Forest Preserve District Employees' Annuity and Benefit Fund of Cook County

Performance Summary

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Table of Contents

Forest Preserve District Employees' Annuity & Benefit Fund of Cook County
Performance Evaluation Executive Summary
Fourth Quarter 2022

Macroeconomic Environment

Amidst the Wreckage, Silver Linings are Visible

Markets sank in 2022 as the Fed embarked on an aggressive path of rate hikes to combat unexpectedly high and persistent inflation. Global stock and bond markets posted double-digit losses for the year, with U.S. bonds posting record-breaking calendar year losses and several U.S. stock indices falling the most since 2008. And we would be remiss not to mention the crypto crash, which shrank the value of these digital assets from a high of $3 trillion in November 2021 to roughly $800 billion at year-end, according to data from CoinMarketCap. Commodities were a lone bright spot for the global economy in 4Q22, buoyed by soaring energy prices in the first half of the year and metals later in the year.

Given the sharp sell-off in stocks, valuations are more reasonable. The forward P/E ratio for the S&P 500 Index was 16.65x as of year-end versus a 16.82x average over the past 25 years, according to data from JP Morgan. For fixed income investors and savers, the sharp rise in interest rates provides immediate benefits in the form of higher income and much-improved forward-looking returns. Callan's 10-year projection for core U.S. fixed income returns more than doubled from the end of 2021, from 1.75% to 4.25%.

Major Trends in the Global Economy in 4Q22

Headline Consumer Price Index (CPI) was 7.1% (ex food and energy: +6.0%) in November, off its June peak of 9.1%; the Personal Consumption Expenditures (PCE) Index rose 5.5% (Core PCE: +4.7%). These year-over-year (YOY) figures exceed the Federal Reserve's long-run inflation target of 2%, but most CPI components showed smaller gains or declines. Energy and core goods prices fell, while food prices and shelter costs continued to rise. Gas prices dropped from $5.00/gallon in June to around $3.20/gallon by year-end. Lagged effects of higher rates, supply chain moderation, and falling home prices indicate that inflation has peaked. However, higher wages, a tight labor market, energy price uncertainty, and increased demand from China pose threats to inflation's downward trajectory.

The Federal Reserve raised its target range for the Fed Funds rate by 0.5% to 4.25% – 4.50% at its December meeting, the highest since 2007. The 2022 cumulative rate hike totaled 4.25%. The Fed has been explicit in its intent to aggressively fight inflation, even if it slows the economy and increases unemployment. The median Fed Funds rate projection from the Fed for year-end 2023 is now 5.1%, up 0.50% from the September projections. The median projection for unemployment rose to 4.6% (from 4.4%) while the projection for real GDP growth fell sharply to 0.5% from 1.2%. A Bloomberg survey of economists showed that 70% expect a recession in the next year, with average growth of 0.3% for the year. Inflation is expected to decrease in the long run according to both markets and the Fed; the "longer-run" median projection from the Fed for the Core PCE Index is 2.0% and the five-year breakeven inflation rate (the difference between nominal and real five-year Treasury yields) was 2.3% as of year-end. Real GDP in 3Q22 was +3.2% (annualized), improving from -0.6% in 2Q. The Conference Board forecasts 0% real growth in 2023, recovering to 1.7% in 2024.

The labor market remained strong despite well-publicized layoffs across the tech industry. Unemployment held steady at 3.7% and payroll growth, while moderating in 4Q, remained robust. Just over 260,000 jobs (non-farm payrolls) were added in November, above expectations, and while down from higher figures earlier in the year it is well above the pre-pandemic average of 150,000–200,000. Further, the ratio of job openings to job seekers remained elevated. The Job Openings and Labor Turnover Survey (JOLTS) for November showed that open positions outnumbered available workers by a ratio of 1.7 to 1, down only slightly from October, and higher than expected. Continued labor shortages, however, do pose a risk as higher wages filter through to inflation. Average hourly earnings for nonfarm payrolls were up 5.1% in November YOY.

The battle to bring inflation down is not limited to the United States. Shortly after the Federal Reserve's 0.5% rate hike in mid-December, the European Central Bank (ECB), the Bank of England, and the Swiss National Bank followed suit with 0.5% rate increases of their own. As in the U.S., policymakers recognize that slower economic growth will likely be an outcome; the ECB lowered its forecast for growth for 2023 to 0.5%, down from a previous forecast of 0.9%. Economists in the U.K. expect the country to face one of the worst recessions among the G7 countries, and Kristalina Georgieva, International Monetary Fund director, recently warned that half of the European Union may experience a recession next year.

Global Equities

U.S. stock indices posted positive returns in 4Q as investor sentiment improved, but the YTD results remained dismal with most indices posting double-digit declines. The S&P 500 Index rose 7.6% for the quarter, lowering its YTD loss to 18.1%. Returns were quite mixed across sectors with Energy (+22.8%) being the best and Consumer Discretionary (-10.2%) faring the worst. Value stocks trounced growth for the quarter (Russell 1000 Value: +12.4%; Russell 1000 Growth: +2.2%) and the year (Russell 1000 Value: -7.5%; Russell 1000 Growth: -29.1%). In 4Q, the Growth Index was hurt by significant underperformance from Tesla (-54%) and Amazon (-26%). Looking back three years, growth is only modestly ahead of value (Russell 1000 Value: +6.0%; Russell 1000 Growth: +7.8%). Small cap stocks exhibited the same pattern in 4Q (Russell 2000 Value: +8.4%; Russell 2000 Growth: +4.1%) but value's full year margin is smaller in the small cap space (Russell 2000 Value: -14.5%; Russell 2000 Growth: -26.4%).

Global ex-U.S. markets also participated in the 4Q rally, and currency appreciation vs. the U.S. dollar further bolstered returns. The MSCI ACWI ex USA Index gained 14.3% (Local: +7.8%), reducing its YTD loss to 16.0% (Local: -9.6%). Across developed market countries, gains were broad-based and value outpaced growth, but by a smaller margin than in the U.S. (MSCI ACWI ex USA Value: +15.7%; MSCI ACWI ex USA Growth: +12.9%). Unlike in the U.S., all sectors of the ACWI ex USA Index delivered a positive return in 4Q of 10% or more.

Emerging markets (MSCI Emerging Markets: +9.7%; Local: +6.6%) also rebounded in 4Q, but returns were mixed across countries. While many nations were up double-digits, India (+2.0%) and Brazil (+2.4%) weighed on broad market returns. China (MSCI China: +13.5%) outperformed. Quarterly returns were also mixed across regions: Latin America (+5.7%), Emerging Europe (+43.1%), and Emerging Asia (+10.8%). The 2022 return for the MSCI EM Index was -20.1%.

Global Fixed Income

U.S. fixed income experienced its worst year—ever—in 2022, by a wide margin. The Bloomberg US Aggregate Bond Index sank 13.0%; the next worst calendar year was 1994 when the Aggregate fell 2.9%. The silver lining lies in the 4.68% yield-to-worst for the Index, up from 1.75% at the beginning of the year. The yield curve remained inverted at year-end; the 10-year Treasury yield was 3.88% and the 2-year yield was 4.41%. The inversion reflects investor expectations for the economy to slow and an eventual need for the Fed to lower rates. The fourth quarter brought some relief to bond investors as longer rates fell modestly and most "spread" sectors outperformed Treasuries. The Aggregate gained 1.9%. High yield corporates (Bloomberg High Yield Index: +4.2%) were star performers, but this Index was down 11.2% for the year.

While rates across developed markets rose broadly in 2022, changes were mixed in 4Q. Rates fell in the U.K. but rose across most of Europe and in Japan. The Bloomberg Global Aggregate ex USD soared 6.8% (hedged: +0.2%) due largely to weakness in the U.S. dollar. Still, the YTD differential for hedged and unhedged investors is nearly 9% (unhedged: -18.7%; hedged: -9.8%).

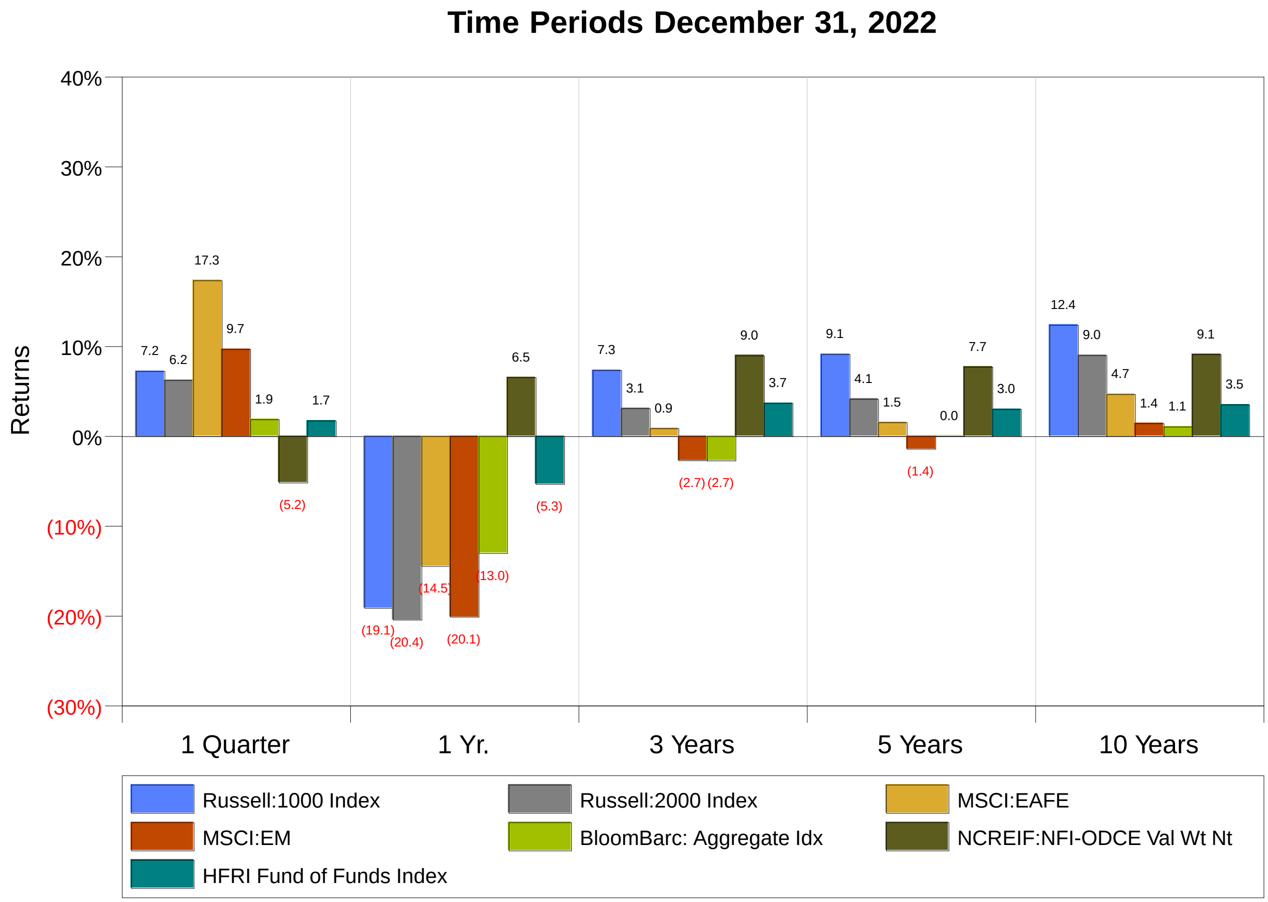
Real Assets

Real assets as a group performed well in 4Q. The S&P GSCI Index rose 3.4%; Gold (S&P Gold Spot Price Index: +9.2%), REITs (MSCI US REIT: +5.2%), infrastructure (DJB Global Infrastructure: +9.6%), and TIPS (Bloomberg TIPS: +2.0%) all posted solid returns. Full year results remained poor, however, for most real assets outside of those related to energy. REITs posted the worst returns (MSCI US REIT: -24.5%) while MLPs (Alerian MLP Index: +30.9%) benefited from higher energy prices.

Closing Thoughts

As we enter 2023, uncertainty remains around the degree to which the Fed can navigate a "soft landing" while combatting inflation. Outside of the U.S., a war that shows no signs of ending and China's path forward as it moves away from its "zero-COVID" policies pose challenges. However, there are a few notable silver linings and reasons for optimism that we choose to highlight to start the new year. Most importantly, valuations in both stock and bond markets have improved. Inflation, while still high, has shown signs of moderating. The labor market remains resilient despite aggressive rate hikes. And China's reopening, albeit rocky, may lead to an economic rebound and contribute to global growth in 2023.

Fourth Quarter 2022 Market Performance



The Callan Periodic Table of Investment Returns
Fourth Quarter 2022

2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Russell:2000 Index **38.8%**	Russell:1000 Index **13.2%**	NCREIF:NFI-ODCE Val Wt Nt **14.0%**	Russell:2000 Index **21.3%**	MSCI:EM **37.3%**	Cambrdg:Gl Pvt Eq & Cred **10.0%**	Russell:1000 Index **31.4%**	Cambrdg:Gl Pvt Eq & Cred **29.8%**	Cambrdg:Gl Pvt Eq & Cred **36.9%**	NCREIF:NFI-ODCE Val Wt Nt **6.5%**
Russell:1000 Index **33.1%**	Cambrdg:Gl Pvt Eq & Cred **11.8%**	Cambrdg:Gl Pvt Eq & Cred **8.7%**	Russell:1000 Index **12.1%**	MSCI:EAFE **25.0%**	NCREIF:NFI-ODCE Val Wt Nt **7.4%**	Russell:2000 Index **25.5%**	Russell:1000 Index **21.0%**	Russell:1000 Index **26.5%**	HFRI Fund of Funds Index (5.3%)
MSCI:EAFE **22.8%**	NCREIF:NFI-ODCE Val Wt Nt **11.5%**	Russell:1000 Index **0.9%**	MSCI:EM **11.2%**	Russell:1000 Index **21.7%**	BC Aggregate **0.0%**	MSCI:EAFE **22.0%**	Russell:2000 Index **20.0%**	NCREIF:NFI-ODCE Val Wt Nt **21.0%**	Cambrdg:Gl Pvt Eq & Cred **(7.8%)**
Cambrdg:Gl Pvt Eq & Cred **21.1%**	BC Aggregate **6.0%**	BC Aggregate **0.5%**	Cambrdg:Gl Pvt Eq & Cred **9.5%**	Cambrdg:Gl Pvt Eq & Cred **19.9%**	HFRI Fund of Funds Index (4.0%)	MSCI:EM **18.4%**	MSCI:EM **18.3%**	Russell:2000 Index **14.8%**	BC Aggregate **(13.0%)**
NCREIF:NFI-ODCE Val Wt Nt **12.9%**	Russell:2000 Index **4.9%**	HFRI Fund of Funds Index (0.3%)	NCREIF:NFI-ODCE Val Wt Nt **7.8%**	Russell:2000 Index **14.6%**	Russell:1000 Index **(4.8%)**	Cambrdg:Gl Pvt Eq & Cred **16.2%**	HFRI Fund of Funds Index 10.9%	MSCI:EAFE **11.3%**	MSCI:EAFE **(14.5%)**
HFRI Fund of Funds Index 9.0%	HFRI Fund of Funds Index 3.4%	MSCI:EAFE **(0.8%)**	BC Aggregate **2.6%**	HFRI Fund of Funds Index 7.8%	Russell:2000 Index **(11.0%)**	BC Aggregate **8.7%**	MSCI:EAFE **7.8%**	HFRI Fund of Funds Index 6.2%	Russell:1000 Index **(19.1%)**
BC Aggregate **(2.0%)**	MSCI:EM **(2.2%)**	Russell:2000 Index **(4.4%)**	MSCI:EAFE **1.0%**	NCREIF:NFI-ODCE Val Wt Nt **6.7%**	MSCI:EAFE **(13.8%)**	HFRI Fund of Funds Index 8.4%	BC Aggregate **7.5%**	BC Aggregate **(1.5%)**	MSCI:EM **(20.1%)**
MSCI:EM **(2.6%)**	MSCI:EAFE **(4.9%)**	MSCI:EM **(14.9%)**	HFRI Fund of Funds Index 0.5%	BC Aggregate **3.5%**	MSCI:EM **(14.6%)**	NCREIF:NFI-ODCE Val Wt Nt **4.4%**	NCREIF:NFI-ODCE Val Wt Nt **0.3%**	MSCI:EM **(2.5%)**	Russell:2000 Index **(20.4%)**

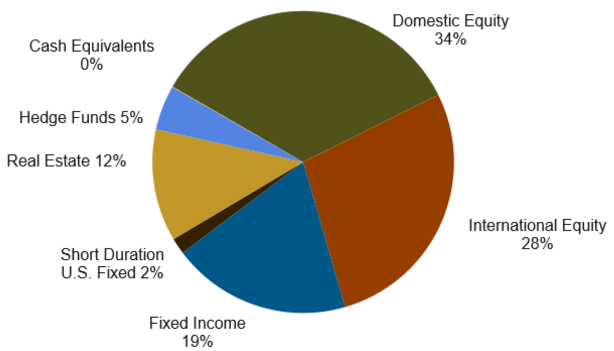
For the 2022 calendar year, Real Estate was the top performing asset class (NCREIF: NFI-ODCE Value Weighted Net Index: +6.5%), leading Hedge Funds (HFRI Fund of Funds Index: -5.3%) and Private Equity & Credit (Cambridge Glb Pvt Eq & Credit -7.8%). Fixed Income (Bloomberg Aggregate Index: -13.0%) finished with its worst calendar year in history. Large Caps (Russell: 1000 Index: -19.1%) led Small Caps (Russell: 2000 Index: -20.4%) for the year. Developed International Equities (MSCI: EAFE Index: -13.0%) outperformed Emerging Markets (MSCI: EM: -20.1%).

Forest Preserve Pension Fund Commentary

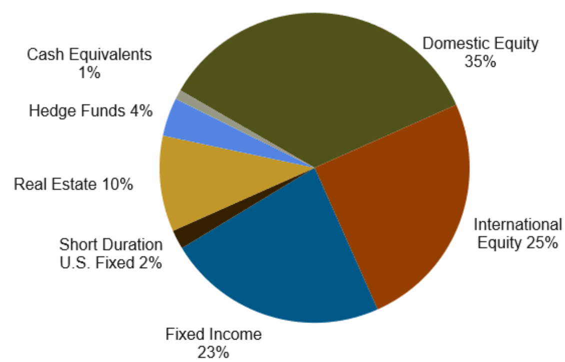
Asset Allocation

The Total Fund ended 2022 with a market value of $188.5 million, a $6.2 million increase the third quarter ending value of $182.3 million. The Fund experienced investment returns of $11.0 million and net outflows of -$4.8 million. Asset class allocations are near their long-term policy targets.

Actual Asset Allocation



Long-Term Target Asset Allocation



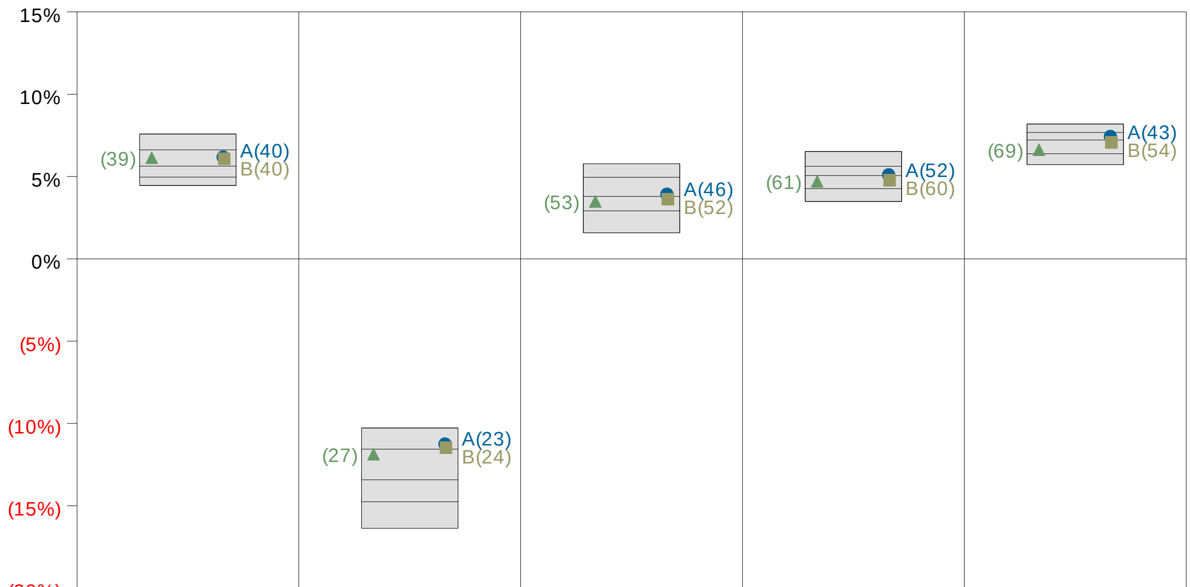
Asset Class	$000s Actual	Weight Actual	Min Target	Long-Term Target	Max Target	Percent Difference	$000s Target	$000s Difference
Domestic Equity	64,712	34.3%	31%	35%	39%	(0.7%)	65,985.50	(1,274)
International Equity	52,552	27.9%	21%	25%	29%	2.9%	47,132.50	5,420
Fixed Income	36,211	19.2%	19%	23%	27%	(3.8%)	43,361.90	(7,151)
Short Duration U.S. Fixed	3,255	1.7%	0%	2%	4%	(0.3%)	3,770.60	(516)
Real Estate	22,646	12.0%	6%	10%	14%	2.0%	18,853.00	3,793
Hedge Funds	8,979	4.8%	0%	4%	8%	0.8%	7,541.20	1,438
Cash Equivalents	175	0.1%	0%	1%	5%	(0.9%)	1,885.30	(1,710)
Total	188,530	100.0%		100%				

Forest Preserve Pension Fund Performance vs. Target

The Total Fund returned 6.08% (Net of Fees) for the quarter, modestly trailing the benchmark return of 6.14%. Domestic Equity, International Equity, and Real Estate outperformed their respective benchmarks for the quarter. Hedge Funds lagged its benchmark, and an overweight to Real Estate also detracted. Over the last year, the Fund declined 11.47% but outperformed the benchmark return (-11.86%) and ranked in the top quartile of peers. The Fund has consistently outperformed its benchmark over longer periods. The Fund's trailing three- and ten-year returns in the top half of peers (Gross of Fee basis).

Table 1.0

Performance vs Callan Public Fund Spons- Mid (100M-1B) (Gross)



		Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile		7.58	(10.27)	5.78	6.52	8.19
25th Percentile		6.62	(11.56)	4.96	5.63	7.68
Median		5.63	(13.43)	3.79	5.06	7.22
75th Percentile		4.97	(14.76)	2.91	4.26	6.38
90th Percentile		4.46	(16.37)	1.58	3.48	5.72
Total Forest (Gross)	● A	6.12	(11.31)	3.86	5.04	7.37
Total Forest (Net)	■ B	6.08	(11.47)	3.62	4.78	7.07
Total Forest Preserve Benchmark	▲	6.14	(11.86)	3.49	4.70	6.63

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Table 1.1
Asset Class Performance vs. Target (Net of Fees)

	Market Value $(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Domestic Equity	**$64,711,951**	**34.32%**	**7.79%**	**(18.24%)**	**6.97%**	**8.45%**	**12.00%**
Domestic Equity Benchmark (2)	-	-	7.18%	(19.21%)	7.07%	8.79%	12.05%
International Equity	**$52,552,174**	**27.87%**	**14.63%**	**(15.38%)**	**0.15%**	**1.70%**	**5.65%**
International Equity Bnmk (4)	-	-	14.28%	(16.00%)	0.07%	0.88%	3.80%
Fixed Income	**$39,466,034**	**20.93%**	**1.78%**	**(10.03%)**	**(1.84%)**	**0.40%**	**1.21%**
Fixed Income Benchmark (3)	-	-	1.80%	(12.09%)	(2.46%)	0.18%	1.13%
****Real Estate**	**$22,646,000**	**12.01%**	**(5.08%)**	**6.87%**	**9.18%**	**8.14%**	**8.04%**
NFI-ODCE Value Weight Net	-	-	(5.17%)	6.55%	8.97%	7.72%	9.11%
****Hedge Funds**	**$8,979,103**	**4.76%**	**1.44%**	**5.02%**	**4.36%**	**4.39%**	**5.32%**
LIBOR + 4%	-	-	2.09%	6.25%	5.06%	5.59%	5.07%
HFRI Fund of Funds Index (5)	-	-	(0.17%)	(5.20%)	4.17%	3.15%	3.60%
Cash Equivalents	**$175,451**	**0.09%**	**0.91%**	**1.60%**	**0.76%**	**1.59%**	**0.97%**
3-month Treasury Bill	-	-	0.84%	1.46%	0.72%	1.26%	0.76%
Total Forest Preserve Fund	**$188,530,714**	**100.00%**	**6.08%**	**(11.47%)**	**3.62%**	**4.78%**	**7.07%**
Total Fund Benchmark (1)	-	-	6.14%	(11.86%)	3.49%	4.70%	6.63%

**Represents trailing data.

Definitions for custom benchmarks can be found on the back page

Table 1.1 illustrates the Forest Preserve Pension Fund's asset class performance against associated benchmarks. In the fourth quarter, Active management added value, while variance from policy weights detracted from relative results.

The Fund's Domestic Equity allocation returned 7.79% in the fourth quarter, outperforming its benchmark return of 7.18%. For the year, Domestic Equity returned -18.24%, surpassing the benchmark's -19.21% return. Domestic Equity has modestly underperformed the benchmark over longer annualized periods..

International Equity posted a return of 14.63% in the fourth quarter, outperforming the benchmark return of 14.28%. Over longer periods, International Equity has demonstrated favorable performance relative to the benchmark, thanks to positive contributions from active managers.

The Fixed Income allocation returned 1.78% in the fourth quarter, in line with the benchmark return of 1.80%. For the year, Fixed Income experienced a decline of 10.03%, but still outperformed the benchmark's -12.09% return. Fixed Income has also outperformed the benchmark over the trailing three-, five-, and ten-year periods.

The Real Estate allocation, consisting of investments in private real estate, recorded a return of -5.08% in the fourth quarter, leading the benchmark return of -5.17%. For the year, Real Estate advanced 6.87%, outperforming the benchmark's 6.55% return. The Real Estate allocation leads the benchmark over the trailing three-, and five-year periods.

The Hedge Fund allocation achieved a return of 1.44% for the quarter, trailing its absolute return benchmark (+2.09%). Hedge Funds trail the benchmark over the last one-, three-, and five-year periods, but have outperformed over the last ten years on an annualized basis.

Benchmarks

1. **Total Fund Benchmark:** Blend of asset class benchmarks at policy weightsThe Long-Term Target was established 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

Benchmarks	Long-Term Target	4Q 2022
Russell 3000	35.0	32.0
MSCI ACWI ex US	25.0	27.0
Bloomberg Aggregate	23.0	18.9
Bloomberg Govt/Credit 1-3 Yr	2.0	2.1
Libor 3 Month + 4.0%	4.0	10.0
Real Estate	10.0	9.0
Cash (90 day T-Bill)	1.0	1.0
Total Target	100.0%	100.0%

2. **Domestic Equity Benchmark:** Russell 3000 Index; Prior to 6/30/2016 Blend of 70% S&P 500 and 30% Russell 2500 Index; Prior to 12/31/2012 Blend of 55.6% S&P 500, 11.0% Russell 2000 Value, 16.7% Russell 1000 Growth, and 16.7% Russell 1000 Value.

3. **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 75% Bloomberg Aggregate Index, and 25% Bloomberg Gov/Credit Intermediate Index.

4. **International Equity Benchmark:** MSCI ACWI ex U.S.

5. **HFRI Fund of Funds Composite Index:** Returns are lagged 1 month.