



*4<sup>th</sup> Quarter 2024*

## **Cook County Pension Fund**

Investment Performance Review

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# Cook County Pension Fund

## 4<sup>th</sup> Quarter 2024

- The Total Fund ended the quarter with a market value of \$13.5 billion, a \$371 million decline from the prior quarter ending value of \$13.9 billion.
- The allocation of the Fund is in line with expectations. The Domestic Equity allocation exceeds its target weight by 4.5%. This overweight is largely offset by underweights to Infrastructure and Private Credit, which are yet to be fully implemented.
- In the fourth quarter, the Total Fund returned -1.49% (NOF) and underperformed the benchmark return of -1.31%. Over the trailing year, the Total Fund returned 9.54% versus the benchmark return of 9.78%.
  - The **Domestic Equity** allocation returned 1.95% for the quarter and trailed the benchmark return of 2.63%. Over the last year, Domestic Equity (22.03%) underperformed the benchmark return (23.81%).
  - The **International Equity** allocation returned -8.19% for the quarter and trailed the benchmark return of -7.61%. Over the last year, the International Equity allocation (3.00%) underperformed the benchmark return (5.23%).
  - The **Fixed Income** allocation returned -2.89% for the quarter and underperformed the benchmark return of -2.78%. Over the last year, the Fixed Income allocation (2.01%) outperformed the benchmark (1.55%).
  - The **REITS** allocation returned -4.64% for the quarter and outperformed the benchmark return of -6.21%. Over the last year, the REITS allocation (10.01%) outperformed the benchmark return (8.73%).
  - The **Private Real Estate** allocation returned 0.65% for the quarter and underperformed the benchmark return of 0.96%. Over the last year, Private Real Estate (-3.11%) trailed the benchmark return (-2.27%).
  - The **Hedge Funds** allocation returned 3.88% for the quarter and outperformed the benchmark return of 2.26%. Over the last year, Hedge Funds (10.94%) outperformed the benchmark (9.52%).
  - The **Private Equity** allocation returned 1.20% for the quarter and added a 3.94% return over the past year.
  - The **Infrastructure** allocation returned 2.38% for the quarter and outperformed the benchmark return of -5.15%.
- Over the trailing three-year period, the Total Fund returned 2.32% (NOF) versus the benchmark return of 2.67%.
- Over the trailing five-year period, the Total Fund returned 7.19% (NOF) and outperformed the benchmark return of 7.05%.
- Over the trailing ten-year period, the Total Fund returned 7.22% (NOF) and outperformed the benchmark return of 7.13%.
- The Total Fund ranked just below its peer group median over the trailing three-year period and outperformed its peer group median over the trailing five- and ten-year periods.

Note: Returns greater than one year are annualized; Returns presented are net of management fees (NOF)

# Equity Markets Up Sharply in 2024

Stocks have recovered losses of 2022; fixed income still lags

## S&P 500 climbed 25% in 2024

- U.S. large cap substantially outperformed U.S. small cap, developed ex-U.S. markets, and emerging markets. Technology and AI drove the S&P 500.

## Weak 4Q for core fixed income

- The Bloomberg Aggregate fell 3.1%. Long duration and non-U.S. bonds saw even greater declines.
- Interest rates remain volatile as the markets assess how the Fed will continue with easing.
- CPI-U came in at 2.9% (year-over-year) through December, up from 3Q, but with a welcome decline in the core figure, which rose 3.2%.

## Solid growth through 2024

- 3Q GDP came in at a surprisingly strong 3.1%, after another surprise in 2Q, and saw 2.3% growth in 4Q. Consumer spending continues to drive GDP growth.

Returns for Periods ended 12/31/24

	Quarter	Last Year	3 Years	5 Years	10 Years	25 Years
<b>U.S. Equity</b>						
Russell 3000	2.63	23.81	8.01	13.86	12.55	7.84
S&P 500	2.41	25.02	8.94	14.53	13.10	7.70
Russell 2000	0.33	11.54	1.24	7.40	7.82	7.55
<b>Global ex-U.S. Equity</b>						
MSCI World ex USA	-7.43	4.70	1.91	5.10	5.26	3.78
MSCI Emerging Markets	-8.01	7.50	-1.92	1.70	3.64	--
MSCI ACWI ex USA Small Cap	-7.66	3.36	-1.47	4.30	5.66	6.23
<b>Fixed Income</b>						
Bloomberg Aggregate	-3.06	1.25	-2.41	-0.33	1.35	3.94
90-day T-Bill	1.17	5.25	3.89	2.46	1.77	1.91
Bloomberg Long Gov/Credit	-7.42	-4.15	-9.20	-3.26	0.99	5.36
Bloomberg Global Agg ex-US	-6.84	-4.22	-6.28	-3.37	-0.90	2.45
<b>Real Estate</b>						
FTSE:EP/NA Developed	-9.45	2.00	-5.11	-0.04	3.19	7.31
NCREIF Property	0.90	0.43	-0.82	3.13	5.66	7.58
NCREIF:NFI-ODCE Val Wt Nt	0.96	-2.27	-3.14	1.99	4.94	6.11
<b>Alternatives</b>						
CS Hedge Fund Index	0.74	9.82	5.51	6.22	4.42	5.57
Cambridge Private Equity*	2.68	7.93	2.75	14.27	13.40	12.39
Bloomberg Commodity	-0.45	5.38	4.05	6.77	1.28	2.15
Gold Spot Price	-0.69	27.47	13.04	11.64	8.35	9.24
<b>Inflation - CPI-U</b>	0.10	2.89	4.22	4.20	3.00	2.54

\*Cambridge Private Equity data as of 9/30/24.

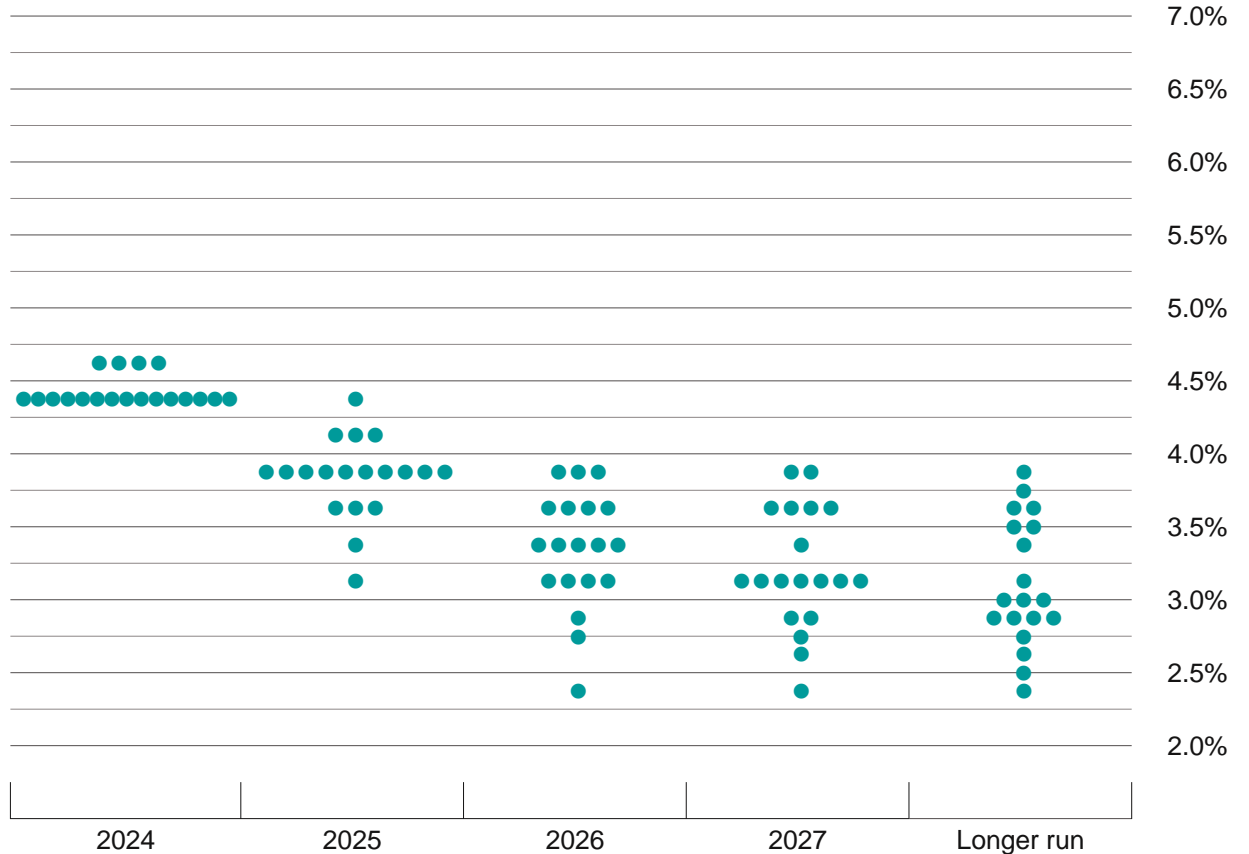
Returns greater than one year are annualized. Sources: Bloomberg, Callan, Cambridge, FTSE Russell, HFRI, MSCI, NCREIF, S&P Dow Jones Indices

# The Fed's 'Dot Plot'

December 18, 2024

## Federal Open Market Committee (FOMC) participants' assessments of appropriate monetary policy

- Median year-end in 2025 = 3.9% (up from 3.4% projection at September meeting)
- “Longer run” median up 10 basis points to 3.0%
  - Bias is toward higher rates; lower bound is 2.4% but higher bound is 3.9%.
- Dispersion of views widens in 2025 and beyond.
- Market expects fewer cuts in 2025 based on CME FedWatch as of January; Fed Funds expectations:
  - Majority expect no cuts through May
  - One cut by end of year has 34% probability
  - Two cuts by end of year has 31% probability



Source: Federal Reserve

# Callan Periodic Table of Investment Returns

As of December 31, 2024

Calendar Year Returns					Quarterly Returns				Monthly Returns		
2020	2021	2022	2023	2024	1Q24	2Q24	3Q24	4Q24	Oct	Nov	Dec
Small Cap Equity	Large Cap Equity	Private Real Estate	Large Cap Equity	Large Cap Equity	Large Cap Equity	EM Equity	REITS	Hedge Funds	Hedge Funds	Small Cap Equity	Hedge Funds
19.96%	28.71%	6.55%	26.29%	25.02%	10.56%	5.00%	16.07%	3.13%	1.05%	10.97%	1.89%
Large Cap Equity	REITS	Hedge Funds	Dev Non-U.S. Equity	Small Cap Equity	Dev Non-U.S. Equity	Large Cap Equity	Small Cap Equity	Large Cap Equity	Private Real Estate	Large Cap Equity	Private Real Estate
18.40%	26.09%	-5.32%	18.24%	11.54%	5.78%	4.28%	9.27%	2.41%	0.32%	5.87%	0.32%
EM Equity	Private Real Estate	U.S. Fixed Income	Small Cap Equity	Hedge Funds	Small Cap Equity	Hedge Funds	EM Equity	Private Real Estate	Large Cap Equity	REITS	EM Equity
18.31%	21.02%	-13.01%	16.93%	11.44%	5.18%	2.01%	8.72%	0.96%	-0.91%	2.39%	-0.14%
Hedge Funds	Small Cap Equity	Dev Non-U.S. Equity	EM Equity	EM Equity	Hedge Funds	U.S. Fixed Income	Dev Non-U.S. Equity	Small Cap Equity	Small Cap Equity	U.S. Fixed Income	U.S. Fixed Income
8.65%	14.82%	-14.45%	9.83%	7.50%	4.65%	0.07%	7.26%	0.33%	-1.44%	1.06%	-1.64%
Dev Non-U.S. Equity	Dev Non-U.S. Equity	Large Cap Equity	REITS	Dev Non-U.S. Equity	EM Equity	Dev Non-U.S. Equity	Large Cap Equity	U.S. Fixed Income	U.S. Fixed Income	Private Real Estate	Dev Non-U.S. Equity
7.82%	11.26%	-18.11%	9.67%	3.82%	2.37%	-0.42%	5.89%	-3.06%	-2.48%	0.32%	-2.27%
U.S. Fixed Income	Hedge Funds	EM Equity	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	Private Real Estate	U.S. Fixed Income	EM Equity	EM Equity	Hedge Funds	Large Cap Equity
7.51%	9.74%	-20.09%	5.53%	1.25%	-0.78%	-0.66%	5.20%	-8.01%	-4.45%	0.16%	-2.38%
Private Real Estate	U.S. Fixed Income	Small Cap Equity	Hedge Funds	REITS	REITS	REITS	Hedge Funds	Dev Non-U.S. Equity	REITS	Dev Non-U.S. Equity	REITS
0.34%	-1.54%	-20.44%	4.24%	0.94%	-1.30%	-2.43%	1.23%	-8.11%	-5.08%	-0.57%	-7.08%
REITS	EM Equity	REITS	Private Real Estate	Private Real Estate	Private Real Estate	Small Cap Equity	Private Real Estate	REITS	Dev Non-U.S. Equity	EM Equity	Small Cap Equity
-9.04%	-2.54%	-25.10%	-12.73%	-2.27%	-2.58%	-3.28%	0.02%	-9.69%	-5.44%	-3.59%	-8.26%

Sources: ● S&P 500 ● Russell 2000 ● MSCI EAFE ● MSCI Emerging Markets ● Bloomberg U.S. Aggregate ● HFRI Fund of Funds Index\*  
 ● NCREIF ODCE Value Weight Net ● FTSE EPRA/NAREIT Developed

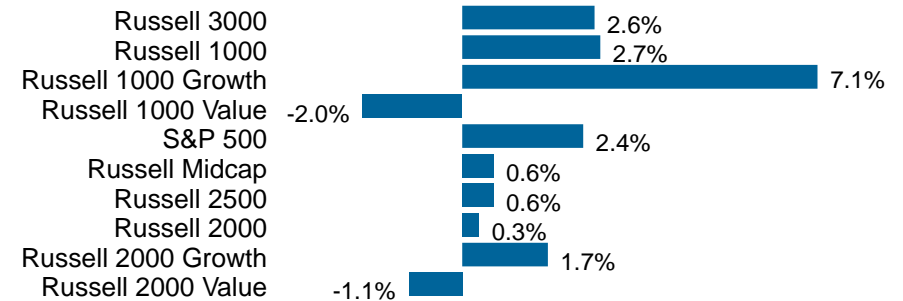
\*Returns are lagged one month

# U.S. Equity Performance: 4Q24

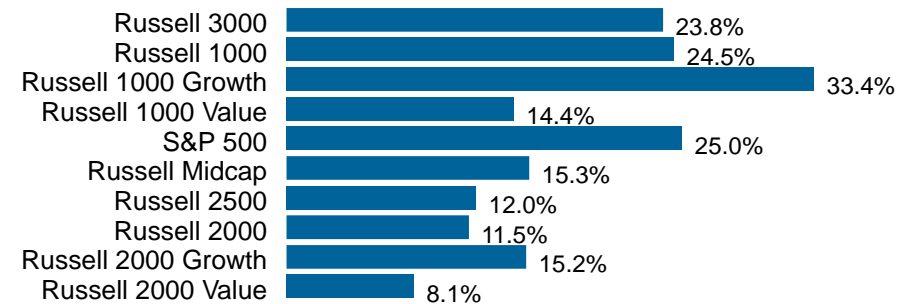
## U.S. market ends on a high note, though with some volatility

- The U.S. equity market ended on a positive note as the S&P 500 Index was up over 2%. However, the quarter was marked by volatility, particularly during October and December. Negative returns in October were driven by investor anxiety around the U.S. presidential election, uncertainty with the Fed's approach to interest rate cuts on a go-forward basis, and some misses to earnings expectations for companies. December returns, while initially buoyed by the Fed's third consecutive rate cut, cooled after the Fed announced no additional rate cuts until the second half of 2025.
- Sector performance was mixed; only 4 (Communication Services, Consumer Discretionary, Financials, and Information Technology) posted positive returns.
- During 4Q24, large cap stocks outperformed small cap stocks. Growth stocks outperformed value stocks across the market cap spectrum.
- Market concentration remains elevated; the percentage of companies outperforming the S&P 500 is at historic lows and there remains a large divergence between S&P 500 and S&P 500 ex-Magnificent Seven returns.

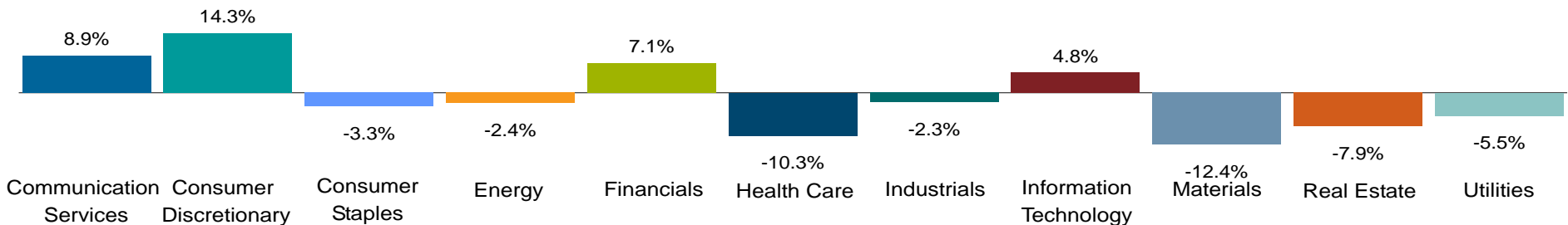
### U.S. Equity: Quarter Ended 12/31/24



### U.S. Equity: One Year Ended 12/31/24



### Industry Sector Quarterly Performance (S&P 500) as of 12/31/24



Sources: FTSE Russell, S&P Dow Jones Indices

# Global/Global ex-U.S. Equity Performance: 4Q24

## Non-U.S. markets pull back at year-end

### Broad market

- Global equity markets had a rough end to the year as concerns around Trump tariffs weighed on Europe and China.
- Europe was one of the worst-performing regions, plagued by political uncertainty and continued economic woes.
- While still negative, Japan's decline over the quarter was stemmed by the approval of a new economic stimulus plan focused on issues such as wage stability and deflation.

### Emerging markets

- Emerging markets declined on the heels of poor results out of China and India. Although Chinese stocks initially gained from the announced stimulus, they later declined due to expected tariffs. Economic growth in India fell short of expectations.

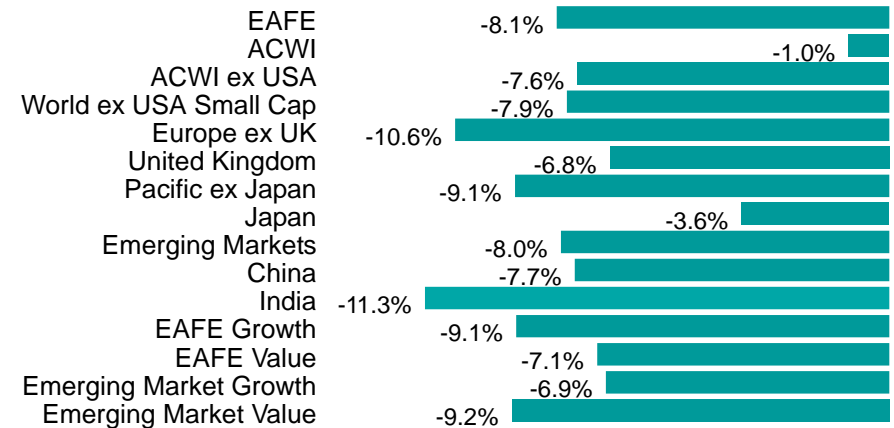
### Growth vs. value

- In developed markets outside the U.S., the influence of technology and AI is comparatively more muted, which makes the trend of growth stocks, especially those from the "Magnificent Seven," outperforming value stocks less pronounced.

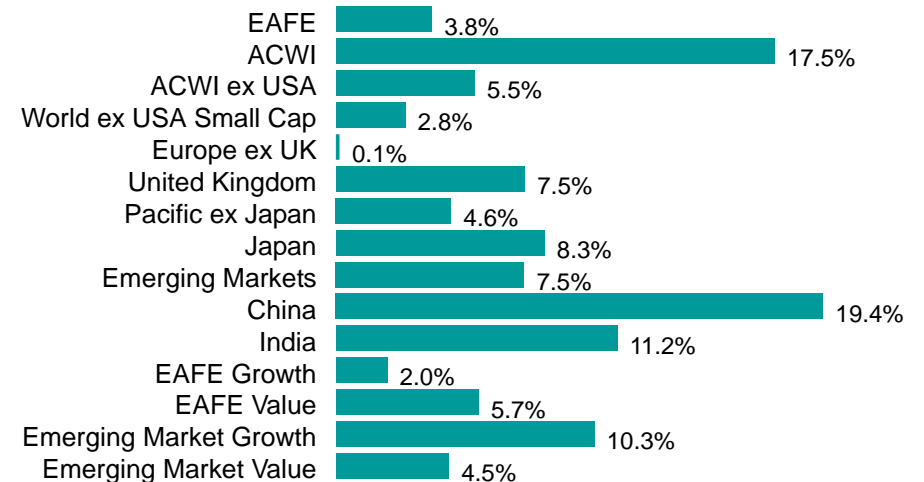
### U.S. dollar strength

- The U.S. dollar shifted direction from the last quarter as expectations for interest rate cuts faded, along with the anticipated beneficial effects of the Trump administration on the U.S. economy; in total the U.S. Dollar Index rose over 7% during the quarter.

### Global Equity Returns: Quarter Ended 12/31/24



### Global Equity Returns: One Year Ended 12/31/24



Source: MSCI

# U.S. Fixed Income Performance: 4Q24

## Uncertainty resumes, hurting 4Q fixed income performance

### Macro environment

- The Fed continued the rate cutting cycle, most recently in December, bringing the target range to 4.25%-4.50%.
- The yield curve steepened, with rates rising for Treasuries one year and longer. The 10-year rose 77 bps from 3.81% to 4.58%.
- Inflation concerns resurfaced, with the breakeven inflation rate rising by 19 bps to 2.30% over the course of the quarter.

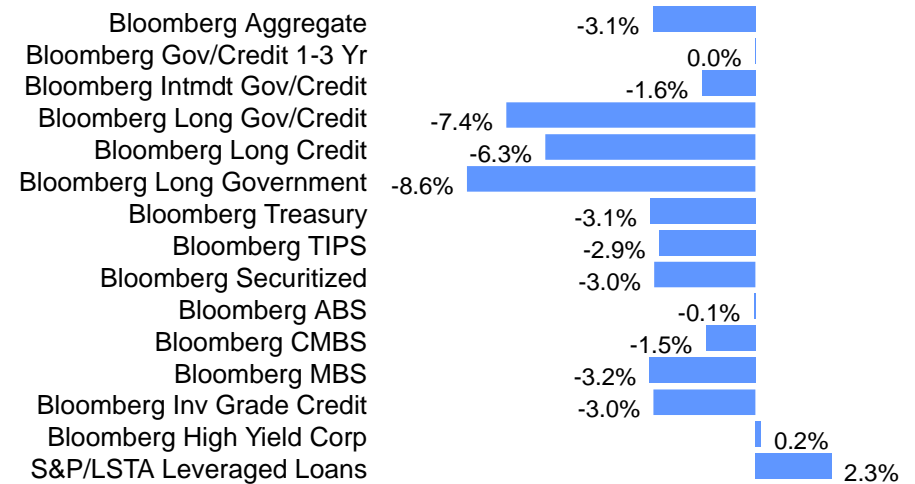
### Performance and drivers

- The Bloomberg US Aggregate Bond Index fell 3.1% due to the rise in rates.
- With the steepening yield curve, long government bonds fared the worst among sectors.
- Leveraged finance sectors (High yield: +0.2%, leveraged loans: +2.3%) were the only positive fixed income sectors as spreads tightened.

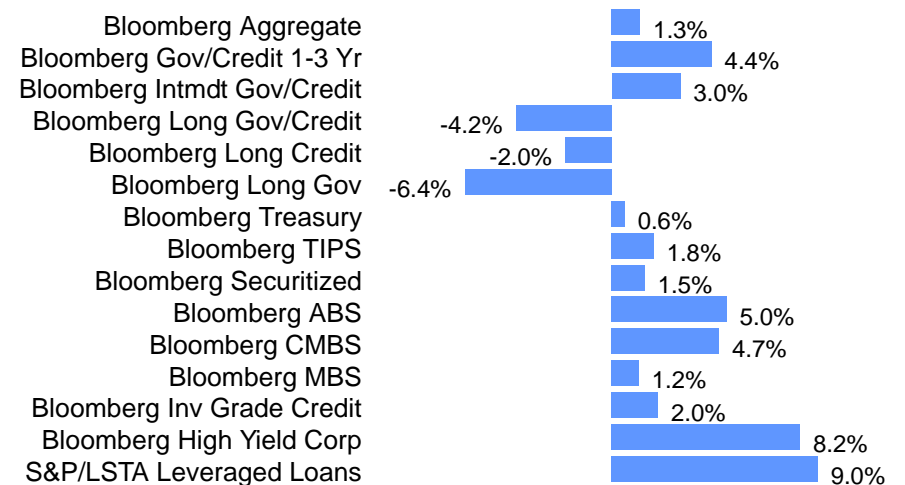
### Valuations

- Corporate credit spreads across both investment grade and leveraged finance tightened, with both being “priced to perfection.”
- New issuance continued to be strong, with 2024 totals for both IG and HY outpacing 2023.

### U.S. Fixed Income Returns: Quarter Ended 12/31/24



### U.S. Fixed Income Returns: One Year Ended 12/31/24



Sources: Bloomberg, Callan, J.P. Morgan, S&P Dow Jones Indices, U.S. Treasury



# U.S. Private Real Estate Performance: 4Q24

## Sector appreciation turns positive, outside of office

### Valuations reflect higher interest rates

- Valuations appear to have bottomed and now reflect higher borrowing costs.
- Income returns were positive across sectors and regions.
- Property sectors were mixed; Office and Hotel experienced negative appreciation, and the remaining sectors had flat or positive appreciation.
- Return dispersion by manager within the ODCE Index was due to the composition of underlying portfolios.

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
NCREIF ODCE	1.0%	-2.3%	-3.1%	2.0%	4.9%
Income	0.8%	3.3%	2.8%	2.9%	3.2%
Appreciation	0.1%	-5.4%	-5.9%	-0.9%	1.7%
NCREIF Property Index	0.9%	0.4%	-0.8%	3.1%	5.7%
Income	1.2%	4.8%	4.3%	4.3%	4.5%
Appreciation	-0.3%	-4.2%	-5.0%	-1.1%	1.1%

Returns are geometrically linked

### NCREIF Property Index Quarterly Returns by Region and Property Type



Source: NCREIF; ODCE return is net

# Hedge Fund Performance: 4Q24

## Strong finish for hedge funds in 2024

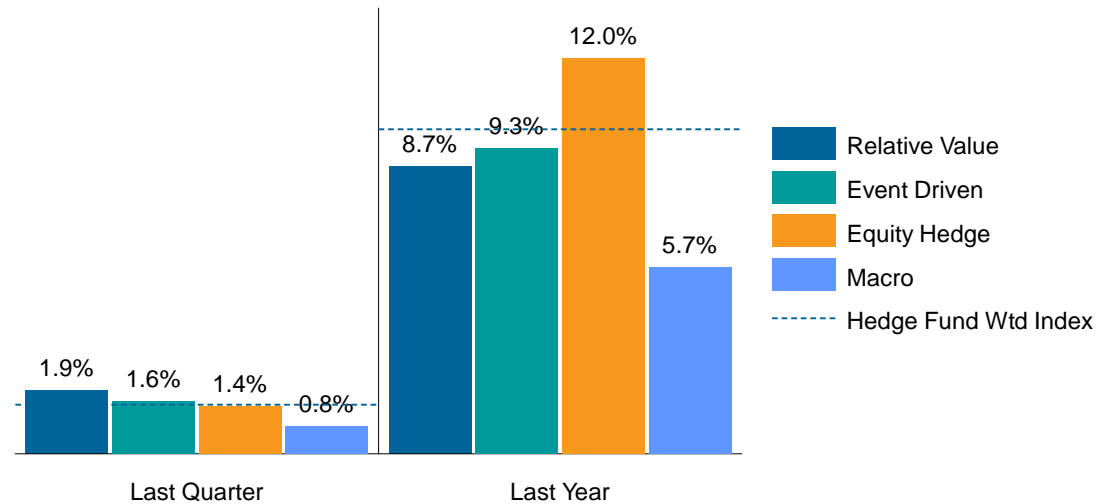
### Hedge funds navigated a volatile quarter

- Relative value strategies finished the year strong, as managers were able to profit off rising bond yields.
- Equity hedge strategies had strong momentum, as managers profited on both the long and short side during the quarter as dispersion remained elevated.
- Event-driven strategies soared in November, on the expectation of a strong M&A cycle in 2025.
- Macro strategies had a strong November, as managers were able to profit off rates moving higher in the final quarter of the year.

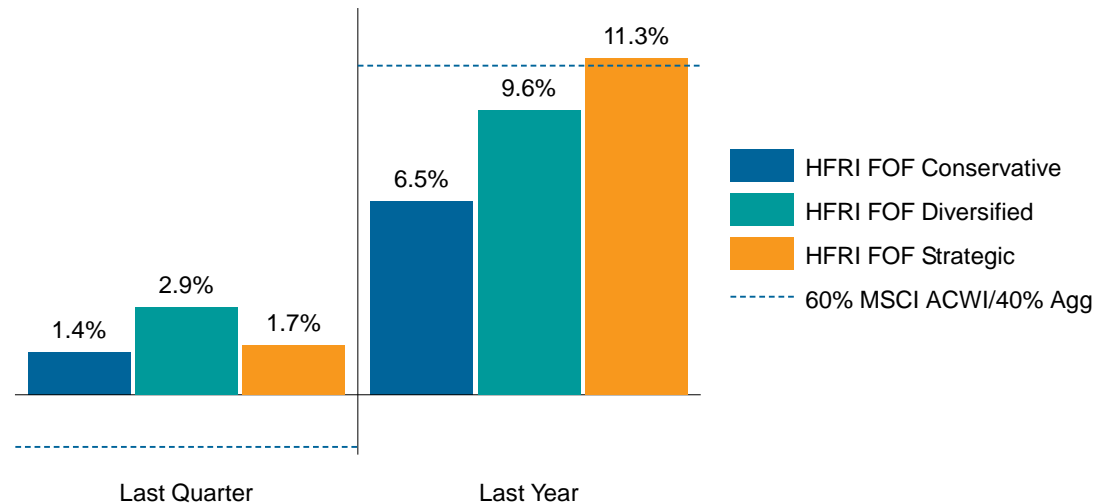
### FOFs ended the year on a strong note

- FOFs with more exposure to relative value and macro strategies saw stronger performance going into year-end.
- Those FOFs with less diversification and more equity beta saw higher performance dispersion.

HFRI Strategy Index Returns vs. Broad Hedge Fund Universe as of 12/31/24



HFRI Fund-of-Funds Returns vs. 60% Stock/40% Bond Mix as of 12/31/24



Source: Hedge Fund Research

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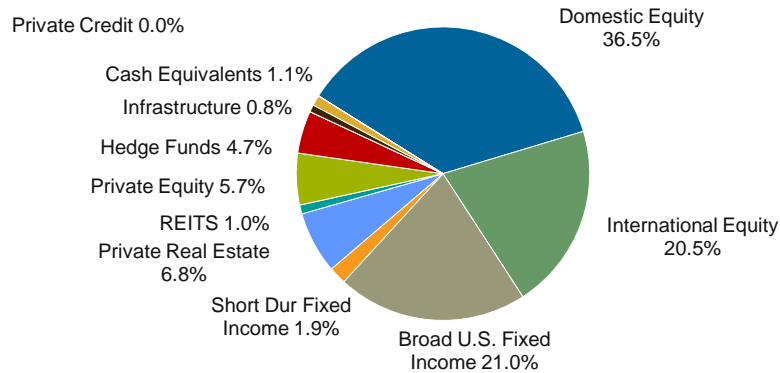
## **Cook County Fund**

4<sup>th</sup> Quarter Investment Performance

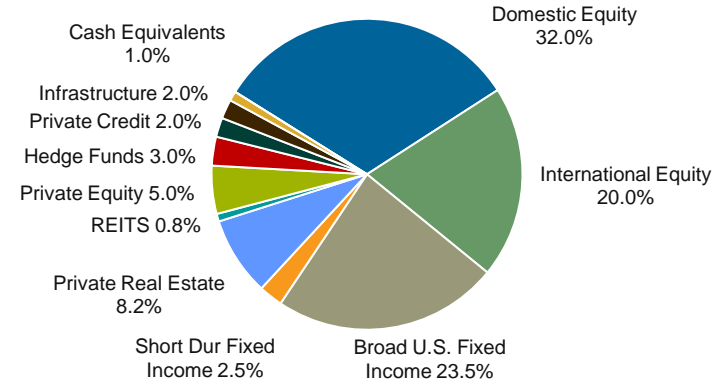
# Asset Allocation vs Policy Target\*

December 31, 2024

**Actual Asset Allocation**



**Target Asset Allocation**



Asset Class	\$000s Actual	Weight Actual	Min Target	Max Target	Percent Difference	\$000s Difference
Domestic Equity	4,915,735	36.5%	28.0%	36.0%	4.5%	600,459
International Equity	2,763,819	20.5%	16.0%	24.0%	0.5%	66,772
Broad U.S. Fixed Income	2,829,217	21.0%	19.5%	27.5%	(2.5%)	(339,813)
Short Dur Fixed Income	260,785	1.9%	0.0%	5.0%	(0.6%)	(76,346)
Private Real Estate	920,813	6.8%	5.0%	13.0%	(1.4%)	(184,976)
REITS	132,684	1.0%	0.0%	2.6%	0.2%	24,802
Private Equity	766,978	5.7%	1.0%	9.0%	0.7%	92,716
Hedge Funds	633,194	4.7%	0.0%	6.0%	1.7%	228,637
Private Credit	0	0.0%	0.0%	4.0%	(2.0%)	(269,705)
Infrastructure	107,587	0.8%	0.0%	4.0%	(1.2%)	(162,118)
Cash Equivalents	153,927	1.1%	0.0%	5.0%	0.1%	19,075
Miscellaneous Assets	496	0.0%	0.0%	0.0%	0.0%	496
<b>Total</b>	<b>13,485,237</b>	<b>100.0%</b>		<b>100.0%</b>	<b>0.0%</b>	<b>-</b>

- The Cook County Fund’s largest overweight is to Domestic Equity (+4.5%). This overweight is largely offset by underweights to Infrastructure (-1.2%) and Private Credit (-2.0%), which are yet to be fully implemented.

\*The target allocation was approved in June 2022, including the funding of Private Credit and Infrastructure. The Total Fund benchmark will be modified in accordance with the actual implementation. This process reflects the practical implementation of non-publicly traded investments.

# Total Fund Asset Summary (\$)

As of December 31, 2024

	December 31, 2024		Net New Inv.	Inv. Return	September 30, 2024	
	Market Value	Weight			Market Value	Weight
Domestic Equity	\$4,915,734,515	36.45%	\$(145,400,000)	\$100,886,802	\$4,960,247,712	35.80%
International Equity	\$2,763,819,062	20.50%	\$301,474	\$(244,287,911)	\$3,007,805,499	21.71%
Fixed Income	\$3,090,002,529	22.91%	\$(40,557,050)	\$(91,752,499)	\$3,222,312,078	23.25%
REITS	\$132,684,307	0.98%	\$0	\$(6,271,920)	\$138,956,228	1.00%
Private Real Estate	\$920,813,414	6.83%	\$(11,443,272)	\$9,979,428	\$922,277,257	6.66%
Private Equity	\$766,978,488	5.69%	\$(30,738,518)	\$9,145,286	\$788,571,720	5.69%
Infrastructure	\$107,587,091	0.80%	\$13,305,738	\$2,499,754	\$91,781,599	0.66%
Hedge Funds	\$633,194,425	4.70%	\$18,220,837	\$24,766,437	\$590,207,152	4.26%
Miscellaneous	\$495,861	0.00%	\$(722,928)	\$729,544	\$489,245	0.00%
Cash Equivalents	\$153,927,467	1.14%	\$19,256,465	\$641,134	\$134,029,868	0.97%
<b>Total Cook County Fund</b>	<b>\$13,485,237,158</b>	<b>100.00%</b>	<b>\$(177,777,255)</b>	<b>\$(193,663,944)</b>	<b>\$13,856,678,357</b>	<b>100.00%</b>

Changes in Total Fund Assets	Ending Market Value	Net New Investment	Investment Returns	Beginning Market Value
Last Quarter (9/30/24 – 12/31/24)	\$13,485,237,158	(\$177,777,255)	(\$193,663,944)	\$13,856,678,357
Last Year (12/31/23 – 12/31/24)	\$13,485,237,158	(\$513,701,389)	\$1,236,936,253	\$12,762,002,294

# Asset Class Performance Returns (NOF)

As of December 31, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Domestic Equity</b>	<b>\$4,915,734,515</b>	<b>36.45%</b>	<b>1.95%</b>	<b>22.03%</b>	<b>7.57%</b>	<b>13.21%</b>	<b>11.81%</b>
Domestic Equity Benchmark (2)	-	-	2.63%	23.81%	8.01%	13.86%	12.55%
<b>International Equity</b>	<b>\$2,763,819,062</b>	<b>20.50%</b>	<b>(8.19%)</b>	<b>3.00%</b>	<b>(0.53%)</b>	<b>2.95%</b>	<b>4.79%</b>
International Equity Benchmark (3)	-	-	(7.61%)	5.23%	0.50%	4.12%	4.75%
<b>Fixed Income</b>	<b>\$3,090,002,529</b>	<b>22.91%</b>	<b>(2.89%)</b>	<b>2.01%</b>	<b>(2.14%)</b>	<b>(0.09%)</b>	<b>1.46%</b>
Fixed Income Benchmark (4)	-	-	(2.78%)	1.55%	(2.00%)	(0.13%)	1.45%
<b>REITS</b>	<b>\$132,684,307</b>	<b>0.98%</b>	<b>(4.64%)</b>	<b>10.01%</b>	<b>(2.27%)</b>	<b>5.47%</b>	<b>6.10%</b>
NAREIT Equity Index	-	-	(6.21%)	8.73%	(2.20%)	4.27%	5.73%
<b>**Private Real Estate</b>	<b>\$920,813,414</b>	<b>6.83%</b>	<b>0.65%</b>	<b>(3.11%)</b>	<b>(1.57%)</b>	<b>4.34%</b>	<b>6.48%</b>
NFI-ODCE Value Weight Net	-	-	0.96%	(2.27%)	(3.14%)	1.99%	4.94%
<b>**Private Equity</b>	<b>\$766,978,488</b>	<b>5.69%</b>	<b>1.20%</b>	<b>3.94%</b>	<b>(0.83%)</b>	<b>18.72%</b>	<b>16.48%</b>
<b>**Hedge Funds</b>	<b>\$633,194,425</b>	<b>4.70%</b>	<b>3.88%</b>	<b>10.94%</b>	<b>6.78%</b>	<b>6.03%</b>	<b>4.96%</b>
90-Day Average SOFR + 4% (5)	-	-	2.26%	9.52%	8.23%	6.71%	6.06%
HFRI Fund of Funds Index (6)	-	-	3.13%	11.44%	3.22%	5.57%	3.83%
<b>**Infrastructure</b>	<b>\$107,587,091</b>	<b>0.80%</b>	<b>2.38%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
FTSE Dev Core Inf 50/50 N	-	-	(5.15%)	9.27%	1.72%	3.11%	5.32%
<b>*Private Credit</b>	<b>\$0</b>	<b>0.00%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Cash Equivalents</b>	<b>\$153,927,467</b>	<b>1.14%</b>	<b>1.19%</b>	<b>5.27%</b>	<b>4.01%</b>	<b>2.57%</b>	<b>1.95%</b>
3-month Treasury Bill	-	-	1.17%	5.25%	3.89%	2.46%	1.77%
<b>Total Cook County Fund</b>	<b>\$13,485,237,158</b>	<b>100.00%</b>	<b>(1.49%)</b>	<b>9.54%</b>	<b>2.32%</b>	<b>7.19%</b>	<b>7.22%</b>
Total Fund Benchmark (1)	-	-	(1.31%)	9.78%	2.67%	7.05%	7.13%

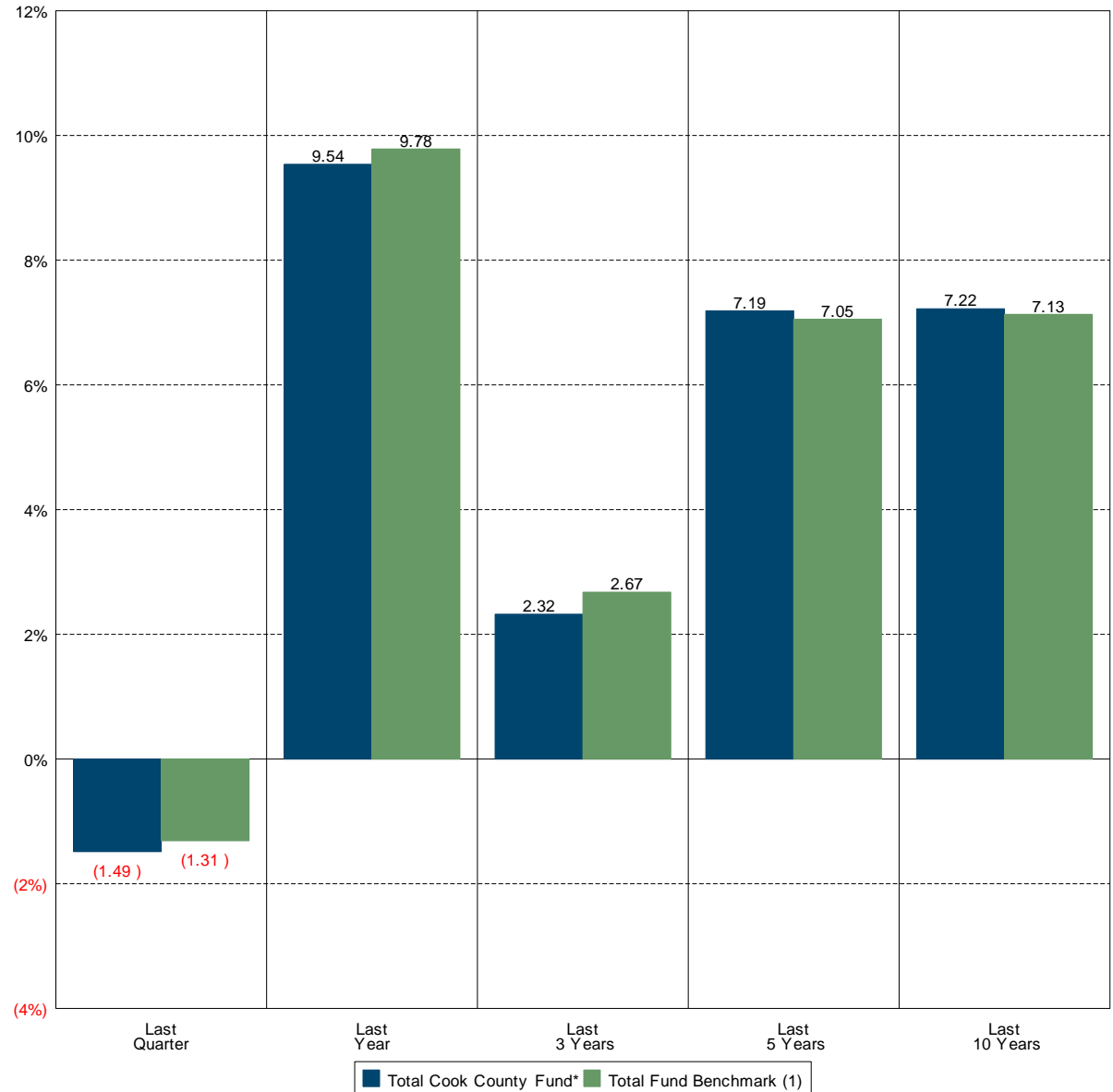
\*Private Credit investment approved by the Board in June 2022 to be implemented at a future date. The appropriate benchmark will be determined at that time.

\*\*Real Estate, Private Equity, Hedge Fund, and Infrastructure information reflect trailing data.

# Total Fund Performance\*

As of December 31, 2024

- 4<sup>th</sup> Quarter: The Total Fund trailed its benchmark for the quarter. Active management in Domestic Equity and International Equity were the largest detractors.
- One-year period: The Total Fund underperformed the benchmark. Active management in Domestic Equity and International Equity were the largest detractors.
- Three-year period: The Total Fund trailed the benchmark return. Active management in Domestic Equity and International Equity and modest overweights to Private Real Estate and Private Equity were the largest detractors.
- Five-year period: The Total Fund outpaced the benchmark for the period. Private Equity and Private Real Estate provided the strongest contributions.
- Ten-year period: The Total Fund return exceeded the benchmark over the last ten years. International Equity, Fixed Income, REITs and Private Real Estate led their respective benchmarks for the period, and Private Equity posted the highest absolute return.



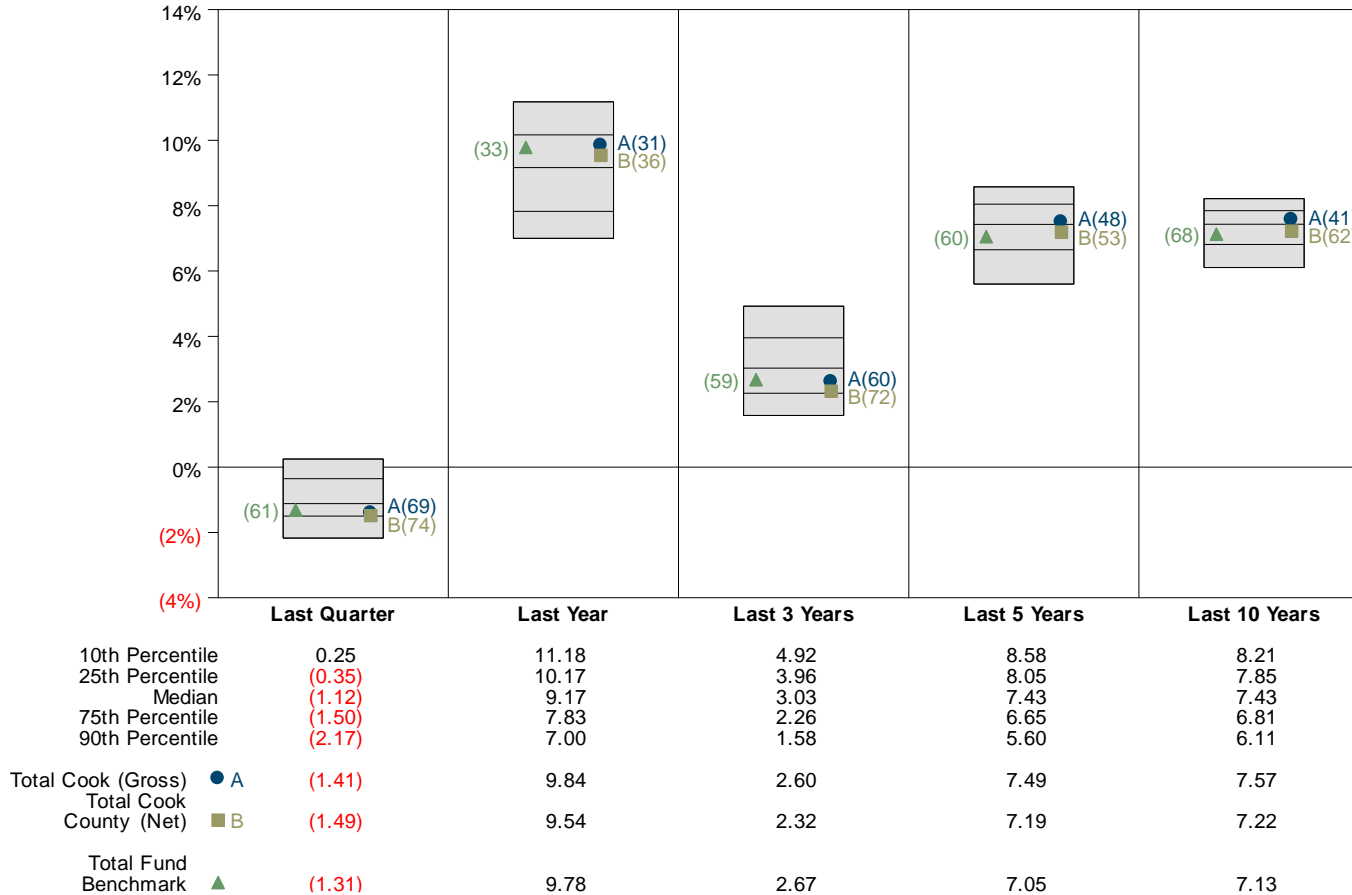
\*Net of Fee Returns

(1) Benchmark detail included in the Appendix

# Total Fund Performance Summary\*

As of December 31, 2024

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



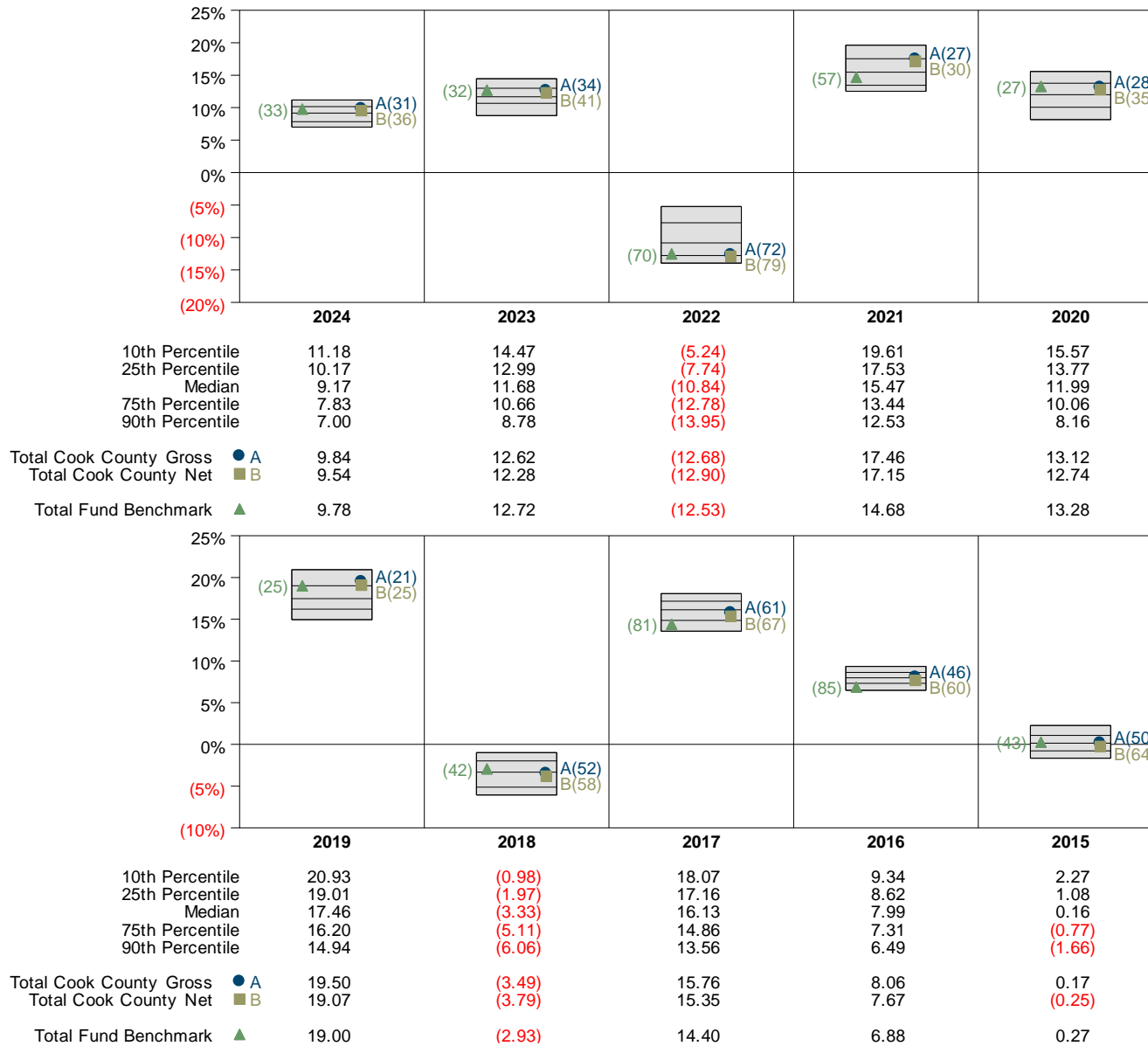
- Over the last year, the Fund trailed its benchmark and ranked at the 31<sup>st</sup> percentile of peers.
- For the trailing three-year period, the Fund performed trailed its benchmark and ranked at the 60<sup>th</sup> percentile of peers.
- Over the last five- and ten-year periods, the Fund outperformed its benchmark and ranked ahead of its peer group median.

\*Peer Group ranking: 1st percentile = best; 100th percentile = worst. The peer universe is Gross of Fees. Benchmark detail included in the Appendix.



# Total Fund Calendar Year Performance

## Callan Public Fund Sponsor Large (>1B) Peer Group – Gross Fees (GOF)



\*Peer Group ranking: 1st percentile = best; 100th percentile = worst. The peer universe is Gross of Fees. Benchmark detail included in the Appendix.

## Performance Detail (NOF)

As of December 31, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Domestic Equity</b>	<b>\$4,915,734,515</b>	<b>36.45%</b>	<b>1.95%</b>	<b>22.03%</b>	<b>7.57%</b>	<b>13.21%</b>	<b>11.81%</b>
Domestic Equity Benchmark (2)	-	-	2.63%	23.81%	8.01%	13.86%	12.55%
<b>Large Cap Value</b>	<b>\$579,476,130</b>	<b>4.30%</b>	<b>(1.54%)</b>	<b>15.68%</b>	<b>8.02%</b>	<b>9.53%</b>	<b>8.81%</b>
Great Lakes	579,476,130	4.30%	(1.54%)	15.68%	8.02%	9.53%	9.07%
Russell 1000 Value Index	-	-	(1.98%)	14.37%	5.63%	8.68%	8.49%
<b>Large Cap Core</b>	<b>\$2,710,169,891</b>	<b>20.10%</b>	<b>2.42%</b>	<b>24.51%</b>	<b>8.80%</b>	<b>14.40%</b>	<b>12.82%</b>
Rhumbline Large Cap Core	2,710,169,891	20.10%	2.42%	24.51%	8.80%	14.40%	12.98%
S&P 500 Index	-	-	2.41%	25.02%	8.94%	14.53%	13.10%
<b>Large Cap Growth</b>	<b>\$616,197,345</b>	<b>4.57%</b>	<b>7.06%</b>	<b>32.71%</b>	<b>10.22%</b>	<b>18.67%</b>	<b>16.46%</b>
Rhumbline R1000 Growth	616,192,290	4.57%	7.07%	-	-	-	-
Russell 1000 Growth Index	-	-	7.07%	33.36%	10.47%	18.96%	16.78%
<b>Small/Mid Cap Broad</b>	<b>\$679,494,825</b>	<b>5.04%</b>	<b>(0.80%)</b>	<b>9.53%</b>	<b>2.25%</b>	<b>8.11%</b>	<b>8.78%</b>
Channing Small/Mid Cap	231,103,260	1.71%	(1.89%)	7.25%	1.62%	6.96%	6.41%
Russell 2500 Value Index	-	-	(0.26%)	10.98%	3.81%	8.44%	7.81%
Frontier Small/Mid Cap	278,723,831	2.07%	(0.85%)	10.30%	3.85%	9.27%	8.79%
Russell 2500 Index	-	-	0.62%	12.00%	2.39%	8.77%	8.85%
William Blair Small/Mid Cap	169,667,733	1.26%	0.80%	11.47%	0.60%	7.94%	10.58%
Russell 2500 Growth Index	-	-	2.43%	13.90%	(0.02%)	8.08%	9.45%
<b>Small Cap Broad</b>	<b>\$330,396,325</b>	<b>2.45%</b>	<b>0.97%</b>	<b>20.43%</b>	<b>2.84%</b>	<b>10.30%</b>	<b>8.81%</b>
Russell 2000 Index	-	-	0.33%	11.54%	1.24%	7.40%	7.82%
<b>Small Cap Value</b>	<b>\$159,886,276</b>	<b>1.19%</b>	<b>(1.26%)</b>	<b>13.17%</b>	<b>5.50%</b>	<b>10.43%</b>	<b>8.29%</b>
Channing	72,172,779	0.54%	(0.25%)	10.95%	3.29%	9.01%	7.52%
Mesirow Equity (Fiduciary)	87,713,496	0.65%	(2.08%)	15.05%	7.46%	11.68%	8.97%
Russell 2000 Value Index	-	-	(1.06%)	8.05%	1.94%	7.29%	7.14%
<b>Small Cap Growth</b>	<b>\$170,510,049</b>	<b>1.26%</b>	<b>3.15%</b>	<b>28.15%</b>	<b>0.57%</b>	<b>10.18%</b>	<b>9.82%</b>
CastleArk Small Cap Growth	170,510,049	1.26%	3.15%	28.15%	0.57%	10.18%	9.57%
Russell 2000 Growth Index	-	-	1.70%	15.15%	0.21%	6.86%	8.09%

Benchmark detail included in the Appendix.

## Performance Detail (NOF)

As of December 31, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>International Equity</b>	<b>\$2,763,819,062</b>	<b>20.50%</b>	<b>(8.19%)</b>	<b>3.00%</b>	<b>(0.53%)</b>	<b>2.95%</b>	<b>4.79%</b>
International Equity Benchmark (3)	-	-	(7.61%)	5.23%	0.50%	4.12%	4.75%
MSCI EAFE	-	-	(8.11%)	3.82%	1.65%	4.73%	5.20%
<b>International</b>	<b>\$815,023,715</b>	<b>6.04%</b>	<b>(8.47%)</b>	<b>2.73%</b>	<b>0.39%</b>	<b>3.26%</b>	<b>4.77%</b>
Lazard Asset Mgmt	478,011,211	3.54%	(8.76%)	2.14%	1.06%	4.08%	5.53%
MSCI ACWI ex US	-	-	(7.60%)	5.53%	0.82%	4.10%	4.80%
Boston Common	187,662,994	1.39%	(9.51%)	1.59%	(3.82%)	-	-
Strategic Global Advisors	147,742,715	1.10%	(6.03%)	6.58%	2.82%	4.75%	4.83%
MSCI EAFE	-	-	(8.11%)	3.82%	1.65%	4.73%	5.20%
<b>International Core</b>	<b>\$1,335,020,101</b>	<b>9.90%</b>	<b>(7.73%)</b>	<b>5.43%</b>	<b>1.72%</b>	<b>4.47%</b>	<b>5.31%</b>
SSgA	1,335,020,101	9.90%	(7.73%)	5.43%	1.72%	4.47%	5.31%
MSCI ACWI ex US	-	-	(7.60%)	5.53%	0.82%	4.10%	4.80%
<b>International Small Cap</b>	<b>\$398,474,557</b>	<b>2.95%</b>	<b>(9.55%)</b>	<b>(2.35%)</b>	<b>(4.99%)</b>	<b>0.69%</b>	<b>3.91%</b>
Franklin Templeton	397,387,324	2.95%	(9.21%)	(1.53%)	(3.93%)	1.82%	4.32%
MSCI ACWI ex US Small Cap	-	-	(7.66%)	3.36%	(1.47%)	4.30%	5.66%
<b>Emerging Markets</b>	<b>\$214,232,918</b>	<b>1.59%</b>	<b>(7.22%)</b>	<b>4.13%</b>	<b>(3.19%)</b>	<b>(0.07%)</b>	<b>3.98%</b>
Allspring	214,232,918	1.59%	(7.22%)	4.13%	(3.19%)	(0.07%)	3.98%
MSCI Emerging Mkts Index	-	-	(8.01%)	7.50%	(1.92%)	1.70%	3.64%

Benchmark detail included in the Appendix.

## Performance Detail (NOF)

As of December 31, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Fixed Income</b>	<b>\$3,090,002,529</b>	<b>22.91%</b>	<b>(2.89%)</b>	<b>2.01%</b>	<b>(2.14%)</b>	<b>(0.09%)</b>	<b>1.46%</b>
Fixed Income Benchmark (4)	-	-	(2.78%)	1.55%	(2.00%)	(0.13%)	1.45%
<b>Broad US Fixed Income</b>	<b>\$2,829,217,125</b>	<b>20.98%</b>	<b>(3.08%)</b>	<b>1.87%</b>	<b>(2.40%)</b>	<b>(0.23%)</b>	<b>1.43%</b>
Bloomberg Aggregate Index	-	-	(3.06%)	1.25%	(2.41%)	(0.33%)	1.35%
<b>Core Fixed Income</b>	<b>\$1,806,824,276</b>	<b>13.40%</b>	<b>(3.04%)</b>	<b>1.37%</b>	<b>(2.28%)</b>	<b>(0.11%)</b>	<b>1.43%</b>
Mellon Capital	1,041,783,091	7.73%	(3.04%)	1.20%	(2.47%)	(0.39%)	1.28%
LM Capital	499,479,170	3.70%	(2.97%)	1.59%	(1.85%)	0.20%	1.58%
New Century Advisors	265,562,015	1.97%	(3.20%)	1.60%	(2.88%)	0.02%	1.58%
Bloomberg Aggregate Index	-	-	(3.06%)	1.25%	(2.41%)	(0.33%)	1.35%
<b>Core Plus Fixed Income</b>	<b>\$1,022,384,310</b>	<b>7.58%</b>	<b>(3.13%)</b>	<b>2.69%</b>	<b>(2.85%)</b>	<b>0.16%</b>	<b>1.91%</b>
MacKay Shields	516,105,872	3.83%	(2.69%)	3.18%	(1.52%)	1.10%	2.34%
PGIM Core Plus FI	479,811,038	3.56%	(2.84%)	2.64%	(1.70%)	0.48%	-
Xponance, Inc.	26,467,399	0.20%	(9.35%)	(1.06%)	(8.26%)	(2.84%)	0.55%
Bloomberg Aggregate Index	-	-	(3.06%)	1.25%	(2.41%)	(0.33%)	1.35%
<b>Short Duration Fixed Income</b>	<b>\$260,785,403</b>	<b>1.93%</b>	<b>(0.78%)</b>	<b>3.24%</b>	<b>1.92%</b>	<b>1.81%</b>	<b>-</b>
Garcia Hamilton	260,785,403	1.93%	(0.78%)	3.24%	1.92%	1.81%	-
Blmbg Gov/Cred 1-3 Yr	-	-	(0.02%)	4.36%	1.69%	1.58%	1.63%
<b>Cash Equivalents</b>	<b>\$153,927,467</b>	<b>1.14%</b>	<b>1.19%</b>	<b>5.27%</b>	<b>4.01%</b>	<b>2.57%</b>	<b>1.95%</b>
CC Cash Mgmt Acct	153,927,467	1.14%	1.19%	5.27%	4.01%	2.57%	1.95%
3-month Treasury Bill	-	-	1.17%	5.25%	3.89%	2.46%	1.77%

Benchmark detail included in the Appendix.

# Performance Detail (NOF)

As of December 31, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Real Estate</b>	<b>\$1,053,497,721</b>	<b>7.81%</b>	<b>(0.04%)</b>	<b>(1.66%)</b>	<b>(1.63%)</b>	<b>4.50%</b>	<b>5.83%</b>
<b>REITS</b>	<b>\$132,684,307</b>	<b>0.98%</b>	<b>(4.64%)</b>	<b>10.01%</b>	<b>(2.27%)</b>	<b>5.47%</b>	<b>6.10%</b>
Adelante	132,684,307	0.98%	(4.64%)	10.01%	(2.27%)	5.48%	-
NAREIT Equity Index	-	-	(6.21%)	8.73%	(2.20%)	4.27%	5.73%
<b>**Private Real Estate</b>	<b>\$920,813,414</b>	<b>6.83%</b>	<b>0.65%</b>	<b>(3.11%)</b>	<b>(1.57%)</b>	<b>4.34%</b>	<b>6.48%</b>
JP Morgan Strategic Property Fd	225,920,585	1.68%	2.19%	(2.74%)	(4.96%)	0.71%	4.19%
Prudential PRISA Real Estate	257,510,330	1.91%	2.30%	(2.37%)	(3.02%)	2.28%	5.56%
AG Core Plus Realty Fd IV	6,040,367	0.04%	(3.18%)	(17.71%)	(17.95%)	(7.44%)	-
Artemis Income & Growth Fund	42,670,126	0.32%	1.13%	15.99%	4.66%	3.21%	-
Artemis RE Fund IV	9,516,799	0.07%	(0.73%)	(2.29%)	-	-	-
Basis Real Estate Fund II	18,970,822	0.14%	2.75%	7.81%	-	-	-
Blackstone RE Partners VIII	20,046,175	0.15%	0.44%	(3.82%)	3.72%	13.25%	-
Blackstone RE Partners IX	32,899,984	0.24%	(0.32%)	(5.66%)	8.07%	14.65%	-
Blackstone RE Partners X	8,871,749	0.07%	6.47%	14.64%	-	-	-
CBRE Strategic Partners VIII	13,057,941	0.10%	(18.60%)	(36.85%)	(22.54%)	(10.14%)	-
Clarion Lion Industrial Trust	177,645,469	1.32%	(0.68%)	(2.96%)	2.99%	-	-
LaSalle Income & Growth Fd VI	3,355,276	0.02%	0.04%	(38.36%)	(25.17%)	(17.46%)	(4.74%)
LaSalle Income & Growth Fd VIII	20,527,420	0.15%	(5.02%)	(9.57%)	3.78%	-	-
Mesirow RE Value III LP	36,839,225	0.27%	0.27%	(2.82%)	5.10%	11.10%	-
Mesirow RE Value IV LP	31,759,896	0.24%	0.61%	1.89%	5.66%	-	-
Mesirow RE Value V LP	11,971,457	0.09%	(1.57%)	-	-	-	-
NFI-ODCE Value Weight Net	-	-	0.96%	(2.27%)	(3.14%)	1.99%	4.94%
<b>**Private Equity</b>	<b>\$766,978,488</b>	<b>5.69%</b>	<b>1.20%</b>	<b>3.94%</b>	<b>(0.83%)</b>	<b>18.72%</b>	<b>16.48%</b>
Mesirow Separate Account	751,528,873	5.57%	1.34%	4.18%	(0.86%)	19.17%	18.03%
Muller and Monroe	13,532,616	0.10%	(8.28%)	(9.85%)	(1.44%)	11.46%	-
<b>**Hedge Funds</b>	<b>\$633,194,425</b>	<b>4.70%</b>	<b>3.88%</b>	<b>10.94%</b>	<b>6.78%</b>	<b>6.03%</b>	<b>4.96%</b>
Blackstone Burnham Fd	448,092,510	3.32%	4.14%	11.39%	7.69%	6.27%	5.32%
Rock Creek Kenwood Fd	185,101,915	1.37%	3.28%	9.89%	4.54%	5.43%	4.17%
90-Day Average SOFR + 4% (5)	-	-	2.26%	9.52%	8.23%	6.71%	6.06%
HFRI Fund of Funds Index (6)	-	-	3.13%	11.44%	3.22%	5.57%	3.83%
<b>Infrastructure</b>	<b>\$107,587,091</b>	<b>0.80%</b>	<b>2.38%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Pantheon Global Infrast. Fd IV	93,587,091	0.69%	2.74%	-	-	-	-
FTSE Dev Core Inf 50/50 N	-	-	(5.15%)	9.27%	1.72%	3.11%	5.32%
<b>*Private Credit</b>	<b>\$0</b>	<b>0.00%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total Cook County Fund</b>	<b>\$13,485,237,158</b>	<b>100.00%</b>	<b>(1.49%)</b>	<b>9.54%</b>	<b>2.32%</b>	<b>7.19%</b>	<b>7.22%</b>
Total Fund Composite Bnmk (1)	-	-	(1.31%)	9.78%	2.67%	7.05%	7.13%

\*Private Credit investment approved by the Board in June 2022 to be implemented at a future date. The appropriate benchmark will be determined at that time.

\*\*Real Estate, Private Equity, Hedge Fund, and Infrastructure information reflect trailing data. Benchmark detail included in the Appendix.

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## Manager Updates

*4<sup>th</sup> Quarter 2024*

### **Mellon Investments Corporation – Passive Core Fixed Income**

In January 2025, Mellon Investments Corporation informed Callan of its plan to close the San Francisco office, which has housed passive index investment professionals. Employees may relocate to Mellon's Pittsburgh office and must decide by the end of February. Those accepting the offer have until Q3 2026 to move. Head of Index Stephanie Hill has accepted and will relocate. The remaining 16 team members have not disclosed their plans. Mellon's investment process for indexing is highly systematic, and this should not materially affect day to day management of client portfolios. Callan will monitor the decisions of remaining team members.

**The Cook County Fund has approximately \$1.0 billion invested in the Mellon Bloomberg Aggregate Index strategy.**

*Callan views the announcement as notable, but not actionable at this time.*

### **William Blair & Company LLC – Small/Mid Cap Equity**

In January 2025, William Blair announced that Stephanie Braming, Head of Investment Management, will retire at the end of 2025. William Blair's CEO and COO will lead a full search for her replacement, with input from senior members of the Investment Management team. No additional personnel or structural changes are anticipated within the Investment Management division because of this announcement.

**The Cook County Fund has approximately \$170 million invested in the William Blair Small/Mid Cap Growth strategy.**

*Callan views the announcement as notable, but not actionable at this time.*

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## Appendix

# Asset Class Performance Returns – Gross of Fees (GOF)

As of December 31, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Domestic Equity</b>	\$4,915,734,515	36.45%	1.98%	22.18%	7.72%	13.37%	12.02%
Domestic Equity Benchmark (2)	-	-	2.63%	23.81%	8.01%	13.86%	12.55%
<b>International Equity</b>	\$2,763,819,062	20.50%	(8.12%)	3.29%	(0.22%)	3.30%	5.16%
International Equity Benchmark (3)	-	-	(7.61%)	5.23%	0.50%	4.12%	4.75%
<b>Fixed Income</b>	\$3,090,002,529	22.91%	(2.85%)	2.12%	(2.03%)	0.03%	1.60%
Fixed Income Benchmark (4)	-	-	(2.78%)	1.55%	(2.00%)	(0.13%)	1.45%
<b>REITS</b>	\$132,684,307	0.98%	(4.51%)	10.58%	(1.72%)	6.06%	6.51%
NAREIT Equity Index	-	-	(6.21%)	8.73%	(2.20%)	4.27%	5.73%
<b>**Private Real Estate</b>	\$920,813,414	6.83%	1.10%	(1.89%)	(0.72%)	5.30%	7.48%
NFI-ODCE Value Weight Net	-	-	0.96%	(2.27%)	(3.14%)	1.99%	4.94%
<b>**Private Equity</b>	\$766,978,488	5.69%	1.21%	4.15%	(0.61%)	18.98%	17.63%
<b>**Hedge Funds</b>	\$633,194,425	4.70%	4.19%	11.97%	7.78%	7.02%	5.95%
90-Day Average SOFR + 4% (5)	-	-	2.26%	9.52%	8.23%	6.71%	6.06%
HFRI Fund of Funds Index (6)	-	-	3.13%	11.44%	3.22%	5.57%	3.83%
<b>**Infrastructure</b>	\$107,587,091	0.80%	2.38%	-	-	-	-
FTSE Dev Core Inf 50/50 N	-	-	(5.15%)	9.27%	1.72%	3.11%	5.32%
<b>*Private Credit</b>	\$0	0.00%					
<b>Cash Equivalents</b>	\$153,927,467	1.14%	1.19%	5.27%	4.01%	2.57%	1.97%
3-month Treasury Bill	-	-	1.17%	5.25%	3.89%	2.46%	1.77%
<b>Total Cook County Fund</b>	\$13,485,237,158	100.00%	(1.41%)	9.84%	2.60%	7.49%	7.57%
Total Fund Benchmark (1)	-	-	(1.31%)	9.78%	2.67%	7.05%	7.13%

\*Private Credit investment approved by the Board in June 2022 to be implemented at a future date. The appropriate benchmark will be determined at that time.

\*\*Real Estate, Private Equity, Hedge Fund, and Infrastructure information reflect trailing data.



## Performance Detail (GOF)

As of December 31, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Domestic Equity</b>	<b>\$4,915,734,515</b>	<b>36.45%</b>	<b>1.98%</b>	<b>22.18%</b>	<b>7.72%</b>	<b>13.37%</b>	<b>12.02%</b>
Domestic Equity Benchmark (2)	-	-	2.63%	23.81%	8.01%	13.86%	12.55%
<b>Large Cap Value</b>	<b>\$579,476,130</b>	<b>4.30%</b>	<b>(1.54%)</b>	<b>15.78%</b>	<b>8.14%</b>	<b>9.66%</b>	<b>8.96%</b>
Great Lakes	579,476,130	4.30%	(1.54%)	15.78%	8.14%	9.66%	9.21%
Russell 1000 Value Index	-	-	(1.98%)	14.37%	5.63%	8.68%	8.49%
<b>Large Cap Core</b>	<b>\$2,710,169,891</b>	<b>20.10%</b>	<b>2.42%</b>	<b>24.51%</b>	<b>8.81%</b>	<b>14.41%</b>	<b>12.85%</b>
Rhumblin Large Cap Core	2,710,169,891	20.10%	2.42%	24.51%	8.81%	14.41%	12.99%
S&P 500 Index	-	-	2.41%	25.02%	8.94%	14.53%	13.10%
<b>Large Cap Growth</b>	<b>\$616,197,345</b>	<b>4.57%</b>	<b>7.07%</b>	<b>32.75%</b>	<b>10.26%</b>	<b>18.72%</b>	<b>16.51%</b>
Rhumblin R1000 Growth	616,192,290	4.57%	7.07%	-	-	-	-
Russell 1000 Growth Index	-	-	7.07%	33.36%	10.47%	18.96%	16.78%
<b>Small/Mid Cap Broad</b>	<b>\$679,494,825</b>	<b>5.04%</b>	<b>(0.68%)</b>	<b>10.11%</b>	<b>2.88%</b>	<b>8.80%</b>	<b>9.48%</b>
Channing Small/Mid Cap	231,103,260	1.71%	(1.77%)	7.78%	2.15%	7.51%	6.95%
Russell 2500 Value Index	-	-	(0.26%)	10.98%	3.81%	8.44%	7.81%
Frontier Small/Mid Cap	278,723,831	2.07%	(0.85%)	10.83%	4.52%	10.05%	9.57%
Russell 2500 Index	-	-	0.62%	12.00%	2.39%	8.77%	8.85%
William Blair Small/Mid Cap	169,667,733	1.26%	1.13%	12.21%	1.32%	8.70%	11.38%
Russell 2500 Growth Index	-	-	2.43%	13.90%	(0.02%)	8.08%	9.45%
<b>Small Cap Broad</b>	<b>\$330,396,325</b>	<b>2.45%</b>	<b>1.15%</b>	<b>21.12%</b>	<b>3.50%</b>	<b>11.00%</b>	<b>9.53%</b>
Russell 2000 Index	-	-	0.33%	11.54%	1.24%	7.40%	7.82%
<b>Small Cap Value</b>	<b>\$159,886,276</b>	<b>1.19%</b>	<b>(1.05%)</b>	<b>13.82%</b>	<b>6.15%</b>	<b>11.11%</b>	<b>9.03%</b>
Channing	72,172,779	0.54%	(0.08%)	11.66%	4.01%	9.75%	8.34%
Mesirow Equity (Fiduciary)	87,713,496	0.65%	(1.83%)	15.64%	8.06%	12.31%	9.64%
Russell 2000 Value Index	-	-	(1.06%)	8.05%	1.94%	7.29%	7.14%
<b>Small Cap Growth</b>	<b>\$170,510,049</b>	<b>1.26%</b>	<b>3.30%</b>	<b>28.90%</b>	<b>1.23%</b>	<b>10.89%</b>	<b>10.53%</b>
CastleArk Small Cap Growth	170,510,049	1.26%	3.30%	28.90%	1.23%	10.89%	10.31%
Russell 2000 Growth Index	-	-	1.70%	15.15%	0.21%	6.86%	8.09%

## Performance Detail (GOF)

As of December 31, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>International Equity</b>	<b>\$2,763,819,062</b>	<b>20.50%</b>	<b>(8.12%)</b>	<b>3.29%</b>	<b>(0.22%)</b>	<b>3.30%</b>	<b>5.16%</b>
International Equity Benchmark (3)	-	-	(7.61%)	5.23%	0.50%	4.12%	4.75%
MSCI EAFE	-	-	(8.11%)	3.82%	1.65%	4.73%	5.20%
<b>International</b>	<b>\$815,023,715</b>	<b>6.04%</b>	<b>(8.43%)</b>	<b>3.01%</b>	<b>0.73%</b>	<b>3.60%</b>	<b>5.14%</b>
Lazard Asset Mgmt	478,011,211	3.54%	(8.76%)	2.26%	1.23%	4.28%	5.73%
MSCI ACWI ex US	-	-	(7.60%)	5.53%	0.82%	4.10%	4.80%
Boston Common	187,662,994	1.39%	(9.41%)	2.01%	(3.39%)	-	-
Strategic Global Advisors	147,742,715	1.10%	(5.89%)	7.19%	3.45%	5.40%	5.48%
MSCI EAFE	-	-	(8.11%)	3.82%	1.65%	4.73%	5.20%
<b>International Core</b>	<b>\$1,335,020,101</b>	<b>9.90%</b>	<b>(7.69%)</b>	<b>5.49%</b>	<b>1.77%</b>	<b>4.52%</b>	<b>5.36%</b>
SSgA	1,335,020,101	9.90%	(7.69%)	5.49%	1.77%	4.52%	5.36%
MSCI ACWI ex US	-	-	(7.60%)	5.53%	0.82%	4.10%	4.80%
<b>International Small Cap</b>	<b>\$398,474,557</b>	<b>2.95%</b>	<b>(9.42%)</b>	<b>(1.79%)</b>	<b>(4.41%)</b>	<b>1.33%</b>	<b>4.60%</b>
Franklin Templeton	397,387,324	2.95%	(9.09%)	(1.01%)	(3.39%)	2.43%	4.98%
MSCI ACWI ex US Small Cap	-	-	(7.66%)	3.36%	(1.47%)	4.30%	5.66%
<b>Emerging Markets</b>	<b>\$214,232,918</b>	<b>1.59%</b>	<b>(7.06%)</b>	<b>5.06%</b>	<b>(2.52%)</b>	<b>0.69%</b>	<b>4.79%</b>
Allspring	214,232,918	1.59%	(7.06%)	5.06%	(2.52%)	0.69%	4.79%
MSCI Emerging Mkts Index	-	-	(8.01%)	7.50%	(1.92%)	1.70%	3.64%

## Performance Detail (GOF)

As of December 31, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Fixed Income</b>	<b>\$3,090,002,529</b>	<b>22.91%</b>	<b>(2.85%)</b>	<b>2.12%</b>	<b>(2.03%)</b>	<b>0.03%</b>	<b>1.60%</b>
Fixed Income Benchmark (4)	-	-	(2.78%)	1.55%	(2.00%)	(0.13%)	1.45%
<b>Broad US Fixed Income</b>	<b>\$2,829,217,125</b>	<b>20.98%</b>	<b>(3.04%)</b>	<b>1.98%</b>	<b>(2.29%)</b>	<b>(0.10%)</b>	<b>1.58%</b>
Bloomberg Aggregate Index	-	-	(3.06%)	1.25%	(2.41%)	(0.33%)	1.35%
<b>Core Fixed Income</b>	<b>\$1,806,824,276</b>	<b>13.40%</b>	<b>(3.03%)</b>	<b>1.43%</b>	<b>(2.22%)</b>	<b>(0.05%)</b>	<b>1.51%</b>
Mellon Capital	1,041,783,091	7.73%	(3.04%)	1.21%	(2.45%)	(0.37%)	1.30%
LM Capital	499,479,170	3.70%	(2.97%)	1.69%	(1.74%)	0.29%	1.70%
New Century Advisors	265,562,015	1.97%	(3.11%)	1.78%	(2.69%)	0.22%	1.78%
Bloomberg Aggregate Index	-	-	(3.06%)	1.25%	(2.41%)	(0.33%)	1.35%
<b>Core Plus Fixed Income</b>	<b>\$1,022,384,310</b>	<b>7.58%</b>	<b>(3.05%)</b>	<b>2.89%</b>	<b>(2.66%)</b>	<b>0.35%</b>	<b>2.13%</b>
MacKay Shields	516,105,872	3.83%	(2.64%)	3.35%	(1.31%)	1.32%	2.58%
PGIM Core Plus FI	479,811,038	3.56%	(2.71%)	2.83%	(1.53%)	0.67%	-
Xponance, Inc.	26,467,399	0.20%	(9.35%)	(0.67%)	(8.06%)	(2.64%)	0.76%
Bloomberg Aggregate Index	-	-	(3.06%)	1.25%	(2.41%)	(0.33%)	1.35%
<b>Short Duration Fixed Income</b>	<b>\$260,785,403</b>	<b>1.93%</b>	<b>(0.78%)</b>	<b>3.32%</b>	<b>2.00%</b>	<b>1.90%</b>	<b>-</b>
Garcia Hamilton	260,785,403	1.93%	(0.78%)	3.32%	2.00%	1.90%	-
Blmbg Gov/Cred 1-3 Yr	-	-	(0.02%)	4.36%	1.69%	1.58%	1.63%
<b>Cash Equivalents</b>	<b>\$153,927,467</b>	<b>1.14%</b>	<b>1.19%</b>	<b>5.27%</b>	<b>4.01%</b>	<b>2.57%</b>	<b>1.97%</b>
CC Cash Mgmt Acct	153,927,467	1.14%	1.19%	5.27%	4.01%	2.57%	1.97%
3-month Treasury Bill	-	-	1.17%	5.25%	3.89%	2.46%	1.77%

# Performance Detail (GOF)

As of December 31, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Real Estate</b>	<b>\$1,053,497,721</b>	<b>7.81%</b>	<b>0.36%</b>	<b>(0.51%)</b>	<b>(0.81%)</b>	<b>5.42%</b>	<b>6.67%</b>
<b>REITS</b>	<b>\$132,684,307</b>	<b>0.98%</b>	<b>(4.51%)</b>	<b>10.58%</b>	<b>(1.72%)</b>	<b>6.06%</b>	<b>6.51%</b>
Adelante	132,684,307	0.98%	(4.51%)	10.58%	(1.72%)	6.07%	-
NAREIT Equity Index	-	-	(6.21%)	8.73%	(2.20%)	4.27%	5.73%
<b>**Private Real Estate</b>	<b>\$920,813,414</b>	<b>6.83%</b>	<b>1.10%</b>	<b>(1.89%)</b>	<b>(0.72%)</b>	<b>5.30%</b>	<b>7.48%</b>
JP Morgan Strategic Property Fd	225,920,585	1.68%	2.41%	(2.12%)	(4.44%)	1.29%	4.92%
Prudential PRISA Real Estate	257,510,330	1.91%	2.71%	(0.73%)	(2.25%)	3.13%	6.40%
AG Core Plus Realty Fd IV	6,040,367	0.04%	(2.09%)	(15.84%)	(16.55%)	(5.96%)	-
Artemis Income & Growth Fund	42,670,126	0.32%	1.77%	17.61%	5.92%	5.79%	-
Artemis RE Fund IV	9,516,799	0.07%	1.52%	6.75%	-	-	-
Basis Real Estate Fund II	18,970,822	0.14%	3.33%	10.48%	-	-	-
Blackstone RE Partners VIII	20,046,175	0.15%	1.01%	(2.47%)	5.07%	14.71%	-
Blackstone RE Partners IX	32,899,984	0.24%	0.24%	(4.60%)	9.19%	16.96%	-
Blackstone RE Partners X	8,871,749	0.07%	9.67%	36.98%	-	-	-
CBRE Strategic Partners VIII	13,057,941	0.10%	(18.02%)	(35.87%)	(21.64%)	(9.21%)	-
Clarion Lion Industrial Trust	177,645,469	1.32%	(0.18%)	(1.98%)	3.91%	-	-
LaSalle Income & Growth Fd VI	3,355,276	0.02%	0.04%	(38.36%)	(25.10%)	(17.14%)	(4.01%)
LaSalle Income & Growth Fd VIII	20,527,420	0.15%	(4.37%)	(8.00%)	5.00%	-	-
Mesirow RE Value III LP	36,839,225	0.27%	0.45%	(2.11%)	5.66%	12.02%	-
Mesirow RE Value IV LP	31,759,896	0.24%	0.85%	2.80%	6.47%	-	-
Mesirow RE Value V LP	11,971,457	0.09%	(0.14%)	-	-	-	-
NFI-ODCE Value Weight Net	-	-	0.96%	(2.27%)	(3.14%)	1.99%	4.94%
<b>**Private Equity</b>	<b>\$766,978,488</b>	<b>5.69%</b>	<b>1.21%</b>	<b>4.15%</b>	<b>(0.61%)</b>	<b>18.98%</b>	<b>17.63%</b>
Mesirow Separate Account	751,528,873	5.57%	1.34%	4.38%	(0.65%)	19.41%	18.42%
Muller and Monroe	13,532,616	0.10%	(8.06%)	(8.96%)	(0.71%)	12.38%	-
<b>**Hedge Funds</b>	<b>\$633,194,425</b>	<b>4.70%</b>	<b>4.19%</b>	<b>11.97%</b>	<b>7.78%</b>	<b>7.02%</b>	<b>5.95%</b>
Blackstone Burnham Fd	448,092,510	3.32%	4.49%	12.52%	8.79%	7.35%	6.39%
Rock Creek Kenwood Fd	185,101,915	1.37%	3.48%	10.68%	5.28%	6.19%	4.95%
90-Day Average SOFR + 4% (5)	-	-	2.26%	9.52%	8.23%	6.71%	6.06%
HFRI Fund of Funds Index (6)	-	-	3.13%	11.44%	3.22%	5.57%	3.83%
<b>Infrastructure</b>	<b>\$107,587,091</b>	<b>0.80%</b>	<b>2.38%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Pantheon Global Infrast. Fd IV	93,587,091	0.69%	2.74%	-	-	-	-
FTSE Dev Core Inf 50/50 N	-	-	(5.15%)	9.27%	1.72%	3.11%	5.32%
<b>*Private Credit</b>	<b>\$0</b>	<b>0.00%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total Cook County Fund</b>	<b>\$13,485,237,158</b>	<b>100.00%</b>	<b>(1.41%)</b>	<b>9.84%</b>	<b>2.60%</b>	<b>7.49%</b>	<b>7.57%</b>
Total Fund Composite Bnmk (1)	-	-	(1.31%)	9.78%	2.67%	7.05%	7.13%

\*Private Credit investment approved by the Board in June 2022 to be implemented at a future date. The appropriate benchmark will be determined at that time.

\*\*Real Estate, Private Equity, Hedge Fund, and Infrastructure information reflect trailing data.

# Performance Attribution (GOF) – 4<sup>th</sup> Quarter

As of December 31, 2024

## Relative Attribution Effects for Quarter ended December 31, 2024

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return		
Domestic Equity	36%	34%	1.98%	2.63%	(0.23%)	0.07%	(0.16%)		
International Equity	21%	20%	(8.12%)	(7.61%)	(0.11%)	(0.07%)	(0.19%)		
Broad US Fixed Inc	21%	24%	(3.04%)	(3.06%)	0.01%	0.06%	0.06%		
Short Duration Fixed Inc	2%	3%	(0.78%)	(0.02%)	(0.01%)	(0.01%)	(0.02%)		
REITS	1%	1%	(4.51%)	(6.21%)	0.02%	0.01%	0.03%		
Private Real Estate	7%	8%	1.10%	0.96%	0.01%	(0.03%)	(0.02%)		
Private Equity	6%	5%	1.21%	1.21%	0.00%	0.01%	0.01%		
Hedge Funds	4%	3%	4.19%	2.26%	0.08%	0.05%	0.13%		
Infrastructure	1%	1%	2.38%	(5.15%)	0.06%	0.00%	0.06%		
Cash	1%	1%	1.19%	1.17%	0.00%	(0.00%)	(0.00%)		
<b>Total</b>			<b>(1.41%)</b>	<b>(1.31%)</b>	<b>+</b>	<b>(0.19%)</b>	<b>+</b>	<b>0.09%</b>	<b>(0.10%)</b>

- **Total Fund Return:** The Fund returned -1.41% for the quarter and underperformed the benchmark by 0.10%.
  - Hedge Funds posted the highest absolute return.
  - Hedge Funds, Infrastructure, and Broad US Fixed Income generated the strongest relative contributions.
- **Manager Performance:** Active management was negative overall for the quarter.
  - Active management in Domestic Equity, International Equity, and Short Duration Fixed Income detracted.
  - Active management in Hedge Funds and Infrastructure added the strongest contributions.
- **Actual Allocation:** Variance from target policy weights contributed positively to relative performance.
  - Overweights to Domestic Equity and Hedge Funds and an underweight to Broad US Fixed Income added the most value.
  - An overweight to International Equity and underweights to Short Duration Fixed Income and Private Real Estate detracted.

# Performance Attribution (GOF) – One Year

As of December 31, 2024

## One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	37%	34%	22.18%	23.81%	(0.54%)	0.38%	(0.16%)
International Equity	21%	20%	3.29%	5.23%	(0.43%)	(0.06%)	(0.49%)
Broad US Fixed Inc	21%	24%	1.98%	1.25%	0.16%	0.26%	0.42%
Short Duration Fixed Inc	1%	3%	3.32%	4.36%	(0.02%)	0.09%	0.08%
REITS	1%	1%	10.58%	8.73%	0.02%	(0.00%)	0.02%
Private Real Estate	7%	8%	(1.89%)	(2.27%)	0.04%	0.07%	0.11%
Private Equity	6%	5%	4.15%	4.15%	0.00%	(0.11%)	(0.11%)
Hedge Funds	4%	4%	11.97%	9.52%	0.11%	0.05%	0.16%
Infrastructure	1%	1%	12.86%	12.58%	0.02%	0.01%	0.02%
Cash	1%	1%	5.27%	5.25%	0.00%	0.01%	0.01%
<b>Total</b>			<b>9.84%</b>	<b>= 9.78%</b>	<b>+ (0.65%)</b>	<b>+ 0.70%</b>	<b>0.06%</b>

- **Total Fund Return:** For the trailing year, the Fund returned 9.84% versus the benchmark return of 9.78%.
  - Domestic Equity recorded the highest absolute return.
  - Broad US Fixed Income added the largest relative contribution.
- **Manager Performance:** Active Management detracted overall.
  - Active management in Domestic Equity and International Equity were the largest detractors.
  - Active management in Broad US Fixed Income, REITs, Hedge Funds, Private Real Estate, and Infrastructure was positive.
- **Actual Allocation:** Deviations from target policy weights added value over the last year.
  - An overweight to Domestic Equity and underweights to Fixed Income had the largest positive impacts.
  - An overweight to Private Equity was the largest detractor from an allocation perspective.

# Performance Attribution (GOF) – Three Years

As of December 31, 2024

## Three Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	35%	33%	7.72%	8.01%	(0.11%)	0.06%	(0.05%)
International Equity	20%	21%	(0.22%)	0.50%	(0.16%)	(0.03%)	(0.19%)
Broad US Fixed Inc	21%	24%	(2.29%)	(2.41%)	0.02%	0.10%	0.12%
Short Duration Fixed Inc	1%	3%	2.00%	1.69%	0.00%	0.03%	0.03%
REITS	1%	1%	(1.72%)	(2.20%)	0.00%	(0.00%)	0.00%
Private Real Estate	8%	8%	(0.72%)	(3.14%)	0.28%	(0.12%)	0.16%
Private Equity	7%	4%	(0.61%)	(0.61%)	0.00%	(0.08%)	(0.08%)
Hedge Funds	5%	5%	7.78%	8.23%	(0.04%)	0.01%	(0.04%)
Infrastructure	0%	0%	-	-	0.00%	0.00%	0.01%
Cash	1%	1%	4.01%	3.89%	0.00%	(0.04%)	(0.04%)

<b>Total</b>	<b>2.60% = 2.67% + 0.01% + (0.08%)</b>	<b>(0.07%)</b>
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- **Total Fund Return:** Over the last three years, the Total Fund returned 2.60% and underperformed the benchmark by 0.07%.
  - The Domestic Equity allocation earned the highest absolute return.
  - Private Real Estate and Broad US Fixed Income added the largest relative contributions.
- **Manager Performance:** Overall, active management had a muted impact for the period.
  - Private Real Estate and Broad US Fixed Income managers added value.
  - Active management in Domestic Equity and International Equity were the primary detractors for the period.
- **Actual Allocation:** Variance from target policy weights had a negative impact on relative results.
  - Underweights to Fixed Income and an overweight to Domestic Equity added value.
  - Modest overweights to Private Real Estate and Private Equity were the primary detractors from an allocation perspective.

# Performance Attribution (GOF) – Five Years

As of December 31, 2024

## Five Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	35%	33%	13.37%	13.86%	(0.16%)	0.07%	(0.09%)
International Equity	20%	21%	3.30%	4.12%	(0.18%)	(0.04%)	(0.22%)
Broad US Fixed Inc	22%	24%	(0.10%)	(0.33%)	0.03%	0.08%	0.10%
Short Duration Fixed Inc	1%	3%	1.90%	1.58%	(0.00%)	0.10%	0.10%
REITS	1%	1%	6.06%	4.27%	0.02%	(0.01%)	0.01%
Private Real Estate	8%	8%	5.30%	1.99%	0.30%	(0.08%)	0.22%
Private Equity	7%	4%	18.98%	18.98%	0.00%	0.33%	0.33%
Hedge Funds	6%	6%	7.02%	6.71%	(0.01%)	(0.00%)	(0.01%)
Infrastructure	0%	0%	-	-	0.00%	0.00%	0.00%
Cash	1%	1%	2.57%	2.46%	0.00%	0.01%	0.01%

<b>Total</b>	<b>7.49% = 7.05% + (0.01%) + 0.45%</b>	<b>0.44%</b>
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- **Total Fund Return:** Over the last five years, the Total Fund returned 7.49% and outperformed the benchmark by 0.44%.
  - Private Equity and Domestic Equity posted the highest absolute returns.
  - Private Equity and Private Real Estate added the largest relative contributions.
- **Manager Performance:** The manager effect was muted overall for the period.
  - Active management in Private Real Estate was the largest contributor.
  - Active management in Domestic Equity and International Equity were the largest detractors.
- **Actual Allocation:** Variance from target policy weights was a source of outperformance over the last five years.
  - Overweights to Private Equity and Domestic Equity added value for the period.
  - Underweights to Fixed Income and Cash also added value.



# Benchmark Definitions

1. **Total Fund Benchmark (Target):** Blend of asset class benchmarks at policy weights. The target allocation was approved in June 2022; however, the benchmark will be modified in accordance with the actual implementation. This process reflects the practical implementation of non-publicly traded investments.

	<u>Target</u>
Domestic Equity	32.0%
International Equity	20.0
Broad US Fixed Income	23.5
Short Duration Fixed Income	2.5
Hedge Funds	3.0
Real Estate	9.0
Private Equity	5.0
Private Credit*	2.0
Infrastructure	2.0
Cash (90 day T-Bill)	1.0
Total Target	100.0%

2. **Domestic Equity Benchmark:** Russell 3000 Index; Prior to 9/31/2011 Blend of 40% S&P 500, 16% Russell 2000 Value, 16% Russell Mid Cap Growth, 14% Russell 1000 Growth, and 14% Russell 1000 Value.
3. **International Equity Benchmark:** MSCI ACWI ex-US IMI Index; Prior to 12/31/2017 MSCI ACWI ex-US Index; Prior to 12/31/2012 Blend of 85% MSCI ACWI ex-US, 15% Global ex US under \$2 billion; Prior to 9/30/2011 Blend of 80% MSCI ACWI ex-US, 20% Global ex US under \$2 billion.
4. **Fixed Income Benchmark:** Blend of 90% Bloomberg Aggregate Index and 10% Bloomberg Gov/Credit 1-3 Year Index; Prior to 12/31/2019 Bloomberg Aggregate Index; Prior to 12/31/2012 Blend of 62.5% Bloomberg Aggregate Index, 12.5% Bloomberg US TIPs Index, and 25% Bloomberg Gov/Credit Intermediate Index.
5. **Hedge Funds:** (1) 90-Day Average SOFR + 4% (prior to 12/31/2022 3-Month LIBOR + 4%); (2) HFRI Fund of Funds Composite Index (returns lagged one month)
6. **Real Estate Benchmark:** Returns are calculated by weighting the benchmark return for each asset class (i.e. Private RE and Public RE). The Private RE benchmark is the NCREIF NFI-ODCE Value Weight Net Index and the Public RE benchmark is the FTSE NAREIT Equity Index.
7. **Private Equity Benchmark:** is set equal to actual returns.
8. **Infrastructure Benchmark:** FTSE Developed Core Infrastructure 50/50 Net

\*Private Credit investment approved by the Board in June 2022 to be implemented at a future date. The appropriate benchmark will be determined at that time.

Current Quarter Target = 34.0% Russell 3000, 24.5% Bloomberg Aggregate, 20.3% MSCI ACWI xUS IMI, 7.9% NCREIF NFI-ODCE Val Wt Net, 5.0% Private Equity, 3.0% 90-day avg. SOFR +4.0%, 2.5% Bloomberg Gov/Cred 1-3 Yr, 1.1% FTSE NAREIT Equity, 1.0% 3-month T-Bill, 0.7% FTSE Dev Core Infra 50/50 Net

## Benchmark Definitions

- Russell : 1000 Index is comprised of the top 1000 domestic equities, representing 88% of the U.S. equity market capitalization.
- Russell : 2000 Index is comprised of the 2000 smallest stocks in the Russell 3000 Index, representing approximately 11% of the U.S. equity market capitalization.
- MSCI ACWI ex US Index: The MSCI ACWI ex US (All Country World Index) Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets, excluding the US. The developed market country indices included are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, and the United Kingdom. The emerging market country indices included are: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Morocco, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand, and Turkey.
- MSCI: EAFE Index is comprised of stocks traded in the developed markets of Europe, Asia, and the Far East. The index tries to capture at least 60% of investable capitalization in said markets subject to constraints governed by industry representation, maximum liquidity, maximum float, and minimum cross-ownership (companies with exposure in multiple countries). The index is capitalization weighted.
- MSCI: EM Index is comprised of stocks traded in the emerging markets of the world that are open to foreign investment. Emerging markets are defined to be countries that exhibit low GDP levels, limitations on foreign investment, lax regulation, irregular trading hours, less sophisticated back office operations, greater perceived risk, restrictions on repatriation of initial capital, dividends, interest, and/or capital gains, and a general perception of the investment community that a country should be considered emerging. The index tries to capture at least 60% of investable capitalization in said markets subject to constraints governed by industry representation, maximum liquidity, maximum float, and minimum cross-ownership (companies with exposure in multiple countries). The index is capitalization weighted.
- Bloomberg Aggregate Index includes fixed rate debt issues rated investment grade or higher by Moody's Investors Service, Standard and Poor's, or Fitch Investor's Service, in that order. All issues must have at least 1 year left to maturity and have an outstanding par value of at least \$100 million. The Aggregate Index is comprised of the Government/Credit, the Mortgage-Backed Securities, and the Asset-Backed Securities indices.
- NCREIF: NFI-ODCE Val Wt Index is a time-weighted return Index with an inception date of 12/31/1977. The Index is comprised of 33 open-end commingled funds, in which 23 are still actively investing. Inclusion within the Index requires (a) minimum of 80% of net fund assets invested in the multifamily, retail, industrial, office, or hotel property type, (b) maximum of 20% of net fund assets invested in real estate debt or private/public company equity, (c) at least 80% of net assets invested in properties with a minimum occupancy of 60%, (d) no more than 70% of real estate net assets invested in a single property type or region, (e) maximum of 40% leverage, and (f) at least 95% of net real estate assets invested within the U.S. market.

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## Benchmark Definitions

- HFRI Fund of Funds Index invest with multiple managers through funds or managed accounts. The strategy designs a diversified portfolio of managers with the objective of significantly lowering the risk (volatility) of investing with an individual manager. The Fund of Funds manager has discretion in choosing which strategies to invest in for the portfolio. A manager may allocate funds to numerous managers within a single strategy, or with numerous managers in multiple strategies. The minimum investment in a Fund of Funds may be lower than an investment in an individual hedge fund or managed account. The investor has the advantage of diversification among managers and styles with significantly less capital than investing with separate managers.
- Cambridge: PE Index: The Thomson-Cambridge All Private Equity, All Regions Index (excluding private energy) is a pooled IRR that is calculated on a quarterly basis. The data is compiled from 4,228 private equity funds (venture capital, growth equity, buyouts, mezzanine and distressed debt) and includes liquidated partnerships formed between 1986 and 2016. The quarterly pooled IRR returns are net of fees, expenses, and carried interest.

# Published Research Highlights: 4Q24

## 2024 Real Assets Fees and Terms Study



## 2024 ESG Survey



## 3Q24 Market Intelligence Report (clients-only)



## Coming Soon: 2025 Capital Markets Assumptions



## Recent Blog Posts

**IRS Guidance:  
How Reliable  
Is it?**

Jana Steele

**Public DB Plan  
Trends (and  
Some That Will  
Be)**

Weston Lewis

**Are Equity  
Returns More  
Volatile in an  
Election Year?  
It Depends!**

Ric Ford and Drew  
Beiger

## Additional Reading

Active vs. Passive quarterly charts

*Capital Markets Review* quarterly newsletter

Monthly Updates to the Periodic Table

*Market Pulse Flipbook* quarterly markets update

Market Intelligence (clients-only)

*Real Estate Indicators* market outlook

# Callan Institute Events

Upcoming conferences, workshops, and webinars

## 2025 National Conference

**Registration is now open for this event in Scottsdale on April 27-29, 2025!**

Our annual conference will feature mainstage speakers and Callan-led workshops on a variety of topics.

This year we welcome Zanny Minton Beddoes, Ethan Mollick, Admiral James Stavridis, Barry Sternlicht, and Evy Poumpouras to the stage! We will be updating our website as we add additional information regarding this event!

Learn more about this event at:  
<https://www.callan.com/events/2025nationalconference/>



## Mark Your Calendar

### 2025 Regional Workshops

June 3, 2025 – Denver

June 5, 2025 – New York

October 28, 2025 – Chicago

October 30, 2025 – San Francisco

*Watch your email for further details and an invitation.*

## Upcoming Webinars

### February 20, 2025

Research Café: ESG Interview Series

### March 20, 2025

Research Café: Sector-Specific Strategies

### March 28, 2025

STAR Webinar

### April 25, 2025

Market Intelligence Report and Webinar

# Introducing Callan On-Demand Education (CODE)

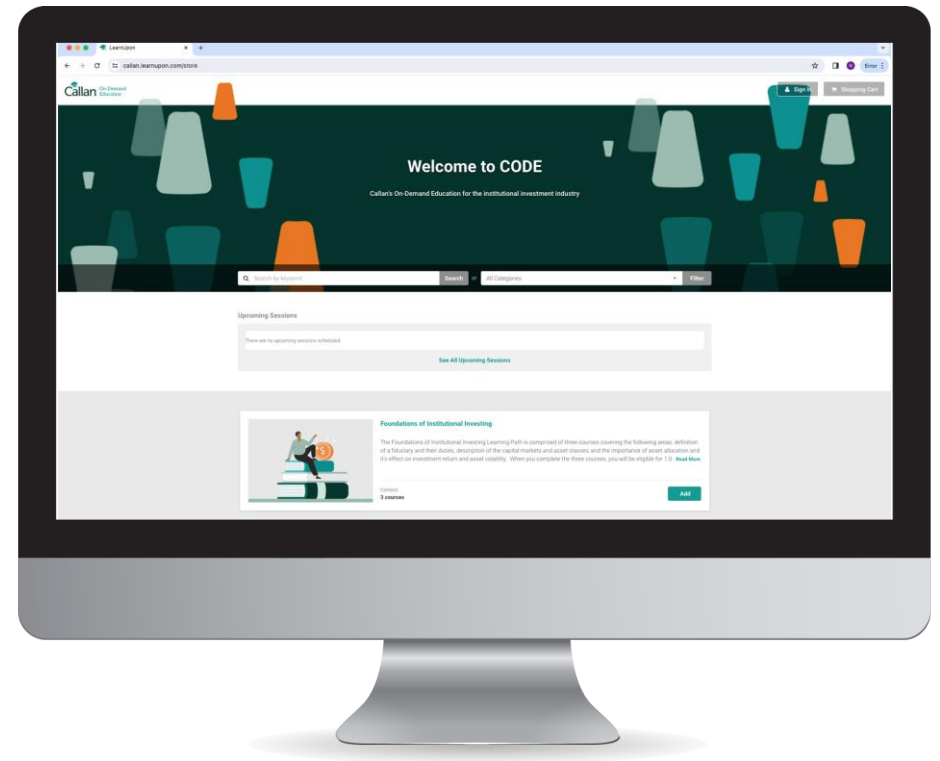


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# Callan Institute Events

Upcoming conferences, workshops, and webinars

## Callan College

### Intro to Investments—Learn the Fundamentals

This course is for institutional investors, including trustees and staff members of public plans, corporate plans, and nonprofits. This session familiarizes trustees and staff with basic investment theory, terminology, and practices.

– September 24-26, 2024 – Virtual Session via Zoom

Please visit our website at [callan.com/events-education](https://callan.com/events-education) as we add dates to our 2024 calendar!

## Mark Your Calendar

### 2024 Regional Workshops

October 22, 2024 – Denver

October 23, 2024 – Chicago

*Watch your email for further details and an invitation.*

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This year we welcome Zanny Minton Beddoes to the stage.

*Registration for this event will open in January 2025!*

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