

Public Employees Retirement Fund (PERF) Portfolio & Partnership Report



As of December 31, 2018

Public Equity Ending Market Value & Performance Summary (By Portfolio)

| Portfolio | Ending Market Value (mil) | 1-Yr | | | 3-Yr | | | 5-Yr | | | 10-Yr | | |
|------------------------------------|---------------------------|------------|-----------|------------|------------|-----------|------------|------------|-----------|------------|------------|-----------|------------|
| | | Net Return | BM Return | Excess Bps | Net Return | BM Return | Excess Bps | Net Return | BM Return | Excess Bps | Net Return | BM Return | Excess Bps |
| Allianz - Global | \$ 2,295.9 | (11.9%) | (9.4%) | (242) | 6.0% | 7.1% | (103) | - | - | - | - | - | - |
| Arrowstreet Capital | \$ 1.2 | - | - | - | - | - | - | - | - | - | - | - | - |
| Arrowstreet Global | \$ 7,597.5 | (5.9%) | (9.4%) | 352 | 9.6% | 7.1% | 255 | - | - | - | - | - | - |
| Baillie Gifford | \$ 2,632.7 | (16.4%) | (13.7%) | (270) | 5.5% | 4.9% | 56 | 2.8% | 1.3% | 150 | 9.8% | 7.2% | 261 |
| CalPERS AB Global | \$ 832.7 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS Corp Gov Passthrough | \$ 0.0 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS Dev Small Cap Index | \$ 3,329.3 | (18.3%) | (18.6%) | 27 | 3.4% | 2.9% | 44 | 1.4% | 1.1% | 37 | 9.5% | 9.2% | 30 |
| CalPERS EM | \$ 3,008.2 | (13.2%) | (13.3%) | 5 | 9.3% | 9.1% | 21 | 2.5% | 2.4% | 18 | 8.5% | 8.4% | 5 |
| CalPERS EM Small Cap | \$ 480.5 | (18.2%) | (18.7%) | 53 | 6.1% | 5.1% | 107 | 1.9% | 0.9% | 96 | - | - | - |
| CalPERS External Int'l Transition | \$ 1.1 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS Fundamental Dev Int'l | \$ 1,093.9 | (15.3%) | (13.8%) | (142) | 5.0% | 4.0% | 98 | 1.2% | 1.0% | 23 | 7.3% | 6.8% | 47 |
| CalPERS Fundamental EM | \$ 263.9 | (9.8%) | (13.3%) | 346 | 15.8% | 9.1% | 664 | 3.6% | 2.4% | 124 | 9.1% | 8.4% | 69 |
| CalPERS GE Completion (Physical) | \$ 502.2 | (18.9%) | 0.0% | (1,890) | - | - | - | - | - | - | - | - | - |
| CalPERS Global All Cap AXA ESG | \$ 942.0 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS Global All Cap Quality | \$ 2,412.8 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS Global All Cap Value | \$ 8,767.6 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS Global All Cap Vol Adj | \$ 4,156.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS Gbl Env Strategy HSBCCCI | \$ 0.6 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS Gbl Max Diversification | \$ 1,033.8 | (10.0%) | (9.4%) | (53) | - | - | - | - | - | - | - | - | - |
| CalPERS Holding Fund | \$ 0.1 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS Int'l Dev | \$ 21,553.6 | (13.8%) | (13.8%) | 9 | 4.1% | 4.0% | 11 | 1.1% | 1.0% | 10 | 6.9% | 6.8% | 9 |
| CalPERS Lazard | \$ 817.9 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS QMA | \$ 798.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS QSI | \$ 899.8 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS Quality Fund | \$ 0.1 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS Global Index Oriented | \$ 27,012.4 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS Mom Dev ex US All Cap | \$ 898.3 | (39.6%) | (14.3%) | (2,523) | (8.1%) | 3.9% | (1,196) | - | - | - | - | - | - |
| CalPERS Mom Strategy | \$ 248.9 | (21.3%) | (13.8%) | (749) | 6.0% | 8.7% | (270) | - | - | - | - | - | - |
| CalPERS Mom US TMI 3000 | \$ 1,435.4 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS Quality Dev ex US | \$ 1.0 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS Quality US TMI 3000 | \$ 0.8 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS Structured EM | \$ 0.1 | (9.8%) | (13.3%) | 349 | 4.8% | 9.1% | (428) | (0.8%) | 2.4% | (320) | 6.9% | 8.4% | (157) |
| CalPERS Synthetic Enhanced | \$ 10,865.1 | (6.1%) | (5.8%) | (26) | 9.9% | 8.9% | 98 | 8.7% | 7.8% | 91 | - | - | - |
| CalPERS US Enhanced | \$ 4,664.3 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS US FTSE 3000 | \$ 36,331.1 | (5.2%) | (5.1%) | (7) | 9.2% | 9.1% | 5 | 7.8% | 7.8% | 2 | 13.2% | 13.1% | 10 |
| CalPERS US Fundamental | \$ 1,738.9 | (8.5%) | (5.1%) | (342) | 8.2% | 9.1% | (89) | 6.0% | 7.8% | (184) | 13.1% | 13.1% | 2 |
| CalPERS Volatility Adj Dev Int'l | \$ 2.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS Volatility Adj EM | \$ 0.4 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS Volatility Adj US TMI 3000 | \$ 1.2 | - | - | - | - | - | - | - | - | - | - | - | - |
| Cartica Capital Partners, LP | \$ 459.6 | (17.2%) | (13.0%) | (418) | 8.0% | 9.4% | (135) | 0.5% | 2.4% | (195) | - | - | - |
| Epoch Global | \$ 1,124.5 | (7.0%) | (9.4%) | 246 | 5.9% | 7.1% | (116) | - | - | - | - | - | - |

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| Portfolio | Ending Market Value (mil) | 1-Yr | | | 3-Yr | | | 5-Yr | | | 10-Yr | | |
|----------------------------|---------------------------|---------------|---------------|-------------|-------------|-------------|------------|-------------|-------------|------------|--------------|--------------|------------|
| | | Net Return | BM Return | Excess Bps | Net Return | BM Return | Excess Bps | Net Return | BM Return | Excess Bps | Net Return | BM Return | Excess Bps |
| First Quadrant Long/Short | \$ 2.7 | (9.5%) | (4.6%) | (486) | 4.2% | 9.2% | (500) | 6.2% | 8.2% | (196) | 12.2% | 13.2% | (102) |
| FIS CalBear | \$ 546.9 | (18.9%) | (14.3%) | (462) | 1.6% | 3.8% | (224) | - | - | - | - | - | - |
| Genesis | \$ 0.9 | - | - | - | - | - | - | - | - | - | - | - | - |
| Hermes | \$ 689.5 | (17.2%) | (14.4%) | (277) | 0.1% | 3.0% | (292) | - | - | - | - | - | - |
| JP Morgan Long/Short | \$ 2,086.6 | (5.8%) | (4.0%) | (179) | 8.6% | 9.4% | (80) | 8.3% | 8.5% | (25) | 14.2% | 13.1% | 114 |
| Lazard | \$ 1,735.9 | (16.1%) | (13.1%) | (294) | 9.3% | 9.2% | 12 | 0.4% | 2.3% | (191) | 8.3% | 8.4% | (8) |
| Legato | \$ 770.9 | (16.9%) | (14.3%) | (260) | 6.6% | 5.3% | 133 | - | - | - | - | - | - |
| LEIA GEM | \$ 568.9 | (16.1%) | (13.3%) | (277) | 4.4% | 6.5% | (208) | - | - | - | - | - | - |
| Progress II | \$ 524.1 | (17.1%) | (11.7%) | (541) | 5.4% | 7.5% | (213) | - | - | - | - | - | - |
| Pyramis Global | \$ 1,044.6 | (15.2%) | (14.2%) | (101) | 1.4% | 3.8% | (242) | (0.2%) | 1.0% | (118) | 6.5% | 6.8% | (31) |
| Pzena | \$ 818.6 | (20.1%) | (8.0%) | (1,217) | 5.6% | 7.8% | (220) | 4.2% | 6.7% | (246) | 12.3% | 11.6% | 71 |
| Strategic II | \$ 591.6 | (9.4%) | (8.0%) | (140) | 5.1% | 8.0% | (297) | - | - | - | - | - | - |
| Taiyo Fund (Public) | \$ 0.5 | - | - | - | - | - | - | - | - | - | - | - | - |
| Tobam Anti-Benchmark | \$ 0.1 | - | - | - | - | - | - | - | - | - | - | - | - |
| Tobam Ventures | \$ 6.4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Wellington | \$ 2,516.2 | (8.7%) | (9.4%) | 73 | 6.7% | 7.1% | (35) | - | - | - | - | - | - |
| Total Public Equity | \$ 160,111.1 | (8.9%) | (8.6%) | (34) | 7.4% | 7.4% | 1 | 4.8% | 4.9% | (3) | 10.4% | 10.4% | (1) |

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| Partnership ¹ | Ending Market Value (mil) | 1-Yr | 3-Yr | 5-Yr | 10-Yr |
|-------------------------------------|---------------------------|------------|------------|------------|------------|
| | | Net Return | Net Return | Net Return | Net Return |
| AACP AP Investors | \$ 1.0 | 0.5% | 31.2% | 20.0% | 11.0% |
| AACP China Growth | \$ 2.3 | -48.3% | -15.8% | -8.7% | 0.4% |
| AACP China Venture Invest | \$ 5.2 | 10.0% | 3.5% | 12.6% | 7.6% |
| AACP India A | \$ 0.2 | -47.4% | -50.0% | -11.8% | -6.5% |
| AACP India B | \$ 9.2 | 36.8% | 12.8% | 8.8% | 11.0% |
| AACP India C | \$ 8.1 | -9.1% | -18.9% | 10.0% | - |
| Aberdare Ventures IV LP | \$ 27.9 | -35.7% | -12.8% | -7.6% | - |
| Advent International GPE V D | \$ 4.9 | -10.3% | 11.1% | 1.4% | NM |
| Advent International GPE VI A | \$ 127.2 | 17.5% | 14.5% | 14.8% | 13.7% |
| Advent International GPE VII C LP | \$ 488.1 | 23.8% | 28.2% | - | - |
| Advent International GPE VIII | \$ 376.4 | 15.0% | - | - | - |
| Advent Latin American PEF III | \$ 5.7 | 0.1% | 5.6% | -1.8% | 0.2% |
| Advent Latin American Private | \$ 39.3 | -32.5% | -1.8% | -7.2% | 2.7% |
| Advent Latin American Private | \$ 70.1 | -15.2% | 3.2% | 2.8% | - |
| AfFinity Asia Pacific Fund III | \$ 31.6 | -14.1% | -9.5% | -6.1% | 0.8% |
| Aisling Capital II | \$ 6.3 | 345.9% | 55.4% | 27.8% | - |
| Aisling Capital III | \$ 55.6 | 98.0% | 51.1% | 45.3% | 9.9% |
| AP Alternative Assets LP | \$ 1.3 | -46.2% | -6.1% | 0.0% | 37.3% |
| Apollo Co Investors (MHE), LP | \$ 38.5 | -35.4% | -20.7% | - | 0.0% |
| Apollo Credit Opport Fund I LP | \$ 30.6 | 20.1% | 14.4% | 8.8% | - |
| Apollo Euro Principal Finance | \$ 0.6 | -12.5% | -13.4% | 10.9% | 14.6% |
| Apollo Global Management | \$ 493.3 | -4.4% | - | - | - |
| Apollo Investment Fund IV | \$ 0.2 | -19.6% | -39.2% | -30.2% | -18.5% |
| Apollo Investment Fund V | \$ 3.8 | 2.3% | -11.6% | -36.7% | -20.5% |
| Apollo Investment Fund VI | \$ 71.6 | -1.7% | -1.3% | -1.3% | 9.1% |
| Apollo Investment Fund VII LP | \$ 167.4 | 2.5% | 1.1% | 6.3% | 17.5% |
| Apollo Investment Fund VIII | \$ 465.7 | 10.5% | 15.7% | 4.5% | - |
| Apollo SVF Mgmt L P | \$ 214.0 | -3.3% | -4.6% | -4.1% | 3.3% |
| Arclight Energy Partners Fund IV | \$ 19.3 | 18.8% | 35.2% | 39.7% | 22.5% |
| Ares Corp Opportunity Fund II | \$ 14.4 | -6.7% | -4.2% | 2.1% | 11.0% |
| Ares Corp Opportunity Fund V L.P. | \$ 173.3 | 1.8% | - | - | - |
| Ares Corporate Opportunity Fund III | \$ 310.0 | 0.0% | 20.8% | 19.1% | 19.8% |
| Ares Corporate Opportunity Fund LP | \$ 6.0 | -7.8% | -0.8% | 4.5% | 2.2% |
| Asia Alternatives Capital | \$ 11.2 | -24.0% | -7.5% | 5.8% | 8.3% |
| Asia Alternatives Capital II | \$ 68.2 | 34.0% | 14.1% | 24.5% | 16.1% |
| Athene Holding LTD Class A | \$ 359.2 | -57.2% | - | - | - |
| Avatar International Investors LP | \$ 30.5 | -15.4% | - | - | - |
| Avatar NA Investors LP | \$ 7.4 | 4.1% | - | - | - |

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| Partnership ¹ | Ending Market Value (mil) | 1-Yr | 3-Yr | 5-Yr | 10-Yr |
|--|---------------------------|------------|------------|------------|------------|
| | | Net Return | Net Return | Net Return | Net Return |
| Avenue Special Situations Fund VI (A) LP | \$ 11.1 | 11.8% | -5.4% | -3.3% | - |
| Banc of America Cal Comm | \$ 13.8 | -3.3% | -8.7% | -1.1% | -0.5% |
| Baring Vostok Priv EQ Fund IV | \$ 48.2 | 3.7% | 23.7% | -1.1% | 6.1% |
| BDC III C LP (Cash) | \$ 69.7 | - | - | - | - |
| Birch Hill Equity Partners III LP | \$ 29.5 | 5.3% | 28.4% | 24.5% | 14.8% |
| Birch Hill Equity Partners IV LP | \$ 118.5 | 21.1% | 19.5% | 15.2% | - |
| Blackstone Capital PRTS VI LP | \$ 483.6 | 28.9% | 18.7% | 17.1% | - |
| Blackstone Communications I | \$ 0.9 | -3.0% | 19.7% | 21.3% | 6.8% |
| Blackstone First Eagle | \$ 91.0 | 34.5% | 20.6% | - | - |
| Blackstone GST | \$ 297.5 | 80.3% | 43.8% | - | - |
| Blackstone Mgmt Partners IV | \$ 20.1 | 17.4% | 15.3% | 8.7% | 13.7% |
| Blackstone Mgmt Partners V | \$ 51.1 | 8.5% | 9.8% | 13.8% | 11.1% |
| Blackstone Tactical Opportunity | \$ 7.8 | - | - | - | - |
| Blackstone Tactical Opportunity Fund II | \$ 409.3 | 13.9% | 18.7% | - | - |
| Blackstone Tactical Opportunity Fund | \$ 101.7 | 0.4% | 5.1% | - | - |
| Blackstone Tactical Opportunity LP | \$ 547.0 | 17.0% | 11.8% | 13.1% | - |
| Blackstone TOF | \$ 53.1 | -13.5% | 19.0% | - | - |
| Bridgepoint Europe II C LP | \$ 0.3 | -20.3% | -37.1% | - | - |
| Bridgepoint Europe III C LP | \$ 8.0 | 6.8% | 8.7% | - | - |
| Bridgepoint Europe III D | \$ 47.4 | 8.5% | 7.9% | 5.6% | 3.2% |
| Bridgepoint Europe IV B LP | \$ 54.1 | 2.8% | 22.0% | - | - |
| Bridgepoint Europe IV D | \$ 205.2 | 2.8% | 17.7% | - | - |
| Bridgepoint Europe V LP | \$ 385.5 | 12.7% | - | - | - |
| California Asia Investors LP | \$ 448.2 | 28.9% | 11.1% | 31.2% | 26.3% |
| California EM Ventures II LLC | \$ 58.4 | -2.0% | 3.8% | 8.0% | 4.4% |
| California EM Ventures IV LLC | \$ 197.0 | 10.7% | 7.1% | 12.5% | 11.8% |
| California Emerging Ventures III LLC | \$ 70.0 | 18.9% | 6.6% | 10.1% | 7.4% |
| California Emerging Ventures LLC | \$ 6.3 | -24.4% | -26.3% | -23.1% | -12.4% |
| California Mezz Investment Fund LP | \$ 43.1 | 0.4% | - | - | - |
| Capital Link Fund I | \$ 184.9 | 3.4% | 0.4% | 3.7% | 7.4% |
| Capital Link Fund II | \$ 208.1 | 26.9% | 18.1% | 18.6% | 10.8% |
| Carlyle Acosta Co-Investment LP | \$ 50.0 | -37.5% | -18.6% | - | - |
| Carlyle Asia Growth Partners III | \$ 2.0 | -41.8% | -11.9% | 0.2% | - |
| Carlyle Asia Growth Partners IV | \$ 41.3 | -25.2% | -7.8% | 0.2% | - |
| Carlyle Asia Partners GP II | \$ 1.5 | 527.4% | 103.3% | 56.8% | 34.2% |
| Carlyle Asia Partners III | \$ 42.4 | -9.2% | 5.4% | 12.0% | 7.6% |
| Carlyle Asia Partners V | \$ 20.6 | - | - | - | - |
| Carlyle Europe Partners II | \$ 0.9 | 10.9% | NM | NM | NM |
| Carlyle Europe Partners III LP | \$ 40.9 | 117.7% | 42.9% | 38.1% | 19.5% |

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|--|---------------------------|------------|------------|------------|------------|
| | | Net Return | Net Return | Net Return | Net Return |
| Carlyle Europe Tech Partners II | \$ 13.7 | 22.7% | 65.9% | 50.8% | 26.0% |
| Carlyle Global Fin Serv Partners | \$ 6.9 | 355.3% | 88.3% | 58.7% | -31.2% |
| Carlyle Havasu Co-Investment LP | \$ 65.0 | -21.8% | - | - | - |
| Carlyle Japan Partners II | \$ 4.3 | -36.4% | 5.8% | 7.9% | 0.7% |
| Carlyle Mexico Partners | \$ 1.1 | -20.0% | 11.1% | 7.8% | 1.5% |
| Carlyle Partners IV, L.P. | \$ 8.5 | 20.5% | -0.7% | 9.9% | 17.6% |
| Carlyle Partners V | \$ 143.4 | 25.1% | 21.1% | 19.5% | 16.8% |
| Carlyle Partners VI L.P. | \$ 510.3 | 14.8% | 17.2% | 9.4% | - |
| Carlyle Partners VII L.P. | \$ 19.0 | - | - | - | - |
| Carlyle Realty III LP | \$ 23.2 | 3.2% | 34.0% | 31.3% | 16.9% |
| Carlyle Riverstone Global Energy + Power | \$ 0.1 | -48.6% | -60.3% | -53.4% | -32.7% |
| Carlyle Strategic Partners II | \$ 1.9 | 11.7% | 11.9% | 5.9% | 11.1% |
| Carlyle Strategic Partners IV | \$ 37.0 | -0.2% | - | - | - |
| Carlyle US Equity Opportunity | \$ 105.4 | 6.1% | - | - | - |
| Carlyle Venture Partners II LP | \$ 10.9 | 19.1% | 2.6% | 27.0% | 6.1% |
| Carlyle Venture Partners III | \$ 1.4 | 34.1% | 15.1% | 14.3% | 11.0% |
| Carlyle/River Renew+Alt Energy II | \$ 134.4 | 1.5% | 8.2% | 1.1% | 2.4% |
| Carlyle/Riverstone Glb E+P IV | \$ 245.3 | 13.7% | 2.3% | -4.0% | 4.3% |
| Carlyle/Riverstone Global | \$ 21.5 | 74.7% | 19.2% | 1.3% | 5.5% |
| CDH Fund V,LP | \$ 212.1 | 12.6% | 20.5% | - | - |
| Centerbridge Cap Partners III | \$ 78.8 | 13.9% | 13.3% | - | - |
| Centinela Investment Partners | \$ 2.4 | 13.0% | - | - | - |
| Central Valley Fund II SBIC LP LP | \$ 9.0 | 12.1% | 14.0% | 16.5% | - |
| Cerberus Cal II Partners LP | \$ 283.1 | -9.5% | - | - | - |
| Cerberus CP Partners LP | \$ 673.3 | 6.8% | 5.1% | 14.4% | - |
| Cerberus Institutional Partner LP | \$ 313.9 | 5.0% | 3.9% | 10.4% | - |
| CHK Mid Con Co-Investment Vehicle | \$ 8.1 | -16.0% | -37.8% | -25.7% | - |
| CHK Mid Con royalty LP | \$ 1.7 | -15.3% | -37.0% | - | - |
| Clarus Lifesciences I LP | \$ 10.5 | 12.5% | 13.8% | 5.0% | 7.3% |
| Clarus Lifesciences II LP | \$ 34.6 | -15.7% | -1.3% | 14.9% | NM |
| Clayton Dubilier + Rice Fund X (Cash) | \$ 42.5 | - | - | - | - |
| Clearlake Cap Partners IV LP | \$ 56.5 | 23.5% | - | - | - |
| Clearlake Capital Partners III LP | \$ 57.7 | 67.5% | 65.3% | 49.0% | - |
| Clearlake Capital Partners V (Cash) | \$ 35.1 | - | - | 0.0% | - |
| Clearlake Opportunity Partners (P) LP | \$ 35.5 | 20.7% | - | 0.0% | - |
| Clearwater Cap Partners Fund III | \$ 45.7 | -4.4% | -4.4% | -2.4% | 3.7% |
| Clearwater Capital Partners | \$ 2.7 | -5.8% | -7.3% | -4.2% | 0.7% |
| Coinvest Hamlet Holdings B LP | \$ 10.4 | -14.4% | 12.2% | 6.0% | - |
| Coller International Partners | \$ 39.8 | 9.2% | -5.0% | -5.2% | 6.2% |

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| | | Net Return | Net Return | Net Return | Net Return |
| Corporate Partners LP | \$ 1.8 | -51.3% | -35.4% | -33.2% | -5.7% |
| Craton Equity Investors I L.P | \$ 0.5 | -90.3% | -62.6% | -51.7% | -33.4% |
| CVC Capital Partners VI | \$ 528.3 | - | - | - | - |
| CVC Capital Partners VII | \$ 96.9 | - | - | - | - |
| CVC Compounding Capital | \$ 855.1 | 13.0% | - | - | - |
| CVC CREDIT Strategic Inv A LP | \$ 73.6 | 6.8% | 16.6% | - | - |
| CVC EURO Equity Partners III | \$ 14.3 | 21.7% | 9.3% | 28.6% | - |
| CVC European Equity Partners IV(B)LP | \$ 0.3 | -18.4% | 14.8% | 9.2% | 14.2% |
| CVC European Equity Tandom Fund B | \$ 4.3 | -3.3% | 11.9% | 3.2% | 5.4% |
| CVC European Equity V LP | \$ 171.8 | 86.8% | 66.0% | 43.7% | - |
| EM Alternative Investments | \$ 50.4 | -7.9% | 2.9% | 4.4% | 4.5% |
| Essex W Health Ventures VIII | \$ 66.6 | -14.0% | - | - | - |
| First Reserve Fund XI LP | \$ 40.6 | 50.8% | -3.1% | -24.8% | -11.4% |
| First Reserve Fund XII | \$ 63.6 | -13.6% | -18.6% | -19.6% | -10.9% |
| First Reserve Fund XIII, LP | \$ 215.4 | 29.7% | 6.1% | - | - |
| Foundation Radiology | \$ 15.2 | - | - | - | - |
| Francisco Partners | \$ 0.3 | 10.2% | -14.9% | -9.1% | -4.9% |
| Francisco Partners II LP | \$ 29.6 | -15.6% | 0.7% | 1.2% | 6.6% |
| Francisco Partners III LP | \$ 80.1 | 38.5% | 33.7% | 27.9% | - |
| Grandval | \$ 5.0 | - | - | - | - |
| GCM Grosvenor DEM II LP | \$ 119.8 | 11.5% | 0.5% | - | - |
| GCM Grosvenor DEM LP | \$ 67.2 | 10.3% | 8.2% | 6.6% | - |
| Generation Capital Partners LP | \$ 0.4 | 28.3% | 6.4% | 3.5% | -12.5% |
| Golden State Investment Fund | \$ 118.8 | 5.3% | 8.0% | 13.8% | 9.4% |
| Green Equity Investors IV | \$ 6.8 | -6.3% | 28.8% | 17.5% | 18.5% |
| Green Equity Investors V LP | \$ 261.5 | 51.0% | 29.8% | 24.5% | 23.8% |
| GSO Cap Solutions Fund II LP | \$ 163.9 | 5.3% | 8.8% | - | - |
| GSO Capital Opportunity | \$ 2.1 | -25.2% | - | - | - |
| GSO Capital Opportunity Fund II L.P. | \$ 100.6 | 11.8% | 8.0% | 11.3% | - |
| GSO Capital Solutions,LP | \$ 22.5 | 10.3% | 0.2% | 2.7% | - |
| GSO Energy Partners C II | \$ 180.3 | 9.6% | - | 0.0% | - |
| GSO Energy Partners C LP | \$ 285.8 | 2.3% | -0.2% | 1.7% | - |
| H + F Capital Partners VIII LP | \$ 425.6 | 15.1% | - | - | - |
| H + F Kronos LP | \$ 116.1 | - | - | - | - |
| H + F Hockey Partners LP | \$ 107.8 | 49.9% | 38.8% | 28.4% | - |
| Hellman + Friedman Cap PAR VI | \$ 42.5 | -3.4% | 13.5% | 30.6% | 21.0% |
| Hellman + Friedman Cap PART V | \$ 0.1 | 23.0% | 15.0% | 11.5% | 16.1% |
| Hellman + Friedman VII L.P. | \$ 403.1 | 31.8% | 36.6% | 31.2% | - |
| ICV Partners II LP | \$ 0.7 | -75.8% | -18.8% | -4.6% | 4.1% |

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Public Employees Retirement Fund (PERF) Portfolio & Partnership Report

As of December 31, 2018



Private Equity Ending Market Value & Performance Summary (By Partnership)

| Partnership ¹ | Ending Market Value (mil) | 1-Yr | 3-Yr | 5-Yr | 10-Yr |
|------------------------------------|---------------------------|------------|------------|------------|------------|
| | | Net Return | Net Return | Net Return | Net Return |
| Insight Venture Partners IX LP | \$ 151.7 | 45.3% | 24.2% | - | - |
| Insight Venture Partners V | \$ 5.1 | 7.1% | 31.3% | 28.2% | - |
| Insight Venture Partners VI | \$ 16.0 | 6.0% | 16.6% | 18.9% | - |
| Insight Venture Partners X LP | \$ 104.4 | - | - | - | - |
| Insight VP Growth BO Co-Invest B | \$ 641.0 | 61.5% | 36.9% | - | - |
| Ithaca LP | \$ 137.4 | 45.3% | 22.4% | - | - |
| Kholsa Ventures III | \$ 41.3 | 35.3% | 12.4% | 10.7% | - |
| Kholsa Ventures Seed, LP | \$ 32.3 | -18.7% | -28.5% | -11.9% | - |
| KKR 2006 | \$ 123.7 | 34.0% | 18.9% | 17.1% | 13.7% |
| KKR AsiaN Fund | \$ 20.7 | - | - | - | - |
| KKR AsiaN Fund II | \$ 527.0 | 3.5% | 14.3% | - | - |
| KKR European Fund II | \$ 0.1 | -92.2% | -64.2% | -45.5% | -22.2% |
| KKR European Fund III | \$ 61.1 | 31.1% | 22.8% | 18.4% | 1.7% |
| KKR Millennium Fund | \$ 0.3 | 99.0% | 20.6% | 20.9% | 15.7% |
| Kline Hawkes Pacific LP | \$ 0.1 | -8.5% | -3.6% | 2.2% | - |
| KPS Special Situations Fund III | \$ 38.8 | 86.7% | 35.1% | 30.9% | 26.2% |
| Lackstone Capital Partners VII | \$ 255.3 | 28.1% | - | - | - |
| Lime Rock Partners IV | \$ 0.1 | 735.4% | 140.9% | 83.8% | 45.8% |
| Lime Rock Partners IV | \$ 88.2 | - | - | - | - |
| Lime Rock Partners V | \$ 26.7 | 0.7% | 4.3% | -2.9% | -1.2% |
| Lindsay Goldberg IV LP | \$ 155.5 | 31.9% | 44.3% | - | - |
| Lion Capital Fund II L.P. | \$ 11.1 | -56.7% | -11.5% | -14.4% | -9.4% |
| Madison Dearborn Cap Partner IV | \$ 6.7 | - | - | - | - |
| Madison Dearborn Cap Partner V | \$ 7.7 | 217.7% | 54.9% | 36.8% | 21.7% |
| MHR Institutional ADV II LLC | \$ 20.5 | -3.6% | -3.4% | -5.7% | 3.0% |
| MHR Institutional INV III | \$ 145.3 | -11.5% | 0.9% | -3.4% | 6.7% |
| New Mountain Partners II | \$ 2.8 | -18.7% | -11.4% | 39.7% | 34.7% |
| New Mountain Partners III | \$ 267.8 | 13.4% | 24.0% | 20.9% | 14.2% |
| Newbridge Asia IV LP | \$ 4.7 | 124.5% | 24.8% | 4.3% | 12.0% |
| Oak Hill Capital Partners II | \$ 2.8 | -1.9% | - | - | - |
| Oak Hill CR Partners III LTD | \$ 159.9 | 5.2% | 9.3% | 13.5% | 9.3% |
| Oaktree Opportunity Fund VIII B LP | \$ 113.6 | 19.9% | 10.0% | 6.7% | - |
| Onex Partners IV LP | \$ 276.0 | 2.8% | 3.9% | - | - |
| Onex Partners V LP | \$ 7.6 | - | - | - | - |
| Onex SIG Co-Investment LP | \$ 157.1 | 41.9% | 24.1% | - | - |
| PAG Asia I LP | \$ 102.4 | 40.3% | 30.1% | 26.8% | - |
| PAGAC Drone Holdings I LP | \$ 67.1 | 28.2% | 10.2% | - | - |
| Palladium Equity Partners III | \$ 27.0 | -11.9% | -1.3% | 4.4% | 14.3% |
| Palladium Equity Partners V | \$ 13.6 | - | - | - | - |

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Public Employees Retirement Fund (PERF) Portfolio & Partnership Report



As of December 31, 2018

Private Equity Ending Market Value & Performance Summary (By Partnership)

| Partnership ¹ | Ending Market Value (mil) | 1-Yr | 3-Yr | 5-Yr | 10-Yr |
|---|---------------------------|------------|------------|------------|------------|
| | | Net Return | Net Return | Net Return | Net Return |
| Patria Brazilian PE FD V LP | \$ 40.3 | 4.3% | - | - | - |
| PCG Clean Energy + Technology | \$ 81.6 | -35.7% | -20.0% | -13.9% | -12.2% |
| PCG Corporate Partners II | \$ 113.6 | 6.8% | 16.8% | 3.2% | 8.7% |
| PCG Int'l Emerging Market | \$ 167.3 | -1.5% | 2.6% | 5.9% | 7.2% |
| PCGI Global Opportunity Fund 2 | \$ 485.4 | 16.9% | 10.3% | 10.5% | - |
| Permira Europe III LP 2 | \$ 0.6 | 5.6% | -49.4% | -33.1% | -18.3% |
| Permira Growth Opportunities | \$ 1.6 | - | - | - | - |
| Permira IV | \$ 35.0 | 9.2% | 24.6% | 17.2% | - |
| Permira V LP 2 | \$ 296.9 | 31.5% | 22.7% | - | - |
| Permira VI L.P.1 | \$ 298.1 | 20.2% | - | - | - |
| Polish Enterprise Fund VI | \$ 13.9 | 1.7% | 94.3% | 56.6% | 23.7% |
| Providence Equity Partners V LP | \$ 3.9 | -62.2% | -30.1% | -15.9% | -6.9% |
| Providence Equity VI | \$ 99.1 | -20.4% | -3.4% | 4.6% | 5.2% |
| Resolute Fund II | \$ 80.5 | 3.2% | 3.0% | 6.1% | 7.8% |
| RFG Private Equity | \$ 0.4 | 20.0% | 11.5% | 5.1% | 3.1% |
| Riverstone Fieldwood Partners | \$ 5.7 | -77.0% | -52.6% | -36.1% | - |
| Riverstone Global Energy + Power V | \$ 330.1 | 9.5% | 6.8% | 6.2% | - |
| Riverstone Global Energy Power VI | \$ 376.6 | 3.6% | - | - | - |
| Riverwood Cap Partners LP | \$ 50.8 | 12.6% | 10.2% | 16.4% | - |
| Sacramento Partners | \$ 164.3 | 32.3% | 21.2% | 19.3% | 12.1% |
| SAIF Partners III | \$ 170.6 | 23.2% | 16.2% | 19.3% | - |
| SAIF Partners IV, LP | \$ 161.7 | 3.8% | 4.9% | 9.7% | - |
| Sankaty Managed (CalPERS) | \$ 306.6 | 8.7% | 7.7% | 0.0% | - |
| Silver Lake Partners II | \$ 2.0 | 49.4% | 4.8% | 17.0% | 14.9% |
| Silver Lake Partners III | \$ 290.8 | 57.4% | 48.3% | 35.1% | 25.0% |
| Silver Lake Partners IV, L.P. | \$ 421.2 | 27.5% | 24.4% | - | - |
| Silver Lake Partners V, L.P. | \$ 90.7 | - | - | - | - |
| Silver Lake Tech Investors IV | \$ 115.3 | 33.7% | 32.1% | - | - |
| Silver Lake Technology Investors (Cash) | \$ 37.5 | 0.0% | - | - | - |
| Siris Partners III LP | \$ 44.2 | 32.6% | 10.9% | - | - |
| SL SPV 1, L.P. | \$ 89.2 | 10.7% | - | - | - |
| T VI Co Investment A LP | \$ 84.0 | 35.1% | 33.3% | - | - |
| Tailwind Capital Partners LP | \$ 5.2 | 2.7% | 4.4% | 7.8% | 10.4% |
| Tailwind Cap Partners II, LP | \$ 129.5 | 0.0% | 13.1% | - | - |
| Tailwind Cap Partners III, LP | \$ 22.4 | - | - | - | - |
| TCP II Co-Investment B LP | \$ 51.3 | -4.0% | 16.0% | - | - |
| The Rise Fund (A), L.P. | \$ 29.8 | - | - | - | - |
| The Second European Equity | \$ 1.4 | -18.4% | -36.0% | -31.1% | -21.2% |

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Public Employees Retirement Fund (PERF) Portfolio & Partnership Report



As of December 31, 2018

Private Equity Ending Market Value & Performance Summary (By Partnership)

| Partnership ¹ | Ending Market Value (mil) | 1-Yr | 3-Yr | 5-Yr | 10-Yr |
|---|---------------------------|--------------|--------------|--------------|--------------|
| | | Net Return | Net Return | Net Return | Net Return |
| THL Managers VI | \$ 72.7 | 6.6% | 6.2% | 10.9% | 7.6% |
| Towerbrook Investors II | \$ 16.7 | -15.3% | -2.2% | 5.8% | 10.2% |
| Towerbrook Investors III L.P. | \$ 34.0 | 1.0% | -2.3% | 2.6% | 7.9% |
| Towerbrook Investors IV LP | \$ 262.4 | 16.3% | 28.4% | - | - |
| Towerbrook Structured Opp Fund | \$ 99.8 | 9.0% | - | - | - |
| TPG Asia V | \$ 90.6 | 3.3% | 21.4% | 16.0% | 9.3% |
| TPG Asia VII (A) | \$ 61.5 | - | - | - | - |
| TPG BioTechnology Partner | \$ 17.5 | 51.5% | 1.2% | -12.6% | - |
| TPG BioTechnology Partners III | \$ 51.6 | 36.4% | -8.3% | 0.5% | - |
| TPG Credit Strategies, L.P. | \$ 11.2 | -30.7% | -21.3% | -12.2% | -1.5% |
| TPG Growth IV, L.P. | \$ 16.2 | - | - | - | - |
| TPG Partners IV | \$ 8.9 | -15.8% | -7.6% | 0.7% | 8.4% |
| TPG Partners V | \$ 74.8 | -4.2% | 3.0% | 10.9% | 7.3% |
| TPG Partners VI | \$ 287.0 | 7.5% | 6.8% | 11.8% | 3.6% |
| TPG Star | \$ 52.6 | -20.4% | -7.1% | -0.3% | 4.7% |
| TPG Venture Holding | \$ 45.8 | 5.7% | 1.5% | 30.9% | 14.6% |
| Trident VI, LP | \$ 266.2 | 34.7% | 22.6% | - | - |
| Trident VII, L.P. | \$ 188.2 | - | - | - | - |
| Triton Fund IV L.P. LP | \$ 65.8 | 19.8% | - | - | - |
| Valor Equity Partners IV, L.P. (Cash) | \$ 52.1 | - | - | - | - |
| Vantagepoint 2006 | \$ 25.0 | -33.1% | -15.3% | -17.8% | -12.6% |
| Vantagepoint CLEANTech Partner | \$ 5.7 | -33.8% | -16.0% | -20.6% | -12.0% |
| Vicente Cap Partners Growth Equity Fund | \$ 35.4 | 1.1% | 3.5% | - | - |
| W Capital Partners II | \$ 11.1 | -6.7% | 1.1% | 0.2% | 6.8% |
| Wellspring (CalPERS) V LP | \$ 13.9 | -2.3% | 23.2% | - | - |
| Wellspring Capital Partners V | \$ 66.0 | -2.7% | 21.1% | 18.8% | - |
| Welsh Carson Anderson + Stowe | \$ 282.7 | 29.8% | 23.9% | - | - |
| Welsh Carson Anderson Stowe XI | \$ 46.3 | 8.0% | 8.9% | 12.2% | - |
| Wigmore Street Co-Investment | \$ 97.8 | 27.9% | 27.9% | - | - |
| Wigmore Street II(BDC III) LP | \$ 12.9 | - | - | - | - |
| WLR Recovery Fund II LP | \$ 0.4 | -45.5% | -10.0% | 4.2% | -5.7% |
| WLR Recovery Fund III | \$ 7.7 | -68.9% | -40.4% | -27.3% | -18.9% |
| WLR Recovery Fund IV | \$ 29.1 | -2.7% | 3.7% | 1.7% | 6.3% |
| Yucaipa American Alliance Fund | \$ 74.6 | 54.2% | 6.4% | -2.4% | 1.5% |
| Yucaipa American Alliance II | \$ 426.4 | 16.5% | 4.0% | 1.4% | 11.3% |
| Yucaipa Corp Initiative Fund | \$ 42.5 | 41.5% | 4.6% | -2.4% | -2.8% |
| Yucaipa Corp Initiatives II LP | \$ 55.1 | 7.8% | 5.2% | 6.0% | -6.5% |
| Other ² | \$ 53.3 | - | - | - | - |
| Total Private Equity | \$ 27,842.7 | 12.5% | 12.3% | 11.3% | 11.4% |

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² Other includes Cash, Unclassified & Distributed Stock.

Public Employees Retirement Fund (PERF) Portfolio & Partnership Report



As of December 31, 2018

Income Ending Market Value & Performance Summary (By Portfolio)

| Portfolio | Ending Market Value (mil) | 1-Yr | | | 3-Yr | | | 5-Yr | | | 10-Yr | | |
|------------------------------------|---------------------------|---------------|---------------|------------|-------------|-------------|------------|-------------|-------------|------------|-------------|-------------|------------|
| | | Net Return | BM Return | Excess Bps | Net Return | BM Return | Excess Bps | Net Return | BM Return | Excess Bps | Net Return | BM Return | Excess Bps |
| Alliance Bernstein | \$ 494.6 | (4.3%) | (3.9%) | (41) | 3.4% | 3.2% | 12 | (0.6%) | (0.8%) | 25 | 2.2% | 0.8% | 145 |
| Baring Asset Mgmt | \$ 298.6 | (1.9%) | (2.5%) | 61 | 2.8% | 2.8% | (5) | (0.6%) | (1.1%) | 44 | 1.4% | 0.7% | 77 |
| CalPERS Agency Mortgage | \$ 9,814.0 | 0.9% | 1.0% | (8) | 1.8% | 1.7% | 14 | 2.7% | 2.5% | 18 | - | - | - |
| CalPERS BB/B High Yield | \$ 113.2 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS BB/B High Yield FOF | \$ 8,453.7 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS Equitable CCMF | \$ 0.8 | 8.4% | 1.0% | 744 | 8.3% | 1.8% | 654 | 8.3% | 2.5% | 577 | 8.3% | 3.4% | 487 |
| CalPERS Governments | \$ 34,527.7 | (1.1%) | (1.2%) | 4 | 2.4% | 2.2% | 17 | 4.2% | 4.1% | 6 | - | - | - |
| CalPERS High Yield | \$ 49.3 | 13.9% | (2.3%) | 1,616 | 25.3% | 7.3% | 1,801 | 13.2% | 3.5% | 967 | 16.0% | 10.6% | 531 |
| CalPERS High Yield Bond Managers | \$ 1,597.4 | (1.4%) | (2.3%) | 90 | 7.4% | 7.3% | 14 | 4.4% | 3.5% | 94 | 11.4% | 10.6% | 80 |
| CalPERS High Yield Mortgage | \$ 341.5 | 4.7% | (2.3%) | 696 | 7.6% | 7.3% | 33 | 7.1% | 3.5% | 358 | 9.9% | 10.6% | (76) |
| CalPERS IFI Completion Fund | \$ 1,027.0 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS Int'l Dev Markets | \$ 1,301.2 | (2.8%) | (2.5%) | (30) | 3.1% | 3.0% | 10 | - | - | - | - | - | - |
| CalPERS Int'l Emerging Markets | \$ 186.8 | (9.9%) | (10.1%) | 20 | 4.8% | 4.0% | 76 | - | - | - | - | - | - |
| CalPERS Int'l Fixed Income | \$ 2,719.3 | (3.5%) | (3.9%) | 34 | 3.9% | 3.2% | 62 | (0.1%) | (0.8%) | 70 | - | - | - |
| CalPERS Investment Grade Corp | \$ 16,637.2 | (4.9%) | (5.5%) | 62 | 5.3% | 4.4% | 92 | 4.9% | 4.4% | 45 | 8.3% | 7.6% | 69 |
| CalPERS Long Duration Corp | \$ 287.3 | (6.9%) | (2.6%) | (430) | 2.8% | 2.5% | 31 | 2.1% | 3.5% | (147) | 8.9% | 6.3% | 258 |
| CalPERS Long Duration Mortgage | \$ 2,744.1 | (0.1%) | (1.6%) | 156 | 3.0% | 2.9% | 19 | 4.0% | 3.8% | 23 | 7.4% | 3.9% | 350 |
| CalPERS Member Home Loan Program | \$ 38.9 | 6.4% | 1.0% | 539 | 6.8% | 1.8% | 502 | 7.3% | 2.5% | 477 | 7.3% | 3.4% | 381 |
| CalPERS Non-Traditional High Yield | \$ 96.0 | 0.2% | (2.3%) | 245 | 12.2% | 7.3% | 494 | 16.6% | 3.5% | 1,306 | - | - | - |
| CalPERS Opportunistic | \$ 260.4 | - | - | - | - | - | - | - | - | - | - | - | - |
| CalPERS Passive Fallen Angels | \$ 52.7 | (5.2%) | (2.3%) | (297) | 10.4% | 7.3% | 314 | 6.4% | 3.5% | 296 | - | - | - |
| CalPERS Sovereign Bonds | \$ 2,373.9 | (2.3%) | (2.7%) | 39 | 4.4% | 3.9% | 48 | 4.9% | 4.6% | 27 | 5.9% | 5.2% | 73 |
| CalPERS Structured Mortgage | \$ 9,119.3 | 1.8% | 1.0% | 76 | 2.9% | 1.8% | 117 | 4.8% | 2.5% | 227 | 6.2% | 3.4% | 278 |
| Highland CLN - Longhorn A | \$ 10.8 | 5.2% | 1.1% | 410 | 1.3% | 5.0% | (373) | (0.0%) | 3.3% | (337) | 6.9% | 8.3% | (143) |
| Highland CLN - Longhorn B | \$ 63.1 | 6.5% | (2.3%) | 879 | 11.3% | 7.3% | 404 | 6.1% | 3.5% | 259 | 11.6% | 10.6% | 97 |
| Investec Asset Mgmt | \$ 163.4 | (10.8%) | (10.1%) | (66) | - | - | - | - | - | - | - | - | - |
| Neuberger Berman | \$ 180.8 | (11.7%) | (10.1%) | (163) | - | - | - | - | - | - | - | - | - |
| PIMCO | \$ 1,362.1 | (3.5%) | (3.9%) | 41 | 3.8% | 3.2% | 53 | 0.1% | (0.8%) | 91 | 3.0% | 0.8% | 224 |
| Total Income | \$ 94,315.2 | (1.8%) | (2.2%) | 35 | 3.5% | 2.8% | 72 | 3.7% | 3.2% | 51 | 6.2% | 4.5% | 171 |

Public Employees Retirement Fund (PERF) Portfolio & Partnership Report



As of December 31, 2018

Real Assets Ending Market Value & Performance Summary (By Partnership)

| Partnership ¹ | Ending Market Value (mil) | 1-Yr | 3-Yr | 5-Yr | 10-Yr |
|---|---------------------------|------------|------------|------------|------------|
| | | Net Return | Net Return | Net Return | Net Return |
| ARA Asia Dragon Fund II | \$ 53.1 | 6.6 % | 17.9 % | 9.2 % | NM |
| ARA China Long Term Hold | \$ 909.1 | -4.3 % | 5.9 % | 8.4 % | NM |
| Asia Pacific Property Fund SCSP | \$ 271.4 | 0.6 % | NM | NM | NM |
| BlackRock Europe Parallel Property Fund II L.P. | \$ 1.0 | -62.7 % | -15.6 % | -28.7 % | -20.4 % |
| Blackstone Property Europe Hedge | \$ 31.4 | NM | NM | NM | NM |
| Blackstone Property Partners Europe, L.P. | \$ 774.4 | NM | NM | NM | NM |
| CalEast Canada Limited Partnership | \$ 3.3 | -1.5 % | -7.3 % | -6.0 % | NM |
| CalEast Industrial Investors, LLC | \$ 16.0 | 3.9 % | 2.2 % | 2.1 % | NM |
| CalEast Solstice - Base | \$ 3,105.3 | 16.2 % | NM | NM | NM |
| CalEast Solstice - DT Land | \$ 241.1 | -6.6 % | NM | NM | NM |
| CalEast Solstice - DT Other | \$ 1,042.1 | -5.4 % | NM | NM | NM |
| CalSmart LLC (Canyon) | \$ 0.2 | -41.4 % | -21.1 % | -6.7 % | NM |
| CalWest - CalPERS | \$ 10.0 | -0.8 % | -7.5 % | -5.3 % | NM |
| Canyon Catalyst Fund II, LLC | \$ 371.4 | 11.5 % | NM | NM | NM |
| Canyon Catalyst Fund, LLC | \$ 0.2 | -1.9 % | 10.2 % | 14.9 % | NM |
| Canyon Johnson Urban Fund, III | \$ 0.3 | 2.0 % | -21.5 % | -8.0 % | 7.3 % |
| CIM Fund III, LP | \$ 343.1 | 7.2 % | 5.1 % | 7.9 % | -175.6 % |
| CIM Urban Real Estate Fund, LP | \$ 334.0 | -3.0 % | -7.3 % | -2.2 % | -2.2 % |
| CIM Urban REIT LLC | \$ 254.2 | 9.4 % | 4.0 % | 5.0 % | 5.4 % |
| FSP - Base | \$ 5,797.5 | 4.0 % | 9.0 % | 14.6 % | NM |
| GRI - Base | \$ 2,279.6 | 7.9 % | 8.1 % | 11.8 % | NM |
| GRI - DT 2012 and Beyond | \$ 17.7 | NM | NM | NM | NM |
| HC Green Development Fund LP | \$ 209.4 | -4.7 % | -2.7 % | -2.8 % | 4.5 % |
| HC NOP Holdings L.P. | \$ 0.3 | NM | NM | NM | NM |
| HCB Interests II LP | \$ 74.4 | -17.0 % | -2.0 % | 3.9 % | 6.2 % |
| HCB LTH | \$ 416.7 | -12.9 % | 4.8 % | -8.7 % | NM |
| HCC Interests LP | \$ 5.4 | -2.3 % | -27.9 % | -17.4 % | 43.7 % |
| HCM Holdings II LP | \$ 0.1 | 1,183.7 % | -146.6 % | -167.2 % | -25.8 % |
| HCR LTH Hedge | \$ 2.5 | NM | NM | NM | NM |
| HCR LTH LLC | \$ 352.7 | 4.6 % | 0.2 % | 1.4 % | NM |
| Hearthstone Housing Partners II, LLC | \$ 0.5 | 263.2 % | 92.6 % | 68.4 % | 24.7 % |
| Hines European Development Fund LP | \$ 7.3 | -0.5 % | -3.7 % | -198.7 % | -199.7 % |

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Public Employees Retirement Fund (PERF) Portfolio & Partnership Report

As of December 31, 2018



Real Assets Ending Market Value & Performance Summary (By Partnership)

| Partnership ¹ | Ending Market Value (mil) | 1-Yr | 3-Yr | 5-Yr | 10-Yr |
|---|---------------------------|-------------|-------------|-------------|-------------|
| | | Net Return | Net Return | Net Return | Net Return |
| IHP Investment Fund III, L.P. | \$ 293.0 | -2.4 % | -6.2 % | 3.5 % | -11.6 % |
| IMI - Base | \$ 6,487.9 | -5.9 % | 6.1 % | 14.0 % | NM |
| IMP Abaca | \$ 189.2 | NM | NM | NM | NM |
| IMP - Base | \$ 4,280.4 | 5.8 % | 7.1 % | 10.3 % | NM |
| IMP - DT 2012 and Beyond | \$ 406.6 | 12.8 % | 18.3 % | 17.8 % | NM |
| IMP - ICMI | \$ 605.6 | NM | NM | NM | NM |
| Institutional Logistics Partners, LLC | \$ 668.5 | 20.3 % | 14.8 % | 14.8 % | NM |
| KC 2011, LLC | \$ 150.8 | 80.5 % | 23.3 % | 16.2 % | NM |
| KSC Affordable Housing Investment Fund, LLC | \$ 70.4 | 0.7 % | 3.1 % | 4.7 % | 3.1 % |
| Land Management Company, LLC | \$ 425.3 | 12.5 % | 7.1 % | NM | NM |
| LaSalle Japan Logistics Fund II LP | \$ 0.2 | -18.9 % | 1.7 % | -10.4 % | -212.4 % |
| National Office Partners, LLC (CWP) | \$ 0.3 | 6.2 % | -3.2 % | 9.1 % | NM |
| ORA Multifamily Investments I, LLC | \$ 126.0 | 20.4 % | 16.6 % | 22.4 % | 35.1 % |
| ORA Residential Investments I, L.P. | \$ 134.7 | -5.9 % | 9.4 % | 17.1 % | 10.7 % |
| Pacific Multifamily Investors, LLC | \$ 1,211.0 | 12.8 % | 11.2 % | NM | NM |
| PLA Residential Fund I, LLC | \$ 0.5 | -6.8 % | -1.7 % | -1.0 % | 22.9 % |
| PLA Retail Fund I, LP | \$ 1.5 | -13.5 % | -21.1 % | -11.0 % | -3.5 % |
| Sacramento Venture - Base | \$ 43.9 | NM | NM | NM | NM |
| Sacramento Venture - DT | \$ 49.0 | NM | NM | NM | NM |
| SF Mission Street Partners, LLC | \$ 5.5 | NM | NM | NM | NM |
| Stockbridge Hollywood Park Co-Investors, LP | \$ 68.3 | 4.0 % | 9.1 % | 16.1 % | 9.4 % |
| Stockbridge Real Estate Fund II -B, LP | \$ 26.7 | 0.6 % | 4.8 % | 11.1 % | -18.5 % |
| TechCore, LLC | \$ 1,273.0 | 7.8 % | 11.2 % | 12.9 % | NM |
| Whitney Ranch Venture, LLC | \$ 47.6 | 6.8 % | -1.0 % | -0.5 % | NM |
| Xander Co-Investment | \$ 0.7 | -8.0 % | -17.5 % | -15.9 % | -20.7 % |
| Total Real Estate³ | \$ 33,890.3 | 4.0% | 6.2% | 9.4% | 1.2% |

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Public Employees Retirement Fund (PERF) Portfolio & Partnership Report

As of December 31, 2018



Real Assets Ending Market Value & Performance Summary (By Partnership)

| Partnership ¹ | Ending Market Value (mil) | 1-Yr | 3-Yr | 5-Yr | 10-Yr |
|---|---------------------------|--------------|--------------|--------------|--------------|
| | | Net Return | Net Return | Net Return | Net Return |
| Alinda Infrastructure Fund I, L.P. | \$ 0.3 | -15.1 % | -0.3 % | 5.8 % | 4.2 % |
| Alinda Infrastructure Fund II, L.P. | \$ 146.7 | -12.1 % | -3.9 % | 3.6 % | NM |
| Archmore International Infrastructure Fund II (B), L.P. | \$ 41.4 | -1.0 % | 2.4 % | NM | NM |
| Archmore International Infrastructure Fund II (C), L.P. | \$ 87.9 | -1.0 % | 2.4 % | NM | NM |
| CalPERS - Unitized Collateral Account | \$ 41.9 | 3.1 % | NM | NM | NM |
| Carlyle Infrastructure Partners, L.P. | \$ 5.2 | 1.6 % | 21.0 % | 13.0 % | 6.4 % |
| CIM Infrastructure Fund, L.P. | \$ 422.0 | 0.2 % | 0.8 % | 8.1 % | 21.6 % |
| Concession Investment Holdings, LLC | \$ 472.1 | 10.9 % | NM | NM | NM |
| Global Infrastructure Partners II, L.P. (GIP II) | \$ 298.8 | 16.3 % | 17.6 % | 19.7 % | NM |
| Golden Reef Infrastructure Trust | \$ 452.5 | 2.6 % | -530.3 % | NM | NM |
| Golden Reef Infrastructure Trust Hedge | \$ 29.5 | -281.1 % | NM | NM | NM |
| Harbert Gulf Pacific Power, LLC (HGPP) | \$ 1,081.3 | 13.0 % | 9.8 % | 7.5 % | NM |
| Harbert Power Fund V, L.P. (HPF V) | \$ 88.6 | 19.2 % | 12.4 % | NM | NM |
| Ivy Investment Vehicle LDC (SWPM) | \$ 747.7 | 7.3 % | 32.5 % | 35.4 % | NM |
| Ivy Investment Vehicle Hedge | \$ 52.9 | 243.6 % | 145.4 % | -256.1 % | NM |
| Neptune Regional Transmission System, LLC | \$ 266.0 | 29.8 % | 13.7 % | 11.0 % | NM |
| North Haven Infrastructure Partners II LP | \$ 243.6 | 10.7 % | 12.3 % | NM | NM |
| Total Infrastructure³ | \$ 4,641.0 | 11.3% | 12.6% | 14.3% | 15.2% |

| Partnership ¹ | Ending Market Value (mil) | 1-Yr | 3-Yr | 5-Yr | 10-Yr |
|-------------------------------------|---------------------------|---------------|--------------|--------------|---------------|
| | | Net Return | Net Return | Net Return | Net Return |
| Lincoln Timber L.P. | \$ 909.5 | -9.6 % | -8.6 % | -4.1 % | -3.9 % |
| Southern Diversified | \$ 2.2 | 12.1 % | NM | NM | NM |
| Sylvanus LLC | \$ 420.3 | -5.7 % | 5.0 % | 1.5 % | 5.6 % |
| Total Forestland³ | \$ 1,322.9 | -11.1% | -6.7% | -3.4% | (2.4%) |

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Public Employees Retirement Fund (PERF) Portfolio & Partnership Report



As of December 31, 2018

Inflation Ending Market Value & Performance Summary (By Portfolio)

| Portfolio | Ending Market Value (mil) | 1-Yr | | | 3-Yr | | | 5-Yr | | | 10-Yr | | |
|----------------------------|---------------------------|---------------|---------------|------------|-------------|-------------|------------|---------------|---------------|------------|-------------|-------------|------------|
| | | Net Return | BM Return | Excess Bps | Net Return | BM Return | Excess Bps | Net Return | BM Return | Excess Bps | Net Return | BM Return | Excess Bps |
| CalPERS Commodities Active | \$ 1,037.7 | (14.0%) | (13.8%) | (14) | 0.5% | 0.5% | 3 | (14.3%) | (14.5%) | 22 | (5.7%) | (5.8%) | 13 |
| CalPERS Commodities Pass. | \$ 137.2 | (14.9%) | (13.8%) | (113) | (0.0%) | 0.5% | (50) | - | - | - | - | - | - |
| CalPERS Core ILB | \$ 5,238.2 | (2.6%) | (3.0%) | 44 | 2.6% | 2.5% | 11 | 1.5% | 1.2% | 31 | 3.8% | 3.6% | 28 |
| CalPERS Tact. Commodities | \$ 503.4 | (15.5%) | (13.8%) | (171) | (0.3%) | 0.5% | (76) | (14.9%) | (14.5%) | (36) | - | - | - |
| CalPERS Tactical TIPS | \$ 581.6 | (1.3%) | (1.3%) | (5) | 2.0% | 2.1% | (16) | 1.6% | 1.7% | (12) | - | - | - |
| Total Inflation | \$ 7,498.1 | (5.3%) | (5.4%) | 13 | 2.3% | 2.2% | 10 | (2.1%) | (2.6%) | 57 | 2.0% | 1.3% | 65 |

Liquidity Ending Market Value & Performance Summary (By Portfolio)

| Portfolio | Ending Market Value (mil) | 1-Yr | | | 3-Yr | | | 5-Yr | | | 10-Yr | | |
|------------------------|---------------------------|-------------|-------------|------------|-------------|-------------|------------|-------------|-------------|------------|-------------|-------------|-------------|
| | | Net Return | BM Return | Excess Bps | Net Return | BM Return | Excess Bps | Net Return | BM Return | Excess Bps | Net Return | BM Return | Excess Bps |
| CalPERS Short Term | \$ 3,838.5 | 2.2% | 1.8% | 48 | 1.3% | 1.1% | 26 | 0.9% | 0.7% | 19 | 0.6% | 0.4% | 12 |
| Total Liquidity | \$ 3,838.5 | 2.2% | 1.7% | 47 | 1.3% | 1.0% | 33 | 1.2% | 1.2% | (6) | 1.0% | 1.1% | (10) |

Public Employees Retirement Fund (PERF) Portfolio & Partnership Report



As of December 31, 2018

Trust Level Ending Market Value & Performance Summary (By Portfolio)

| Portfolio | Ending Market Value (mil) | 1-Yr | | | 3-Yr | | | 5-Yr | | | 10-Yr | | |
|-------------------------------|---------------------------|------------|-----------|------------|------------|-----------|------------|------------|-----------|------------|------------|-----------|------------|
| | | Net Return | BM Return | Excess Bps | Net Return | BM Return | Excess Bps | Net Return | BM Return | Excess Bps | Net Return | BM Return | Excess Bps |
| Absolute Return Strategies | \$ 234.3 | (4.0%) | 6.9% | (1,099) | (1.5%) | 6.1% | (764) | 0.4% | 5.7% | (532) | 3.3% | 5.6% | (237) |
| AQR MAC Fund LP | \$ 645.2 | (16.9%) | 7.5% | (2,444) | 3.7% | 7.5% | (378) | 4.4% | 7.5% | (308) | - | - | - |
| CalPERS GE Vol. Cap. | \$ 9.1 | (16.0%) | (4.4%) | (1,164) | 6.1% | 9.3% | (312) | - | - | - | - | - | - |
| CalPERS Int Hldg Fixed Income | \$ 0.9 | NM | NM | - | NM | NM | - | - | - | - | - | - | - |
| CalPERS MHLP | \$ 5.4 | 3.1% | 1.0% | 211 | 4.4% | 1.8% | 267 | 4.9% | 2.5% | 234 | - | - | - |
| CalPERS TLPM Completion | \$ 936.0 | (6.7%) | (2.7%) | (392) | - | - | - | - | - | - | - | - | - |
| Fidelity MAC | \$ 993.9 | - | - | - | - | - | - | - | - | - | - | - | - |
| Perella Weinberg MAC | \$ 475.2 | - | - | - | - | - | - | - | - | - | - | - | - |
| Standard Life MAC | \$ 280.3 | (10.7%) | (1.8%) | (895) | (3.4%) | 4.3% | (767) | (0.1%) | 5.6% | (566) | - | - | - |
| Total Trust Level | \$ 3,580.2 | - | - | - | - | - | - | - | - | - | - | - | - |

Risk Mitigation Ending Market Value & Contribution to Total Fund (By Portfolio)

| Portfolio | Ending Market Value (mil) | Contribution to Total Fund (bps) | | | |
|------------------------------|---------------------------|----------------------------------|------|------|-------|
| | | 1-Yr | 3-Yr | 5-Yr | 10-Yr |
| CalPERS Left Tail Risk | \$ 12.5 | (2) | - | - | - |
| Longtail Alpha | \$ 24.2 | (1) | - | - | - |
| Universa | \$ 74.8 | (1) | - | - | - |
| Total Risk Mitigation | \$ 111.4 | (4) | - | - | - |

Plan Level Transition Ending Market Value & Performance Summary (By Portfolio)

| Portfolio | Ending Market Value (mil) | 1-Yr | | | 3-Yr | | | 5-Yr | | | 10-Yr | | |
|------------------------------------|---------------------------|------------|-----------|------------|------------|-----------|------------|------------|-----------|------------|------------|-----------|------------|
| | | Net Return | BM Return | Excess Bps | Net Return | BM Return | Excess Bps | Net Return | BM Return | Excess Bps | Net Return | BM Return | Excess Bps |
| CalPERS Fixed Income Transition | \$ 0.0 | NM | NM | - | NM | NM | - | NM | NM | - | NM | NM | - |
| CalPERS Inflation Transition | \$ 0.4 | NM | NM | - | NM | NM | - | NM | NM | - | - | - | - |
| CalPERS Market Cap Transition | \$ 10.3 | NM | NM | - | NM | NM | - | NM | NM | - | NM | NM | - |
| CalPERS Small Cap Transition | \$ 0.0 | NM | NM | - | NM | NM | - | NM | NM | - | NM | NM | - |
| Total Plan Level Transition | \$ 10.7 | - | - | - | - | - | - | - | - | - | - | - | - |

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