COUNTY EMPLOYEES' AND OFFICERS' ANNUITY AND BENEFIT FUND OF COOK COUNTY (A FIDUCIARY FUND OF COOK COUNTY, ILLINOIS)

FINANCIAL STATEMENTS

DECEMBER 31, 2018 AND 2017

COUNTY EMPLOYEES' AND OFFICERS' ANNUITY AND BENEFIT FUND OF COOK COUNTY

FINANCIAL STATEMENTS WITH SUPPLEMENTARY INFORMATION

DECEMBER 31, 2018 AND 2017

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DECEMBER 31, 2018 AND 2017

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LEGACY
PROFESSIONALS LLP
CERTIFIED PUBLIC ACCOUNTANTS

REPORT OF INDEPENDENT AUDITORS

To the Board of Trustees of
County Employees' and Officers' Annuity
and Benefit Fund of Cook County

Report on the Financial Statements
We have audited the accompanying financial statements of County Employees' and Officers' Annuity and Benefit Fund of Cook County (the Plan), a fiduciary fund of Cook County, Illinois, which comprise the combining statements of pension plan fiduciary net position and postemployment healthcare plan net position as of December 31, 2018 and 2017, and the related combining statements of changes in pension plan fiduciary net position and postemployment healthcare plan net position for the years then ended, and the related notes to the financial statements, which collectively comprise the Plan's basic financial statements.

Management's Responsibility for the Financial Statements
Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility
Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit includes performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Plan's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

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Opinion
In our opinion, the financial statements referred to in the first paragraph present fairly, in all material respects, the plan net position of County Employees' and Officers' Annuity and Benefit Fund of Cook County as of December 31, 2018 and 2017, and the changes in plan net position for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Other Matters
Required Supplementary Information
Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 4 through 4e and the required supplementary information on pages 34 through 38 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquires of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information
Our audits were conducted for the purpose of forming an opinion on the Plan's basic financial statements as a whole. The accompanying supplementary information on pages 39 through 43 is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audits of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the basic financial statements as a whole.

Other Matters (continued)

Previously Audited Information

We also have previously audited the basic financial statements for the years ended December 31, 2016, 2015, 2014, and 2013 (which are not presented herein), and we expressed unmodified opinions on those financial statements. In our opinion, the information on page 42 is fairly stated in all material respects in relation to the basic financial statements from which it has been derived.

Legacy Professionals LLP

Westchester, Illinois

June 17, 2019

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

This section presents Management's Discussion and Analysis of the financial position and performance of the County Employees' and Officers' Annuity and Benefit Fund of Cook County (the Plan) for the years ended December 31, 2018 and 2017. This discussion is presented as an overview of the financial activities of the Plan and should be read in conjunction with the Plan's financial statements.

Overview of the Basic Financial Statements

The following discussion and analysis is intended to serve as an introduction to the Plan's basic financial statements. The financial statements are prepared on an economic sources focus and accrual basis of accounting in accordance with Governmental Accounting Standards Board (GASB) pronouncements. The basic components of the financial package are described below:

Combining Statements of Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position provides a snapshot of account balances and net position held in trust for future benefit payments and any liabilities as of the Plan's year end. Over time increases and decreases in net position may serve as a useful indicator of whether the financial position of the Plan is improving or deteriorating.

Combining Statements of Changes in Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position shows the revenues (additions) and expenses (deductions) during the year, where additions less deductions equal net increase (decrease) in net position. The net increase (decrease) in net position reports the change in net position as reported in the combining Statements of Changes in Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position of the prior year and the current year.

Notes to the Financial Statements provides additional information that is essential to achieving a better understanding of the data provided in the basic financial statements.

Required Supplementary Information provides schedules and related notes concerning actuarial information, funding progress, employer contributions and investment returns.

Supplementary Information includes schedules of net administrative expenses, professional and consulting fees, investment expenses, additions by source, and deductions by type and employer contributions receivable.

Financial Highlights

Net position decreased by $545,859,661 or -5.2% from $10,407,883,443 at December 31, 2017 to $9,862,023,782 at December 31, 2018. Comparatively, net position increased by $1,292,225,573 or 14.2% from $9,115,657,870 at December 31, 2016 to 10,407,883,443 at December 31, 2017. The decrease in net position for 2018 was primarily due to the decrease in the fair value of investments. The increase in net position for 2017 was primarily due to the increase in the fair value of investments.

Rate of return of the Plan's investment portfolio was -3.79% for 2018, 15.35% for 2017 and 7.67% for 2016.

Net Position

The condensed Combining Statements of Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position reflects the resources available to pay benefits to members. A summary of the Combining Statements of Pension Plan Fiduciary Net Position and Postemployment Plan Net Position is as follows:

Plan Net Position
As of December 31,

				Current Year Increase in	
	2018	2017	2016	Dollars	Percent
Total assets	$ 10,886,244,214	$ 11,765,897,724	$ 10,407,279,006	$ (879,653,510)	- 7.5%
Total liabilities	1,024,220,432	1,358,014,281	1,291,621,136	(333,793,849)	- 24.6%
Net position	$ 9,862,023,782	$ 10,407,883,443	$ 9,115,657,870	$ (545,859,661)	- 5.2%

Changes in Plan Net Position

The condensed Combining Statements of Changes in Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position reflects the changes in the resources available to pay benefits to members. A summary of the Combining Statements of Changes in Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position is as follows:

Changes in Plan Net Position
For the Years Ended December 31,

	2018	2017	2016	Current Year Increase/(Decrease) in Dollars	Percent
Additions:					
Employer contributions	$ 587,748,221	$ 559,205,626	$ 464,268,404	$ 28,542,595	5.1%
Employee contributions	134,159,171	138,826,184	139,355,592	(4,667,013)	-3.4%
Net investment income (loss) (includes security lending activities)	(424,787,945)	1,399,625,874	629,442,470	(1,824,413,819)	-130.4%
Other	27,479,205	23,321,813	14,019,340	4,157,392	17.8%
Total additions	324,598,652	2,120,979,497	1,247,085,806	(1,796,380,845)	-84.7%
Deductions:					
Benefits	831,661,745	790,352,526	742,396,434	41,309,219	5.2%
Refunds	33,662,521	32,995,364	26,702,222	667,157	2.0%
Administrative expenses	5,134,047	5,406,034	5,373,555	(271,987)	-5.0%
Total deductions	870,458,313	828,753,924	774,472,211	41,704,389	5.0%
Net increase (decrease)	(545,859,661)	1,292,225,573	472,613,595	(1,838,085,234)	-142.2%
Net position					
Beginning of year	10,407,883,443	9,115,657,870	8,643,044,275	1,292,225,573	14.2%
End of year	$ 9,862,023,782	$ 10,407,883,443	$ 9,115,657,870	$ (545,859,661)	-5.2%

Additions to Plan Net Position

Total additions were $324,598,652 in 2018, $2,120,979,497 in 2017 and $1,247,085,806 in 2016.

Employer contributions increased to $587,748,221 in 2018 from $559,205,626 in 2017 and increased from $464,268,404 in 2016. Employer contributions are statutorily set at 1.54 times employee contributions collected two years prior. The County made supplemental contributions of $378,436,000 in 2018, $353,800,000 in 2017, and $270,526,000 in 2016.

Employee contributions, including permissive service credit purchases, decreased to $134,159,171 in 2018 from $138,826,184 in 2017 and decreased from $139,355,592 in 2016 when compared to 2017 employee contributions. The majority of members contribute 8.5% of covered wages.

Net investment (loss) totaled ($424,787,945) for 2018 compared to income of $1,399,625,874 and $629,442,470 for 2017 and 2016, respectively. Investment earnings fluctuate primarily from the overall performance of the financial markets from year to year.

Deductions to Plan Net Position

Total deductions were $870,458,313 in 2018, $828,753,924 in 2017 and were $774,472,211 in 2016.

Benefits increased to $831,661,745 in 2018 from $790,352,526 in 2017 and $742,396,434 in 2016 due primarily to the 3% annual cost of living increases for annuitants and an increase in the number of retirees.

Refunds increased to $33,662,521 in 2018 from $32,995,364 in 2017 and increased from $26,702,222 in 2016. These changes are due to fluctuations in refund applications.

The cost to administer the Plan decreased by 5.0% to $5,134,047 in 2018 from $5,406,034 in 2017. Comparatively, the cost to administer the Plan increased by 0.6% to $5,406,034 in 2017 from $5,373,555 in 2016.

Actuarial Information

Pension Benefits

Under GASB Statement No. 67, *Financial Reporting for Pension Plans*, the Plan's funding for pension benefits is as follows:

Funding for Pension Benefits
For the Years Ended December 31,

	2018	2017	2016
Total pension liability	$ 21,723,236,738	$ 22,940,794,624	$ 23,240,192,010
Plan fiduciary net position	9,862,023,782	10,407,883,443	9,115,657,870
Employer's net pension liability	$ 11,861,212,956	$ 12,532,911,181	$ 14,124,534,140
Plan fiduciary net position as a percentage of the total pension liability	45.40%	45.37%	39.22%

Postemployment Healthcare Benefits

Under GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, the Plan's funding for postemployment healthcare benefits is as follows:

Funding for Healthcare Benefits
For the Years Ended December 31,

	2018	2017	2016
Total other postemployment benefits liability	$ 1,534,053,569	$ 2,148,249,441	$ 2,229,886,669
Plan fiduciary net position	-	-	-
Employer's net other postemployement benefits liability	$ 1,534,053,569	$ 2,148,249,441	$ 2,229,886,669

Contributions for postemployment healthcare benefits are made on a "pay-as-you-go" basis, resulting in a 0.00% funded ratio.

Actuarial Information (continued)

Combined

The Plan actuary has performed a combined valuation of the pension and postemployment healthcare benefits provided by the Plan to measure the overall funded status and contribution requirements of the Plan. Such a valuation is required under Chapter 40, Article 5/9-199 of the Illinois Pension Code which provides that the Plan shall submit a report each year containing a detailed statement of the affairs of the Plan, its income and expenditures, and assets and liabilities. The combined valuation reflects the actuarial assumptions adopted by the Board based on the results of an actuarial experience study. These assumptions conform to the actuarial standards recommended by the Plan's actuary and were used by the Plan's actuary to present the combined funding status in accordance with *Section 9-199*. The Plan's funding under the combined actuarial valuation is as follows:

Funding for Combined Pension and Postemployment Healthcare Benefits For the Years Ended December 31,

	2018	2017	2016
Unfunded actuarial accrued liability	$ 6,791,017,319	$ 6,741,295,828	$ 7,238,233,759
Funded ratio	60.75%	60.09%	56.73%

Contact Information

This financial report is designed to provide the employer, plan participants and others with a general overview of the Plan's finances and show accountability for money it receives. Questions concerning any data provided in the report or requests for additional information should be addressed to:

County Employees' and Officers' Annuity
and Benefit Fund of Cook County
Attention: Executive Director
70 West Madison Street
Suite 1925
Chicago, Illinois 60602

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

Combining Statements of Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position

December 31, 2018 and 2017

	2018			2017		
	Total	Pension	Postemployment Healthcare	Total	Pension	Postemployment Healthcare
Assets						
Receivables						
Employer contributions less allowance of $8,185,337 in 2018 and $6,501,930 in 2017	$ 222,543,029	$ 222,543,029	$ -	$ 221,777,241	$ 221,777,241	$ -
Employee contributions	14,314,210	14,314,210	-	6,313,252	6,313,252	-
Accrued investment income	29,686,644	29,686,644	-	22,764,522	22,764,522	-
Receivable for securities sold	34,415,136	34,415,136	-	42,988,417	42,988,417	-
Due from Forest Preserve District Employees' Annuity and Benefit Fund of Cook County	381,010	381,010	-	359,334	359,334	-
EGWP/Medicare Part D subsidy	5,479,027	-	5,479,027	3,416,852	-	3,416,852
Prescription rebates	949,412	-	949,412	2,066,366	-	2,066,366
Impress balance receivable	1,441,000	-	1,441,000	1,200,000	-	1,200,000
Other	11,349	11,349	-	46,069	46,069	-
Total receivables	309,220,817	301,351,378	7,869,439	300,932,053	294,248,835	6,683,218
Investments						
U.S. and international equities	4,958,851,665	4,958,851,665	-	5,840,815,927	5,840,815,927	-
U.S. Government and government agency obligations	1,170,334,505	1,170,334,505	-	1,042,879,014	1,042,879,014	-
Corporate and foreign government obligations	1,049,336,411	1,049,336,411	-	892,437,094	892,437,094	-
Collective international equity fund	70,371,275	70,371,275	-	77,439,593	77,439,593	-
Commingled fixed income fund	28,081,553	28,081,553	-	28,067,670	28,067,670	-
Private global fixed fund limited partnership	255,881,343	255,881,343	-	214,787,328	214,787,328	-
Exchange traded funds	55,162,948	55,162,948	-	172,932,810	172,932,810	-
Private equities	513,790,532	513,790,532	-	393,324,331	393,324,331	-
Hedge funds	666,385,423	666,385,423	-	661,759,083	661,759,083	-
Real estate funds	647,961,102	647,961,102	-	625,399,268	625,399,268	-
Short-term investment	218,141,023	218,141,023	-	296,147,796	296,147,796	-
Total investments	9,634,297,780	9,634,297,780	-	10,245,989,914	10,245,989,914	-
Collateral held for securities on loan	942,725,617	942,725,617	-	1,218,975,757	1,218,975,757	-
Total assets	10,886,244,214	10,878,374,775	7,869,439	11,765,897,724	11,759,214,506	6,683,218
Liabilities						
Accounts payable	12,634,128	12,634,128	-	7,103,244	7,103,244	-
Healthcare & other benefits payable	7,869,439	-	7,869,439	9,373,422	2,690,204	6,683,218
Payable for securities purchased	60,991,248	60,991,248	-	122,561,858	122,561,858	-
Securities lending collateral	942,725,617	942,725,617	-	1,218,975,757	1,218,975,757	-
Total liabilities	1,024,220,432	1,016,350,993	7,869,439	1,358,014,281	1,351,331,063	6,683,218
Net position						
Net position restricted for pensions	9,862,023,782	9,862,023,782	-	10,407,883,443	10,407,883,443	-
Net position held in trust for postemployment healthcare benefits	-	-	-	-	-	-
Total	$ 9,862,023,782	$ 9,862,023,782	$ -	$ 10,407,883,443	$ 10,407,883,443	$ -

See accompanying notes to financial statements.

COUNTY EMPLOYEES' AND OFFICERS' ANNUITY AND BENEFIT FUND OF COOK COUNTY

COMBINING STATEMENTS OF CHANGES IN PENSION PLAN FIDUCIARY NET POSITION AND POSTEMPLOYMENT HEALTHCARE PLAN NET POSITION

YEARS ENDED DECEMBER 31, 2018 AND 2017

	2018			2017		
	Total	Pension	Postemployment Healthcare	Total	Pension	Postemployment Healthcare
ADDITIONS						
Employer contributions						
Statutory	$ 209,312,221	$ 209,312,221	$ -	$ 205,405,626	$ 205,405,626	$ -
Supplemental	378,436,000	378,436,000	-	353,800,000	353,800,000	-
Allocation to postemployment healthcare	-	(38,310,969)	38,310,969	-	(47,454,641)	47,454,641
Total employer contributions	587,748,221	549,437,252	38,310,969	559,205,626	511,750,985	47,454,641
Employee contributions						
Salary deductions	129,003,778	129,003,778	-	133,373,644	133,373,644	-
Refund repayments	2,249,491	2,249,491	-	2,688,177	2,688,177	-
Former and miscellaneous service payments	660,852	660,852	-	701,554	701,554	-
Optional payments and deductions	164,362	164,362	-	36,687	36,687	-
Deductions in lieu of disability	2,080,688	2,080,688	-	2,026,122	2,026,122	-
Total employee contributions	134,159,171	134,159,171	-	138,826,184	138,826,184	-
Investment income						
Net appreciation (depreciation) in fair value of investments	(595,032,962)	(595,032,962)	-	1,248,856,354	1,248,856,354	-
Dividends	128,038,585	128,038,585	-	114,586,784	114,586,784	-
Interest	73,805,330	73,805,330	-	66,512,771	66,512,771	-
	(393,189,047)	(393,189,047)	-	1,429,955,909	1,429,955,909	-
Less investment expenses	(36,754,398)	(36,754,398)	-	(35,232,027)	(35,232,027)	-
Net investment income	(429,943,445)	(429,943,445)	-	1,394,723,882	1,394,723,882	-
Securities lending						
Income	6,160,217	6,160,217	-	5,817,943	5,817,943	-
Expenses	(1,004,717)	(1,004,717)	-	(915,951)	(915,951)	-
Net securities lending income	5,155,500	5,155,500	-	4,901,992	4,901,992	-
Other						
Employer federal subsidized programs	5,678,102	5,678,102	-	4,296,563	4,296,563	-
EGWP/Medicare Part D subsidy	18,324,171	-	18,324,171	10,398,481	-	10,398,481
Prescription plan rebates	3,294,421	-	3,294,421	7,563,914	-	7,563,914
Employee transfers from Forest Preserve District Employees' Annuity and Benefit Fund of Cook County	182,511	182,511	-	54,257	54,257	-
Miscellaneous	-	-	-	1,008,598	1,008,598	-
Total other additions	27,479,205	5,860,613	21,618,592	23,321,813	5,359,418	17,962,395
Total additions	324,598,652	264,669,091	59,929,561	2,120,979,497	2,055,562,461	65,417,036

See accompanying notes to financial statements.

COUNTY EMPLOYEES' AND OFFICERS' ANNUITY AND BENEFIT FUND OF COOK COUNTY

COMBINING STATEMENTS OF CHANGES IN PENSION PLAN FIDUCIARY NET POSITION AND POSTEMPLOYMENT HEALTHCARE PLAN NET POSITION

YEARS ENDED DECEMBER 31, 2018 AND 2017

	2018			2017		
	Total	Pension	Postemployment Healthcare	Total	Pension	Postemployment Healthcare
DEDUCTIONS						
Benefits						
Annuity						
Employee	$ 704,246,643	$ 704,246,643	$ -	$ 661,594,080	$ 661,594,080	$ -
Spouse and children	55,983,104	55,983,104	-	51,874,102	51,874,102	-
Disability						
Ordinary	10,851,548	10,851,548	-	10,875,990	10,875,990	-
Duty	650,889	650,889	-	591,318	591,318	-
Healthcare less annuitant contributions of $50,903,709 in 2018 and $46,679,437 in 2017	59,929,561	-	59,929,561	65,417,036	-	65,417,036
Total benefits	831,661,745	771,732,184	59,929,561	790,352,526	724,935,490	65,417,036
Refunds	33,662,521	33,662,521	-	32,995,364	32,995,364	-
Net administrative expenses	5,134,047	5,134,047	-	5,406,034	5,406,034	-
Total deductions	870,458,313	810,528,752	59,929,561	828,753,924	763,336,888	65,417,036
NET INCREASE (DECREASE)	(545,859,661)	(545,859,661)	-	1,292,225,573	1,292,225,573	-
NET POSITION						
Beginning of year	10,407,883,443	10,407,883,443	-	9,115,657,870	9,115,657,870	-
End of year	$ 9,862,023,782	$ 9,862,023,782	$ -	$ 10,407,883,443	$ 10,407,883,443	$ -

See accompanying notes to financial statements.

NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The County Employees' and Officers' Annuity and Benefit Fund of Cook County (the Plan) is administered in accordance with Chapter 40, Article 5/9 of the Illinois Compiled Statutes (the Statutes).

Financial Reporting Entity - Accounting principles generally accepted in the United States of America define a financial reporting entity as consisting of the primary government and its component units for which the primary government is financially accountable. Financial accountability includes appointing a voting majority of a component unit's governing board, the ability of a primary government to impose its will on the component unit, or a potential for a component unit to provide specific financial benefits to or impose specific financial burdens on the primary government. The Plan has determined that no other outside entity meets the above criteria and, therefore, no other entity has been included as a component unit in the Plan's financial statements.

Based on the above criteria, the Plan is considered to be a fiduciary fund of Cook County, Illinois (the County) and is included in the County's financial statements.

Method of Accounting - The financial statements are prepared using the accrual basis of accounting. Employer contributions are recognized as income pursuant to legal requirements as specified by the Illinois Compiled Statutes. Employee contributions are recognized in the period in which the contributions are due. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan.

Investments - Investments are reported at fair value, which generally represents reported market value as of the last business day of the year. Where less than an entire investment holding is sold, average value is used to determine realized gain or loss.

Allocated Expenses - Administrative expenses are initially paid by the Plan. These expenses are allocated between the Plan and the Forest Preserve District Employees' Annuity and Benefit Fund of Cook County (the Forest Fund) on a pro rata basis, as applicable.

Capital Assets - The Plan has set a capitalization threshold of $100,000 for all capital asset types. As of December 31, 2018 and 2017, the Plan does not have any capital assets.

Estimates - The preparation of the financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect certain reported amounts and disclosures in the financial statements. Actual results could differ from those estimates.

NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Reclassifications - Certain prior year amounts have been reclassified to conform to the current year presentation.

Subsequent Events - Subsequent events have been evaluated through June 17, 2019, which is the date the financial statements were available to be issued.

NOTE 2. PLAN DESCRIPTION

The Plan was established on January 1, 1926, and is governed by legislation contained in the Illinois Compiled Statutes (the Statutes), particularly Chapter 40, Article 5/9 (the Article). Effective with the signing of Public Act 96-0889 into law on April 14, 2010, participants that first became contributors on or after January 1, 2011 are Tier 2 participants. All other participants that were contributing prior to January 1, 2011 are Tier 1 participants. The Plan can be amended only by the Illinois Legislature. The Plan is a single employer defined benefit pension plan with a defined contribution minimum. The Plan was established for the purpose of providing retirement, death and disability benefits for full-time employees of the County and the dependents of such employees. The Plan is considered to be a fiduciary fund of Cook County, Illinois and is included in the County's financial statements.

The Statutes authorize a Board of Trustees (the Board) of nine members to carry out the provisions of the Article. According to the Article, two members of the Board are ex officio, four are elected by the employee members of the Plan and three are elected by the annuitants of the Plan. The two ex officio members are the Comptroller of Cook County, or someone chosen by the Comptroller, and the Treasurer of Cook County, or someone chosen by the Treasurer. All members of the Board are fiduciaries with respect to the Plan and are statutorily mandated to discharge their duties, as such, solely in the interest of the Plan's participants and beneficiaries.

The Board has the powers and duties required in the Article to collect all contributions due to the Plan, to invest the Plan's reserves, to have an annual audit, to appoint employees, to authorize or suspend payment of any benefit and to have exclusive original jurisdiction in all matters relating to or affecting the Plan. The Board approves its own budget which is prepared by the administrative staff of the Plan. The Board is required annually to submit to the County Board of Cook County a detailed report of the financial affairs and status of the Plan. Provisions in other articles of Chapter 40 require the Board to submit its annual audit and actuarial valuation reports to the State of Illinois Department of Insurance, as well as another detailed annual report, the form and content of which is specified by the Department of Insurance.

Covered employees are required to contribute 8.5% (9% for sheriffs) of their salary to the Plan, subject to the salary limitations for Tier 2 participants in Article 5/1-160. If an employee leaves covered employment without qualifying for an annuity, accumulated contributions are refunded with interest (3% or 4% depending on when the employee became a participant). The County's total contribution is the amount of contributions made by the employees to the Plan in the calendar year two years prior to the year for which annual applicable tax is levied, multiplied by 1.54. The source of funds for the County's contributions has been designated by State Statute as the County's annual property tax levy. The County's payroll for employees covered by the Plan for the years ended December 31, 2018 and 2017 was $1,533,721,507 and $1,567,480,401 respectively.

NOTE 2. PLAN DESCRIPTION (CONTINUED)

The Plan provides retirement as well as death and disability benefits. Tier 1 employees age 50 or older and Tier 2 employees age 62 or older are entitled to receive a minimum formula annuity of 2.4% for each year of credited service if they have at least 10 years of service. The maximum benefit is 80% of the final average monthly salary. For Tier 1 employees under age 60 and Tier 2 employees under age 67, the monthly retirement benefit is reduced by ½% for each month the participant is below that age. The reduction is waived for Tier 1 participants having 30 or more years of credited service.

Participants should refer to the applicable State Statutes for more complete information.

At December 31, 2018 and 2017, participants consisted of the following:

	2018	2017
Active members	19,671	20,349
Retired members	15,820	15,488
Beneficiaries	2,782	2,729
Inactive members	14,898	14,624
Total	53,171	53,190

NOTE 3. EMPLOYER'S PENSION LIABILITY

Net Pension Liability

The components of the employer's net pension liability of the Plan for the years ended December 31, 2018 and 2017 are as follows:

	2018	2017
Total pension liability	$ 21,723,236,738	$ 22,940,794,624
Plan fiduciary net position	9,862,023,782	10,407,883,443
Employer's net pension liability	$ 11,861,212,956	$ 12,532,911,181
Plan fiduciary net position as a percentage of the total pension liability	45.40%	45.37%

See the schedule of changes in the employer's net pension liability and related ratios in the required supplementary information for additional information related to the funded status of the Plan.

NOTE 3. EMPLOYER'S PENSION LIABILITY (CONTINUED)

Net Pension Liability (continued)

The net pension liability was determined by actuarial valuations performed as of December 31, 2018 and 2017 using the following actuarial methods and assumptions:

Actuarial valuation date	December 31, 2018	December 31, 2017
Actuarial cost method	Entry Age Normal	Entry Age Normal
Amortization method	Level Dollar - Open	Level Dollar - Open
Remaining amortization period	30 years	30 years
Asset valuation method	Five Year Smoothed Average Market	Five Year Smoothed Average Market
Actuarial assumptions		
Inflation	2.75% per year, compounded annually;	2.75% per year, compounded annually
Salary increases	3.50% to 8.00%, based on age;	3.50% to 8.00%, based on age
Investment rate of return	7.25% per year, compounded annually;	7.25% per year, compounded annually
Retirement age	Rates of retirement for each age from 50 to 80 based on recent experience of the Plan where all employees are assumed to retire by age 80	Rates of retirement for each age from 50 to 80 based on recent experience of the Plan where all employees are assumed to retire by age 80
Mortality	RP-2014 Blue Collar Mortality Table, base year 2006. Buck Modified MP-2017 projection scale.	RP-2014 Blue Collar Mortality Table, base year 2006. Conduent Modified MP-2017 projection scale.
Postretirement annuity increase		
	Tier 1 participants - 3.0% compounded annually	Tier 1 participants - 3.0% compounded annually
	Tier 2 participants - the lesser of 3.0% or one half of the increase in the Consumer Price Index	Tier 2 participants - the lesser of 3.0% or one half of the increase in the Consumer Price Index

The actuarial assumptions used in the December 31, 2018 and 2017 valuations were based on the results of an actuarial experience study conducted by Conduent, Inc. (formerly Buck Consultants, LLC) dated February 2018. The Plan engaged Cavanaugh Macdonald Consulting to prepare the December 31, 2018 valuation.

NOTE 3. EMPLOYER'S PENSION LIABILITY (CONTINUED)

Discount Rate

The discount rate used to measure the total pension liability at December 31, 2018 and 2017 was 4.98% and 4.47% respectively. The projection of cash flows used to determine the discount rate assumed that contributions will continue to follow the current funding policy. Based on this assumption, the Plan's fiduciary net position was projected to be insufficient to make all projected future benefit payments of current plan members. A municipal bond rate of 4.13% and 3.16% at December 31, 2018 and 2017, respectively, and the long-term investment rate of return of 7.25% at December 31, 2018 and 2017 was used in the development of the blended discount rate after that point. The municipal bond rates are based on the S&P Municipal Bond 20 Year High Grade Rate Index. Based on the long-term rate of return of 7.25% and municipal bond rate of 4.13% at December 31, 2018 and 3.16% at December 31, 2017, the blended discount rate would be 4.98% at December 31, 2018 and 4.47% at December 31, 2017.

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following is an analysis of the net pension liability's sensitivity to changes in the discount rate at December 31, 2018 and 2017. The following table presents the net pension liability of the employer using the blended discount rate as well as the employer's net pension liability calculated using a discount rate 1 percent lower and 1 percent higher than the current discount rate:

	1% Decrease 3.98%	Current Discount Rate 4.98%	1% Increase 5.98%
Net Pension Liability - December 31, 2018	$ 15,172,534,698	$ 11,861,212,956	$ 9,169,383,954

	1% Decrease 3.47%	Current Discount Rate 4.47%	1% Increase 5.47%
Net Pension Liability - December 31, 2017	$ 16,366,617,953	$ 12,532,911,181	$ 9,471,482,980

NOTE 4. SUMMARY OF EMPLOYER FUNDING POLICIES

Statutory Funding

Employer contributions are funded primarily through a tax levied by Cook County, Illinois. The employer contributions to be remitted to the Plan are equal to the total contributions made by the employees to the Plan in the calendar year two years prior, multiplied by 1.54.

Supplemental Funding

Per the 2018 IGA (Intergovernmental Agreement), the County is required to make supplemental payments totaling of $353,436,000 to promote the long-term fiscal sustainability of the Plan. During the year ended December 31, 2018, the County made supplemental contributions to the Plan totaling $378,436,000. The additional $25,000,000 received on December 31, 2018 pertains to the 2019 IGA. For the year ended December 31, 2017, the County made supplemental contributions to the Plan totaling $353,800,000.

NOTE 5. INVESTMENTS

Investment Policy

The Board of Trustees is responsible for establishing reasonable and consistent investment objectives, policies, and guidelines governing the investment of Plan assets in accordance with the Illinois Compiled Statutes. The Plan is authorized to invest in bonds, notes, certificates of indebtedness, mortgage notes, real estate, stocks, shares, debentures, or other obligations or securities as set forth in the "prudent person" provisions of the state statutes. All of the Plan's financial instruments are consistent with the permissible investments outlined in the state statutes and any index-linked financial instruments are limited to those indices that replicate the permissible investments outlined in the State Statutes. During the year ended December 31, 2018 and 2017, there were no significant changes to the investment policy.

NOTE 5. INVESTMENTS (CONTINUED)

The Plan's investment policy in accordance with the Statutes establishes the following target allocation across asset classes:

Asset Class	Target Allocation %	Long-term Expected Real Rate of Return
Domestic equities	33.00%	11.24%
International equities	21.00%	9.51%
Fixed income	26.00%	4.77%
Real estate funds	9.00%	9.77%
Private equity	4.00%	11.43%
Hedge Funds	6.00%	7.31%
Short-term investment	1.00%	3.98%
Total investments	100.00%	

Long-Term Expected Rate of Return

The long-term expected rate of return on the Plan's investments was determined based on the results of an experience review. The results of the experience review were presented to the Board at the Board's March 2018 Meeting and adopted at a subsequent meeting. The rate of return assumption was based on the target asset allocation of the Plan. In the experience review, best estimate ranges of expected future real rates of return (net of inflation) for the portfolio were developed, based on the expected returns of each major asset class and their weights in the portfolio. An econometric model that forecasts a variety of economic environments and then calculates asset class returns based on functional relationships between the economic variables and the asset classes was then used. Expected investment expenses were subtracted and expected inflation was added to arrive at the long term expected nominal return. A value for the expected long term expected return was selected for the portfolio such that there was a better than 50% likelihood of the emerging returns exceeding the expected return. Best estimates or arithmetic real rates of return for each major asset class included in the Plan's target asset allocation as of December 31, 2018 are listed in the table above.

Annual Money-Weighted Rate of Return

The annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was (3.79%) and 15.35% for the years ended December 31, 2018 and 2017 respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

NOTE 5. INVESTMENTS (CONTINUED)

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The Plan's investment policy is an average credit quality for each manager's total fixed income portfolio (Corporate and U.S. Government holdings) of not less than A- by two out of three credit agencies (Moody's Investor Service, Standard & Poor's and/or Fitch). The following table presents a summarization of the Plan's credit quality ratings of investments at December 31, 2018 and 2017 valued by Moody's Investors Service, Standard & Poor's and/or Fitch:

Type of Investment	Rating	2018	2017
U.S. Government and government agency obligations	Aaa/AAA	$ 1,126,661,748	$ -
	Aa/AA	4,446,042	969,866,822
	A/A	1,034,254	-
	Baa/BBB	410,323	-
	Not Rated	37,782,138	73,012,192
		$ 1,170,334,505	$ 1,042,879,014
Corporate and foreign government obligations	Aaa/AAA	$ 140,912,898	$ 49,734,614
	Aa/AA	55,450,980	43,244,820
	A/A	244,845,248	196,619,170
	Baa/BBB	439,977,678	399,219,807
	Ba/BB	47,343,211	91,257,578
	B/B	27,024,658	21,568,391
	Caa/CCC	-	71,256
	D/D	-	33,808
	Not Rated	93,781,738	90,687,650
		$ 1,049,336,411	$ 892,437,094
Commingled fixed income fund	Not Rated	$ 28,081,553	$ 28,067,670
Short-term investment	Not Rated	$ 218,141,023	$ 296,147,796

NOTE 5. INVESTMENTS (CONTINUED)

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Investments held for longer periods are subject to increased risk of adverse interest rate changes. The Plan's investment policy for duration for each manager's total fixed income portfolio is within plus or minus 30% of the duration for the fixed income performance benchmark (*Bloomberg Barclays US Aggregate Fixed Income*, which was 5.87 years at December 31, 2018 and 5.98 years at December 31, 2017*)*. The following table presents a summarization of the Plan's debt investments at December 31, 2018 and 2017, using the segmented time distribution method:

Type of Investment	Maturity	2018	2017
U.S. Government and government agency obligations	Less than 1 year	$ 167,349,384	$ 92,827,736
	1 - 5 years	355,220,165	271,124,646
	5 - 10 years	186,092,265	221,211,473
	Over 10 years	461,672,691	457,715,159
		$ 1,170,334,505	$ 1,042,879,014
Corporate and foreign government obligations	Less than 1 year	$ 219,808,611	$ 94,336,069
	1 - 5 years	240,685,129	248,124,750
	5 - 10 years	290,893,458	295,709,384
	Over 10 years	297,949,213	254,266,891
		$ 1,049,336,411	$ 892,437,094
Commingled fixed income fund	1 - 5 years	$ 28,081,553	$ 28,067,670
Short-term investment	Less than 1 year	$ 218,141,023	$ 296,147,796

NOTE 5. INVESTMENTS (CONTINUED)

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. The Plan's exposure to foreign currency risk at December 31, 2018 and 2017 is as follows:

Type of Investment	Fair Value (USD) 2018	Fair Value (USD) 2017
U.S. and international equities		
Australian dollar	$ 61,079,609	$ 67,544,094
Brazil real	36,260,689	34,564,982
British pound sterling	233,612,366	287,406,366
Canadian dollar	121,270,059	126,857,132
Chilean peso	2,579,305	2,923,883
Colombian peso	353,726	500,048
Danish krone	23,220,147	25,977,028
Egyptian pound	162,844	198,082
European euro	432,970,169	586,137,751
Hong Kong dollar	159,921,452	152,526,523
Hungarian forint	779,492	1,193,009
Indian rupee	17,563,526	20,584,222
Indonesian rupiah	9,088,212	7,985,768
Israeli shekel	6,620,433	9,049,297
Japanese yen	315,882,453	409,706,421
Malaysian ringgit	5,079,458	6,338,639
Mexican peso	10,215,052	9,944,521
New Taiwan dollar	46,706,841	44,440,360
New Turkish lira	54,295	117,984
New Zealand dollar	12,423,410	12,434,442
Norwegian krone	11,186,482	18,276,725
Phillipenes peso	4,107,072	7,609,358
Polish zloty	5,221,095	5,990,608
Russian ruble	418,882	496,564
Singapore dollar	28,583,794	29,599,310
South African rand	16,043,067	20,504,292
South Korean won	46,400,568	61,647,767
Swedish krona	50,572,540	56,520,490
Swiss franc	90,292,671	106,330,018
Thailand baht	7,826,846	9,006,007
United Arab Emirates dirham	1,304,847	1,457,264
U.S. dollar	3,201,050,263	3,716,946,972
Total U.S. and international equities	$ 4,958,851,665	$ 5,840,815,927

NOTE 5. INVESTMENTS (CONTINUED)

Foreign Currency Risk (continued)

Type of Investment	Fair Value (USD) 2018	Fair Value (USD) 2017
Corporate and foreign government obligations		
Brazil real	$ 927,578	$ -
British pound sterling	728,888	-
Canadian dollar	732,473	2,764,885
Chinese yuan renminbi	733,031	-
Czech koruna	2,579,712	-
European euro	1,582,488	-
Hungarian forint	1,108,290	-
Indian rupee	14,540	-
Japanese yen	1,021,298	-
Mexican peso	541,343	-
Peruvian sol	532,737	-
Philippines peso	2,466,560	-
Polish zloty	465,682	-
Russian ruble	701,429	-
Singapore dollar	93,330	-
South korean won	279,744	-
Swedish krona	453,178	-
Taiwan dollar	760,528	-
New Turkish lira	989,532	1,003,130
Norwegian krone	695,979	-
U.S. dollar	1,031,928,071	888,669,079
Total corporate and foreign government obligations	$ 1,049,336,411	$ 892,437,094
Private equities		
European euro	$ 30,651,851	$ 21,420,498
U.S. dollar	483,138,681	371,903,833
Total private equities	$ 513,790,532	$ 393,324,331

For the years ended December 31, 2018 and 2017, net realized gain on investments sold, reflecting the difference between the proceeds received and cost value of securities sold, was $478,576,208 and $545,849,687 respectively. These amounts are included in the net appreciation (depreciation) in fair value of investments as reported on the combining statements of changes in pension plan fiduciary net position and postemployment healthcare plan net position. The calculation of realized gains and losses is independent of the calculation of net appreciation (depreciation) in the fair value of plan investments. Investments purchased in a previous year and sold in the current year result in their realized gains and losses being reported in the current year and their net appreciation (depreciation) in Plan assets being reported in both the current year and the previous years.

NOTE 6. DERIVATIVES

Derivative transactions involve, to varying degrees, credit risk, interest rate risk and market risk. Credit risk is the possibility that a loss may occur because a party to a transaction fails to perform according to the previously agreed upon terms. Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Market risk is the possibility that a change in interest or currency rates will cause the value of a financial instrument to decrease or become more costly to settle. The following table summarizes the derivatives held within the Fund's investment portfolio as of December 31, 2018 and 2017.

	Notional Amounts		Fair Value	
	2018	2017	2018	2017
Hedging derivative instruments				
Foreign currency contracts purchased	$ -	$ -	$ (119,728,163)	$ (29,474,769)
Foreign currency contracts sold	-	-	119,604,889	29,494,115
Futures				
Equity	2,858,634	-	(173,650)	-
Fixed Income	(42,720,771)	-	1,329,775	-
Swaps				
Interest rate swaps	-	-	(775,834)	-
Inflation rate swaps	-	-	(299,536)	-
Return swaps	-	-	27,002	-

Forward Currency Forward Contracts

Forward currency contracts are used to hedge against fluctuations in foreign currency-denominated assets used primarily in portfolio trade settlements. These contracts are a cash contract in which a seller agrees to deliver a specific cash commodity to a buyer sometime in the future. Forward agreements are subject to the creditworthiness of the counterparties, which are principally large financial institutions. Forward currency contracts are reported at fair value within the combining statement of pension plan fiduciary net position and postemployment healthcare plan net position included in investments. The gain or loss on forward currency contracts is recognized and recorded on the combining statement of changes in pension plan fiduciary net position and postemployment healthcare plan net position as part of investment income. The foreign currency contracts are short-term in nature.

NOTE 6. DERIVATIVES (CONTINUED)

Forward Currency Forward Contracts (continued)

The Plan's exposure to foreign currency risk at December 31, 2018 and 2017 is as follows:

Currency	Fair Value	
Foreign currency exchange sales	2018	2017
Australian dollar	$ 5,775,404	$ 4,540,837
Brazil real	1,188,837	-
British pound sterling	4,163,582	924,178
Canadian dollar	5,841,758	1,823,268
Chinese yuan renminbi	2,640,904	473,069
Colombian peso	488,418	-
Czech koruna	2,813,404	-
Danish krone	27,273	-
European euro	5,645,797	1,477,105
Hong Kong dollar	57,624	18,845
Hungarian forint	1,108,290	-
Indian rupee	1,370,140	-
Indonesian rupiah	876,101	-
Israeli shekel	994,922	438,328
Japanese yen	3,935,175	1,958,520
Mexican peso	218,311	-
New Zealand dollar	2,073,553	1,191,396
Norwegian krone	2,249,579	385,935
Peruvian sol	532,737	-
Philippines peso	2,775,428	-
Polish zloty	740,795	-
Russian ruble	701,429	-
Singapore dollar	1,613,291	476,493
South Korean won	1,386,691	-
South African rand	251,139	-
Swedish krona	2,742,988	1,137,855
Swiss franc	2,003,079	-
Taiwan dollar	2,538,580	-
Thailand baht	1,042,820	-
Turkish lira	1,406,242	-
U.S. dollar	60,400,598	14,648,286
Total	$ 119,604,889	$ 29,494,115

NOTE 6. DERIVATIVES (CONTINUED)

Forward Currency Forward Contracts (continued)

	Fair Value	
Foreign currency exchange purchases	2018	2017
Australian dollar	$ (2,420,985)	$ -
Brazil real	(385,672)	-
British pound sterling	(1,688,995)	(470,661)
Canadian dollar	(3,494,140)	(2,025,665)
Chilean peso	(1,853,262)	-
Chinese yuan renminbi	(4,581,231)	(4,127,033)
Colombian peso	(493,295)	-
Czech koruna	(233,691)	-
European euro	(21,869,186)	(9,716,932)
Indian rupee	(1,355,601)	-
Indonesian rupiah	(1,134,166)	-
Israeli shekel	(2,198,794)	-
Japanese yen	(1,501,240)	(471,836)
Mexican peso	(241,996)	-
New Zealand dollar	(3,378,101)	(6,866,396)
Norwegian krone	(1,171,395)	(3,582)
Philippines peso	(308,868)	-
Polish zloty	(275,114)	-
Singapore dollar	(1,046,909)	-
South Korean won	(1,106,947)	-
South African rand	(1,894,716)	-
Swedish krona	(1,782,559)	-
Swiss franc	(9,456,032)	(770,697)
Taiwan dollar	(1,778,052)	-
Thailand baht	(2,874,171)	-
Turkish lira	(416,709)	-
U.S. dollar	(50,786,336)	(5,021,967)
	$ (119,728,163)	$ (29,474,769)

Futures & Swaps

Futures are agreements to purchase or sell a specific amount of an asset at a specified maturity for an agreed-upon price. Futures contracts are reported at fair value in the equity and fixed income investments on the combining statement of pension plan fiduciary net position and postemployment healthcare plan net position. The gain or loss on futures contracts is reported as part of investment income on the combining statement of changes in pension plan fiduciary net position and postemployment healthcare plan net position. These instruments are not rated by the credit rating agencies.

NOTE 6. DERIVATIVES (CONTINUED)

Futures & Swaps (continued)

Swaps are arrangements to exchange currency or assets. Swaps are reported at fair value in the fixed income investments on the combining statement of pension plan fiduciary net position and postemployment healthcare plan net position. The gain or loss on futures contracts is reported as part of investment income on the combining statement of changes in pension plan fiduciary net position and postemployment healthcare plan net position. These instruments are not rated by the credit rating agencies.

The following table presents a summarization of the Plan's Future and Swaps investments' interest rate risk exposure at December 31, 2018 and 2017, using the segmented time distribution method:

Derivate Type	Maturity	2018	2017
Futures	Less than 1 Year	$ 1,156,125	$ -
Swaps	Less than 1 Year	$ 27,002	$ -
	1 - 5 years	(304,633)	-
	5 - 10 years	(785,776)	-
	Over 10 years	15,039	-
	Total	$ (1,048,368)	$ -

NOTE 7. WHEN-ISSUED TRANSACTIONS

The Plan may purchase securities on a when-issued basis, that is, obligate itself to purchase securities with delivery and payment to occur at a later date. At the time the Plan enters into a commitment to purchase the security, the transaction is recorded at the purchase price which equals fair value. The value at delivery may be more or less than the purchase price. No interest accrues to the Plan until delivery and payment takes place. As of December 31, 2018 and 2017, the Plan contracted to acquire securities on a when-issued basis with a total principal amount of approximately $37,540,000 and $73,800,000 respectively.

NOTE 8. FAIR VALUE MEASUREMENTS

GASB Statement No. 72, *Fair Value Measurement and Application*, established a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are described below:

<u>Basis of Fair Value Measurement</u>

Level 1	Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities
Level 2	Quoted prices in markets that are not considered to be active or financial instruments for which all significant inputs are observable, either directly or indirectly
Level 3	Prices or valuations that require inputs that are both significant to the fair value measurement and unobservable

The Plan categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The Plan has the following recurring fair value measurements as of December 31, 2018 and 2017:

		Fair Value Measurements at 12/31/2018 Using:		
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by fair value level				
U.S. and international equities	$ 4,958,851,665	$ 4,958,851,665	$ -	$ -
U.S. Government and government agency obligations	1,170,334,505	-	1,170,334,505	-
Corporate and foreign government obligations	1,049,336,411	-	1,049,336,411	-
Exchange traded funds	55,162,948	55,162,948	-	-
Total investments by fair value level	7,233,685,529	$ 5,014,014,613	$ 2,219,670,916	$ -
Investments measured at net asset value	2,400,612,251			
Total investments at fair value	$ 9,634,297,780			

NOTE 8. FAIR VALUE MEASUREMENTS (CONTINUED)

	Total	Fair Value Measurements at 12/31/2017 Using: Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by fair value level				
U.S. and international equities	$ 5,840,815,927	$ 5,840,815,927	$ -	$ -
U.S. Government and government agency obligations	1,042,879,014	-	1,042,879,014	-
Corporate and foreign government obligations	892,437,094	-	892,437,094	-
Exchange traded funds	172,932,810	172,932,810	-	-
Total investments by fair value level	7,949,064,845	$ 6,013,748,737	$ 1,935,316,108	$ -
Investments measured at net asset value	2,296,925,069			
Total investments at fair value	$ 10,245,989,914			

Level 1 Measurements

U.S. and international equities and exchange traded funds are traded in active markets on national and international securities exchanges and are valued at closing prices on the measurement date.

Level 2 Measurements

U.S. Government and government agency obligations and corporate and foreign government obligations are generally valued by benchmarking model-derived prices to quoted market prices and trade data for identical or comparable securities. To the extent that quoted prices are not available, fair value is determined based on a valuation model that include inputs such as interest rate yield curves and credit spreads. Securities traded in markets that are not considered active are valued based on quoted market prices, broker to dealer quotations, or alternative pricing sources with reasonable levels of price transparency. Securities that trade infrequently and therefore have little or no price transparency are valued using the investment manager's best estimates.

NOTE 8. FAIR VALUE MEASUREMENTS (CONTINUED)

The valuation methods for investments measured at net asset value (NAV) are presented on the following table:

	Fair Value		Unfunded	Redemption Frequency	Redemption Notice
	12/31/2018	12/31/2017	Commitments	(If Eligible)	Period
Investments measured at net asset value:					
Collective international equity fund (1)					
Lazard/Wilmington Emerging Markets Sudan Free Portfolio	$ 70,371,275	$ 77,439,593	-	Daily	N/A
Commingled fixed income fund (2)					
MacKay Shields Defensive Bond Arbitrage Fund Ltd.	28,081,553	28,067,670	-	Daily	5 days
Private global fixed fund limited partnership (3)					
Franklin Templeton Global Multisector Plus Fund, L.P.	255,881,343	214,787,328	-	Monthly	15 days
Private equities (4)	513,790,532	393,324,331	346,463,426	Closed Ended	N/A
Hedge funds (5)					
Burnham Harbor Fund Ltd.	490,556,721	477,351,993	-	Monthly	95 days
RC Kenwood Fund Ltd.	175,828,702	184,407,090	-	Quarterly	90 days
Real estate funds (6)					
JPMCB Strategic Property Fund	272,741,485	262,575,288	-	Quarterly	45 days
PRISA Separate Account	247,088,693	237,020,184	-	Quarterly	90 days
Others	128,130,925	125,803,796	44,875,571	Quarterly	90 days
Short-term investment (7)					
BNY Mellon EB Temporary Investment Fund	218,141,022	296,147,796	-	Daily	N/A
Total investments measured at net asset value	$ 2,400,612,251	$ 2,296,925,069			

(1) Collective international equity fund - The fund's investment objective is to achieve long-term capital appreciation by investing primarily in equity and equity-related securities of issuers that are located, or do significant business, in emerging market countries. The fair value of the investment in the fund has been determined using the NAV per share of the investment.

(2) Commingled fixed income fund - The fund's investment objective is to track the performance of the Barclays U.S. Aggregate Index. The fair value of the investment in the fund has been determined using the NAV per share of the investment.

(3) Private global fixed income fund limited partnership - The partnership's investment objective is to maximize total investment return by investing in a portfolio of fixed and floating rate debt securities and debt obligations of governments, government-related or corporate issuers worldwide, as well as derivative financial instruments. The fair value of the investment in the partnership fund has been determined using the NAV per share (or its equivalent) of the investment.

NOTE 8. FAIR VALUE MEASUREMENTS (CONTINUED)

(4) Private equities - This investment consists of 79 limited partnership investments in 2018 and 51 in 2017, with an investment objective to achieve long-term capital appreciation and capital preservation through investments in limited partnerships, privately issued securities, private equity funds, and other pooled investments. Closed-end limited partnership interests are generally illiquid and cannot be redeemed. It is expected that liquidation of the limited partnership interests will generally coincide with the terms of the various underlying partnership agreements. These underlying private equity partnerships generally have a fund life per the Limited Partnership Agreements of approximately 10 to 12 years plus 2 to 3 one-year extensions. However, the underlying general partners may extend their funds indefinitely to facilitate an orderly liquidation of the underlying assets. The fair value of the investments in this type has been determined using the NAV per share (or its equivalent) of the investments.

(5) Hedge funds - The investment objective of the hedge funds is to invest in non-traditional portfolio managers, diversified portfolios of hedge funds having a low correlation with major investment markets, and diversified groups of alternative investment funds that invest or trade in a wide variety of financial instruments and strategies. The fair value of the investment in the hedge funds has been determined using the NAV per share (or its equivalent) of the investment.

(6) Real estate funds - These investments include a commingled pension trust fund, an insurance company separate account, and other real estate funds that are designed as funding vehicles for tax-qualified pension plans. Their investments are comprised primarily of real estate investments either directly owned or through partnership interests and mortgage and other loans on income producing real estate. The fair values of the investments in this type have been determined using the NAV per share (or its equivalent) of the investments. Due to the nature of the investments and available cash on hand, significant redemptions in this type of investment may at times be subject to additional restrictions.

(7) Short-term investment - This investment's objective is to invest in short-term investments of high quality and low risk to protect capital while achieving investment returns. The fair value of the investment in the fund has been determined using the NAV per share of the investment.

NOTE 9. SECURITIES LENDING

State Statutes and the investment policy permit the Plan to lend its securities to broker-dealers and other entities with a simultaneous agreement to return collateral for the same securities in the future. The Plan's custodian, acting as the lending agent, lends securities for collateral in the form of cash, U.S. Government obligations and irrevocable letters of credit equal to 102% of the fair value of domestic securities plus accrued interest and 105% of the fair value of foreign securities plus accrued interest.

The Plan does not have the right to sell or pledge securities received as collateral unless the borrower defaults. The average term of securities loaned was 75 days for 2018 and 87 days for 2017; however, any loan may be terminated on demand by either the Plan or the borrower. Cash collateral was invested in a separately managed portfolio, which had an average weighted maturity at December 31, 2018 and 2017 of 77 and 90 days, respectively.

As of December 31, 2018 and 2017, the fair value (carrying amount) of loaned securities was $1,188,389,587 and $1,402,318,531 respectively. As of December 31, 2018 and 2017, the fair value (carrying amount) of cash collateral received by the Plan was $942,725,617 and $1,218,975,757 respectively. The cash collateral is included as an asset and a corresponding liability on the combining statements of pension plan fiduciary net position and postemployment healthcare plan net position. As of December 31, 2018 and 2017, the fair value (carrying amount) of non-cash collateral received by the Plan was $278,065,381 and $219,920,960 respectively.

Although the Plan's securities lending activities are collateralized as described above, they involve both market and credit risk. In this context, market risk refers to the possibility that the borrower of securities will be unable to collateralize the loan upon a sudden material change in the fair value of the loaned securities. Credit risk refers to the possibility that counterparties involved in the securities lending program may fail to perform in accordance with the terms of their contracts.

Indemnification deals with the situation in which a client's securities are not returned due to the insolvency of a borrower. The contract with the lending agent requires indemnification to the Plan if borrowers fail to return the securities or fail to pay the Plan for income distributions by the issuers of securities while the securities are on loan.

NOTE 9. SECURITIES LENDING (CONTINUED)

A summary of securities loaned at fair value as of December 31, 2018 and 2017 is as follows:

	2018	2017
Securities loaned - backed by cash collateral		
U.S. and international equities	$ 663,838,236	$ 840,093,373
U.S. Government and government agency obligations	130,459,946	105,971,706
Exchange traded funds	40,377,541	163,399,993
Corporate and foreign government obligations	83,164,383	79,146,994
Total securities loaned - backed by cash collateral	917,840,107	1,188,612,066
Securities loaned - backed by non-cash collateral		
U.S. and international equities	221,564,089	-
U.S. Government and government agency obligations	47,724,114	213,706,465
Corporate and foreign government obligations	1,261,277	-
Total securities loaned - backed by non-cash collateral	270,549,480	213,706,465
Total	$ 1,188,389,587	$ 1,402,318,531

NOTE 10. EMPLOYER'S POSTEMPLOYMENT HEALTHCARE LIABILITY

Plan Description

The Plan administers a Postemployment Group Healthcare Benefit Plan (PGHBP), a single-employer defined benefit postemployment healthcare plan. The PGHBP is administered in accordance with Chapter 40, Article 5/10 of the Illinois Compiled Statutes, which assigns the authority to establish and amend benefit provisions to the Plan's Board of Trustees. PGHBP provides a healthcare benefit to annuitants of Cook County, Illinois (the employer) who elect to participate in the PGHBP.

At December 31, 2018 and 2017, participants consisted of the following:

	2018	2017
Active members	19,671	20,349
Inactive plan members or beneficiaries currently receiving benefit payments	11,809	11,605
Inactive plan members entitled to but not yet receiving benefit payments	1,592	1,528
Total	33,072	33,482

Plan Description (continued)

Benefits provided - The PGHBP provides healthcare and vision benefits for annuitants and their dependents.

Contributions - The PGHBP is funded on a "pay-as-you-go" basis. The employee and spouse annuitants pay between 38% - 48% and 51% - 61% of the annual medical costs, respectively, depending upon medicare eligibility and coverage type. The remaining costs are funded by an allocation from the Plan.

Method of Accounting - The PGHBP's financial statements have been combined with the Plan's financial statements and are presented using the accrual basis of accounting. Healthcare expenses are recognized when incurred and estimable.

Employer's Net Postemployment Healthcare Liability

The components of the employer's net postemployment healthcare liability at December 31, 2018 and 2017 were as follows:

	2018	2017
Total postemployment healthcare liability	$ 1,534,053,569	$ 2,148,249,441
Plan fiduciary net position	-	-
Employer's net postemployment healthcare liability	$ 1,534,053,569	$ 2,148,249,441
Plan fiduciary net position as a percentage of the total postemployment healthcare liability	0.00%	0.00%

Contributions for postemployment healthcare benefits are made on a "pay-as-you-go" basis. There are no dedicated assets for healthcare benefits resulting in a 0.00% funded ratio.

See the schedule of changes in the employer's net postemployment healthcare liability and related ratios in the required supplementary information for additional information related to the funded status of the PGHBP.

NOTE 10. EMPLOYER'S POSTEMPLOYMENT HEALTHCARE LIABILITY (CONTINUED)

The net postemployment healthcare liability was determined by actuarial valuation performed as of December 31, 2018 and 2017 using the following actuarial methods and assumptions:

Actuarial valuation date	December 31, 2018	December 31, 2017
Actuarial cost method	Entry Age Normal	Entry Age Normal
Actuarial assumptions:		
Inflation	2.75% per year	2.75% per year
Salary increases	3.50% to 8.00%, based on age	3.50% to 8.00%, based on age
Health care cost trend rates	7.25% in the first year, decreasing by .25% per year until an ultimate rate of 4.75% is reached for pre-medicare 5.75% in the first year, decreasing by .25% per year until an ultimate rate of 4.75% is reached for post-medicare	7.25% in the first year, decreasing by .25% per year until an ultimate rate of 4.75% is reached for pre-medicare 5.75% in the first year, decreasing by .25% per year until an ultimate rate of 4.75% is reached for post-medicare
Mortality	RP-2014 Blue Collar Mortality Table, base year 2006, Buck (formerly Conduent) Modified MP-2017 projection scale	RP-2014 Blue Collar Mortality Table, base year 2006, Conduent Modified MP-2017 projection scale

The actuarial assumptions used in the December 31, 2018 and 2017 valuations were based on the results of an actuarial experience study conducted by Buck Consultants, LLC (formerly Conduent, Inc.) over the period 2013 through 2016.

Discount Rate

The blended discount rate used to measure the total postemployment healthcare liability at December 31, 2018 and 2017 was 4.13% and 3.16% respectively. The projection of cash flows used to determine the discount rate assumed that the employer's contributions will continue to follow the current funding policy. Based on this assumption, the Plan's fiduciary net position was projected to be insufficient to make all projected future benefit payments of current plan members. Municipal bond rates of 4.13% and 3.16% at December 31, 2018 and 2017, respectively, and the long-term investment rate of return of 0% were used in the development of the blended discount rates. The municipal bond rates are based on the S&P Municipal Bond 20 Year High Grade Rate Index.

Sensitivity of the Net Postemployment Healthcare Liability to Changes in the Discount Rate

The following is an analysis of the net postemployment healthcare liability's sensitivity to changes in the discount rate at December 31, 2018 and 2017. The following table presents the net postemployment healthcare liability of the employer using the blended discount rate as well as the employer's net postemployment healthcare liability calculated using a discount rate 1 percent lower and 1 percent higher than the current discount rate:

	1% Decrease	Current Discount Rate	1% Increase
Net postemployment healthcare liability	3.13%	4.13%	5.13%
as of December 31, 2018	$ 1,803,057,515	$ 1,534,053,569	$ 1,319,144,094

	1% Decrease	Current Discount Rate	1% Increase
Net postemployment healthcare liability	2.16%	3.16%	4.16%
as of December 31, 2017	$ 2,532,858,758	$ 2,148,249,441	$ 1,842,064,933

Sensitivity of the Net Postemployment Healthcare Liability to Changes in the Health Care Cost Trend Rate

The following is an analysis of the net postemployment healthcare liability's sensitivity to changes in the health care cost trend rate at December 31, 2018 and 2017. The following table presents the net postemployment healthcare liability of the employer using the health care cost trend rate as well as the employer's net postemployment healthcare liability calculated using a health care cost trend rate 1 percent lower and 1 percent higher than the current health care cost trend rate:

Net postemployment healthcare liability	1% Decrease	Health Care Cost Trend Rate	1% Increase
as of December 31, 2018	$ 1,289,159,107	$ 1,534,053,569	$ 1,850,456,464

Net postemployment healthcare liability	1% Decrease	Health Care Cost Trend Rate	1% Increase
as of December 31, 2017	$ 1,805,019,432	$ 2,148,249,441	$ 2,593,628,968

NOTE 11. RELATED PARTY TRANSACTIONS

The Plan has common Trustees and shares office space with the Forest Preserve District Employees' Annuity and Benefit Fund of Cook County (Forest Fund) who reimburses the Plan for shared administrative services provided by the Plan. During the years ended December 31, 2018 and 2017, the Plan allocated administrative expenditures of $99,627 and $109,430 respectively to the Forest Fund.

As of December 31, 2018 and 2017, the Forest Fund owes the Plan $381,010 and $359,334 respectively. These amounts include plan transfers of Plan members transferring from one plan to another.

NOTE 12. PRONOUNCEMENTS ISSUED NOT YET EFFECTIVE

In November 2016, GASB issued Statement No. 83, *Certain Asset Retirement Obligations*. Statement No. 83 addresses accounting and financial reporting for certain asset retirement obligations and establishes criteria for determining the timing and pattern of recognition of a liability and a corresponding deferred outflow of resources for asset retirement obligations. Statement No. 83 is effective for the Plan's fiscal year ending December 31, 2019.

In January 2017, GASB issued Statement No. 84, *Fiduciary Activities*. Statement No. 84 improves guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. Statement No. 84 is effective for the Plan's fiscal year ending December 31, 2019.

In June 2017, GASB issued Statement No. 87, *Leases*. Statement No. 87 was issued to improve accounting and financial reporting for leases by governments. This Statement increases the usefulness of governmental financial statements by requiring recognition of certain lease assets and liabilities for leases that were previously classified as operating leases. Statement No. 87 establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Statement No. 87 is effective for the Plan's fiscal year ending December 31, 2020.

In June 2017, GASB issued Statement No. 88, *Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements*. Statement No. 88 was issued to improve the information that is disclosed in notes to government financial statements related to debt. This Statement also clarifies which liabilities governments should include when disclosing information related to debt. Statement No. 88 is effective for the Plan's fiscal year ending December 31, 2019.

In June 2018, GASB issued Statement No. 89, *Accounting for Interest Cost Incurred Before the End of a Construction Period*. Statement No. 89 was issued to enhance the relevance and comparability of information about capital assets and the cost of borrowing for a reporting period and simplify accounting for interest cost incurred before the end of a construction period. Statement No. 89 is effective for the Plan's fiscal year ending December 31, 2020.

NOTE 12. PRONOUNCEMENTS ISSUED NOT YET EFFECTIVE (CONTINUED)

In August 2018, GASB issued Statement No. 90, *Major Equity Interests - An Amendment of GASB Statements No. 14 and No.61*. Statement No. 90 was issued to improve the consistency and comparability of reporting a government's majority equity interest in a legally separate organization and to improve the relevance of financial statement information for certain component units. Statement No. 90 is effective for the Plan's fiscal year ending December 31, 2019.

In May 2019, GASB issued Statement No. 91, *Conduit Debt Obligations.* Statement No. 91 was issued to provide a single method of reporting conduit debt obligations by issuers and eliminate diversity in practice associated with commitments extended by issuers, arrangements associated with conduit debt obligations, and related note disclosures. Statement No. 91 is effective for the Plan's fiscal year ending December 31, 2021.

The Plan is currently evaluating the impact of adopting the aforementioned GASB Statements.

NOTE 13. SUBSEQUENT EVENT

The Fund has been named as a defendant in a class action litigation, entitled *Lori G. Levin, et. al., v. The Retirement Board of the County Employees' and Officers' Annuity and Benefit Fund of Cook County*, in which the plaintiff seeks, on behalf of herself and similarly situated annuitants, the ability to purchase health insurance administered by the Fund, despite her ineligibility under the Board's policy. On June 7, 2019, the Appellate Court reversed the order of the Circuit Court of Cook County affirming the Board's decision denying Ms. Levin's participation in the health insurance program administered by the Fund. The Fund has not yet determined what, if any, further legal action it intends to take and no reasonable estimate of the financial impact arising out of the decision can be made at this time.

REQUIRED SUPPLEMENTARY INFORMATION - PENSION

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

Required Supplementary Information - Pension

Schedule of Changes in the Employer's Net Pension Liability and Related Ratios

	2018	2017	2016	2015	2014
Total pension liability					
Service cost	$ 440,682,868	$ 478,904,097	$ 559,176,234	$ 496,161,454	$ 491,887,347
Interest	1,027,348,255	1,082,982,064	1,002,950,495	994,674,970	958,433,835
Difference between expected and actual experience	(278,982,116)	(152,859,373)	318,014,746	(126,330,351)	-
Changes of assumptions	(1,601,212,188)	(950,493,320)	(1,893,474,930)	1,329,087,966	-
Expected benefit payments, including refunds of employee contributions	(805,394,705)	(757,930,854)	(709,560,225)	(676,470,215)	(622,003,259)
Net change in total pension liability	(1,217,557,886)	(299,397,386)	(722,893,680)	2,017,123,824	828,317,923
Total pension liability					
Beginning of year	22,940,794,624	23,240,192,010	23,963,085,690	21,945,961,866	21,117,643,943
End of year	$ 21,723,236,738	$ 22,940,794,624	$ 23,240,192,010	$ 23,963,085,690	$ 21,945,961,866
Plan fiduciary net position					
Contributions - employer	$ 549,437,252	$ 511,750,985	$ 414,703,155	$ 136,075,504	$ 146,075,414
Contributions - employee	134,159,171	138,826,184	139,355,592	137,707,719	129,325,318
Net investment income	(424,787,945)	1,399,625,874	629,442,470	(21,896,696)	488,890,897
Expected benefit payments, including refunds of employee contributions	(805,394,705)	(757,930,854)	(709,560,225)	(676,470,215)	(622,003,259)
Administrative expenses	(5,134,047)	(5,406,034)	(5,373,555)	(5,151,110)	(5,010,206)
Other	5,860,613	5,359,418	4,046,158	4,380,293	3,753,960
Net change in plan fiduciary net position	(545,859,661)	1,292,225,573	472,613,595	(425,354,505)	141,032,124
Plan fiduciary net position					
Beginning of year	10,407,883,443	9,115,657,870	8,643,044,275	9,068,398,780	8,927,366,656
End of year	$ 9,862,023,782	$ 10,407,883,443	$ 9,115,657,870	$ 8,643,044,275	$ 9,068,398,780
Employer's net pension liability	$ 11,861,212,956	$ 12,532,911,181	$ 14,124,534,140	$ 15,320,041,415	$ 12,877,563,086
Plan fiduciary net position as a percentage of the total pension liability	45.40%	45.37%	39.22%	36.07%	41.32%
Covered payroll	$ 1,533,721,507	$ 1,567,480,401	$ 1,580,251,254	$ 1,572,417,298	$ 1,514,550,023
Employer's net pension liability as a percentage of covered payroll	773.36%	799.56%	893.82%	974.30%	850.26%

Note:
This schedule is intended to show information for ten years.
The additional years' information will be displayed as it becomes available.

See Report of Independent Auditors.

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

Required Supplementary Information - Pension

Schedule of Employer Contributions and Related Notes

Last Ten Fiscal Years

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Actuarially determined contribution	$ 562,815,816	$ 514,888,487	$ 519,642,931	$ 595,370,046	$ 540,218,287	$ 493,724,370	$ 454,327,461	$ 352,850,988	$ 283,892,734	$ 287,061,532
Contributions in relation to the actuarially determined contribution	(549,437,252)	(511,750,985)	(414,703,155)	(136,075,504)	(146,075,414)	(147,720,014)	(152,734,539)	(160,652,118)	(144,539,577)	(152,506,089)
Contribution deficiency	$ 13,378,564	$ 3,137,502	$ 104,939,776	$ 459,294,542	$ 394,142,873	$ 346,004,356	$ 301,592,922	$ 192,198,870	$ 139,353,157	$ 134,555,443
Covered payroll	$ 1,533,721,507	$ 1,567,480,401	$ 1,580,251,254	$ 1,572,417,298	$ 1,514,550,023	$ 1,484,269,715	$ 1,478,253,368	$ 1,456,444,123	$ 1,494,093,569	$ 1,498,161,713
Contributions as a percentage of covered payroll	35.82%	32.65%	26.24%	8.65%	9.64%	9.95%	10.33%	11.03%	9.67%	10.18%

Notes to Schedule

Actuarially determined contribution rates are calculated as of December 31, one year prior to the fiscal year in which contributions are reported.

Valuation Date	December 31, 2018
Methods and assumptions used to determine contribution rates:	
Actuarial cost method	Entry Age Normal
Amortization method	Level Dollar - Open
Remaining amortization period	30 years
Asset valuation method	Five Year Smoothed Average Market
Inflation	2.75% per year, compounded annually
Salary increases	3.50% to 8.00%, based on age
Investment rate of return	7.25% per year, compounded annually
Retirement age	Based on actual past experience, assume all employees retire by age 80 (Tier 1 participants) and 75 (Tier 2 participants)
Mortality	RP-2014 Blue Collar Mortality Table, base year 2006, Buck Modified MP-2017 projection scale
Postretirement annuity increases	Tier 1 participants - 3.0% compounded annually Tier 2 participants - the lesser of 3.0% or one half of the increase in the Consumer Price Index

See Report of Independent Auditors.

COUNTY EMPLOYEES' AND OFFICERS' ANNUITY AND BENEFIT FUND OF COOK COUNTY

REQUIRED SUPPLEMENTARY INFORMATION - PENSION

SCHEDULE OF INVESTMENT RETURNS

	2018	2017	2016	2015	2014
Annual money-weighted rate of return, net of investment expense	-3.79%	15.35%	7.67%	(0.10)%	5.90%

Note:

This schedule is intended to show information for ten years.
The additional years' information will be displayed as it becomes available.

See Report of Independent Auditors.

REQUIRED SUPPLEMENTARY INFORMATION - POSTEMPLOYMENT HEALTHCARE

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

Required Supplementary Information - Postemployment Healthcare

Schedule of Changes in the Employer's Net Postemployment Healthcare Liability and Related Ratios

	2018	2017
Total postemployment healthcare liability		
Service cost	$ 40,557,095	$ 82,344,830
Interest	68,565,681	84,911,522
Changes in benefit terms	(292,725,744)	(79,293,990)
Difference between expected and actual experience	(92,253,919)	(55,814,160)
Changes of assumptions	(300,028,016)	(66,330,809)
Benefit payments	(38,310,969)	(47,454,621)
Net change in total postemployment healthcare liability	(614,195,872)	(81,637,228)
Total postemployment healthcare liability		
Beginning of year	2,148,249,441	2,229,886,669
End of year	$ 1,534,053,569	$ 2,148,249,441
Plan fiduciary net position		
Contributions - employer	$ 38,310,969	$ 47,454,641
Benefit payments - net	(38,310,969)	(47,454,641)
Net change in plan fiduciary net position	-	-
Plan fiduciary net position		
Beginning of year	-	-
End of year	$ -	$ -
Employer's net postemployment healthcare liability	$ 1,534,053,569	$ 2,148,249,441
Plan fiduciary net position as a percentage of the total postemployment healthcare liability	0.00%	0.00%
Covered payroll	$ 1,576,658,158	$ 1,602,986,483
Employer's net postemployment healthcare liability as a percentage of covered payroll	97.30%	134.02%

Note:
This schedule is intended to show information for ten years.
The additional years' information will be displayed as it becomes available.

See Report of Independent Auditors.

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

Required Supplementary Information - Postemployment Healthcare

Schedule of Employer Contributions and Related Notes

Last Ten Fiscal Years

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Actuarially determined contribution	$ 133,228,086	$ 187,348,423	$ 206,678,514	$ 190,871,452	$ 189,907,202	$ 178,698,965	$ 156,700,388	$ 165,176,771	$ 163,823,488	$ 157,964,519
Contributions in relation to the actuarially determined contribution	(38,310,969)	(47,454,621)	(49,565,249)	(50,756,817)	(43,957,458)	(40,097,630)	(37,986,237)	(38,185,306)	(40,183,057)	(35,779,228)
Contribution deficiency	$ 94,917,117	$ 139,893,802	$ 157,113,265	$ 140,114,635	$ 145,949,744	$ 138,601,335	$ 118,714,151	$ 126,991,465	$ 123,640,431	$ 122,185,291
Covered payroll	$ 1,576,658,158	$ 1,602,986,483	$ 1,609,559,234	$ 1,597,597,077	$ 1,514,550,023	$ 1,484,269,715	$1,478,253,368	$ 1,456,444,123	$ 1,494,093,569	$ 1,498,161,713
Contributions as a percentage of covered payroll	2.43%	2.96%	3.08%	3.18%	2.90%	2.70%	2.57%	2.62%	2.69%	2.39%

Notes to Schedule

Actuarially determined contribution rates are calculated as of December 31, one year prior to the fiscal year in which contributions are reported.

Valuation Date:	December 31, 2018
Methods and assumptions used to determine contribution rates:	
Actuarial cost method	Entry Age Normal
Amortization method	Level Dollar - Open
Remaining amortization period	30 years
Inflation	2.75% per year
Salary increases	3.50% to 8%, based on age
Health care cost trend rate	7.25% in the first year, decreasing by .25% per year until an ultimate rate of 4.75% is reached for pre-Medicare 5.75% in the first year, decreasing by .25% per year until an ultimate rate of 4.75% is reached for post-Medicare
Retirement age	Based on actual past experience, assume all employees retire by age 80 (Tier 1 participants) and 75 (Tier 2 participants)
Mortality	RP-2014 Blue Collar Mortality Table, base year 2006, Buck (formerly Conduent) Modified MP-2017 projection scale

See Report of Independent Auditors.

SUPPLEMENTARY INFORMATION

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

Schedules of Net Administrative Expenses and Professional and Consulting Fees

Years Ended December 31, 2018 and 2017

	2018	2017
Administrative expenses		
Bank charges	$ 32,791	$ 34,018
Document imaging	40,269	123,848
Election expense	109,904	100,228
Employee benefits	453,329	413,332
Insurance - fidelity, fiduciary and liability	133,047	137,327
Maintenance of equipment, systems, software and support	412,385	727,913
Membership, conference and training	25,058	33,996
Office expense	99,333	203,243
Postage	106,743	97,403
Printing and stationery	74,165	71,062
Professional and consulting fees	638,274	486,575
Recovery site expense	106,203	44,658
Regulatory filing fees	8,000	8,000
Rent	462,115	486,483
Salaries	2,532,058	2,538,938
Utilities	-	8,440
Total	5,233,674	5,515,464
Less administrative expenses allocated to Forest Preserve District Employees' Annuity and Benefit Fund of Cook County	(99,627)	(109,430)
Net administrative expenses	$ 5,134,047	$ 5,406,034
Professional and consulting fees		
Actuarial service	$ 135,986	$ 100,380
Audit	86,238	65,115
Consulting	181,907	89,276
Legal	206,461	205,102
Lobbyist	27,682	26,702
Total	$ 638,274	$ 486,575

COUNTY EMPLOYEES' AND OFFICERS' ANNUITY AND BENEFIT FUND OF COOK COUNTY

SCHEDULES OF INVESTMENT EXPENSES

YEARS ENDED DECEMBER 31, 2018 AND 2017

	2018	2017
INVESTMENT MANAGER EXPENSE		
Adelante Capital Management	$ 457,100	$ 449,819
Angelo Gordon	244,784	241,141
Ariel Investments	623,201	509,823
Blackstone Alternative Asset Management	5,377,349	5,150,188
CastleArk Management	1,245,229	1,163,677
CBRE Global Investors	332,240	310,106
Channing Capital Management	1,606,152	1,638,207
Chicago Equity Partners	-	70,867
Fortaleza Asset Management, Inc.	-	134,560
Franklin Templeton Investments	2,937,650	2,810,259
Frontier Capital Management	1,304,572	1,241,310
Garcia Hamilton	73,848	-
Great Lakes Advisors, Inc.	469,673	449,812
J.P. Morgan Asset Management	3,474,764	3,547,930
Killian Capital Management	253,180	334,965
LaSalle Investment Management	135,598	170,213
Lazard Asset Management, LLC	658,675	602,502
LM Capital Group, LLC	614,451	616,532
Lombardia Capital	-	44,868
Loomis Sayles & Company, LP	-	298,909
MacKay Shields	911,975	897,458
Mellon Capital	168,333	145,469
Mesirow Financial	3,642,946	3,200,298

COUNTY EMPLOYEES' AND OFFICERS' ANNUITY AND BENEFIT FUND OF COOK COUNTY

SCHEDULES OF INVESTMENT EXPENSES

YEARS ENDED DECEMBER 31, 2018 AND 2017

	2018	2017
INVESTMENT MANAGER EXPENSE (CONTINUED)		
Mondrian Investment Partners, Ltd.	$ 1,157,706	$ 1,080,401
Muller and Monroe Asset Management	350,000	350,000
NCM Capital	423,628	371,817
New Century Investment Management	403,002	437,921
PGIM Investments	126,420	-
Progress Investment Management	2,141,325	1,968,659
Prudential Real Estate Investors	1,942,989	1,886,846
RhumbLine Advisers	172,931	136,749
Russell Investments	225,498	154,716
SPC Capital Management	70,000	70,000
Strategic Global Advisors	110,310	-
State Street Global Advisors	400,370	378,601
The Rock Creek Group	1,392,256	1,362,369
Wells Capital Management	1,152,034	1,026,097
William Blair & Company	1,263,872	1,169,647
	35,864,061	34,422,736
INVESTMENT CONSULTING FEES		
Callan Associates, Inc.	380,736	392,673
Total investment consulting fees	380,736	392,673
INVESTMENT CUSTODIAN FEES		
BNY Mellon	509,601	416,618
Total investment expenses	$ 36,754,398	$ 35,232,027

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

Additions by Source

Year Ended December 31,	Employer Contributions	Employee Contributions	Net Investment and Net Securities Lending Income (1)	Other (2)	Total Additions
2013	$187,817,644	$127,593,220	$ 1,179,440,119	$ 8,547,729	$ 1,503,398,712
2014	$190,032,872	$129,325,318	$ 488,890,897	$ 9,742,062	$ 817,991,149
2015	$186,832,321	$137,707,719	$ (21,896,696)	$ 11,457,843	$ 314,101,187
2016	$464,268,404	$139,355,592	$ 629,442,470	$ 14,019,340	$ 1,247,085,806
2017	$559,205,626	$138,826,184	$ 1,399,625,874	$ 23,321,813	$ 2,120,979,497
2018	$587,748,221	$134,159,171	$ (424,787,945)	$ 27,479,205	$ 324,598,652

Deductions by Type

Year Ended December 31,	Benefits	Refunds	Net Administrative Expenses	Total Deductions
2013	$601,770,020	$ 29,873,030	$ 4,324,634	$ 635,967,684
2014	$645,601,458	$ 26,347,361	$ 5,010,206	$ 676,959,025
2015	$701,031,411	$ 33,273,171	$ 5,151,110	$ 739,455,692
2016	$742,396,434	$ 26,702,222	$ 5,373,555	$ 774,472,211
2017	$790,352,526	$ 32,995,364	$ 5,406,034	$ 828,753,924
2018	$831,661,745	$ 33,662,521	$ 5,134,047	$ 870,458,313

1 - Includes realized and unrealized net gain or loss on investments and net securities lending income.

2 - Includes employer federal subsidized programs, EQWP/Medicare Part D, prescription/repayment plan rebates and miscellaneous income.

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

Schedule of Employer Contributions Receivable

December 31, 2018

Contribution Year	Contributions Receivable	Uncollected Balance	Reserved	Net Contributions Receivable
2017	$ 208,226,206	$ 19,279,122	$ 1,574,487	$ 17,704,635
2018	$ 211,449,244	211,449,244	6,610,850	204,838,394
		$ 230,728,366	$ 8,185,337	$ 222,543,029

Note:
Employer contributions are funded primarily through property taxes levied by Cook County, Illinois.