	9.2	9.2	7.2	9.3	8.1	5.3	Jan-07
NCREIF ODCE Equal Weighted (Net)			*1.1*	*2.6*	*6.0*	*6.0*	*7.0*	*9.1*	*8.8*	*5.1*	*Jan-07*
BlackRock Core Property Fund	8,241,473	0.4	2.5	--	--	--	--	--	--	2.5	Feb-19
NCREIF ODCE Equal Weighted (Net)			*1.1*	--	--	--	--	--	--	*2.6*	*Feb-19*
Clarion Lion Properties Fund	46,659,657	2.2	--	--	--	--	--	--	--	1.4	Apr-19
NCREIF ODCE Equal Weighted (Net)			--	--	--	--	--	--	--	*1.1*	*Apr-19*
Commodities	**61,454,680**	**2.9**	**-1.5**	**3.6**	**-5.0**	**-5.0**	**0.9**	**-7.6**	**--**	**-3.4**	**May-10**
Bloomberg Commodity Index TR USD			*-1.2*	*5.1*	*-6.8*	*-6.8*	*-2.2*	*-9.1*	--	*-5.1*	*May-10*
Credit Suisse Risk Parity	61,454,680	2.9	-1.5	3.6	-5.0	-5.0	1.1	-6.0	--	-4.8	Apr-11
Bloomberg Commodity Index TR USD			*-1.2*	*5.1*	*-6.8*	*-6.8*	*-2.2*	*-9.1*	--	*-8.2*	*Apr-11*
TIPS	**44,423,093**	**2.1**	**1.6**	**3.4**	**3.4**	**3.4**	**1.7**	**1.0**	**--**	**1.0**	**Jul-14**
BBgBarc U.S. TIPS 0-5 Years			*1.6*	*3.3*	*3.2*	*3.2*	*1.7*	*0.9*	--	*0.9*	*Jul-14*
Northern Trust 0-5 Year TIPS	44,423,093	2.1	1.6	3.4	3.4	3.4	1.7	1.0	--	1.0	Jul-14
BBgBarc US Treasury TIPS 0-5 Yr TR			*1.6*	*3.3*	*3.2*	*3.2*	*1.6*	*0.9*	--	*0.9*	*Jul-14*
Overlay	**7,141,239**	**0.3**									
Russell Investments Overlay	7,101,866	0.3									

[1] Cash composite includes the cash account, cash collateral in the Russell Investments Overlay program, and residuals from terminated manager assets.

Cash Flow Summary

Quarter Ending June 30, 2019

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
AHL Partners LLP	$10,601,498	$0	$0	$0	$136,189	$10,737,687
American Core Realty Fund, LLC	$31,152,375	$0	-$842,200	-$842,200	$975,600	$31,285,774
ArrowMark Co-Investment	$5,159,390	$0	-$162,231	-$162,231	$169,637	$5,166,796
Artisan Global Opportunities	$58,038,513	$0	$0	$0	$3,571,206	$61,609,719
Artisan Global Value	$124,365,735	$10,844,249	-$10,844,249	$0	$5,523,766	$129,889,500
BlackRock 3-Month T-Bill	$361,137,169	$68,000,000	-$36,000,000	$32,000,000	$2,410,835	$395,548,003
BlackRock Core Property Fund	$8,125,000	$0	-$95,615	-$95,615	$212,087	$8,241,473
Blackstone/GSO Cap Partners	$8,561,213	$235,149	$0	$235,149	-$171,096	$8,625,266
BlueBay EM Select Bond	$67,884,170	$0	-$32,000,000	-$32,000,000	$1,786,076	$37,670,246
Cash Account	$47,217,940	$325,683,574	-$354,606,954	-$28,923,380	$118,692	$18,413,252
Clarion Lion Properties Fund	$0	$46,000,000	-$96,591	$45,903,409	$756,248	$46,659,657
Comgest Global EM Promising Co	$14,218,220	$0	$0	$0	$0	$14,218,220
Cove Street Small Cap Value	$18,120,131	$0	$0	$0	$783,433	$18,903,565
Credit Suisse Risk Parity	$62,379,162	$0	-$61,416	-$61,416	-$863,066	$61,454,680
Crestline Co-Investment	$1,290,342	$262,861	-$215	$262,646	-$36	$1,552,952
Crestline Portfolio Financing	$4,397,331	$1,292,487	$0	$1,292,487	$125,673	$5,815,491
Cross Ocean USD ESS Fund II LP	$12,667,831	$0	-$3,028,870	-$3,028,870	$389,717	$10,028,678
Cross Ocean USD ESS Fund III, L.P.	--	$2,700,000	$0	$2,700,000	$0	$2,700,000
DE Shaw Composite Fund, LLC	$30,129,091	$0	-$192,338	-$192,338	$601,467	$30,538,220
Dimensional Fund Adv EM Value	$24,547,975	$15,000,000	$0	$15,000,000	$571,072	$40,119,047
DRA Growth & Income Fund IX	$10,798,692	$5,076,142	-$615,561	$4,460,581	$254,014	$15,513,287
DRA Growth & Income Fund VI	$1,179,812	$0	-$566,244	-$566,244	$27,476	$641,044
DRA Growth & Income Fund VII	$8,534,311	$0	-$5,811,013	-$5,811,013	$163,177	$2,886,475
DRA Growth & Income Fund VIII	$12,080,109	$0	-$518,556	-$518,556	$220,987	$11,782,540
Dymon Asia Macro Fund, Ltd	$15,236,996	$0	$0	$0	$184,473	$15,421,469

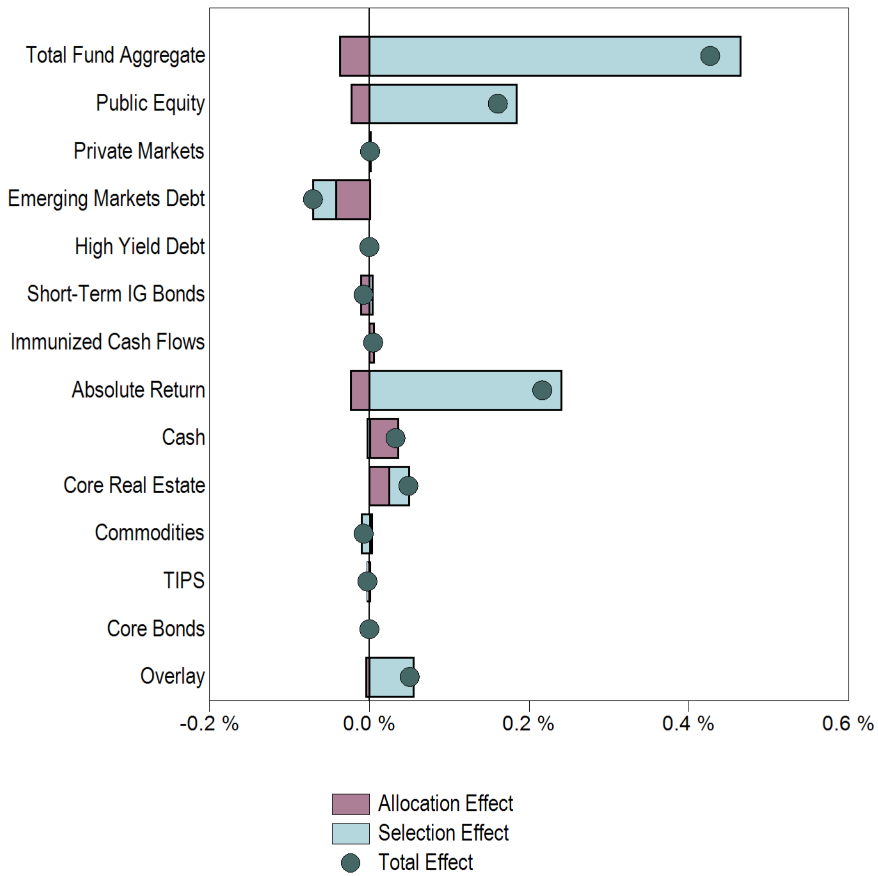
Total Fund Aggregate

As of June 30, 2019

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
GEM Realty Fund VI	$592,442	$300,000	-$28,125	$271,875	$1,138	$865,455
Global Infra Part III-A/B, LP	$17,873,510	$534,378	-$101,090	$433,288	$1,967,099	$20,273,897
GQG Global Emerging Markets	$27,885,171	$12,000,000	-$38,801	$11,961,199	$2,325,322	$42,171,692
Great Hill Equity Partners IV	$2,583,729	$0	-$95,777	-$95,777	$117,309	$2,605,261
Hudson Bay	$25,340,832	$0	$0	$0	$608,620	$25,949,452
Iguazu Partners LP Fund	--	$32,000,000	$0	$32,000,000	$746,176	$32,746,176
Innovation Endeavors III	$994,036	$480,000	$0	$480,000	$29,570	$1,503,606
Insight Immunized Cash Flow	--	$105,000,000	$0	$105,000,000	-$12,108	$104,987,892
JD Capital	$14,412,338	$0	-$54,085	-$54,085	$320,735	$14,678,988
Kepos Alpha Fund, Ltd	$12,858,696	$0	-$61,079	-$61,079	$1,783,540	$14,581,157
Keynes Lev Quant Strat, Ltd	$10,243,168	$0	$0	$0	$963,708	$11,206,876
Lime Rock Partners VIII	$1,664,437	$55,479	-$17,333	$38,146	$300,184	$2,002,766
Marshall Wace Eureka Fund	$22,705,038	$0	-$125,242	-$125,242	$776,247	$23,356,043
Medley Opportunity Fund II LP	$25,063,697	$0	-$1,780,685	-$1,780,685	-$786,098	$22,496,913
Northern Tr 1-3 Yr US Gov Bond	$113,571,428	$0	-$115,072,032	-$115,072,032	$1,500,604	$0
Northern Tr Russell 2000 Value	$12,911,495	$0	-$698	-$698	$178,829	$13,089,626
Northern Trust 0-5 Year TIPS	$43,702,551	$0	$0	$0	$720,542	$44,423,093
Northern Trust MSCI EM IMI	$117,260,166	$0	-$30,000,000	-$30,000,000	-$837,720	$86,422,446
Northern Trust MSCI World ex US	$51,590,914	$0	-$4,000,145	-$4,000,145	$2,007,257	$49,598,026
Northern Trust Russell 1000	$90,977,605	$0	-$7,000,000	-$7,000,000	$3,741,215	$87,718,819
Northern Trust Russell 3000	$314,931,120	$0	-$43,000,000	-$43,000,000	$12,138,645	$284,069,765
Oberweis Intl Opportunities	$27,069,975	$15,182,729	-$15,182,729	$0	$989,193	$28,059,168
Octagon CLO Opp Fund III	$5,000,000	$1,250,000	-$82,010	$1,167,990	$300,090	$6,468,080
Pantheon Global Secondary III	$4,670,496	$0	-$732,416	-$732,416	$309,038	$4,247,118
Pantheon USA Fund VII, LP	$17,067,385	$0	-$1,653,925	-$1,653,925	$546,249	$15,959,709
Partners Group Secondary 2008	$1,248,455	$0	-$90,152	-$90,152	$35,918	$1,194,221

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
Partners Group Secondary 2011	$7,719,504	$0	-$225,051	-$225,051	$218,232	$7,712,685
Pathway Private Eq Fund VIII	$3,089,602	$0	$0	$0	-$138,342	$2,951,260
PE Strategic Partnership, LP	$47,028,230	$10,125,000	-$118,125	$10,006,875	$1,149,169	$58,184,273
Pharo Management, Ltd.	$22,118,372	$0	$0	$0	$1,088,547	$23,206,919
Pine River Fund, Ltd	$1,695,341	$0	-$525,704	-$525,704	$223,779	$1,393,415
Pine River Volatility Arb	$15,973,168	$0	-$26,873	-$26,873	$57,385	$16,003,680
Prudential PRISA, LP	$34,128,811	$0	-$32,723,092	-$32,723,092	$425,116	$1,830,835
Russell Investments Overlay	$5,953,545	$10,475,404	-$10,475,404	$0	$1,148,321	$7,101,866
Sandler Plus Offshore Fund Ltd	$19,737,215	$0	$0	$0	$338,933	$20,076,148
Senator Global Opportunity, LP	$20,305,618	$0	$0	$0	$1,218,138	$21,523,756
State Street Terminated Managers	$38,972	$0	-$359	-$359	$761	$39,374
Systematica	$9,050,229	$0	$0	$0	$343,890	$9,394,119
Torchlight Debt Opportunity VI	$1,470,179	$7,500,000	-$101,250	$7,398,750	$192,312	$9,061,241
Tristan - EPISO IV	$10,865,592	$598,792	-$390,580	$208,212	$513,383	$11,587,186
Tristan - EPISO V	$0	$109,531	$0	$109,531	$1,610	$111,141
White Oak Direct Lending	$11,271,501	$0	$14,409	$14,409	-$343,443	$10,942,467
Total	**$2,110,487,568**	**$670,705,774**	**-$709,130,405**	**-$38,424,630**	**$55,156,715**	**$2,127,219,653**

Attribution Effects
3 Months Ending June 30, 2019

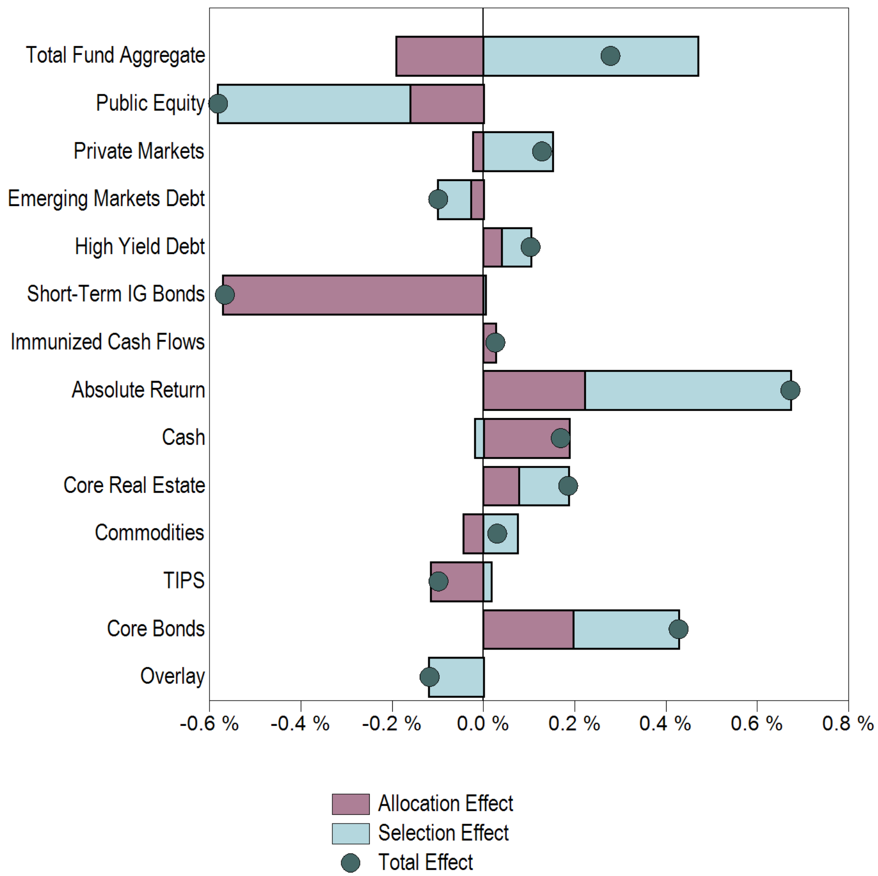


Attribution Summary
3 Months Ending June 30, 2019

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Public Equity	3.4%	2.7%	0.7%	0.2%	0.0%	0.2%
Private Markets	3.2%	3.2%	0.0%	0.0%	0.0%	0.0%
Emerging Markets Debt	3.7%	4.9%	-1.1%	0.0%	0.0%	-0.1%
High Yield Debt	--	--	--	--	0.0%	--
Short-Term IG Bonds	0.7%	0.6%	0.0%	0.0%	0.0%	0.0%
Immunized Cash Flows	1.3%	1.3%	0.0%	0.0%	0.0%	0.0%
Absolute Return	3.6%	0.6%	2.9%	0.2%	0.0%	0.2%
Cash	0.6%	0.6%	0.0%	0.0%	0.0%	0.0%
Core Real Estate	1.8%	1.1%	0.7%	0.0%	0.0%	0.0%
Commodities	-1.5%	-1.2%	-0.3%	0.0%	0.0%	0.0%
TIPS	1.6%	1.6%	0.0%	0.0%	0.0%	0.0%
Core Bonds	--	--	--	--	0.0%	--
Overlay	19.2%	0.6%	18.6%	0.1%	0.0%	0.1%
Total	**2.5%**	**2.1%**	**0.4%**	**0.5%**	**0.0%**	**0.4%**

[1] Difference in attribution returns and returns in the performance summary may occur as a result of the different calculation methodologies that are applied by InvestorForce.

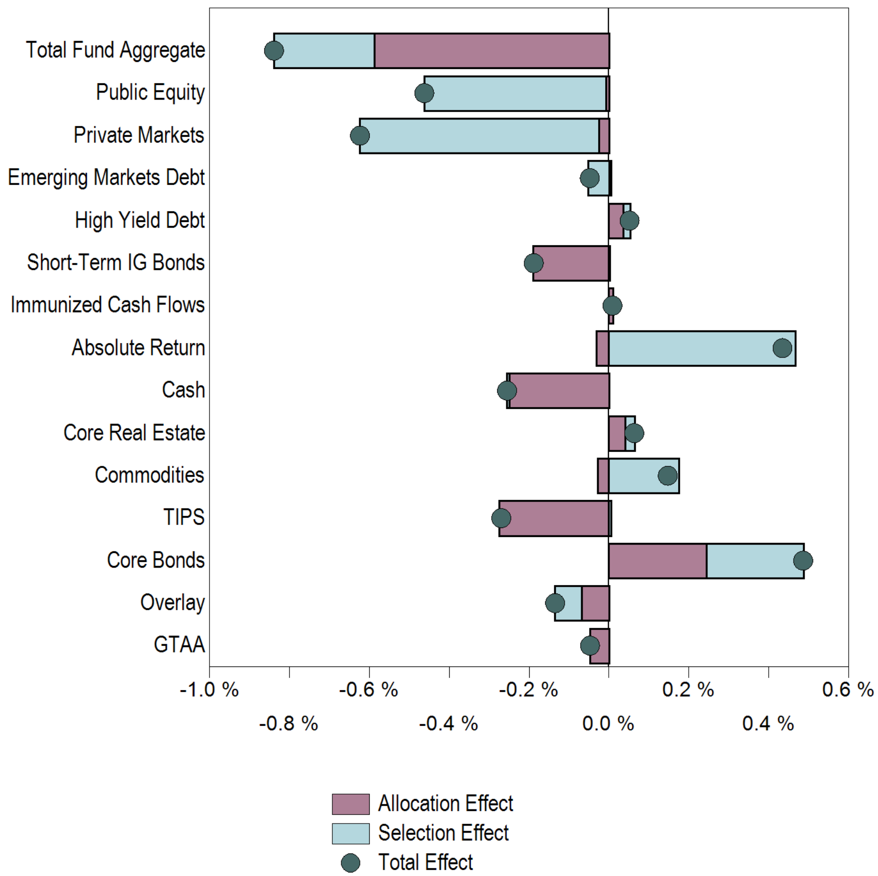
Attribution Effects
1 Year Ending June 30, 2019



Attribution Summary
1 Year Ending June 30, 2019

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Public Equity	3.9%	5.2%	-1.3%	-0.4%	-0.2%	-0.6%
Private Markets	7.3%	6.0%	1.3%	0.2%	0.0%	0.1%
Emerging Markets Debt	8.2%	10.8%	-2.6%	-0.1%	0.0%	-0.1%
High Yield Debt	--	--	--	0.1%	0.0%	0.1%
Short-Term IG Bonds	--	1.8%	--	0.0%	-0.6%	-0.6%
Immunized Cash Flows	--	--	--	0.0%	0.0%	0.0%
Absolute Return	7.7%	1.9%	5.7%	0.5%	0.2%	0.7%
Cash	2.0%	2.3%	-0.4%	0.0%	0.2%	0.2%
Core Real Estate	7.8%	6.0%	1.8%	0.1%	0.1%	0.2%
Commodities	-5.0%	-6.8%	1.7%	0.1%	0.0%	0.0%
TIPS	3.4%	3.2%	0.2%	0.0%	-0.1%	-0.1%
Core Bonds	--	2.5%	--	0.2%	0.2%	0.4%
Overlay	-11.8%	2.3%	-14.1%	-0.1%	0.0%	-0.1%
Total	**4.3%**	**4.0%**	**0.3%**	**0.5%**	**-0.2%**	**0.3%**

Attribution Effects
3 Years Ending June 30, 2019



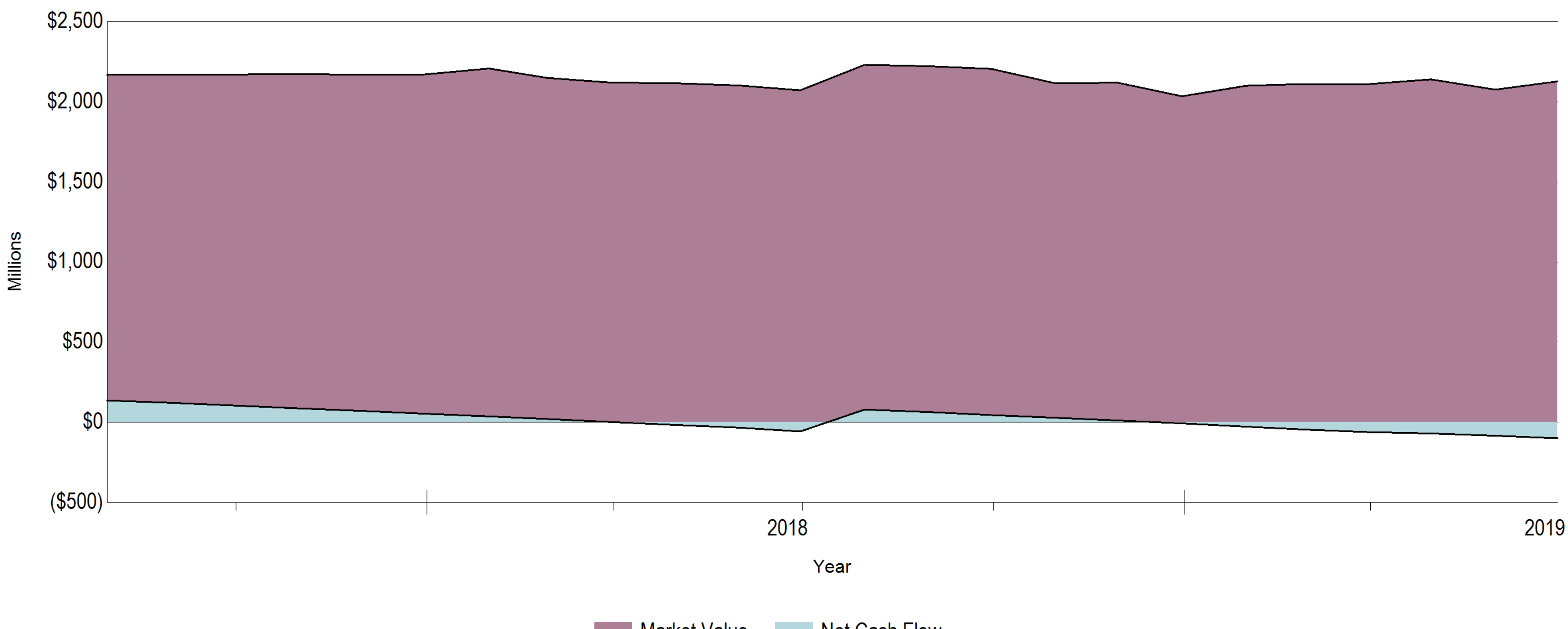
Attribution Summary
3 Years Ending June 30, 2019

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Public Equity	10.1%	11.7%	-1.5%	-0.5%	0.0%	-0.5%
Private Markets	8.0%	11.1%	-3.1%	-0.6%	0.0%	-0.6%
Emerging Markets Debt	3.4%	4.9%	-1.5%	-0.1%	0.0%	0.0%
High Yield Debt	--	--	--	0.0%	0.0%	0.1%
Short-Term IG Bonds	--	0.6%	--	0.0%	-0.2%	-0.2%
Immunized Cash Flows	--	--	--	0.0%	0.0%	0.0%
Absolute Return	4.6%	0.2%	4.4%	0.5%	0.0%	0.4%
Cash	1.3%	1.4%	-0.1%	0.0%	-0.3%	-0.3%
Core Real Estate	7.4%	7.0%	0.4%	0.0%	0.0%	0.1%
Commodities	0.9%	-2.2%	3.1%	0.2%	0.0%	0.1%
TIPS	1.7%	1.7%	0.0%	0.0%	-0.3%	-0.3%
Core Bonds	--	0.5%	--	0.2%	0.2%	0.5%
Overlay	-6.4%	1.4%	-7.8%	-0.1%	-0.1%	-0.1%
GTAA	--	--	--	0.0%	0.0%	0.0%
Total	**5.8%**	**6.7%**	**-0.8%**	**-0.3%**	**-0.6%**	**-0.8%**

Total Fund Asset Growth Summary

As of June 30, 2019

Market Value History
2 Years Ending June 30, 2019

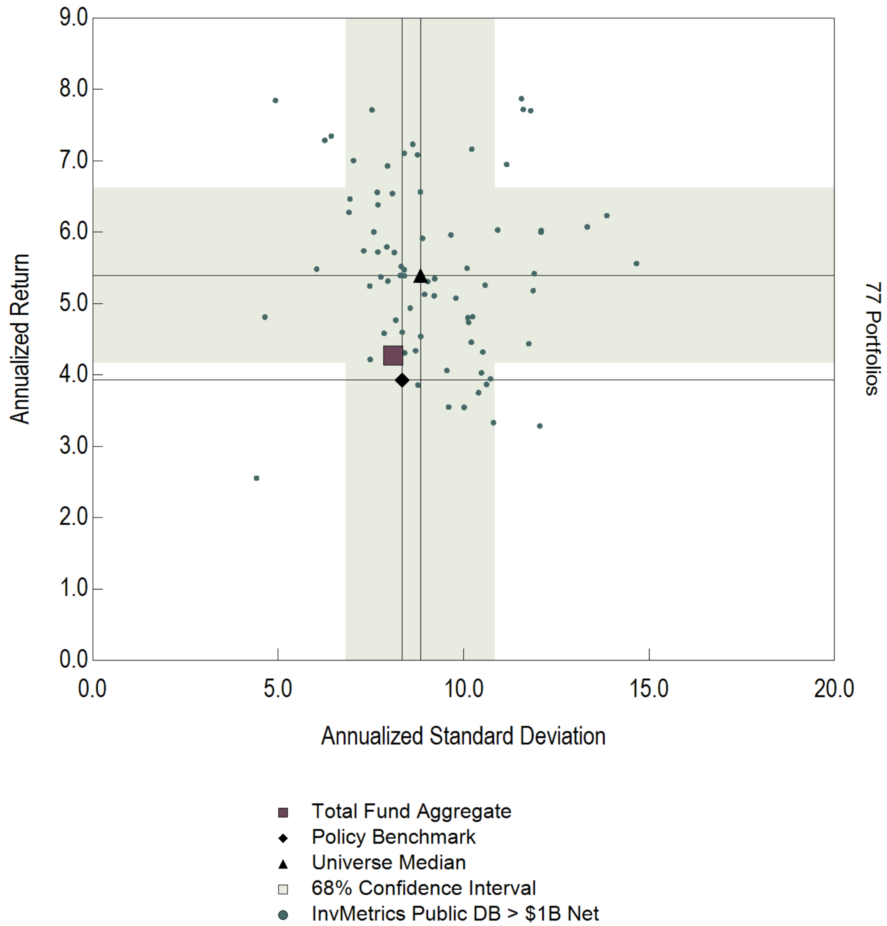


	Second Quarter	Fiscal Year-To-Date	One Year	Two Years
Beginning Market Value	$2,110,487,568	$2,071,707,543	$2,071,707,543	$1,998,468,931
Net Cash Flow	-$38,425,318	-$42,589,242	-$42,589,242	-$100,235,835
Net Investment Change	$55,157,403	$98,101,352	$98,101,352	$228,986,557
Ending Market Value	$2,127,219,653	$2,127,219,653	$2,127,219,653	$2,127,219,653

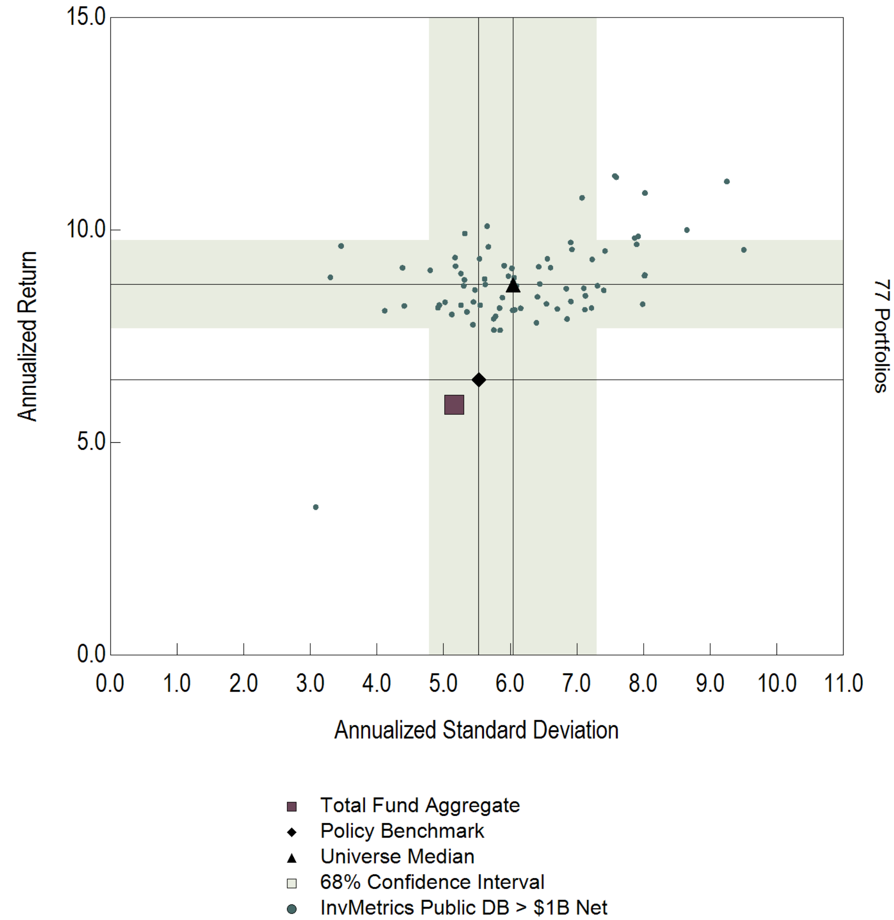
Total Fund Risk/Return

As of June 30, 2019

Annualized Return vs. Annualized Standard Deviation
1 Year Ending June 30, 2019



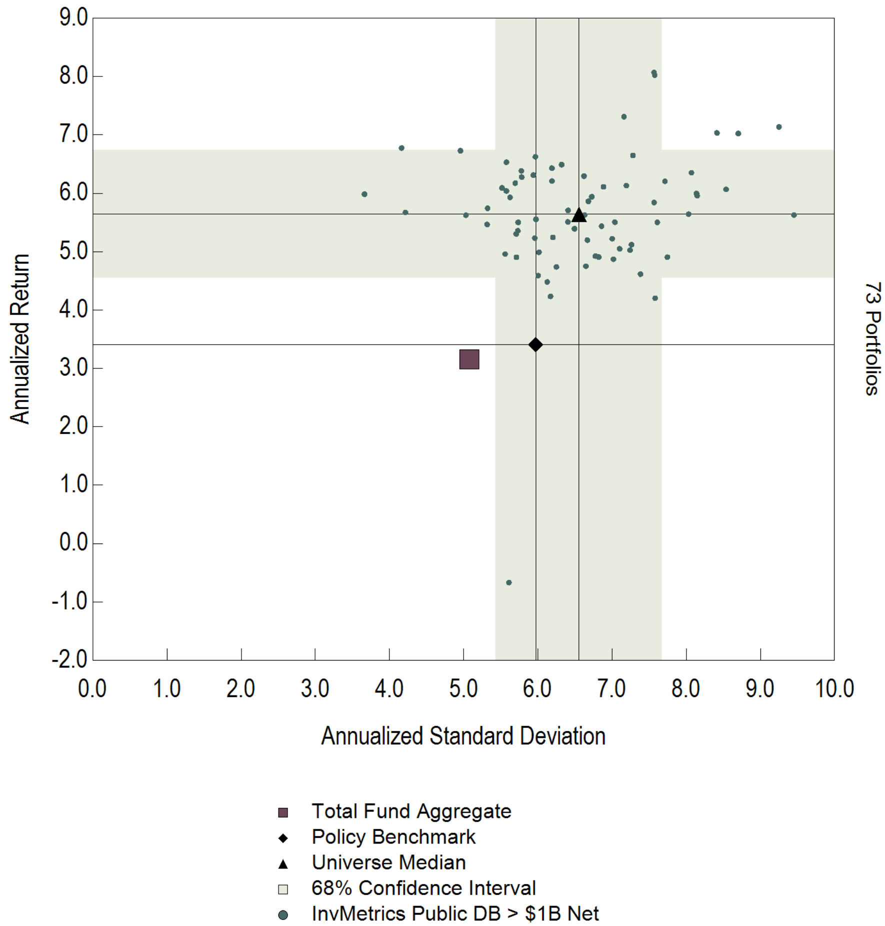
Annualized Return vs. Annualized Standard Deviation
3 Years Ending June 30, 2019



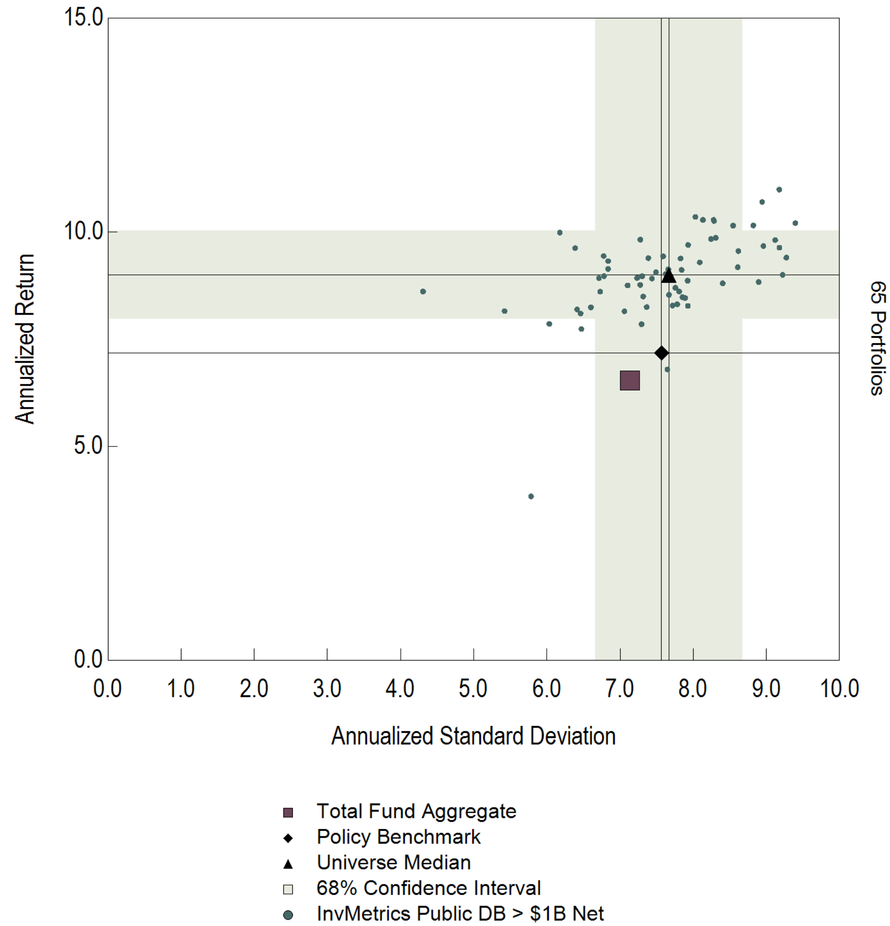
Total Fund Risk/Return

As of June 30, 2019

Annualized Return vs. Annualized Standard Deviation
5 Years Ending June 30, 2019



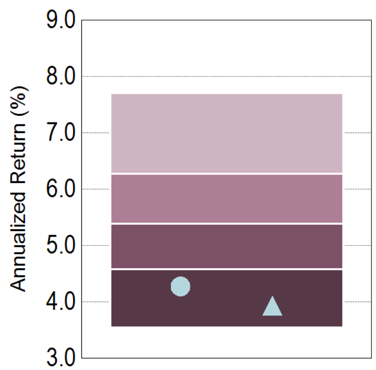
Annualized Return vs. Annualized Standard Deviation
10 Years Ending June 30, 2019



Total Fund Risk Statistics vs. Peer Universe (Trailing 1 Year)

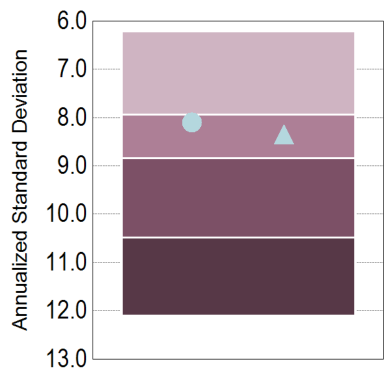
As of June 30, 2019

Annualized Return (%) vs. InvMetrics Public DB > $1B Net



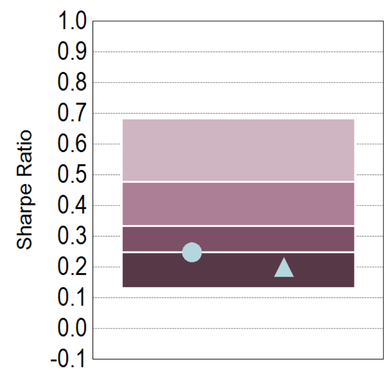
Total Fund Aggregate	
Value	4.3
Rank	85
Policy Benchmark	
Value	3.9
Rank	90
Universe	
5th %tile	7.7
25th %tile	6.3
Median	5.4
75th %tile	4.6
95th %tile	3.5

Annualized Standard Deviation vs. InvMetrics Public DB > $1B Net



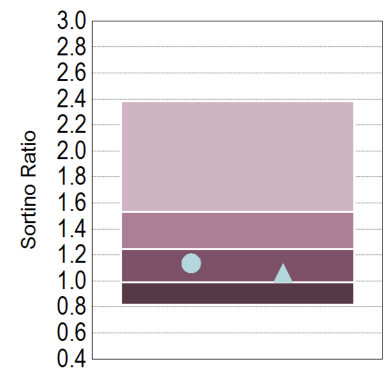
Total Fund Aggregate	
Value	8.1
Rank	31
Policy Benchmark	
Value	8.3
Rank	37
Universe	
5th %tile	6.2
25th %tile	7.9
Median	8.8
75th %tile	10.5
95th %tile	12.1

Sharpe Ratio vs. InvMetrics Public DB > $1B Net



Total Fund Aggregate	
Value	0.2
Rank	76
Policy Benchmark	
Value	0.2
Rank	84
Universe	
5th %tile	0.7
25th %tile	0.5
Median	0.3
75th %tile	0.2
95th %tile	0.1

Sortino Ratio vs. InvMetrics Public DB > $1B Net

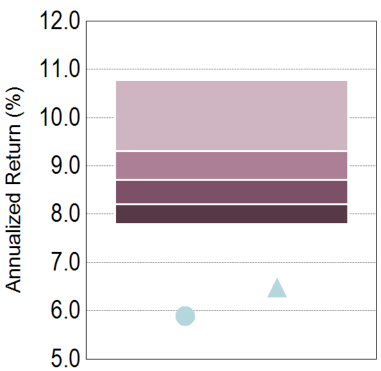


Total Fund Aggregate	
Value	1.1
Rank	61
Policy Benchmark	
Value	1.1
Rank	67
Universe	
5th %tile	2.4
25th %tile	1.5
Median	1.3
75th %tile	1.0
95th %tile	0.8

Total Fund Risk Statistics vs. Peer Universe (Trailing 3 Years)

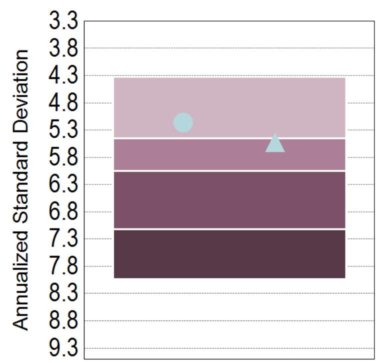
As of June 30, 2019

Annualized Return (%) vs. InvMetrics Public DB > $1B Net



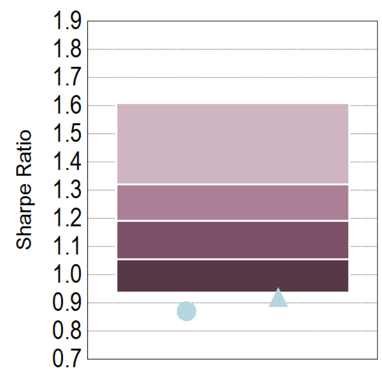
Total Fund Aggregate	
Value	5.9
Rank	99
Policy Benchmark	
Value	6.5
Rank	99
Universe	
5th %tile	10.8
25th %tile	9.3
Median	8.7
75th %tile	8.2
95th %tile	7.8

Annualized Standard Deviation vs. InvMetrics Public DB > $1B Net



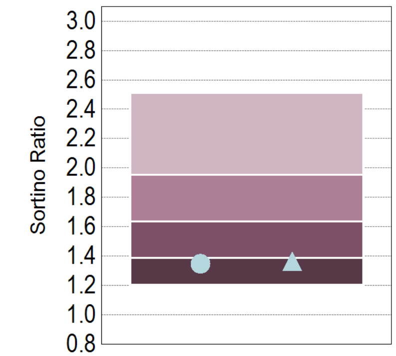
Total Fund Aggregate	
Value	5.2
Rank	15
Policy Benchmark	
Value	5.5
Rank	29
Universe	
5th %tile	4.3
25th %tile	5.4
Median	6.0
75th %tile	7.1
95th %tile	8.0

Sharpe Ratio vs. InvMetrics Public DB > $1B Net



Total Fund Aggregate	
Value	0.9
Rank	98
Policy Benchmark	
Value	0.9
Rank	97
Universe	
5th %tile	1.6
25th %tile	1.3
Median	1.2
75th %tile	1.1
95th %tile	0.9

Sortino Ratio vs. InvMetrics Public DB > $1B Net

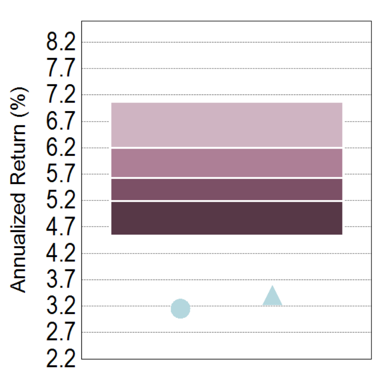


Total Fund Aggregate	
Value	1.3
Rank	77
Policy Benchmark	
Value	1.4
Rank	76
Universe	
5th %tile	2.5
25th %tile	2.0
Median	1.6
75th %tile	1.4
95th %tile	1.2

Total Fund Risk Statistics vs. Peer Universe (Trailing 5 Years)

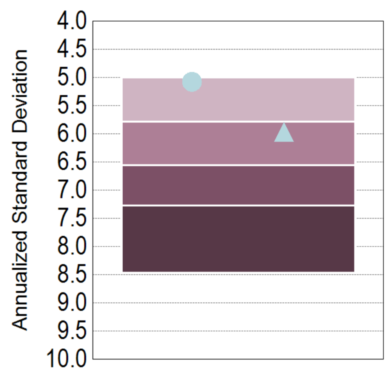
As of June 30, 2019

Annualized Return (%) vs. InvMetrics Public DB > $1B Net



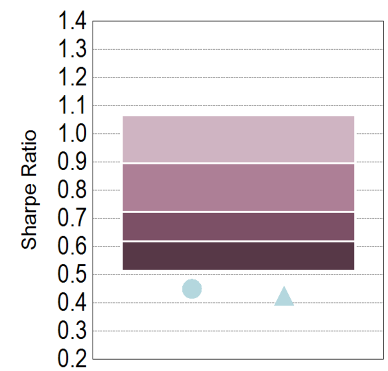
Total Fund Aggregate	
Value	3.2
Rank	99
Policy Benchmark	
Value	3.4
Rank	99
Universe	
5th %tile	7.1
25th %tile	6.2
Median	5.6
75th %tile	5.2
95th %tile	4.5

Annualized Standard Deviation vs. InvMetrics Public DB > $1B Net



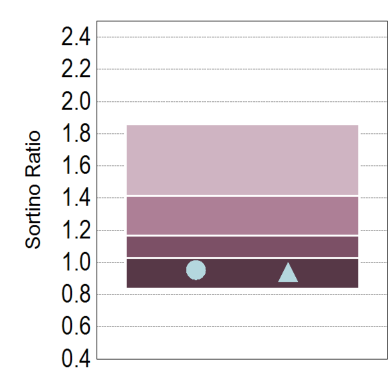
Total Fund Aggregate	
Value	5.1
Rank	6
Policy Benchmark	
Value	6.0
Rank	32
Universe	
5th %tile	5.0
25th %tile	5.8
Median	6.6
75th %tile	7.3
95th %tile	8.5

Sharpe Ratio vs. InvMetrics Public DB > $1B Net



Total Fund Aggregate	
Value	0.4
Rank	99
Policy Benchmark	
Value	0.4
Rank	99
Universe	
5th %tile	1.1
25th %tile	0.9
Median	0.7
75th %tile	0.6
95th %tile	0.5

Sortino Ratio vs. InvMetrics Public DB > $1B Net

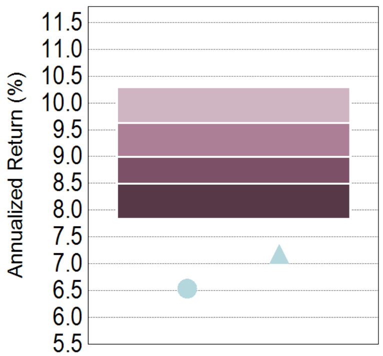


Total Fund Aggregate	
Value	1.0
Rank	88
Policy Benchmark	
Value	0.9
Rank	91
Universe	
5th %tile	1.9
25th %tile	1.4
Median	1.2
75th %tile	1.0
95th %tile	0.8

Total Fund Risk Statistics vs. Peer Universe (Trailing 10 Years)

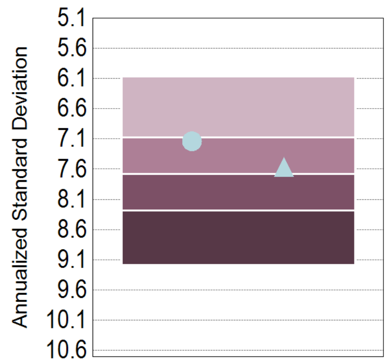
As of June 30, 2019

Annualized Return (%) vs. InvMetrics Public DB > $1B Net



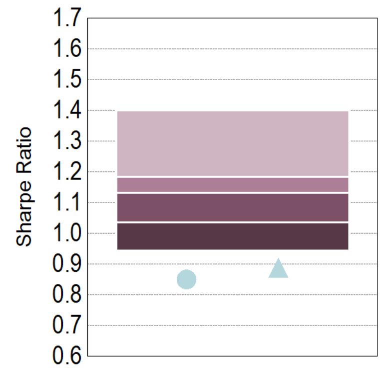
Total Fund Aggregate	
Value	6.5
Rank	99
Policy Benchmark	
Value	7.2
Rank	98
Universe	
5th %tile	10.3
25th %tile	9.6
Median	9.0
75th %tile	8.5
95th %tile	7.9

Annualized Standard Deviation vs. InvMetrics Public DB > $1B Net



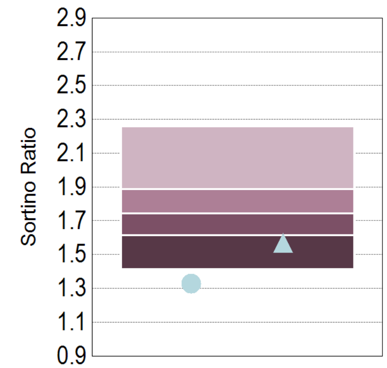
Total Fund Aggregate	
Value	7.1
Rank	27
Policy Benchmark	
Value	7.6
Rank	44
Universe	
5th %tile	6.1
25th %tile	7.1
Median	7.7
75th %tile	8.3
95th %tile	9.2

Sharpe Ratio vs. InvMetrics Public DB > $1B Net



Total Fund Aggregate	
Value	0.8
Rank	99
Policy Benchmark	
Value	0.9
Rank	98
Universe	
5th %tile	1.4
25th %tile	1.2
Median	1.1
75th %tile	1.0
95th %tile	0.9

Sortino Ratio vs. InvMetrics Public DB > $1B Net



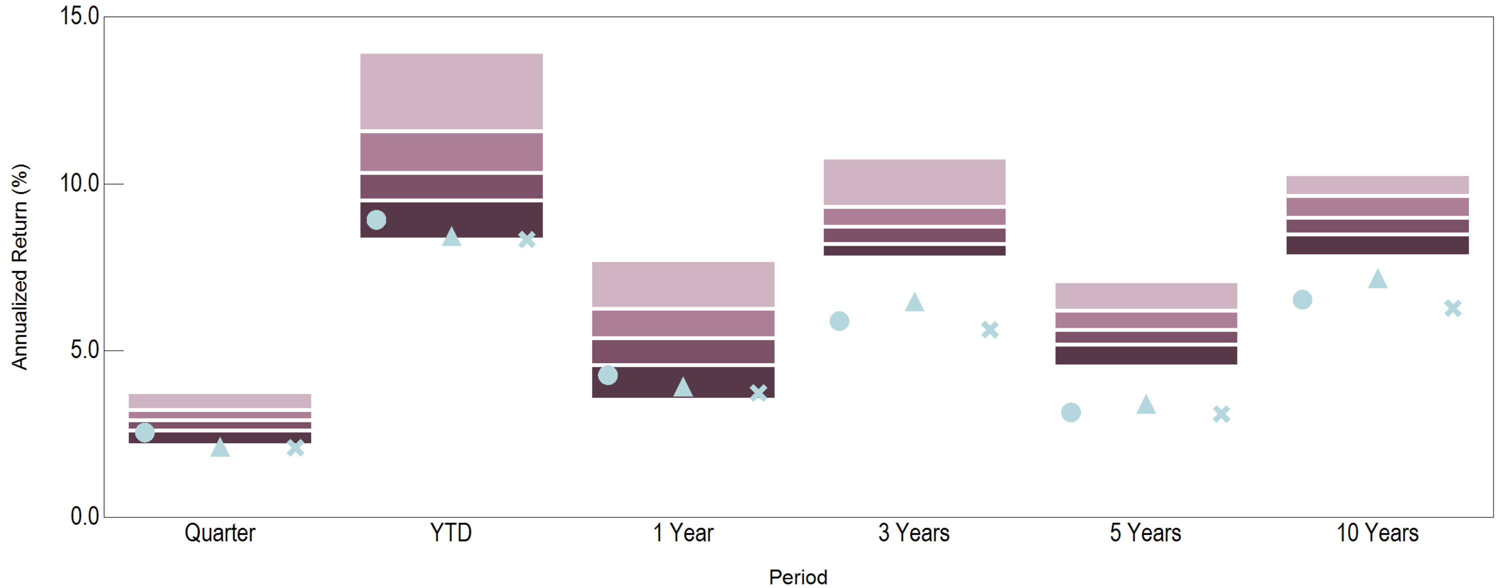
Total Fund Aggregate	
Value	1.3
Rank	98
Policy Benchmark	
Value	1.6
Rank	84
Universe	
5th %tile	2.3
25th %tile	1.9
Median	1.7
75th %tile	1.6
95th %tile	1.4

Total Fund Rolling Excess Returns

As of June 30, 2019

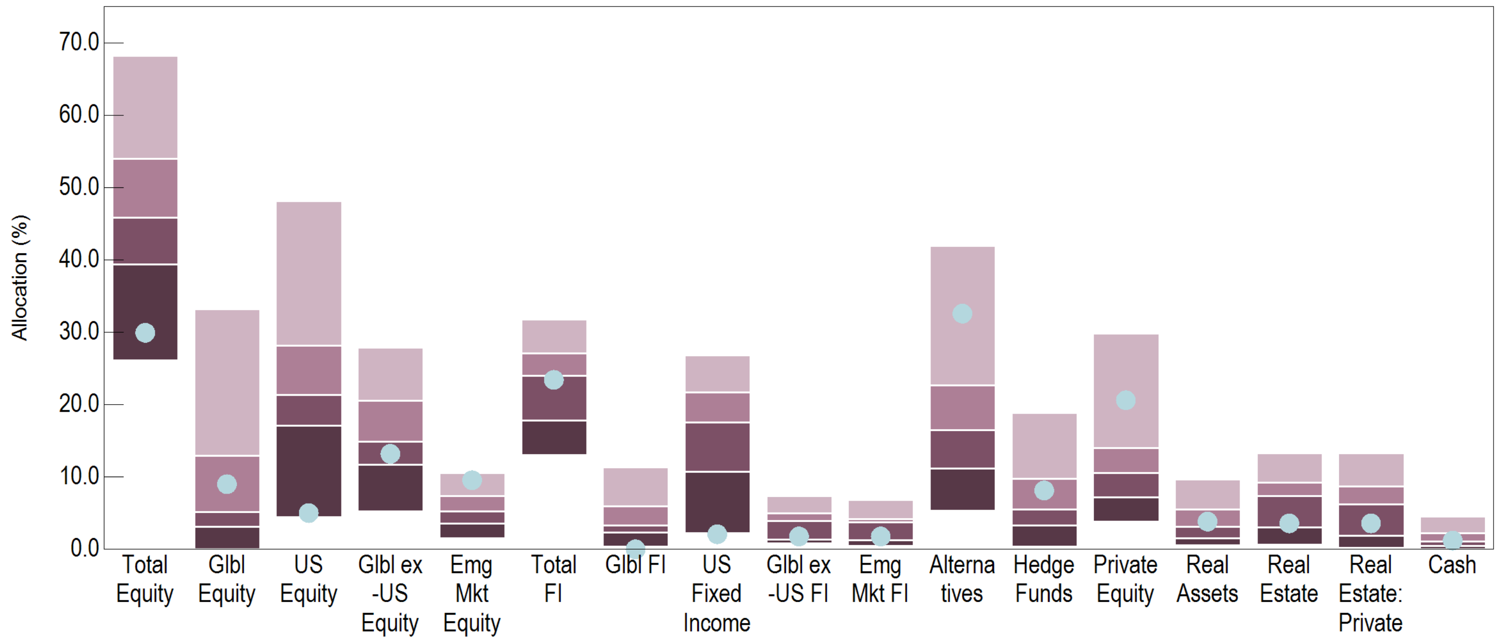
Rolling Annualized Excess Performance

InvMetrics Public DB > $1B Net Return Comparison
Ending June 30, 2019



	Return (Rank)											
5th Percentile	3.8		14.0		7.7		10.8		7.1		10.3	
25th Percentile	3.2		11.6		6.3		9.3		6.2		9.6	
Median	2.9		10.3		5.4		8.7		5.6		9.0	
75th Percentile	2.6		9.5		4.6		8.2		5.2		8.5	
95th Percentile	2.2		8.3		3.5		7.8		4.5		7.9	
# of Portfolios	78		78		77		77		73		65	
Total Fund Aggregate	2.5	(79)	8.9	(89)	4.3	(85)	5.9	(99)	3.2	(99)	6.5	(99)
Policy Benchmark	2.1	(98)	8.4	(95)	3.9	(90)	6.5	(99)	3.4	(99)	7.2	(98)
Investable Benchmark Portfolio	2.1	(98)	8.3	(96)	3.7	(94)	5.6	(99)	3.1	(99)	6.3	(99)

Total Plan Allocation vs. InvMetrics Public DB > $1B Net
As of June 30, 2019



Allocation	Total Equity	Glbl Equity	US Equity	Glbl ex -US Equity	Emg Mkt Equity	Total FI	Glbl FI	US Fixed Income	Glbl ex -US FI	Emg Mkt FI	Alternatives	Hedge Funds	Private Equity	Real Assets	Real Estate	Real Estate: Private	Cash	
5th Percentile	68.2	33.2	48.2	27.9	10.6	31.8	11.3	26.8	7.4	6.8	41.9	18.8	29.8	9.7	13.3	13.3	4.6	--
25th Percentile	54.1	13.0	28.2	20.6	7.4	27.2	6.0	21.8	5.0	4.3	22.7	9.8	14.1	5.6	9.3	8.8	2.3	--
Median	45.9	5.2	21.5	15.0	5.3	24.1	3.4	17.6	4.0	3.8	16.5	5.6	10.7	3.2	7.4	6.3	1.2	--
75th Percentile	39.4	3.2	17.2	11.8	3.6	17.9	2.4	10.8	1.4	1.3	11.2	3.4	7.3	1.6	3.1	2.0	0.6	--
95th Percentile	26.2	0.1	4.5	5.4	1.6	13.1	0.4	2.3	0.9	0.5	5.4	0.4	3.9	0.7	0.7	0.3	0.1	--
# of Portfolios	61	27	52	57	47	60	27	51	32	27	56	39	52	31	53	51	60	-- --
Total Fund Aggregate	29.9	9.0	5.0	13.2	9.5	23.4	0.0	2.1	1.8	1.8	32.6	8.1	20.6	3.8	3.6	3.6	1.2	--
Rank	91	36	95	70	8	54	99	97	73	68	11	32	9	41	71	66	50	

Major Benchmark Returns
Periods Ending June 30, 2019

Name	Q2-19	1 Yr	3 Yrs	5 Yrs	10 Yrs
US Equity					
Russell 3000	4.1	9.0	14.0	10.2	14.7
S&P 500	4.3	10.4	14.2	10.7	14.7
Russell 1000	4.2	10.0	14.1	10.5	14.8
Russell 1000 Growth	4.6	11.6	18.1	13.4	16.3
Russell 1000 Value	3.8	8.5	10.2	7.5	13.2
Russell MidCap	4.1	7.8	12.2	8.6	15.2
Russell 2000	2.1	-3.3	12.3	7.1	13.4
Russell 2000 Growth	2.7	-0.5	14.7	8.6	14.4
Russell 2000 Value	1.4	-6.2	9.8	5.4	12.4
International Equity					
MSCI ACWI	3.6	5.7	11.6	6.2	10.1
MSCI World ex USA	3.8	1.3	9.0	2.0	6.7
MSCI EAFE	3.7	1.1	9.1	2.2	6.9
MSCI Emerging Markets	0.6	1.2	10.7	2.5	5.8
Fixed Income					
91 Day T-Bills	0.6	2.3	1.4	0.9	0.5
BBgBarc US Aggregate TR	3.1	7.9	2.3	2.9	3.9
BBgBarc US Govt/Credit TR	3.5	8.5	2.4	3.1	4.1
BBgBarc US Municipal TR	2.1	6.7	2.6	3.6	4.7
BBgBarc US High Yield TR	2.5	7.5	7.5	4.7	9.2
FTSE WGBI TR	3.6	5.5	1.0	0.8	2.2
FTSE WGBI ex US TR	3.9	4.5	0.8	0.2	1.9
Real Estate					
FTSE NAREIT All REIT	1.1	11.5	5.8	8.6	15.5
NCREIF Property Index	1.5	6.5	6.9	8.8	9.2
Alternatives					
HFRI Fund of Funds Composite Index	1.5	1.2	4.2	2.2	3.2
Inflation					
Consumer Price Index	0.8	1.6	2.0	1.5	1.7

Total Fund Risk Statistics (Net of Fees)

As of June 30, 2019

Statistics Summary

3 Years Ending June 30, 2019

	% of Total MV	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Anlzd Alpha J	Anlzd Alpha J Rank	Tracking Error	Information Ratio	Information Ratio Rank	Beta	Sharpe Ratio
Total Fund Aggregate	100.00%	5.89%	99	5.16%	15	-0.12%	63	1.32%	-0.45	80	0.91	0.87
Policy Benchmark	--	6.48%	99	5.53%	29	0.00%	61	0.00%	--	--	1.00	0.92
Growth	58.02%	8.79%	--	8.46%	--	-1.20%	--	1.75%	-0.89	--	0.96	0.87
Growth Benchmark	--	10.35%	--	8.63%	--	0.00%	--	0.00%	--	--	1.00	1.04
Public Equity	29.93%	10.13%	--	10.35%	--	-0.60%	--	1.66%	-0.92	--	0.91	0.84
Public Equity Benchmark	--	11.66%	--	11.29%	--	0.00%	--	0.00%	--	--	1.00	0.91
Global Equity	9.00%	13.05%	25	11.85%	52	1.63%	25	3.08%	0.53	23	1.00	0.98
MSCI ACWI IMI Net USD	--	11.42%	41	11.44%	43	0.00%	43	0.00%	--	--	1.00	0.88
US Equity	5.63%	12.72%	45	12.77%	31	-1.42%	46	1.91%	-0.69	71	1.01	0.89
MSCI USA IMI GR USD	--	14.04%	34	12.52%	27	0.00%	34	0.00%	--	--	1.00	1.01
International Equity	3.65%	8.55%	67	12.14%	46	-0.91%	70	2.19%	-0.17	71	1.07	0.59
MSCI World ex USA IMI NR USD	--	8.92%	62	11.16%	17	0.00%	54	0.00%	--	--	1.00	0.67
Emerging Markets Equity	8.60%	6.57%	87	12.59%	16	-2.59%	88	3.11%	-1.11	97	0.90	0.41
MSCI Emerging Market IMI Net	--	10.01%	48	13.62%	47	0.00%	52	0.00%	--	--	1.00	0.63
Marketable Alternative Equity	3.05%	6.66%	--	4.03%	--	3.04%	--	4.83%	-0.02	--	0.41	1.31
HFRI Equity Hedge (Total) Index	--	6.77%	--	6.38%	--	0.00%	--	0.00%	--	--	1.00	0.84
Private Markets	24.77%	7.97%	--	7.48%	--	-0.52%	--	5.40%	-0.57	--	0.73	0.88
Private Markets Benchmark	--	11.08%	--	7.58%	--	0.00%	--	0.00%	--	--	1.00	1.28

	% of Total MV	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Anlzd Alpha J	Anlzd Alpha J Rank	Tracking Error	Information Ratio	Information Ratio Rank	Beta	Sharpe Ratio
Private Markets ex Russell 3000	11.11%	7.76%	--	4.14%	--	5.88%	--	8.30%	-0.40	--	0.05	1.54
Private Markets Benchmark	--	11.08%	--	7.58%	--	0.00%	--	0.00%	--	--	1.00	1.28
Private Equity	18.06%	9.54%	--	9.18%	--	7.55%	--	11.18%	-0.53	--	0.04	0.89
San Jose Custom Private Equity Benchmark	--	15.51%	--	6.67%	--	0.00%	--	0.00%	--	--	1.00	2.12
Private Equity ex Russell 3000	4.71%	11.36%	--	4.30%	--	9.49%	--	7.75%	-0.31	--	0.04	2.32
Cambridge PE Composite BM	--	13.79%	--	6.71%	--	0.00%	--	0.00%	--	--	1.00	1.85
Private Debt	3.20%	-2.47%	--	7.45%	--	-8.21%	--	7.19%	-1.35	--	0.74	-0.52
S&P Global Leveraged Loan Index +2%	--	7.25%	--	2.81%	--	0.00%	--	0.00%	--	--	1.00	2.08
Private Real Estate	2.47%	17.55%	--	7.08%	--	22.88%	--	8.78%	1.21	--	-1.23	2.28
NCREIF Property Index	--	6.89%	--	2.79%	--	0.00%	--	0.00%	--	--	1.00	1.96
Emerging Markets Debt	3.31%	3.39%	89	8.36%	72	-1.95%	85	1.89%	-0.81	98	1.12	0.24
50% JPM EMBI GD / 50% JPM GBI-EM	--	4.91%	65	7.30%	59	0.00%	65	0.00%	--	--	1.00	0.48
High Yield Debt	--	--	--	--	--	--	--	--	--	--	--	--
50% BAML Global HY / 50% S&P Global Leveraged Loan	--	6.31%	--	3.24%	--	0.00%	--	0.00%	--	--	1.00	1.51
Zero Beta	32.53%	2.87%	--	1.45%	--	1.77%	--	2.83%	0.93	--	0.26	1.01
Zero Beta Benchmark	--	0.25%	--	3.50%	--	0.00%	--	0.00%	--	--	1.00	-0.33
Absolute Return	8.14%	4.56%	--	2.38%	--	3.60%	--	3.00%	1.45	--	0.36	1.33

	% of Total MV	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Anlzd Alpha J	Anlzd Alpha J Rank	Tracking Error	Information Ratio	Information Ratio Rank	Beta	Sharpe Ratio
Absolute Return Benchmark	--	0.20%	--	3.50%	--	0.00%	--	0.00%	--	--	1.00	-0.34
Macro	3.97%	3.66%	--	4.36%	--	3.17%	--	2.58%	1.28	--	0.87	0.52
HFRI Macro (Total) Index	--	0.35%	--	4.08%	--	0.00%	--	0.00%	--	--	1.00	-0.26
Relative Value	4.16%	5.84%	--	2.54%	--	3.85%	--	3.27%	0.26	--	0.16	1.75
HFRI Relative Value (Total) Index	--	5.01%	--	2.52%	--	0.00%	--	0.00%	--	--	1.00	1.43
Cash	0.87%	1.28%	--	0.22%	--	-0.11%	--	0.15%	-0.69	--	0.74	-0.53
ICE BofAML 91 Days T-Bills TR	--	1.38%	--	0.23%	--	0.00%	--	0.00%	--	--	1.00	-0.06
Other	9.11%	2.60%	--	2.02%	--	1.21%	--	2.45%	0.50	--	0.41	0.59
Other Benchmark	--	1.38%	--	3.21%	--	0.00%	--	0.00%	--	--	1.00	-0.01
Core Real Estate	4.14%	7.40%	--	2.02%	--	6.76%	--	3.81%	0.11	--	-0.14	2.97
NCREIF ODCE Equal Weighted (Net)	--	6.97%	--	2.86%	--	0.00%	--	0.00%	--	--	1.00	1.94
Commodities	2.89%	0.93%	--	6.53%	--	1.71%	--	5.19%	0.60	--	0.61	-0.07

Benchmark History
As of June 30, 2019

Total Fund Aggregate		
10/1/2018	Present	13% MSCI USA IMI NR USD / 7% MSCI World ex USA IMI NR USD / 10% MSCI Emerging Market IMI Net / 25% Private Markets Benchmark / 3% 50% JPM EMBI GD / 50% JPM GBI-EM / 20% ICE BofAML 91 Days T-Bills TR / 5% Immunized Cash Flows Benchmark / 7% Absolute Return Benchmark / 5% NCREIF-ODCE / 3% Bloomberg Commodity Index TR USD / 2% BBgBarc US Treasury TIPS 0-5 Yr TR
11/1/2017	9/30/2018	28% MSCI ACWI IMI Net USD / 9% Cambridge PE Composite BM / 33% Fixed Income Custom Benchmark / 6% S&P Global Leveraged Loan +2% / 8% NCREIF Property Index / 4% Bloomberg Commodity Index TR USD / 1% DJ Brookfield Global Infrastructure Net TR USD / 11% HFRI Macro (Total) Index
7/1/2015	10/31/2017	28% MSCI ACWI IMI Net USD / 9% Cambridge Associates Private Equity Composite / 19% Fixed Income Custom Benchmark / 5% S&P Global Leveraged Loan +2% / 7% NCREIF Property Index / 6% Bloomberg Commodity Index TR USD / 5% DJ Brookfield Global Infrastructure Net TR USD / 5% S&P Global LargeMidCap Commodity and Resources GR USD / 11% HFRI Macro (Total) Index / 5% 60/40 MSCI ACWI IMI/BC Global
Low-Cost Passive Portfolio		
10/1/2018	Present	13% MSCI USA IMI NR USD / 7% MSCI World ex USA IMI NR USD / 10% MSCI Emerging Market IMI Net / 15% Russell 3000 / 4% BBgBarc US Aggregate TR / 8% FTSE EPRA/NAREIT Global NR USD / 3% S&P Global Natural Resources Net USD / 3% 50% JPM EMBI GD / 50% JPM GBI-EM / 25% ICE BofAML 91 Days T-Bills TR / 7% 3-Month Libor + 1% / 2% BBgBarc US Treasury TIPS 0-5 Yr TR / 3% Bloomberg Commodity Index TR USD
Liability Benchmark Portfolio		
10/1/2018	Present	BBgBarc US Treasury Long TR
Growth		
10/1/2018	Present	51.73% Public Equity Benchmark / 43.1% Private Markets Benchmark / 5.17% 50% JPM EMBI GD / 50% JPM GBI-EM
11/1/2017	9/30/2018	51.29% MSCI ACWI IMI Net USD / 16.48% Cambridge PE Composite BM / 10.99% S&P Global Leveraged Loan +2% / 7.33% NCREIF Property Index / 60.4% 50% JPM EMBI GD (US)/ 50% JPM GBIEM GD (Lcl) / 60.4% 50% BAML Global HY / 50% S&P Global Leveraged Loan / 1.83% DJ Brookfield Global Infrastructure Net TR USD
7/1/2015	10/31/2017	47.23% MSCI ACWI IMI Net USD / 15.18% Cambridge PE Composite BM / 8.43% S&P Global Leveraged Loan +2% / 8.43% DJ Brookfield Global Infrastructure Net TR USD / 8.43% S&P Global Natural Resources Index TR USD / 5.9% NCREIF Property Index / 3.2% 50% JPM EMBI GD (US)/ 50% JPM GBIEM GD (Lcl) / 3.2% 50% BAML Global HY / 50% S&P Global Leveraged Loan
Public Equity		
10/1/2018	Present	43.33% MSCI USA IMI NR USD / 23.33% MSCI World ex USA IMI NR USD / 33.33% MSCI Emerging Market IMI Net
5/1/2010	9/30/2018	MSCI ACWI IMI Net USD
Global Equity		
7/1/2015	Present	MSCI ACWI IMI Net USD
US Equity		
7/1/2015	Present	MSCI USA IMI NR USD
International Equity		
7/1/2015	Present	MSCI World ex USA

Emerging Markets Equity		
7/1/2015	Present	MSCI Emerging Market IMI Net
Marketable Alternative Equity		
10/1/2014	Present	HFRI Equity Hedge (Total) Index
Private Markets		
10/1/2018	Present	Private Markets
11/1/2017	9/30/2018	64.3% Cambridge PE Composite BM / 28.6% NCREIF Property Index / 7.1% DJ Brookfield Global Infrastructure Net TR USD
7/1/2015	10/31/2017	40% Cambridge PE Composite BM / 15.6% NCREIF Property Index / 22.2% DJ Brookfield Global Infrastructure Net TR USD / 22.2% S&P Global Natural Resources Index TR USD
Northern Trust Russell 3000		
6/1/2018	Present	Russell 3000
Private Equity		
7/1/2018	Present	Cambridge Associates Global Private Equity Index
Private Debt		
		No Benchmark Selected
Private Real Estate		
7/1/2015	Present	NCREIF ODCE Equal Weighted
Private Real Assets		
		No Benchmark Selected
Emerging Markets Debt		
7/1/2015	Present	50% JP Morgan GBI EM Global Diversified TR USD / 50% JP Morgan EMBI Global Diversified
High Yield Debt		
2/1/2013	Present	50% ICE BofAML Global High Yield Constrained Hedged TR / 50% S&P/LSTA Leveraged Loan TR
Zero Beta		
10/1/2018	Present	62.5% ICE BofAML 91 Days T-Bills TR / 15.62% Immunized Cash Flows Benchmark / 21.88% Absolute Return Benchmark
7/1/2015	9/30/2018	HFRI Macro (Total) Index
Short-Term IG Bonds		
10/1/2018	Present	ICE BofAML 91 Days T-Bills TR

Immunized Cash Flows		
10/1/2018	Present	Immunized Cash Flows
Absolute Return		
10/1/2018	Present	3-Month Libor Total Return USD
11/1/2012	9/30/2018	HFRI Macro (Total) Index
Macro		
10/1/2014	Present	HFRI Macro (Total) Index
Relative Value		
10/1/2014	Present	HFRI Relative Value (Total) Index
Cash		
1/1/2006	Present	ICE BofAML 91 Days T-Bills TR
Other		
10/1/2018	Present	50% NCREIF-ODCE / 30% Bloomberg Commodity Index TR USD / 20% BBgBarc U.S. TIPS 0-5 Years
11/1/2017	9/30/2018	76.74% BBgBarc Global Aggregate TR / 11.63% NCREIF Property Index / 11.63% Bloomberg Commodity Index TR USD
7/1/2015	10/31/2017	51.18% BBgBarc Global Aggregate TR / 11.78% NCREIF Property Index / 20.2% Bloomberg Commodity Index TR USD / 16.84% 60/40 MSCI ACWI/BBgBarc Global Aggregate
Core Real Estate		
7/1/2004	Present	NCREIF-ODCE
Commodities		
5/1/2010	Present	Bloomberg Commodity Index TR USD
TIPS		
3/1/2017	Present	100% BBgBarc US Treasury TIPS 0-5 Yr TR
Core Bonds		
7/1/2015	Present	BBgBarc Global Aggregate TR
Overlay		
11/1/2011	Present	91 Day T-Bills

Glossary and Notes

Credit Risk: Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security.)

Duration: Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

Information Ratio: This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

Jensen's Alpha: A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk. Portfolio Return- [Risk Free Rate+Beta*(market return-Risk Free Rate)].

Market Capitalization: For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

Market Weighted: Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

Maturity: The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

Prepayment Risk: The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

Price-Book Value (P/B) Ratio: The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

Price-Earnings (P/E) Ratio: A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about is future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

Quality Rating: The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

Sharpe Ratio: A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

Standard Deviation: A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

STIF Account: Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

Style: The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

Yield to Maturity: The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a "basis book." For example, a 5% bond pays $5 a year interest on each $100 par value. To figure its current yield, divide $5 by $95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay $100 for the bond that can be bought now for $95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

$$\frac{5\%\ \text{(discount)}}{5\ \text{(yrs. to maturity)}} = \begin{array}{c}1\%\ \text{pro rata, plus}\\ 5.26\%\ \text{(current yield)}\end{array} = 6.26\%\ \text{(yield to maturity)}$$

Sources: Investment Terminology, International Foundation of Employee Benefit Plans, 1999.
The Handbook of Fixed Income Securities, Fabozzi, Frank J., 1991.

Notes

The Russell Indices®, TM, SM are trademarks/service marks of the Frank Russell Company.

Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.