



School Employees Retirement System of Ohio

QUARTERLY INVESTMENTS PERFORMANCE REPORT

For Quarter End Date: 6/30/2023

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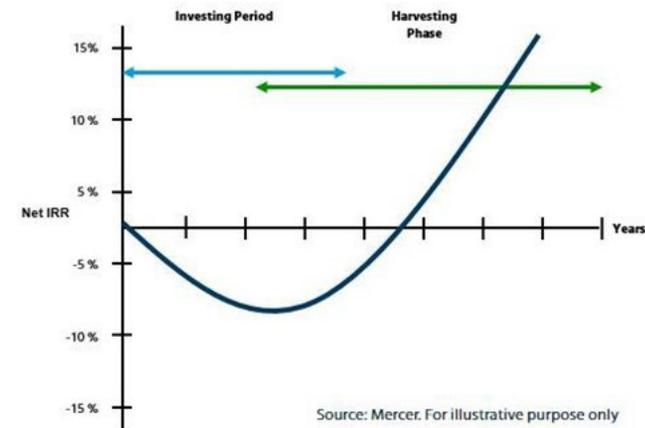
SERS investment strategic goals continue to focus on value added performance, risk management, cost effectiveness and maintenance of an investment program that meets or exceeds investment objectives over the long-term. In addition, SERS strives to provide clear and transparent reporting to stakeholders 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
- IRR, unlike TWRs, place greater weight on periods when the portfolio of a given investment is largest
- IRR 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

TOTAL NET OF FEES

Reporting Currency: USD

6/30/2023

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	17,834,826,917.25	2.74	5.73	2.85	7.39	7.39	10.65	8.26	8.54	7.56	7.82
OSERS Policy BM		2.43	6.20	2.59	7.09	7.09	8.64	7.21	7.63	7.38	7.77
Excess Return		0.32	-0.47	0.26	0.30	0.30	2.00	1.05	0.92	0.18	0.04
Global Equities	7,492,566,599.64	5.84	12.56	5.90	15.60	15.60	11.23	8.14	9.02	8.21	7.69
Custom Gbl Equities BM		5.81	13.93	6.18	16.53	16.53	10.97	7.69	8.61	7.89	7.39
Excess Return		0.03	-1.37	-0.28	-0.93	-0.93	0.26	0.46	0.41	0.32	0.30
Global Fixed Income	2,317,636,099.35	0.02	2.90	-0.39	0.74	0.74	-2.31	1.81	2.30	3.91	5.25
Bloomberg U.S. Aggregate Bond Index		-0.36	2.09	-0.84	-0.94	-0.94	-3.96	0.77	1.52	3.01	4.61
Excess Return		0.38	0.81	0.45	1.67	1.67	1.66	1.05	0.78	0.90	0.64
Global Private Credit	1,054,352,372.26	1.84	4.88	3.29	6.07	6.07	10.88				10.88
Custom Private Credit Inv BM		0.78	4.56	2.32	8.25	8.25	5.90				5.90
Excess Return		1.06	0.32	0.97	-2.17	-2.17	4.98				4.98
Global Private Equity	2,304,317,158.28	2.05	4.36	3.17	2.54	2.54	26.17	18.86	18.37	13.25	13.37
Custom Gbl Private Equity BM		1.18	2.18	1.15	-4.03	-4.03	21.74	15.05	14.32	12.96	12.92
Excess Return		0.87	2.18	2.02	6.57	6.57	4.43	3.81	4.05	0.29	0.45
Global Real Assets	3,628,641,192.13	0.00	-3.28	-0.88	1.30	1.30	10.82	9.17	10.23	7.41	7.73
Custom Gbl Real Assets BM		-1.81	-5.25	-1.81	-1.63	-1.63	7.15	6.71	8.34	8.71	9.18
Excess Return		1.82	1.97	0.93	2.93	2.93	3.67	2.46	1.88	-1.30	-1.46
Opportunistic & Tactical	567,618,376.46	1.58	3.82	1.24	2.71	2.71	11.30	6.04	6.89		6.83
Opportunistic & Tactical BM		-0.18	3.05	-0.32	1.06	1.06	-1.96	0.80	4.36		4.19
Excess Return		1.76	0.77	1.56	1.65	1.65	13.27	5.25	2.53		2.64
Cash Equivalents	469,695,119.13	-1.97	2.28	1.54	2.76	2.76	6.20	4.41	2.67	2.39	2.34
FTSE 30 Day Treasury Bill		0.43	2.31	1.21	3.70	3.70	1.29	1.50	0.93	1.24	1.24
Excess Return		-2.40	-0.03	0.34	-0.94	-0.94	4.91	2.91	1.73	1.15	1.09
Short-Term Cash	438,529,435.83	0.41	2.31	1.23	3.79	3.79	1.31	1.57	1.04	1.58	3.80
FTSE 30 Day Treasury Bill		0.43	2.31	1.21	3.70	3.70	1.29	1.50	0.93	1.24	3.09
Excess Return		-0.02	0.00	0.02	0.09	0.09	0.02	0.07	0.11	0.34	0.71



OPPORTUNISTIC & TACTICAL INVESTMENTS

IRR and Performance Multiples

(Inception to Date | Roll Forward | Base)

End Date: 6/30/2023

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	46,134,641	5,368,605	37,036,556	-2.64	0.92	0.12	0.80
2	Barings Global Special Situations Credit 2	6/1/2015	32,730,000	30,154,793	35,974,251	11,306,774	12.14	1.57	1.19	0.37
3	Barings Global Special Situations Credit 3	10/1/2017	49,893,344	49,061,910	30,435,198	34,517,072	8.21	1.32	0.62	0.70
4	GoldenTree Distressed Fund 2014	8/27/2014	50,000,000	48,621,811	64,916,485	16,398,628	12.53	1.67	1.34	0.34
5	GoldenTree Distressed Fund III	11/30/2018	50,000,000	48,990,296	55,644,856	24,251,561	24.07	1.63	1.14	0.50
6	GoldenTree Distressed Fund III - Co-Investment	8/1/2020	40,000,000	18,800,000	7,400,000	20,819,257	25.69	1.50	0.39	1.11
7	GoldenTree Distressed Fund IV	5/1/2021	50,000,000	11,000,000	3,806,867	10,554,754	36.28	1.31	0.35	0.96
8	GoldenTree Structured Products Fund VII	8/25/2020	50,000,000	25,525,000	1,011,076	26,323,548	6.45	1.07	0.04	1.03
9	ICG Europe Fund VIII	8/24/2021	43,785,109	9,377,892	1,072,721	9,893,932	14.30	1.17	0.11	1.06
10	Marathon Healthcare Finance Fund	8/24/2021	50,000,000	14,649,829	1,842,439	13,980,498	6.86	1.08	0.13	0.95
11	Oceanwood European Financial	6/2/2015	25,000,000	25,000,000	24,301,168	5,042,749	3.51	1.17	0.97	0.20
12	PIMCO BRAVO Fund II	5/3/2013	40,000,000	49,513,610	59,647,295	1,458,074	6.36	1.23	1.20	0.03
13	PIMCO BRAVO Fund III	10/3/2016	40,000,000	42,244,662	22,807,697	34,571,860	8.75	1.36	0.54	0.82
14	PIMCO DISCO Fund III	5/31/2020	50,000,000	25,055,767	27,438,661	1,027,011	12.07	1.14	1.10	0.04
15	Strategic Value Capital Solutions Fund II	8/24/2022	50,000,000	5,000,000	0	5,000,000	0.00	1.00	0.00	1.00
16	Strategic Value Special Situations Fund V	3/1/2021	75,000,000	37,471,875	211,919	41,478,067	8.69	1.11	0.01	1.11
Total: Ohio SERS Opportunistic & Tactical Investments			746,408,453	486,602,087	341,879,238	293,660,342	9.54	1.31	0.70	0.60
Total Investments:	16		746,408,453	486,602,087	341,879,238	293,660,342	9.54	1.31	0.70	0.60

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 EQUITY

IRR and Performance Multiples

(Inception to Date | Roll Forward | Base)

End Date: 6/30/2023

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	43,079,906	2,696,508	48,324,198	7.57	1.18	0.06	1.12
2	Bridgepoint Development Capital II	12/6/2011	32,730,000	42,660,092	79,177,226	-1,485,324	23.01	1.82	1.86	-0.03
3	Bridgepoint Development Capital III	5/13/2016	31,783,750	31,419,323	43,076,901	30,744,084	34.30	2.35	1.37	0.98
4	Bridgepoint Development Capital IV	3/1/2020	50,854,000	15,832,659	0	15,327,186	-4.67	0.97	0.00	0.97
5	Bridgepoint Europe IV	6/30/2008	32,730,000	39,936,142	55,269,726	6,926,011	9.69	1.56	1.38	0.17
6	Bridgepoint Europe V	10/31/2014	32,730,000	33,051,802	45,295,390	19,390,257	18.24	1.96	1.37	0.59
7	Bridgepoint Europe VI	6/22/2018	54,550,000	53,231,570	5,229,503	74,272,455	20.96	1.49	0.10	1.40
8	Bridgepoint Europe VII	12/1/2021	81,825,000	0	0	0				
9	Bridgepoint Europe VII Side-Car Co-investment	12/1/2021	20,456,250	0	0	0				
10	Bridgepoint Growth Fund II	11/17/2022	31,783,750	0	0	0				
11	Bridgepoint Growth Fund II Side-car Co-investment	11/17/2022	8,009,505	0	0	0				
12	Carlyle Asia Partners Growth II	9/15/2021	75,000,000	16,585,069	-33,965	13,919,107	-22.17	0.84	0.00	0.84
13	Charterhouse Capital Partners IX	10/27/2008	31,353,522	37,481,708	50,029,364	-122,630	9.28	1.33	1.33	0.00
14	Charterhouse Capital Partners X	10/1/2015	43,640,000	40,039,068	44,171,691	26,984,367	20.10	1.78	1.10	0.67
15	Cinven V	5/23/2012	32,730,000	41,234,045	59,538,029	7,502,523	17.24	1.63	1.44	0.18
16	Cinven VI	4/22/2016	30,277,528	36,113,745	30,698,529	34,181,197	19.48	1.80	0.85	0.95
17	Cinven VII	3/1/2019	32,730,000	27,218,007	1,171,305	32,217,757	14.66	1.23	0.04	1.18
18	Cinven VIII	8/24/2022	54,550,000	0	0	0				
19	Coller International Partners V	12/1/2006	31,680,000	33,650,934	46,524,111	-9,194	7.45	1.38	1.38	0.00
20	Coller International Partners VI	4/14/2011	37,638,367	39,496,386	59,607,968	6,148,707	15.14	1.66	1.51	0.16
21	Coller International Partners VII	6/17/2015	60,000,000	46,791,657	48,742,465	27,024,368	14.00	1.62	1.04	0.58
22	Coller International Partners VIII	7/31/2019	60,000,000	32,965,089	4,131,661	43,344,381	26.09	1.44	0.13	1.31
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	30,023,337	7,758,207	43,066,040	7.93	1.69	0.26	1.43
25	Francisco Partners Agility	9/1/2016	25,000,000	22,251,233	85,486,690	23,990,386	83.94	4.92	3.84	1.08
26	Francisco Partners Agility II	3/31/2020	40,000,000	25,460,000	0	32,590,238	18.16	1.28	0.00	1.28
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	17,093,851	23.35	3.39	2.95	0.44
29	Francisco Partners IV	12/1/2014	50,000,000	49,209,385	96,894,382	50,769,124	27.61	3.00	1.97	1.03
30	Francisco Partners IV – Dell Co-Invest	9/1/2016	10,020,036	10,020,036	47,665,038	10,435,665	44.25	5.80	4.76	1.04
31	Francisco Partners V	8/1/2017	50,000,000	48,525,000	14,350,000	72,909,060	18.76	1.80	0.30	1.50
32	Francisco Partners V - Renaissance Co-Invest	2/1/2022	10,000,000	10,176,140	0	10,123,370	-0.45	0.99	0.00	0.99
33	Francisco Partners V – LogMeln Co-Invest	8/1/2020	10,000,000	10,014,241	734,608	7,852,540	-5.49	0.86	0.07	0.78
34	Francisco Partners V – Perforce Co-Invest	9/30/2019	8,117,165	8,233,636	0	12,368,622	12.05	1.50	0.00	1.50
35	Francisco Partners VI	4/17/2020	50,000,000	42,375,000	0	47,559,275	9.87	1.12	0.00	1.12
36	Francisco Partners VII	1/1/2022	100,000,000	0	0	0				
37	FS Equity Partners V, L.P.	1/1/2004	25,000,000	21,834,995	42,590,879	1,412,093	15.30	2.02	1.95	0.06
38	FS Equity Partners VI	7/27/2009	40,000,000	51,725,970	125,563,227	17,732,062	23.27	2.77	2.43	0.34
39	FS Equity Partners VII	4/30/2014	50,000,000	56,313,656	36,938,316	53,055,371	10.43	1.60	0.66	0.94
40	FS Equity Partners VII - CRH Co-Invest	3/1/2019	7,000,000	7,000,000	7,000,000	17,510,052	44.87	3.50	1.00	2.50
41	FS Equity Partners VIII	4/25/2019	50,000,000	41,208,790	2,121,972	65,437,984	24.29	1.64	0.05	1.59

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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: 6/30/2023

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 - NearU Co-Invest	8/24/2022	10,000,000	10,030,907	0	10,000,000	-0.31	1.00	0.00	1.00
43	FS Equity Partners VIII - USME Co-Invest	11/1/2020	8,000,000	8,006,753	2,453,988	12,658,845	32.54	1.89	0.31	1.58
44	FS Equity Partners VIII - White Water Express Co-Invest	1/1/2022	10,000,000	10,021,125	0	10,000,002	-0.15	1.00	0.00	1.00
45	Graham Partners III	6/30/2008	40,000,000	42,931,011	85,269,608	5,843,338	22.69	2.12	1.99	0.14
46	Graham Partners IV	4/1/2016	15,000,000	14,889,101	35,659,784	1,367,906	32.98	2.49	2.40	0.09
47	Graham Partners V	6/1/2019	50,000,000	47,821,606	3,658,906	58,240,508	23.90	1.29	0.08	1.22
48	Green Equity Investors CF	3/1/2021	23,329,933	21,478,995	11,171,404	17,708,185	20.27	1.34	0.52	0.82
49	Green Equity Investors IX	12/1/2021	50,000,000	0	0	0				
50	Green Equity Investors V	1/30/2007	50,000,000	55,367,838	127,809,901	767,223	18.44	2.32	2.31	0.01
51	Green Equity Investors VI	9/28/2011	50,000,000	62,891,816	65,992,187	53,291,282	13.85	1.90	1.05	0.85
52	Green Equity Investors VI - ASM Co-Invest	10/1/2014	10,000,000	10,115,000	0	1,595,084	-19.40	0.16	0.00	0.16
53	Green Equity Investors VII	2/1/2016	50,000,000	49,115,088	40,670,210	62,043,264	21.66	2.09	0.83	1.26
54	Green Equity Investors VIII	10/1/2019	50,000,000	44,742,624	405,098	50,555,864	7.56	1.14	0.01	1.13
55	GS Distressed Opportunities III, L.P.	8/31/2006	75,000,000	73,587,875	83,604,121	1,361,328	2.90	1.15	1.14	0.02
56	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
57	J.P. Morgan European Corp. Finance III	1/31/2006	40,000,000	42,424,237	59,293,998	1,217,538	6.15	1.43	1.40	0.03
58	J.P. Morgan European Corp. Finance IV	6/30/2008	25,000,000	24,522,508	35,425,711	5,223,800	11.05	1.66	1.44	0.21
59	J.P. Morgan Venture Capital III	12/31/2005	30,000,000	34,196,061	46,778,426	8,503,187	7.12	1.62	1.37	0.25
60	J.P. Morgan Venture Capital IV	6/30/2008	50,000,000	62,322,777	108,995,050	48,580,787	16.44	2.53	1.75	0.78
61	Jade Equity Investors	8/1/2019	30,000,000	22,561,093	5,061,265	24,775,998	22.56	1.32	0.22	1.10
62	Jade Equity Investors II	12/1/2021	50,000,000	0	0	0				
63	KKR Ascendant	3/1/2023	50,000,000	0	0	0				
64	Kohlberg Investors IX	12/1/2019	50,000,000	41,973,003	1,627,727	53,786,261	24.08	1.32	0.04	1.28
65	Kohlberg Investors VI, L.P.	6/29/2007	40,000,000	36,488,546	63,814,504	61,739	16.41	1.75	1.75	0.00
66	Kohlberg Investors VII CV	9/30/2021	16,876,522	16,852,525	433,543	28,224,073	37.58	1.70	0.03	1.67
67	Kohlberg Investors VIII	7/1/2016	40,000,000	42,341,938	31,902,951	47,983,113	21.54	1.89	0.75	1.13
68	Kohlberg Investors X	11/17/2022	50,000,000	0	0	0				
69	Kohlberg Investors X Side Car	11/17/2022	25,000,000	0	0	0				
70	Levine Leichtman Capital Partners V	4/30/2013	50,000,000	75,918,178	124,276,280	16,783,015	17.21	1.86	1.64	0.22
71	Levine Leichtman Capital Partners VI	4/1/2017	40,000,000	51,110,718	17,366,101	53,043,381	14.71	1.38	0.34	1.04
72	Levine Leichtman Lower Middle Market Fund III	2/1/2021	50,000,000	16,906,188	4,207,209	12,967,879	1.84	1.02	0.25	0.77
73	Levine Leichtman Lower Middle Market Fund III - IPM Co-Invest	9/15/2021	8,000,000	8,000,000	302,495	10,105,182	18.19	1.30	0.04	1.26
74	Lightspeed Opportunity Fund II	4/28/2022	50,000,000	18,000,000	0	17,833,406	-2.02	0.99	0.00	0.99
75	Mason Wells Buyout Fund IV	10/1/2015	40,000,000	38,778,537	5,827,840	70,442,999	15.09	1.97	0.15	1.82
76	Mason Wells III	3/24/2010	40,000,000	38,071,440	114,665,898	35,691	20.55	3.01	3.01	0.00
77	Monomoy Capital Partners II	12/30/2010	40,000,000	58,362,193	90,225,268	3,987,396	44.10	1.61	1.55	0.07
78	Monomoy Capital Partners IV	1/1/2021	75,000,000	25,149,790	6,109,271	25,481,601	36.61	1.26	0.24	1.01
79	NGP Natural Resources XI	11/5/2014	50,000,000	51,263,713	43,986,495	36,801,959	10.41	1.58	0.86	0.72
80	NGP Natural Resources XII	8/1/2017	40,000,000	31,432,584	17,462,663	30,359,428	13.70	1.52	0.56	0.97
81	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
82	Oaktree Principal Fund V	4/28/2009	40,000,000	40,000,000	42,714,534	6,997,817	3.82	1.24	1.07	0.17

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: 6/30/2023

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 Special Situations Fund II	8/25/2019	50,000,000	50,000,000	21,289,620	55,969,635	44.99	1.55	0.43	1.12
84	Odyssey Investment Partners IV	6/30/2008	40,000,000	34,567,752	104,118,718	689,860	32.79	3.03	3.01	0.02
85	Odyssey Investment Partners V	4/15/2014	45,000,000	45,983,986	24,807,788	39,494,863	6.79	1.40	0.54	0.86
86	Odyssey Investment Partners VI	11/1/2019	60,000,000	48,532,593	22,719	58,150,245	11.19	1.20	0.00	1.20
87	Primus Capital Fund IX	2/1/2021	65,000,000	25,429,930	0	22,392,176	-13.98	0.88	0.00	0.88
88	Primus Capital Fund VII	11/1/2012	25,000,000	27,179,325	69,250,122	1,905,546	25.40	2.62	2.55	0.07
89	Primus Capital Fund VIII	8/1/2017	25,000,000	26,800,001	10,025,429	32,322,166	15.27	1.58	0.37	1.21
90	Primus Venture Partners Fund V	7/1/2000	25,000,000	25,725,000	41,262,487	1,957,314	10.30	1.68	1.60	0.08
91	Primus Venture Partners Fund VI	12/31/2007	25,000,000	29,200,991	52,053,602	2,466,408	15.25	1.87	1.78	0.08
92	Quantum Energy Partners V	6/30/2008	50,000,000	51,819,626	76,736,575	1,301,876	8.83	1.51	1.48	0.03
93	Silver Lake Partners III	3/23/2007	50,000,000	55,082,214	97,853,219	26,718,002	18.31	2.26	1.78	0.49
94	Silver Lake Partners IV	4/11/2013	50,000,000	61,332,780	64,396,869	79,349,088	21.37	2.34	1.05	1.29
95	Silver Lake Partners V	3/1/2017	50,000,000	50,924,203	21,256,968	56,884,786	14.82	1.53	0.42	1.12
96	Silver Lake Partners VII	12/1/2021	100,000,000	0	0	0				
97	Sole Source Capital II	11/1/2020	50,000,000	19,157,363	12,065,184	45,514,682	137.70	3.01	0.63	2.38
98	SPC Partners IV	3/31/2008	30,000,000	32,602,108	65,391,023	3,936,332	16.61	2.13	2.01	0.12
99	SPC Partners V	5/11/2012	40,000,000	43,591,488	46,193,943	15,229,029	7.01	1.41	1.06	0.35
100	SPC Partners VI	9/1/2016	25,000,000	27,051,922	11,318,678	25,012,848	9.89	1.34	0.42	0.92
101	StepStone VC Secondaries Fund V	5/1/2021	75,000,000	38,205,029	0	40,684,091	5.46	1.06	0.00	1.06
102	TPG Rise Climate	6/1/2021	100,000,000	31,527,350	752,139	35,366,949	25.44	1.15	0.02	1.12
103	Transportation Resource Partners III	6/30/2008	25,000,000	18,882,653	31,424,950	-24,996	14.21	1.66	1.66	0.00
104	Warburg Pincus Energy	5/30/2014	30,000,000	28,464,658	19,200,961	13,139,958	2.91	1.14	0.67	0.46
105	Warburg Pincus Private Equity XI	5/16/2012	50,000,000	53,375,000	68,930,203	21,337,187	11.71	1.69	1.29	0.40
106	Warburg Pincus Private Equity XII	11/19/2015	65,000,000	64,122,500	67,713,620	62,811,982	17.58	2.04	1.06	0.98
107	Warburg, Pincus Private Equity X, L.P.	11/4/2007	75,000,000	75,000,000	133,396,497	1,378,472	9.50	1.80	1.78	0.02
Total: Ohio SERS Private Equity			4,379,433,053	3,382,450,531	3,627,880,272	2,301,762,885	14.48	1.75	1.07	0.68
Total Investments: 107			4,379,433,053	3,382,450,531	3,627,880,272	2,301,762,885	14.48	1.75	1.07	0.68

¹ Investment is Liquidated as of the Report End Date

indicates that the valuation has been rolled forward.

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GLOBAL REAL ASSETS

IRR and Performance Multiples

(Inception to Date | Roll Forward | Base)

End Date: 6/30/2023

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	82,579,746	68,731,395	43,652,224	11.21	1.36	0.83	0.53
2	Almanac Realty Securities VIII	1/1/2018	50,000,000	31,786,625	7,540,040	30,623,114	10.52	1.20	0.24	0.96
3	Almanac Realty V	4/30/2008	49,073,993	55,908,408	81,653,116	73,450	11.41	1.46	1.46	0.00
4	Beacon Capital VI	3/1/2009	37,500,000	38,000,857	58,957,988	189,433	16.49	1.56	1.55	0.00
5	Brookfield Global Transition Fund	6/1/2021	75,000,000	23,789,686	1,131,771	22,510,733	-0.83	0.99	0.05	0.95
6	Brookfield Super-Core Infrastructure Co-Investment Sidecar	4/1/2023	20,000,000	0	0	0				
7	Brookfield Super-Core Infrastructure Partners	6/30/2022	50,000,000	50,004,799	21,516	86,505,023	251.85	1.73	0.00	1.73
8	Carlyle Property Investors	12/31/2020	100,000,000	100,000,000	3,056,443	98,588,536	1.48	1.02	0.03	0.99
9	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
10	Carlyle Realty Partners V, L.P.	11/30/2006	35,132,569	64,457,311	95,612,112	108,592	8.67	1.49	1.48	0.00
11	Carlyle Realty Partners VI	12/28/2010	20,132,055	33,403,867	45,195,372	2,494,373	16.08	1.43	1.35	0.07
12	Carlyle Realty Partners VIII	3/1/2017	50,000,000	42,686,707	35,516,069	26,395,630	24.30	1.45	0.83	0.62
13	CB Richard Ellis Strategic Partners US V - Opportunity	6/23/2008	22,721,359	23,485,851	33,582,742	150,775	5.65	1.44	1.43	0.01
14	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
15	CBRE U.S. Core Partners	1/30/2015	350,000,000	348,871,438	112,341,342	476,131,384	10.52	1.69	0.32	1.36
16	Clarion Lion Industrial Trust	4/1/2005	181,000,000	199,219,728	69,673,662	486,382,349	11.83	2.79	0.35	2.44
17	Clarion Lion Properties Fund	10/1/2003	144,792,823	216,003,287	130,593,589	262,226,778	7.37	1.82	0.60	1.21
18	DigitalBridge Partners II	8/24/2021	50,000,000	52,647,075	5,678,822	49,158,469	4.42	1.04	0.11	0.93
19	DigitalBridge Partners II - GD Towers Co-Invest	8/24/2022	10,000,000	9,208,683	0	9,344,255	1.48	1.01	0.00	1.01
20	DigitalBridge Partners II - Vertical Bridge Co-Invest	11/1/2021	10,000,000	10,145,058	517,917	10,572,358	6.39	1.09	0.05	1.04
21	Eaglecrest Infrastructure Fund	12/31/2018	70,000,000	70,175,000	1,798,009	72,459,435	2.83	1.06	0.03	1.03
22	Global Infrastructure Partners Capital Solutions Fund II	3/31/2020	100,000,000	39,807,733	3,257,671	37,868,494	4.96	1.03	0.08	0.95
23	Global Transport Income Fund Feeder LLC	6/18/2018	150,000,000	149,801,808	24,473,379	152,803,047	7.59	1.18	0.16	1.02
24	Harrison Street Social Infrastructure Fund	5/1/2019	65,000,000	66,212,311	3,193,902	75,156,841	6.78	1.18	0.05	1.14
25	IFC Core Farmland Fund LP	12/21/2022	25,000,000	0	0	0				
26	IFM Global Infrastructure	10/21/2013	364,994,118	379,406,048	87,409,212	616,318,320	11.63	1.85	0.23	1.62
27	InfraBridge Global Infrastructure Fund	8/25/2016	50,000,000	67,097,284	45,044,234	39,178,049	6.16	1.26	0.67	0.58
28	JP Morgan Strategic Property Fund	1/1/1998	119,621,424	117,761,837	231,227,930	88,198,829	8.72	2.71	1.96	0.75
29	Lubert-Adler Laramar Urban Neighborhood Fund	3/23/2016	55,000,000	53,851,518	12,348,708	46,812,429	2.13	1.10	0.23	0.87
30	Lubert-Adler Real Estate Fund VI	4/29/2011	61,869,563	67,245,644	129,456,690	4,537,822	20.79	1.99	1.93	0.07
31	Lubert-Adler Real Estate Fund VII	3/27/2015	75,000,000	74,374,313	41,028,322	40,652,285	1.79	1.10	0.55	0.55
32	Lubert-Adler Recovery & Enhancement Capital Fund	7/31/2020	100,000,000	64,552,310	3,702,087	66,322,807	7.70	1.08	0.06	1.03
33	Mesa West Core Lending Fund	12/12/2014	75,000,000	75,000,000	56,504,257	45,200,957	5.31	1.36	0.75	0.60
34	Patrizia TransEuropean IV	3/30/2007	27,275,000	33,774,988	38,191,058	242,066	2.00	1.14	1.13	0.01
35	Patrizia TransEuropean V	12/6/2011	27,275,000	32,820,773	43,379,606	241,739	8.07	1.33	1.32	0.01
36	Patrizia TransEuropean VI	7/1/2015	43,502,878	43,016,556	26,469,100	29,832,515	5.06	1.31	0.62	0.69
37	Pretium Single-Family Rental Fund III	11/1/2021	50,000,000	50,000,000	2,696,582	53,370,506	9.83	1.12	0.05	1.07
38	PRISA	7/1/2004	49,627,184	54,390,225	51,239,296	84,884,012	6.86	2.50	0.94	1.56
39	PRISA II	7/1/2004	75,144,022	146,956,696	95,346,706	201,376,393	6.36	2.02	0.65	1.37
40	RREEF America REIT II	10/1/2004	73,812,238	223,068,293	161,185,343	307,850,468	7.84	2.10	0.72	1.38
41	UBS Trumbull Property Fund	9/27/1996	82,693,884	147,606,551	287,600,769	44,294,369	10.89	2.25	1.95	0.30

¹ Investment is Liquidated as of the Report End Date

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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: 6/30/2023

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 Income Fund	3/18/2015	75,000,000	78,558,380	105,058,902	9,663,021	6.71	1.46	1.34	0.12
Total: Ohio SERS Real Estate		3,186,168,110	3,470,426,255	2,251,159,065	3,637,371,880	8.98	1.70	0.65	1.05
Total Investments:	42	3,186,168,110	3,470,426,255	2,251,159,065	3,637,371,880	8.98	1.70	0.65	1.05

¹ Investment is Liquidated as of the Report End Date

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GLOBAL PRIVATE CREDIT

IRR and Performance Multiples

(Inception to Date | Roll Forward | Base)

End Date: 6/30/2023

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	89,176,782	17,506,145	78,324,698	6.45	1.07	0.20	0.88
2	Arcmont Direct Lending II	6/1/2015	54,487,500	58,389,126	64,984,875	3,628,217	7.14	1.18	1.11	0.06
3	Arcmont Direct Lending III	2/8/2018	61,245,000	68,886,108	29,888,219	47,939,053	6.96	1.13	0.43	0.70
4	Arcmont Direct Lending SMA	3/1/2021	150,000,000	114,670,021	13,808,139	106,571,728	5.18	1.05	0.12	0.93
5	Ares Private Credit Solutions Fund II	10/1/2020	50,000,000	31,039,132	1,300,927	30,006,166	0.76	1.01	0.04	0.97
6	Barings European Private Loan Fund III	4/1/2021	150,000,000	106,814,074	11,971,389	103,548,090	6.68	1.08	0.11	0.97
7	Carlyle Credit Opportunities Fund II	4/1/2021	100,000,000	99,664,052	15,218,640	92,589,153	7.38	1.08	0.15	0.93
8	Carlyle Credit Opportunities Fund III	1/24/2023	100,000,000	0	0	0				
9	Carlyle Direct Lending Fund IV	5/20/2022	30,000,000	30,000,000	946,065	29,700,956	4.04	1.02	0.03	0.99
10	CIFC-LBC SMA Credit Fund	10/24/2022	100,000,000	5,000,000	0	5,000,000	0.00	1.00	0.00	1.00
11	Francisco Partners Credit - ZocDoc Co-Invest	3/1/2021	7,008,018	7,107,185	0	8,921,091	10.93	1.26	0.00	1.26
12	Francisco Partners Credit Partners Aggregator	3/1/2020	75,000,000	46,200,000	19,323,038	45,447,080	18.31	1.40	0.42	0.98
13	Francisco Partners Credit Partners II	4/1/2021	150,000,000	60,675,000	0	65,057,993	10.14	1.07	0.00	1.07
14	GoldenTree Structures Products Opportunities Fund 2013	2/6/2014	43,248,750	51,849,258	66,732,787	1,343,924	10.62	1.31	1.29	0.03
15	Highbridge Principal Strategies Special Loan Fund 2016	11/15/2016	60,000,000	53,951,496	43,556,046	23,416,716	7.25	1.24	0.81	0.43
16	Highbridge Principal Strategies Special Loan Fund V	3/1/2020	150,000,000	107,926,161	26,761,609	99,965,060	9.76	1.17	0.25	0.93
17	Highbridge Principal Strategies Special Loan Fund VI	12/21/2022	75,000,000	0	0	0				
18	Invesco Credit Partners Fund II	6/2/2020	50,000,000	39,358,610	5,015,505	45,522,310	23.71	1.28	0.13	1.16
19	Invesco Credit Partners Fund III	5/19/2023	50,000,000	0	0	0				
20	KKR Dislocation Opportunities Fund	5/1/2020	50,000,000	45,816,842	19,635,110	32,234,880	8.21	1.13	0.43	0.70
21	KKR Opportunities Fund II	9/15/2021	75,000,000	0	0	0				
22	LBC Credit Partners IV	8/1/2016	50,000,000	45,285,143	44,979,254	10,130,303	7.92	1.22	0.99	0.22
23	LBC Credit Partners V	3/1/2020	150,000,000	133,256,928	63,877,797	90,760,257	13.03	1.16	0.48	0.68
24	West Street Strategic Solutions Fund I	7/1/2020	125,000,000	69,070,407	6,915,833	69,616,350	6.03	1.11	0.10	1.01
Total: Ohio SERS Global Private Credit			2,005,989,268	1,264,136,326	452,421,377	989,724,025	8.93	1.14	0.36	0.78
Total Investments: 24			2,005,989,268	1,264,136,326	452,421,377	989,724,025	8.93	1.14	0.36	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 6/30/23 would include a 3/31/23 Capital Account Statement Valuation +/- cash flows from 4/1/23 through 6/30/23.

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/>)