



PA Public School Employees' Retirement System | Fourth Quarter 2016

Quarterly Investment Review

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Market Highlights

	Performance(%)							Inception Date
	1 Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	Since Inception	
Equity								
Dow Jones U.S. Total Stock Market Index	4.14	8.76	12.62	8.36	14.59	7.18	10.12	01/01/1987
S&P 500 Index	3.82	7.82	11.96	8.87	14.66	6.95	10.05	01/01/1926
MSCI USA IMI	4.00	8.60	12.66	8.45	14.65	7.26	9.53	06/01/1994
MSCI USA Large Cap Index	3.65	7.69	11.47	8.85	14.60	6.97	9.08	06/01/1994
MSCI USA Small Cap Index	6.96	14.25	19.80	7.48	15.20	8.15	9.69	01/01/2001
MSCI EAFE Index (Net)	-0.71	5.67	1.00	-1.60	6.53	0.75	8.62	01/01/1970
MSCI EAFE Index (hedged)	6.91	13.02	3.12	2.83	8.80	-0.24	7.08	01/01/1970
MSCI EAFE Index (Price)	-1.04	4.70	-1.88	-4.20	3.58	-2.06	6.19	01/01/1970
MSCI EAFE Small Cap Index (Net)	-2.86	5.54	2.18	2.10	10.56	2.95	8.03	01/01/2001
MSCI AC World ex USA IMI Index (Net)	-1.57	5.37	4.41	-1.44	5.35	1.22	4.62	06/01/1994
MSCI AC World ex USA Index (Net)	-1.25	5.57	4.50	-1.78	5.00	0.96	4.06	01/01/2001
MSCI Emerging Markets Index (Net)	-4.16	4.49	11.19	-2.55	1.28	1.84	10.02	02/01/1988
Fixed Income								
Bimbg. Barc. U.S. Aggregate	-2.98	-2.53	2.65	3.03	2.23	4.34	7.55	01/01/1976
Bimbg. Barc. U.S. Treasury: Long	-11.67	-11.98	1.33	7.78	2.52	6.68	8.31	01/01/1973
Barclays Global Agg GDP Weighted Dev x U.S. Index (unhedged)	-8.67	-7.55	1.47	-2.34	-0.42	2.78	2.28	01/01/2005
Barclays Global Agg GDP Weighted Dev x U.S. Index (hedged)	-1.96	-1.08	4.90	4.93	4.65	4.59	4.52	01/01/2005
Bimbg. Barc. U.S. Corp: High Yield	1.75	7.40	17.13	4.66	7.36	7.45	9.04	07/01/1983
Bimbg. Barc. Emerging Market 10% Country Cap Index	-6.84	-4.58	6.85	-2.97	0.05	N/A	2.12	07/01/2008
Bimbg. Barc. Global Inflation-Linked: U.S. TIPS	-2.41	-1.47	4.68	2.26	0.89	4.36	5.60	10/01/1997
Barclays World Inflation Linked Bonds (hedged)	-2.06	1.64	10.22	5.92	3.47	5.06	6.14	01/01/1997
Barclays Universal Index	-2.61	-1.68	3.91	3.28	2.78	4.57	6.32	01/01/1990
Libor (3 month)	0.23	0.42	0.74	0.43	0.40	1.15	5.77	01/01/1977
BofA Merrill Lynch 3 Month US T-Bill	0.08	0.18	0.33	0.14	0.12	0.80	5.09	01/01/1978
BofA Merrill Lynch US Treasury Bills 0-3M	0.07	0.14	0.25	0.10	0.08	0.72	2.60	07/01/1992

Market Highlights

	Performance(%)						Since Inception	Inception Date
	1 Quarter	FYTD	1 Year	3 Years	5 Years	10 Years		
MLP								
S&P MLP Index	3.32	6.34	21.95	-5.18	3.03	8.19	10.75	08/01/2001
Infrastructure								
FTSE Dev. Core Infrastr 50/50 Index (Net) (Hedged)	-1.03	-0.37	11.81	9.33	11.35	N/A	10.32	01/01/2010
FTSE Developed Core Infrastr 50/50 Index (Net)	-3.87	-3.01	10.63	5.86	8.84	N/A	8.93	01/01/2010
Risk Parity								
Blended Policy (Risk Parity)	-3.93	-0.34	12.20	5.33	N/A	N/A	2.82	10/01/2012
Commodities								
Bloomberg Commodity Index Total Return	2.66	-1.31	11.74	-11.26	-8.96	-5.58	2.43	02/01/1991
Bloomberg Gold Subindex Total Return	-12.70	-13.35	7.73	-1.93	-6.52	5.27	4.40	02/01/1991
Real Estate								
Burgiss (Lagged) - Opportunistic	-1.05	-1.25	1.15	6.50	7.85	3.79	8.03	01/01/1989
Burgiss (Lagged) - Value Added	1.33	2.59	6.15	10.50	9.91	2.59	6.32	07/01/1988
NCREIF ODCE NOF 1 Quarter Lag	1.83	3.77	9.08	11.42	11.33	5.05	7.68	04/01/1978
FTSE EPRA/NAREIT Developed Index (Net)	-5.59	-4.41	4.06	5.90	9.48	1.48	5.74	03/01/2005
FTSE EPRA NAREIT Custom Dev 100% Hedged USD (Net)	-2.58	-1.50	5.36	8.71	11.98	N/A	11.98	01/01/2012
Wilshire US Real Estate Securities Index	-2.20	-3.57	7.62	14.05	12.24	4.80	11.99	01/01/1978
Private Markets								
Burgiss (Lagged) - PE/PD/VC/Int	0.74	1.26	2.34	4.34	4.82	3.75	3.19	04/01/1998
Burgiss (Lagged) - PE/PD	0.98	1.59	2.92	4.76	5.27	4.08	5.11	01/01/2003
Burgiss (Lagged) - VC	-0.30	-0.23	-0.77	1.75	1.35	-0.16	-0.99	01/01/2003
Burgiss (Lagged) - Int	-0.69	-0.64	-0.19	0.07	N/A	N/A	-6.72	04/01/2012

As of December 31, 2016

Trailing Period Performance

	Performance(%)										Inception Date
	1 Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Since Inception			
PSERS Total Fund	1.43	5.13	9.32	10.95	5.82	7.47	4.36	6.52			09/01/1997
Blended Policy (Total Plan)	-0.58	2.08	6.29	8.80	4.22	5.40	3.10	N/A			N/A
Value Added	2.01	3.05	3.03	2.15	1.60	2.07	1.26	N/A			N/A
Total Public Market Composite	0.45	4.41	9.50	10.97	4.07	5.93	3.68	6.43			06/01/2002
Blended Policy (Public Market) (Hedged)	-0.96	2.48	7.97	11.05	3.29	4.86	2.69	5.09			
Value Added	1.41	1.93	1.53	-0.08	0.78	1.07	0.99	1.34			
Blended Policy (Public Market) (Unhedged)	-2.29	0.88	5.91	9.70	2.31	4.25	2.39	4.88			
Value Added	2.74	3.53	3.59	1.27	1.76	1.68	1.29	1.55			
Total Private Market Composite	4.20	7.15	8.89	10.92	9.68	10.70	6.87	9.92			12/01/1992
Blended Policy (Private Market)	0.45	0.94	1.73	2.80	5.88	6.35	4.71	N/A			
Value Added	3.75	6.21	7.16	8.12	3.80	4.35	2.16	N/A			

*PSERS Total Fund and Public Markets Composites incorporate the levered returns for the PSERS Gold and PSERS U.S. Long Treasuries accounts.

**Total Fund Blended Policy Benchmark incorporates the performance of the Public Market Blended Policy Benchmark (Hedged).

As of December 31, 2016

Trailing Period Performance

Performance (%)

Since
July 2011

6.41

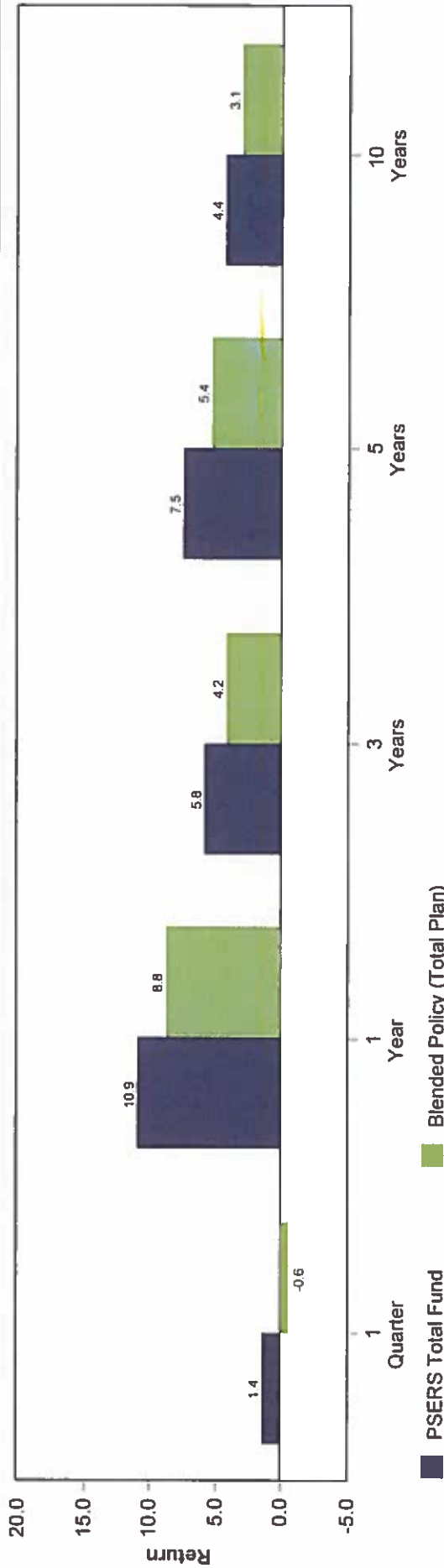
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PSERS Total Fund

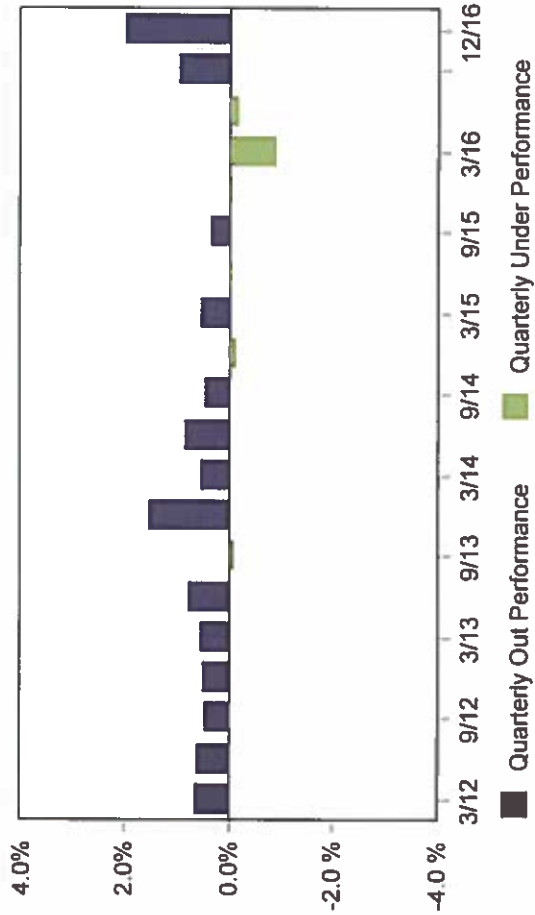
Blended Policy (Total Plan)

Performance Summary

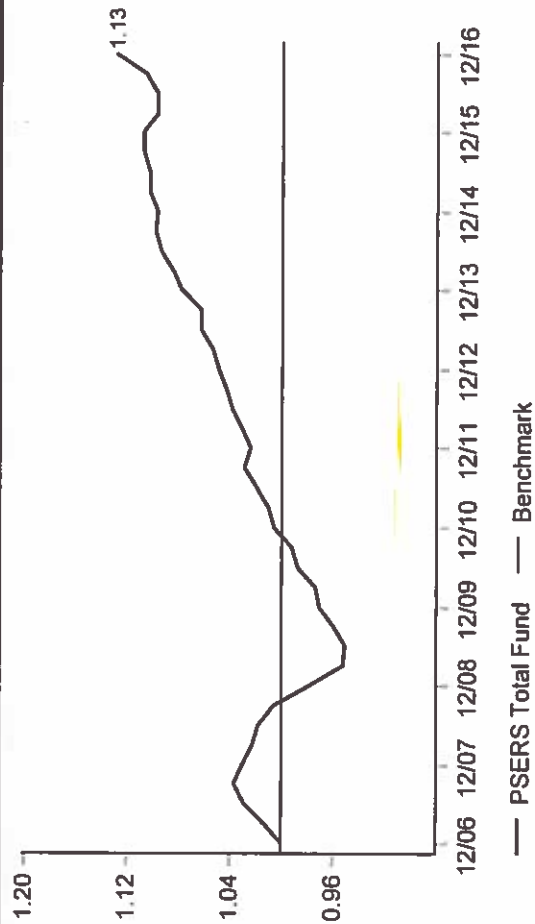
Return Summary



Quarterly Excess Performance

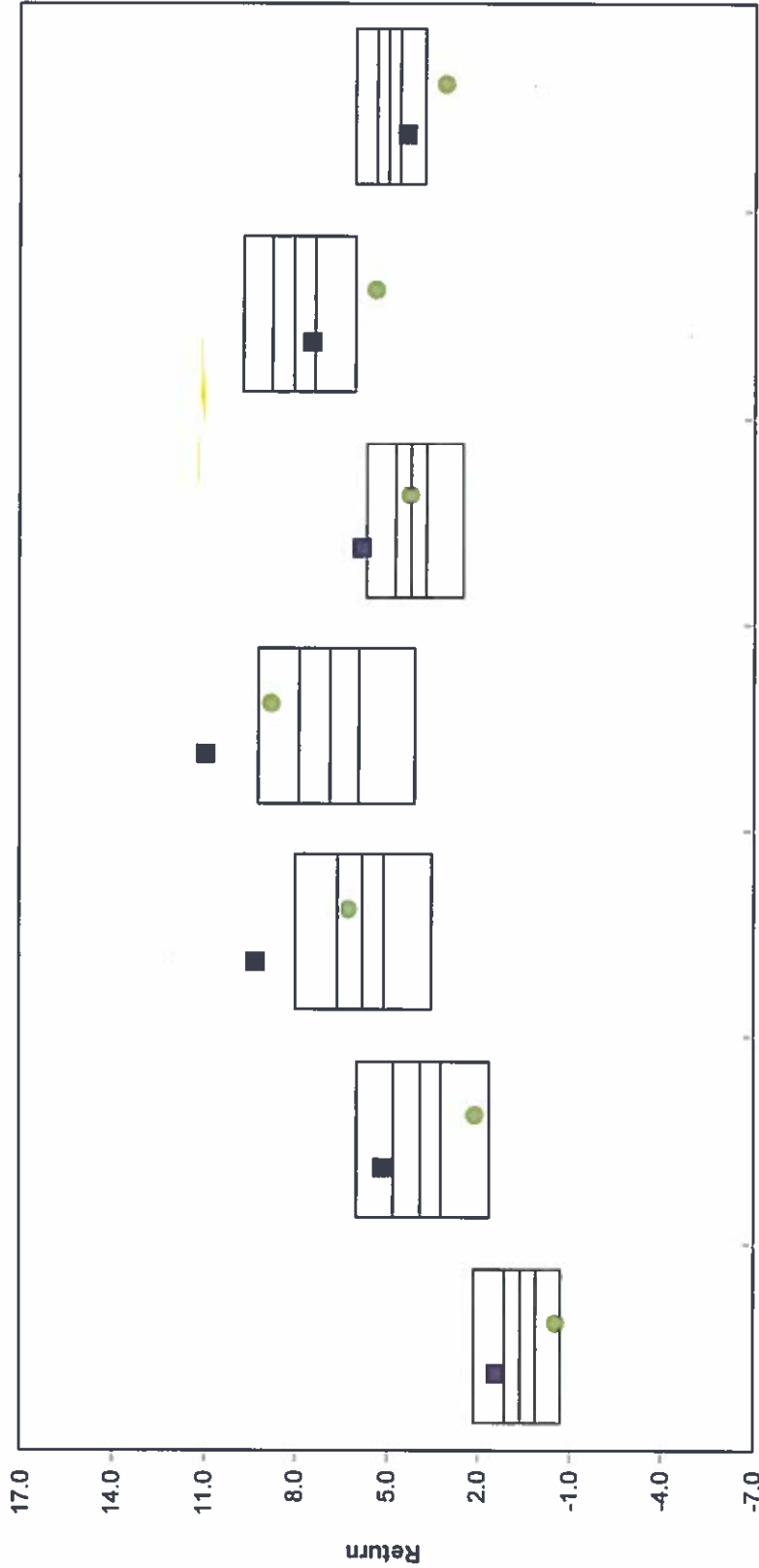


Ratio of Cumulative Wealth - 10 Years



Peer Group Analysis

All Public Plans-Total Fund



■ PSERS Total Fund
● Blended Policy (Total Plan)

5th Percentile
1st Quartile
Median
3rd Quartile
95th Percentile

Population

Parenttheses contain percentile rankings.

410

403

387

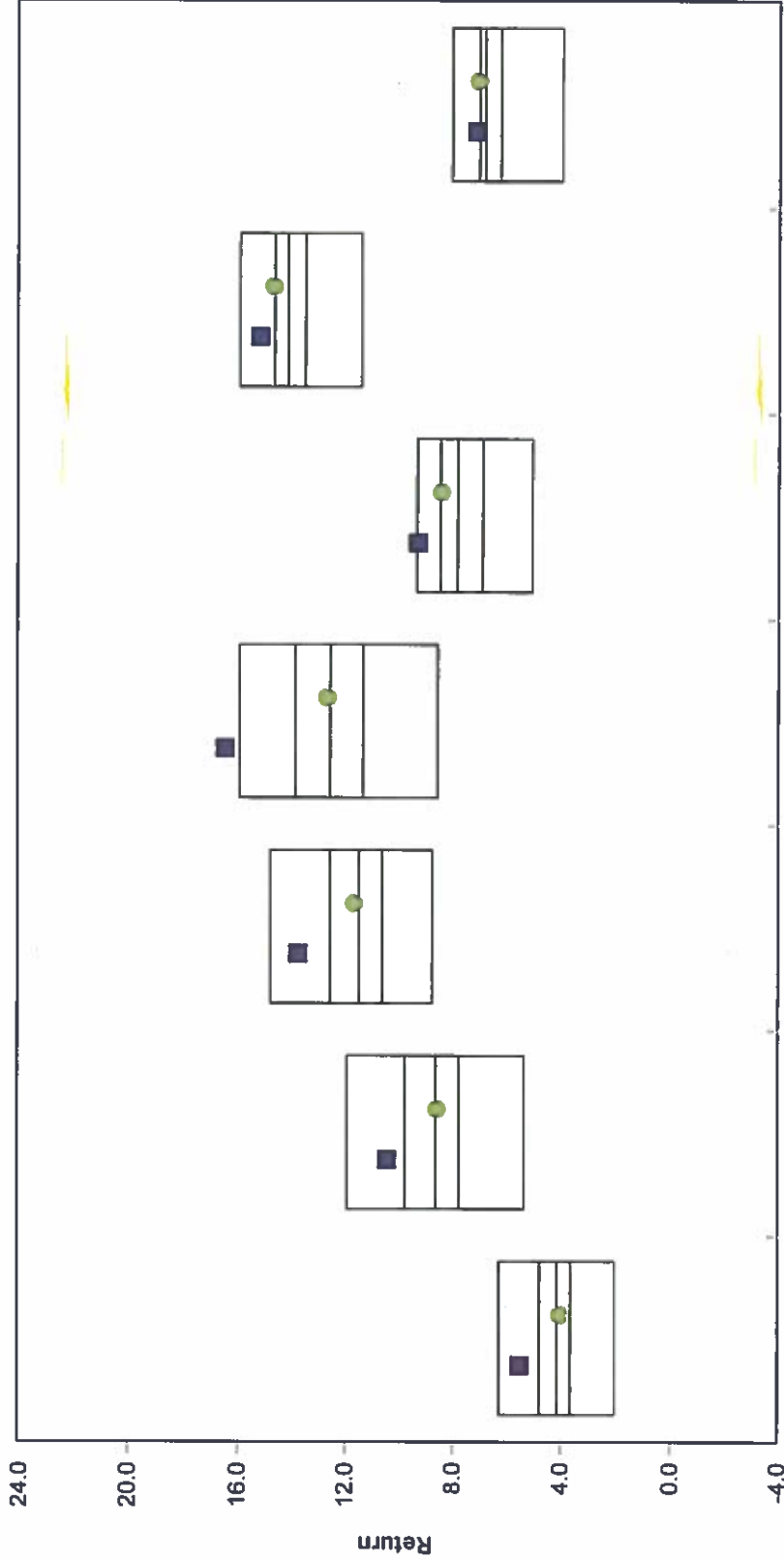
376

259



Plan Sponsor Peer Group Analysis

All Public Plans-US Equity Segment



	1 Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years
■ Total US Equity Composite	5.55 (10)	10.44 (15)	13.70 (10)	16.38 (4)	9.29 (6)	15.14 (10)	7.16 (23)
● Blended Policy (Tot US Eq)	4.00 (62)	8.60 (53)	11.61 (44)	12.66 (49)	8.45 (28)	14.65 (24)	7.06 (25)

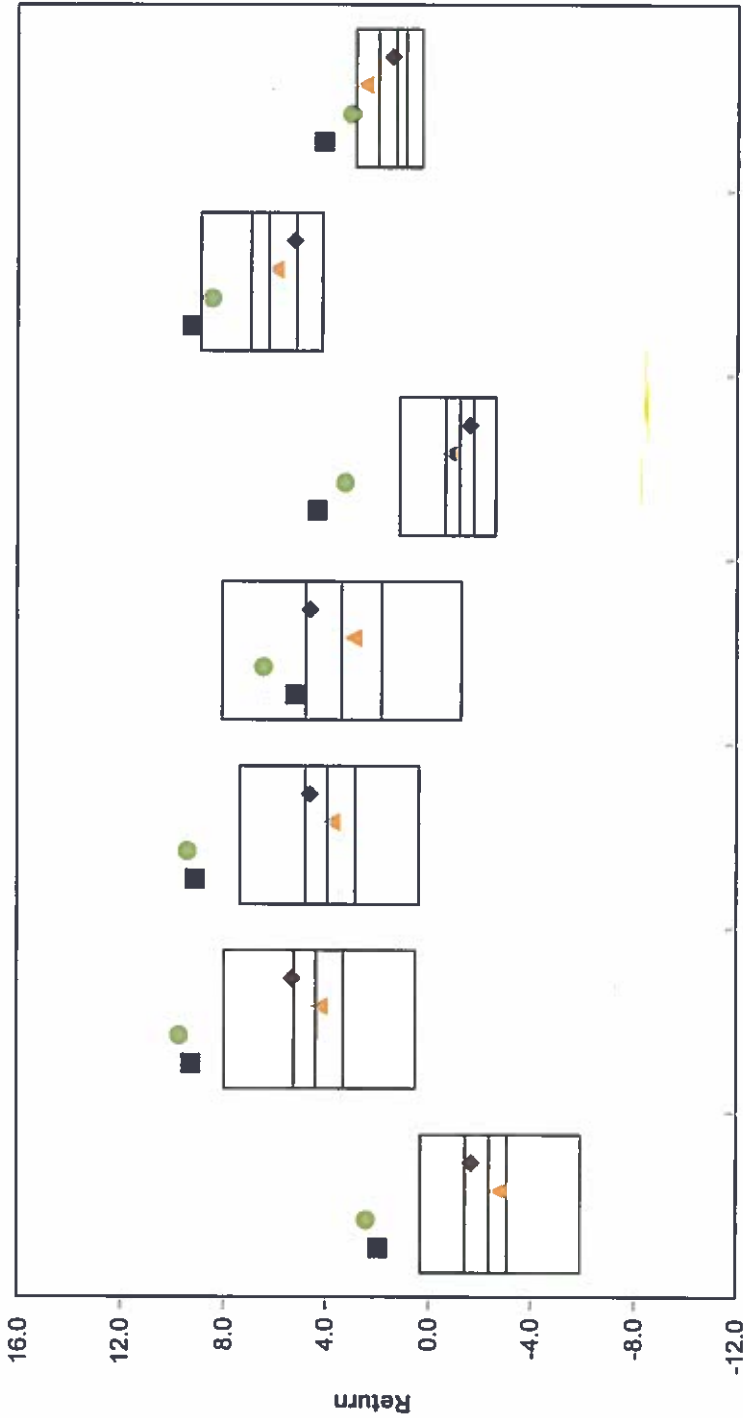
5th Percentile	6.34	11.95	14.79	15.90	9.35	15.87	8.06
1st Quartile	4.84	9.79	12.58	13.85	8.51	14.64	7.06
Median	4.15	8.65	11.47	12.58	7.89	14.11	6.89
3rd Quartile	3.65	7.78	10.62	11.38	6.94	13.48	6.28
95th Percentile	2.01	5.36	8.76	8.58	5.07	11.45	4.06
Population	107	106	102	101	94	80	39

Parentheses contain percentile rankings.



Plan Sponsor Peer Group Analysis

All Public Plans-Intl. Equity Segment



	1 Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years
■ Total Non-U.S. Equity Composite (hedged)	1.88 (1)	9.21 (2)	9.11 (1)	5.15 (24)	4.30 (1)	9.27 (5)	4.09 (1)
● Blended Policy (Total Non-US Eq) (Hedged)	2.38 (1)	9.69 (2)	9.39 (1)	6.43 (13)	3.26 (2)	8.44 (8)	3.01 (5)
▲ Total Non-U.S. Equity Composite (unhedged)	-2.76 (67)	4.25 (56)	3.76 (55)	2.96 (57)	-0.80 (34)	6.03 (60)	2.54 (10)
◆ Blended Policy (Total Non-US Eq) (Unhedged)	-1.68 (35)	5.32 (24)	4.67 (31)	4.67 (29)	-1.57 (67)	5.27 (73)	1.49 (43)

5th Percentile	8.02	7.34	7.34	8.10	1.12	8.95	2.88
1st Quartile	-1.39	5.23	4.82	4.80	-0.61	7.00	2.01
Median	-2.32	4.45	3.98	3.43	-1.16	6.32	1.33
3rd Quartile	-3.08	3.32	2.88	1.84	-1.76	5.19	0.93
95th Percentile	-5.90	0.55	0.35	-1.26	-2.59	4.15	0.26

Population

101

101

96

96

85

72

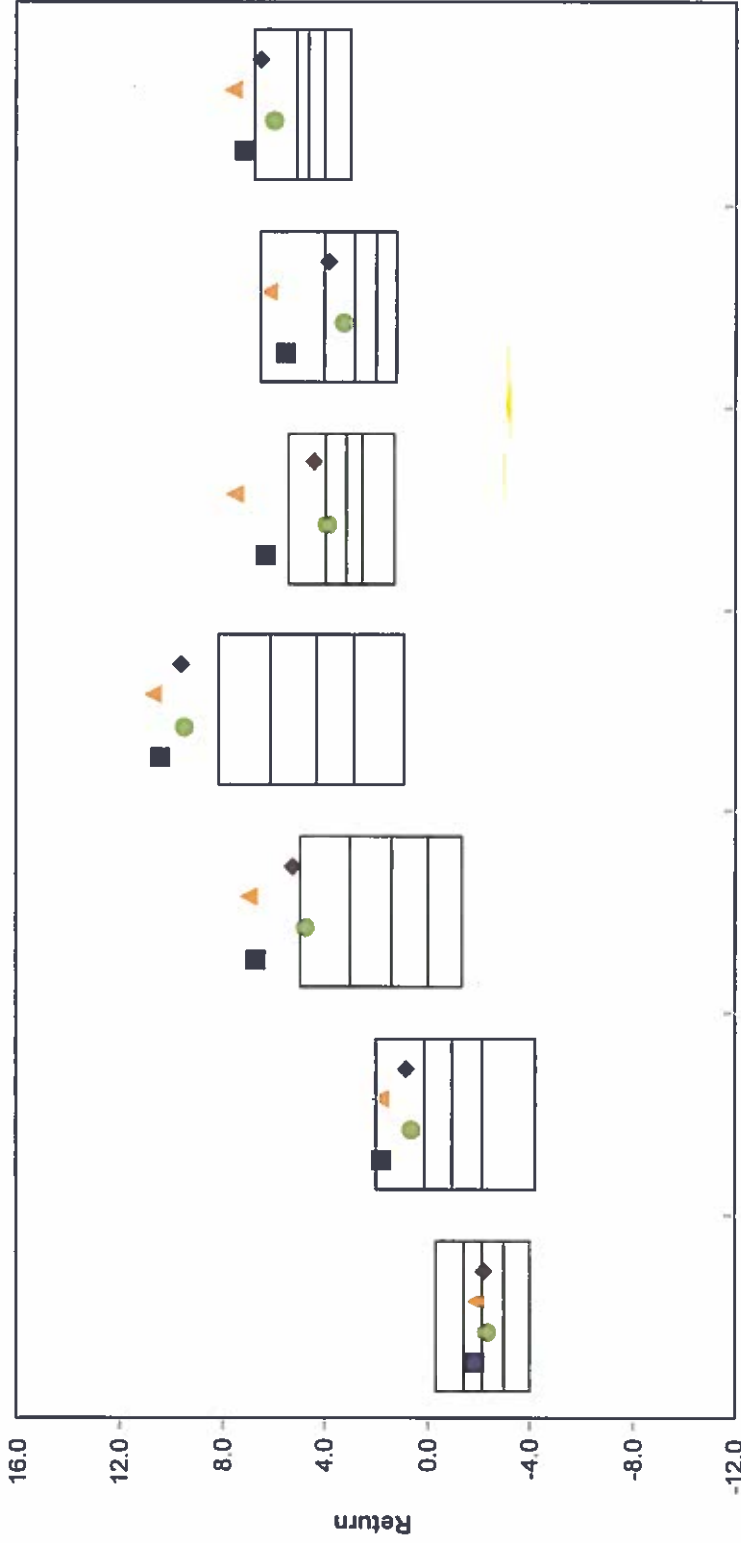
36

Parentheses contain percentile rankings.



Plan Sponsor Peer Group Analysis

All Public Plans-US Fixed Income Segment



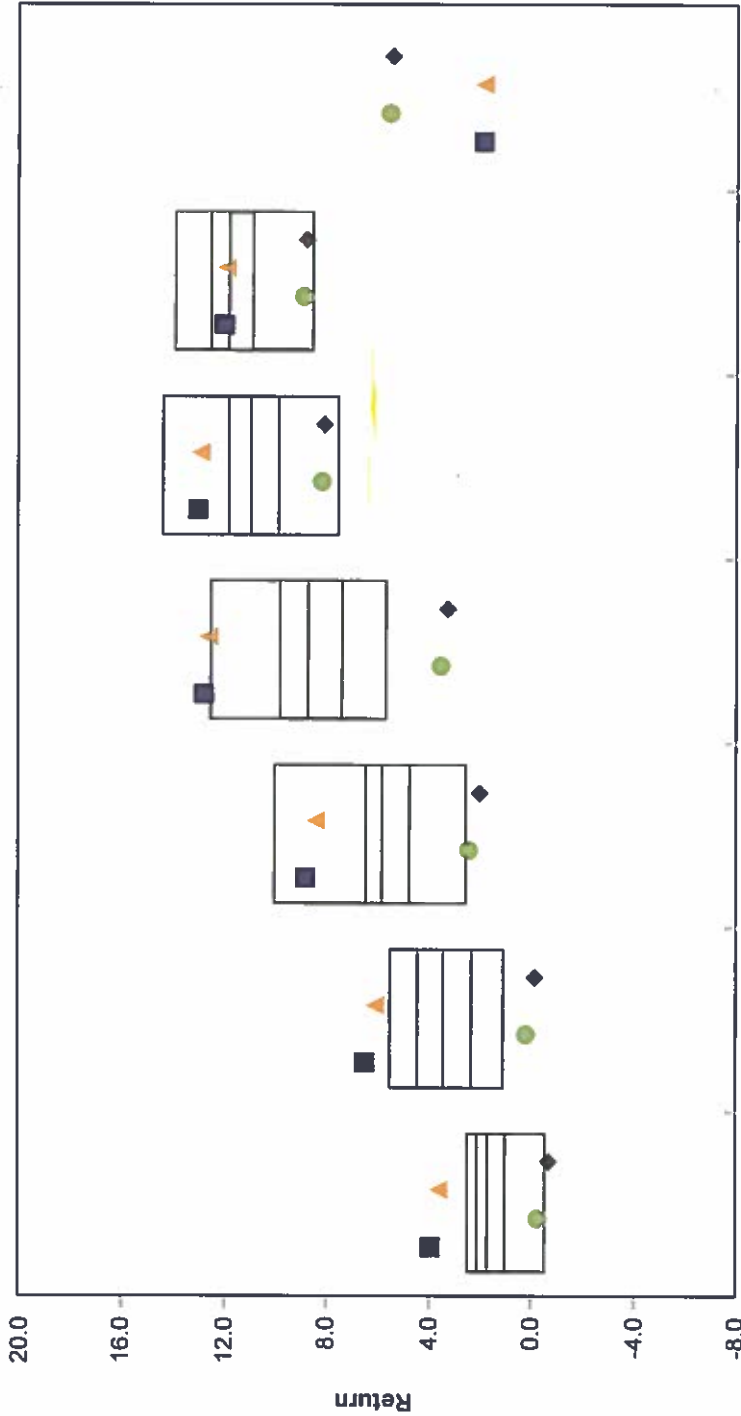
	1 Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years
Total Fixed Income Composite	-1.93 (41)	1.75 (8)	6.70 (1)	10.43 (2)	6.29 (2)	5.52 (8)	7.12 (4)
Blended Policy (Total FI)	-2.33 (56)	0.61 (20)	4.75 (7)	9.49 (3)	3.90 (28)	3.27 (40)	5.96 (11)
Total US Fixed Income Composite	-1.92 (41)	1.87 (7)	6.96 (1)	10.71 (1)	7.54 (1)	6.23 (7)	7.61 (3)
Blended Policy (Total US FI)	-2.19 (53)	0.87 (15)	5.25 (5)	9.61 (2)	4.39 (18)	3.87 (28)	6.49 (7)
5th Percentile	-0.31	1.99	4.93	8.17	5.44	6.51	6.78
1st Quartile	-1.42	0.11	3.01	6.14	3.98	4.01	5.09
Median	-2.09	-0.98	1.34	4.34	3.20	2.87	4.64
3rd Quartile	-2.95	-2.11	-0.03	2.83	2.51	1.97	4.05
95th Percentile	-3.99	-4.25	-1.33	0.89	1.28	1.22	3.01
Population	101	100	96	96	88	77	39

Parenttheses contain percentile rankings.



Plan Sponsor Peer Group Analysis

All Public Plans-Real Estate Segment



	1 Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years
■ Total Real Estate (levered/hedged)	3.92 (3)	6.43 (5)	8.76 (8)	12.78 (4)	13.01 (11)	11.97 (40)	1.92 (N/A)
● Blended Policy (Total Real Estate) (Hedged)	-0.32 (95)	0.20 (99)	2.39 (99)	3.52 (100)	8.21 (88)	8.85 (94)	5.51 (N/A)
▲ Total Real Estate (levered/unhedged)	3.59 (3)	6.10 (5)	8.44 (8)	12.58 (5)	12.94 (12)	11.93 (42)	1.90 (N/A)
◆ Blended Policy (Total Real Estate) (Unhedged)	-0.70 (97)	-0.16 (100)	2.03 (100)	3.30 (100)	8.12 (88)	8.79 (94)	5.48 (N/A)

5th Percentile	2.47	5.57	10.08	12.53	14.41	13.92	N/A
1st Quartile	2.12	4.47	6.45	9.79	11.81	12.52	N/A
Median	1.71	3.42	5.81	8.72	10.96	11.87	N/A
3rd Quartile	1.01	2.33	4.76	7.43	9.85	10.88	N/A
95th Percentile	-0.51	1.09	2.58	5.69	7.55	8.54	N/A

Population

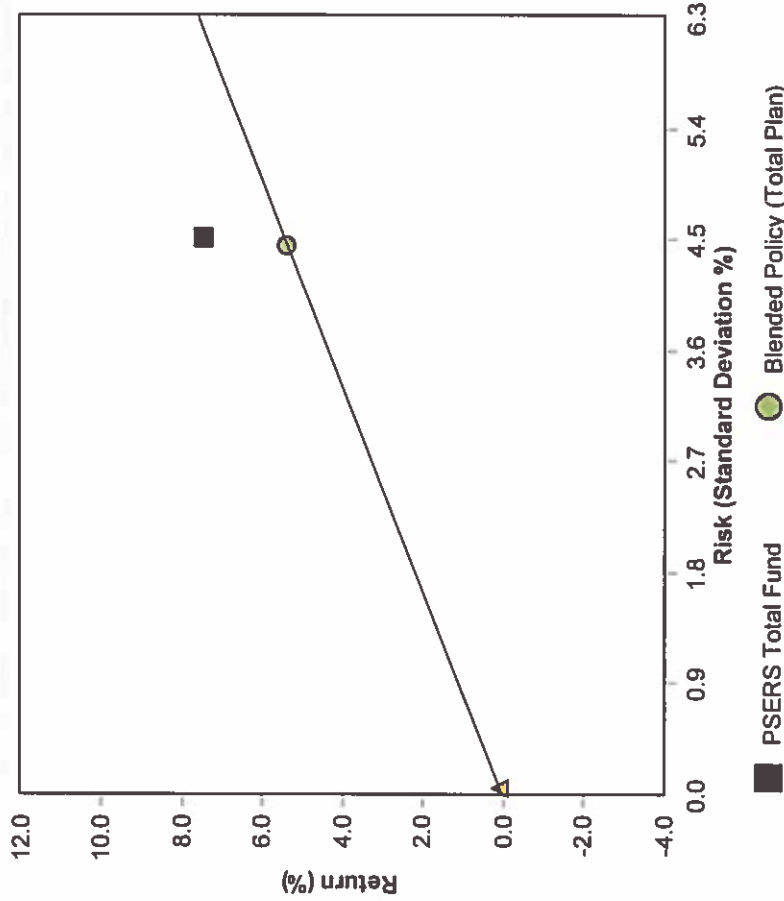
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Parenttheses contain percentile rankings.

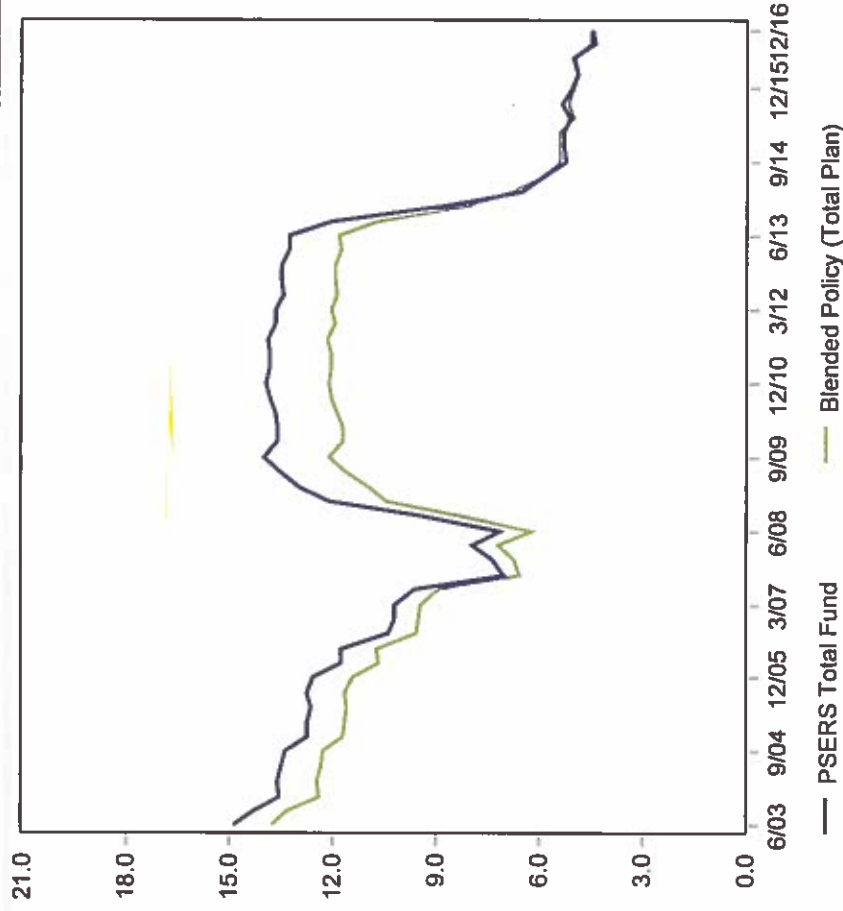


Risk Profile

Annualized Return vs. Annualized Standard Deviation
5 Years



Rolling 5 Years Standard Deviation



5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
PSERS Total Fund	1.98	1.26	1.57	0.92	1.61	2.13	0.97	7.47	4.52	0.96
Blended Policy (Total Plan)	0.00	0.00	N/A	1.00	1.19	0.00	1.00	5.40	4.45	1.00
Citigroup 3 Month T-Bill	-5.29	4.45	-1.19	0.01	N/A	0.09	0.00	0.09	0.05	0.08

As of December 31, 2016

Trailing Period Performance

	Performance(%)						Since Inception	Inception Date
	1 Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	
Total Public and Private Equity Exposure (hedged)	3.54	8.58	9.95	9.43	N/A	N/A	N/A	10/01/2014
Total Public Equity Composite (hedged)	3.19	9.63	10.84	9.19	6.02	11.67	5.36	07/01/1998
Blended Policy (Public Equity) (Hedged)	3.05	9.31	10.31	8.89	5.35	11.13	4.78	5.44
Value Added	0.14	0.32	0.53	0.30	0.67	0.54	0.58	0.95
Total US Equity Composite	5.55	10.44	13.70	16.38	9.29	15.14	7.16	5.98
Blended Policy (Tot US Eq)	4.00	8.60	11.61	12.66	8.45	14.65	7.06	4.93
Value Added	1.55	1.84	2.09	3.72	0.84	0.49	0.10	1.05
Total Non-U.S. Equity Composite (hedged)	1.88	9.21	9.11	5.15	4.30	9.27	4.09	5.09
Blended Policy (Total Non-US Eq) (Hedged)	2.38	9.69	9.39	6.43	3.26	8.44	3.01	4.14
Value Added	-0.50	-0.48	-0.28	-1.28	1.04	0.83	1.08	0.95
Emerging Markets Equity Composite	-11.51	-5.76	-4.46	-3.95	-3.64	1.56	1.54	7.26
Blended Policy (MSCI EM net)	-4.16	4.49	5.18	11.19	-2.55	1.28	1.88	7.96
Value Added	-7.35	-10.25	-9.64	-15.14	-1.09	0.28	-0.34	-0.70
Total Alternative Investments (hedged)	3.93	7.17	8.74	9.63	7.29	9.54	9.39	9.90
Burgiss (Lagged) - PE/PDVC/Int	0.74	1.26	1.17	2.34	4.34	4.82	3.75	3.19
Burgiss (Lagged) - Int	-0.69	-0.64	-1.40	-0.19	0.07	N/A	N/A	-6.72
Burgiss (Lagged) - VC	-0.30	-0.23	-1.41	-0.77	1.75	1.35	-0.16	-0.99
Burgiss (Lagged) - PE/PD	0.98	1.59	1.68	2.92	4.76	5.27	4.08	5.11
Total Fixed Income Composite (hedged)	-1.93	1.75	6.70	10.43	6.29	5.52	7.12	6.70
Blended Policy (Total FI)	-2.33	0.61	4.75	9.49	3.90	3.27	5.96	5.85
Value Added	0.40	1.14	1.95	0.94	2.39	2.25	1.16	0.85
Investment Grade Composite	-8.00	-7.09	-3.30	2.62	4.12	N/A	N/A	3.43
Blended Policy (Investment Grade)	-5.81	-5.55	-2.23	2.23	4.12	2.15	5.09	2.30
Value Added	-2.19	-1.54	-1.07	0.39	N/A	N/A	N/A	1.13
US Core Plus Fixed Income Composite	-1.68	-0.01	1.11	3.95	4.23	3.94	5.30	5.12
Blended Policy (Barclays Aggregate Index)	-2.98	-2.53	-0.37	2.65	3.03	2.23	4.26	4.21
Value Added	1.30	2.52	1.48	1.30	1.20	1.71	1.04	0.91
Non-U.S. Developed Markets Fixed Income	-1.26	-0.15	2.94	6.23	-0.26	0.72	3.89	4.77
Blended Policy (Barclays Global Agg GDP weighted)	-1.96	-1.08	1.57	4.90	-1.07	0.35	3.26	N/A
Value Added	0.70	0.93	1.37	1.33	0.81	0.37	0.63	N/A
U.S. Long Treasuries Composite (unlevered)	-12.39	-13.38	-7.59	-0.04	5.50	N/A	N/A	0.82
Blmbyg. Barc. U.S. Treasury: Long	-11.67	-11.98	-6.31	1.33	7.78	2.52	6.68	1.87
Value Added	-0.72	-1.40	-1.28	-1.37	-2.28	N/A	N/A	-1.05
Credit-Related (hedged)	2.08	5.94	10.72	9.75	N/A	N/A	N/A	3.20
Blended Policy (Credit-Related)	0.78	5.59	10.51	15.99	N/A	N/A	N/A	2.89
Value Added	1.30	0.35	0.21	-6.24	N/A	N/A	N/A	0.31
Emerging Markets Fixed Income	-1.11	3.86	7.55	9.28	-0.47	2.01	N/A	2.91

*The indicated index in parenthesis of Blended Policy represents current benchmark. Description of Blended Policy is provided in Appendix of this report

As of December 31, 2016

Trailing Period Performance

	Performance(%)										Inception Date
	1 Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	Since Inception			
Blended Policy (Barclays Emerging Mkt 10% Country Cap)	-6.84	-4.58	-2.74	6.85	-2.97	0.05	4.55	1.20			
Value Added	5.73	8.44	10.29	2.43	2.50	1.96	N/A	1.71			
High Yield Fixed Income Composite (hedged)	2.32	6.09	10.97	9.72	5.89	8.94	7.16	7.80			10/01/1999
Blended Policy (Barclays Corporate HY)	1.75	7.40	13.33	17.13	4.66	7.36	7.51	7.66			
Value Added	0.57	-1.31	-2.36	-7.41	1.23	1.58	-0.35	0.14			
Inflation Protected (levered)	-2.05	4.13	10.61	17.80	N/A	N/A	N/A	7.60			10/01/2014
Blended Policy (Barclays World Inflation Linked Bond - Hedged)	-2.06	1.64	5.85	10.22	3.92	1.87	4.87	3.59			
Value Added	0.01	2.49	4.76	7.58	N/A	N/A	N/A	4.01			
Inflation Protected (unlevered)	-0.88	2.27	5.54	9.13	7.98	4.17	9.04	7.73			04/01/2004
Blended Policy (Barclays World Inflation Linked Bond - Hedged)	-2.06	1.64	5.85	10.22	3.92	1.87	4.87	4.32			
Value Added	1.18	0.63	-0.31	-1.09	4.06	2.30	4.17	3.41			
TIPS Composite (unlevered)	-0.88	2.27	5.54	9.13	7.98	4.17	9.04	7.73			04/01/2004
Blended Policy (Barclays World Inflation Linked Bond - Hedged)	-2.06	1.64	5.85	10.22	3.92	1.87	4.87	4.32			
Value Added	1.18	0.63	-0.31	-1.09	4.06	2.30	4.17	3.41			
PIMCO Multi-Sector Strategy	-2.97	-1.49	2.14	7.11	2.90	N/A	N/A	2.98			07/01/2012
Blended Policy (PIMCO Multi-Sector)	-3.85	-3.34	0.31	6.36	3.24	3.26	4.87	3.09			
Value Added	0.88	1.85	1.83	0.75	-0.34	N/A	N/A	-0.11			
Real Assets (unlevered/hedged)	1.16	2.88	11.16	15.02	N/A	N/A	N/A	1.75			10/01/2014
Blended Policy (Real Assets) (Hedged)	-0.67	-0.79	7.35	9.34	N/A	N/A	N/A	-1.19			
Value Added	1.83	3.67	3.81	5.68	N/A	N/A	N/A	2.94			
MLP Composite	2.90	7.77	32.54	24.62	-0.79	8.64	N/A	16.43			10/01/2008
S&P MLP Index	3.32	6.34	30.19	21.95	-5.18	3.03	8.19	12.02			
Value Added	-0.42	1.43	2.35	2.67	4.39	5.61	N/A	4.41			
Infrastructure Composite (unlevered/hedged)	-1.03	-0.59	4.51	11.66	N/A	N/A	N/A	7.11			11/01/2015
FTSE Dev. Core Infrastr 50/50 Index (Net) (Hedged)	-1.03	-0.37	4.67	11.81	9.33	11.35	N/A	6.35			
Value Added	0.00	-0.22	-0.16	-0.15	N/A	N/A	N/A	0.76			
Commodities Composite (unlevered)	-2.81	-3.67	6.08	14.74	-5.68	-5.26	-2.19	-1.67			11/01/2006
Blended Policy (Commodities)	-3.27	-5.81	4.12	10.80	-7.91	-7.07	-4.61	-4.48			
Value Added	0.46	2.14	1.96	3.94	2.23	1.81	2.42	2.81			
Total Real Estate (unlevered/hedged)	3.49	5.90	8.14	12.00	12.69	11.78	1.83	8.13			04/01/1981
Blended Policy (Total Real Estate) (Hedged)	-0.32	0.20	2.39	3.52	8.21	8.85	5.51	8.43			
Value Added	3.81	5.70	5.75	8.48	4.48	2.93	-3.68	-0.30			
Private Real Estate Composite	4.61	7.19	9.15	12.95	13.17	12.24	2.22	9.35			07/01/1996
Blended Policy (Private Real Estate)	0.00	0.44	2.53	3.44	8.06	8.75	5.46	9.54			
Value Added	4.61	6.75	6.62	9.51	5.11	3.49	-3.24	-0.19			
PTRES Composite (unlevered/hedged)	-3.93	-2.73	1.70	6.04	7.70	8.15	1.98	9.10			07/01/1998
Blended Policy (PTRES) (Hedged)	-2.58	-1.50	1.79	5.36	6.41	9.85	1.80	8.39			
Value Added	-1.35	-1.23	-0.09	0.68	1.29	-1.70	0.18	0.71			

*The indicated index in parenthesis of Blended Policy represents current benchmark. Description of Blended Policy is provided in Appendix of this report

As of December 31, 2016

Trailing Period Performance

	Performance(%)							Inception Date
	1 Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	10 Years	
Risk Parity Composite (vol adjusted)	-1.03	2.62	8.26	11.14	4.60	N/A	N/A	2.44
Blended Policy (Risk Parity)	-3.93	-0.34	6.13	12.20	5.33	N/A	N/A	2.82
Value Added	2.90	2.96	2.13	-1.06	-0.73	N/A	N/A	-0.38
Total Absolute Return	4.23	6.78	5.83	3.71	3.49	3.75	5.62	5.31
Blended Policy (3-month Libor + 3.5%)	1.10	2.17	3.21	4.27	4.56	5.73	6.83	6.96
Value Added	3.13	4.61	2.62	-0.56	-1.07	-1.98	-1.21	-1.65
Unallocated Cash & Cash Equivalents	0.08	0.21	0.35	0.40	0.34	1.02	0.15	0.41
BofA Merrill Lynch 3 Month US T-Bill	0.08	0.18	0.25	0.33	0.14	0.12	0.80	2.05
Value Added	0.00	0.03	0.10	0.07	0.20	0.90	-0.65	-1.64

*The indicated index in parenthesis of Blended Policy represents current benchmark. Description of Blended Policy is provided in Appendix of this report

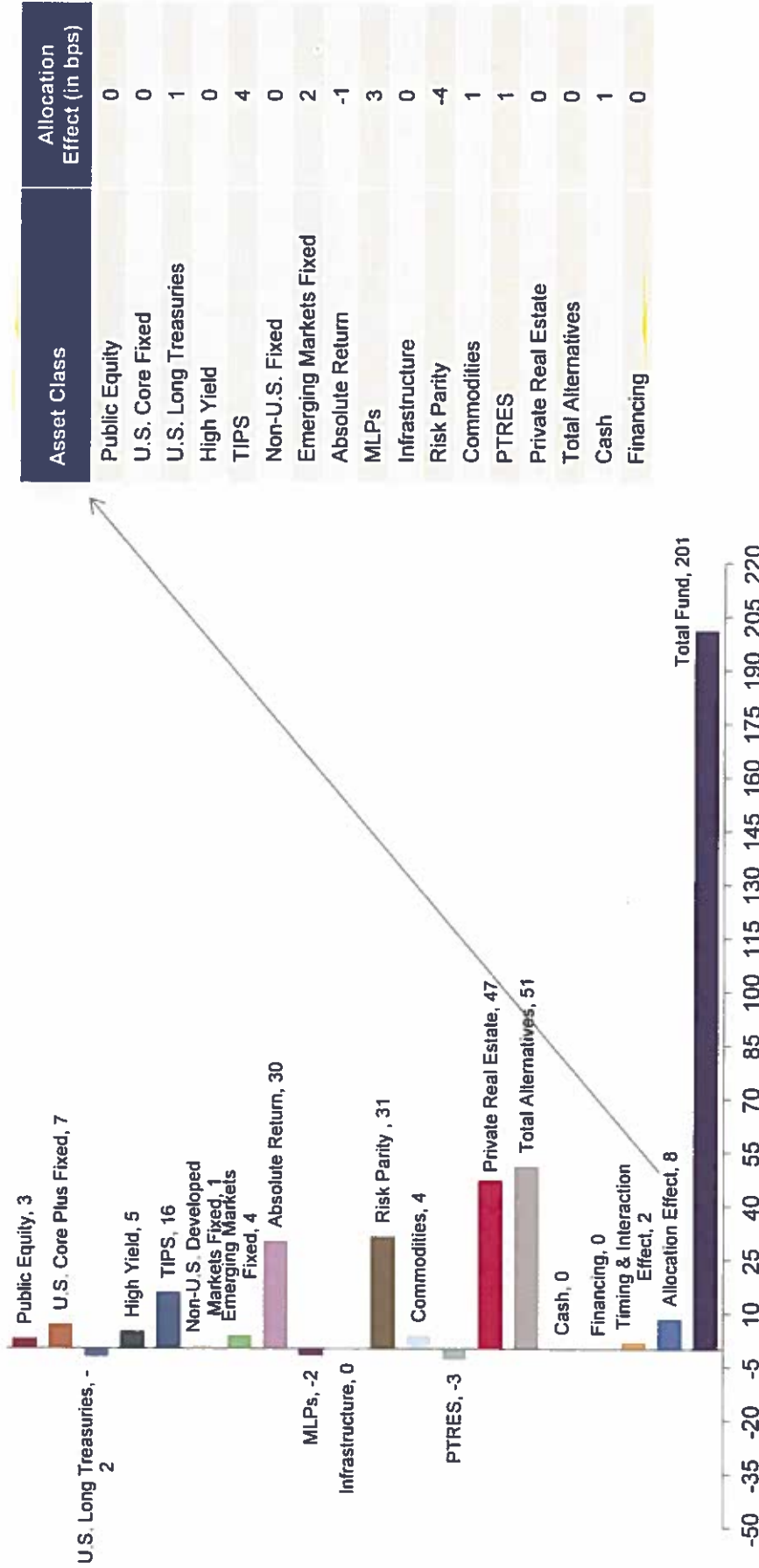
As of December 31, 2016

Trailing Period Performance

	Performance(%)										Inception Date
	1	2	3	1	3	5	10	Since Inception			
	Quarter	2 Quarters	3 Quarters	Year	Years	Years	Years	Inception			
PSERS Total Fund	1.43	5.13	9.32	10.95	5.82	7.47	4.36	9.75	07/01/1982		
Blended Policy (Total Plan)	-0.58	2.08	6.29	8.80	4.22	5.40	3.10	N/A			
Value Added	2.01	3.05	3.03	2.15	1.60	2.07	1.26	N/A			
Total Public and Private Equity Exposure (hedged)	3.54	8.58	9.95	9.43	N/A	N/A	N/A	4.90	10/01/2014		
Blended Policy (Total Equity Exposure)	1.98	5.59	6.06	5.90	5.08	8.24	4.75	4.16			
Value Added	1.56	2.99	3.89	3.53	N/A	N/A	N/A	0.74			
Total Fixed Income Composite (hedged)	-1.93	1.75	6.70	10.43	6.29	5.52	7.12	6.70	07/01/1998		
Blended Policy (Total FI)	-2.33	0.61	4.75	9.49	3.90	3.27	5.96	5.85			
Value Added	0.40	1.14	1.95	0.94	2.39	2.25	1.16	0.85			
Real Assets (unlevered/hedged)	1.16	2.88	11.16	15.02	N/A	N/A	N/A	1.75	10/01/2014		
Blended Policy (Real Assets) (Hedged)	-0.67	-0.79	7.35	9.34	N/A	N/A	N/A	-1.19			
Value Added	1.83	3.67	3.81	5.68	N/A	N/A	N/A	2.94			
Risk Parity Composite (vol adjusted)	-1.03	2.62	8.26	11.14	4.60	N/A	N/A	2.44	10/01/2012		
Blended Policy (Risk Parity)	-3.93	-0.34	6.13	12.20	5.33	N/A	N/A	2.82			
Value Added	2.90	2.96	2.13	-1.06	-0.73	N/A	N/A	-0.38			
Total Absolute Return	4.23	6.78	5.83	3.71	3.49	3.75	5.62	5.31	10/01/2005		
Blended Policy (3-month Libor + 3.5%)	1.10	2.17	3.21	4.27	4.56	5.73	6.83	6.96			
Value Added	3.13	4.61	2.62	-0.56	-1.07	-1.98	-1.21	-1.65			

*The indicated index in parenthesis of Blended Policy represents current benchmark. Description of Blended Policy is provided in Appendix of this report

Performance Attribution – Total Fund

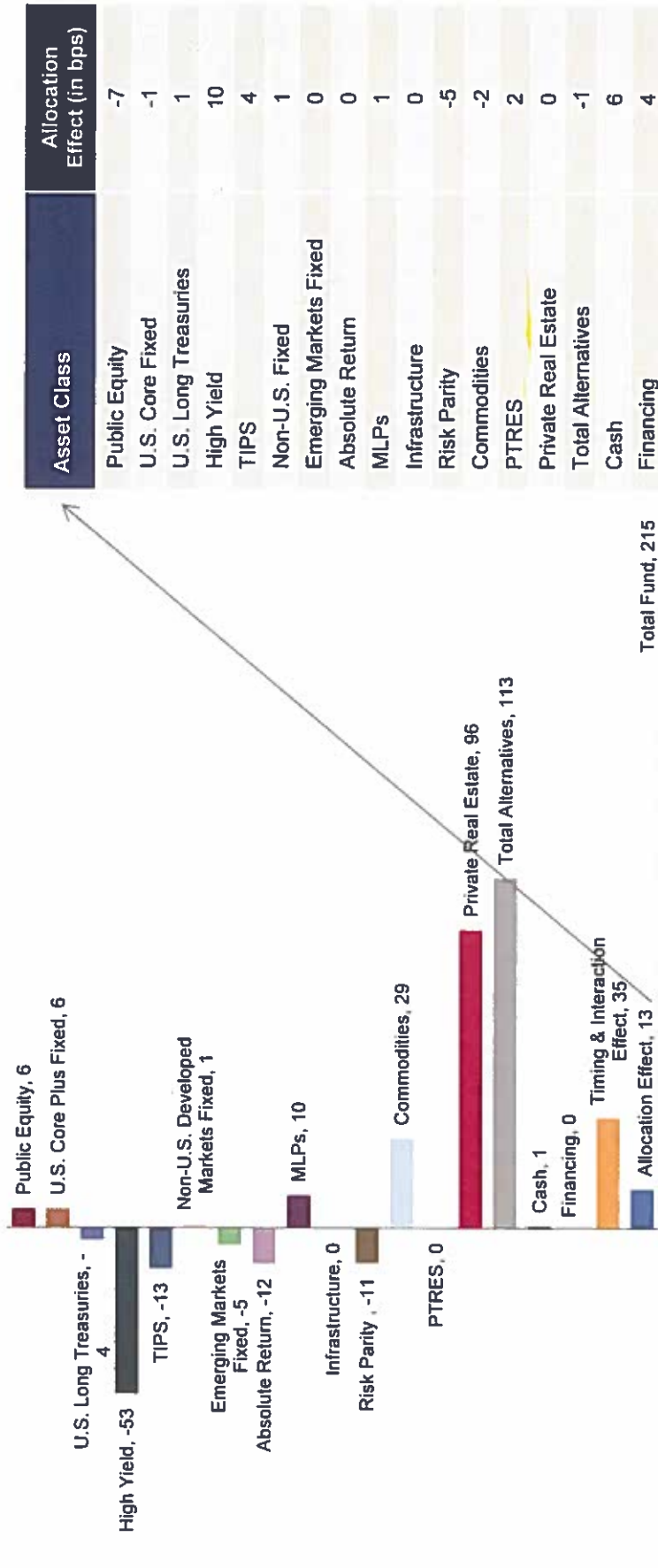


Basis Points

- The Selection Effect (shown by each composite bar above) represents the impact each composite had on Total Fund performance, based on its weight in the asset class and its performance relative to its blended asset class policy benchmark.
- The Allocation Effect represents the favorable or unfavorable impact of being over or under weight to each asset class relative to policy targets.
- The Timing & Interaction Effect captures the impact of intra-month cash flows on Total Fund return.

1 Year Ending December 31, 2016

Performance Attribution – Total Fund



- The Selection Effect (shown by each composite bar above) represents the impact each composite had on Total Fund performance, based on its weight in the asset class and its performance relative to its blended asset class policy benchmark.
- The Allocation Effect represents the favorable or unfavorable impact of being over or under weight to each asset class relative to policy targets.
- The Timing & Interaction Effect captures the impact of intra-month cash flows on Total Fund return.





Total Fund

As of December 31, 2016

Trailing Period Performance

Performance (%)

	1 Quarter	2 Quarters Ending Dec-2016	3 Quarters Ending Dec-2016	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
PSERS Total Fund	1.43	5.13	9.32	10.95	5.82	7.47	4.36	6.12	06/01/1998
Blended Policy (Total Plan)	-0.58	2.08	6.29	8.80	4.22	5.40	3.10	4.77	
Value Added	2.01	3.05	3.03	2.15	1.60	2.07	1.26	1.35	
Total Public Markets Composite	0.45	4.41	9.50	10.97	4.07	5.93	3.68	6.43	06/01/2002
Blended Policy (Public Market) (Hedged)	-0.96	2.48	7.97	11.05	3.29	4.86	2.69	5.09	
Value Added	1.41	1.93	1.53	-0.08	0.78	1.07	0.99	1.34	
Blended Policy (Public Market) (Unhedged)	-2.29	0.88	5.91	9.70	2.31	4.25	2.39	4.88	
Value Added	2.74	3.53	3.59	1.27	1.76	1.68	1.29	1.55	
Total Public Equity Composite	3.19	9.63	10.84	9.19	6.02	11.67	5.36	6.39	07/01/1998
Blended Policy (Public Equity) (Hedged)	3.05	9.31	10.31	8.89	5.35	11.13	4.78	5.44	
Value Added	0.14	0.32	0.53	0.30	0.67	0.54	0.58	0.95	
Blended Policy (Public Equity) (Unhedged)	1.35	7.08	8.30	8.72	3.57	9.95	4.23	5.13	
Value Added	1.84	2.55	2.54	0.47	2.45	1.72	1.13	1.26	
Total US Equity Composite	5.55	10.44	13.70	16.38	9.29	15.14	7.16	5.98	01/01/2000
Blended Policy (Tot US Eq)	4.00	8.60	11.61	12.66	8.45	14.65	7.06	4.93	
Value Added	1.55	1.84	2.09	3.72	0.84	0.49	0.10	1.05	
PSERS-S&P 500 Index Composite	4.29	8.81	11.66	13.90	9.51	15.16	7.43	6.04	07/01/1998
S&P 500 Index	3.82	7.82	10.47	11.96	8.87	14.66	6.95	5.72	
Value Added	0.47	0.99	1.19	1.94	0.64	0.50	0.48	0.32	
Total US Small Cap Composite	9.32	15.41	20.01	24.13	7.89	14.80	8.52	9.87	12/01/2001
MSCI USA Small Cap Index	6.96	14.25	18.76	19.80	7.48	15.20	8.15	9.64	
Value Added	2.36	1.16	1.25	4.33	0.41	-0.40	0.37	0.23	
PSERS Small Cap Index Composite	9.32	15.41	20.01	24.13	9.60	15.60	9.82	10.78	12/01/2001
PSERS-S&P 400 Index Composite	7.50	12.18	16.82	21.34	9.25	15.62	9.74	10.47	07/01/1998
S&P MidCap 400	7.42	11.87	16.34	20.74	9.04	15.33	9.16	10.09	
Value Added	0.08	0.31	0.48	0.60	0.21	0.29	0.58	0.38	
PSERS-S&P 600 Index Composite	11.30	19.77	24.34	28.05	10.26	17.69	10.13	10.06	06/01/1998
S&P SmallCap 600	11.13	19.14	23.28	26.56	9.47	16.62	9.03	9.44	
Value Added	0.17	0.63	1.06	1.49	0.79	1.07	1.10	0.62	
Total Non-U.S. Equity Composite (hedged)	1.88	9.21	9.11	5.15	4.30	9.27	4.09	5.09	01/01/2000
Blended Policy (Total Non-US Eq) (Hedged)	2.38	9.69	9.39	6.43	3.26	8.44	3.01	4.14	
Value Added	-0.50	-0.48	-0.28	-1.28	1.04	0.83	1.08	0.95	
Total Non-U.S. Equity Composite (unhedged)	-2.76	4.25	3.76	2.96	-0.80	6.03	2.54	4.17	01/01/2000
Blended Policy (Total Non-US Eq) (Unhedged)	-1.68	5.32	4.67	4.67	-1.57	5.27	1.49	3.24	
Value Added	-1.08	-1.07	-0.91	-1.71	0.77	0.76	1.05	0.93	
Emerging Markets Equity Composite	-11.51	-5.76	-4.46	-3.95	-3.64	1.56	1.54	7.26	07/01/1998
Blended Policy (MSCI EM net)	-4.16	4.49	5.18	11.19	-2.55	1.28	1.88	7.96	

As of December 31, 2016

Trailing Period Performance

Performance (%)

	1 Quarter	2 Quarters Ending Dec-2016	3 Quarters Ending Dec-2016	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Value Added	-7.35	-10.25	-9.64	-15.14	-1.09	0.28	-0.34	-0.70	
MSCI Emerging Markets IMI (Net)	-4.45	3.99	4.63	9.90	-2.40	1.54	2.07	7.00	
Value Added	-7.06	-9.75	-9.09	-13.85	-1.24	0.02	-0.53	0.26	
Wasatch EM Small Cap	-11.51	-5.76	-4.46	-3.95	-4.20	2.78	N/A	5.91	07/01/2008
Blended Policy (Wasatch EM)	-5.63	0.76	1.70	4.03	-1.62	3.35	3.46	2.78	
Value Added	-5.88	-6.52	-6.16	-7.98	-2.58	-0.57	N/A	3.13	
Total Non-U.S. Equity x Emerging Markets Composite (hedged)	2.53	9.93	9.77	5.60	N/A	N/A	N/A	5.50	04/01/2014
Blended Policy (Non-US Equity x EM) (Hedged)	2.68	9.94	9.58	6.25	3.86	8.82	3.19	4.19	
Value Added	-0.15	-0.01	0.19	-0.65	N/A	N/A	N/A	1.31	
Insight Everest - Int'l Eq (notional)	7.67	7.60	8.19	4.02	7.34	3.96	2.14	1.96	07/01/2006
Currency Hedge Benchmark	7.69	7.69	8.31	4.18	7.46	4.12	2.24	2.05	
Value Added	-0.02	-0.09	-0.12	-0.16	-0.12	-0.16	-0.10	-0.09	
Total Non-U.S. Equity x Emerging Markets Composite (unhedged)	-2.34	4.73	4.16	3.29	-0.57	6.85	2.22	5.59	07/01/1997
Blended Policy (Non-US Equity x EM) (Unhedged)	-1.57	5.37	4.65	4.41	-1.44	5.35	1.53	N/A	
Value Added	-0.77	-0.84	-0.49	-1.12	0.87	1.50	0.69	N/A	
Non-US Large Cap Equity Composite	-1.69	5.52	4.83	3.99	-0.78	6.18	1.92	5.28	07/01/1998
Blended Policy (MSCI World AC Word ex USA net)	-1.25	5.57	4.89	4.50	-1.78	5.00	1.04	4.29	
Value Added	-0.44	-0.05	-0.06	-0.51	1.00	1.18	0.88	0.99	
PSERS ACWI x US Index Fund	-0.96	5.92	5.67	5.35	-1.20	5.64	1.66	4.43	07/01/1998
MSCI ACWI/EAFE Index Blend	-1.25	5.57	4.89	4.50	-1.78	5.00	0.96	3.87	
Value Added	0.29	0.35	0.78	0.85	0.58	0.64	0.70	0.56	
BlackRock EMAX	-3.92	5.63	8.16	13.37	N/A	N/A	N/A	-3.91	07/01/2015
MSCI Emerging Markets Index (Net)	-4.16	4.49	5.18	11.19	-2.55	1.28	1.84	-5.48	
Value Added	0.24	1.14	2.98	2.18	N/A	N/A	N/A	1.57	
Active Non-US Large Cap Composite	-2.52	5.17	3.85	2.28	-0.33	6.98	2.72	5.72	07/01/1998
MSCI AC World ex USA Index (Net)	-1.25	5.57	4.89	4.50	-1.78	5.00	0.96	4.22	
Value Added	-1.27	-0.40	-1.04	-2.22	1.45	1.98	1.76	1.50	
Baillie Gifford	-3.78	6.19	5.26	5.65	0.45	7.82	4.35	8.70	07/01/2002
MSCI AC World ex USA Index (Net)	-1.25	5.57	4.89	4.50	-1.78	5.00	0.96	6.18	
Value Added	-2.53	0.62	0.37	1.15	2.23	2.62	3.39	2.52	
Marathon Asset Mgmt	-1.45	5.28	3.20	1.25	-0.26	8.20	4.17	8.59	07/01/1998
Blended Benchmark (MSCI ACWI ex USA net)	-1.25	5.57	4.89	4.50	-1.78	5.00	1.00	4.37	
Value Added	-0.20	-0.29	-1.69	-3.25	1.52	3.20	3.17	4.22	
BlackRock Global Composite	-2.18	3.19	2.54	-1.59	-2.02	4.92	2.25	6.47	10/01/2004
MSCI AC World ex USA Index (Net)	-1.25	5.57	4.89	4.50	-1.78	5.00	0.96	5.27	
Value Added	-0.93	-2.38	-2.35	-6.09	-0.24	-0.08	1.29	1.20	
Non-US Small Cap Equity Composite	-5.24	-0.10	0.12	-0.91	1.53	11.30	3.95	7.79	07/01/2005

As of December 31, 2016

Trailing Period Performance

	Performance (%)										Inception Date
	1 Quarter	2 Quarters Ending Dec-2016	3 Quarters Ending Dec-2016	1 Year	3 Years	5 Years	10 Years	Since Inception			
MSCI AC World ex USA Small Cap (Net)	-3.52	4.11	3.20	3.91	0.77	7.74	2.90	6.25			
Value Added	-2.72	-4.21	-3.08	-4.82	0.76	3.56	1.05	1.54			
Acadian Asset Mgmt	-0.69	7.85	8.17	8.76	3.82	11.82	4.80	9.49			07/01/2005
Blended Benchmark (MSCI AC World ex USA Small Cap net)	-3.52	4.11	3.20	3.91	0.77	7.74	3.07	5.72			
Value Added	2.83	3.74	4.97	4.85	3.05	4.08	1.73	3.77			
Wasatch Int'l Small Cap	-11.48	-6.50	-5.14	-7.75	-0.64	10.91	6.11	8.03			10/01/2005
Blended Benchmark (MSCI AC World ex USA Small Cap net)	-3.52	4.11	3.20	3.91	0.77	7.74	3.07	5.10			
Value Added	-7.96	-10.61	-8.34	-11.66	-1.41	3.17	3.04	2.93			
Oberweis Asset Mgmt	-7.70	-3.53	-3.12	-4.84	2.42	17.67	N/A	6.87			07/01/2008
MSCI AC World ex USA Small Cap (Net)	-3.52	4.11	3.20	3.91	0.77	7.74	2.90	3.78			
Value Added	-4.18	-7.64	-6.32	-8.75	1.65	9.93	N/A	3.09			
QS Investors	-2.52	5.86	3.94	3.28	2.54	10.64	N/A	5.07			07/01/2008
MSCI AC World ex USA Small Cap (Net)	-3.52	4.11	3.20	3.91	0.77	7.74	2.90	3.78			
Value Added	1.00	1.75	0.74	-0.63	1.77	2.90	N/A	1.29			
Fidelity Institutional Int'l Small Cap	-5.47	0.80	-0.33	0.16	0.31	8.23	N/A	7.91			10/01/2008
MSCI AC World ex USA Small Cap (Net)	-3.52	4.11	3.20	3.91	0.77	7.74	2.90	7.63			
Value Added	-1.95	-3.31	-3.53	-3.75	-0.46	0.49	N/A	0.28			
Total Fixed Income Composite	-1.93	1.75	6.70	10.43	6.29	5.52	7.12	6.70			07/01/1998
Blended Policy (Total FI)	-2.33	0.61	4.75	9.49	3.90	3.27	5.96	5.85			
Value Added	0.40	1.14	1.95	0.94	2.39	2.25	1.16	0.85			
Global Fixed Income Composite	-1.59	0.38	1.94	4.64	2.44	N/A	N/A	2.37			07/01/2012
Blended Policy (Global FI)	-3.38	-2.41	-0.23	4.55	1.23	1.63	N/A	1.09			
Value Added	1.79	2.79	2.17	0.09	1.21	N/A	N/A	1.28			
Total US Fixed Income Composite	-1.92	1.87	6.96	10.71	7.54	6.23	7.61	7.01			10/01/2004
Blended Policy (Total US FI)	-2.19	0.87	5.25	9.61	4.39	3.87	6.49	5.88			
Value Added	0.27	1.00	1.71	1.10	3.15	2.36	1.12	1.13			
Total US Fixed Income ex TIPS Composite	-1.84	0.77	5.22	7.36	6.75	7.34	7.12	6.83			07/01/1998
Investment Grade Composite	-8.00	-7.09	-3.30	2.62	N/A	N/A	N/A	3.43			10/01/2014
Blended Policy (Investment Grade)	-5.81	-5.55	-2.23	2.23	4.12	2.15	5.09	2.30			
Value Added	-2.19	-1.54	-1.07	0.39	N/A	N/A	N/A	1.13			
US Core Plus Fixed Income Composite	-1.68	-0.01	1.11	3.95	4.23	3.94	5.30	5.12			10/01/2004
Blended Policy (Barclays Aggregate Index)	-2.98	-2.53	-0.37	2.65	3.03	2.23	4.26	4.21			
Value Added	1.30	2.52	1.48	1.30	1.20	1.71	1.04	0.91			
Pugh Capital Management	-3.14	-2.64	-0.38	2.63	3.11	2.56	4.83	5.12			07/01/2006
Bimbg. Barc. U.S. Aggregate	-2.98	-2.53	-0.37	2.65	3.03	2.23	4.34	4.63			
Value Added	-0.16	-0.11	-0.01	-0.02	0.08	0.33	0.49	0.49			
PSERS Active Core Plus Fixed Income	-2.73	-1.82	0.42	3.50	4.09	3.17	5.69	6.07			07/01/1998



As of December 31, 2016

Trailing Period Performance

Performance (%)

	1 Quarter	2 Quarters Ending Dec-2016	3 Quarters Ending Dec-2016	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Bimbg. Barc. U.S. Aggregate Value Added	-2.98 0.25	-2.53 0.71	-0.37 0.79	2.65 0.85	3.03 1.06	2.23 0.94	4.34 1.35	4.98 1.09	
BlackRock Global Alpha	-0.64	1.84	0.98	4.31	4.76	5.51	N/A	7.33	07/01/2007
Blended Policy (Barclays Aggregate Index) Value Added	-2.98 2.34	-2.53 4.37	-0.37 1.35	2.65 1.66	3.03 1.73	2.23 3.28	4.26 N/A	4.36 2.97	
SEI Investment Management	3.15	8.92	12.48	7.34	N/A	N/A	N/A	3.25	03/01/2014
BofA Merrill Lynch Corporate 1-3 Year Value Added	-0.21 3.36	0.12 8.80	1.16 11.32	2.39 4.95	1.53 N/A	2.16 N/A	3.43 N/A	1.42 1.83	
Non-U.S. Developed Markets Fixed Income Composite	-1.26	-0.15	2.94	6.23	-0.26	0.72	3.89	4.77	07/01/1998
Blended Policy (Barclays GlobalAgg GDP Weighted Dev xUS hedged) Value Added	-1.96 0.70	-1.08 0.93	1.57 1.37	4.90 1.33	-1.07 0.81	0.35 0.37	3.26 0.63	N/A N/A	
Alliance Bernstein Global Fixed	-1.26	-0.15	2.94	6.23	-0.55	0.71	N/A	0.71	01/01/2012
Spliced Barclays GlobalAgg GDPWeighted Dev xUS Value Added	-1.96 0.70	-1.08 0.93	1.57 1.37	4.90 1.33	-1.07 0.52	0.35 0.36	3.18 N/A	0.35 0.36	
U.S. Long Treasuries (levered)	-81.03	-82.80	-77.55	-65.74	17.85	N/A	N/A	-31.91	07/01/2012
Bimbg. Barc. U.S. Treasury: Long Value Added	-11.67 -69.36	-11.98 -70.82	-6.31 -71.24	1.33 -67.07	7.78 10.07	2.52 N/A	6.68 N/A	1.87 -33.78	
PSERS U.S. Long Treasuries (unlevered)	-12.39	-13.38	-7.59	-0.04	5.50	N/A	N/A	0.82	07/01/2012
Bimbg. Barc. U.S. Treasury: Long Value Added	-11.67 -0.72	-11.98 -1.40	-6.31 -1.28	1.33 -1.37	7.78 -2.28	2.52 N/A	6.68 N/A	1.87 -1.05	
Credit-Related	2.08	5.94	10.72	9.75	N/A	N/A	N/A	3.20	10/01/2014
Blended Policy (Credit-Related) Value Added	0.78 1.30	5.59 0.35	10.51 0.21	15.99 -6.24	N/A N/A	N/A N/A	N/A N/A	2.89 0.31	
Emerging Markets Fixed Income Composite	-1.11	3.86	7.55	9.28	-0.47	2.01	N/A	2.91	04/01/2010
Blended Policy (Barclays Emerging Mkt 10% Country Cap) Value Added	-6.84 5.73	-4.58 8.44	-2.74 10.29	6.85 2.43	-2.97 2.50	0.05 1.95	4.55 N/A	1.20 1.71	
Franklin Templeton Emerging Fixed Income	-1.11	3.86	7.60	9.04	1.76	4.81	N/A	7.13	10/01/2008
Blended Benchmark (Barclays Emerging Mkt 10% Country Cap) Value Added	-6.84 5.73	-4.58 8.44	-2.74 10.34	6.85 2.19	-2.97 4.73	0.65 4.16	4.19 N/A	3.40 3.73	
High Yield Fixed Income Composite (hedged)	2.32	6.09	10.97	9.72	5.89	8.94	7.15	7.80	10/01/1999
Blended Policy (Barclays Corporate HY) Value Added	1.75 0.57	7.40 -1.31	13.33 -2.36	17.13 -7.41	4.66 1.23	7.36 1.58	7.51 -0.35	7.66 0.14	
High Yield Fixed Income x Internal Composite (hedged)	2.33	N/A	N/A	N/A	N/A	N/A	N/A	2.33	10/01/2016
Blended Policy (Barclays Corporate HY) Value Added	1.75 0.58	7.40 N/A	13.33 N/A	17.13 N/A	4.66 N/A	7.36 N/A	7.51 N/A	1.75 0.58	
Insight Oxygen - HY (notional)	7.00	6.12	9.14	4.29	N/A	N/A	N/A	4.83	07/01/2015
HY Currency Hedge Benchmark	6.79	5.95	9.00	4.01	9.25	4.02	1.25	4.43	



As of December 31, 2016

Trailing Period Performance

Performance (%)

	1 Quarter	2 Quarters Ending Dec-2016	3 Quarters Ending Dec-2016	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Value Added	0.21	0.17	0.14	0.28	N/A	N/A	N/A	0.40	
High Yield Fixed Income Composite (Unhedged)	1.61	5.46	9.93	9.32	5.62	8.78	7.08	7.75	10/01/1999
Blended Policy (Barclays Corporate HY)	1.75	7.40	13.33	17.13	4.66	7.36	7.51	7.66	
Value Added	-0.14	-1.94	-3.40	-7.81	0.96	1.42	-0.43	0.09	
High Yield Fixed Income x Internal Composite (unhedged)	1.62	N/A	N/A	N/A	N/A	N/A	N/A	1.62	10/01/2016
Blended Policy (Barclays Corporate HY)	1.75	7.40	13.33	17.13	4.66	7.36	7.51	1.75	
Value Added	-0.13	N/A	N/A	N/A	N/A	N/A	N/A	-0.13	
Mezzanine High Yield Composite	-5.56	-6.14	-5.93	-12.61	N/A	N/A	N/A	-9.96	06/01/2015
Bimbg. Barc. U.S. Corp. High Yield	1.75	7.40	13.33	17.13	4.66	7.36	7.45	4.68	
Value Added	-7.31	-13.54	-19.26	-29.74	N/A	N/A	N/A	-14.64	
Internally Managed Private Debt Co-Investment	-1.02	-1.70	-10.26	-32.90	-19.61	N/A	N/A	-16.00	08/01/2013
Bimbg. Barc. U.S. Corp. High Yield	1.75	7.40	13.33	17.13	4.66	7.36	7.45	5.27	
Value Added	-2.77	-9.10	-23.59	-50.03	-24.27	N/A	N/A	-21.27	
Mezzanine High Yield Composite x Internal	-5.71	N/A	N/A	N/A	N/A	N/A	N/A	-5.71	10/01/2016
Bimbg. Barc. U.S. Corp. High Yield	1.75	7.40	13.33	17.13	4.66	7.36	7.45	1.75	
Value Added	-7.46	N/A	N/A	N/A	N/A	N/A	N/A	-7.46	
Caryle Energy Mezz. Opp. Fund	0.00	-13.50	-18.80	-43.51	-15.09	N/A	N/A	-6.36	10/01/2012
Bimbg. Barc. U.S. Corp. High Yield	1.75	7.40	13.33	17.13	4.66	7.36	7.45	5.83	
Value Added	-1.75	-20.90	-32.13	-60.64	-19.75	N/A	N/A	-12.19	
Caryle Energy Mezz. Opp. Fund II	0.00	-19.56	-3.26	-7.16	N/A	N/A	N/A	-15.44	11/01/2015
Bimbg. Barc. U.S. Corp. High Yield	1.75	7.40	13.33	17.13	4.66	7.36	7.45	9.90	
Value Added	-1.75	-26.96	-16.59	-24.29	N/A	N/A	N/A	-25.34	
ICG Europe Fund V	-13.83	-10.56	-10.38	-6.35	-1.53	N/A	N/A	2.38	01/01/2013
Bimbg. Barc. U.S. Corp. High Yield	1.75	7.40	13.33	17.13	4.66	7.36	7.45	5.35	
Value Added	-15.58	-17.96	-23.71	-23.48	-6.19	N/A	N/A	-2.97	
ICG Europe Fund VI	-6.36	6.29	14.20	N/A	N/A	N/A	N/A	83.16	02/01/2016
Bimbg. Barc. U.S. Corp. High Yield	1.75	7.40	13.33	17.13	4.66	7.36	7.45	19.04	
Value Added	-8.11	-1.11	0.87	N/A	N/A	N/A	N/A	64.12	
Bain Capital Middle Market Credit 2010, L.P.	-0.50	-1.00	-2.51	-6.05	1.55	6.78	N/A	6.79	06/01/2010
Bimbg. Barc. U.S. Corp. High Yield	1.75	7.40	13.33	17.13	4.66	7.36	7.45	8.10	
Value Added	-2.25	-8.40	-15.84	-23.18	-3.11	-0.58	N/A	-1.31	
Bain Capital Middle Market Credit 2014, L.P.	1.66	3.96	8.03	5.91	4.54	N/A	N/A	4.29	11/01/2013
Bimbg. Barc. U.S. Corp. High Yield	1.75	7.40	13.33	17.13	4.66	7.36	7.45	4.75	
Value Added	-0.09	-3.44	-5.30	-11.22	-0.12	N/A	N/A	-0.46	
Opportunistic High Yield Composite	4.30	9.59	15.47	16.50	N/A	N/A	N/A	7.40	06/01/2015
Bimbg. Barc. U.S. Corp. High Yield	1.75	7.40	13.33	17.13	4.66	7.36	7.45	4.68	
Value Added	2.55	2.19	2.14	-0.63	N/A	N/A	N/A	2.72	

As of December 31, 2016

Trailing Period Performance

	Performance (%)									
	1	2 Quarters	3 Quarters	1	3	5	10	Since	Inception	Inception
	Quarter	Ending	Ending	Year	Years	Years	Years	Inception		Date
		Dec-2016	Dec-2016							
Apollo European Principal Fund II	0.00	0.91	8.35	9.70	8.26	N/A	N/A	6.03	6.03	10/01/2012
Bimbg. Barc. U.S. Corp: High Yield Value Added	1.75	7.40	13.33	17.13	4.66	7.36	7.45	5.83	5.83	
	-1.75	-6.49	-4.98	-7.43	3.60	N/A	N/A	0.20	0.20	
Bain Capital Credit Opp. Fund IV	-1.40	-0.28	4.99	2.05	-1.23	2.30	N/A	6.70	6.70	10/01/2008
Bimbg. Barc. U.S. Corp: High Yield Value Added	1.75	7.40	13.33	17.13	4.66	7.36	7.45	10.27	10.27	
	-3.15	-7.68	-8.34	-15.08	-5.89	-5.06	N/A	-3.57	-3.57	
Bain Capital Distressed and Special Situations 2013	2.55	11.00	14.58	7.00	4.65	N/A	N/A	5.46	5.46	10/01/2012
Bimbg. Barc. U.S. Corp: High Yield Value Added	1.75	7.40	13.33	17.13	4.66	7.36	7.45	5.83	5.83	
	0.80	3.60	1.25	-10.13	0.00	N/A	N/A	-0.37	-0.37	
Bain Capital Distressed and Special Situations 2016 (A), L.P.	3.78	17.26	27.21	29.32	N/A	N/A	N/A	24.48	24.48	11/01/2015
Bimbg. Barc. U.S. Corp: High Yield Value Added	1.75	7.40	13.33	17.13	4.66	7.36	7.45	9.90	9.90	
	2.03	9.86	13.88	12.19	N/A	N/A	N/A	14.58	14.58	
TPG Opportunities Partners II, LP	0.46	2.33	2.66	6.10	17.57	N/A	N/A	13.41	13.41	04/01/2012
Bimbg. Barc. U.S. Corp: High Yield Value Added	1.75	7.40	13.33	17.13	4.66	7.36	7.45	6.59	6.59	
	-1.29	-5.07	-10.67	-11.03	12.91	N/A	N/A	6.82	6.82	
TPG Opportunities Partners III, LP	-4.20	1.24	7.17	10.73	N/A	N/A	N/A	-0.08	-0.08	02/01/2014
Bimbg. Barc. U.S. Corp: High Yield Value Added	1.75	7.40	13.33	17.13	4.66	7.36	7.45	4.55	4.55	
	-5.95	-6.16	-6.16	-6.40	N/A	N/A	N/A	-4.63	-4.63	
TOP NPL (A)	-0.89	-6.22	-6.82	-3.56	16.94	N/A	N/A	15.49	15.49	04/01/2012
Bimbg. Barc. U.S. Corp: High Yield Value Added	1.75	7.40	13.33	17.13	4.66	7.36	7.45	6.59	6.59	
	-2.64	-13.62	-20.15	-20.69	12.28	N/A	N/A	8.90	8.90	
TPG TAO	1.96	4.74	7.41	10.05	N/A	N/A	N/A	10.09	10.09	01/01/2015
Bimbg. Barc. U.S. Corp: High Yield Value Added	1.75	7.40	13.33	17.13	4.66	7.36	7.45	5.78	5.78	
	0.21	-2.66	-5.92	-7.08	N/A	N/A	N/A	4.31	4.31	
Brigade Distressed Value	4.76	10.98	24.68	34.96	5.04	7.35	N/A	7.07	7.07	10/01/2011
1-Month Libor + 5%	1.38	2.75	4.13	5.52	5.30	5.27	6.04	5.27	5.27	
Value Added	3.38	8.23	20.55	29.44	-0.26	2.08	N/A	1.80	1.80	
Brigade Structured Credit Offshore Fund	6.08	14.46	20.48	26.20	N/A	N/A	N/A	8.59	8.59	11/01/2014
Barclays Corporate High Yield + 0.25%	1.82	7.54	13.54	17.42	4.92	7.63	7.72	4.53	4.53	
Value Added	4.26	6.92	6.94	8.78	N/A	N/A	N/A	4.06	4.06	
Avenue Energy Opportunities Fund	12.76	25.20	46.56	42.19	N/A	N/A	N/A	3.24	3.24	02/01/2015
Bimbg. Barc. U.S. Corp: High Yield Value Added	1.75	7.40	13.33	17.13	4.66	7.36	7.45	5.68	5.68	
	11.01	17.80	33.23	25.06	N/A	N/A	N/A	-2.44	-2.44	
Avenue Europe SS III	14.22	11.58	16.91	5.81	N/A	N/A	N/A	5.81	5.81	01/01/2016
Bimbg. Barc. U.S. Corp: High Yield Value Added	1.75	7.40	13.33	17.13	4.66	7.36	7.45	17.13	17.13	
	12.47	4.18	3.58	-11.32	N/A	N/A	N/A	-11.32	-11.32	
Real Asset High Yield Composite	0.25	2.45	4.27	4.99	N/A	N/A	N/A	4.02	4.02	06/01/2015

As of December 31, 2016

Trailing Period Performance

Performance (%)

	1 Quarter	2 Quarters Ending Dec-2016	3 Quarters Ending Dec-2016	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Bimbg. Barc. U.S. Corp. High Yield Value Added	1.75 -1.50	7.40 -4.95	13.33 -9.06	17.13 -12.14	4.66 N/A	7.36 N/A	7.45 N/A	4.68 -0.66	
Mariner/Galton RMBS	-0.36	2.63	5.60	3.87	5.60	9.23	N/A	8.36	05/01/2010
Blended Benchmark (Barclays US MBS) Value Added	-1.97 1.61	-1.39 4.02	-0.30 5.90	1.67 2.20	3.15 2.45	4.87 4.36	N/A N/A	5.52 2.84	
Galton Onshore Mortgage Recovery Fund III, LP	-0.13	1.43	2.01	1.83	-1.35	N/A	N/A	-1.19	11/01/2013
Bimbg. Barc. U.S. Corp. High Yield Value Added	1.75 -1.88	7.40 -5.97	13.33 -11.32	17.13 -15.30	4.66 -6.01	7.36 N/A	7.45 N/A	4.75 -5.94	
Mariner International Infrastructure	0.51	2.64	4.55	8.67	2.80	N/A	N/A	1.87	12/01/2013
Bimbg. Barc. U.S. Corp. High Yield Value Added	1.75 -1.24	7.40 -4.76	13.33 -8.78	17.13 -8.46	4.66 -1.86	7.36 N/A	7.45 N/A	4.71 -2.84	
The Varde Scratch and Dent Fund, LP	0.89	2.98	4.67	6.67	N/A	N/A	N/A	8.64	12/01/2014
Bimbg. Barc. U.S. Corp. High Yield Value Added	1.75 -0.86	7.40 -4.42	13.33 -8.66	17.13 -10.46	4.66 N/A	7.36 N/A	7.45 N/A	4.81 3.83	
The Varde Scratch and Dent Fund Feed I-A	3.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/01/2016
Bimbg. Barc. U.S. Corp. High Yield Value Added	1.75 1.30	7.40 N/A	13.33 N/A	17.13 N/A	4.66 N/A	7.36 N/A	7.45 N/A	4.57 N/A	
Senior Loans High Yield Composite	1.46	6.06	12.43	12.71	N/A	N/A	N/A	6.96	06/01/2015
Bimbg. Barc. U.S. Corp. High Yield Value Added	1.75 -0.29	7.40 -1.34	13.33 -0.90	17.13 -4.42	4.66 N/A	7.36 N/A	7.45 N/A	4.68 2.28	
Cerberus Levered Loan Fund I	1.93	3.75	5.63	6.04	2.66	5.78	N/A	5.78	01/01/2012
Bimbg. Barc. U.S. Corp. High Yield Value Added	1.75 0.18	7.40 -3.65	13.33 -7.70	17.13 -11.09	4.66 -2.00	7.36 -1.58	7.45 N/A	7.36 -1.58	
Cerberus Levered Loan Fund II	0.81	2.88	2.12	3.25	8.31	N/A	N/A	9.27	01/01/2013
Bimbg. Barc. U.S. Corp. High Yield Value Added	1.75 -0.94	7.40 -4.52	13.33 -11.21	17.13 -13.88	4.66 3.65	7.36 N/A	7.45 N/A	5.35 3.92	
Cerberus PSERS Levered Loan Opportunities Fund	5.41	14.13	23.54	36.14	N/A	N/A	N/A	45.38	10/01/2015
Bimbg. Barc. U.S. Corp. High Yield Value Added	1.75 3.66	7.40 6.73	13.33 10.21	17.13 19.01	4.66 N/A	7.36 N/A	7.45 N/A	11.60 33.78	
LBC Credit Partners II	3.71	7.33	12.56	14.28	14.53	18.25	N/A	10.33	01/01/2009
Bimbg. Barc. U.S. Corp. High Yield Value Added	1.75 1.96	7.40 -0.07	13.33 -0.77	17.13 -2.85	4.66 9.87	7.36 10.89	7.45 N/A	13.36 -3.03	
LBC Credit Partners III	1.97	4.55	8.14	13.28	13.13	N/A	N/A	15.52	04/01/2013
Bimbg. Barc. U.S. Corp. High Yield Value Added	1.75 0.22	7.40 -2.85	13.33 -5.19	17.13 -3.85	4.66 8.47	7.36 N/A	7.45 N/A	4.92 10.60	
LBC-P Credit Fund LP	1.55	N/A	N/A	N/A	N/A	N/A	N/A	1.55	10/01/2016
Bimbg. Barc. U.S. Corp. High Yield	1.75	7.40	13.33	17.13	4.66	7.36	7.45	1.75	



As of December 31, 2016

Trailing Period Performance

Performance (%)

	1 Quarter	2 Quarters Ending Dec-2016	3 Quarters Ending Dec-2016	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Value Added	-0.20	N/A	N/A	N/A	N/A	N/A	N/A	-0.20	
Summit Partners Credit Fund II LP	3.14	7.34	11.12	13.37	N/A	N/A	N/A	4.53	11/01/2014
Bimbg. Barc. U.S. Corp. High Yield	1.75	7.40	13.33	17.13	4.66	7.36	7.45	4.27	
Value Added	1.39	-0.06	-2.21	-3.76	N/A	N/A	N/A	0.26	
Oaktree Loan Fund 2X, LP	3.07	-1.42	6.29	5.35	-7.28	-0.92	N/A	3.04	01/01/2008
Bimbg. Barc. U.S. Corp. High Yield	1.75	7.40	13.33	17.13	4.66	7.36	7.45	8.09	
Value Added	1.32	-8.82	-7.04	-11.78	-11.94	-8.28	N/A	-5.05	
Bain Capital Credit Managed Account (PSERS), L.P.	3.76	10.33	23.79	17.84	3.98	6.04	N/A	7.65	07/01/2009
Bimbg. Barc. U.S. Corp. High Yield	1.75	7.40	13.33	17.13	4.66	7.36	7.45	10.34	
Value Added	2.01	2.93	10.46	0.71	-0.68	-1.32	N/A	-2.69	
Park Square Credit Opportunities	1.64	5.92	14.30	20.66	N/A	N/A	N/A	19.59	11/01/2015
Bimbg. Barc. U.S. Corp. High Yield	1.75	7.40	13.33	17.13	4.66	7.36	7.45	9.90	
Value Added	-0.11	-1.48	0.97	3.53	N/A	N/A	N/A	9.69	
Hayfin Special Opportunities Credit LP	-5.21	-2.20	-2.66	4.47	-1.85	N/A	N/A	1.96	03/01/2013
Bimbg. Barc. U.S. Corp. High Yield	1.75	7.40	13.33	17.13	4.66	7.36	7.45	5.08	
Value Added	-6.96	-9.60	-15.99	-12.66	-6.52	N/A	N/A	-3.12	
Hayfin SOF II USD Co-Invest	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/01/2016
Bimbg. Barc. U.S. Corp. High Yield	1.75	7.40	13.33	17.13	4.66	7.36	7.45	4.57	
Value Added	-1.75	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Hayfin SOF II USD LP	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	09/01/2016
Bimbg. Barc. U.S. Corp. High Yield	1.75	7.40	13.33	17.13	4.66	7.36	7.45	2.43	
Value Added	-1.75	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Inflation Protected (levered)	-2.05	4.13	10.61	17.80	N/A	N/A	N/A	7.60	10/01/2014
Blended Policy (Barclays World Inflation Linked Bond - Hedged)	-2.06	1.64	5.85	10.22	3.92	1.87	4.87	3.59	
Value Added	0.01	2.49	4.76	7.58	N/A	N/A	N/A	4.01	
Inflation Protected (unlevered)	-0.88	2.27	5.54	9.13	7.98	4.17	9.04	7.73	04/01/2004
Blended Policy (Barclays World Inflation Linked Bond - Hedged)	-2.06	1.64	5.85	10.22	3.92	1.87	4.87	4.32	
Value Added	1.18	0.63	-0.31	-1.09	4.06	2.30	4.17	3.41	
TIPS Composite (levered)	-2.05	4.13	10.61	17.80	8.96	4.51	9.05	7.72	04/01/2004
Blended Policy (Barclays World Inflation Linked Bond - Hedged)	-2.06	1.64	5.85	10.22	3.92	1.87	4.87	4.32	
Value Added	0.01	2.49	4.76	7.58	5.04	2.64	4.18	3.40	
Blended Policy (Net Levered TIPS)	-4.39	2.70	11.03	20.11	7.19	3.04	N/A	N/A	
Value Added	2.34	1.43	-0.42	-2.31	1.77	1.47	N/A	N/A	
TIPS Composite (unlevered)	-0.88	2.27	5.54	9.13	7.98	4.17	9.04	7.73	04/01/2004
Blended Policy (Barclays World Inflation Linked Bond - Hedged)	-2.06	1.64	5.85	10.22	3.92	1.87	4.87	4.32	
Value Added	1.18	0.63	-0.31	-1.09	4.06	2.30	4.17	3.41	
Bridgewater TIPS (unlevered)	-0.16	4.33	8.85	11.69	N/A	N/A	N/A	2.94	02/01/2015



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Trailing Period Performance

Performance (%)

	1 Quarter	2 Quarters Ending Dec-2016	3 Quarters Ending Dec-2016	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
BGI Custom IL Bond Index (unlevered)	-1.96	2.26	7.60	11.34	N/A	N/A	N/A	N/A	
Value Added	1.80	2.07	1.25	0.35	N/A	N/A	N/A	N/A	
Bridgewater TIPS (levered)	-0.60	8.39	18.08	23.93	12.83	6.87	12.46	11.02	07/01/2004
BGI Custom IL Bond Index (levered)	-4.13	4.18	15.08	23.14	11.71	N/A	N/A	N/A	
Value Added	3.53	4.21	3.00	0.79	1.12	N/A	N/A	N/A	
Garda Inflation Opportunity Composite (levered)	-9.16	-4.29	1.00	18.39	N/A	N/A	N/A	1.65	08/01/2014
Blended Benchmark (Garda)	-11.03	-7.50	-0.74	19.87	6.33	N/A	N/A	-2.07	
Value Added	1.87	3.21	1.74	-1.48	N/A	N/A	N/A	3.72	
Garda Inflation Opportunity Composite (unlevered)	-2.43	-1.27	0.43	4.96	N/A	N/A	N/A	N/A	01/01/2015
Bimbg. Barc. Global Inflation-Linked: U.S. TIPS	-2.41	-1.47	0.22	4.68	2.26	0.89	4.36	1.58	
Value Added	-0.02	0.20	0.21	0.28	N/A	N/A	N/A	N/A	
Garda Inflation Opp. Fund ClB (levered)	-11.57	-6.39	-0.02	21.35	9.76	N/A	N/A	-2.84	03/01/2013
Blended Benchmark (Garda)	-11.03	-7.50	-0.74	19.87	6.33	N/A	N/A	-5.92	
Value Added	-0.54	1.11	0.72	1.48	3.43	N/A	N/A	3.08	
Garda Inflation Opp. Fund ClB (unlevered)	-2.64	-1.60	0.17	4.85	N/A	N/A	N/A	0.82	02/01/2015
Bimbg. Barc. Global Inflation-Linked: U.S. TIPS	-2.41	-1.47	0.22	4.68	2.26	0.89	4.36	0.02	
Value Added	-0.23	-0.13	-0.05	0.17	N/A	N/A	N/A	0.80	
Garda Fixed Income Relative Value Opportunity Fund Ltd. (TIPS)	1.26	4.51	4.94	6.82	N/A	N/A	N/A	3.80	08/01/2014
PSERS Total TIPS (levered)	-1.76	-0.17	1.52	5.98	3.13	1.57	6.15	5.39	03/01/2004
PSERS Total TIPS (unlevered)	-1.49	0.03	1.72	6.19	3.20	1.60	4.99	4.49	03/01/2004
Bimbg. Barc. Global Inflation-Linked: U.S. TIPS	-2.41	-1.47	0.22	4.68	2.26	0.89	4.36	4.03	
Value Added	0.92	1.50	1.50	1.51	0.94	0.71	0.63	0.46	
PSERS TIPS (levered)	-2.35	-0.88	0.79	5.23	2.89	1.43	6.08	5.34	03/01/2004
PSERS TIPS (unlevered)	-2.35	-0.88	0.79	5.23	2.89	1.41	4.89	4.42	03/01/2004
Bimbg. Barc. Global Inflation-Linked: U.S. TIPS	-2.41	-1.47	0.22	4.68	2.26	0.89	4.36	4.03	
Value Added	0.06	0.59	0.57	0.55	0.63	0.52	0.53	0.39	
PIMCO Multi-Sector Strategy	-2.97	-1.49	2.14	7.11	2.90	N/A	N/A	2.98	07/01/2012
Blended Policy (PIMCO Multi-Sector)	-3.85	-3.34	0.31	6.36	3.24	3.26	4.87	3.09	
Value Added	0.88	1.85	1.83	0.75	-0.34	N/A	N/A	-0.11	
Real Assets (levered/hedged)	1.52	3.79	14.41	19.39	N/A	N/A	N/A	3.23	10/01/2014
Real Assets (unlevered/hedged)	1.16	2.88	11.15	15.02	N/A	N/A	N/A	1.75	10/01/2014
Blended Policy (Real Assets) (Hedged)	-0.67	-0.79	7.35	9.34	N/A	N/A	N/A	-1.19	
Value Added	1.83	3.67	3.81	5.68	N/A	N/A	N/A	2.94	
Real Assets (levered/unhedged)	1.18	3.37	13.91	19.09	N/A	N/A	N/A	3.11	10/01/2014
Real Assets (unlevered/unhedged)	0.82	2.55	10.78	14.80	N/A	N/A	N/A	1.66	10/01/2014



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Trailing Period Performance

Performance (%)

	1 Quarter	2 Quarters Ending Dec-2016	3 Quarters Ending Dec-2016	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Blended Policy (Real Assets) (Unhedged)	-1.06	-1.16	6.93	9.08	N/A	N/A	N/A	-1.31	
Value Added	1.88	3.71	3.85	5.72	N/A	N/A	N/A	2.97	
Real Assets x Private Real Estate (levered/hedged)	-1.38	0.37	21.20	27.77	N/A	N/A	N/A	-9.73	10/01/2014
Real Assets x Private Real Estate (unlevered/hedged)	-1.05	0.10	13.02	16.94	N/A	N/A	N/A	-12.31	10/01/2014
Blended Policy (Real Assets x Private RE) (Hedged)	-1.19	-1.66	11.11	14.09	N/A	N/A	N/A	-10.94	
Value Added	0.14	1.76	1.91	2.85	N/A	N/A	N/A	-1.37	
Real Assets x Private Real Estate (levered/unhedged)	-2.25	-0.47	20.08	27.12	N/A	N/A	N/A	-9.93	10/01/2014
Real Assets x Private Real Estate (unlevered/unhedged)	-1.60	-0.43	12.37	16.58	N/A	N/A	N/A	-12.43	10/01/2014
Blended Policy (Real Assets x Private RE) (Unhedged)	-1.85	-2.29	10.35	13.63	N/A	N/A	N/A	-11.13	
Value Added	0.25	1.86	2.02	2.95	N/A	N/A	N/A	-1.30	
MLP Composite	2.90	7.77	32.54	24.62	-0.79	8.64	N/A	16.43	10/01/2008
S&P MLP Index	3.32	6.34	30.19	21.95	-5.18	3.03	8.19	12.02	
Value Added	-0.42	1.43	2.35	2.67	4.39	5.61	N/A	4.41	
PSERS S&P MLP Index	3.25	6.27	30.08	22.29	N/A	N/A	N/A	-4.57	08/01/2015
S&P MLP Total Return Index	3.32	6.34	30.19	21.95	-5.18	3.03	8.19	-7.05	
Value Added	-0.07	-0.07	-0.11	0.34	N/A	N/A	N/A	2.48	
Atlantic Trust	3.32	8.70	35.35	28.14	-0.48	N/A	N/A	7.94	09/01/2012
S&P MLP Index	3.32	6.34	30.19	21.95	-5.18	3.03	8.19	2.01	
Value Added	0.00	2.36	5.16	6.19	4.70	N/A	N/A	5.93	
PSERS Harvest Funds MLP	1.64	6.01	27.58	19.96	-0.46	8.57	N/A	16.39	10/01/2008
S&P MLP Index	3.32	6.34	30.19	21.95	-5.18	3.03	8.19	12.02	
Value Added	-1.68	-0.33	-2.61	-1.99	4.72	5.54	N/A	4.37	
Salient	3.82	10.40	38.62	29.46	-1.59	N/A	N/A	7.65	08/01/2012
S&P MLP Index	3.32	6.34	30.19	21.95	-5.18	3.03	8.19	2.35	
Value Added	0.50	4.06	8.43	7.51	3.59	N/A	N/A	5.30	
Infrastructure Composite (levered/hedged)	-2.18	-1.50	8.50	24.58	N/A	N/A	N/A	10.71	11/01/2015
Infrastructure Composite (unlevered/hedged)	-1.03	-0.59	4.51	11.66	N/A	N/A	N/A	7.11	11/01/2015
FTSE Dev. Core Infrast 50/50 Index (Net) (Hedged)	-1.03	-0.37	4.67	11.81	9.33	11.35	N/A	6.35	
Value Added	0.00	-0.22	-0.16	-0.15	N/A	N/A	N/A	0.76	
Insight Nevada - Infra (notional)	6.00	5.34	6.46	1.84	N/A	N/A	N/A	1.40	12/01/2015
Infra Currency Hedge Benchmark	6.03	5.46	6.59	1.98	N/A	N/A	N/A	1.53	
Value Added	-0.03	-0.12	-0.13	-0.14	N/A	N/A	N/A	-0.13	
Infrastructure Composite (levered/unhedged)	-8.17	-7.02	1.27	21.40	N/A	N/A	N/A	8.29	11/01/2015
Infrastructure Composite (unlevered/unhedged)	-3.86	-3.16	1.26	10.52	N/A	N/A	N/A	4.58	11/01/2015
FTSE Developed Core Infrast 50/50 Index (Net)	-3.87	-3.01	1.37	10.63	5.86	8.84	N/A	4.66	
Value Added	0.01	-0.15	-0.11	-0.11	N/A	N/A	N/A	-0.08	

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Trailing Period Performance

Performance (%)

	1 Quarter	2 Quarters Ending Dec-2016	3 Quarters Ending Dec-2016	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Publicly-Traded Infrastructure Composite (levered)	-8.17	-7.02	1.27	21.40	N/A	N/A	N/A	8.29	11/01/2015
Publicly-Traded Infrastructure Composite (unlevered)	-3.86	-3.16	1.26	10.52	N/A	N/A	N/A	6.17	11/01/2015
FTSE Developed Core Infrastr 50/50 Index (Net)	-3.87	-3.01	1.37	10.63	5.86	8.84	N/A	4.66	
Value Added	0.01	-0.15	-0.11	-0.11	N/A	N/A	N/A	1.51	
PSERS Infrastructure Index (levered)	-8.17	-7.02	1.27	21.40	N/A	N/A	N/A	8.29	11/01/2015
PSERS Infrastructure Index (unlevered)	-3.86	-3.16	1.26	10.52	N/A	N/A	N/A	4.58	11/01/2015
FTSE Developed Core Infrastr 50/50 Index (Net)	-3.87	-3.01	1.37	10.63	5.86	8.84	N/A	4.66	
Value Added	0.01	-0.15	-0.11	-0.11	N/A	N/A	N/A	-0.08	
Commodities Composite (levered)	-6.18	-7.93	13.55	35.48	-9.41	-8.19	-3.72	-3.18	11/01/2006
Commodities Composite (unlevered)	-2.81	-3.67	6.08	14.74	-5.68	-5.26	-2.19	-1.67	11/01/2006
Blended Policy (Commodities)	-3.27	-5.81	4.12	10.80	-7.91	-7.07	-4.61	-4.48	
Value Added	0.46	2.14	1.96	3.94	2.23	1.81	2.42	2.81	
PSERS Commodity Beta + PCAF Composite	3.61	1.85	14.78	17.31	N/A	N/A	N/A	-12.21	05/01/2014
Bloomberg Commodity Index Total Return	2.66	-1.31	11.28	11.74	-11.26	-8.96	-5.58	-15.53	
Value Added	0.95	3.16	3.50	5.57	N/A	N/A	N/A	3.32	
PSERS Commodity Beta (levered)	7.40	-0.02	38.59	45.52	N/A	N/A	N/A	-14.40	05/01/2014
PSERS Commodity Beta (unlevered)	2.82	-0.01	12.49	14.25	N/A	N/A	N/A	-13.45	05/01/2014
Bloomberg Commodity Index Total Return	2.66	-1.31	11.28	11.74	-11.26	-8.96	-5.58	-15.53	
Value Added	0.16	1.30	1.21	2.51	N/A	N/A	N/A	2.08	
PIMCO Commodity Alpha Fund	5.16	13.25	15.21	20.81	N/A	N/A	N/A	14.99	03/01/2015
Libor (3 month)	0.23	0.42	0.59	0.74	0.43	0.40	1.15	0.55	
Value Added	4.93	12.83	14.62	20.07	N/A	N/A	N/A	14.44	
Gresham	4.19	0.89	12.84	12.90	-10.81	-7.87	N/A	-5.01	10/01/2007
Bloomberg Commodity Index Total Return	2.66	-1.31	11.28	11.74	-11.26	-8.96	-5.58	-7.07	
Value Added	1.53	2.20	1.56	1.16	0.45	1.09	N/A	2.06	
Wellington Management Company	2.97	7.11	19.02	25.32	-7.07	-4.74	-1.30	-1.30	01/01/2007
Blended Benchmark (WMC)	5.11	5.12	17.54	23.33	-7.32	-4.18	-0.31	-0.31	
Value Added	-2.14	1.99	1.48	1.99	0.25	-0.56	-0.99	-0.99	
PSERS Gold Fund (unlevered)	-12.81	-13.52	-7.75	7.38	-1.29	N/A	N/A	-6.46	06/01/2012
Bloomberg Gold Subindex Total Return	-12.70	-13.35	-7.52	7.73	-1.93	-6.52	5.27	-6.96	
Value Added	-0.11	-0.17	-0.23	-0.35	0.64	N/A	N/A	0.50	
PTRES Composite (levered/hedged)	-3.42	-1.67	4.91	11.66	9.48	9.21	2.48	9.39	07/01/1998
PTRES Composite (unlevered/hedged)	-3.93	-2.73	1.70	6.04	7.70	8.15	1.98	9.10	07/01/1998
Blended Policy (PTRES) (Hedged)	-2.58	-1.50	1.79	5.36	6.41	9.85	1.80	8.39	
Value Added	-1.35	-1.23	-0.09	0.68	1.29	-1.70	0.18	0.71	
Insight Sierra - REIT (notional)	7.07	6.70	6.34	2.31	N/A	N/A	N/A	1.70	12/01/2015
REIT Currency Hedge Benchmark	7.08	6.76	6.46	2.46	N/A	N/A	N/A	1.84	



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Trailing Period Performance

Performance (%)

	1 Quarter	2 Quarters Ending Dec-2016	3 Quarters Ending Dec-2016	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Value Added	-0.01	-0.06	-0.12	-0.15	N/A	N/A	N/A	-0.14	
PTRES Composite (levered/unhedged)	-6.98	-5.19	1.26	9.65	8.81	8.82	2.30	9.28	07/01/1998
PTRES Composite (unlevered/unhedged)	-6.20	-4.95	-0.54	4.89	7.31	7.91	1.87	9.03	07/01/1998
Blended Policy (PTRES) (Unhedged)	-5.59	-4.41	-1.11	4.06	5.83	9.49	1.63	8.29	
Value Added	-0.61	-0.54	0.57	0.83	1.48	-1.58	0.24	0.74	
PSERS REIT Index (levered)	-11.12	-9.11	-3.06	7.24	N/A	N/A	N/A	3.59	11/01/2015
PSERS REIT Index (unlevered)	-5.52	-4.37	-1.02	4.16	N/A	N/A	N/A	2.30	11/01/2015
FTSE EPRA/NAREIT Developed Index (Net)	-5.59	-4.41	-1.11	4.06	5.90	9.48	1.48	2.21	
Value Added	0.07	0.04	0.09	0.10	N/A	N/A	N/A	0.09	
Security Capital Preferred Growth	-2.49	-0.94	5.96	12.23	11.25	10.27	N/A	8.36	07/01/2008
Wishare US Real Estate Securities Index	-2.20	-3.57	2.21	7.62	14.05	12.24	4.80	8.56	
Value Added	-0.29	2.63	3.75	4.61	-2.80	-1.97	N/A	-0.20	
Risk Parity Composite (vol adjusted)	-1.03	2.62	8.25	11.14	4.60	N/A	N/A	2.44	10/01/2012
Blended Policy (Risk Parity)	-3.93	-0.34	6.13	12.20	5.33	N/A	N/A	2.82	
Value Added	2.90	2.96	2.13	-1.06	-0.73	N/A	N/A	-0.38	
PSERS Risk Parity (vol adjusted)	-1.66	2.28	8.81	14.17	5.70	N/A	N/A	2.53	02/01/2013
AQR GRP EL 20 Offshore Fund (vol adjusted)	-2.75	-1.36	5.11	9.30	1.43	N/A	N/A	0.36	11/01/2012
Bridgewater All Weather @15% (vol adjusted)	-2.16	1.53	8.86	11.60	3.85	N/A	N/A	2.01	10/01/2012
DE Shaw Orienteer (vol adjusted)	-2.72	1.17	5.76	7.86	N/A	N/A	N/A	5.75	02/01/2014
DE Shaw Orienteer HV (vol adjusted)	-2.71	1.21	5.81	N/A	N/A	N/A	N/A	8.96	02/01/2016
BlackRock Market Advantage II (vol adjusted)	-0.65	3.03	8.29	11.69	N/A	N/A	N/A	0.91	04/01/2015
Bridgewater Optimal (vol adjusted)	7.77	12.35	12.95	7.72	N/A	N/A	N/A	5.23	11/01/2015
Total Absolute Return	4.23	6.78	5.83	3.71	3.49	3.75	5.62	5.31	10/01/2005
Blended Policy (3-month Libor + 3.5%)	1.10	2.17	3.21	4.27	4.56	5.73	6.83	6.96	
Value Added	3.13	4.61	2.62	-0.56	-1.07	-1.98	-1.21	-1.65	
Apollo/SASOF III	-2.03	-5.75	-4.17	-6.52	N/A	N/A	N/A	-21.27	02/01/2015
Libor (1 month)	0.15	0.28	0.39	0.49	0.28	0.25	0.99	0.36	
Value Added	-2.18	-6.03	-4.56	-7.01	N/A	N/A	N/A	-21.63	
Oceanwood Opportunities Fund	4.45	10.24	3.86	-5.12	N/A	N/A	N/A	1.38	09/01/2014
Libor (1 month)	0.15	0.28	0.39	0.49	0.28	0.26	0.99	0.32	
Value Added	4.30	9.96	3.47	-5.61	N/A	N/A	N/A	1.06	
Perry Partners L.P.	11.17	11.16	10.91	8.03	-3.57	N/A	N/A	-2.99	12/01/2013
Libor (1 month)	0.15	0.28	0.39	0.49	0.28	0.26	0.99	0.28	
Value Added	11.02	10.88	10.52	7.54	-3.85	N/A	N/A	-3.27	
Ellis Lake	-44.75	-44.38	-47.20	-48.93	-24.69	N/A	N/A	-19.00	04/01/2013



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Trailing Period Performance

Performance (%)

	1 Quarter	2 Quarters Ending Dec-2016	3 Quarters Ending Dec-2016	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Libor (1 month) Value Added	0.15 -44.90	0.28 -44.65	0.39 -47.59	0.49 -49.42	0.28 -24.97	0.26 N/A	0.99 N/A	0.26 -19.26	
Garda Fixed Income Relative Value Opportunity Fund Ltd.	1.26	4.51	4.94	6.83	5.11	5.41	N/A	5.41	01/01/2012
Libor (1 month) Value Added	0.15 1.11	0.28 4.23	0.39 4.55	0.49 6.34	0.28 4.83	0.26 5.15	0.99 N/A	0.26 5.15	
Capula Global Relative Value Fund Limited - Class F	3.35	5.48	6.98	9.01	8.57	6.90	N/A	7.01	04/01/2011
Libor (1 month) Value Added	0.15 3.20	0.28 5.20	0.39 6.59	0.49 8.52	0.28 8.29	0.26 6.64	0.99 N/A	0.25 6.76	
PIMCO PARS/GCOF/MAV Fund	1.40	1.41	2.71	0.54	4.07	5.63	N/A	6.91	03/01/2008
Libor (1 month) Value Added	0.15 1.25	0.28 1.13	0.39 2.32	0.49 0.05	0.28 3.79	0.26 5.37	0.99 N/A	0.47 6.44	
PIMCO PARS	-2.62	-0.07	2.53	-0.14	7.31	N/A	N/A	6.11	10/01/2012
PIMCO GCOF	6.11	8.03	9.50	10.19	9.18	N/A	N/A	9.65	10/01/2012
PIMCO MAV	3.67	2.78	3.36	1.88	4.91	N/A	N/A	2.43	10/01/2012
BlackRock Capital Structure Investments Fund	1.18	4.84	-8.23	-10.67	-1.55	1.32	N/A	0.64	03/01/2009
Libor (1 month) Value Added	0.15 1.03	0.28 4.56	0.39 -8.62	0.49 -11.16	0.28 -1.83	0.26 1.06	0.99 N/A	0.26 0.38	
Brigade Leveraged Capital Structures Offshore Fund	2.52	8.46	17.91	22.88	3.17	4.52	N/A	5.46	10/01/2007
Libor (1 month) Value Added	0.15 2.37	0.28 8.18	0.39 17.52	0.49 22.39	0.28 2.89	0.26 4.26	0.99 N/A	0.65 4.81	
Caspian Select Credit International - Class A	4.31	8.76	11.70	8.92	0.21	4.33	N/A	2.86	04/01/2011
Libor (1 month) Value Added	0.15 4.16	0.28 8.48	0.39 11.31	0.49 8.43	0.28 -0.07	0.26 4.07	0.99 N/A	0.25 2.61	
Caspian Keystone Focused Fund, L.P.	1.00	5.52	N/A	N/A	N/A	N/A	N/A	8.54	06/01/2016
Libor (1 month) Value Added	0.15 0.85	0.28 5.24	0.39 N/A	0.49 N/A	0.28 N/A	0.26 N/A	0.99 N/A	0.31 8.23	
Venor Capital Offshore	5.15	N/A	N/A	N/A	N/A	N/A	N/A	5.62	09/01/2016
Citigroup 1 Month T-Bill Value Added	0.06 5.09	0.12 N/A	0.16 N/A	0.21 N/A	0.08 N/A	0.06 N/A	0.64 N/A	0.09 5.53	
Aeolus Property Catastrophe Fund I LP	1.44	8.96	8.97	10.24	14.73	N/A	N/A	17.16	06/01/2012
Libor (1 month) Value Added	0.15 1.29	0.28 8.68	0.39 8.58	0.49 9.75	0.28 14.45	0.26 N/A	0.99 N/A	0.26 16.90	
Nephila / Palmetto Fund Ltd. - Class G	-0.17	1.94	3.00	2.83	5.03	6.40	N/A	6.45	07/01/2011
Libor (1 month) Value Added	0.15 -0.32	0.28 1.66	0.39 2.61	0.49 2.34	0.28 4.75	0.26 6.14	0.99 N/A	0.25 6.20	
Independence Reinsurance Partners Composite	0.85	3.74	5.95	9.86	N/A	N/A	N/A	9.86	01/01/2016



As of December 31, 2016

Trailing Period Performance

Performance (%)

	1 Quarter	2 Quarters Ending Dec-2016	3 Quarters Ending Dec-2016	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Libor (1 month)	0.15	0.28	0.39	0.49	0.28	0.26	0.99	0.49	
Value Added	0.70	3.46	5.56	9.37	N/A	N/A	N/A	9.37	
DaVinci Reinsurance Ltd.	1.05	4.15	7.11	11.94	N/A	N/A	N/A	11.94	01/01/2016
Medici Fund Ltd.	0.70	3.43	4.93	N/A	N/A	N/A	N/A	6.01	02/01/2016
Capula Tail Risk Fund Limited - Class C	0.57	0.87	0.66	-0.57	0.55	-3.39	N/A	-0.77	07/01/2011
Libor (1 month)	0.15	0.28	0.39	0.49	0.28	0.26	0.99	0.25	
Value Added	0.42	0.59	0.27	-1.06	0.27	-3.65	N/A	-1.02	
Bridgewater Pure Alpha Fund II, Ltd.	14.30	16.45	10.55	2.94	5.47	4.97	13.46	12.62	01/01/2006
Libor (3 month)	0.23	0.42	0.59	0.74	0.43	0.40	1.15	1.51	
Value Added	14.07	16.03	9.96	2.20	5.04	4.57	12.31	11.11	
Brevar Howard Fund Limited - Class E	6.71	4.44	4.35	3.52	0.57	1.77	N/A	3.18	07/01/2010
Libor (3 month)	0.23	0.42	0.59	0.74	0.43	0.40	1.15	0.38	
Value Added	6.48	4.02	3.76	2.78	0.14	1.37	N/A	2.80	
OWS Credit Opportunity Offshore Fund III	2.73	10.23	11.54	10.03	N/A	N/A	N/A	8.55	12/01/2015
Libor (3 month)	0.23	0.42	0.59	0.74	0.43	0.40	1.15	0.73	
Value Added	2.50	9.81	10.95	9.29	N/A	N/A	N/A	7.82	
Unallocated Cash & Cash Equivalents	0.08	0.21	0.35	0.40	0.34	1.02	0.15	0.41	07/01/1998
BofA Merrill Lynch 3 Month US T-Bill	0.08	0.18	0.25	0.33	0.14	0.12	0.80	2.05	
Value Added	0.00	0.03	0.10	0.07	0.20	0.90	-0.65	-1.64	
PSERS Cash Management	0.08	0.21	0.34	0.40	0.22	0.30	-0.47	2.48	07/01/1985
RE Conversions	0.00	0.00	0.00	0.00	N/A	N/A	N/A	0.00	09/01/2015
PSERS Prop Fund	0.14	0.29	0.42	0.56	0.32	0.30	N/A	0.39	01/01/2009
BofA Merrill Lynch US Treasury Bills 0-3M	0.07	0.14	0.19	0.25	0.10	0.08	0.72	0.09	
Value Added	0.07	0.15	0.23	0.31	0.22	0.22	N/A	0.30	
LIBOR Composite	0.40	0.92	1.42	1.90	1.14	1.23	N/A	1.47	04/01/2008
PSERS LIBOR	0.33	0.71	1.09	1.43	0.83	0.82	1.77	1.77	01/01/2007
Libor (3 month)	0.23	0.42	0.59	0.74	0.43	0.40	1.15	1.15	
Value Added	0.10	0.29	0.50	0.69	0.40	0.42	0.62	0.62	
Capula LIBOR Tail Risk	0.57	0.86	0.65	-0.57	N/A	N/A	N/A	-0.37	10/01/2015
Libor (3 month)	0.23	0.42	0.59	0.74	0.43	0.40	1.15	0.68	
Value Added	0.34	0.44	0.06	-1.31	N/A	N/A	N/A	-1.05	
Radcliffe Ultra Short Duration	0.62	1.79	2.94	4.26	2.60	N/A	N/A	2.74	06/01/2012
Libor (3 month)	0.23	0.42	0.59	0.74	0.43	0.40	1.15	0.39	
Value Added	0.39	1.37	2.35	3.52	2.17	N/A	N/A	2.35	

As of December 31, 2016

Trailing Period Performance

Performance (%)

	1 Quarter	2 Quarters Ending Dec-2016	3 Quarters Ending Dec-2016	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
PSERS Healthcare & HOP									
PSERS Healthcare - Premium Assist	0.18	0.43	0.69	0.97	0.49	0.55	1.68	2.96	01/01/1998
BofA Merrill Lynch 3 Month US T-Bill Value Added	0.08	0.18	0.25	0.33	0.14	0.12	0.80	2.13	
PSERS Healthcare - HOP	0.15	0.29	0.42	0.53	0.32	0.30	1.12	1.65	02/01/2002
BofA Merrill Lynch 3 Month US T-Bill Value Added	0.08	0.18	0.25	0.33	0.14	0.12	0.80	1.34	
	0.07	0.11	0.17	0.20	0.18	0.18	0.32	0.31	
E/M Total Program Composite									
E/M US Core Plus FI Composite	-0.32	1.12	2.94	4.09	1.79	6.39	3.18	3.25	01/01/2000
	-3.14	-2.64	-0.38	2.63	2.95	2.52	1.02	1.42	11/01/2004
Pugh Capital Management	-3.14	-2.64	-0.38	2.63	3.11	2.56	4.83	5.12	07/01/2006
Bimbg. Barc. U.S. Aggregate Value Added	-2.98	-2.53	-0.37	2.65	3.03	2.23	4.34	4.63	
	-0.16	-0.11	-0.01	-0.02	0.08	0.33	0.49	0.49	
E/M Absolute Return Composite									
Ellis Lake	-44.75	-44.38	-47.20	-48.93	-24.69	N/A	N/A	-20.41	07/01/2013
	-44.75	-44.38	-47.20	-48.93	-24.69	N/A	N/A	-19.00	04/01/2013
Libor (1 month) Value Added	0.15	0.28	0.39	0.49	0.28	0.26	0.99	0.26	
	-44.90	-44.66	-47.59	-49.42	-24.97	N/A	N/A	-19.26	
E/M Short Duration Cash									
Radcliffe Ultra Short Duration	0.49	2.11	4.17	5.20	N/A	N/A	N/A	3.80	10/01/2014
	0.62	1.79	2.94	4.26	2.60	N/A	N/A	2.74	06/01/2012
Libor (3 month) Value Added	0.23	0.42	0.59	0.74	0.43	0.40	1.15	0.39	
	0.39	1.37	2.35	3.52	2.17	N/A	N/A	2.35	
Radcliffe Specialty Finance Debt									
3-Month Libor + 0.60% Value Added	0.40	2.37	5.18	5.97	N/A	N/A	N/A	4.18	10/01/2014
	0.38	0.73	1.04	1.35	1.03	1.00	1.75	1.10	
	0.02	1.64	4.14	4.62	N/A	N/A	N/A	3.08	

As of December 31, 2016

Trailing Period Performance

Performance (%)

	1 Quarter	2 Quarters Ending Dec-2016	3 Quarters Ending Dec-2016	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Total Private Market Composites (hedged)	4.20	7.18	8.90	10.94	9.68	10.71	6.87	9.92	10/01/1992
Blended Policy (Private Market)	0.45	0.94	1.73	2.80	5.88	6.35	4.71	N/A	
Value Added	3.75	6.24	7.17	8.14	3.80	4.36	2.16	N/A	
Total Private Market Composites (unhedged)	4.20	7.15	8.89	10.92	9.68	10.70	6.87	9.92	10/01/1992
Blended Policy (Private Market)	0.45	0.94	1.73	2.80	5.88	6.35	4.71	N/A	
Value Added	3.75	6.21	7.16	8.12	3.80	4.35	2.16	N/A	
Total Alternative Investments (hedged)	3.93	7.17	8.74	9.63	7.29	9.54	9.39	9.90	07/01/1998
Burgiss (Lagged) - PE/PDVC/Int	0.74	1.26	1.17	2.34	4.34	4.82	3.75	3.18	
Value Added	3.19	5.91	7.57	7.29	2.95	4.72	5.64	6.72	
Burgiss (Lagged) - Int	-0.69	-0.64	-1.40	-0.19	0.07	N/A	N/A	N/A	
Value Added	4.62	7.81	10.14	9.82	7.22	N/A	N/A	N/A	
Burgiss (Lagged) - PE/PD	0.98	1.59	1.68	2.92	4.76	5.27	4.08	N/A	
Value Added	2.95	5.58	7.06	6.71	2.53	4.27	5.31	N/A	
Burgiss (Lagged) - VC	-0.30	-0.23	-1.41	-0.77	1.75	1.35	-0.16	N/A	
Value Added	4.23	7.40	10.15	10.40	5.54	8.19	9.55	N/A	
Total Alternative Investments (unhedged)	3.93	7.13	8.73	9.59	7.28	9.53	9.39	9.90	07/01/1998
Burgiss (Lagged) - PE/PDVC/Int	0.74	1.26	1.17	2.34	4.34	4.82	3.75	3.18	
Value Added	3.19	5.87	7.56	7.25	2.94	4.71	5.64	6.72	
Burgiss (Lagged) - Int	-0.69	-0.64	-1.40	-0.19	0.07	N/A	N/A	N/A	
Value Added	4.62	7.77	10.13	9.78	7.21	N/A	N/A	N/A	
Burgiss (Lagged) - PE/PD	0.98	1.59	1.68	2.92	4.76	5.27	4.08	N/A	
Value Added	2.95	5.54	7.05	6.67	2.52	4.26	5.31	N/A	
Burgiss (Lagged) - VC	-0.30	-0.23	-1.41	-0.77	1.75	1.35	-0.16	N/A	
Value Added	4.23	7.36	10.14	10.36	5.53	8.18	9.55	N/A	
Priv. Eq/ Venture Cap/ Priv. Debt/Co-Invest	3.93	7.13	8.73	9.59	7.28	N/A	N/A	9.16	04/01/2012
Insight Wilson - PE (notional)	0.14	3.80	0.37	3.12	N/A	N/A	N/A	3.24	10/01/2015
PE Currency Hedge Custom Benchmark	0.18	4.02	0.80	3.50	N/A	N/A	N/A	3.51	
Value Added	-0.04	-0.22	-0.43	-0.38	N/A	N/A	N/A	-0.27	
Private Equity Co-Investment Composite	7.63	13.88	19.59	27.85	30.62	N/A	N/A	34.41	04/01/2012
PA Penn Investment Fund - PE Composite	6.00	9.84	9.69	12.12	N/A	N/A	N/A	10.85	12/01/2015
PA Penn Investment Fund - PE	16.37	29.23	28.95	27.89	N/A	N/A	N/A	25.32	12/01/2015
PA Penn Investment Fund - PE Internal	0.00	0.00	0.00	8.27	N/A	N/A	N/A	7.61	12/01/2015
Internally Managed PE Composite	7.74	14.14	20.11	28.67	30.90	N/A	N/A	34.59	04/01/2012
Private Eq/ Venture Cap/ Private Debt	3.73	6.77	8.20	8.81	6.70	9.13	9.24	9.81	07/01/1998
Private Debt Composite	2.86	5.05	5.74	1.58	4.81	7.96	7.24	7.46	04/01/2001
Private Equity/ Venture Capital Composite	3.89	7.07	8.63	10.08	7.06	9.34	9.42	9.69	07/01/1998

As of December 31, 2016

Trailing Period Performance

Performance (%)

	1 Quarter	2 Quarters Ending Dec-2016	3 Quarters Ending Dec-2016	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Burgiss (Lagged) - PE/PDVC/Int Value Added	0.74 3.15	1.26 5.81	1.17 7.46	2.34 7.74	4.34 2.72	4.82 4.52	3.75 5.67	3.18 6.51	
Private Equity	3.87	6.86	9.10	10.41	6.77	9.22	9.61	10.53	04/01/2001
Private Equity x Tobacco Composite	3.87	6.86	9.10	10.41	6.93	9.32	9.66	10.56	04/01/2001
Venture Capital	4.01	8.31	5.94	8.19	9.50	10.28	7.72	3.47	04/01/2001
Total Real Estate (levered/hedged)	3.92	6.43	8.76	12.78	13.01	11.97	1.92	8.16	04/01/1981
Total Real Estate (unlevered/hedged)	3.49	5.90	8.14	12.00	12.69	11.78	1.83	8.13	04/01/1981
Blended Policy (Total Real Estate) (Hedged) Value Added	-0.32 3.81	0.20 5.70	2.39 5.75	3.52 8.48	8.21 4.48	8.65 2.93	5.51 -3.68	8.43 -0.30	
Total Real Estate (levered/unhedged)	3.59	6.10	8.44	12.58	12.94	11.93	1.90	8.15	04/01/1981
Total Real Estate (unlevered/unhedged)	3.49	5.90	8.14	12.00	12.69	11.78	1.83	8.13	04/01/1981
Blended Policy (Total Real Estate) (Unhedged) Value Added	-0.70 4.19	-0.16 6.06	2.03 6.11	3.30 8.70	8.12 4.57	8.79 2.99	5.48 -3.65	8.42 -0.29	
Private Real Estate Composite	4.61	7.19	9.15	12.95	13.17	12.24	2.22	9.35	07/01/1996
Blended Policy (Private Real Estate) Value Added	0.00 4.61	0.44 6.75	2.53 6.62	3.44 9.51	8.06 5.11	8.75 3.49	5.46 -3.24	9.54 -0.19	
Private Real Estate x Internal	4.63	7.20	9.16	12.86	13.09	12.17	1.88	8.87	07/01/1996
Internally Managed Private Real Estate	3.27	6.43	8.45	18.42	21.86	N/A	N/A	26.22	07/01/2013

As of December 31, 2016

Calendar Year Performance

	Performance (%)										
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	
PSERS Total Fund	10.95	-1.80	8.75	8.66	11.35	4.31	14.22	12.06	-29.70	13.83	
Blended Policy (Total Plan)	8.80	-2.66	6.88	5.65	8.78	2.39	10.32	12.94	-25.96	10.43	
Value Added	2.15	0.86	1.87	3.01	2.57	1.92	3.90	-0.88	-3.74	3.40	
Total Public Markets Composite	10.97	-4.70	6.58	6.64	10.98	1.01	15.33	28.30	-34.67	10.15	
Blended Policy (Public Market) (Hedged)	11.05	-5.66	5.19	4.76	9.81	-0.36	11.76	24.17	-32.01	9.44	
Value Added	-0.08	0.96	1.39	1.88	1.17	1.37	3.57	4.13	-2.66	0.71	
Blended Policy (Public Market) (Unhedged)	9.70	-6.28	4.16	4.69	9.81	-0.36	11.76	24.17	-32.01	9.44	
Value Added	1.27	1.58	2.42	1.95	1.17	1.37	3.57	4.13	-2.66	0.71	
Total Public Equity Composite	9.19	0.92	8.15	24.43	17.07	-6.95	16.95	41.00	-42.75	10.55	
Blended Policy (Public Equity) (Hedged)	8.89	-0.51	7.93	24.18	16.73	-7.83	14.34	37.59	-41.03	10.10	
Value Added	0.30	1.43	0.22	0.25	0.34	0.87	2.61	3.41	-1.72	0.46	
Blended Policy (Public Equity) (Unhedged)	8.72	-1.88	4.14	23.89	16.73	-7.83	14.34	37.59	-41.03	10.10	
Value Added	0.47	2.80	4.01	0.54	0.34	0.87	2.61	3.41	-1.72	0.46	
Total US Equity Composite	16.38	0.40	11.71	34.04	15.65	1.65	18.37	33.94	-41.49	4.68	
Blended Policy (Tot US Eq)	12.66	0.64	12.51	33.39	16.42	0.80	16.52	28.22	-37.23	5.62	
Value Added	3.72	-0.24	-0.80	0.65	-0.77	0.85	1.85	5.72	-4.26	-0.94	
PSERS-S&P 500 Index Composite	13.90	1.43	13.66	32.85	16.09	2.03	16.03	28.52	-37.07	5.60	
S&P 500 Index	11.96	1.38	13.69	32.39	16.00	2.11	15.06	26.46	-37.00	5.49	
Value Added	1.94	0.05	-0.03	0.46	0.09	-0.08	0.97	2.06	-0.07	0.11	
Total US Small Cap Composite	24.13	-2.31	3.57	37.99	15.08	-1.14	26.20	38.03	-35.83	2.82	
MSCI USA Small Cap Index	19.80	-3.65	7.55	38.26	18.22	-3.03	27.96	39.74	-35.88	-3.00	
Value Added	4.33	1.34	-3.98	-0.27	-3.14	1.89	-1.76	-1.71	0.05	5.82	
PSERS Small Cap Index Composite	24.13	-1.79	8.00	38.32	18.36	-0.14	27.43	35.33	-33.93	4.01	
PSERS-S&P 400 Index Composite	21.34	-2.20	9.87	33.45	18.78	-1.80	27.42	41.12	-35.91	8.08	
S&P MidCap 400	20.74	-2.18	9.77	33.50	17.88	-1.73	26.64	37.38	-36.23	7.98	
Value Added	0.60	-0.02	0.10	-0.05	0.90	0.13	0.78	3.74	0.32	0.10	
PSERS-S&P 600 Index Composite	28.05	-1.47	6.23	43.13	17.70	1.64	27.47	29.62	-30.67	-0.14	
S&P SmallCap 600	26.56	-1.97	5.76	41.31	16.33	1.02	26.31	25.57	-31.07	-0.30	
Value Added	1.49	0.50	0.47	1.82	1.37	0.62	1.16	4.05	0.40	0.16	
Total Non-U.S. Equity Composite (hedged)	5.15	2.68	5.09	15.95	18.39	-13.34	16.00	45.88	-43.80	16.34	
Blended Policy (Total Non-US Eq) (Hedged)	6.43	-0.50	3.97	16.36	17.03	-14.30	12.73	45.38	-44.31	14.66	
Value Added	-1.28	3.18	1.12	-0.41	1.36	0.96	3.27	0.50	0.51	1.68	
Total Non-U.S. Equity Composite (unhedged)	2.96	-1.98	-3.27	15.95	18.39	-13.34	16.00	45.88	-43.80	16.34	
Blended Policy (Total Non-US Eq) (Unhedged)	4.67	-5.11	-3.99	15.82	17.03	-14.30	12.73	45.38	-44.31	14.66	
Value Added	-1.71	3.13	0.72	0.13	1.36	0.96	3.27	0.50	0.51	1.68	
Emerging Markets Equity Composite	-3.95	-8.21	1.48	-0.24	21.03	-17.81	17.04	71.83	-52.69	37.99	
Blended Policy (MSCI EM net)	11.19	-14.92	-2.19	-2.60	18.23	-18.42	18.87	78.48	-53.27	39.79	
Value Added	-15.14	6.71	3.67	2.36	2.80	0.61	-1.83	-6.65	0.58	-1.80	
MSCI Emerging Markets IMI (Net)	9.90	-13.86	-1.79	-2.20	18.69	-19.49	19.90	82.36	-53.78	39.77	

Calendar Year Performance

	Performance (%)									
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Value Added	-13.65	5.65	3.27	1.96	2.34	1.68	-2.86	-10.53	1.09	-1.78
Wasatch EM Small Cap	-3.95	-10.36	2.13	1.87	28.06	-12.98	42.87	119.08	N/A	N/A
Blended Policy (Wasatch EM)	4.03	-9.81	1.49	1.01	22.60	-26.96	27.47	114.32	-58.10	42.57
Value Added	-7.98	-0.55	0.64	0.86	5.46	13.98	15.40	4.77	N/A	N/A
Total Non-U.S. Equity x Emerging Markets Composite (hedged)	5.60	3.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blended Policy (Non-US Equity x EM) (Hedged)	6.25	0.66	4.75	16.36	17.03	-14.30	12.73	45.38	-44.31	14.66
Value Added	-0.65	3.04	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Insight Everest - Int'l Eq (notional)	4.02	7.13	10.98	-0.37	-1.46	0.00	1.39	1.84	3.15	-4.46
Currency Hedge Benchmark	4.18	7.24	11.06	-1.39	0.00	0.00	0.00	3.39	3.81	-5.01
Value Added	-0.16	-0.11	-0.08	1.02	-1.46	0.00	1.39	-1.55	-0.66	0.55
Total Non-U.S. Equity x Emerging Markets Composite (unhedged)	3.29	-1.46	-3.43	19.23	18.82	-12.39	14.77	42.06	-45.82	15.61
Blended Policy (Non-US Equity x EM) (Unhedged)	4.41	-4.60	-3.89	15.82	17.03	-14.30	12.73	45.38	-44.31	14.66
Value Added	-1.12	3.14	0.46	3.41	1.79	1.91	2.04	-3.32	-1.51	0.95
Non-US Large Cap Equity Composite	3.99	-2.75	-3.41	17.33	17.78	-11.96	12.69	40.38	-44.76	16.43
Blended Policy (MSCI World AC World ex USA net)	4.50	-5.66	-3.87	15.29	16.83	-13.71	11.15	41.45	-45.33	17.12
Value Added	-0.51	2.90	0.46	2.04	0.95	1.75	1.54	-1.07	0.57	-0.69
PSERS ACWI x US Index Fund	5.35	-5.24	-3.41	16.07	17.57	-13.06	11.85	42.86	-44.91	17.01
MSCI ACWI/EAFE Index Blend	4.50	-5.66	-3.87	15.29	16.83	-13.71	11.15	41.45	-45.53	16.65
Value Added	0.85	0.42	0.46	0.78	0.74	0.65	0.70	1.41	0.62	0.36
BlackRock EMEA	13.37	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MSCI Emerging Markets Index (Net)	11.19	-14.92	-2.19	-2.60	18.23	-18.42	18.88	78.51	-53.33	39.38
Value Added	2.18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Active Non-US Large Cap Composite	2.28	0.72	-3.88	19.34	18.60	-8.26	15.23	37.57	-44.80	15.83
MSCI AC World ex USA Index (Net)	4.50	-5.66	-3.87	15.29	16.83	-13.71	11.15	41.45	-45.53	16.65
Value Added	-2.22	6.38	-0.01	4.05	1.77	5.45	4.08	-3.88	0.93	-0.82
Baillie Gifford	5.65	-1.91	-2.19	17.46	21.25	-11.41	15.75	49.51	-46.12	28.43
MSCI AC World ex USA Index (Net)	4.50	-5.66	-3.87	15.29	16.83	-13.71	11.15	41.45	-45.53	16.65
Value Added	1.15	3.75	1.68	2.17	4.42	2.30	4.60	8.06	-0.59	11.78
Marathon Asset Mgmt	1.25	3.53	-5.35	25.79	18.82	-9.23	17.59	35.96	-40.50	17.53
Blended Benchmark (MSCI ACWI ex USA net)	4.50	-5.66	-3.87	15.29	16.83	-13.71	11.15	41.45	-45.53	17.12
Value Added	-3.25	9.19	-1.48	10.50	1.99	4.48	6.44	-5.49	5.03	0.41
BlackRock Global Composite	-1.59	-0.93	-3.52	13.89	18.71	-4.14	21.12	35.38	-45.67	14.99
MSCI AC World ex USA Index (Net)	4.50	-5.66	-3.87	15.29	16.83	-13.71	11.15	41.45	-45.53	16.65
Value Added	-6.09	4.73	0.35	-1.40	1.88	9.57	9.97	-6.07	-0.14	-1.66
Non-US Small Cap Equity Composite	-0.91	9.41	-3.47	30.37	25.17	-15.55	29.62	52.97	-52.32	8.09
MSCI AC World ex USA Small Cap (Net)	3.91	2.60	-4.03	19.73	18.52	-18.50	25.21	62.91	-50.23	10.76
Value Added	-4.82	6.81	0.56	10.64	6.65	2.95	4.41	-9.94	-2.09	-2.67
Acadian Asset Mgmt	8.76	3.08	-0.19	24.86	25.11	-16.94	26.02	59.84	-55.59	23.01
Blended Benchmark (MSCI AC World ex USA Small Cap net)	3.91	2.60	-4.03	19.73	18.52	-18.50	25.21	62.91	-48.38	8.63

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Calendar Year Performance

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Value Added	4.85	0.48	3.84	5.13	6.59	1.56	0.81	-3.07	-7.21	14.38
Wasatch Int'l Small Cap	-7.75	14.73	-7.31	28.25	33.41	-13.75	34.70	69.89	-52.34	14.56
Blended Benchmark (MSCI AC World ex USA Small Cap net)	3.91	2.60	-4.03	19.73	18.52	-18.50	25.21	62.91	-48.38	8.63
Value Added	-11.66	12.13	-3.28	8.52	14.89	4.75	9.49	6.98	-3.96	5.93
Oberweis Asset Mgmt	-4.84	16.17	-2.82	59.12	31.95	-14.60	31.03	62.42	N/A	N/A
MSCI AC World ex USA Small Cap (Net)	3.91	2.60	-4.03	19.73	18.52	-18.50	25.21	62.91	-50.23	10.76
Value Added	-8.75	13.57	1.21	39.39	13.43	3.90	5.82	-0.49	N/A	N/A
QS Investors	3.28	4.60	-0.18	26.34	21.71	-12.22	26.52	41.35	N/A	N/A
MSCI AC World ex USA Small Cap (Net)	3.91	2.60	-4.03	19.73	18.52	-18.50	25.21	62.91	-50.23	10.76
Value Added	-0.63	2.00	3.85	6.61	3.19	6.28	1.31	-21.55	N/A	N/A
Fidelity Institutional Int'l Small Cap	0.16	5.14	-4.16	19.81	22.81	-18.54	24.04	60.57	N/A	N/A
MSCI AC World ex USA Small Cap (Net)	3.91	2.60	-4.03	19.73	18.52	-18.50	25.21	62.91	-50.23	10.76
Value Added	-3.75	2.54	-0.13	0.08	4.29	-0.04	-1.17	-2.34	N/A	N/A
Total Fixed Income Composite	10.43	-1.40	10.29	-2.52	11.76	9.54	14.11	22.14	-7.24	7.35
Blended Policy (Total FI)	9.49	-2.62	5.19	-4.69	9.86	7.27	10.27	24.60	-4.55	7.99
Value Added	0.94	1.22	5.10	2.17	1.90	2.27	3.84	-2.46	-2.69	-0.64
Global Fixed Income Composite	4.64	-0.92	3.69	-1.89	N/A	N/A	N/A	N/A	N/A	N/A
Blended Policy (Global FI)	4.55	-3.35	2.65	-2.76	7.49	5.36	8.07	9.49	N/A	N/A
Value Added	0.09	2.43	1.04	0.87	N/A	N/A	N/A	N/A	N/A	N/A
Total US Fixed Income Composite	10.71	-0.54	12.94	-2.35	11.42	10.83	14.58	22.49	-7.78	7.28
Blended Policy (Total US FI)	9.61	-1.72	5.60	-2.92	9.48	8.46	10.45	27.91	-6.09	7.79
Value Added	1.10	1.18	7.34	0.57	1.94	2.37	4.13	-5.42	-1.69	-0.51
Total US Fixed Income ex TIPS Composite	7.36	-0.14	13.46	3.53	13.15	4.98	13.50	24.35	-10.83	5.66
Investment Grade Composite	2.62	-0.22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blended Policy (Investment Grade)	2.23	-0.58	11.06	-5.59	4.39	14.57	7.30	-0.22	11.04	8.38
Value Added	0.39	0.36	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
US Core Plus Fixed Income Composite	3.95	1.70	7.12	-0.86	8.06	9.31	10.25	14.84	-5.70	5.86
Blended Policy (Barclays Aggregate Index)	2.65	0.55	5.97	-2.02	4.21	7.06	7.16	8.60	2.38	6.50
Value Added	1.30	1.15	1.15	1.16	3.85	2.25	3.09	6.24	-8.08	-0.64
Pugh Capital Management	2.63	0.56	6.22	-1.89	5.52	8.02	7.24	8.65	5.43	6.45
Bimbg. Barc. U.S. Aggregate	2.65	0.55	5.97	-2.02	4.21	7.84	6.54	5.93	5.24	6.97
Value Added	-0.02	0.01	0.25	0.13	1.31	0.18	0.70	2.72	0.19	-0.52
PSERS Active Core Plus Fixed Income	3.50	1.59	7.27	-2.01	5.78	9.34	8.54	15.38	1.57	6.95
Bimbg. Barc. U.S. Aggregate	2.65	0.55	5.97	-2.02	4.21	7.84	6.54	5.93	5.24	6.97
Value Added	0.85	1.04	1.30	0.01	1.57	1.50	2.00	9.45	-3.67	-0.02
BlackRock Global Alpha	4.31	2.25	7.79	1.52	12.05	11.18	13.67	19.95	-5.12	N/A
Blended Policy (Barclays Aggregate Index)	2.65	0.55	5.97	-2.02	4.21	7.06	7.16	8.60	2.38	6.50
Value Added	1.66	1.70	1.82	3.54	7.84	4.12	6.51	11.35	-7.50	N/A
SEI Investment Management	7.34	0.04	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



As of December 31, 2016

Calendar Year Performance

	Performance (%)										
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	
BofA Merrill Lynch Corporate 1-3 Year Value Added	2.39	1.01	1.19	1.78	4.49	1.76	4.86	14.69	-2.68	5.67	
Non-U.S. Developed Markets Fixed Income Composite	6.23	-5.57	-1.09	-2.49	7.16	3.79	8.63	19.43	-3.08	8.28	
Blended Policy (Barclays GlobalAgg GDP Weighted Dev xUS hedged) Value Added	4.90	-5.56	-2.28	-1.49	6.70	4.48	5.84	8.04	3.76	9.23	
Alliance Bernstein Global Fixed	1.33	-0.01	1.19	-1.00	0.46	-0.69	2.79	11.39	-6.84	-0.95	
Spliced Barclays GlobalAgg GDPWeighted Dev xUS Value Added	6.23	-5.71	-1.80	-1.82	7.30	N/A	N/A	N/A	N/A	N/A	
U.S. Long Treasuries (levered)	4.90	-5.56	-2.28	-1.49	6.70	3.95	3.47	9.49	2.77	11.03	
Bimbg. Barc. U.S. Treasury: Long Value Added	1.33	-0.15	0.48	-0.33	0.60	N/A	N/A	N/A	N/A	N/A	
Emerging Markets Fixed Income Composite	-65.74	-9.37	427.01	-88.18	N/A	N/A	N/A	N/A	N/A	N/A	
Blended Policy (Barclays Emerging Mkt 10% Country Cap) Value Added	1.33	-1.21	25.07	-12.66	3.56	29.93	9.38	-12.92	24.03	9.81	
PSERS U.S. Long Treasuries (unlevered)	-67.07	-8.16	401.94	-75.52	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Treasury: Long Value Added	-0.04	-1.84	19.66	-12.10	N/A	N/A	N/A	N/A	N/A	N/A	
Credit-Related	1.33	-1.21	25.07	-12.66	3.56	29.93	9.38	-12.92	24.03	9.81	
Blended Policy (Credit-Related) Value Added	-1.37	-0.63	-5.41	0.56	N/A	N/A	N/A	N/A	N/A	N/A	
Emerging Markets Fixed Income Composite	9.75	-1.46	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Blended Policy (Barclays Emerging Mkt 10% Country Cap) Value Added	15.99	-6.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Franklin Templeton Emerging Fixed Income	-6.24	4.84	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Blended Benchmark (Barclays Emerging Mkt 10% Country Cap) Value Added	9.28	-6.50	-3.52	-4.08	16.81	0.82	N/A	N/A	N/A	N/A	
High Yield Fixed Income Composite (hedged) Value Added	6.85	-11.72	-3.14	-5.39	16.00	-1.49	15.68	21.98	-5.22	18.11	
Blended Policy (Barclays Corporate HY) Value Added	2.43	5.22	-0.38	1.31	0.81	2.31	N/A	N/A	N/A	N/A	
High Yield Fixed Income Composite (hedged) Value Added	9.04	-1.75	-1.66	0.87	18.99	1.96	14.19	56.43	N/A	N/A	
Blended Policy (Barclays Corporate HY) Value Added	6.85	-11.72	-3.14	-5.39	19.47	4.47	10.95	8.00	8.00	8.00	
High Yield Fixed Income Composite (Unhedged) Value Added	2.19	9.97	1.48	6.26	-0.48	-2.51	3.24	48.43	N/A	N/A	
Blended Policy (Barclays Corporate HY) Value Added	9.72	-0.29	8.54	10.17	17.31	1.64	15.95	34.90	-20.97	3.59	
High Yield Fixed Income x Internal Composite (hedged) Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	57.95	-26.17	2.65	
Blended Policy (Barclays Corporate HY) Value Added	-7.41	4.18	6.09	2.73	1.50	-3.34	0.83	-23.05	5.20	0.94	
High Yield Fixed Income x Internal Composite (hedged) Value Added	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Blended Policy (Barclays Corporate HY) Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	57.95	-26.17	2.65	
Insight Oxygen - HY (notional) Value Added	4.29	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
HY Currency Hedge Benchmark Value Added	4.01	10.55	13.41	-4.63	-2.06	1.12	4.49	-4.83	1.53	-8.96	
High Yield Fixed Income Composite (Unhedged) Value Added	0.28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Blended Policy (Barclays Corporate HY) Value Added	9.32	-0.69	8.54	10.17	17.31	1.64	15.95	34.90	-20.97	3.59	
High Yield Fixed Income x Internal Composite (Unhedged) Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	57.95	-26.17	2.65	
Blended Policy (Barclays Corporate HY) Value Added	-7.81	3.78	6.09	2.73	1.50	-3.34	0.83	-23.05	5.20	0.94	
High Yield Fixed Income x Internal Composite (Unhedged) Value Added	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Blended Policy (Barclays Corporate HY) Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	57.95	-26.17	2.65	
Mezzanine High Yield Composite	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Value Added	-12.61	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

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Calendar Year Performance

	Performance (%)										
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Internally Managed Private Debt Co-Investment	-29.74	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	-32.90	-33.14	15.79	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Mezzanine High Yield Composite x Internal	-50.03	-28.67	13.34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Carlyle Energy Mezz. Opp. Fund	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	-43.51	-9.01	19.08	20.66	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Carlyle Energy Mezz. Opp. Fund II	-60.64	-4.54	16.63	13.22	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	-7.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
ICG Europe Fund V	-24.29	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	-6.35	-2.00	4.03	15.07	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
ICG Europe Fund VI	-23.48	2.47	1.58	7.63	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Bain Capital Middle Market Credit 2010, L.P.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	-6.05	4.81	6.37	11.04	19.37	8.64	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Bain Capital Middle Market Credit 2014, L.P.	-23.18	9.28	3.92	3.60	3.56	3.66	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	5.91	0.81	7.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Opportunistic High Yield Composite	-11.22	5.28	4.55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	16.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Apollo European Principal Fund II	-0.63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	9.70	6.31	8.80	-0.83	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Bain Capital Credit Opp. Fund IV	-7.43	10.78	6.35	-8.27	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	2.05	-7.15	1.69	9.20	6.47	0.81	13.76	39.72	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Bain Capital Distressed and Special Situations 2013	-15.08	-2.68	-0.76	1.76	-9.34	-4.17	-1.36	-18.49	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	7.00	-3.02	10.46	10.06	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Bain Capital Distressed and Special Situations 2016 (A), L.P.	-10.13	1.45	8.01	2.62	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	29.32	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

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	Performance (%)										
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
TPG Opportunities Partners II, LP	6.10	21.82	25.75	13.76	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
TPG Opportunities Partners III, LP	-11.03	26.29	23.30	6.32	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	10.73	3.39	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
TOP NPL (A)	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Bimbg. Barc. U.S. Corp. High Yield Value Added	-6.40	7.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
TPG TAO	-3.56	27.19	30.38	12.18	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
TPG TAO	-20.69	31.66	27.93	4.74	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	10.05	10.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Brigade Distressed Value	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
1-Month Libor + 5% Value Added	-7.08	14.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Brigade Structured Credit Offshore Fund	34.96	-17.17	3.66	11.12	10.71	N/A	N/A	N/A	N/A	N/A	
Barclays Corporate High Yield + 0.25% Value Added	5.52	5.21	5.16	5.20	5.25	5.24	5.29	5.35	7.80	10.51	
Avenue Energy Opportunities Fund	29.44	-22.38	-1.50	5.92	5.46	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	26.20	-5.62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Avenue Europe SS III	17.42	-4.23	2.71	7.71	16.10	5.24	15.41	58.60	-25.97	2.13	
Bimbg. Barc. U.S. Corp. High Yield Value Added	8.78	-1.39	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Blended Benchmark (Barclays US MBS) Value Added	42.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Galton Onshore Mortgage Recovery Fund III, LP	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Mariner International Infrastructure	25.06	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	5.81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
The Vaude Scratch and Dent Fund, LP	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Real Asset High Yield Composite	-12.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Blended Benchmark (Barclays US MBS) Value Added	4.99	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Blended Benchmark (Barclays US MBS) Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Galton Onshore Mortgage Recovery Fund III, LP	-12.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Blended Benchmark (Barclays US MBS) Value Added	3.87	4.38	8.61	8.55	21.64	1.67	N/A	N/A	N/A	N/A	
Blended Benchmark (Barclays US MBS) Value Added	1.67	1.51	6.33	7.50	7.50	7.50	N/A	N/A	N/A	N/A	
Blended Benchmark (Barclays US MBS) Value Added	2.20	2.87	2.28	1.05	14.14	-5.83	N/A	N/A	N/A	N/A	
Galton Onshore Mortgage Recovery Fund III, LP	1.83	-1.33	-4.44	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Blended Benchmark (Barclays US MBS) Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Blended Benchmark (Barclays US MBS) Value Added	-15.30	3.14	-6.89	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Blended Benchmark (Barclays US MBS) Value Added	8.67	5.82	-5.53	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Blended Benchmark (Barclays US MBS) Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Blended Benchmark (Barclays US MBS) Value Added	-8.46	10.29	-7.98	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Blended Benchmark (Barclays US MBS) Value Added	6.67	7.48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

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	Performance (%)										
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
The Varde Scratch and Dent Fund Feed I-A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Senior Loans High Yield Composite	12.71	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Cerberus Levered Loan Fund I	6.04	-1.29	3.38	9.09	12.20	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Cerberus Levered Loan Fund II	3.25	8.03	13.92	12.21	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Cerberus PSERS Levered Loan Opportunities Fund	36.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
LBC Credit Partners II	14.28	12.35	17.02	19.02	29.31	21.09	-15.87	-6.79	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
LBC Credit Partners III	-2.85	16.82	14.57	11.58	13.50	16.11	-30.99	-65.00	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
LBC-P Credit Fund LP	-3.85	18.93	9.21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Summit Partners Credit Fund II LP	13.37	-0.21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Oaktree Loan Fund 2X, LP	-3.76	4.26	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	5.35	-23.74	-0.78	6.26	12.69	7.08	12.94	39.95	-18.94	N/A	
Bain Capital Credit Managed Account (PSERS), L.P.	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Bimbg. Barc. U.S. Corp. High Yield Value Added	-11.78	-19.27	-3.23	-1.18	-3.12	2.10	-2.18	-18.26	7.22	N/A	
Park Square Credit Opportunities	17.84	-8.51	4.28	7.79	10.67	2.10	14.16	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Park Square Credit Opportunities	0.71	-4.04	1.83	0.35	-5.14	-2.88	-0.96	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield Value Added	20.66	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Hayfin Special Opportunities Credit LP	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Value Added	3.53	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Value Added	4.47	-2.76	-6.95	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

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	Performance (%)										
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	
Bimbg. Barc. U.S. Corp. High Yield	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Value Added	-12.66	1.71	-9.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Hayfin SOF II USD Co-Invest	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Value Added	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Hayfin SOF II USD LP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. U.S. Corp. High Yield	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87	
Value Added	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Inflation Protected (levered)	17.80	-2.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Blended Policy (Barclays World Inflation Linked Bond - Hedged)	10.22	-1.76	3.64	-8.61	6.98	13.56	6.31	11.41	-2.35	11.63	
Value Added	7.58	-0.24	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Inflation Protected (unlevered)	9.38	2.95	12.49	-10.76	9.15	23.56	18.13	18.74	0.47	11.28	
Blended Policy (Barclays World Inflation Linked Bond - Hedged)	10.22	-1.76	3.64	-8.61	6.98	13.56	6.31	11.41	-2.35	11.63	
Value Added	-0.84	4.71	8.85	-2.15	2.17	10.00	11.82	7.33	2.82	-0.35	
TIPS Composite (levered)	17.80	-2.00	12.06	-11.23	8.59	23.01	17.55	18.42	0.20	11.14	
Blended Policy (Barclays World Inflation Linked Bond - Hedged)	10.22	-1.76	3.64	-8.61	6.98	13.56	6.31	11.41	-2.35	11.63	
Value Added	7.58	-0.24	8.42	-2.62	1.61	9.45	11.24	7.01	2.55	-0.49	
Blended Policy (Net Levered TIPS)	20.11	-3.97	6.76	-17.07	13.75	28.18	12.34	22.50	-8.81	N/A	
Value Added	-2.31	1.97	5.30	5.84	-5.16	-5.17	5.21	-4.08	9.01	N/A	
TIPS Composite (unlevered)	9.13	2.55	12.49	-10.76	9.15	23.56	18.13	18.74	0.47	11.28	
Blended Policy (Barclays World Inflation Linked Bond - Hedged)	10.22	-1.76	3.64	-8.61	6.98	13.56	6.31	11.41	-2.35	11.63	
Value Added	-1.09	4.31	8.85	-2.15	2.17	10.00	11.82	7.33	2.82	-0.35	
Bridgewater TIPS (unlevered)	11.69	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
BGI Custom IL Bond Index (unlevered)	11.34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Value Added	0.35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bridgewater TIPS (levered)	23.93	-2.06	18.34	-11.80	10.04	29.14	27.46	20.64	5.45	10.83	
BGI Custom IL Bond Index (levered)	23.14	-3.03	16.75	-12.94	N/A	N/A	N/A	N/A	N/A	N/A	
Value Added	0.79	0.97	1.59	1.14	N/A	N/A	N/A	N/A	N/A	N/A	
Garda Inflation Opportunity Composite (levered)	18.39	-0.97	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Blended Benchmark (Garda)	19.87	-1.74	2.07	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Value Added	-1.48	0.77	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Garda Inflation Opportunity Composite (unlevered)	4.96	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Bimbg. Barc. Global Inflation-Linked: U.S. TIPS	4.68	-1.44	3.64	-8.61	6.98	13.56	6.31	11.41	-2.35	11.63	
Value Added	0.28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Garda Inflation Opp. Fund CI B (levered)	21.35	-1.47	10.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Blended Benchmark (Garda)	19.87	-1.74	2.07	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Value Added	1.48	0.27	8.53	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Garda Inflation Opp. Fund CI B (unlevered)	4.85	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Blended Benchmark (Garda)	4.68	-1.44	3.64	-8.61	6.98	13.56	6.31	11.41	-2.35	11.63	

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	Performance (%)									
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Value Added	0.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Garda Fixed Income Relative Value Opportunity Fund Ltd. (TIPS)	6.82	2.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PSERS Total TIPS (levered)	5.98	-1.46	5.03	-7.97	7.10	18.25	11.31	17.12	-2.23	11.50
PSERS Total TIPS (unlevered)	6.19	-1.46	5.03	-7.97	7.03	13.96	7.12	12.95	-2.23	11.50
Blimbg. Barc. Global Inflation-Linked: U.S. TIPS	4.68	-1.44	3.64	-8.61	6.98	13.56	6.31	11.41	-2.35	11.63
Value Added	1.51	-0.02	1.39	0.64	0.05	0.40	0.81	1.54	0.12	-0.13
PSERS TIPS (levered)	5.23	-1.46	5.03	-7.97	7.10	18.25	11.31	17.12	-2.23	11.50
PSERS TIPS (unlevered)	5.23	-1.46	5.03	-7.97	7.03	13.96	7.12	12.95	-2.23	11.50
Blimbg. Barc. Global Inflation-Linked: U.S. TIPS	4.68	-1.44	3.64	-8.61	6.98	13.56	6.31	11.41	-2.35	11.63
Value Added	0.55	-0.02	1.39	0.64	0.05	0.40	0.81	1.54	0.12	-0.13
PIMCO Multi-Sector Strategy	7.11	-3.32	5.22	-1.24	N/A	N/A	N/A	N/A	N/A	N/A
Blended Policy (PIMCO Multi-Sector)	6.36	-2.70	6.32	-0.73	7.46	7.84	6.54	5.93	5.24	6.97
Value Added	0.75	-0.62	-1.10	-0.51	N/A	N/A	N/A	N/A	N/A	N/A
Real Assets (levered/hedged)	19.39	-8.32	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Real Assets (unlevered/hedged)	15.02	-7.87	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blended Policy (Real Assets) (Hedged)	9.34	-8.95	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Value Added	5.68	1.08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Real Assets (levered/unhedged)	19.09	-8.32	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Real Assets (unlevered/unhedged)	14.80	-7.87	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blended Policy (Real Assets) (Unhedged)	9.08	-8.99	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Value Added	5.72	1.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Real Assets x Private Real Estate (levered/hedged)	27.77	-30.79	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Real Assets x Private Real Estate (unlevered/hedged)	16.94	-29.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blended Policy (Real Assets x Private RE) (Hedged)	14.09	-24.87	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Value Added	2.85	-4.29	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Real Assets x Private Real Estate (levered/unhedged)	27.12	-30.79	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Real Assets x Private Real Estate (unlevered/unhedged)	16.58	-29.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blended Policy (Real Assets x Private RE) (Unhedged)	13.63	-24.92	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Value Added	2.95	-4.24	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MLP Composite	24.62	-32.63	16.30	37.44	12.77	18.88	39.82	72.22	N/A	N/A
S&P MLP Index	21.95	-35.07	7.66	29.75	4.95	14.47	35.17	78.79	-37.46	9.41
Value Added	2.67	2.44	8.64	7.69	7.82	4.41	4.65	-6.57	N/A	N/A
PSERS S&P MLP Index	22.29	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S&P MLP Total Return Index	21.95	-35.07	7.66	29.75	4.95	14.47	35.17	78.79	-37.46	9.41
Value Added	0.34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Atlantic Trust	28.14	-33.34	15.38	38.77	N/A	N/A	N/A	N/A	N/A	N/A
S&P MLP Index	21.95	-35.07	7.66	29.75	4.95	14.47	35.17	78.79	-37.46	9.41

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Calendar Year Performance

	Performance (%)									
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Value Added	6.19	1.73	7.72	9.02	N/A	N/A	N/A	N/A	N/A	N/A
PSERS Harvest Funds MLP	19.96	-30.25	17.87	35.60	12.80	18.88	39.82	72.22	N/A	N/A
S&P MLP Index	21.95	-35.07	7.66	29.75	4.95	14.47	35.17	78.79	-37.46	9.41
Value Added	-1.99	4.82	10.21	5.85	7.85	4.41	4.65	-6.57	N/A	N/A
Salient	29.46	-36.06	15.15	38.62	N/A	N/A	N/A	N/A	N/A	N/A
S&P MLP Index	21.95	-35.07	7.66	29.75	4.95	14.47	35.17	78.79	-37.46	9.41
Value Added	7.51	-0.99	7.49	8.87	N/A	N/A	N/A	N/A	N/A	N/A
Infrastructure Composite (levered/hedged)	24.58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Infrastructure Composite (unlevered/hedged)	11.66	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FTSE Dev. Core Infrastr 50/50 Index (Net) (Hedged)	11.81	-3.56	21.17	18.21	10.80	7.40	8.22	N/A	N/A	N/A
Value Added	-0.15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Insight Nevada - Infra (notional)	1.84	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Infra Currency Hedge Benchmark	1.98	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Value Added	-0.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Infrastructure Composite (levered/unhedged)	21.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Infrastructure Composite (unlevered/unhedged)	10.52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FTSE Developed Core Infrastr 50/50 Index (Net)	10.63	-7.56	16.02	15.48	11.49	8.00	10.34	N/A	N/A	N/A
Value Added	-0.11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Publicly-Traded Infrastructure Composite (levered)	21.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Publicly-Traded Infrastructure Composite (unlevered)	10.52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FTSE Developed Core Infrastr 50/50 Index (Net)	10.63	-7.56	16.02	15.48	11.49	8.00	10.34	N/A	N/A	N/A
Value Added	-0.11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PSERS Infrastructure Index (levered)	21.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PSERS Infrastructure Index (unlevered)	10.52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FTSE Developed Core Infrastr 50/50 Index (Net)	10.63	-7.56	16.02	15.48	11.49	8.00	10.34	N/A	N/A	N/A
Value Added	-0.11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Commodities Composite (levered)	35.48	-33.05	-18.05	-14.29	2.41	-10.00	18.13	33.40	-42.37	28.40
Commodities Composite (unlevered)	14.74	-18.59	-10.18	-11.16	2.41	-10.00	18.13	33.40	-42.37	28.40
Blended Policy (Commodities)	10.80	-19.85	-12.05	-10.34	-1.05	-13.32	16.82	18.90	-35.65	16.22
Value Added	3.94	1.26	1.87	-0.82	3.46	3.32	1.31	14.50	-6.72	12.18
PSERS Commodity Beta + PCAF Composite	17.31	-22.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bloomberg Commodity Index Total Return	11.74	-24.66	-17.01	-9.52	-1.06	-13.32	16.83	18.91	-35.65	16.23
Value Added	5.57	2.06	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PSERS Commodity Beta (levered)	45.52	-41.67	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PSERS Commodity Beta (unlevered)	14.25	-23.49	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bloomberg Commodity Index Total Return	11.74	-24.66	-17.01	-9.52	-1.06	-13.32	16.83	18.91	-35.65	16.23
Value Added	2.51	1.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PIMCO Commodity Alpha Fund	20.81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



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	Performance (%)										
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	
Libor (3 month)	0.74	0.32	0.23	0.27	0.42	0.34	0.34	0.69	2.92	5.30	
Value Added	20.07	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Gresham	12.90	-24.91	-16.31	-7.06	0.86	-6.15	20.92	25.47	-37.17	N/A	
Bloomberg Commodity Index Total Return	11.74	-24.66	-17.01	-9.52	-1.06	-13.32	16.83	18.91	-35.65	16.23	
Value Added	1.16	-0.25	0.70	2.46	1.72	7.17	4.09	6.56	-1.52	N/A	
Wellington Management Company	25.32	-24.58	-15.09	-5.05	2.92	-11.05	19.62	50.65	-46.97	31.55	
Blended Benchmark (WMC)	23.33	-24.75	-14.23	-2.79	4.39	-7.71	19.25	33.80	-36.65	28.62	
Value Added	1.99	0.17	-0.86	-2.26	-1.47	-3.34	0.37	16.85	-10.32	2.93	
PSERS Gold Fund (unlevered)	7.38	-10.78	0.40	-28.17	N/A	N/A	N/A	N/A	N/A	N/A	
Bloomberg Gold Subindex Total Return	7.73	-10.88	-1.75	-28.66	6.08	9.63	28.72	22.86	3.91	29.92	
Value Added	-0.35	0.10	2.15	0.49	N/A	N/A	N/A	N/A	N/A	N/A	
PTRES Composite (levered/hedged)	11.66	-2.15	20.09	4.10	13.75	4.71	16.82	45.64	-49.52	-8.56	
PTRES Composite (unlevered/hedged)	6.04	-1.89	20.09	4.10	13.75	4.71	16.82	45.64	-49.52	-8.56	
Blended Policy (PTRES) (Hedged)	5.36	-0.32	14.73	2.24	29.85	-8.13	20.03	39.30	-47.73	-6.94	
Value Added	0.68	-1.57	5.36	1.86	-16.10	12.84	-3.21	6.34	-1.79	-1.62	
Insight Sierra - REIT (notional)	2.31	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
REIT Currency Hedge Benchmark	2.46	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Value Added	-0.15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
PTRES Composite (levered/unhedged)	9.65	-2.16	20.09	4.10	13.75	4.71	16.82	45.64	-49.52	-8.56	
PTRES Composite (unlevered/unhedged)	4.89	-1.89	20.09	4.10	13.75	4.71	16.82	45.64	-49.52	-8.56	
Blended Policy (PTRES) (Unhedged)	4.06	-0.72	14.73	2.24	29.85	-8.13	20.03	39.30	-47.73	-6.94	
Value Added	0.83	-1.17	5.36	1.86	-16.10	12.84	-3.21	6.34	-1.79	-1.62	
PSERS REIT Index (levered)	7.24	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
PSERS REIT Index (unlevered)	4.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
FTSE EPRA/NAREIT Developed Index (Net)	4.06	-0.79	15.02	3.67	27.73	-6.46	19.63	37.13	-48.16	-7.39	
Value Added	0.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Security Capital Preferred Growth	12.23	2.15	20.09	4.10	13.75	4.71	24.71	84.34	N/A	N/A	
Wishire US Real Estate Securities Index	7.62	4.81	31.53	2.15	17.55	8.56	29.12	29.20	-39.83	-17.66	
Value Added	4.61	-2.66	-11.44	1.95	-3.80	-3.85	-4.41	35.14	N/A	N/A	
Risk Parity Composite (vol adjusted)	11.14	-6.54	10.17	-4.74	N/A	N/A	N/A	N/A	N/A	N/A	
Blended Policy (Risk Parity)	12.20	-5.66	10.41	-5.28	N/A	N/A	N/A	N/A	N/A	N/A	
Value Added	-1.06	-0.88	-0.24	0.54	N/A	N/A	N/A	N/A	N/A	N/A	
PSERS Risk Parity (vol adjusted)	14.17	-6.14	10.21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
AQR GRP EL 20 Offshore Fund (vol adjusted)	9.30	-11.68	8.10	-4.78	N/A	N/A	N/A	N/A	N/A	N/A	
Bridgewater All Weather @15% (vol adjusted)	11.60	-8.35	9.49	-4.57	N/A	N/A	N/A	N/A	N/A	N/A	
DE Shaw Orientteer (vol adjusted)	7.66	-1.44	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
DE Shaw Orientteer HV (vol adjusted)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
BlackRock Market Advantage II (vol adjusted)	11.69	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

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	Performance (%)										
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	
Bridgewater Optimal (vol adjusted)	7.72	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Absolute Return	3.71	3.70	3.06	4.77	3.54	7.72	17.25	15.25	-8.71	8.17	
Blended Policy (3-month Libor + 3.5%)	4.27	3.83	5.61	7.50	7.50	7.75	8.00	8.00	8.00	8.00	
Value Added	-0.56	-0.13	-2.55	-2.73	-3.96	-0.03	9.25	7.25	-16.71	0.17	
Apollo/SASOF III	-6.52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Libor (1 month)	0.49	0.20	0.16	0.19	0.24	0.23	0.27	0.33	2.67	5.25	
Value Added	-7.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Oceanwood Opportunities Fund	-5.12	9.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Libor (1 month)	0.49	0.20	0.16	0.19	0.24	0.23	0.27	0.33	2.67	5.25	
Value Added	-5.61	8.90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Perry Partners L.P.	8.03	-13.32	-4.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Libor (1 month)	0.49	0.20	0.16	0.19	0.24	0.23	0.27	0.33	2.67	5.25	
Value Added	7.54	-13.52	-4.41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Ellis Lake	-48.93	-9.85	-7.22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Libor (1 month)	0.49	0.20	0.16	0.19	0.24	0.23	0.27	0.33	2.67	5.25	
Value Added	-49.42	-10.05	-7.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Garda Fixed Income Relative Value Opportunity Fund Ltd.	6.83	2.18	6.39	5.06	6.70	N/A	N/A	N/A	N/A	N/A	
Libor (1 month)	0.49	0.20	0.16	0.19	0.24	0.23	0.27	0.33	2.67	5.25	
Value Added	6.34	1.98	6.23	4.87	6.46	N/A	N/A	N/A	N/A	N/A	
Capulia Global Relative Value Fund Limited - Class F	9.01	8.09	8.62	8.18	8.83	N/A	N/A	N/A	N/A	N/A	
Libor (1 month)	0.49	0.20	0.16	0.19	0.24	0.23	0.27	0.33	2.67	5.25	
Value Added	8.52	7.89	8.46	7.99	8.59	N/A	N/A	N/A	N/A	N/A	
PIMCO PARS/GCOF/MAV Fund	0.54	7.08	4.70	2.16	14.21	5.85	2.03	60.77	N/A	N/A	
Libor (1 month)	0.49	0.20	0.16	0.19	0.24	0.23	0.27	0.33	2.67	5.25	
Value Added	0.05	6.88	4.54	1.97	13.97	5.62	1.76	60.44	N/A	N/A	
PIMCO PARS	-0.14	8.20	14.38	0.90	N/A	N/A	N/A	N/A	N/A	N/A	
PIMCO GCOF	10.19	10.03	7.34	11.11	N/A	N/A	N/A	N/A	N/A	N/A	
PIMCO MAV	1.88	10.07	2.97	-4.71	N/A	N/A	N/A	N/A	N/A	N/A	
BlackRock Capital Structure Investments Fund	-10.67	12.60	-5.14	7.52	4.07	23.18	0.61	N/A	N/A	N/A	
Libor (1 month)	0.49	0.20	0.16	0.19	0.24	0.23	0.27	0.33	2.67	5.25	
Value Added	-11.16	12.40	-5.30	7.33	3.83	22.95	0.34	N/A	N/A	N/A	
Brigade Leveraged Capital Structures Offshore Fund	22.88	-11.10	0.51	6.12	7.05	2.90	7.84	39.90	-16.69	N/A	
Libor (1 month)	0.49	0.20	0.16	0.19	0.24	0.23	0.27	0.33	2.67	5.25	
Value Added	22.39	-11.30	0.35	5.93	6.81	2.67	7.57	39.57	-19.36	N/A	
Caspian Select Credit International - Class A	8.92	-10.40	3.11	9.82	11.83	N/A	N/A	N/A	N/A	N/A	
Libor (1 month)	0.49	0.20	0.16	0.19	0.24	0.23	0.27	0.33	2.67	5.25	
Value Added	8.43	-10.60	2.95	9.63	11.59	N/A	N/A	N/A	N/A	N/A	

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Calendar Year Performance

	Performance (%)										
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	
Caspian Keystone Focused Fund, L.P.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Libor (1 month)	0.49	0.20	0.16	0.19	0.24	0.23	0.27	0.33	2.67	5.25	
Value Added	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Venor Capital Offshore	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Clitgroup 1 Month T-Bill	0.21	0.02	0.02	0.01	0.04	0.04	0.10	0.10	1.35	4.57	
Value Added	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Aeolus Property Catastrophe Fund I LP	10.24	14.72	19.41	22.65	N/A	N/A	N/A	N/A	N/A	N/A	
Libor (1 month)	0.49	0.20	0.16	0.19	0.24	0.23	0.27	0.33	2.67	5.25	
Value Added	9.75	14.52	19.25	22.46	N/A	N/A	N/A	N/A	N/A	N/A	
Nephila / Palmetto Fund Ltd. - Class G	2.83	5.37	6.92	6.96	10.04	N/A	N/A	N/A	N/A	N/A	
Libor (1 month)	0.49	0.20	0.16	0.19	0.24	0.23	0.27	0.33	2.67	5.25	
Value Added	2.34	5.17	6.76	6.77	9.80	N/A	N/A	N/A	N/A	N/A	
Independence Reinsurance Partners Composite	9.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Libor (1 month)	0.49	0.20	0.16	0.19	0.24	0.23	0.27	0.33	2.67	5.25	
Value Added	9.37	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
DaVinci Reinsurance Ltd.	11.94	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Medici Fund Ltd.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Capula Tail Risk Fund Limited - Class C	-0.57	3.32	-1.04	-3.41	-14.28	N/A	N/A	N/A	N/A	N/A	
Libor (1 month)	0.49	0.20	0.16	0.19	0.24	0.23	0.27	0.33	2.67	5.25	
Value Added	-1.06	3.12	-1.20	-3.60	-14.52	N/A	N/A	N/A	N/A	N/A	
Brdgwater Pure Alpha Fund II, Ltd.	2.94	7.58	5.93	6.99	1.56	32.86	56.55	2.44	14.31	13.91	
Libor (3 month)	0.74	0.32	0.23	0.27	0.42	0.34	0.34	0.69	2.92	5.30	
Value Added	2.20	7.26	5.70	6.72	1.14	32.52	56.21	1.75	11.39	8.61	
Brevan Howard Fund Limited - Class E	3.52	-1.46	-0.29	2.83	4.35	12.70	N/A	N/A	N/A	N/A	
Libor (3 month)	0.74	0.32	0.23	0.27	0.42	0.34	0.34	0.69	2.92	5.30	
Value Added	2.78	-1.78	-0.52	2.56	3.93	12.36	N/A	N/A	N/A	N/A	
OWS Credit Opportunity Offshore Fund III	10.03	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Libor (3 month)	0.74	0.32	0.23	0.27	0.42	0.34	0.34	0.69	2.92	5.30	
Value Added	9.29	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Unallocated Cash & Cash Equivalents	0.40	0.33	0.29	0.28	3.84	3.06	0.47	0.06	-8.91	2.19	
BofA Merrill Lynch 3 Month US T-Bill	0.33	0.05	0.04	0.07	0.11	0.10	0.13	0.21	2.06	5.00	
Value Added	0.07	0.28	0.25	0.21	3.73	2.96	0.34	-0.15	-10.97	-2.81	
PSERS Cash Management	0.40	-0.05	0.30	0.29	0.55	0.77	0.46	0.25	-9.42	2.29	
RE Conversions	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
PSERS Prop Fund	0.56	0.20	0.19	0.24	0.29	0.22	0.31	1.14	N/A	N/A	
BofA Merrill Lynch US Treasury Bills 0-3M	0.25	0.02	0.03	0.05	0.08	0.07	0.13	0.14	1.75	4.78	

Calendar Year Performance

	Performance (%)									
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Value Added	0.31	0.18	0.16	0.19	0.21	0.15	0.18	1.00	N/A	N/A
LIBOR Composite	1.90	0.76	0.76	1.39	1.35	0.62	0.97	3.35	N/A	N/A
PSERS LIBOR	1.43	0.46	0.59	0.86	0.76	0.63	1.04	3.42	3.01	5.61
Libor (3 month)	0.74	0.32	0.23	0.27	0.42	0.34	0.34	0.69	2.92	5.30
Value Added	0.69	0.14	0.36	0.59	0.34	0.29	0.70	2.73	0.09	0.31
Capula LIBOR Tail Risk	-0.57	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Libor (3 month)	0.74	0.32	0.23	0.27	0.42	0.34	0.34	0.69	2.92	5.30
Value Added	-1.31	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Radcliffe Ultra Short Duration	4.26	2.19	1.38	3.25	N/A	N/A	N/A	N/A	N/A	N/A
Libor (3 month)	0.74	0.32	0.23	0.27	0.42	0.34	0.34	0.69	2.92	5.30
Value Added	3.52	1.87	1.15	2.98	N/A	N/A	N/A	N/A	N/A	N/A
PSERS Healthcare & HOP										
PSERS Healthcare - Premium Assist	0.97	0.31	0.19	0.50	0.79	0.83	1.28	2.67	3.76	5.69
BofA Merrill Lynch 3 Month US T-Bill	0.33	0.05	0.04	0.07	0.11	0.10	0.13	0.21	2.06	5.00
Value Added	0.64	0.26	0.15	0.43	0.68	0.73	1.15	2.46	1.70	0.69
PSERS Healthcare - HOP	0.53	0.24	0.20	0.24	0.29	0.24	0.47	0.95	2.80	5.39
BofA Merrill Lynch 3 Month US T-Bill	0.33	0.05	0.04	0.07	0.11	0.10	0.13	0.21	2.06	5.00
Value Added	0.20	0.19	0.16	0.17	0.18	0.14	0.34	0.74	0.74	0.39
E/M Total Program Composite	4.09	2.07	-0.74	19.28	8.37	-5.72	16.52	29.46	-34.32	7.40
E/M US Core Plus FI Composite	2.63	0.38	5.92	-1.85	5.72	7.63	1.26	-17.81	2.87	6.11
Pugh Capital Management	2.63	0.56	6.22	-1.89	5.52	8.02	7.24	8.65	5.43	6.45
Blmbg. Barc. U.S. Aggregate	2.65	0.55	5.97	-2.02	4.21	7.84	6.54	5.93	5.24	6.97
Value Added	-0.02	0.01	0.25	0.13	1.31	0.18	0.70	2.72	0.19	-0.52
E/M Absolute Return Composite	-48.93	-9.85	-7.22	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ellis Lake	-48.93	-9.85	-7.22	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Libor (1 month)	0.49	0.20	0.16	0.19	0.24	0.23	0.27	0.33	2.67	5.25
Value Added	-49.42	-10.05	-7.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A
E/M Short Duration Cash	5.20	2.74	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Radcliffe Ultra Short Duration	4.26	2.19	1.38	3.25	N/A	N/A	N/A	N/A	N/A	N/A
Libor (3 month)	0.74	0.32	0.23	0.27	0.42	0.34	0.34	0.69	2.92	5.30
Value Added	3.52	1.87	1.15	2.98	N/A	N/A	N/A	N/A	N/A	N/A
Radcliffe Specialty Finance Debt	5.97	3.22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3-Month Libor + 0.60%	1.35	0.92	0.84	0.87	1.03	0.94	0.95	1.29	3.54	5.93
Value Added	4.62	2.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

As of December 31, 2016

Calendar Year Performance

	Performance (%)										
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	
Total Private Market Composites (hedged)	10.94	5.39	12.85	12.52	12.00	11.14	11.59	-23.40	-9.29	35.61	
Blended Policy (Private Market)	2.80	4.86	10.13	7.34	6.79	9.10	6.86	-13.63	-0.23	15.87	
Value Added	8.14	0.53	2.72	5.18	5.21	2.04	4.73	-9.77	-9.06	19.74	
Total Private Market Composites (unhedged)	10.92	5.39	12.85	12.52	12.00	11.14	11.59	-23.40	-9.29	35.61	
Blended Policy (Private Market)	2.80	4.86	10.13	7.34	6.79	9.10	6.86	-13.63	-0.23	15.87	
Value Added	8.12	0.53	2.72	5.18	5.21	2.04	4.73	-9.77	-9.06	19.74	
Total Alternative Investments (hedged)	9.63	2.39	10.03	12.73	13.27	9.95	15.58	-9.62	-3.23	39.96	
Burgiss (Lagged) - PE/PDVC/Int	2.34	3.78	6.96	5.22	5.86	6.17	7.46	-9.11	-4.02	14.77	
Value Added	7.29	-1.39	3.07	7.51	7.41	3.79	8.12	-0.51	0.79	25.19	
Burgiss (Lagged) - Int	-0.19	1.24	-0.84	-11.20	N/A	N/A	N/A	N/A	N/A	N/A	
Value Added	9.82	1.15	10.87	23.93	N/A	N/A	N/A	N/A	N/A	N/A	
Burgiss (Lagged) - PE/PD	2.92	4.01	7.42	5.74	6.36	6.53	7.17	-8.74	-4.02	15.35	
Value Added	6.71	-1.62	2.61	6.99	6.91	3.43	8.41	-0.88	0.79	24.61	
Burgiss (Lagged) - VC	-0.77	2.75	3.31	0.65	0.86	1.95	5.19	-13.29	-3.98	3.08	
Value Added	10.40	-0.36	6.72	12.08	12.41	8.01	10.39	3.67	0.75	36.88	
Total Alternative Investments (unhedged)	9.59	2.39	10.03	12.73	13.27	9.95	15.58	-9.62	-3.23	39.96	
Burgiss (Lagged) - PE/PDVC/Int	2.34	3.78	6.96	5.22	5.86	6.17	7.46	-9.11	-4.02	14.77	
Value Added	7.25	-1.39	3.07	7.51	7.41	3.79	8.12	-0.51	0.79	25.19	
Burgiss (Lagged) - Int	-0.19	1.24	-0.84	-11.20	N/A	N/A	N/A	N/A	N/A	N/A	
Value Added	9.78	1.15	10.87	23.93	N/A	N/A	N/A	N/A	N/A	N/A	
Burgiss (Lagged) - PE/PD	2.92	4.01	7.42	5.74	6.36	6.53	7.17	-8.74	-4.02	15.35	
Value Added	6.67	-1.62	2.61	6.99	6.91	3.43	8.41	-0.88	0.79	24.61	
Burgiss (Lagged) - VC	-0.77	2.75	3.31	0.65	0.86	1.95	5.19	-13.29	-3.98	3.08	
Value Added	10.36	-0.36	6.72	12.08	12.41	8.01	10.39	3.67	0.75	36.88	
Priv. Eq/ Venture Cap/ Priv. Debt/Co-Invest	9.59	2.39	10.03	12.72	N/A	N/A	N/A	N/A	N/A	N/A	
Insight Wilson - PE (notional)	3.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
PE Currency Hedge Custom Benchmark	3.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Value Added	-0.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Private Equity Co-Investment Composite	27.85	25.47	37.82	39.75	N/A	N/A	N/A	N/A	N/A	N/A	
PA Penn Investment Fund - PE Composite	12.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
PA Penn Investment Fund - PE	27.89	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
PA Penn Investment Fund - PE Internal	8.27	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Internally Managed PE Composite	28.67	25.48	37.82	39.75	N/A	N/A	N/A	N/A	N/A	N/A	
Private Eq/ Venture Cap/ Private Debt	8.81	1.76	9.71	12.55	13.23	10.29	15.57	-9.63	-3.22	40.21	
Private Debt Composite	1.58	0.50	12.79	12.21	13.49	2.43	19.36	3.32	-9.96	20.65	
Private Equity/ Venture Capital Composite	10.08	1.97	9.30	12.53	13.20	12.00	14.24	-13.50	-1.67	44.82	
Burgiss (Lagged) - PE/PDVC/Int	2.34	3.78	6.96	5.22	5.86	6.17	7.46	-9.11	-4.02	14.77	
Value Added	7.74	-1.81	2.34	7.31	7.34	5.83	6.78	-4.49	2.35	30.05	



As of December 31, 2016

Calendar Year Performance

	Performance (%)										
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2007
Private Equity	10.41	1.29	8.82	13.12	12.89	13.13	15.04	-14.11	-2.74	48.10	48.10
Private Equity x Tobacco Composite	10.41	1.75	8.82	13.12	12.89	13.13	15.04	-14.11	-2.74	48.10	48.10
Venture Capital	8.19	6.92	13.50	7.10	15.97	2.26	7.84	-9.66	6.36	21.76	21.76
Total Real Estate (levered/hedged)	12.78	9.17	17.23	11.70	9.16	13.21	3.52	-35.90	-23.17	19.04	19.04
Total Real Estate (unlevered/hedged)	12.00	9.01	17.23	11.70	9.16	13.21	3.52	-35.90	-23.17	19.04	19.04
Blended Policy (Total Real Estate) (Hedged)	3.52	6.49	14.95	10.56	9.05	15.56	6.74	-14.14	-4.83	11.01	11.01
Value Added	8.48	2.52	2.28	1.14	0.11	-2.35	-3.22	-21.76	-16.34	8.03	8.03
Total Real Estate (levered/unhedged)	12.58	9.17	17.23	11.70	9.16	13.21	3.52	-35.90	-23.17	19.04	19.04
Total Real Estate (unlevered/unhedged)	12.00	9.01	17.23	11.70	9.16	13.21	3.52	-35.90	-23.17	19.04	19.04
Blended Policy (Total Real Estate) (Unhedged)	3.30	6.45	14.95	10.56	9.05	15.56	6.74	-14.14	-4.83	11.01	11.01
Value Added	8.70	2.56	2.28	1.14	0.11	-2.35	-3.22	-21.76	-18.34	8.03	8.03
Private Real Estate Composite	12.95	9.54	17.15	11.92	9.79	13.48	1.04	-44.59	-16.12	31.23	31.23
Blended Policy (Private Real Estate)	3.44	6.12	14.95	10.56	9.05	15.56	6.74	-14.14	-4.83	11.01	11.01
Value Added	9.51	3.42	2.20	1.36	0.74	-2.08	-5.70	-30.45	-11.29	20.22	20.22
Private Real Estate x Internal	12.86	9.46	17.07	11.85	9.79	13.48	1.04	-44.61	-17.15	28.90	28.90
Internally Managed Private Real Estate	18.42	18.51	28.93	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

PSERS Total Fund Composite

As of December 31, 2016

Asset Allocation

	Total Fund	
	(\$)	%
PSERS Total Fund Composite	50,436,401	100.0
Total Public Market Composite	37,088,425	73.5
Total Private Market Composite	13,346,997	26.5
Total Public Equity Composite	9,485,991	18.8
Equity Rebalance Account	-	0.0
Total US Equity Composite	3,443,967	6.8
Total US Large Cap Composite	2,533,813	5.0
PSERS-S&P 500 Index Composite	2,533,813	5.0
Radcliffe Specialty Finance Debt	327,878	0.7
PE Conversions	229,342	0.5
Total US Small Cap Composite	908,956	1.8
PSERS-S&P 600 Index Composite	456,793	0.9
PSERS-S&P 400 Index Composite	452,162	0.9
PSERS Misc. Equity	1,198	0.0
Total Non-U.S. Equity Composite (hedged)	6,042,024	12.0
Emerging Markets Equity Composite	250,370	0.5
Total Non-U.S. Equity x Emerging Markets Composite	5,791,654	11.5
Wasatch EM Small Cap	250,370	0.5
Pareto Everest	64,827	0.1
Non-US Large Cap Equity Composite	4,945,692	9.8
PSERS ACWI x US Index Fund	2,659,728	5.3
BlackRock EMAX	344,650	0.7
Baillie Gifford	890,734	1.8
Marathon Asset Mgmt	908,297	1.8
BlackRock Global Composite	486,933	1.0
Non-US Small Cap Equity Composite	781,135	1.5
Acadian Asset Mgmt	199,490	0.4
Wasatch Int'l Small Cap	215,644	0.4
Oberweis Asset Mgmt	153,959	0.3
QS Investors	77,659	0.2
Fidelity Institutional Int'l Small Cap	134,384	0.3
Total Alternative Investments (hedged)	8,091,423	16.0

Alternative investment and real estate investments are valued on a quarter lag.

PSERS Total Fund Composite

As of December 31, 2016

Asset Allocation

	Total Fund	%
	(\$)	
Private Equity	5,449,089	10.8
Insight Wilson - PE	979	0.0
PA Penn Investment Fund - PE Composite	25,924	0.1
Private Debt	1,179,176	2.3
Venture Capital	1,004,621	2.0
Internally Managed PE Composite	431,633	0.9
Total Fixed Income Composite	11,354,641	22.5
Investment Grade Composite	2,620,670	5.2
US Core Plus Fixed Income Composite	2,300,165	4.6
Pugh Capital Management	98,425	0.2
PSERS Active Core Plus Fixed Income	1,202,446	2.4
BlackRock Global Alpha	892,810	1.8
SEI Investment Management	106,483	0.2
Non-U.S. Developed Markets Fixed Income Composite	174,536	0.3
Alliance Bernstein Global Fixed	174,536	0.3
U.S. Long Treasuries Composite	145,969	0.3
PSERS U.S. Long Treasuries	145,969	0.3
Credit-Related	4,462,344	8.8
Emerging Markets Fixed Income Composite	308,515	0.6
Franklin Templeton Emerging Fixed Income	308,515	0.6
High Yield Fixed Income Composite (hedged)	4,153,830	8.2
Insight Oxygen - HY	4,269	0.0
Mezzanine High Yield Composite	477,324	0.9
Internally Managed Private Debt Co-Investment	14,818	0.0
Mezzanine High Yield Composite x Internal	462,506	0.9
Carlyle Energy Mezz. Opp. Fund	79,583	0.2
Carlyle Energy Mezz. Opp. Fund II	19,504	0.0
ICG Europe Fund V	172,392	0.3
ICG Europe Fund VI	25,699	0.1
Bain Capital Middle Market Credit 2010, L.P.	33,292	0.1
Bain Capital Middle Market Credit 2014, L.P.	132,036	0.3

Alternative investment and real estate investments are valued on a quarter lag.

PSERS Total Fund Composite

As of December 31, 2016

Asset Allocation

	Total Fund (\$)	%
Opportunistic High Yield Composite	1,764,945	3.5
Apollo European Principal Fund II	170,459	0.3
Bain Capital Credit Opp. Fund IV	73,582	0.1
Bain Capital Distressed and Special Situations 2013	308,117	0.6
Bain Capital Distressed and Special Situations 2016 (A), L.P.	102,181	0.2
TPG Opportunities Partners II, LP	37,370	0.1
TPG Opportunities Partners III, LP	63,758	0.1
TOP NPL (A)	18,837	0.0
TPG TAO	267,708	0.5
Brigade Distressed Value	143,165	0.3
Brigade Structured Credit Offshore Fund	239,069	0.5
Avenue Energy Opportunities Fund	232,653	0.5
Avenue Europe SS III	108,047	0.2
Real Asset High Yield Composite	585,689	1.2
Mariner/Galton RMBS	174,242	0.3
Gallon Onshore Mortgage Recovery Fund III, LP	137,500	0.3
Mariner International Infrastructure	101,804	0.2
The Varde Scratch and Dent Fund, LP	153,042	0.3
The Varde Scratch and Dent Fund Feed I-A	19,102	0.0
Senior Loans High Yield Composite	1,321,603	2.6
Cerberus Levered Loan Fund I	17,157	0.0
Cerberus Levered Loan Fund II	138,051	0.3
Cerberus PSERS Levered Loan Opportunities Fund	99,539	0.2
LBC Credit Partners I	26,866	0.1
LBC Credit Partners III	135,387	0.3
LBC-P Credit Fund LP	53,174	0.1
Summit Partners Credit Fund II LP	128,936	0.3
Oaktree Loan Fund 2X, LP	11,209	0.0
Bain Capital Credit Managed Account (PSERS), L.P.	344,664	0.7
Park Square Credit Opportunities	144,403	0.3
Hayfin Special Opportunities Credit LP	181,260	0.4
Hayfin SOF II USD Co-Invest	3,442	0.0
Hayfin SOF II USD LP	37,515	0.1

Alternative investment and real estate investments are valued on a quarter lag.

PSERS Total Fund Composite

As of December 31, 2016

Asset Allocation

Total Fund
(\$) %

Inflation Protected	3,858,395	7.7
TIPS Composite (levered)	3,858,395	7.7
Garda Inflation Opportunity Composite (levered)	428,616	0.8
Garda Inflation Opp. Fund CI B (levered)	338,691	0.7
Garda FIRVO Fund Ltd. (TIPS)	89,924	0.2
Bridgewater TIPS (levered)	2,261,821	4.5
PSERS Total TIPS (levered)	1,167,958	2.3
PIMCO Multi-Sector Strategy	411,151	0.8
PSERS Fixed Liquidation	2,081	0.0
Real Assets (levered/hedged)	10,525,385	20.9
MLP Composite	2,475,986	4.9
PSERS S&P MLP Index	489,409	1.0
Atlantic Trust	592,585	1.2
Harvest Enhanced Index	7,086	0.0
Harvest MLP Alpha	767,532	1.5
Salient	619,373	1.2
Infrastructure Composite (levered/hedged)	433,287	0.9
Insight Nevada - Infra	4,538	0.0
Publicly-Traded Infrastructure Composite (levered)	428,749	0.9
PSERS Infrastructure Index (levered)	428,749	0.9
Commodities Composite (levered)	1,815,380	3.6
PSERS Commodities Composite	929,152	1.8
PSERS Commodity Beta (levered)	673,018	1.3
PIMCO Commodity Alpha Fund	256,133	0.5
Gresham	328,737	0.7
Wellington Management Company	437,973	0.9
Gold Composite	119,519	0.2
PSERS Gold Fund (levered)	119,519	0.2
Total Real Estate (levered/hedged)	5,800,733	11.5
PTRES Composite (levered/hedged)	544,180	1.1

Alternative investment and real estate investments are valued on a quarter lag.

PSERS Total Fund Composite

As of December 31, 2016

Asset Allocation

	Total Fund	%
	(\$)	
Insight Sierra - REIT	4,920	0.0
PSERS REIT Index (levered)	329,823	0.7
Security Capital Preferred Growth	209,437	0.4
Private Real Estate	5,256,553	10.4
Private Real Estate x Internal	5,157,336	10.2
Internally Managed Private Real Estate	99,216	0.2
Risk Parity Composite	4,429,845	8.8
PSERS Risk Parity	2,060,382	4.1
AQR GRP EL 20 Offshore Fund	15,788	0.0
Bridgewater All Weather @15%	594,371	1.2
DE Shaw Orienteer	383,240	0.8
DE Shaw Orienteer HV	333,523	0.7
BlackRock Market Advantage II	411,344	0.8
Bridgewater Optimal	631,197	1.3
Total Absolute Return	4,862,376	9.6
Apollo/SASOF III	39,788	0.1
Oceanwood Opportunities Fund	206,488	0.4
Perry Partners L.P.	97,759	0.2
Ellis Lake	2,380	0.0
Garda Fixed Income Relative Value Opportunity Fund Ltd.	380,786	0.8
Capula Global Relative Value Fund Limited - Class F	409,887	0.8
PIMCO PARS/GCOF/MAV Fund	774,756	1.5
PIMCO PARS	265,159	0.5
PIMCO GCOF	286,696	0.6
PIMCO MAV	240,852	0.5
BlackRock Capital Structure Investments Fund	266,457	0.5
Brigade Leveraged Capital Structures Offshore Fund	281,086	0.6
Caspian Select Credit International - Class A	235,010	0.5
Caspian Keystone Focused Fund, L.P.	16,487	0.0
Venor Capital Offshore	158,424	0.3
Aeolus Property Catastrophe Fund I LP	178,167	0.4

Alternative investment and real estate investments are valued on a quarter lag.

PSERS Total Fund Composite

As of December 31, 2016

Asset Allocation

	Total Fund (\$)	%
Nephila / Palmetto Fund Ltd. - Class G	247,734	0.5
Independence Reinsurance Partners Composite	67,541	0.1
Independence Reinsurance Partners Cash	23,952	0.0
DaVinci Reinsurance Ltd.	22,388	0.0
Medici Fund Ltd.	21,202	0.0
Capula Tail Risk Fund Limited - Class C	346,565	0.7
Bridgewater Pure Alpha Fund II, Ltd.	884,805	1.8
Brevan Howard Fund Limited - Class E	49,669	0.1
OWS Credit Opportunity Offshore Fund III	218,586	0.4
Unallocated Cash & Cash Equivalents	1,686,393	3.3
PSERS Cash Management	1,684,246	3.3
RE Conversions	2,147	0.0

Alternative investment and real estate investments are valued on a quarter lag.