

Callan

County Employees' and Officers' Annuity and Benefit Fund of Cook County

Performance Summary

December 31, 2020

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**County Employees' and Officers' Annuity & Benefit Fund of Cook County
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2020—Good Riddance

Most of us are happy to say good-bye to 2020. And, there are reasons for optimism as we head into 2021. These include a roll-out of vaccinations, probable fiscal stimulus on top of the recently passed package, and pent-up demand from consumers in addition to lean inventories that will need to be rebuilt. Further, a last-minute Brexit deal thwarted uncertainty on that front (though it will take time to iron out the details) and a contentious U.S. election is nearly behind us. That said, for those of you who would self-categorize as “glass half empty” folks, there is plenty of fodder to support that sentiment. A new super-contagious coronavirus strain has emerged, hospitals are struggling with capacity, important pockets of the economy remain depressed, and the inequality gap continues to worsen.

Markets seemingly defied much of the anguish imposed on society during the year, leaving some to question whether they are “priced to perfection.” After the precipitous sell-off in the spring, risk assets have rallied with some U.S. stock indices hitting record highs going into year-end and yields on high yield bonds reaching record lows. As a result, investment return projections leave little room for enthusiasm.

Third quarter real GDP rose 33.4%, a record quarterly increase, following the 2Q20 record drop of 31.4% (both annualized). As of Sept. 30, the year-over-year decline was 2.8%. Fourth quarter and 2021 GDP projections vary and are dependent on the degree to which lockdowns are reinstated, the timeline for broad distribution of a vaccine, and the nature and timing of additional fiscal and/or monetary stimulus. The Conference Board estimate for 4Q real GDP is 2.8% (annualized), bringing its full-year estimate to -3.6%. Broadly, projections for 2021 growth generally fall between 3.5% and 4.0%. The recent passage of the aptly titled Coronavirus Response and Relief Supplemental Appropriations Act provides a needed boost, but many economists feel that more is needed. The roughly \$900 billion package includes more aid for small businesses, an 11-week extension of federal unemployment benefit programs with an additional \$300 per week, and a \$600 stimulus payment for qualified individuals. Notably, aid for states and municipalities was not included.

The unemployment rate, which peaked at 14.7% in April, fell to 6.7% in November. However, 22 million jobs were lost from February to April, while only 12 million have been added since. Lower-income, less-skilled, and tourism-related jobs have been the hardest hit, increasing concerns about the widest income inequality gap in history, further fueled by climbing stock prices. On the hopeful front, the need to replenish low inventory and a positive outlook for capital spending may support employment growth in coming months.

The Federal Reserve Board left its Fed funds target rate unchanged (0.00% to 0.25%) at the December meeting and reiterated its belief that the course of the economy depends on the pandemic, which continues to “pose considerable risks to the economic outlook over the near term.” It further committed to continue monthly purchases of both U.S. Treasuries (\$80 billion per month) and mortgages (\$40 billion per month) for the foreseeable future. Current projections remain for no hikes until 2023.

While year-over-year inflation remained low (CPI: +1.2%; Core: +1.7% as of November), the breakeven spread for 10-year Treasury Inflation Protected Securities widened to 2% at year-end, the highest since 2018 and sharply higher than the 0.5% level hit in March 2020. Concerns over the Fed’s ballooning balance sheet, approaching \$8 trillion, as well as expectations for increased stimulus, have fueled worries over future inflation. The Congressional Budget Office projects that the 2020 U.S. fiscal deficit will be roughly 15% of GDP, the largest since 1945.

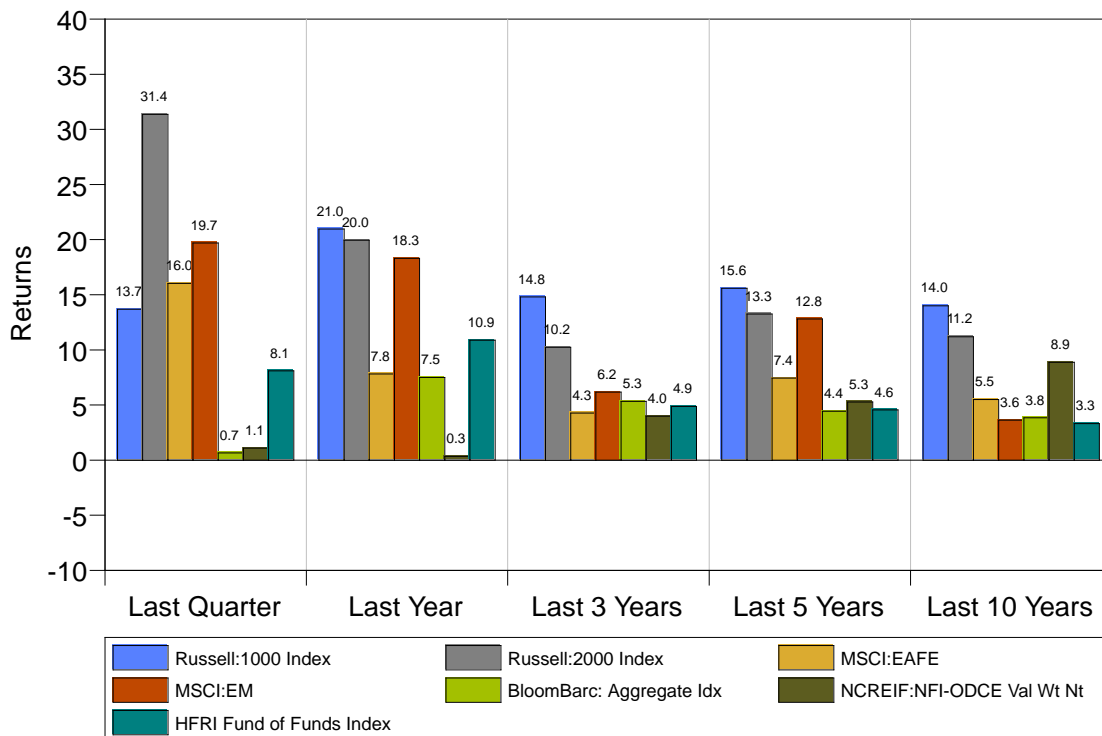
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Outside of the U.S., recoveries have been mixed with Asian countries being the furthest along. Purchasing Manager Composites, which gauge activity in both manufacturing and services, remain at or below 50 (signaling contraction) in many areas (Japan, the U.K., and the euro zone). According to projections from the Organization for Economic Cooperation and Development (OECD), several countries are expected to experience real GDP declines for 2020 of roughly 10% (U.K., Argentina, France, Italy, Mexico, and India); China is an outlier at +1.8%. At its December meeting, the OECD released its new predictions: -4.2% in 2020 and +4.2% for 2021. While the 2020 forecast is slightly improved from the -4.5% September projection, the 2021 outlook has worsened (from 5.0%). China (+8.0%) and India (+7.9%) have the brightest prospects for 2021, according to the OECD.

Renewed lockdowns were announced throughout Europe and the U.K. as post-Thanksgiving cases rose. Exacerbating the situation, a new super-contagious variant of the virus emerged in the U.K. and has since spread to more than 30 countries. Plans for distributing vaccines were in the works as the year ended, but timing remains uncertain. In recognition of the continued pandemic toll on economies, the European Central Bank announced that it will increase the size of its asset purchases by €500 billion to a total of €1.85 trillion (\$2.21 trillion) and will continue asset purchases at least through March 2022. With respect to Brexit, the last minute “EU-UK Trade and Cooperation Agreement”—passed on Christmas Eve—paves the way forward but leaves much uncertainty. While hotly debated issues around fishing and the border in Northern Ireland were resolved, the agreement does not cover the financial services sector, an industry with one of the largest trade surpluses in the U.K. Further, implementation is likely to cause some disruptive snags given new customs and regulatory checks, and many details still need to be worked out—including a trade deal with the U.S.

Fourth Quarter 2020 Market Performance

Time Periods December 31, 2020



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U.S. stocks continued their upward trajectory in 4Q20, and the S&P 500 Index hit a record high going into year-end. The Index was up 12.1% for the quarter, bringing its 2020 gain to 18.4%. Since the market low in March, the benchmark is up over 70%, with all sectors posting increases greater than 40%. The quarter's winner, Energy (+28%), however, remains down 34% for the year. Technology (+12% in 4Q) was the best-performing 2020 sector with a 44% gain. Laggards for the quarter and the year were Utilities (+7%; +1%) and Real Estate (+5%; -2%). The pandemic has cast a pall over certain sectors while rewarding others; online retail stocks soared 69% in 2020, but hotels/cruise lines, airlines, and retail REITs dropped roughly 30%. Megacaps continue to account for a disproportionate amount of the index and returns; the five largest stocks (Apple, Microsoft, Amazon, Facebook, Alphabet) made up 22% of the S&P 500 Index as of 12/31, and for 2020, this group accounted for 12.1% of the 18.4% Index return. In 4Q, value outperformed growth across the capitalization spectrum but trails by a significant margin for the full year. Small cap value (R2000 Value: +33.4%) was the best-performing style group for the quarter but its 2020 gain is a mere 4.6%. Small cap outperformed large for the quarter (R2000: +31.4%; R1000: +13.7%) but 2020 performance was roughly even (+20.0%; +21.0%).

Developed ex-U.S. and emerging market indices (MSCI ACWI ex-USA: +17.0%; MSCI Emerging Markets: +19.7%) also posted robust returns for the quarter and the year (+10.7%; +18.3%). Double-digit returns were broad-based across both developed and emerging market countries for the quarter.

The U.S. dollar continued to weaken versus developed and emerging market currencies. Relative to a basket of developed market currencies, the greenback lost just over 4% for the quarter and more than 7% for the year. While emerging market currencies broadly rallied in 4Q, some have not recovered from poor performance earlier in the year.

U.S. Treasury yields rose steadily over the course of 4Q; the 10-year U.S. Treasury yield closed the quarter at 0.93%, up 24 basis points from Sept. 30, but off sharply from the year-end level of 1.92%. TIPS (Bloomberg Barclays US TIPS: +1.6%) strongly outperformed nominal U.S. Treasuries for the quarter as 10-year breakeven spreads widened from 163 bps to 199 bps. The Bloomberg Barclays US Aggregate Bond Index gained 0.7%, bringing its 2020 gain to 7.5%. Corporates strongly outperformed U.S. Treasuries for the quarter and the year (Bloomberg Barclays US Treasury: -0.8%; +8.0%; Bloomberg Barclays US Corporate: +3.0%; +9.9%) in spite of record 2020 issuance. High yield corporates (Bloomberg Barclays High Yield: +6.5%; +7.1%) outperformed investment grade for the quarter but trailed for the year. High yield default rates (6.2% y-o-y as of December) continued to trend higher but are expected to peak far below levels reached in the Global Financial Crisis. Separately, municipal bonds (Bloomberg Barclays Muni Bond Index: +1.8%; +5.2%) outperformed U.S. Treasuries for the quarter but trailed for the year.

Outside of the U.S., broad-based U.S. dollar weakness dampened hedged returns for the quarter. The Bloomberg Barclays Global Aggregate Bond Index rose 3.3% (unhedged) and 0.9% (hedged). Emerging market debt indices posted solid results in the risk-on environment (EMBI Global Div: +5.8%; GBI-EM GI Div: +9.6%) with emerging market currencies doing especially well; full-year returns are now in positive territory (+5.3%; +2.7%).

Real assets posted strong returns in 4Q though most indices remain in the red for the full year. The Bloomberg Commodity Index gained 10.2% and the more energy-heavy S&P GSCI Index rose 14.5%. Full-year returns for these indices are -3.1% and -23.7%, respectively. Gold took a breather and was roughly flat for the quarter but is up over 20% for the year. Oil prices continued to recover from the spring plunge; Brent Crude closed the year at over \$50, a sharp increase from the \$20 level hit in April. The Alerian MLP Index benefited, gaining 32.4%, but it is down nearly 30% for 2020. REITs also did well during the quarter but fell over the year (FTSE Nareit: +11.6%; -

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8.0%). TIPS (Bloomberg Barclays TIPS: +1.6%; +11.0%) outperformed nominal Treasuries for the quarter and the year.

Closing Thoughts

Few are wistful over the end of 2020 as we hope for a more “normal” 2021 with respect to both personal and work lives. At the same time, markets seem fully priced and return expectations across asset classes are muted. Yields in U.S. fixed income remain unquestionably meager, with some questioning whether the asset class can play the role it has traditionally served. Negative-yielding debt has reached epic levels—the market value of the Bloomberg Barclays Global Negative Yielding Debt Index hit \$18 trillion in December with just under 30% of the world’s investment grade debt yielding less than 0%. Real yields on cash are the lowest since 1830 (according to data from JP Morgan). Stock valuations are also lofty, and market leadership, especially in the U.S., has been unquestionably narrow with momentum being a key driver of relative results. This paints a challenging backdrop for our clients, yet Callan’s advice remains to adhere to a disciplined investment process that includes a well-defined long-term asset allocation policy and, if applicable, to understand the risks undertaken to improve expected investment returns.

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The Callan Periodic Table of Investment Returns
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2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
NCREIF:NFI-ODCE Val Wt Nt 15.0%	MSCI:EM 18.2%	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%	Cambridge:PE Idx 9.8%	Russell:1000 Index 31.4%	Cambridge:PE Idx 28.9%
BC Aggregate 7.8%	MSCI:EAFE 17.3%	Russell:1000 Index 33.1%	Cambridge:PE Idx 11.8%	Cambridge:PE Idx 8.6%	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%
Cambridge:PE Idx 7.2%	Russell:1000 Index 16.4%	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%
Russell:1000 Index 1.5%	Russell:2000 Index 16.3%	Cambridge:PE Idx 21.2%	BC Aggregate 6.0%	BC Aggregate 0.5%	Cambridge:PE Idx 9.5%	Cambridge:PE Idx 19.6%	HFRI Fund of Funds Index (4.0%)	MSCI:EM 18.4%	MSCI:EM 18.3%
Russell:2000 Index (4.2%)	Cambridge:PE Idx 13.7%	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%)	Cambridge:PE Idx 16.2%	HFRI Fund of Funds Index 10.9%
HFRI Fund of Funds Index (5.7%)	NCREIF:NFI-ODCE Val Wt Nt 9.8%	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%
MSCI:EAFE (12.1%)	HFRI Fund of Funds Index 4.8%	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%
MSCI:EM (18.4%)	BC Aggregate 4.2%	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%

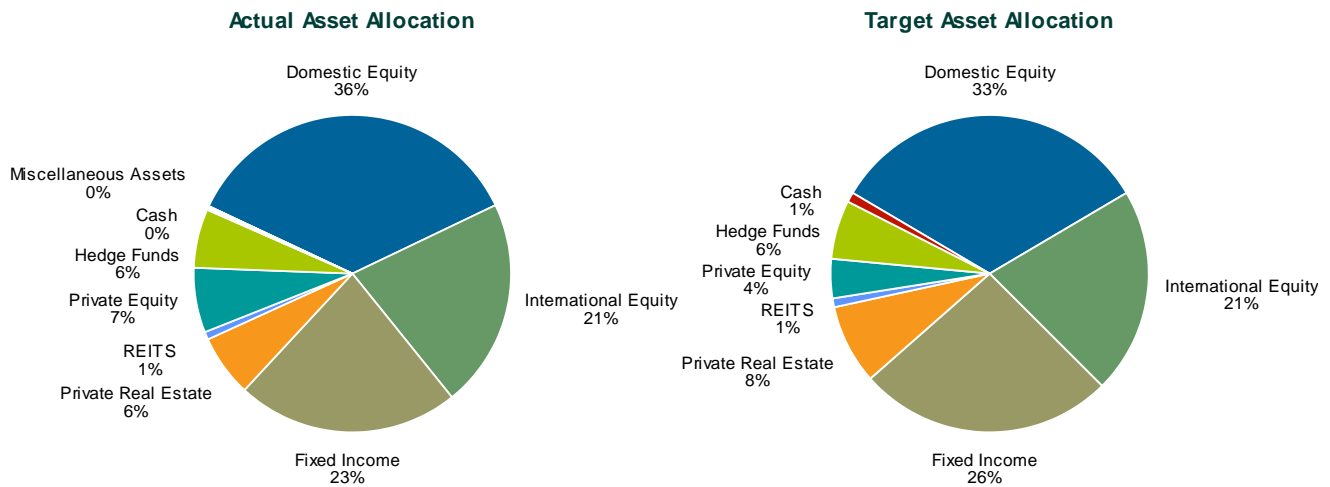
For the calendar year 2020, Private Equity was the top performing asset class (Cambridge Private Equity Index: +28.9%). Large Cap Equity (Russell 1000 Index: +21.0%) narrowly outperformed Small Cap Equity (Russell 2000 Index: +20.0%). Emerging Markets (MSCI Emerging Markets: +18.3%) outperformed Developed International Equity (MSCI EAFE: +7.8%). Hedge Funds (HFRI Fund of Funds Index: +10.9%) and Fixed Income (Bloomberg Barclays US Aggregate Bond Index: +7.5%) outperformed Real Estate (NCREIF: NFI-ODCE Value Weighted Net Index: +0.3%).

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Cook County Pension Fund Commentary

Asset Allocation

The Cook County Fund ("Fund") ended December with a market value of \$12.31 billion, a \$1.07 billion increase from the third quarter value of \$11.23 billion. During the quarter, the Fund gained \$1.18 billion from investment returns and experienced net outflows of \$109.3 million.



Asset Class	\$000s Actual	Weight Actual	Min Target	Target	Max Target	Percent Difference	\$000s Difference
Domestic Equity	4,431,501	36.0%	29.0%	33.0%	37.0%	3.0%	369,873
International Equity	2,617,653	21.3%	17.0%	21.0%	25.0%	0.3%	32,981
Fixed Income	2,792,111	22.7%	22.0%	26.0%	30.0%	(3.3%)	(407,960)
Private Real Estate	770,353	6.3%	5.0%	8.1%	13.0%	(1.9%)	(231,515)
REITS	94,316	0.8%	0.0%	0.9%	2.6%	(0.1%)	(11,532)
Private Equity	816,323	6.6%	0.0%	4.0%	8.0%	2.6%	324,004
Hedge Funds	739,672	6.0%	0.0%	6.0%	10.0%	0.0%	1,194
Cash	45,982	0.4%	0.0%	1.0%	5.0%	(0.6%)	(77,097)
Miscellaneous Assets	52	0.0%	0.0%	0.0%	0.0%	0.0%	52
Total	12,307,962	100.0%		100.0%			

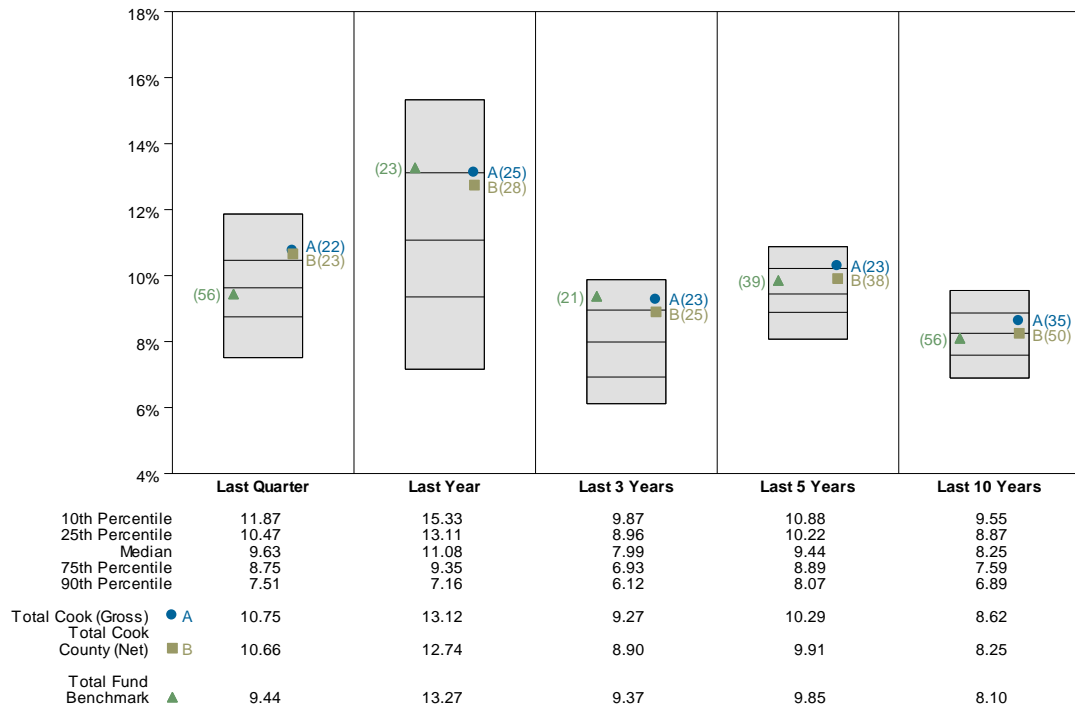
Cook County Performance vs. Target

The Cook County Pension Fund generated a return of 10.66% in the fourth quarter, leading its custom benchmark. Domestic Equity returned 15.26% for the quarter, leading the benchmark. International Equity posted a strong absolute return (+16.73%) for the quarter, but trailed its benchmark (+17.22%). Fixed Income, Private Real Estate, and Hedge Funds outperformed their respective benchmarks for the quarter, while REITS underperformed. Active management in Domestic Equity and Fixed Income added value for the quarter. An underweight to Fixed Income and an overweight to Private Equity also added value for the period.

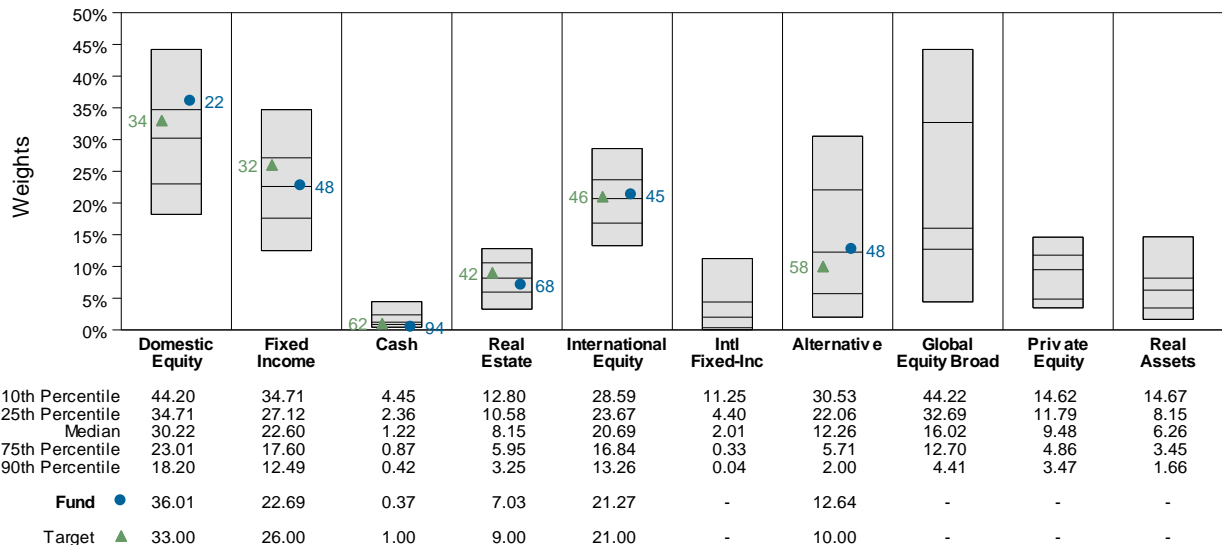
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The Fund leads its custom benchmark (+9.85%) over the last five-year period with an annualized net of fee return of 9.91%. Over the trailing five years, active management in International Equity and Private Real Estate has added value. An underweight to Fixed Income has also added value. Over the trailing ten years, the Fund's return of 8.25% leads its benchmark (+8.10%) and ranks at the median of peers.

Table 1.0
Performance vs Callan Public Fund Spons - Large (>1B) (Gross)



Asset Class Weights vs Callan Public Fund Spons - Large (>1B)



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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	\$4,431,501,278	36.01%	15.26%	19.16%	13.15%	14.73%	12.78%
Domestic Equity Benchmark (2)	-	-	14.68%	20.89%	14.49%	15.43%	13.66%
International Equity	\$2,617,653,240	21.27%	16.73%	10.86%	5.43%	9.19%	6.17%
International Equity Benchmark (3)	-	-	17.22%	11.12%	4.83%	8.90%	4.78%
Fixed Income	\$2,792,110,576	22.69%	2.04%	6.73%	4.76%	4.50%	3.88%
Fixed Income Benchmark (4)	-	-	0.62%	7.09%	5.20%	4.35%	3.84%
REITS	\$94,316,423	0.77%	10.94%	(5.16%)	4.23%	5.37%	-
NAREIT Equity Index	-	-	11.57%	(8.00%)	3.40%	4.77%	8.31%
**Private Real Estate	\$770,352,826	6.26%	2.40%	3.26%	5.94%	6.59%	9.63%
NFI-ODCE Value Weight Net	-	-	1.10%	0.34%	3.99%	5.27%	8.87%
**Private Equity	\$816,322,588	6.63%	15.30%	31.60%	28.00%	21.46%	11.11%
**Hedge Funds	\$739,671,645	6.01%	4.13%	3.42%	3.82%	4.23%	-
LIBOR + 4%	-	-	1.04%	4.64%	5.78%	5.47%	4.89%
HFRI Fund of Funds Index (5)	-	-	4.14%	8.74%	3.95%	3.73%	3.18%
Cash Equivalents	\$45,982,192	0.37%	0.03%	0.65%	1.84%	1.47%	0.80%
3-month Treasury Bill	-	-	0.03%	0.67%	1.60%	1.20%	0.64%
Total Cook County Fund	\$12,307,962,477	100.00%	10.66%	12.74%	8.90%	9.91%	8.25%
Total Fund Benchmark (1)	-	-	9.44%	13.27%	9.37%	9.85%	8.10%

**Represents trailing data.

Footnotes found on the back page

Table 1.1 illustrates the Cook County Fund's asset class performance against associated benchmarks. The Cook County Fund's Domestic Equity allocation outperformed its benchmark for the quarter. International Equity trailed its benchmark, but has enjoyed success over longer periods, outperforming the benchmark on a trailing three-, five-, and ten-year basis.

During the fourth quarter, the Fixed Income allocation returned 2.04% compared to the 0.62% return of the Bloomberg Barclays Aggregate Index. Active management, as well as an underweight to the asset class, added value in the fourth quarter. Over longer periods, the Fixed Income allocation leads its benchmark over the trailing five- and ten-year periods by 0.15% and 0.04%, respectively.

The Real Estate allocation is comprised of investments in public real estate securities (REITS) and Private Real Estate. Private Real Estate has consistently bested its benchmark in both the short and long term. The Private Real Estate allocation contains primarily core investments (income producing real estate) and a small allocation to non-core, closed-end funds. In the most recent quarter, Private Real Estate outperformed its benchmark, returning 2.40%, compared to the benchmark return of 1.10%.

REITS trailed its benchmark (+11.57%) in the fourth quarter, but produced a strong absolute return of 10.94%. The REITS allocation has performed favorably versus its benchmark over longer periods, leading its benchmark over the trailing one-, three-, and five-year periods.

Private Equity experienced net withdrawals for the quarter and the weight is currently above its strategic allocation target. For the quarter, the Private Equity allocation posted a return of 15.30%. Over the trailing year, the Private Equity allocation returned 31.60%. The Private Equity allocation has performed well over longer periods, enjoying double-digit annualized returns over the trailing one-, three-, five-, and ten-year periods.

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The Hedge Fund allocation (+4.13%) led its absolute return benchmark for the quarter. In the last year, it returned 3.42%, trailing its absolute benchmark return. The Hedge Fund allocation has outperformed its industry peers as measured by the HFRI Fund-of-Funds Index over the trailing five years.

Notes and Observations

Notes

- Total Fund Benchmark (Target):** Blend of asset class benchmarks at policy weights. The Domestic Equity and Private Equity policy weights are adjusted each month such that the Private Equity weight is set equal to the invested capital, up to the Long Term Target of 4%. The uninvested capital is allocated to Domestic Equity. This process reflects the practical implementation of non-publicly traded investments.

	Strategic <u>Target</u>	Interim <u>Target</u>
Russell 3000	33.0%	33.0%
MSCI ACWI ex US	21.0	21.0
BloomBarc Aggregate	26.0	26.0
Libor 3 Month + 4.0%	6.0	6.0
Real Estate	9.0	9.0
Private Equity	4.0	4.0
Cash	1.0	1.0
Total Target	100.0%	100.0%

- 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.
- International 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.
- Fixed Income Benchmark:** Blend of 90% BloomBarc Aggregate Index and 10% BloomBarc Gov/Credit 1-3 Year Index; Prior to 12/31/2019 BloomBarc Aggregate Index; Prior to 12/31/2012 Blend of 62.5% BloomBarc Aggregate Index, 12.5% BloomBarc US TIPs Index, and 25% BloomBarc Gov/Credit Intermediate Index.
- HFRI Fund of Funds Composite Index:** Returns are lagged 1 month.

***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.

****Private Equity Benchmark:** is set equal to actual returns.