

Callan



Executive Summary

March 31, 2024

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**Chicago Teachers' Pension Fund
Performance Evaluation Executive Summary
First Quarter 2024**

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Total Fund Commentary

The Fund was valued at \$12.5 billion at the end of the first quarter, representing an increase of approximately \$462.7 million from December 31, 2023. The change in the Fund's market value was attributable to approximately \$457.2 million in new investment gains and \$5.5 million in cash inflows. The Fund's asset allocation was close to the permissible Investment Policy ranges, except for private equity, international equity, and fixed income. The private equity component of the portfolio exceeded the upper bound of the range by approximately 1.5% while fixed income and international equity were both below the lower bound of the range by approximately 2.3% and 1.1%, respectively. With respect to the Fund's asset allocation versus the current target at the end of the first quarter, underweights to international equity (-4.6%), and fixed income (-5.3%) were offset by overweights to domestic equity (+1.0%), real estate (+1.0%), private equity (+3.5%), infrastructure (+0.3%), and cash (+4.0%).

While it may feel like we are in a "higher forever" world with respect to stock prices or interest rates, we know this scenario is implausible, if not impossible. Amid a backdrop of low volatility mixed with investor enthusiasm (especially around anything to do with artificial intelligence) and better-than-expected economic news, the S&P 500 Index closed the quarter at a new high, its 22nd record high over the course of the quarter. A cut in the Fed Funds rate did not materialize as anticipated and the Fed appears to be in no hurry to cut rates. Views are mixed with respect to the trajectory of both stocks and short-term rates. Lone voices have suggested that the Fed's next move could be a hike, but the more widespread expectation is for a cut, with the market assigning a roughly 50% chance at the Fed's June meeting. With respect to stocks, some see continued increases given strong earnings and a healthy economic outlook, while others float a "bubble" theory, especially with respect to some large growth stocks. Compelling evidence is presented to support both the economic nirvana/soft landing view as well as the hard landing scenario that is not as rosy.

In this environment, the Fund had a net return of 3.77% over the quarter (3.83% gross of fees), underperforming the Policy Target by 68 basis points, and ranking in the 74th percentile of peers. Longer-term performance (trailing three-, five-, seven-, and ten-year periods) is ahead of the Policy Target and, with the exception of the trailing three-year period, ranks ahead of the peer group median. Over the quarter, fixed income, international equity, and infrastructure positively contributed to results. Domestic Equity, real estate, and private equity had negative attribution this quarter. It is important to note that private market investments, such as private equity, infrastructure, and real estate are valued on a lagged basis and therefore should be evaluated in more detail separately, using appropriate metrics to capture the magnitude and timing of the cash flows associated with these investments. Callan prepares separate reports on behalf of CTPF to evaluate the performance of these investments in more detail.

Closing Thoughts

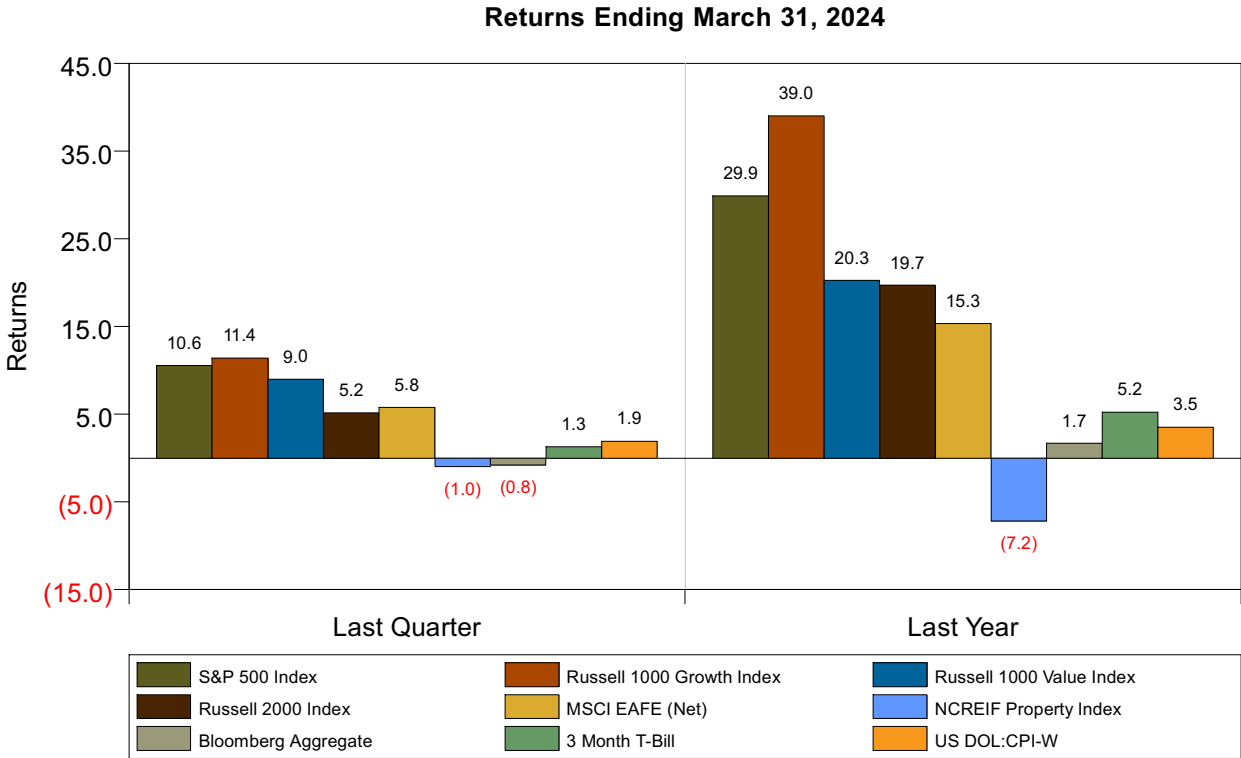
Competing views exist with enthusiasts for the soft-landing scenario and solid financial market returns highlighting robust earnings, a resilient consumer, strong labor market, and moderating inflation that will enable the Fed to gradually cut rates. The less sanguine view notes sticky inflation that calls rate cuts into question, commercial real estate woes, rising loan delinquencies, and stress in lower income brackets. Geopolitical worries and a growing deficit are cited by both sides as

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potential sources of volatility and uncertainty. As usual, Callan recommends adhering to a disciplined investment process that includes a well-defined long-term asset-allocation policy.

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Select Market Returns



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QUARTERLY REVIEW

• **First Quarter, 2024 Investment Performance Update:**

- Performance: For the first quarter, the Fund underperformed the market benchmark by 62 basis points, gross of investment management fees (68 basis points net of fees) and ranked in the 74th percentile of its peers. Longer-term performance (trailing three-years and longer) continues to be competitive relative to benchmarks.

• **Watch Status Report:** The following managers are on the Watch List:

- Ariel: Included on the Watch List due to underperformance and personnel turnover. On August 16, 2023, Callan was notified by Ariel that Rupal Bhansali decided to leave the firm and start her own business. While her official last day was August 31, 2023, Henry Mallari-D'Auria, the Head of Emerging Markets Investments, will become CIO of Ariel's global equity and emerging markets equity strategies. Both the International and Global as well as Emerging Markets teams will report to him. Micky J. Jagirdar, Head of Investments for International & Global Equities and co-portfolio manager on the Global Concentrated strategy, will support Mallari-D'Auria in the management of the International and Global strategies. Jagirdar, who has more than 20 years of experience, joined the firm in 2011 along with Bhansali and was appointed as head of Investments in 2016. Jagirdar is Bhansali's younger brother.
- Strategic Global Advisors: Was originally included on the Watch List due to underperformance. Performance has improved and SGA is recommended for removal from the watch list.
- State Street Global Advisors: Included on the watch list due to missing MWDBE brokerage goals. A search to replace State Street is underway.
- Attucks: On March 1, 2024, Attucks announced that Winston Blake, President of Attucks, departed the firm. Blake served as President for over 12 years prior to his departure.

In the fourth quarter of 2022, Attucks announced several initiatives impacting their technology platform and investment team. The firm made enhancements to its back office operations, which allow them to improve data flow in the areas of accounting, performance, compliance, billing, and content distribution. With respect to the investment team, Attucks added two individuals, Dhruvi Shah, who joined as a Senior Investment Analyst, and Sinclair Nagy, who joined as a Vice President. Shah will focus on fixed income, while Nagy will provide support in the areas of portfolio management, manager research and private markets coverage. In addition, Attucks announced that former CIO, Patrick Silvestri, decided to leave the firm January 1, 2023. The role of Chief Investment Officer has been eliminated, as part of Attucks' strategic plan. Given the magnitude of these changes and the portfolio's underperformance, Attucks has been placed on watch.

- William Blair International Small Cap: Included on the Watch List due to underperformance.

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- J.P. Morgan Strategic Property Fund (SPF): Callan was notified on Monday, November 6, 2023, that Kim Adams, Senior Portfolio Manager of the J.P. Morgan SPF, decided to depart J.P. Morgan to pursue other career interests, effective immediately. Ms. Adams was the senior portfolio manager of SPF for the past five years and the co-portfolio manager for an additional five years. The portfolio management team structure is changing as a result of Ms. Adams' departure. The new team for SPF will now consist of co-portfolio managers Brian Nottage, Sue Kolasa, and Caitlin Simon, all of whom are based in New York, as well as assistant portfolio manager Jason Curran who joined the Fund team in 2022 and is based in Los Angeles. All individuals will be 100% dedicated to the Fund. Given these significant changes, we believe SPF should be placed on watch status and monitored closely going forward.

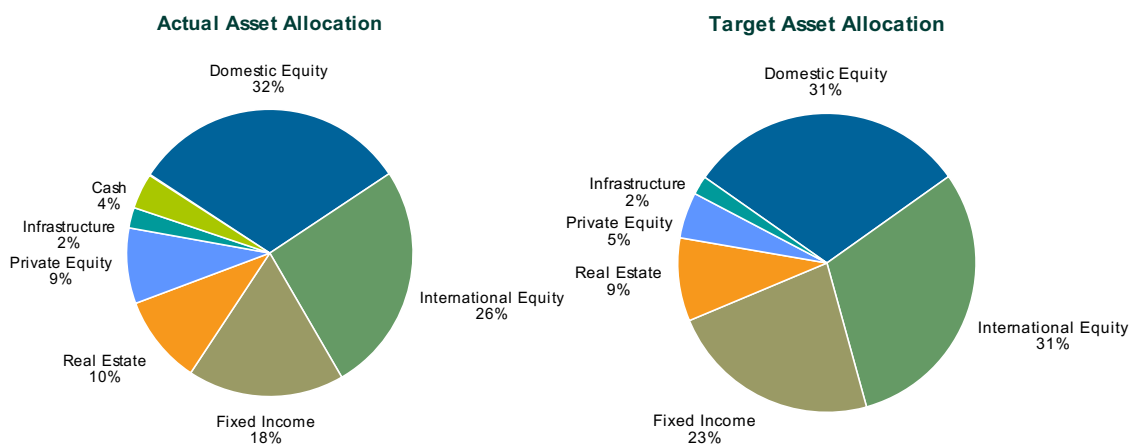
In addition to the personnel turnover described above, based on the watch list parameters for performance, the J.P. Morgan SPF qualifies to be added to the watch list for underperformance.

- WAMCO – Western Asset Management Company: In May 2024, WAMCO informed Callan that PM John Bellows resigned from the firm due to personal reasons.
Bellows took over managerial responsibilities of the generalist PM team from Mark Lindbloom in November of last year and began reporting to Buchanan. With Bellows' unexpected departure, Lindbloom will reassume this responsibility, though it is unclear whether this reassignment will be temporary or permanent. According to co-CIO Ken Leech, they will look both internally and externally to fill Bellows' role, given Lindbloom's 46 years of industry experience.
- Morgan Stanley – International Equity: Included on the watch list due to performance reasons.

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Asset Allocation

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Asset Class	\$Millions Actual	Weight Actual	Target	Percent Difference	\$Millions Difference
Domestic Equity	3,954	31.5%	30.5%	1.0%	130
International Equity	3,253	25.9%	30.5%	(4.6%)	(571)
Fixed Income	2,217	17.7%	23.0%	(5.3%)	(667)
Real Estate	1,258	10.0%	9.0%	1.0%	130
Private Equity	1,069	8.5%	5.0%	3.5%	442
Infrastructure	283	2.3%	2.0%	0.3%	32
Cash	503	4.0%	0.0%	4.0%	503
Total	12,538	100.0%	100.0%		

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INVESTMENT MANAGER ASSET ALLOCATIONS

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of March 31, 2024, with the distribution as of December 31, 2023. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

	March 31, 2024			December 31, 2023		
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
DOMESTIC EQUITY	\$3,954,407,240	31.54%	\$(14,865,233)	\$345,508,066	\$3,623,764,406	30.01%
Rhumblin Rsl 1000 LCC	2,561,266,849	20.43%	(9,265,965)	233,766,594	2,336,766,220	19.35%
Rhumblin Rsl 1000 LCG	406,195,281	3.24%	(794,858)	40,983,555	366,006,584	3.03%
Zevenbergen US ACE	130,541,969	1.04%	(144,029)	14,486,972	116,199,025	0.96%
Channing US ACE	148,263,333	1.18%	(983,851)	8,161,988	141,085,197	1.17%
Rhumblin LCV	328,221,139	2.62%	(1,815,509)	26,458,289	303,578,359	2.51%
NT GI Structured SCC	90,084,007	0.72%	(424,597)	5,157,770	85,350,834	0.71%
Conestoga SCG	111,410,229	0.89%	(286,721)	4,172,796	107,524,154	0.89%
Phocas SCV	97,045,477	0.77%	(884,233)	4,564,445	93,365,265	0.77%
Attucks Domestic Equity (Mgr of Mgrs)	\$81,378,957	0.65%	\$(265,468)	\$7,755,657	\$73,888,767	0.61%
Attucks Matarin SCC	1,653	0.00%	(23)	22	1,654	0.00%
Attucks Heard ACC	38,977,597	0.31%	(145,375)	2,143,182	36,979,790	0.31%
Attucks Lasanti	26,941,133	0.21%	(20,365)	4,277,267	22,684,230	0.19%
Attucks Paradigm LCV	15,442,705	0.12%	(99,533)	1,334,895	14,207,344	0.12%
Attucks Cash Acct LCE	564	0.00%	(55)	378	241	0.00%
Attucks Transition	15,304	0.00%	(116)	(87)	15,508	0.00%
INTERNATIONAL EQUITY	\$3,252,912,104	25.95%	\$(21,089,621)	\$140,040,548	\$3,133,961,177	25.95%
Ariel EAFE ILCV	77,687,785	0.62%	(485,114)	4,005,656	74,167,243	0.61%
DFA ISCV	186,216,415	1.49%	(3,331,591)	9,260,001	180,288,006	1.49%
Earnest Partners EME	195,087,150	1.56%	(1,563,511)	(617,332)	197,267,993	1.63%
Earnest Partners ILCE	540,574,013	4.31%	(2,558,422)	26,252,807	516,879,628	4.28%
Lazard Asst Mgt ILCE	536,456,261	4.28%	(5,892,279)	30,791,032	511,557,507	4.24%
Leading Edge IE MOM	145,081,795	1.16%	(846,348)	5,621,202	140,306,942	1.16%
Morgan Stanley ILCE	546,649,788	4.36%	(2,238,259)	13,870,610	535,017,438	4.43%
Strategic Global Adv. EAFE	87,394,199	0.70%	(346,916)	5,941,182	81,799,934	0.68%
William Blair ILCG	609,575,367	4.86%	(2,088,440)	38,758,266	572,905,541	4.74%
William Blair ISCE	190,792,855	1.52%	(744,227)	(1,344,950)	192,882,033	1.60%
Attucks Int'l Equity	\$137,396,476	1.10%	\$(994,513)	\$7,502,075	\$130,888,913	1.08%
Attucks ARI	302	0.00%	0	(8)	310	0.00%
Attucks GlobeFlex Global Eq	36,515,851	0.29%	(99,283)	3,379,065	33,236,070	0.28%
Attucks Brown Capital Int'l SCG	27,416,901	0.22%	(437,219)	436,534	27,417,586	0.23%
Attucks Glovista EM Equity	18,661,700	0.15%	(300,694)	317,366	18,645,028	0.15%
Attucks Redwood Int'l ACC	27,901,804	0.22%	(63,642)	2,102,451	25,862,996	0.21%
Attucks Paradigm ILCC	26,899,917	0.21%	(93,674)	1,266,668	25,726,924	0.21%
FIXED INCOME	\$2,217,091,653	17.68%	\$(22,025,190)	\$(15,047,886)	\$2,254,164,728	18.67%
Garcia Hamilton FIC	259,025,081	2.07%	(2,648,244)	(3,747,544)	265,420,869	2.20%
LM Capital FICP	303,635,465	2.42%	(3,211,354)	(816,589)	307,663,408	2.55%
Pugh FIC	258,382,491	2.06%	(2,528,031)	(1,657,302)	262,567,823	2.17%
SSgA Agg Bond Index FI	400,516,579	3.19%	(3,116,127)	(3,377,596)	407,010,302	3.37%
Ramirez Fixed Income	108,782,641	0.87%	(1,098,643)	(455,141)	110,336,425	0.91%
WAMCO FICP	568,110,476	4.53%	(6,415,831)	(4,647,479)	579,173,786	4.80%
Wellington Core Bond	262,470,768	2.09%	(2,559,014)	(353,033)	265,382,815	2.20%
Attucks Fixed Income	\$56,168,150	0.45%	\$(447,946)	\$6,798	\$56,609,299	0.47%
Attucks Barksdale	17,228,390	0.14%	(137,753)	(152,890)	17,519,032	0.15%
Attucks New Century GI TIPS	19,767,737	0.16%	(62,037)	(160,990)	19,990,764	0.17%
Attucks LM Capital EMD	19,172,023	0.15%	(248,156)	320,677	19,099,502	0.16%
TOTAL FUND	\$12,537,695,518	100.00%	\$5,541,924	\$457,178,541	\$12,074,975,052	100.00%

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INVESTMENT MANAGER ASSET ALLOCATIONS (Continued)

	March 31, 2024			Inv. Return	December 31, 2023	
	Market Value	Weight	Net New Inv.		Market Value	Weight
INFRASTRUCTURE	\$282,626,384	2.25%	\$(2,920,277)	\$11,301,299	\$274,245,363	2.27%
Brookfield Infra III	52,447,118	0.42%	(3,018,174)	2,268,850	53,196,442	0.44%
Brookfield Infrastructure IV	25,498,177	0.20%	(329,338)	1,132,538	24,694,977	0.20%
Brookfield Infrastructure Fund V	8,364,381	0.07%	949,553	359,241	7,055,587	0.06%
JLC Infrastructure Fund I	6,863,488	0.05%	1,235,737	5,926	5,621,825	0.05%
IFM Global Fund	47,501,728	0.38%	(91,004)	1,327,189	46,265,542	0.38%
JP Morgan Infr-OE	85,089,286	0.68%	(1,104,954)	4,588,947	81,605,293	0.68%
Macquarie European Fd III Infr	156,748	0.00%	(252,640)	(18,891)	428,278	0.00%
Macquarie Infrastructure V	27,987,940	0.22%	(267,570)	965,973	27,289,537	0.23%
Macquarie Infrastructure VI	11,574,749	0.09%	(41,887)	413,634	11,203,003	0.09%
Ullico Taxable Fund	17,142,769	0.14%	0	257,892	16,884,878	0.14%
REAL ESTATE	\$1,258,431,668	10.04%	\$(5,682,813)	\$(51,649,720)	\$1,315,764,200	10.90%
BIG RE Fund I	20,149,436	0.16%	0	0	20,149,436	0.17%
BIG RE Fund II	22,418,433	0.18%	1,912,287	0	20,506,146	0.17%
BREDS HG LP	18,183,335	0.15%	(228,680)	423,447	17,988,569	0.15%
Clarion Lion Indus Tr	227,198,821	1.81%	(611,109)	(7,042,720)	234,852,650	1.94%
Europa Fd III PRE	81,543	0.00%	(145,142)	(62,667)	289,351	0.00%
Fortress Japan PRE	956,772	0.01%	27,907	339,446	589,419	0.00%
Fortress Japan Fd II PRE	697,409	0.01%	(18,767)	104,894	611,282	0.01%
Franklin Temp PREMOM	175,501	0.00%	(10,584)	(382,657)	568,742	0.00%
GreenOak Fund III	15,454,455	0.12%	575,547	(3,641,216)	18,520,124	0.15%
Heitman IV LP	21,155,369	0.17%	(361,052)	(269,631)	21,786,051	0.18%
Heitman V LP	24,219,913	0.19%	4,817,648	(549,901)	19,952,166	0.17%
JP Morgan Strat PRE-OE	153,192,738	1.22%	(2,505,575)	(8,907,491)	164,605,804	1.36%
LaSalle Property PRE-OE	230,013,312	1.83%	(2,327,663)	(11,520,163)	243,861,138	2.02%
Longpoint RE Fd I	31,489	0.00%	481	(2,334)	33,342	0.00%
Longpoint RE Fd II	28,044,108	0.22%	(364,075)	68,780	28,339,403	0.23%
Lonpoint Realty Fund III	3,400,000	0.03%	(3,400,000)	0	6,800,000	0.06%
Long Wharf VI	24,120,834	0.19%	(230,237)	475,578	23,875,493	0.20%
Long Wharf VII	5,824,184	0.05%	1,134,334	0	4,689,850	0.04%
MB Asia RE Fd PRE	139,970	0.00%	0	(2,089)	142,059	0.00%
Newport Cap Fund II	20,467,413	0.16%	213,178	(0)	20,254,235	0.17%
Newport Cap Fund III	18,351,819	0.15%	0	0	18,351,819	0.15%
Oak Street Fund IV RE	9,409,483	0.08%	162,182	(774,218)	10,021,519	0.08%
PRISA Fd I PRE-OE	165,481,799	1.32%	(1,558,738)	(8,194,805)	175,235,342	1.45%
PRISA Fd II PRE-OE	118,711,786	0.95%	(1,784,448)	(6,624,477)	127,120,711	1.05%
SASC II	14,806,116	0.12%	382,493	0	14,423,623	0.12%
TA Associates Realty Fund XII	43,751,718	0.35%	78,827	(809,855)	44,482,746	0.37%
TA Associates Realty Fund XIII	6,665,259	0.05%	(450,907)	(1,633,834)	8,750,000	0.07%
UBS Realty PRE-OE	53,525,611	0.43%	(530,542)	(2,249,578)	56,305,731	0.47%
Walton St Fd III PRE	15,897	0.00%	0	3,057	12,840	0.00%
Walton St Fd V PRE	698,638	0.01%	0	(28,210)	726,848	0.01%
Walton St Fd VI PRE	10,296,411	0.08%	(4,342)	(348,881)	10,649,634	0.09%
Walton St Mexico Fd I PRE	792,095	0.01%	(455,836)	(20,194)	1,268,126	0.01%
TOTAL FUND	\$12,537,695,518	100.00%	\$5,541,924	\$457,178,541	\$12,074,975,052	100.00%

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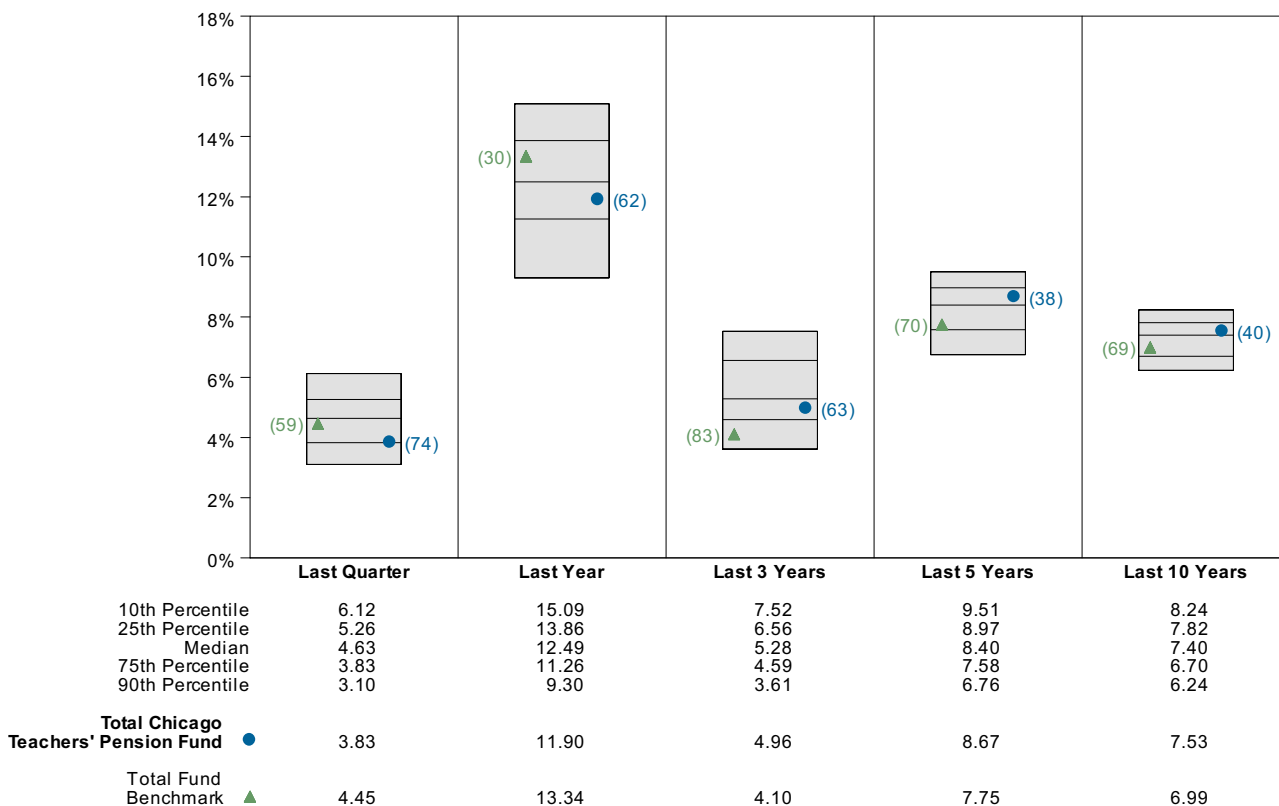
INVESTMENT MANAGER ASSET ALLOCATIONS (Continued)

	March 31, 2024			December 31, 2023		
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
PRIVATE EQUITY	\$1,069,079,249	8.53%	\$10,678,321	\$22,203,853	\$1,036,197,075	8.58%
Adams St Many Fd PE	460,837,122	3.68%	10,725,090	16,728,162	433,383,870	3.59%
African Dev Ptr III	8,604,011	0.07%	(423,591)	1,012,112	8,015,490	0.07%
AFIG Fund II LP	6,256,497	0.05%	29,425	(757,759)	6,984,831	0.06%
Aldrich Capital Partners II	1,230,025	0.01%	(10,279)	51,522	1,188,782	0.01%
Astra Partners I	12,755,930	0.10%	479,999	(0)	12,275,932	0.10%
AUA II	6,633,332	0.05%	(214,540)	1,072,699	5,775,173	0.05%
AVP XI LP	33,901,439	0.27%	(48,750)	(13,946)	33,964,135	0.28%
AVP XII LP	19,555,359	0.16%	570,000	(18,710)	19,004,069	0.16%
AVP XIII	5,249,204	0.04%	869,375	(14,603)	4,394,432	0.04%
Data Focus I	17,449,780	0.14%	482,188	(0)	16,967,592	0.14%
EQT Fund VIII	23,835,246	0.19%	1,014,470	(1,153,226)	23,974,002	0.20%
EQT IX LP	26,453,769	0.21%	112,237	(311,626)	26,653,158	0.22%
EQT X LP	2,283,329	0.02%	111,945	95,082	2,076,301	0.02%
Estancia II	7,504,252	0.06%	(2,873,024)	0	10,377,276	0.09%
Farol Fund II	16,916,340	0.13%	56,917	0	16,859,423	0.14%
Farol Fund III	4,666,451	0.04%	4,666,451	0	-	-
HarbourVest Ptrs VI PE	71,802	0.00%	0	(2,133)	73,935	0.00%
HarbourVest Ptrs VII PE	18,250,022	0.15%	(613,186)	0	18,863,208	0.16%
HarbourVest Ptrs VIII PE	1,063,628	0.01%	(388,561)	84	1,452,105	0.01%
HVP Buyout X PE	17,957,664	0.14%	0	0	17,957,664	0.15%
HVP Venture X PE	15,413,035	0.12%	(119,953)	7	15,532,981	0.13%
HVP Brand Fd II	2,813,506	0.02%	0	0	2,813,506	0.02%
Hispania Fd II PE	3,296	0.00%	0	(8,267)	11,563	0.00%
ICV Capital Ptrs III PE	7,511,464	0.06%	44,826	(273,275)	7,739,913	0.06%
ICV Capital Ptrs IV PE	21,721,714	0.17%	(437,777)	(542,439)	22,701,930	0.19%
KKR Americas Fd XII	29,687,924	0.24%	(1,903,999)	1,462,694	30,129,229	0.25%
KKR Americas Fd XIII	15,328,049	0.12%	3,219,935	471,498	11,636,616	0.10%
Long Arc Capital Fd I	9,325,258	0.07%	421,468	0	8,903,790	0.07%
MB SPO FD II	3,353,289	0.03%	244,802	0	3,108,488	0.03%
Mesirow Fd IV PE	2,236,826	0.02%	(200,000)	0	2,436,826	0.02%
Mesirow Fd V PE	9,266,346	0.07%	(360,000)	0	9,626,346	0.08%
Mesirow Fd VII A PE	19,739,258	0.16%	0	0	19,739,258	0.16%
Mesirow Fd VII B PE	14,780,941	0.12%	(21,875)	(395)	14,803,211	0.12%
Mesirow Fund VIII	18,227,839	0.15%	700,000	0	17,527,839	0.15%
Mesirow Fd X PE	3,125,163	0.02%	(1,964,823)	0	5,089,986	0.04%
NMS Capital Fund III	18,538,239	0.15%	61,978	(484,960)	18,961,221	0.16%
NMS Capital Fund IV	17,085,296	0.14%	315,156	2,139,828	14,630,313	0.12%
P4G I	11,188,180	0.09%	(1,058,114)	0	12,246,294	0.10%
Palladium Ptrs IV PE	10,190,417	0.08%	43,445	0	10,146,972	0.08%
Palladium Ptrs V PE	19,006,527	0.15%	(3,077,088)	1,297,339	20,786,276	0.17%
Pantheon Asia Fd V PE	300,794	0.00%	0	0	300,794	0.00%
Pantheon Europe Fd II PE	14,833	0.00%	0	(339)	15,171	0.00%
Pantheon Europe Fd VI PE	1,443,237	0.01%	(101,657)	(33,486)	1,578,380	0.01%
Pantheon GI Fd 2014	34,011,220	0.27%	(720,000)	0	34,731,220	0.29%
Pantheon Select Fd	22,990,540	0.18%	815,342	373,732	21,801,466	0.18%
Pantheon USA Fd III PE	17,516	0.00%	0	0	17,516	0.00%
Pantheon USA Fd IV PE	53,120	0.00%	0	0	53,120	0.00%
Pharos Fd II PE	3,963,872	0.03%	0	237,197	3,726,675	0.03%
Pharos Fd III PE	10,293,422	0.08%	37,500	(130,137)	10,386,059	0.09%
Red Arts Capital Opp Fd I	2,610,242	0.02%	0	0	2,610,242	0.02%
RLJ Equity Fund II	13,286,630	0.11%	247,942	(0)	13,038,688	0.11%
Tuming Rock Fd I	4,079,642	0.03%	(1,687,347)	587,690	5,179,299	0.04%
Tuming Rock Fd II	13,547,353	0.11%	1,329,780	419,472	11,798,101	0.10%
Tuming Rock Fd III	2,049,759	0.02%	2,049,759	0	-	-
WM Partners II	12,860,391	0.10%	50,068	35	12,810,288	0.11%
WM Partners III	7,538,905	0.06%	(1,797,213)	0	9,336,118	0.08%
CASH	\$503,147,220	4.01%	\$61,446,738	\$4,822,380	\$436,878,102	3.62%
TOTAL FUND	\$12,537,695,518	100.00%	\$5,541,924	\$457,178,541	\$12,074,975,052	100.00%

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Total Fund Performance vs. Target

Performance vs Callan Public Fund Spons - Large (>1B) (Gross)



Note: Performance is shown gross-of-fees.

Current quarter Policy Target = 30.5% Russell 3000 Index, 30.5% MSCI ACWI ex US Index, 23% Bloomberg Aggregate Bond Index, 9% NFI ODCE Value Weight Index, 5% Russell 3000 Index+3.0% and 2% FTSE Developed Core Infrastructure 50/50 Net.

For the first quarter, the Fund underperformed the market benchmark by 62 basis points, gross of investment management fees (68 basis points net of fees) and ranked in the 74th percentile of its peers. Longer-term performance continues to be competitive relative to benchmarks and peers.

The total manager attribution effect was negative over the quarter. Fixed income, international equity, and infrastructure positively contributed to results. However, domestic equity, real estate, and private equity detracted from results.

The following is a brief summary of the performance of each of the major asset classes represented in the Fund (performance commentary relative to benchmarks is net of fees, while results relative to peers is gross of fees):

- Domestic Equity:** The domestic equity composite underperformed the Russell 3000 Index by 46 basis points over the first quarter, ranking in the 46th percentile of its peers. Zevenbergen and Phocus outperformed their benchmarks by 124 and 203 basis points, respectively.
- International Equity:** The international equity composite outperformed the MSCI ACWI Ex-US IMI Index by 17 basis points for the quarter and ranked in the 66th percentile of its peer group..

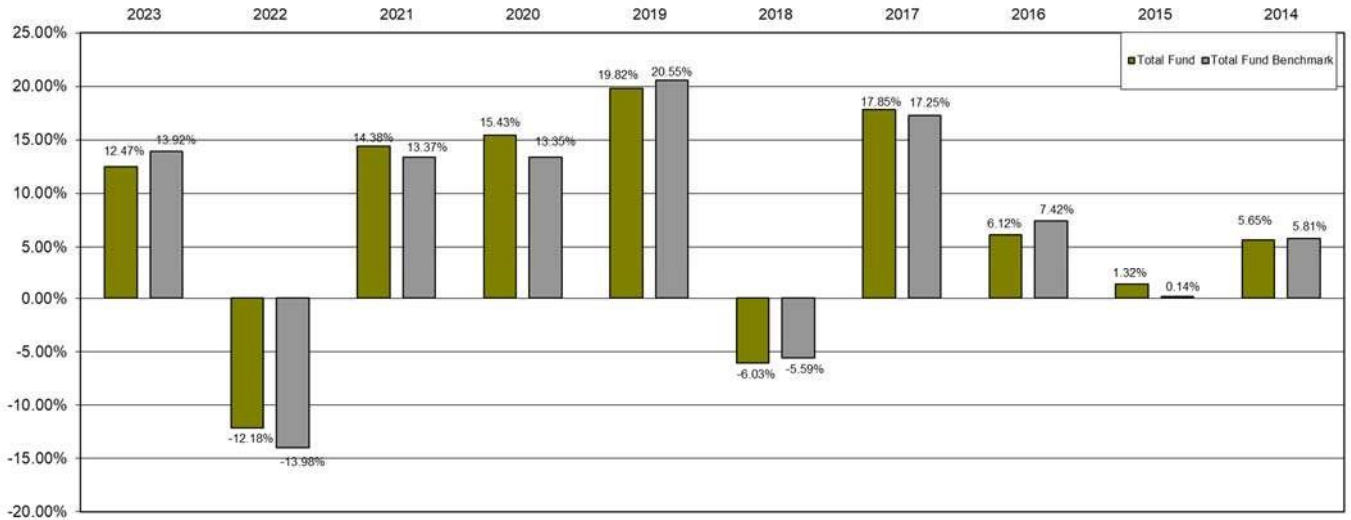
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Dimensional Fund Advisors and the William Blair Growth portfolio exceeded their benchmarks by 247 and 143 basis points, respectively. Morgan Stanley and Earnest Partners detracted from results.

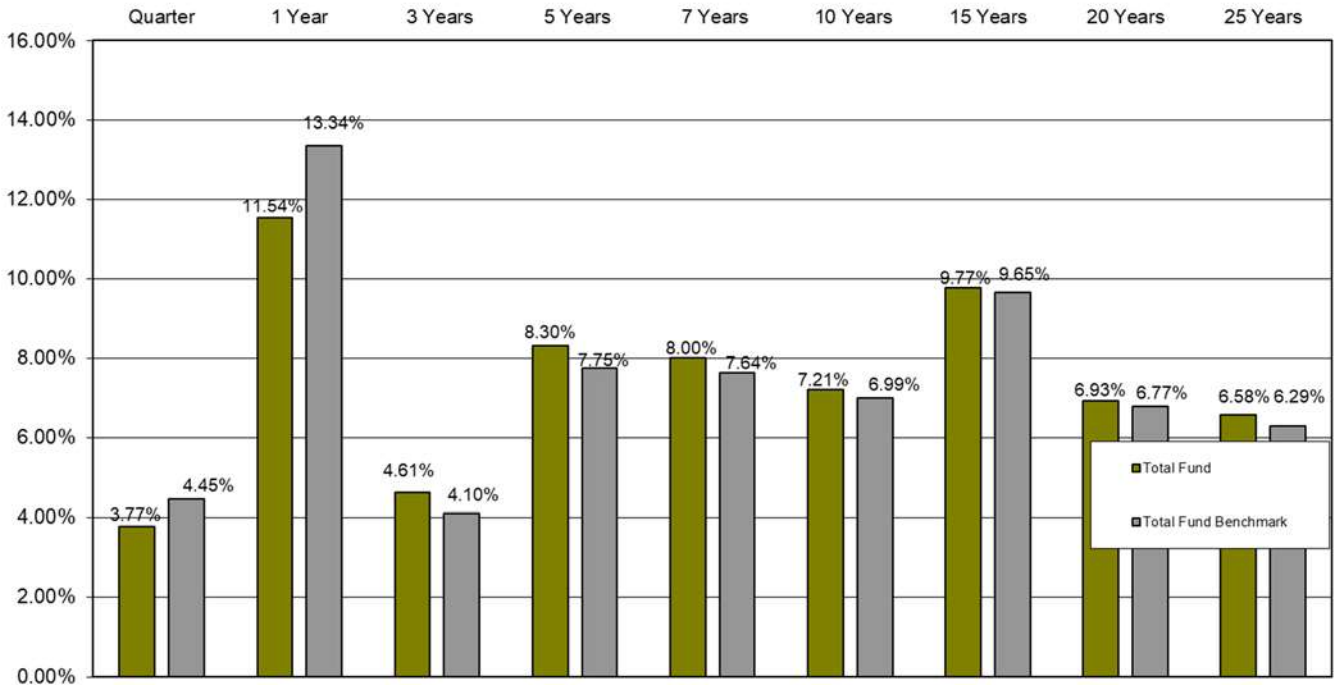
- **Fixed Income:** The fixed income composite outperformed the Bloomberg Aggregate Index by 11 basis points for the quarter and ranked in the 87th percentile of its peers. The managers generally outperformed their benchmarks. Wellington and LM Capital posted strong relative results while Garcia Hamilton failed to beat its benchmarks.
- **Alternative Investments:** The infrastructure portfolio outperformed while the real estate and private equity portfolios underperformed on a time-weighted return basis. It is important to note that performance evaluation for these instruments should encompass several metrics that go beyond time-weighted return calculations. These metrics take into account the timing and magnitude of distributions and contributions over the life of these investments. This cash flow activity is imperative in evaluating the success of these instruments. Hence, these portfolios are evaluated separately and more rigorously under separate cover.

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Total Fund Calendar Year Performance, Net of Fees



Total Fund Performance Over Various Trailing Periods, Net of Fees



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MANAGER PERFORMANCE

Table 1 presents returns for the public market domestic and international equity and fixed income managers and composites in the Chicago Teacher Pension Fund relative to appropriate benchmarks on a net of fee basis. Managers highlighted in red are currently on the Watch List.

Table 1 (Net-of-Fees):

CTPF Investment Strategies	Net Investment Returns as of 3/31/2024						Inception Date	Qtr-End MV
	Qtr	1 Yr	3 Yr	5 Yr	7 Yr	Since Inception		
FUND								
Fixed Income								
SSgA Aggregate Bond Index	-0.84	1.73	-2.48	-	-	-0.94	Aug-19	\$401m
Bloomberg Barclays Aggregate Index	-0.78	1.70	-2.46	-	-	-0.87		
Variance	-0.06	0.03	-0.02	-	-	-0.07		
Wellington Core Bond	-0.17	3.30	-2.36	-	-	-0.43	Aug-19	\$262m
Bloomberg Barclays Aggregate Index	-0.78	1.70	-2.46	-	-	-0.87		
Variance	0.61	1.60	0.10	-	-	0.44		
Garcia Hamilton	-1.44	-0.04	-2.24	0.48	1.20	2.55	Oct-10	\$259m
Bloomberg Barclays Aggregate Index	-0.78	1.70	-2.46	0.36	1.06	1.91		
Variance	-0.66	-1.74	0.22	0.12	0.14	0.64		
LM Capital*	-0.30	2.74	-1.78	1.07	1.49	3.28	Nov-04	\$304m
Bloomberg Barclays Aggregate Index	-0.78	1.70	-2.46	0.36	1.06	3.00		
Variance	0.48	1.04	0.68	0.71	0.43	0.28		
Pugh Capital Management	-0.66	2.24	-2.27	0.67	1.29	2.13	Oct-10	\$258m
Bloomberg Barclays Aggregate Index	-0.78	1.70	-2.46	0.36	1.06	1.91		
Variance	0.12	0.54	0.19	0.31	0.23	0.22		
Ramirez Fixed Income	-0.46	2.25	-	-	-	-7.12	Dec-21	\$109m
Bloomberg Barclays Aggregate Index	-0.78	1.70	-	-	-	-7.37		
Variance	0.32	0.55	-	-	-	0.25		
Western Asset Management	-0.84	2.55	-3.03	0.61	1.46	4.02	Feb-03	\$568m
Bloomberg Barclays Aggregate Index	-0.78	1.70	-2.46	0.36	1.06	3.15		
Variance	-0.06	0.85	-0.57	0.25	0.40	0.87		

*LM mandate changed from Core Bond to Core Plus Bond as of 7/1/13. Peer group rankings are not applicable to the full track record given the change in mandates.

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Table 1 (Net-of-Fees, Continued):

CTPF Investment Strategies	Net Investment Returns as of 3/31/2024						Inception Date	Qtr-End MV
	FUND	Qtr	1 Yr	3 Yr	5 Yr	7 Yr		
Large Cap Equity								
Rhumbline Russell 1000 Index Fund	10.03	29.31	10.40	14.67	13.74	9.74	Jun-07	\$2,561m
Russell 1000 Index	10.30	29.87	10.45	14.76	13.85	9.73		
Variance	-0.27	-0.56	-0.05	-0.09	-0.11	0.01		
Rhumbline Russell 1000 Growth Index Fund	11.21	38.53	12.68	18.57	-	17.73	Oct-17	\$406m
Russell 1000 Growth Index	11.41	39.00	12.50	18.52	-	17.70		
Variance	-0.20	-0.47	0.18	0.05	-	0.03		
Zevenbergen Capital Management	12.38	42.01	-6.13	13.84	16.36	11.56	Oct-92	\$131m
Russell 3000 Growth Index	11.23	37.95	11.54	17.82	17.43	10.57		
Variance	1.15	4.06	-17.67	-3.98	-1.07	0.99		
Channing*	5.70	18.26	5.80	12.29	10.09	13.17	Jul-09	\$148m
Channing Benchmark	8.62	20.18	7.74	10.18	8.98	12.28		
Variance	-2.92	-1.92	-1.94	2.11	1.11	0.89		
Rhumbline LCV	8.76	19.76	-	-	-	4.90	Jan-22	\$328m
Russell 1000 Value Index	8.99	20.27	-	-	-	11.72		
Variance	-0.23	-0.51	-	-	-	-6.82		
Small Cap Equity								
Northern Trust Small Cap	6.05	20.81	3.45	9.76	9.03	11.63	Jan-91	\$90m
Russell 2000 Index	5.18	19.71	-0.10	8.10	7.73	10.22		
Variance	0.87	1.10	3.55	1.66	1.30	1.41		
Conestoga Small Cap Growth	3.71	12.80	1.38	9.63	-	6.50	Jul-18	\$111m
Russell 2000 Growth Index	7.58	20.30	-2.68	7.38	-	4.51		
Variance	-3.87	-7.50	4.06	2.25	-	1.99		
Phocas Small Cap Value	4.73	21.94	5.24	9.97	7.34	9.06	Jul-16	\$97m
Russell 2000 Value Index	2.90	18.75	2.22	8.17	6.55	8.88		
Variance	1.83	3.19	3.02	1.80	0.79	0.18		
Manager of Managers								
Attucks**	5.87	17.11	1.65	6.40	6.59	6.18	Dec-13	\$275m
Custom Benchmark	5.32	15.69	3.61	7.85	7.56	6.70		
Variance	0.55	1.42	-1.96	-1.45	-0.97	-0.52		

*Channing mandate changed from Mid Cap Value to All Cap Value as of 10/1/11. The Channing Benchmark reflects the Russell MC Value Index through 9/30/11 and Russell 3000 Value thereafter. Peer group rankings are not applicable to the full track record given the change in mandates.

**In 4Q13, Attucks was transitioned from a domestic equity portfolio to a Best-in-Class portfolio.

**Chicago Teachers' Pension Fund
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First Quarter 2024**

Table 1 (Net-of-Fees, Continued):

CTPF Investment Strategies		Net Investment Returns as of 3/31/2024					Inception Date	Qtr-End MV
FUND	Qtr	1 Yr	3 Yr	5 Yr	7 Yr	Since Inception		
International Equity								
Ariel Investments	5.26	10.07	2.60	4.30	3.87	4.56		
MSCI EAFE Index	5.78	15.32	4.78	7.33	6.70	7.76	Jul-16	
Variance	-0.52	-5.25	-2.18	-3.03	-2.83	-3.20	\$78m	
EARNEST Partners	5.00	14.67	5.03	7.99	7.63	5.90		
MSCI ACWI ex-US Index	4.69	13.26	1.94	5.97	5.88	3.19	Apr-07	
Variance	0.31	1.41	3.09	2.02	1.75	2.71	\$541m	
Lazard	6.04	16.27	3.85	6.26	5.96	5.60		
MSCI ACWI ex-US Index	4.69	13.26	1.94	5.97	5.88	4.77	Jan-01	
Variance	1.35	3.01	1.91	0.29	0.08	0.83	\$536m	
Morgan Stanley	2.50	8.03	2.53	5.95	5.92	7.83		
MSCI EAFE Index	5.78	15.32	4.78	7.33	6.70	5.26	Apr-95	
Variance	-3.28	-7.29	-2.25	-1.38	-0.78	2.57	\$547m	
Strategic Global Advisors	7.16	18.40	5.60	6.28	5.84	6.80		
MSCI EAFE Index	5.78	15.32	4.78	7.33	6.70	7.76	Jul-16	
Variance	1.38	3.08	0.82	-1.05	-0.86	-0.96	\$87m	
William Blair Growth	6.70	14.11	-0.24	8.47	8.20	7.89		
MSCI ACWI ex-US IMI Growth Index	5.35	11.06	-1.00	6.17	6.56	6.11	Feb-10	
Variance	1.35	3.05	0.76	2.30	1.64	1.78	\$610m	
William Blair International Small Cap	-0.88	7.43	-5.32	5.19	4.59	3.93		
William Blair ISCE Benchmark*	1.82	10.00	-2.51	5.76	5.75	3.48	Apr-07	
Variance	-2.70	-2.57	-2.81	-0.57	-1.16	0.45	\$191m	
Dimensional Fund Advisors	5.25	16.10	6.10	7.69	5.37	8.40		
MSCI World Small Cap ex-US Value	2.89	12.88	2.22	5.82	5.10	7.31	Jun-12	
Variance	2.36	3.22	3.88	1.87	0.27	1.09	\$186m	
EARNEST Partners Emerging Markets	-0.41	7.34	0.22	4.46	5.62	3.56		
MSCI Emerging Markets Index	2.37	8.15	-5.05	2.22	3.72	2.36	Mar-13	
Variance	-2.78	-0.81	5.27	2.24	1.90	1.20	\$195m	
International Manager of Managers								
Leading Edge	4.03	14.42	2.62	5.55	5.39	5.12		
MSCI ACWI ex-US Index	4.69	13.26	1.94	5.97	5.88	4.84	Apr-10	
Variance	-0.66	1.16	0.68	-0.42	-0.49	0.28	\$145m	

* The William Blair ISCE benchmark is comprised of the MSCI ACWI ex US Small Cap Index through 5/31/12 and the MSCI ACWI ex US Small Cap Growth Index thereafter.

**Chicago Teachers' Pension Fund
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Table 1 (Net-of-Fees, Continued):

CTPF Investment Strategies	Net Investment Returns as of 3/31/2024						Inception Date	Qtr-End MV
	FUND	Qtr	1 Yr	3 Yr	5 Yr	7 Yr		
Infrastructure								
Infrastructure Composite	3.86	11.05	10.73	14.42	13.58	8.71	Nov-08	\$283m
Infrastructure Benchmark*	0.66	1.62	2.53	3.32	4.46	6.38		
Variance	3.20	9.43	8.20	11.10	9.12	2.33		
Real Estate								
Real Estate Composite	-4.11	-9.46	7.99	6.05	6.33	7.01	Jan-02	\$1,258m
NFL-ODCE Value Weight	-2.58	-12.00	2.47	2.56	3.76	6.07		
Variance	-1.53	2.54	5.52	3.49	2.57	0.94		
Private Equity								
Private Equity Composite	2.09	7.54	15.22	16.72	16.28	10.69	Jan-02	\$1,069m
Private Equity Benchmark**	10.59	32.63	13.40	18.10	16.88	10.28		
Variance	-8.50	-25.09	1.82	-1.38	-0.60	0.41		

*The Infrastructure Benchmark is 8% Annualized Return through 9/30/17 and FTSE Developed Core Infrastructure 50/50 (Net) thereafter.

**The Private Equity Benchmark is Russell 3000 through 9/30/17, thereafter Russell 3000+3%.

Note: Private market investments shown above are typically reported on a one quarter lag. Private Equity returns are, at times, reported on a longer lag. Comments on Infrastructure, REITS and Real Estate are covered in the quarterly Real Estate Report. Private Equity is discussed in the quarterly Private Equity Report.

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MANAGER PERFORMANCE

Table 1 presents returns for the public market domestic and international equity and fixed income managers and composites in the Chicago Teacher Pension Fund relative to appropriate benchmarks on a gross of fee basis. Managers highlighted in red are currently on the Watch List.

Table 2 (Gross-of-Fees):

CTPF Investment Strategies	Gross Investment Returns as of 3/31/2024						Inception Date	Qtr-End MV
	Qtr	1 Yr	3 Yr	5 Yr	7 Yr	Since Inception		
FUND								
Fixed Income								
SSgA Aggregate Bond Index	-0.83	1.77	-2.44	-	-	-0.90	Aug-19	\$401m
Bloomberg Barclays Aggregate Index	-0.78	1.70	-2.46	-	-	-0.87		
Variance	-0.05	0.07	0.02	-	-	-0.03		
Peer Ranking – CAI Core Bond	96	86	90	-	-			
Wellington Core Bond	-0.13	3.48	-2.18	-	-	-0.26	Aug-19	\$262m
Bloomberg Barclays Aggregate Index	-0.78	1.70	-2.46	-	-	-0.87		
Variance	0.65	1.78	0.28	-	-	0.61		
Peer Ranking – CAI Core Bond	10	7	71	-	-			
Garcia Hamilton	-1.41	0.09	-2.12	0.61	1.33	2.71	Oct-10	\$259m
Bloomberg Barclays Aggregate Index	-0.78	1.70	-2.46	0.36	1.06	1.91		
Variance	-0.63	-1.61	0.34	0.25	0.27	0.80		
Peer Ranking – CAI Core Bond	99	99	62	89	90			
LM Capital*	-0.26	2.89	-1.64	1.21	1.64	3.45	Nov-04	\$304m
Bloomberg Barclays Aggregate Index	-0.78	1.70	-2.46	0.36	1.06	3.00		
Variance	0.52	1.19	0.82	0.85	0.58	0.45		
Peer Ranking - CAI Core Plus Bond	67	66	46	66	82			
Pugh Capital Management	-0.63	2.38	-2.13	0.81	1.43	2.29	Oct-10	\$258m
Bloomberg Barclays Aggregate Index	-0.78	1.70	-2.46	0.36	1.06	1.91		
Variance	0.15	0.68	0.33	0.45	0.37	0.38		
Peer Ranking - CAI Core Bond	79	59	65	75	81			
Ramirez Fixed Income	-0.41	2.44	-	-	-	-6.97	Dec-21	\$109m
Bloomberg Barclays Aggregate Index	-0.78	1.70	-	-	-	-7.37		
Variance	0.37	0.74	-	-	-	0.40		
Peer Ranking - CAI Core Bond	42	54	-	-	-			
Western Asset Management	-0.80	2.72	-2.87	0.77	1.63	4.20	Feb-03	\$568m
Bloomberg Barclays Aggregate Index	-0.78	1.70	-2.46	0.36	1.06	3.15		
Variance	-0.02	1.02	-0.41	0.41	0.57	1.05		
Peer Ranking - CAI Core Plus Bond	94	71	95	96	83			

*LM mandate changed from Core Bond to Core Plus Bond as of 7/1/13. Peer group rankings are not applicable to the full track record given the change in mandates.

**Chicago Teachers' Pension Fund
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Table 2 (Gross-of-Fees, Continued):

CTPF Investment Strategies	Gross Investment Returns as of 3/31/2024						Inception Date	Qtr-End MV
	FUND	Qtr	1 Yr	3 Yr	5 Yr	7 Yr		
Large Cap Equity								
Rhumbline Russell 1000 Index Fund	10.28	29.83	10.45	14.73	13.82	9.56	Jun-07	\$2,561m
Russell 1000 Index	10.30	29.87	10.45	14.76	13.85	9.73		
Variance	-0.02	-0.04	0.00	-0.03	-0.03	-0.17		
Peer Ranking – CAI Large Cap	67	57	53	47	54			
Rhumbline Russell 1000 Growth Index Fund	11.21	38.54	12.69	18.58	-	17.74	Oct-17	\$406m
Russell 1000 Growth Index	11.41	39.00	21.67	18.52	-	17.70		
Variance	-0.20	-0.46	-8.98	0.06	-	0.04		
Peer Ranking - CAI Large Cap Growth	69	55	16	10	-			
Zevenbergen Capital Management	12.47	42.54	-5.74	14.30	16.83	12.01	Oct-92	\$131m
Russell 3000 Growth Index	11.23	37.95	11.54	17.82	17.43	10.57		
Variance	1.24	4.59	-17.28	-3.52	-0.60	1.44		
Peer Ranking - CAI All Cap Growth	48	17	99	50	38			
Channing*	5.82	18.82	6.32	12.82	10.62	13.71	Jul-09	\$148m
Channing Benchmark	8.62	20.18	7.74	10.18	8.98	12.28		
Variance	-2.80	-1.36	-1.42	2.64	1.64	1.43		
Peer Ranking – CAI All Cap Value	87	74	89	48	59			
Rhumbline LCV	8.76	19.76	-	-	-	4.91	Jan-22	\$328m
Russell 1000 Value Index	8.99	20.27	-	-	-	11.72		
Variance	-0.23	-0.51	-	-	-	-6.81		
Peer Ranking – CAI Large Cap Value	70	71	-	-	-	73		
Small Cap Equity								
Northern Trust Small Cap	6.07	20.92	3.55	9.86	9.12	11.72	Jan-91	\$90m
Russell 2000 Index	5.18	19.71	-0.10	8.10	7.73	10.22		
Variance	0.89	1.21	3.65	1.76	1.39	1.50		
Peer Ranking - CAI Small Cap	43	38	60	72	59			
Conestoga Small Cap Growth	3.89	13.60	2.07	10.40	-	7.74	Jul-18	\$111m
Russell 2000 Growth Index	7.58	20.30	-2.68	7.38	-	4.51		
Variance	-3.69	-6.70	4.75	3.02	-	3.23		
Peer Ranking - CAI Small Cap Growth	91	83	22	47	-			
Phocas Small Cap Value	4.93	22.96	6.12	10.89	8.24	9.94	Jul-16	\$97m
Russell 2000 Value Index	2.90	18.75	2.22	8.17	6.55	8.88		
Variance	2.03	4.21	3.90	2.72	1.69	1.06		
Peer Ranking - CAI Small Cap Value	55	30	54	50	60			
Manager of Managers								
Attucks**	5.87	17.63	2.20	6.99	7.19	6.59	Dec-13	\$275m
Custom Benchmark	5.32	15.69	3.61	7.85	7.56	6.70		
Variance	0.55	1.94	-1.41	-0.86	-0.37	-0.11		

*Channing mandate changed from Mid Cap Value to All Cap Value as of 10/1/11. The Channing Benchmark reflects the Russell MC Value Index through 9/30/11 and Russell 3000 Value thereafter. Peer group rankings are not applicable to the full track record given the change in mandates.

**In 4Q13, Attucks was transitioned from a domestic equity portfolio to a Best-in-Class portfolio.

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Table 2 (Gross-of-Fees, Continued):

CTPF Investment Strategies	Gross Investment Returns as of 3/31/2024						Inception Date	Qtr-End MV
	Qtr	1 Yr	3 Yr	5 Yr	7 Yr	Since Inception		
FUND								
International Equity								
Ariel Investments	5.43	10.82	3.29	5.01	4.57	5.25	Jul-16	\$78m
MSCI EAFE Index	5.78	15.32	4.78	7.33	6.70	7.76		
Variance	-0.35	-4.50	-1.49	-2.32	-2.13	-2.51		
Peer Ranking - CAI Non-US Equity	55	82	58	96	96			
EARNEST Partners	5.11	15.14	5.47	8.43	8.06	6.39	Apr-07	\$541m
MSCI ACWI ex-US Index	4.69	13.26	1.94	5.97	5.88	3.19		
Variance	0.42	1.88	3.53	2.46	2.18	3.20		
Peer Ranking - CAI Non-US Equity	59	46	25	36	28			
Lazard	6.09	16.48	4.03	6.44	6.15	5.91	Jan-01	\$536m
MSCI ACWI ex-US Index	4.69	13.26	1.94	5.97	5.88	4.77		
Variance	1.40	3.22	2.09	0.47	0.27	1.14		
Peer Ranking - CAI Non-US Equity	40	30	48	79	81			
Morgan Stanley	2.60	8.48	2.95	6.38	6.35	8.29	Apr-95	\$547m
MSCI EAFE Index	5.78	15.32	4.78	7.33	6.70	5.26		
Variance	-3.18	-6.84	-1.83	-0.95	-0.35	3.03		
Peer Ranking - CAI Non-US Equity	87	92	65	80	76			
Strategic Global Advisors	7.28	18.97	6.12	6.81	6.36	7.32	Jul-16	\$87m
MSCI EAFE Index	5.78	15.32	4.78	7.33	6.70	7.76		
Variance	1.50	3.65	1.34	-0.52	-0.34	-0.44		
Peer Ranking - CAI Non-US Equity	21	15	20	73	76			
William Blair Growth	6.78	14.51	0.12	8.85	8.58	8.28	Feb-10	\$610m
MSCI ACWI ex-US IMI Growth Index	5.35	11.06	-1.00	6.17	6.56	6.11		
Variance	1.43	3.45	1.12	2.68	2.02	2.17		
Peer Ranking - CAI Core Growth Int'l Equity	36	29	61	20	25			
William Blair International Small Cap	-0.69	8.31	-4.52	6.06	5.46	4.88	Apr-07	\$191m
William Blair ISCE Benchmark*	1.82	10.00	-2.51	5.76	5.75	3.48		
Variance	-2.51	-1.69	-2.01	0.30	-0.29	1.40		
Peer Ranking - CAI Int'l Small Cap Equity	92	74	86	58	64			
Dimensional Fund Advisors	5.36	16.22	6.14	7.71	5.39	8.43	Jun-12	\$186m
MSCI World Small Cap ex-US Value	2.89	12.88	2.22	5.82	5.1	7.31		
Variance	2.47	3.34	3.92	1.89	0.29	1.12		
Peer Ranking - CAI Int'l Small Cap Equity	41	28	7	33	65			
EARNEST Partners Emerging Markets	-0.28	7.91	0.75	5.01	6.17	4.09	Mar-13	\$195m
MSCI Emerging Markets Index	2.37	8.15	-5.05	2.22	3.72	2.36		
Variance	-2.65	-0.24	5.80	2.79	2.45	1.73		
Peer Ranking - CAI EM Equity	82	59	30	38	32			
International Manager of Managers								
Leading Edge	4.03	15.10	3.38	6.35	6.20	5.93	Apr-10	\$145m
MSCI ACWI ex-US Index	4.69	13.26	1.94	5.97	5.88	4.84		
Variance	-0.66	1.84	1.44	0.38	0.32	1.09		
Peer Ranking - CAI Non-US Equity	74	47	56	80	79			

* The William Blair ISCE benchmark is comprised of the MSCI ACWI ex US Small Cap Index through 5/31/12 and the MSCI ACWI ex US Small Cap Growth Index thereafter.

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Table 2 (Gross-of-Fees, Continued):

CTPF Investment Strategies	Gross Investment Returns as of 3/31/2024						Inception Date	Qtr-End MV
	Qtr	1 Yr	3 Yr	5 Yr	7 Yr	Since Inception		
FUND								
Infrastructure								
Infrastructure Composite	4.11	12.26	11.89	15.79	14.66	9.48	Nov-08	\$283m
Infrastructure Benchmark*	0.66	1.62	2.53	3.32	4.46	6.38		
Variance	3.45	10.64	9.36	12.47	10.20	3.10		
Real Estate								
Real Estate Composite	-3.94	-8.83	8.81	6.89	7.13	7.56	Jan-02	\$1,258m
NFI-ODCE Value Weight	-2.58	-12.00	2.47	2.56	3.76	6.07		
Variance	-1.36	3.17	6.34	4.33	3.37	1.49		
Private Equity								
Private Equity Composite	2.13	8.31	16.12	17.84	17.15	11.01	Jan-02	\$1,069m
Private Equity Benchmark**	10.59	32.63	13.40	18.10	16.88	10.28		
Variance	-8.46	-24.32	2.72	-0.26	0.27	0.73		

*The Infrastructure Benchmark is 8% Annualized Return through 9/30/17 and FTSE Developed Core Infrastructure 50/50 (Net) thereafter.

**The Private Equity Benchmark is Russell 3000 through 9/30/17, thereafter Russell 3000+3%.

Note: Private market investments shown above are typically reported on a one quarter lag. Private Equity returns are, at times, reported on a longer lag. Comments on Infrastructure, REITS and Real Estate are covered in the quarterly Real Estate Report. Private Equity is discussed in the quarterly Private Equity Report.

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Manager Watch List

MANAGER/STRATEGY	REASON	DATE PLACED ON WATCH LIST	LAST DUE DILIGENCE MEETING	ACTIONS TAKEN	POLICY/RECOMMENDED ACTIONS	AUM as of 3/31/2024	Current Quarter Watch List Score	Previous Quarter Watch List Score
Ariel - International Equity	Performance Reasons/Personnel Turnover	July 2020	May 2024	Monitor	Monitor	\$78 mil.	0.9	0.9
State Street Global Advisors - Passive Bond	Brokerage	April 2022	March 2024	Monitor	Search	\$401 mil.	N/A	N/A
Attucks	Performance Reasons/Personnel Turnover	March 2023	May 2024	Monitor	Monitor	\$275 mil.	N/A	N/A
William Blair - International Small Cap	Performance Reasons	March 2023	May 2024	Monitor	Monitor	\$191 mil.	0.7	0.5
WAMCO	Personnel Turnover	June 2024	May 2024	Monitor	Montitor	\$568 mil.	0.4	0.4
JP Morgan SPF	Performance Reasons/Personnel Turnover	December 2023	May 2024	Monitor	Monitor	\$153 mil.	N/A	N/A
Morgan Stanley	Performance Reasons	June 2024	May 2024	Monitor	Search	\$547 mil.	0.8	0.8

Policy/Recommended Actions Legend

Remove = Policy action taken due to IPS guidelines. Remove manager from the watch list as performance improves.

Termination = Recommended action for the Board

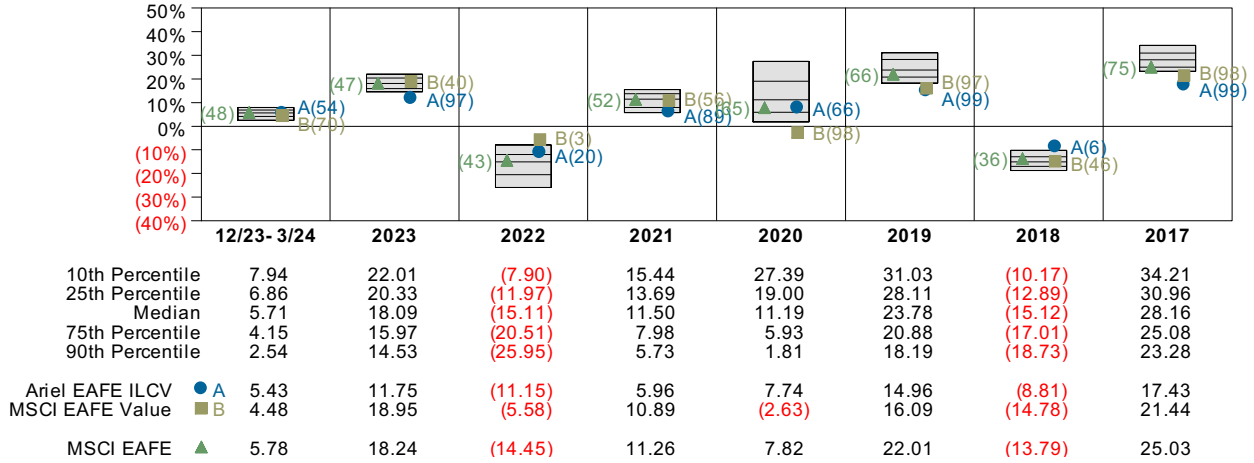
Monitor = Recommended action for the Board

Search = Board authorized a manager search

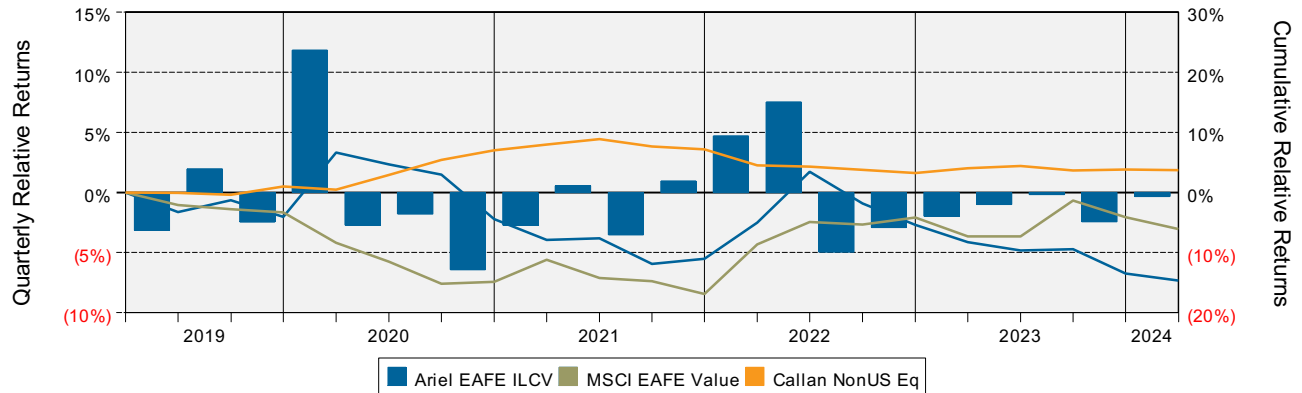
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Manager Watch List: Ariel

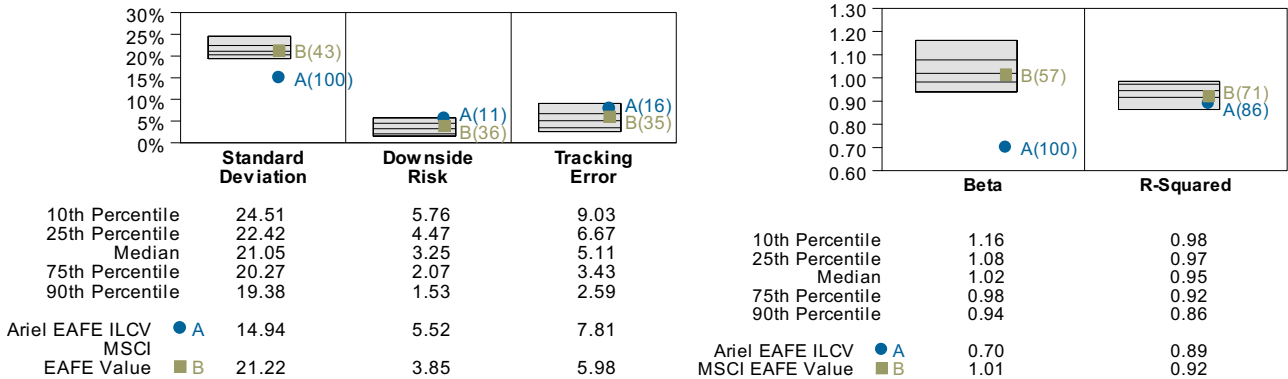
Performance vs Callan Non-US Equity (Gross)



Cumulative and Quarterly Relative Returns vs MSCI EAFE



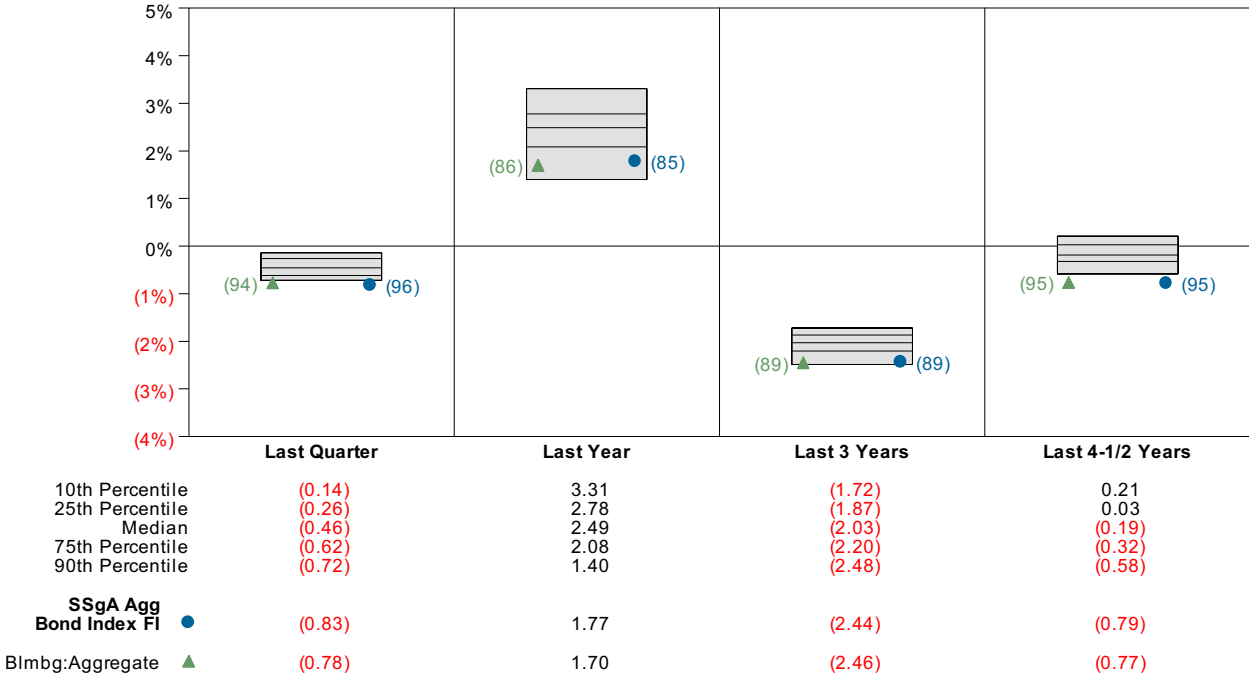
Risk Statistics Rankings vs MSCI EAFE (Net) Rankings Against Callan Non-US Equity (Gross) Five Years Ended March 31, 2024



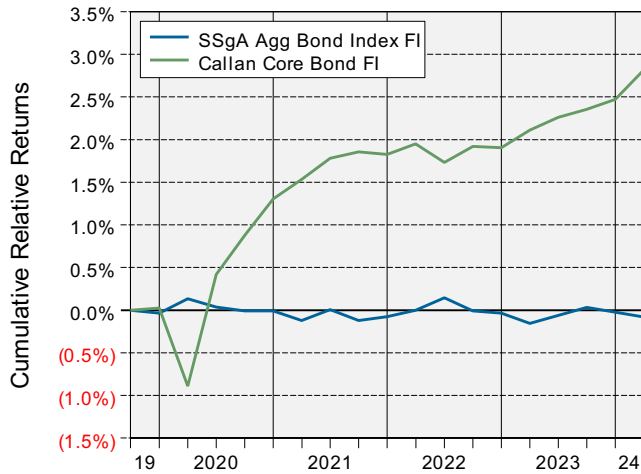
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Manager Watch List: State Street Global Advisors

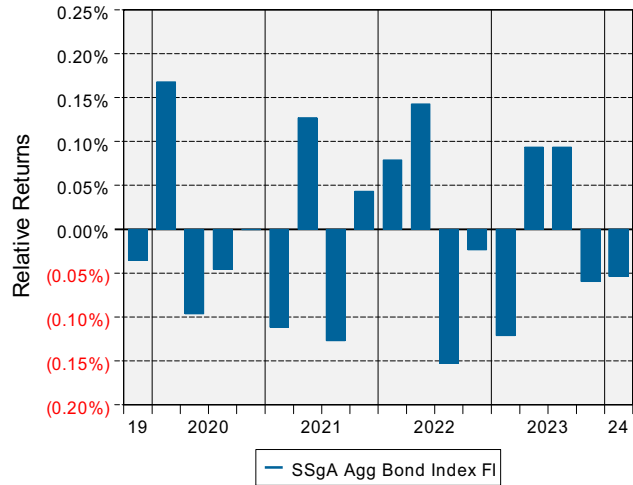
Performance vs Callan Core Bond Fixed Income (Gross)



Cumulative Returns vs Blmbg:Aggregate



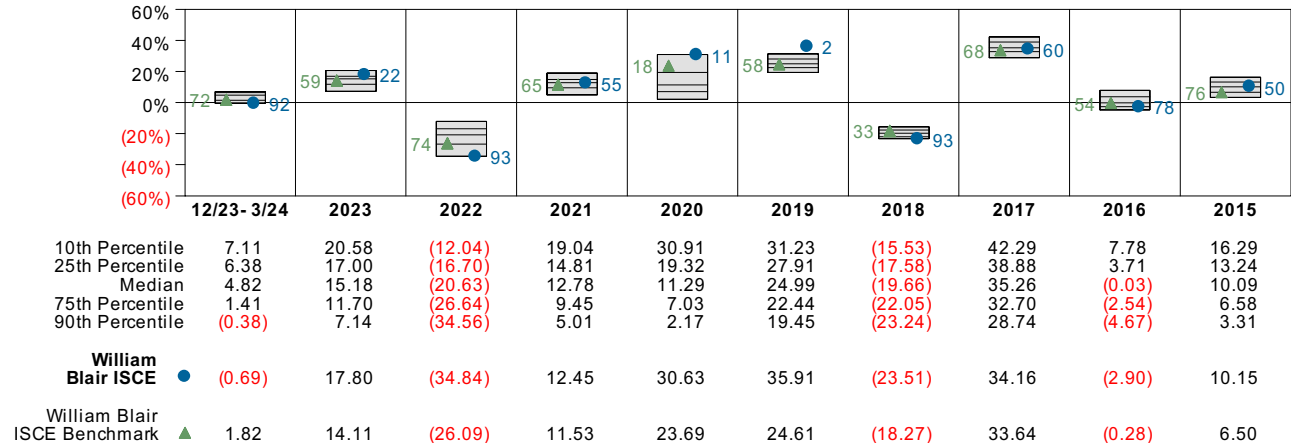
Relative Return vs Blmbg:Aggregate



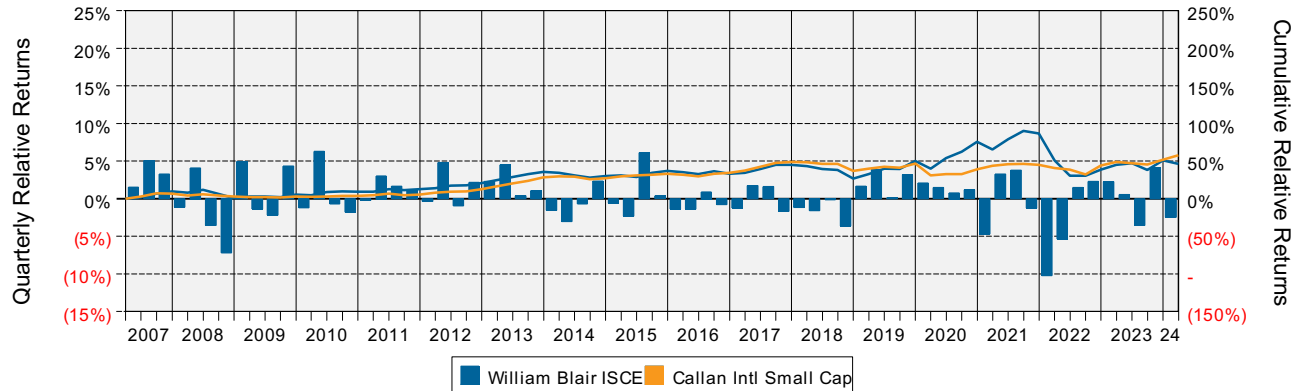
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Manager Watch List: William Blair

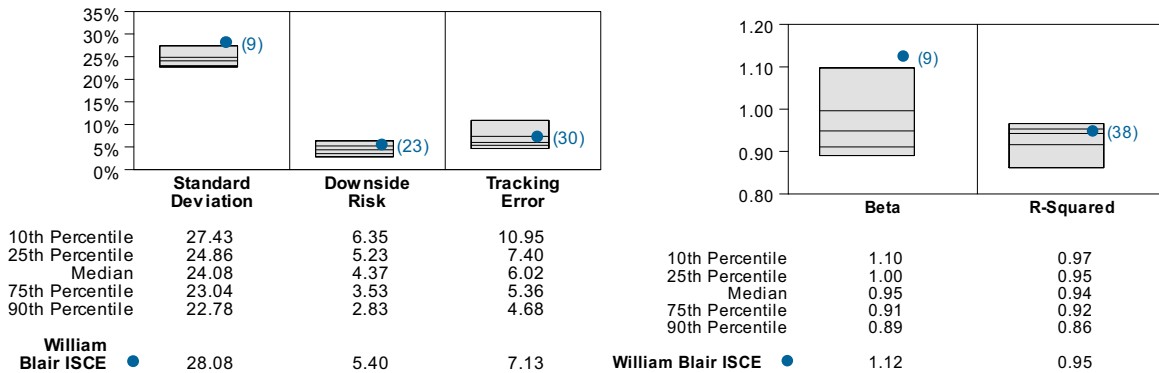
Performance vs Callan International Small Cap (Gross)



Cumulative and Quarterly Relative Returns vs William Blair ISCE Benchmark



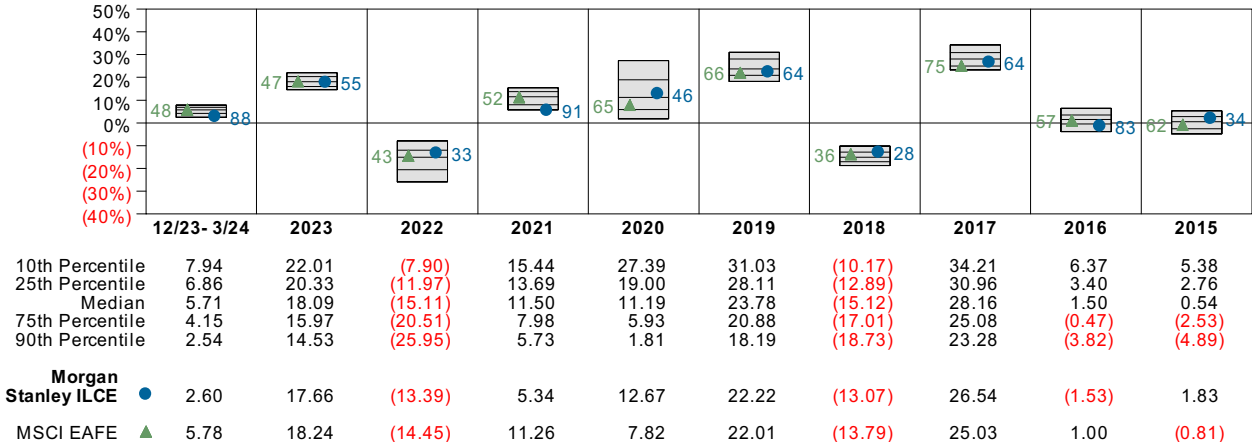
Risk Statistics Rankings vs William Blair ISCE Benchmark Rankings Against Callan International Small Cap (Gross) Five Years Ended March 31, 2024



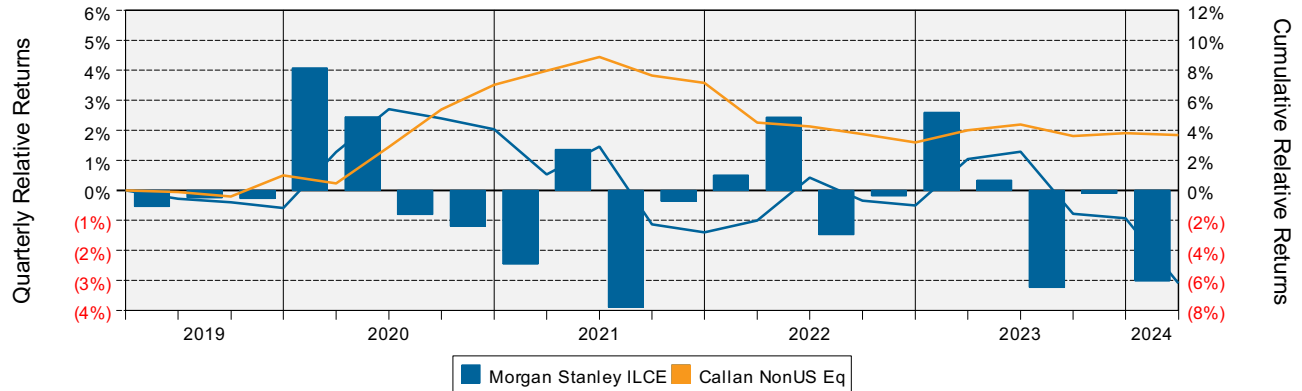
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Manager Watch List: Morgan Stanley

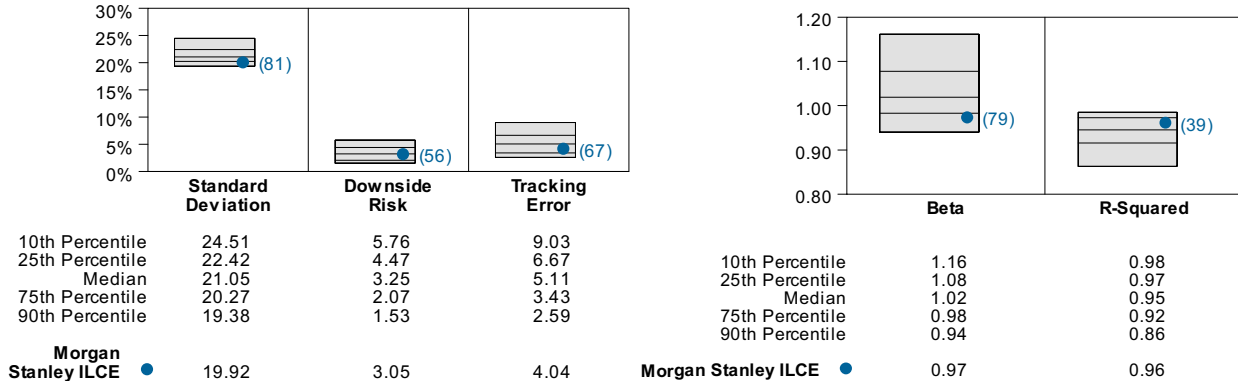
Performance vs Callan Non-US Equity (Gross)



Cumulative and Quarterly Relative Returns vs MSCI EAFE



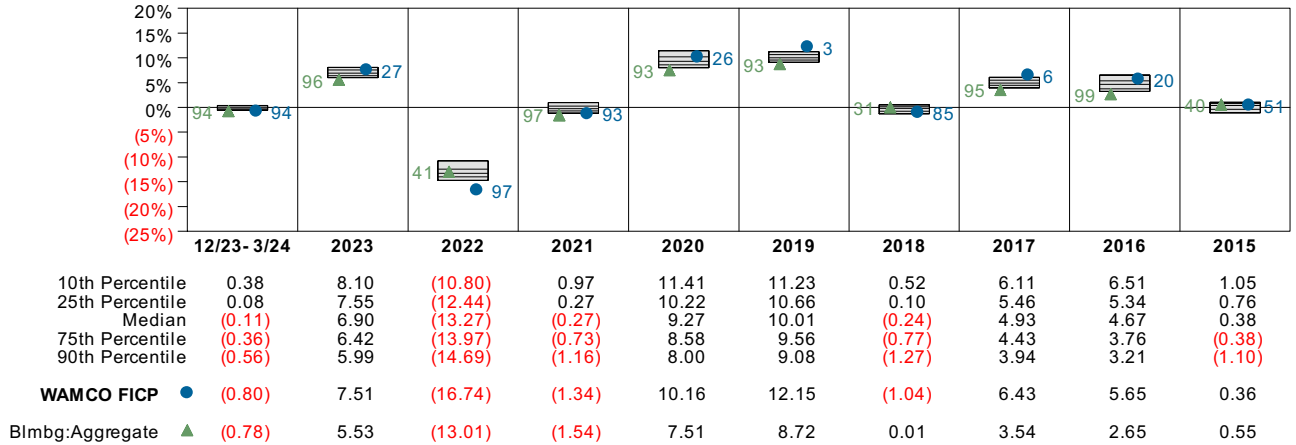
Risk Statistics Rankings vs MSCI EAFE (Net) Rankings Against Callan Non-US Equity (Gross) Five Years Ended March 31, 2024



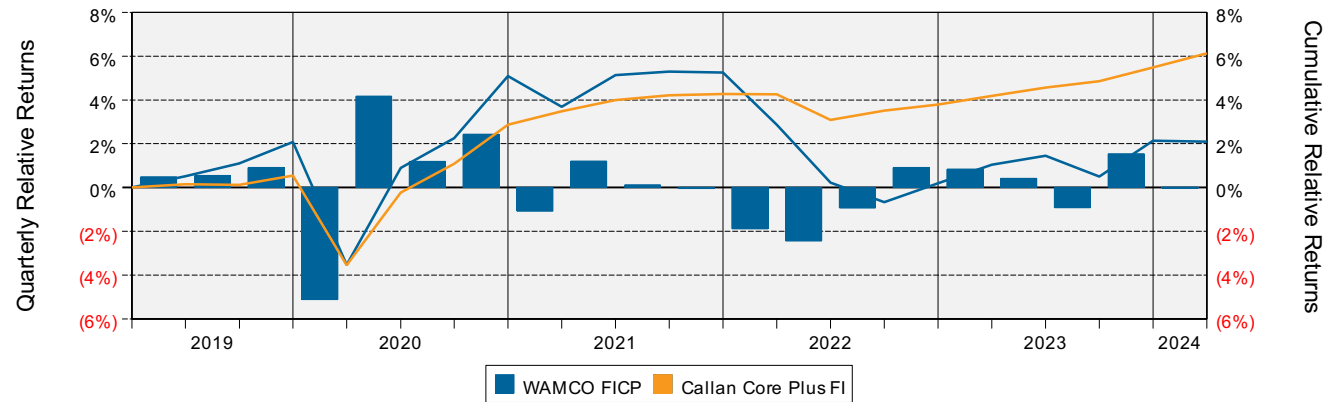
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Manager Watch List: WAMCO

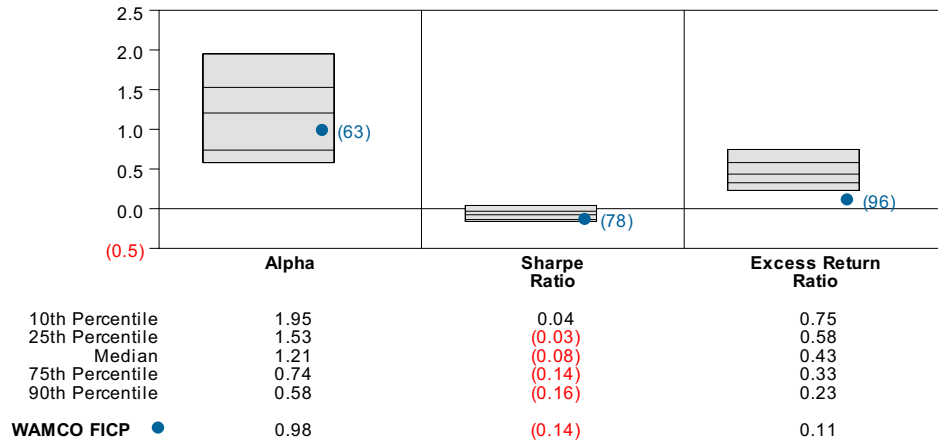
Performance vs Callan Core Plus Fixed Income (Gross)



Cumulative and Quarterly Relative Returns vs Blmbg:Aggregate



Risk Adjusted Return Measures vs Blmbg:Aggregate Rankings Against Callan Core Plus Fixed Income (Gross) Five Years Ended March 31, 2024



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General Market and Economic Conditions

The U.S. economy grew at a healthy 3.4% annual rate in 4Q23, slightly up from the initial estimate of 3.2%. Consumer spending, especially in health care, was a key driver in the quarter's gain, as was federal and local government spending. First quarter GDP forecasts are mixed, with 2% being an average. The Atlanta Fed's GDPNow forecast was 2.3% as of quarter-end. The median projection from the Fed for full 2024 GDP growth is 2.1%, a notable increase from the 1.4% median expectation in December.

As expected, the Fed held the Fed Funds rate at 5.25% - 5.50% at its March meeting. Its median expectation for year-end Fed Funds remained unchanged at 4.6%, implying roughly three cuts in 2024. Market expectations are similar at roughly three cuts, down sharply from the six expected just a few months ago. Statements from Chair Jerome Powell as well as Governor Christopher Waller indicated that they are in no hurry to cut rates and are willing to wait to see more evidence that inflation is waning. This is not a surprise given that we have not yet seen widespread evidence that the economy is weakening.

Consumers are also feeling pretty good about current conditions, according to the University of Michigan Index of Consumer Sentiment, which revealed a March print that was the highest since December 2020, beating expectations and up nearly 30% over the past year. However, the Conference Board's Consumer Confidence Index declined slightly in March, falling short of expectations. Notably, while the Present Situation component rose, the Expectations component fell to 73.8; a level of 80 or lower has historically signaled a recession in the next 12 months.

Inflation surprised to the upside in February; +3.2% year-over-year with services sectors being the key drivers over the past year. The Core measure was up 3.8%. Notably, after four consecutive months of declines, the energy index rose 2.3% in February (month-over-month). Gasoline prices were up 3.8% and WTI Crude closed the quarter at \$83.20, up from \$71.70 at year-end. The Personal Consumption Expenditures Price Index, the Fed's favored measure, rose slightly from 2.4% to 2.5% (year-over-year) while the Core PCE fell slightly from 2.9% to 2.8%, the lowest level in nearly three years. "Supercore" inflation, which includes services but excludes energy and housing and is viewed as a proxy for labor costs, slowed in February but is up 3.3% over the last 12 months.

The labor market remained tight. Non-farm payroll gains were 275,000 in February and the 3-month average was a robust 265,000 despite downward revisions in the first two months of the year. Unemployment was 3.9% and wage growth was 4.5%.

While the preceding paragraphs paint a seemingly rosy scenario for the economy, if inflation does not reaccelerate, there is also evidence of cracks that would thwart the soft-landing scenario. The commercial real estate sector remains under pressure, lending has sharply slowed, and the lagged effect of higher rates has not yet fully materialized. There is also a notable difference in well-being across income levels, which could have implications for the most important part of the U.S. economy: consumer spending. According to Federal Reserve data, the delinquency rate for credit card loans for all commercial banks ticked up to 3.1%, a steady increase from the all-time low of 1.5% in 3Q21 (delinquency rates were helped by stimulus payments during the pandemic). The New York Federal

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Reserve publishes a Quarterly Report on Household debt and credit, and its March publication noted that “both auto loans and credit cards have seen particular worsening of new delinquencies, with transition rates now above pre-pandemic levels.” Savings have also been depleted for those with lower incomes. The bottom 20% income bracket lost 18% of deposits (inflation-adjusted) between 4Q19 and 3Q23 while the top 20% gained 13% (Source: JP Morgan Guide to the Markets). A recent Household Pulse Survey from the Census Bureau showed that for those with less than \$50,000 in income, nearly 80% were “moderately” or “very” stressed by recent price increases and over 25% said paying for normal household expenses was “very difficult.” These issues feed the hard landing narrative, which is not currently the prevailing view but merits consideration.

Of note from overseas, Switzerland became the first central bank to cut interest rates; the Swiss National Bank cut its policy rate 25 bps as inflation fell to 1.2%. And Japan moved in the opposite direction! The Bank of Japan raised interest rates for the first time since 2007 and became the world’s last central bank to end its negative interest rate policy. From -0.1%, the BOJ raised its overnight interest rate to a range of 0.0% to 0.1%. Inflation in Japan climbed to 2.8% (annual) in February, up from 2.2% in January. Core inflation (excludes fresh foods) was also 2.8%, above the central bank’s 2% target for the 23rd consecutive month.

In China, factory output and retail sales beat expectations in January and February, but the property sector remains under pressure. In the first two months of the year, China's National Bureau of Statistics showed a 7% gain in industrial output in the first two months of the year with retail sales rising 5.5%. On the downside, the value of homes sold by the top 100 developers plunged nearly 50% in the first quarter (year-over-year). China targets growth of about 5% this year but signals continued reluctance to use deficit spending for economic stimulus.

Fourth Quarter 2023 Market Performance

U.S. stocks rallied sharply in 1Q with the S&P 500 Index (+10.6%) closing the quarter at a record high for the 22nd time during the quarter. Communication Services (+15.8%), Energy (+13.7%), and Technology (+12.7%) were the top-performing sectors with Real Estate (-1.1%) being at the bottom and the only sector to deliver a negative return. The equal-weighted version of the Index gained a more modest 7.9% as the largest stocks continued to outperform. The top 10 holdings hit another high at 33.5% of the Index on a cap-weighted basis. Growth (R1000 Growth: +11.4%) outperformed Value (R1000 Value: +9.0%) and large cap (R1000: +10.3%) outperformed small (Russell 2000: +5.2%). Of the “Magnificent 7,” only Apple (-10.8%) and Tesla (-29.2%) suffered losses. The Mag 7 were up 13% for the quarter, with the S&P 500 Index ex Mag 7 up 6%.

The U.S dollar strengthened against most currencies, most notably the Japanese yen (-7%). The MSCI ACWI ex USA trailed the U.S. with a 4.7% gain (Local: +8.2%). Technology (+10.7%) was the best-performing sector. Most countries delivered gains but from a regional perspective, Pacific ex-Japan (-1.7%) was hurt by weak performance from Hong Kong (-11.7%). In contrast, Japan (+11.0%) saw double-digit gains that were even better in local terms (+19.2%). Emerging Markets (MSCI EM: +2.4%) were up modestly, trailing developed markets. Latin America (-4.0%) was dragged down by poor results from Brazil (-7.4%) and Chile (-4.5%). China (-2.2%) also weighed on emerging market performance.

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Bond yields rose modestly in 1Q as expectations dwindled for aggressive rate cuts amid stubbornly high inflation. The U.S. Treasury 10-year yield rose from 3.88% as of year-end 2023 to 4.20% at the end of 1Q 2024. The Bloomberg US Aggregate Bond Index fell 0.8% for the quarter. Ten-year breakeven spreads, a measure of the market's expectation for inflation over the next decade, rose from 2.16% to 2.32%. U.S. TIPS outperformed nominal U.S. Treasuries (Bloomberg US TIPS: -0.1%; Bloomberg US Treasury: -1.0%). Investment grade corporate bonds outperformed U.S. Treasuries by 89 bps on a duration-adjusted basis, fueled by strong demand that easily absorbed record supply for a first quarter and the second largest quarterly issuance ever. High yield corporates (Bloomberg HY: +1.5%) outperformed the investment grade market despite an uptick in the default rate to 5.7%, according to data from Barclays Research. Leveraged loans performed even better (CS Leveraged Loan: +2.3%).

Rates rose in most developed markets and U.S. dollar strength eroded returns for unhedged investors (Bloomberg Global Aggregate ex US: -3.2%; Hedged: +0.6%). Emerging market debt performed relatively well, especially high yield. The JP Morgan EMBI Global Diversified Index rose 2.0% with the high yield component up 4.9%. Conversely, the local debt GBI-EM Global Diversified Index sank 2.1%. Currency depreciation vs. the U.S. dollar hurt returns; the local currency return for the Index was +0.7%. Most currencies were down vs. the dollar for the quarter.

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Appendix

Appendix - 3/31/2024

Manager	12/31/2023	03/31/2024	12/31/2023	03/31/2024	12/31/2023	03/31/2024	12/31/2023	03/31/2024	12/31/2023	03/31/2024	12/31/2023	03/31/2024	12/31/2023	03/31/2024	Weighted Averages
<i>Small Cap Growth Equity</i> Conestoga*	No	No	No	No	No	No	No	No	No	No	No	No	No	No	0.10
<i>Small Cap Value Equity</i> Phocas	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	0.40
<i>Small Cap Equity</i> NTGI Structured Small Cap	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	0.30
<i>All Cap Growth Equity</i> Zweigenberg	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No	No	No	No	Yes	Yes	0.50
<i>All Cap Value Equity</i> Channing	Yes	Yes	No	No	No	Yes	Yes	Yes	No	No	No	No	Yes	Yes	0.40
<i>International Equity</i> EARNEST Partners	No	No	No	No	No	No	No	No	No	No	No	No	No	No	0.00
Lazard	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	0.50
Morgan Stanley	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	0.80
Leading Edge	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes	0.60
William Blair	Yes	Yes	No	No	No	No	No	No	No	No	No	No	No	No	0.20
Ariel	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	0.90
Strategic Global	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	0.60
<i>International Small Cap</i> William Blair	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes	0.70
DFA	No	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	0.20
<i>Emerging Market Equity</i> EARNEST Partners	No	No	No	No	No	No	No	No	No	No	No	No	No	No	0.00
<i>Active Core Fixed Income</i> Ramirez***	No	No	No	No	No	No	No	No	No	No	No	No	No	No	0.00
Pugh	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes	0.40
Garcia Hamilton	No	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes	0.40
Wellington**	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes	0.40
<i>Active Core Plus Fixed Income</i> LM Capital	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	0.20
<i>Active Opportunistic Fixed Income</i> WAMCO	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes	0.40

*Manager does not yet have 7 years of portfolio data. CTFF portfolio data has been linked with a representative historical manager composite to populate columns requiring at least 7 years of data in the analysis above.
 **Manager does not yet have 3 years of portfolio data. CTFF portfolio data has been linked with a representative historical manager composite to populate columns requiring at least 3 years of data in the analysis above.
 ***Manager does not yet have 3 years of portfolio data. CTFF portfolio data has been linked with a representative historical manager composite to populate all columns in the analysis above.