



***California Public Employees' Retirement System
Universe Comparison Report – June 30, 2015***

*Julia Bonafede, CFA
President & Principal*

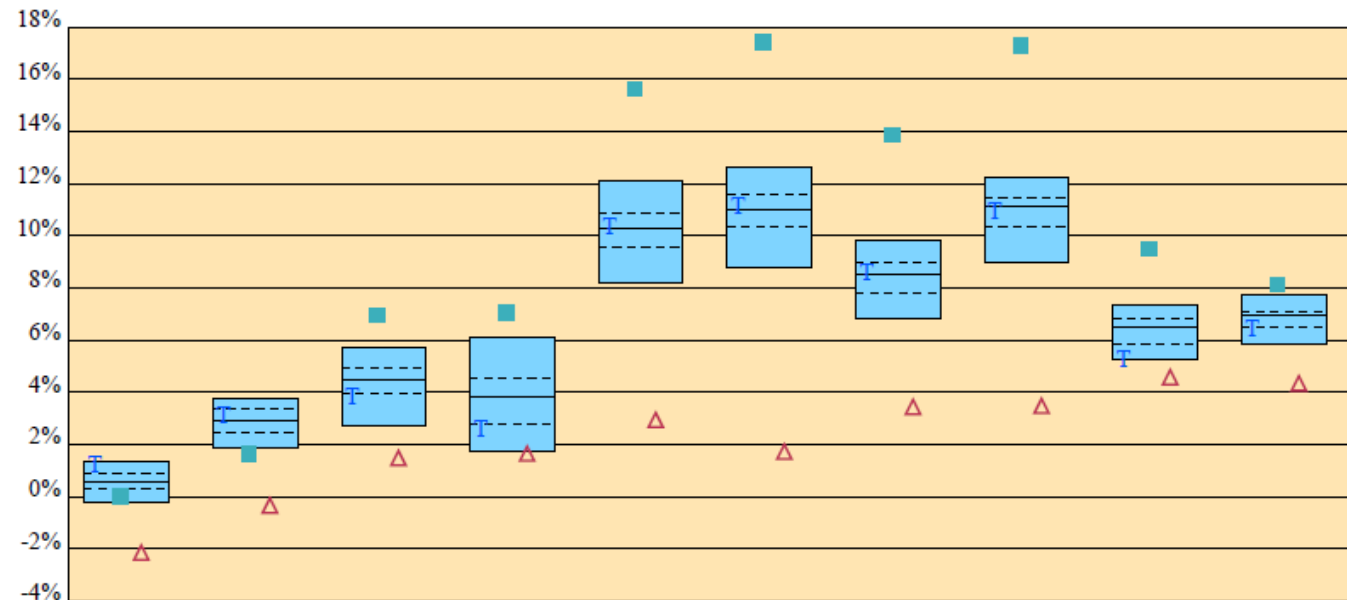
*Andrew Junkin, CFA
Managing Director & Principal*

August 2015

Total Fund – Universe Comparison



California Public Employees Retirement
Total Returns of Public Funds > \$10 Billion
Rates of Return for Periods Ending June 30, 2015



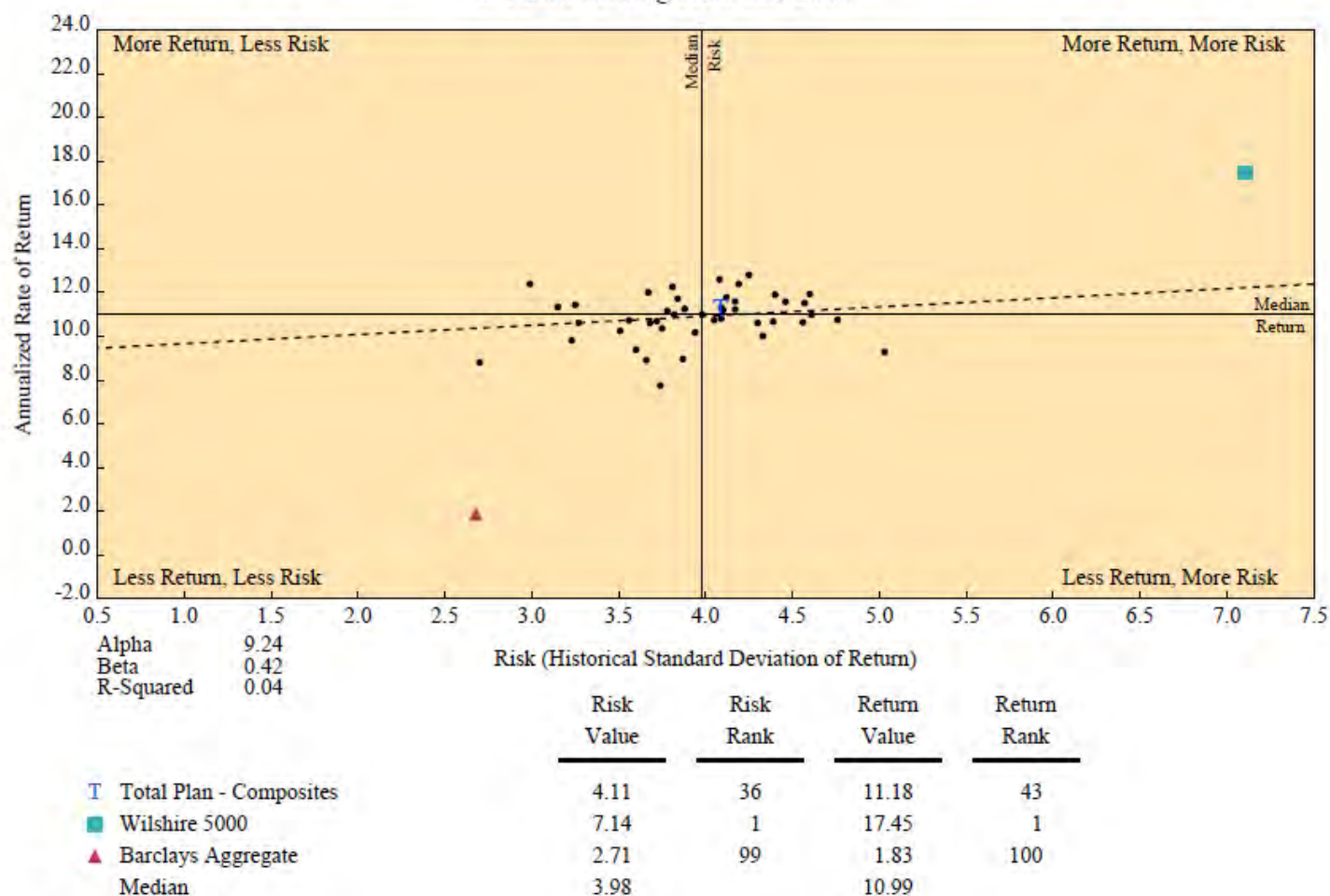
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th Percentile	1.34	3.73	5.73	6.10	12.13	12.60	9.84	12.21	7.35	7.72
25th Percentile	0.89	3.35	4.95	4.53	10.83	11.59	8.95	11.48	6.81	7.10
Median	0.58	2.89	4.49	3.85	10.26	10.99	8.52	11.11	6.46	6.93
75th Percentile	0.27	2.47	3.92	2.76	9.56	10.36	7.79	10.33	5.84	6.48
95th Percentile	-0.25	1.88	2.74	1.74	8.19	8.80	6.81	8.98	5.27	5.81
T Total Plan - Composites	1.22 (10)	3.11 (34)	3.87 (77)	2.62 (79)	10.40 (43)	11.18 (43)	8.58 (45)	10.94 (60)	5.27 (96)	6.43 (77)
■ Wilshire 5000	0.06 (82)	1.67 (96)	7.01 (1)	7.09 (1)	15.66 (1)	17.45 (1)	13.92 (1)	17.33 (1)	9.54 (1)	8.16 (1)
△ Barclays Govt/Credit	-2.10 (99)	-0.30 (100)	1.52 (100)	1.69 (96)	2.98 (100)	1.76 (100)	3.48 (100)	3.52 (100)	4.62 (99)	4.39 (100)

GOF returns are used in universe comparison.

Total Fund – Risk and Return



California Public Employees Retirement Risk v. Total Return of Public Funds > \$10 Billion 3 Years Ending June 30, 2015

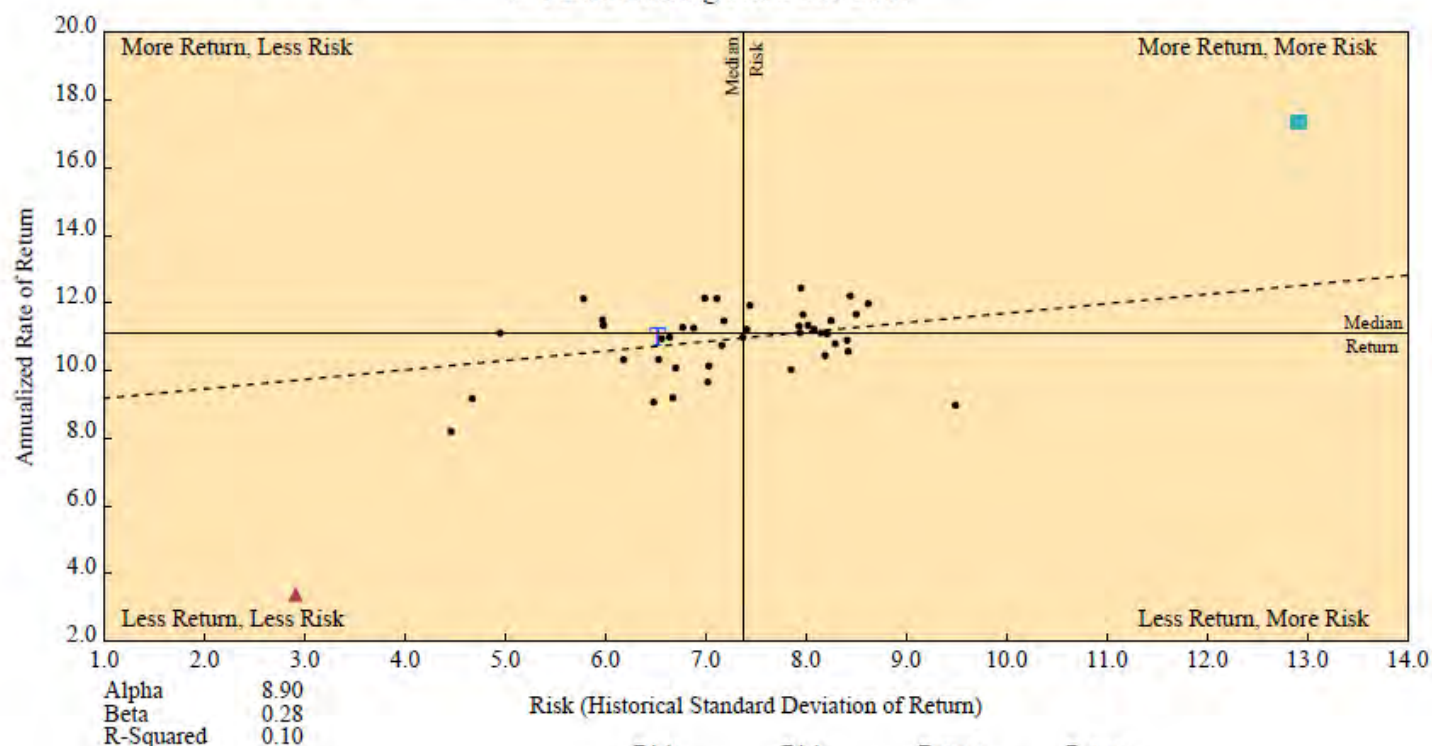


GOF returns are used in universe comparison.

Total Fund – Risk and Return



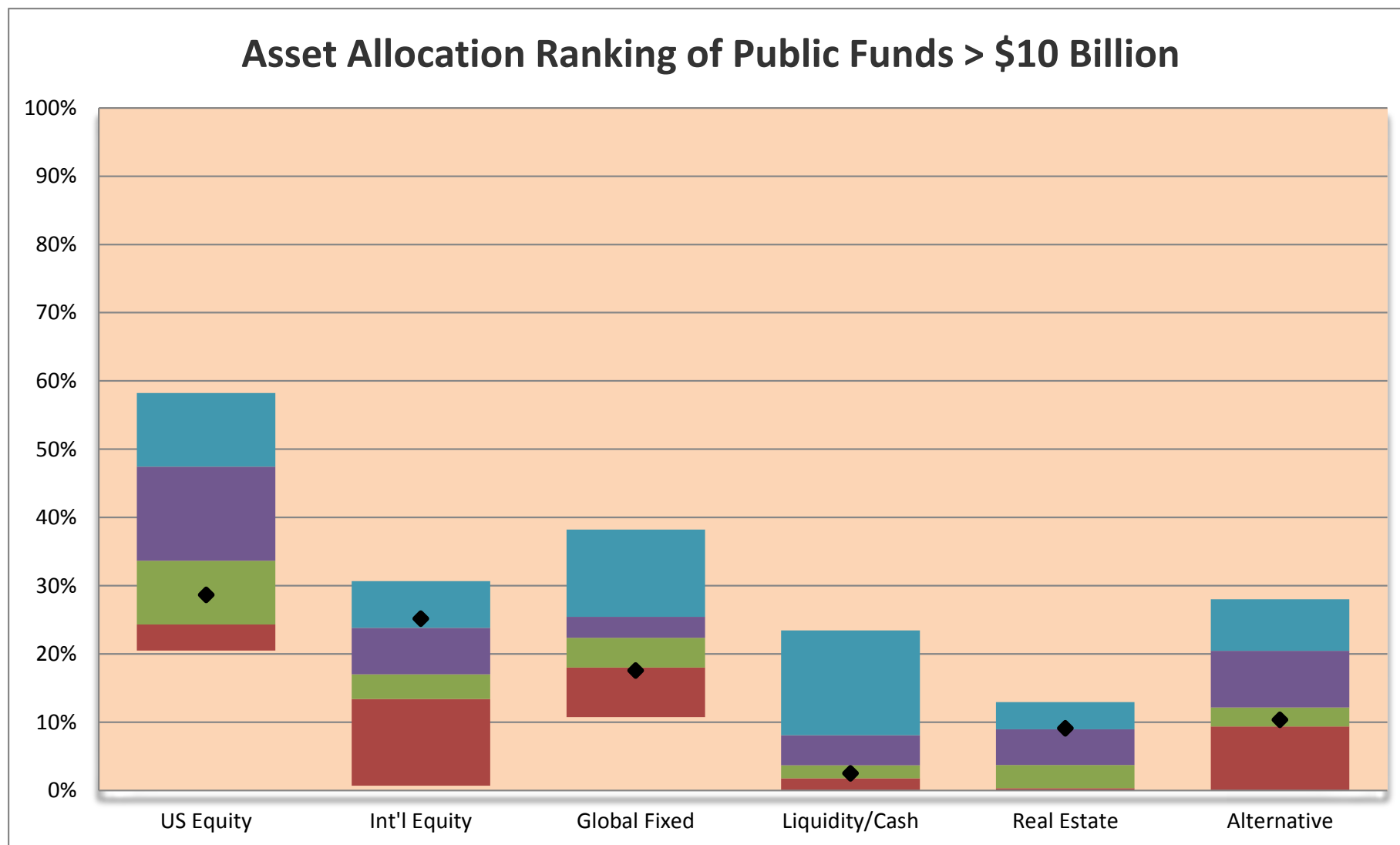
California Public Employees Retirement
 Risk v. Total Return of Public Funds > \$10 Billion
 5 Years Ending June 30, 2015



	Risk Value	Risk Rank	Return Value	Return Rank
T Total Plan - Composites	6.56	79	10.94	60
■ Wilshire 5000	12.97	1	17.33	1
▲ Barclays Aggregate	2.97	100	3.35	100
Median	7.37		11.11	

GOF returns are used in universe comparison.

Asset Allocation Ranking – Universe Analysis

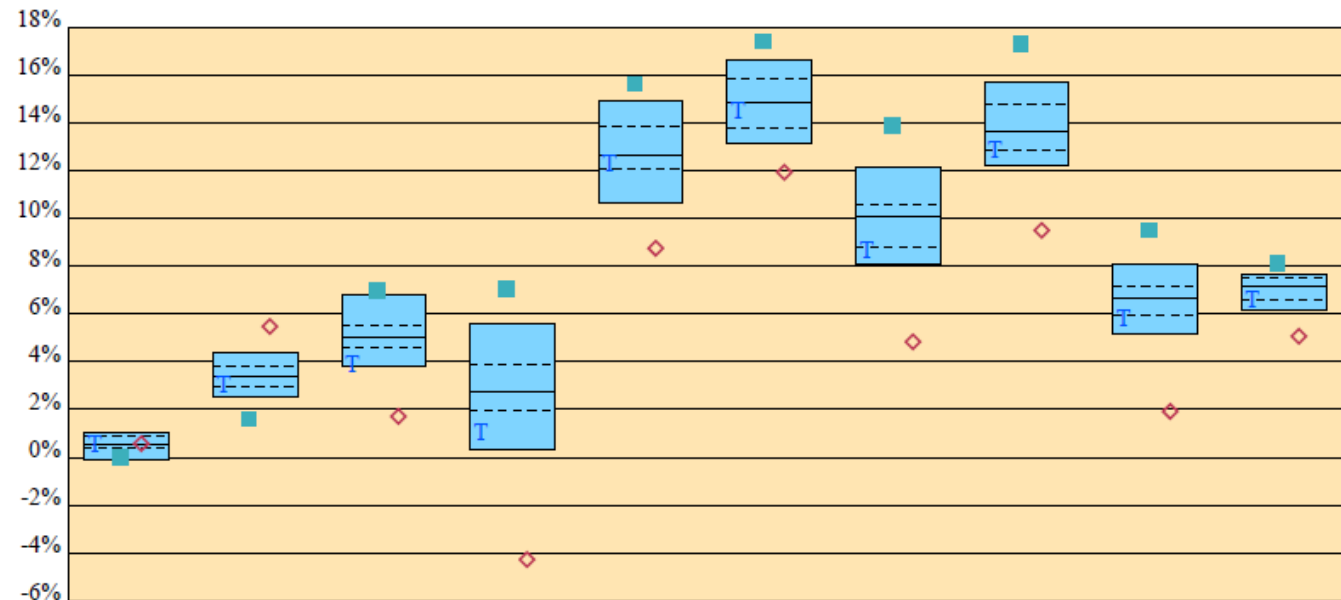


CalPERS	US Equity	Int'l Equity	Global Fixed	Liquidity/Cash	Real Estate	Alternative
Weight%(Rank)	28.66% (63)	25.19% (20)	17.58% (75)	2.49% (61)	9.09% (19)	10.37% (61)

Growth: Public Equity – Universe Comparison



California Public Employees Retirement Equity Returns of Public Funds > \$10 Billion Rates of Return for Periods Ending June 30, 2015



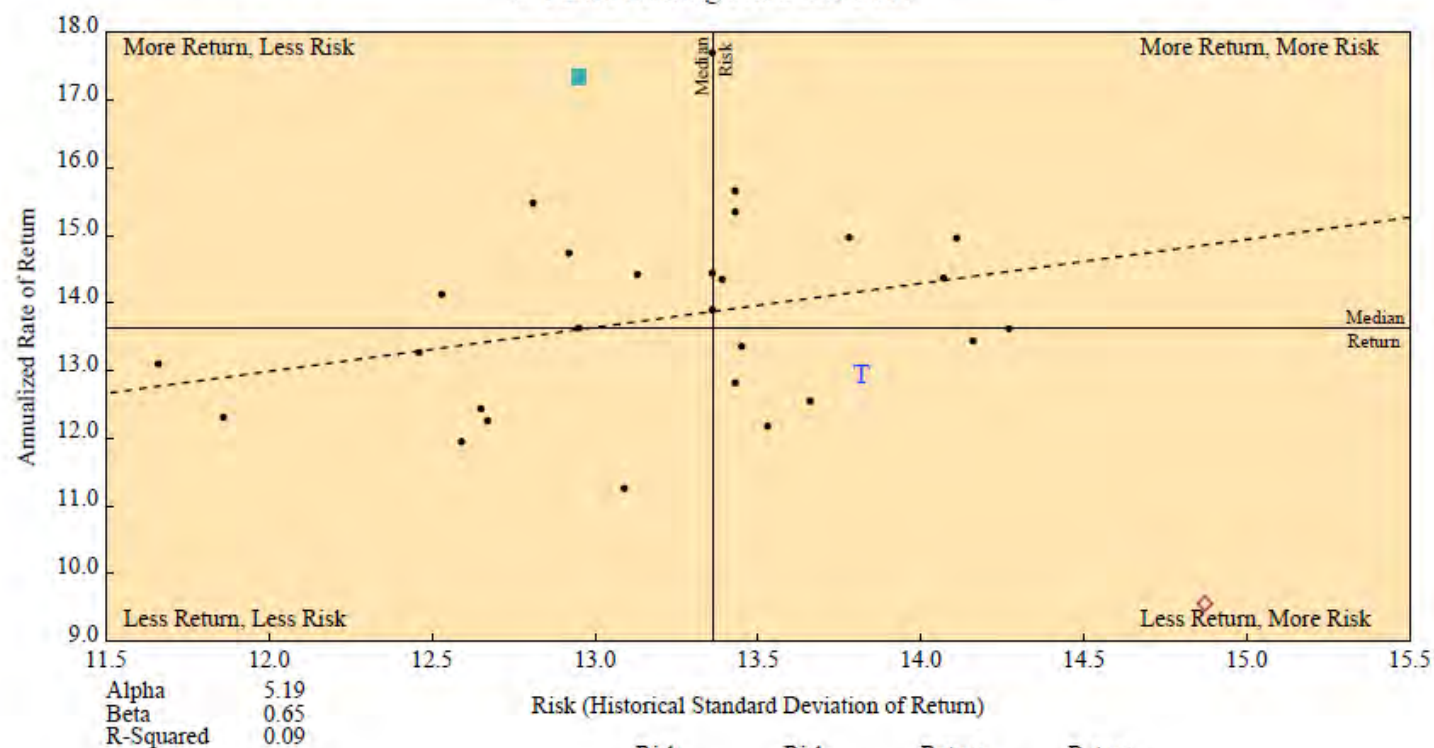
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th Percentile	1.04	4.37	6.79	5.60	14.90	16.64	12.15	15.66	8.11	7.66
25th Percentile	0.89	3.82	5.53	3.85	13.84	15.83	10.54	14.74	7.16	7.49
Median	0.52	3.35	5.02	2.76	12.65	14.86	10.04	13.63	6.68	7.15
75th Percentile	0.42	2.93	4.60	1.93	12.05	13.76	8.77	12.82	5.91	6.60
95th Percentile	-0.09	2.56	3.80	0.36	10.61	13.15	8.07	12.18	5.19	6.14
T Total Plan - Composites	0.56 (47)	3.08 (59)	3.91 (93)	1.06 (93)	12.31 (59)	14.52 (56)	8.66 (81)	12.91 (70)	5.81 (79)	6.64 (65)
■ Wilshire 5000	0.06 (93)	1.67 (99)	7.01 (1)	7.09 (1)	15.66 (1)	17.45 (1)	13.92 (1)	17.33 (1)	9.54 (1)	8.16 (1)
◇ MSCI EAFE (Net)	0.62 (41)	5.52 (1)	1.76 (99)	-4.22 (99)	8.79 (96)	11.97 (99)	4.88 (100)	9.54 (100)	1.97 (100)	5.12 (100)

GOF returns are used in universe comparison.

Growth: Public Equity – Risk and Return



California Public Employees Retirement Risk v. Total Equity Returns of Public Funds > \$10 Billion 5 Years Ending June 30, 2015



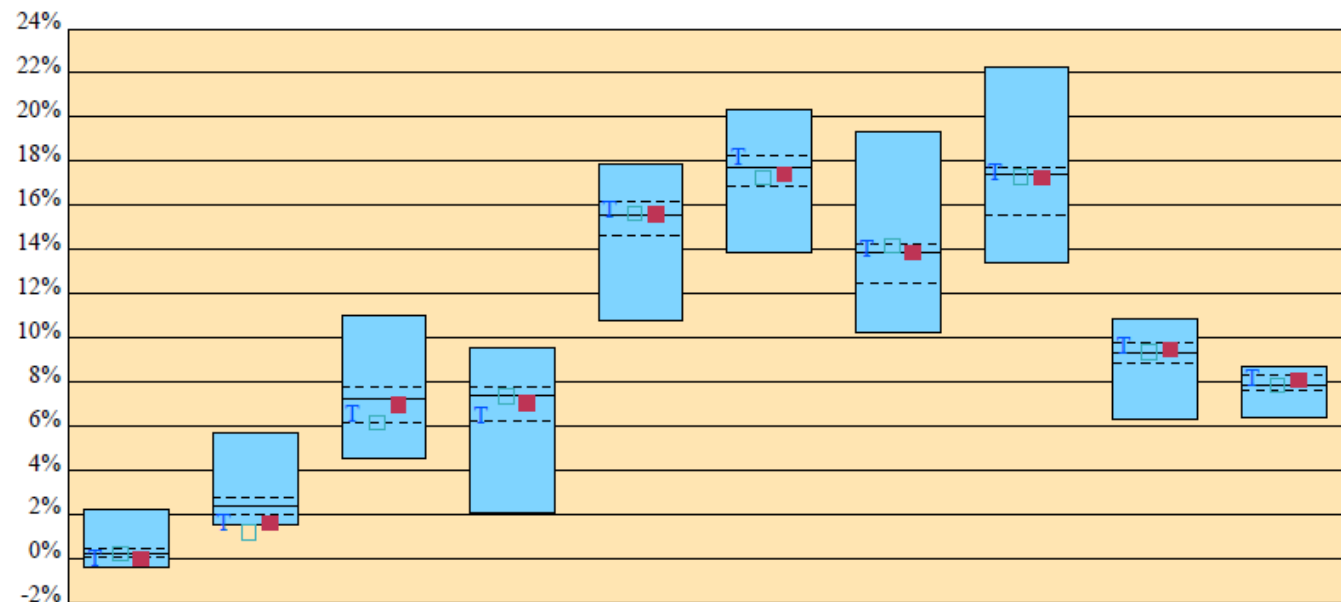
	Risk Value	Risk Rank	Return Value	Return Rank
T Total Plan - Composites	13.83	17	12.91	70
■ Wilshire 5000	12.97	62	17.33	1
◇ MSCI EAFE (Net)	14.89	1	9.54	100
Median	13.36		13.63	

GOF returns are used in universe comparison.

Growth: US Equity – Universe Comparison



California Public Employees Retirement US Equity Returns of Public Funds > \$10 Billion Rates of Return for Periods Ending June 30, 2015



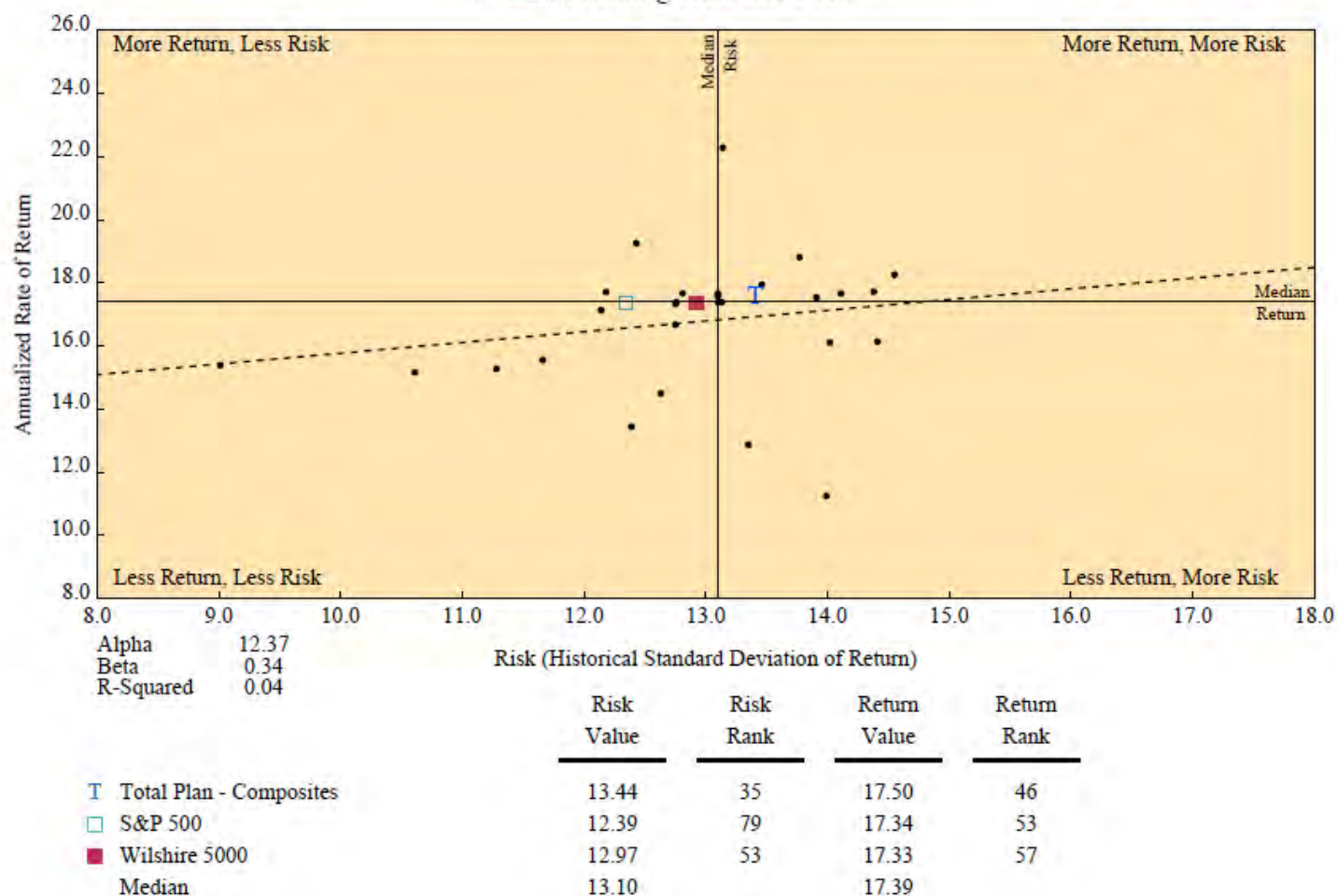
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th Percentile	2.25	5.71	11.02	9.59	17.89	20.35	19.35	22.28	10.87	8.73
25th Percentile	0.48	2.80	7.77	7.79	16.21	18.23	14.22	17.72	9.82	8.29
Median	0.26	2.36	7.26	7.37	15.58	17.71	13.89	17.39	9.29	7.86
75th Percentile	0.06	2.02	6.20	6.25	14.61	16.85	12.49	15.55	8.86	7.65
95th Percentile	-0.37	1.56	4.52	2.06	10.79	13.90	10.21	13.44	6.28	6.38
T Total Plan - Composites	0.06 (75)	1.62 (93)	6.57 (68)	6.49 (65)	15.80 (40)	18.22 (25)	14.06 (34)	17.50 (46)	9.67 (29)	8.19 (35)
□ S&P 500	0.28 (47)	1.23 (96)	6.22 (71)	7.42 (40)	15.70 (43)	17.31 (65)	14.22 (25)	17.34 (53)	9.42 (41)	7.90 (45)
■ Wilshire 5000	0.06 (75)	1.67 (93)	7.01 (59)	7.09 (62)	15.66 (46)	17.45 (59)	13.92 (46)	17.33 (57)	9.54 (33)	8.16 (35)

GOF returns are used in universe comparison.

Growth: US Equity – Risk and Return



California Public Employees Retirement Risk v. US Equity Returns of Public Funds > \$10 Billion 5 Years Ending June 30, 2015

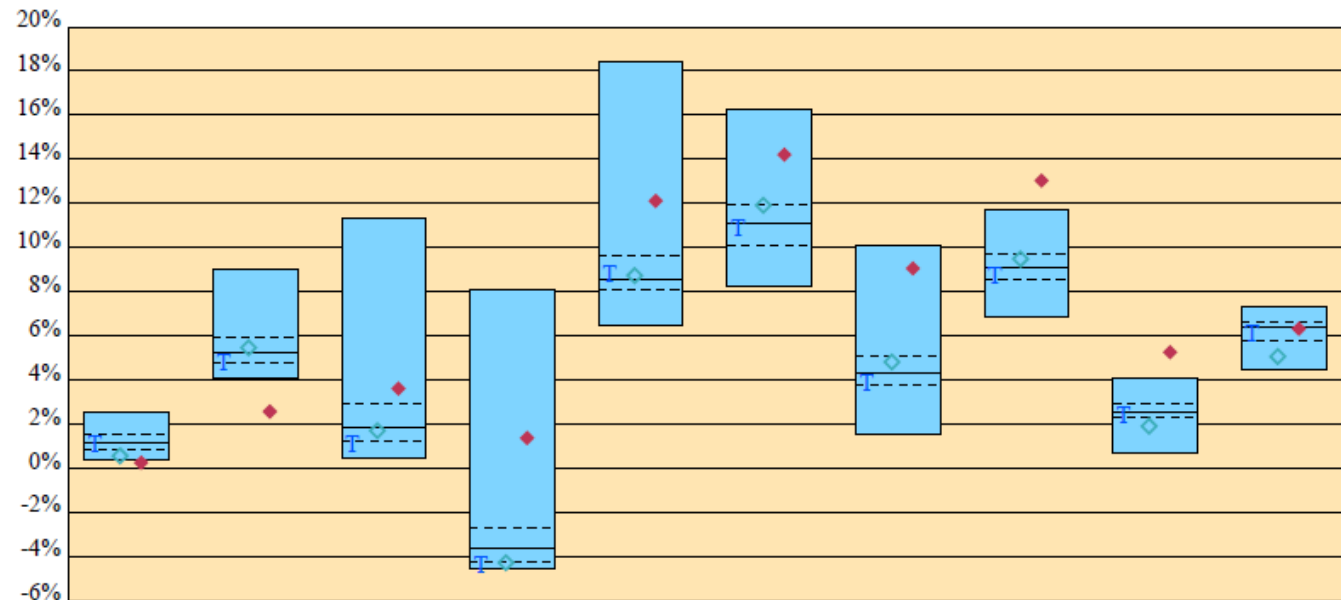


GOF returns are used in universe comparison.

Growth: International Equity – Universe Comparison



California Public Employees Retirement
International Equity Returns of Public Funds > \$10 Billion
Rates of Return for Periods Ending June 30, 2015



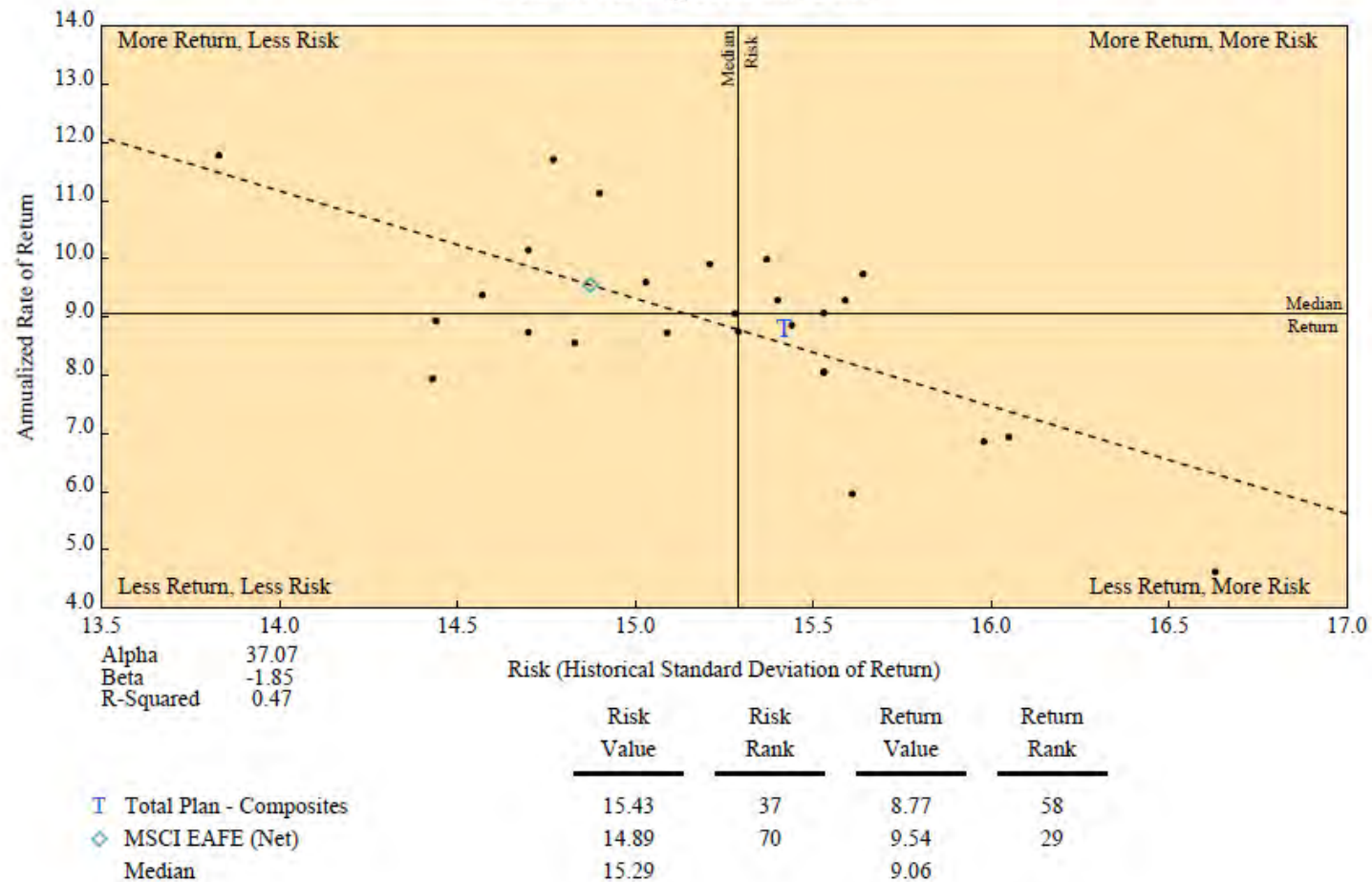
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th Percentile	2.52	9.05	11.37	8.09	18.43	16.28	10.07	11.71	4.06	7.34
25th Percentile	1.52	5.96	2.91	-2.71	9.64	11.95	5.09	9.74	2.97	6.60
Median	1.19	5.21	1.87	-3.58	8.59	11.11	4.29	9.06	2.57	6.37
75th Percentile	0.85	4.75	1.24	-4.22	8.09	10.11	3.77	8.56	2.34	5.77
95th Percentile	0.37	4.11	0.43	-4.56	6.47	8.22	1.57	6.86	0.67	4.49
T Total Plan - Composites	1.12 (52)	4.79 (68)	1.15 (75)	-4.35 (90)	8.82 (38)	10.94 (56)	3.86 (71)	8.77 (58)	2.43 (60)	6.11 (68)
◇ MSCI EAFE (Net)	0.62 (87)	5.52 (27)	1.76 (53)	-4.22 (75)	8.79 (38)	11.97 (22)	4.88 (34)	9.54 (29)	1.97 (75)	5.12 (81)
◆ MSCI World (Net)	0.31 (99)	2.63 (100)	3.67 (16)	1.43 (14)	12.17 (14)	14.26 (8)	9.12 (5)	13.09 (1)	5.32 (1)	6.38 (43)

GOF returns are used in universe comparison.

Growth: International Equity – Risk and Return



California Public Employees Retirement Risk v. Non-US Equity Returns of Public Funds > \$10 Billion 5 Years Ending June 30, 2015

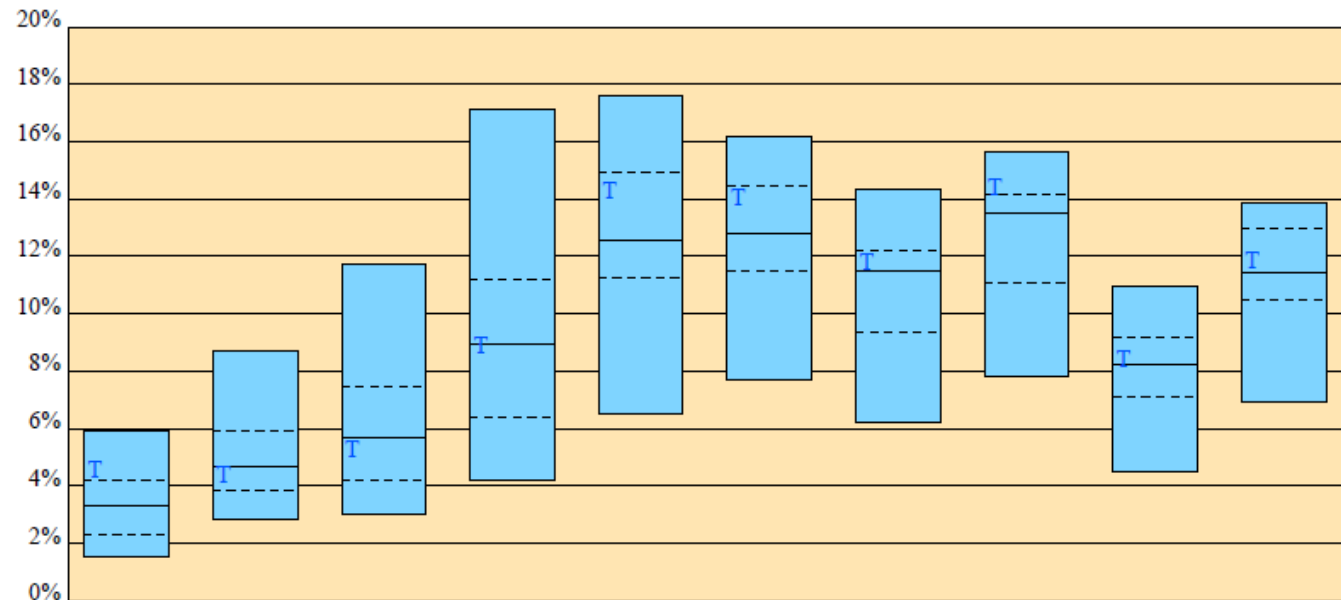


GOF returns are used in universe comparison.

Growth: Private Equity – Universe Comparison



California Public Employees Retirement
Private Equity Returns of Public Funds > \$10 Billion
Rates of Return for Periods Ending June 30, 2015



	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th Percentile	5.90	8.73	11.74	17.10	17.63	16.20	14.35	15.66	10.95	13.89
25th Percentile	4.23	5.94	7.49	11.17	14.94	14.45	12.19	14.15	9.20	12.95
Median	3.30	4.68	5.68	8.95	12.55	12.82	11.48	13.52	8.22	11.46
75th Percentile	2.29	3.86	4.20	6.40	11.23	11.51	9.36	11.08	7.13	10.46
95th Percentile	1.53	2.82	2.99	4.19	6.50	7.73	6.19	7.81	4.51	6.93

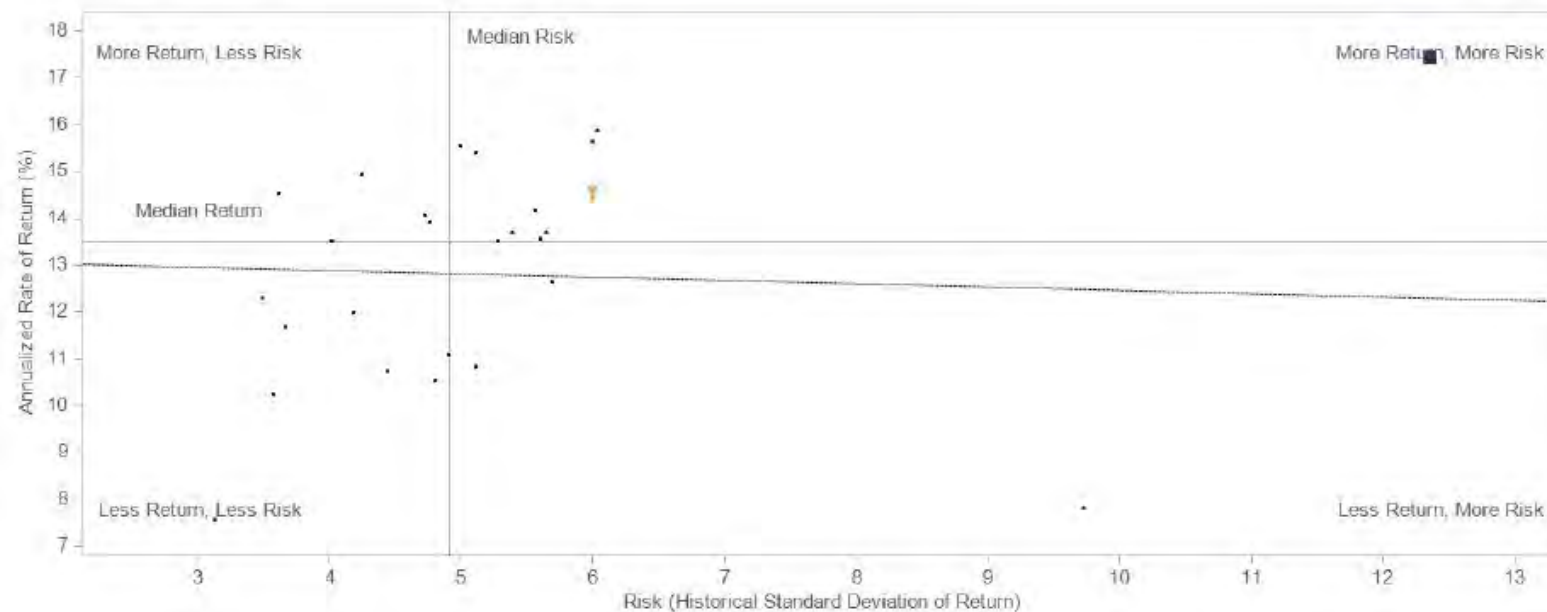
T Total Plan - Composites 4.59 (11) 4.39 (56) 5.30 (53) 8.92 (50) 14.33 (25) 14.08 (25) 11.84 (39) 14.42 (21) 8.43 (40) 11.88 (37)

GOF returns are used in universe comparison.

Growth: Private Equity – Risk and Return



California Public Employees Retirement System Risk vs Total Private Equity Returns of Public Funds > \$10 Billion 5 Years Ending June 30, 2015



Alpha: 13.16
Beta: -0.07
R-Squared: 0

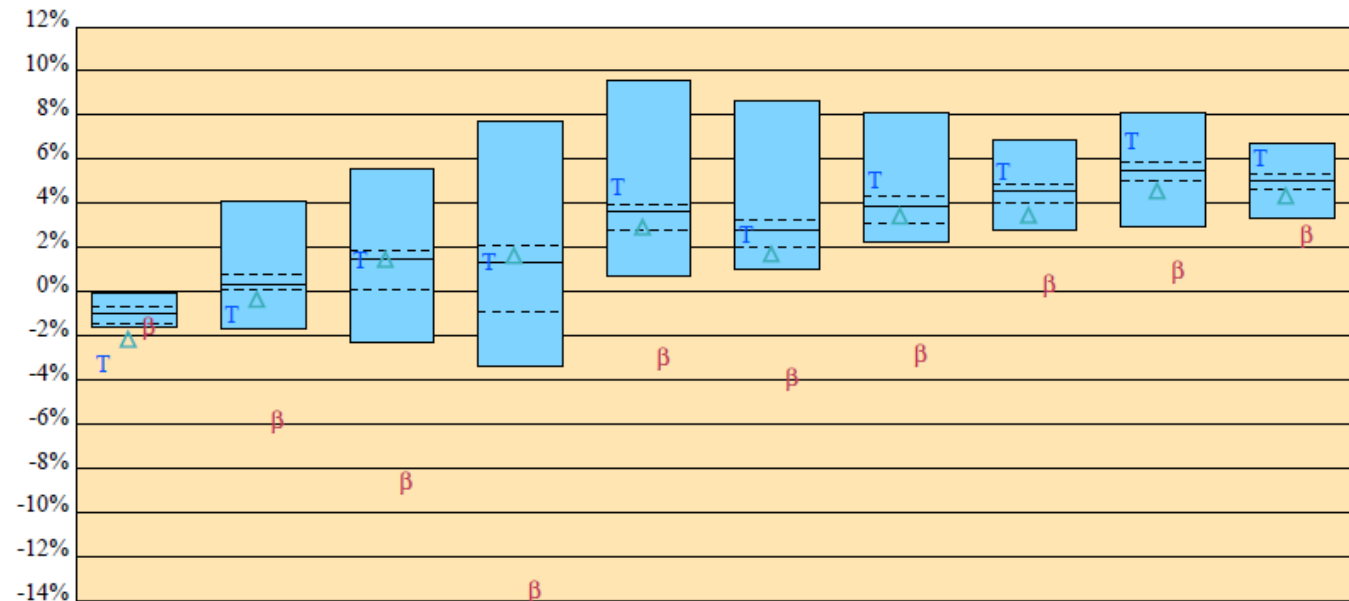
	Risk Value	Risk Rank	Return Value	Return Rank
Total Plan - Composites	6.03	9	14.42	21
S&P 500	12.38	1	17.34	1
Median	4.91		13.53	

GOF returns are used in universe comparison.

Income – Universe Comparison



California Public Employees Retirement Fixed Income Returns of Public Funds > \$10 Billion Rates of Return for Periods Ending June 30, 2015



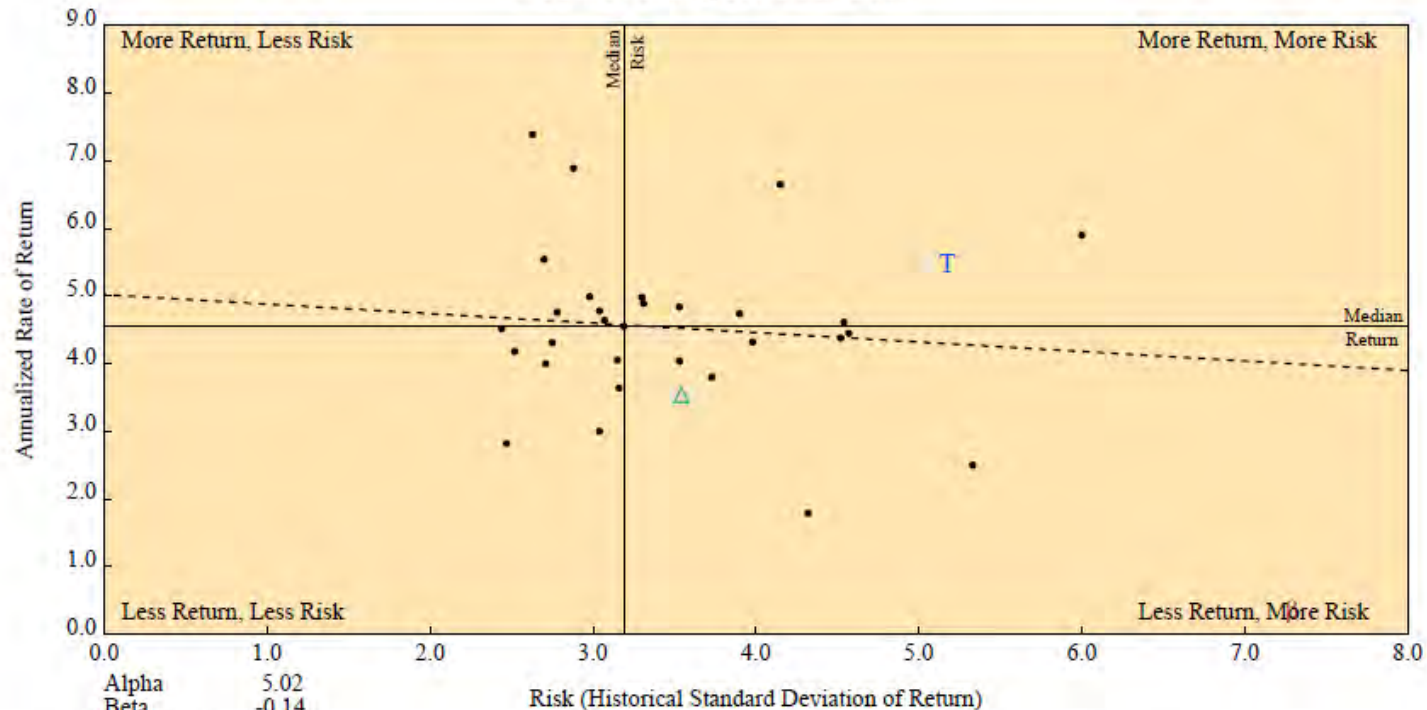
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th Percentile	-0.05	4.07	5.58	7.76	9.54	8.65	8.10	6.89	8.14	6.76
25th Percentile	-0.67	0.80	1.88	2.08	3.97	3.27	4.36	4.89	5.86	5.35
Median	-0.98	0.31	1.51	1.32	3.63	2.77	3.87	4.55	5.46	4.99
75th Percentile	-1.44	0.09	0.13	-0.87	2.78	2.05	3.11	4.05	5.05	4.61
95th Percentile	-1.63	-1.69	-2.31	-3.35	0.70	1.01	2.22	2.82	2.97	3.37
T Total Plan - Composites	-3.27 (99)	-1.04 (93)	1.41 (52)	1.33(47)	4.77 (11)	2.59 (59)	5.04 (19)	5.43 (15)	6.85 (5)	6.10 (5)
Δ Barclays Govt/Credit	-2.10 (96)	-0.30 (84)	1.52 (47)	1.69(33)	2.98 (71)	1.76 (81)	3.48 (65)	3.52 (88)	4.62 (79)	4.39 (79)
β Citigroup Non-US Govt Bond	-1.54 (87)	-5.83 (100)	-8.57 (100)	-13.49 (100)	-2.95 (100)	-3.88 (100)	-2.82 (100)	0.33 (100)	0.95 (100)	2.63 (99)

GOF returns are used in universe comparison.

Income – Risk and Return



California Public Employees Retirement Risk v. Total Fixed Income Returns of Public Funds > \$10 Billion 5 Years Ending June 30, 2015



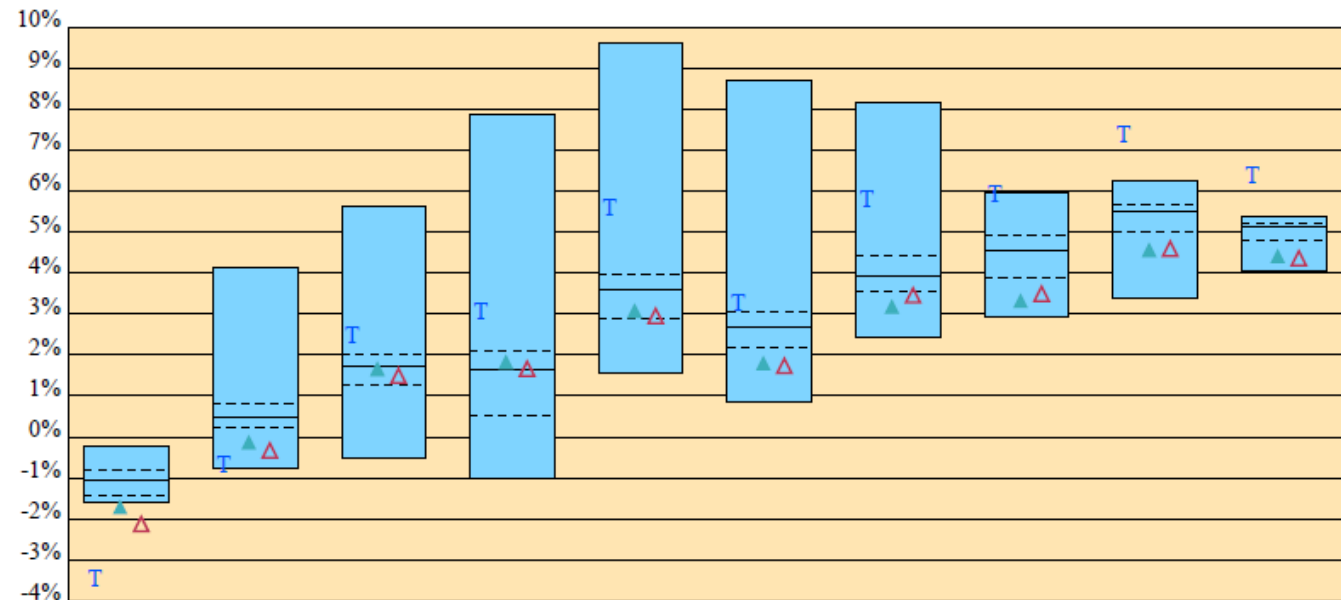
	Risk Value	Risk Rank	Return Value	Return Rank
T Total Plan - Composites	5.20	5	5.43	15
△ Barclays Govt/Credit	3.58	32	3.52	88
β Citigroup Non-US Govt Bond	7.33	1	0.33	100
Median	3.19		4.55	

GOF returns are used in universe comparison.

US Income – Universe Comparison



California Public Employees Retirement US Fixed Income Returns of Public Funds > \$10 Billion Rates of Return for Periods Ending June 30, 2015



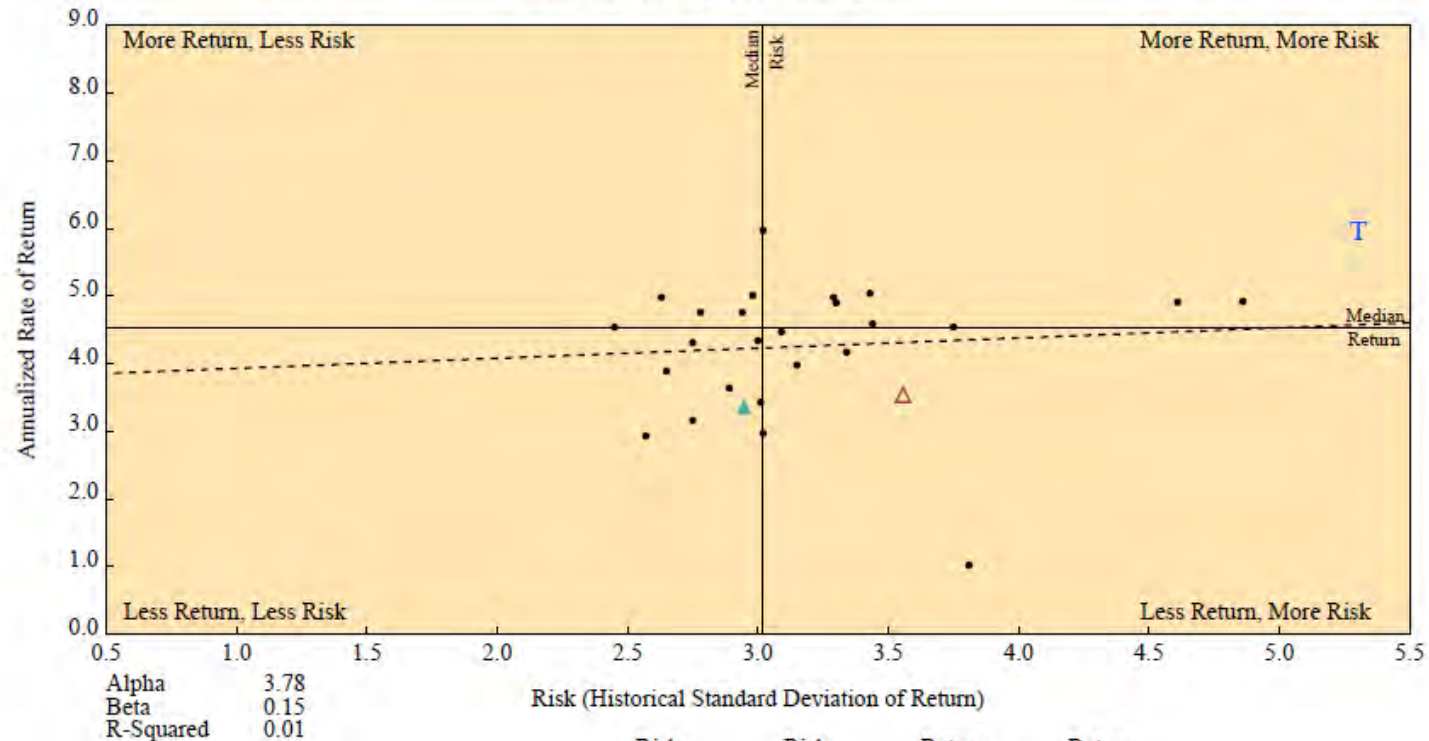
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th Percentile	-0.22	4.11	5.63	7.85	9.62	8.70	8.15	5.97	6.24	5.39
25th Percentile	-0.79	0.81	2.01	2.08	3.98	3.03	4.41	4.92	5.66	5.20
Median	-1.07	0.47	1.72	1.62	3.58	2.68	3.92	4.54	5.48	5.12
75th Percentile	-1.44	0.23	1.26	0.51	2.88	2.19	3.55	3.89	5.00	4.79
95th Percentile	-1.59	-0.78	-0.50	-1.00	1.57	0.84	2.42	2.93	3.37	4.04
T Total Plan - Composites	-3.45 (99)	-0.65 (92)	2.50 (12)	3.05 (12)	5.59 (9)	3.27 (17)	5.81 (13)	5.92 (5)	7.37 (1)	6.38 (1)
▲ Barclays Aggregate	-1.68 (95)	-0.10 (85)	1.69 (50)	1.86 (32)	3.11 (71)	1.83 (79)	3.21 (83)	3.35 (84)	4.59 (81)	4.44 (87)
△ Barclays Govt/Credit	-2.10 (95)	-0.30 (85)	1.52 (60)	1.69 (39)	2.98 (71)	1.76 (83)	3.48 (75)	3.52 (79)	4.62 (81)	4.39 (87)

GOF returns are used in universe comparison.

US Income – Risk and Return



California Public Employees Retirement Risk v. US Fixed Income Returns of Public Funds > \$10 Billion 5 Years Ending June 30, 2015



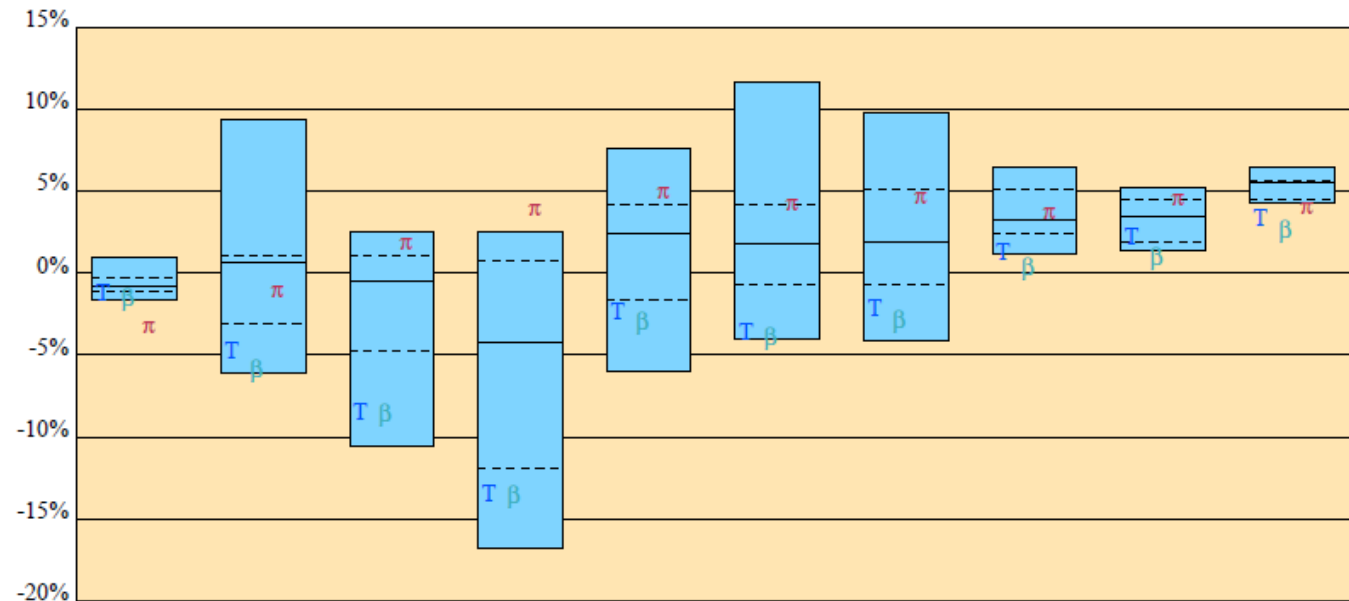
	Risk Value	Risk Rank	Return Value	Return Rank
T Total Plan - Composites	5.32	1	5.92	5
▲ Barclays Aggregate	2.97	62	3.35	84
△ Barclays Govt/Credit	3.58	17	3.52	79
Median	3.02		4.54	

GOF returns are used in universe comparison.

International Income – Universe Comparison



California Public Employees Retirement International Fixed Income Returns of Public Funds > \$10 Billion Rates of Return for Periods Ending June 30, 2015



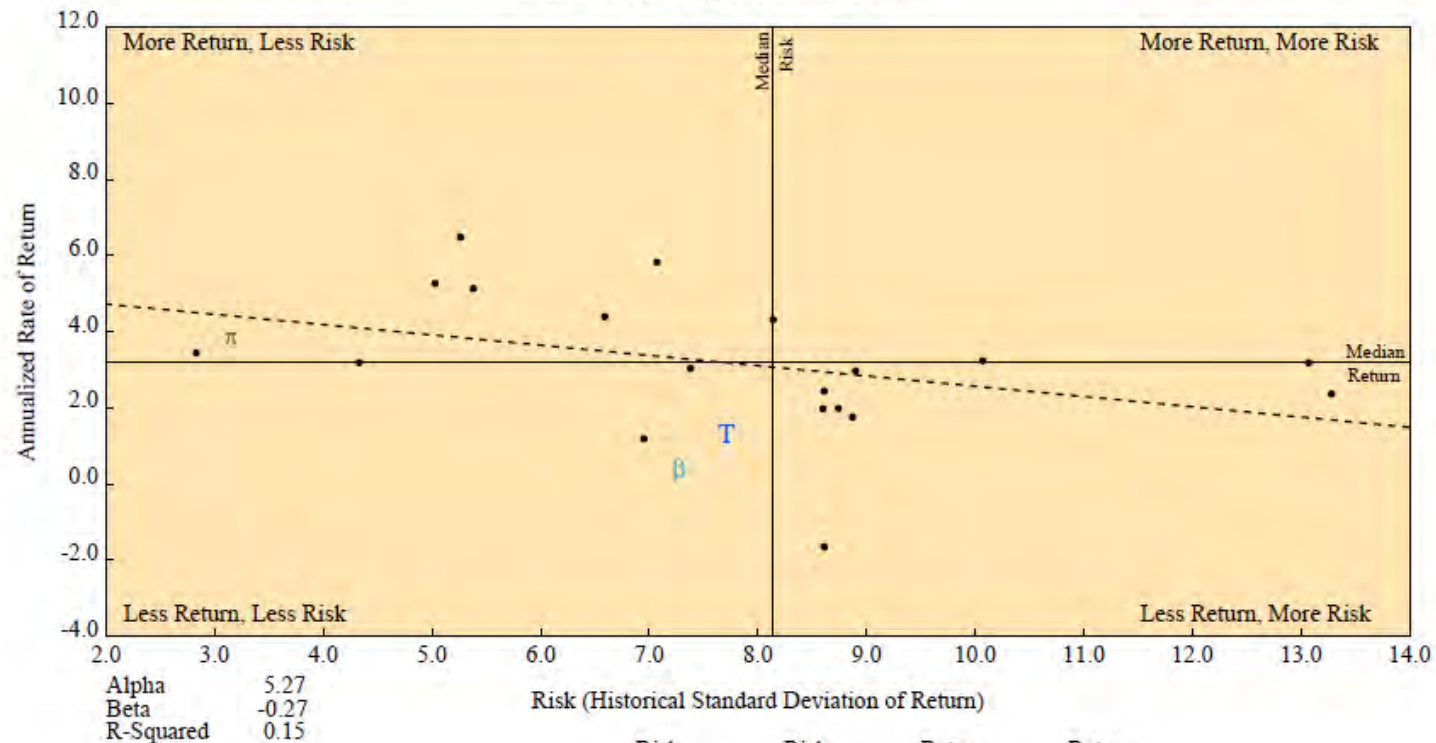
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th Percentile	0.92	9.32	2.55	2.47	7.58	11.66	9.80	6.49	5.16	6.49
25th Percentile	-0.29	1.03	1.07	0.73	4.17	4.14	5.05	5.14	4.44	5.64
Median	-0.77	0.59	-0.47	-4.26	2.43	1.74	1.85	3.19	3.47	5.53
75th Percentile	-1.13	-3.13	-4.71	-11.95	-1.63	-0.75	-0.69	2.37	1.90	4.52
95th Percentile	-1.62	-6.06	-10.59	-16.83	-5.98	-3.99	-4.11	1.19	1.38	4.27
T Total Plan - Composites	-1.17 (78)	-4.68 (81)	-8.48 (85)	-13.43 (78)	-2.37 (87)	-3.60 (94)	-2.11 (89)	1.26 (93)	2.22 (58)	3.43 (99)
β Citigroup Non-US Govt Bond	-1.54 (92)	-5.83 (92)	-8.57 (85)	-13.49 (78)	-2.95 (87)	-3.88 (94)	-2.82 (94)	0.33 (99)	0.95 (99)	2.63 (100)
π Citigroup Hedged Non-US Govt	-3.19 (99)	-1.02 (60)	1.97 (9)	4.02 (1)	4.99 (12)	4.32 (20)	4.77 (25)	3.84 (35)	4.65 (15)	4.14 (99)

GOF returns are used in universe comparison.

International Income – Risk and Return



California Public Employees Retirement Risk v. Non-US Fixed Income Returns of Public Funds > \$10 Billion 5 Years Ending June 30, 2015



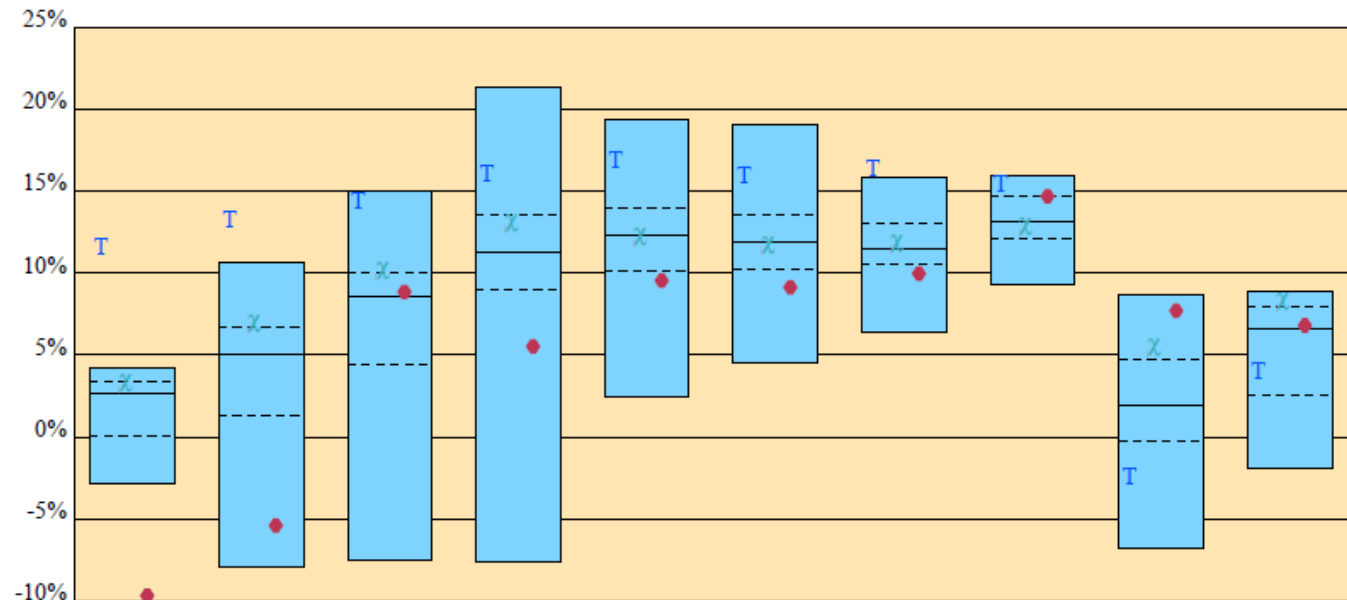
	Risk Value	Risk Rank	Return Value	Return Rank
T Total Plan - Composites	7.75	56	1.26	93
β Citigroup Non-US Govt Bond	7.33	56	0.33	99
π Citigroup Hedged Non-US Govt	3.21	99	3.84	35
Median	8.14		3.19	

GOF returns are used in universe comparison.

Real Estate – Universe Comparison



California Public Employees Retirement Real Estate Returns of Public Funds > \$10 Billion Rates of Return for Periods Ending June 30, 2015



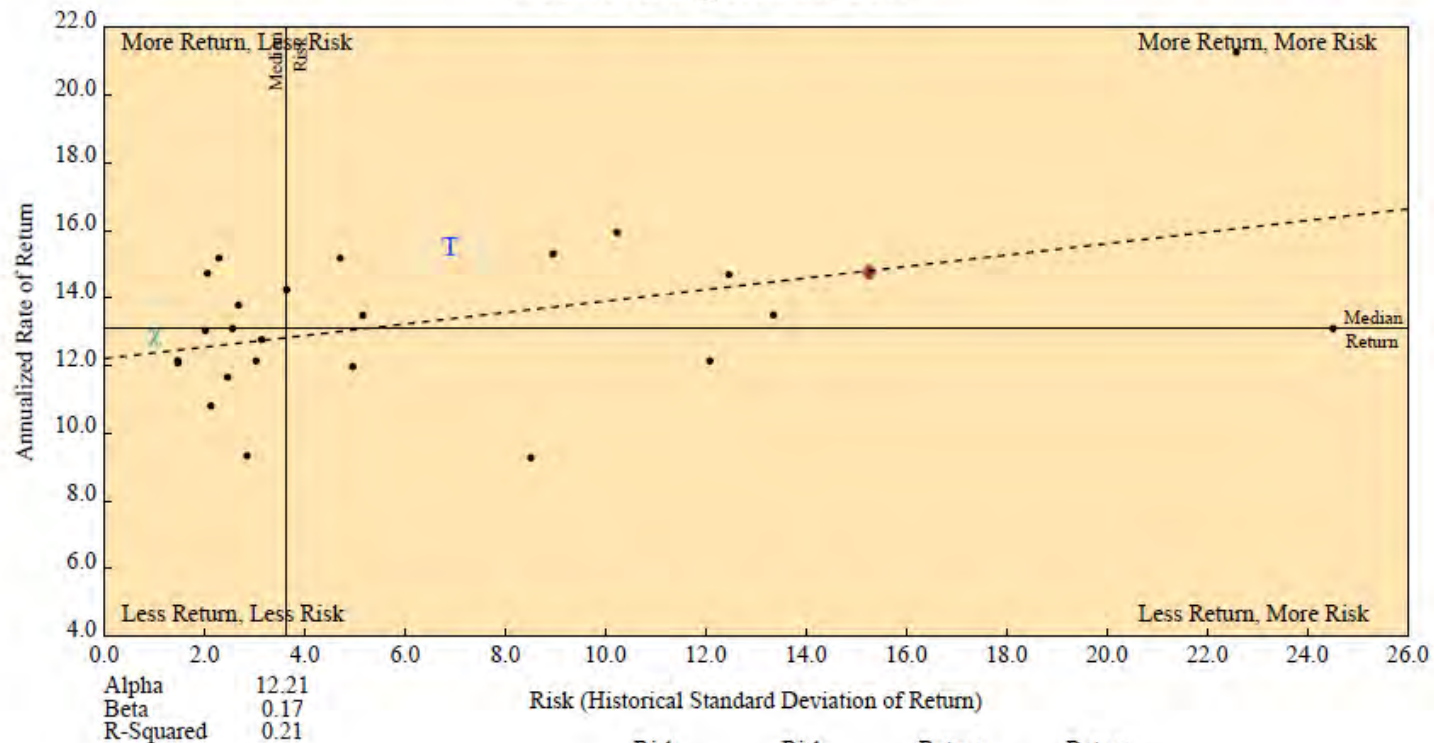
	1 Quarter	2 Quarters	3 Quarters	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th Percentile	4.21	10.64	14.98	21.27	19.31	19.04	15.85	15.94	8.69	8.90
25th Percentile	3.36	6.70	10.04	13.56	13.97	13.59	13.02	14.73	4.69	7.90
Median	2.62	5.07	8.58	11.28	12.27	11.86	11.50	13.10	1.91	6.59
75th Percentile	0.06	1.27	4.46	8.93	10.07	10.20	10.57	12.08	-0.30	2.58
95th Percentile	-2.89	-7.93	-7.50	-7.58	2.49	4.52	6.34	9.28	-6.77	-1.89
T Total Plan - Composites	11.58 (1)	13.24 (1)	14.43 (9)	16.10 (9)	16.87 (9)	15.95 (9)	16.36 (1)	15.45 (5)	-2.39 (87)	4.09 (62)
X NCREIF Property Index	3.14 (28)	6.82 (18)	10.07 (21)	12.96 (35)	12.08 (50)	11.63 (50)	11.73 (39)	12.71 (58)	5.36 (12)	8.16 (18)
● Wilshire RESI	-9.61 (95)	-5.33 (92)	8.91 (46)	5.59 (81)	9.60 (75)	9.19 (79)	10.03 (83)	14.74 (20)	7.76 (5)	6.87 (43)

GOF returns are used in universe comparison.

Real Estate – Risk and Returns



California Public Employees Retirement Risk v. Total Real Estate Returns of Public Funds > \$10 Billion 5 Years Ending June 30, 2015



T Total Plan - Composites
X NCREIF Property Index
● Wilshire RESI
Median

Risk Value	Risk Rank	Return Value	Return Rank
6.99	33	15.45	5
1.14	100	12.71	58
15.38	5	14.74	20
3.64		13.10	

GOF returns are used in universe comparison.



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