Callan

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

Performance Summary

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Table of Contents

General Market & Economic Conditions	3
Cook County Commentary	7
Cook County Performance	7

General Market and Economic Conditions

The second quarter was reasonably uneventful and markets were relatively placid until June 23rd, when British voters narrowly approved the Brexit referendum. Investor complacency was replaced with shock, and markets reacted fiercely. Volatility spiked, global bond yields fell sharply, the pound hit a 31-year low with a record intraday swing of more than 10%, stock markets plunged, and gold surged. Two trillion dollars were erased from global equity markets in one day, marking the largest daily loss ever. While markets stabilized to some degree in ensuing days, much uncertainty remains around this unexpected outcome. Following the vote, the UK was downgraded by S&P and Fitch to AA and while the full implications of this decision will be unknown for some time, economic conditions in the UK are widely expected to deteriorate with monetary easing likely sometime this summer.

While Brexit took a near-term Fed hike off the table, the US economy appeared to gain some momentum after a sluggish first quarter. First quarter GDP was revised to +1.1% from +0.8%, but remained weaker than the +2.4% rate in 2015. Retail sales rose 0.5% in May following a 1.3% jump in April and housing remained a bright spot with existing home sales up 4.5% in May, the highest since 2007. Manufacturing continued to strengthen following last quarter's weakness. The ISM Composite Index of manufacturing activity increased to 53.2 marking a 16-month high. However, inflation remained tame with the Fed's favored measure, the Personal Consumption Expenditures (PCE) Index up only 0.9% year-over-year through May. Core CPI (ex-Food & Energy) was also benign at +2.2% year-over-year. In stark contrast to most economies overseas, the Atlanta Fed predicts a healthy +2.7% GDP print for the second quarter of 2016.

At the June meeting (prior to the Brexit vote), the FOMC opted to leave rates unchanged given worries over a surprisingly weak labor report in May and amid an uncertain global economic picture. While a June rate hike seemed plausible in May, the employment report results released in early June was unexpected. For example, non-farm payrolls increased by only 38,000, which was the smallest since 2010 and well below estimates for a gain of 155,000. Given a shrinking labor force participation rate (62.6%), the unemployment rate actually fell to 4.7%. The Fed's most recent "dot plot" continues to imply two rate hikes in 2016, but the number of hikes expected in 2017 and 2018 was modestly reduced. Further, longer-term projections for the Fed Funds rate came down from 3.25% to 3.0%.

While Brexit was the main event during the quarter, continued efforts by the European Central Bank to stimulate euro zone economies should not go unnoticed. As a part of its asset purchase program, the ECB began buying corporate bonds on June 8 and had invested nearly €5 billion as of quarter-end, including purchases from troubled issuers such as Volkswagen and Telecom Italia.

Global bond yields across many developed markets also hit all-time lows. The yield on the German 10-year bund for example closed the quarter at -0.13%. In Switzerland, the entire stock of government debt now trades at negative yields, and negative-yielding government debt swelled to nearly \$12 trillion in the wake of the results of the referendum. The average yield on investment grade European corporate debt dropped to less than 1%, a record low, according to data from BofA Merrill Lynch.

While Japan posted a relatively strong first quarter GDP number (+1.9%), the country faces growing challenges amid a strengthening yen and 2% inflation goal. Japanese core consumer prices fell 0.4% in May (year-over-year), the biggest drop since April 2013.

Second Quarter 2016 Market Performance

Following the Brexit outcome, US equity benchmark performance remained volatile, but positive for the quarter. The S&P 500 staged a strong recovery in the wake of the sharp Brexit-related decline in late June, and closed up 2.5% for the quarter. At quarter end, the S&P 500 Index stood just 1.5% below its all-time high (May 21, 2015). Mid and small capitalization stocks outperformed by a modest margin in the quarter as the Russell Mid Cap gained 3.2% and the Russell 2000 rose 3.8%. Value indices exceeded Growth indices across market capitalizations. The largest difference was in large caps as the Russell 1000 Value outperformed its growth index counterpart by 4.0%.

The excess return of value over growth was largely attributable to sector performance. The two largest growth sectors, Technology (29% of the Russell 1000 Growth Index) and Consumer Discretionary (21%) were the only two sectors to post negative returns in the quarter. The two sectors were down 2.8% and 0.9%, respectively. Conversely, Energy, with a 14% weight in the Russell 1000 Value index and minimal representation in the Growth index, was the strongest performing sector, up 12%. Interest rate-sensitive sectors such as Utilities and Telecom, more prominently represented in value indices, benefited from the sharp decline in interest rates and were up roughly 7% for the quarter. Financials (+2.1%) nearly matched the S&P 500 return, a positive considering the impact of Brexit on most large UK banks. Barclays, Royal Bank of Scotland and Lloyds Banking Group all posted sharp declines; -12%, -26% and -22%, respectively. REITs (+7.4%) benefited from the decline in interest rates and US economic stability.

International developed markets returned -1.5% return (MSCI EAFE Index) while emerging markets held on to post a +0.7% (MSCI Emerging Markets Index). Switzerland was the strongest performing European country (+2%) while Italy (-10%) and Spain (-8%) were among the worst performers. Canada (+3.4%) was the best performing country in the EAFE. Year-to-date, emerging markets have outperformed both international developed and US stocks yet maintain a price-to-book value near the financial crisis low. Among the emerging markets, commodity producers such as Brazil (+14%) and Russia (+4%) benefited from the rebound in oil prices.

Interest rates were range-bound for much of the quarter, but fell sharply after the surprise outcome from the referendum in the UK. The 10-year US Treasury yield approached record lows, closing the quarter at 1.49%, nearly 30 bps lower than the first quarter and nearly 80 bps below the 2015 year-end level. The 10-year Treasury returned 3.0% for the quarter and is up nearly 8% year-to-date. The Barclays Aggregate Index gained 2.2%, bringing its 2016 year-to-date result to +5.3%. Long duration assets posted double-digit returns with the Barclays Long US Government/Credit +6.6% for the quarter and +14.3% for six months. Given strong performance in April, high yield was the best performer for the quarter as the Barclays High Yield Index returned +5.5% for the quarter and is up 9.1% thus far year-to-date.

Overseas, the German 10-year bund yield returned -0.13%. The ECB began purchasing corporate bonds in early June, driving corporate bond yields in the euro zone to record lows. Nearly 40% of the BofA Merrill Lynch Global Government Bond Index (which includes all Euro members) now carries a negative yield. The Barclays Global Aggregate ex-US returned +3.4% (+2.7% hedged) for the quarter. The dollar lost ground versus the safe-haven yen, which surged more than 8% versus the greenback over the quarter but gained versus the euro (-2%) and pound (-7%). Emerging markets debt indices also posted solid returns for the quarter. The dollar-denominated

JPM EMBI Global Diversified Index returned 5.0% and the local currency JPM GBI-EM Global Diversified returned 3.0%.

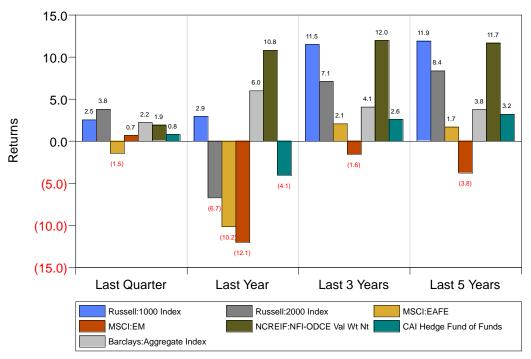
Real estate gained 1.91% during the second quarter as measured by the preliminary return of the NFI-ODCE Index during the second quarter, comprised of a 0.90% income return and 1.01% appreciation return. Publicly traded U.S. REITS as measured by the FTSE NAREIT Equity Index rallied returned 6.96% as rate-hike expectations eased and commercial real estate fundamentals remained constructive. Private real estate was not immune to the effects of volatility as year to date transaction volume was down approximately 16% year over year. The U.S. real estate market has become increasingly attractive and has captured nearly 30% of global capital allocations in 2016.

Private equity fundraising had an uptick from the sluggish first quarter as commitments totaled \$102.2 billion with 196 new partnerships formed. The number of funds raised increased by 11% over the first quarter, while the dollar volume increased significantly. Distressed debt surged to \$13.3 billion from only \$2.4 billion in the first quarter. Venture Capital also saw a jump to \$14.6 billion from \$8.9 billion in the first quarter. Regarding exits, it was reported that there were 118 private M&A exits of buy-out companies. Volume was down from the 140 in the first quarter, but the announced value increased. The number of venture capital private sale exits declined in the second quarter, but the dollar volume increased.

Hedge funds eked out modest gains amid the disorder caused by Brexit. The Credit Suisse Hedge Fund Index (CS HFI) gained 0.59% while the median manager in the Callan Hedge Fund-of-Funds Database edged ahead at 0.78%, net of fees.

As measured by the CS Hedge Fund Indices, returns across the underlying strategies were varied. The strongest performers were Convertible Arbitrage (+2.65%), Event-Driven Multi-Strategy (+2.24%) and Distressed (+1.95%). Global Macro generated a modest 0.71% during the quarter. Short Bias managers trailed (-6.32%) while Equity Market Neutral managers (-3.17%) were caught flat-footed by the shifting risk appetites surrounding the Brexit. The average Long/Short equity fell (-1.21%) and trailed the S&P 500 Index (+2.46%) for the third consecutive quarter.





Domestic equities as measured by the Russell Indices were positive for the quarter. Developed non-U.S. equity markets were negative (MSCI EAFE) while emerging markets posted positive returns (MSCI EM). Fixed income, real estate, and hedge funds were also positive as measured the representative market indices.

2007	2008	2009	2010	2011	2012	2013	2014	2015	2 Qtrs. 2016
MSCI:EM	BC Aggregate	MSCI:EM	Russell:2000 Index	NCREIF:NFI- ODCE Val Wt	MSCI:EM	Russell:2000 Index	Russell:1000 Index	NCREIF:NFI- ODCE Val Wt	MSCI:EM
39.4%	5.2%	78.5%	26.9%	15.0%	18.2%	38.8%	13.2%	14.0%	6.4%
Cambridge:PE Index	NCREIF:NFI- ODCE Val Wt Nt	MSCI:EAFE	MSCI:EM	BC Aggregate	MSCI:EAFE	Russell:1000 Index	Cambridge:PE Index	Cambridge:PE Index	BC Aggregate
22.7%	(10.7%)	31.8%	18.9%	7.8%	17.3%	33.1%	11.7%	8.5%	5.3%
NCREIF:NFI-	CAI Hedge	Russell:1000	Cambridge:PE	Cambridge:PE	Russell:1000	MSCI:EAFE	NCREIF:NFI-	Russell:1000	NCREIF:NFI-
ODCE Val Wt	Fund of Funds	Index	Index	Index	Index		ODCE Val Wt	Index	ODCE Val Wt
Nt 14.8 %	(21.0%)	28.4%	18.8%	7.2%	16.4%	22.8%	Nt 11.5%	0.9%	Nt 3.9 %
MSCI:EAFE	Cambridge:PE	Russell:2000	Russell:1000	Russell:1000	Russell:2000	Cambridge:PE	BC Aggregate	BC Aggregate	Russell:1000
	Index	Index	Index	Index	Index	Index			Index
11.2%	(26.7%)	27.2%	16.1%	1.5%	16.3%	21.1%	6.0%	0.5%	3.7%
CAI Hedge	Russell:2000	Cambridge:PE	NCREIF:NFI-	CAI Hedge	Cambridge:PE	NCREIF:NFI-	Russell:2000	CAI Hedge	Russell:2000
Fund of Funds	Index	Index	ODCE Val Wt	Fund of Funds	Index	ODCE Val Wt	Index	Fund of Funds	Index
10.0%	(33.8%)	17.3%	Nt 15.3%	(3.4%)	14.0%	Nt 12.9 %	4.9%	(0.1%)	2.2%
BC Aggregate	Russell:1000	CAI Hedge	MSCI:EAFE	Russell:2000	NCREIF:NFI-	CAI Hedge	CAI Hedge	MSCI:EAFE	CAI Hedge
	Index	Fund of Funds		Index	ODCE Val Wt	Fund of Funds	Fund of Funds		Fund of Funds
7.0%	(37.6%)	13.1%	7.8%	(4.2%)	Nt 9.8%	10.8%	3.4%	(0.8%)	(2.2%)
Russell:1000	MSCI:EAFE	BC Aggregate	BC Aggregate	MSCI:EAFE	CAI Hedge	BC Aggregate	MSCI:EM	Russell:2000	MSCI:EAFE
Index					Fund of Funds			Index	
5.8%	(43.4%)	5.9%	6.5%	(12.1%)	6.6%	(2.0%)	(2.2%)	(4.4%)	(4.4%)
Russell:2000	MSCI:EM	NCREIF:NFI-	CAI Hedge	MSCI:EM	BC Aggregate	MSCI:EM	MSCI:EAFE	MSCI:EM	Private
Index		ODCE Val Wt	Fund of Funds						Equity not yet
(1.6%)	(53.3%)	Nt (30.4%)	6.1%	(18.4%)	4.2%	(2.6%)	(4.9%)	(14.9%)	available

Cook County Commentary

Asset Allocation

The fund value at the end of June 2016 was \$8.52 billion, representing a net increase of \$97.79 million from the prior quarter end. Investments returned \$174.72 million for the quarter while net outflows to fund benefit payments were \$76.93 million.

Currently, assets are overweight to public equities and real estate, with an underweight to fixed income. The fund continued its progress toward its target allocation to private equity with a net investment of approximately \$16.2 million in the first quarter.



Asset Class	6/30 Actual Allocation (%)	Interim Target (%)*	Strategic Target (%)
B .: E .:	00.40/	00.00/	05.00/
Domestic Equity	32.1%	28.9%	25.0%
International Equity	20.9%	20.0%	20.0%
Fixed Income	24.8%	32.0%	32.0%
Real Estate	9.9%	8.0%	8.0%
Private Equity	2.4%	2.1%	6.0%
Hedge Funds	8.0%	9.0%	9.0%
Cash	1.9%	0.0%	0.0%
Misc.	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%

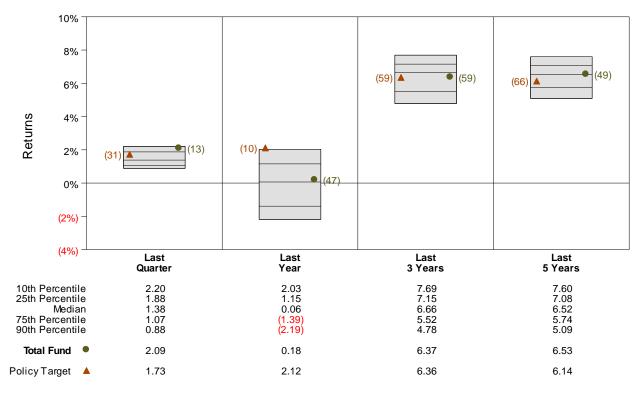
^{*}Interim target reflect modifications for non-public asset classes such as private equity that cannot be funded or rebalanced as regularly as public market strategies due to the illiquid nature of the investments.

Cook County Performance vs. Target

For the second quarter of 2016, the portfolio performed in line or exceeded its custom benchmark over the last three and five-year periods. Over these periods, the portfolio generated annualized returns of 6.37% and 6.53%, respectively. Active management in international equity and an overweight in real estate provided the largest contributions to outperformance over the trailing periods.

During the quarter, the portfolio generated 2.09%. The portfolio exceeded its benchmark and peers during the most recent quarter due to an underweight to fixed income, and overweights to public equities and real estate. In the last 12 months, the portfolio trailed its benchmark, but exceeded the majority of its public fund peers as evidenced in Table 1.0. Relative underperformance over the last 12 months has been driven by a small cap bias in U.S. equities and diversifying strategies in fixed income.

Table 1.0 CAI Public Fund Sponsor - Large (>1B)



Asset Class Weights vs CAI Public Fund Sponsor - Large (>1B)

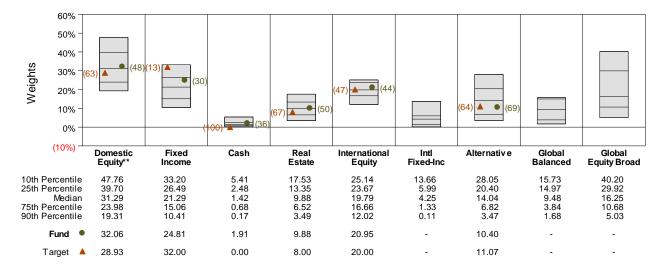


Table 1.1 **Asset Class Performance vs. Target**

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Domestic Equity	\$2,731,907,266	32.06%	2.36%	(1.66%)	9.65%	10.37%
Domestic Equity Benchmark (2)	<u>-</u>	-	2.63%	2.14%	11.13%	11.34%
International Equity	\$1,785,318,300	20.95%	(0.79%)	(7.53%)	2.96%	2.42%
International Equity Benchmark (3)	-	-	(0.64%)	(10.24%)	1.16%	0.00%
Fixed Income	\$2,113,989,188	24.81%	2.21%	4.40%	3.76%	3.77%
Fixed Income Benchmark (4)	-	-	2.21%	6.00%	4.06%	3.79%
REITS	\$260,284,799	3.05%	5.93%	19.31%	11.40%	-
NAREIT Equity Index	-	-	6.96%	24.04%	13.58%	12.60%
**Priv ate Real Estate	\$582,117,096	6.83%	3.88%	11.04%	13.66%	13.02%
NFI-ODCE Value Weight Net	-	-	1.91%	10.80%	11.97%	11.66%
**Priv ate Equity	\$203,338,850	2.39%	(0.12%)	(1.99%)	7.60%	6.32%
**Hedge Funds	\$682,659,483	8.01%	2.56%	(2.17%)	4.03%	-
LIBOR + 4%	-	-	1.14%	4.49%	4.33%	4.36%
HFRI Fund of Funds Index	-	-	0.50%	(5.45%)	1.90%	1.62%
Cash Equivalents	\$162,697,729	1.91%	0.09%	0.30%	0.20%	0.18%
3-month Treasury Bill	<u> </u>	<u>-</u>	0.07%	0.19%	0.09%	0.09%
Total Cook County Fund	\$8,522,328,673	100.00%	2.09%	0.18%	6.37%	6.53%
Total Fund Benchmark (1)	-	-	1.73%	2.12%	6.36%	6.14%

^{**}Represents trailing data.

Footnotes found on the back page

Table 1.1 illustrates the portfolio's asset class performance versus associated benchmarks. The portfolio's domestic equity allocation trailed the benchmark by 0.27% for the quarter. However, an overweight to this asset class versus the target was additive to the fund's performance.

The international equity allocation trailed the composite passive index for the quarter, but outperformed for the other periods measured above. In the past five years, Cook County's international equity allocation exceeded the passive benchmark index by over 2.4% annualized. Diversifying strategies such as non-U.S. small cap detracted for the quarter while the emerging markets allocation was additive.

The fixed income allocation posted a similar return to that of the Barclays Aggregate Index for the quarter. Core Plus strategies were additive as managers with an overweight to corporate securities outperformed. In contrast, the global fixed income allocation detracted from the asset class return.

Real estate has been the best performing asset class over the last one, three and five years with returns in excess of 11% annualized for each respective period. The real estate allocation is comprised of investments in public real estate securities (REITS) and private real estate. The REIT allocation trailed its benchmark due in large part to active management which represents approximately 30% of the REIT allocation. The private real estate portfolio contains primarily core, income producing real estate, and a small allocation to non-core, closed end funds. The non-core funds were funded during the quarter and over the past year or so.

Presently, the private equity program is pursuing a fund-of-funds approach. The current investment of 2.4% is below its target allocation of 6%. Capital committed, but waiting investment have been invested in public equities as the program continues to be implemented. During the quarter, a net investment of \$16.2 million was made in funds-of-funds' investments while net distributions of \$2.3 million were returned from legacy partnerships.

The portfolio's hedge fund allocation outperformed its absolute return benchmark for the quarter, but has trailed in recent periods. However, the hedge fund composite has exceeded its industry peers as measured by the HFRI Fund-of-Funds Index and the Callan peer universe. DGAM has continued its wind-down with distributions of \$135 million during the quarter. The balance at June 30 stood at \$67.9 million which was 0.8% of the total fund and is consistent with the wind-down schedule that had been provided earlier in the year. An additional \$19.5 million was received in July.

Notes and Observations

DGAM has continued its wind-down and returned \$135 million in the last quarter, plus an additional distribution in July. The firm has announced a number of departures from the organization.

On August 16, 2016, Piedmont Investment Advisors announced that it was acquiring fellow North Carolina firm, NCM Capital. The deal is expected to close at the end of the third quarter.

Notes

Total Fund Benchmark (Target): Blend of asset class benchmarks at policy weights. The Domestic Equity and Private Equity target weights are adjusted each month such that the Private Equity Interim benchmark weight is set to approximate the invested capital. The uninvested capital is allocated to Domestic Equity. This process reflects the practical implementation of non-publically traded investments.

	Strategic	Interim	
	<u>Target</u>	<u>Target</u>	
Russell 3000	25.0%	28.9%	
MSCI ACWI ex US	20.0	20.0	
Barclays Aggregate	32.0	32.0	
Libor 3 Month + 4.0%	9.0	9.0	
Real Estate	8.0	8.0	
Private Equity	6.0	2.1	
Total Target	100.0%	100.0%	

- 2. Domestic Equity Benchmark: Blend of 17% S&P 500, 7% Russell 2000 Value, 7% Russell Mid Cap Growth, 6% Russell 1000 Growth, and 6% Russell 1000 Value through 9/31/2011; Russell 3000 thereafter.
- 3. International Benchmark: 12% MSCI ACWI ex-US, 3% Global ex US under \$2 billion through 9/30/2011; then 17% MSCI ACWI ex-US, 3% Global ex US under \$2 billion through 12/31/12; MSCI ACWI ex-US thereafter.
- Fixed Income Benchmark: Blend of 25% Barclays Aggregate, 5% Barclays US TIPs Index, 10% Barclays Gov/Credit Intermediate through 12/31/2012; Barclays Aggregate thereafter.