CALSTRS

Investment Committee

Item Number 4a – Open Session

Subject: Annual Investment Cost Report

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Item Type: Information

Date & Time: November 1, 2023 – 15 minutes

Attachment(s): Attachment 1 – Cost Breakdown

Attachment 2 – Cost Breakout by Category

Attachment 3 – Asset Class Trends

Attachment 4 – Peer Comparison

PowerPoint(s): 2022 Annual Investment Cost Report

Item Purpose

The purpose of this informational report is to provide the Committee a complete breakdown of the costs associated with running the Total Portfolio as of December 31, 2022.

Executive Summary

The calendar year 2022 was the first time in over 50 years that both U.S. stocks and bonds posted double digit losses. U.S. equity approached 20% losses during the first half of the year. The Federal Reserve aggressively raised interest rates at a historic rate in an effort to slow inflation - which drove bond returns into negative double digits. Public asset market values declined.

In the private markets, Private Equity returns were flat after gaining double digits the previous two years, Infrastructure (Inflation Sensitive) earned over 7%, and Real Estate market values grew after returning over 20% on the year.

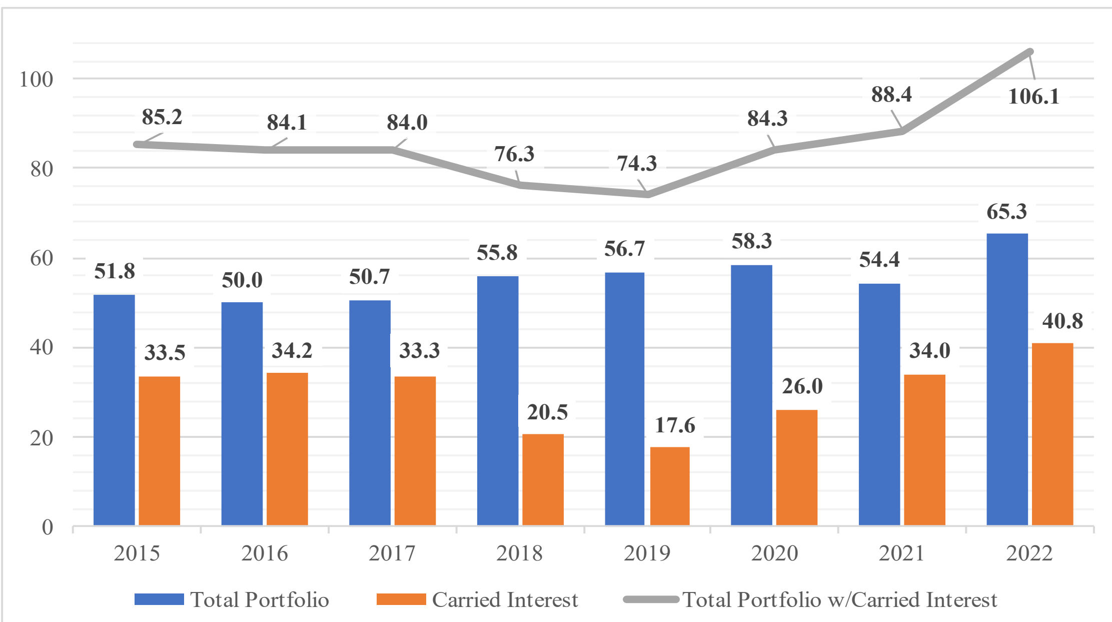
In addition to the market fluctuation, CalSTRS enacted two strategic allocation shifts as part of the long-term strategy. The first, in January, shifted 2% of the Public Equity policy target to Private Equity. The second, in July, further reduced the Public Equity target by 2% and increased Inflation Sensitive and Real Estate by 1% each. A higher allocation to private assets will increase cost, but also add value in terms of diversified risk and higher expected returns. The allocation shifts, combined with the market activity, had a direct impact on CalSTRS' costs for the year.

- Overall costs (including carried interest) increased by 9% to $3.3 billion.
- Private market costs, including carried interest, accounted for over 92% of this total.
- Excluding carried interest, total portfolio costs were $2.0 billion.
- Collaborative model strategies saved $428 million in 2022 ($1.6 billion over 6 years).

Background

Investment costs are an important determinant of fund performance and require close oversight and active monitoring. It is important to note that information in this Cost Report is one point in time. Costs can fluctuate significantly each year depending on the life cycle of the underlying investments and/or the investment pace of the strategy. CalSTRS is a long-term investor and as such, return and cost data is more meaningful when compared over long time periods. All costs and carried interest within this report are for calendar year (CY) 2022 and on a cash basis.

Chart / Table 1 – Overall Costs[1] in Basis Points and Absolute Dollars



($ in Millions)	2015	2016	2017	2018	2019	2020	2021	2022	2022 Δ
NAV	186,100	194,698	218,215	225,703	242,190	261,992	338,296	308,309	-9%
Total Portfolio Costs	963	973	1,106	1,260	1,374	1,527	1,840	2,014	9%
Carried Interest Paid	623	665	727	463	426	681	1,150	1,257	9%
Total w/Carried Interest	1,586	1,638	1,833	1,723	1,800	2,209	2,990	3,271	9%

Overall, the Total Portfolio NAV decreased on the year, while costs increased. The increase in costs is primarily attributed to a higher allocation to private assets. The reason for this shift and how it impacted costs is discussed in the "Drivers of Cost" section of this report.

[1] Based on total costs for the period over a smoothed NAV to account for new and exited investments during the respective calendar year. Basis point totals may not tie due to rounding.

Chart and Table 1 above show:

- Overall costs including carried interest for 2022 (grey line) increased by almost 18 basis points (bps) relative to the NAV. This is equivalent to a $281 million increase in absolute dollars.
- Total portfolio costs (blue bar) increased by 11 bps, equivalent to a $174 million increase from the previous year.
- Carried interest (orange bar) increased by almost 7 bps, or $107 million.
- The eight-year average cost per dollar (excluding carried interest) is roughly 55 bps.

Total portfolio costs and carried interest are driven by different factors. In normal market environments, total portfolio costs include management fees and internal operating costs that are highly correlated to the NAV of the Total Portfolio. Carried interest, a profit-sharing agreement between the general partner and the limited partners (i.e., CalSTRS), is positively correlated to investment returns and is paid to the general partner upon the profitable exit from an investment.

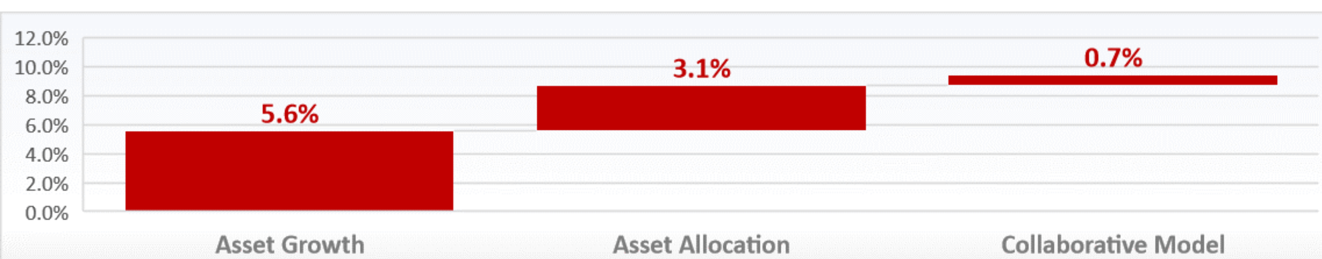
The Drivers of Cost

Asset Growth Asset Allocation Collaborative Model Carried Interest

Overall costs will increase or decrease based on four primary reasons (shown above). Because there are four major levers which drive costs, there will be volatility from year to year. Therefore, it is most productive to examine longer rolling periods for trends (available in Attachment 2 for each asset class). The below discussion is specific to calendar year 2022.

Total portfolio costs and carried interest both increased in 2022 as indicated in Table 1. Carried interest increased by 9% and is discussed separately from portfolio costs given that it often corresponds to multiple years. Total portfolio costs increased by over 9%, and are captured in the form of management fees, operating expenses, and other expenses. A breakout of these expenses is provided in Attachment 2.

Chart 2 – Total Portfolio Cost Attribution for 2022



Asset Growth

The largest component of total portfolio costs are management fees, which are mostly based on NAV. As the Total Portfolio grows, it will often incur greater operating expenses, but management fees have a direct year to year impact. In 2022, the overall NAV of the Total Portfolio decreased by 9%, but public and private markets did not move in the same direction. Public assets decreased by 16%, while private assets increased 7%.

Private markets have higher fees relative to public markets to compensate for the specialization needed to manage investments with higher risk/return profiles or additional diversifying aspects. Higher private asset market values created higher management fees. This is why costs went up in 2022, even though the overall NAV went down. The decline in public asset market values led to lower management fees from public asset managers, but this was less than the increase in private management fees overall. The net impact increased portfolio costs by more than 5%.

Asset Allocation

In addition to their impact on management fees discussed above, private assets incur portfolio company fees. These fees grow as more capital is allocated to private assets. In 2022, the strategic target allocation to Public Equity was reduced by 4% and allocated to private assets. First, in January, 2% was shifted to Private Equity. Then second, in July, another 2% was shifted to Inflation Sensitive and Real Estate equally. The allocation shifts led to increased portfolio costs by over 3%.

Collaborative Model

As the Total Fund grows or new strategies implemented, expenses associated with staffing, consulting, and systems will increase. Managing more assets internally will bring higher operating expenses, but these are more than offset by savings in management fees. These savings are outlined in the November 2023 Board Item 4b: Collaborative Model Savings.

For 2022, public asset operating expenses stayed flat, while private asset operating expenses increased by 0.7%. Much of this is attributed to building out the operating model to support co-investments and the Collaborative Model. The number of co-investments grew from 188 to 200 over 2022, but substantially even more over the previous few years. Operating expenses may increase slightly as the Collaborative Model's infrastructure is built, but then flatten when economies of scale are obtained through growth.

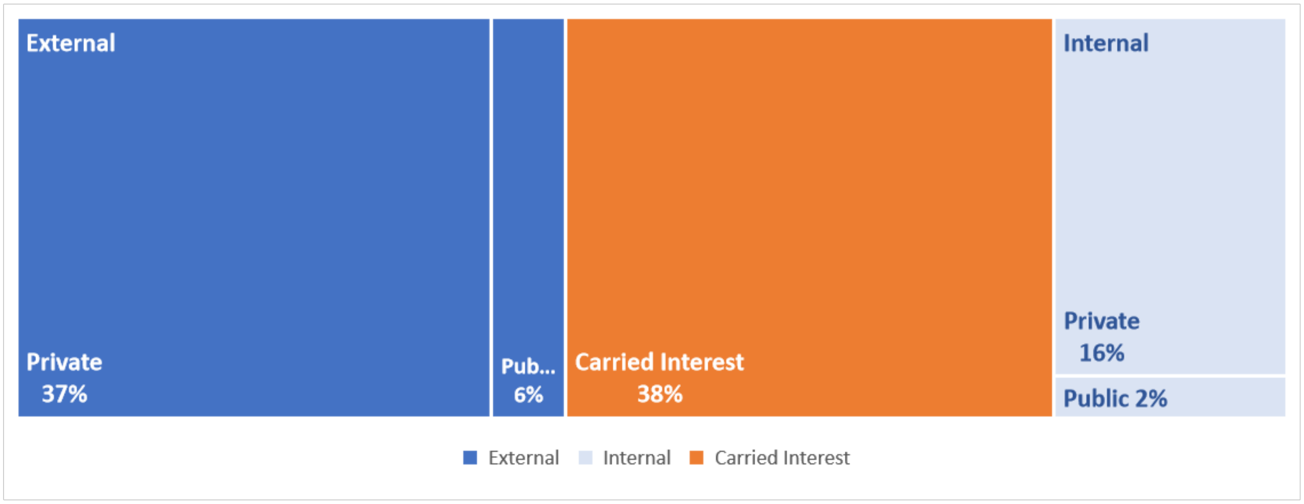
Carried Interest

A higher annual return in an asset class where profit sharing agreements exist will increase total costs. The agreements are tied to profits realized over a period of years rather than a single year. Multiple factors influence how much carried interest is earned, which often fluctuates until it is ultimately paid. These range from the strategy of the investment, negotiated agreement, the economic environment over its life and the timing of when dry powder is put to use. To report realized costs with certainty, the Cost Report tracks carried interest as it is paid rather than accrued, making it intricate to attribute drivers in a single year. For 2022, carried interest paid increased by 9%, which indicates significant realized gains earned by private assets over the last few years.

Internal vs. External - Public vs. Private Costs

In general, it costs more to manage investments externally than internally. Internal investment management allows staff to focus on specific strategies while leveraging internal knowledge and adding value by generating meaningful cost savings. However, there are strategies that require either significant infrastructure or specialized expertise that economically justify external management. For such strategies, external investment managers and partners are utilized, overseen, and monitored by internal staff and the Investment Committee's general consultants.

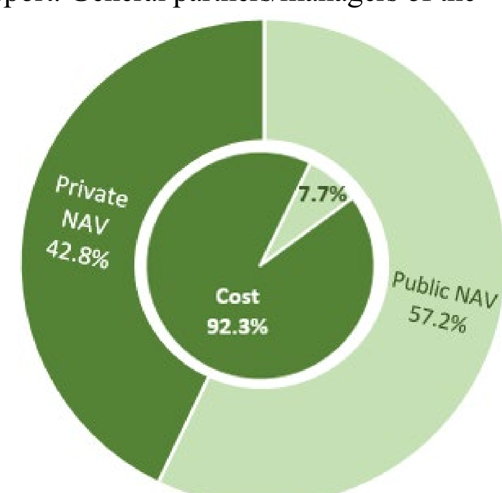
Chart 4 – Total Portfolio Costs and Carried Interest Heat Maps



With the declines in the public equity and fixed income markets, the percentage of internally managed accounts (based on NAV) fell to 60%, down from 67% the previous year. Cost percentages, however, stayed almost identical to last year. Chart 4 demonstrates the size relationship between externally managed costs, carried interest paid, and internally managed costs. For 2022, CalSTRS paid $3.3 Billion in overall costs: 38.4% in carried interest, 43.2% in external costs, and 18.4% in internal costs.

Chart 5 – Overall Costs: Public vs. Private (*with Carried Interest*)

There were approximately 971 private assets in 2022. The costs associated with 98.6% of the private assets, based on their NAV, have been obtained and reported within this report. General partners/managers of the remaining 1.4% of private assets were non-responsive as they are primarily composed of investments that are winding down and at the end of their life. Staff believes that 98.6% coverage provides a directionally accurate cost figure.



In 2022, the percentage of private assets grew to almost 43% (up from 32% the prior year). Private market costs, including carried interest, accounted for over 92% of the overall costs. This is typical, consistent with previous years, and expected as private assets are complex and require a higher degree of specialized expertise, resulting in higher costs. Studies have shown that a private equity program can add significant value to a portfolio in terms of diversified risk and higher expected return specifically over a 10-20-year investment horizon. For a complete breakdown of costs, both public vs. private and internal vs. external, refer to Attachment 1.

Table 2 – Total Portfolio Costs as a Percentage of Net Asset Value *(in Millions)*

	NAV	%	Cost	%
Externally Managed	116,179	38%	1,412	70%
Private	*81,611*	*26%*	*1,221*	*61%*
Public	*34,568*	*11%*	*191*	*9%*
Internally Managed	192,130	62%	602	30%
Private	*50,482*	*16%*	*540*	*27%*
Public	*141,648*	*46%*	*62*	*3%*
Total	308,309	100%	2,014	100%

Avg Cost *in Basis Points*	
Private	
External	Internal
150	107
Public	
External	Internal
55	4

In 2022, external management costs were approximately $1.4 billion compared to $602 million in internal management costs. Table 2 shows internally managed investments account for 62% of the Total Portfolio NAV, yet they represent only 30% of the Total Portfolio Costs. When looking at the average cost basis from year to year, the average cost of private assets decreased while the average cost of public assets increased. This is predominately the result of the asset growth discussed in the "Drivers of Cost" section: lower public market values increased average cost while higher private market values decreased average cost.

Capture Ratio Analysis

The Capture Ratio reflects the percentage of gross profits captured and reflected in the net returns over the eight-year period ending December 31, 2022. The ratio and its components are shown in cumulative since single year figures can swing based on carried interest from multiple years paid out in a single year.

Chart 5 – Total Portfolio Capture Ratio (Cumulative) Trend Line

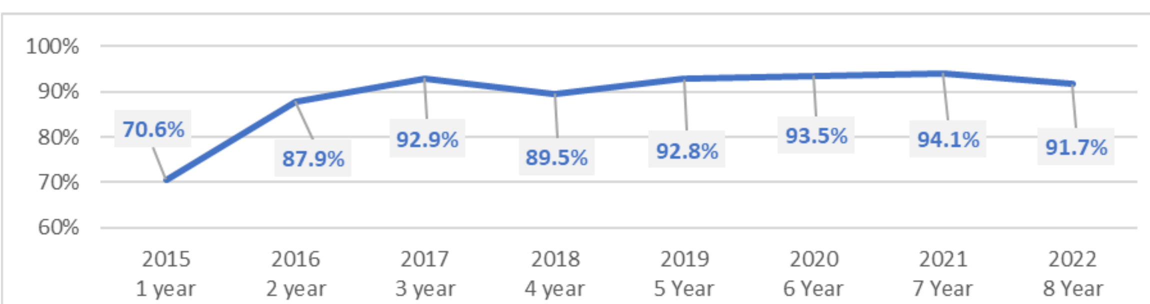


Chart 5 above shows that CalSTRS has captured 91.7% of the gross dollars earned over the last eight years. This ratio decreased from last year due to the increase in private asset allocation discussed throughout this report. The capture ratios for private asset classes will tend to be lower due to the carried interest paid out from these investment types, but this is offset by their long term expected net returns and risk diversification value.

Table 3 – Capture Ratio *(in Millions)*

8-Year Period *Ending December 31, 2022*		2022 Target Weights	Costs*	Gross Dollars**	Net Dollars**	Capture Ratio	Net Return (Time Weighted)
	Total Portfolio		$12,690	$153,344	$140,654	**91.7%**	7.70%
Growth	Global Equity	43%	990	67,417	66,427	**98.5%**	7.15%
	Private Equity	13%	5,644	33,040	27,396	**82.9%**	14.04%
Real Assets	Real Estate	15%	3,374	31,720	28,345	**89.4%**	11.01%
	Inflation Sensitive	5%	367	5,133	4,765	**92.8%**	7.38%
Diversifying	Fixed Income	12%	77	2,940	2,863	**97.4%**	1.45%
	Risk Mitigating Strategies	10%	1,183	6,916	5,732	**82.9%**	2.66%

** Management fees and carried interest are considered the industry standard for measuring costs*
*** Cumulative dollar gain or loss over the period*

Table 3 shows that the Total Portfolio has earned $140.6 billion over the last eight-years, while paying $12.7 billion in fees and carried interest.

Peer Comparison[2]

Data for peer comparison was compiled and prepared by a third-party cost measurement service provider utilizing various customized methodologies different from this report. Information in this section is strictly for benchmarking purposes and differs from CalSTRS reported costs primarily due to the exclusion of broker commissions, partnership expenses and carried interest within the peer comparison.

- Based on a comparison of 14 global peers from $112 billion to $731 billion in AUM, CalSTRS investments was a low-cost fund.

- CalSTRS investment cost of 56.2 bps was below its expected cost of 63.3 bps, demonstrating the fund was low cost compared to peers, given an identical asset mix.

- CalSTRS Investment Branch saved 7.1 bps over the expected investment costs of 63.3 bps, which equates to approximately $210 million saved compared to its peers, given an identical asset mix.

For further details on peer comparison, please refer to Attachment 4.

The full listing of glossary terms and definitions can be found at the following link [Investment terms glossary - CalSTRS]().

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[2] Data collected and compiled by CEM Benchmarking, Inc. for calendar year 2022.