

ANNUAL BOARD UPDATE

For the period ended December 31, 2020

Report Prepared For:

Pennsylvania State Employees' Retirement System



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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 December 31, 2020, as well as the quarter-over-quarter and year-over-year change.

The Portfolio is generating a since inception net IRR of 12.4% at December 31, 2020, up 13 basis points quarter-over-quarter.

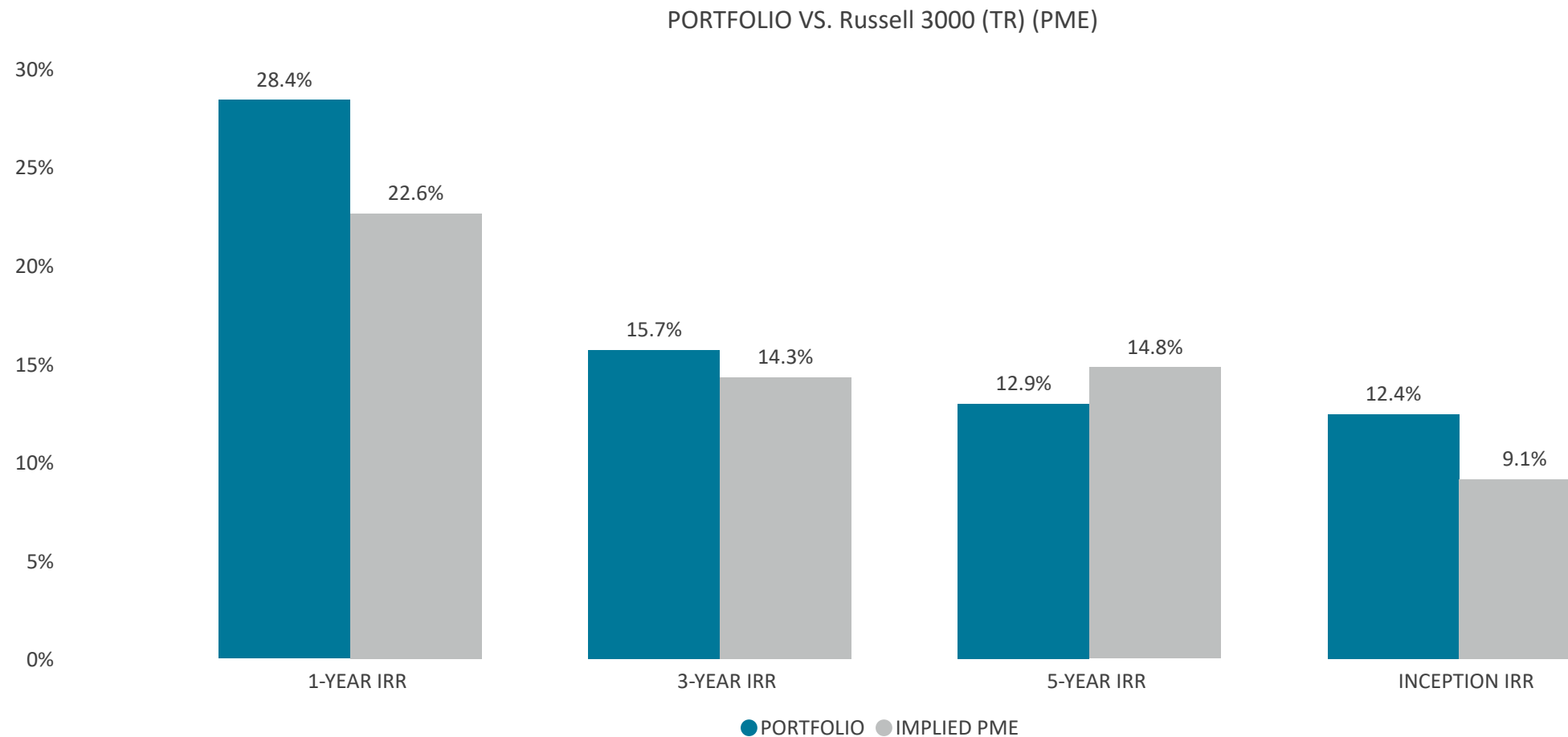
As of December 31, 2020. In USD millions.

SERS PORTFOLIO PERFORMANCE SUMMARY					
	DECEMBER 31, 2020	SEPTEMBER 30, 2020	DECEMBER 31, 2019	QUARTERLY Δ	ANNUAL Δ
Number of Managers	116	116	114	0	2
Number of Investments	327	325	319	2	8
Number of Active Investments	182	182	179	0	3
Committed Capital	\$14,016.0	\$13,936.3	\$13,331.0	\$79.7	\$684.9
Unfunded Commitment	2,725.9	2,831.5	2,661.3	(105.6)	64.6
Total Exposure	7,699.6	7,324.4	6,651.9	375.1	1,047.7
Total Contributed	17,371.6	17,153.6	16,661.0	218.1	710.6
Total Distributed	23,547.8	23,215.6	22,684.7	332.2	863.1
Total Market Value	4,973.7	4,492.9	3,990.6	480.8	983.1
Since Inception G/L	11,149.9	10,555.0	10,014.3	594.9	1,135.6
Total Value	\$28,521.5	\$27,708.6	\$26,675.3	\$812.9	\$1,846.2
Net DPI	1.4x	1.4x	1.4x		
Net TVM	1.6x	1.6x	1.6x		
Net IRR	12.4%	12.3%	12.2%	13 bps	19 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

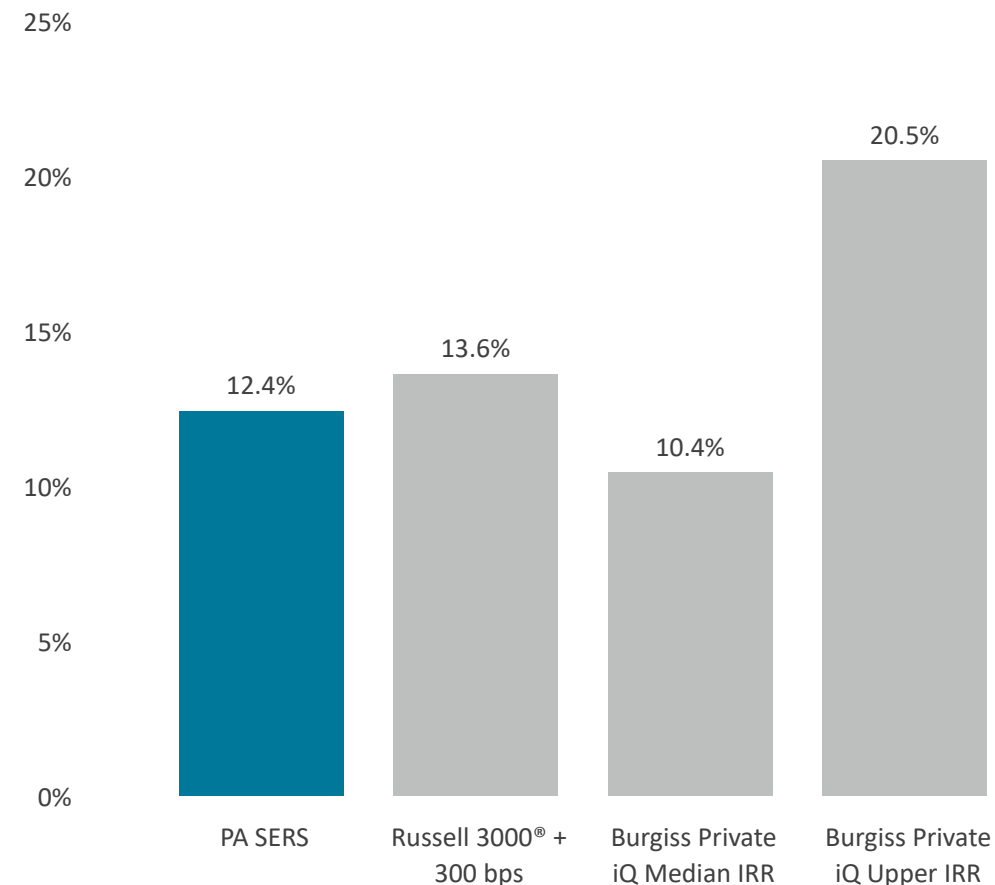
The following table illustrates the Portfolio's point-to-point investment performance as of December 31, 2020, as well as the public market equivalent (PME) based on the Russell 3000 (TR) index.



PORTFOLIO PERFORMANCE VS. BENCHMARKS

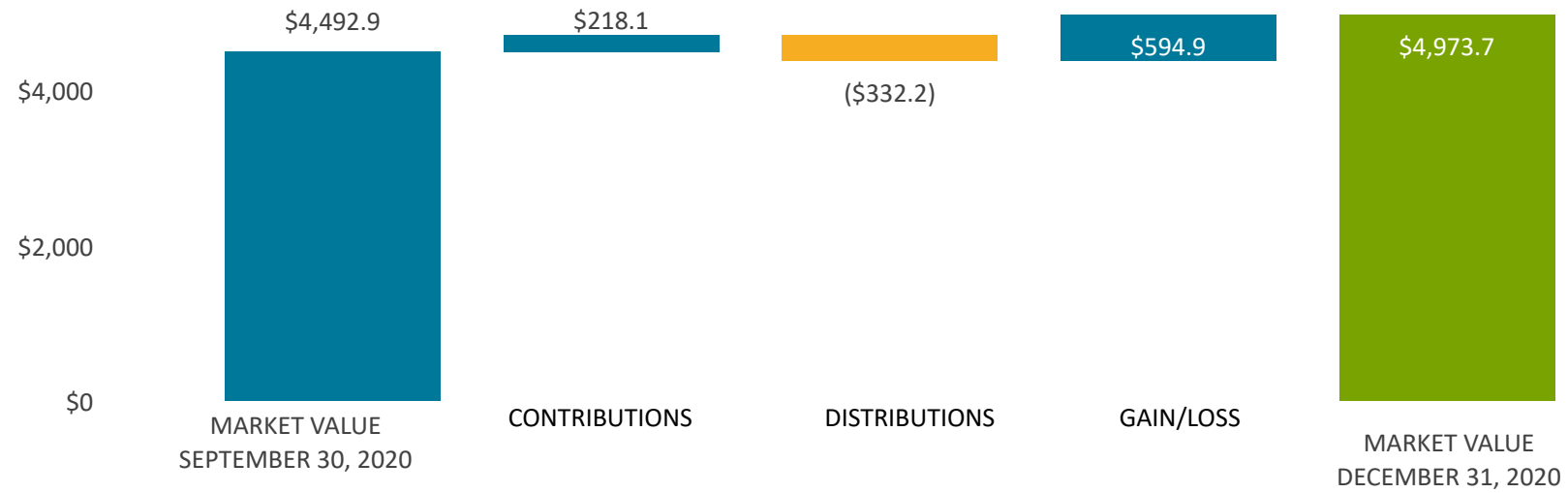
The Portfolio's performance is measured against two benchmarks, the Russell 3000[®] and Burgiss Private iQ. The following graph illustrates Portfolio IRR performance versus benchmarks as of December 31, 2020.

Returns	1 YEAR RETURN	3 YEAR RETURN	5 YEAR RETURN	10 YEAR RETURN
SERS Combined Portfolio (IRR)	28.4%	15.7%	12.9%	11.4%
Burgiss Private iQ Pooled PE Benchmark	26.2%	17.4%	15.9%	13.8%
Burgiss Private iQ All PE Top-Quartile	28.9%	23.3%	21.4%	20.9%
Russell 3000 [®]	20.9%	14.5%	15.4%	13.8%
Russell 3000 [®] + 300 bps	23.9%	17.5%	18.4%	16.8%
SERS Core Buyout (IRR)	27.5%	17.1%	16.2%	14.5%
Burgiss Private iQ Pooled Buyout Benchmark	19.7%	14.3%	15.4%	13.2%
Burgiss Private iQ Buyout Top-Quartile	24.0%	21.1%	21.7%	20.4%
SERS Core Growth Equity (IRR)	56.3%	36.5%	23.7%	20.6%
Burgiss Private iQ Pooled VC Benchmark	53.7%	29.8%	20.1%	18.4%
Burgiss Private iQ VC Top-Quartile	44.8%	29.9%	24.0%	25.0%
SERS Core Special Situations (IRR)	17.3%	14.5%	11.9%	10.7%
Burgiss Private iQ Pooled SS Benchmark	6.1%	6.2%	7.8%	8.3%
Burgiss Private iQ SS Top-Quartile	13.3%	13.2%	13.3%	13.1%
SERS Keystone Legacy Fund (IRR)	8.0%	(0.2%)	3.8%	6.7%
Burgiss Private iQ Pooled PE Benchmark	26.2%	17.4%	15.9%	13.8%
Burgiss Private iQ All PE Top-Quartile	28.9%	23.3%	21.4%	20.9%

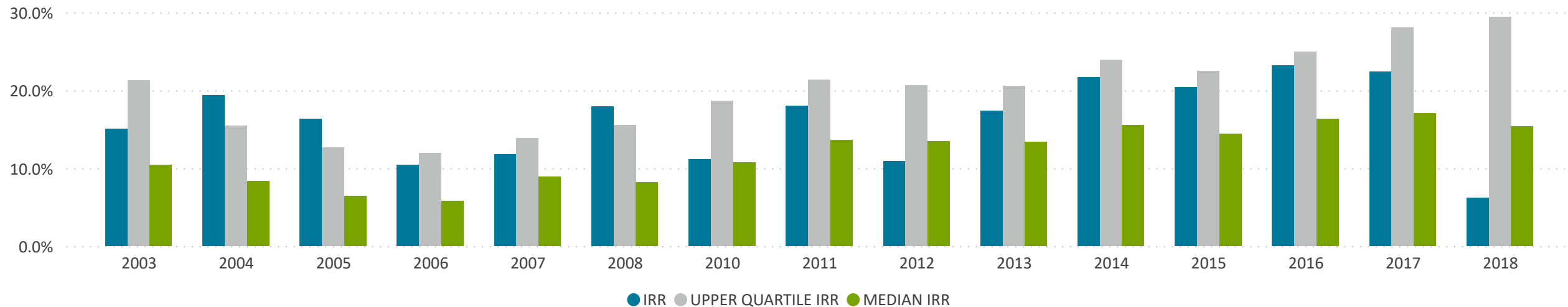


QUARTERLY VALUATION MOVEMENT

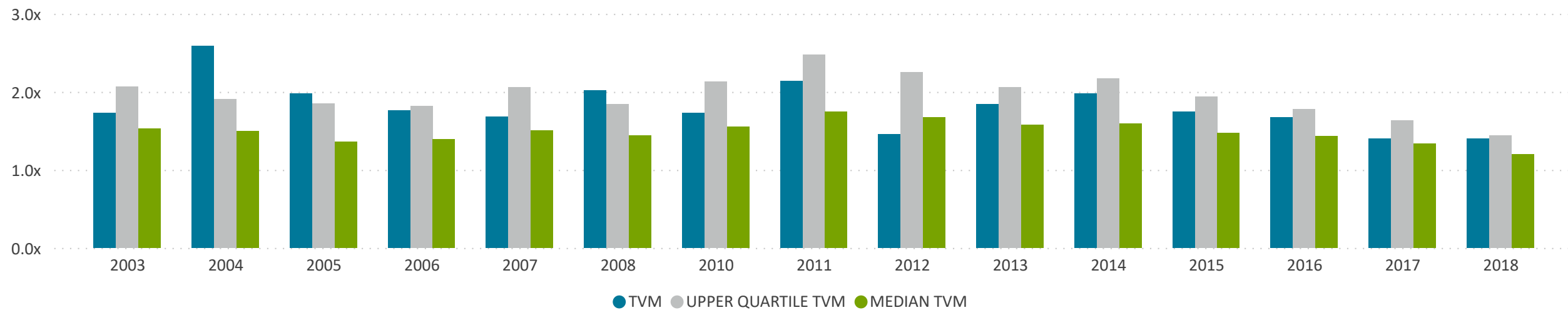
During the fourth quarter of 2020, the value of the Portfolio increased by \$594.9 million, or 13.2%.



IRR PERFORMANCE BY VINTAGE YEAR



TVM PERFORMANCE BY VINTAGE YEAR



FUND GEOGRAPHIC FOCUS

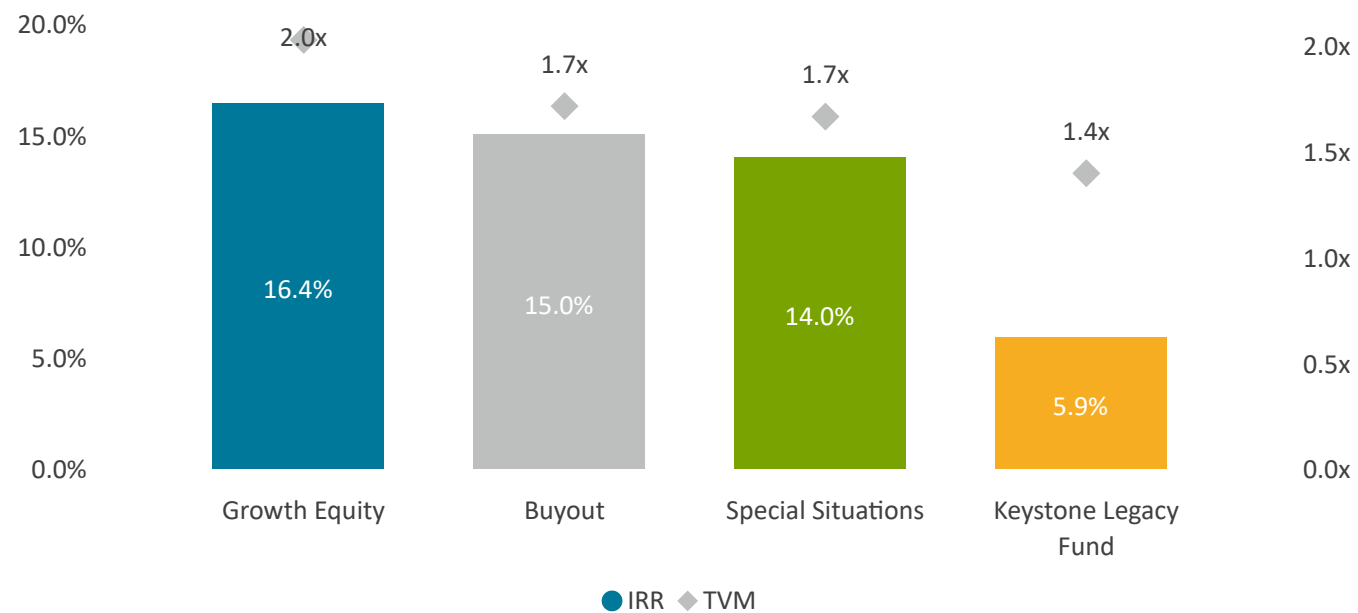
As of December 31, 2020. In USD millions.

GEOGRAPHY	NAV	% OF TOTAL	UNFUNDED	% OF TOTAL	TOTAL EXPOSURE	% OF TOTAL
North America	\$2,787.1	56.0%	\$1,612.6	59.2%	\$4,399.7	57.1%
Keystone Legacy Fund	\$652.6	13.1%	\$140.6	5.2%	\$793.2	10.3%
Global	\$500.3	10.1%	\$542.1	19.9%	\$1,042.4	13.5%
Europe	\$401.1	8.1%	\$236.6	8.7%	\$637.7	8.3%
Emerging Markets	\$119.1	2.4%	\$27.5	1.0%	\$146.6	1.9%
Asia	\$513.6	10.3%	\$166.5	6.1%	\$680.1	8.8%
Total	\$4,973.7	100.0%	\$2,725.9	100.0%	\$7,699.6	100.0%

CORE PORTFOLIO PERIODIC RETURNS VS. RUSSELL 3000 INDEX

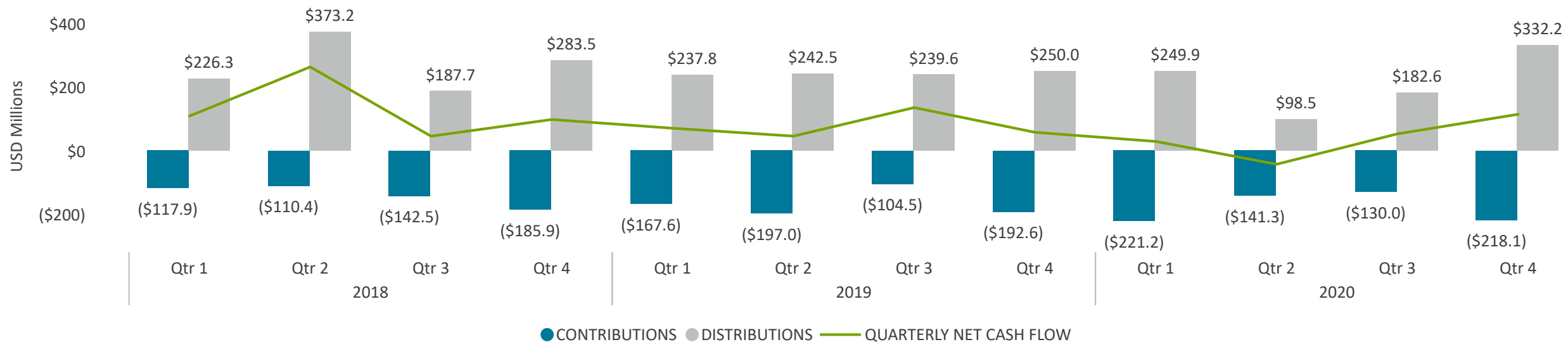
BENCHMARK	1 YEAR RETURN	3 YEAR RETURN	5 YEAR RETURN	10 YEAR RETURN	SINCE INCEPTION
SERS Core Portfolio (IRR)	32.5%	20.9%	17.2%	15.1%	15.3%
Russell 3000®	20.9%	14.5%	15.4%	13.8%	10.6%
Russell 3000® + 300 bps	23.9%	17.5%	18.4%	16.8%	13.6%
PA SERS Outperformance/(Underperformance)					
Russell 3000® Net	11.7%	6.4%	1.8%	1.3%	4.7%
Russell 3000® + 300 bps Net	8.7%	3.4%	(1.2%)	(1.7%)	1.7%

PERFORMANCE BY SECTOR



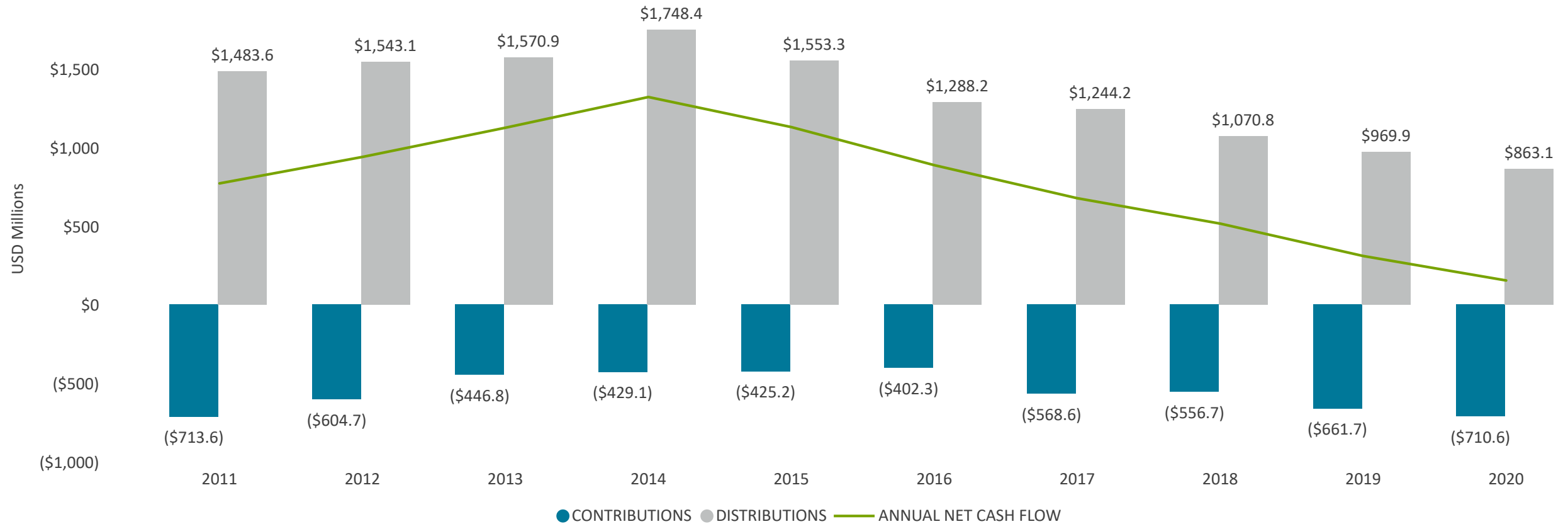
QUARTERLY CASH FLOW ACTIVITY

During the fourth quarter of 2020, the Portfolio contributed \$218.1 million and received \$332.2 million of distributions, for a net cash inflow of \$114.1 million.

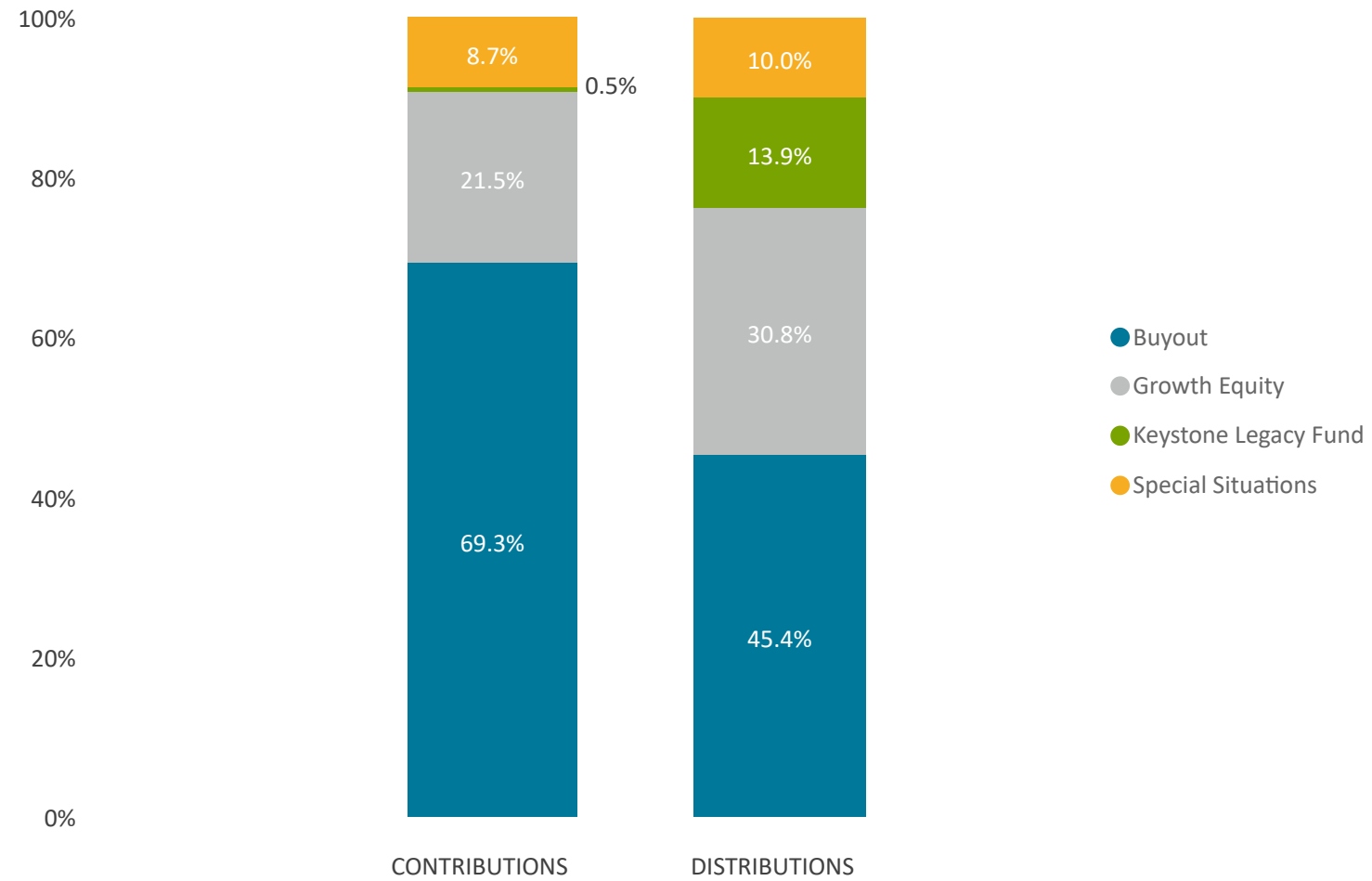


ANNUAL CASH FLOW ACTIVITY

During the twelve months ended December 31, 2020, the Portfolio contributed \$710.6 million and received \$863.1 million of distributions, for a net cash inflow of \$152.5 million.

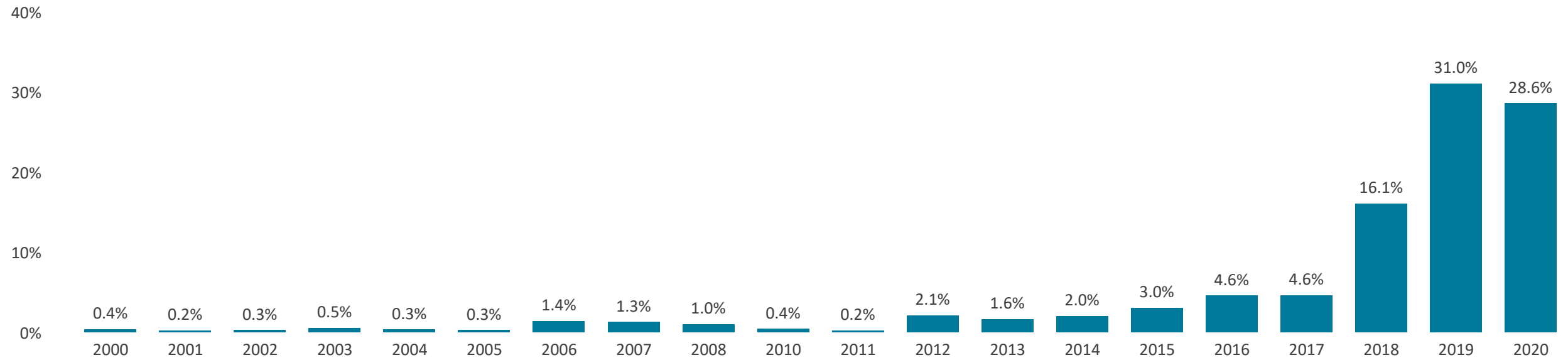


CASH FLOW BY SECTOR



UNFUNDED % by VINTAGE YEAR

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



SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of December 31, 2020

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
1997	Apollo Investment Fund IV	Buyout	\$75,000,000	\$74,838,620	\$124,814,033	\$50,243	\$50,025,656	1.7x	8.5%	Second	Second
1997 Total			\$75,000,000	\$74,838,620	\$124,814,033	\$50,243	\$50,025,656	1.7x	8.5%	Second	Second
1998	HarbourVest IPEP III	Buyout	40,000,000	39,400,000	61,092,165	77,020	21,769,185	1.6x	8.6%	Third	Second
1998 Total			\$40,000,000	\$39,400,000	\$61,092,165	\$77,020	\$21,769,185	1.6x	8.6%	Third	Second
1999	HarbourVest Partners VI	Growth Equity	200,000,000	196,586,055	251,227,115	803,036	55,444,096	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	8,228,227	778,831	(10,592,942)	0.5x	(6.3%)	Third	Third
1999 Total			\$255,000,000	\$250,702,504	\$302,818,720						
2000	ABRY Partners IV	Buyout	27,242,773	25,497,290	74,633,973						
2000	Apollo Investment Fund V	Buyout	50,000,000	44,972,146	122,673,016	428,660	78,129,530	2.7x	38.8%	First	First
2000	Audax Private Equity Fund	Buyout	35,000,000	36,839,098	56,057,910	329,846	19,548,658	1.5x	13.1%	Third	Third
2000	Blackstone Communications Partners I	Buyout	25,000,000	25,114,042	30,998,189	157,763	6,041,910	1.2x	6.2%	Fourth	Fourth
2000	Madison Dearborn Capital Partners IV	Buyout	90,000,000	90,454,587	169,895,733	2,385,623	81,826,769	1.9x	14.1%	Second	Second
2000	New Enterprise Associates X	Growth Equity	35,000,000	35,028,000	33,995,586	7,362,668	6,330,254	1.2x	2.5%	Second	Second
2000	Permira European Fund II	Buyout	45,672,612	45,672,612	91,560,959	314,211	46,202,558	2.0x	21.6%	First	Second
2000	Providence Equity Partners IV	Buyout	25,000,000	23,420,840	56,065,270						
2000 Total			\$332,915,385	\$326,998,615	\$635,880,636						
2001	ABRY Mezzanine Partners	Special Situations	30,000,000	26,731,187	49,707,116						
2001	Blackstone Capital IV	Buyout	69,379,875	69,119,097	192,546,094	1,607,904	125,034,901	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	\$367,423,374						
2002	Berkshire Fund VI	Buyout	20,000,000	18,819,615	54,873,734						
2002	GTCR VIII	Buyout	75,000,000	69,393,599	120,471,948				22.3%	Second	
2002 Total			\$95,000,000	\$88,213,214	\$175,345,682						
2003	HarbourVest Partners VII	Growth Equity	75,000,000	73,687,500	110,398,612	10,261,502	46,972,614	1.6x	6.9%	First	First

SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of December 31, 2020

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2003	Kelso VII	Buyout	40,000,000	41,169,937	65,821,118	61,929	24,713,110	1.6x	11.4%	Third	Third
2003	New Enterprise Associates 11	Growth Equity	25,000,000	25,000,000	63,385,828	2,821,102	41,206,930	2.6x	15.5%	First	First
2003	Permira European Fund III	Buyout	\$127,062,518	\$127,340,454	\$218,052,206	341,010	91,052,762	1.7x	26.1%	Second	Third
2003	TPG Partners IV	Buyout	27,907,484	27,981,463	58,018,004						
2003 Total			\$294,970,002	\$295,179,353	\$515,675,767						
2004	ABRY Partners V	Buyout	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	Buyout	25,000,000	25,000,000	45,084,480	169,028	20,253,508	1.8x	12.2%	Second	Second
2004	OCM Opportunities Fund V	Special Situations	40,000,000	40,003,507	65,911,274						
2004	Providence Equity Partners V	Buyout	45,000,000	42,692,171	51,743,883						
2004 Total			\$195,000,000	\$182,863,325	\$303,825,305						
2005	Apollo Investment Fund VI	Buyout	40,000,000	38,911,805	64,467,407	762,774	26,318,375	1.7x	8.7%	Second	Second
2005	Audax Private Equity Fund II	Buyout	25,000,000	25,517,152	46,325,622	200,335	21,008,805	1.8x	14.1%	First	Second
2005	HIPEP V-Asia Pacific & Rest of World	Buyout	30,000,000	28,245,316	36,187,819	3,895,800	11,838,303	1.4x	5.9%	Third	Third
2005	Lexington Capital Partners VI	Special Situations	50,000,000	53,066,325	71,180,326						
2005	Lightspeed Venture Partners VII	Growth Equity	18,000,000	18,000,000	49,449,448						
2005	Newbridge Asia IV	Buyout	40,000,000	38,903,378	86,585,520						
2005	OCM Opportunities Fund VI	Special Situations	40,000,000	40,000,000	63,171,009						
2005	OCM/GFI Power Opportunities Fund II	Buyout	13,431,284	13,470,852	41,644,215						
2005 Total			\$256,431,284	\$256,114,829	\$459,011,367						
2006	ABRY Senior Equity II	Special Situations	30,000,000	28,282,103	44,960,375						
2006	Asia Alternatives Capital Partners	Buyout	25,000,000	25,208,545	42,288,913	2,854,559	19,934,927	1.8x	10.8%	Second	Second
2006	AXA Secondary Fund IV	Special Situations	80,000,000	70,134,752	99,186,788						
2006	Berkshire Fund VII	Buyout	32,000,000	32,613,861	68,126,503						

SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of December 31, 2020

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2006	Blackstone Capital Partners V	Buyout	150,000,000	150,111,788	243,336,516	5,494,807	98,719,535	1.7x	7.5%	Third	Second
2006	Centerbridge Capital Partners I	Special Situations	50,000,000	57,399,008	114,404,865	5,377,430	62,383,287	2.1x	19.3%	First	First
2006	Eureka II	Buyout	20,000,000	21,906,935	22,678,390	4,091,674	4,863,129	1.2x	4.0%	Fourth	Fourth
2006	Francisco Partners II	Buyout	30,000,000	29,383,916	43,490,515	3,474,707	17,581,305	1.6x	10.1%	Second	Third
2006	HarbourVest Partners VIII	Growth Equity	\$100,000,000	\$98,000,000	\$153,594,387	42,664,222	98,258,609	2.0x	10.8%	First	First
2006	Hellman & Friedman Capital Partners VI	Buyout	125,000,000	119,913,412	222,910,013	2,240,617	105,237,218	1.9x	12.9%	Second	Second
2006	Madison Dearborn Capital Partners V	Buyout	75,000,000	71,556,584	113,906,518	2,464,740	44,814,674	1.6x	7.3%	Third	Second
2006	New Enterprise Associates 12	Growth Equity	35,000,000	35,631,130	46,722,311	4,323,079	15,414,260	1.4x	6.8%	Second	Second
2006	NewSpring Growth Capital II	Growth Equity	10,000,000	9,850,000	14,875,145						
2006	OCM Principal Opportunities Fund IV	Special Situations	20,000,000	20,400,000	34,058,279						
2006	Permira IV	Buyout	136,324,852	138,422,695	208,443,061	21,908,565	91,928,931	1.7x	8.9%	Second	Second
2006	TPG Partners V	Buyout	88,831,038	92,531,812	129,624,285	1,047,974	38,140,447	1.4x	4.8%	Third	Third
2006 Total			\$1,007,155,890	\$1,001,346,542	\$1,602,606,863						
2007	ABRY Advanced Securities Fund	Special Situations	7,262,950	23,508,684	38,682,209						
2007	Advent Latin American Private Equity Fund IV	Buyout	30,000,000	30,797,073	43,265,921	3,414,793	15,883,641	1.5x	9.1%	Third	Third
2007	Asia Alternatives Capital Partners II	Buyout	29,949,500	29,036,386	52,916,183	22,010,491	45,890,288	2.6x	17.7%	First	First
2007	Audax Private Equity Fund III	Buyout	37,000,000	42,498,691	81,672,112	1,665,952	40,839,374	2.0x	15.0%	Second	Second
2007	Battery Ventures VIII	Growth Equity	25,000,000	25,050,751	56,969,947						
2007	Dover Street VII	Special Situations	30,000,000	28,696,128	39,191,745	2,013,029	12,508,646	1.4x	9.2%	Third	Third
2007	Insight Venture Partners VI	Growth Equity	30,000,000	32,244,177	81,709,725	203,265	49,668,814	2.5x	19.2%	First	Second
2007	JMI Equity Fund VI	Growth Equity	40,000,000	40,000,246	69,497,467						
2007	Kelso VIII	Buyout	150,000,000	146,324,156	169,841,890	30,221,724	53,739,458	1.4x	6.5%	Fourth	Fourth
2007	OCM Opportunities Fund VII	Special Situations	40,000,000	40,000,000	54,806,896						
2007	OCM Opportunities Fund VII b	Special Situations	40,000,000	36,000,000	62,262,693						
2007	Providence Equity Partners VI	Buyout	49,976,748	54,594,993	60,285,062						

SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of December 31, 2020

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2007	TPG Asia V	Buyout	22,500,000	21,964,311	27,732,308	3,359,573	9,127,570	1.4x	6.4%	Third	Third
2007	Weathergag Venture Capital	Growth Equity	25,000,000	22,875,000	35,620,221	19,011,425	31,756,646	2.4x	13.3%	Second	Second
2007 Total			\$556,689,198	\$573,590,595	\$874,454,379						
2008	ABRY Partners VI	Buyout	50,000,000	59,994,861	107,608,270						
2008	Advent International GPE VI-A	Buyout	35,000,000	35,146,325	69,432,177	4,472,849	38,758,701	2.1x	16.7%	Second	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	Buyout	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	47,092,349						
2008	Lightspeed Venture Partners VIII	Growth Equity	15,000,000	15,000,000	32,524,378						
2008	LLR Equity Partners III	Buyout	30,000,000	29,108,722	51,222,009	7,119,606	29,232,892	2.0x	15.3%	Second	Second
2008	Madison Dearborn Capital Partners VI	Buyout	50,000,000	53,140,073	89,629,950	27,757,359	64,247,236	2.2x	23.4%	First	First
2008	TPG Partners VI	Buyout	44,294,641	50,432,611	67,384,574	7,283,258	24,235,220	1.5x	9.7%	Second	Third
2008 Total			\$286,062,641	\$305,750,298	\$541,947,122						
2010	Advent Latin American Private Equity Fund V	Buyout	15,000,000	14,430,000	8,325,000	7,960,306	1,855,306	1.1x	2.2%	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	Buyout	25,000,000	19,267,532	24,445,586						
2010	OCM Opportunities Fund VIII	Special Situations	12,500,000	12,583,425	17,717,075						
2010	OCM Opportunities Fund VIIIb	Special Situations	12,500,000	12,500,000	12,982,282						
2010	Weathergag Venture Capital II	Growth Equity	25,000,000	23,250,000	27,321,587	55,932,266	60,003,853	3.6x	20.3%	Second	Second
2010 Total			\$110,000,000	\$102,099,421	\$111,511,819						
2011	ABRY Partners VII	Buyout	30,000,000	38,153,686	48,787,265						
2011	Asia Alternatives Korea Buyout Investors (Hahn & Co)	Buyout	7,000,000	8,775,467	12,576,871	1,413,800	5,215,204	1.6x	10.9%	Third	Third
2011	Berkshire Fund VIII	Buyout	30,000,000	32,062,612	29,954,225						
2011	Francisco Partners III	Buyout	20,000,000	20,514,684	37,495,077	19,826,474	36,806,867	2.8x	22.4%	First	First

SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of December 31, 2020

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2011	H.I.G. Growth Buyouts & Equity Fund II	Buyout	15,000,000	15,898,204	10,010,436						
2011	Insight Venture Partners VII	Growth Equity	20,000,000	21,319,992	45,165,537	22,113,674	45,959,220	3.2x	22.8%	Second	Second
2011	JMI Equity Fund VII	Growth Equity	10,000,000	9,780,000	20,950,630						
2011	Meritech Capital Partners IV	Growth Equity	20,000,000	19,700,000	39,083,311						
2011 Total			\$152,000,000	\$166,204,644	\$244,023,353						
2012	Advent International GPE VII-B	Buyout	40,000,000	37,600,000	43,291,033	28,290,221	33,981,254	1.9x	15.4%	Second	Second
2012	Asia Alternatives Capital Partners III	Buyout	50,000,000	54,683,209	49,860,863	43,883,056	39,060,710	1.7x	13.5%	Third	Second
2012	AXA Secondary Fund V B	Special Situations	75,000,000	61,682,742	97,337,534						
2012	Carlyle Energy Mezzanine Opportunities Fund	Buyout	50,000,000	65,140,434	31,410,748	4,942,135	(28,787,551)	0.6x	(23.6%)	Fourth	Fourth
2012	NewSpring Growth Capital III	Growth Equity	25,000,000	23,643,105	17,442,493						
2012	Penn Asia Investors	Buyout	133,000,000	102,114,163	64,082,072	99,277,986	61,245,895	1.6x	15.1%	Second	Third
2012 Total			\$373,000,000	\$344,863,653	\$303,424,743						
2013	Eureka Growth Capital III	Buyout	20,000,000	15,613,524	15,886,883	13,101,710	13,375,069	1.9x	38.5%	First	Second
2013	FSN Capital IV	Buyout	37,894,803	38,520,666	55,829,456						
2013	H.I.G. Bayside Loan Opp. Fund III	Special Situations	50,000,000	40,418,122	41,716,688						
2013	Incline Equity Partners III	Buyout	15,000,000	16,048,858	33,723,849	6,642,031	24,317,022	2.5x	33.5%	First	First
2013	Insight Venture Partners VIII	Growth Equity	50,000,000	52,821,055	98,624,579	56,051,127	101,854,651	2.9x	22.4%	Second	Second
2013	LBC Credit Partners III	Special Situations	50,000,000	46,696,253	49,260,162				8.3%	Fourth	
2013	Oaktree Opportunities Fund IX	Special Situations	50,000,000	50,000,000	25,342,085						
2013	Platinum Equity Capital Partners III	Special Situations	50,000,000	47,092,256	80,813,844	15,664,098	49,385,686	2.0x	39.1%	First	Second
2013 Total			\$322,894,803	\$307,210,733	\$401,197,545						
2014	Capvis Equity IV	Buyout	42,701,512	44,923,075	33,984,236	19,053,709	8,114,871				
2014	GTCR Fund XI	Buyout	25,000,000	24,015,695	37,187,137				42.4%	First	
2014	H.I.G. Europe Capital Partners II	Buyout	24,735,655	20,061,285	4,624,567						
2014	Hahn & Company II	Buyout	50,000,000	54,525,907	16,718,025						

SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of December 31, 2020

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2014	Horizon Impact Fund	Buyout	50,000,000	44,629,802	27,726,470	44,328,919	27,425,587	1.6x	16.0%	Second	Second
2014	Horizon Strategic Fund - Carlyle Group	Buyout	100,000,000	86,601,204	42,848,347	111,002,460	67,249,603	1.8x	14.1%	Third	Second
2014	KPS Special Situations Fund IV	Special Situations	25,000,000	23,501,221	7,238,520	23,906,526	7,643,825	1.3x	16.7%	Second	Third
2014	LLR Equity Partners IV	Buyout	50,000,000	45,485,764	68,390,121	30,243,106	53,147,463	2.2x	25.8%	First	First
2014	Meritech Capital Partners V	Growth Equity	23,000,000	21,332,500	23,292,561						
2014	Sentinel Capital Partners V	Buyout	10,000,000	10,142,127	10,470,903	8,631,483	8,960,259	1.9x	21.2%	Second	Second
2014 Total			\$400,437,167	\$375,218,579	\$272,480,886						
2015	ABRY Partners VIII	Buyout	25,000,000	29,250,536	22,908,390						
2015	ADV Opportunities Fund I	Special Situations	50,000,000	59,116,845	16,410,457	61,539,830	18,833,442	1.3x	7.9%	Fourth	Third
2015	Advent Latin American Private Equity Fund VI	Buyout	25,000,000	21,300,000	5,000,000	22,927,590	6,627,590	1.3x	12.2%	Third	Third
2015	Centerbridge Capital Partners III	Special Situations	30,000,000	33,805,775	15,828,305	32,956,206	14,978,736	1.4x	18.1%	Second	Third
2015	Clearlake Capital Partners IV	Special Situations	15,000,000	21,809,094	18,396,080	18,947,406	15,534,392	1.7x	28.1%	First	Second
2015	Francisco Partners IV	Buyout	25,000,000	24,656,280	24,569,726	55,152,207	55,065,653	3.2x	37.1%	First	First
2015	H.I.G. Bayside Loan Opp. Fund IV	Special Situations	25,000,000	22,626,299	14,163,502						
2015	H.I.G. Brazil and Latin America Partners	Buyout	50,000,000	29,942,431	9,139						
2015	Insight Venture Partners IX	Growth Equity	50,000,000	51,172,788	21,696,145	137,488,165	108,011,523	3.1x	32.2%	First	First
2015	JMI Equity Fund VIII	Growth Equity	25,000,000	26,900,000	18,009,754						
2015	Lightspeed India Partners I	Growth Equity	15,000,000	13,590,000	1,576,000						
2015	Primavera Capital Fund II	Buyout	50,000,000	55,175,162	15,880,656						
2015	Ridgemont Equity Partners II	Buyout	50,000,000	48,547,530	27,657,924						
2015	RRJ Capital Master Fund III	Special Situations	50,000,000	45,106,028	40,975,154	13,899,454	9,768,580	1.2x	10.6%	Third	Fourth
2015 Total			\$485,000,000	\$482,998,767	\$243,081,233						
2016	Advent International GPE VIII-B	Buyout	50,000,000	47,450,001	-	92,369,342	44,919,341	1.9x	27.1%	First	First
2016	ASF VII B	Special Situations	100,000,000	57,427,498	13,541,442						
2016	ASF VII PA Co-Invest	Special Situations	50,000,000	28,529,951	7,385,230						

SCHEUDLE OF INVESTMENTS BY VINTAGE YEAR

As of December 31, 2020

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2016	Audax Private Equity Fund V	Buyout	50,000,000	44,342,402	21,583,025	46,748,101	23,988,724	1.5x	20.1%	Second	Second
2016	Blackstone Capital Partners VII	Buyout	50,000,000	52,010,987	5,795,751	60,438,814	14,223,577	1.3x	14.1%	Third	Third
2016	Hellman & Friedman Capital Partners VIII	Buyout	50,000,000	50,622,049	9,284,430	69,526,928	28,189,309	1.6x	19.2%	Second	Second
2016	Providence Strategic Growth II	Growth Equity	60,000,000	70,896,047	78,495,624						
2016	Sterling Group Partners IV	Buyout	20,000,000	17,486,324	974,538	24,613,965	8,102,179	1.5x	15.8%	Third	Third
2016	Vista Equity Partners Fund VI	Buyout	150,000,000	169,329,493	91,505,322						
2016 Total			\$580,000,000	\$538,094,753	\$228,565,362						
2017	Asia Alternatives Capital Partners V	Buyout	50,000,000	28,098,797	1,434,279	27,401,564	737,046	1.0x	2.5%	Fourth	Fourth
2017	FSN Capital V	Buyout	80,319,520	73,344,090	17,943,794						
2017	Horizon Impact Fund B	Buyout	100,000,000	64,250,000	990,000	68,699,381	5,439,381	1.1x	4.9%	Fourth	Fourth
2017	Permira VI	Buyout	57,228,368	51,150,582	11,727,066	88,445,295	49,021,780	2.0x	33.7%	First	First
2017	Wind Point Partners VIII	Buyout	100,000,000	96,063,858	48,554,180						
2017 Total			\$387,547,888	\$312,907,327	\$80,649,319						
2018	Clearlake Capital Partners V	Special Situations	55,000,000	50,650,059	15,464,574	NM	NM	NM	NM	NM	NM
2018	CVC Capital Partners VII	Buyout	95,437,107	59,640,429	956,940	NM	NM	NM	NM	NM	NM
2018	GTCR Fund XII	Buyout	32,500,000	21,276,884	6,222,496	NM	NM	NM	NM	NM	NM
2018	Hahn & Company III	Buyout	56,250,000	15,744,782	83,933	NM	NM	NM	NM	NM	NM
2018	Hahn & Company III - Supplemental Fund	Buyout	18,750,000	6,094,401	57,377	NM	NM	NM	NM	NM	NM
2018	Insight Venture Partners X	Growth Equity	100,000,000	97,800,000	6,616,572	NM	NM	NM	NM	NM	NM
2018	Keystone Legacy Fund	Keystone Legacy Fund	200,000,000	5,584,637,787	7,128,250,921	652,592,647	2,196,205,781	1.4x	5.9%	NM	NM
2018	LLR Equity Partners V	Buyout	75,000,000	68,335,417	14,786,456	NM	NM	NM	NM	NM	NM
2018	NGP Keystone	Buyout	25,000,000	-	-	NM	NM	NM	NM	NM	NM
2018	NGP XII	Buyout	75,000,000	42,515,030	241,746	NM	NM	NM	NM	NM	NM
2018	Providence Strategic Growth III	Growth Equity	75,000,000	55,162,297	16,950,563	NM	NM	NM	NM	NM	NM

SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of December 31, 2020

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2018	Silver Lake Partners V	Buyout	78,000,000	63,479,077	663,420	NM	NM	NM	NM	NM	NM
2018	TDR Capital IV	Buyout	93,605,827	34,834,570	-	NM	NM	NM	NM	NM	NM
2018 Total			\$979,542,934	\$6,100,170,733	\$7,190,294,996						
2019	Apollo Investment Fund IX	Buyout	85,400,000	24,378,915	2,770,743	NM	NM	NM	NM	NM	NM
2019	ASF VIII B	Special Situations	100,000,000	20,621,854	302,782	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	Buyout	75,000,000	19,489,494	1,798,070	NM	NM	NM	NM	NM	NM
2019	Blackstone Capital Partners VIII	Buyout	70,000,000	-	-	NM	NM	NM	NM	NM	NM
2019	Hellman & Friedman Capital Partners IX	Buyout	90,000,000	41,179,258	-	NM	NM	NM	NM	NM	NM
2019	Insight Venture Partners XI	Growth Equity	75,000,000	36,150,000	7,214	NM	NM	NM	NM	NM	NM
2019	KPS Special Situations Fund V	Special Situations	75,000,000	14,199,017	-	NM	NM	NM	NM	NM	NM
2019	KPS Special Situations Mid-Cap Fund	Special Situations	25,000,000	4,599,958	-	NM	NM	NM	NM	NM	NM
2019	Permira VII	Buyout	79,935,376	26,484,698	-	NM	NM	NM	NM	NM	NM
2019	Primavera Capital Fund III	Buyout	75,000,000	59,970,524	545,612	NM	NM	NM	NM	NM	NM
2019	Providence Strategic Growth IV	Growth Equity	75,000,000	31,996,968	4,054,061	NM	NM	NM	NM	NM	NM
2019	TCV X	Growth Equity	75,000,000	47,572,500	-	NM	NM	NM	NM	NM	NM
2019	Thoma Bravo Fund XIII	Buyout	75,000,000	61,175,385	38,622,739	NM	NM	NM	NM	NM	NM
2019	TSG8	Buyout	100,000,000	20,591,294	-	NM	NM	NM	NM	NM	NM
2019	Vista Equity Partners Fund VII	Buyout	75,000,000	36,605,522	174,838	NM	NM	NM	NM	NM	NM
2019	Wind Point Partners IX-A	Buyout	75,000,000	15,198,449	-	NM	NM	NM	NM	NM	NM
2019 Total			\$1,275,335,376	\$460,218,836	\$48,276,058	NM	NM	NM	NM	NM	NM
2020	Altaris Health Partners V	Buyout	50,000,000	-	-	NM	NM	NM	NM	NM	NM
2020	Ares PA Opportunities Fund, L.P. - Special Situations	Special Situations	100,000,000	-	-	NM	NM	NM	NM	NM	NM
2020	Clearlake Capital Partners VI	Special Situations	60,000,000	15,361,453	500,319	NM	NM	NM	NM	NM	NM

SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of December 31, 2020

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2020	CVC Capital Partners VIII, L.P.	Buyout	61,077,505	-	-	NM	NM	NM	NM	NM	NM
2020	HarbourVest PA Co-investment Fund	Buyout	200,000,000	37,350,000	-	NM	NM	NM	NM	NM	NM
2020	LLR Equity Partners VI	Buyout	50,000,000	-	-	NM	NM	NM	NM	NM	NM
2020	Neuberger Berman PA Co-Investment Fund	Buyout	200,000,000	-	-	NM	NM	NM	NM	NM	NM
2020	Permira Susquehanna Opportunities - Buyout	Buyout	40,000,000	-	-	NM	NM	NM	NM	NM	NM
2020	Thoma Bravo Discover Fund III, L.P.	Buyout	20,000,000	-	-	NM	NM	NM	NM	NM	NM
2020	Thoma Bravo Fund XIV	Buyout	50,000,000	-	-	NM	NM	NM	NM	NM	NM
2020 Total			\$831,077,505	\$52,711,453	\$500,319	NM	NM	NM	NM	NM	NM
Total: Active Investments			\$9,465,439,947	\$12,808,170,497	\$15,088,901,047	\$4,973,703,956	\$7,254,434,506	1.6x	9.2%	Third	Second
Total: Liquidated Investments			\$4,550,521,149	\$4,563,470,217	\$8,458,917,137	-	\$3,895,446,921	1.9x	16.3%	First	Second
Total: Commonwealth of Pennsylvania State Employees' Retirement System			\$14,015,961,096	\$17,371,640,714	\$23,547,818,184	\$4,973,703,956	\$11,149,881,426	1.6x	12.4%	Second	Second

SCHEDULE OF INVESTMENTS BY SECTOR

As of December 31, 2020

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Buyout	ABRY Partners IV	2000	\$27,242,773	\$25,497,290	\$74,633,973						
Buyout	ABRY Partners V	2004	45,000,000	41,752,543	84,778,199						
Buyout	ABRY Partners VI	2008	50,000,000	59,994,861	107,608,270						
Buyout	ABRY Partners VII	2011	30,000,000	38,153,686	48,787,265						
Buyout	ABRY Partners VIII	2015	25,000,000	29,250,536	22,908,390						
Buyout	Advent International GPE VI-A	2008	35,000,000	35,146,325	69,432,177	4,472,849	38,758,701	2.1x	16.7%	Second	First
Buyout	Advent International GPE VII-B	2012	40,000,000	37,600,000	43,291,033	28,290,221	33,981,254	1.9x	15.4%	Second	Second
Buyout	Advent International GPE VIII-B	2016	50,000,000	47,450,001	-	92,369,342	44,919,341	1.9x	27.1%	First	First
Buyout	Advent Latin American Private Equity Fund IV	2007	30,000,000	30,797,073	43,265,921	3,414,793	15,883,641	1.5x	9.1%	Third	Third
Buyout	Advent Latin American Private Equity Fund V	2010	15,000,000	14,430,000	8,325,000	7,960,306	1,855,306	1.1x	2.2%	Fourth	Fourth
Buyout	Advent Latin American Private Equity Fund VI	2015	25,000,000	21,300,000	5,000,000	22,927,590	6,627,590	1.3x	12.2%	Third	Third
Buyout	Altaris Health Partners V	2020	50,000,000	-	-	NM	NM	NM	NM	NM	NM
Buyout	Apollo Investment Fund IV	1997	75,000,000	74,838,620	124,814,033	50,243	50,025,656	1.7x	8.5%	Second	Second
Buyout	Apollo Investment Fund IX	2019	85,400,000	24,378,915	2,770,743	NM	NM	NM	NM	NM	NM
Buyout	Apollo Investment Fund V	2000	50,000,000	44,972,146	122,673,016	428,660	78,129,530	2.7x	38.8%	First	First
Buyout	Apollo Investment Fund VI	2005	40,000,000	38,911,805	64,467,407	762,774	26,318,375	1.7x	8.7%	Second	Second
Buyout	Asia Alternatives Capital Partners	2006	25,000,000	25,208,545	42,288,913	2,854,559	19,934,927	1.8x	10.8%	Second	Second
Buyout	Asia Alternatives Capital Partners II	2007	29,949,500	29,036,386	52,916,183	22,010,491	45,890,288	2.6x	17.7%	First	First
Buyout	Asia Alternatives Capital Partners III	2012	50,000,000	54,683,209	49,860,863	43,883,056	39,060,710	1.7x	13.5%	Third	Second
Buyout	Asia Alternatives Capital Partners V	2017	50,000,000	28,098,797	1,434,279	27,401,564	737,046	1.0x	2.5%	Fourth	Fourth
Buyout	Asia Alternatives Korea Buyout Investors (Hahn & Co)	2011	7,000,000	8,775,467	12,576,871	1,413,800	5,215,204	1.6x	10.9%	Third	Third
Buyout	Audax Private Equity Fund	2000	35,000,000	36,839,098	56,057,910	329,846	19,548,658	1.5x	13.1%	Third	Third
Buyout	Audax Private Equity Fund II	2005	25,000,000	25,517,152	46,325,622	200,335	21,008,805	1.8x	14.1%	First	Second
Buyout	Audax Private Equity Fund III	2007	37,000,000	42,498,691	81,672,112	1,665,952	40,839,374	2.0x	15.0%	Second	Second

SCHEDULE OF INVESTMENTS BY SECTOR

As of December 31, 2020

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Buyout	Audax Private Equity Fund V	2016	50,000,000	44,342,402	21,583,025	46,748,101	23,988,724	1.5x	20.1%	Second	Second
Buyout	Audax Private Equity Fund VI	2019	75,000,000	19,489,494	1,798,070	NM	NM	NM	NM	NM	NM
Buyout	Berkshire Fund VI	2002	20,000,000	18,819,615	54,873,734						
Buyout	Berkshire Fund VII	2006	32,000,000	32,613,861	68,126,503						
Buyout	Berkshire Fund VIII	2011	30,000,000	32,062,612	29,954,225						
Buyout	Blackstone Capital IV	2001	69,379,875	69,119,097	192,546,094	1,607,904	125,034,901	2.8x	36.2%	First	First
Buyout	Blackstone Capital Partners V	2006	150,000,000	150,111,788	243,336,516	5,494,807	98,719,535	1.7x	7.5%	Third	Second
Buyout	Blackstone Capital Partners VII	2016	50,000,000	52,010,987	5,795,751	60,438,814	14,223,577	1.3x	14.1%	Third	Third
Buyout	Blackstone Capital Partners VIII	2019	70,000,000	-	-	NM	NM	NM	NM	NM	NM
Buyout	Blackstone Communications Partners I	2000	25,000,000	25,114,042	30,998,189	157,763	6,041,910	1.2x	6.2%	Fourth	Fourth
Buyout	Capvis Equity IV	2014	42,701,512	44,923,075	33,984,236	19,053,709	8,114,871				
Buyout	Carlyle Energy Mezzanine Opportunities Fund	2012	50,000,000	65,140,434	31,410,748	4,942,135	(28,787,551)	0.6x	(23.6%)	Fourth	Fourth
Buyout	CVC Capital Partners VII	2018	95,437,107	59,640,429	956,940	NM	NM	NM	NM	NM	NM
Buyout	CVC Capital Partners VIII, L.P.	2020	61,077,505	-	-	NM	NM	NM	NM	NM	NM
Buyout	Eureka Growth Capital III	2013	20,000,000	15,613,524	15,886,883	13,101,710	13,375,069	1.9x	38.5%	First	Second
Buyout	Eureka II	2006	20,000,000	21,906,935	22,678,390	4,091,674	4,863,129	1.2x	4.0%	Fourth	Fourth
Buyout	Francisco Partners II	2006	30,000,000	29,383,916	43,490,515	3,474,707	17,581,305	1.6x	10.1%	Second	Third
Buyout	Francisco Partners III	2011	20,000,000	20,514,684	37,495,077	19,826,474	36,806,867	2.8x	22.4%	First	First
Buyout	Francisco Partners IV	2015	25,000,000	24,656,280	24,569,726	55,152,207	55,065,653	3.2x	37.1%	First	First
Buyout	FSN Capital IV	2013	37,894,803	38,520,666	55,829,456						
Buyout	FSN Capital V	2017	80,319,520	73,344,090	17,943,794						
Buyout	Great Hill Equity Partners IV	2008	25,000,000	25,125,662	59,603,949						
Buyout	GTCR Fund XI	2014	25,000,000	24,015,695	37,187,137				42.4%	First	
Buyout	GTCR Fund XII	2018	32,500,000	21,276,884	6,222,496	NM	NM	NM	NM	NM	NM
Buyout	GTCR VIII	2002	75,000,000	69,393,599	120,471,948				22.3%	Second	

SCHEDULE OF INVESTMENTS BY SECTOR

As of December 31, 2020

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Buyout	H.I.G. Brazil and Latin America Partners	2015	50,000,000	29,942,431	9,139						
Buyout	H.I.G. Europe Capital Partners II	2014	24,735,655	20,061,285	4,624,567						
Buyout	H.I.G. Growth Buyouts & Equity Fund II	2011	15,000,000	15,898,204	10,010,436						
Buyout	Hahn & Company II	2014	50,000,000	54,525,907	16,718,025						
Buyout	Hahn & Company III	2018	56,250,000	15,744,782	83,933	NM	NM	NM	NM	NM	NM
Buyout	Hahn & Company III - Supplemental Fund	2018	18,750,000	6,094,401	57,377	NM	NM	NM	NM	NM	NM
Buyout	HarbourVest IPEP III	1998	40,000,000	39,400,000	61,092,165	77,020	21,769,185	1.6x	8.6%	Third	Second
Buyout	HarbourVest PA Co-investment Fund	2020	200,000,000	37,350,000	-	NM	NM	NM	NM	NM	NM
Buyout	Hellman & Friedman Capital Partners IX	2019	90,000,000	41,179,258	-	NM	NM	NM	NM	NM	NM
Buyout	Hellman & Friedman Capital Partners VI	2006	125,000,000	119,913,412	222,910,013	2,240,617	105,237,218	1.9x	12.9%	Second	Second
Buyout	Hellman & Friedman Capital Partners VIII	2016	50,000,000	50,622,049	9,284,430	69,526,928	28,189,309	1.6x	19.2%	Second	Second
Buyout	HIPEP V-Asia Pacific & Rest of World	2005	30,000,000	28,245,316	36,187,819	3,895,800	11,838,303	1.4x	5.9%	Third	Third
Buyout	Horizon Impact Fund	2014	50,000,000	44,629,802	27,726,470	44,328,919	27,425,587	1.6x	16.0%	Second	Second
Buyout	Horizon Impact Fund B	2017	\$100,000,000	\$64,250,000	\$990,000	68,699,381	5,439,381	1.1x	4.9%	Fourth	Fourth
Buyout	Horizon Strategic Fund - Carlyle Group	2014	100,000,000	86,601,204	42,848,347	111,002,460	67,249,603	1.8x	14.1%	Third	Second
Buyout	Incline Equity Partners III	2013	15,000,000	16,048,858	33,723,849	6,642,031	24,317,022	2.5x	33.5%	First	First
Buyout	Kelso VII	2003	40,000,000	41,169,937	65,821,118	61,929	24,713,110	1.6x	11.4%	Third	Third
Buyout	Kelso VIII	2007	150,000,000	146,324,156	169,841,890	30,221,724	53,739,458	1.4x	6.5%	Fourth	Fourth
Buyout	LLR Equity Partners II	2004	25,000,000	25,000,000	45,084,480	169,028	20,253,508	1.8x	12.2%	Second	Second
Buyout	LLR Equity Partners III	2008	30,000,000	29,108,722	51,222,009	7,119,606	29,232,892	2.0x	15.3%	Second	Second
Buyout	LLR Equity Partners IV	2014	50,000,000	45,485,764	68,390,121	30,243,106	53,147,463	2.2x	25.8%	First	First
Buyout	LLR Equity Partners V	2018	75,000,000	68,335,417	14,786,456	NM	NM	NM	NM	NM	NM
Buyout	LLR Equity Partners VI	2020	50,000,000	-	-	NM	NM	NM	NM	NM	NM
Buyout	Madison Dearborn Capital Partners IV	2000	90,000,000	90,454,587	169,895,733	2,385,623	81,826,769	1.9x	14.1%	Second	Second
Buyout	Madison Dearborn Capital Partners V	2006	75,000,000	71,556,584	113,906,518	2,464,740	44,814,674	1.6x	7.3%	Third	Second

SCHEDULE OF INVESTMENTS BY SECTOR

As of December 31, 2020

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Buyout	Madison Dearborn Capital Partners VI	2008	50,000,000	53,140,073	89,629,950	27,757,359	64,247,236	2.2x	23.4%	First	First
Buyout	Neuberger Berman PA Co-Investment Fund	2020	200,000,000	-	-	NM	NM	NM	NM	NM	NM
Buyout	Newbridge Asia IV	2005	40,000,000	38,903,378	86,585,520						
Buyout	NGP Keystone	2018	25,000,000	-	-	NM	NM	NM	NM	NM	NM
Buyout	NGP XII	2018	75,000,000	42,515,030	241,746	NM	NM	NM	NM	NM	NM
Buyout	Oaktree Power Opportunities Fund III	2010	25,000,000	19,267,532	24,445,586						
Buyout	OCM/GFI Power Opportunities Fund II	2005	13,431,284	13,470,852	41,644,215						
Buyout	Penn Asia Investors	2012	133,000,000	102,114,163	64,082,072	99,277,986	61,245,895	1.6x	15.1%	Second	Third
Buyout	Permira European Fund II	2000	45,672,612	45,672,612	91,560,959	314,211	46,202,558	2.0x	21.6%	First	Second
Buyout	Permira European Fund III	2003	127,062,518	127,340,454	218,052,206	341,010	91,052,762	1.7x	26.1%	Second	Third
Buyout	Permira IV	2006	136,324,852	138,422,695	208,443,061	21,908,565	91,928,931	1.7x	8.9%	Second	Second
Buyout	Permira Susquehanna Opportunities - Buyout	2020	40,000,000	-	-	NM	NM	NM	NM	NM	NM
Buyout	Permira VI	2017	57,228,368	51,150,582	11,727,066	88,445,295	49,021,780	2.0x	33.7%	First	First
Buyout	Permira VII	2019	79,935,376	26,484,698	-	NM	NM	NM	NM	NM	NM
Buyout	Primavera Capital Fund II	2015	50,000,000	55,175,162	15,880,656						
Buyout	Primavera Capital Fund III	2019	75,000,000	59,970,524	545,612	NM	NM	NM	NM	NM	NM
Buyout	Providence Equity Partners IV	2000	25,000,000	23,420,840	56,065,270						
Buyout	Providence Equity Partners V	2004	45,000,000	42,692,171	51,743,883						
Buyout	Providence Equity Partners VI	2007	49,976,748	54,594,993	60,285,062						
Buyout	Ridgmont Equity Partners II	2015	50,000,000	48,547,530	27,657,924						
Buyout	Sentinel Capital Partners V	2014	10,000,000	10,142,127	10,470,903	8,631,483	8,960,259	1.9x	21.2%	Second	Second
Buyout	Silver Lake Partners V	2018	78,000,000	63,479,077	663,420	NM	NM	NM	NM	NM	NM
Buyout	Sterling Group Partners IV	2016	20,000,000	17,486,324	974,538	24,613,965	8,102,179	1.5x	15.8%	Third	Third
Buyout	TDR Capital IV	2018	93,605,827	34,834,570	-	NM	NM	NM	NM	NM	NM
Buyout	Thoma Bravo Discover Fund III, L.P.	2020	20,000,000	-	-	NM	NM	NM	NM	NM	NM

SCHEDULE OF INVESTMENTS BY SECTOR

As of December 31, 2020

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Buyout	Thoma Bravo Fund XIII	2019	75,000,000	61,175,385	38,622,739	NM	NM	NM	NM	NM	NM
Buyout	Thoma Bravo Fund XIV	2020	50,000,000	-	-	NM	NM	NM	NM	NM	NM
Buyout	TPG Asia V	2007	22,500,000	21,964,311	27,732,308	3,359,573	9,127,570	1.4x	6.4%	Third	Third
Buyout	TPG Partners IV	2003	27,907,484	27,981,463	58,018,004						
Buyout	TPG Partners V	2006	88,831,038	92,531,812	129,624,285	1,047,974	38,140,447	1.4x	4.8%	Third	Third
Buyout	TPG Partners VI	2008	44,294,641	50,432,611	67,384,574	7,283,258	24,235,220	1.5x	9.7%	Second	Third
Buyout	TSG8	2019	100,000,000	20,591,294	-	NM	NM	NM	NM	NM	NM
Buyout	Vista Equity Partners Fund VI	2016	150,000,000	169,329,493	91,505,322						
Buyout	Vista Equity Partners Fund VII	2019	75,000,000	36,605,522	174,838	NM	NM	NM	NM	NM	NM
Buyout	Wind Point Partners IX-A	2019	75,000,000	15,198,449	-	NM	NM	NM	NM	NM	NM
Buyout	Wind Point Partners VIII	2017	100,000,000	96,063,858	48,554,180						
Buyout Total			\$6,115,408,997	\$4,640,912,578	\$5,010,162,375	\$2,715,881,404	\$3,085,131,201	1.7x	14.1%	Second	Second
Keystone Legacy Fund	Keystone Legacy Fund	2018	200,000,000	5,584,637,787	7,128,250,921	652,592,647	2,196,205,781	1.4x	5.9%	NM	NM
Keystone Legacy Fund Total			\$200,000,000	\$5,584,637,787	\$7,128,250,921	\$652,592,647	\$2,196,205,781	1.4x	5.9%	NM	NM
Growth Equity	Battery Ventures VIII	2007	25,000,000	25,050,751	56,969,947						
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	803,036	55,444,096	1.3x	3.6%	First	First
Growth Equity	HarbourVest Partners VII	2003	75,000,000	73,687,500	110,398,612	10,261,502	46,972,614	1.6x	6.9%	First	First
Growth Equity	HarbourVest Partners VIII	2006	100,000,000	98,000,000	153,594,387	42,664,222	98,258,609	2.0x	10.8%	First	First
Growth Equity	Insight Venture Partners IX	2015	50,000,000	51,172,788	21,696,145	137,488,165	108,011,523	3.1x	32.2%	First	First
Growth Equity	Insight Venture Partners VI	2007	30,000,000	32,244,177	81,709,725	203,265	49,668,814	2.5x	19.2%	First	Second
Growth Equity	Insight Venture Partners VII	2011	20,000,000	21,319,992	45,165,537	22,113,674	45,959,220	3.2x	22.8%	Second	Second
Growth Equity	Insight Venture Partners VIII	2013	\$50,000,000	\$52,821,055	\$98,624,579	56,051,127	101,854,651	2.9x	22.4%	Second	Second
Growth Equity	Insight Venture Partners X	2018	100,000,000	97,800,000	6,616,572	NM	NM	NM	NM	NM	NM

SCHEDULE OF INVESTMENTS BY SECTOR

As of December 31, 2020

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Growth Equity	Insight Venture Partners XI	2019	75,000,000	36,150,000	7,214	NM	NM	NM	NM	NM	NM
Growth Equity	JMI Equity Fund VI	2007	40,000,000	40,000,246	69,497,467						
Growth Equity	JMI Equity Fund VII	2011	10,000,000	9,780,000	20,950,630						
Growth Equity	JMI Equity Fund VIII	2015	25,000,000	26,900,000	18,009,754						
Growth Equity	Lightspeed India Partners I	2015	15,000,000	13,590,000	1,576,000						
Growth Equity	Lightspeed Venture Partners VII	2005	18,000,000	18,000,000	49,449,448						
Growth Equity	Lightspeed Venture Partners VIII	2008	15,000,000	15,000,000	32,524,378						
Growth Equity	Meritech Capital Partners IV	2011	20,000,000	19,700,000	39,083,311						
Growth Equity	Meritech Capital Partners V	2014	23,000,000	21,332,500	23,292,561						
Growth Equity	New Enterprise Associates 11	2003	25,000,000	25,000,000	63,385,828	2,821,102	41,206,930	2.6x	15.5%	First	First
Growth Equity	New Enterprise Associates 12	2006	35,000,000	35,631,130	46,722,311	4,323,079	15,414,260	1.4x	6.8%	Second	Second
Growth Equity	New Enterprise Associates IX	1999	20,000,000	19,600,000	8,228,227	778,831	(10,592,942)	0.5x	(6.3%)	Third	Third
Growth Equity	New Enterprise Associates X	2000	35,000,000	35,028,000	33,995,586	7,362,668	6,330,254	1.2x	2.5%	Second	Second
Growth Equity	NewSpring Growth Capital II	2006	10,000,000	9,850,000	14,875,145						
Growth Equity	NewSpring Growth Capital III	2012	25,000,000	23,643,105	17,442,493						
Growth Equity	Providence Strategic Growth II	2016	60,000,000	70,896,047	78,495,624						
Growth Equity	Providence Strategic Growth III	2018	75,000,000	55,162,297	16,950,563	NM	NM	NM	NM	NM	NM
Growth Equity	Providence Strategic Growth IV	2019	75,000,000	31,996,968	4,054,061	NM	NM	NM	NM	NM	NM
Growth Equity	TCV X	2019	75,000,000	47,572,500	-	NM	NM	NM	NM	NM	NM
Growth Equity	Weathergag Venture Capital	2007	25,000,000	22,875,000	35,620,221	19,011,425	31,756,646	2.4x	13.3%	Second	Second
Growth Equity	Weathergag Venture Capital II	2010	25,000,000	23,250,000	27,321,587	55,932,266	60,003,853	3.6x	20.3%	Second	Second
Growth Equity Total			\$1,382,768,000	\$1,256,443,900	\$1,444,934,493	\$1,101,754,530	\$1,290,245,123	2.0x	11.1%	Third	Second
Special Situations	ABRY Advanced Securities Fund	2007	7,262,950	23,508,684	38,682,209						
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	28,282,103	44,960,375						

SCHEUDLE OF INVESTMENTS BY SECTOR

As of December 31, 2020

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Special Situations	ADV Opportunities Fund I	2015	50,000,000	59,116,845	16,410,457	61,539,830	18,833,442	1.3x	7.9%	Fourth	Third
Special Situations	Ares PA Opportunities Fund, L.P. - Special Situations	2020	100,000,000	-	-	NM	NM	NM	NM	NM	NM
Special Situations	ASF VII B	2016	100,000,000	57,427,498	13,541,442						
Special Situations	ASF VII PA Co-Invest	2016	50,000,000	28,529,951	7,385,230						
Special Situations	ASF VIII B	2019	100,000,000	20,621,854	302,782	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						
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	57,399,008	114,404,865	5,377,430	62,383,287	2.1x	19.3%	First	First
Special Situations	Centerbridge Capital Partners III	2015	30,000,000	33,805,775	15,828,305	32,956,206	14,978,736	1.4x	18.1%	Second	Third
Special Situations	Clearlake Capital Partners IV	2015	15,000,000	21,809,094	18,396,080	18,947,406	15,534,392	1.7x	28.1%	First	Second
Special Situations	Clearlake Capital Partners V	2018	55,000,000	50,650,059	15,464,574	NM	NM	NM	NM	NM	NM
Special Situations	Clearlake Capital Partners VI	2020	60,000,000	15,361,453	500,319	NM	NM	NM	NM	NM	NM
Special Situations	Dover Street VII	2007	30,000,000	28,696,128	39,191,745	2,013,029	12,508,646	1.4x	9.2%	Third	Third
Special Situations	H.I.G. Bayside Debt & LBO Fund II	2008	30,000,000	30,998,253	47,092,349						
Special Situations	H.I.G. Bayside Loan Opp. Fund III	2013	50,000,000	40,418,122	41,716,688						
Special Situations	H.I.G. Bayside Loan Opp. Fund IV	2015	25,000,000	22,626,299	14,163,502						
Special Situations	KPS Special Situations Fund IV	2014	25,000,000	23,501,221	7,238,520	23,906,526	7,643,825	1.3x	16.7%	Second	Third
Special Situations	KPS Special Situations Fund V	2019	75,000,000	14,199,017	-	NM	NM	NM	NM	NM	NM
Special Situations	KPS Special Situations Mid-Cap Fund	2019	25,000,000	4,599,958	-	NM	NM	NM	NM	NM	NM
Special Situations	LBC Credit Partners III	2013	50,000,000	46,696,253	49,260,162				8.3%	Fourth	

SCHEDULE OF INVESTMENTS BY SECTOR

As of December 31, 2020

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
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	71,180,326						
Special Situations	Oaktree Opportunities Fund IX	2013	50,000,000	50,000,000	25,342,085						
Special Situations	OCM Opportunities Fund V	2004	40,000,000	40,003,507	65,911,274						
Special Situations	OCM Opportunities Fund VI	2005	40,000,000	40,000,000	63,171,009						
Special Situations	OCM Opportunities Fund VII	2007	40,000,000	40,000,000	54,806,896						
Special Situations	OCM Opportunities Fund VII b	2007	40,000,000	36,000,000	62,262,693						
Special Situations	OCM Opportunities Fund VIII	2010	12,500,000	12,583,425	17,717,075						
Special Situations	OCM Opportunities Fund VIIIb	2010	12,500,000	12,500,000	12,982,282						
Special Situations	OCM Principal Opportunities Fund IV	2006	20,000,000	20,400,000	34,058,279						
Special Situations	Platinum Equity Capital Partners III	2013	50,000,000	47,092,256	80,813,844	15,664,098	49,385,686	2.0x	39.1%	First	Second
Special Situations	RRJ Capital Master Fund III	2015	\$50,000,000	\$45,106,028	\$40,975,154	13,899,454	9,768,580	1.2x	10.6%	Third	Fourth
Special Situations Total			\$1,767,262,950	\$1,326,176,232	\$1,505,553,258	\$503,475,376	\$682,852,401	1.5x	13.2%	First	First
Total: Active Investments			\$9,465,439,947	\$12,808,170,497	\$15,088,901,047	\$4,973,703,956	\$7,254,434,506	1.6x	9.2%	Third	Second
Total: Liquidated Investments			\$4,550,521,149	\$4,563,470,217	\$8,458,917,137	\$0	\$3,895,446,921	1.9x	16.3%	First	Second
Total: Commonwealth of Pennsylvania State Employees' Retirement System			\$14,015,961,096	\$17,371,640,714	\$23,547,818,184	\$4,973,703,956	\$11,149,881,426	1.6x	12.4%	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 December 31, 2020, for funds with vintage years 1980 to 2020.

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 December 31, 2020, 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 December 31, 2020, for funds with vintage years 1980 to 2020. 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.

IRR and TVM performance for investments held less than three years is not meaningful ("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 December 31, 2020 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 30-31 - Redacted