

PRIVATE EQUITY SEMI-ANNUAL BOARD UPDATE

For the period ended June 30, 2021

Report Prepared For:

Pennsylvania State Employees' Retirement System



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Disclaimer on this Page - Redacted

PERFORMANCE SUMMARY

StepStone Group LP (“StepStone”) was engaged by Pennsylvania State Employees’ Retirement System (“SERS”) to provide Private Equity services for prospective investment opportunities, as well as portfolio management.

StepStone monitors investments under the entity Pennsylvania State Employees’ Retirement System (“the Portfolio”).

The following table illustrates the Portfolio’s since inception investment performance as of June 30, 2021, as well as the quarter-over-quarter and year-over-year change.

The Portfolio is generating a since inception net IRR of 12.7% at June 30, 2021, up 15 basis points quarter-over-quarter.

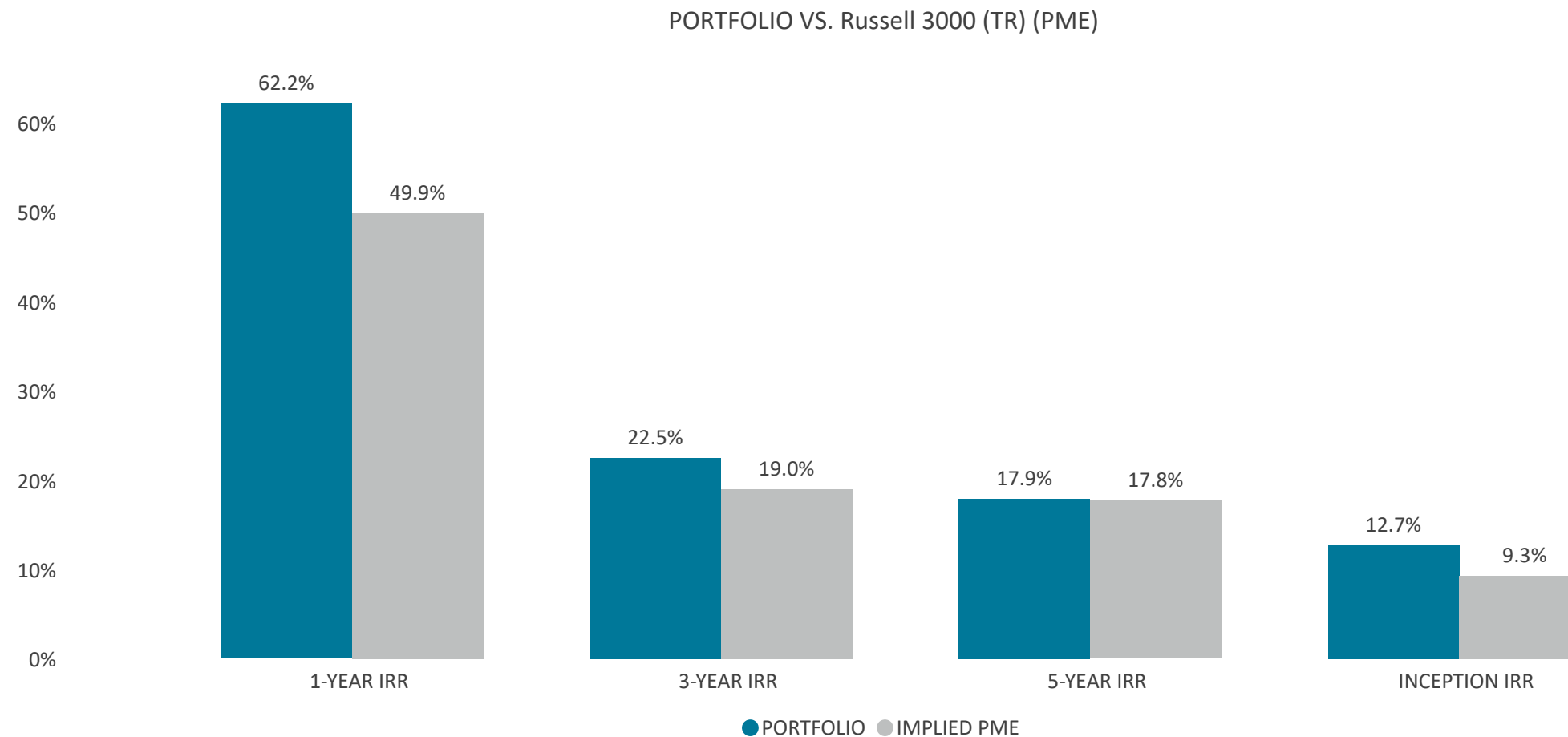
As of June 30, 2021. In USD millions.

SERS PORTFOLIO PERFORMANCE SUMMARY					
	JUNE 30, 2021	MARCH 31, 2021	JUNE 30, 2020	QUARTERLY Δ	ANNUAL Δ
Number of Managers	116	116	115	0	1
Number of Investments	329	328	323	1	6
Number of Active Investments	181	181	180	0	1
Committed Capital	\$14,174.9	\$14,082.9	\$13,676.2	\$92.0	\$498.7
Unfunded Commitment	2,403.4	2,541.6	2,670.5	(138.2)	(267.1)
Total Exposure	8,562.1	8,037.7	6,703.5	524.3	1,858.6
Total Contributed	17,873.7	17,621.9	17,023.5	251.9	850.2
Total Distributed	24,195.9	23,843.5	23,033.1	352.5	1,162.9
Total Market Value	6,158.6	5,496.1	4,032.9	662.5	2,125.7
Since Inception G/L	12,480.8	11,717.7	10,042.5	763.1	2,438.4
Total Value	\$30,354.6	\$29,339.6	\$27,066.0	\$1,015.0	\$3,288.6
Net DPI	1.4x	1.4x	1.4x		
Net TVM	1.7x	1.7x	1.6x		
Net IRR	12.7%	12.5%	12.1%	15 bps	52 bps

Past performance is not necessarily indicative of future results and there can be no assurance that the investment will achieve comparable results or avoid substantial losses.

PERFORMANCE SUMMARY CONTINUED

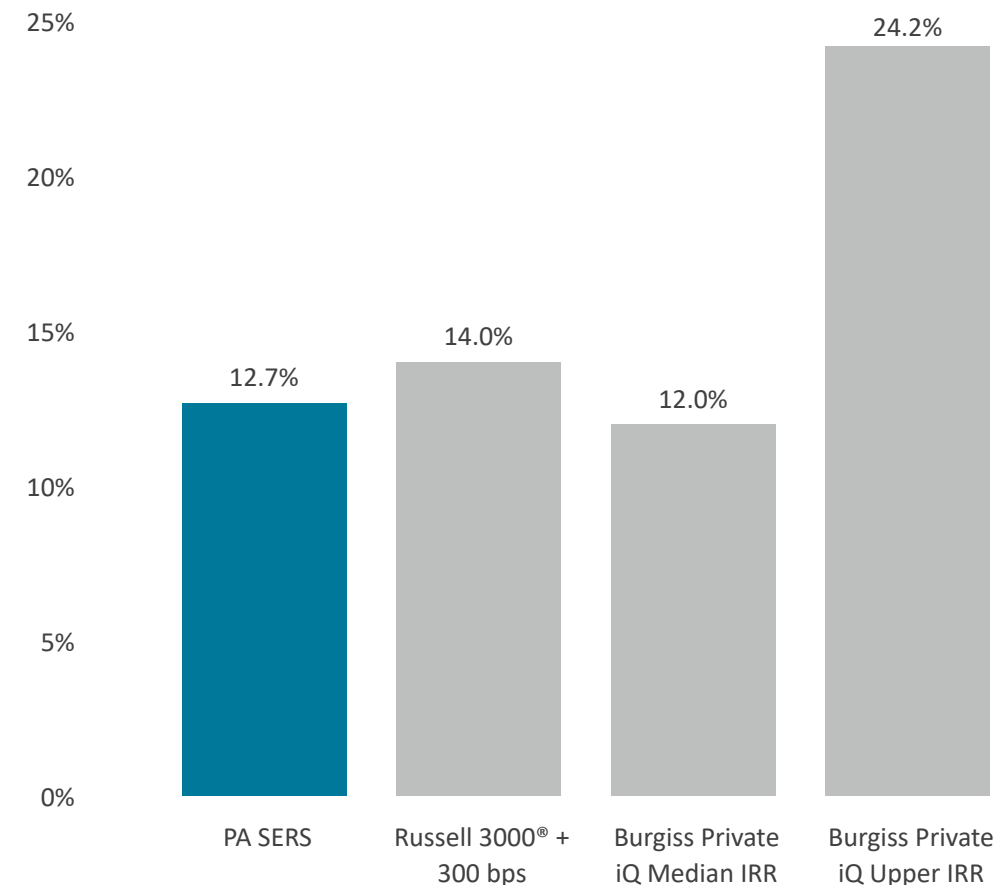
The following table illustrates the Portfolio's point-to-point investment performance as of June 30, 2021, as well as the public market equivalent (PME) based on the Russell 3000 (TR) index.



PORTFOLIO PERFORMANCE VS. BENCHMARKS

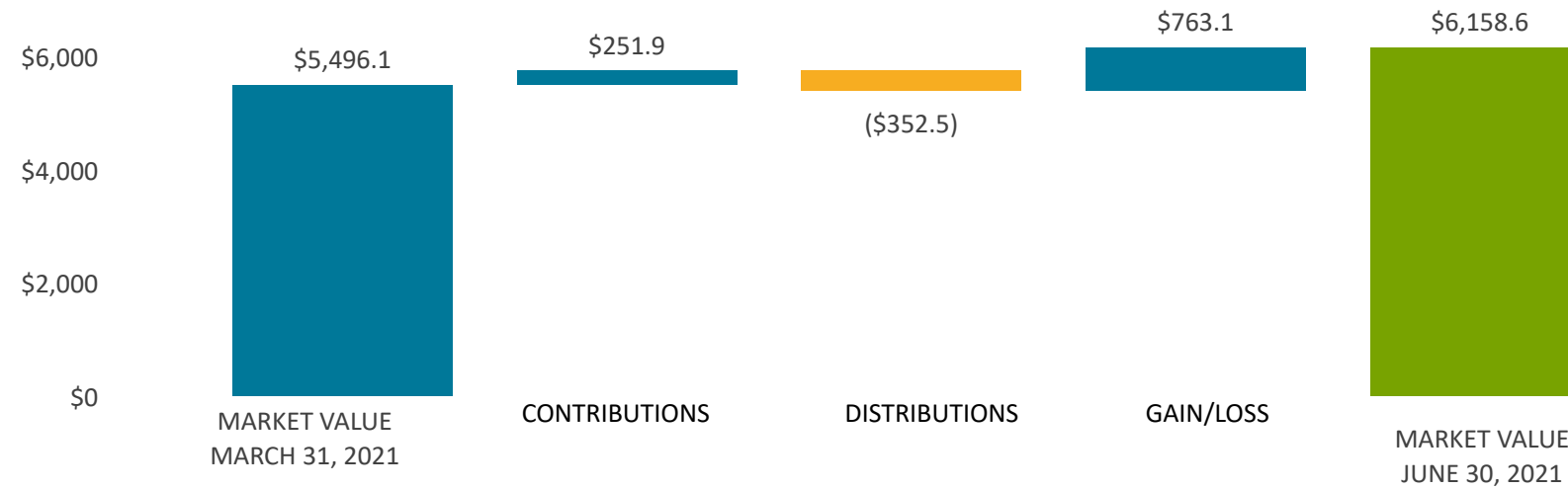
The Portfolio's performance is measured against two benchmarks, the Russell 3000® and Burgiss Private iQ. The following graph illustrates Portfolio IRR performance versus benchmarks as of June 30, 2021.

Returns	1 YEAR RETURN	3 YEAR RETURN	5 YEAR RETURN	10 YEAR RETURN
SERS Combined Portfolio (IRR)	62.2%	22.5%	17.9%	11.4%
Burgiss Private iQ Pooled PE Benchmark	52.3%	22.4%	20.1%	14.7%
Burgiss Private iQ All PE Top-Quartile	61.2%	30.4%	28.2%	24.9%
Russell 3000®	44.2%	18.7%	17.9%	14.7%
Russell 3000® + 300 bps	47.2%	21.7%	20.9%	17.7%
SERS Core Buyout (IRR)	53.1%	23.5%	20.7%	14.8%
Burgiss Private iQ Pooled Buyout Benchmark	49.3%	19.6%	19.0%	13.7%
Burgiss Private iQ Buyout Top-Quartile	57.4%	26.5%	26.4%	22.9%
SERS Core Growth Equity (IRR)	105.2%	43.0%	32.4%	20.9%
Burgiss Private iQ Pooled VC Benchmark	82.4%	35.4%	27.0%	20.1%
Burgiss Private iQ VC Top-Quartile	82.3%	39.9%	33.4%	31.1%
SERS Core Special Situations (IRR)	49.5%	19.9%	15.7%	9.5%
Burgiss Private iQ Pooled SS Benchmark	19.8%	8.3%	9.3%	8.6%
Burgiss Private iQ SS Top-Quartile	27.3%	15.1%	15.2%	14.2%
SERS Keystone Legacy Fund (IRR)	50.5%	4.4%	6.4%	6.1%
Burgiss Private iQ Pooled PE Benchmark	52.3%	22.4%	20.1%	14.7%
Burgiss Private iQ All PE Top-Quartile	61.2%	30.4%	28.2%	24.9%

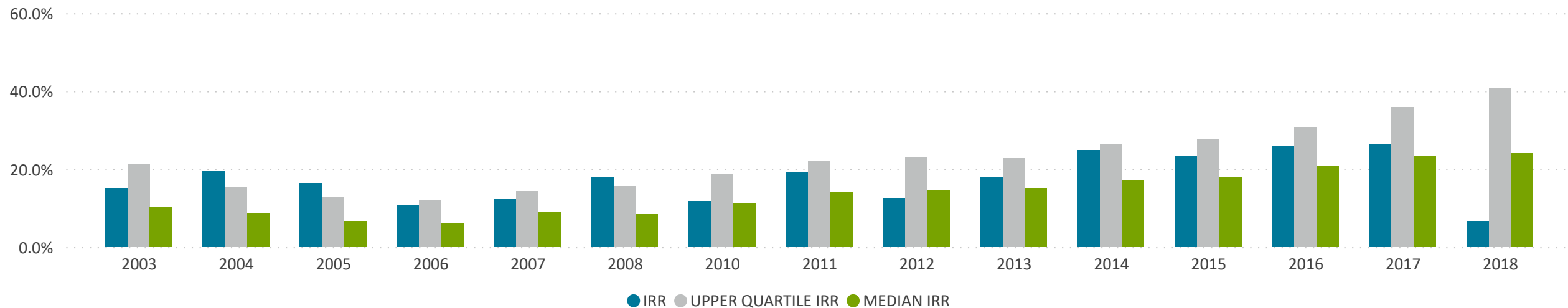


QUARTERLY VALUATION MOVEMENT

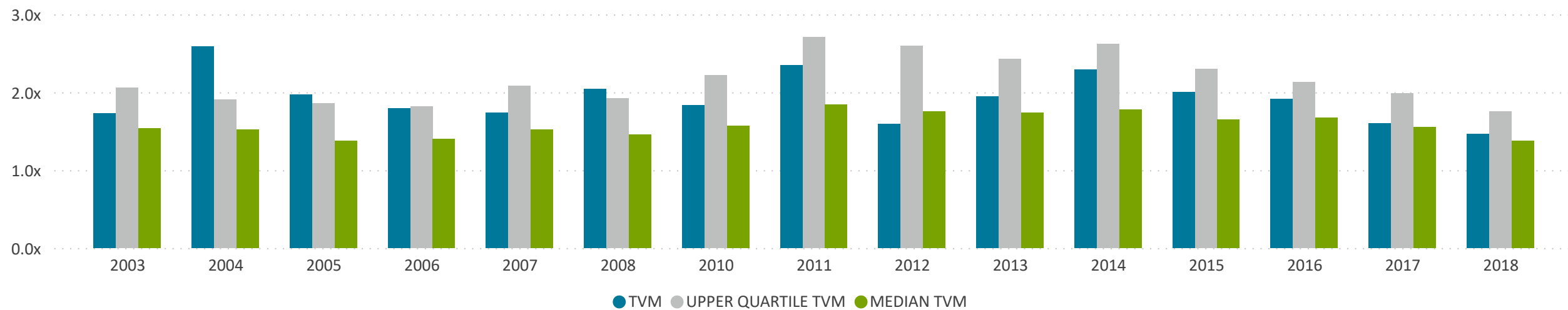
During the second quarter of 2021, the value of the Portfolio increased by \$763.1 million, or 13.9%.



IRR PERFORMANCE BY VINTAGE YEAR



TVM PERFORMANCE BY VINTAGE YEAR



FUND GEOGRAPHIC FOCUS

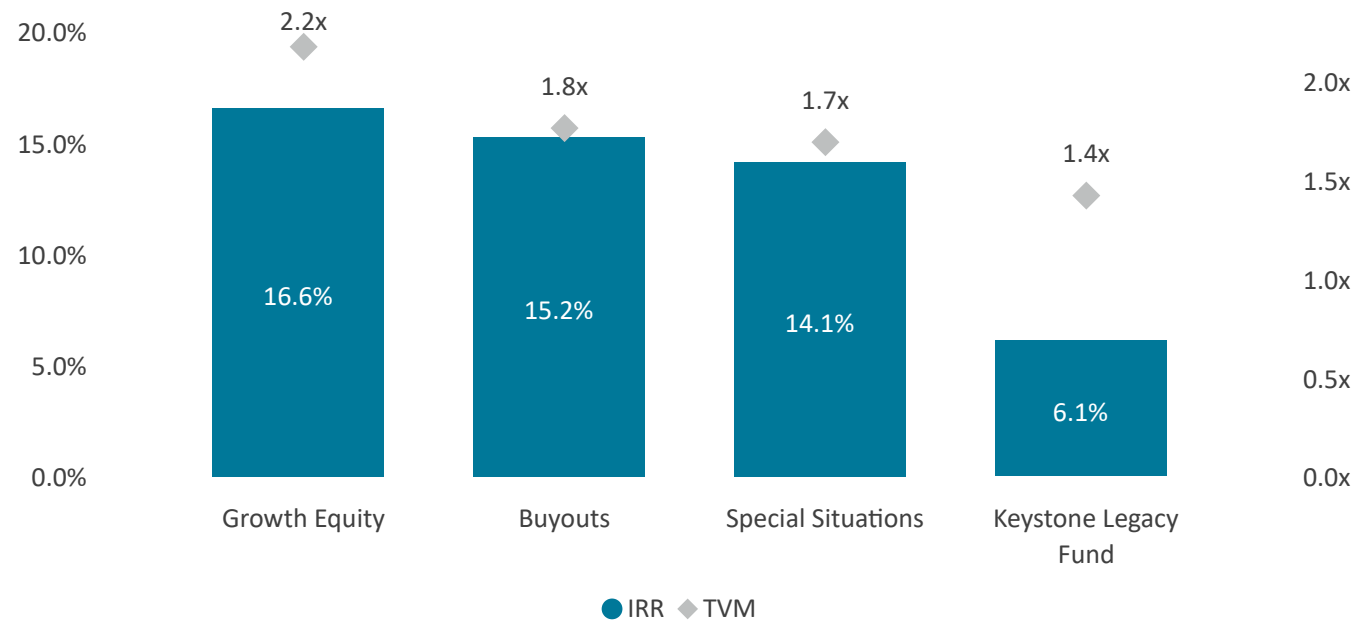
As of June 30, 2021. In USD millions.

GEOGRAPHY	NAV	% OF TOTAL	UNFUNDED	% OF TOTAL	TOTAL EXPOSURE	% OF TOTAL
North America	\$3,495.4	56.8%	\$1,310.7	54.5%	\$4,806.0	56.1%
Keystone Legacy Fund	\$700.5	11.4%	\$108.5	4.5%	\$809.0	9.4%
Global	\$582.1	9.5%	\$572.6	23.8%	\$1,154.7	13.5%
Europe	\$539.9	8.8%	\$267.2	11.1%	\$807.1	9.4%
Emerging Markets	\$163.7	2.7%	\$16.7	0.7%	\$180.5	2.1%
Asia	\$677.1	11.0%	\$127.8	5.3%	\$804.8	9.4%
Total	\$6,158.6	100.0%	\$2,403.4	100.0%	\$8,562.1	100.0%

CORE PORTFOLIO PERIODIC RETURNS VS. RUSSELL 3000 INDEX

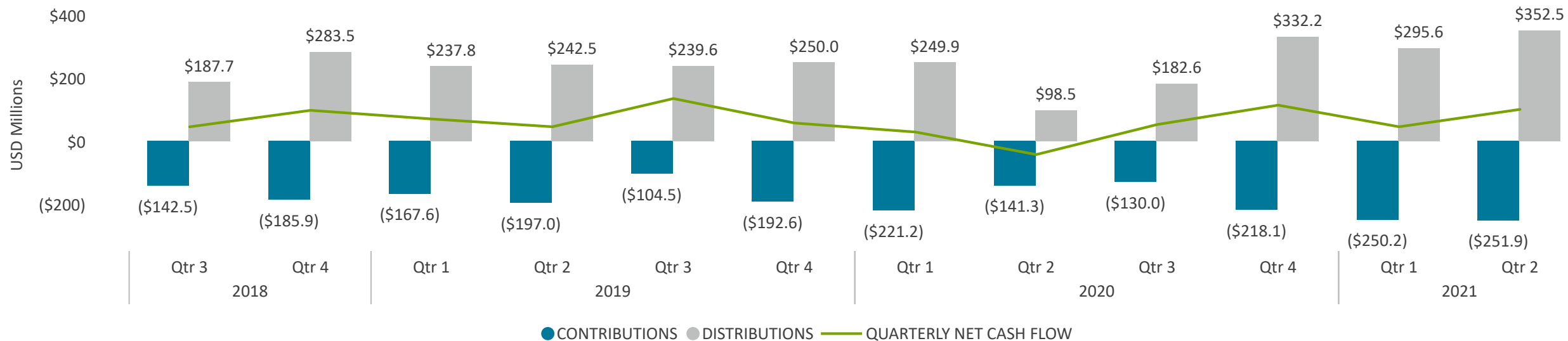
BENCHMARK	1 YEAR RETURN	3 YEAR RETURN	5 YEAR RETURN	10 YEAR RETURN	SINCE INCEPTION
SERS Core Portfolio (IRR)	64.1%	27.5%	22.6%	15.2%	15.5%
Russell 3000®	44.2%	18.7%	17.9%	14.7%	11.0%
Russell 3000® + 300 bps	47.2%	21.7%	20.9%	17.7%	14.0%
PA SERS Outperformance/(Underperformance)					
Russell 3000® Net	19.9%	8.7%	4.7%	0.5%	4.5%
Russell 3000® + 300 bps Net	16.9%	5.7%	1.7%	(2.5%)	1.5%

PERFORMANCE BY SECTOR



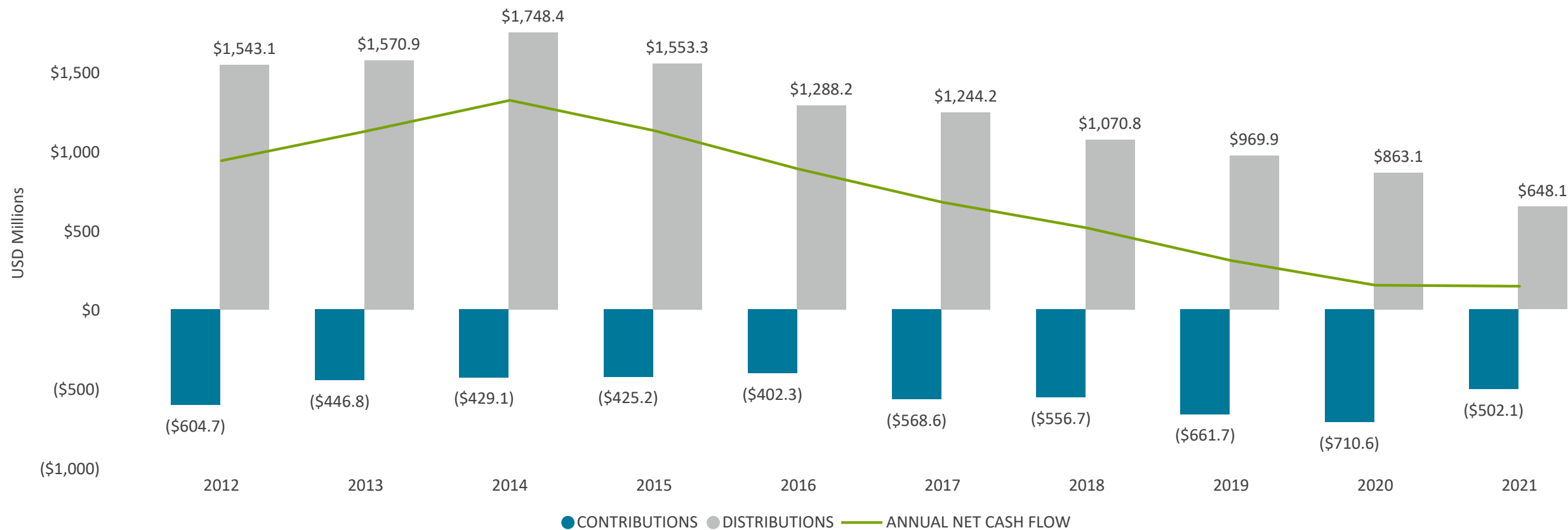
QUARTERLY CASH FLOW ACTIVITY

During the second quarter of 2021, the Portfolio contributed \$251.9 million and received \$352.5 million of distributions, for a net cash inflow of \$100.6 million.

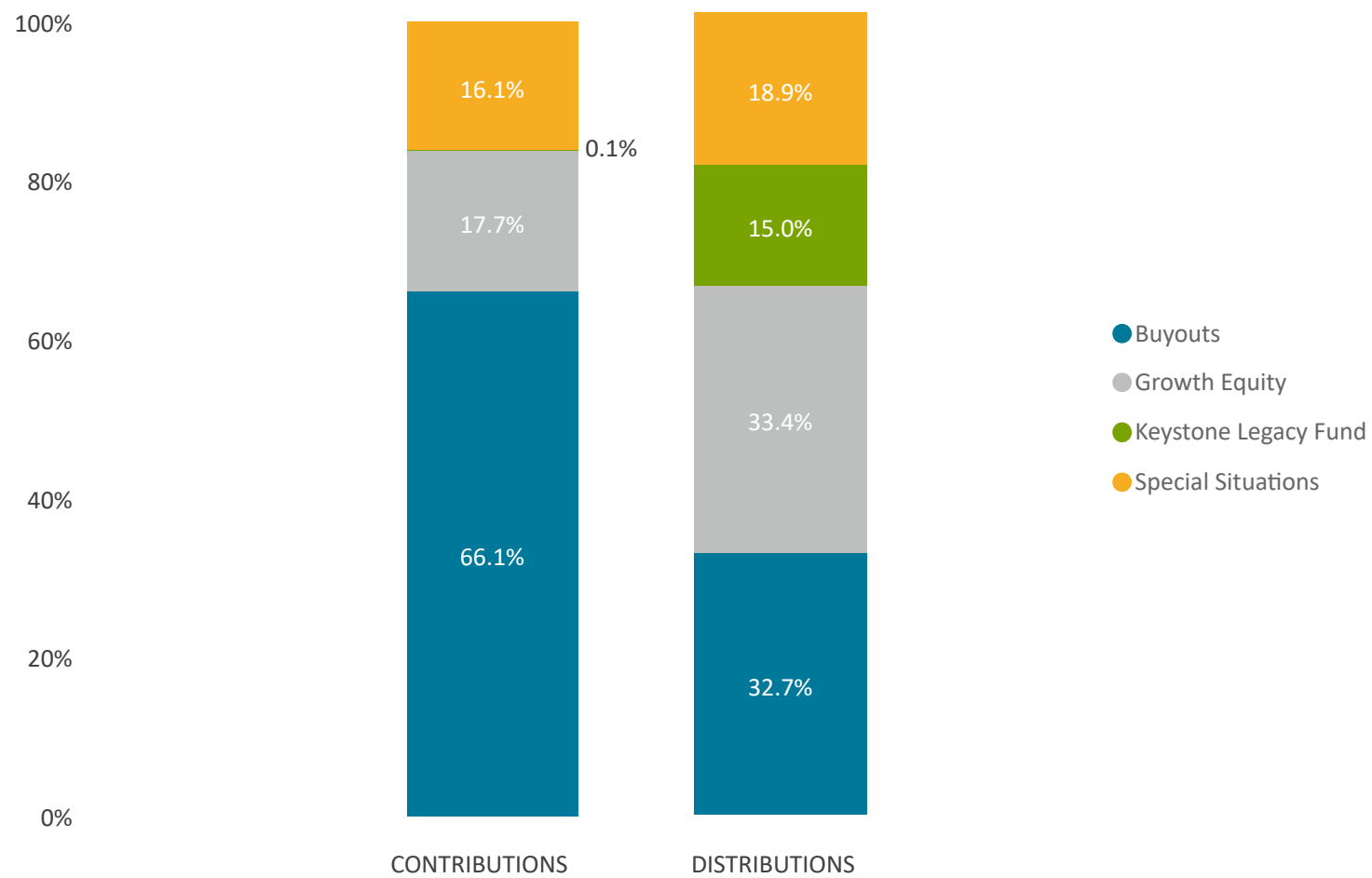


ANNUAL CASH FLOW ACTIVITY

During the six months ended June 30, 2021, the Portfolio contributed \$502.1 million and received \$648.1 million of distributions, for a net cash inflow of \$146.0 million.

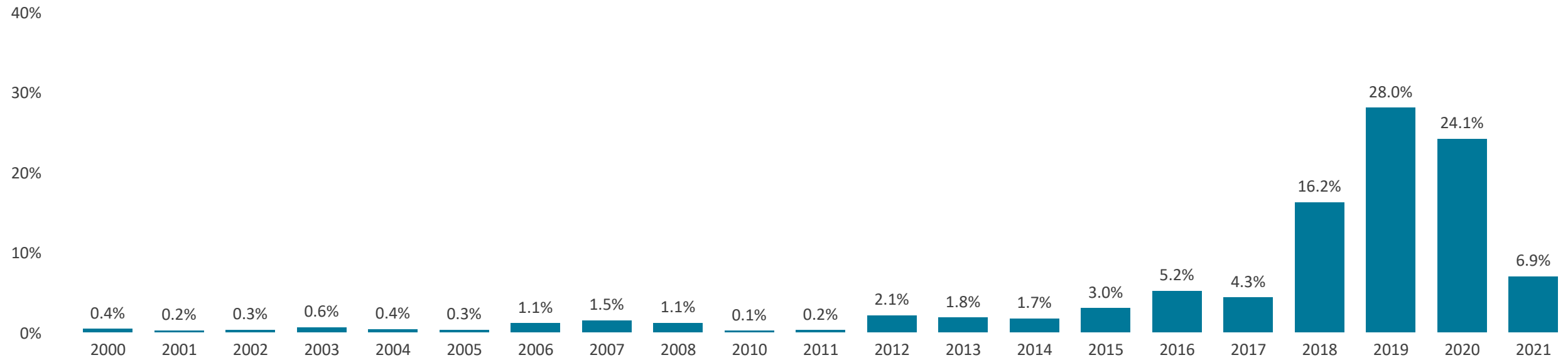


CASH FLOW BY SECTOR



UNFUNDED % by VINTAGE YEAR

The following chart provides unfunded commitments by vintage year as a percentage of the Portfolio's total unfunded commitments.



SCHEUDLE OF INVESTMENTS BY VINTAGE YEAR

As of June 30,2021

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
1997	Apollo Investment Fund IV	Buyouts	\$75,000,000	\$74,838,620	\$124,814,033	\$25,446	\$50,000,859	1.7x	8.5%	Second	Second
1997 Total			\$75,000,000	\$74,838,620	\$124,814,033	\$25,446	\$50,000,859	1.7x	8.5%	Second	Second
1998	HarbourVest IPEP III	Buyouts	40,000,000	39,400,000	61,092,165	75,606	21,767,771	1.6x	8.6%	Second	Second
1998 Total			\$40,000,000	\$39,400,000	\$61,092,165	\$75,606	\$21,767,771	1.6x	8.6%	Second	Second
1999	HarbourVest Partners VI	Growth Equity	200,000,000	196,586,055	251,227,115	652,443	55,293,503	1.3x	3.6%	First	First
1999	Lexington Capital Partners III	Special Situations	35,000,000	34,516,449	43,363,378						
1999	New Enterprise Associates IX	Growth Equity	20,000,000	19,600,000	8,739,870	287,629	(10,572,501)	0.5x	(6.3%)	Third	Third
1999 Total			\$255,000,000	\$250,702,504	\$303,330,363						
2000	ABRY Partners IV	Buyouts	27,242,773	25,497,290	74,633,973						
2000	Apollo Investment Fund V	Buyouts	50,000,000	44,972,146	122,673,016	428,610	78,129,480	2.7x	38.8%	First	First
2000	Audax Private Equity Fund	Buyouts	35,000,000	36,839,098	56,057,910	537,176	19,755,988	1.5x	13.1%	First	Second
2000	Blackstone Communications Partners I	Buyouts	25,000,000	25,114,042	30,998,189	200,299	6,084,446	1.2x	6.3%	Second	Second
2000	Madison Dearborn Capital Partners IV	Buyouts	90,000,000	90,454,587	169,895,733	2,835,660	82,276,806	1.9x	14.1%	First	First
2000	New Enterprise Associates X	Growth Equity	35,000,000	35,028,000	34,372,267	7,269,561	6,613,828	1.2x	2.6%	Second	Second
2000	Permira European Fund II	Buyouts	45,672,612	45,672,612	91,560,959	418,804	46,307,151	2.0x	21.6%	First	First
2000	Providence Equity Partners IV	Buyouts	25,000,000	23,420,840	56,065,270						
2000 Total			\$332,915,385	\$326,998,615	\$636,257,317						
2001	ABRY Mezzanine Partners	Special Situations	30,000,000	26,731,187	49,707,116						
2001	Blackstone Capital IV	Buyouts	69,379,875	69,119,097	193,103,796	1,120,439	125,105,139	2.8x	36.2%	First	First
2001	Lexington Capital Partners V	Special Situations	75,000,000	74,623,418	125,170,164						
2001 Total			\$174,379,875	\$170,473,702	\$367,981,077						
2002	Berkshire Fund VI	Buyouts	20,000,000	18,819,615	54,873,734						
2002	GTCR VIII	Buyouts	75,000,000	69,393,599	120,471,948				22.3%	First	
2002 Total			\$95,000,000	\$88,213,214	\$175,345,682						
2003	HarbourVest Partners VII	Growth Equity	75,000,000	73,687,500	111,573,847	7,770,178	45,656,525	1.6x	6.8%	First	First
2003	Kelso VII	Buyouts	40,000,000	41,169,937	65,821,118	59,275	24,710,456	1.6x	11.4%	Second	Second
2003	New Enterprise Associates 11	Growth Equity	25,000,000	25,000,000	63,385,828	3,360,033	41,745,861	2.7x	15.6%	First	First

SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of June 30, 2021

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2003	Permira European Fund III	Buyouts	127,062,518	127,340,454	218,052,206	515,035	91,226,787	1.7x	26.1%	Second	Second
2003	TPG Partners IV	Buyouts	27,907,484	27,981,463	58,314,713						
2003 Total			\$294,970,002	\$295,179,353	\$517,147,711						
2004	ABRY Partners V	Buyouts	45,000,000	41,752,543	84,778,199						
2004	AXA Secondary Fund III	Special Situations	26,000,000	21,737,894	37,244,706						
2004	AXA Secondary Fund III-2	Special Situations	14,000,000	11,677,210	19,062,764						
2004	LLR Equity Partners II	Buyouts	25,000,000	25,000,000	45,292,813	85,402	20,378,215	1.8x	12.2%	Second	Second
2004	Providence Equity Partners V	Buyouts	45,000,000	42,692,347	52,204,745						
2004 Total			\$155,000,000	\$142,859,994	\$238,583,226	\$531,833	\$96,255,065	1.7x	12.6%	Second	Second
2005	Apollo Investment Fund VI	Buyouts	40,000,000	38,911,805	64,467,407	754,001	26,309,602	1.7x	8.7%	Second	Second
2005	Audax Private Equity Fund II	Buyouts	25,000,000	25,517,152	46,325,622	201,391	21,009,861	1.8x	14.1%	First	Second
2005	HIPEP V-Asia Pacific & Rest of World	Buyouts	30,000,000	28,245,316	36,614,543	3,791,623	12,160,850	1.4x	6.0%	Third	Second
2005	Lexington Capital Partners VI	Special Situations	50,000,000	53,066,325	71,895,633						
2005	Lightspeed Venture Partners VII	Growth Equity	18,000,000	18,000,000	52,541,303						
2005	Newbridge Asia IV	Buyouts	40,000,000	38,903,378	86,585,520						
2005	OCM/GFI Power Opportunities Fund II	Buyouts	13,431,284	13,470,852	41,657,114						
2005 Total			\$216,431,284	\$216,114,829	\$400,087,143	\$12,613,542	\$196,585,856	1.9x	13.3%	First	First
2006	ABRY Senior Equity II	Special Situations	30,000,000	28,388,642	45,127,413						
2006	Asia Alternatives Capital Partners	Buyouts	25,000,000	25,218,098	42,428,645	4,579,974	21,790,521	1.9x	11.2%	Second	First
2006	AXA Secondary Fund IV	Special Situations	80,000,000	70,134,752	99,186,788						
2006	Berkshire Fund VII	Buyouts	32,000,000	32,613,937	68,200,082						
2006	Blackstone Capital Partners V	Buyouts	150,000,000	150,111,788	246,661,082	3,808,663	100,357,957	1.7x	7.6%	Second	Second
2006	Centerbridge Capital Partners I	Special Situations	50,000,000	57,337,396	117,317,806	2,180,540	62,160,950	2.1x	19.2%	First	First
2006	Eureka II	Buyouts	20,000,000	21,906,935	22,842,724	4,393,665	5,329,454	1.2x	4.2%	Third	Third
2006	Francisco Partners II	Buyouts	30,000,000	29,383,916	43,490,515	3,720,236	17,826,834	1.6x	10.1%	Second	Second
2006	HarbourVest Partners VIII	Growth Equity	100,000,000	98,000,000	163,112,068	61,663,513	126,775,581	2.3x	12.1%	First	First
2006	Hellman & Friedman Capital Partners VI	Buyouts	125,000,000	119,913,412	222,910,013	2,289,462	105,286,063	1.9x	12.9%	First	Second

SCHEUDLE OF INVESTMENTS BY VINTAGE YEAR

As of June 30,2021

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2006	Madison Dearborn Capital Partners V	Buyouts	63,817,077	71,556,584	114,081,412	5,005,001	47,529,829	1.7x	7.5%	Second	Second
2006	New Enterprise Associates 12	Growth Equity	35,000,000	35,631,130	47,061,881	4,237,615	15,668,366	1.4x	6.8%	Second	Second
2006	NewSpring Growth Capital II	Growth Equity	10,000,000	9,850,000	19,519,679						
2006	OCM Principal Opportunities Fund IV	Special Situations	20,000,000	20,400,000	34,342,112						
2006	Permira IV	Buyouts	136,343,270	138,422,695	208,443,061	27,861,790	97,882,157	1.7x	9.1%	Second	Second
2006	TPG Partners V	Buyouts	88,831,038	92,531,812	130,072,991	265,663	37,806,842	1.4x	4.8%	Third	Second
2006 Total			\$995,991,385	\$1,001,401,098	\$1,624,798,271	\$122,893,401	\$746,290,574	1.7x	9.7%	Second	Second
2007	ABRY Advanced Securities Fund	Special Situations	7,262,950	23,529,104	38,786,236						
2007	Advent Latin American Private Equity Fund IV	Buyouts	30,000,000	30,797,073	43,955,921	2,701,575	15,860,423	1.5x	9.1%	Second	Third
2007	Asia Alternatives Capital Partners II	Buyouts	29,949,500	29,058,178	55,006,730	43,492,575	69,441,127	3.4x	20.7%	First	First
2007	Audax Private Equity Fund III	Buyouts	37,000,000	42,498,691	81,672,112	1,735,234	40,908,656	2.0x	15.0%	Second	Second
2007	Battery Ventures VIII	Growth Equity	25,000,000	25,050,751	57,611,584						
2007	Dover Street VII	Special Situations	30,000,000	28,696,128	39,335,124	2,214,802	12,853,798	1.4x	9.3%	Third	Third
2007	Insight Venture Partners VI	Growth Equity	30,000,000	32,244,177	81,709,725	170,604	49,636,153	2.5x	19.2%	First	Second
2007	JMI Equity Fund VI	Growth Equity	40,000,000	40,000,246	69,497,467	1,486,683	30,983,904	1.8x	11.5%	Second	Second
2007	Kelso VIII	Buyouts	150,000,000	146,556,066	183,942,590	26,403,146	63,789,670	1.4x	7.2%	Third	Third
2007	OCM Opportunities Fund VII	Special Situations	40,000,000	40,000,000	54,845,803						
2007	OCM Opportunities Fund VII b	Special Situations	40,000,000	36,000,000	62,303,999						
2007	Providence Equity Partners VI	Buyouts	49,976,748	54,594,993	73,112,514						
2007	TPG Asia V	Buyouts	22,500,000	21,964,311	27,755,071	3,504,319	9,295,079	1.4x	6.4%	Third	Third
2007	Weathergag Venture Capital	Growth Equity	25,000,000	22,875,000	38,284,801	21,591,812	37,001,613	2.6x	14.0%	Second	Second
2007 Total			\$556,689,198	\$573,864,717	\$907,819,677	\$116,920,220	\$450,875,180	1.8x	11.7%	Second	Second
2008	ABRY Partners VI	Buyouts	50,000,000	59,994,861	107,608,270						
2008	Advent International GPE VI-A	Buyouts	35,000,000	35,146,325	70,431,146	3,631,473	38,916,294	2.1x	16.6%	First	First
2008	Battery Ventures VIII Side Car Fund	Growth Equity	6,768,000	6,803,790	17,449,466						
2008	Great Hill Equity Partners IV	Buyouts	25,000,000	25,125,662	59,603,949						
2008	H.I.G. Bayside Debt & LBO Fund II	Special Situations	30,000,000	30,998,253	47,943,327						

SCHEUDLE OF INVESTMENTS BY VINTAGE YEAR

As of June 30,2021

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2008	Lightspeed Venture Partners VIII	Growth Equity	15,000,000	15,000,000	33,102,394						
2008	LLR Equity Partners III	Buyouts	30,000,000	29,108,722	61,694,021	4,040,222	36,625,521	2.3x	16.6%	Second	First
2008	Madison Dearborn Capital Partners VI	Buyouts	50,000,000	53,234,413	101,526,969	18,852,540	67,145,096	2.3x	23.4%	First	First
2008	TPG Partners VI	Buyouts	44,294,641	50,576,261	70,125,630	4,946,150	24,495,519	1.5x	9.6%	Second	Second
2008 Total			\$286,062,641	\$305,988,288	\$569,485,172	\$71,160,357	\$334,657,242	2.1x	18.7%	First	First
2010	Advent Latin American Private Equity Fund V	Buyouts	15,000,000	14,430,000	8,325,000	8,826,023	2,721,023	1.2x	3.0%	Fourth	Fourth
2010	Avenue Special Situations Fund VI	Special Situations	20,000,000	20,068,464	20,720,289						
2010	Oaktree Power Opportunities Fund III	Buyouts	25,000,000	19,267,532	28,341,259						
2010	OCM Opportunities Fund VIII	Special Situations	12,500,000	12,583,425	18,050,538						
2010	OCM Opportunities Fund VIIIb	Special Situations	12,500,000	12,500,000	13,516,237						
2010	Weathergag Venture Capital II	Growth Equity	25,000,000	23,250,000	46,273,978	48,650,684	71,674,662	4.1x	21.3%	Second	First
2010 Total			\$110,000,000	\$102,099,421	\$135,227,302	\$66,142,474	\$99,270,355	2.0x	12.1%	Second	Second
2011	ABRY Partners VII	Buyouts	30,000,000	38,124,390	48,787,265						
2011	Asia Alternatives Korea Buyout Investors (Hahn & Co)	Buyouts	7,000,000	8,797,362	12,677,843	1,518,167	5,398,648	1.6x	11.1%	Third	Third
2011	Berkshire Fund VIII	Buyouts	30,000,000	32,670,922	31,344,938						
2011	Francisco Partners III	Buyouts	20,000,000	20,514,684	44,624,792	23,165,109	47,275,217	3.3x	24.3%	First	First
2011	H.I.G. Growth Buyouts & Equity Fund II	Buyouts	15,000,000	15,898,204	10,010,436						
2011	Insight Venture Partners VII	Growth Equity	20,000,000	22,129,992	53,076,524	26,017,089	56,963,620	3.6x	24.3%	Second	Second
2011	JMI Equity Fund VII	Growth Equity	10,000,000	9,780,000	23,216,560	721,234	14,157,794	2.4x	17.7%	Third	Second
2011	Meritech Capital Partners IV	Growth Equity	20,000,000	19,700,000	41,401,375						
2011 Total			\$152,000,000	\$167,615,554	\$265,139,733	\$128,151,538	\$225,675,717	2.3x	19.1%	Second	Second
2012	Advent International GPE VII-B	Buyouts	40,000,000	37,600,000	46,246,943	30,655,285	39,302,228	2.0x	16.2%	Second	Second
2012	Asia Alternatives Capital Partners III	Buyouts	50,000,000	54,964,538	54,649,559	51,936,120	51,621,141	1.9x	15.4%	Second	Second
2012	AXA Secondary Fund V B	Special Situations	75,000,000	61,682,742	97,337,534						
2012	Carlyle Energy Mezzanine Opportunities Fund	Buyouts	50,000,000	65,376,555	32,552,667	6,776,501	(26,047,387)	0.6x	(17.8%)	Fourth	Fourth
2012	Penn Asia Investors	Buyouts	133,000,000	108,414,940	66,461,826	138,392,479	96,439,365	1.9x	19.0%	Second	Second
2012 Total			\$348,000,000	\$328,038,775	\$297,248,529						

SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of June 30, 2021

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2013	Eureka Growth Capital III	Buyouts	20,000,000	15,613,524	15,886,883	17,009,117	17,282,476	2.1x	40.0%	First	Second
2013	FSN Capital IV	Buyouts	37,917,982	38,520,666	55,829,456						
2013	H.I.G. Bayside Loan Opp. Fund III	Special Situations	50,000,000	40,418,122	44,041,745						
2013	Incline Equity Partners III	Buyouts	15,000,000	15,990,275	38,012,437	3,987,740	26,009,902	2.6x	34.0%	First	Second
2013	Insight Venture Partners VIII	Growth Equity	50,000,000	52,821,055	106,952,239	54,119,014	108,250,199	3.0x	22.5%	Second	Second
2013	LBC Credit Partners III	Special Situations	50,000,000	46,696,253	50,854,648				8.7%	Fourth	
2013	Oaktree Opportunities Fund IX	Special Situations	50,000,000	50,000,000	31,088,063						
2013	Platinum Equity Capital Partners III	Special Situations	50,000,000	47,092,256	83,359,180	16,183,692	52,450,616	2.1x	39.2%	First	Second
2013 Total			\$322,917,982	\$307,152,150	\$426,024,650	\$172,103,173	\$290,975,673	1.9x	18.0%	Second	Second
2014	Capvis Equity IV	Buyouts	42,794,206	46,342,729	33,984,236	22,717,098	10,358,605				
2014	GTCR Fund XI	Buyouts	25,000,000	24,016,936	42,807,386				44.1%	First	
2014	H.I.G. Europe Capital Partners II	Buyouts	24,634,141	22,568,576	8,779,457						
2014	Hahn & Company II	Buyouts	50,000,000	54,983,519	19,951,404						
2014	Horizon Impact Fund	Buyouts	50,000,000	44,629,802	37,132,412	43,649,098	36,151,708	1.8x	18.1%	Second	Third
2014	Horizon Strategic Fund - Carlyle Group	Buyouts	100,000,000	105,470,460	77,978,133	118,758,388	91,266,061	1.9x	16.3%	Third	Second
2014	KPS Special Situations Fund IV	Special Situations	25,000,000	23,501,221	7,238,520	30,110,594	13,847,893	1.6x	22.2%	Second	Third
2014	LLR Equity Partners IV	Buyouts	50,000,000	45,485,764	79,921,635	24,895,448	59,331,319	2.3x	26.4%	Second	Second
2014	Meritech Capital Partners V	Growth Equity	23,000,000	21,332,500	58,794,559						
2014	Sentinel Capital Partners V	Buyouts	10,000,000	10,142,127	11,903,752	8,261,955	10,023,580	2.0x	21.7%	Second	Second
2014 Total			\$400,428,347	\$398,473,633	\$378,491,494	\$534,917,140	\$514,935,000	2.3x	24.8%	Second	Second
2015	ABRY Partners VIII	Buyouts	25,000,000	29,375,266	30,152,207						
2015	ADV Opportunities Fund I	Special Situations	50,000,000	60,124,723	17,614,551	64,123,139	21,612,967	1.4x	8.0%	Fourth	Third
2015	Advent Latin American Private Equity Fund VI	Buyouts	25,000,000	22,875,000	9,875,000	25,799,987	12,799,987	1.6x	17.8%	Third	Third
2015	Centerbridge Capital Partners III	Special Situations	30,000,000	37,456,270	23,432,992	34,969,508	20,946,230	1.6x	20.5%	Second	Third
2015	Clearlake Capital Partners IV	Special Situations	15,000,000	22,593,846	28,633,118	17,232,072	23,271,344	2.0x	33.1%	First	Second
2015	Francisco Partners IV	Buyouts	25,000,000	24,656,280	31,098,061	53,785,492	60,227,273	3.4x	35.9%	First	First
2015	H.I.G. Bayside Loan Opp. Fund IV	Special Situations	25,000,000	22,626,299	19,512,513						

SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of June 30, 2021

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2015	H.I.G. Brazil and Latin America Partners	Buyouts	50,000,000	38,611,909	3,493,942						
2015	Insight Venture Partners IX	Growth Equity	50,000,000	51,172,788	35,184,952	172,420,811	156,432,975	4.1x	36.3%	First	First
2015	JMI Equity Fund VIII	Growth Equity	25,000,000	26,900,000	34,355,644	26,721,201	34,176,845	2.3x	30.9%	Second	Third
2015	Lightspeed India Partners I	Growth Equity	15,000,000	14,137,500	2,125,958						
2015	Primavera Capital Fund II	Buyouts	50,000,000	55,952,507	19,872,674	75,441,591	39,361,758	1.7x	15.2%	Third	Second
2015	Ridgemont Equity Partners II	Buyouts	50,000,000	49,092,763	34,810,584						
2015	RRJ Capital Master Fund III	Special Situations	50,000,000	46,219,242	42,276,088	16,302,675	12,359,521	1.3x	12.2%	Third	Fourth
2015 Total			\$485,000,000	\$501,794,392	\$332,438,285	\$673,700,034	\$504,343,926	2.0x	23.4%	Second	Second
2016	Advent International GPE VIII-B	Buyouts	50,000,000	47,450,001	17,418,122	88,959,409	58,927,530	2.2x	28.5%	Second	First
2016	ASF VII B	Special Situations	100,000,000	57,427,498	32,443,142						
2016	ASF VII PA Co-Invest	Special Situations	50,000,000	28,529,951	11,976,048						
2016	Audax Private Equity Fund V	Buyouts	50,000,000	44,365,789	33,735,910	43,501,420	32,871,541	1.7x	22.7%	Second	Third
2016	Blackstone Capital Partners VII	Buyouts	50,000,000	52,238,699	11,678,459	68,313,698	27,753,458	1.5x	20.2%	Third	Third
2016	Hellman & Friedman Capital Partners VIII	Buyouts	50,000,000	50,917,286	14,043,813	85,873,677	49,000,204	2.0x	25.4%	Second	Second
2016	Providence Strategic Growth II	Growth Equity	60,000,000	73,526,455	93,299,403						
2016	Sterling Group Partners IV	Buyouts	20,000,000	17,921,148	1,916,377	30,781,051	14,776,280	1.8x	21.7%	Second	Second
2016	Vista Equity Partners Fund VI	Buyouts	150,000,000	174,137,903	97,569,460						
2016 Total			\$580,000,000	\$546,514,730	\$314,080,735	\$731,660,928	\$499,226,933	1.9x	25.7%	Second	Second
2017	Asia Alternatives Capital Partners V	Buyouts	50,000,000	36,751,337	2,690,962	44,674,657	10,614,282	1.3x	21.2%	Third	Third
2017	FSN Capital V	Buyouts	80,249,034	79,942,235	17,943,794						
2017	Horizon Impact Fund B	Buyouts	100,000,000	69,250,000	990,000	89,537,646	21,277,646	1.3x	13.7%	Third	Third
2017	Permira VI	Buyouts	57,050,743	51,150,582	14,437,612	89,583,882	52,870,912	2.0x	29.7%	First	First
2017	Wind Point Partners VIII	Buyouts	100,000,000	96,616,633	48,554,180						
2017 Total			\$387,299,777	\$333,710,786	\$84,616,548	\$449,588,542	\$200,494,303	1.6x	26.2%	Second	Second
2018	Clearlake Capital Partners V	Special Situations	55,000,000	57,902,176	46,589,874	85,167,943	73,855,642	2.3x	55.8%	First	First
2018	CVC Capital Partners VII	Buyouts	94,390,939	59,640,429	1,356,001	NM	NM	NM	NM	NM	NM
2018	GTCR Fund XII	Buyouts	32,500,000	23,222,638	6,409,717				36.3%	Second	

SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of June 30, 2021

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2018	Hahn & Company III	Buyouts	56,250,000	23,665,391	83,933	NM	NM	NM	NM	NM	NM
2018	Hahn & Company III - Supplemental Fund	Buyouts	18,750,000	7,859,417	57,377	NM	NM	NM	NM	NM	NM
2018	Insight Venture Partners X	Growth Equity	100,000,000	100,373,487	16,352,126	251,095,645	167,074,285	2.7x	53.8%	Second	First
2018	Keystone Legacy Fund	Keystone Legacy Fund	200,000,000	5,586,721,082	7,233,765,104	700,481,149	2,347,525,171	1.4x	6.1%	Fourth	Second
2018	LLR Equity Partners V	Buyouts	75,000,000	68,335,417	14,786,456	75,811,774	22,262,813	1.3x	17.6%	Third	Third
2018	NGP Keystone	Buyouts	25,000,000	-	-	NM	NM	NM	NM	NM	NM
2018	NGP XII	Buyouts	75,000,000	42,515,030	241,746	NM	NM	NM	NM	NM	NM
2018	Providence Strategic Growth III	Growth Equity	75,000,000	61,346,968	17,376,055	NM	NM	NM	NM	NM	NM
2018	Silver Lake Partners V	Buyouts	78,000,000	72,015,841	14,332,831	110,395,099	52,712,089	1.7x	34.9%	Second	Second
2018	TDR Capital IV	Buyouts	91,888,221	34,834,570	-	NM	NM	NM	NM	NM	NM
2018 Total			\$976,779,160	\$6,138,432,446	\$7,351,351,221	\$1,619,504,050	\$2,832,422,824	1.5x	6.7%	Fourth	Second
2019	Apollo Investment Fund IX	Buyouts	85,400,000	41,708,849	5,439,214	NM	NM	NM	NM	NM	NM
2019	ASF VIII B	Special Situations	100,000,000	20,621,854	2,621,353	NM	NM	NM	NM	NM	NM
2019	ASF VIII PA Co-Invest	Special Situations	50,000,000	5,000	-	NM	NM	NM	NM	NM	NM
2019	Audax Private Equity Fund VI	Buyouts	75,000,000	34,856,158	3,932,237	NM	NM	NM	NM	NM	NM
2019	Blackstone Capital Partners VIII	Buyouts	70,000,000	9,055,444	-	NM	NM	NM	NM	NM	NM
2019	Hellman & Friedman Capital Partners IX	Buyouts	90,000,000	63,900,030	1,052,081	NM	NM	NM	NM	NM	NM
2019	Insight Venture Partners XI	Growth Equity	75,000,000	59,625,000	7,214	NM	NM	NM	NM	NM	NM
2019	KPS Special Situations Fund V	Special Situations	75,000,000	18,606,750	1,488,047	NM	NM	NM	NM	NM	NM
2019	KPS Special Situations Mid-Cap Fund	Special Situations	25,000,000	7,083,737	-	NM	NM	NM	NM	NM	NM
2019	Permira VII	Buyouts	78,464,034	30,411,088	-	NM	NM	NM	NM	NM	NM
2019	Primavera Capital Fund III	Buyouts	75,000,000	76,262,950	590,988	NM	NM	NM	NM	NM	NM
2019	Providence Strategic Growth IV	Growth Equity	75,000,000	43,736,467	4,054,061	NM	NM	NM	NM	NM	NM
2019	TCV X	Growth Equity	75,000,000	52,864,047	-	NM	NM	NM	NM	NM	NM
2019	Thoma Bravo Fund XIII	Buyouts	75,000,000	74,110,180	38,622,739	NM	NM	NM	NM	NM	NM
2019	TSG8	Buyouts	100,000,000	31,977,193	174,584	NM	NM	NM	NM	NM	NM
2019	Vista Equity Partners Fund VII	Buyouts	75,000,000	47,329,193	174,838	NM	NM	NM	NM	NM	NM

SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of June 30, 2021

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2019	Wind Point Partners IX-A	Buyouts	75,000,000	24,046,966	1,291,310	NM	NM	NM	NM	NM	NM
2019 Total			\$1,273,864,034	\$636,200,904	\$59,448,667	\$898,289,549	\$321,537,311	NM	NM	NM	NM
2020	Altaris Health Partners V	Buyouts	50,000,000	1,364,136	-	NM	NM	NM	NM	NM	NM
2020	Ares PA Opportunities Fund, L.P. - Special Situations	Special Situations	100,000,000	31,433,739	-	NM	NM	NM	NM	NM	NM
2020	Clearlake Capital Partners VI	Special Situations	60,000,000	29,112,189	500,319	NM	NM	NM	NM	NM	NM
2020	CVC Capital Partners VIII, L.P.	Buyouts	59,292,498	-	-	NM	NM	NM	NM	NM	NM
2020	HarbourVest PA Co-investment Fund	Buyouts	200,000,000	94,350,000	-	NM	NM	NM	NM	NM	NM
2020	LLR Equity Partners VI	Buyouts	50,000,000	5,904,212	-	NM	NM	NM	NM	NM	NM
2020	Neuberger Berman PA Co-Investment Fund	Buyouts	200,000,000	41,282,256	-	NM	NM	NM	NM	NM	NM
2020	Permira Susquehanna Opportunities - Buyout	Buyouts	40,000,000	19,356,856	-	NM	NM	NM	NM	NM	NM
2020	Thoma Bravo Discover Fund III, L.P.	Buyouts	20,000,000	6,784,137	-	NM	NM	NM	NM	NM	NM
2020	Thoma Bravo Fund XIV	Buyouts	50,000,000	19,664,646	12	NM	NM	NM	NM	NM	NM
2020 Total			\$829,292,498	\$249,252,170	\$500,331	\$286,863,017	\$38,111,178	NM	NM	NM	NM
2021	Hellman & Friedman X	Buyouts	100,000,000	-	-	NM	NM	NM	NM	NM	NM
2021	Providence Strategic Growth Europe	Growth Equity	76,043,641	11,308,108	2,143,410	NM	NM	NM	NM	NM	NM
2021 Total			\$176,043,641	\$11,308,108	\$2,143,410			NM	NM	NM	NM
Total: Active Investments			\$9,519,065,209	\$13,206,628,004	\$15,573,452,739	\$6,158,644,786	\$8,525,469,522	1.6x	9.8%	Third	Second
Total: Liquidated Investments			\$4,655,823,327	\$4,667,116,828	\$8,622,492,689	-	\$3,955,375,861	1.8x	16.2%	First	Second
Total: Commonwealth of Pennsylvania State Employees' Retirement System			\$14,174,888,536	\$17,873,744,832	\$24,195,945,428	\$6,158,644,786	\$12,480,845,382	1.7x	12.7%	Second	Second

SCHEDULE OF INVESTMENTS BY SECTOR

As of June 30, 2021

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Buyouts	ABRY Partners IV	2000	\$27,242,773	\$25,497,290	\$74,633,973						
Buyouts	ABRY Partners V	2004	45,000,000	41,752,543	84,778,199						
Buyouts	ABRY Partners VI	2008	50,000,000	59,994,861	107,608,270						
Buyouts	ABRY Partners VII	2011	30,000,000	38,124,390	48,787,265						
Buyouts	ABRY Partners VIII	2015	25,000,000	29,375,266	30,152,207						
Buyouts	Advent International GPE VI-A	2008	35,000,000	35,146,325	70,431,146	3,631,473	38,916,294	2.1x	16.6%	First	First
Buyouts	Advent International GPE VII-B	2012	40,000,000	37,600,000	46,246,943	30,655,285	39,302,228	2.0x	16.2%	Second	Second
Buyouts	Advent International GPE VIII-B	2016	50,000,000	47,450,001	17,418,122	88,959,409	58,927,530	2.2x	28.5%	Second	First
Buyouts	Advent Latin American Private Equity Fund IV	2007	30,000,000	30,797,073	43,955,921	2,701,575	15,860,423	1.5x	9.1%	Second	Third
Buyouts	Advent Latin American Private Equity Fund V	2010	15,000,000	14,430,000	8,325,000	8,826,023	2,721,023	1.2x	3.0%	Fourth	Fourth
Buyouts	Advent Latin American Private Equity Fund VI	2015	25,000,000	22,875,000	9,875,000	25,799,987	12,799,987	1.6x	17.8%	Third	Third
Buyouts	Altaris Health Partners V	2020	50,000,000	1,364,136	-	NM	NM	NM	NM	NM	NM
Buyouts	Apollo Investment Fund IV	1997	75,000,000	74,838,620	124,814,033	25,446	50,000,859	1.7x	8.5%	Second	Second
Buyouts	Apollo Investment Fund IX	2019	85,400,000	41,708,849	5,439,214	NM	NM	NM	NM	NM	NM
Buyouts	Apollo Investment Fund V	2000	50,000,000	44,972,146	122,673,016	428,610	78,129,480	2.7x	38.8%	First	First
Buyouts	Apollo Investment Fund VI	2005	40,000,000	38,911,805	64,467,407	754,001	26,309,602	1.7x	8.7%	Second	Second
Buyouts	Asia Alternatives Capital Partners	2006	25,000,000	25,218,098	42,428,645	4,579,974	21,790,521	1.9x	11.2%	Second	First
Buyouts	Asia Alternatives Capital Partners II	2007	29,949,500	29,058,178	55,006,730	43,492,575	69,441,127	3.4x	20.7%	First	First
Buyouts	Asia Alternatives Capital Partners III	2012	50,000,000	54,964,538	54,649,559	51,936,120	51,621,141	1.9x	15.4%	Second	Second
Buyouts	Asia Alternatives Capital Partners V	2017	50,000,000	36,751,337	2,690,962	44,674,657	10,614,282	1.3x	21.2%	Third	Third
Buyouts	Asia Alternatives Korea Buyout Investors (Hahn & Co)	2011	7,000,000	8,797,362	12,677,843	1,518,167	5,398,648	1.6x	11.1%	Third	Third
Buyouts	Audax Private Equity Fund	2000	35,000,000	36,839,098	56,057,910	537,176	19,755,988	1.5x	13.1%	First	Second
Buyouts	Audax Private Equity Fund II	2005	25,000,000	25,517,152	46,325,622	201,391	21,009,861	1.8x	14.1%	First	Second
Buyouts	Audax Private Equity Fund III	2007	37,000,000	42,498,691	81,672,112	1,735,234	40,908,656	2.0x	15.0%	Second	Second
Buyouts	Audax Private Equity Fund V	2016	50,000,000	44,365,789	33,735,910	43,501,420	32,871,541	1.7x	22.7%	Second	Third
Buyouts	Audax Private Equity Fund VI	2019	75,000,000	34,856,158	3,932,237	NM	NM	NM	NM	NM	NM

SCHEDULE OF INVESTMENTS BY SECTOR

As of June 30, 2021

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Buyouts	Berkshire Fund VI	2002	20,000,000	18,819,615	54,873,734						
Buyouts	Berkshire Fund VII	2006	32,000,000	32,613,937	68,200,082						
Buyouts	Berkshire Fund VIII	2011	30,000,000	32,670,922	31,344,938						
Buyouts	Blackstone Capital IV	2001	69,379,875	69,119,097	193,103,796	1,120,439	125,105,139	2.8x	36.2%	First	First
Buyouts	Blackstone Capital Partners V	2006	150,000,000	150,111,788	246,661,082	3,808,663	100,357,957	1.7x	7.6%	Second	Second
Buyouts	Blackstone Capital Partners VII	2016	50,000,000	52,238,699	11,678,459	68,313,698	27,753,458	1.5x	20.2%	Third	Third
Buyouts	Blackstone Capital Partners VIII	2019	70,000,000	9,055,444	-	NM	NM	NM	NM	NM	NM
Buyouts	Blackstone Communications Partners I	2000	25,000,000	25,114,042	30,998,189	200,299	6,084,446	1.2x	6.3%	Second	Second
Buyouts	Capvis Equity IV	2014	42,794,206	46,342,729	33,984,236	22,717,098	10,358,605				
Buyouts	Carlyle Energy Mezzanine Opportunities Fund	2012	50,000,000	65,376,555	32,552,667	6,776,501	(26,047,387)	0.6x	(17.8%)	Fourth	Fourth
Buyouts	CVC Capital Partners VII	2018	94,390,939	59,640,429	1,356,001	NM	NM	NM	NM	NM	NM
Buyouts	CVC Capital Partners VIII, L.P.	2020	59,292,498	-	-	NM	NM	NM	NM	NM	NM
Buyouts	Eureka Growth Capital III	2013	20,000,000	15,613,524	15,886,883	17,009,117	17,282,476	2.1x	40.0%	First	Second
Buyouts	Eureka II	2006	20,000,000	21,906,935	22,842,724	4,393,665	5,329,454	1.2x	4.2%	Third	Third
Buyouts	Francisco Partners II	2006	30,000,000	29,383,916	43,490,515	3,720,236	17,826,834	1.6x	10.1%	Second	Second
Buyouts	Francisco Partners III	2011	20,000,000	20,514,684	44,624,792	23,165,109	47,275,217	3.3x	24.3%	First	First
Buyouts	Francisco Partners IV	2015	25,000,000	24,656,280	31,098,061	53,785,492	60,227,273	3.4x	35.9%	First	First
Buyouts	FSN Capital IV	2013	37,917,982	38,520,666	55,829,456						
Buyouts	FSN Capital V	2017	80,249,034	79,942,235	17,943,794						
Buyouts	Great Hill Equity Partners IV	2008	25,000,000	25,125,662	59,603,949						
Buyouts	GTCR Fund XI	2014	25,000,000	24,016,936	42,807,386				44.1%	First	
Buyouts	GTCR Fund XII	2018	32,500,000	23,222,638	6,409,717				36.3%	Second	
Buyouts	GTCR VIII	2002	75,000,000	69,393,599	120,471,948				22.3%	First	
Buyouts	H.I.G. Brazil and Latin America Partners	2015	50,000,000	38,611,909	3,493,942						
Buyouts	H.I.G. Europe Capital Partners II	2014	24,634,141	22,568,576	8,779,457						
Buyouts	H.I.G. Growth Buyouts & Equity Fund II	2011	15,000,000	15,898,204	10,010,436						
Buyouts	Hahn & Company II	2014	50,000,000	54,983,519	19,951,404						

SCHEDULE OF INVESTMENTS BY SECTOR

As of June 30, 2021

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Buyouts	Hahn & Company III	2018	56,250,000	23,665,391	83,933	NM	NM	NM	NM	NM	NM
Buyouts	Hahn & Company III - Supplemental Fund	2018	18,750,000	7,859,417	57,377	NM	NM	NM	NM	NM	NM
Buyouts	HarbourVest IPEP III	1998	40,000,000	39,400,000	61,092,165	75,606	21,767,771	1.6x	8.6%	Second	Second
Buyouts	HarbourVest PA Co-investment Fund	2020	200,000,000	94,350,000	-	NM	NM	NM	NM	NM	NM
Buyouts	Hellman & Friedman Capital Partners IX	2019	90,000,000	63,900,030	1,052,081	NM	NM	NM	NM	NM	NM
Buyouts	Hellman & Friedman Capital Partners VI	2006	125,000,000	119,913,412	222,910,013	2,289,462	105,286,063	1.9x	12.9%	First	Second
Buyouts	Hellman & Friedman Capital Partners VIII	2016	50,000,000	50,917,286	14,043,813	85,873,677	49,000,204	2.0x	25.4%	Second	Second
Buyouts	Hellman & Friedman X	2021	100,000,000	-	-	NM	NM	NM	NM	NM	NM
Buyouts	HIPEP V-Asia Pacific & Rest of World	2005	30,000,000	28,245,316	36,614,543	3,791,623	12,160,850	1.4x	6.0%	Third	Second
Buyouts	Horizon Impact Fund	2014	50,000,000	44,629,802	37,132,412	43,649,098	36,151,708	1.8x	18.1%	Second	Third
Buyouts	Horizon Impact Fund B	2017	100,000,000	69,250,000	990,000	89,537,646	21,277,646	1.3x	13.7%	Third	Third
Buyouts	Horizon Strategic Fund - Carlyle Group	2014	100,000,000	105,470,460	77,978,133	118,758,388	91,266,061	1.9x	16.3%	Third	Second
Buyouts	Incline Equity Partners III	2013	15,000,000	15,990,275	38,012,437	3,987,740	26,009,902	2.6x	34.0%	First	Second
Buyouts	Kelso VII	2003	40,000,000	41,169,937	65,821,118	59,275	24,710,456	1.6x	11.4%	Second	Second
Buyouts	Kelso VIII	2007	150,000,000	146,556,066	183,942,590	26,403,146	63,789,670	1.4x	7.2%	Third	Third
Buyouts	LLR Equity Partners II	2004	25,000,000	25,000,000	45,292,813	85,402	20,378,215	1.8x	12.2%	Second	Second
Buyouts	LLR Equity Partners III	2008	30,000,000	29,108,722	61,694,021	4,040,222	36,625,521	2.3x	16.6%	Second	First
Buyouts	LLR Equity Partners IV	2014	50,000,000	45,485,764	79,921,635	24,895,448	59,331,319	2.3x	26.4%	Second	Second
Buyouts	LLR Equity Partners V	2018	75,000,000	68,335,417	14,786,456	75,811,774	22,262,813	1.3x	17.6%	Third	Third
Buyouts	LLR Equity Partners VI	2020	50,000,000	5,904,212	-	NM	NM	NM	NM	NM	NM
Buyouts	Madison Dearborn Capital Partners IV	2000	90,000,000	90,454,587	169,895,733	2,835,660	82,276,806	1.9x	14.1%	First	First
Buyouts	Madison Dearborn Capital Partners V	2006	63,817,077	71,556,584	114,081,412	5,005,001	47,529,829	1.7x	7.5%	Second	Second
Buyouts	Madison Dearborn Capital Partners VI	2008	50,000,000	53,234,413	101,526,969	18,852,540	67,145,096	2.3x	23.4%	First	First
Buyouts	Neuberger Berman PA Co-Investment Fund	2020	200,000,000	41,282,256	-	NM	NM	NM	NM	NM	NM
Buyouts	Newbridge Asia IV	2005	40,000,000	38,903,378	86,585,520						
Buyouts	NGP Keystone	2018	25,000,000	-	-	NM	NM	NM	NM	NM	NM
Buyouts	NGP XII	2018	75,000,000	42,515,030	241,746	NM	NM	NM	NM	NM	NM

SCHEDULE OF INVESTMENTS BY SECTOR

As of June 30, 2021

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Buyouts	Oaktree Power Opportunities Fund III	2010	25,000,000	19,267,532	28,341,259						
Buyouts	OCM/GFI Power Opportunities Fund II	2005	13,431,284	13,470,852	41,657,114						
Buyouts	Penn Asia Investors	2012	133,000,000	108,414,940	66,461,826	138,392,479	96,439,365	1.9x	19.0%	Second	Second
Buyouts	Permira European Fund II	2000	45,672,612	45,672,612	91,560,959	418,804	46,307,151	2.0x	21.6%	First	First
Buyouts	Permira European Fund III	2003	127,062,518	127,340,454	218,052,206	515,035	91,226,787	1.7x	26.1%	Second	Second
Buyouts	Permira IV	2006	136,343,270	138,422,695	208,443,061	27,861,790	97,882,157	1.7x	9.1%	Second	Second
Buyouts	Permira Susquehanna Opportunities - Buyout	2020	40,000,000	19,356,856	-	NM	NM	NM	NM	NM	NM
Buyouts	Permira VI	2017	57,050,743	51,150,582	14,437,612	89,583,882	52,870,912	2.0x	29.7%	First	First
Buyouts	Permira VII	2019	78,464,034	30,411,088	-	NM	NM	NM	NM	NM	NM
Buyouts	Primavera Capital Fund II	2015	50,000,000	55,952,507	19,872,674	75,441,591	39,361,758	1.7x	15.2%	Third	Second
Buyouts	Primavera Capital Fund III	2019	75,000,000	76,262,950	590,988	NM	NM	NM	NM	NM	NM
Buyouts	Providence Equity Partners IV	2000	25,000,000	23,420,840	56,065,270						
Buyouts	Providence Equity Partners V	2004	45,000,000	42,692,347	52,204,745						
Buyouts	Providence Equity Partners VI	2007	49,976,748	54,594,993	73,112,514						
Buyouts	Ridgemont Equity Partners II	2015	50,000,000	49,092,763	34,810,584						
Buyouts	Sentinel Capital Partners V	2014	10,000,000	10,142,127	11,903,752	8,261,955	10,023,580	2.0x	21.7%	Second	Second
Buyouts	Silver Lake Partners V	2018	78,000,000	72,015,841	14,332,831	110,395,099	52,712,089	1.7x	34.9%	Second	Second
Buyouts	Sterling Group Partners IV	2016	20,000,000	17,921,148	1,916,377	30,781,051	14,776,280	1.8x	21.7%	Second	Second
Buyouts	TDR Capital IV	2018	91,888,221	34,834,570	-	NM	NM	NM	NM	NM	NM
Buyouts	Thoma Bravo Discover Fund III, L.P.	2020	20,000,000	6,784,137	-	NM	NM	NM	NM	NM	NM
Buyouts	Thoma Bravo Fund XIII	2019	75,000,000	74,110,180	38,622,739	NM	NM	NM	NM	NM	NM
Buyouts	Thoma Bravo Fund XIV	2020	50,000,000	19,664,646	12	NM	NM	NM	NM	NM	NM
Buyouts	TPG Asia V	2007	22,500,000	21,964,311	27,755,071	3,504,319	9,295,079	1.4x	6.4%	Third	Third
Buyouts	TPG Partners IV	2003	27,907,484	27,981,463	58,314,713						
Buyouts	TPG Partners V	2006	88,831,038	92,531,812	130,072,991	265,663	37,806,842	1.4x	4.8%	Third	Second
Buyouts	TPG Partners VI	2008	44,294,641	50,576,261	70,125,630	4,946,150	24,495,519	1.5x	9.6%	Second	Second
Buyouts	TSG8	2019	100,000,000	31,977,193	174,584	NM	NM	NM	NM	NM	NM

SCHEDULE OF INVESTMENTS BY SECTOR

As of June 30, 2021

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Buyouts	Vista Equity Partners Fund VI	2016	150,000,000	174,137,903	97,569,460						
Buyouts	Vista Equity Partners Fund VII	2019	75,000,000	47,329,193	174,838	NM	NM	NM	NM	NM	NM
Buyouts	Wind Point Partners IX-A	2019	75,000,000	24,046,966	1,291,310	NM	NM	NM	NM	NM	NM
Buyouts	Wind Point Partners VIII	2017	100,000,000	96,616,633	48,554,180						
Buyout Total			\$6,197,990,618	\$5,010,423,393	\$5,276,957,115	\$3,480,288,544	\$3,746,822,266	1.7x	14.8%	Second	Second
Keystone Legacy Fund	Keystone Legacy Fund	2018	200,000,000	5,586,721,082	7,233,765,104	700,481,149	2,347,525,171	1.4x	6.1%	NM	NM
Keystone Legacy Fund Total			\$200,000,000	\$5,586,721,082	\$7,233,765,104	\$700,481,149	\$2,347,525,171	1.4x	6.1%	NM	NM
Growth Equity	Battery Ventures VIII	2007	25,000,000	25,050,751	57,611,584						
Growth Equity	Battery Ventures VIII Side Car Fund	2008	6,768,000	6,803,790	17,449,466						
Growth Equity	HarbourVest Partners VI	1999	200,000,000	196,586,055	251,227,115	652,443	55,293,503	1.3x	3.6%	First	First
Growth Equity	HarbourVest Partners VII	2003	75,000,000	73,687,500	111,573,847	7,770,178	45,656,525	1.6x	6.8%	First	First
Growth Equity	HarbourVest Partners VIII	2006	100,000,000	98,000,000	163,112,068	61,663,513	126,775,581	2.3x	12.1%	First	First
Growth Equity	Insight Venture Partners IX	2015	50,000,000	51,172,788	35,184,952	172,420,811	156,432,975	4.1x	36.3%	First	First
Growth Equity	Insight Venture Partners VI	2007	30,000,000	32,244,177	81,709,725	170,604	49,636,153	2.5x	19.2%	First	Second
Growth Equity	Insight Venture Partners VII	2011	20,000,000	22,129,992	53,076,524	26,017,089	56,963,620	3.6x	24.3%	Second	Second
Growth Equity	Insight Venture Partners VIII	2013	50,000,000	52,821,055	106,952,239	54,119,014	108,250,199	3.0x	22.5%	Second	Second
Growth Equity	Insight Venture Partners X	2018	100,000,000	100,373,487	16,352,126	251,095,645	167,074,285	2.7x	53.8%	Second	First
Growth Equity	Insight Venture Partners XI	2019	75,000,000	59,625,000	7,214	NM	NM	NM	NM	NM	NM
Growth Equity	JMI Equity Fund VI	2007	40,000,000	40,000,246	69,497,467	1,486,683	30,983,904	1.8x	11.5%	Second	Second
Growth Equity	JMI Equity Fund VII	2011	10,000,000	9,780,000	23,216,560	721,234	14,157,794	2.4x	17.7%	Third	Second
Growth Equity	JMI Equity Fund VIII	2015	25,000,000	26,900,000	34,355,644	26,721,201	34,176,845	2.3x	30.9%	Second	Third
Growth Equity	Lightspeed India Partners I	2015	15,000,000	14,137,500	2,125,958						
Growth Equity	Lightspeed Venture Partners VII	2005	18,000,000	18,000,000	52,541,303						
Growth Equity	Lightspeed Venture Partners VIII	2008	15,000,000	15,000,000	33,102,394						
Growth Equity	Meritech Capital Partners IV	2011	20,000,000	19,700,000	41,401,375						
Growth Equity	Meritech Capital Partners V	2014	23,000,000	21,332,500	58,794,559						

SCHEDULE OF INVESTMENTS BY SECTOR

As of June 30, 2021

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Growth Equity	New Enterprise Associates 11	2003	25,000,000	25,000,000	63,385,828	3,360,033	41,745,861	2.7x	15.6%	First	First
Growth Equity	New Enterprise Associates 12	2006	35,000,000	35,631,130	47,061,881	4,237,615	15,668,366	1.4x	6.8%	Second	Second
Growth Equity	New Enterprise Associates IX	1999	20,000,000	19,600,000	8,739,870	287,629	(10,572,501)	0.5x	(6.3%)	Third	Third
Growth Equity	New Enterprise Associates X	2000	35,000,000	35,028,000	34,372,267	7,269,561	6,613,828	1.2x	2.6%	Second	Second
Growth Equity	NewSpring Growth Capital II	2006	10,000,000	9,850,000	19,519,679						
Growth Equity	Providence Strategic Growth Europe	2021	76,043,641	11,308,108	2,143,410	NM	NM	NM	NM	NM	NM
Growth Equity	Providence Strategic Growth II	2016	60,000,000	73,526,455	93,299,403						
Growth Equity	Providence Strategic Growth III	2018	75,000,000	61,346,968	17,376,055	NM	NM	NM	NM	NM	NM
Growth Equity	Providence Strategic Growth IV	2019	75,000,000	43,736,467	4,054,061	NM	NM	NM	NM	NM	NM
Growth Equity	TCV X	2019	75,000,000	52,864,047	-	NM	NM	NM	NM	NM	NM
Growth Equity	Weathergag Venture Capital	2007	25,000,000	22,875,000	38,284,801	21,591,812	37,001,613	2.6x	14.0%	Second	Second
Growth Equity	Weathergag Venture Capital II	2010	25,000,000	23,250,000	46,273,978	48,650,684	71,674,662	4.1x	21.3%	Second	First
Growth Equity Total			\$1,433,811,641	\$1,297,361,015	\$1,583,803,352	\$1,400,900,291	\$1,687,342,627	2.3x	12.2%	Third	Second
Special Situations	ABRY Advanced Securities Fund	2007	7,262,950	23,529,104	38,786,236						
Special Situations	ABRY Mezzanine Partners	2001	30,000,000	26,731,187	49,707,116						
Special Situations	ABRY Senior Equity II	2006	30,000,000	28,388,642	45,127,413						
Special Situations	ADV Opportunities Fund I	2015	50,000,000	60,124,723	17,614,551	64,123,139	21,612,967	1.4x	8.0%	Fourth	Third
Special Situations	Ares PA Opportunities Fund, L.P. - Special Situations	2020	100,000,000	31,433,739	-	NM	NM	NM	NM	NM	NM
Special Situations	ASF VII B	2016	100,000,000	57,427,498	32,443,142						
Special Situations	ASF VII PA Co-Invest	2016	50,000,000	28,529,951	11,976,048						
Special Situations	ASF VIII B	2019	100,000,000	20,621,854	2,621,353	NM	NM	NM	NM	NM	NM
Special Situations	ASF VIII PA Co-Invest	2019	50,000,000	5,000	-	NM	NM	NM	NM	NM	NM
Special Situations	Avenue Special Situations Fund VI	2010	20,000,000	20,068,464	20,720,289						
Special Situations	AXA Secondary Fund III	2004	26,000,000	21,737,894	37,244,706						
Special Situations	AXA Secondary Fund III-2	2004	14,000,000	11,677,210	19,062,764						
Special Situations	AXA Secondary Fund IV	2006	80,000,000	70,134,752	99,186,788						

SCHEDULE OF INVESTMENTS BY SECTOR

As of June 30, 2021

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Special Situations	AXA Secondary Fund V B	2012	75,000,000	61,682,742	97,337,534						
Special Situations	Centerbridge Capital Partners I	2006	50,000,000	57,337,396	117,317,806	2,180,540	62,160,950	2.1x	19.2%	First	First
Special Situations	Centerbridge Capital Partners III	2015	30,000,000	37,456,270	23,432,992	34,969,508	20,946,230	1.6x	20.5%	Second	Third
Special Situations	Clearlake Capital Partners IV	2015	15,000,000	22,593,846	28,633,118	17,232,072	23,271,344	2.0x	33.1%	First	Second
Special Situations	Clearlake Capital Partners V	2018	55,000,000	57,902,176	46,589,874	85,167,943	73,855,642	2.3x	55.8%	First	First
Special Situations	Clearlake Capital Partners VI	2020	60,000,000	29,112,189	500,319	NM	NM	NM	NM	NM	NM
Special Situations	Dover Street VII	2007	30,000,000	28,696,128	39,335,124	2,214,802	12,853,798	1.4x	9.3%	Third	Third
Special Situations	H.I.G. Bayside Debt & LBO Fund II	2008	30,000,000	30,998,253	47,943,327						
Special Situations	H.I.G. Bayside Loan Opp. Fund III	2013	50,000,000	40,418,122	44,041,745						
Special Situations	H.I.G. Bayside Loan Opp. Fund IV	2015	25,000,000	22,626,299	19,512,513						
Special Situations	KPS Special Situations Fund IV	2014	25,000,000	23,501,221	7,238,520	30,110,594	13,847,893	1.6x	22.2%	Second	Third
Special Situations	KPS Special Situations Fund V	2019	75,000,000	18,606,750	1,488,047	NM	NM	NM	NM	NM	NM
Special Situations	KPS Special Situations Mid-Cap Fund	2019	25,000,000	7,083,737	-	NM	NM	NM	NM	NM	NM
Special Situations	LBC Credit Partners III	2013	50,000,000	46,696,253	50,854,648				8.7%	Fourth	
Special Situations	Lexington Capital Partners III	1999	35,000,000	34,516,449	43,363,378						
Special Situations	Lexington Capital Partners V	2001	75,000,000	74,623,418	125,170,164						
Special Situations	Lexington Capital Partners VI	2005	50,000,000	53,066,325	71,895,633						
Special Situations	Oaktree Opportunities Fund IX	2013	50,000,000	50,000,000	31,088,063						
Special Situations	OCM Opportunities Fund VII	2007	40,000,000	40,000,000	54,845,803						
Special Situations	OCM Opportunities Fund VII b	2007	40,000,000	36,000,000	62,303,999						
Special Situations	OCM Opportunities Fund VIII	2010	12,500,000	12,583,425	18,050,538						
Special Situations	OCM Opportunities Fund VIIIb	2010	12,500,000	12,500,000	13,516,237						
Special Situations	OCM Principal Opportunities Fund IV	2006	20,000,000	20,400,000	34,342,112						
Special Situations	Platinum Equity Capital Partners III	2013	50,000,000	47,092,256	83,359,180	16,183,692	52,450,616	2.1x	39.2%	First	Second
Special Situations	RRJ Capital Master Fund III	2015	50,000,000	46,219,242	42,276,088	16,302,675	12,359,521	1.3x	12.2%	Third	Fourth
Special Situations Total			\$1,687,262,950	\$1,312,122,513	\$1,478,927,168	\$576,974,802	\$743,779,457	1.6x	14.1%	First	First

SCHEDULE OF INVESTMENTS BY SECTOR

As of June 30, 2021

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Total: Active Investments			\$9,519,065,209	\$13,206,628,004	\$15,573,452,739	\$6,158,644,786	\$8,525,469,522	1.6x	9.8%	Third	Second
Total: Liquidated Investments			\$4,655,823,327	\$4,667,116,828	\$8,622,492,689	\$0	\$3,955,375,861	1.8x	16.2%	First	Second
Total: Commonwealth of Pennsylvania State Employees' Retirement System			\$14,174,888,536	\$17,873,744,832	\$24,195,945,428	\$6,158,644,786	\$12,480,845,382	1.7x	12.7%	Second	Second

END NOTES

Performance Summary

Commitment reflects current commitment include FX fluctuations for non-USD funds.

Contributed Capital includes contributions for investments, management fees and expenses to underlying partnership investments.

Distributions include stock distributions.

Net DPI, or Distributed to Paid-In-Multiple, is calculated as Distributed Capital divided by Contributed Capital, inclusive of StepStone fees.

Net TVM, or Total Value Multiple, is calculated as Total Value, which is comprised of Market Value plus Distributed Capital, divided by Contributed Capital, inclusive of StepStone fees.

Net IRR is net of managers' fees, expenses, and carried interest, inclusive of StepStone fees.

Portfolio Performance vs Benchmarks

Benchmark is a dollar-weighted calculation of quarterly changes in the Russell 3000® Index. Russell Investment Group is the source and owner of the trademark, service marks and copyrights related to the Russell Indexes.

Russell® is a trademark of Russell Investment Group. Returns shown are time-weighted (TWR).

Benchmark is provided by Burgiss Private iQ and reflects Global Private Equity Funds (excluding Real Assets and Real Estate) Median IRR as of June 30, 2021, for funds with vintage years 1980 to 2021.

Returns shown are dollar-weighted (IRR).

Benchmark is provided by Burgiss Private iQ and reflects Global pooled returns for Buyout (including Natural Resources), Venture Capital, Special Situations (including Distressed and Mezzanine), and all Private Equity (excluding Real Assets and Real Estate), respectively, as of June 30, 2021, for funds with vintage years 1980 to 2020. Returns shown are dollar-weighted (IRR).

Benchmark is provided by Burgiss Private iQ and reflects Global Upper Quartile IRR for Buyout (including Natural Resources), Venture Capital, Special Situations (including Distressed and Mezzanine), and all Private Equity (excluding Real Assets and Real Estate), respectively, as of June 30, 2021, for funds with vintage years 1980 to 2021. Returns shown are dollar-weighted (IRR).

Core Portfolio vs Russell 3000 Index

Benchmark is a dollar-weighted calculation of quarterly changes in the Russell 3000® Index. Russell Investment Group is the source and owner of the trademark, service marks and copyrights related to the Russell Indexes.

Russell® is a trademark of Russell Investment Group. Buyout, Growth Equity, and Special Situations sectors represent PASERS core portfolio of investment returns within each sector.

Keystone Legacy Fund contains Buyout, Venture Capital, and Special Situation funds defined as non-core by PASERS.

Schedule of Investments by Vintage Year & Sector

Commitment reflects current commitment including FX fluctuations for non-USD funds.

Contributions includes management fees and expenses.

Gain/Loss represents since inception total value change of active investments unless otherwise noted.

NM - Not Meaningful

IRR for certain vehicles may have been impacted by StepStone's or the underlying GPs' use of subscription-backed credit facilities by such vehicles.

Fund quartile rankings provided by Burgiss Private iQ as of June 30, 2021 and represent sector-comparable funds aggregated by vintage year, asset class and geography in which SERS made investments.

Keystone Legacy Fund performance represents since inception returns for all non-core funds.

These figures have been prepared by Stepstone on behalf of SERS and have not been provided by any General Partner.

Past performance is not necessarily indicative of future results and there can be no assurance that the fund will achieve comparable results or avoid substantial losses.

Definitions on Pages 29-30 - Redacted