QUARTERLY PRIVATE EQUITY BOARD UPDATE

For the period ended December 31, 2023

Prepared at the Specific Request of:

Client:

Pennsylvania State Employees' Retirement System



TABLE OF CONTENTS

PA SERS PE Portfolio - Number of Funds and Managers/GPs	1
Performance Summary	2
Portfolio Performance vs Russell 3000	3
Portfolio Performance vs. Benchmarks	4
Quarterly Valution Movement	5
Vintage Year Performance	6
IRR Performance by Vintage Year	6
TVM Performance by Vintage Year	6
Diversification	7
Fund Geographic Diversification	7
Core Portfolio Returns	8
Performance by Sector	8
Cash Flow Activity	9
Quarterly Cash Flow Activity	9
Annual Cash Flow Activity	10
Cash Flow by Sector	11
Unfunded by Vintage Year	12
Schedule of Investments	13
Schedule of Investments by Vintage Year	13
Schedule of Investments by Sector	22
Schedule of Legacy Private Credit Investments	31
Schedule of Diverse Investments	32
End Notes	34
Definitions	36

1			
2			
3 //			
5			
6			
6			
6			
7			
/			
123456677889			
9			
10			
11			
12 13			
13			
13 .22 .31			
.31			
.32			
.34 .36			
.30			

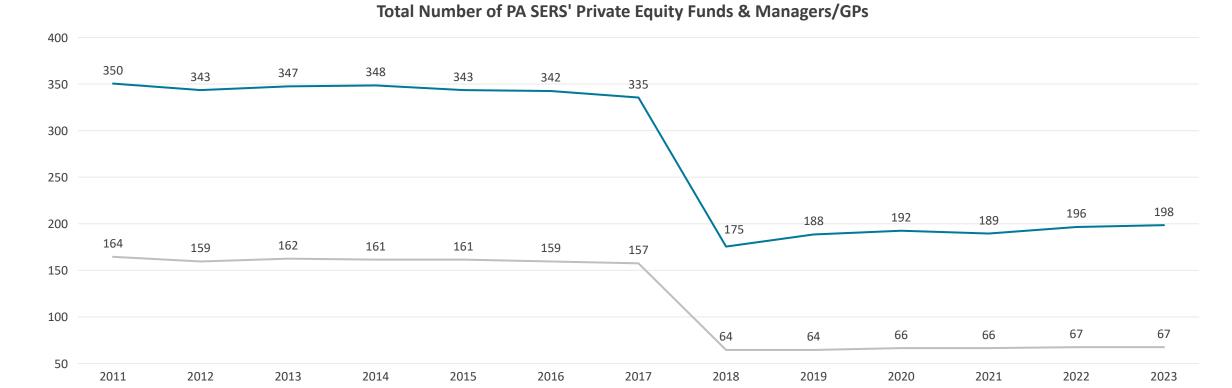
Disclaimer on this Page - Redacted



PA SERS PE PORTFOLIO - Number of Funds and Managers/GPs

StepStone Group LP ("StepStone") was engaged by Pennsylvania State Employees' Retirement System ("PA 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").

PA SERS is invested in 67 active managers as of December 31, 2023.



At the June 14, 2017 board meeting, PA SERS' Board hired Fairview Capital to take over monitoring responsibilities for 163 funds and 93 managers/GP relationships. This active legacy management portfolio, known as Keystone Legacy Fund, became effective July 1, 2018, and is the reason for the large drop in number of private equity funds and managers/GPs in 2018 on the chart above. All 163 funds and 93 managers/GPs were collapsed into a single line item for reporting purposes.

As of December 31, 2023, the Keystone Legacy Fund has 38 funds and 26 managers/GPs.

PE Funds —— PE Managers



PERFORMANCE SUMMARY

The following table illustrates the Portfolio's since inception investment performance as of December 31, 2023, 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, 2023.

As of December 31, 2023. In USD millions.

	PA SERS PORTFOLIO PERFORMANCE SUMMARY												
December 31, 2023 September 30, 2023 December 31, 2022 QUARTERLY Δ													
Committed Capital	\$22,088.1	\$22,083.4	\$21,634.8	\$4.7	\$453.3								
Total Contributed (TC)	20,571.1	20,397.7	19,941.9	173.4	629.2								
Unfunded Commitment	2,468.8	2,647.0	2,620.4	(178.3)	(151.7)								
Total Distributed (TD)	26,983.8	26,768.1	26,229.6	215.7	754.2								
Remaining Market Value (RMV)	6,937.3	6,806.7	6,517.3	130.6	420.0								
Total Value (TV = TD + RMV)	\$33,921.1	\$33,574.8	\$32,746.9	\$346.3	\$1,174.2								
Since Inception Gain/Loss (TV - TC)	13,350.0	13,177.1	12,805.1	172.9	545.0								
Net DPI (DPI = TD / TC)	1.3x	1.3x	1.3x										
Net TVM (TVM = TV / TC)	1.6x	1.6x	1.6x										
Net IRR	12.4%	12.4%	12.5%	0.0%	(0.1%)								

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.

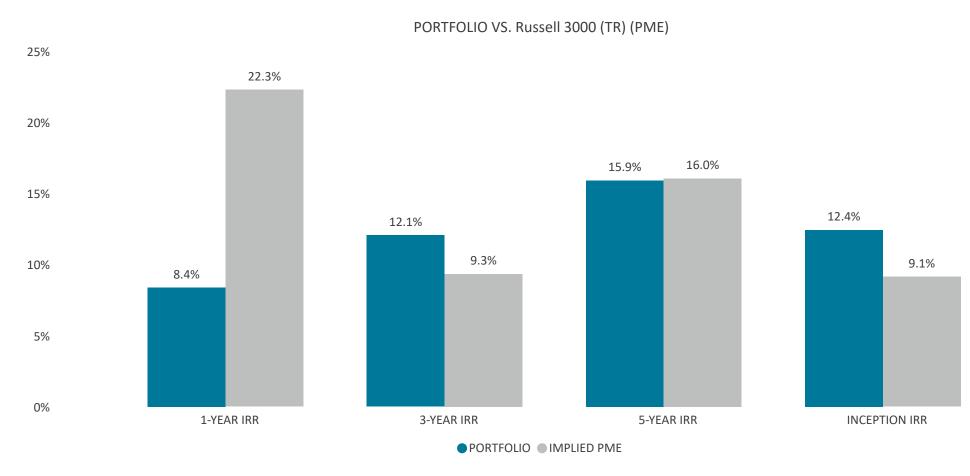
IRR and TVM for certain vehicles may have been impacted by StepStone's or the underlying GPs' use of subscription-backed credit facilities by such vehicles.

Reinvested/recycled amounts increase contributed capital.



PERFORMANCE SUMMARY CONTINUED

The following table illustrates the Portfolio's point-to-point investment performance as of December 31, 2023, as well as the public market equivalent (PME) based on the Russell 3000 (TR) index.



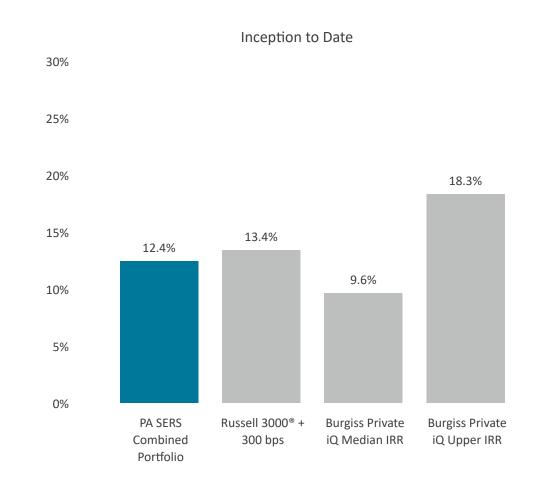
The referenced indices/benchmarks are shown for general market comparisons and are not meant to represent any particular fund. An investor cannot directly invest in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.



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, 2023.

RETURNS	1 YEAR RETURN	3 YEAR RETURN	5 YEAR RETURN	10 YEAR RETURN
PA SERS Combined Portfolio (IRR)	8.4%	12.1%	15.9%	11.3%
Burgiss Private iQ Pooled PE Benchmark	6.0%	10.8%	15.0%	13.3%
Burgiss Private iQ All PE Top-Quartile	11.1%	18.4%	19.3%	18.5%
Russell 3000®	26.0%	8.5%	15.2%	11.5%
Russell 3000® + 300 bps	29.0%	11.5%	18.2%	14.5%
PA SERS Core Buyout (IRR)	8.1%	12.0%	15.8%	14.0%
Burgiss Private iQ Pooled Buyout Benchmark	8.9%	14.4%	16.3%	14.0%
Burgiss Private iQ Buyout Top-Quartile	16.1%	26.9%	23.4%	22.3%
PA SERS Core Growth Equity (IRR)	7.2%	12.7%	25.5%	18.7%
Burgiss Private iQ Pooled VC Benchmark	(2.4%)	4.8%	16.6%	16.4%
Burgiss Private iQ VC Top-Quartile	3.1%	13.8%	18.7%	18.1%
PA SERS Core Special Situations (IRR)	11.0%	14.3%	16.5%	11.0%
Burgiss Private iQ Pooled SS Benchmark	9.4%	9.4%	8.6%	8.1%
Burgiss Private iQ SS Top-Quartile	13.3%	13.4%	12.6%	12.7%
PA SERS Keystone Legacy Fund (IRR)	(0.5%)	2.4%	2.6%	4.6%
Burgiss Private iQ Pooled PE Benchmark	6.0%	10.8%	15.0%	13.3%
Burgiss Private iQ All PE Top-Quartile	11.1%	18.4%	19.3%	18.5%

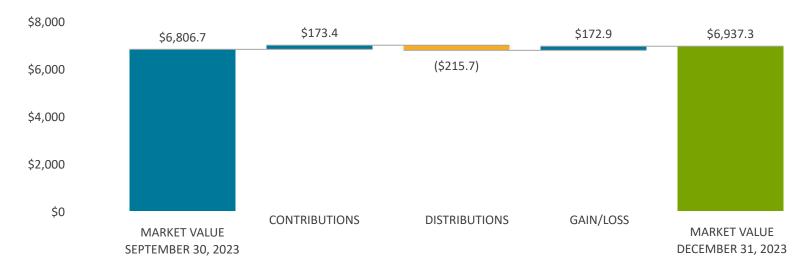


The referenced indices/benchmarks are shown for general market comparisons and are not meant to represent any particular fund. An investor cannot directly invest in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.



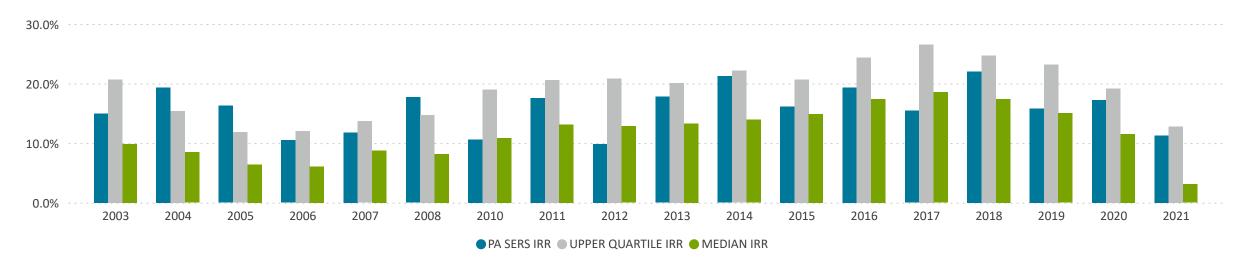
QUARTERLY VALUATION MOVEMENT

During the fourth quarter of 2023, the value of the Portfolio increased by \$172.9 million, or 2.5%.

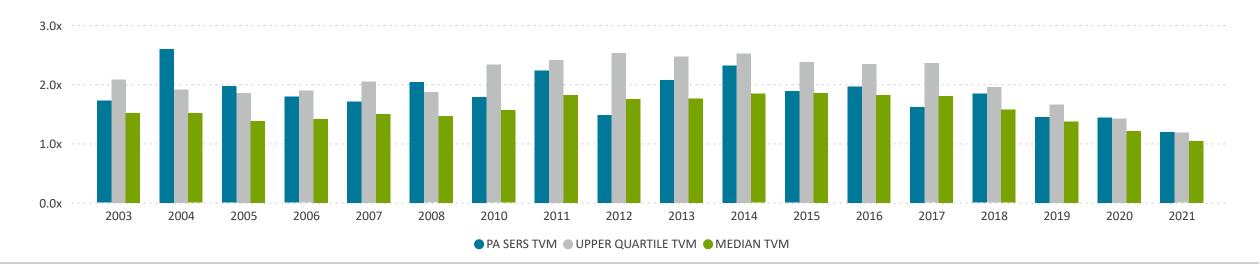




IRR PERFORMANCE BY VINTAGE YEAR



TVM PERFORMANCE BY VINTAGE YEAR





FUND GEOGRAPHIC DIVERSIFICATION

As of December 31, 2023. In USD millions.

GEOGRAPHY	NAV	% OF TOTAL	UNFUNDED	% OF TOTAL	TOTAL EXPOSURE	% OF TOTAL
North America	\$4,480.0	64.6%	\$1,770.0	71.7%	\$6,250.0	66.4%
Global	\$794.1	11.4%	\$379.7	15.4%	\$1,173.8	12.5%
Europe	\$794.6	11.5%	\$206.5	8.4%	\$1,001.2	10.6%
Asia	\$541.4	7.8%	\$70.6	2.9%	\$612.0	6.5%
Keystone Legacy Fund	\$194.1	2.8%	\$31.7	1.3%	\$225.8	2.4%
Emerging Markets	\$133.1	1.9%	\$10.2	0.4%	\$143.3	1.5%
Total	\$6,937.3	100.0%	\$2,468.8	100.0%	\$9,406.1	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
PA SERS Core Portfolio (IRR)	8.6%	12.7%	17.8%	14.3%	15.3%
Russell 3000®	26.0%	8.5%	15.2%	11.5%	10.4%
Russell 3000® + 300 bps	29.0%	11.5%	18.2%	14.5%	13.4%
PA SERS Outperformance/(Underperformance)					
Russell 3000® Net	(17.3%)	4.1%	2.6%	2.8%	4.9%
Russell 3000® + 300 bps Net	(20.3%)	1.1%	(0.4%)	(0.2%)	1.9%

The referenced indices/benchmarks are shown for general market comparisons and are not meant to represent any particular fund. An investor cannot directly invest in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.

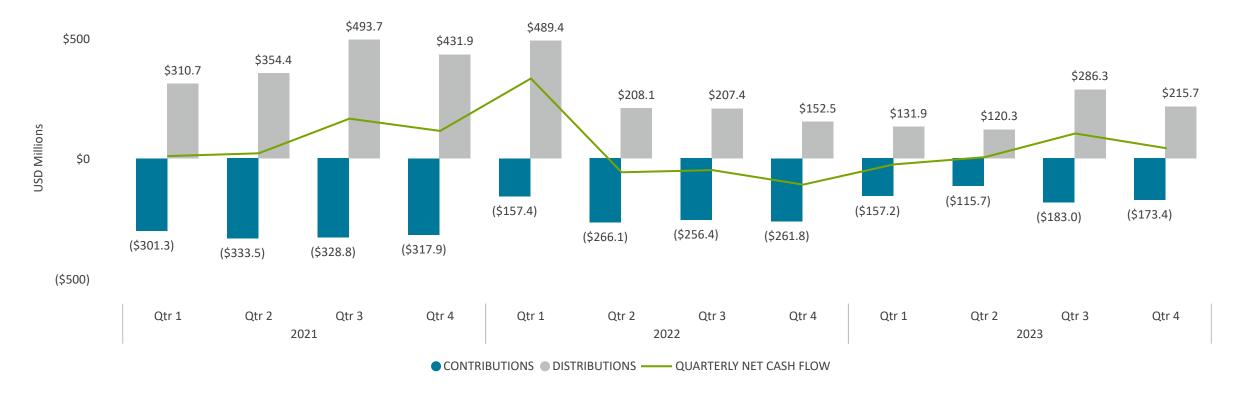
PERFORMANCE BY SECTOR





QUARTERLY CASH FLOW ACTIVITY

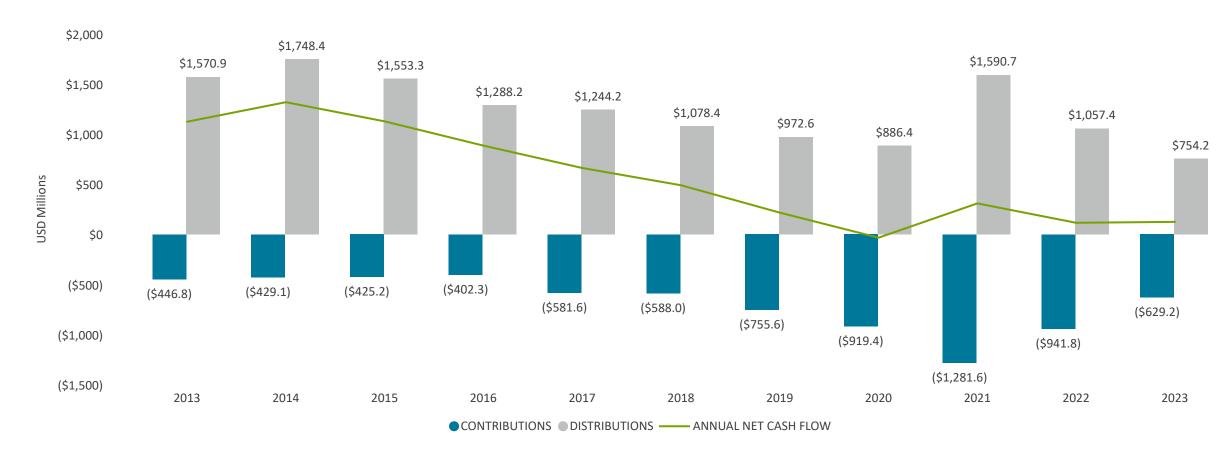
During the fourth quarter of 2023, the Portfolio contributed \$173.4 million and received \$215.7 million of distributions, for a net cash inflow of \$42.3 million.





ANNUAL CASH FLOW ACTIVITY

During the twelve months ended December 31, 2023, the Portfolio contributed \$629.2 million and received \$754.2 million of distributions, for a net cash inflow of \$125.0 million.





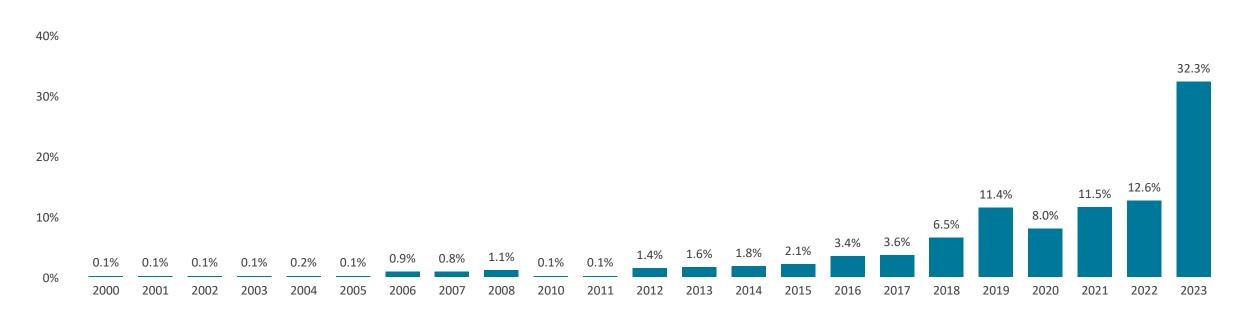
QUARTERLY CASH FLOW BY SECTOR





UNFUNDED % by VINTAGE YEAR

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





As of December 31, 2023

VINTAGE	FUND	SECTOR	COMMITMENT (CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK T	VM RANK
1997	Apollo Investment Fund IV	Buyouts	\$75,000,000	\$74,838,620	\$124,814,033	\$36,637		1.7x	8.5%	Second	Second
1997 Total		·	\$75,000,000	\$74,838,620	\$124,814,033	\$36,637	\$50,012,050	1.7x	8.5%	Second	Second
1998	HarbourVest IPEP III	Buyouts	40,000,000	39,400,000	61,092,165	69,829	21,761,994	1.6x	8.6%	Third	Second
1998 Total			\$40,000,000	\$39,400,000	\$61,092,165	\$69,829	\$21,761,994	1.6x	8.6%	Third	Second
1999	HarbourVest Partners VI	Growth Equity	200,000,000	196,586,055	251,227,115	359,017	55,000,077	1.3x	3.6%	First	First
1999	Lexington Capital Partners III	Special Situations	35,000,000	34,516,449	43,576,611						
1999	New Enterprise Associates IX	Growth Equity	20,000,000	19,600,000	8,739,870	434,559	(10,425,571)	0.5x	(6.0%)	Second	Third
1999 Total			\$255,000,000	\$250,702,504	\$303,543,596						
2000	Audax Private Equity Fund	Buyouts	35,000,000	36,839,098	56,057,910	62,750	19,281,562	1.5x	13.1%	Second	Third
2000	Blackstone Communications Partners I	Buyouts	25,000,000	25,114,042	30,998,189	157,677	6,041,824	1.2x	6.2%	Fourth	Fourth
2000	New Enterprise Associates X	Growth Equity	35,000,000	35,028,000	39,412,034	1,592,983	5,977,017	1.2x	2.3%	Second	Second
2000	Permira European Fund II	Buyouts	45,672,612	45,672,612	91,560,959	306,200	46,194,547	2.0x	21.6%	First	First
2000	Providence Equity Partners IV	Buyouts	25,000,000	23,420,840	56,065,270						
2000 Total			\$165,672,612	\$166,074,592	\$274,094,362						
2001	Blackstone Capital IV	Buyouts	69,379,875	69,119,097	193,976,664	252,093	125,109,660	2.8x	36.2%	First	First
2001	Lexington Capital Partners V	Special Situations	75,000,000	74,623,418	125,170,164						
2001 Total			\$144,379,875	\$143,742,515	\$319,146,828						
2002	Berkshire Fund VI	Buyouts	20,000,000	18,819,615	55,273,814						
2002 Total			\$20,000,000	\$18,819,615	\$55,273,814						
2003	HarbourVest Partners VII	Growth Equity	75,000,000	73,687,500	117,353,630	1,219,744	44,885,874	1.6x	6.7%	First	First
2003	Kelso VII	Buyouts	40,000,000	41,169,937	65,821,118	69,707	24,720,888	1.6x	11.4%	Third	Third
2003	New Enterprise Associates 11	Growth Equity	25,000,000	25,000,000	63,385,828	1,712,178	40,098,006	2.6x	15.4%	First	First
2003	Permira European Fund III	Buyouts	127,062,518	127,340,454	218,157,969	349,252	91,166,767	1.7x	26.1%	Second	Third
2003	TPG Partners IV	Buyouts	27,907,484	27,981,463	58,314,713						
2003 Total			\$294,970,002	\$295,179,353	\$523,033,258						



As of December 31, 2023

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	RR RANK T	VM RANK
2004	AXA Secondary Fund III	Special Situations	\$26,000,000	\$21,737,894	\$37,244,706	\$59,562	\$15,566,374	1.7x	44.0%	First	Second
2004	AXA Secondary Fund III-2	Special Situations	14,000,000	11,677,210	19,062,764	40,107	7,425,660	1.6x	40.5%	First	Second
2004	Providence Equity Partners V	Buyouts	45,000,000	42,688,053	52,244,364						
2004 Total			\$85,000,000	\$76,103,158	\$108,551,834						
2005	Apollo Investment Fund VI	Buyouts	40,000,000	38,911,805	64,467,407	677,521	26,233,122	1.7x	8.6%	Second	Second
2005	Lexington Capital Partners VI	Special Situations	50,000,000	53,066,325	73,905,823						
2005	Lightspeed Venture Partners VII	Growth Equity	18,000,000	18,000,000	53,968,729						
2005 Total			\$108,000,000	\$109,978,130	\$192,341,959	\$3,229,151	\$85,592,980	1.8 x	9.5%	Second	Second
2006	ABRY Senior Equity II	Special Situations	30,000,000	28,400,326	45,262,542						
2006	Asia Alternatives Capital Partners	Buyouts	25,000,000	25,218,098	44,268,821	1,861,907	20,912,630	1.8x	10.8%	Second	Second
2006	AXA Secondary Fund IV	Special Situations	80,000,000	70,134,752	99,618,118	102,217	29,585,583	1.4x	8.5%	Second	Third
2006	Berkshire Fund VII	Buyouts	32,000,000	32,613,937	68,596,870						
2006	Blackstone Capital Partners V	Buyouts	150,000,000	150,134,053	250,461,118	71,635	100,398,700	1.7x	7.6%	Third	Second
2006	Centerbridge Capital Partners I	Special Situations	50,000,000	57,337,396	117,317,806	1,563,015	61,543,425	2.1x	19.2%	First	First
2006	Eureka II	Buyouts	20,000,000	21,906,935	24,443,442	4,782,306	7,318,813	1.3x	4.9%	Fourth	Fourth
2006	Francisco Partners II	Buyouts	30,000,000	29,383,916	48,734,237	71,378	19,421,699	1.7x	10.4%	Second	Third
2006	HarbourVest Partners VIII	Growth Equity	100,000,000	98,000,000	187,241,100	27,318,605	116,559,705	2.2x	11.2%	First	First
2006	Madison Dearborn Capital Partners V	Buyouts	63,817,077	71,571,265	118,967,323	714,523	48,110,581	1.7x	7.5%	Third	Second
2006	New Enterprise Associates 12	Growth Equity	35,000,000	35,631,130	48,996,151	1,621,033	14,986,054	1.4x	6.6%	Second	Second
2006	NewSpring Growth Capital II	Growth Equity	10,000,000	9,850,000	19,617,977						
2006	Permira IV	Buyouts	136,385,706	138,422,695	208,443,061	26,569,688	96,590,054	1.7x	8.8%	Second	Second
2006	TPG Partners V	Buyouts	88,831,038	92,531,812	130,273,217	101,114	37,842,519	1.4x	4.8%	Third	Third
2006 Total			\$851,033,821	\$861,136,316	\$1,412,241,782	\$66,313,244	\$617,418,711	1.7 x	9.1%	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	2,224,072	15,382,920	1.5x	8.8%	Third	Third



As of December 31, 2023

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2007	Asia Alternatives Capital Partners II	Buyouts	\$29,949,500	\$29,105,691	\$72,182,168	\$3,146,119	\$46,222,596	2.6x	16.7%	First	First
2007	Audax Private Equity Fund III	Buyouts	37,000,000	42,498,691	82,716,671	635,948	40,853,929	2.0x	15.0%	Second	Second
2007	Battery Ventures VIII	Growth Equity	25,000,000	25,050,751	61,369,645						
2007	Dover Street VII	Special Situations	30,000,000	28,696,128	41,139,248	27,756	12,470,876	1.4x	9.1%	Third	Third
2007	Kelso VIII	Buyouts	150,000,000	147,077,801	212,472,060	544,002	65,938,261	1.4x	7.2%	Third	Third
2007	OCM Opportunities Fund VII	Special Situations	40,000,000	40,000,000	54,917,803						
2007	OCM Opportunities Fund VII b	Special Situations	40,000,000	36,000,000	62,330,206						
2007	Providence Equity Partners VI	Buyouts	49,976,748	54,530,937	78,145,686						
2007	TPG Asia V	Buyouts	22,500,000	21,964,311	30,309,943	1,104,919	9,450,551	1.4x	6.3%	Third	Third
2007	Weathergage Venture Capital	Growth Equity	25,000,000	22,875,000	46,144,239	12,365,813	35,635,052	2.6x	13.1%	Second	Second
2007 Total			\$486,689,198	\$502,125,487	\$824,469,825	\$26,258,942	\$348,603,280	1.7x	10.6%	Second	Second
2008	ABRY Partners VI	Buyouts	50,000,000	60,107,028	107,944,545						
2008	Advent International GPE VI-A	Buyouts	35,000,000	35,146,325	70,431,146	2,808,054	38,092,875	2.1x	16.4%	Second	First
2008	Battery Ventures VIII Side Car Fund	Growth Equity	6,768,000	6,803,790	18,828,496						
2008	Great Hill Equity Partners IV	Buyouts	25,000,000	25,125,662	63,349,649						
2008	H.I.G. Bayside Debt & LBO Fund II	Special Situations	30,000,000	31,448,253	51,691,289						
2008	Lightspeed Venture Partners VIII	Growth Equity	15,000,000	15,000,000	37,035,502						
2008	LLR Equity Partners III	Buyouts	30,000,000	29,108,722	65,280,571	479,679	36,651,528	2.3x	16.5%	Second	First
2008	Madison Dearborn Capital Partners VI	Buyouts	50,000,000	53,296,374	120,202,206	258,948	67,164,780	2.3x	23.2%	First	First
2008	TPG Partners VI	Buyouts	44,294,641	50,576,261	74,115,119	575,747	24,114,605	1.5x	9.5%	Second	Third
2008 Total			\$286,062,641	\$306,612,416	\$608,878,523	\$29,879,461	\$332,145,568	2.1x	18.4%	First	First
2010	Advent Latin American Private Equity Fund V	Buyouts	15,000,000	14,430,000	12,224,997	3,587,755	1,382,752	1.1x	1.4%	Fourth	Fourth
2010	Avenue Special Situations Fund VI	Special Situations	20,000,000	20,068,464	21,075,410						
2010	Oaktree Power Opportunities Fund III	Buyouts	25,000,000	19,267,532	29,286,578						
2010	OCM Opportunities Fund VIII	Special Situations	12,500,000	12,583,425	18,205,746						



As of December 31, 2023

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2010	OCM Opportunities Fund VIIIb	Special Situations	\$12,500,000	\$12,500,000	\$18,460,884						
2010	Weathergage Venture Capital II	Growth Equity	25,000,000	23,250,000	59,686,273	27,627,689	64,063,962	3.8x	18.2%	Second	First
2010 Total			\$110,000,000	\$102,099,421	\$158,939,888	\$35,931,787	\$92,772,254	1.9x	10.8%	Second	Second
2011	ABRY Partners VII	Buyouts	30,000,000	38,446,552	51,558,373						
2011	Asia Alternatives Korea Buyout Investors (Hahn & Co)	Buyouts	7,000,000	8,945,759	12,677,843	1,381,342	5,113,426	1.6x	10.3%	Third	Third
2011	Francisco Partners III	Buyouts	20,000,000	20,514,684	58,501,352	8,388,018	46,374,686	3.3x	23.2%	First	First
2011	H.I.G. Growth Buyouts & Equity Fund II	Buyouts	15,000,000	17,287,425	21,078,697						
2011	Insight Venture Partners VII	Growth Equity	20,000,000	22,129,992	54,006,381	18,008,533	49,884,922	3.3x	21.7%	Second	Second
2011	JMI Equity Fund VII	Growth Equity	10,000,000	9,789,325	23,911,259	573,067	14,695,001	2.5x	17.8%	Second	Second
2011	Meritech Capital Partners IV	Growth Equity	20,000,000	20,000,000	47,596,799						
2011 Total			\$122,000,000	\$137,113,737	\$269,330,705	\$47,610,158	\$179,827,126	2.3x	17.9%	Second	Second
2012	Advent International GPE VII-B	Buyouts	40,000,000	38,400,000	63,725,466	6,083,502	31,408,968	1.8x	13.4%	Third	Second
2012	Asia Alternatives Capital Partners III	Buyouts	50,000,000	55,637,190	76,108,322	23,051,951	43,523,083	1.8x	12.2%	Third	Second
2012	AXA Secondary Fund V B	Special Situations	75,000,000	61,682,742	97,816,150	191,191	36,324,599	1.6x	16.0%	Second	Third
2012	Carlyle Energy Mezzanine Opportunities Fund	Buyouts	50,000,000	65,670,223	40,417,028	84,906	(25,168,289)	0.6x			Fourth
2012	Penn Asia Investors	Buyouts	133,000,000	126,703,043	111,839,250	95,498,394	80,634,601	1.6x	12.6%	Third	Third
2012 Total			\$348,000,000	\$348,093,198	\$389,906,216	\$124,909,944	\$166,722,962	1.5x			Third
2013	Eureka Growth Capital III	Buyouts	20,000,000	17,210,666	40,332,770	5,449,877	28,571,981	2.7x	44.1%	First	First
2013	FSN Capital IV	Buyouts	38,009,855	38,520,666	82,280,821						
2013	H.I.G. Bayside Loan Opp. Fund III	Special Situations	50,000,000	42,696,553	49,904,323						
2013	Incline Equity Partners III	Buyouts	15,000,000	16,006,245	41,866,592	183,118	26,043,464	2.6x	33.9%	First	First
2013	Insight Venture Partners VIII	Growth Equity	50,000,000	54,916,419	117,288,540	56,209,719	118,581,840	3.2x	21.1%	Second	Second
2013	LBC Credit Partners III	Special Situations	50,000,000	46,696,243	54,397,706				8.0%	Third	
2013	Oaktree Opportunities Fund IX	Special Situations	50,000,000	50,000,000	53,233,854						
2013	Platinum Equity Capital Partners III	Special Situations	50,000,000	47,144,882	93,286,427	7,236,543	53,378,088	2.1x	37.8%	First	Second
2013 Total			\$323,009,855	\$313,191,673	\$532,591,033	\$116,888,256	\$336,287,615	2.1x	17.8%	Second	Second



As of December 31, 2023

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2014	Capvis Equity IV	Buyouts	\$43,039,837	\$46,342,729	\$41,736,092	\$23,742,115	\$19,135,478				
2014	GTCR Fund XI	Buyouts	25,000,000	24,775,445	54,589,100				32.4%	First	
2014	H.I.G. Europe Capital Partners II	Buyouts	24,491,162	22,568,576	17,832,358						
2014	Hahn & Company II	Buyouts	50,000,000	57,129,048	58,569,603						
2014	Horizon Impact Fund	Buyouts	50,000,000	42,649,604	69,252,180	25,120,340	51,722,916	2.2x	18.7%	Second	Second
2014	Horizon Strategic Fund - Carlyle Group	Buyouts	100,000,000	107,340,007	148,503,328	40,471,673	81,634,994	1.8x			Third
2014	KPS Special Situations Fund IV	Special Situations	25,000,000	23,893,422	37,008,974	10,714,557	23,830,110	2.0x	23.5%	First	Second
2014	LLR Equity Partners IV	Buyouts	50,000,000	45,485,764	95,620,140	21,710,432	71,844,808	2.6x	26.6%	First	First
2014	Meritech Capital Partners V	Growth Equity	23,000,000	22,540,000	154,318,263						
2014	Sentinel Capital Partners V	Buyouts	10,000,000	10,044,690	19,188,852	2,042,943	11,187,105	2.1x	20.7%	Second	Second
2014 Total			\$400,530,998	\$402,769,284	\$696,618,890	\$235,490,281	\$529,339,888	2.3x	21.2%	Second	Second
2015	ABRY Partners VIII	Buyouts	25,000,000	29,917,418	37,164,641						
2015	ADV Opportunities Fund I	Special Situations	50,000,000	63,436,058	39,690,149	41,554,006	17,808,097	1.3x	4.9%	Fourth	Fourth
2015	Advent Latin American Private Equity Fund VI	Buyouts	25,000,000	23,250,000	14,292,073	27,680,486	18,722,559	1.8x	14.7%	Third	Third
2015	Centerbridge Capital Partners III	Special Situations	30,000,000	40,038,953	38,176,293	28,905,828	27,043,168	1.7x	17.1%	Second	Third
2015	Clearlake Capital Partners IV	Special Situations	15,000,000	23,504,759	38,348,669	9,508,084	24,351,994	2.0x	28.8%	First	Second
2015	Francisco Partners IV	Buyouts	25,000,000	24,656,280	48,419,069	26,352,339	50,115,128	3.0x	27.1%	First	First
2015	H.I.G. Bayside Loan Opp. Fund IV	Special Situations	25,000,000	22,626,299	20,452,258						
2015	H.I.G. Brazil and Latin America Partners	Buyouts	50,000,000	54,008,902	18,683,595						
2015	Insight Venture Partners IX	Growth Equity	50,000,000	52,784,788	72,287,108	127,478,492	146,980,812	3.8x	25.0%	First	First
2015	JMI Equity Fund VIII	Growth Equity	25,000,000	27,565,904	50,849,127	14,736,079	38,019,302	2.4x	27.4%	First	Second
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	58,104,574	24,318,255	63,393,147	29,606,828	1.5x	8.0%	Fourth	Fourth
2015	Ridgemont Equity Partners II	Buyouts	50,000,000	53,909,810	80,305,272	24,143,117	50,538,579	1.9x	19.7%	Second	Second
2015	RRJ Capital Master Fund III	Special Situations	50,000,000	51,015,720	45,702,378	9,309,102	3,995,760	1.1x	3.8%	Fourth	Fourth
2015 Total			\$485,000,000	\$538,956,963	\$530,814,845	\$483,704,194	\$475,562,076	1.9x	16.2%	Second	Second



As of December 31, 2023

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK T	VMRANK
2016	Advent International GPE VIII-B	Buyouts	\$50,000,000	\$50,000,000	\$50,304,047	\$53,765,268	\$54,069,315		17.6%	Third	Second
2016	ASF VII B	Special Situations	100,000,000	72,941,390	72,089,141	41,838,469	40,986,220		14.4%	Third	Third
2016	ASF VII PA Co-Invest	Special Situations	50,000,000	36,479,053	33,757,485	27,106,474	24,384,906	1.7x	16.3%	Third	Third
2016	Audax Private Equity Fund V	Buyouts	50,000,000	44,939,958	66,745,788	28,226,920	50,032,751	2.1x	23.6%	Second	Second
2016	Blackstone Capital Partners VII	Buyouts	50,000,000	54,024,789	37,840,144	47,412,666	31,228,021	1.6x	12.7%	Fourth	Fourth
2016	Hellman & Friedman Capital Partners VIII	Buyouts	50,000,000	51,540,472	27,218,400	63,815,210	39,493,138	1.8x	13.1%	Fourth	Third
2016	Providence Strategic Growth II	Growth Equity	60,000,000	79,142,860	126,230,222	59,121,894	106,209,256	2.3x	36.9%	First	Second
2016	Sterling Group Partners IV	Buyouts	20,000,000	20,572,517	21,784,477	26,347,103	27,559,062	2.3x	21.4%	Second	Second
2016	Vista Equity Partners Fund VI	Buyouts	150,000,000	189,830,702	216,963,419						
2016 Total			\$580,000,000	\$599,471,741	\$652,933,123						
2017	Asia Alternatives Capital Partners V	Buyouts	50,000,000	52,847,907	9,819,415	57,806,449	14,777,957	1.3x	9.0%	Fourth	Fourth
2017	FSN Capital V	Buyouts	80,277,053	85,924,575	26,753,909						
2017	Horizon Impact Fund B	Buyouts	100,000,000	90,500,000	28,710,000	108,972,268	47,182,268	1.5x	12.3%	Fourth	Fourth
2017	Permira VI	Buyouts	56,579,572	52,364,123	31,563,313	73,135,676	52,334,866	2.0x	17.2%	Third	Second
2017	Sixth Street TAO 4.0 (B)	Special Situations	100,000,000	98,929,730	48,994,050	86,752,426	36,816,746	1.4x	10.4%	Fourth	Fourth
2017	Wind Point Partners VIII	Buyouts	100,000,000	103,770,032	152,781,191						
2017 Total			\$486,856,625	\$484,336,367	\$298,621,878	\$482,923,181	\$297,208,691	1.6 x	15.4%	Third	Third
2018	Clearlake Capital Partners V	Special Situations	55,000,000	79,506,170	106,223,151	64,003,396	90,720,377	2.1x	39.2%	First	First
2018	CVC Capital Partners VII	Buyouts	91,557,910	92,102,049	45,991,751	126,069,293	79,958,995	1.9x	21.9%	Second	Second
2018	GTCR Fund XII	Buyouts	32,500,000	32,620,693	19,642,335				22.9%	Second	
2018	Hahn & Company III	Buyouts	56,250,000	47,521,966	6,425,443						
2018	Hahn & Company III - Supplemental Fund	Buyouts	18,750,000	18,733,951	1,485,995						
2018	ICG Europe Fund VII	Special Situations	90,216,852	87,061,845	42,097,360	90,767,901	45,803,416	1.5x	16.0%	Third	Third
2018	Insight Venture Partners X	Growth Equity	100,000,000	104,723,487	57,898,051	217,990,286	171,164,850	2.6x	26.1%	First	First
2018	Keystone Legacy Fund	Keystone Legacy Fund	5,516,049,176	5,593,176,049	7,622,561,722	194,080,340	2,223,466,013	1.4x	5.9%	NM	NM



As of December 31, 2023

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2018	LLR Equity Partners V	Buyouts	\$75,000,000	\$73,590,002	\$29,618,357	\$114,807,850	\$70,836,204		20.4%	Second	First
2018	NGP XII	Buyouts	75,000,000	59,833,846	55,908,439	\$42,653,817	\$38,728,410	1.6x	16.5%	Third	Second
2018	Providence Strategic Growth III	Growth Equity	75,000,000	89,953,986	73,654,499	80,210,725	63,911,238	1.7x	24.9%	Second	Third
2018	Silver Lake Partners V	Buyouts	78,000,000	78,981,693	41,627,178	82,200,485	44,845,970	1.6x	13.7%	Third	Third
2018	TDR Capital IV	Buyouts	87,408,592	72,540,172	23,812,536	80,422,831	31,695,196	1.4x	15.3%	Third	Fourth
2018 Total			\$6,350,732,529	\$6,430,345,909	\$8,126,946,817	\$1,230,419,882	\$2,927,020,790	1.5 x	6.5%	NM	NM
2019	Apollo Investment Fund IX	Buyouts	85,400,000	79,976,747	32,120,079	87,274,828	39,418,160	1.5x	20.7%	Second	Second
2019	Ares PA Opportunities Fund, L.P Distressed Debt	Special Situations	200,000,000	147,981,610	37,842,276	162,485,018	52,345,684	1.4x	16.8%	Second	Third
2019	ASF VIII B	Special Situations	100,000,000	62,280,495	15,850,264	73,249,466	26,819,235	1.4x	18.7%	Second	Second
2019	Audax Private Equity Fund VI	Buyouts	75,000,000	76,268,853	41,841,240	91,042,038	56,614,425	1.7x	34.6%	First	First
2019	Clearlake Opportunities Partners II	Special Situations	75,000,000	51,416,132	17,178,828	45,825,066	11,587,762	1.2x	10.8%	Third	Third
2019	Glendon Opportunities Fund II	Special Situations	150,000,000	135,000,000	17,836,086						
2019	KPS Special Situations Mid-Cap Fund	Special Situations	25,000,000	15,599,258	4,598,409	20,277,051	9,276,202	1.6x	21.3%	Second	Second
2019	Primavera Capital Fund III	Buyouts	75,000,000	80,533,095	15,252,886	91,612,910	26,332,701	1.3x	7.9%	Fourth	Third
2019	Sixth Street Opportunities Partners IV	Special Situations	50,000,000	40,355,923	16,797,071	38,265,597	14,706,745	1.4x	11.4%	Third	Third
2019	Sixth Street TAO Contingent (D)	Special Situations	150,000,000	90,229,514	28,568,649	94,572,190	32,911,325	1.4x	15.0%	Third	Third
2019	TCV X	Growth Equity	75,000,000	56,289,972	13,692,960	101,858,199	59,261,187	2.1x	21.7%	Second	First
2019	Thoma Bravo Fund XIII	Buyouts	75,000,000	91,498,386	63,166,104				27.8%	Second	
2019	TSG8	Buyouts	100,000,000	88,225,713	3,315,893	77,192,347	(7,717,473)	0.9x	(3.9%)	Fourth	Fourth
2019	Vista Equity Partners Fund VII	Buyouts	75,000,000	68,015,812	7,157,217						
2019	Wind Point Partners IX-A	Buyouts	75,000,000	71,850,505	18,403,386						
2019 Total			\$1,385,400,000	\$1,155,522,014	\$333,621,348	\$1,337,476,222	\$515,575,555	1.4x	15.8%	Second	Second
2020	Ares PA Opportunities Fund, L.P Diversified Credit	Special Situations	70,000,000	51,433,196	3,724,377	59,820,315	12,111,497	1.2x	13.0%	Second	Third
2020	ASF VIII PA Co-Invest	Special Situations	50,000,000	24,940,129	2,644,711	28,295,214	5,999,796	1.2x	15.0%	Second	Second
2020	Clearlake Capital Partners VI	Special Situations	60,000,000	62,654,403	9,575,200	95,414,956	42,335,753	1.7x	23.9%	First	First



As of December 31, 2023

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS TVM	IRR	IRR RANK	TVM RANK
2020	HarbourVest PA Co-investment Fund	Buyouts	\$200,000,000	\$169,325,000	\$9,487,500	\$227,648,721	\$67,811,221 1.4x	15.6%	Third	Second
2020	Hellman & Friedman Capital Partners IX	Buyouts	90,000,000	91,074,083	6,513,194	126,479,888	41,918,999 1.5x	14.1%	Third	Second
2020	HPS Mezzanine Partners 2019	Special Situations	75,000,000	72,015,011	23,265,074	69,363,843	20,613,906 1.3x	11.9%	Second	Second
2020	ICG Europe Mid-Market Fund	Special Situations	73,861,441	58,204,634	24,141,866	59,216,673	25,153,905 1.4x	23.0%	First	First
2020	Insight Venture Partners XI	Growth Equity	75,000,000	72,975,000	474,113	108,650,030	36,149,142 1.5x	14.6%	Second	First
2020	KPS Special Situations Fund V	Special Situations	75,000,000	38,903,692	11,111,441	52,611,977	24,819,726 1.6x	22.0%	First	First
2020	Permira VII	Buyouts	75,942,482	72,958,617	5,589,425	79,465,713	12,096,521 1.2x	6.5%	Fourth	Fourth
2020	Providence Strategic Growth IV	Growth Equity	75,000,000	79,277,628	39,852,687	98,378,990	58,954,049 1.7x	40.4%	First	First
2020 Total			\$919,803,923	\$793,761,393	\$136,379,589	\$1,005,346,320	\$347,964,516 1.4x	17.2%	Second	First
2021	Altaris Health Partners V	Buyouts	50,000,000	30,947,280	467,183	NM	NM NM	NM	NM	NM
2021	Ares PA Opportunities Fund, L.P Special Situations	Special Situations	130,000,000	122,070,319	15,885,564	NM	NM NM	NM	NM	NM
2021	Blackstone Capital Partners VIII	Buyouts	70,000,000	46,946,907	2,903,959	NM	NM NM	NM	NM	NM
2021	CVC Capital Partners VIII	Buyouts	54,150,315	39,693,809	249,432	NM	NM NM	NM	NM	NM
2021	Hellman & Friedman Capital Partners X	Buyouts	100,000,000	72,325,179	186,673	NM	NM NM	NM	NM	NM
2021	Insight Partners Fund XII	Growth Equity	50,000,000	38,789,234	13,065	NM	NM NM	NM	NM	NM
2021	LLR Equity Partners VI	Buyouts	50,000,000	38,591,712	-	NM	NM NM	NM	NM	NM
2021	Neuberger Berman PA Co-Investment Fund	Buyouts	200,000,000	140,864,052	19,662,060	NM	NM NM	NM	NM	NM
2021	NGP Keystone	Buyouts	25,000,000	10,150,000	-	NM	NM NM	NM	NM	NM
2021	Permira Susquehanna Opportunities - Buyout	Buyouts	40,000,000	20,875,338	99,900	NM	NM NM	NM	NM	NM
2021	Providence Strategic Growth Europe	Growth Equity	71,915,741	66,934,276	13,280,317	NM	NM NM	NM	NM	NM
2021	Providence Strategic Growth V	Growth Equity	50,000,000	37,457,126	3,178,445	NM	NM NM	NM	NM	NM
2021	Thoma Bravo Discover Fund III	Buyouts	20,000,000	19,960,776	-	NM	NM NM	NM	NM	NM
2021	Thoma Bravo Fund XIV	Buyouts	50,000,000	49,253,111	6,511,630	NM	NM NM	NM	NM	NM
2021 Total			\$961,066,055	\$734,859,119	\$62,438,228	\$814,307,677	\$141,886,786 1.2x	11.3%	Second	Second
2022	ASF IX B	Special Situations	100,000,000	7,870,512	3,782	NM	NM NM	NM	NM	NM



As of December 31, 2023

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2022	Clearlake Capital Partners VII	Special Situations	\$100,000,000	\$57,849,852	\$268,947	NM	NM	NM	NM	NM	NM
2022	Clearlake Opportunities Partners III	Special Situations	75,000,000	17,245,610	284,018	NM	NM	NM	NM	NM	NM
2022	Sixth Street Opportunities Partners V	Special Situations	50,000,000	25,700,046	474,914	NM	NM	NM	NM	NM	NM
2022	Thoma Bravo Discover Fund IV, L.P.	Buyouts	50,000,000	28,590,080	-	NM	NM	NM	NM	NM	NM
2022	Thoma Bravo Fund XV, L.P.	Buyouts	100,000,000	71,318,055	21,669	NM	NM	NM	NM	NM	NM
2022	Veritas Capital Partners VIII, L.P.	Buyouts	100,000,000	55,577,127	20,267	NM	NM	NM	NM	NM	NM
2022 Total			\$575,000,000	\$264,151,282	\$1,073,597	\$285,289,158	\$22,211,473	NM	NM	NM	NM
2023	ASF IX PA Co-Invest B L.P.	Special Situations	50,000,000	11,182,645	-	NM	NM	NM	NM	NM	NM
2023	Francisco Partners Agility III	Buyouts	30,000,000	-	-	NM	NM	NM	NM	NM	NM
2023	Francisco Partners VII	Buyouts	100,000,000	750,000	-	NM	NM	NM	NM	NM	NM
2023	Francisco Partners VII PA Co-Invest	Buyouts	50,000,000	13,547,979	-	NM	NM	NM	NM	NM	NM
2023	Hellman & Friedman Capital Partners XI	Buyouts	100,000,000	-	-	NM	NM	NM	NM	NM	NM
2023	Keystone Co-Investors Veritas VIII, L.P.	Buyouts	25,000,000	-	-	NM	NM	NM	NM	NM	NM
2023	KPS Special Situations Fund VI, LP	Special Situations	75,000,000	-	-	NM	NM	NM	NM	NM	NM
2023	KPS Special Situations Mid-Cap Fund II, LP	Special Situations	25,000,000	-	-	NM	NM	NM	NM	NM	NM
2023	Providence Strategic Growth Europe II, L.P.	Growth Equity	71,654,630	3,804,163	2,029	NM	NM	NM	NM	NM	NM
2023	Providence Strategic Growth VI	Growth Equity	75,000,000	-	-	NM	NM	NM	NM	NM	NM
2023	Sentinel Capital Partners VII	Buyouts	100,000,000	6,903,844	-	NM	NM	NM	NM	NM	NM
2023	Sentinel Junior Capital II, L.P.	Special Situations	25,000,000	3,524,603	-	NM	NM	NM	NM	NM	NM
2023	Thoma Bravo Co-Invest Opportunities Fund XV-5, L.P.	Buyouts	50,000,000	20,352,148	-	NM	NM	NM	NM	NM	NM
2023	TSG 9	Buyouts	100,000,000	19,659,018	-	NM	NM	NM	NM	NM	NM
2023 Total			\$876,654,630	\$79,724,400	\$2,029	\$77,812,286	(\$1,910,084)	NM	NM	NM	NM
Total: Activ	ve Investments		\$16,735,862,765	\$15,229,109,208	\$16,997,700,163	\$6,937,302,218	\$8,705,893,174	1.6x	9.0%	Second	Second
Total: Liqui	idated Investments		\$5,352,192,177	\$5,341,981,500	\$9,986,132,713	\$0	\$4,644,151,213	1.9x	16.3%	First	Second
Total: Com	monwealth of Pennsylvania State Employees' Retireme	nt System	\$22,088,054,942	\$20,571,090,707	\$26,983,832,876	\$6,937,302,218	\$13,350,044,387	1.6x	12.4%	Second	Second



As of December 31, 2023

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Buyouts	ABRY Partners VI	2008	\$50,000,000	\$60,107,028	\$107,944,545						
Buyouts	ABRY Partners VII	2011	30,000,000	38,446,552	51,558,373	-					
Buyouts	ABRY Partners VIII	2015	25,000,000	29,917,418	37,164,641						
Buyouts	Advent International GPE VI-A	2008	35,000,000	35,146,325	70,431,146	2,808,054	38,092,875	2.1x	16.4%	Second	First
Buyouts	Advent International GPE VII-B	2012	40,000,000	38,400,000	63,725,466	6,083,502	31,408,968	1.8x	13.4%	Third	Second
Buyouts	Advent International GPE VIII-B	2016	50,000,000	50,000,000	50,304,047	53,765,268	54,069,315	2.1x	17.6%	Third	Second
Buyouts	Advent Latin American Private Equity Fund IV	2007	30,000,000	30,797,073	43,955,921	2,224,072	15,382,920	1.5x	8.8%	Third	Third
Buyouts	Advent Latin American Private Equity Fund V	2010	15,000,000	14,430,000	12,224,997	3,587,755	1,382,752	1.1x	1.4%	Fourth	Fourth
Buyouts	Advent Latin American Private Equity Fund VI	2015	25,000,000	23,250,000	14,292,073	27,680,486	18,722,559	1.8x	14.7%	Third	Third
Buyouts	Altaris Health Partners V	2021	50,000,000	30,947,280	467,183	NM	NM	NM	NM	NM	NM
Buyouts	Apollo Investment Fund IV	1997	75,000,000	74,838,620	124,814,033	36,637	50,012,050	1.7x	8.5%	Second	Second
Buyouts	Apollo Investment Fund IX	2019	85,400,000	79,976,747	32,120,079	87,274,828	39,418,160	1.5x	20.7%	Second	Second
Buyouts	Apollo Investment Fund VI	2005	40,000,000	38,911,805	64,467,407	677,521	26,233,122	1.7x	8.6%	Second	Second
Buyouts	Asia Alternatives Capital Partners	2006	25,000,000	25,218,098	44,268,821	1,861,907	20,912,630	1.8x	10.8%	Second	Second
Buyouts	Asia Alternatives Capital Partners II	2007	29,949,500	29,105,691	72,182,168	3,146,119	46,222,596	2.6x	16.7%	First	First
Buyouts	Asia Alternatives Capital Partners III	2012	50,000,000	55,637,190	76,108,322	23,051,951	43,523,083	1.8x	12.2%	Third	Second
Buyouts	Asia Alternatives Capital Partners V	2017	50,000,000	52,847,907	9,819,415	57,806,449	14,777,957	1.3x	9.0%	Fourth	Fourth
Buyouts	Asia Alternatives Korea Buyout Investors (Hahn & Co)	2011	7,000,000	8,945,759	12,677,843	1,381,342	5,113,426	1.6x	10.3%	Third	Third
Buyouts	Audax Private Equity Fund	2000	35,000,000	36,839,098	56,057,910	62,750	19,281,562	1.5x	13.1%	Second	Third
Buyouts	Audax Private Equity Fund III	2007	37,000,000	42,498,691	82,716,671	635,948	40,853,929	2.0x	15.0%	Second	Second
Buyouts	Audax Private Equity Fund V	2016	50,000,000	44,939,958	66,745,788	28,226,920	50,032,751	2.1x	23.6%	Second	Second
Buyouts	Audax Private Equity Fund VI	2019	75,000,000	76,268,853	41,841,240	91,042,038	56,614,425	1.7x	34.6%	First	First
Buyouts	Berkshire Fund VI	2002	20,000,000	18,819,615	55,273,814						
Buyouts	Berkshire Fund VII	2006	32,000,000	32,613,937	68,596,870						
Buyouts	Blackstone Capital IV	2001	69,379,875	69,119,097	193,976,664	252,093	125,109,660	2.8x	36.2%	First	First



As of December 31, 2023

SECTOR	FUND	VINTAGE		CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM		IRR RANK	
Buyouts	Blackstone Capital Partners V	2006	\$150,000,000	\$150,134,053	\$250,461,118	\$71,635	\$100,398,700	1.7x	7.6%	Third	Second
Buyouts	Blackstone Capital Partners VII	2016	50,000,000	54,024,789	37,840,144	\$47,412,666	\$31,228,021	1.6x	12.7%	Fourth	Fourth
Buyouts	Blackstone Capital Partners VIII	2021	70,000,000	46,946,907	2,903,959	NM	NM	NM	NM	NM	NM
Buyouts	Blackstone Communications Partners I	2000	25,000,000	25,114,042	30,998,189	157,677	6,041,824	1.2x	6.2%	Fourth	Fourth
Buyouts	Capvis Equity IV	2014	43,039,837	46,342,729	41,736,092	23,742,115	19,135,478				
Buyouts	Carlyle Energy Mezzanine Opportunities Fund	2012	50,000,000	65,670,223	40,417,028	84,906	(25,168,289)	0.6x			Fourth
Buyouts	CVC Capital Partners VII	2018	91,557,910	92,102,049	45,991,751	126,069,293	79,958,995	1.9x	21.9%	Second	Second
Buyouts	CVC Capital Partners VIII	2021	54,150,315	39,693,809	249,432	NM	NM	NM	NM	NM	NM
Buyouts	Eureka Growth Capital III	2013	20,000,000	17,210,666	40,332,770	5,449,877	28,571,981	2.7x	44.1%	First	First
Buyouts	Eureka II	2006	20,000,000	21,906,935	24,443,442	4,782,306	7,318,813	1.3x	4.9%	Fourth	Fourth
Buyouts	Francisco Partners Agility III	2023	30,000,000	-	-	NM	NM	NM	NM	NM	NM
Buyouts	Francisco Partners II	2006	30,000,000	29,383,916	48,734,237	71,378	19,421,699	1.7x	10.4%	Second	Third
Buyouts	Francisco Partners III	2011	20,000,000	20,514,684	58,501,352	8,388,018	46,374,686	3.3x	23.2%	First	First
Buyouts	Francisco Partners IV	2015	25,000,000	24,656,280	48,419,069	26,352,339	50,115,128	3.0x	27.1%	First	First
Buyouts	Francisco Partners VII	2023	100,000,000	750,000	-	NM	NM	NM	NM	NM	NM
Buyouts	Francisco Partners VII PA Co-Invest	2023	50,000,000	13,547,979	-	NM	NM	NM	NM	NM	NM
Buyouts	FSN Capital IV	2013	38,009,855	38,520,666	82,280,821						
Buyouts	FSN Capital V	2017	80,277,053	85,924,575	26,753,909						
Buyouts	Great Hill Equity Partners IV	2008	25,000,000	25,125,662	63,349,649						
Buyouts	GTCR Fund XI	2014	25,000,000	24,775,445	54,589,100				32.4%	First	
Buyouts	GTCR Fund XII	2018	32,500,000	32,620,693	19,642,335				22.9%	Second	
Buyouts	H.I.G. Brazil and Latin America Partners	2015	50,000,000	54,008,902	18,683,595						
Buyouts	H.I.G. Europe Capital Partners II	2014	24,491,162	22,568,576	17,832,358						
Buyouts	H.I.G. Growth Buyouts & Equity Fund II	2011	15,000,000	17,287,425	21,078,697						
Buyouts	Hahn & Company II	2014	50,000,000	57,129,048	58,569,603						



As of December 31, 2023

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Buyouts	Hahn & Company III	2018	\$56,250,000	\$47,521,966	\$6,425,443		C () 1000				
Buyouts	Hahn & Company III - Supplemental Fund	2018	18,750,000	18,733,951	1,485,995						
Buyouts	HarbourVest IPEP III	1998	40,000,000	39,400,000	61,092,165	69,829	21,761,994	1.6x	8.6%	Third	Second
Buyouts	HarbourVest PA Co-investment Fund	2020	200,000,000	169,325,000	9,487,500	227,648,721	67,811,221	1.4x	15.6%	Third	Second
Buyouts	Hellman & Friedman Capital Partners IX	2020	90,000,000	91,074,083	6,513,194	126,479,888	41,918,999	1.5x	14.1%	Third	Second
Buyouts	Hellman & Friedman Capital Partners VIII	2016	50,000,000	51,540,472	27,218,400	63,815,210	39,493,138	1.8x	13.1%	Fourth	Third
Buyouts	Hellman & Friedman Capital Partners X	2021	100,000,000	72,325,179	186,673	NM	NM	NM	NM	NM	NM
Buyouts	Hellman & Friedman Capital Partners XI	2023	100,000,000	-	-	NM	NM	NM	NM	NM	NM
Buyouts	Horizon Impact Fund	2014	50,000,000	42,649,604	69,252,180	25,120,340	51,722,916	2.2x	18.7%	Second	Second
Buyouts	Horizon Impact Fund B	2017	100,000,000	90,500,000	28,710,000	108,972,268	47,182,268	1.5x	12.3%	Fourth	Fourth
Buyouts	Horizon Strategic Fund - Carlyle Group	2014	100,000,000	107,340,007	148,503,328	40,471,673	81,634,994	1.8x			Third
Buyouts	Incline Equity Partners III	2013	15,000,000	16,006,245	41,866,592	183,118	26,043,464	2.6x	33.9%	First	First
Buyouts	Kelso VII	2003	40,000,000	41,169,937	65,821,118	69,707	24,720,888	1.6x	11.4%	Third	Third
Buyouts	Kelso VIII	2007	150,000,000	147,077,801	212,472,060	544,002	65,938,261	1.4x	7.2%	Third	Third
Buyouts	Keystone Co-Investors Veritas VIII, L.P.	2023	25,000,000	-	-	NM	NM	NM	NM	NM	NM
Buyouts	LLR Equity Partners III	2008	30,000,000	29,108,722	65,280,571	479,679	36,651,528	2.3x	16.5%	Second	First
Buyouts	LLR Equity Partners IV	2014	50,000,000	45,485,764	95,620,140	21,710,432	71,844,808	2.6x	26.6%	First	First
Buyouts	LLR Equity Partners V	2018	75,000,000	73,590,002	29,618,357	114,807,850	70,836,204	2.0x	20.4%	Second	First
Buyouts	LLR Equity Partners VI	2021	50,000,000	38,591,712	-	NM	NM	NM	NM	NM	NM
Buyouts	Madison Dearborn Capital Partners V	2006	63,817,077	71,571,265	118,967,323	714,523	48,110,581	1.7x	7.5%	Third	Second
Buyouts	Madison Dearborn Capital Partners VI	2008	50,000,000	53,296,374	120,202,206	258,948	67,164,780	2.3x	23.2%	First	First
Buyouts	Neuberger Berman PA Co-Investment Fund	2021	200,000,000	140,864,052	19,662,060	NM	NM	NM	NM	NM	NM
Buyouts	NGP Keystone	2021	25,000,000	10,150,000	-	NM	NM	NM	NM	NM	NM
Buyouts	NGP XII	2018	75,000,000	59,833,846	55,908,439	42,653,817	38,728,410	1.6x	16.5%	Third	Second
Buyouts	Oaktree Power Opportunities Fund III	2010	25,000,000	19,267,532	29,286,578						



As of December 31, 2023

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVMRANK
Buyouts	Penn Asia Investors	2012	\$133,000,000	\$126,703,043	\$111,839,250	\$95,498,394	\$80,634,601	1.6x	12.6%	Third	Third
Buyouts	Permira European Fund II	2000	45,672,612	45,672,612	91,560,959	306,200	46,194,547	2.0x	21.6%	First	First
Buyouts	Permira European Fund III	2003	127,062,518	127,340,454	218,157,969	349,252	91,166,767	1.7x	26.1%	Second	Third
Buyouts	Permira IV	2006	136,385,706	138,422,695	208,443,061	26,569,688	96,590,054	1.7x	8.8%	Second	Second
Buyouts	Permira Susquehanna Opportunities - Buyout	2021	40,000,000	20,875,338	99,900	NM	NM	NM	NM	NM	NM
Buyouts	Permira VI	2017	56,579,572	52,364,123	31,563,313	73,135,676	52,334,866	2.0x	17.2%	Third	Second
Buyouts	Permira VII	2020	75,942,482	72,958,617	5,589,425	79,465,713	12,096,521	1.2x	6.5%	Fourth	Fourth
Buyouts	Primavera Capital Fund II	2015	50,000,000	58,104,574	24,318,255	63,393,147	29,606,828	1.5x	8.0%	Fourth	Fourth
Buyouts	Primavera Capital Fund III	2019	75,000,000	80,533,095	15,252,886	91,612,910	26,332,701	1.3x	7.9%	Fourth	Third
Buyouts	Providence Equity Partners IV	2000	25,000,000	23,420,840	56,065,270						
Buyouts	Providence Equity Partners V	2004	45,000,000	42,688,053	52,244,364						
Buyouts	Providence Equity Partners VI	2007	49,976,748	54,530,937	78,145,686						
Buyouts	Ridgemont Equity Partners II	2015	50,000,000	53,909,810	80,305,272	24,143,117	50,538,579	1.9x	19.7%	Second	Second
Buyouts	Sentinel Capital Partners V	2014	10,000,000	10,044,690	19,188,852	2,042,943	11,187,105	2.1x	20.7%	Second	Second
Buyouts	Sentinel Capital Partners VII	2023	100,000,000	6,903,844	-	NM	NM	NM	NM	NM	NM
Buyouts	Silver Lake Partners V	2018	78,000,000	78,981,693	41,627,178	82,200,485	44,845,970	1.6x	13.7%	Third	Third
Buyouts	Sterling Group Partners IV	2016	20,000,000	20,572,517	21,784,477	26,347,103	27,559,062	2.3x	21.4%	Second	Second
Buyouts	TDR Capital IV	2018	87,408,592	72,540,172	23,812,536	80,422,831	31,695,196	1.4x	15.3%	Third	Fourth
Buyouts	Thoma Bravo Co-Invest Opportunities Fund XV-5, L.P.	2023	50,000,000	20,352,148	-	NM	NM	NM	NM	NM	NM
Buyouts	Thoma Bravo Discover Fund III	2021	20,000,000	19,960,776	-	NM	NM	NM	NM	NM	NM
Buyouts	Thoma Bravo Discover Fund IV, L.P.	2022	50,000,000	28,590,080	-	NM	NM	NM	NM	NM	NM
Buyouts	Thoma Bravo Fund XIII	2019	75,000,000	91,498,386	63,166,104				27.8%	Second	
Buyouts	Thoma Bravo Fund XIV	2021	50,000,000	49,253,111	6,511,630	NM	NM	NM	NM	NM	NM
Buyouts	Thoma Bravo Fund XV, L.P.	2022	100,000,000	71,318,055	21,669	NM	NM	NM	NM	NM	NM
Buyouts	TPG Asia V	2007	22,500,000	21,964,311	30,309,943	1,104,919	9,450,551	1.4x	6.3%	Third	Third



As of December 31, 2023

CECTOR	ELIND	VINTAGE	CON AN ALTH AFRIT	CONTRIBUTIONS	DICTRIBUTIONS	NAA DIKETA (ALLIE	CAINI/LOSS	T) / 0 4	IDD	IDD DANK	T) / D 4 D 4 D 14
SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR KANK	TVM RANK
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	130,273,217	101,114	37,842,519	1.4x	4.8%	Third	Third
Buyouts	TPG Partners VI	2008	44,294,641	50,576,261	74,115,119	575,747	24,114,605	1.5x	9.5%	Second	Third
Buyouts	TSG 9	2023	100,000,000	19,659,018	-	NM	NM	NM	NM	NM	NM
Buyouts	TSG8	2019	100,000,000	88,225,713	3,315,893	77,192,347	(7,717,473)	0.9x	(3.9%)	Fourth	Fourth
Buyouts	Veritas Capital Partners VIII, L.P.	2022	100,000,000	55,577,127	20,267	NM	NM	NM	NM	NM	NM
Buyouts	Vista Equity Partners Fund VI	2016	150,000,000	189,830,702	216,963,419						
Buyouts	Vista Equity Partners Fund VII	2019	75,000,000	68,015,812	7,157,217						
Buyouts	Wind Point Partners IX-A	2019	75,000,000	71,850,505	18,403,386						
Buyouts	Wind Point Partners VIII	2017	100,000,000	103,770,032	152,781,191						
Buyouts Total			\$6,412,133,976	\$5,677,928,726	\$5,542,476,828	\$3,814,581,815	\$3,679,129,917	1.6x	13.0%	Third	Second
Growth Equity	Battery Ventures VIII	2007	25,000,000	25,050,751	61,369,645						
Growth Equity	Battery Ventures VIII Side Car Fund	2008	6,768,000	6,803,790	18,828,496						
Growth Equity	HarbourVest Partners VI	1999	200,000,000	196,586,055	251,227,115	359,017	55,000,077	1.3x	3.6%	First	First
Growth Equity	HarbourVest Partners VII	2003	75,000,000	73,687,500	117,353,630	1,219,744	44,885,874	1.6x	6.7%	First	First
Growth Equity	HarbourVest Partners VIII	2006	100,000,000	98,000,000	187,241,100	27,318,605	116,559,705	2.2x	11.2%	First	First
Growth Equity	Insight Partners Fund XII	2021	50,000,000	38,789,234	13,065	NM	NM	NM	NM	NM	NM
Growth Equity	Insight Venture Partners IX	2015	50,000,000	52,784,788	72,287,108	127,478,492	146,980,812	3.8x	25.0%	First	First
Growth Equity	Insight Venture Partners VII	2011	20,000,000	22,129,992	54,006,381	18,008,533	49,884,922	3.3x	21.7%	Second	Second
Growth Equity	Insight Venture Partners VIII	2013	50,000,000	54,916,419	117,288,540	56,209,719	118,581,840	3.2x	21.1%	Second	Second
Growth Equity	Insight Venture Partners X	2018	100,000,000	104,723,487	57,898,051	217,990,286	171,164,850	2.6x	26.1%	First	First
Growth Equity	Insight Venture Partners XI	2020	75,000,000	72,975,000	474,113	108,650,030	36,149,142	1.5x	14.6%	Second	First
Growth Equity	JMI Equity Fund VII	2011	10,000,000	9,789,325	23,911,259	573,067	14,695,001	2.5x	17.8%	Second	Second
Growth Equity	JMI Equity Fund VIII	2015	25,000,000	27,565,904	50,849,127	14,736,079	38,019,302	2.4x	27.4%	First	Second
Growth Equity	Lightspeed India Partners I	2015	15,000,000	14,137,500	2,125,958						
· · ·											



As of December 31, 2023

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Growth Equity	Lightspeed Venture Partners VII	2005	\$18,000,000	\$18,000,000	\$53,968,729						
Growth Equity	Lightspeed Venture Partners VIII	2008	15,000,000	15,000,000	37,035,502						
Growth Equity	Meritech Capital Partners IV	2011	20,000,000	20,000,000	47,596,799						
Growth Equity	Meritech Capital Partners V	2014	23,000,000	22,540,000	154,318,263						
Growth Equity	New Enterprise Associates 11	2003	25,000,000	25,000,000	63,385,828	1,712,178	40,098,006	2.6x	15.4%	First	First
Growth Equity	New Enterprise Associates 12	2006	35,000,000	35,631,130	48,996,151	1,621,033	14,986,054	1.4x	6.6%	Second	Second
Growth Equity	New Enterprise Associates IX	1999	20,000,000	19,600,000	8,739,870	434,559	(10,425,571)	0.5x	(6.0%)	Second	Third
Growth Equity	New Enterprise Associates X	2000	35,000,000	35,028,000	39,412,034	1,592,983	5,977,017	1.2x	2.3%	Second	Second
Growth Equity	NewSpring Growth Capital II	2006	10,000,000	9,850,000	19,617,977						
Growth Equity	Providence Strategic Growth Europe	2021	71,915,741	66,934,276	13,280,317	NM	NM	NM	NM	NM	NM
Growth Equity	Providence Strategic Growth Europe II, L.P.	2023	71,654,630	3,804,163	2,029	NM	NM	NM	NM	NM	NM
Growth Equity	Providence Strategic Growth II	2016	60,000,000	79,142,860	126,230,222	59,121,894	106,209,256	2.3x	36.9%	First	Second
Growth Equity	Providence Strategic Growth III	2018	75,000,000	89,953,986	73,654,499	80,210,725	63,911,238	1.7x	24.9%	Second	Third
Growth Equity	Providence Strategic Growth IV	2020	75,000,000	79,277,628	39,852,687	98,378,990	58,954,049	1.7x	40.4%	First	First
Growth Equity	Providence Strategic Growth V	2021	50,000,000	37,457,126	3,178,445	NM	NM	NM	NM	NM	NM
Growth Equity	Providence Strategic Growth VI	2023	75,000,000	-	-	NM	NM	NM	NM	NM	NM
Growth Equity	TCV X	2019	75,000,000	56,289,972	13,692,960	101,858,199	59,261,187	2.1x	21.7%	Second	First
Growth Equity	Weathergage Venture Capital	2007	25,000,000	22,875,000	46,144,239	12,365,813	35,635,052	2.6x	13.1%	Second	Second
Growth Equity	Weathergage Venture Capital II	2010	25,000,000	23,250,000	59,686,273	27,627,689	64,063,962	3.8x	18.2%	Second	First
Growth Equity Total			\$1,606,338,371	\$1,457,573,885	\$1,863,666,412	\$1,181,866,642	\$1,587,959,168	2.1x	11.1%	Second	First
Keystone Legacy Fund	Keystone Legacy Fund	2018	5,516,049,176	5,593,176,049	7,622,561,722	194,080,340	2,223,466,013	1.4x	5.9%	NM	NM
Keystone Legacy Fund To	tal		\$5,516,049,176	\$5,593,176,049	\$7,622,561,722	\$194,080,340	\$2,223,466,013	1.4x	5.9%	NM	NM
Special Situations	ABRY Advanced Securities Fund	2007	7,262,950	23,529,104	38,786,236						
Special Situations	ABRY Senior Equity II	2006	30,000,000	28,400,326	45,262,542						
Special Situations	ADV Opportunities Fund I	2015	50,000,000	63,436,058	39,690,149	41,554,006	17,808,097	1.3x	4.9%	Fourth	Fourth



As of December 31, 2023

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Special Situations	Ares PA Opportunities Fund, L.P Distressed Debt	2019	\$200,000,000	\$147,981,610	\$37,842,276	\$162,485,018	\$52,345,684	1.4x	16.8%	Second	Third
Special Situations	Ares PA Opportunities Fund, L.P Diversified Credit	2020	70,000,000	51,433,196	3,724,377	59,820,315	12,111,497	1.2x	13.0%	Second	Third
Special Situations	Ares PA Opportunities Fund, L.P Special Situations	2021	130,000,000	122,070,319	15,885,564	NM	NM	NM	NM	NM	NM
Special Situations	ASF IX B	2022	100,000,000	7,870,512	3,782	NM	NM	NM	NM	NM	NM
Special Situations	ASF IX PA Co-Invest B L.P.	2023	50,000,000	11,182,645	-	NM	NM	NM	NM	NM	NM
Special Situations	ASF VII B	2016	100,000,000	72,941,390	72,089,141	41,838,469	40,986,220	1.6x	14.4%	Third	Third
Special Situations	ASF VII PA Co-Invest	2016	50,000,000	36,479,053	33,757,485	27,106,474	24,384,906	1.7x	16.3%	Third	Third
Special Situations	ASF VIII B	2019	100,000,000	62,280,495	15,850,264	73,249,466	26,819,235	1.4x	18.7%	Second	Second
Special Situations	ASF VIII PA Co-Invest	2020	50,000,000	24,940,129	2,644,711	28,295,214	5,999,796	1.2x	15.0%	Second	Second
Special Situations	Avenue Special Situations Fund VI	2010	20,000,000	20,068,464	21,075,410						
Special Situations	AXA Secondary Fund III	2004	26,000,000	21,737,894	37,244,706	59,562	15,566,374	1.7x	44.0%	First	Second
Special Situations	AXA Secondary Fund III-2	2004	14,000,000	11,677,210	19,062,764	40,107	7,425,660	1.6x	40.5%	First	Second
Special Situations	AXA Secondary Fund IV	2006	80,000,000	70,134,752	99,618,118	102,217	29,585,583	1.4x	8.5%	Second	Third
Special Situations	AXA Secondary Fund V B	2012	75,000,000	61,682,742	97,816,150	191,191	36,324,599	1.6x	16.0%	Second	Third
Special Situations	Centerbridge Capital Partners I	2006	50,000,000	57,337,396	117,317,806	1,563,015	61,543,425	2.1x	19.2%	First	First
Special Situations	Centerbridge Capital Partners III	2015	30,000,000	40,038,953	38,176,293	28,905,828	27,043,168	1.7x	17.1%	Second	Third
Special Situations	Clearlake Capital Partners IV	2015	15,000,000	23,504,759	38,348,669	9,508,084	24,351,994	2.0x	28.8%	First	Second
Special Situations	Clearlake Capital Partners V	2018	55,000,000	79,506,170	106,223,151	64,003,396	90,720,377	2.1x	39.2%	First	First
Special Situations	Clearlake Capital Partners VI	2020	60,000,000	62,654,403	9,575,200	95,414,956	42,335,753	1.7x	23.9%	First	First
Special Situations	Clearlake Capital Partners VII	2022	100,000,000	57,849,852	268,947	NM	NM	NM	NM	NM	NM
Special Situations	Clearlake Opportunities Partners II	2019	75,000,000	51,416,132	17,178,828	45,825,066	11,587,762	1.2x	10.8%	Third	Third
Special Situations	Clearlake Opportunities Partners III	2022	75,000,000	17,245,610	284,018	NM	NM	NM	NM	NM	NM
Special Situations	Dover Street VII	2007	30,000,000	28,696,128	41,139,248	27,756	12,470,876	1.4x	9.1%	Third	Third
Special Situations	Glendon Opportunities Fund II	2019	150,000,000	135,000,000	17,836,086						
Special Situations	H.I.G. Bayside Debt & LBO Fund II	2008	30,000,000	31,448,253	51,691,289						



As of December 31, 2023

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Special Situations	H.I.G. Bayside Loan Opp. Fund III	2013	\$50,000,000	\$42,696,553	\$49,904,323						
Special Situations	H.I.G. Bayside Loan Opp. Fund IV	2015	25,000,000	22,626,299	20,452,258						
Special Situations	HPS Mezzanine Partners 2019	2020	75,000,000	72,015,011	23,265,074	69,363,843	20,613,906	1.3x	11.9%	Second	Second
Special Situations	ICG Europe Fund VII	2018	90,216,852	87,061,845	42,097,360	90,767,901	45,803,416	1.5x	16.0%	Third	Third
Special Situations	ICG Europe Mid-Market Fund	2020	73,861,441	58,204,634	24,141,866	59,216,673	25,153,905	1.4x	23.0%	First	First
Special Situations	KPS Special Situations Fund IV	2014	25,000,000	23,893,422	37,008,974	10,714,557	23,830,110	2.0x	23.5%	First	Second
Special Situations	KPS Special Situations Fund V	2020	75,000,000	38,903,692	11,111,441	52,611,977	24,819,726	1.6x	22.0%	First	First
Special Situations	KPS Special Situations Fund VI, LP	2023	75,000,000	-	-	NM	NM	NM	NM	NM	NM
Special Situations	KPS Special Situations Mid-Cap Fund	2019	25,000,000	15,599,258	4,598,409	20,277,051	9,276,202	1.6x	21.3%	Second	Second
Special Situations	KPS Special Situations Mid-Cap Fund II, LP	2023	25,000,000	-	-	NM	NM	NM	NM	NM	NM
Special Situations	LBC Credit Partners III	2013	50,000,000	46,696,243	54,397,706				8.0%	Third	
Special Situations	Lexington Capital Partners III	1999	35,000,000	34,516,449	43,576,611						
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	73,905,823						
Special Situations	Oaktree Opportunities Fund IX	2013	50,000,000	50,000,000	53,233,854						
Special Situations	OCM Opportunities Fund VII	2007	40,000,000	40,000,000	54,917,803						
Special Situations	OCM Opportunities Fund VII b	2007	40,000,000	36,000,000	62,330,206						
Special Situations	OCM Opportunities Fund VIII	2010	12,500,000	12,583,425	18,205,746						
Special Situations	OCM Opportunities Fund VIIIb	2010	12,500,000	12,500,000	18,460,884						
Special Situations	Platinum Equity Capital Partners III	2013	50,000,000	47,144,882	93,286,427	7,236,543	53,378,088	2.1x	37.8%	First	Second
Special Situations	RRJ Capital Master Fund III	2015	50,000,000	51,015,720	45,702,378	9,309,102	3,995,760	1.1x	3.8%	Fourth	Fourth
Special Situations	Sentinel Junior Capital II, L.P.	2023	25,000,000	3,524,603	-	NM	NM	NM	NM	NM	NM
Special Situations	Sixth Street Opportunities Partners IV	2019	50,000,000	40,355,923	16,797,071	38,265,597	14,706,745	1.4x	11.4%	Third	Third
Special Situations	Sixth Street Opportunities Partners V	2022	50,000,000	25,700,046	474,914	NM	NM	NM	NM	NM	NM
Special Situations	Sixth Street TAO 4.0 (B)	2017	100,000,000	98,929,730	48,994,050	86,752,426	36,816,746	1.4x	10.4%	Fourth	Fourth



As of December 31, 2023

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Special Situations	Sixth Street TAO Contingent (D)	2019	\$150,000,000	\$90,229,514	\$28,568,649	\$94,572,190	\$32,911,325	1.4x	15.0%	Third	Third
Special Situations Total			\$3,201,341,243	\$2,500,430,547	\$1,968,995,201	\$1,746,773,422	\$1,215,338,075	1.5x	13.9%	Second	Second
Total: Active Investments			\$16,735,862,765	\$15,229,109,208	\$16,997,700,163	\$6,937,302,218	\$8,705,893,174	1.6x	9.0%	Second	Second
Total: Liquidated Investm	ents		\$5,352,192,177	\$5,341,981,500	\$9,986,132,713	\$0	\$4,644,151,213	1.9x	16.3%	First	Second
Total: Commonwealth of Pennsylvania State Employees' Retirement System			\$22,088,054,942	\$20,571,090,707	\$26,983,832,876	\$6,937,302,218	\$13,350,044,387	1.6x	12.4%	Second	Second



LEGACY PRIVATE CREDIT SCHEDULE OF INVESTMENTS

As of December 31, 2023

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2018	Apollo Hybrid Value Fund	Diversified Credit	\$100,000,000	\$134,750,855	\$129,638,066	\$47,329,030	\$42,216,242	1.3x	15.6%	First	Second
2018	Audax Direct Lending Solutions Fund-A	Direct Lending	100,000,000	115,010,311	73,020,002	76,615,694	34,625,385	1.3x	14.9%	First	Second
2018	Brightwood Capital Fund IV	Direct Lending	100,000,000	100,000,000	48,492,417	86,986,719	35,479,136	1.4x	8.0%	Fourth	Second
2018 Total			\$300,000,000	\$349,761,166	\$251,150,485	\$210,931,443	\$112,320,763	1.3x	11.7%	Second	Second
2019	ICG North American Private Debt Fund II	Direct Lending	50,000,000	45,760,434	20,582,316	34,674,931	9,496,814	1.2x	11.0%	Second	Third
2019	Permira Credit Solutions IV Master (Feeder) SCSp	Direct Lending	75,000,000	62,933,547	18,119,260	62,368,316	17,554,029	1.3x	10.7%	Third	Second
2019 Total			\$125,000,000	\$108,693,981	\$38,701,577	\$97,043,247	\$27,050,843	1.2 x	10.8%	Second	Second
2021	Ares PA Opportunities Fund, L.P Direct Lending	Direct Lending	100,000,000	77,658,441	4,236,879	NM	NM	NM	NM	NM	NM
2021	Permira Susquehanna Opportunities - Credit	Direct Lending	60,000,000	12,287,712	1,314,459	NM	NM	NM	NM	NM	NM
2021 Total			\$160,000,000	\$89,946,153	\$5,551,338			NM	NM	NM	NM
Total: Active Investments			\$585,000,000	\$548,401,300	\$295,403,400						



DIVERSE FUNDS SCHEDULE OF INVESTMENTS

As of December 31, 2023

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR
2006	Asia Alternatives Capital Partners	Buyouts	\$25,000,000	\$25,218,098	\$44,268,821	\$1,861,907	\$20,912,630	1.8x	10.8%
2007	Asia Alternatives Capital Partners II	Buyouts	29,949,500	29,105,691	72,182,168	3,146,119	46,222,596	2.6x	16.7%
2007	Weathergage Venture Capital	Growth Equity	25,000,000	22,875,000	46,144,239	12,365,813	35,635,052	2.6x	13.1%
2010	Weathergage Venture Capital II	Growth Equity	25,000,000	23,250,000	59,686,273	27,627,689	64,063,962	3.8x	18.2%
2011	Asia Alternatives Korea Buyout Investors (Hahn & Co)	Buyouts	7,000,000	8,945,759	12,677,843	1,381,342	5,113,426	1.6x	10.3%
2012	Asia Alternatives Capital Partners III	Buyouts	50,000,000	55,637,190	76,108,322	23,051,951	43,523,083	1.8x	12.2%
2012	Penn Asia Investors	Buyouts	133,000,000	126,703,043	111,839,250	95,498,394	80,634,601	1.6x	12.6%
2015	Clearlake Capital Partners IV	Special Situations	15,000,000	23,504,759	38,348,669	9,508,084	24,351,994	2.0x	28.8%
2016	Vista Equity Partners Fund VI	Buyouts	150,000,000	189,830,702	216,963,419				
2017	Asia Alternatives Capital Partners V	Buyouts	50,000,000	52,847,907	9,819,415	57,806,449	14,777,957	1.3x	9.0%
2018	Clearlake Capital Partners V	Special Situations	55,000,000	79,506,170	106,223,151	64,003,396	90,720,377	2.1x	39.2%
2019	Clearlake Opportunities Partners II	Special Situations	75,000,000	51,416,132	17,178,828	45,825,066	11,587,762	1.2x	10.8%
2019	Thoma Bravo Fund XIII	Buyouts	75,000,000	91,498,386	63,166,104				27.8%
2019	TSG8	Buyouts	100,000,000	88,225,713	3,315,893	77,192,347	(7,717,473)	0.9x	(3.9%)
2019	Vista Equity Partners Fund VII	Buyouts	75,000,000	68,015,812	7,157,217				
2020	Clearlake Capital Partners VI	Special Situations	60,000,000	62,654,403	9,575,200	95,414,956	42,335,753	1.7x	23.9%
2021	Thoma Bravo Discover Fund III	Buyouts	20,000,000	19,960,776	-	NM	NM	NM	NM
2021	Thoma Bravo Fund XIV	Buyouts	50,000,000	49,253,111	6,511,630	NM	NM	NM	NM
2022	Clearlake Capital Partners VII	Special Situations	100,000,000	57,849,852	268,947	NM	NM	NM	NM
2022	Clearlake Opportunities Partners III	Special Situations	75,000,000	17,245,610	284,018	NM	NM	NM	NM
2022	Thoma Bravo Discover Fund IV, L.P.	Buyouts	50,000,000	28,590,080	-	NM	NM	NM	NM
2022	Thoma Bravo Fund XV, L.P.	Buyouts	100,000,000	71,318,055	21,669	NM	NM	NM	NM
2022	Veritas Capital Partners VIII, L.P.	Buyouts	100,000,000	55,577,127	20,267	NM	NM	NM	NM
2023	Keystone Co-Investors Veritas VIII, L.P.	Buyouts	25,000,000	-	-	NM	NM	NM	NM
2023	Thoma Bravo Co-Invest Opportunities Fund XV-5, L.P.	Buyouts	50,000,000	20,352,148	-	NM	NM	NM	NM



DIVERSE FUNDS SCHEDULE OF INVESTMENTS

As of December 31, 2023

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR
2023	TSG 9	Buyouts	\$100,000,000	\$19,659,018	-	NM	NM	NM	NM
Total: Private	e Equity Diverse Funds		\$1,619,949,500	\$1,339,040,542	\$901,761,343	\$1,236,937,333	\$799,658,135	1.6x	15.4%
2018	Brightwood Capital Fund IV	Direct Lending	\$100,000,000	\$100,000,000	\$48,492,417	\$86,986,719	\$35,479,136	1.4x	8.0%
Total: Legacy	y Private Credit Diverse Funds		\$100,000,000	\$100,000,000	\$48,492,417	\$86,986,719	\$35,479,136	1.4x	8.0%

END NOTES

Performance Summary

Commitment reflects current commitment including 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, 2023, for funds with vintage years 1980 to 2023.

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, 2023, for funds with vintage years 1980 to 2023. 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, 2023, for funds with vintage years 1980 to 2023. Returns shown are dollar-weighted (IRR).

Unless otherwise indicated, all underlying investment attribution and performance information presented is net of fees and expenses charged by the underlying investment, but gross of StepStone vehicle/account fees and expenses. Where indicated, net return figures presented for StepStone vehicle/account performance include fees and expenses paid to StepStone.

Vintage Year Performance

IRR and TVM performance excludes Keystone Legacy Fund.

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.

Unless otherwise indicated, all underlying investment attribution and performance information presented is net of fees and expenses charged by the underlying investment, but gross of StepStone vehicle/account fees and expenses. Where indicated, net return figures presented for StepStone vehicle/account performance include fees and expenses paid to StepStone.

END NOTES CONTINUED

Schedule of Investments by Vintage Year, Sector, Legacy Private Credit, Diverse Funds

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

Contributions include management fees and expenses.

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

NM - Not Meaningful

IRR and TVM for certain vehicles may have been impacted by StepStone's or the underlying GPs' use of subscription-backed credit facilities by such vehicles. Reinvested/recycled amounts increase contributed capital.

Fund quartile rankings provided by Burgiss Private iQ as of December 31, 2023 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.

Legacy Private Credit investments are not included in the Private Equity portfolio and are excluded from any performance figures shown throughout this report other than the Legacy Private Credit Schedule of Investments.

StepStone Diverse Manager Definition:

- (i) 33%+ of the General Partner/Management company is owned by diverse individuals; and/or
- (ii) 33%+ of carried interest for the Fund will be allocated to diverse individuals; and/or
- (iii) 33% of key persons are diverse individuals

Diverse individuals include women and racial/ethnic minority employees, specifically in the US: Asian, Black, Hispanic/Latinx, Indigenous People, Middle Eastern/North African, and Two or More Races.

In addition, LGTBQIA+, disability, and US Military Veteran status will be considered.

StepStone has not completed due diligence on all Funds in SERS Private Equity portfolio and therefore the diverse manager list excludes these Funds.

Unless otherwise indicated, all underlying investment attribution and performance information presented is net of fees and expenses charged by the underlying investment, but gross of StepStone vehicle/account fees and expenses. Where indicated, net return figures presented for StepStone vehicle/account performance include fees and expenses paid to StepStone.

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 36-37 - Redacted