

February 2024

Rhode Island State Investment Commission

Private Equity, Private Credit, and Real Asset Pacing Plan



For Use With Institutional Investors Only - Not For the Retail Public.

Recommended Pacing Plans

For Use With Institutional Investors Only – Not For the Retail Public.

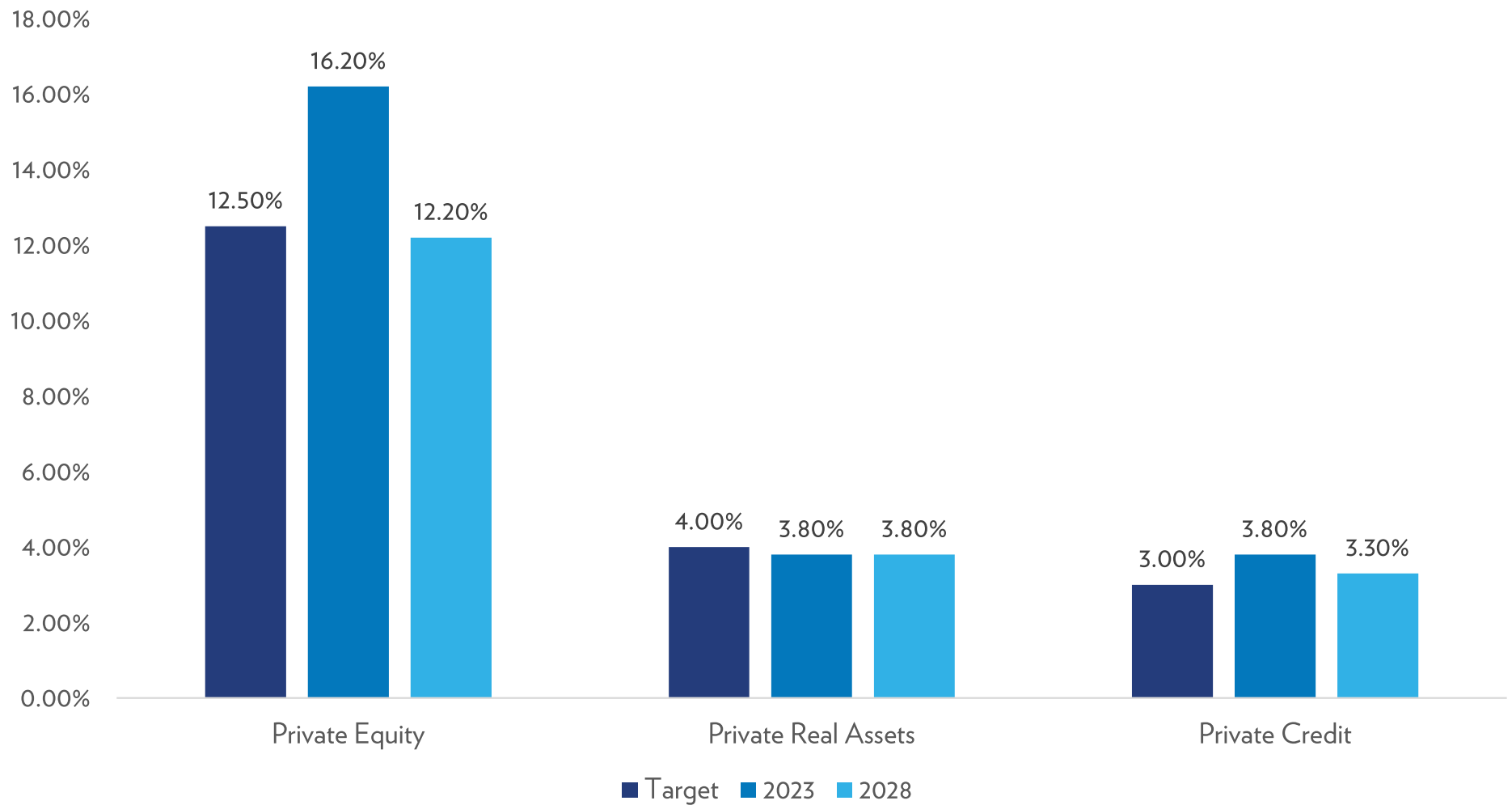
Recommended Pacing Plan

Commitments (\$millions)

	Private Equity	Private Real Assets	Private Credit
2024	240	75	75
2025	280	75	75
2026	320	85	75
2027	360	85	75
2028	400	95	75
2029	440	95	75

Pacing Plan Projections

Target, Current, and Five-Year Forecast



Pacing Plan Projections

Forecasted Cash Flows

Pacing Plan and Forecast Dec 2023 (amounts in \$000)					
	2024	2025	2026	2027	2028
Commitments					
Private Equity	240,000	280,000	320,000	360,000	400,000
Private Credit	75,000	75,000	75,000	75,000	75,000
Private Real Assets	75,000	75,000	85,000	85,000	95,000
Contributions					
Private Equity	(410,446)	(301,460)	(288,658)	(300,033)	(324,415)
Private Credit	(126,261)	(85,942)	(79,377)	(76,751)	(75,700)
Private Real Assets	(53,014)	(52,709)	(58,041)	(65,179)	(71,773)
Distributions					
Private Equity	534,484	532,010	520,653	506,790	488,225
Private Credit	129,059	114,578	126,124	128,839	117,527
Private Real Assets	54,569	65,306	74,325	81,524	87,237
Net Cash Flow					
Private Equity	124,038	230,550	231,995	206,757	163,811
Private Credit	2,798	28,636	46,748	52,088	41,827
Private Real Assets	1,555	12,597	16,283	16,345	15,464

Proposed Private Equity Pacing Plan

Pacing Plan

ERSRI - Capital Budget Model		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
1	Forecast Plan Total Assets	10,868,782	11,303,533	11,755,675	12,225,902	12,714,938	13,223,535	13,752,477	14,302,576	14,874,679	15,469,666
2	New Commitments		240,000	280,000	320,000	360,000	400,000	440,000	440,000	480,000	480,000
<u>Private Equity Fair Value by Sector:</u>											
Private Equity Fair Value by Sector:		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
3	Buyout	1,454,161	1,492,369	1,440,064	1,375,972	1,326,545	1,310,314	1,336,821	1,404,712	1,501,149	1,613,107
4	Venture Capital	239,703	261,724	275,834	285,924	293,687	299,062	303,040	306,353	309,261	313,076
5	Distressed Debt	66,569	47,052	23,683	9,248	1,182	64	19	6	2	1
10	Private Equity Total	1,760,433	1,801,145	1,739,582	1,671,144	1,621,414	1,609,440	1,639,881	1,711,071	1,810,412	1,926,184
Strategy Diversification:		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
11	Buyout	82.6%	82.9%	82.8%	82.3%	81.8%	81.4%	81.5%	82.1%	82.9%	83.7%
12	Venture Capital	13.6%	14.5%	15.9%	17.1%	18.1%	18.6%	18.5%	17.9%	17.1%	16.3%
13	Distressed Debt	3.8%	2.6%	1.4%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
16	Private Equity Fair Value as % of Total Plan Assets	16.2%	15.9%	14.8%	13.7%	12.8%	12.2%	11.9%	12.0%	12.2%	12.5%
17	Private Equity Target Asset Allocation	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
<u>Unfunded Commitments and Fair Value</u>		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
18	Private Equity Unfunded Commitments	865,801	695,355	673,894	705,237	765,204	840,789	924,927	976,758	1,042,266	1,083,846
19	Unfunded Commitments + FV	2,626,234	2,496,500	2,413,476	2,376,380	2,386,618	2,450,229	2,564,808	2,687,828	2,852,678	3,010,030
20	Unfunded Commitments + FV as % of Assets	24.2%	22.1%	20.5%	19.4%	18.8%	18.5%	18.6%	18.8%	19.2%	19.5%
21	Ratio of Unf Com + FV to Target Allocation	1.93x	1.77x	1.64x	1.55x	1.50x	1.48x	1.49x	1.50x	1.53x	1.56x
<u>Net Cash Flow Requirements</u>		12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032	
27	Total Net Cash Flow to Private Equity	124,038	230,550	231,995	206,757	163,811	119,345	80,201	57,272	48,669	
<u>Annual Commitments by Strategy</u>		12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032	
28	Existing Commitments	0	0	0	0	0	0	0	0	0	
29	Buyout	210,000	240,000	275,000	310,000	340,000	375,000	375,000	410,000	410,000	
30	Venture Capital	30,000	40,000	45,000	50,000	60,000	65,000	65,000	70,000	70,000	
35	Total Annual Commitments to Private Equity	240,000	280,000	320,000	360,000	400,000	440,000	440,000	480,000	480,000	
Total Plan Assets assumed to grow at 4.0%											

Proposed Private Credit Pacing Plan

Pacing Plan

ERSRI - Capital Budget Model		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
1	Forecast Plan Total Assets	10,868,782	11,303,533	11,755,675	12,225,902	12,714,938	13,223,535	13,752,477	14,302,576	14,874,679	15,469,666
2	New Commitments		75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
Private Credit Fair Value by Sector:											
10	Private Credit Total	410,348	445,301	457,633	452,987	442,574	441,464	447,179	453,259	453,824	452,743
16	Private Credit Fair Value as % of Total Plan Assets	3.8%	3.9%	3.9%	3.7%	3.5%	3.3%	3.3%	3.2%	3.1%	2.9%
17	Private Credit Target Asset Allocation	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Unfunded Commitments and Fair Value		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
18	Private Equity Unfunded Commitments	191,685	140,424	129,482	125,105	123,355	122,654	122,374	122,262	122,217	122,199
19	Unfunded Commitments + FV	602,033	585,725	587,115	578,092	565,928	564,118	569,553	575,521	576,041	574,942
20	Unfunded Commitments + FV as % of Assets	5.5%	5.2%	5.0%	4.7%	4.5%	4.3%	4.1%	4.0%	3.9%	3.7%
21	Ratio of Unf Com + FV to Target Allocation	1.85x	1.73x	1.66x	1.58x	1.48x	1.42x	1.38x	1.34x	1.29x	1.24x
27	Total Net Cash Flow to Private Credit		2,798	28,636	46,748	52,088	41,827	34,899	35,060	41,135	42,833
35	Total Annual Commitments to Private Credit		75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
Total Plan Assets assumed to grow at 4.0%											

Proposed Private Real Asset Pacing Plan



Pacing Plan

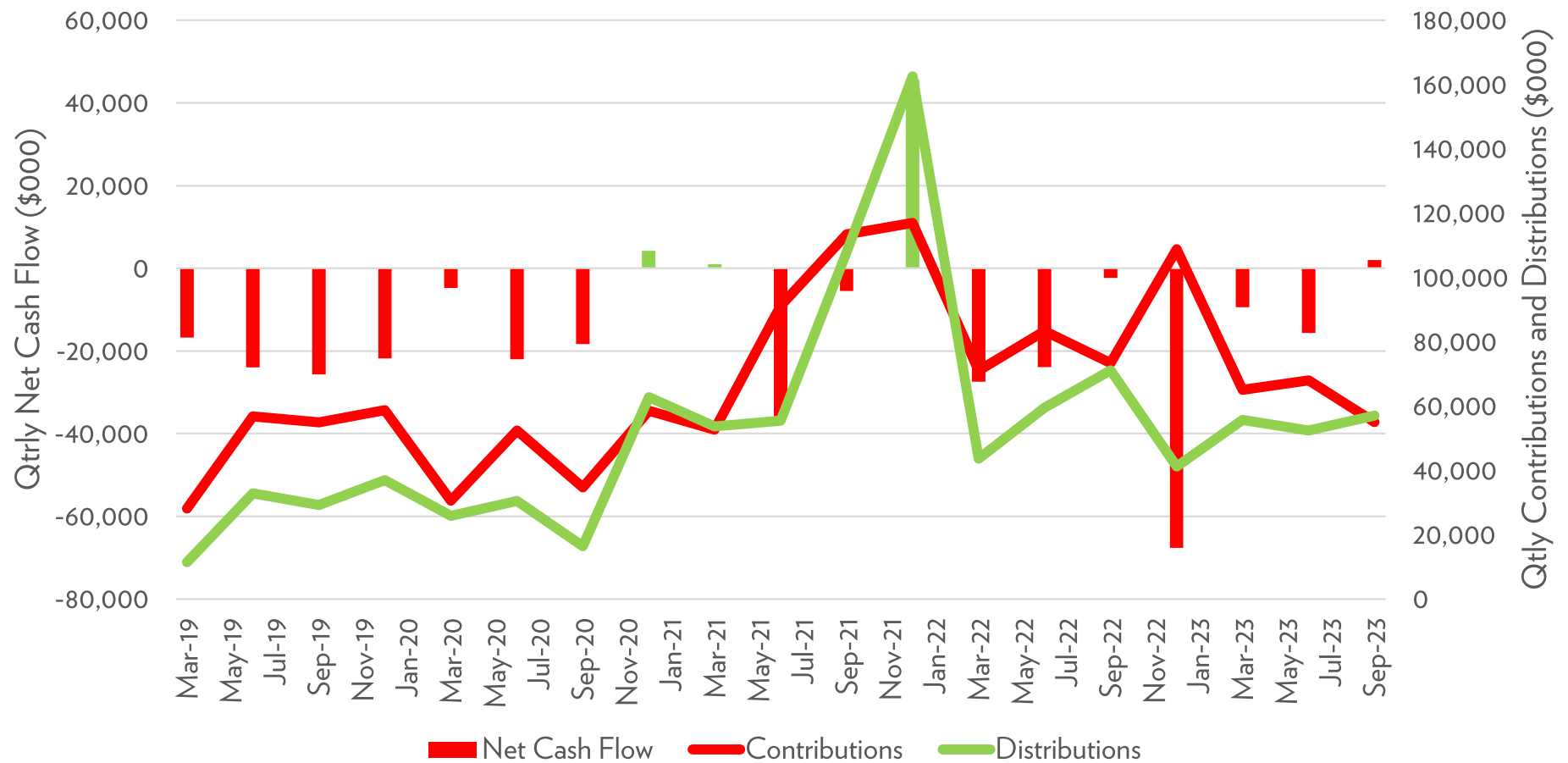
ERSRI - Capital Budget Model		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
1	Forecast Plan Total Assets	10,868,782	11,303,533	11,755,675	12,225,902	12,714,938	13,223,535	13,752,477	14,302,576	14,874,679	15,469,666
2	New Commitments		75,000	75,000	85,000	85,000	95,000	95,000	105,000	105,000	105,000
<u>Private RA Fair Value by Sector:</u>											
10	Private RA Total	406,077	433,963	452,828	469,375	487,060	506,908	529,654	555,530	584,606	615,822
16	Private RA Fair Value as % of Total Plan Assets	3.7%	3.8%	3.9%	3.8%	3.8%	3.8%	3.9%	3.9%	3.9%	4.0%
17	Private RA Target Asset Allocation	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
<u>Unfunded Commitments and Fair Value</u>											
18	Private RA Unfunded Commitments	143,866	165,852	188,143	215,101	234,922	258,149	275,143	296,305	311,818	322,680
19	Unfunded Commitments + FV	549,943	599,814	640,971	684,477	721,982	765,057	804,797	851,834	896,424	938,502
20	Unfunded Commitments + FV as % of Assets	5.1%	5.3%	5.5%	5.6%	5.7%	5.8%	5.9%	6.0%	6.0%	6.1%
21	Ratio of Unf Com + FV to Target Allocation	1.26x	1.33x	1.36x	1.40x	1.42x	1.45x	1.46x	1.49x	1.51x	1.52x
27	Total Net Cash Flow to Private RA		1,555	12,597	16,283	16,345	15,464	14,004	12,524	11,200	11,168
35	Total Annual Commitments to Private RA		75,000	75,000	85,000	85,000	95,000	95,000	105,000	105,000	105,000
Total Plan Assets assumed to grow at 4.0%											

Historical Cash Flows

Private Equity Cash Flows

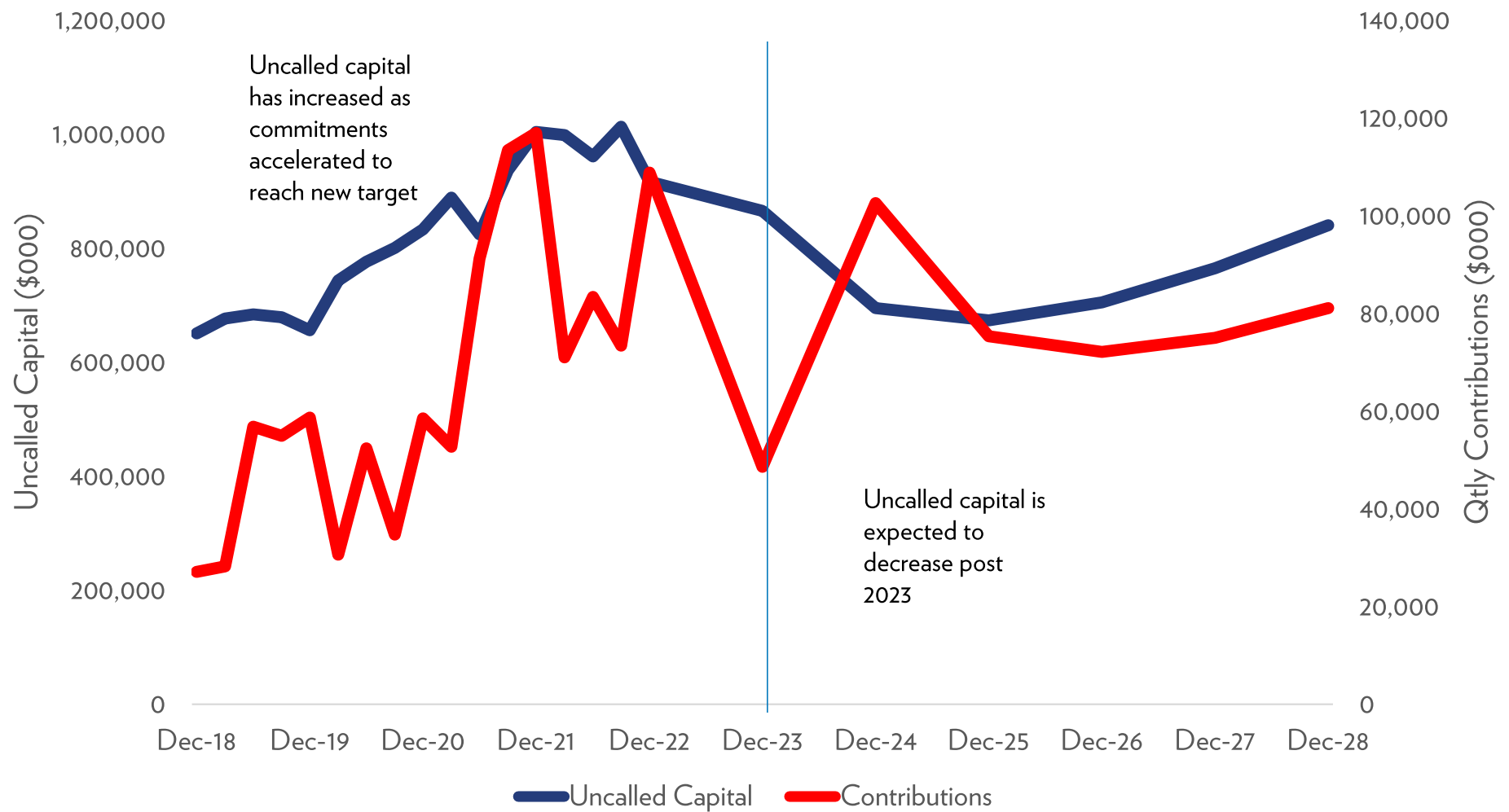
Cash flow has been negative with increased commitments, turned positive in Q3 2023

Historical Cash Flows for Private Equity Portfolio



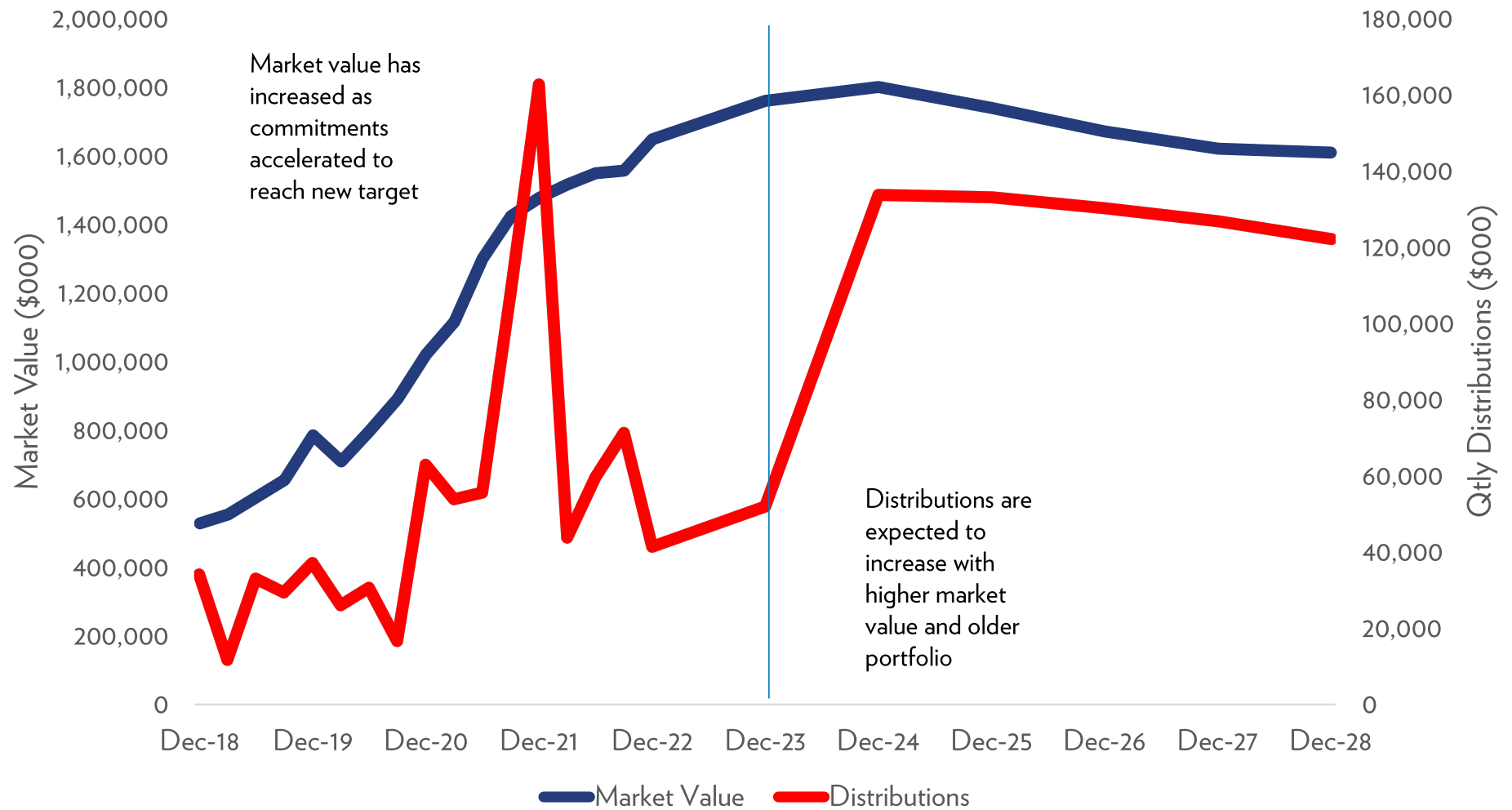
Expected Contributions

Contributions are a function of uncalled capital



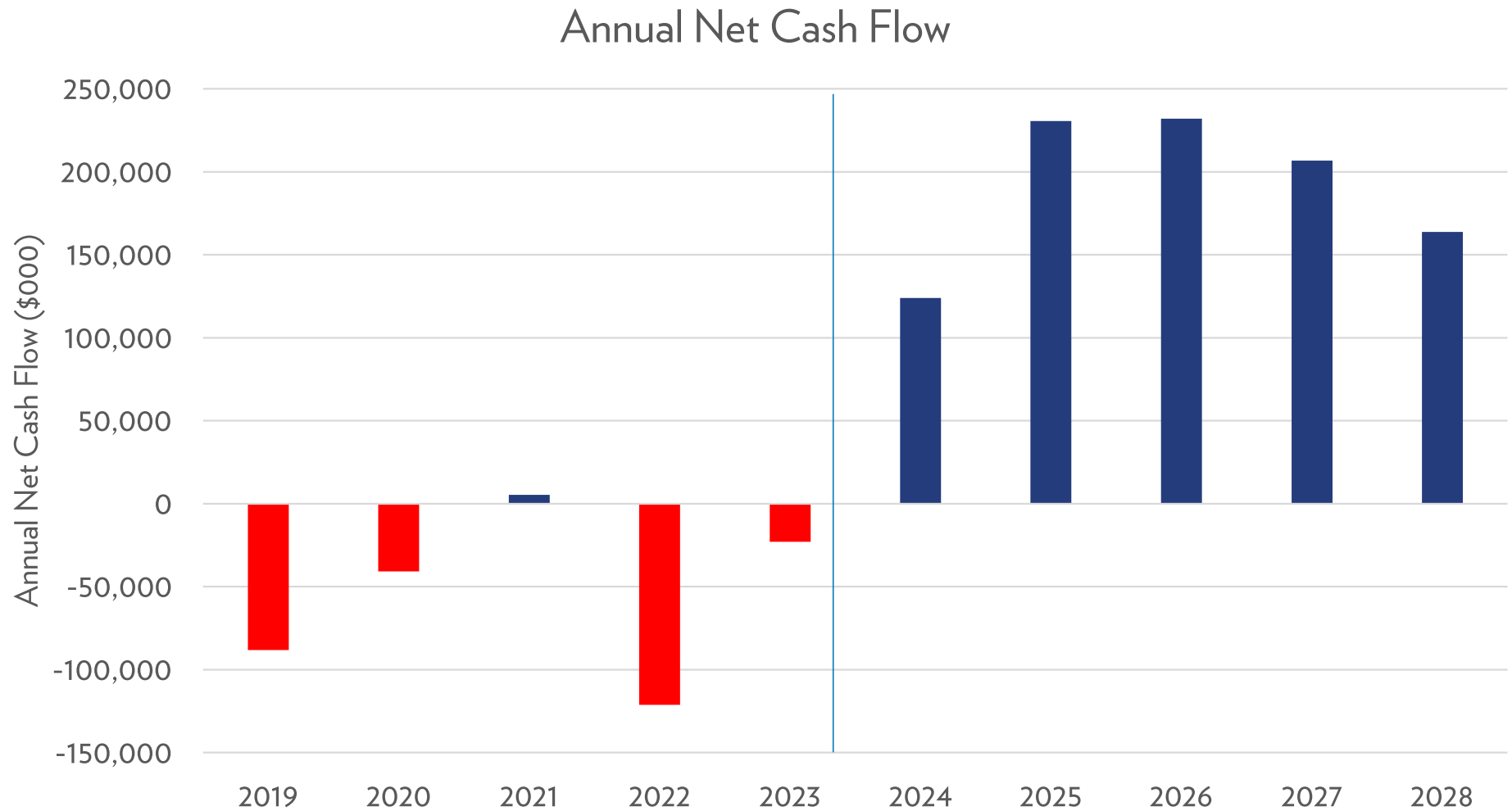
Expected Distributions

Distributions are a function of market value and age of investments



Expected Net Cash Flows

Cash flows expected to be positive post 2023 as the portfolio matures



Pacing Plan Projections

Comparison of Prior Pacing Plans

Comparison of Historical Pacing Plans (amounts in \$000,000)

Private Equity

	Date of PM Data	Total Fund Market Value	Commitments		Distributions 2024-28	Contributions 2024-28	Net Flows 2024-28	Exposure	
			2024	2024-28				2024	2028
December 2022 Pacing Plan	9/30/2022	9,860	200	1,400	2,388	(1,384)	1,004	16.3%	12.3%
March 2023 Pacing Plan	12/31/2022	10,267	200	1,400	2,466	(1,402)	1,064	16.5%	12.4%
June 2023 Pacing Plan	3/31/2023	10,577	200	1,425	2,507	(1,515)	992	16.3%	12.6%

Private Credit

	Date of PM Data	Total Fund Market Value	Commitments		Distributions 2024-28	Contributions 2024-28	Net Flows 2024-28	Exposure	
			2024	2024-28				2024	2028
December 2022 Pacing Plan	9/30/2022	9,860	100	500	693	(522)	171	3.4%	2.8%
March 2023 Pacing Plan	12/31/2022	10,267	100	500	727	(523)	204	3.6%	3.0%
June 2023 Pacing Plan	3/31/2023	10,577	75	375	597	(402)	195	3.8%	3.4%

Private Real Assets

	Date of PM Data	Total Fund Market Value	Commitments		Distributions 2024-28	Contributions 2024-28	Net Flows 2024-28	Exposure	
			2024	2024-28				2024	2028
December 2022 Pacing Plan	9/30/2022	9,860	50	250	372	(321)	51	4.3%	4.2%
March 2023 Pacing Plan	12/31/2022	10,267	50	250	367	(298)	69	4.4%	4.5%
June 2023 Pacing Plan	3/31/2023	10,577	50	280	353	(262)	91	4.0%	4.0%

Stress Tests

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Stress Testing

Scenarios

Scenario	Description	Peak PE Allocation	2026 Allocation	2028 Allocation
Base Case	Current Assumptions	16.2%	13.7%	12.2%
No Commitments	No New Commitments	16.2%	11.4%	7.1%
Scenario 1	Distributions are at 50% of normal levels in 2024 and 2025	18.9%	15.9%	12.9%
Scenario 2	Total Fund declines 10% in 2024 and recovers in 2026	18.4%	13.7%	12.2%
Scenario 3	Scenario 1 + Scenario 2	22.8%	15.9%	12.9%
Scenario 4	Private equity returns are 2% lower PA over the forecasted period	16.2%	13.2%	11.9%
Scenario 5	Total Fund grows at 2% PA rather than 4% PA	16.2%	14.5%	13.4%

Scenarios for Private Equity

Base Case

ERSRI - Capital Budget Model		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
1	Forecast Plan Total Assets	10,868,782	11,303,533	11,755,675	12,225,902	12,714,938	13,223,535	13,752,477	14,302,576	14,874,679	15,469,666
2	New Commitments		240,000	280,000	320,000	360,000	400,000	440,000	440,000	480,000	480,000
Private Equity Fair Value by Sector:											
Private Equity Fair Value by Sector:		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
3	Buyout	1,454,161	1,492,369	1,440,064	1,375,972	1,326,545	1,310,314	1,336,821	1,404,712	1,501,149	1,613,107
4	Venture Capital	239,703	261,724	275,834	285,924	293,687	299,062	303,040	306,353	309,261	313,076
5	Distressed Debt	66,569	47,052	23,683	9,248	1,182	64	19	6	2	1
10	Private Equity Total	1,760,433	1,801,145	1,739,582	1,671,144	1,621,414	1,609,440	1,639,881	1,711,071	1,810,412	1,926,184
Strategy Diversification:											
11	Buyout	82.6%	82.9%	82.8%	82.3%	81.8%	81.4%	81.5%	82.1%	82.9%	83.7%
12	Venture Capital	13.6%	14.5%	15.9%	17.1%	18.1%	18.6%	18.5%	17.9%	17.1%	16.3%
13	Distressed Debt	3.8%	2.6%	1.4%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
16	Private Equity Fair Value as % of Total Plan Assets	16.2%	15.9%	14.8%	13.7%	12.8%	12.2%	11.9%	12.0%	12.2%	12.5%
17	Private Equity Target Asset Allocation	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
Unfunded Commitments and Fair Value											
18	Private Equity Unfunded Commitments	865,801	695,355	673,894	705,237	765,204	840,789	924,927	976,758	1,042,266	1,083,846
19	Unfunded Commitments + FV	2,626,234	2,496,500	2,413,476	2,376,380	2,386,618	2,450,229	2,564,808	2,687,828	2,852,678	3,010,030
20	Unfunded Commitments + FV as % of Assets	24.2%	22.1%	20.5%	19.4%	18.8%	18.5%	18.6%	18.8%	19.2%	19.5%
21	Ratio of Unf Com + FV to Target Allocation	1.93x	1.77x	1.64x	1.55x	1.50x	1.48x	1.49x	1.50x	1.53x	1.56x
Net Cash Flow Requirements											
27	Total Net Cash Flow to Private Equity		124,038	230,550	231,995	206,757	163,811	119,345	80,201	57,272	48,669
Annual Commitments by Strategy											
28	Existing Commitments		0	0	0	0	0	0	0	0	0
29	Buyout		210,000	240,000	275,000	310,000	340,000	375,000	375,000	410,000	410,000
30	Venture Capital		30,000	40,000	45,000	50,000	60,000	65,000	65,000	70,000	70,000
35	Total Annual Commitments to Private Equity		240,000	280,000	320,000	360,000	400,000	440,000	440,000	480,000	480,000
Total Plan Assets assumed to grow at 4.0%											

Scenarios for Private Equity

No Commitments

ERSRI - Capital Budget Model		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
1	Forecast Plan Total Assets	10,868,782	11,303,533	11,755,675	12,225,902	12,714,938	13,223,535	13,752,477	14,302,576	14,874,679	15,469,666
2	New Commitments		0	0	0	0	0	0	0	0	0
Private Equity Fair Value by Sector:											
Private Equity Fair Value by Sector:		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
3	Buyout	1,454,161	1,476,619	1,347,172	1,132,524	882,070	634,539	418,636	250,675	134,270	63,089
4	Venture Capital	239,703	259,474	262,136	248,680	223,990	191,368	154,054	115,743	80,300	50,835
5	Distressed Debt	66,569	47,052	23,683	9,248	1,182	64	19	6	2	1
10	Private Equity Total	1,760,433	1,783,145	1,632,991	1,390,451	1,107,242	825,971	572,709	366,424	214,571	113,924
Strategy Diversification:											
11	Buyout	82.6%	82.8%	82.5%	81.5%	79.7%	76.8%	73.1%	68.4%	62.6%	55.4%
12	Venture Capital	13.6%	14.6%	16.1%	17.9%	20.2%	23.2%	26.9%	31.6%	37.4%	44.6%
13	Distressed Debt	3.8%	2.6%	1.5%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
16	Private Equity Fair Value as % of Total Plan Assets	16.2%	15.8%	13.9%	11.4%	8.7%	6.2%	4.2%	2.6%	1.4%	0.7%
17	Private Equity Target Asset Allocation	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
Unfunded Commitments and Fair Value											
18	Private Equity Unfunded Commitments	865,801	473,355	259,494	142,467	78,280	43,031	23,660	13,011	7,155	3,935
19	Unfunded Commitments + FV	2,626,234	2,256,500	1,892,486	1,532,918	1,185,522	869,002	596,370	379,435	221,727	117,859
20	Unfunded Commitments + FV as % of Assets	24.2%	20.0%	16.1%	12.5%	9.3%	6.6%	4.3%	2.7%	1.5%	0.8%
21	Ratio of Unf Com + FV to Target Allocation	1.93x	1.60x	1.29x	1.00x	0.75x	0.53x	0.35x	0.21x	0.12x	0.06x
Net Cash Flow Requirements											
27	Total Net Cash Flow to Private Equity		142,038	317,530	396,556	415,115	387,089	332,927	262,164	188,120	122,260
Annual Commitments by Strategy											
28	Existing Commitments		0	0	0	0	0	0	0	0	0
29	Buyout		0	0	0	0	0	0	0	0	0
30	Venture Capital		0	0	0	0	0	0	0	0	0
35	Total Annual Commitments to Private Equity		0	0	0	0	0	0	0	0	0
Total Plan Assets assumed to grow at 4.0%											

Scenarios for Private Equity

Scenario 1 – Lower distributions in 2024/2025

ERSRI - Capital Budget Model		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
1	Forecast Plan Total Assets	10,868,782	11,303,533	11,755,675	12,225,902	12,714,938	13,223,535	13,752,477	14,302,576	14,874,679	15,469,666
2	New Commitments		240,000	280,000	320,000	360,000	400,000	440,000	440,000	480,000	480,000
Private Equity Fair Value by Sector:											
Private Equity Fair Value by Sector:		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
3	Buyout	1,454,161	1,710,522	1,844,776	1,610,318	1,464,493	1,387,844	1,377,213	1,423,779	1,509,166	1,616,057
4	Venture Capital	239,703	294,105	332,961	321,776	317,345	314,600	313,035	312,490	312,746	314,850
5	Distressed Debt	66,569	63,760	49,717	14,026	1,707	64	19	6	2	1
10	Private Equity Total	1,760,433	2,068,387	2,227,454	1,946,120	1,783,545	1,702,509	1,690,268	1,736,276	1,821,914	1,930,908
Strategy Diversification:											
11	Buyout	82.6%	82.7%	82.8%	82.7%	82.1%	81.5%	81.5%	82.0%	82.8%	83.7%
12	Venture Capital	13.6%	14.2%	14.9%	16.5%	17.8%	18.5%	18.5%	18.0%	17.2%	16.3%
13	Distressed Debt	3.8%	3.1%	2.2%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
16	Private Equity Fair Value as % of Total Plan Assets	16.2%	18.3%	18.9%	15.9%	14.0%	12.9%	12.3%	12.1%	12.2%	12.5%
17	Private Equity Target Asset Allocation	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
Unfunded Commitments and Fair Value											
18	Private Equity Unfunded Commitments	865,801	695,355	673,894	705,237	765,204	840,789	924,927	976,758	1,042,266	1,083,846
19	Unfunded Commitments + FV	2,626,234	2,763,742	2,901,349	2,651,357	2,548,749	2,543,298	2,615,195	2,713,034	2,864,181	3,014,754
20	Unfunded Commitments + FV as % of Assets	24.2%	24.5%	24.7%	21.7%	20.0%	19.2%	19.0%	19.0%	19.3%	19.5%
21	Ratio of Unf Com + FV to Target Allocation	1.93x	1.96x	1.97x	1.73x	1.60x	1.54x	1.52x	1.52x	1.54x	1.56x
Net Cash Flow Requirements											
27	Total Net Cash Flow to Private Equity		(143,204)	34,809	490,268	345,287	248,092	170,821	110,192	73,414	56,581
Annual Commitments by Strategy											
28	Existing Commitments		0	0	0	0	0	0	0	0	0
29	Buyout		210,000	240,000	275,000	310,000	340,000	375,000	375,000	410,000	410,000
30	Venture Capital		30,000	40,000	45,000	50,000	60,000	65,000	65,000	70,000	70,000
35	Total Annual Commitments to Private Equity		240,000	280,000	320,000	360,000	400,000	440,000	440,000	480,000	480,000
Total Plan Assets assumed to grow at 4.0%											

Scenarios for Private Equity

Scenario 2 – Total fund declines 10% in 2024 and recovers in 2026

ERSRI - Capital Budget Model		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
1	Forecast Plan Total Assets	10,868,782	9,781,904	9,781,904	12,225,902	12,714,938	13,223,535	13,752,477	14,302,576	14,874,679	15,469,666
2	New Commitments		240,000	280,000	320,000	360,000	400,000	440,000	440,000	480,000	480,000
Private Equity Fair Value by Sector:											
Private Equity Fair Value by Sector:		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
3	Buyout	1,454,161	1,492,369	1,440,064	1,375,972	1,326,545	1,310,314	1,336,821	1,404,712	1,501,149	1,613,107
4	Venture Capital	239,703	261,724	275,834	285,924	293,687	299,062	303,040	306,353	309,261	313,076
5	Distressed Debt	66,569	47,052	23,683	9,248	1,182	64	19	6	2	1
10	Private Equity Total	1,760,433	1,801,145	1,739,582	1,671,144	1,621,414	1,609,440	1,639,881	1,711,071	1,810,412	1,926,184
Strategy Diversification:											
		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
11	Buyout	82.6%	82.9%	82.8%	82.3%	81.8%	81.4%	81.5%	82.1%	82.9%	83.7%
12	Venture Capital	13.6%	14.5%	15.9%	17.1%	18.1%	18.6%	18.5%	17.9%	17.1%	16.3%
13	Distressed Debt	3.8%	2.6%	1.4%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
16	Private Equity Fair Value as % of Total Plan Assets	16.2%	18.4%	17.8%	13.7%	12.8%	12.2%	11.9%	12.0%	12.2%	12.5%
17	Private Equity Target Asset Allocation	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
Unfunded Commitments and Fair Value											
		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
18	Private Equity Unfunded Commitments	865,801	695,355	673,894	705,237	765,204	840,789	924,927	976,758	1,042,266	1,083,846
19	Unfunded Commitments + FV	2,626,234	2,496,500	2,413,476	2,376,380	2,386,618	2,450,229	2,564,808	2,687,828	2,852,678	3,010,030
20	Unfunded Commitments + FV as % of Assets	24.2%	25.5%	24.7%	19.4%	18.8%	18.5%	18.6%	18.8%	19.2%	19.5%
21	Ratio of Unf Com + FV to Target Allocation	1.93x	2.04x	1.97x	1.55x	1.50x	1.48x	1.49x	1.50x	1.53x	1.56x
Net Cash Flow Requirements											
		12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032	
27	Total Net Cash Flow to Private Equity	124,038	230,550	231,995	206,757	163,811	119,345	80,201	57,272	48,669	
Annual Commitments by Strategy											
		12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032	
28	Existing Commitments	0	0	0	0	0	0	0	0	0	0
29	Buyout	210,000	240,000	275,000	310,000	340,000	375,000	375,000	410,000	410,000	
30	Venture Capital	30,000	40,000	45,000	50,000	60,000	65,000	65,000	70,000	70,000	
35	Total Annual Commitments to Private Equity	240,000	280,000	320,000	360,000	400,000	440,000	440,000	480,000	480,000	
Total Plan Assets assumed to grow at 4.0%											

Scenarios for Private Equity

Scenario 3 – Lower distributions and 2024 total fund decline

ERSRI - Capital Budget Model		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
1	Forecast Plan Total Assets	10,868,782	9,781,904	9,781,904	12,225,902	12,714,938	13,223,535	13,752,477	14,302,576	14,874,679	15,469,666
2	New Commitments		240,000	280,000	320,000	360,000	400,000	440,000	440,000	480,000	480,000
Private Equity Fair Value by Sector:											
Private Equity Fair Value by Sector:		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
3	Buyout	1,454,161	1,710,522	1,844,776	1,610,318	1,464,493	1,387,844	1,377,213	1,423,779	1,509,166	1,616,057
4	Venture Capital	239,703	294,105	332,961	321,776	317,345	314,600	313,035	312,490	312,746	314,850
5	Distressed Debt	66,569	63,760	49,717	14,026	1,707	64	19	6	2	1
10	Private Equity Total	1,760,433	2,068,387	2,227,454	1,946,120	1,783,545	1,702,509	1,690,268	1,736,276	1,821,914	1,930,908
Strategy Diversification:											
11	Buyout	82.6%	82.7%	82.8%	82.7%	82.1%	81.5%	81.5%	82.0%	82.8%	83.7%
12	Venture Capital	13.6%	14.2%	14.9%	16.5%	17.8%	18.5%	18.5%	18.0%	17.2%	16.3%
13	Distressed Debt	3.8%	3.1%	2.2%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
16	Private Equity Fair Value as % of Total Plan Assets	16.2%	21.1%	22.8%	15.9%	14.0%	12.9%	12.3%	12.1%	12.2%	12.5%
17	Private Equity Target Asset Allocation	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
Unfunded Commitments and Fair Value											
18	Private Equity Unfunded Commitments	865,801	695,355	673,894	705,237	765,204	840,789	924,927	976,758	1,042,266	1,083,846
19	Unfunded Commitments + FV	2,626,234	2,763,742	2,901,349	2,651,357	2,548,749	2,543,298	2,615,195	2,713,034	2,864,181	3,014,754
20	Unfunded Commitments + FV as % of Assets	24.2%	28.3%	29.7%	21.7%	20.0%	19.2%	19.0%	19.0%	19.3%	19.5%
21	Ratio of Unf Com + FV to Target Allocation	1.93x	2.26x	2.37x	1.73x	1.60x	1.54x	1.52x	1.52x	1.54x	1.56x
Net Cash Flow Requirements											
27	Total Net Cash Flow to Private Equity		(143,204)	34,809	490,268	345,287	248,092	170,821	110,192	73,414	56,581
Annual Commitments by Strategy											
28	Existing Commitments		0	0	0	0	0	0	0	0	0
29	Buyout		210,000	240,000	275,000	310,000	340,000	375,000	375,000	410,000	410,000
30	Venture Capital		30,000	40,000	45,000	50,000	60,000	65,000	65,000	70,000	70,000
35	Total Annual Commitments to Private Equity		240,000	280,000	320,000	360,000	400,000	440,000	440,000	480,000	480,000
Total Plan Assets assumed to grow at 4.0%											

Scenarios for Private Equity

Scenario 4 – Private equity returns are 2% per annum lower

ERSRI - Capital Budget Model		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
1	Forecast Plan Total Assets	10,868,782	11,303,533	11,755,675	12,225,902	12,714,938	13,223,535	13,752,477	14,302,576	14,874,679	15,469,666
2	New Commitments		240,000	280,000	320,000	360,000	400,000	440,000	440,000	480,000	480,000
Private Equity Fair Value by Sector:											
Private Equity Fair Value by Sector:		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
3	Buyout	1,454,161	1,471,295	1,402,452	1,327,539	1,272,371	1,253,916	1,279,662	1,346,405	1,440,226	1,547,981
4	Venture Capital	239,703	258,087	268,588	275,422	280,460	283,820	286,634	289,616	292,823	297,252
5	Distressed Debt	66,569	46,334	22,944	8,812	1,117	64	19	6	2	1
10	Private Equity Total	1,760,433	1,775,716	1,693,984	1,611,773	1,553,947	1,537,800	1,566,316	1,636,026	1,733,051	1,845,234
Strategy Diversification:											
11	Buyout	82.6%	82.9%	82.8%	82.4%	81.9%	81.5%	81.7%	82.3%	83.1%	83.9%
12	Venture Capital	13.6%	14.5%	15.9%	17.1%	18.0%	18.5%	18.3%	17.7%	16.9%	16.1%
13	Distressed Debt	3.8%	2.6%	1.4%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
16	Private Equity Fair Value as % of Total Plan Assets	16.2%	15.7%	14.4%	13.2%	12.2%	11.6%	11.4%	11.4%	11.7%	11.9%
17	Private Equity Target Asset Allocation	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
Unfunded Commitments and Fair Value											
18	Private Equity Unfunded Commitments	865,801	695,355	673,894	705,237	765,204	840,789	924,927	976,758	1,042,266	1,083,846
19	Unfunded Commitments + FV	2,626,234	2,471,071	2,367,878	2,317,009	2,319,150	2,378,589	2,491,243	2,612,784	2,775,318	2,929,080
20	Unfunded Commitments + FV as % of Assets	24.2%	21.9%	20.1%	19.0%	18.2%	18.0%	18.1%	18.3%	18.7%	18.9%
21	Ratio of Unf Com + FV to Target Allocation	1.93x	1.75x	1.61x	1.52x	1.46x	1.44x	1.45x	1.46x	1.49x	1.51x
Net Cash Flow Requirements											
27	Total Net Cash Flow to Private Equity		114,258	212,820	207,591	176,998	130,498	83,708	43,389	19,817	10,409
Annual Commitments by Strategy											
28	Existing Commitments		0	0	0	0	0	0	0	0	0
29	Buyout		210,000	240,000	275,000	310,000	340,000	375,000	375,000	410,000	410,000
30	Venture Capital		30,000	40,000	45,000	50,000	60,000	65,000	65,000	70,000	70,000
35	Total Annual Commitments to Private Equity		240,000	280,000	320,000	360,000	400,000	440,000	440,000	480,000	480,000
Total Plan Assets assumed to grow at 4.0%											

Scenarios for Private Equity

Scenario 5 – Total fund grows at 2% per annum rather than 4%

ERSRI - Capital Budget Model		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
1	Forecast Plan Total Assets	10,868,782	11,086,158	11,307,881	11,534,038	11,764,719	12,000,014	12,240,014	12,484,814	12,734,510	12,989,201
2	New Commitments		240,000	280,000	320,000	360,000	400,000	440,000	440,000	480,000	480,000
Private Equity Fair Value by Sector:											
Private Equity Fair Value by Sector:		12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032
3	Buyout	1,454,161	1,492,369	1,440,064	1,375,972	1,326,545	1,310,314	1,336,821	1,404,712	1,501,149	1,613,107
4	Venture Capital	239,703	261,724	275,834	285,924	293,687	299,062	303,040	306,353	309,261	313,076
5	Distressed Debt	66,569	47,052	23,683	9,248	1,182	64	19	6	2	1
10	Private Equity Total	1,760,433	1,801,145	1,739,582	1,671,144	1,621,414	1,609,440	1,639,881	1,711,071	1,810,412	1,926,184
Strategy Diversification:											
11	Buyout	82.6%	82.9%	82.8%	82.3%	81.8%	81.4%	81.5%	82.1%	82.9%	83.7%
12	Venture Capital	13.6%	14.5%	15.9%	17.1%	18.1%	18.6%	18.5%	17.9%	17.1%	16.3%
13	Distressed Debt	3.8%	2.6%	1.4%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
16	Private Equity Fair Value as % of Total Plan Assets	16.2%	16.2%	15.4%	14.5%	13.8%	13.4%	13.4%	13.7%	14.2%	14.8%
17	Private Equity Target Asset Allocation	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
Unfunded Commitments and Fair Value											
18	Private Equity Unfunded Commitments	865,801	695,355	673,894	705,237	765,204	840,789	924,927	976,758	1,042,266	1,083,846
19	Unfunded Commitments + FV	2,626,234	2,496,500	2,413,476	2,376,380	2,386,618	2,450,229	2,564,808	2,687,828	2,852,678	3,010,030
20	Unfunded Commitments + FV as % of Assets	24.2%	22.5%	21.3%	20.6%	20.3%	20.4%	21.0%	21.5%	22.4%	23.2%
21	Ratio of Unf Com + FV to Target Allocation	1.93x	1.80x	1.71x	1.65x	1.62x	1.63x	1.68x	1.72x	1.79x	1.85x
Net Cash Flow Requirements											
27	Total Net Cash Flow to Private Equity		124,038	230,550	231,995	206,757	163,811	119,345	80,201	57,272	48,669
Annual Commitments by Strategy											
28	Existing Commitments		0	0	0	0	0	0	0	0	0
29	Buyout		210,000	240,000	275,000	310,000	340,000	375,000	375,000	410,000	410,000
30	Venture Capital		30,000	40,000	45,000	50,000	60,000	65,000	65,000	70,000	70,000
35	Total Annual Commitments to Private Equity		240,000	280,000	320,000	360,000	400,000	440,000	440,000	480,000	480,000
Total Plan Assets assumed to grow at 2.0%											

Background on Capital Budget Modeling

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- Private markets investments tend to be made through limited life, closed end funds
 - Funds grow as capital is called and investments increase in value, and then have a ‘harvest period’ as investments are sold and funds wind down
 - To achieve a steady target allocation to a private markets asset class, money needs to be put into new funds each year as old funds wind down – the “pacing plan” or “capital budget”
 - Targeting a specific allocation is a complex problem – there are many variables, most outside the control of the allocator

-
- The allocation to an asset class is a function of the fair market value of the invested capital in that asset class (the numerator) and the overall size of the portfolio (the denominator), for example:

$$\text{Private Equity Allocation} = \text{Private Equity Fair Value} / \text{Total Fund Value}$$

- For typical private markets investments, neither of these is in the complete control of the allocator
- Taking the denominator first, total fund value is a function of:
 - Asset inflows (contributions) and outflows (benefit payments and other expenses) – there is some predictability to these but also some uncertainty
 - Returns of the overall portfolio – this introduces very significant uncertainty, particularly over the short to medium term

The numerator (the fair market value of the asset class) also has multiple factors

- Dollars committed each year is the main factor that is under an allocator's control
 - However, for drawdown funds, this does not directly translate into invested market value. Managers can typically draw this capital over 3-5 years, and will do so as opportunities become available
 - The pace of these drawdowns is one key assumption in capital budgets
- Dollars distributed is a second key factor in determining the fair market value of invested capital
 - Depends upon the manager finding the right opportunity to exit the investment
- Finally, the growth rate of the capital that is invested (returns) is the third main factor

-
- To summarize – for drawdown funds, the key drivers of fair market value are:
 - drawdown pace,
 - distribution pace, and
 - asset return
 - Output is more sensitive to drawdown and distribution pace than return assumptions
 - All three of these factors vary with the market environment
 - Distribution pace has the most sensitivity to market conditions – strong/rising equity markets lead to high distributions
 - Use of co-investments can help limit drawdown pace as a variable
 - Use of open-ended funds can reduce the variability introduced by both drawdowns and distributions (but within limits for illiquid asset classes, and with other tradeoffs)

Modeling an Asset Class - Asset Flows

- Our asset class model builds from assumptions for a simplified generic fund for that asset – example below is the buyout model
- Contributions occur in a pattern over early years, then capital is distributed in the later years. Capital grows at an assumed return rate while it is invested

