



School Employees Retirement System of Ohio

QUARTERLY INVESTMENTS PERFORMANCE REPORT

For Quarter End Date: 9/30/2023

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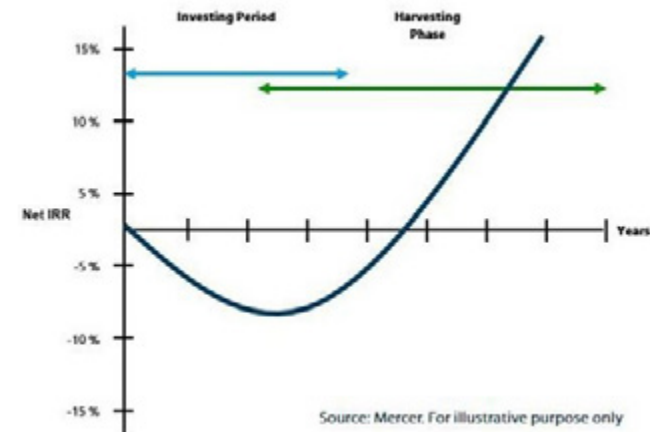
SERS investment strategic goals continue to focus on value added performance, risk management, cost effectiveness and maintenance of an investment program that meets or exceeds investment objectives over the long-term. In addition, SERS strives to provide clear and transparent reporting to stakeholders and interested parties. On a quarterly basis, SERS will post reporting to our website that provides total fund and asset class net of fee time-weighted returns along with details of the alternative investments within the SERS investment portfolio. It is important to note these reports are net of all fees.

Time-Weighted Returns (TWR) versus Money-Weighted Returns (IRR)

- Traditional asset classes like Public Equities and Public Fixed Income have traditionally utilized TWRs, while alternative asset classes like Private Equity and Real Assets have traditionally utilized IRRs.
 - Traditional asset classes utilize TWRs because the calculation attempts to reduce, or outright remove, the impact of cash flows on investment returns. The logic behind this is that traditional asset class investment managers don't typically control the timing or size of the cash flows coming into, or out of, their accounts. Therefore, in order to compare all investment managers within a given asset class on the same footing, the TWR reduces or removes the impact of any cash flows on investment performance and produces a figure more indicative of the investment manager's skill. For plans like SERS, TWRs are calculated on a monthly basis and geometrically linked together to produce longer period returns. TWRs are typically stated in annualized terms for periods equal to, or greater than, one year.
 - Alternative asset classes utilize IRRs because the calculation specifically was designed to take into account both the size and the timing of cash flows. The logic behind this is that alternative investment managers are very much in control of not only when they call (distribute) capital from (to) investors, but how much capital they will call (distribute). IRRs can be calculated over shorter time periods, such as quarterly or over a one year time period, but are generally calculated and stated on a "since inception" basis.
- Based on the differences in calculation methodologies between TWR and IRR, the two return types cannot be combined together to produce investment returns at a total plan level. One methodology, therefore, must be chosen to calculate investment returns across each asset class, and eventually at the total plan level. SERS, and most other pension funds, utilize TWRs in investment performance reports at the asset class and total plan level. While TWRs are utilized at the asset class and total plan level for reporting, SERS staff also utilize IRRs in their analysis of alternative investment managers.

Finer points of Money-Weighted Returns (IRR) and the J-Curve

- IRR is inherently annualized
- IRRs, unlike TWRs, place greater weight on periods when the portfolio of a given investment is largest
- IRRs for alternative investment managers experience something known as the "J-Curve." At a high level, the J-Curve will cause most alternative investment managers to produce IRRs in early years that are negative. This is caused by a couple of factors:
 - Early calls of capital in alternative assets typically are weighted towards fee collection by the general partner, which creates a natural drag on performance
 - Valuation of assets in alternative asset accounts early in the life of the fund may be more difficult to ascertain, which can create a drag on performance
 - Early in the life of alternative assets (aka the "Investment Period"), the vast majority of cash flows are outflows. Not until later (aka the "Harvesting Period") in the life of the fund are investments liquidated and cash flows returned to the limited partners.





TOTAL FUND *(continued)*

FUND SUMMARY BY ASSET CLASS

Report ID: IPM0005



Reporting Currency: USD

TOTAL NET OF FEES

9/30/2023

Annualized

Account Name Benchmark Name	Market Value	Month	YTD	3 Months	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	20 Years	ITD
Total Fund	17,455,148,331.55	-1.69	4.38	-1.27	-1.27	9.06	8.23	7.35	7.85	7.31	7.70
OSERS Policy BM		-2.29	4.13	-1.99	-1.99	9.11	6.29	6.26	6.95	7.08	7.63
Excess Return		0.60	0.25	0.72	0.72	-0.05	1.95	1.09	0.90	0.22	0.07
Global Equities	7,045,226,853.75	-3.79	9.00	-3.16	-3.16	20.38	7.10	6.68	7.80	7.79	7.43
Custom Gbl Equities BM		-4.14	10.06	-3.40	-3.40	20.80	7.00	6.13	7.46	7.50	7.12
Excess Return		0.34	-1.05	0.24	0.24	-0.42	0.10	0.56	0.35	0.29	0.30
Global Fixed Income	2,235,925,967.42	-2.33	0.23	-2.60	-2.60	2.12	-3.70	1.24	1.96	3.77	5.11
Bloomberg U.S. Aggregate Bond Index		-2.54	-1.21	-3.23	-3.23	0.64	-5.21	0.10	1.13	2.85	4.45
Excess Return		0.21	1.43	0.63	0.63	1.47	1.50	1.14	0.83	0.93	0.66
Global Private Credit	1,097,269,183.20	0.93	7.47	2.46	2.46	8.33	10.51				10.83
Custom Private Credit Inv BM		0.78	6.99	2.32	2.32	9.08	6.29				6.18
Excess Return		0.15	0.47	0.14	0.14	-0.74	4.22				4.65
Global Private Equity	2,312,081,574.33	1.13	6.36	1.92	1.92	6.92	24.30	17.47	18.10	13.44	13.32
Custom Gbl Private Equity BM		1.21	3.80	1.21	1.21	1.99	18.84	14.48	14.11	12.21	12.85
Excess Return		-0.08	2.56	0.70	0.70	4.92	5.46	2.99	3.99	1.23	0.47
Global Real Assets	3,548,830,534.74	-0.72	-4.33	-1.09	-1.09	-3.09	10.09	8.45	9.70	7.17	7.62
Custom Gbl Real Assets BM		-1.98	-7.12	-1.98	-1.98	-6.60	6.79	5.90	7.82	8.41	9.03
Excess Return		1.26	2.79	0.89	0.89	3.50	3.29	2.54	1.88	-1.24	-1.41
Opportunistic & Tactical	539,321,388.82	0.13	4.63	0.78	0.78	7.31	9.92	5.30	6.58		6.74
Opportunistic & Tactical BM		-2.32	0.30	-2.67	-2.67	2.64	-3.20	-0.24	3.63		3.81
Excess Return		2.46	4.33	3.44	3.44	4.66	13.12	5.54	2.95		2.92
Cash Equivalents	676,492,829.29	2.80	5.34	2.99	2.99	-1.76	4.65	4.88	2.97	2.53	2.45
FTSE 30 Day Treasury Bill		0.45	3.70	1.36	1.36	4.61	1.74	1.68	1.07	1.30	1.29
Excess Return		2.35	1.64	1.64	1.64	-6.37	2.92	3.20	1.90	1.24	1.16
Short-Term Cash	613,933,541.52	0.43	3.65	1.30	1.30	4.59	1.74	1.72	1.17	1.63	3.81
FTSE 30 Day Treasury Bill		0.45	3.70	1.36	1.36	4.61	1.74	1.68	1.07	1.30	3.11
Excess Return		-0.02	-0.05	-0.06	-0.06	-0.02	0.00	0.04	0.10	0.34	0.70



OPPORTUNISTIC & TACTICAL INVESTMENTS

IRR and Performance Multiples

(Inception to Date | Roll Forward | Base)

End Date: 9/30/2023

All Portfolio Investments

Base Currency: USD

Investment			Transactions		Valuation	Performance					
Investment	Closing Date	Commitment	Paid-In Capital	Distributions	Valuation	IRR	TVPI	DPI	RVPI		
Ohio SERS Opportunistic & Tactical Investments											
1	Barings Asset-Based Income Fund	3/31/2018	50,000,000	49,913,202	6,993,402	40,539,882		-1.55	0.95	0.14	0.81
2	Barings Global Special Situations Credit 2	6/1/2015	31,762,500	30,154,793	35,974,251	11,014,598		11.88	1.56	1.19	0.37
3	Barings Global Special Situations Credit 3	10/1/2017	49,893,344	49,064,680	31,039,601	34,375,846		8.12	1.33	0.63	0.70
4	GoldenTree Distressed Fund 2014	8/27/2014	50,000,000	48,621,811	65,136,934	15,536,269		12.26	1.66	1.34	0.32
5	GoldenTree Distressed Fund III	11/30/2018	50,000,000	48,990,296	60,553,733	19,335,214		23.45	1.63	1.24	0.39
6	GoldenTree Distressed Fund III - Co-Investment	8/1/2020	40,000,000	18,800,000	11,620,000	17,071,376		24.37	1.53	0.62	0.91
7	GoldenTree Distressed Fund IV	5/1/2021	50,000,000	11,000,000	3,806,867	10,656,858		30.30	1.31	0.35	0.97
8	GoldenTree Structured Products Fund VII	8/25/2020	50,000,000	25,525,000	1,011,076	26,624,856		6.12	1.08	0.04	1.04
9	ICG Europe Fund VIII	8/24/2021	42,490,820	9,377,892	1,072,721	10,547,784		16.52	1.24	0.11	1.12
10	Marathon Healthcare Finance Fund	8/24/2021	50,000,000	14,649,829	1,842,439	14,292,283		7.22	1.10	0.13	0.98
11	Oceanwood European Financial	6/2/2015	25,000,000	25,000,000	26,505,503	2,516,983		3.26	1.16	1.06	0.10
12	PIMCO BRAVO Fund II	5/3/2013	40,000,000	49,513,610	59,647,295	1,417,657		6.34	1.23	1.20	0.03
13	PIMCO BRAVO Fund III	10/3/2016	40,000,000	42,244,662	22,807,697	35,765,212		8.96	1.39	0.54	0.85
14	PIMCO DISCO Fund III	5/31/2020	50,000,000	25,055,767	27,438,661	1,055,834		12.06	1.14	1.10	0.04
15	Strategic Value Capital Solutions Fund II	8/24/2022	50,000,000	7,500,000	0	7,332,663		-3.28	0.98	0.00	0.98
16	Strategic Value Special Situations Fund V	3/1/2021	75,000,000	37,471,875	268,169	43,462,669		10.60	1.17	0.01	1.16
Total: Ohio SERS Opportunistic & Tactical Investments			744,146,664	492,883,419	355,718,348	291,545,982		9.48	1.31	0.72	0.59
Total Investments:	16		744,146,664	492,883,419	355,718,348	291,545,982		9.48	1.31	0.72	0.59

¹ Investment is Liquidated as of the Report End Date

indicates that the valuation has been rolled forward.

Missing performance values indicate insufficient cash flows or incalculable results.

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GLOBAL PRIVATE EQUITY

IRR and Performance Multiples

(Inception to Date | Roll Forward | Base)

End Date: 9/30/2023

All Portfolio Investments

Base Currency: USD

Investment			Transactions		Valuation	Performance				
Investment	Closing Date	Commitment	Paid-In Capital	Distributions	Valuation	IRR	TVPI	DPI	RVPI	
Ohio SERS Private Equity										
1	Altas Partners Holdings II	9/1/2019	50,000,000	45,919,575	2,696,508	53,610,207	8.76	1.23	0.06	1.17
2	Bridgepoint Development Capital II	12/6/2011	31,762,500	42,660,092	79,177,226	-1,441,418	23.03	1.82	1.86	-0.03
3	Bridgepoint Development Capital III	5/13/2016	30,513,750	31,419,323	43,076,901	33,581,068	34.48	2.44	1.37	1.07
4	Bridgepoint Development Capital IV	3/1/2020	48,822,000	24,562,902	0	20,967,288	-21.59	0.85	0.00	0.85
5	Bridgepoint Europe IV	6/30/2008	31,762,500	39,936,142	55,269,726	6,895,576	9.65	1.56	1.38	0.17
6	Bridgepoint Europe V	10/31/2014	31,762,500	33,051,802	45,295,390	18,473,128	17.66	1.93	1.37	0.56
7	Bridgepoint Europe VI	6/22/2018	52,937,500	53,231,570	5,229,503	73,417,883	18.30	1.48	0.10	1.38
8	Bridgepoint Europe VII	12/1/2021	79,405,456	0	0	0				
9	Bridgepoint Europe VII Side-Car Co-investment	12/1/2021	19,851,563	0	0	0				
10	Bridgepoint Growth Fund II	11/17/2022	30,513,750	0	0	0				
11	Bridgepoint Growth Fund II Side-car Co-investment	11/17/2022	7,689,465	0	0	0				
12	Carlyle Asia Partners Growth II	9/15/2021	75,000,000	23,227,050	33,528	16,283,173	-42.22	0.70	0.00	0.70
13	Charterhouse Capital Partners IX	10/27/2008	30,426,711	37,481,708	50,319,793	297,476	9.52	1.35	1.34	0.01
14	Charterhouse Capital Partners X	10/1/2015	42,350,000	40,039,068	51,296,560	19,243,561	19.42	1.76	1.28	0.48
15	Cinven V	5/23/2012	31,762,500	41,401,689	59,538,029	8,044,938	17.25	1.63	1.44	0.19
16	Cinven VI	4/22/2016	29,382,523	36,232,401	31,208,381	33,176,594	18.52	1.78	0.86	0.92
17	Cinven VII	3/1/2019	31,762,500	28,925,013	1,171,305	32,622,728	10.01	1.17	0.04	1.13
18	Cinven VIII	8/24/2022	52,937,500	0	0	0				
19	Coller International Partners V	12/1/2006	31,680,000	33,650,934	46,524,111	12,832	7.45	1.38	1.38	0.00
20	Coller International Partners VI	4/14/2011	37,638,367	39,504,605	59,793,667	5,855,629	15.06	1.66	1.51	0.15
21	Coller International Partners VII	6/17/2015	60,000,000	47,029,999	50,896,465	24,663,142	13.55	1.61	1.08	0.52
22	Coller International Partners VIII	7/31/2019	60,000,000	34,100,239	4,744,186	46,031,445	25.50	1.49	0.14	1.35
23	FdG Capital Partners II, L.P.	6/30/2004	21,037,725	27,483,423	32,328,802	550,124	3.41	1.20	1.18	0.02
24	Ford Financial Fund II	5/17/2013	30,000,000	30,026,432	8,453,623	42,617,958	7.76	1.70	0.28	1.42
25	Francisco Partners Agility	9/1/2016	25,000,000	22,251,233	85,486,690	25,384,868	83.38	4.98	3.84	1.14
26	Francisco Partners Agility II	3/31/2020	40,000,000	25,460,000	0	33,944,748	18.07	1.33	0.00	1.33
27	Francisco Partners Agility III	1/1/2022	45,000,000	0	0	0				
28	Francisco Partners III	2/19/2010	40,000,000	38,958,586	114,848,836	17,136,929	23.29	3.39	2.95	0.44
29	Francisco Partners IV	12/1/2014	50,000,000	49,209,385	96,894,382	48,654,548	27.02	2.96	1.97	0.99
30	Francisco Partners IV – Dell Co-Invest	9/1/2016	10,020,036	10,020,036	47,665,038	9,958,072	43.85	5.75	4.76	0.99
31	Francisco Partners V	8/1/2017	50,000,000	48,525,000	14,350,000	78,380,652	19.51	1.91	0.30	1.62
32	Francisco Partners V – Renaissance Co-Invest	2/1/2022	10,150,739	10,176,140	0	10,242,239	0.46	1.01	0.00	1.01
33	Francisco Partners V – LogMeIn Co-Invest	8/1/2020	10,000,000	10,014,241	734,608	7,841,044	-5.12	0.86	0.07	0.78
34	Francisco Partners V – Perforce Co-Invest	9/30/2019	8,117,165	8,233,636	0	13,764,654	14.35	1.67	0.00	1.67
35	Francisco Partners VI	4/17/2020	50,000,000	46,025,000	0	55,462,288	14.33	1.21	0.00	1.21
36	Francisco Partners VII	1/1/2022	100,000,000	0	0	0				
37	FS Equity Partners IX	9/21/2023	50,000,000	0	0	0				
38	FS Equity Partners V, L.P.	1/1/2004	25,000,000	21,840,133	43,251,247	614,000	15.28	2.01	1.98	0.03
39	FS Equity Partners VI	7/27/2009	40,000,000	51,750,365	131,535,890	14,647,225	23.37	2.82	2.54	0.28
40	FS Equity Partners VII	4/30/2014	50,000,000	56,387,426	36,938,316	53,772,728	10.28	1.61	0.66	0.95
41	FS Equity Partners VII - CRH Co-Invest	3/1/2019	7,000,000	7,000,000	7,000,000	17,510,052	42.76	3.50	1.00	2.50

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indicates that the valuation has been rolled forward.

Missing performance values indicate insufficient cash flows or incalculable results.

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GLOBAL PRIVATE EQUITY *(continued)*

IRR and Performance Multiples

(Inception to Date | Roll Forward | Base)

End Date: 9/30/2023

All Portfolio Investments

Base Currency: USD

Investment			Transactions		Valuation	Performance					
Investment	Closing Date	Commitment	Paid-In Capital	Distributions	Valuation	IRR	TVPI	DPI	RVPI		
Ohio SERS Private Equity											
42	FS Equity Partners VIII	4/25/2019	50,000,000	41,696,178	2,121,972	64,012,921	↔	20.53	1.59	0.05	1.54
43	FS Equity Partners VIII - NearU Co-Invest	8/24/2022	10,000,000	10,030,907	0	10,000,000	↔	-0.29	1.00	0.00	1.00
44	FS Equity Partners VIII - USME Co-Invest	11/1/2020	8,000,000	8,006,753	2,453,988	12,658,869	↔	29.55	1.89	0.31	1.58
45	FS Equity Partners VIII - White Water Express Co-Invest	1/1/2022	10,000,000	10,021,125	0	10,613,002	↔	3.51	1.06	0.00	1.06
46	Graham Partners III	6/30/2008	40,000,000	43,160,679	90,094,039	736,854	↔	22.64	2.10	2.09	0.02
47	Graham Partners IV	4/1/2016	15,000,000	14,889,101	35,659,784	1,489,847	↔	33.00	2.50	2.40	0.10
48	Graham Partners V	6/1/2019	50,000,000	47,821,606	3,658,906	60,173,824	↔	22.32	1.33	0.08	1.26
49	Green Equity Investors CF	3/1/2021	23,329,933	21,478,995	11,171,404	17,989,611	↔	19.07	1.36	0.52	0.84
50	Green Equity Investors IX	12/1/2021	50,000,000	480,814	0	164,474	↔	-65.79	0.34	0.00	0.34
51	Green Equity Investors V	1/30/2007	50,000,000	55,367,838	127,809,901	735,545	↔	18.44	2.32	2.31	0.01
52	Green Equity Investors VI	9/28/2011	50,000,000	64,800,580	66,049,656	59,735,137	↔	14.22	1.94	1.02	0.92
53	Green Equity Investors VI - ASM Co-Invest	10/1/2014	10,000,000	10,115,000	0	1,595,084	↔	-18.89	0.16	0.00	0.16
54	Green Equity Investors VII	2/1/2016	50,000,000	53,240,543	48,609,161	58,924,498	↔	21.08	2.02	0.91	1.11
55	Green Equity Investors VIII	10/1/2019	50,000,000	44,742,624	672,101	51,499,280	↔	7.84	1.17	0.02	1.15
56	GS Distressed Opportunities III	8/31/2006	75,000,000	73,587,875	83,604,121	1,338,864	↔	2.89	1.15	1.14	0.02
57	J.P. Morgan European Corp. Finance II	6/30/2002	25,000,000	27,540,924	40,441,784	0	↔	8.09	1.47	1.47	0.00
58	J.P. Morgan European Corp. Finance III	1/31/2006	40,000,000	42,437,809	59,293,998	1,065,484	↔	6.12	1.42	1.40	0.03
59	J.P. Morgan European Corp. Finance IV	6/30/2008	25,000,000	24,538,949	35,425,711	4,656,828	↔	10.79	1.63	1.44	0.19
60	J.P. Morgan Venture Capital III	12/31/2005	30,000,000	34,222,283	46,778,426	9,832,881	↔	7.33	1.65	1.37	0.29
61	J.P. Morgan Venture Capital IV	6/30/2008	50,000,000	62,364,628	108,995,050	48,258,832	↔	16.28	2.52	1.75	0.77
62	Jade Equity Investors	8/1/2019	30,000,000	24,063,801	5,061,265	26,962,918	↔	21.02	1.33	0.21	1.12
63	Jade Equity Investors II	12/1/2021	50,000,000	0	0	0	↔				
64	KKR Ascendant	3/1/2023	50,000,000	0	0	0	↔				
65	Kohlberg Investors IX	12/1/2019	50,000,000	41,973,003	1,627,727	56,307,061	↔	23.43	1.38	0.04	1.34
66	Kohlberg Investors VI, L.P.	6/29/2007	40,000,000	36,488,546	63,814,504	66,116	↔	16.41	1.75	1.75	0.00
67	Kohlberg Investors VII CV	9/30/2021	16,876,522	16,852,525	433,543	28,533,808	↔	32.76	1.72	0.03	1.69
68	Kohlberg Investors VIII	7/1/2016	40,000,000	42,341,938	36,408,402	45,678,320	↔	21.49	1.94	0.86	1.08
69	Kohlberg Investors X	11/17/2022	50,000,000	0	0	0	↔				
70	Kohlberg Investors X Side Car	11/17/2022	25,000,000	0	0	0	↔				
71	Levine Leichtman Capital Partners V	4/30/2013	50,000,000	76,010,389	124,329,467	18,120,966	↔	17.28	1.87	1.64	0.24
72	Levine Leichtman Capital Partners VI	4/1/2017	40,000,000	52,274,950	17,571,247	55,992,742	↔	14.76	1.41	0.34	1.07
73	Levine Leichtman Lower Middle Market Fund III	2/1/2021	50,000,000	23,011,899	5,411,602	18,082,871	↔	2.58	1.02	0.24	0.79
74	Levine Leichtman Lower Middle Market Fund III - IPM Co-Invest	9/15/2021	8,000,000	8,000,000	352,870	10,885,126	↔	20.53	1.40	0.04	1.36
75	Lightspeed Opportunity Fund II	4/28/2022	50,000,000	18,000,000	0	17,818,116	↔	-1.42	0.99	0.00	0.99
76	Mason Wells Buyout Fund IV	10/1/2015	40,000,000	38,778,537	5,827,840	74,797,039	↔	15.59	2.08	0.15	1.93
77	Mason Wells III	3/24/2010	40,000,000	38,071,440	114,665,898	53,761	↔	20.55	3.01	3.01	0.00
78	Monomoy Capital Partners II	12/30/2010	40,000,000	58,362,193	90,225,268	2,809,699	↔	43.92	1.59	1.55	0.05
79	Monomoy Capital Partners IV	1/1/2021	75,000,000	25,149,790	6,582,505	25,404,256	↔	29.71	1.27	0.26	1.01
80	NGP Natural Resources XI	11/5/2014	50,000,000	51,885,070	50,250,957	31,362,593	↔	10.23	1.57	0.97	0.60
81	NGP Natural Resources XII	8/1/2017	40,000,000	33,096,137	30,478,000	18,568,924	↔	12.93	1.48	0.92	0.56
82	Oak Hill Capital Partners III, L.P.	12/31/2007	40,000,000	51,074,739	81,197,368	0	↔	9.87	1.59	1.59	0.00

¹ Investment is Liquidated as of the Report End Date

↔ indicates that the valuation has been rolled forward.

Missing performance values indicate insufficient cash flows or incalculable results.

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GLOBAL PRIVATE EQUITY *(continued)*

IRR and Performance Multiples

(Inception to Date | Roll Forward | Base)

End Date: 9/30/2023

All Portfolio Investments

Base Currency: USD

Investment			Transactions		Valuation	Performance					
Investment	Closing Date	Commitment	Paid-In Capital	Distributions	Valuation	IRR	TVPI	DPI	RVPI		
Ohio SERS Private Equity											
83	Oaktree Principal Fund V	4/28/2009	40,000,000	40,000,000	42,972,308	5,593,789	↔	3.45	1.21	1.07	1.14
84	Oaktree Special Situations Fund II	8/25/2019	50,000,000	50,000,000	21,289,620	57,437,348	↔	40.76	1.57	0.43	1.15
85	Odyssey Investment Partners IV	6/30/2008	40,000,000	34,567,752	104,118,718	886,817	↔	32.79	3.04	3.01	0.03
86	Odyssey Investment Partners V	4/15/2014	45,000,000	46,069,844	24,823,057	32,130,080	↔	4.21	1.24	0.54	0.70
87	Odyssey Investment Partners VI	11/1/2019	60,000,000	49,042,910	22,719	59,321,422	↔	10.33	1.21	0.00	1.21
88	Primus Capital Fund IX	2/1/2021	65,000,000	25,429,930	0	23,282,667	↔	-7.68	0.92	0.00	0.92
89	Primus Capital Fund VII	11/1/2012	25,000,000	27,179,325	69,250,122	3,377,973	↔	25.62	2.67	2.55	0.12
90	Primus Capital Fund VIII	8/1/2017	25,000,000	26,800,001	19,020,990	26,728,019	↔	16.86	1.71	0.71	1.00
91	Primus Venture Partners Fund V	7/1/2000	25,000,000	25,725,000	41,262,487	1,255,101	↔	10.20	1.65	1.60	0.05
92	Primus Venture Partners Fund VI	12/31/2007	25,000,000	29,200,991	52,053,602	1,953,826	↔	15.16	1.85	1.78	0.07
93	Quantum Energy Partners V	6/30/2008	50,000,000	51,819,626	76,736,575	1,200,257	↔	8.81	1.50	1.48	0.02
94	Silver Lake Partners III	3/23/2007	50,000,000	55,082,214	98,504,008	30,733,651	↔	18.52	2.35	1.79	0.56
95	Silver Lake Partners IV	4/11/2013	50,000,000	61,496,809	65,293,470	85,013,239	↔	21.67	2.44	1.06	1.38
96	Silver Lake Partners V	3/1/2017	50,000,000	51,018,394	23,040,145	55,458,844	↔	14.12	1.54	0.45	1.09
97	Silver Lake Partners VII	12/1/2021	100,000,000	0	0	0	↔				
98	Sole Source Capital II	11/1/2020	50,000,000	19,157,363	12,065,184	46,705,072	↔	120.89	3.07	0.63	2.44
99	SPC Partners IV	3/31/2008	30,000,000	32,602,108	65,391,023	3,851,872	↔	16.59	2.12	2.01	0.12
100	SPC Partners V	5/11/2012	40,000,000	43,591,488	46,266,630	14,604,956	↔	6.77	1.40	1.06	0.34
101	SPC Partners VI	9/1/2016	25,000,000	27,158,840	11,338,113	26,080,757	↔	10.21	1.38	0.42	0.96
102	StepStone VC Secondaries Fund V	5/1/2021	75,000,000	38,205,029	0	39,231,707	↔	1.87	1.03	0.00	1.03
103	StepStone VC Secondaries Fund VI LP	9/21/2023	100,000,000	0	0	0	↔				
104	TPG Rise Climate	6/1/2021	100,000,000	34,286,070	2,303,625	37,575,708	↔	21.33	1.16	0.07	1.10
105	Transportation Resource Partners III	6/30/2008	25,000,000	18,882,653	31,437,045	0	↔	14.22	1.66	1.66	0.00
106	Warburg Pincus Energy	5/30/2014	30,000,000	28,464,658	20,016,961	12,643,694	↔	3.06	1.15	0.70	0.44
107	Warburg Pincus Private Equity XI	5/16/2012	50,000,000	53,375,000	73,520,812	17,909,709	↔	11.81	1.71	1.38	0.34
108	Warburg Pincus Private Equity XII	11/19/2015	65,000,000	64,122,500	74,407,970	56,406,690	↔	17.21	2.04	1.16	0.88
109	Warburg, Pincus Private Equity X, L.P.	11/4/2007	75,000,000	75,000,000	133,396,497	1,372,817	↔	9.50	1.80	1.78	0.02
Total: Ohio SERS Private Equity			4,510,493,205	3,429,993,818	3,711,368,859	2,309,899,546		14.40	1.76	1.08	0.67
Total Investments:	109		4,510,493,205	3,429,993,818	3,711,368,859	2,309,899,546		14.40	1.76	1.08	0.67

¹ Investment is Liquidated as of the Report End Date

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GLOBAL REAL ASSETS

IRR and Performance Multiples

(Inception to Date | Roll Forward | Base)

End Date: 9/30/2023

All Portfolio Investments

Base Currency: USD

Investment			Transactions		Valuation	Performance				
Investment	Closing Date	Commitment	Paid-In Capital	Distributions	Valuation	IRR	TVPI	DPI	RVPI	
Ohio SERS Real Estate										
1	Almanac Realty Securities VII	11/25/2014	75,000,000	82,715,841	69,470,498	42,064,095	10.66	1.35	0.84	0.51
2	Almanac Realty Securities VIII	1/1/2018	50,000,000	33,189,466	8,089,019	31,699,846	9.74	1.20	0.24	0.96
3	Almanac Realty V	4/30/2008	49,073,993	55,908,408	81,653,116	71,904	11.40	1.46	1.46	0.00
4	Beacon Capital VI	3/1/2009	37,500,000	38,000,857	58,957,988	189,389	16.49	1.56	1.55	0.00
5	Blackstone Strategic Partners Real Estate VIII	9/21/2023	40,000,000	0	0	0				
6	Brookfield Global Transition Fund	6/1/2021	75,000,000	26,626,367	1,707,812	25,215,901	1.51	1.01	0.06	0.95
7	Brookfield Super-Core Infrastructure Co-Investment Sidecar	4/1/2023	20,000,000	0	0	0				
8	Brookfield Super-Core Infrastructure Partners	6/30/2022	50,000,000	50,102,681	505,431	49,842,784	0.82	1.00	0.01	0.99
9	Carlyle Property Investors	12/31/2020	100,000,000	100,000,000	3,540,107	96,066,519	-0.29	1.00	0.04	0.96
10	Carlyle Realty Partners IV	7/1/2005	25,000,000	37,748,862	50,743,409	0	4.26	1.34	1.34	0.00
11	Carlyle Realty Partners V, L.P.	11/30/2006	35,132,569	64,457,311	95,612,112	123,502	8.67	1.49	1.48	0.00
12	Carlyle Realty Partners VI	12/28/2010	20,132,055	33,403,867	45,195,372	2,521,222	16.06	1.43	1.35	0.08
13	Carlyle Realty Partners VIII	3/1/2017	50,000,000	42,904,829	36,947,465	26,034,237	23.78	1.47	0.86	0.61
14	CB Richard Ellis Strategic Partners US V - Opportunity	6/23/2008	22,721,359	23,485,851	33,582,742	146,266	5.65	1.44	1.43	0.01
15	CBRE Core Storage Partners Co-Investment	12/21/2022	15,000,000	15,000,000	0	15,000,000	0.00	1.00	0.00	1.00
16	CBRE U.S. Core Partners	1/30/2015	350,000,000	348,871,438	117,161,181	469,305,790	10.09	1.68	0.34	1.35
17	Clarion Lion Industrial Trust	4/1/2005	181,000,000	199,219,728	71,947,502	478,640,660	11.53	2.76	0.36	2.40
18	Clarion Lion Properties Fund	10/1/2003	144,792,823	216,528,918	132,840,117	244,320,388	6.89	1.74	0.61	1.13
19	DigitalBridge Partners II	8/24/2021	50,000,000	55,517,391	10,015,770	48,520,110	4.90	1.05	0.18	0.87
20	DigitalBridge Partners II - GD Towers Co-Invest	8/24/2022	10,000,000	9,443,219	240,567	9,340,410	1.50	1.01	0.03	0.99
21	DigitalBridge Partners II - Vertical Bridge Co-Invest	11/1/2021	10,000,000	10,145,058	517,917	10,955,258	7.60	1.13	0.05	1.08
22	Eaglecrest Infrastructure Fund	12/31/2018	70,000,000	70,175,000	1,798,009	73,548,697	3.18	1.07	0.03	1.05
23	Global Infrastructure Partners Capital Solutions Fund II	3/31/2020	100,000,000	39,807,733	2,774,805	39,829,202	7.70	1.07	0.07	1.00
24	Global Transport Income Fund Feeder LLC	6/18/2018	150,000,000	149,775,382	27,795,384	151,898,609	7.50	1.20	0.19	1.01
25	Harrison Stree Infrastructure Fund	5/1/2019	65,000,000	66,356,146	3,904,585	76,001,405	6.86	1.20	0.06	1.15
26	IFC Core Farmland Fund LP	12/21/2022	25,000,000	0	0	0				
27	IFM Global Infrastructure	10/21/2013	364,994,118	379,406,048	92,802,638	613,382,549	11.27	1.86	0.24	1.62
28	InfraBridge Global Infrastructure Fund	8/25/2016	50,000,000	67,084,844	45,044,234	41,760,112	6.73	1.29	0.67	0.62
29	JP Morgan Strategic Property Fund	1/1/1998	119,621,424	118,153,545	232,450,437	86,333,734	8.68	2.70	1.97	0.73
30	Lubert-Adler Laramar Urban Neighborhood Fund	3/23/2016	55,000,000	53,851,518	14,481,702	40,467,687	0.44	1.02	0.27	0.75
31	Lubert-Adler Real Estate Fund VI	4/29/2011	61,869,563	67,245,644	129,456,690	4,279,248	20.76	1.99	1.93	0.06
32	Lubert-Adler Real Estate Fund VII	3/27/2015	75,000,000	74,374,313	43,702,237	35,262,241	1.13	1.06	0.59	0.47
33	Lubert-Adler Recovery & Enhancement Capital Fund	7/31/2020	100,000,000	76,989,810	6,558,008	76,942,063	7.46	1.08	0.09	1.00
34	Mesa West Core Lending Fund	12/12/2014	75,000,000	75,000,000	57,396,673	44,361,841	5.22	1.36	0.77	0.59
35	Patrizia TransEuropean IV	3/30/2007	26,468,750	33,774,988	38,191,058	223,751	2.00	1.14	1.13	0.01
36	Patrizia TransEuropean V	12/6/2011	26,468,750	32,820,773	43,379,606	225,672	8.07	1.33	1.32	0.01
37	Patrizia TransEuropean VI	7/1/2015	42,216,931	42,925,765	26,469,100	29,166,048	4.76	1.30	0.62	0.68
38	Pretium Single-Family Rental Fund III	11/1/2021	50,000,000	50,000,000	3,225,693	52,382,001	7.55	1.11	0.06	1.05
39	PRISA	7/1/2004	49,627,184	54,390,225	54,390,653	79,927,211	6.71	2.47	1.00	1.47
40	PRISA II	7/1/2004	75,144,022	146,956,696	102,736,083	188,866,735	6.14	1.98	0.70	1.29
41	RREEF America REIT II	10/1/2004	73,812,238	223,068,293	173,939,645	288,795,119	7.62	2.07	0.78	1.29

¹ Investment is Liquidated as of the Report End Date

indicates that the valuation has been rolled forward.

Missing performance values indicate insufficient cash flows or incalculable results.

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GLOBAL REAL ASSETS *(continued)*

IRR and Performance Multiples

(Inception to Date | Roll Forward | Base)

End Date: 9/30/2023

All Portfolio Investments

Base Currency: USD

Investment			Transactions		Valuation	Performance			
Investment	Closing Date	Commitment	Paid-In Capital	Distributions	Valuation	IRR	TVPI	DPI	RVPI
Ohio SERS Real Estate									
42 UBS Trumbull Property Fund	9/27/1996	82,693,884	147,674,834	287,991,672	42,413,703	10.86	2.24	1.95	0.29
43 UBS Trumbull Property Income Fund	3/18/2015	75,000,000	78,578,836	105,414,435	9,219,932	6.68	1.46	1.34	0.12
Total: Ohio SERS Real Estate		3,223,269,663	3,491,680,480	2,312,631,469	3,525,345,841	8.70	1.67	0.66	1.01
Total Investments:	43	3,223,269,663	3,491,680,480	2,312,631,469	3,525,345,841	8.70	1.67	0.66	1.01

¹ Investment is Liquidated as of the Report End Date

indicates that the valuation has been rolled forward.

Missing performance values indicate insufficient cash flows or incalculable results.



GLOBAL PRIVATE CREDIT

IRR and Performance Multiples

(Inception to Date | Roll Forward | Base)

End Date: 9/30/2023

All Portfolio Investments

Base Currency: USD

Investment			Transactions		Valuation	Performance				
Investment	Closing Date	Commitment	Paid-In Capital	Distributions	Valuation	IRR	TVPI	DPI	RVPI	
Ohio SERS Global Private Credit										
1	Apollo Origination Partnership	8/19/2020	100,000,000	93,517,545	19,844,879	82,621,300	7.29	1.10	0.21	0.88
2	Arcmont Direct Lending II	6/1/2015	54,487,500	58,389,126	64,984,875	3,800,198	7.19	1.18	1.11	0.07
3	Arcmont Direct Lending III	2/8/2018	61,245,000	70,461,382	32,968,825	46,949,616	6.77	1.13	0.47	0.67
4	Arcmont Direct Lending SMA	3/1/2021	150,000,000	131,706,611	20,724,736	118,510,543	5.51	1.06	0.16	0.90
5	Ares Private Credit Solutions Fund II	10/1/2020	50,000,000	32,702,005	1,732,800	32,445,757	3.41	1.05	0.05	0.99
6	Barings European Private Loan Fund III	4/1/2021	150,000,000	114,702,674	15,283,755	110,192,325	6.90	1.09	0.13	0.96
7	Barings European Private Loan Fund IV	7/1/2023	75,000,000	0	0	0				
8	Carlyle Credit Opportunities Fund II	4/1/2021	100,000,000	100,948,020	22,086,189	88,714,018	7.40	1.10	0.22	0.88
9	Carlyle Credit Opportunities Fund III	1/24/2023	100,000,000	0	0	0				
10	Carlyle Direct Lending Fund IV	5/20/2022	30,000,000	30,000,000	1,600,067	30,381,386	8.79	1.07	0.05	1.01
11	CIFC-LBC SMA Credit Fund	10/24/2022	100,000,000	5,000,000	0	4,964,270	-0.71	0.99	0.00	0.99
12	Francisco Partners Credit - ZocDoc Co-Invest	3/1/2021	7,008,018	7,107,185	602,690	8,592,640	11.18	1.29	0.08	1.21
13	Francisco Partners Credit Partners Aggregator	3/1/2020	75,000,000	46,200,000	20,064,835	45,947,057	17.76	1.43	0.43	0.99
14	Francisco Partners Credit Partners II	4/1/2021	150,000,000	60,675,000	0	66,473,762	9.82	1.10	0.00	1.10
15	GoldenTree Structures Products Opportunities Fund 2013	2/6/2014	43,248,750	51,849,258	66,919,526	598,904	10.41	1.30	1.29	0.01
16	Highbridge Principal Strategies Special Loan Fund 2016	11/15/2016	60,000,000	54,064,163	44,110,121	23,550,035	7.33	1.25	0.82	0.44
17	Highbridge Principal Strategies Special Loan Fund V	3/1/2020	150,000,000	120,616,749	29,147,623	112,375,377	9.60	1.17	0.24	0.93
18	Highbridge Principal Strategies Special Loan Fund VI	12/21/2022	75,000,000	0	0	0				
19	Invesco Credit Partners Fund II	6/2/2020	50,000,000	39,358,610	5,263,280	47,137,629	22.71	1.33	0.13	1.20
20	Invesco Credit Partners Fund III	5/19/2023	50,000,000	0	0	0				
21	KKR Dislocation Opportunities Fund	5/1/2020	50,000,000	45,875,645	20,766,110	31,383,877	7.73	1.14	0.45	0.68
22	KKR Opportunities Fund II	9/15/2021	75,000,000	11,250,000	0	11,250,000	0.00	1.00	0.00	1.00
23	LBC Credit Partners IV	8/1/2016	50,000,000	45,285,143	45,375,708	10,254,292	8.13	1.23	1.00	0.23
24	LBC Credit Partners V	3/1/2020	150,000,000	133,016,501	68,118,893	89,999,092	13.50	1.19	0.51	0.68
25	West Street Strategic Solutions Fund I	7/1/2020	125,000,000	69,070,407	6,915,833	70,787,560	6.13	1.12	0.10	1.02
Total: Ohio SERS Global Private Credit			2,080,989,268	1,321,796,026	486,510,745	1,036,929,636	9.00	1.15	0.37	0.78
Total Investments:	25		2,080,989,268	1,321,796,026	486,510,745	1,036,929,636	9.00	1.15	0.37	0.78

¹ Investment is Liquidated as of the Report End Date

indicates that the valuation has been rolled forward.

Missing performance values indicate insufficient cash flows or incalculable results.



APPENDIX

FOOTNOTES:

This reporting comes directly from Burgiss Private I, which is the investment system SERS uses for all alternative investments to track transactions and investment performance results. This reporting relies upon the accuracy and completeness of information (which may or may not be audited by the fund manager) provided to SERS by each fund manager. SERS has

not conducted an independent verification of the information provided nor have we conducted an audit of such information.

Performance of investments with less than three years may not be meaningful due to upfront costs.

DEFINITIONS:

Closing Date:

The date the Fund begins accepting Commitments from Investors.

Commitment:

The amount of capital that SERS has pledged to contribute to the Fund.

Distributions:

The amount of capital that SERS has received back from the Fund for the Inception-to-Date.

DPI – Distributed to Paid In:

The ratio of money distributed to Limited Partners by the Fund, relative to contributions.

(as defined by ILPA <https://ilpa.org/glossary/distributed-to-paid-in-dpi/>)

IRR – Internal Rate of Return:

The discount rate at which the present value of future cash flows of an investment equals to the cost of the investment. It is determined when the net present value of the cash outflows (the cost of the investment) and the cash inflows (returns on the investment) equal zero, with the discount rate equal to the IRR.

(as defined by ILPA <https://ilpa.org/glossary/internal-rate-of-return-irr/>)

Paid-In Capital:

The amount of capital that SERS has contributed to the Fund for the Inception-to-Date.

Rolled-Forward Valuations:

This means that the valuation represented on the report is the most recent Capital Account Statement balance +/- cash flows up through the report end date. All valuations are net of fees.

In this example, a Rolled-Forward Valuation date as of 9/30/23 would include a 6/30/23 Capital Account Statement Valuation +/- cash flows from 7/1/23 through 9/30/23.

RVPI – Residual Value to Paid In:

The ratio of the current value of all remaining investments within a fund to the total contributions of Limited Partners to date.

(as defined by ILPA <https://ilpa.org/glossary/residual-value-to-paid-in-rvpi/>)

TVPI – Total Value to Paid In:

The ratio of the current value of remaining investments within a fund, plus the total value of all distributions to date, relative to the total amount of capital paid into the fund to date.

(as defined by ILPA <https://ilpa.org/glossary/total-value-to-paid-in-tvpi/>)