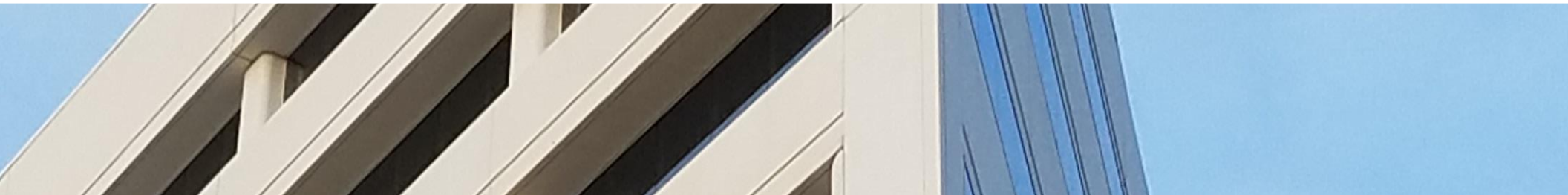




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California Public Employees' Retirement System
Universe Comparison Report – June 30, 2020

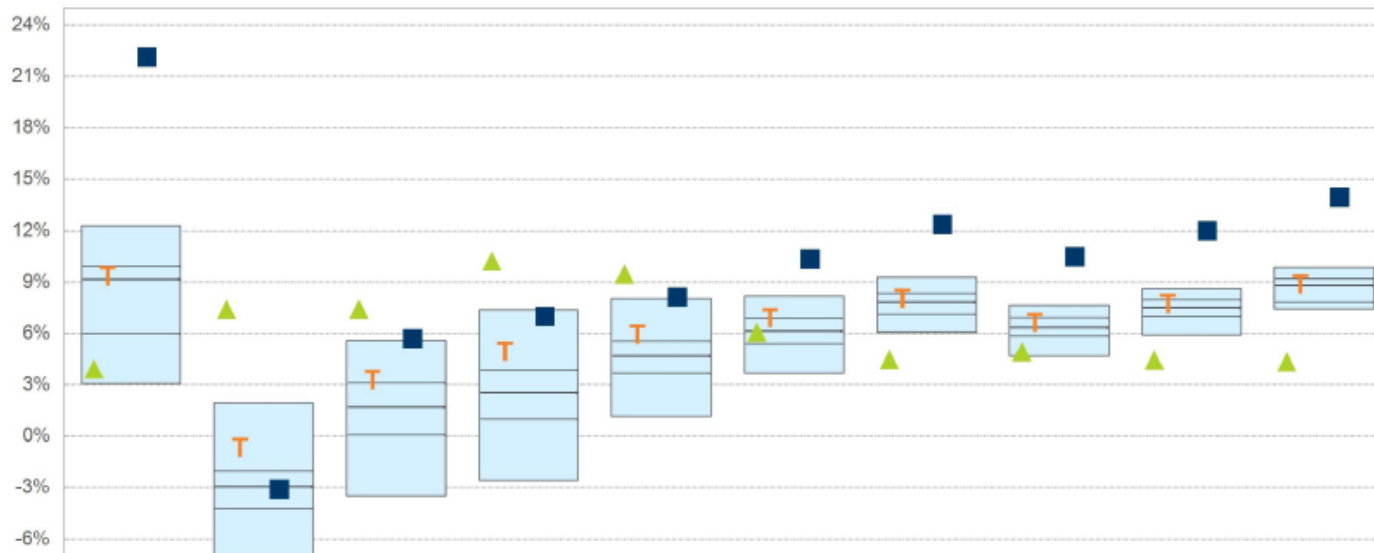


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Total Fund – Universe Comparison

California Public Employees' Retirement Performance Comparison

Total Returns of Public Funds > \$10 Billion
Cumulative Periods Ending : June 30, 2020



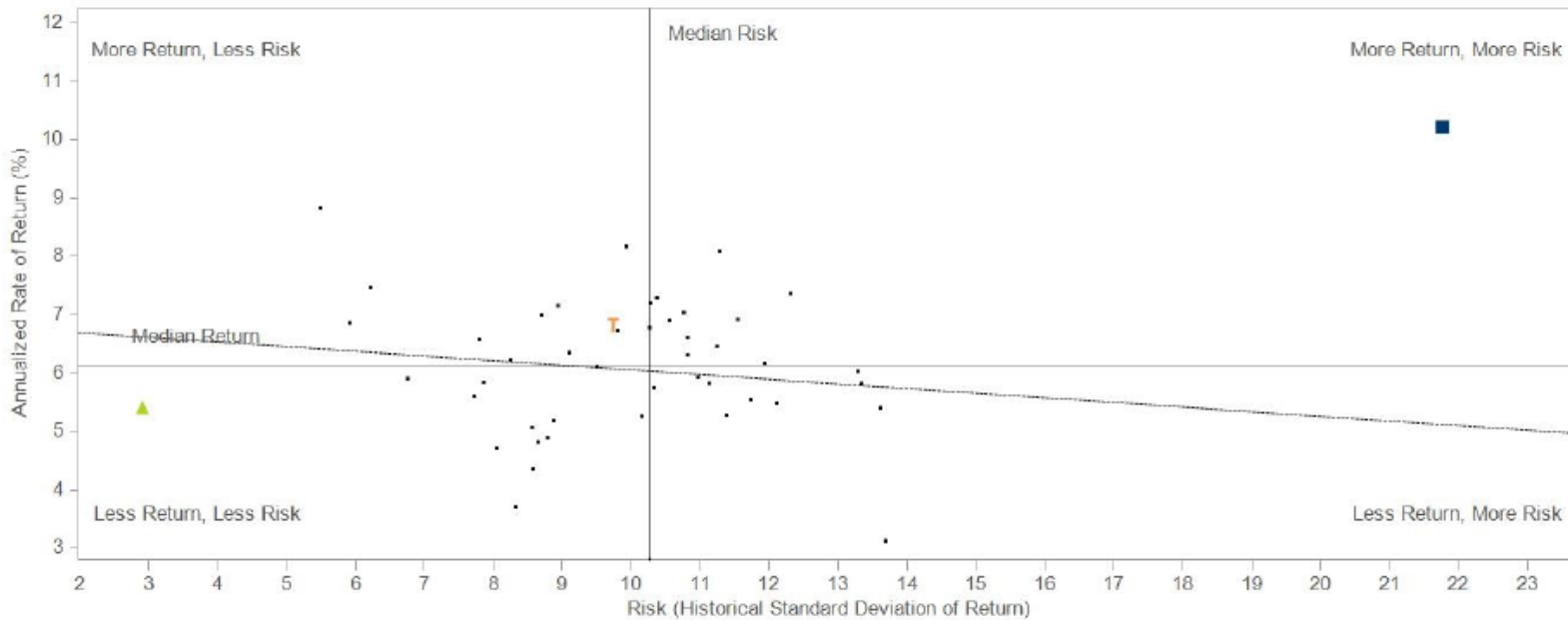
Percentile Rankings	1 Qtr	2 Qtrs	3 Qtrs	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th	12.29	1.92	5.58	7.39	8.02	8.18	9.28	7.66	8.60	9.87
25th	9.92	-2.02	3.09	3.88	5.56	6.89	8.34	6.94	7.96	9.21
50th	9.16	-2.96	1.89	2.57	4.68	6.12	7.82	6.35	7.52	8.81
75th	6.01	-4.24	0.07	1.02	3.68	5.40	7.13	5.85	6.99	7.83
95th	3.08	-6.98	-3.46	-2.59	1.17	3.70	6.06	4.68	5.93	7.45
No. Of Obs	48	48	48	47	46	46	46	46	46	44
T Perf - Total Fund	9.16 (50)	-0.84 (13)	3.09 (25)	4.77 (19)	5.77 (23)	6.73 (31)	7.87 (43)	6.43 (47)	7.56 (43)	8.67 (56)
■ Wilshire 5000 Barclays	21.04 (1)	-3.30 (54)	5.48 (5)	6.78 (7)	7.93 (5)	10.13 (1)	12.17 (1)	10.27 (1)	11.78 (1)	13.74 (1)
▲ Govt/Credit	3.71 (92)	7.21 (1)	7.20 (1)	10.02 (1)	9.27 (1)	5.87 (56)	4.26 (99)	4.74 (94)	4.24 (99)	4.13 (100)



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Total Fund – Risk and Returns

California Public Employees' Retirement
 Risk vs Total Returns of Public Funds > \$10 Billion
 3 Years Ending June 30, 2020

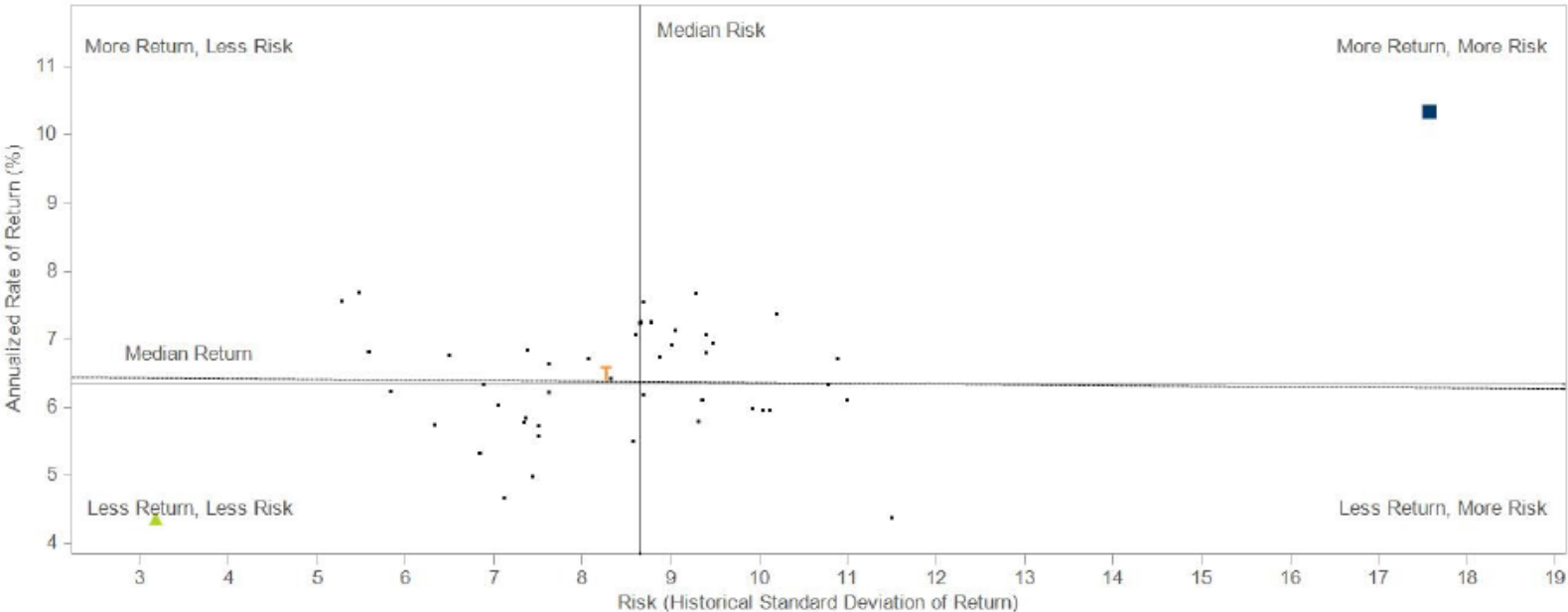


Alpha: 6.86
 Beta: -0.08
 R-Squared: 0.02

	Risk Value	Risk Rank	Return Value	Return Rank
T Perf - Total Fund	9.81	56	6.73	31
■ Wilshire 5000	21.84	1	10.13	1
▲ Barclays Aggregate	2.98	100	5.32	75
Median	10.28		6.12	

Total Fund – Risk and Returns

California Public Employees' Retirement
 Risk vs Total Returns of Public Funds > \$10 Billion
 5 Years Ending June 30, 2020

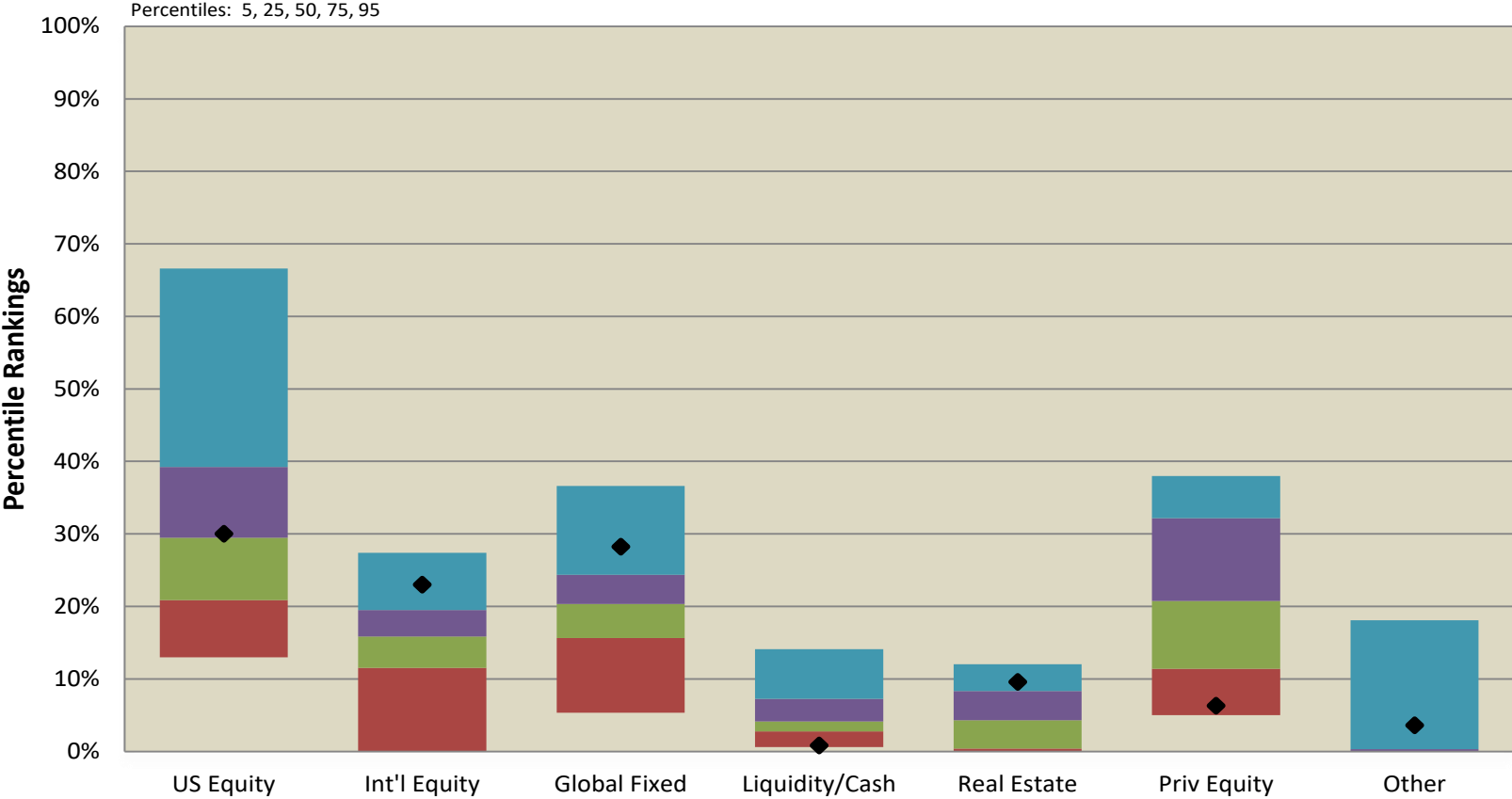


Alpha: 6.47
 Beta: -0.01
 R-Squared: 0

	Risk Value	Risk Rank	Return Value	Return Rank
T Perf - Total Fund	8.33	56	6.43	47
■ Wilshire 5000	17.63	1	10.27	1
▲ Barclays Aggregate	3.23	100	4.30	99
Median	8.65		6.35	

Asset Allocation Ranking – Universe Analysis

Asset Allocation Ranking of Public Funds > \$10 Billion

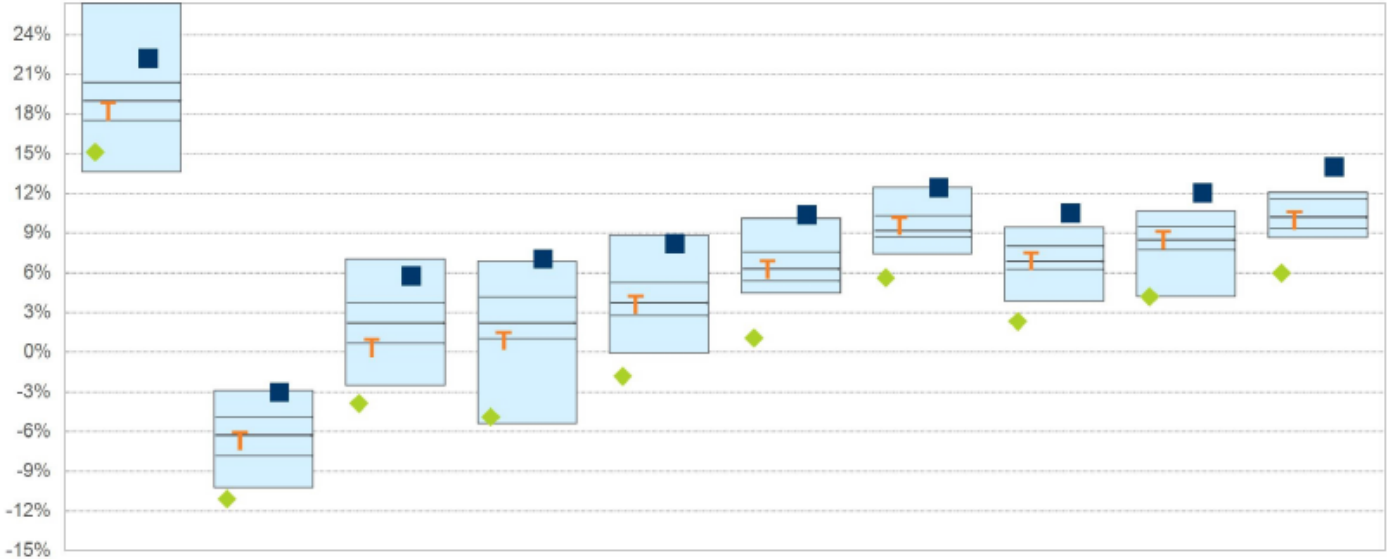


Percentile Rankings	US Equity	Int'l Equity	Global Fixed	Liquidity/Cash	Real Estate	Priv Equity	Other
5th	66.59%	27.39%	36.62%	14.09%	12.03%	37.97%	18.07%
25th	39.21%	19.52%	24.36%	7.25%	8.31%	32.15%	0.33%
50th	29.47%	15.85%	20.34%	4.12%	4.32%	20.73%	0.00%
75th	20.86%	11.51%	15.62%	2.78%	0.38%	11.42%	0.00%
95th	12.99%	0.00%	5.33%	0.60%	0.00%	5.00%	0.00%
CalPERS	30.02% (43)	23.00% (14)	28.24% (8)	0.85% (93)	9.61% (9)	6.31% (85)	1.92% (10)

Growth: Public Equity – Universe Comparison

California Public Employees' Retirement Performance Comparison

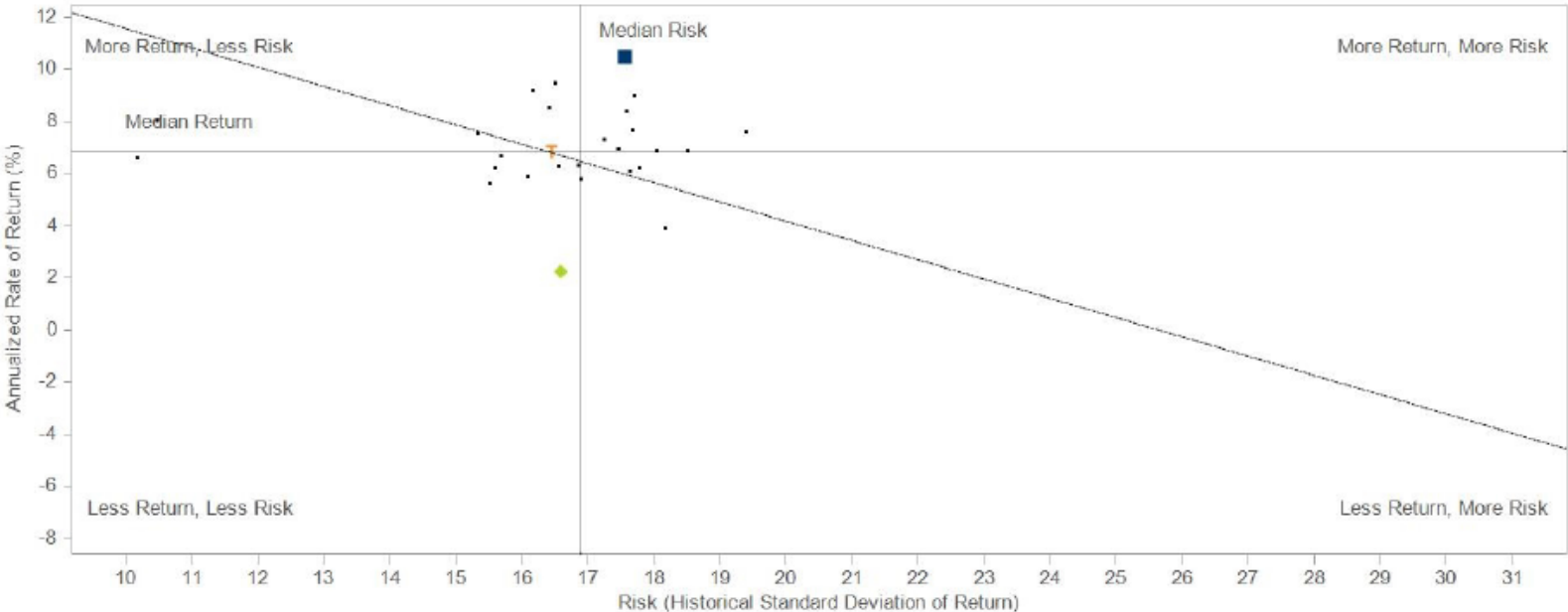
Total Equity Returns of Public Funds > \$10 Billion
Cumulative Periods Ending : June 30, 2020



Percentile Rankings	1 Qtr	2 Qtrs	3 Qtrs	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th	26.40	-2.89	7.04	6.90	8.84	10.12	12.47	9.47	10.66	12.11
25th	20.39	-4.88	3.74	4.15	5.26	7.58	10.31	8.02	9.50	11.60
50th	19.02	-6.26	2.22	2.20	3.76	6.31	9.18	6.87	8.48	10.22
75th	17.55	-7.83	0.70	1.04	2.79	5.43	8.72	6.25	7.77	9.39
95th	13.64	-10.24	-2.46	-5.36	-0.05	4.47	7.47	3.91	4.20	8.66
No. Of Obs	33	33	30	28	27	27	27	27	26	10
T Perf - Global Equity	17.96 (85)	-6.93 (56)	0.12 (78)	0.63 (75)	3.38 (58)	6.04 (54)	9.32 (46)	6.67 (54)	8.26 (54)	9.75 (68)
■ Wilshire 5000	21.94 (11)	-3.30 (5)	5.48 (5)	6.78 (5)	7.93 (5)	10.13 (1)	12.17 (5)	10.27 (1)	11.78 (1)	13.74 (1)
◆ MSCI EAFE (Net)	14.88 (92)	-11.35 (95)	-4.11 (95)	-5.13 (91)	-2.07 (99)	0.81 (99)	5.36 (99)	2.05 (95)	3.83 (95)	5.73 (99)

Growth: Public Equity – Risk and Returns

California Public Employees' Retirement
 Risk vs Total Equity Returns of Public Funds > \$10 Billion
 5 Years Ending June 30, 2020



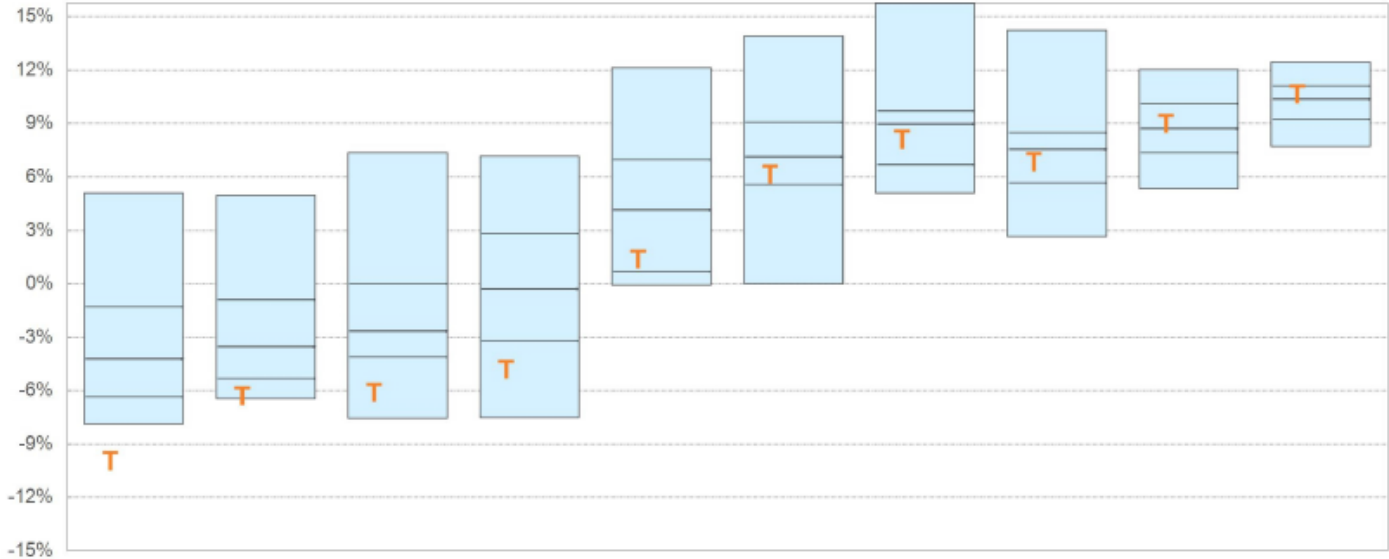
Alpha: 18.97
 Beta: -0.74
 R-Squared: 0.55

	Risk Value	Risk Rank	Return Value	Return Rank
T Perf - Global Equity	16.52	62	6.67	54
■ Wilshire 5000	17.63	35	10.27	1
◆ MSCI EAFE (Net)	16.66	58	2.05	95
Median	16.89		6.87	

Growth: Private Equity – Universe Comparison

California Public Employees' Retirement Performance Comparison

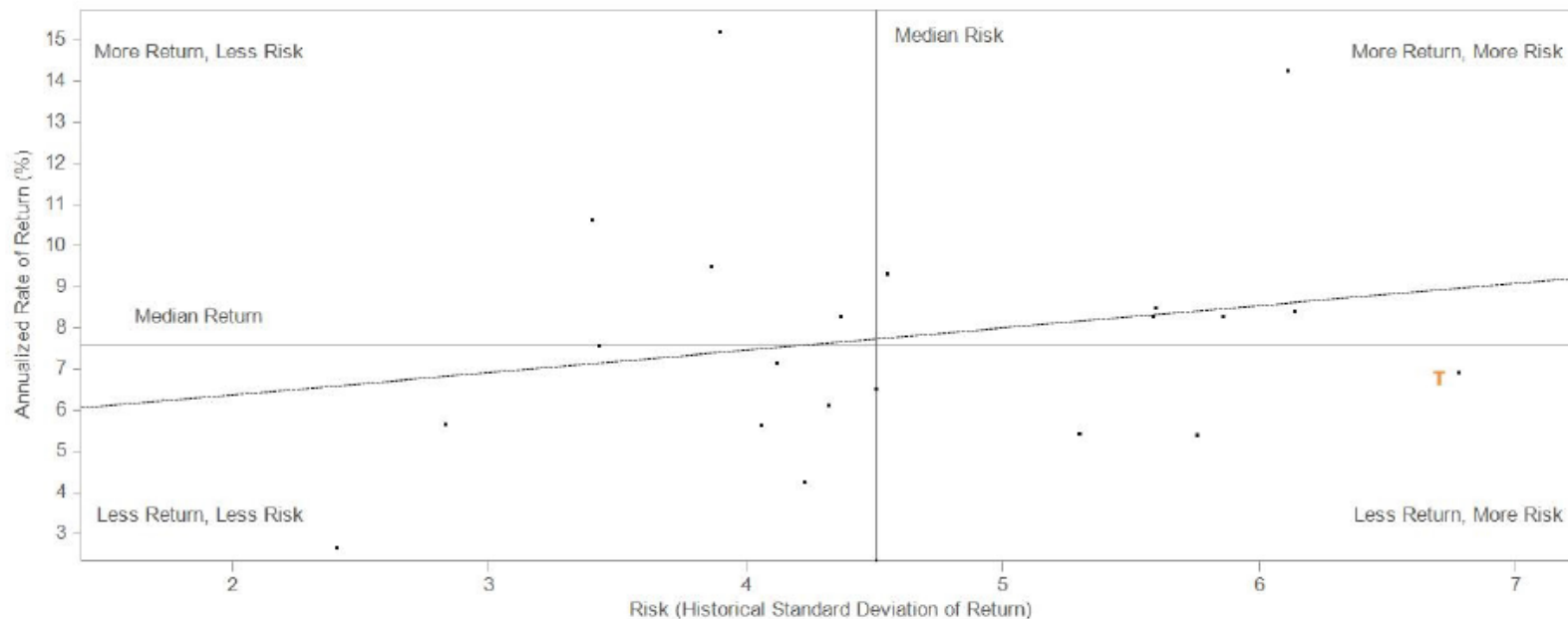
Total Private Equity Returns of Public Funds > \$10 Billion
Cumulative Periods Ending : June 30, 2020



Percentile Rankings	1 Qtr	2 Qtrs	3 Qtrs	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th	5.09	4.96	7.37	7.17	12.13	13.91	15.77	14.24	12.04	12.46
25th	-1.29	-0.90	0.00	2.81	6.97	9.09	9.72	8.49	10.09	11.13
50th	-4.21	-3.54	-2.66	-0.29	4.13	7.12	8.99	7.57	8.71	10.37
75th	-6.34	-5.32	-4.11	-3.20	0.66	5.57	6.71	5.67	7.35	9.26
95th	-7.89	-6.47	-7.56	-7.52	-0.06	0.00	5.10	2.66	5.35	7.72
No. Of Obs	30	30	27	25	24	22	22	22	20	18
T Perf - Private Equity	-10.14 (100)	-6.49 (95)	-6.30 (91)	-5.00 (89)	1.19 (70)	5.95 (60)	7.91 (55)	6.66 (60)	8.80 (45)	10.47 (43)

Growth: Private Equity – Risk and Return

California Public Employees' Retirement
 Risk vs Total Private Equity Returns of Public Funds > \$10 Billion
 5 Years Ending June 30, 2020



Alpha: 5.3
 Beta: 0.54
 R-Squared: 0.05

	Risk Value	Risk Rank	Return Value	Return Rank
T Perf - Private Equity	6.72	5	6.66	60
Median	4.51		7.57	

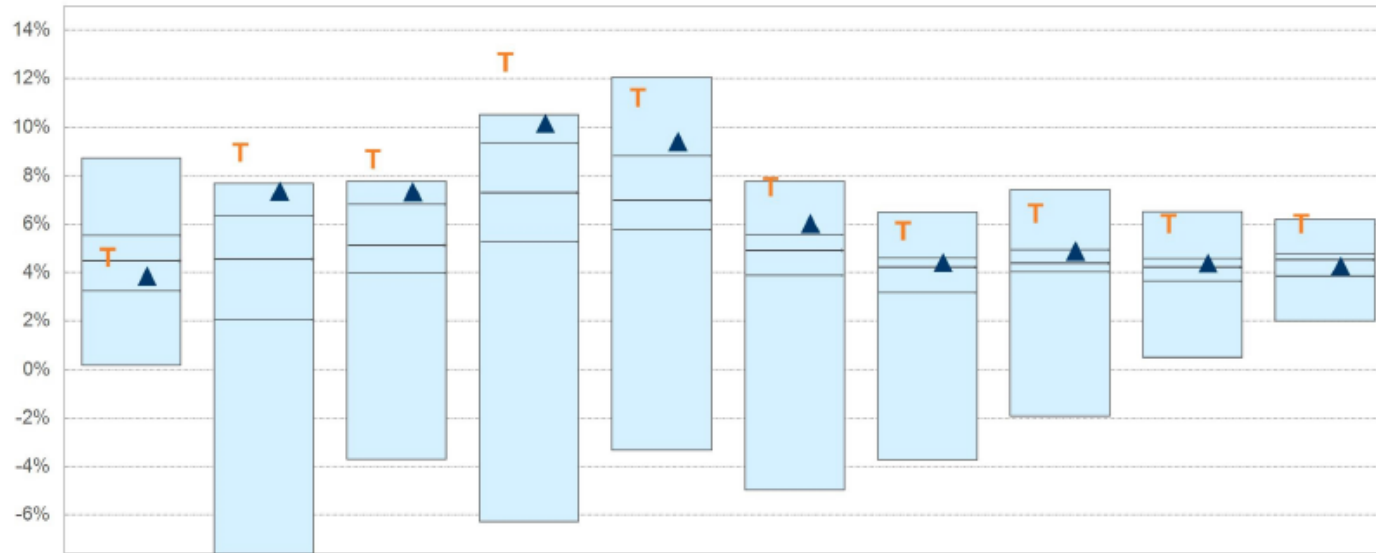


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Income – Universe Comparison

California Public Employees' Retirement Performance Comparison

Total Fixed Income Returns of Public Funds > \$10 Billion
Cumulative Periods Ending : June 30, 2020



Percentile Rankings	1 Qtr	2 Qtrs	3 Qtrs	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th	8.73	7.88	7.77	10.52	12.05	7.78	8.48	7.40	6.50	6.20
25th	5.53	6.33	6.83	9.35	8.81	5.55	4.61	4.98	4.58	4.78
50th	4.50	4.56	5.12	7.29	6.99	4.93	4.22	4.39	4.23	4.55
75th	3.25	2.05	3.99	5.28	5.77	3.88	3.17	4.03	3.67	3.85
95th	0.18	-7.60	-3.71	-6.25	-3.31	-4.98	-3.74	-1.90	0.51	2.00
No. Of Obs	33	33	30	28	27	25	25	24	22	20
T Perf - Income	4.50 (50)	8.82 (1)	8.56 (1)	12.55 (1)	11.09 (5)	7.40 (5)	5.58 (5)	6.32 (5)	5.87 (5)	5.88 (5)
▲ Barclays Govt/Credit	3.71 (65)	7.21 (11)	7.20 (15)	10.02 (9)	9.27 (13)	5.87 (17)	4.28 (45)	4.74 (33)	4.24 (45)	4.13 (65)

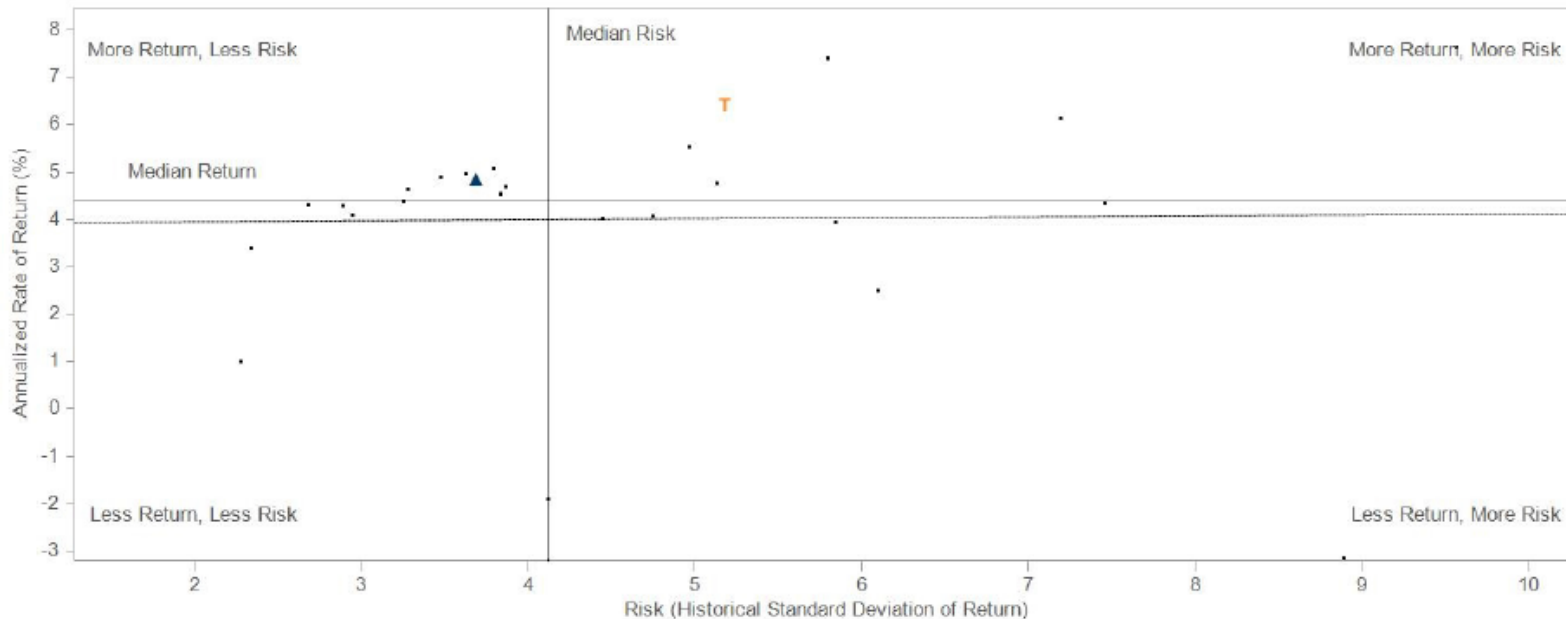


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Income – Risk and Returns

California Public Employees' Retirement Risk vs Total Fixed Income Returns of Public Funds > \$10 Billion

5 Years Ending June 30, 2020



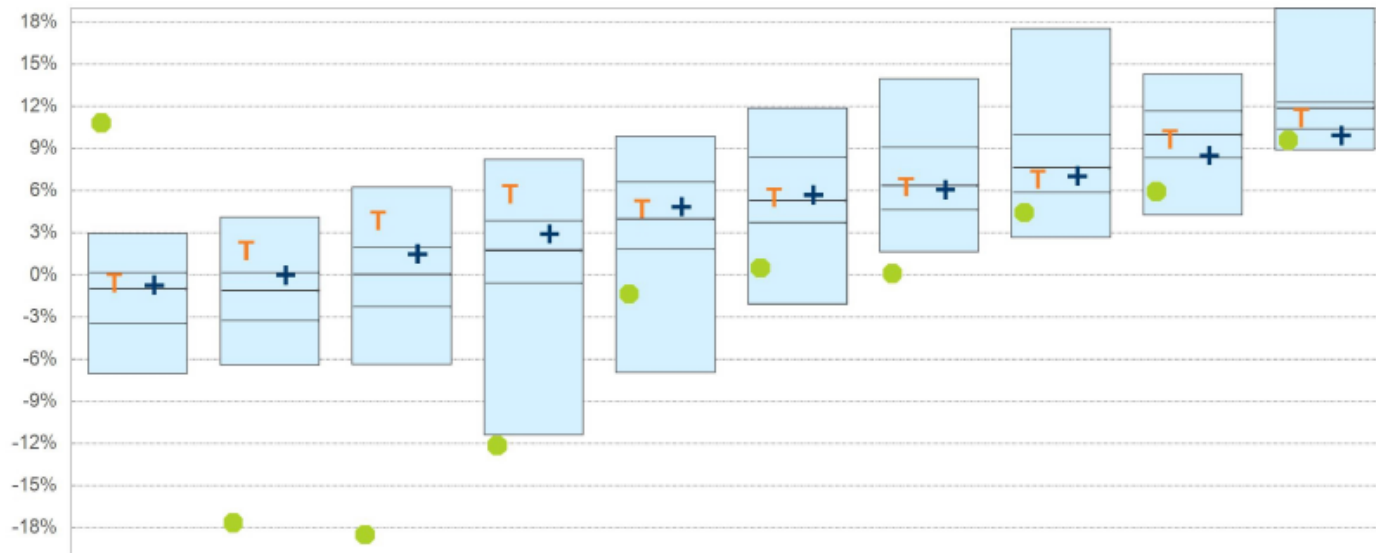
Alpha: 3.91
Beta: 0.02
R-Squared: 0

	Risk Value	Risk Rank	Return Value	Return Rank
T Perf - Income	5.21	29	6.32	5
▲ Barclays Govt/Credit	3.72	62	4.74	33
Median	4.12		4.39	

Real Estate – Universe Comparison

California Public Employees' Retirement Performance Comparison

Total Real Estate Returns of Public Funds > \$10 Billion
Cumulative Periods Ending : June 30, 2020



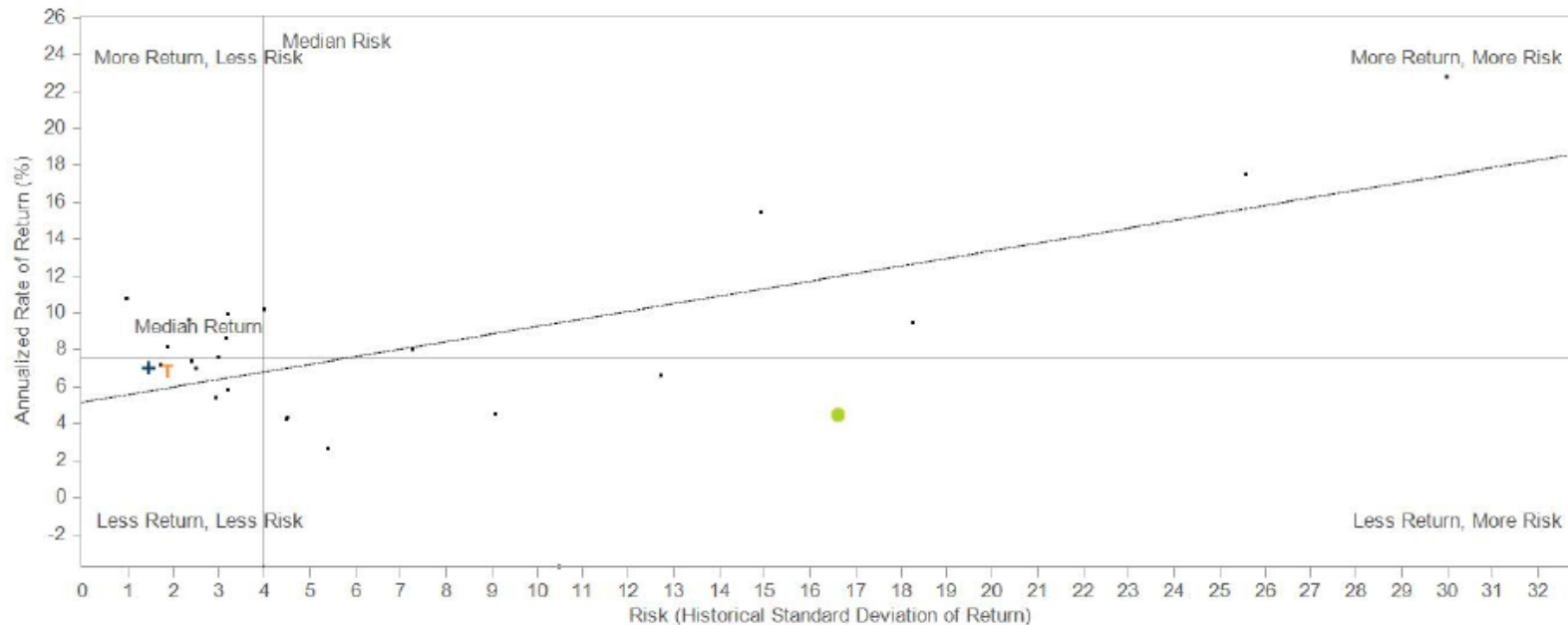
Percentile Rankings	1 Qtr	2 Qtrs	3 Qtrs	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th	2.96	4.10	6.24	8.21	9.83	11.85	13.96	17.51	14.29	19.00
25th	0.14	0.14	1.96	3.83	6.63	8.36	9.10	9.97	11.65	12.27
50th	-1.00	-1.10	0.02	1.74	3.99	5.32	6.37	7.61	9.96	11.87
75th	-3.45	-3.23	-2.23	-0.56	1.82	3.72	4.64	5.84	8.33	10.39
95th	-7.04	-6.39	-6.37	-11.41	-6.94	-2.07	1.66	2.68	4.28	8.94
No. Of Obs	28	28	26	24	23	23	23	23	18	14
T Perf - Real Estate	-0.80 (39)	1.50 (13)	3.64 (9)	5.53 (5)	4.47 (41)	5.28 (50)	6.04 (50)	6.57 (70)	9.42 (56)	10.92 (66)
+ NCREIF Property Indx	-0.99 (46)	-0.29 (35)	1.28 (33)	2.89 (45)	4.58 (41)	5.44 (45)	5.82 (60)	6.77 (65)	8.28 (75)	9.70 (83)
● Wilshire RESI	10.57 (1)	-17.89 (100)	-18.76 (99)	-12.39 (99)	-1.62 (89)	0.22 (89)	-0.15 (99)	4.20 (94)	5.71 (87)	9.34 (83)



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Real Estate – Risk and Returns

California Public Employees' Retirement
 Risk vs Total Real Estate Returns of Public Funds > \$10 Billion
 5 Years Ending June 30, 2020



Alpha: 5.19
 Beta: 0.41
 R-Squared: 0.37

	Risk Value	Risk Rank	Return Value	Return Rank
T Perf - Real Estate	1.99	89	6.57	70
+ NCREIF Property Indx	1.57	99	6.77	65
● Wilshire RESI	16.73	10	4.20	94
Median	3.99		7.61	



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