



CaIPERS
CIO Performance Report

Period Ending December 31, 2017



Table of Contents

Section I: Total Fund & Affiliate Investment Program Summary

Total Fund Summary

Affiliate Investment Program Summary

Section II: Global Equity

Global Equity Summary

Internal Equity

Internal Domestic Equity

Internal International Developed Equity

Internal Emerging Market Equity

External Equity

External Domestic Traditional Equity

External International Developed Traditional Equity

External Emerging Market Equity

Corporate Governance & Emerging Manager Program

Section III: Private Equity

Private Equity Summary & Performance by Strategy

Private Equity Top 20 General Partners by Exposure

Private Equity Performance by General Partner

Section IV: Income

Income Summary

Domestic Income

International Income & External High Yield

Table of Contents *continued*

Section V: Real Assets

- Real Assets Summary
- Real Estate Top 20 Partners by Exposure
- Real Estate Partnerships Performance
- Forestland & Infrastructure Partnerships

Section VI: Inflation

- Inflation Summary

Section VII: Liquidity

- Liquidity Summary

Section VIII: TLPM

- TLPM Summary

Section IX: Other PERF

- Other PERF Summary
 - Absolute Return Strategies
 - Other Plan Level Portfolios

Section X: Affiliate Investment Programs

- Judges II Retirement Fund, Legislators' Retirement System & Long-Term Care Fund
- California Employers' Retirement Benefit Trust (CERBT) Fund
 - CERBT Strategy 1
 - CERBT Strategy 2
 - CERBT Strategy 3

Section XI: Other Programs

- Securities Lending Summary, Short-Term Liquidity & Terminated Agency Pool Summary
- Current Emerging Manager and Transition Manager Performance Summary

Section XII: Asset Class Benchmarks & Definitions

Section I
Total Fund & Affiliate
Program Summary

Period Ending December 31, 2017

Section I: Total Fund and Affiliate Program Summary

Total Fund Summary and Total Fund Plus Terminated Agency Pool (TAP) Summary

Asset Class	December 31, 2017			1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr		20-Yr	
	Ending Market Value (MM)	% of Total Fund Assets	Asset Allocation Target Range %	Net Return	Excess Bps	Net Return	Excess Bps	Net Return	Excess Bps	\$ Value Added (MM) ²	Net Return	Excess Bps	Net Return	Excess Bps	Net Return	Excess Bps	Net Return	Excess Bps	Net Return	Excess Bps
Growth	203,151	58.0	47-61	N/M	N/M	5.61	(26)	11.35	(19)	(383)	23.15	(104)	9.99	(39)	11.95	(46)	6.02	(111)	7.04	(21)
Global Equity	176,440	50.4	39-53	1.64	(1)	5.82	0	11.62	(0)	0	24.03	(35)	9.97	10	11.81	22	5.50	(26)	6.64	1
Private Equity	26,710	7.6	4-12	N/M	N/M	4.23	(185)	9.73	(138)	(365)	18.04	(486)	9.89	(213)	12.61	(274)	9.15	(407)	10.72	112
Income	65,583	18.7	15-25	1.00	3	1.34	6	2.71	12	71	7.22	65	3.65	62	3.28	80	6.01	72	6.46	56
Real Assets	36,829	10.5	8-18	N/M	N/M	2.05	48	4.52	151	546	8.49	209	9.36	28	10.42	55	(0.86)	(731)	7.01	(266)
Real Estate	30,721	8.8	6-16	N/M	N/M	1.40	(24)	3.83	69	209	7.83	113	9.97	13	10.94	34	(1.32)	(856)	6.76	(336)
Infrastructure	4,153	1.2	0-2	N/M	N/M	8.20	645	12.48	925	339	18.23	1,192	12.42	716	14.26	891	13.26	711	-	-
Forestland	1,955	0.6	0-2	N/M	N/M	(0.05)	(65)	0.02	(128)	(25)	0.75	(253)	(3.00)	(823)	(0.15)	(728)	(0.36)	(556)	-	-
Inflation	27,422	7.8	6-12	1.95	1	4.03	9	7.38	39	102	6.33	17	0.08	31	(1.96)	56	0.13	2	-	-
Liquidity	14,660	4.2	(2)-7	0.13	1	0.35	6	0.68	13	19	1.15	30	0.74	9	0.43	(16)	1.07	(14)	2.62	8
TLPM	2,063	0.6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other PERF⁴	278	0.1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Fund	349,986	100.0		1.37	(16)	4.04	6	8.09	35	1,173	15.73	25	7.58	(0)	9.03	19	4.94	(114)	6.68	(28)
<i>CalPERS Policy Index¹</i>				<i>1.53</i>		<i>3.98</i>		<i>7.74</i>			<i>15.48</i>		<i>7.58</i>		<i>8.84</i>		<i>6.08</i>		<i>6.97</i>	

Total Fund Inception Date Net Rate Of Return (07/01/1988)

8.57

Total Fund Plus TAP Summary	December 31, 2017		1-Mo		3-Mo		FYTD		1-Yr		3-Yr		5-Yr		10-Yr		20-Yr	
	Ending Market Value (MM)	% of Total Fund Plus TAP Assets	Net Return	Excess Bps	Net Return	Excess Bps	Net Return	Excess Bps	Net Return	Excess Bps	Net Return	Excess Bps	Net Return	Excess Bps	Net Return	Excess Bps	Net Return	Excess Bps
Total Fund	349,986	99.96	1.37	(16)	4.04	6	8.09	35	15.73	25	7.58	(0)	9.03	19	4.94	(114)	6.68	(28)
Terminated Agency Pool ³	144	0.04	1.23	-	1.84	-	2.68	-	5.02	-	2.61	-	-	-	-	-	-	-
Total Fund Plus TAP	350,130	100.0	1.37		4.04		8.09		15.72		7.58		9.03		4.94		6.68	

¹ See Section XII for components of CalPERS Policy Index. Current Asset Class Policy Benchmark performance is linked to their respective prior Policy Benchmark.

² Value Added is the excess bps converted into a dollar value by multiplying the excess bps by the fiscal year-to-date average market value.

³ The Terminated Agency Pool (TAP) was funded in July 2013 and exists to provide benefit payments to members who are employees of agencies that have terminated their contract with CalPERS.

⁴ "OTHER PERF" includes Absolute Return Strategies and Other Plan Level portfolios.

⁵ The notation "N/M" indicates that the return is not meaningful as Private Asset performance is measured on a quarterly cycle.

Section I: Total Fund and Affiliate Program Summary
Affiliate Investment Programs Summary

	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Fund Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ¹	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
Defined Benefit, Health, And OPEB Plans																	
Judges' Retirement Fund	43	0.3	0.11	0	0.31	3	0.61	6	0	1.03	18	0.58	17	0.37	10	0.53	14
Judges' Retirement System II Fund	1,484	9.2	1.47	2	4.05	5	7.75	9	1	15.53	35	6.72	25	7.95	26	5.73	5
Legislators' Retirement System Fund	118	0.7	1.29	3	2.87	6	5.31	9	0	10.18	35	4.72	24	5.13	35	5.39	26
Health Care Fund	450	2.8	0.45	(1)	0.38	(1)	1.22	(2)	(0)	3.58	4	2.28	4	2.46	36	4.24	23
Long-Term Care Fund	4,579	28.3	1.34	(1)	2.77	1	5.00	3	1	9.12	22	3.77	10	3.69	22	3.93	12
CERBT Strategy 1 Fund	6,512	40.3	1.53	3	4.35	9	8.29	16	10	16.66	51	7.08	46	8.08	44	5.34	30
CERBT Strategy 2 Fund	1,014	6.3	1.41	3	3.59	9	6.75	15	1	13.45	51	5.91	42	6.50	41	-	-
CERBT Strategy 3 Fund	343	2.1	1.31	4	2.88	9	5.28	15	0	10.11	48	4.65	37	4.94	43	-	-
SUPPLEMENTAL INCOME PLANS (457/SCP)																	
CalPERS Target Income Fund	105	0.6	0.60	(2)	1.43	2	3.07	4	0	6.83	16	3.37	14	3.95	19	-	-
CalPERS Target 2015 Fund	92	0.6	0.60	(2)	1.43	2	3.07	4	0	6.83	16	3.36	13	4.71	16	-	-
CalPERS Target 2020 Fund	150	0.9	0.65	(2)	1.65	2	3.62	4	0	8.01	16	3.76	14	5.47	17	-	-
CalPERS Target 2025 Fund	126	0.8	0.86	(4)	2.48	3	5.21	6	0	11.20	18	4.97	16	6.69	21	-	-
CalPERS Target 2030 Fund	118	0.7	1.03	(5)	3.08	3	6.44	6	0	13.55	18	5.82	17	7.71	21	-	-
CalPERS Target 2035 Fund	69	0.4	1.21	(7)	3.74	2	7.71	5	0	16.14	18	6.75	18	8.67	21	-	-
CalPERS Target 2040 Fund	60	0.4	1.37	(9)	4.36	2	8.99	5	0	18.77	16	7.65	19	9.50	24	-	-
CalPERS Target 2045 Fund	28	0.2	1.55	(10)	5.02	1	10.15	3	0	20.95	17	8.46	20	10.02	25	-	-
CalPERS Target 2050 Fund	13	0.1	1.53	(13)	4.99	(2)	10.16	4	0	20.94	16	8.45	19	10.00	23	-	-
CalPERS Target 2055 Fund	7	0.0	1.56	(10)	5.01	0	10.15	3	0	20.98	20	8.48	23	-	-	-	-
SSgA STIF	105	0.7	0.11	0	0.31	3	0.60	5	0	1.03	17	0.58	16	0.35	9	-	-
CalPERS SIP US Short Term Bond Core	36	0.2	0.02	(1)	(0.24)	(3)	0.07	(6)	(0)	0.73	(12)	0.78	(14)	-	-	-	-
CalPERS SIP US Bond Core	59	0.4	0.46	(0)	0.37	(2)	1.22	(2)	(0)	3.57	2	2.27	3	-	-	-	-
CalPERS SIP Real Asset Core	6	0.0	2.24	(4)	3.77	(4)	7.84	(9)	(0)	8.57	(12)	2.11	(11)	-	-	-	-
CalPERS SIP Russell All Cap Core	570	3.5	1.00	(0)	6.34	0	11.19	(1)	(0)	21.11	(2)	11.16	4	-	-	-	-
CalPERS SIP Global All Cap EX-US Core	76	0.5	2.13	(23)	5.24	2	11.90	8	0	28.12	31	8.79	41	-	-	-	-
Total Affiliate Investment Programs	16,161	100.0															

¹ Value Added is the excess bps converted into a dollar value by multiplying the excess bps by the fiscal year-to-date average market value.

Section II
Global Equity

Period Ending December 31, 2017

Section II: Global Equity

Global Equity Summary

GLOBAL EQUITY SUMMARY	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ²	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
Internal Domestic Equity	78,736	44.6	1.08	3	6.45	7	11.70	16	120	21.41	(46)	11.06	12	15.72	20	8.76	29
Internal Int'l Developed Equity	51,416	29.1	1.94	(5)	4.87	(9)	11.13	2	9	26.80	15	9.00	25	8.66	38	2.80	14
Internal Emerging Market Equity	11,741	6.7	4.05	23	6.94	12	15.14	17	17	32.39	(29)	8.28	17	4.48	(26)	2.47	9
External Domestic Traditional Equity	6,605	3.7	1.57	30	6.65	14	11.03	(25)	(16)	17.49	(184)	9.56	(118)	15.47	1	7.76	(55)
External Int'l Developed Traditional Equity	21,602	12.2	1.32	(56)	4.91	(52)	10.99	(50)	(105)	26.79	116	9.60	20	9.24	114	3.42	78
External Emerging Market Equity	2,625	1.5	4.53	62	6.29	(39)	13.62	(146)	(37)	27.91	(453)	6.70	(155)	3.45	(98)	2.00	6
Corporate Governance	147	0.1	14.77	1,318	29.53	2,741	55.78	4,588	53	102.18	7,653	33.41	2,662	26.49	1,515	11.48	678
Emerging Manager Program	3,558	2.0	1.22	(23)	4.59	(86)	10.95	(31)	(10)	22.57	(40)	-	-	-	-	-	-
Other ³	10	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Global Equity¹	176,440	100.0	1.64	(1)	5.82	0	11.62	(0)	0	24.03	(35)	9.97	10	11.81	22	5.50	(26)

¹Absolute Return Strategies performance history is included in Global Equity prior to July 1, 2011. Ending market value and returns includes Public Equity Transition, Venture, and Internal Holding accounts.

²Value Added is the Excess BPS converted into a dollar value by multiplying the excess bps by the fiscal year-to-date average market value.

³Includes Global Equity Transition & Venture portfolios.

Section II: Global Equity

Internal Equity

	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ¹	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
Internal Domestic Equity																	
Domestic Fundamental	6,133	7.8	1.80	79	6.69	40	11.56	5	3	14.92	(679)	9.66	(128)	15.09	(45)	8.45	(3)
Int Dom FTSE 3000 PERF	57,631	73.2	1.05	5	6.33	4	11.56	4	27	21.70	(2)	11.01	8	15.63	10	8.65	17
Int Microcap PERF	345	0.4	0.74	(221)	4.37	(7)	10.68	(51)	(2)	14.63	(78)	7.61	104	14.13	294	8.64	395
Int Momentum US TMI 3000	1,755	2.2	0.11	(90)	6.23	(6)	12.80	129	20	23.52	181	10.88	(5)	-	-	-	-
Int VolAdj US TMI 3000	3,902	5.0	0.80	(21)	6.66	37	11.69	18	6	21.85	14	10.86	(8)	-	-	-	-
Synthetic Enhanced Equity	7,563	9.6	1.12	(21)	7.05	(9)	12.42	64	53	24.42	120	12.33	115	16.81	129	-	-
Int Quality US TMI 3000	1,406	1.8	1.15	14	6.99	69	12.54	103	13	21.47	(24)	-	-	-	-	-	-
Total Internal Domestic Equity	78,736	100.0	1.08	3	6.45	7	11.70	16	120	21.41	(46)	11.06	12	15.72	20	8.76	29

	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ¹	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
Internal Int'l Developed Equity																	
CalPERS Dev ex US DBI	1,828	3.6	2.07	22	5.55	72	10.44	(43)	(7)	26.22	(9)	7.77	(69)	8.71	66	-	-
Fundamental Developed Int'l	4,239	8.2	2.05	20	4.38	(46)	11.24	37	15	25.32	(99)	9.77	131	10.07	202	2.94	54
Int Developed Small Cap Index PERF	4,953	9.6	3.19	0	5.71	9	13.05	23	11	30.23	61	11.45	43	10.13	42	-	-
Int GLBL Env Strategy HSBCCI	832	1.6	0.11	(153)	3.65	(217)	8.38	(324)	(26)	24.44	5	9.16	(71)	11.47	(12)	-	-
Int Int'l EQ PERF	32,778	63.7	1.80	(5)	4.78	(6)	10.88	1	3	26.46	14	8.57	12	8.17	11	2.47	8
Int Developed Int'l Volatility ADJ	2,712	5.3	1.55	(44)	4.25	(67)	10.40	(68)	(16)	26.47	(20)	8.64	(9)	-	-	-	-
Int Momentum Dev ex US All Cap	1,244	2.4	1.84	(16)	5.51	60	13.43	235	26	31.15	448	-	-	-	-	-	-
Int Quality Developed ex US	956	1.9	1.72	(27)	4.03	(89)	9.85	(123)	-	27.06	39	-	-	-	-	-	-
Int Global Maximum Diversification	1,152	2.2	1.90	25	-	-	-	-	-	-	-	-	-	-	-	-	-
GE Completion Fund (Physical)	724	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Internal Int'l Developed Equity	51,416	100.0	1.94	(5)	4.87	(9)	11.13	2	9	26.80	15	9.00	25	8.66	38	2.80	14

	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-YR	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ¹	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
Internal Emerging Market Equity																	
CalPERS Emerging Markets DBI	480	4.1	4.09	17	4.93	(180)	11.89	(322)	(14)	30.81	(203)	5.90	(223)	2.36	(227)	-	-
EM Small Cap PERF	1,053	9.0	3.13	15	7.92	25	14.94	78	7	34.17	166	9.58	129	6.49	91	-	-
Fundamental Emerging Markets	1,088	9.3	5.52	160	6.82	10	15.66	54	5	27.41	(543)	9.60	147	4.58	(5)	2.87	52
Int Emerging Market PERF	7,820	66.6	3.93	1	6.77	4	15.22	10	7	33.05	21	8.41	28	4.85	22	-	-
Structured Emerging Markets	0	0.0	(5.10)	(901)	0.18	(654)	3.81	(1,131)	(0)	13.00	(1,984)	1.73	(639)	0.47	(415)	0.72	(164)
Int Emerging Market Volatility Adj	723	6.2	4.18	39	8.42	164	13.88	(107)	(6)	33.48	91	8.01	(22)	-	-	-	-
Emerging Markets Quality Fund	256	2.2	5.02	123	7.98	120	17.35	240	-	37.04	447	-	-	-	-	-	-
EM Momentum Strategy	321	2.7	3.80	1	7.22	44	19.36	441	12	39.70	713	-	-	-	-	-	-
Total Internal Emerging Market Equity	11,741	100.0	4.05	23	6.94	12	15.14	17	17	32.39	(29)	8.28	17	4.48	(26)	2.47	9

¹ Value Added is the excess bps converted into a dollar value by multiplying the excess bps by the fiscal year-to-date average market value.

Section II: Global Equity

External Equity

	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ¹	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
External Domestic Traditional Equity																	
Boston Company	1,198	18.1	2.59	89	7.74	143	12.04	161	18	15.85	64	10.67	83	15.99	117	8.42	99
First Quadrant Long/Short	2,167	32.8	0.38	(70)	4.81	(173)	9.02	(270)	(56)	15.02	(730)	9.32	(177)	15.73	3	-	-
JP Morgan Long/Short	2,216	33.5	1.51	44	7.25	56	11.96	26	5	22.79	88	10.90	(41)	16.96	118	-	-
Pzena Investment Management	1,025	15.5	3.13	143	8.09	178	12.28	185	17	17.12	192	11.25	142	17.23	241	8.62	119
Total External Domestic Traditional Equity	6,605	100.0	1.57	30	6.65	14	11.03	(25)	(16)	17.49	(184)	9.56	(118)	15.47	1	7.76	(55)

	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ¹	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
External Int'l Developed Traditional Equity																	
Arrowstreet Capital	4,531	21.0	2.01	(26)	4.92	(30)	11.50	(14)	(6)	29.20	172	9.22	72	9.97	255	6.37	397
Baillie Gifford	3,149	14.6	1.59	(69)	5.75	53	12.68	104	31	34.13	665	11.89	340	9.96	255	5.16	276
Pyramis Global	1,232	5.7	1.21	(69)	3.45	(142)	8.96	(174)	(21)	24.32	(183)	6.84	(163)	7.26	(80)	-	-
Hermes	833	3.9	1.98	27	0.86	(165)	5.77	(359)	(29)	23.60	(273)	-	-	-	-	-	-
Allianz - Global	2,605	12.1	0.64	(101)	5.61	(21)	12.99	138	34	28.10	372	-	-	-	-	-	-
Epoch Global	2,592	12.0	0.32	(132)	3.40	(242)	8.15	(347)	(86)	18.26	(612)	-	-	-	-	-	-
Wellington	2,756	12.8	1.06	(59)	4.33	(150)	9.55	(207)	(54)	25.21	82	-	-	-	-	-	-
Arrowstreet Global	3,905	18.1	1.53	(12)	6.50	68	13.31	169	59	28.50	412	-	-	-	-	-	-
Total External Int'l Developed Traditional Equity	21,602	100.0	1.32	(56)	4.91	(52)	10.99	(50)	(105)	26.79	116	9.60	20	9.24	114	3.42	78

	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ¹	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
External Emerging Market Equity																	
Genesis Asset Managers	1	0.1	1.81	(210)	(0.11)	(678)	(19.29)	(3,437)	(19)	(7.32)	(3,976)	(4.32)	(1,257)	(3.03)	(746)	1.11	(83)
Lazard Emerging Markets	2,068	78.8	4.99	108	6.55	(12)	14.67	(41)	(8)	26.65	(579)	7.46	(79)	3.57	(86)	3.31	137
Cartica Capital Partners, LP	555	21.2	2.86	(123)	5.34	(166)	10.23	(525)	(28)	36.67	414	10.49	203	5.44	88	-	-
Total External Emerging Market Equity	2,625	100.0	4.53	62	6.29	(39)	13.62	(146)	(37)	27.91	(453)	6.70	(155)	3.45	(98)	2.00	6

¹ Value Added is the excess bps converted into a dollar value by multiplying the excess bps by the fiscal year-to-date average market value.

Section II: Global Equity
Corporate Governance and Emerging Manager Program

	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ¹	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
Corporate Governance																	
Knight Vinke Institutional Partners	147	99.6	14.67	1,307	25.45	2,333	47.66	3,938	45	75.39	5,259	64.35	6,039	31.82	2,734	8.83	857
Taiyo Pearl Fund (Public)	0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blum Strategic Partners II	0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Corporate Governance	147	100.0	14.77	1,318	29.53	2,741	55.78	4,588	53	102.18	7,653	33.41	2,662	26.49	1,515	11.48	678

	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ¹	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
Emerging Manager Program																	
Progress Investment II	631	17.7	1.81	73	5.75	56	11.94	150	9	22.20	199	-	-	-	-	-	-
Legato Emerging Manager	925	26.0	2.02	(36)	4.47	(210)	10.63	(225)	(20)	24.25	(371)	-	-	-	-	-	-
Strategic Investments II	653	18.3	0.38	5	4.55	(50)	8.75	(165)	(10)	17.52	(187)	-	-	-	-	-	-
LEIA GEM Investments	677	19.0	0.98	(21)	4.99	67	12.27	168	11	21.53	240	-	-	-	-	-	-
FIS CalBear Fund	672	18.9	0.63	(203)	3.32	(267)	11.34	(12)	(1)	26.96	68	-	-	-	-	-	-
Total Emerging Manager Program	3,558	100.0	1.22	(23)	4.59	(86)	10.95	(31)	(10)	22.57	(40)	-	-	-	-	-	-

¹ Value Added is the excess bps converted into a dollar value by multiplying the excess bps by the fiscal year-to-date average market value.

Section III
Private Equity

Period Ending December 31, 2017

Section III: Private Equity

Private Equity Summary and Performance by Strategy

	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return ⁴	Excess bps ⁴	Net Return ⁴	Excess bps ⁴	Net Return	Excess bps	\$ Value Added (MM) ²	Net Return ⁴	Excess bps ⁴	Net Return ⁴	Excess bps ⁴	Net Return ⁴	Excess bps ⁴	Net Return ⁴	Excess bps ⁴
Total Private Equity Summary¹																	
PE Partnership Investments	26,508	99.2	N/M	N/M	4.21	(187)	9.69	(142)	(375)	18.03	(487)	9.96	(206)	12.65	(270)	9.26	(397)
Private Equity Distribution Stock ³	203	0.8	N/M	N/M	8.69	261	22.76	1,165	8	53.82	3,092	(18.80)	(3,081)	(13.23)	(2,858)	(9.33)	(2,255)
Total Private Equity	26,710	100.0	N/M	N/M	4.23	(185)	9.73	(138)	(365)	18.04	(486)	9.89	(213)	12.61	(274)	9.15	(407)

Private Equity Strategy ¹	December 31, 2017		3-Months	FYTD	1-Yr	3-Yr	5-Yr	10-Yr
	Ending Market Value (MM)	% of Total Assets	Net Return	Net Return	Net Return	Net Return	Net Return	Net Return
Buyout	16,448	61.6	4.08	11.69	20.63	11.54	13.70	9.73
Growth Expansion	4,400	16.5	7.37	11.67	27.55	14.52	15.47	9.02
Credit Related	2,848	10.7	2.18	3.29	7.43	0.64	7.40	9.28
Venture Capital	904	3.4	2.13	6.57	(0.92)	(1.15)	4.58	2.95
Opportunistic	1,820	6.8	3.19	2.04	7.87	13.83	12.85	6.06
Other ⁵	290	1.1	-	-	-	-	-	-
Total Private Equity Strategy	26,710	100.0	4.23	9.73	18.04	9.89	12.61	9.15

¹ Private Equity time weighted rate of returns are computed by State Street Bank and are based on General Partners' most recent received financial statements and any cash adjustments received prior to two business days before the end of the quarter.

² Value Added is the excess bps converted into a dollar value by multiplying the excess bps by the fiscal year-to-date average market value.

³ Private Equity Stock Distribution Portfolio is highly concentrated and significant tracking errors are expected due to its use of the Global Equity based Private Equity Policy Benchmark.

⁴ The notation "N/M" indicates that the return is not meaningful as Private Asset performance is measured on a quarterly cycle.

⁵ Other includes Cash, Unclassified & Distributed Stock

Section III: Private Equity

Private Equity Top 20 General Partner by Exposure

	December 31, 2017	
	Ending Market Value (MM)	% of Total Private Equity
Top 20 Private Equity Partners Exposure¹		
Blackstone Group	2,590	9.7%
Apollo Management	2,112	7.9%
Carlyle Group	1,519	5.7%
CVC Capital Partners	1,238	4.6%
CERBERUS	1,203	4.5%
Advent International	1,177	4.4%
TPG Capital	928	3.5%
KKR and Co.	862	3.2%
Hellman and Friedman Capital Partners	842	3.2%
Silver Lake	744	2.8%
Bridgepoint Capital	713	2.7%
57 STARS	635	2.4%
Yucaipa	621	2.3%
Asia Alternative Assets	585	2.2%
Permira	578	2.2%
GCM Grosvenor	577	2.2%
Insight Capital	564	2.1%
Riverstone LLC	532	2.0%
Ares Management LLC	454	1.7%
California Emerging Ventures	440	1.6%
Top 20 Private Equity Partners Exposure	18,914	70.8%
Exposure From All Other Partners	7,796	29.2%
Total Private Equity Partners Exposure	26,710	100%

¹ Private Equity Partners exposure data is based on General Partners' most recent received financial statements and any cash adjustments received prior to two business days before the end of the quarter.

Section III: Private Equity

Private Equity Performance by General Partner

Private Equity General Partners ¹	December 31, 2017		3-Mo	FYTD	1-Yr	3-Yr	5-Yr	10-Yr
	Ending Market Value (MM)	% of Total Assets	Net Return	Net Return	Net Return	Net Return	Net Return	Net Return
57 STARS	635	2.4	6.87	10.44	12.07	6.43	7.79	6.62
Aberdare	49	0.2	(4.43)	12.47	29.61	4.42	13.49	3.36
Advent International	1,177	4.4	3.25	10.59	19.72	13.56	16.00	15.67
Affinity Equity Partners	42	0.2	1.39	1.39	9.51	(7.32)	(1.50)	(0.29)
Aisling Capital	73	0.3	5.70	24.70	51.24	15.92	22.03	7.93
Apollo Management	2,112	7.9	8.55	14.22	41.47	10.89	16.86	14.16
Arclight	21	0.1	1.88	5.69	16.08	31.76	32.12	19.31
Ares Management LLC	454	1.7	(2.23)	29.37	37.61	23.27	20.41	16.72
Asia Alternative Assets	585	2.2	2.20	1.56	0.14	23.88	25.73	17.90
Avenue Capital Partners	22	0.1	2.91	7.21	(3.56)	(10.72)	(2.21)	1.01
Baring	51	0.2	10.64	9.79	45.15	0.28	1.15	(10.98)
Birch Hill Equity Partners	135	0.5	10.39	11.58	16.92	17.05	15.74	11.30
Blackstone Group	2,590	9.7	4.80	7.64	16.20	9.17	14.38	9.19
Bridgepoint Capital	713	2.7	2.75	20.97	30.55	16.85	14.18	6.88
CDH Fund	180	0.7	8.05	21.36	21.66	12.90		
CERBERUS	1,203	4.5	0.63	(4.00)	0.81	14.57	17.09	
CLEARLAKE CAPITAL	118	0.4	4.04	16.60	48.67	33.42	25.88	
CVC Capital Partners	1,238	4.6	12.05	31.68	40.85	28.78	20.40	12.05
California Emerging Ventures	440	1.6	1.67	3.62	0.35	5.96	8.79	6.43
Capital Dynamics	172	0.6	(2.21)	(5.17)	(6.47)	(8.48)	(10.24)	(8.73)
Carlyle Group	1,519	5.7	1.89	8.92	15.97	12.07	13.71	12.68
Castlelake Partners	18	0.1	(5.36)	(20.95)	(20.86)	(13.18)	(2.85)	0.69
Centerbridge Partners	75	0.3	1.52	3.63	8.74			

¹ Private Equity time weighted rate of returns are computed by State Street Bank and are based on General Partners' most recent received financial statements and any cash adjustments received prior to two business days before the end of the quarter.

The notation "N/M" indicates that the return is not meaningful

Section III: Private Equity

Private Equity Performance by General Partner

Private Equity General Partners ¹	December 31, 2017		3-Mo	FYTD	1-Yr	3-Yr	5-Yr	10-Yr
	Ending Market Value (MM)	% of Total Assets	Net Return	Net Return	Net Return	Net Return	Net Return	Net Return
Clarus Ventures	77	0.3	1.83	3.44	11.23	13.63	23.95	11.83
Clearwater Capital	46	0.2	(3.40)	(6.86)	(5.17)	(8.55)	(2.69)	1.17
Coller Capital	51	0.2	(1.06)	(13.98)	(9.41)	(2.81)	4.21	4.44
Craton Equity Partners	5	0.0	(10.70)	(11.92)	(18.88)	(23.01)	(26.00)	(20.06)
EM Alternatives	62	0.2	12.78	15.07	15.07	6.73	10.12	1.28
Essex Woodlands Health Ventures	91	0.3	(11.25)	(1.96)	1.55	(4.82)	2.51	
First Reserve	266	1.0	(0.51)	(8.59)	7.20	(31.42)	(19.20)	(7.90)
Foundation Radiology	15	0.1	0.00	0.00	0.00	(0.00)		
Francisco Partners	109	0.4	7.05	16.39	46.48	15.77	16.50	13.50
GCM Grosvenor	577	2.2	2.61	6.93	8.56	6.74	10.82	6.07
GSO Capital Partners	159	0.6	3.82	3.08	7.29			
Gael Partners, LLC	9	0.0	2.51	3.51	8.26	7.04	1.88	10.49
Green Equity Investors	242	0.9	7.81	10.53	26.87	16.08	17.67	24.47
Hamilton Lane	153	0.6	3.70	3.70	10.60	9.90	14.95	8.22
HarbourVest Partners, LLC	16	0.1	4.04	0.20	(8.81)	(5.70)	0.37	(0.30)
Hellman and Friedman Capital Partners	842	3.2	7.92	27.28	52.03	29.69	33.92	21.58
Inner City Venture	7	0.0	(0.01)	3.13	14.03	41.01	30.51	19.78
Insight Capital	564	2.1	10.71	20.00	36.89	15.74	21.93	23.27
Jasper Ridge Partners	244	0.9	3.06	20.71	20.71	13.89	19.15	7.79
KKR and Co.	862	3.2	2.68	8.78	11.97	12.28	12.59	6.71

¹ Private Equity time weighted rate of returns are computed by State Street Bank and are based on General Partners' most recent received financial statements and any cash adjustments received prior to two business days before the end of the quarter. The notation "N/M" indicates that the return is not meaningful

Section III: Private Equity

Private Equity Performance by General Partner

Private Equity General Partners ¹	December 31, 2017		3-Mo	FYTD	1-Yr	3-Yr	5-Yr	10-Yr
	Ending Market Value (MM)	% of Total Assets	Net Return	Net Return	Net Return	Net Return	Net Return	Net Return
KMCP	128	0.5	2.89	2.44	48.91	7.43	13.06	10.69
KPS	53	0.2	(4.81)	3.54	1.03	14.34	23.35	23.44
Khosla Ventures	90	0.3	16.36	54.31	(3.21)	(7.35)	(0.64)	
Kline Hawkes California	21	0.1	0.24	(0.31)	5.02	1.20	(6.55)	(6.45)
Lime Rock	149	0.6	5.96	3.53	20.03	8.99	7.96	4.75
Lindsay Goldberg	98	0.4	57.27	63.84	64.52			
Lion Capital	32	0.1	9.07	19.57	107.26	5.70	(0.64)	(1.71)
MHR	192	0.7	8.76	13.96	16.99	(2.80)	5.12	5.12
Madison Dearborn Partners	24	0.1	(2.84)	0.39	1.61	5.67	10.69	6.00
New Mountain Capital LLC	271	1.0	0.68	16.91	25.44	29.50	21.41	14.88
Oak Hill Capital Partners	199	0.7	1.22	5.76	15.46	13.99	16.49	9.12
Oaktree Capital Management	100	0.4	4.11	8.89	19.16	1.33	4.94	
Onex	347	1.3	1.18	8.89	9.46	7.13		
PAG	136	0.5	0.36	1.46	19.97	17.47	19.21	
Palladium	121	0.5	0.37	4.64	19.12	(2.90)	11.79	13.86
Patria Brazilian	28	0.1	4.34	9.34	54.84			
Permira	578	2.2	4.17	16.29	18.52	14.55	12.03	3.55
Polish Enterprise	18	0.1	(3.68)	49.12	205.32	57.06	43.20	18.39
Providence Equity Partners	153	0.6	0.46	5.40	8.59	8.79	9.19	5.98
RIVERSTONE GLOBAL ENERGY	332	1.2	8.30	2.91	87.09			
Richardson Financial Group	7	0.0	5.84	7.74	8.94	(2.43)	(2.15)	2.05

¹ Private Equity time weighted rate of returns are computed by State Street Bank and are based on General Partners' most recent received financial statements and any cash adjustments received prior to two business days before the end of the quarter.

Section III: Private Equity

Private Equity Performance by General Partner

	December 31, 2017		3-Mo	FYTD	1-Yr	3-Yr	5-Yr	10-Yr
	Ending Market Value (MM)	% of Total Assets	Net Return	Net Return	Net Return	Net Return	Net Return	Net Return
Private Equity General Partners¹								
Riverstone LLC	532	2.0	0.77	(3.79)	9.37	(10.27)	(1.69)	
Riverwood Capital LLC	57	0.2	5.47	2.36	(5.84)	(2.39)	19.71	
SAIF Partners	305	1.1	2.66	2.40	9.48	16.11	10.57	10.54
Sageview Capital LLC	88	0.3	17.12	11.55	29.87	10.02	7.61	
Sankaty Advisors	373	1.4	2.04	5.49	6.63	5.10		
Silver Lake	744	2.8	5.62	10.38	22.58	20.80	19.39	12.25
Siris Capital	46	0.2	1.26	3.51	6.00			
Stonepoint Capital	290	1.1	6.01	14.64	22.27	11.07		
THL Equity Advisors	128	0.5	(4.04)	0.96	3.05	8.57	14.10	6.98
TPG Capital	928	3.5	1.45	3.49	6.18	7.83	12.06	7.58
Tailwind	234	0.9	1.96	6.65	21.32	14.16	18.68	12.53
The Jordon Company	83	0.3	1.75	2.62	6.86	5.59	10.44	
TowerBrook Capital Partners	330	1.2	5.68	3.82	11.57	11.02	10.59	11.95
Triton Partners	57	0.2	4.91	21.85	21.44	7.09		
VantagePoint Venture Partners	49	0.2	(3.09)	(3.47)	8.21	(12.54)	(14.85)	(7.11)
Vicente Capital Partners	35	0.1	4.99	4.79	6.93	3.28	13.44	
W Capital Partners	12	0.0	14.44	17.74	3.08	5.01	0.82	5.22
WLR Recovery	72	0.3	6.27	(2.26)	(3.49)	(2.56)	3.54	0.58
Wellspring Capital Management	85	0.3	(0.06)	8.77	41.05	40.97	20.60	
Welsh and Carson and Anderson and Stowe	253	0.9	6.40	10.78	25.34	16.82	16.18	9.59
Yucaipa	621	2.3	1.88	2.88	4.14	(6.92)	(0.25)	(0.54)
Other ²	290	1.1	N/M	N/M	N/M	N/M	N/M	N/M
Private Equity Partnership Investments²	26,710	100.0	4.23	9.73	18.04	9.89	12.61	9.15

¹ Private Equity time weighted rate of returns are computed by State Street Bank and are based on General Partners' most recent received financial statements and any cash adjustments received prior to two business days before the end of the quarter.

² Other includes Cash, Unclassified & Distributed Stock

The notation "N/M" indicates that the return is not meaningful

Section IV
Income

Period Ending December 31, 2017

Section IV: Income

Income Summary

	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ¹	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
Total Income Summary																	
Total Domestic Income	59,836	91.2	1.02	3	1.39	10	2.56	14	81	6.68	67	3.87	71	3.71	86	6.33	71
Total International Income	5,746	8.8	0.78	5	1.19	(8)	4.31	15	9	12.65	104	2.02	23	(0.49)	54	3.13	105
Total Income	65,583	100.0	1.00	3	1.34	6	2.71	12	71	7.22	65	3.65	62	3.28	80	6.01	72

¹ Value Added is the excess bps converted into a dollar value by multiplying the excess bps by the fiscal year-to-date average market value.

Section IV: Income
Domestic Income

Domestic Income	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ²	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
BB High Yield Fund ¹	441	0.7	0.05	(13)	0.39	(17)	2.22	(37)	(2)	6.74	(10)	6.08	26	-	-	-	-
Passive Fallen Angels	72	0.1	0.66	36	1.05	42	7.65	510	4	8.38	127	10.05	398	-	-	-	-
Duration Management ¹	11,210	18.7	0.64	(58)	0.81	(73)	1.53	(68)	(99)	5.38	(53)	3.28	85	2.07	(2)	5.01	(46)
Equitable CCMF	1	0.0	0.68	36	2.05	189	4.15	305	0	8.07	557	8.31	639	8.95	691	8.14	432
Governments ¹	17,291	28.9	1.24	1	1.58	4	2.23	1	3	6.02	11	2.50	6	2.15	6	-	-
High Yield Bond Accounting Managers ¹	999	1.7	0.54	24	0.99	37	2.98	43	4	6.58	(53)	6.72	65	6.73	125	8.27	70
High Yield Mortgage ¹	332	0.6	0.58	28	2.02	140	5.55	299	11	11.66	454	8.60	254	9.44	396	-	-
High Yield ¹	45	0.1	9.66	935	9.18	855	14.89	1,234	6	17.49	1,037	13.52	746	11.38	591	13.56	599
Highland CLN - Longhorn A ¹	16	0.0	0.57	18	(5.28)	(645)	(4.14)	(638)	(1)	(17.63)	(2,188)	(1.70)	(619)	0.55	(378)	2.46	(211)
Highland CLN - Longhorn B ¹	78	0.1	1.39	108	3.96	333	2.91	35	0	6.19	(92)	4.65	(142)	9.02	355	5.89	(168)
Internal Inv-Grade Corp ¹	11,573	19.3	1.66	8	2.39	5	4.32	9	11	10.90	90	5.71	41	5.46	82	7.92	49
Long Duration Corporates ¹	2,846	4.8	1.93	95	3.07	179	4.69	226	73	9.85	383	3.40	25	4.50	165	8.65	260
Long Duration MTG ¹	1,727	2.9	0.61	(37)	0.92	(36)	2.30	(13)	(3)	4.43	(159)	3.85	70	3.01	16	6.28	64
MHLP-BRS ¹	45	0.1	0.92	60	1.86	170	4.20	310	2	8.55	604	7.40	548	9.81	777	7.11	329
Non-Traditional High Yield ¹	142	0.2	0.54	23	2.99	236	1.79	(77)	(1)	21.63	1,452	10.97	491	17.89	1,242	-	-
Opportunistic ¹	214	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Agency Mortgage ¹	6,462	10.8	0.40	7	0.27	12	1.24	13	9	2.84	36	2.16	28	2.27	24	-	-
Internal MTG Structure ¹	4,329	7.2	0.37	6	0.32	16	1.39	29	12	3.92	142	3.32	140	5.14	310	5.75	194
PERS Internal Bonds Sovereign ¹	2,010	3.4	0.50	0	1.23	(5)	4.00	27	5	10.90	62	3.90	28	3.07	24	6.18	(26)
Tactical High Yield Corporates	2	0.0	0.39	8	1.29	66	2.18	(37)	(0)	5.20	(192)	-	-	-	-	-	-
Domestic FI Transition Account	0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Domestic Income	59,836	100.0	1.02	3	1.39	10	2.56	14	81	6.68	67	3.87	71	3.71	86	6.33	71

¹ Unitized portfolios owned by other retirement plans. Ending Market Value represents the PERF's ownership in the portfolio.

² Value Added is the excess bps converted into a dollar value by multiplying the excess bps by the fiscal year-to-date average market value.

Section IV: Income

Total International Income and External High Yield

	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ²	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
International Income																	
Alliance Bernstein Institutional Investment	517	9.0	0.72	(0)	0.98	(28)	3.76	(40)	(3)	11.64	3	1.83	4	(0.71)	31	2.55	46
Baring Asset Management	304	5.3	0.51	8	2.27	76	4.85	55	3	11.40	86	0.79	(11)	(1.30)	24	2.30	48
Int'l Int'l Fixed Income	1,745	30.4	0.80	8	1.26	0	4.64	47	9	12.83	122	1.90	11	(0.18)	84	-	-
PIMCO	1,128	19.6	0.59	(13)	1.22	(4)	4.34	18	2	12.59	99	1.99	20	(0.42)	61	3.78	170
Int'l Emerging Markets Fixed Income	207	3.6	1.93	2	0.33	1	4.22	60	1	17.46	166	3.56	37	-	-	-	-
Int'l Developed Markets Fixed Income	1,435	25.0	0.45	2	1.44	(6)	4.44	13	2	11.33	79	1.77	22	-	-	-	-
Int'l Fixed Income Transition Account	0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bluebay Asset Management	117	2.0	1.92	1	(0.29)	(61)	2.67	(95)	(2)	14.45	(135)	-	-	-	-	-	-
Investec Asset Management EM	183	3.2	1.97	6	0.39	7	3.82	20	0	16.66	87	-	-	-	-	-	-
Neuberger Berman EM	110	1.9	2.42	51	0.55	22	3.94	32	-	17.10	130	-	-	-	-	-	-
Total International Income	5,746	100.0	0.78	5	1.19	(8)	4.31	15	9	12.65	104	2.02	23	(0.49)	54	3.13	105

	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ²	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
External High Yield Income																	
Columbia High Yield ¹	187		0.34	(12)	0.01	(69)	2.01	(51)	(1)	7.36	(7)	6.54	22	6.35	81	-	-
High Yield Nomura ¹	597		0.66	36	1.15	52	3.63	107	6	7.65	53	7.37	130	7.41	194	9.57	201
Voya High Yield ¹	265		0.39	0	1.29	12	2.18	(6)	-	3.65	(59)	4.38	(12)	-	-	-	-

¹ Unitized portfolios owned by multiple retirement plans. Portfolios roll up to the PERF High Yield Bond Managers portfolio.

² Value Added is the excess bps converted into a dollar value by multiplying the excess bps by the fiscal year-to-date average market value.

Section V
Real Assets

Period Ending December 31, 2017

Section V: Real Assets
Real Assets Summary

Real Assets ¹	December 31, 2017		1- Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return ³	Excess bps ³	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ²	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
Real Estate	30,721	83.4	N/M	N/M	1.40	(24)	3.83	69	209	7.83	113	9.97	13	10.94	34	(1.32)	(856)
Infrastructure	4,153	11.3	N/M	N/M	8.20	645	12.48	925	339	18.23	1,192	12.42	716	14.26	891	13.26	711
Forestland	1,955	5.3	N/M	N/M	(0.05)	(65)	0.02	(128)	(25)	0.75	(253)	(3.00)	(823)	(0.15)	(728)	(0.36)	(556)
Total Real Assets	36,829	100.0	N/M	N/M	2.05	48	4.52	151	546	8.49	209	9.36	28	10.42	55	(0.86)	(731)

¹ Partnership Market Values and Returns are based on the General Partners' September 30, 2017 financial statements and any cash adjustments received prior to two business days before the end of the quarter.

² Value Added is the excess bps converted into a dollar value by multiplying the excess bps by the fiscal year-to-date average market value.

³ The notation "N/M" indicates that the return is not meaningful as Private Asset performance is measured on a quarterly cycle.

Section V: Real Assets

Real Estate Top 20 Partners by Exposure

Top 20 Real Estate Partners Exposure ¹	As of December 31, 2017	
	Ending Market Value (MM)	% of Total Private Real Estate
Miller Capital Advisory	6,466	21.0
GI Partners	5,330	17.3
CommonWealth Partners	4,827	15.7
GID Investment Advisors, LLC	4,325	14.1
First Washington	2,086	6.8
Hines	1,193	3.9
CIM	1,029	3.3
ARA Management	1,004	3.3
Pacific Urban Residential	950	3.1
Institutional Housing Partners	873	2.8
Bentall Kennedy	728	2.4
Invesco	591	1.9
Resmark Equity Partners	397	1.3
JP Morgan Asset Management	269	0.9
Klein Financial Corporation	222	0.7
AGI Resmark Partners	114	0.4
Stockbridge Capital	103	0.3
Xander Group	22	0.1
Hearthstone Advisors	14	0.0
Canyon Capital Realty Advisors	10	0.0
Top 20 Real Estate Partners Exposure	30,550	99.4
Exposure From All Other Partners	171	0.6
Total Real Estate Partners Exposure	30,721	100.0

¹ Partnership Market Values and Returns are based on the General Partners' September 30, 2017 financial statements.

Section V: Real Assets

Real Estate Partnerships Performance

Real Estate Partnerships ¹	As of December 31, 2017		QTR	FYTD	1-Yr	3-Yr	5-Yr
	Ending Market Value (MM)	% Of Total Assets	Net Rate of Return	Net Rate of Return	Net Rate of Return	Net Rate of Return	Net Rate of Return
301 Capitol Mall, LP	17	0.1%	(3.00)	(2.40)	(3.70)	(2.70)	(3.40)
AGI Resmark Housing Fund, LLC	114	0.4%	25.90	23.50	28.80	33.60	N/AP
ARA Asia Dragon Fund	-	0.0%	(3.60)	(3.70)	0.60	N/M	N/M
ARA Asia Dragon Fund II	52	0.2%	(3.00)	2.00	9.70	15.00	N/M
ARA China Long Term Hold	952	3.1%	4.60	10.30	17.50	12.20	N/AP
Asia Pacific Property Fund SCSP	269	0.9%	4.00	6.10	9.80	N/AP	N/AP
BlackRock Europe Parallel Property Fund II L.P.	2	0.0%	(0.90)	(0.90)	(0.90)	N/M	N/M
CalEast Canada Limited Partnership	3	0.0%	1.90	(14.50)	(19.20)	(9.10)	(4.40)
CalEast Industrial Investors, LLC	15	0.0%	(0.80)	1.10	(2.50)	5.60	2.90
CalEast Solstice - Base	2,656	8.6%	0.40	4.20	13.50	N/AP	N/AP
CalEast Solstice - DT Land	338	1.1%	0.70	(10.60)	(18.80)	N/AP	N/AP
CalEast Solstice - DT Other	1,081	3.5%	5.40	14.20	16.80	N/AP	N/AP
CalEast Solstice, LLC	(3)	0.0%	N/M	N/M	N/M	N/M	N/M
CalWest - CalPERS	11	0.0%	3.80	4.10	(15.90)	(5.90)	N/AP
Canyon Catalyst Fund, LLC	7	0.0%	2.30	4.00	14.20	22.20	N/M
Canyon Catalyst Fund II, LLC	222	0.7%	1.60	1.60	N/AP	N/AP	N/AP
Canyon Johnson Urban Fund, III	3	0.0%	37.70	37.70	(40.50)	(17.30)	(5.00)
CBRE Strategic Partners UK Fund II	(22)	-0.1%	N/M	N/M	N/M	N/M	N/M
CIM Fund III, LP	357	1.2%	(0.30)	2.80	4.10	5.90	10.50
CIM Urban Real Estate Fund, LP	344	1.1%	(1.90)	(1.80)	(7.80)	(5.40)	(2.60)
CIM Urban REIT LLC	311	1.0%	(0.60)	(4.10)	(1.30)	3.10	4.80
FSP - Base	4,100	13.3%	2.10	2.70	7.40	14.50	N/AP
FSP - DT 2012 and Beyond	726	2.4%	(2.10)	(3.90)	(1.00)	12.40	N/AP
GRI - Base	2,086	6.8%	0.40	2.00	6.40	11.40	N/AP
HC Green Development Fund LP	205	0.7%	(1.10)	(2.30)	(2.70)	(1.80)	14.70
HC NOP Holdings L.P.	1	0.0%	N/M	N/M	N/M	N/M	N/M
HCB Interests II LP	118	0.4%	0.80	2.80	2.50	4.40	12.60
HCB LTH	499	1.6%	5.80	4.20	5.70	(8.30)	(4.90)
HCC Interests LP	11	0.0%	2.30	2.70	(15.90)	(26.50)	(17.00)
HCM Holdings II LP	-	0.0%	(0.30)	3.70	(107.90)	(121.10)	(139.80)
HCR LTH LLC	352	1.1%	(1.90)	(1.90)	(2.40)	(9.30)	N/AP
Hearthstone Housing Partners II, LLC	-	0.0%	N/M	N/M	N/M	N/M	N/M
Hearthstone Housing Partners, L.P.	(3)	0.0%	N/M	N/M	N/M	N/M	N/M
Hearthstone Path-of-Growth Fund, LLC	17	0.1%	3.50	(2.90)	27.50	(20.10)	(12.40)
Hearthstone-MSII Homebuilding Investors, LLC	-	0.0%	N/M	N/M	N/M	N/M	N/M
Hines European Development Fund LP	8	0.0%	(0.50)	(1.20)	(4.30)	N/M	N/M
IHP Investment Fund I, L.P.	36	0.1%	11.70	(16.40)	(20.60)	(10.40)	2.90
IHP Investment Fund II, L.P.	7	0.0%	(18.90)	(23.10)	6.70	4.20	19.20
IHP Investment Fund III, L.P.	326	1.1%	(2.00)	(5.50)	(5.90)	1.50	0.80
IMI - Base	6,466	21.0%	1.50	5.70	8.80	18.20	N/AP
IMP - Base	4,032	13.1%	0.80	1.70	9.70	10.90	N/AP
IMP - DT 2012 and Beyond	293	1.0%	4.80	10.50	18.80	21.80	N/AP

¹Partnership Market Values and Returns are based on the General Partners' September 30, 2017 financial statements.

Section V: Real Assets

Real Estate Partnerships Performance

	As of December 31, 2017		QTR	FYTD	1-Yr	3-Yr	5-Yr
	Ending Market Value (MM)	% Of Total Assets	Net Rate of Return	Net Rate of Return	Net Rate of Return	Net Rate of Return	Net Rate of Return
Real Estate Partnerships¹							
Institutional Core Multifamily Investors	591	1.9%	2.60	3.40	5.60	9.60	N/AP
Institutional Logistics Partners, LLC	728	2.4%	2.80	4.80	8.40	15.40	N/AP
KAREC California Development Program, LLC	0	0.0%	N/M	N/M	N/M	N/M	N/M
KC 2011, LLC	145	0.5%	(26.60)	(4.20)	(3.70)	10.20	2.70
KSC Affordable Housing Investment Fund, LLC	77	0.3%	1.10	1.70	4.10	4.90	6.30
Land Management Company, LLC	462	1.5%	(0.30)	3.90	11.10	(9.30)	N/AP
LaSalle Japan Logistics Fund II LP	0	0.0%	N/M	N/M	N/M	N/M	N/M
National Office Partners, LLC (CWP)	0	0.0%	(1.60)	(5.40)	(8.60)	5.40	14.50
ORA Residential Investments I, L.P.	204	0.7%	7.90	11.60	17.10	20.30	26.40
Pacific Multifamily Investors, LLC	950	3.1%	3.00	5.50	9.60	11.10	N/AP
PERS-400 R STREET	18	0.1%	3.40	7.80	15.20	12.90	15.90
PLA Residential Fund I, LLC	0	0.0%	N/M	N/M	N/M	N/M	N/M
PLA Retail Fund I, LP	2	0.0%	N/M	N/M	N/M	N/M	N/M
Stockbridge Hollywood Park Co-Investors, LP	77	0.3%	(0.10)	1.60	17.80	10.50	17.90
Stockbridge Real Estate Fund II -B, LP	27	-	8.30	9.60	24.60	5.60	15.60
TechCore, LLC	1,240	4.0%	3.50	6.70	11.70	15.40	12.50
TPG Hospitality Investments IV, LLC	-13	0.0%	N/M	N/M	N/M	N/M	N/M
Whitney Ranch Venture, LLC	42	0.1%	(4.40)	53.30	45.70	(14.00)	N/AP
Xander Co-Investment	22	0.1%	(1.20)	(32.70)	(33.80)	(19.80)	(24.60)
Total Real Estate	30,721	100.0%	1.40	3.83	7.83	9.97	10.94

Section V: Real Assets

Forestland and Infrastructure Partnerships

	31-Dec-17		QTR	FYTD	1-Yr	3-Yr	5-Yr
	Ending Market Value (MM)	% of Total Infrastructure Assets	Net Rate of Return	Net Rate of Return	Net Rate of Return	Net Rate of Return	Net Rate of Return
Infrastructure Partnerships¹							
Alinda Infrastructure Fund I, L.P.	4	0.1%	(3.10)	1.50	14.50	8.50	11.70
Alinda Infrastructure Fund II, L.P.	219	5.3%	(1.00)	(0.60)	(2.50)	5.40	6.00
Archmore International Infrastructure Fund II (B), L.P.	41	1.0%	3.40	8.10	12.30	N/M	N/AP
Archmore International Infrastructure Fund II (C), L.P.	87	2.1%	3.40	8.10	12.30	N/M	N/AP
CalPERS - Unitized Collateral Account	35	0.8%	(0.50)	(0.50)	N/AP	N/AP	N/AP
Carlyle Infrastructure Partners, L.P.	29	0.7%	49.30	56.70	58.30	16.50	15.20
CIM Infrastructure Fund, L.P.	448	10.8%	0.10	(0.10)	4.00	7.50	10.30
Concession Investment Holdings, LLC	439	10.6%	2.20	8.90	11.60	N/AP	N/AP
Global Infrastructure Partners II, L.P. (GIP II)	262	6.3%	6.70	9.40	18.40	16.70	22.40
Golden Reef Infrastructure Trust	442	10.6%	1.20	8.80	8.30	N/AP	N/AP
Golden State Matterhorn, LLC	0	0.0%	N/M	N/M	N/M	N/AP	N/AP
Harbert Gulf Pacific Power, LLC (HGPP)	806	19.4%	3.30	4.10	14.30	6.70	N/AP
Harbert Power Fund V, L.P. (HPF V)	80	1.9%	3.40	3.00	10.20	10.30	N/AP
Ivy Investment Vehicle LDC (SWPM)	795	19.1%	34.80	53.90	66.10	41.10	42.60
Neptune Regional Transmission System, LLC	213	5.1%	2.10	2.60	8.80	3.10	7.00
North Haven Infrastructure Partners II LP	141	3.4%	17.70	25.60	26.20	9.70	N/AP
Bear Republic Infrastructure, LLC	0	0.0%	N/M	N/M	N/M	N/AP	N/AP
Total Infrastructure	4,153	100%	8.20	12.48	18.23	12.42	14.26

	December 31, 2017		QTR	FYTD	1-Yr	3-Yr	5-Yr
	Ending Market Value (MM)	% of Total Forestland Assets	Net Rate of Return	Net Rate of Return	Net Rate of Return	Net Rate of Return	Net Rate of Return
Forestland Partnerships¹							
Lincoln Timber L.P.	1,502	76.8%	(0.30)	(1.70)	(0.50)	(4.30)	(1.10)
Southern Diversified	2	0.1%	0.20	N/AP	0.30	N/AP	N/AP
Sylvanus LLC	460	23.5%	0.90	9.60	1.70	1.80	3.20
Total Forestland	1,955	100%	(0.05)	0.02	0.75	(3.00)	(0.15)

Section VI
Inflation

Period Ending December 31, 2017

Section VI: Inflation
Inflation Summary

Inflation	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ¹	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
Core Inflation Linked Bonds	18,423	67.2	1.07	(7)	1.95	(14)	3.74	2	4	6.68	9	1.80	(5)	0.84	28	-	-
Internal Commodities PERF	4,753	17.3	4.41	0	9.89	(0)	17.88	5	2	5.85	9	(7.49)	3	(12.26)	(10)	(10.24)	(3)
Tactical Inflation Assets	4,246	15.5	2.95	28	6.27	74	11.66	187	74	5.21	71	(1.51)	87	-	-	-	-
Total Inflation	27,422	100.0	1.95	1	4.03	9	7.38	39	102	6.33	17	0.08	31	(1.96)	56	0.13	2

¹ Value Added is the excess bps converted into a dollar value by multiplying the excess bps by the fiscal year-to-date average market value.

Tactical Inflation Assets	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ¹	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
Tactical Commodities	2,133	50.2	4.97	55	11.28	138	21.63	380	77	6.98	121	(7.67)	(14)	-	-	-	-
Tactical TIPS	2,113	49.8	0.92	0	1.23	(3)	2.13	(1)	(0)	2.93	(8)	1.83	(22)	-	-	-	-
Tactical Inflation	4,246	100.0	2.95	28	6.27	74	11.66	187	74	5.21	71	(1.51)	87	-	-	-	-

¹ Value Added is the excess bps converted into a dollar value by multiplying the excess bps by the fiscal year-to-date average market value.

Section VII
Liquidity

Period Ending December 31, 2017

Section VII: Liquidity
Liquidity Summary

Liquidity	December 31, 2017		1-Month		3-Months		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ¹	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
PERS Internal Short Term Portfolio	14,660	100.0	0.13	2	0.35	5	0.68	11	16	1.16	20	0.63	10	0.45	11	0.59	8
Total Liquidity	14,660	100.0	0.13	1	0.35	6	0.68	13	19	1.15	30	0.74	9	0.43	(16)	1.07	(14)

¹ Value Added is the excess bps converted into a dollar value by multiplying the excess bps by the fiscal year-to-date average market value.

Section VIII
TLPM

Period Ending December 31, 2017

Section VIII: TLPM

TLPM Summary

TLPM Summary	December 31, 2017		1-Mo		3-Mo		FYTD		1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
External MAC ¹	1,383	67.0	1.59	98	4.83	301	9.06	538	13.88	638	5.77	(173)	7.06	(44)	-	-
GE Volatility Capture Fund ²	70	3.4	1.45	34	5.48	(116)	11.35	(7)	24.17	234	-	-	-	-	-	-
TLPM Overlay	512	24.8	1.13	(39)	3.56	(42)	7.37	(37)	-	-	-	-	-	-	-	-
TLPM Investment Risk Mitigation	97	4.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TLPM Transition	0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total TLPM	2,063	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

¹The External MAC Partners were initially funded in December 2012.

²GE Volatility Capture Fund was initially funded in November 2015 within Global Equity asset class. This portfolio transferred to TLPM in November 2017.

Section IX
Other PERF

Period Ending December 31, 2017

Section IX: Other PERF Portfolios

Other PERF Portfolios

Other PERF Summary	December 31, 2017		1-Mo		3-Mo		FYTD		1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
Absolute Return Strategies ¹	270	97.4	(0.54)	(98)	1.79	55	0.95	(179)	6.39	80	0.65	(487)	3.04	(236)	1.47	(447)
Other Plan Level	7	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Other PERF	278	100.0	(2.15)		(1.56)		(3.36)		(1.47)		1.26		5.54		5.74	

Absolute Return Strategies Summary	December 31, 2017		1-Mo		3-Mo		FYTD		1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
Direct Investments	269	99.4	(0.54)	(99)	1.80	56	0.91	(183)	6.13	54	0.40	(512)	2.95	(245)	1.71	(423)
Fund of Hedge Funds	1	0.5		(44)	0.00	(124)		(274)	30.60	2,500	9.26	375	7.73	233	3.31	(264)
ARS Transition	0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Absolute Return Strategies	270	100.0	(0.54)	(98)	1.79	55	0.95	(179)	6.39	80	0.65	(487)	3.04	(236)	1.47	(447)

Other Plan Level Summary	December 31, 2017		1-Mo		3-Mo		FYTD		1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
MHLP Personal Loans	7	94.7	0.35	4	1.18	103	2.74	164	5.90	340	4.71	279	4.83	279	-	-
PERS Internal Holding FI Fund	0	5.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Other Plan Level	7	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

¹ Absolute Return Strategies performance history is included in Public Equity prior to July 1, 2011. Ending market value and returns includes Public Equity Transition portfolio.

Section X

Affiliate Investment Programs

Period Ending December 31, 2017

Section X: Affiliate Investment Programs

Judges' II Retirement Fund, Legislators' Retirement System Fund and Long-Term Care Fund

	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Rate of Return	Excess Bps	\$ Value Added (MM) ¹	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
Judges' Retirement System II Fund																	
JRS II Cash	0	0.0	0.11	0	0.30	2	1.94	139	0	2.62	176	1.11	70	0.92	65	0.81	42
JRS II Commodities	47	3.1	4.41	0	9.94	4	17.92	9	0	5.89	13	(7.18)	34	(12.15)	1	-	-
JRS II Domestic Income	500	33.7	1.02	3	1.39	10	2.56	14	1	6.67	66	3.86	71	3.70	85	6.24	62
JRS II Global Equity	746	50.2	1.65	1	5.84	1	11.67	5	0	24.47	9	9.99	12	11.72	12	5.38	6
JRS II REITs	118	8.0	1.41	(1)	3.81	(2)	5.74	(0)	(0)	11.43	1	5.37	(1)	7.22	2	4.37	35
JRS II TIPS	74	5.0	0.94	3	1.28	2	2.19	5	0	3.11	10	2.00	(6)	0.08	(6)	-	-
Total Judges' Retirement System II Fund	1,484	100.0	1.47	2	4.05	5	7.75	9	1	15.53	35	6.72	25	7.95	26	5.73	5

	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Rate of Return	Excess Bps	\$ Value Added (MM) ¹	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
Legislators' Retirement System Fund																	
LRS Cash	0	0.0	6.23	612	6.44	616	6.76	621	0	7.46	661	2.75	234	1.66	139	1.18	79
LRS Commodities	4	3.1	4.41	0	9.94	4	17.92	9	0	5.89	13	(7.19)	33	(12.16)	0	-	-
LRS Domestic Income	46	38.7	1.02	3	1.39	10	2.57	14	0	6.67	66	3.86	71	3.70	85	6.25	63
LRS Global Equity	28	24.1	1.65	1	5.84	1	11.67	5	0	24.47	9	10.01	14	11.73	13	5.57	6
LRS REITs	10	8.1	1.41	(1)	3.81	(2)	5.74	(0)	(0)	11.43	1	5.38	(0)	7.23	3	-	-
LRS TIPS	31	25.9	0.94	3	1.28	2	2.19	5	0	3.11	11	2.01	(4)	0.08	(5)	3.62	9
Total Legislators' Retirement System Fund	118	100.0	1.29	3	2.87	6	5.31	9	0	10.18	35	4.72	24	5.13	35	5.39	26

	December 31, 2017		1-Month		3-Months		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps	\$ Value Added (MM) ¹	Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps
Long-Term Care Fund																	
LTC Cash	0	0.0	0.11	0	0.31	3	1.38	83	0	7.79	694	2.63	222	1.58	131	1.14	75
LTC Commodities	250	5.5	4.39	(2)	9.80	(10)	17.71	(13)	(0)	5.48	(28)	(7.49)	3	(12.20)	(4)	-	-
LTC Domestic Income	2,724	59.5	0.98	(0)	1.25	(4)	2.38	(4)	(1)	5.95	(7)	3.13	(2)	2.88	3	5.81	19
LTC Global Equity	776	16.9	1.66	3	5.81	9	11.52	18	1	24.32	37	9.86	34	11.32	32	5.39	13
LTC REITs	569	12.4	1.62	8	4.02	16	5.77	36	2	11.07	80	4.72	77	6.48	70	3.75	43
LTC TIPS	260	5.7	0.94	2	1.26	(0)	2.14	1	0	3.01	0	2.04	(1)	0.13	(0)	3.63	10
Total Long-Term Care Fund	4,579	100.0	1.34	(1)	2.77	1	5.00	3	1	9.12	22	3.77	10	3.69	22	3.93	12

Section X: Affiliate Investment Programs

California Employers' Retirement Benefit Trust (CERBT) Fund

CERBT Strategy 1	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ¹	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
CERBT S1 Cash	2	0.0	0.16	5	1.19	90	1.51	96	0	2.15	129	0.95	54	0.59	32	0.64	25
CERBT S1 Commodities	200	3.1	4.41	0	9.89	(0)	17.92	9	0	5.86	9	(7.56)	(4)	(12.35)	(19)	-	-
CERBT S1 Domestic Income	1,760	27.0	1.02	3	1.39	10	2.56	14	2	6.68	67	3.85	70	3.71	86	6.25	62
CERBT S1 Global Equity	3,699	56.8	1.66	3	5.81	9	11.55	21	8	24.39	44	9.93	41	11.38	38	5.29	18
CERBT S1 REITs	525	8.1	1.62	9	4.02	16	5.80	39	2	11.13	86	4.75	81	6.51	74	4.05	73
CERBT S1 TIPS	326	5.0	0.94	3	1.28	2	2.19	5	0	3.11	10	2.00	(5)	0.08	(5)	-	-
Total CERBT Strategy 1	6,512	100.0	1.53	3	4.35	9	8.29	16	10	16.66	51	7.08	46	8.08	44	5.34	30

CERBT Strategy 2	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ¹	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
CERBT S2 Cash	2	0.2	0.24	13	0.48	20	1.02	47	0	2.46	160	1.09	68	0.68	41	-	-
CERBT S2 Commodities	31	3.1	4.41	0	9.97	7	17.96	13	0	5.89	12	(7.51)	1	(12.31)	(15)	-	-
CERBT S2 Domestic Income	395	38.9	1.02	3	1.39	10	2.57	14	1	6.68	67	3.86	71	3.71	86	-	-
CERBT S2 Global Equity	403	39.8	1.66	3	5.80	8	11.53	19	1	24.37	42	9.88	36	11.35	35	-	-
CERBT S2 REITs	81	8.0	1.62	9	4.02	16	5.78	37	0	11.10	83	4.76	82	6.49	71	-	-
CERBT S2 TIPS	101	10.0	0.94	3	1.28	2	2.18	4	0	3.10	9	1.99	(6)	0.06	(8)	-	-
Total CERBT Strategy 2	1014	100.0	1.41	3	3.59	9	6.75	15	2	13.45	51	5.91	42	6.50	41	-	-

CERBT Strategy 3	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ¹	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps
CERBT S3 Cash	0	0.1	0.21	9	0.46	17	0.95	40	0	1.82	96	0.86	45	0.62	35	-	-
CERBT S3 Commodities	10	3.1	4.41	0	9.97	7	17.98	15	0	5.83	6	(7.40)	13	(12.18)	(2)	-	-
CERBT S3 Domestic Income	134	39.0	1.02	3	1.39	10	2.56	14	0	6.71	69	3.82	66	3.66	80	-	-
CERBT S3 Global Equity	82	23.9	1.66	3	5.80	8	11.53	19	0	24.36	41	9.87	35	11.33	32	-	-
CERBT S3 REITs	28	8.0	1.62	9	4.02	16	5.78	37	0	11.11	84	4.66	72	6.44	67	-	-
CERBT S3 TIPS	89	26.0	0.94	3	1.28	2	2.19	5	0	3.12	12	1.99	(6)	0.10	(4)	-	-
Total CERBT Strategy 3	343	100.0	1.31	4	2.88	9	5.28	15	1	10.11	48	4.65	37	4.94	43	-	-

¹ Value Added is the Excess BPS converted into a dollar value by multiplying the excess bps by the fiscal year-to-date average market value.

Section XI
Other Programs

PERIOD ENDING DECEMBER 31, 2017

Section XI: Other Programs

Securities Lending Program, Short Term Liquidity, and Terminated Agency Pool Performance Summary

	December 31, 2017		1-Mo		3-Mo		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)	% of Total Assets	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	\$ Value Added (MM) ¹	Net Return	Excess bps	Net Return	Excess bps	Net Return	Excess bps	Net Rate of Return	Exc ess Bps
Securities Lending Program																	
CaIPERS ESec Cash Collateral	4,168	71.5	0.08	(3)	0.26	(5)	0.53	(6)	(3)	0.90	(10)	0.64	13	0.43	9	-	-
Internal Sec Lend Portfolio	1,665	28.5	0.13	2	0.36	7	0.69	12	3	1.17	21	0.72	19	0.51	20	-	-
Sec Lending Int & Ext Reinvest	5,834	100.0	0.09	(2)	0.29	(1)	0.59	1	1	1.01	3	0.56	5	0.59	25	0.67	26

	December 31, 2017		1-Month		3-Months		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)		Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps	\$ Value Added (MM) ¹	Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps	Net Rate of Return	Exc ess Bps
Short Term Liquidity																	
CaIPERS STIF	22,827		0.45	37	-	-	-	-	-	-	-	-	-	-	-	-	-

	December 31, 2017		1-Month		3-Months		FYTD			1-Yr		3-Yr		5-Yr		10-Yr	
	Ending Market Value (MM)		Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps		Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps	Net Rate of Return	Exc ess Bps
Terminated Agency Pool																	
Terminated Agency Pool ³	144		1.23	-	1.84	-	2.68	-		5.02	-	2.61	-	-	-	-	-

¹ Value Added is the Excess BPS converted into a dollar value by multiplying the excess bps by the fiscal year-to-date average market value.

² Structured Investment Vehicle

³ Terminated Agency Pool funded July 2013

Current Emerging Manager and Transition Manager Performance Summary

September 30, 2017		1-Month		3-Months		FYTD		1-Yr		3-Yr		5-Yr		10-YR		
CURRENT EMERGING MANAGER SUMMARY ¹		Ending Market Value (MM)	Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps	3-Yr	Excess Bps	Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps
PUBLIC EQUITY ²																
Funds Held in Fund of Fund Structure		3,401	3.14	19	6.08	57	6.08	57	18.07	(59)	N/A		N/A		N/A	
International		1,832	2.08	(87)	7.10	159	7.10	159	19.53	87	N/A		N/A		N/A	
Domestic		1,555	4.65	170	4.77	(74)	4.77	(74)	17.11	(155)	N/A		N/A		N/A	
PRIVATE EQUITY ³																
Non Fund of Fund Investments		3,742	N/A		2.95	(179)	2.95	(179)	5.30	(1,780)	2.88	(660)	7.11	(855)	5.20	(784)
International		1,423	N/A		1.88	(286)	1.88	(286)	5.26	(1,784)	10.58	110	11.71	(395)	7.32	(572)
Domestic		2,319	N/A		3.64	(110)	3.64	(110)	5.30	(1,780)	(0.67)	(1,015)	4.88	(1,078)	4.22	(882)
REAL ESTATE																
Non Fund of Fund Investments		323	N/A		(13.18)	(1,482)	(13.18)	(1,482)	(3.46)	(1,016)	2.05	(779)	2.76	(784)	N/M	
International		N/A	N/A		N/A		N/A		N/A		N/A		N/A		N/A	
Domestic		323	N/A		(13.18)	(1,482)	(13.18)	(1,482)	(3.46)	(1,016)	2.05	(779)	2.76	(784)	N/M	
Funds Held in Fund of Fund Structure ⁴		228	N/A		1.75	11	1.75	11	13.61	691	22.01	1,217	N/A		N/A	
International		N/A	N/A		N/A		N/A		N/A		N/A		N/A		N/A	
Domestic		228	N/A		1.75	11	1.75	11	13.61	691	22.01	1,217	N/A		N/A	

September 30, 2017		1-Month		3-Months		FYTD		1-Yr		3-Yr		5-Yr		10-YR		
TRANSITION MANAGER SUMMARY ¹		Ending Market Value (MM)	Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps	Net Rate of Return	Excess Bps
PUBLIC EQUITY ²																
Non Fund of Fund Investments		1,912	1.52	(112)	4.12	(188)	4.12	(188)	11.63	(1,089)	N/A		N/A		N/A	
International		1,912	1.52	(112)	4.12	(188)	4.12	(188)	11.63	(1,089)	N/A		N/A		N/A	
Domestic			N/A		N/A		N/A		N/A		N/A		N/A		N/A	

¹ The data contained in this report reflects funds identified as current emerging managers or transition managers and their performance as of 03/31/17. This report does not include fund of fund advisors except for private equity. Excess basis points were calculated using the appropriate asset class policy benchmark (unless otherwise footnoted). Performance for this report is shown as Time-Weighted Returns.

² Public Equity performance is performance of the Global Equity - Emerging Manager composite. Managers' performance is compared to a composite benchmark consisting of asset-weighted individual benchmarks of the total current emerging manager or transition manager universe (i.e. at the asset class level each emerging manager is compared to their respective benchmark, not the Public Equity policy benchmark). International Transition returns do not equal total Transition returns as the Domestic fund was closed in February of 2017 and those 2 months of returns are included in the total.

³ Private Equity performance is the performance of the Private Equity - Emerging Manager composite/hierarchy.

⁴ N/M means that time weighted returns cannot be calculated because the partnership had negative net assets for at least one quarter during the time period.

Section XII

Asset Class Benchmarks &
Definitions

PERIOD ENDING DECEMBER 31, 2017

Section XII: Asset Class Benchmarks Definitions

Asset Class Benchmarks

BENCHMARK	BENCHMARK COMPONENTS As of October 1, 2016	BENCHMARK COMPONENTS July 1, 2015 - September 30, 2016	BENCHMARK COMPONENTS July 1, 2014 - June 30, 2015
Total Fund*	Growth 54% Income 20% Real Assets 13% Inflation 9% Liquidity 4%	Growth 61% Income 20% Real Assets 12% Inflation 6% Liquidity 1%	Growth 61% Income 19% Real Assets 12% Inflation 6% Liquidity 2%
Growth Benchmark	Public Equity 85.2% FSTE CalPERS Global (All-World, All Capitalization) customized to exclude Board directed divestments Private Equity 14.8% (67% FTSE U.S. TMI + 33% FTSE AW ex US TMI) + 3% 1 Qtr Lag	Public Equity 83.6% FSTE CalPERS Global (All-World, All Capitalization) customized to exclude Board directed divestments Private Equity 16.4% (67% FTSE U.S. TMI + 33% FTSE AW ex US TMI) + 3% 1 Qtr Lag	Public Equity 84% FSTE CalPERS Global (All-World, All Capitalization) customized to exclude Board directed divestments Private Equity 16% (67% FTSE U.S. TMI + 33% FTSE AW ex US TMI) + 3% 1 Qtr Lag
Income Benchmark	90% Barclays Long Liability + 10% Barclays International Fixed Income Index GDP weighted ex-US	90% Barclays Long Liability + 10% Barclays International Fixed Income Index GDP weighted ex-US	90% Barclays Long Liability + 10% Barclays International Fixed Income Index GDP weighted ex-US
Liquidity Benchmark	Liquidity Portfolio 100% 91-Day Treasury Bills	Liquidity Portfolio 100% 91-Day Treasury Bills	Liquidity Portfolio 75% Barclays Treasury 2 - 10-Yr Cash 25% 1-Month T-Bill
Real Assets Benchmark	Real Estate 84.6% NCREIF ODCE (Net) Infrastructure 7.7% CPI + 4% 1 Qtr Lag Forestland 7.7% NCREIF Timberland (Gross) 1 Qtr lag	Real Estate 83.4% NCREIF ODCE (Net) Infrastructure 8.3% CPI + 4% 1 Qtr Lag Forestland 8.3% NCREIF Timberland (Gross) 1 Qtr lag	Real Estate 83% NCREIF ODCE (Net) Infrastructure 8.5% CPI + 4% 1 Qtr Lag Forestland 8.5% NCREIF Timberland (Gross) 1 Qtr lag
Inflation Benchmark	Inflation Linked Bonds Portfolio 75% 67% Barclays Capital Global Inflation US + 33% Barclays Capital Global Inflation Linked Bonds (U.K., France, Italy, Germany, Canada) Commodities Portfolio 25% S&P GSCI 500 Total Return Index	Inflation Linked Bonds Portfolio 75% 67% Barclays Capital Global Inflation US + 33% Barclays Capital Global Inflation Linked Bonds (U.K., France, Italy, Germany, Canada) Commodities Portfolio 25% S&P GSCI 500 Total Return Index	Inflation Linked Bonds Portfolio 75% 67% Barclays Capital Global Inflation US + 33% Barclays Capital Global Inflation Linked Bonds (U.K., France, Italy, Germany, Canada) Commodities Portfolio 25% S&P GSCI 500 Total Return Index

*Benchmark linked to prior policy benchmarks from inception

Section XII: Asset Class Benchmarks Definitions

Total Fund Policy Benchmark Target Weights Transition Schedule

ASSET CLASS	Interim Targets¹	POLICY TARGETS
Global Equity	46%	47%
Private Equity	<u>8%</u>	<u>12%</u>
GROWTH	54%	59%
INCOME	20%	19%
Infrastructure/Forestland	2%	3%
Real Estate	<u>11%</u>	<u>11%</u>
REAL ASSETS	13%	14%
INFLATION	9%	6%
LIQUIDITY	4%	2%
TOTAL FUND POLICY	100%	100%

¹ Interim Strategic Targets were adopted by the Board and effective October 1, 2016.

Section XII: Asset Class Benchmarks

Affiliate Investment Program Benchmarks

Program	ASSET CLASS BENCHMARK	POLICY BENCHMARK
Judge's Retirement System Fund	Cash	91-day Treasury Bill
Judge's Retirement System II Fund	Global Equity U.S. Fixed Income TIPS Commodities REITs	CalPERS Custom FTSE Global Composite Barclays Long Liability Index Barclays U.S. TIPS Index, Series L S&P GSCI Total Return Daily FTSE EPRA/NAREIT Developed Index
Legislators' Retirement System Fund	Global Equity U.S. Fixed Income TIPS Commodities REITs	CalPERS Custom FTSE Global Composite Barclays Long Liability Index Barclays U.S. TIPS Index, Series L S&P GSCI Total Return Daily FTSE EPRA/NAREIT Developed Index
Public Employees' Health Care Fund	U.S. Fixed Income	Barclays U.S. Aggregate Bond Index
Long-Term Care Fund	Global Equity U.S. Fixed Income TIPS Commodities REITs	MSCI ACWI IMI (Net) Barclays Long Liability Index Barclays U.S. Treasury Inflation Protected Securities (TIPS) Index S&P GSCI Total Return Daily FTSE EPRA/NAREIT Developed Liquid (Net)
California Employers' Retiree Benefit Trust (CERBT) Funds 1, 2 & 3	Global Equity U.S. Fixed Income TIPS Commodities REITs	MSCI ACWI IMI (Net) Barclays Long Liability Index Barclays U.S. TIPS Index, Series L S&P GSCI Total Return Daily FTSE EPRA/NAREIT Developed Liquid (Net)

Section XII: Asset Class Benchmarks Definitions

Definitions

CASH IN – The total contributions, net of temporary returns of capital, made by CalPERS towards investments.

CASH OUT – The total distributions received by CalPERS from its investments.

CONTRIBUTIONS – The total amount of cash that has been called from limited partners.

DISTRIBUTIONS – The total amount of cash and stock that has been paid out to limited partners.

EXCESS BPS – Excess basis points (BPS) is the difference between the portfolio or composite return and the benchmark return multiplied by 100 to convert the Excess BPS to a whole number.

Excess BPS Calculation

Excess BPS = (Portfolio or Composite Return – Benchmark Return) x 100

INTERNAL RATE OF RETURN (IRR) – Dollar weighted rate of return that shows profitability as a percentage, showing the return on each dollar invested. IRR equates the present value of a partnership's estimated cash flows (CF) with the present value of the partnership's costs. Before fees (BF) IRR is calculated before all expensed fees such as Asset Management, Disposition, Incentive Fees, etc. After fees (AF) IRR is calculated after all expensed fees such as Asset Management, Disposition, Incentive Fees, etc.

IRR is the quarterly discount rate that makes the following relationship hold:

Present Value (inflows) = Present Value (investment costs)

IRR Calculation

$IRR = CF_0 + CF_1 / (1+IRR) + CF_2 / (1+IRR)^2 + CF_3 / (1+IRR)^3 \dots CF_n / (1+IRR)^n$

IRR COMPARED TO TIME WEIGHTED RATE OF RETURN (TWRR) - According to the Global Investment Performance Standards (GIPS); using IRR is a more accurate method than TWRR to measure private equity funds. An IRR reflects the effects of the timing of cash flows in a portfolio. The IRR is required for private equity assets because the firm controls the cash flows into and out of the portfolio. A time-weighted rate of return (TWRR) will not offer the best measure for an investor to compare returns between private equity funds because the TWRR will not capture the critical effects of cash flow management within the control of the private equity manager.

INVESTMENT MULTIPLE – A measure of a fund's performance showing the fund's total value as a multiple of its cost basis. The computation is as follows:

Investment Multiple Calculation

(Distributions + Market Value) / Contributions

MARKET VALUE: PRIVATE ASSETS - An opinion of value as of a certain date as stated by either the investment advisor or independent appraiser. Market value differs from amount funded or net investment in that the value includes unrealized gains or losses during the holding period.

MARKET VALUE: PUBLIC ASSETS AT SECURITY LEVEL - Ending market value in the performance system is calculated as the shares * price + income accrual. Market Value is generally computed by the Custodian based on CalPERS pricing hierarchy.

MARKET VALUE: PUBLIC ASSETS AT PORTFOLIO LEVEL - Ending market value in the performance system is calculated as the sum of the underlying securities' ending market values as described above +/- any open receivables or payables (uninvested assets). This is consistent with the Net Asset Value or Total Net Assets reported in accounting.

NET RATE OF RETURN – Performance is net of internal and external investment office management expenses.

REALIZED GAIN OR LOSS – The gain or loss CalPERS realized from the disposition of an asset.

RATE OF RETURNS - CalPERS performance uses a daily Modified-Dietz methodology which is geometrically linked to produce time-weighted returns for longer periods.

Daily Return Calculation

Rate of Return_{Daily} = 6/30/2016 & Prior - Dollar Value Added / Average Balance; 7/1/2016 to Present - Dollar Value Added / Beginning Market Value

Where:

Dollar Value Added = Gains/losses due to price appreciation and income

Average Balance = Beginning Market Value + Net Cash Flows

Daily returns are then geometrically linked to produce multi-period returns. The linking formula is as follows:

$$R_{Monthly} = ((1 + R_1) \times (1 + R_2) \times \dots (1 + R_n)) - 1$$

TOTAL EXPOSURE – Total Exposure is the current reported value of investments plus remaining amount of unfunded commitments.

UNREALIZED GAIN OR LOSS – The difference between an asset's cost and market value.

VALUE ADDED – Value Added is the excess BPS converted into a dollar value by multiplying the excess BPS multiplied by the fiscal year-to-date average market value. For clarity, this is metric differs from Dollar Value Added calculation referenced above and used in the daily return calculation.

Value Added Calculation

Value Added = ((Portfolio or Composite Return – Benchmark Return) x 100) x fiscal year-to-date average market value

DISCLAIMER - Only actively traded portfolios are listed in CIO Report

XI - 3 CalPERS CIO Performance Report

Prepared by:



CalPERS Investment Office
Investment Servicing
400 Q Street
Sacramento, CA. 95814