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

A Component Unit of
Cook County, Illinois

COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Fiscal Years Ended December 31, 2016 and 2015

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A Component Unit of Cook County, Illinois

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For the Fiscal Years Ended December 31, 2016 and 2015

Prepared by the staff of the
County Employees' and Officers' Annuity and Benefit Fund of Cook County

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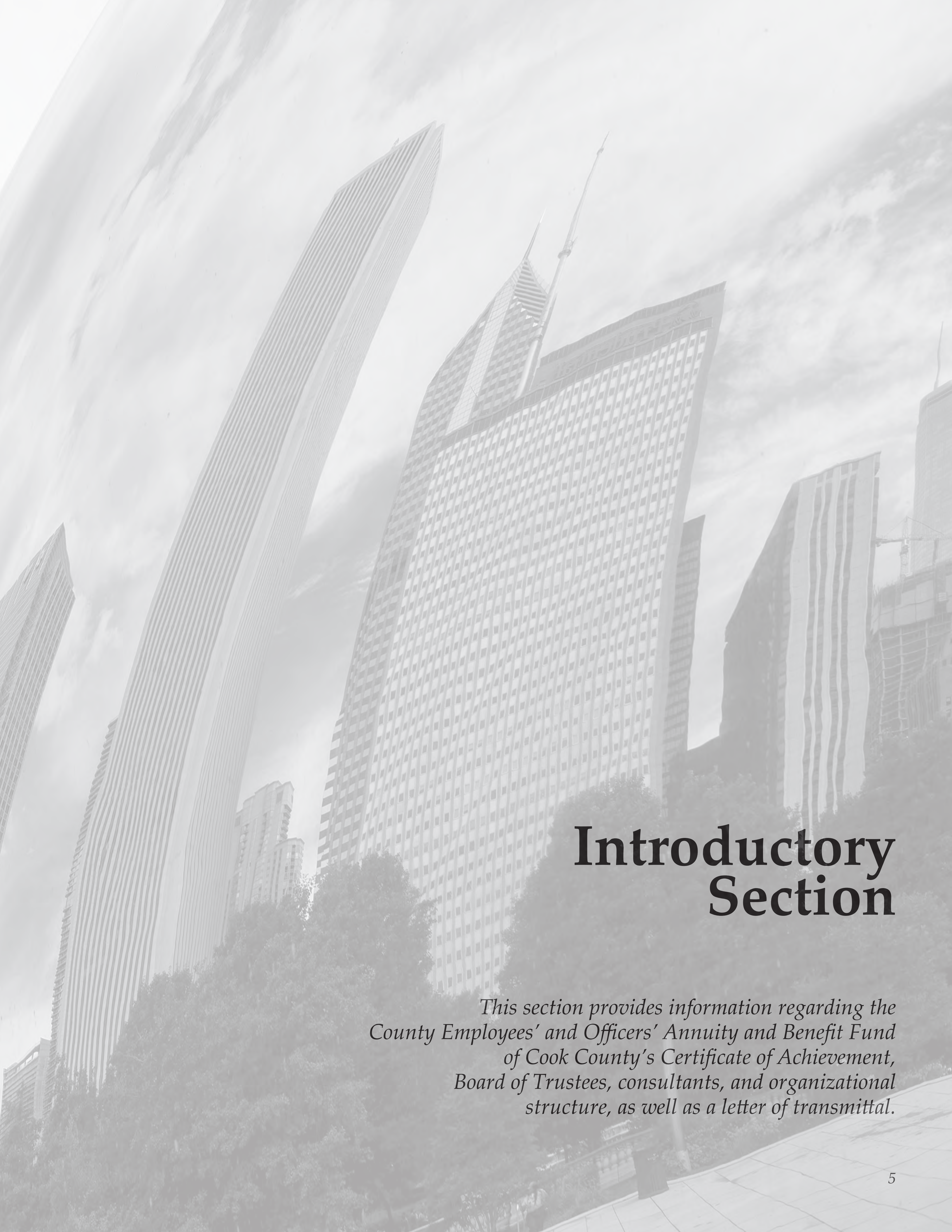


Introductory Section

This section provides information regarding the County Employees' and Officers' Annuity and Benefit Fund of Cook County's Certificate of Achievement, Board of Trustees, consultants, and organizational structure, as well as a letter of transmittal.

Certificate of Achievement

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

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

For its Comprehensive Annual Financial Report for the Fiscal Year Ended

December 31, 2015

Executive Director/CEO

Principal Officials

Retirement Board

John E. Fitzgerald
President
Elected Cook County Annuitant

Patrick J. McFadden
Vice-President
Elected Cook County Annuitant

Robert DeGraff
Elected Cook County Employee

Andrew Jatico
Elected Cook County Employee

Bill Kouruklis
Ex Officio Cook County Treasurer (Designee)

Diahann Goode
Secretary
Elected Cook County Employee

Joseph Nevius
Elected Forest Preserve District Annuitant

Dennis White
Elected Forest Preserve District Employee

Lawrence L. Wilson, CPA
Ex Officio Cook County Comptroller

Professional Consultants

Legal Counsel
Burke Burns & Pinelli, Ltd.

Investment Consultant
Callan Associates, Inc.
RVK, Inc.

Master Custodian
BNY Mellon

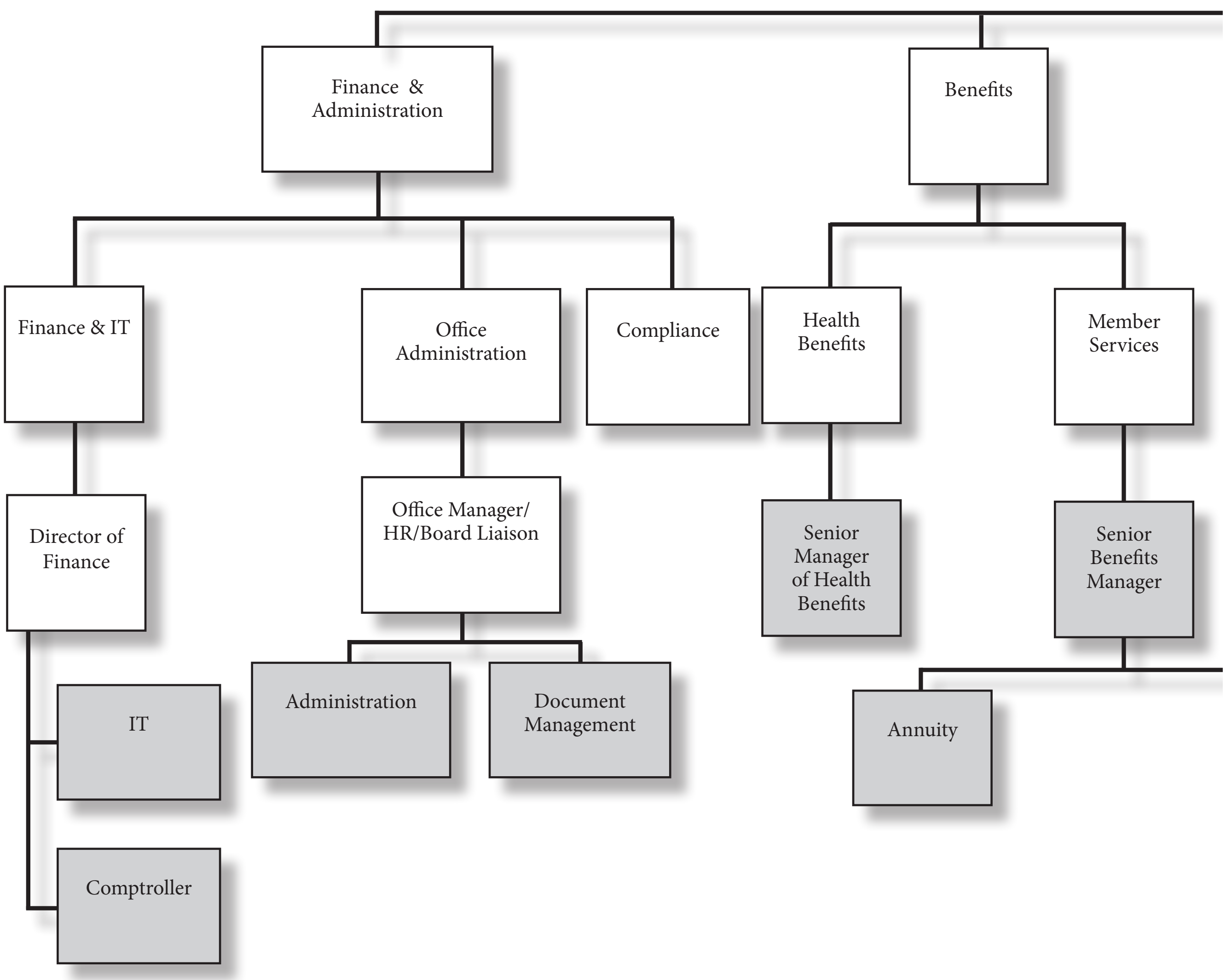
Auditor
Legacy Professionals, LLP

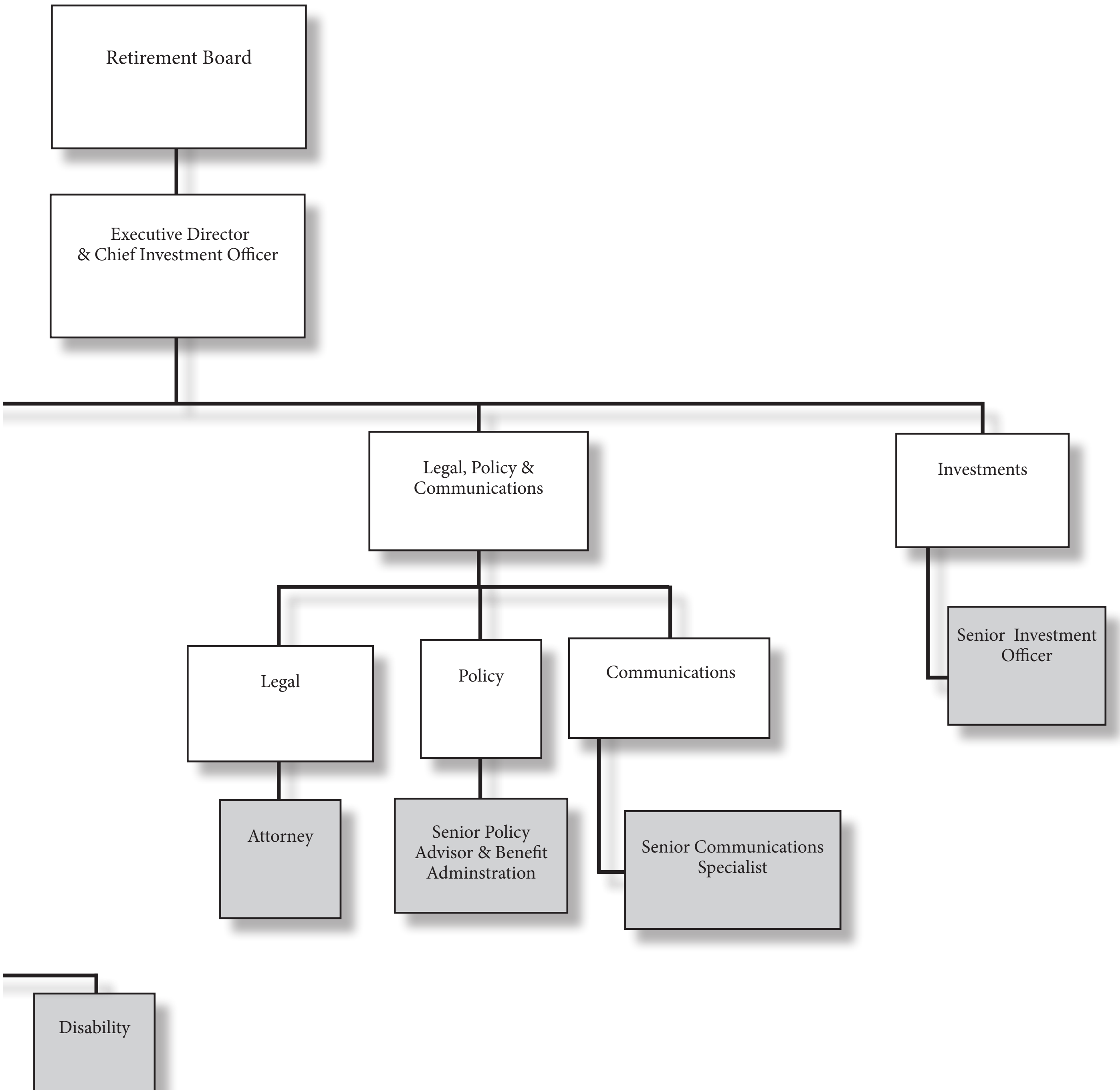
Consulting Actuary
Conduent HR Services

Custodian
Cook County Treasurer

Investment Managers are listed on pages 82-83.
Brokers used by Investment Managers are listed on pages 84-85.

Organizational Chart




Retirement Board
Executive Director & Chief Investment Officer
Legal, Policy & Communications
Investments
Legal
Policy
Communications
Senior Investment Officer
Attorney
Senior Policy Advisor & Benefit Adminstration
Senior Communications Specialist
Disability

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Letter of Transmittal

June 12, 2017

Retirement Board
County Employees and Officers' Annuity and Benefit Fund of Cook County
and *ex officio* for the Forest Preserve District Employees' Annuity and Benefit Fund of Cook County
33 N Dearborn St, Suite 1000
Chicago, IL 60602

To the Retirement Board and Our Members:

We are pleased to submit to you the Comprehensive Annual Financial Report ("CAFR") of the County Employees' and Officers' Annuity and Benefit Fund of Cook County ("the fund") for the calendar year ended December 31, 2016. Fund management is responsible for the contents of this report, including the financial, investment, actuarial, and statistical information contained herein.

To the best of our knowledge and belief, the information contained in this report is complete and accurate in all material respects. This report is provided to allow the reader to gain an understanding of the fund's financial position and operational activities. Readers should review this report in conjunction with the Management's Discussion and Analysis (MD&A) found in the Financial Section.

Fund Profile

As of December 31, 2016, the Cook County Fund consisted of 20,969 active employees, 15,222 retirement annuitants, 2,687 survivor annuitants, and 14,005 inactive members. It was established in 1926 by an act of the Illinois General Assembly and is administered in accordance with 40 ILCS 5/9-101, et seq. It is a defined benefit pension plan that provides retirement, survivor, death, health, and disability benefits to qualified employees and retirees of Cook County and their eligible dependents and beneficiaries. The fund is considered to be a component unit of Cook County, Illinois, and is included in the County's financial statements as a pension trust fund.

The fund is governed by a nine-member Retirement Board ("Board") combined with the Forest Preserve District Fund. The nine Trustees are elected as follows: four are elected by the employees of Cook County and the Forest Preserve District, three are elected by the annuitants of Cook County and the Forest Preserve District and two are *ex officio* seats appointed by the Comptroller and Treasurer of Cook County. Elected Trustees serve staggered three-year terms, so that no more than three positions are subject to election each year. The fund has common trustees and shares office space and administrative services with the Forest Preserve Fund.

County Employees' and Officers' Annuity and Benefit Fund of Cook County
Forest Preserve District Employees' Annuity and Benefit Fund of Cook County
33 N Dearborn St, Suite 1000 | Chicago, IL 60602 | 312.603.1200 | 312.603.9760 fax | www.cookcountypension.com

Summary of Financial Experience

The following table summarizes the changes in the Cook County Fund's net position between December 31, 2016 and December 31, 2015 (numbers in millions):

Change in Net Position	2016	2015	$ Change	% Change
Total additions	$1,288.7	$351.7	$937.0	266.4%
Total deductions	$816.1	$777.1	$39.0	5.0%
Change in net position from prior year	$472.6	($ 425.4)	$898.0	211%

A more detailed analysis of the fund's financial experience can be found in the Financial Section.

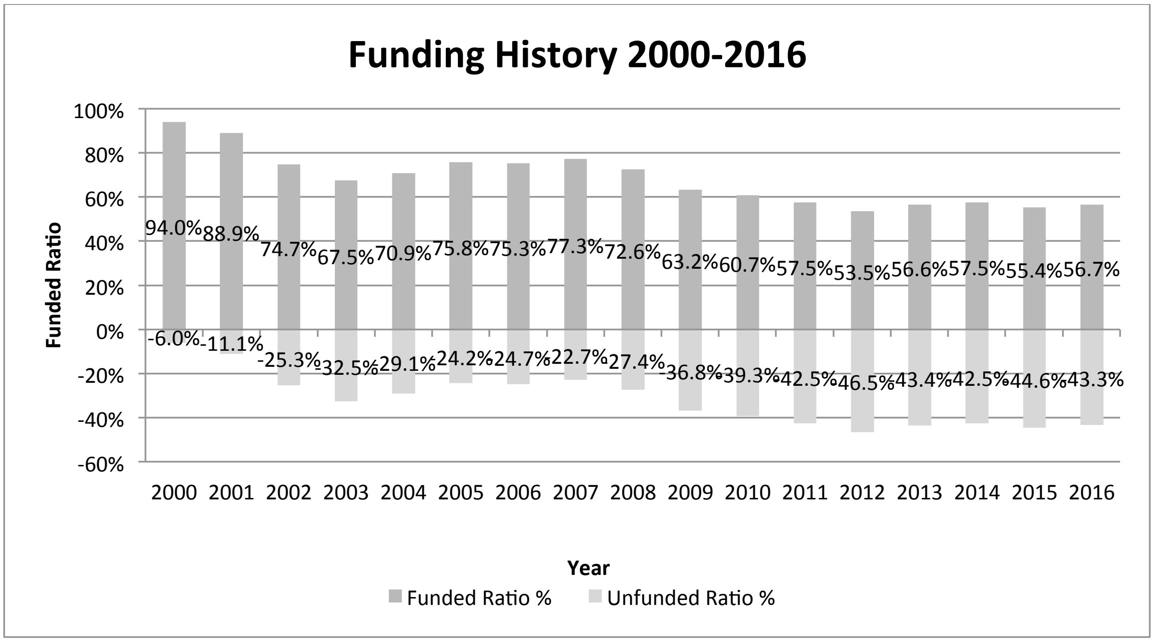
Funding

The fund engages an independent actuary, Conduent HR Services, formerly Buck Consultants, LLC, to perform an actuarial valuation on an annual basis pursuant to the provisions of the Illinois Pension Code.

The Cook County Fund experienced positive financial performance during 2016 with growth in assets and strong investment results. The fund investment return for the year was 7.67%, which was above the actuarial assumed rate of return of 7.5%. On an actuarial basis, the fund's assets grew to $9.5 billion in 2016 from $9.0 billion in 2015, the $0.5 billion increase reduced the fund's $16.7 billion in combined accrued liability of pension and health benefits, resulting in an unfunded actuarial accrued liability of $7.2 billion.

The funded ratio (the ratio of assets to liabilities) for pension and retiree health benefits combined was 56.7% (vs. 55.4% in 2015). The fund's actuarial accrued liability for pension benefits only was $15.5 billion and the actuarial value of assets was $9.5 billion, resulting in an unfunded liability of $6.0 billion and a funded ratio of 61.4%. The fund's actuarial accrued liability for retiree health benefits was $2.0 billion. As there are no dedicated assets, the actuarial value of assets was $0 for retiree health benefits, resulting in an unfunded liability of $2.0 billion.

For 2016, the Cook County Administration (Employer) took affirmative effort to address the downward funding trend by identifying an additional contribution source to the fund pursuant to a one-year Intergovernmental Agreement (IGA). The supplemental contribution source is derived from the Home Rule Sales Tax amounting to an additional contribution of $270.5 million in 2016 or 140% above the statutory contribution. For 2017, the Employer is expected to make supplemental payments of $353.8 million. The supplemental contributions on a near term basis serve to bridge the funding shortfall for annual benefit pay-outs. Moreover, the 2016 contribution, in combination with investment performance and cost saving initiatives, resulted in an improved funded status for the year.



On a projected basis, the fund continues to face a funding shortfall without legislative action to establish an actuarially-based funding policy. For the past 19 years, the statutory tax multiple used to determine the employer contribution has been 1.54. According to the 2016 valuation, an actuarially-determined tax multiple of 5.18 is needed to restore solvency and avoid projected depletion of the fund that is estimated by 2038.

A detailed discussion of funding is provided in the Actuarial Section of this report.

Investments

The Board's authority to invest fund assets is governed by 40 ILCS 5/1-101 et seq. and 40 ILCS 5/9-101 et seq. The fund's Investment Policy, which provides additional strategies and safeguards for the fund's investment objectives, can be found at CookCountyPension.com.

At year-end, the total invested assets of the fund were valued at $9.0 billion compared with $8.5 billion at the end of 2015, an increase of approximately $0.5 billion. The investment portfolio's net rate of return for the year ending December 31, 2016 was 7.67%. Solid absolute returns from the fund's domestic equity and real estate programs offset positive but meager fixed income and non-U.S. developed equity returns as global political events created swings in market sentiment and confidence about the future. The Board works to maintain a diversified asset allocation within acceptable risk parameters.

The investment portfolio represents an increasing source of funding for benefit payments. In 2016, $1.3 billion in total additions made up of employer contributions, employee contributions, annuitant healthcare benefit contributions and net investment earnings were offset by $0.8 billion in deductions consisting of benefits, refunds and administrative expenses.

Additional information regarding performance and investment professionals who provide services to the fund can be found in the Investment Section.

2016 Initiatives

The fund continues to implement strategic initiatives across member services, organizational flexibility, systems and performance measurement, and liability and risk management. As the annuitant membership grows, the fund continually reviews its strategic and operating imperatives to maintain quality member service.

Retiree Health Benefit

Among these initiatives in 2016, was the fund's implementation of the Employer Group Waiver Plan (EGWP) to offset rising prescription costs associated with the retiree health benefit. Beginning January 1, 2017, Medicare eligible members would receive a comparable prescription drug benefit at a lower cost with expected cost savings for the fund. The anticipated cost savings from the EGWP implementation was a contributing factor to the increase in the 2016 actuarial funded ratio.

Benefits Administration

The Cook County Fund maintains its commitment to delivering high-touch customer service amid high volumes of benefit requests, processing over 750 retirement applications in the past year. Member engagement remains a primary focus as the fund implemented targeted stakeholder campaigns and enhanced member communications to address issues ranging from retiree health benefits to local pension reform efforts.

The fund continued to transition from paper to electronic document management in 2016. Systems enhancements improved workflow and collaboration between departments, leading to increased efficiency of benefits administration and improved information security.

Legislation

For 2016, there were no statutory changes to benefits or funding. The Board continues to monitor the status of proposals for pension reform that would have an impact on Cook County Fund members.

Additional Funding

As of the date of this letter, the Employer has made additional contributions to the Cook County Fund totaling $150,000,000 pursuant to the IGA. The Employer is expected to make additional payments in the amounts of: $25,000,000 on June 30, 2017; $25,000,000 on July 31, 2017; $25,000,000 on August 31, 2017; $25,000,000 on September 29, 2017; $25,000,000 on October 31, 2017; and $78,800,000 on or before November 30, 2017 for a total of $353,800,000. This will significantly alleviate the cash flow burden resulting from the need to liquidate investments in order to pay monthly benefit payments, especially during volatile markets.

Accounting System & Internal Control

This report and the financial statements included within were prepared to conform to the principles of governmental accounting and reporting pronounced by the Governmental Accounting Standards Board and the American Institute of Certified Public Accountants.

The financial statements were prepared using the accrual basis of accounting. Under the accrual basis, revenues are recognized in the accounting period in which they are earned, without regard to the date of collection, and expenses are recognized when the corresponding liabilities are incurred, regardless of when payment is made.

The fund maintains a system of internal controls to adequately safeguard its assets and assure the reliability of its financial records. The controls are designed to provide reasonable, but not absolute, assurance that these objectives are met. The concept of reasonable assurance recognizes that first, the cost of the control should not exceed the benefits likely to be derived, and second, the valuation of the cost and benefits requires estimates and judgments by management. Management and the outside auditor continually review the controls for adequacy.

The financial statements included in this report were audited by Legacy Professionals, LLP, who have issued an unqualified opinion for calendar year ended December 31, 2016. A copy of their report is contained in the Financial Section.

Awards

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the fund for its CAFR for the fiscal year ended December 31, 2015. This was the seventh year that the fund has earned this prestigious award. In order to be awarded a Certificate of Achievement, the fund must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that this current CAFR continues to meet the Certificate of Achievement Program's requirements, and we are submitting it to the GFOA to determine its eligibility for another certificate.

Acknowledgments

This report was prepared through the combined efforts of the fund's staff under the direction of the Board. On behalf of the Board, I would like to thank the staff and professional consultants for their efforts in compiling this report.

Respectfully submitted,

Nickol R. Hackett

Nickol R. Hackett
Executive Director and Chief Investment Officer

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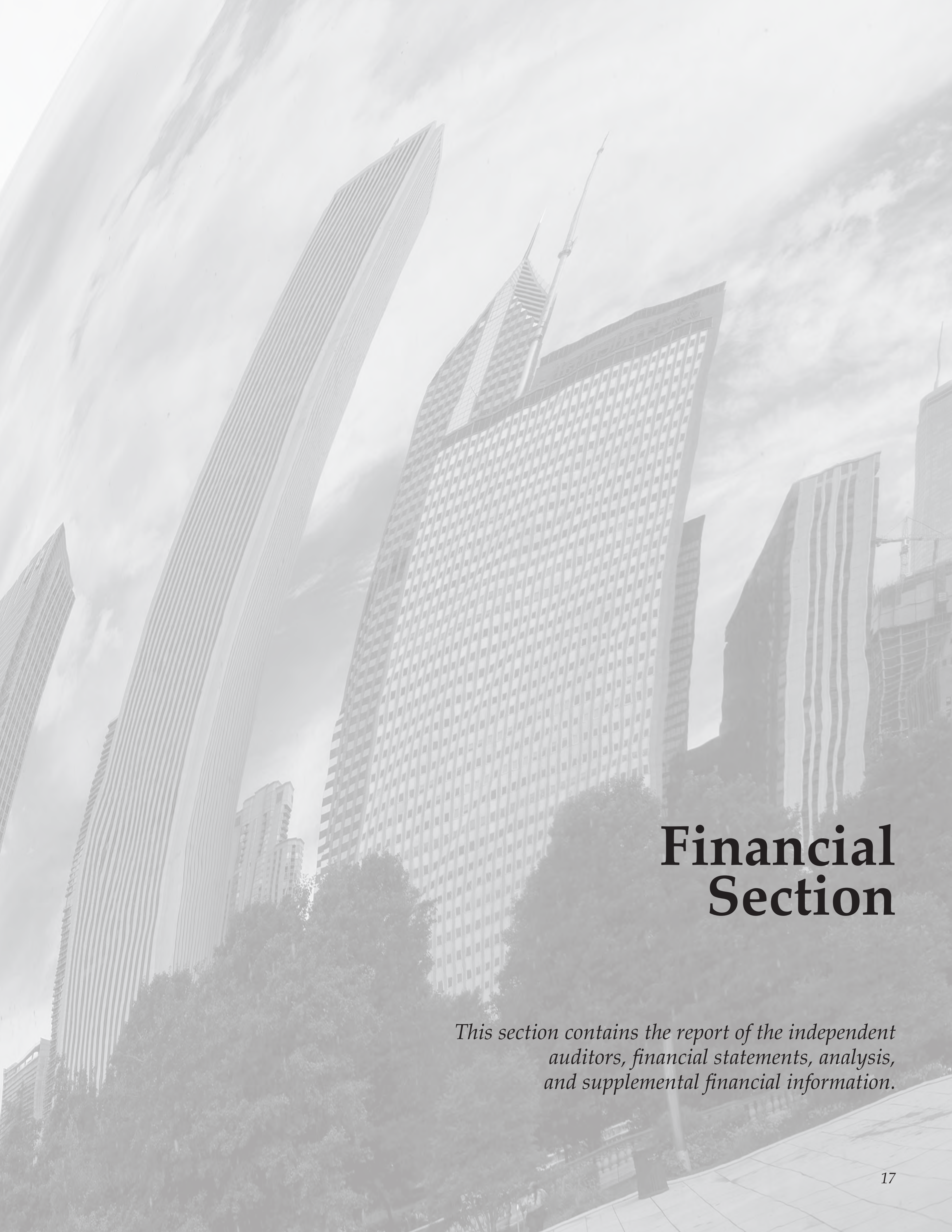

Financial Section

This section contains the report of the independent auditors, financial statements, analysis, and supplemental financial information.

Report of Independent Auditors

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, 2016 and 2015, 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.

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, 2016 and 2015, 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 and the required supplementary information, consisting of the schedule of changes in the employer's net pension liability and related ratios, schedule of employer contributions and related notes, schedule of investment returns, schedule of funding progress, schedule of employer contributions and notes to schedule of funding progress and schedule of employer contributions, 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, consisting of the schedules of net administrative expenses and professional and consulting fees, schedules of investment expenses, additions by source, deductions by type and schedule of employer contributions receivable, 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, 2014, 2013, 2012, and 2011 (which are not presented herein), and we expressed unmodified opinions on those financial statements. In our opinion, the previously audited information presented on the additions by source and deductions by type is fairly stated in all material respects in relation to the basic financial statements from which it has been derived.

Legacy Professionals LLP

Chicago, Illinois

June 12, 2017

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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, 2016 and 2015. 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, deductions by type and employer contributions receivable.

Financial Highlights

Net position increased by $472,613,595 or 5.5% from $8,643,044,275 at December 31, 2015 to $9,115,657,870 at December 31, 2016. Comparatively, net position decreased by $425,354,505 or 4.7% from $9,068,398,780 at December 31, 2014 to $8,643,044,275 at December 31, 2015. The increase in net position for 2016 was primarily due to the increase in the fair value of investments and supplemental employer contributions from Cook County, Illinois of $270,526,000. The decrease in net position for 2015 was primarily due to the decrease in the fair value of the investments.

The **rate of return** of the Plan's investment portfolio was 7.67% for 2016, -0.10% for 2015 and 5.90% for 2014.

Plan 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	
	2016	2015	2014	Dollars	Percent
Total assets	$ 10,407,279,006	$ 9,901,259,891	$10,527,247,093	$506,019,115	5.1%
Total liabilities	1,291,621,136	1,258,215,616	1,458,848,313	33,405,520	2.7%
Net position	$ 9,115,657,870	$ 8,643,044,275	$ 9,068,398,780	$472,613,595	5.5%

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,			Current Year Increase/(Decrease) in	
	2016	2015	2014	Dollars	Percent
Additions					
Employer contributions	$ 464,268,404	$ 186,832,321	$ 190,032,872	$ 277,436,083	148.5%
Employee contributions	139,355,592	137,707,719	129,325,318	1,647,873	1.2%
Annuitant healthcare benefits contributions	41,650,333	37,635,349	37,358,502	4,014,984	1.2%
Investment income (loss) (includes securities lending activities)	629,442,470	(21,896,696)	488,890,897	651,339,166	2974.6%
Other	14,019,340	11,457,843	9,742,062	2,561,497	22.4%
Total additions	1,288,736,139	351,736,536	855,349,651	936,999,603	266.4%
Deductions					
Benefits	784,046,767	738,666,760	682,959,960	45,380,007	6.1%
Refunds	26,702,222	33,273,171	26,347,361	(6,570,949)	-19.7%
Administrative expenses	5,373,555	5,151,110	5,010,206	222,445	4.3%
Total deductions	816,122,544	777,091,041	714,317,527	39,031,503	5.0%
Net increase (decrease)	472,613,595	(425,354,505)	141,032,124	897,968,100	211.1%
Net position					
Beginning of year	8,643,044,275	9,068,398,780	8,927,366,656	(425,354,505)	-4.7%
End of year	$9,115,657,870	$8,643,044,275	$9,068,398,780	$ 472,613,595	5.5%

Additions to Plan Net Position

Total additions were $1,288,736,139 in 2016, $351,736,536 in 2015 and $855,349,651 in 2014.

Employer contributions increased to $464,268,404 in 2016 from $186,832,321 in 2015 and decreased from $190,032,872 in 2014. Employer contributions are statutorily set at 1.54 times employee contributions collected two years prior. The County made supplemental contributions of $270,526,000 during 2016.

Employee contributions, including permissive service credit purchases, increased to $139,355,592 in 2016 from $137,707,719 in 2015 and $129,325,318 in 2014. The majority of members contribute 8.5% of covered wages.

Annuitant healthcare benefits contributions increased to $41,650,333 in 2016 from $37,635,349 in 2015 and were $37,358,502 in 2014. Annuitant healthcare benefits contributions fluctuate from year to year based on participation and healthcare costs.

Net investment income totaled $629,442,470 for 2016 compared to income (loss) ($21,896,696) for 2015 and $488,890,897 for 2014. Investment earnings fluctuate primarily from the overall performance of the financial markets from year to year.

Deductions to Plan Net Position

Total deductions were $816,122,544 in 2016, $777,091,041 in 2015 and were $714,317,527 in 2014.

Benefits increased to $784,046,767 in 2016 from $738,666,760 in 2015 and $682,959,960 in 2014 due primarily to the 3% annual cost of living increases for annuitants and an increase in the number of retirees.

Refunds decreased to $26,702,222 in 2016 from $33,273,171 in 2015 and $26,347,361 in 2014. These changes are due to fluctuations in refund applications.

The cost to administer the Plan increased by 4.3% to $5,373,555 in 2016 from $5,151,110 in 2015. Comparatively, the cost to administer the Plan increased by 2.8% to $5,151,110 in 2015 from $5,010,206 in 2014.

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,		
	2016	**2015**	**2014**
Total pension liability	$23,240,192,010	$23,963,085,690	$21,945,961,866
Plan fiduciary net position	9,115,657,870	8,643,044,275	9,068,398,780
Employer's net pension liability	$14,124,534,140	$15,320,041,415	$12,877,563,086
Plan fiduciary net position as a percentage of the total pension liability	39.22%	36.07%	41.32%

Postemployment Healthcare Benefits

Under GASB Statement No. 43, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, the Plan's funding for postemployment healthcare benefits is as follows:

	Funding for Postemployment Healthcare Benefits For the Years Ended December 31,		
	2016	**2015**	**2014**
Unfunded actuarial accrued liability	$1,957,804,688	$2,134,106,707	$1,980,088,617
Funded ratio	0.00%	0.00%	0.00%

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,

	2016	2015	2014
Unfunded actuarial accrued liability	$ 7,238,233,759	$ 7,241,166,616	$ 6,508,281,618
Funded ratio	56.73%	55.39%	57.51%

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
33 North Dearborn Street
Suite 1000
Chicago, Illinois 60602

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

December 31, 2016

ASSETS	Total	Pension	Postemployment Healthcare
Receivables			
Employer contributions less allowance of $6,791,899 in 2016	$ 206,231,500	$ 198,037,968	$ 8,193,532
Employee contributions	7,556,328	7,556,328	-
Accrued investment income	20,362,677	20,362,677	-
Receivable for securities sold	97,101,028	97,101,028	-
Due from Forest Preserve District Employees' Annuity and Benefit Fund of Cook County	463,181	463,181	-
Medicare Part D subsidy	883,525	-	883,525
Other	1,486,628	37,823	1,448,805
Total receivables	334,084,867	323,559,005	10,525,862
Investments			
U.S. and international equities	4,264,200,142	4,264,200,142	-
U.S. Government and government agency obligations	1,026,986,177	1,026,986,177	-
Corporate bonds	822,348,141	822,348,141	-
Collective international equity fund	67,885,886	67,885,886	-
Commingled fixed income fund	26,821,800	26,821,800	-
Private global fixed fund limited partnership	206,118,267	206,118,267	-
Exchange traded funds	483,639,898	483,639,898	-
Private equities	267,153,632	267,153,632	-
Hedge funds	634,093,947	634,093,947	-
Real estate funds	597,613,560	597,613,560	-
Short-term investments	602,067,528	602,067,528	-
Total investments	8,998,928,978	8,998,928,978	-
Collateral held for securities on loan	1,074,265,161	1,074,265,161	-
Total assets	10,407,279,006	10,396,753,144	10,525,862
LIABILITIES			
Accounts payable	6,092,219	6,092,219	-
Healthcare insurance payable	10,525,862	-	10,525,862
Payable for securities purchased	200,737,894	200,737,894	-
Securities lending collateral	1,074,265,161	1,074,265,161	-
Total liabilities	1,291,621,136	1,281,095,274	10,525,862
Net position			
Net position restricted for pensions	9,115,657,870	9,115,657,870	-
Net position held in trust for postemployment healthcare benefits	-	-	-
Total	$9,115,657,870	$9,115,657,870	$ -

See accompanying notes to combining financial statements.

Combining Statements of Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position (continued)

December 31, 2015			
ASSETS	**Total**	**Pension**	**Postemployment Healthcare**
Receivables			
Employer contributions less allowance of $11,090,380 in 2015	$ 195,994,802	$ 188,234,742	$ 7,760,060
Employee contributions	5,709,813	5,709,813	-
Accrued investment income	20,729,923	20,729,923	-
Receivable for securities sold	101,749,176	101,749,176	-
Due from Forest Preserve District Employees' Annuity and Benefit Fund of Cook County	515,876	515,876	-
Medicare Part D subsidy	859,672	-	859,672
Other	1,428,234	52,025	1,376,209
Total receivables	326,987,496	316,991,555	9,995,941
Investments			
U.S. and international equities	3,925,905,225	3,925,905,225	-
U.S. Government and government agency obligations	1,031,502,731	1,031,502,731	-
Corporate bonds	765,044,107	765,044,107	-
Collective international equity fund	51,962,976	51,962,976	-
Commingled fixed income fund	25,666,065	25,666,065	-
Private global fixed fund limited partnership	191,345,512	191,345,512	-
Exchange traded funds	458,949,498	458,949,498	-
Private equities	160,785,243	160,785,243	-
Hedge funds	803,013,247	803,013,247	-
Real estate funds	591,993,643	591,993,643	-
Short-term investments	453,717,122	453,717,122	-
Total investments	8,459,885,369	8,459,885,369	-
Collateral held for securities on loan	1,114,387,026	1,114,387,026	-
Total assets	9,901,259,891	9,891,263,950	9,995,941
LIABILITIES			
Accounts payable	5,134,977	5,134,977	-
Healthcare insurance payable	9,995,941	-	9,995,941
Payable for securities purchased	128,697,672	128,697,672	-
Securities lending collateral	1,114,387,026	1,114,387,026	-
Total liabilities	1,258,215,616	1,248,219,675	9,995,941
Net position			
Net position restricted for pensions	8,643,044,275	8,643,044,275	-
Net position held in trust for postemployment healthcare benefits	-	-	-
Total	$8,643,044,275	$8,643,044,275	$ -

See accompanying notes to combining financial statements.

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

Year Ended December 31, 2016	Total	Pension	Postemployment Healthcare
Additions			
Employer contributions			
Statutory	$ 193,742,404	$ 144,177,155	$ 49,565,249
Supplemental	270,526,000	270,526,000	-
Total employer contributions	464,268,404	414,703,155	49,565,249
Employee contributions			
Salary deductions	134,282,029	134,282,029	-
Refund repayments	2,569,240	2,569,240	-
Former and miscellaneous service payments	584,376	584,376	-
Optional payments and deductions	38,314	38,314	-
Deductions in lieu of disability	1,881,633	1,881,633	-
Total employee contributions	139,355,592	139,355,592	-
Annuitant healthcare benefits contributions	41,650,333	-	41,650,333
Investment income			
Net appreciation (depreciation) in fair value of investments	484,767,317	484,767,317	-
Dividends	107,959,948	107,959,948	-
Interest	64,033,120	64,033,120	-
	656,760,385	656,760,385	-
Less investment expenses	(32,912,681)	(32,912,681)	-
Net investment income	623,847,704	623,847,704	-
Securities lending			
Income	6,717,119	6,717,119	-
Expenses	(1,122,353)	(1,122,353)	-
Net securities lending income	5,594,766	5,594,766	-
Other			
Employer federal subsidized programs	3,162,532	3,162,532	-
Medicare Part D subsidy	4,090,789	-	4,090,789
Prescription plan rebates	5,882,393	-	5,882,393
Employee transfers (to) from Forest Preserve District Employees' Annuity and Benefit Fund of Cook County	133,999	133,999	-
Miscellaneous	749,627	749,627	-
Total other additions	14,019,340	4,046,158	9,973,182
Total additions	1,288,736,139	1,187,547,375	101,188,764

See accompanying notes to combining financial statements.

Combining Statements of Changes in Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position (continued)

Year Ended December 31, 2015

	Total	Pension	Postemployment Healthcare
Additions			
Employer contributions			
Statutory	$ 186,832,321	$ 136,075,504	$ 50,756,817
Supplemental	-	-	-
Total employer contributions	186,832,321	136,075,504	50,756,817
Employee contributions			
Salary deductions	132,637,621	132,637,621	-
Refund repayments	2,651,848	2,651,848	-
Former and miscellaneous service payments	659,843	659,843	-
Optional payments and deductions	42,030	42,030	-
Deductions in lieu of disability	1,716,377	1,716,377	-
Total employee contributions	137,707,719	137,707,719	-
Annuitant healthcare benefits contributions	37,635,349	-	37,635,349
Investment income			
Net appreciation (depreciation) in fair value of investments	(173,161,584)	(173,161,584)	-
Dividends	111,215,391	111,215,391	-
Interest	68,785,887	68,785,887	-
	6,839,694	6,839,694	-
Less investment expenses	(33,698,935)	(33,698,935)	-
Net investment income	(26,859,241)	(26,859,241)	-
Securities lending			
Income	5,927,926	5,927,926	-
Expenses	(965,381)	(965,381)	-
Net securities lending income	4,962,545	4,962,545	-
Other			
Employer federal subsidized programs	3,847,725	3,847,725	-
Medicare Part D subsidy	3,872,127	-	3,872,127
Prescription plan rebates	3,205,423	-	3,205,423
Employee transfers (to) from Forest Preserve District Employees' Annuity and Benefit Fund of Cook County	18,370	18,370	-
Miscellaneous	514,198	514,198	-
Total other additions	11,457,843	4,380,293	7,077,550
Total additions	351,736,536	256,266,820	95,469,716

See accompanying notes to combining financial statements.

Combining Statements of Changes in Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position (continued)

Year Ended December 31, 2016

	Total	Pension	Postemployment Healthcare
Deductions			
Benefits			
Annuity			
Employee	$ 624,231,419	$ 624,231,419	$ -
Spouse and children	47,919,324	47,919,324	-
Disability			
Ordinary	10,160,688	10,160,688	-
Duty	546,572	546,572	-
Healthcare	101,188,764	-	101,188,764
Total benefits	784,046,767	682,858,003	101,188,764
Refunds	26,702,222	26,702,222	-
Net administrative expenses	5,373,555	5,373,555	-
Total deductions	816,122,544	714,933,780	101,188,764
Net increase (decrease)	472,613,595	472,613,595	-
Net position			
Beginning of year	8,643,044,275	8,643,044,275	-
End of year	$9,115,657,870	$9,115,657,870	$ -

See accompanying notes to combining financial statements.

Combining Statements of Changes in Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position (continued)

Year Ended December 31, 2015

	Total	Pension	Postemployment Healthcare
Deductions			
Benefits			
Annuity			
Employee	$ 587,861,744	$ 587,861,744	$ -
Spouse and children	45,002,859	45,002,859	-
Disability			
Ordinary	9,916,487	9,916,487	-
Duty	415,954	415,954	-
Healthcare	95,469,716	-	95,469,716
Total benefits	738,666,760	643,197,044	95,469,716
Refunds	33,273,171	33,273,171	-
Net administrative expenses	5,151,110	5,151,110	-
Total deductions	777,091,041	681,621,325	95,469,716
Net increase (decrease)	(425,354,505)	(425,354,505)	-
Net position			
Beginning of year	9,068,398,780	9,068,398,780	-
End of year	$8,643,044,275	$8,643,044,275	$ -

See accompanying notes to combining financial statements.

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.

New Accounting Pronouncement - The Plan has implemented Governmental Accounting Standards Board (GASB) Statement *No. 72, Fair Value Measurement and Application* (GASB 72), which addresses accounting and financial reporting issues related to fair value measurements. GASB 72 provides guidance for determining a fair value measurement for financial reporting purpose and applying fair value to certain investments and disclosures related to all fair value measurements.

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 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, 2016 and 2015, 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.

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

Subsequent Events - Subsequent events have been evaluated through June 12, 2017, 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 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 created 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.

TheStatutes 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, 2016 and 2015 was $1,580,251,254 and $1,572,417,298 respectively.

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.

Note 2: Plan Description (continued)

At December 31, 2016 and 2015, participants consisted of the following:

	2016	2015
Active Members	20,969	21,596
Retired Members	15,222	14,922
Beneficiaries	2,687	2,675
Inactive Members	14,005	13,190
Total	52,883	52,383

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, 2016 and 2015 are as follows:

	2016	2015
Total pension liability	$23,240,192,010	$23,963,085,690
Plan fiduciary net position	9,115,657,870	8,643,044,275
Employer's net pension liability	$14,124,534,140	$15,320,041,415
Plan fiduciary net position as a percentage of the total pension liability	39.22%	36.07%

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: Employers's Pension Liability (continued)

The net pension liability was determined by actuarial valuations performed as of December 31, 2016 and 2015 using the following actuarial methods and assumptions:

Actuarial valuation date	December 31, 2016 and 2015
Actuarial cost method	Entry Age Normal
Amortization method	Level Dollar - Open
Remaining amortization period	30 years
Asset valuation method	Five Year Smoothed Average Market
Actuarial assumptions:	
Inflation	3.25% per year, compounded annually
Salary increases	3.75% to 8.00%, based on age
Investment Rate of Return	7.50% per year, compounded annually
Retirement age	Rates of retirement for each age from 50 to 75 based on recent experience of the Plan where all employees are assumed to retire by age 75
Mortality	RP-2000 Blue Collar Mortality Table, base year 2000, fully generational based on Scale BB
Postretirement annuity increase	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

The actuarial assumptions used in the December 31, 2016 and 2015 valuations were based on the results of an actuarial experience study conducted by Buck Consultants, LLC dated January 2014.

Note 3: Employers's Pension Liability (continued)

Discount Rate

The blended discount rates used to measure the total pension liability at December 31, 2016 and 2015 were 4.64% and 4.15%, 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 3.71% and 3.20% at December 31, 2016 and 2015, respectively, and the long-term investment rate of return of 7.50% 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 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, 2016 and 2015. 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:

December 31, 2016

	1% Decrease	Current Discount Rate	1% Increase
	3.64%	4.64%	5.64%
Net Pension Liability	$18,243,015,037	$14,124,534,140	$10,873,652,859

December 31, 2015

	1% Decrease	Current Discount Rate	1% Increase
	3.15%	4.15%	5.15%
Net Pension Liability	$19,821,767,092	$15,320,041,415	$11,800,111,612

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

During the year ended December 31, 2016, the County made supplemental contributions to the Plan totaling $270,526,000 to promote the long-term fiscal sustainability of the Plan. These contributions were made pursuant to a one year Intergovernmental Agreement (IGA) entered into as of December 8, 2015 between the County and the Plan.

On November 14, 2016, the County entered into a one year IGA with the Plan to make supplemental contributions to the plan totaling $353,800,000 to promote the long-term fiscal sustainability of the Plan. The supplemental contributions are expected to be paid by the County beginning on December 31, 2016 through October 31, 2017 in the monthly amount of $25,000,000 with a final payment of $78,000,000 on November 30, 2017. The first monthly supplemental contribution payment was received by the Plan on January 6, 2017. Subsequent to year end and through the date of these financial statements, the County has made supplemental contributions totaling $150,000,000 of the $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 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, 2016 and 2015, there were no changes to the investment policy.

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

Asset Class	Target Allocation %	Long-term Expected Rate of Return
Domestic equities	25.00%	9.36%
International equities	20.00%	7.61%
Fixed income	32.00%	2.03%
Real estate	8.00%	6.91%
Private equity	9.00%	4.68%
Hedge funds	6.00%	12.40%
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 study performed by Buck Consultants LLC. The results of the experience study were adopted by the Board in January 2014. The investment return assumption was based on the current asset allocation of the Plan. In the experience study, Buck Consultants LLC developed best estimate ranges of expected future real rates of return (net of pension plan investment expense and inflation) for each major asset class. These ranges were combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates or geometric real rates of return for each major asset class included in the Plan's target asset allocation as of December 31, 2013 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 7.67% and (0.10)% for years ended December 31, 2016 and 2015, 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, 2016 and 2015 valued by Moody's Investors Service, Standard & Poor's and/or Fitch:

Type of Investment	Rating	2016	2015
U.S. Government and			
government agency obligations	Aaa/AAA	$ 172,604	$ -
	Aa/AA	928,904,735	965,636,744
	Not Rated	97,908,838	65,865,987
		$1,026,986,177	$1,031,502,731
Corporate bonds	Aaa/AAA	$ 48,506,639	$ 57,113,576
	Aa/AA	32,586,006	28,938,979
	A/A	165,481,684	174,154,771
	Baa/BBB	360,891,419	325,354,126
	Ba/BB	114,193,825	84,495,383
	B/B	39,430,435	39,063,698
	Caa/CCC	6,992,198	9,675,474
	Ca/CC	-	474,788
	C/C	276,176	-
	D/D	347,296	227,406
	Not Rated	53,642,463	45,545,906
		$ 822,348,141	$ 765,044,107
Commingled fixed income fund	Baa/BBB	$ 26,821,800	$ 25,666,065
Short-term investments	Not Rated	$ 602,067,528	$ 453,717,122

Note 5: Investments (continued)

Investment Risk (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 5.89 years at December 31, 2016 and 5.68 years at December 31, 2015). The following table presents a summarization of the Plan's debt investments at December 31, 2016 and 2015, using the segmented time distribution method:

Type of Investment	Maturity	2016	2015
U.S. Government and government agency obligations	Less than 1 year	$ 41,930,224	$ 34,489,303
	1 - 5 years	260,538,133	275,344,178
	6 - 10 years	199,418,969	199,568,985
	Over 10 years	525,098,851	522,100,265
		$1,026,986,177	$1,031,502,731
Corporate bonds	Less than 1 year	$ 80,770,194	$ 319,667,924
	1 - 5 years	236,779,236	106,319,205
	6 - 10 years	287,367,978	194,184,823
	Over 10 years	217,430,733	144,872,155
		$ 822,348,141	$ 765,044,107
Commingled fixed income fund	1 - 5 years	$ 26,821,800	$ 25,666,065
Short-term investments	Less than 1 year	$ 602,067,528	$ 453,717,122

Note 5: Investments (continued)

Investment Risk (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 investment policy limits the amount of investments in foreign equities to 20% of total Plan assets and foreign fixed income obligations to 2.5% of the total Plan assets.

The Plan's exposure to foreign currency risk at December 31, 2016 and 2015 is as follows:

Type of Investment	Fair Value (USD) 2016	Fair Value (USD) 2015
U.S. and international equities		
Australian dollar	$ 72,090,036	$ 67,145,553
Brazilian real	22,034,268	15,342,482
British pound sterling	235,875,591	314,998,719
Canadian dollar	98,136,267	64,015,512
Chilean peso	2,535,875	2,191,251
Colombian peso	471,258	395,721
Czech koruna	38,001	43,778
Danish krone	24,225,552	23,422,657
Egyptian pound	244,466	291,663
European euro	425,043,124	381,778,462
Hong Kong dollar	107,837,446	108,983,901
Hungarian fornit	1,023,544	360,318
Indian rupee	14,579,736	10,620,170
Indonesian rupiah	6,341,159	4,946,620
Israeli shekel	7,142,608	6,014,267
Japanese yen	313,922,289	286,510,705
Malaysian ringgit	5,038,720	5,659,128
Mexican peso	8,513,047	9,752,911
New Taiwan dollar	30,991,207	29,347,463
New Turkish lira	496,551	656,541
New Zealand dollar	11,400,230	8,260,832
Norwegian krone	21,520,393	16,463,743
Philippines peso	6,723,629	5,987,426
Polish zloty	3,389,402	1,842,172
Russian ruble	532,753	342,695
Singapore dollar	21,223,544	19,942,448
South African rand	15,117,538	12,463,900
South Korean won	43,635,467	44,461,886
Swedish krona	43,845,594	41,815,199
Swiss franc	78,901,898	102,611,092
Thailand baht	8,974,788	7,869,619
United Arab Emirates dirham	-	1,131,081
U.S. dollar	2,632,354,161	2,330,235,310
Total U.S. and international equities	$4,264,200,142	$ 3,925,905,225

Note 5: Investments (continued)

Investment Risk (continued)

Foreign Currency Risk (continued)

Type of Investment	Fair Value (USD) 2016	Fair Value (USD) 2015
Corporate bonds		
British pound sterling	$ 874,914	$ 1,414,207
European euro	-	2,045,354
Mexican peso	10,956,224	9,271,891
Philippines peso	984,540	1,483,988
Swedish krona	1,079,281	-
U.S. dollar	808,453,182	750,828,667
Total corporate bonds	$822,348,141	$765,044,107
Private equities		
European euro	$ 10,868,687	$ 4,393,640
U.S dollar	256,284,945	156,391,603
Total private equities	$267,153,632	$ 160,785,243

For the years ended December 31, 2016 and 2015, net realized gain on investments sold, reflecting the difference between the proceeds received and cost value of securities sold, was $96,385,836 and $286,603,188 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: 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, 2016 and 2015, the Plan contracted to acquire securities on a when-issued basis with a total principal amount of approximately $94,100,000 and $65,866,000 respectively.

Note 7: 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:

Basis of Fair Value Measurement	
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, 2016 and 2015:

		Fair Value Measurements at 12/31/2016 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	$4,264,200,142	$4,264,200,142	$ -	$ -
U.S. Government and government agency obligations	1,026,986,177	-	1,026,986,177	-
Corporate bonds	822,348,141	-	822,348,141	-
Exchange traded funds	483,639,898	483,639,898	-	-
Total investments by fair value level	6,597,174,358	$4,747,840,040	$1,849,334,318	$ -
Investments measured at net asset value	2,401,754,620			
Total investments at fair value	$8,998,928,978			

Note 7: Fair Value Measurements (continued)

		Fair Value Measurements at 12/31/2015 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	$3,925,905,225	$3,925,905,225	$ -	$ -
U.S. Government and government agency obligations	1,031,502,731	-	1,031,502,731	-
Corporate bonds	765,044,107	-	765,044,107	-
Exchange traded funds	458,949,498	458,949,498	-	-
Total investments by fair value level	6,181,401,561	$4,384,854,723	$1,796,546,838	$ -
Investments measured at net asset value	2,278,483,808			
Total investments at fair value	$8,459,885,369			

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 bonds 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 7: Fair Value Measurements (continued)

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

	Fair Value 12/31/16	Fair Value 12/31/15	Unfunded Commitments	Redemption Frequency (If Eligible)	Redemption Notice Period
Investments measured at net asset value					
Collective international equity fund (1)					
Lazard/Wilmington Emerging Markets Sudan Free Portfolio	$ 67,885,886	$ 51,962,976	-	Daily	N/A
Commingled fixed income fund (2)					
MacKay Shields Defensive Bond Arbitrage Fund Ltd.	26,821,800	25,666,065	-	Daily	5 days
Private global fixed fund limited partnership (3)					
Franklin Templeton Global Multisector Plus Fund, L.P.	206,118,267	191,345,512	-	Monthly	15 days
Private equities (4)	267,153,632	160,785,243	280,535,000	Closed Ended	N/A
Hedge funds (5)					
Burnham Harbor Fund Ltd.	446,348,433	432,883,249	-	Monthly	95 days
Buckingham Fund	16,335,874	202,002,528	-	Quarterly	65 days
RC Kenwood Fund Ltd.	171,409,640	168,127,470	-	Quarterly	90 days
Real estate funds (6)					
JPMCB Strategic Property Fund	247,049,922	229,752,871	-	Quarterly	45 days
PRISA Separate Account	231,002,063	222,523,994	-	Quarterly	90 days
Others	119,561,575	139,716,778	42,077,000	Quarterly	90 days
Short-term investments (7)					
BNY Mellon EB Temporary Investment Fund	602,067,528	453,717,122	-	Daily	N/A
Total investments measured at net asset value	$2,401,754,620	$2,278,483,808			

(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.

Note 7: Fair Value Measurements (continued)

(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.

(4) Private equities - This investment consists of 47 limited partnership investments 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 - This investment includes 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 investments - 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.has been determined using the NAV per share of the investment.

Note 8: Derivatives

The Plan's investment policy permits the use of financial futures for hedging purposes only. Speculation and leveraging of financial futures within the portfolio is prohibited. The Plan uses derivative financial instruments to gain exposure to an asset class, manage portfolio risk or to facilitate international portfolio trading.

A derivative security is a financial contract whose value is based on, or "derived" from, a traditional security, an asset, or a market index. Derivative instruments include forward currency contracts and futures contracts as part of the Plan's investment portfolio.

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.

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 in the receivable for securities sold and payable for securities purchased on 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, typically ranging from one week to three months.

The Plan uses futures contracts as an investment vehicle to gain exposure to an asset class with minimal market entry costs to the Plan. At December 31, 2016, the Plan had futures contracts with a fair value of ($1,494,554) a notional value of $198,921,540 and a maturity date of March 17, 2017 for all contracts. Comparatively, at December 31, 2015, the Plan had futures contracts with a fair value of $745,803 and a notional value of $236,370,350 with a maturity date of March 18, 2016 for all contracts.

Futures contracts are reported at fair value in the equity 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. See Note 5 for investment risk for the Plan's equity investments.

Note 8: Derivatives (continued)

The Plan's portfolio includes the following derivative instruments at December 31, 2016 and 2015:

	2016	2015
Hedging derivative instruments		
Forward currency contract receivables	$ 17,399,562	$ 17,256,284
Forward currency contract payable	(17,000,354)	(17,183,165)
Total hedging derivative instruments	399,208	73,119
Investment derivative instruments		
U.S. Equity Index Futures Contracts	(1,494,554)	745,803
Total	$ (1,095,346)	$ 818,922

For the years ended December 31, 2016 and 2015, the change in fair value of the deferred inflows and outflows of the foreign currency contracts was not material to these financial statements.

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 43 days for 2016 and 103 days for 2015; 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, 2016 and 2015 of 84 and 64 days, respectively.

As of December 31, 2016 and 2015, the fair value (carrying amount) of loaned securities was $1,253,039,566 and $1,365,261,211 respectively. As of December 31, 2016 and 2015, the fair value (carrying amount) of cash collateral received by the Plan was $1,074,265,161 and $1,114,387,026 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, 2016 and 2015, the fair value (carrying amount) of non-cash collateral received by the Plan was $212,162,888 and $287,086,886 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.

During 2016 and 2015, there were no losses due to default of a borrower or the lending agent.

Note 9: Securities Lending (continued)

A summary of securities loaned at fair value as of December 31, 2016 and 2015 is as follows:

	2016	2015
Securities loaned - backed by cash collateral		
U.S. and international equities	$ 665,348,723	$ 764,542,280
U.S. Government and government agency obligations	109,193,962	85,059,135
Exchanged traded funds	170,060,838	149,394,555
Corporate bonds	102,952,991	85,557,467
Total securities loaned - backed by cash collateral	1,047,556,514	1,084,553,437
Securities loaned - backed by non-cash collateral		
U.S. Government and government agency obligations	205,483,052	280,707,774
Total	$1,253,039,566	$1,365,261,211

Note 10: Postemployment Group Healthcare Benefit Plan

Plan Description

The Plan administers a Postemployment Group Healthcare Benefit Plan (PGHBP), a single-employer defined benefit postemployment health plan. PGHBP is administered in accordance with Chapter 40, Article 5/10 of the 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 who elect to participate in PGHBP.

All benefit elections under the PGHBP are fully self-insured. The Plan is currently allowed, in accordance with State Statutes, to pay all or a portion of medical costs for the annuitants. Presently, the employee and spouse annuitants pay approximately 48% and 33% of the annual medical costs, respectively. The remaining costs are borne by the Plan. The Plan does not maintain stop-loss coverage for the PGHBP.

At December 31, 2016 and 2015, the number of annuitants and surviving spouses participating in the PGHBP, totaled 8,954 and 8,783 respectively.

The following is a reconciliation of healthcare benefits payable for the years ended December 31, 2016 and 2015:

	2016	2015
Healthcare benefits payable, January 1	$ 9,995,941	$ 9,803,028
Claims incurred	101,718,685	95,662,629
Claims paid	(101,188,764)	(95,469,716)
Healthcare benefits payable, December 31	$ 10,525,862	$ 9,995,941

The Plan's actuary, Segal Consultants, estimated medical claims incurred but not reported (IBNR) as of December 31, 2016 and 2015 based on industry standards including historical IBNR levels, insurance company studies, lag studies and actuarial assumptions. The Plan estimated the prescription claims liability for both December 31, 2016 and 2015 based on claims paid subsequent to year end.

The Plan's employees are also participants in the PGHBP. The Plan had 31 employees at both December 31, 2016 and 2015. During years ended December 31, 2016 and 2015, the Plan paid healthcare premiums for 11 retired Plan employees. For active and retired Plan employees, the actuarially determined liability under GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*, is included in the total actuarial liability and related GASB Statement No. 43 disclosure.

Note 10: Postemployment Group Healthcare Benefit Plan (continued)

Summary of Significant Accounting Policies

Method of Accounting - PGHBP's financial statements have been combined with the Plan's financial statements and are presented using the accrual basis of accounting. The Plan subsidizes the cost for postemployment group health benefits in excess of the retiree healthcare premiums with no contribution rate or asset allocation associated with it. Post-employment group healthcare costs are recognized when incurred and estimable.

Contributions - The Plan funds PGHBP on a "pay-as-you-go" basis.

Administrative Costs - Administrative costs associated with PGHBP are paid by the Plan's employer contributions and annuitant health benefit contributions.

Health Care Cost Trend Rates -

2016 - 7.50% in the first year, decreasing by .25% per year until an ultimate rate of 4.75% is reached for pre-medicare and 6.00% in the first year, decreasing by .25% until an ultimate rate of 4.75% is reached for post-medicare.

2015 - 7.75% in the first year, decreasing by .25% per year until an ultimate rate of 4.75% is reached for pre-medicare and 6.25% in the first year, decreasing by .25% until an ultimate rate of 4.75% is reached for post-medicare.

Inflation Rate Assumption - 3.25% per year.

Actuarial Valuations - Actuarial valuations of the Plan involve estimates of the value of reported amounts and assumptions about the probability of events far into the future. Actuarially determined amounts are subject to continual revision as results are compared to past expectations and new estimates are made about the future. Actuarial calculations of the Plan reflect a long-term perspective and are based on the benefits provided under the terms of the Plan in effect at the time of each valuation and on the historical pattern of sharing of costs between the employer and Plan members to that point.

Funded Status and Funding Progress

As of December 31, 2016, the most recent actuarial valuation date, the PGHBP was 0% funded on an actuarial basis. The actuarial accrued liability for benefits was $1,957,804,688 and the actuarial value of assets was $0, resulting in an unfunded actuarial accrued liability (UAAL) of $1,957,804,688. The covered payroll (annual payroll of active employees covered by the Plan) was $1,609,559,234 and the ratio of the UAAL to the covered payroll was 121.64%.

As of December 31, 2015, the PGHBP was 0% funded on an actuarial basis. The actuarial accrued liability for benefits was $2,134,106,707 and the actuarial value of assets was $0, resulting in an unfunded actuarial accrued liability (UAAL) of $2,134,106,707. The covered payroll (annual payroll of active employees covered by the Plan) was $1,597,597,077 and the ratio of the UAAL to the covered payroll was 133.58%.

The schedule of funding progress, presented as required supplementary information (RSI) following the notes to the financial statements, presents multi-year trend information about whether the actuarial values of the Plan assets are increasing or decreasing over time relative to the actuarial accrued liability for benefits.

Note 11: Related Party Transactions

The Plan has common Trustees and shares office space with the Forest Fund who reimburses the Plan for shared administrative services provided by the Plan. During the years ended December 31, 2016 and 2015, the Plan allocated administrative expenditures of $101,167 and $92,675 respectively to the Forest Fund.

As of December 31, 2016 and 2015, the Forest Fund owes the Plan $463,181 and $515,876 respectively. These amounts include plan transfers of Plan members transferring from one plan to another.

Note 12: Pronouncements Issued Not Yet Effective

In June 2015, GASB issued Statement No. 73, *Accounting and Financial Reporting for Pensions and Related Assets that are not within the Scope of GASB Statement No. 68, and Amendments to Certain Provisions of GASB Statements 67 and 68*. Statement No. 73 establishes requirements for pension plans that are not administered through a trust (not covered by Statements 67 and 68). The requirements in Statement No. 73 for reporting pensions generally are the same as Statement 68, however, the lack of a trust that meets specified criteria is reflected in the measurements. Statement No. 73 is effective for the Plan's fiscal year ending December 31, 2016, except for provisions that address employers and governmental nonemployer contributing entities for pensions that are not within the scope of GASB Statement No. 68, which are effective for the Plan's fiscal year ending December 31, 2017.

In June 2015, GASB issued Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*. Statement No. 74 replaces the requirements of Statement No. 43, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*. This Statement addresses the financial reports of defined benefit Other Postemployment Benefit Plans that are administered through trusts that meet specified criteria. The Statement requires more extensive note disclosures and required supplementary information related to the measurement of the other postemployment benefit liabilities for which assets have been accumulated, including information about the annual money-weighted rates of return on plan investments. Statement No. 74 is effective for the Plan's fiscal year ending December 31, 2017.

In June 2015, GASB issued Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. Statement No. 75 replaces the requirements of Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*. Statement No. 75 requires governments to report a liability on the financial statements for the other postemployment benefits that they provide. Statement No. 75 also requires more extensive note disclosures and required supplementary information about the other postemployment benefit liabilities. Statement No. 75 is effective for the Plan's fiscal year ending December 31, 2018.

In January 2016, GASB issued Statement No. 80, *Blending Requirements for Certain Component Units - an amendment of GASB Statement No. 14*. Statement No. 80 amends the blending requirements for the financial statement presentation of component units of all state and local governments established in Statement No. 14, The *Financial Reporting Entity*, as amended. Statement No. 80 is effective for the Plan's fiscal year ending December 31, 2017.

Note 12: Pronouncements Issued Not Yet Effective (continued)

In March 2016, GASB issued Statement No. 81, *Irrevocable Split-Interest Agreements*. Statement No. 81 improves accounting and financial reporting for irrevocable split-interest agreements by providing recognition and measurement guidance for situations in which a government is a beneficiary of the agreement. Statement No. 81 is effective for the Plan's fiscal year ending December 31, 2017.

In March 2016, GASB issued Statement No. 82, *Pension Issues - an amendment of GASB Statements No. 67, No. 68, and No. 73*. Statement No. 82 addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. Statement No. 82 is effective for the Plan's fiscal year ending December 31, 2017.

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 March 2017, GASB issued Statement No. 85, *Omnibus 2017*. Statement No. 85 addresses practice issues that have been identified during implementation and application of certain GASB Statements. It addresses a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits (OPEB)). Statement No. 85 is effective for the Plan's fiscal year ending December 31, 2018.

In May 2017, GASB issued Statement No. 86, *Certain Debt Extinguishment Issues*. Statement No. 86 was issued to improve consistency in accounting and financial reporting for in-substance defeasance of debt by providing guidance for transactions in which cash and other monetary assets acquired with only existing resources are placed in an irrevocable trust for the sole purpose of extinguishing debt. Statement No. 86 also improves accounting and financial reporting for prepaid insurance on debt that is extinguished and notes to financial statements for debt that is defeased in substance. Statement No. 86 is effective for the Plan's fiscal year ending December 31, 2018.

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

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Required Supplementary Information - Pension

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

	December 31, 2016
Total pension liability	
Service cost	$ 559,176,234
Interest	1,002,950,495
Difference between expected and actual experience	318,014,746
Changes of assumptions	(1,893,474,930)
Expected benefit payments, including refunds of employee contributions	(709,560,225)
Net change in total pension liability	(722,893,680)
Total pension liability	
Beginning of year	23,963,085,690
End of year	$23,240,192,010
Plan fiduciary net position	
Contributions - employer	$414,703,155
Contributions - employee	139,355,592
Net investment income	629,442,470
Expected benefit payments, including refunds of employee contributions	(709,560,225)
Administrative expenses	(5,373,555)
Other	4,046,158
Net change in plan fiduciary net position	472,613,595
Plan fiduciary net position	
Beginning of year	8,643,044,275
End of year	$ 9,115,657,870
Employer's net pension liability	$14,124,534,140
Plan fiduciary net position as a percentage of the total pension liability	39.22%
Covered-employee payroll	$ 1,580,251,254
Employer's net pension liability as a percentage of covered-employee payroll	893.82%

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.

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

	December 31, 2015
Total pension liability	
Service cost	$ 496,161,454
Interest	994,674,970
Difference between expected and actual experience	(126,330,351)
Changes of assumptions	1,329,087,966
Expected benefit payments, including refunds of employee contributions	(676,470,215)
Net change in total pension liability	2,017,123,824
Total pension liability	
Beginning of year	21,945,961,866
End of year	$23,963,085,690
Plan fiduciary net position	
Contributions - employer	$ 136,075,504
Contributions - employee	137,707,719
Net investment income	(21,896,696)
Expected benefit payments, including refunds of employee contributions	(676,470,215)
Administrative expenses	(5,151,110)
Other	4,380,293
Net change in plan fiduciary net position	(425,354,505)
Plan fiduciary net position	
Beginning of year	9,068,398,780
End of year	$ 8,643,044,275
Employer's net pension liability	$15,320,041,415
Plan fiduciary net position as a percentage of the total pension liability	36.07%
Covered-employee payroll	$ 1,572,417,298
Employer's net pension liability as a percentage of covered-employee payroll	974.30%

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.

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

	December 31, 2014
Total pension liability	
Service cost	$ 491,887,347
Interest	958,433,835
Difference between expected and actual experience	-
Changes of assumptions	-
Expected benefit payments, including refunds of employee contributions	(622,003,259)
Net change in total pension liability	828,317,923
Total pension liability	
Beginning of year	21,117,643,943
End of year	$21,945,861,866
Plan fiduciary net position	
Contributions - employer	$ 146,075,414
Contributions - employee	129,325,318
Net investment income	488,890,897
Expected benefit payments, including refunds of employee contributions	(622,003,259)
Administrative expenses	(5,010,206)
Other	3,753,960
Net change in plan fiduciary net position	141,032,124
Plan fiduciary net position	
Beginning of year	8,927,366,656
End of year	$ 9,068,398,780
Employer's net pension liability	$12,877,563,086
Plan fiduciary net position as a percentage of the total pension liability	41.32%
Covered-employee payroll	$ 1,514,550,023
Employer's net pension liability as a percentage of covered-employee payroll	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.

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Schedule of Employer Contributions - Last Ten Fiscal Years

	2016	2015	2014	2013	2012
Actuarially determined contribution	$ 562,815,816	$ 514,888,487	$ 519,642,931	$ 595,370,046	$ 540,218,287
Contributions in relation to the actuarially determined contribution	(414,703,155)	(136,075,504)	(146,075,414)	(147,720,014)	(152,734,539)
Contribution deficiency	$ 148,112,661	$ 378,812,983	$ 373,567,517	$ 447,650,032	$ 387,483,748
Covered employee payroll	$1,580,251,254	$1,572,417,298	$1,514,550,023	$1,484,269,715	$1,478,253,368
Contributions as a percentage of covered employee payroll	26.24%	8.65%	9.64%	9.95%	10.33%

See Report of Independent Auditors.

Notes to Schedule of Employer Contributions

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, 2016

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	3.25% per year, compounded annually
Salary increases	3.75% to 8%, based on age
Investment rate of return	7.5% per year, compounded annually
Retirement age	Based on actual past experience, assume all employees retire by age 75
Mortality	RP-2000 Blue Collar Mortality Table, base year 2000, fully generational based on Scale BB.
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.

Schedule of Employer Contributions - Last Ten Fiscal Years (continued)

	2011	2010	2009	2008	2007
Actuarially determined contribution	$ 493,724,370	$ 454,327,461	$ 352,850,988	$ 283,892,734	$ 287,061,532
Contributions in relation to the actuarially determined contribution	(160,652,118)	(144,539,577)	(152,506,089)	(150,227,360)	(230,114,335)
Contribution deficiency	$ 333,072,252	$ 309,787,884	$ 200,344,899	$ 133,665,374	$ 56,947,197
Covered employee payroll	$1,456,444,123	$1,494,093,569	$1,498,161,713	$1,463,372,408	$1,370,844,734
Contributions as a percentage of covered employee payroll	11.03%	9.67%	10.18%	10.27%	16.79%

See Report of Independent Auditors.

Schedule of Investment Returns

	2016	2015	2014
Annual money-weighted rate of return, net of investment expense	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

Schedule of Funding Progress

Year Ended December 31,		Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll (b-a)/(c)
2011		$ -	$1,678,571,388	$1,678,571,388	0.00%	$1,456,444,123	115.25%
2012		$ -	$1,845,609,132	$1,845,609,132	0.00%	$1,478,253,368	124.85%
2013	(1)	$ -	$1,978,767,490	$1,978,767,490	0.00%	$1,484,269,715	133.32%
2014		$ -	$1,980,088,617	$1,980,088,617	0.00%	$1,514,550,023	130.74%
2015		$ -	$2,134,106,707	$2,134,106,707	0.00%	$1,597,597,077	133.58%
2016		$ -	$1,957,804,688	$1,957,804,688	0.00%	$1,609,559,234	121.64%

(1) = Change in actuarial assumptions.

See Notes to Schedule of Funding Progress and Schedule of Employer Contributions.

Schedule of Employer Contributions

Year Ended December 31,	Annual Required Contribution (ARC) (a)	Required Statutory Basis (b)	Employer Contributions (c)	Percent of ARC Contributed (c/a)
2011	$165,176,771	$ -	$38,185,306	23.12%
2012	$156,700,388	$ -	$37,986,237	24.24%
2013	$178,698,965	$ -	$40,097,630	22.44%
2014	$189,907,202	$ -	$43,957,458	23.15%
2015	$190,871,452	$ -	$50,756,817	26.59%
2016	$206,678,514	$ -	$49,565,249	23.98%

See Notes to Schedule of Funding Progress and Schedule of Employer Contributions.

Notes to Schedule of Funding Progress and Schedule of Employer Contributions

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest actuarial valuation follows:

Valuation date	December 31, 2016 and 2015
Actuarial cost method	Entry age actuarial cost as a percentage of earnings
Amortization method	Level Dollar - Open
Amortization period	30 years
Actuarial assumptions	
Discount rate	4.5% per year
Inflation	3.25% per year
Health care cost trend rate	2016 - 7.50% in the first year, decreasing by .25% per year until an ultimate rate of 4.75% is reached for pre-medicare and 6.00% in the first year decreasing by .25% per year until an ultimate rate of 4.75% is reached for post-medicare. 2015 - 7.75% in the first year, decreasing by .25% per year until an ultimate rate of 4.75% is reached for pre-medicare and 6.25% in the first yeardecreasing by .25% per year until an ultimate rate of 4.75% is reached for post-medicare.
Mortality rates	RP-2000 Blue Collar Mortality Table, base year 2000, fully generational based on Scale BB
Retirement age assumptions	Based on actual past experience assume all employees retire by age 75

Supplementary Information

Schedules of Net Administrative Expenses and Professional and Consulting Fees

Years Ended December 31, 2016 and 2015

	2016	2015
Administrative expenses		
Bank charges	$ 31,351	$ 31,032
Document imaging	131,046	193,762
Election expense	144,933	91,704
Employee benefits	538,414	561,288
Insurance - fidelity, fiduciary and liability	120,438	117,385
Maintenance of equipment, systems, software and support	426,409	460,365
Membership, conference and training	32,533	43,970
Office expense	85,949	120,426
Postage	111,067	92,461
Printing and stationery	63,217	107,463
Professional and consulting fees	629,268	434,610
Recovery site expense	33,983	41,716
Regulatory filing fees	8,000	8,000
Rent	434,224	416,800
Salaries	2,674,345	2,509,732
Utilities	9,545	13,071
Total	5,474,722	5,243,785
Less administrative expenses allocated to Forest Preserve District Employees' Annuity and Benefit Fund of Cook County	(101,167)	(92,675)
Net administrative expenses	$5,373,555	$5,151,110
Professional and consulting fees		
Actuarial service	$ 131,388	$ 91,668
Audit	73,540	110,550
Consulting	78,139	66,324
Legal	319,480	139,293
Lobbyist	26,721	26,775
Total	$ 629,268	$ 434,610

Schedules of Investment Expenses

Years Ended December 31, 2016 and 2015

	2016	2015
Investment manager expense		
Adelante Capital Management	$ 429,460	$ 403,063
Angelo Gordon & Co.	224,717	192,351
Ariel Investments	347,552	350,327
Blackstone Alternative Asset Management	4,777,861	4,535,325
Capri Capital Partners	-	18,335
CastleArk Management	966,318	1,035,459
CBRE Global Investors	432,659	436,183
Channing Capital Management	1,355,592	1,324,826
Chicago Equity Partners	200,571	195,889
Cozad Asset Management, Inc.	-	338,984
Credit Suisse Securities	-	(14,000)
Diversified Global Asset Management	561,148	2,052,701
Fiduciary Management Associates	685,262	686,138
Fortaleza Asset Management, Inc.	122,973	122,445
Franklin Templeton Investments	2,438,308	2,489,887
Frontier Capital Management	992,505	977,048
Great Lakes Advisors, Inc.	398,055	383,887
Herndon Capital Management	185,735	373,210
J.P. Morgan Asset Management	3,290,690	2,508,202
John Buck Company	16,091	66,426
Killian Capital Management	296,157	284,325
LaSalle Investment Management	306,925	344,797
Lazard Asset Management, LLC	554,884	632,154
Lightspeed Venture Partners	-	(550)
LM Capital Group, LLC	608,901	588,536
Lombardia Capital	149,214	142,462
Loomis Sayles & Company, LP	811,179	795,240
MacKay Shields	861,181	836,956
Mellon Capital	92,272	133,376
Mesirow Financial	1,739,694	1,965,818

(continued)

Schedules of Investment Expenses (continued)

Years Ended December 31, 2016 and 2015

	2016	2015
Investment manager expense (continued)		
Mondrian Investment Partners, Ltd.	$ 929,628	$ 911,719
Muller and Monroe Asset Management	352,398	647,201
NCM Capital	294,769	289,012
New Century Investment Management	429,112	420,481
Pacific Venture Group	1,262	10,750
Progress Investment Management	1,681,315	1,684,637
Prudential Real Estate Investors	1,635,473	739,110
RhumbLine Advisers	79,161	80,517
Russell Implementation Services, Inc.	513,381	645,830
SPC Capital Management	74,167	84,167
State Street Global Advisors	313,997	341,069
The Rock Creek Group	1,264,181	1,304,102
Wells Capital Management	817,731	801,460
William Blair & Company	954,612	951,037
	32,187,091	33,110,892
Investment consulting fees		
Callan Associates Inc.	369,795	371,459
RVK, Inc.	50,000	-
Total investment consulting fees	419,795	371,459
Investment custodian fees		
BNY Mellon	305,795	216,584
Total investment expenses	$32,912,681	$33,698,935

Additions By Source

Year Ended December 31,	Employer Contributions	Employee Contributions	Annuitant Healthcare Benefits Contributions	Net Investment and Net Securities Lending Income (1)	Other (2)	Total Additions
2011	$195,337,621	$127,577,473	$33,236,282	$ 82,701,033	$17,614,316	$ 456,466,725
2012	$190,720,776	$128,869,508	$33,948,728	$ 887,687,519	$10,190,689	$1,251,417,220
2013	$187,817,644	$127,593,220	$35,927,206	$1,179,440,119	$ 8,547,729	$1,539,325,918
2014	$190,032,872	$129,325,318	$37,358,502	$ 488,890,897	$ 9,742,062	$ 855,349,651
2015	$186,832,321	$137,707,719	$37,635,349	$ (21,896,696)	$11,457,843	$ 351,736,536
2016	$464,268,404	$139,355,592	$41,650,333	$ 629,442,470	$14,019,340	$1,288,736,139

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

(2) - Includes employer federal subsidized programs, Medicare Part D, prescription/repayment plan rebates and miscellaneous income. Early Retirement Reinsurance Program is included in 2011 and 2012.

Deductions By Type

Year Ended December 31,	Benefits	Refunds	Net Administrative Expenses	Total Deductions
2011	$556,632,909	$29,165,335	$4,078,843	$589,877,087
2012	$595,339,763	$33,081,726	$4,303,353	$632,724,842
2013	$637,697,226	$29,873,030	$4,324,634	$671,894,890
2014	$682,959,960	$26,347,361	$5,010,206	$714,317,527
2015	$738,666,760	$33,273,171	$5,151,110	$777,091,041
2016	$784,046,767	$26,702,222	$5,373,555	$816,122,544

Schedule of Employer Contributions Receivable

December 31, 2016

Levy Year	Contributions Receivable	Uncollected Balance	Reserved	Net Contributions Receivable
2015	$192,786,468	$ 17,369,469	$ 1,122,704	$ 16,246,765
2016	$195,653,930	195,653,930	5,669,195	189,984,735
		$213,023,399	$ 6,791,899	$206,231,500

Notes: *Employer contributions are funded primarily through a County tax levy.*
Uncollected employer contributions for the 2014 and prior levy years are fully reserved.

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Investment Section

This section includes an investment report, Investment Consultant's Commentary, the Master Custodian's Certification, a summary of investment policy, and summary tables of investment data.

Investment Report

June 12, 2017

To the Retirement Board and Our Members:

The County Employees' and Officers' Annuity and Benefit Fund of Cook County ("the fund") employs a prudent investment strategy to meet its long-term actuarial objective of growing the assets to support member benefits. Together with fund staff and the investment consultant, Callan Associates, the Retirement Board oversees the investment strategy through ongoing study of the portfolio structure, return assumptions, and projected funding needs to support member benefits.

In 2016, the Cook County Fund's investment portfolio performed solidly despite periods of economic turbulence that marked the year.

- Investment assets grew approximately $0.5 billion to $9.0 billion by December 31, 2016, returning +7.7% net of investment management fees over the previous 12-month period.

- Performance (net of fees) over the last five years reflects outperformance of 40 basis points annually (8.0% vs. 7.6% custom benchmark).

- Strong absolute returns from the fund's domestic equity and real estate programs offset positive but meager fixed income and non-U.S. developed equity returns as global political events created swings in market sentiment and confidence about the future.

During 2016, the fund liquidated $198.0 million to meet the shortfall in benefit obligations, as contributions for the year did not keep pace with the growth of benefit payments to members.

The Consultant's Commentary; Master Custodian's certification letter; a summary of the fund's goals, objectives, and guidelines; and selected investment schedules follow for your review. [1]

Sincerely,

Nickol R. Hackett

Nickol R. Hackett
Executive Director and Chief Investment Officer

[1] Data provided to the fund by its custodian and its investment consultant form the basis of the information that is presented throughout the Investment Section. All portfolio rates of return are presented using time and asset-weighted returns. Returns are calculated net of investment manager fees.

County Employees' and Officers' Annuity and Benefit Fund of Cook County
Forest Preserve District Employees' Annuity and Benefit Fund of Cook County
33 N Dearborn St, Suite 1000 | Chicago, IL 60602 | 312.603.1200 | 312.603.9760 fax | www.cookcountypension.com

Investment Consultant's Commentary

Callan

Callan Associates Inc.
120 North LaSalle Street
Suite 2400
Chicago, IL 60602

Main 312.346.3536
Fax 312.346.1356

www.callan.com

June 12, 2017

Board of Trustees
County Employees' and Officers' Annuity and Benefit Fund of Cook County
33 North Dearborn Street, Suite 1000
Chicago, IL 60602

Dear Trustees,

Callan Associates, Inc. is pleased to present the County Employees' and Officers' Annuity and Benefit Fund of Cook County ("Fund") results for fiscal year ended December 31, 2016. As of year-end, the Fund's fair value totaled $9.0 billion, an approximate $540 million increase since December 31, 2015.

The global economy proved to be resilient in 2016 as political surprises in the U.K. Brexit vote in June, and the U.S. presidential election in November created wild swings in sentiment and confidence about the future moved markets around the globe without regard to the underlying economic data.

Domestic equity markets as measured by the S&P 500 Index overcame a significant downturn early to post an +11.96% return for the year. Non-U.S. developed equity markets were positive with a +1.00% return as measured by the MSCI EAFE Index, despite a strengthening dollar that detracted from returns for U.S. investors. Emerging markets saw a rebound from a difficult 2015 with an +11.19% return for the year. Bond markets as represented by Bloomberg Barclays Aggregate Index generated a return of +2.65% for the year, despite a fourth quarter that produced negative returns due to an increase in rates. Real Estate returns were strong once again in 2016 as the NCREIF Open End Diversified Core Equity Index (ODCE) produced a +7.79% return.

As noted in the Schedule of Investment Results, the Fund generated a total return of 7.67% net-of-fees for the year ended December 31, 2016, which exceeded the 6.88% return of the Fund's target benchmark (the Policy Benchmark). In aggregate, the Fund's domestic equity, fixed income and private real estate investments exceeded their benchmarks, while the Fund's international equity investments trailed its benchmark.

Sincerely,

John P. Jackson, CFA
Senior Vice President

Master Custodian's Certification

BNY MELLON

Asset Servicing

Michael J. Beggy
Vice President

June 12, 2017

To the Board of Trustees and the Executive Director of the County Employees' and Officers' Annuity & Benefit Fund of Cook County:

BNY Mellon as custodian of the County Employees' and Officers' Annuity & Benefit Fund of Cook County (the "client") has established an "Account" that holds the clients property in safekeeping facilities of the Custodian (or other custodian banks or clearing operations), provided the recordkeeping of certain property of the client and completed the annual accounting certification for the year January 1, 2016 through December 31, 2016.

In addition, in accordance with the terms of the Custody Agreement dated, November 1, 2007, BNY Mellon also provides the following services as Custodian:

- Market settlement of purchases and sales and engage in other transactions, including free receipts and deliveries, exchanges and other voluntary corporate actions, with respect to securities or property received by the Custodian
- Take actions necessary to settle transactions in futures and/or options contracts, short selling programs, foreign exchange or foreign exchange contracts, swaps and other derivative investments with third parties
- Lend the assets of the Account in accordance with a separate Securities Lending Agreement.
- Invest available cash in any collective fund, including a collective investment fund maintained by the Custodian or and affiliate of the Custodian for collective investment of employee benefit trusts or deposit in an interest bearing account of banking department of Custodian.
- Appoint subcustodians, including affiliates of the custodian, as to part or all of the Account.
- Hold property in nominee name, in bearer form or in book entry form, in a clearinghouse corporation or in a depository.
- Take all action necessary to pay for, and settle authorized transactions.
- Collect income payable to and distributions due to the Account.
- Collect all proceeds from securities, certificates of deposit or other investments which may mature or be called.
- Forward to the authorized party as designated by the client, proxies or ballots that are to be a voted by the authorized party.
- Attend to corporate actions that have no discretionary decision requirement
- Report the value of the Account as agreed upon by the client and custodian.
- Credit the account with income and maturity proceeds on securities contractual payment date.

Sincerely,

Michael J. Beggy
Relationship Executive

Asset Servicing
Room 410 ~ One Mellon Center ~ Pittsburgh, PA 15258-0001
(412) 234-6933 ~ (412) 236-1928 Fax

The Bank of New York Mellon

Summary of Investment Policy

Overview

Under the guidance and direction of the Board and governed by the “prudent man rule,” it is the mission of the County Employees’ and Officers’ Annuity Fund of Cook County (“the Fund”) and the Investment Staff to optimize the total return of the Fund’s investment portfolio through a policy of diversified investments using parameters of prudent risk management as measured on the total portfolio, acting at all times in the exclusive interest of the participants and beneficiaries of the Fund.

To accomplish this mission, the Board and Investment Staff understand and accept their fiduciary obligations to the members of the Fund. These obligations are legal in nature and are outlined in the Illinois Pension Code [40 ILCS 5]. Investments made by the Fund shall satisfy the conditions of the Illinois Pension Code and applicable Illinois law and, in particular, the prudent man rule set forth in the Illinois Pension Code [40 ILCS 5/1-109].

Subject to these fiduciary standards, the Board and Investment Staff shall endeavor at all times to implement the Statement of Investment Policy in a manner consistent with the stated mission of the Fund, while ensuring transparency and compliance with all applicable laws and regulations.

The Policy is set forth by the Board in order to:

- Establish a clear understanding of all involved parties of the investment goals and objectives of the Fund.
- Define and assign the responsibilities of all involved parties.
- Establish the relevant investment horizon for which the Fund assets will be managed.
- Establish risk parameters governing assets of the Fund.
- Establish target asset allocation and re-balancing procedures.
- Establish a methodology and criteria for selecting, retaining and terminating Investment Professionals.
- Offer specific guidance to and define limitations for all Investment Managers regarding the investment of Fund assets.

In summary, the purpose of the Statement of Investment Policy is to formalize the Board’s investment objectives, policies and procedures and to define the duties and responsibilities of the various entities involved in the investment process. The Statement of Investment Policy is intended to serve as a guide, reference tool and communication link between the Board, Investment Staff and Investment Professionals.

Investment Objectives

The primary return objectives of the Fund are to:

- Preserve the safety of principal.
- Exceed, after investment management fees, a customized blended benchmark consistent with prudent levels of risk.
- Create a stream of investment returns to ensure the systematic and adequate funding of actuarially determined benefits through contributions and professional management of Fund assets.

To achieve these objectives, the assets of the Fund have been allocated to meet its actuarial assumed rate of return of 7.5%. To evaluate success, the Board compares the performance of the Fund to the actuarial assumed rate of return and its custom benchmark. This benchmark represents a passive implementation of the historical investment policy targets and it is re-balanced regularly.

While achieving the return objectives, the Fund is able to tolerate certain levels of risk, which are:

- To accept prudent levels of short-term and long-term volatility consistent with the near-term cash flow needs, funding level, and long-term liability structure of the Fund.
- To tolerate appropriate levels of downside risk relative to the Fund's actuarial assumed rate of return of 7.5%. In doing so, the Board will attempt to minimize the probability of underperforming the Fund's actuarial assumed rate of return over the long-term and to minimize the shortfall in the event such underperformance occurs.
- To accept certain variances in the asset allocation structure of the Fund relative to the broad financial markets and peer groups.
- To tolerate certain levels of short-term underperformance by the Fund's Investment Managers.

The investment objectives of the Fund are constrained by applicable law, time, taxes and liquidity. The Fund will operate in accordance with applicable law, as amended. The Fund has a long-term time horizon as the assets are used to pay qualified participant pension benefits. The Fund is a tax-exempt entity, but can be subject to taxes involving unrelated business taxable income ("UBTI"). UBTI is income earned by a tax-exempt entity that does not result from tax-exempt activities. The Fund will attempt to minimize or to avoid incurring UBTI. The liquidity needs of the Fund are to meet the regular cash flow requirements of the Fund.

Asset Allocation and Rebalancing Procedures

The Board reviews the target asset allocation of the Fund at least once every three years. It will take into consideration applicable statutes, the actuarial rate of return of the Fund, the long term nature of the asset pool, the cash flow needs of the Fund and the general asset allocation structure of the Fund's peers. It will make assumptions on the capital markets over the long term and optimize the asset allocation to best meet the actuarial and cash flow needs of the Fund at prudent levels of risk.

The Board establishes the asset allocation targets and ranges and reviews them periodically. To ensure that the allocations meet the risk/return objectives of the Fund, the target allocations will be reviewed annually for reasonableness relative to significant economic market changes or changes to the long-term goals and objectives. Proper implementation of this guideline may require that a periodic adjustment or rebalancing be made to ensure conformance with asset allocation targets. Rebalancing requirements shall be reviewed on a continual basis. Rebalancing may also occur in the event of a change in the allocation percentages by asset class by the Board or as a result of extraordinary market events. Rebalancing shall take place as soon as practical after said change or amendment has been approved.

Schedule of Investment Results

For Year Ended December 31, 2016

	Annualized Returns		
	2016	3 Years	5 Years
Total Fund	7.7%	4.3%	8.0%
Policy Benchmark *	6.9%	4.6%	7.6%
Domestic Equity	14.6%	7.4%	14.0%
Russell 3000	12.7%	8.4%	14.7%
International Equity	2.9%	-1.0%	6.5%
MSCI ACWI ex. U.S.	1.0%	-1.6%	6.5%
Fixed Income	4.1%	3.0%	2.6%
BloomBarc Aggregate	2.7%	3.0%	2.3%
Real Estate	8.8%	10.9%	10.7%
NFI-ODCE Value Weight Net	7.8%	11.0%	11.2%
Private Equity	11.5%	-0.7%	1.4%
CCPF Fund Composite	11.0%	13.0%	12.4%
Hedge Funds	2.7%	3.5%	N/A
Libor-3 Month+4%	4.8%	4.4%	4.4%

**The Policy Benchmark is as follows:*

- *As of December 31, 2016: 32% BloomBarc Aggregate Index, 28.7% Russell 3000 Index, 20% MSCI ACWI ex. U.S. Index, 9% Libor-3 Month+ 4.0% Index, 5.7% NFI-ODCE Value Weight Net, 2.3% Private Equity and 2.3% FTSE NAREIT Equity Index.*

- *As of December 31, 2013: 32% Barclays Aggregate Index, 31% Russell 3000 Index, 20% MSCI ACWI ex. U.S. Index, 9% Libor-3 Month+ 4.0% Index and 8% NCREIF Total Index.*

- *As of December 31, 2011: 25% Barclays Aggregate Index, 38% Russell 3000 Index, 17% MSCI ACWI ex. U.S. Index, 10% BarCap Int. Gov./Credit Inter, 5% Barclays US TIPS Index, 3% S&P Global ex. U.S. <$2B. and 2% NCREIF Total Index.*

N/A - Not Available. Investments not held during that time period.

Note: Returns are calculated using geometrically-linked, time and asset-weighted returns. Returns are calculated net of investment manager fees.

Schedule of Investment Summary and Asset Allocation

	For Year Ended December 31, 2016			For Year Ended December 31, 2015		
Asset Class	Fair Value	Percent of Total	Target	Fair Value	Percent of Total	Target
Domestic Equity	$3,072,578,245	34%	25%	$2,614,801,036	31%	25%
International Equity	1,707,443,965	19%	20%	1,653,138,558	20%	20%
Fixed Income	2,082,274,385	23%	32%	2,013,558,415	24%	32%
Real Estate	633,317,276	7%	8%	760,871,748	9%	8%
Hedge Funds-of-Funds	634,093,947	7%	9%	803,013,247	9%	9%
Private Equity	267,153,632	3%	6%	160,785,243	2%	6%
Short Term Investments	602,067,528	7%	0%	453,717,122	5%	0%
Total Investments	$8,998,928,978	100%	100%	$8,459,885,369	100%	100%

Schedule of Top Ten Largest Holdings - Excludes Commingled Funds

For year ended December 31, 2016

Top 10 Domestic Equity Holdings	Sector	Shares	Fair Value	% of Total
Apple Inc.	Technology	239,177	$27,701,480	0.9%
Microsoft Corp.	Technology	442,393	27,490,301	0.9%
Intel Corp.	Technology	438,435	15,898,410	0.5%
Exxon Mobil Corp.	Energy	168,802	15,236,069	0.5%
General Electric Co.	Capital Goods	455,135	14,382,266	0.5%
Berkshire Hathaway Inc.	Financial Services	86,347	14,072,834	0.5%
Citigroup Inc.	Financial Services	225,506	13,401,822	0.4%
Bank of America Corp.	Financial Services	605,506	13,381,683	0.4%
Amazon.com Inc.	Services	17,521	13,138,472	0.4%
Johnson & Johnson	Healthcare	111,814	12,882,091	0.4%
Total Top 10 Domestic Equity Holdings		2,790,636	$ 167,585,428	5.5%
Total Domestic Equity			$3,072,578,245	100.0%

Top 10 International Equity Holdings	Sector	Shares	Fair Value	% of Total
Roche Holding AG (Switzerland)	Healthcare	63,079	$14,436,144	0.8%
Anheuser-Busch InBev SA/NV (Belgium)	Consumer Goods	124,606	13,215,103	0.8%
Prudential PLC (United Kingdom)	Financial Services	629,833	12,666,070	0.7%
Shire PLC (Ireland)	Biotechnology	218,394	12,640,174	0.7%
Nestle SA (Switzerland)	Consumer Goods	169,494	12,182,355	0.7%
British American Tobacco PLC (United Kingdom)	Tobacco	194,246	11,092,528	0.6%
Siemens AG (Germany)	Captial Goods	78,150	9,627,674	0.6%
Sampo OYJ (Finland)	Insurance	206,425	9,272,983	0.5%
Total SA (France)	Basic Materials	167,170	8,590,435	0.5%
Fresenius SE & Co. KGAA (Germany)	Healthcare	109,639	8,587,555	0.5%
Total Top 10 International Equity Holdings		1,961,036	$ 112,311,021	5.7%
Total International Equity			$1,707,443,965	100.0%

For year ended December 31, 2016

Top 10 Fixed Income Holdings	Sector	Par	Fair Value	% of Total
Commitment to Purchase FNMA Pools 3.500% 01/01/2047	U.S. Agencies	16,000,000	$16,398,720	0.8%
U.S. Treasury Note 2.500% 05/15/2024	U.S. Governments	13,483,000	13,684,706	0.7%
U.S. Treasury Bond 2.750% 08/15/2042	U.S. Governments	13,033,000	12,312,666	0.6%
U.S. Treasury Note 2.125% 05/15/2025	U.S. Governments	11,970,000	11,734,311	0.6%
U.S. Treasury Note 1.125% 09/30/2021	U.S. Governments	11,950,000	11,526,612	0.6%
U.S. Treasury - CPI Inflation 1.375% 02/15/2044	U.S. Tips	10,273,070	11,211,104	0.5%
U.S. Treasury Note .875% 02/28/2017	U.S. Governments	10,517,000	10,524,046	0.5%
U.S. Treasury Note .875% 01/31/2018	U.S. Governments	10,460,000	10,452,260	0.5%
U.S. Treasury Note 2.000% 11/15/2021	U.S. Governments	10,370,000	10,398,725	0.5%
Commitment to Purchase GNMA II Jumbos 3.000% 01/20/2047	U.S. Agencies	9,975,000	10,099,887	0.5%
Total Top 10 Fixed Income Holdings		118,031,070	$ 118,343,037	5.8%
Total Fixed Income			$2,082,274,385	100.0%

A complete list of the portfolio holdings is available for review upon request.

Schedule of Investment Manager Fees and Assets Under Management

For year ended December 31, 2016

Asset Category	Investment Manager Fees	Assets Under Management
Global Equity		
Adelante Capital Management	$ 429,460	$ 72,774,022
Ariel Investments	347,552	48,910,312
CastleArk Management	966,318	156,956,527
Channing Capital Management	1,355,592	244,781,450
Fiduciary Management Associates	685,262	126,623,657
Fortaleza Asset Management, Inc.	122,973	33,931,036
Franklin Templeton Investments	1,852,438	250,198,033
Frontier Capital Management	992,505	137,057,245
Great Lakes Advisors, Inc.	398,055	284,125,598
Herndon Capital Management	185,735	-
J.P. Morgan Asset Management	1,180,526	261,933,333
Killian Capital Management	296,157	187,605,648
Lazard Asset Management, LLC	554,884	259,517,649
Lombardia Capital Partners	149,214	25,243,634
Mondrian Investment Partners, Ltd.	929,628	120,755,971
Progress Investment Management	1,681,315	266,920,147
RhumbLine Advisers	79,161	733,320,118
Russell Implementation Services, Inc.	513,381	694,710,881
State Street Global Advisors	313,997	647,644,651
Wells Capital Management	817,731	90,775,749
William Blair & Company	954,612	136,236,549
Total Global Equity	14,806,496	4,780,022,210
Fixed Income		
Chicago Equity Partners	200,571	104,416,858
Franklin Templeton Investments	585,870	206,118,267
LM Capital Group, LLC	608,901	388,602,778
Loomis Sayles & Company, LP	811,179	344,726,902
MacKay Shields	861,181	326,735,748
Mellon Capital	92,272	363,319,878
NCM Capital	294,769	123,145,367
New Century Investment Management	429,112	224,544,548
Russell Implementation Services, Inc.	-	664,039
Total Fixed Income	3,883,855	2,082,274,385

Schedule of Investment Manager Fees and Assets Under Management (continued)

For year ended December 31, 2016

Asset Category	Investment Manager Fees	Assets Under Management
Real Estate		
Angelo Gordon & Co.	$ 224,717	$ 7,867,919
Blackstone Alternative Asset Management	450,000	11,846,638
Capri Capital Partners	-	15,007
CBRE Global Investors	432,659	45,804,999
J.P. Morgan Asset Management	2,110,164	247,049,922
John Buck Company	16,091	230,201
LaSalle Investment Management	306,925	24,730,685
Mesirow Financial	297,762	29,066,125
Prudential Real Estate Investors	1,635,473	231,002,063
Russell Implementation Services, Inc.	-	35,703,717
Total Real Estate	5,473,791	633,317,276
Hedge Fund of Funds		
Blackstone Alternative Asset Management	4,327,861	446,348,433
Diversified Global Asset Management	561,148	16,335,874
The Rock Creek Group	1,264,181	171,409,640
Total Hedge Funds of Funds	6,153,190	634,093,947
Private Equity		
Arch Venture Partners	-	2,157,258
Credit Suisse Securities	-	447,734
Evergreen Venture Partners	-	3,862,544
Lightspeed Venture Partners	-	832,932
Mesirow Financial	1,441,932	235,354,238
Muller and Monroe Asset Management	352,398	13,821,015
Pacific Venture Group	1,262	-
SPC Capital Management	74,167	5,926,392
Trident Capital	-	1,524,965
William Blair & Company	-	11,925
Wind Point Partners	-	3,214,629
Total Private Equity	1,869,759	267,153,632
Short Term Investments		
BNY Mellon	-	602,067,528
Total	$32,187,091	$8,998,928,978

Schedule of Brokerage Commissions

For year ended December 31, 2016

Broker Name	Number of Shares	Commissions	Cost per Share
Domestic Equity Commissions			
Loop Capital Markets, LLC*	8,500,556	$ 244,971	$0.029
Pershing LLC	8,464,574	162,378	0.019
Merrill Lynch Securities	3,841,050	124,113	0.032
Credit Suisse	3,765,816	108,535	0.029
Stifel, Nicolaus & Co.	2,049,100	64,709	0.032
Goldman Sachs	2,132,001	62,776	0.029
Robert W. Baird & Co., Inc.	1,589,995	55,810	0.035
Penserra Securities*	1,811,184	48,965	0.027
RBC Capital Markets LLC	1,427,244	44,046	0.031
Cheevers & Co., Inc.*	1,597,178	40,966	0.026
William Blair & Co.	1,281,810	38,997	0.030
Jefferies & Co., Inc.	1,091,524	31,891	0.029
J.P. Morgan Securities	1,193,806	31,736	0.027
King & Associates	1,012,307	30,026	0.030
Brokers with < $30,000 of Commissions	20,862,263	554,902	0.027
Total Domestic Equity Commissions	60,620,408	$1,644,821	$0.027

**Women/minority-owned brokerage firm. The Retirement Board's brokerage policy encourages investment manager, as they search for best possible trade execution, to utilize women/minority-owned enterprises, specifically firms headquartered in the State of Illinois.*

For year ended December 31, 2016

Broker Name	Number of Shares	Commissions	Cost per Share
International Equity Commissions			
BNY Convergex	13,877,655	$110,415	$0.008
Merrill Lynch Securities	12,112,190	66,961	0.006
UBS Securities	10,031,852	43,520	0.004
Citigroup Global Markets, Inc.	13,537,005	42,062	0.003
Goldman Sachs	9,879,167	33,425	0.003
Deutsche Bank Securities, Inc.	2,163,310	30,398	0.014
Morgan Stanley & Co.	3,223,353	29,934	0.009
Credit Suisse	3,148,774	25,249	0.008
BNP Paribas Securities	5,186,102	22,987	0.004
J.P. Morgan Securities	6,051,589	20,262	0.003
Brokers with < $20,000 of Commissions	72,373,596	290,186	0.004
Total International Equity Commissions	151,584,593	$715,399	$0.005

**Women/minority-owned brokerage firm. The Retirement Board's brokerage policy encourages investment manager, as they search for best possible trade execution, to utilize women/minority-owned enterprises, specifically firms headquartered in the State of Illinois.*

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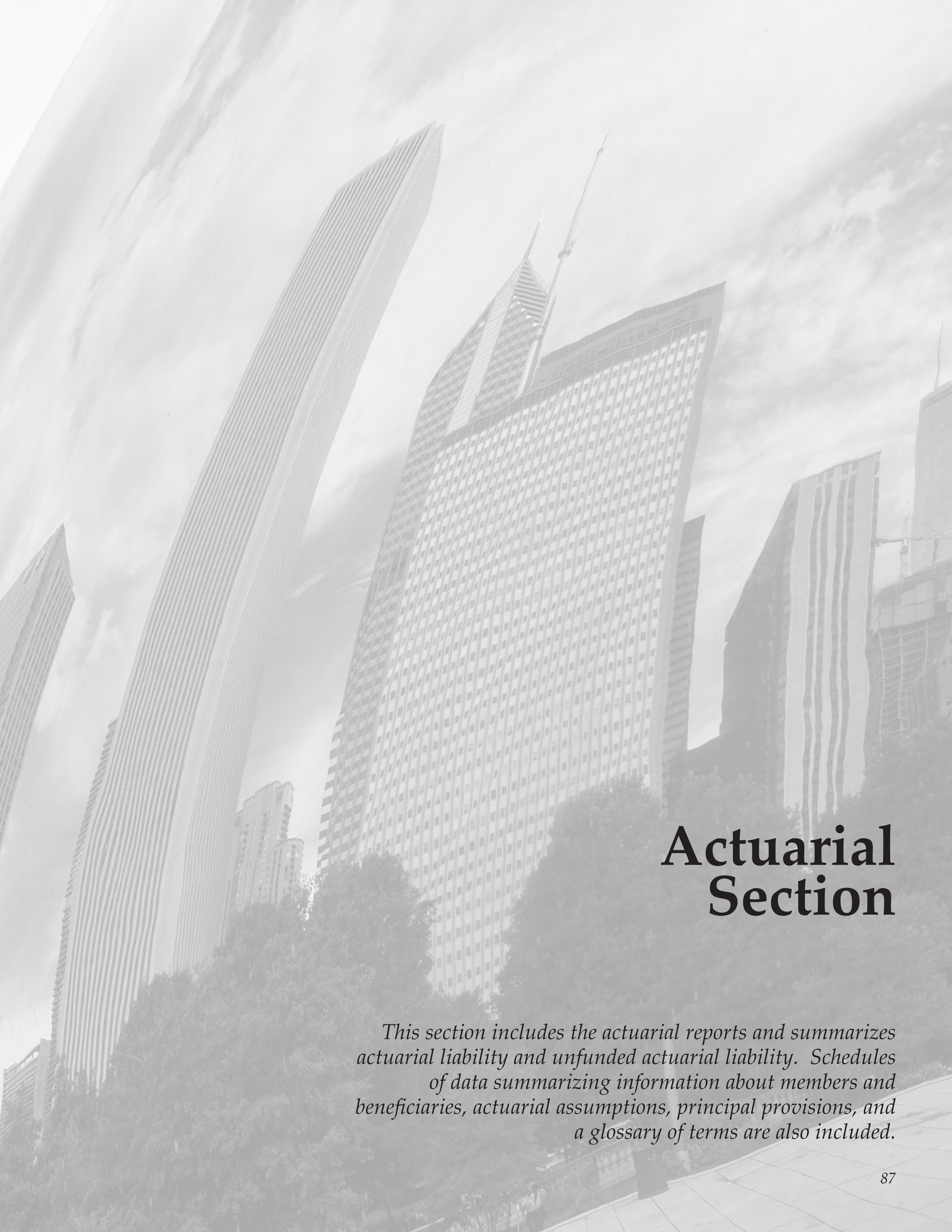

Actuarial Section

This section includes the actuarial reports and summarizes actuarial liability and unfunded actuarial liability. Schedules of data summarizing information about members and beneficiaries, actuarial assumptions, principal provisions, and a glossary of terms are also included.

Actuarial Certification - Pension Benefits

CONDUENT

June 2017

Board of Trustees
County Employees' and Officers' Annuity and Benefit Fund of Cook County
Chicago, Illinois

Certification of Actuarial Valuation

Ladies and Gentlemen:

This report summarizes the actuarial valuation results of the County Employees' and Officers' Annuity and Benefit Fund of Cook County ("CEABF" or "the Fund") as of December 31, 2016 performed by Conduent HR Consulting, LLC ("Conduent"), formerly Buck Consultants, LLC.

The actuary performs the valuation annually. The last valuation for the Plan was completed for the December 31, 2015 plan year. All Schedules in the report, with the exception of pages 104-105, were prepared by the actuary. The actuarial valuation is based on audited financial and member data provided by the CEABF staff and summarized in this report. The benefits considered are those delineated in the Plan, the CEABF was established on January 1, 1926 and is governed by legislation contained in the Illinois Compiled statutes, particularly Chapter 40, as amended and restated effective December 31, 2016. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

All costs, liabilities and other factors under the Plan were determined in accordance with generally accepted actuarial principles and procedures. An actuarial cost method is used to measure the actuarial liabilities which we believe is reasonable. Certain historical information with respect to costs, liabilities, assets, accounting disclosure information, etc. has been derived from the prior actuary's reports and information provided by the Plan sponsor. That information is presented for comparison purposes and Conduent has not verified the validity of any of those calculations or data. Conduent is solely responsible for the actuarial data and actuarial results presented in this report, excluding the historical information and data just described. This report fully and fairly discloses the actuarial position of the Plan.

The CEABF is funded by Employer and Member Contributions. The County levies a tax annually equal to the total amount of contributions made by the members in the calendar year 2 years prior to the year of the levy, multiplied by 1.54. This statutory methodology currently represents less than 40% of the actuarial required contribution and results in projected insolvency of CEABF by 2039. We recommend that a funding policy be legislated that is sufficient to pay the Normal Costs of active Plan members, Plan expenses, and amortize the Unfunded Actuarial Accrued Liability as a level percent of payroll (or salary) over a period no longer than 30 years.

The economic and demographic assumptions used in the valuation were adopted by the Board in consultation with Conduent HR Consulting. The Board's established practice is to review the experience of the CEABF at least once every five years to determine if any changes to the valuation assumptions are warranted. The assumptions used in the valuation are based on recommendations made and approved by the Board as part of an Experience Study covering plan years from January 1, 2009 through December 31, 2012. This experience study was performed by Conduent in January, 2014 and resulted in changes in the following assumptions:

Permanent Withdrawal from Active Status

Retirement

Salary Increase

Inflation

Mortality and future mortality improvement

In selecting economic assumptions, the interest rate of 7.50% is based upon a review of the existing portfolio structure, a review of recent experience, and information from the Board. The salary increase assumption is based on actual experience and future expectations of inflation, merit, and productivity components. In our opinion, the actuarial assumptions used are appropriate for purposes of the valuation and are reasonably related to the experience of the CEABF and to reasonable long-term expectations. The mortality improvement assumption was selected in accordance with Actuarial Standard of Practice No. 35. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown on pages 117-121.

The assumptions and methods used to determine the Annual Determined Contributions (ADC) of the CEABF as outlined in this report and all supporting schedules meet the parameters and requirements for disclosure of Governmental Accounting Standards Board (GASB) Statement No. 67, Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans. Based on member data and asset information provided by the CEABF staff, we have prepared the Schedule of Funding Progress and Schedule of Employer Contributions that are included in the Financial Section of the Comprehensive Annual Financial Report.

Because of the risk of misinterpretation of actuarial results, you should ask us to review any statement you wish to make on the results contained in this report. Conduent will accept no liability for any such statement made without our prior review.

Future actuarial measurements may differ significantly from the current measurement presented in this report due to such factors as: plan experience different from that anticipated by the economic and demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for

These measurements; and changes in plan provisions or applicable law. Due to the limited scope of this report, an analysis of the potential range of such future measurements has not been performed.

Please note that GASB Statement No. 25 (Financial Reporting for Defined Benefit Pension Plans) is applicable for fiscal years ending prior to 2014 and has been replaced by GASB Statement No. 67 (Financial

Reporting for Pension Plans) for fiscal years ending 2014 and later. Similarly, GASB Statement No. 27 (Accounting for Pensions by State and Local Governmental Employers) is applicable for fiscal years ending prior to 2015 and has been replaced by GASB Statement No. 68 (Accounting and Financial Reporting for Pensions) for fiscal years ending 2015 and later. We have prepared required accounting information for GASB Statement Nos. 67 and 68 for the measurement year ending December 31, 2016, based on a valuation date of December 31, 2016.

The undersigned is an Enrolled Actuary, an Associate of the Society of Actuaries and Member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all Applicable Actuarial Standards of Practice. He is available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

Respectfully submitted,

Larry Langer, EA, ASA, MAAA, FCA

Principal, Wealth Consulting

Conduent

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Actuarial Valuation - Pension Benefits

Overview

The County Employees' and Officers' Annuity and Benefit Fund of Cook County ("CEABF" or "the Fund) provides pension and ancillary benefit payments to the active, retired and separated employees of Cook County. A Retirement Board comprised of retiree, employee, and appointed representatives is responsible for administering the Plan and providing oversight of the investment policy. This report presents the results of the actuarial valuation of the Plan benefits as of the valuation date of December 31, 2016.

Purpose

An actuarial valuation is performed on the Plan annually as of the end of the fiscal year. The main purposes of the actuarial valuation detailed in this report are:

1. To determine the employer contribution necessary to fund the CEABF in an actuarially sound manner;
2. To disclose the funding assets and liability measures as of the valuation date;
3. To disclose the accounting measures for the Plan required by GASB No. 67 as of the end of the last fiscal year;
4. To review the current funded status of the Plan;
5. To compare actual and expected experience under the Plan during the last fiscal year;
6. And to report trends in contributions, assets, liabilities, and funded status over the last several years.

Because of the risk of misinterpretation of actuarial results, you should ask us to review any statement you wish to make on the results contained in this report. Conduent will accept no liability for any such statement made without our prior review. This actuarial valuation provides a "snapshot" of the funded position of the Plan based on the Plan provisions, membership, assets, and actuarial assumptions as of the valuation date.

Membership

Actives: As of December 31, 2016, there were 20,969 employees in active service (including 171 on disability) covered under the provisions of the Plan. The significant age, service, salary and accumulated contribution information for these employees is summarized below, along with comparative figures from the last actuarial valuation one year earlier.

	December 31, 2016	December 31, 2015
Number of active employees	20,969	21,596
Average age	47.4	47.1
Average years of service	13.8	13.5
Total annual salary	$1,580,251,254	$1,572,417,298
Average annual salary	$ 75,361	$ 72,811
Total accumulated contributions	$1,790,559,652	$1,755,975,205
Average accumulated contributions	$ 85,391	$ 81,310

The number of active members decreased by 2.9% from the previous valuation date. The average age and service of the active members increased by 0.3 year each. The total annual valuation salary increased by 0.5%. The average salary increased by 3.5% from the previous valuation.

Disabilities: There were 171 disabled members (included in the active data). There were 171 disabilities in the prior year.

Retirees and Beneficiaries: In addition to the active members, there were 15,222 retired members and 2,687 beneficiaries who are receiving monthly benefit payments on the valuation date. The significant age and annual benefit information for these members are summarized below with comparative figures from the last actuarial valuation performed one year earlier.

	December 31, 2016	December 31, 2015
Number of members receiving payments		
Retirees	15,222	14,922
Beneficiaries	2,687	2,675
Total	17,909	17,597
Average age	71.9	71.6
Annual benefit amounts		
Retirees	$ 646,002,778	$ 608,178,046
Beneficiaries	$ 49,174,371	$ 46,814,690
Total	$ 695,177,149	$ 654,992,736
Average annual benefit payments	$ 38,817	$ 37,222

The number of retired members and beneficiaries increased by 1.8% from the previous valuation date. The average age of the retired members increased by 0.3 years. The total annual benefit payments for these members increased by 6.1% from the previous valuation date.

Membership (continued)

Inactives: In addition to the active and retired members, there were 14,005 inactive members who did not elect to receive their accumulated contributions when they left covered employment. The age information for these inactive members is summarized below with comparative figures from the last actuarial valuation one year earlier.

	December 31, 2016	December 31, 2015
Number of inactive members	14,005	13,190
Average age	47.60	47.40

The number of inactive members increased by 6.2% from the previous valuation. The average age of the inactive members increased by 0.2 years.

In our opinion, the membership data collected and prepared for use in this actuarial valuation meets the data quality standards required under Actuarial Standards of Practice No. 23.

Plan Assets

The Plan's assets are held in trust and invested for the exclusive benefit of Plan members. The trust is funded by member and employer contributions, and pays benefits directly to eligible members in accordance with Plan provisions. The assets are audited annually and are reported at fair value. On a fair value basis, the Plan has a Net Position Available for Benefits of $9.12 billion as of December 31, 2016. This includes an increase of $472.6 million over the Net Position Available for Benefits of $8.64 billion as of December 31, 2015. During 2016, the fair value of assets experienced an investment rate of return of 7.7%, as reported by the investment consultant.

In order to reduce the volatility investment gains and losses can have on the Plan's actuarially required contribution and funded status, the Board has adopted a five-year smoothing method to determine the actuarial value of assets used for funding purposes. This method recognizes gains and losses, i.e. the difference between actual investment return during the year and the expected return based on the valuation interest rate, on a level basis over a five year period. In our opinion, this method complies with Actuarial Standards of Practice No. 44.

As of December 31, 2016, the assets available for benefits on an actuarial value basis were $9.5 billion. This includes an increase of $497.2 million over the actuarial value of assets of $9.0 billion as of December 31, 2015. During 2016, the actuarial value of assets experienced an actuarial rate of return of 7.3% which is based on a five-year averaging of investment returns

A summary of the assets held for investment, a summary of changes in assets, and the development of the actuarial value of assets is shown on pages 104-106.

Actuarial Experience

Differences between the expected experience based on the actuarial assumptions and the actual experience create changes in the actuarial accrued liability, actuarial value of assets, and the unfunded actuarial accrued liability from one year to the next. These changes create an actuarial gain if the experience is favorable and an actuarial loss if the experience is unfavorable. The Plan experienced a total net actuarial gain of $95.8 million during the prior year. This net gain is about 0.6% of the Plan's prior year actuarial accrued liability. The net gain is a combination of two principal factors, demographic experience and investment performance under actuarial smoothing. Below is a more detailed discussion. .

The demographic experience tracks actual changes in the Plan's population compared to the assumptions for decrements such as mortality, turnover, and retirement, as well as pay increases. The Plan experienced a demographic gain of $110.3 million during the year ending December 31, 2016. This gain decreased the unfunded actuarial accrued liability by $110.3 million and increased the funded ratio by 0.4%.

There were 19,604 active members who were also reported active in the December 31, 2015 actuarial valuation. The total salary for this group increased by 4.7%, which was higher than the 4.2% increase we expected for the group.

Continued tracking of the demographic experience is warranted in order to confirm the appropriateness of the actuarial assumptions. Details of the demographic, economic, and other assumptions used to value the Plan liabilities and normal cost can be found in Section 5. In our opinion, the economic assumptions comply with Actuarial Standards of Practice No. 27 and the demographic assumptions comply with Actuarial Standards of Practice No. 35.

On the asset side, the rate of return on the fair value of assets for the year ending December 31, 2016 was reported to be 7.7%, which was higher than the assumed rate of 7.5%.

The rate of return on the actuarial value of Plan assets for the year ending December 31, 2016 was approximately 7.3% compared to the assumption of 7.5%, resulting in an asset loss of $14.5 million. The actuarial value of assets also recognizes deferred portions of prior years' gains and losses on fair value. The investment loss recognized this year is primarily due to the investment loss in 2015. The actuarial value of the assets recognizes only 20% of the 2016 unexpected change in fair value, delaying the recognition of the remaining 80% over the next four years. The loss, based on the actuarial methodology, increased the unfunded actuarial accrued liability by $14.5 million and decreased the funded ratio by 0.1%. It should be noted that the Plan's assumed asset return of 7.5% is a long-term rate and short-term performance is not necessarily indicative of expected long-term future returns.

A summary of the actuarial gains and losses experienced during the prior year is shown on page 101.

Actuarial Contributions

The current contribution mechanism is not sufficient to fund the CEABF in an actuarially sound manner. The County levies a tax annually equal to the total amount of contributions made by the members in the calendar year 2 years prior to the year of the levy, multiplied by 1.54. This funding policy is insufficient to meet the needs of the CEABF. We project that the CEABF will become insolvent in 2039. **We recommend that a funding policy be legislated that is sufficient to pay the Normal Costs of active Plan members, Plan expenses, and amortize the unfunded actuarial accrued liability as a level dollar amount over a period no longer than 30 years.** We summarize those costs in the next paragraph.

The normal cost represents the cost of the benefits that accrue during the year for active members under the Entry Age Actuarial Cost Method. It is determined as a level percentage of pay which, if paid from entry age to the assumed retirement age, assuming all the actuarial assumptions are exactly met by experience, would accumulate to a fund sufficient to pay all benefits provided by the Plan. The expected member contributions are subtracted from this amount to determine the employer normal cost. The employer normal cost for 2017 has been determined to be $92.7 million, or 5.9% of pay.

The cost method also determines the actuarial accrued liability which represents the value of all accumulated past normal cost payments. This amount is compared to the actuarial value of assets to determine if the Plan is ahead or behind in funding as of the valuation date. The difference between the total actuarial accrued liability and the actuarial value of assets equals the amount of unfunded actuarial accrued liability or surplus (if negative) on the valuation date. This amount is amortized and added to the employer normal cost to determine the annual actuarially required employer contribution for the year.

The unfunded actuarial accrued liability as of December 31, 2016 is $5.97 billion. This represents a small increase of $23.0 million in the unfunded actuarial accrued liability from last year's amount of $5.95 billion. The annual payment required to amortize the unfunded actuarial accrued liability of $5.97 billion as of December 31, 2016 is $470.1 million, or 29.8% of pay.

The annual actuarially required employer contribution for 2017 is $562.8 million, or 35.6% of pay. This represents an increase of $47.9 million in the employer contribution amount of $514.9 million for 2016, or a 2.9% of pay increase from last year's employer contribution rate of 32.7%.

The actuarial liabilities and development of the annual actuarial employer contribution is shown on pages 99-100.

Funded Status

The funded status is a measure of the progress that has been made in funding the Plan as of the valuation date. It is determined as a ratio of the actuarial value of assets divided by the total actuarial accrued liability on the valuation date. A ratio of over 100% represents a Plan that is ahead in funding, and a ratio of less than 100% represents a Plan that is behind in funding on the valuation date.

As of December 31, 2016 the funded ratio of the Plan is 61.4%. This represents an increase of 1.2% from last year's funded ratio of 60.2% as of December 31, 2015.

Where presented, references to "funded ratio" and "unfunded accrued liability" are typically measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded accrued liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the plan if the plan were to settle (i.e. purchase annuities) for a portion or all of its liabilities.

A history of the unfunded actuarial accrued liability and the funded ratio is shown on page 103.

Accounting Information

The Governmental Accounting Standards Board (GASB) issues statements which establish financial reporting standards for defined benefit pension Plans and accounting for the pension expenditures and expenses for governmental employers. The required financial reporting information for the Plan and the Employer under GASB No. 67 can be found on pages 108-111.

Changes in Plan Provisions

There were no changes in benefits or other Plan provisions considered in this actuarial valuation since the last valuation performed as of December 31, 2015.

Changes in Actuarial Assumptions, Methods, or Procedures

There have been no changes in asset valuation method or actuarial assumptions since the last actuarial valuation performed as of December 31, 2015.

Comparative Summary of Key Actuarial Valuation Results

	Actuarial Valuation as of	
	December 31, 2016	December 31, 2015
Summary of Member Data		
Number of Members Included in the Valuation		
Active Members	20,969	21,596
Retirees and Beneficiaries	17,909	17,597
Inactive Members	14,005	13,190
Total	52,883	52,383
Annual Payroll		
Average (actual)	$75,361	$72,811
Annual Benefit Payments		
Retirees and Beneficiaries (Average) [1]	$38,817	$37,222
Investment Returns		
Fair Value - Rate of Return (net of investment expenses) [2]	7.7%	-0.1%
Actuarial Value - Rate of Return	7.3%	6.6%
Summary of Assets and Liabilities		
Total Actuarial Accrued Liability	$15,456,773,985	$14,936,591,336
Actuarial Value of Assets	$ 9,488,223,349	$ 8,991,018,918
Unfunded Actuarial Accrued Liability	$ 5,968,550,636	$ 5,945,572,418
Funded Ratio	61.39%	60.19%
Employer Actuarial Required Contribution		
Employer Normal Cost	$ 92,709,250	$ 107,422,955
Amortization of Unfunded Actuarial Accrued Liability (Surplus)	$ 470,106,566	$ 407,465,533
Employer Actuarial Required Contribution	$ 562,815,816	$ 514,888,488

[1] *The verage annual benefit payments for retirees only is $42,439 as of December 31, 2016 and $40,757 as of December 31, 2015.*

[2] *Rate of return determined by the investment consultant.*

Actuarial Liabilities and Normal Cost

For the Fiscal Year ending December 31, 2016

Actuarial Liabilities	**Totals**
1. Present Value of Projected Benefits for Active Members	
Retirement Benefits	$ 7,648,274,892
Withdrawal Benefits	328,501,017
Death Benefits	156,974,641
Total	8,133,750,550
2. Retired Members and Beneficiaries Receiving Benefits	8,305,339,574
3. Inactive Members with Deferred Benefits	574,027,302
4. Total Present Value of Projected Benefits (1. + 2. + 3.)	17,013,117,426
5. Present Value of Future Normal Costs	1,556,343,442
6. Total Actuarial Accrued Liability (4. – 5.)	$15,456,773,984

Normal Cost	**Totals**	**% of Pay**
1. Active Members		
a. Retirement Benefits	$ 183,261,659	11.55%
b. Withdrawal Benefits	32,495,416	2.05%
c. Duty Disability Benefits	122	0.00%
d. Ordinary Disability Benefits	393,237	0.02%
e. Death Benefits	5,453,044	0.35%
f. Administrative Expenses	5,642,233	0.34%
2. Total Normal Cost	227,245,711	14.52%
3. Expected Member Contribution	134,536,461	8.49%
4. Employer Normal Cost (2. – 3.)	$ 92,709,250	6.03%

Actuarial Contributions*

Valuation Date	Fiscal Year Ending December 31, 2016	2015
1. Valuation Payroll	$ 1,580,251,254	$ 1,572,417,298
2. Total Actuarial Accrued Liability		
a. Active Members		
i. Retirement Benefits	6,297,813,881	6,134,621,054
ii. Withdrawal Benefits	161,814,058	162,369,404
iii. Death Benefits	117,779,170	116,064,713
iv. Total	6,577,407,109	6,413,055,171
b. Retired Members and Beneficiaries Receiving Benefits	8,305,339,574	7,864,534,443
c. Inactive Members with Deferred Benefits	574,027,302	659,001,722
d. Total (2.a.iv. + 2.b. + 2.c.)	15,456,773,985	14,936,591,336
3. Actuarial Value of Assets	9,488,223,349	8,991,018,918
4. Unfunded Actuarial Accrued Liability (UAAL) (2.d. - 3.)	5,968,550,636	5,945,572,418
5. Funded Ratio (3. / 2.d.)	61.39%	60.19%
6. UAAL as a Percent of Annual Payroll (4. / 1.)	377.70%	378.12%

Development of Employer Contribution	Fiscal Year Ending December 31, 2018	2017
7. Amortization Payment for UAAL		
a. Amount	470,106,566	407,465,533
b. As a % of pay	29.75%	25.91%
8. Employer Normal Cost		
a. Amount	92,709,250	107,422,955
b. As a % of pay	5.87%	6.83%
9. Employer Actuarial Required Contribution		
a. Amount	562,815,816	514,888,487
b. As a % of pay	35.62%	32.74%
10. Funding Period (years)	30	30

** The contribution rates above are amounts needed to fund the CEABF in an actuarially responsible manner.*

Actuarial (Gain)/Loss

Development of Actuarial (Gain) / Loss	Amount
1. Expected Actuarial Accrued Liability	
a. Actuarial Accrued Liability at December 31, 2015	$14,936,591,336
b. Normal Cost at December 31, 2015	228,783,093
c. Interest on a. + b. to End of Year	1,137,403,082
d. Benefit Payments and Refunds, with Interest to End of Year	735,687,700
e. Expected Actuarial Accrued Liability Before Changes (a. + b. + c. - d.)	15,567,089,811
f. Change in Actuarial Accrued Liability at December 31, 2016, Due to Change in Actuarial Assumptions	0
g. Change in Actuarial Accrued Liability at December 31, 2016, Due to Change in Actuarial Methods	0
h. Expected Actuarial Value of Assets at December 31, 2016 (e. + f. + g.)	15,567,089,811
2. Actuarial Accrued Liability at December 31, 2016	15,456,773,985
3. Liability (Gain) / Loss (2. – 1.h.)	(110,315,826)
4. Expected Actuarial Value of Assets	
a. Actuarial Value of Assets at December 31, 2015	8,991,018,918
b. Interest on a. to End of Year	674,326,419
c. Contributions Made for December 31, 2016	558,104,905
d. Interest on c. to End of Year	20,550,577
e. Benefit Payments and Administrative Expenses with Interest to End of Year	741,259,120
f. Change in Actuarial Value of Assets at December 31, 2016 due to Change in Method	0
g. Expected Actuarial Value of Assets at December 31, 2016 (a. + b. + c. + d. – e. – f.)	9,502,741,699
5. Actuarial Value of Assets as of December 31, 2016	9,488,223,349
6. Actuarial Asset (Gain) / Loss (4.g. - 5.)	14,518,350
7. Actuarial (Gain) / Loss (3. + 6.)	$ (95,797,476)

Analysis of Experience

Analysis of Actuarial (Gains) and Losses
Resulting From Differences Between Assumed Experience and Actual Experience

Type of (Gain) or Loss	Year End December 31, 2016	As % of Last Year's AAL
1. COLA Experience	$ 0	0.00%
2. Salary Experience	2,613,304	0.02%
3. Investment Experience	14,518,350	0.10%
4. Retiree Mortality Experience	(98,296,918)	-0.66%
5. Contribution Shortfall	131,424,225	0.88%
6. (Gain) or Loss During Year From Experience, (1. + 2. + 3. + 4. + 5.)	50,258,961	0.34%
7. Asset Valuation Method	0	0.00%
8. Past Service Amortization Change	0	0.00%
9. Assumption and Method Changes	0	0.00%
10. Coding Changes	0	0.00%
11. Other (turnover, retirement ages, service purchase, etc.)	(146,056,437)	-0.98%
12. Total (Gain) or Loss During Year, (6. + 7. + 8. + 9. + 10.+ 11.)	$ (95,797,476)	-0.64%

Actuarial Balance Sheet

Financial Resources	December 31, 2016
1. Actuarial Value of Assets	$ 9,488,223,349
2. Present Value of Future Contributions	
a. Expected Member Contributions	921,403,259
b. Employer Normal Cost	634,940,183
c. Total	1,556,343,441
3. Unfunded Actuarial Accrued Liability/(Reserve)	5,968,550,636
4. Total Assets (1. + 2.c. + 3.)	17,013,117,426
Benefit Obligations	
1. Present Value of Future Benefits	
a. Active Members	8,133,750,550
b. Retirees and Beneficiaries	8,305,339,574
c. Inactive Members	574,027,302
d. Total	$17,013,117,426

History of UAAL and Funded Ratio

Valuation Date December 31,	Actuarial Accrued Liability (AAL)	Actuarial Value of Assets (AVA)	Funded Ratio (AVA as a % of AAL)	Unfunded Actuarial Accrued Liability (UAAL)
2007	$ 9,386,287,797	$8,059,879,804	85.87%	$ 1,326,407,993
2008 [1]	10,097,027,865	8,036,074,797	79.59%	2,060,953,068
2009 [1]	11,489,081,298	7,945,567,096	69.16%	3,543,514,202
2010 [1]	12,023,222,885	7,982,368,659	66.39%	4,040,854,226
2011 [1]	12,628,274,561	7,897,102,116	62.54%	4,731,172,445
2012 [1]	13,418,486,943	7,833,882,926	58.38%	5,584,604,017
2013 [1]	13,636,576,177	8,381,444,287	61.46%	5,255,131,890
2014 [1]	14,140,547,353	8,810,509,070	62.31%	5,330,038,283
2015 [1]	14,936,591,336	8,991,018,918	60.19%	5,945,572,418
2016 [1]	15,456,773,985	9,488,223,349	61.39%	5,968,550,636

[1] *Pension benefits only*

Reconciliation of Change in Unfunded Actuarial Liability

Development of Unfunded Actuarial Liability	Amount
1. Unfunded Actuarial Accrued Liability as of December 31, 2015	$5,945,572,418
2. Employer Contribution Requirement of Normal Cost Plus Interest on Unfunded Liability for Period January 1, 2016 to December 31, 2016	561,397,608
3. Actual Employer Contribution for the Year, Plus Interest*	429,973,383
4. Increase in Unfunded Liability Due to Employer Contribution Plus Interest Being Less Than Normal Cost Plus Interest on Unfunded Liability (2. - 3.)	131,424,225
5. Increase/(Decrease) in Unfunded Liability Due to Investment Return Lower/(Higher) Than Assumed	14,518,350
6. Increase/(Decrease) in Unfunded Liability Due to Salary Increases Higher/(Lower) Than Assumed	2,613,304
7. Increase/(Decrease) in Unfunded Liability Due to Other Sources	(125,577,661)
8. Net Increase/(Decrease) in Unfunded Liability for the Year (4. + 5. + 6. + 7.)	22,978,218
9. Unfunded Actuarial Liability as of December 31, 2016 (1.+ 8.)	$5,968,550,636

Includes an additional $270.5 Million supplemental contribution from the employer

Summary of Fair Value of Assets

	Fair Value as of December 31,			
	2016		2015	
Asset Category	Amount	%	Amount	%
1. Short-Term Investments	$ 602,067,528	5.98%	$ 453,717,122	4.74%
2. Investments at Fair Value				
a. U.S. and International Equities	4,264,200,142	41.00%	3,925,905,225	41.00%
b. U.S. Government and Government Agency Obligations	1,026,986,177	10.77%	1,031,502,731	10.77%
c. Corporate Bonds	822,348,141	7.99%	765,044,107	7.99%
d. Collective International Equity Fund	67,885,886	0.54%	51,962,976	0.54%
e. Commingled Fixed Income Fund	26,821,800	0.27%	25,666,065	0.27%
f. Exchange Traded Funds	483,639,898	4.79%	458,949,498	4.79%
g. Private Equities	473,271,899	3.68%	352,130,755	3.68%
h. Hedge Funds	634,093,947	8,39%	803,013,247	8,39%
i. Real Estate	597,613,560	6.18%	591,993,643	6.18%
j. Total	$8,396,861,450	83.62%	8,006,168,247	83.62%
3. Collateral Held for Securities Lending	1,074,265,161	11.64%	1,114,387,026	11.64%
4. Total Assets (1. + 2.j. + 3.)	10,073,194,139	100.00%	9,574,272,395	100.00%
5. Receivables				
a. Interest and Dividends	20,362,677		20,729,923	
b. Investments Sold	97,101,028		101,749,176	
c. Other Receivables	206,095,300		194,512,456	
d. Total	323,559,005		316,991,555	
6. Payables				
a. Investments Purchased	200,737,894		128,697,672	
b. Securities Lending Collateral	1,074,265,161		1,114,387,026	
c. Other Payables	6,092,219		5,134,977	
d. Total	1,281,095,274		1,248,219,675	
7. Net Assets for Pension Benefits (4. + 5.d. – 6.d.)	**$9,115,657,870**		**$8,643,044,275**	

Changes in Fair Value of Assets

Transactions

	December 31, 2016	December 31, 2015
Additions		
1. Contributions		
a. Contributions from Employers	$ 414,703,155	$ 136,075,504
b. Contributions from Plan Members	139,355,592	137,707,719
c. Total	554,058,747	273,783,223
2. Net Investment Income		
a. Interest and Dividends	171,993,068	180,001,278
b. Net Appreciation (Depreciation)	484,767,317	(173,161,584)
c. Net Securities Lending Income	5,594,766	4,962,545
d. Total	662,355,151	11,802,239
e. Less Investment Expense	32,912,681	33,698,935
f. Net Investment Income	629,442,470	(21,896,696)
g. Miscellaneous	3,912,159	4,361,923
h. Employee Transfers	133,999	18,370
3. Total Additions	**1,187,547,375**	**256,266,820**
Deductions		
4. Benefits and Expenses		
a. Retirement Benefits	682,858,003	643,197,044
b. Refund of Contributions	26,702,222	33,273,171
c. Administrative Expenses	5,373,555	5,151,110
d. Employee Transfers	0	0
5. Total Deductions	**714,933,780**	**681,621,325**
6. Net Increase (Decrease)	**472,613,595**	**(425,354,505)**
7. Net Assets Held in Trust for Pension Benefits		
a. Beginning of Year	**8,643,044,275**	**9,068,398,780**
b. End of Year	**$9,115,657,870**	**$8,643,044,275**

Actuarial Value of Assets

Development of Actuarial Value of Assets	Amount
1. Actuarial Value of Assets as of December 31, 2015	$8,991,018,918
2. Unrecognized Return as of December 31, 2015	(347,974,643)
3. Fair Value of Assets as of December 31, 2015 (1. + 2.)	8,643,044,275
4. Contributions	
a. Member (includes purchased service)	139,355,592
b. Employer	414,703,155
c. Miscellaneous contributions	4,046,158
d. Total	558,104,905
5. Distributions	
a. Benefit payments	682,858,003
b. Refund of contributions	26,702,222
c. Administrative expenses	5,373,555
d. Total	714,933,780
6. Expected Return at 7.50% on	
a. Item 1.	674,326,419
b. Item 2.	26,098,098
c. Item 4.d.	20,550,577
d. Item 5.d.	26,325,340
e. Total (a. + b. + c. – d.)	642,453,558
7. Actual Return on Fair Value for Fiscal Year, Net of Investment Expenses	629,442,470
8. Return to be Spread for Fiscal Year (7. – 6.e.)*	(13,011,088)
9. Total Fair Value of Assets as of December 31, 2016	9,115,657,870

10. Return to be Spread

Fiscal Year	Return to be Spread	Unrecognized Percent	Unrecognized Return
2016	(13,011,088)	80%	(10,408,870)
2015	(687,170,453)	60%	(412,302,272)
2014	(167,852,724)	40%	(67,141,090)
2013	586,433,767	20%	117,286,753
2012	339,499,232	0%	0
		Total	(372,565,479)

11. Actuarial Value of Assets (9. – 10.)	$9,488,223,349
12. Recognized Rate of Return for the Year on Actuarial Value of Assets	7.34%
13. Rate of Return for the Year on Fair Value of Assets (reported by investment consultant - net of investment expenses)	7.70%

** Annual Return to be Spread calculation based on assumed 7.50% investment return which includes an assumption that all expenses and revenues are on average paid at mid-year*

Schedule of Funding Progress

The liabilities and assets resulting from the last ten actuarial valuations are as follows:

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll (b-a)/(c)
December 31, 2007	$8,059,879,804	$ 9,386,287,797	$1,326,407,993	85.87%	$1,370,844,734	96.76%
December 31, 2008	8,036,074,797	10,097,027,865	2,060,953,068	79.59%	1,463,372,408	140.84%
December 31, 2009	7,945,567,096	11,489,081,298	3,543,514,202	69.16%	1,498,161,713	236.52%
December 31, 2010	7,982,368,659	12,023,222,885	4,040,854,226	66.39%	1,494,093,569	270.46%
December 31, 2011	7,897,102,116	12,628,274,561	4,731,172,445	62.54%	1,456,444,123	324.84%
December 31, 2012	7,833,882,926	13,418,486,943	5,584,604,017	58.38%	1,478,253,368	377.78%
December 31, 2013	8,381,444,287	13,636,576,177	5,255,131,890	61.46%	1,484,269,715	354.06%
December 31, 2014	8,810,509,070	14,140,547,353	5,330,038,283	62.31%	1,514,550,023	351.92%
December 31, 2015	8,991,018,918	14,936,591,336	5,945,572,418	60.19%	1,572,417,298	378.12%
December 31, 2016	9,488,223,349	15,456,773,985	5,968,550,636	61.39%	1,580,251,254	377.70%

Schedule of Employer Contributions

The required contributions and actual percentages contributed over the last ten years are as follows:

Fiscal Year Ended December 31,	Employer Annual Required Contribution (ARC)	Employer Contribution	Percentage Contributed
2007	$287,061,532	$230,114,335	80.16%
2008	283,892,734	150,227,360	52.92%
2009	352,850,988	152,506,089	43.22%
2010	454,327,461	144,539,577	31.81%
2011	493,724,370	160,652,118	32.54%
2012	540,218,287	152,734,539	28.27%
2013	595,370,046	147,720,014	24.81%
2014	519,642,931	146,075,414	28.11%
2015	514,888,487	136,075,504	26.43%
2016	562,815,816	414,703,155	73.68%

Schedule of Changes in Net Pension Liability

The GASB Statement No. 67 Change in Net Pension Liability

Total Pension Liability	**December 31, 2016**	**December 31, 2015**
Service Cost	$ 559,176,234	$ 496,161,454
Interest	1,002,950,495	994,674,970
Changes of Benefit Terms	-	-
Difference between Expected and Actual Experience	318,014,746	(126,330,351)
Change of Assumptions	(1,893,474,930)	1,329,087,966
Benefit Payments, including Refund of Member Contributions	(709,560,225)	(676,470,215)
Net Change in Total Pension Liability	(722,893,680)	2,017,123,824
Total Pension Liability - Beginning of Year	$ 23,963,085,690	$ 21,945,961,866
Total Expected Pension Liability - End of Year	$ 23,240,192,010	$ 23,963,085,690
Plan Fiduciary Net Position		
Employer Contributions	$ 414,703,166	$ 136,075,504
Member Contributions	139,355,592	137,707,719
Net Investment Income	629,442,470	(21,896,696)
Benefit Payments, including Refund of Member Contributions	(709,560,225)	(676,470,215)
Administrative Expenses	(5,373,555)	(5,151,110)
Other	4,046,147	4,380,293
Net Change in Plan Fiduciary Net Position	472,613,595	(425,354,505)
Plan Fiduciary Net Position - Beginning of Year	$ 8,643,044,275	$ 9,068,398,780
Plan Fiduciary Net Position - End of Year	$ 9,115,657,870	$ 8,643,044,275

Net Pension Liability (Asset)

The GASB Statement No. 67 Net Pension Liability

Net Pension Liability (Asset)

	December 31, 2016	December 31, 2015
Total Pension Liability	$ 23,240,192,010	$ 23,963,085,690
Plan Fiduciary Net Position	9,115,657,870	8,643,044,275
Net Pension Liability (Asset)	$ 14,124,534,140	$ 15,320,041,415
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability (Asset)	39.22%	36.07%

Sensitivity

The GASB Statement No. 67 Sensitivity of Net Pension Liability

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

December 31, 2016	1% Decrease	Current	1% Increase
Discount Rate	3.64%	4.64%	5.64%
Net Pension Liability (Asset)	$18,243,015,037	$14,124,534,140	$10,873,652,859

The discount rate used to measure the total pension liability was 4.64%. The discount rate used to measure the total pension liability at December 31, 2015 was 4.15%. The projection of cash flows used to determine the discount rate assumed that CEABF's contributions will continue to follow the current funding policy, which levies a tax annually equal to the total amount of contributions made by the members in the calendar year 2 years prior to the year of the levy, multiplied by 1.54 . 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 3.71% was used in the development of the blended GASB discount rate after that point. The 3.71% rate is based on the S&P Municipal Bond 20 Year High Grade Rate Index as of December 30, 2016. Based on the long-term rate of return of 7.50% and the municipal bond rate of 3.71%, the blended GASB discount rate would be 4.64%. Please see the supporting exhibits for additional detail.

Pension Expense

The GASB Statement No. 68 Pension Expense

Measurement Year Ending	December 31, 2016	December 31, 2015
Service Cost	$ 559,176,234	$ 496,161,454
Interest	1,002,950,495	994,674,970
Difference between Expected and Actual Experience	46,827,261	(30,737,312)
Change of Assumptions	(138,444,087)	323,379,067
Member Contributions	(139,355,592)	(137,707,719)
Projected Earnings on Plan Investments	(642,453,558)	(665,273,757)
Difference between Expected and Actual Earnings	173,606,854	171,004,636
Administrative Expense	5,373,555	5,151,110
Other	(4,046,147)	(4,380,293)
Changes of Benefit Terms	-	-
Total Pension Expense	$ 863,635,015	$1,152,272,156

Actuarial Assumptions and Methods

Valuation date:	December 31, 2016	December 31, 2015
Actuarial cost method:	Entry Age	Entry Age
Asset valuation method:	Market	Market
Total Pension Liability Discount Rate	4.64%	4.15%
Actuarial assumptions:		
- Investment Rate of Return	7.50%	7.50%
- Municipal Bond Rate	3.71%	3.20%
- Projected Salary Increases	8.00% - 3.75%	8.00% - 3.75%
- Inflation Assumption	3.25%	3.25%

The projection of cash flows used to determine the discount rate assumed that County contributions will continue to follow the current funding policy based on the tax levy. 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 3.71% was used in the development of the blended GASB discount rate after that point. The 3.71% rate is based on the S&P Municipal Bond 20 Year High Grade Rate Index as of December 30, 2016. Based on the long-term rate of return of 7.50% and the municipal bond rate of 3.71%, the blended GASB discount rate would be 4.64%. See the preceding exhibits for more detail.

Investment Rate of Return Detail

The long-term expected rate of return on the Fund's investments was determined based on the results of an experience review performed by Buck Consultants. The results of the experience review were presented to the Board by Buck Consultants at the Board's January 9, 2014 Meeting and adopted at the same meeting. The rate of return assumption was based on the target asset allocation of the fund. In the experience review, Buck Consultants developed best estimate ranges of expected future real rates of return (net of inflation) for the portfolio, based on the expected returns of each major asset class and their weights in the portfolio. Buck used 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. 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 of arithmetic real rates of return (net of inflation) for each major asset class included in the Fund's target asset allocation as of December 31, 2013 are listed in the table below:

	Target Allocation	Long-Term Expected Real Rate of Return
Domestic Equity	25.00%	9.36%
International Equity	20.00%	7.61%
Fixed Income	32.00%	2.03%
Real Estate	8.00%	6.91%
Hedge Funds	9.00%	4.68%
Private Equity	6.00%	12.40%
	100.00%	

Brief Summary of Benefit Provisions

Participant. A person employed by the County whose salary or wages is paid in whole or in part by the County. An employee in service on or after January 1, 1984 shall be deemed as a participant regardless of when he or she became an employee.

Service. For all purposes except the minimum retirement annuity and ordinary disability benefit, service during four months in any calendar year constitutes one year of service. For the minimum retirement annuity, all service is computed in whole calendar months. Service for any 15 days in a calendar month shall constitute a month of service.

For purposes of the minimum retirement annuity, service shall include:

a. Any time during which the employee performed the duties of his or her position and contributed to the County Employees' and Officers' Annuity and Benefit Fund of Cook County (CEABF).
b. Vacations and leaves of absence with whole or part pay.
c. Periods during which the employee receives a disability benefit from the CEABF, and
d. Certain periods of accumulated sick leave.

Retirement Annuity - Eligibility. An employee who withdraws from service with 10 or more years of service is entitled to a retirement annuity upon attainment of age 50.

Retirement Annuity - Amount

Money Purchase Annuity. The amount of annuity based on the sum accumulated from the employee's salary deductions for age and service annuity plus 1/10 of the sum accumulated from the contributions by the County for age and service annuity for each completed year of service after the first 10.

Minimum Formula Annuity. The amount of annuity provided is equal to 2.4% of final average salary for each year of service. Final average salary is the highest average monthly salary for any 48 consecutive months within the last 10 years of service. Salary for pension purposes is actual salary earned exclusive of overtime or extra salary. The maximum amount of annuity is 80% of final average salary.

If an employee retires before age 60, the annuity is reduced by .5% for each full month or fraction thereof that the employee is under age 60 when the annuity begins, unless the employee has 30 or more years of service, in which case there is no reduction for retirement before age 60.

If the Minimum Formula Annuity is greater than the Money Purchase Annuity, the employee is entitled to receive the Minimum Formula Annuity.

Automatic Increase in Retirement Annuity. Employees who retire from service having attained age 60 or more, or, if retirement occurs on or after January 1, 1991, with at least 30 years of service, 3% of the annuity beginning January of the year following the year in which the first anniversary of retirement occurs. If retirement is before age 60 with less than 30 years of service, increases begin in January of the year immediately following the year in which age 60 is attained. Beginning January 1, 1998, increases are calculated as 3% of the monthly annuity payable at the time of the increase.

Brief Summary of Benefit Provisions (continued)

Optional Plan of Contributions and Benefits. During the period through June 30, 2005, an employee may establish optional credit for additional benefits by making additional contributions of 3% of salary. The additional benefit is equal to 1% of final average salary for each year of service for which optional contributions have been paid. The additional benefit shall be included in the calculation of the automatic annual increase and the calculation of the survivor's annuity.

Alternate Annuity for County Officers. An alternate annuity is available for county officers elected on or before January 1, 2008. The amount of this alternate annuity is equal to 3% of final salary for the first 8 years of service, 4% for the next 4 years of service, and 5% thereafter, subject to a maximum of 80% of final salary. The elected county officer is required to contribute an additional 3% of salary to be eligible for the alternate annuity. The alternate survivor's annuity for survivors of elected county officers is 66-2/3% of the amount of the elected county officer's earned retirement annuity on the date of death, subject to a minimum payment of 10% of salary.

Annuities for Members of the Cook County Police Department. In lieu of the regular of minimum retirement annuity, a deputy sheriff who is a member of the County Police Department may be entitled to the following annuity:

Upon withdrawal from service after having attained age 50 in service with 20 or more years of service credit as a police officer, the officer shall be entitled to an annuity computed as follows: 50% of final average salary, plus 2% of final average salary for each year of service in excess of 20 years, subject to a maximum of 80% of final average salary.

Surviving Spouse's Annuity - Death in Service

Money Purchase Annuity- Death In Service. The amount of annuity based on the accumulated salary deductions and County contributions for both the employee and the spouse.

Minimum Formula Annuity. A minimum annuity is provided for the eligible surviving spouse of an employee who dies in service with any number of years of service. The amount of such minimum spouse's annuity is equal to 65% of the annuity the employee would have been entitled to as of the date of death, provided the spouse on such date is age 55 or older, or that the employee had 30 or more years of service. If the spouse is under age 55 and the employee had less than 30 years of service, the amount of the spouse's annuity shall be discounted by .5% for each month that the spouse is less than age 55 on the date of the employee's death. The amount of the surviving spouse's annuity shall not be less than 10% of the employee's final average salary as of the date of death.

If the Minimum Formula Annuity is greater than the Money Purchase Annuity, the surviving spouse shall be entitled to receive the Minimum Formula Annuity.

Surviving Spouse's Annuity - Death after Retirement. The amount of the annuity is the greater of the money purchase annuity or the minimum formula annuity. The surviving spouse of an annuitant who dies on or after July 1, 2002 shall be entitled to an annuity of 65% of the employee's annuity at the time of death if the employee had at least 10 years of service, reduced by .5% per month that the spouse is under age 55 at the time of the employee's death. There is no reduction for age if the employee had at least 30 years of service.

Brief Summary of Benefit Provisions (continued)

Automatic Annual Increase in Surviving Spouse's Annuity. On the January 1 occurring on or immediately after the first anniversary of the deceased employee's death, the surviving spouse's annuity shall be increased by 3% of the amount of annuity payable at the time of the increase. On each January 1 thereafter, the annuity shall be increased by an additional 3% of the amount of annuity payable at the time of the increase.

Child's Annuity. Annuities are provided for unmarried children of a deceased employee who are under age 18. An adopted child is entitled to the child's annuity if such child was legally adopted at least one year before the child's annuity becomes payable. The child's annuity is payable under the following conditions:

(a) the death of the employee was a duty related death; or (b) if the death is not a duty related death, the employee died while in service and had completed at least four years of service from the date of his or her original entrance in service and at least two years from the latest re-entrance: or (c) if the employee died while in receipt of an annuity, her or she must have withdrawn from service after attainment of age 50

The amount of the annuity is the greater of 10% of the employee's final salary at the date of death or $140 per month for each child.

Duty Disability Benefits. Duty disability benefits are payable to an employee who becomes disabled as a result of an accidental injury incurred while in the performance of an act of duty. Benefits begin on the first regular and normal work date for which the employee does not receive a salary. The amount of the duty disability benefit is equal to 75% of the employee's salary at the date of injury, reduced by the amount the employee receives from Workers' Compensation. However, if the disability, in any measure has resulted from any physical defect or disease that existed at the time such injury was sustained, the duty disability benefit shall be 50% of salary. The CEABF contributes the 8.5% (9% for County Police) of salary normally contributed by the employee for pension purposes.

If the disability commences prior to age 60, duty disability benefits are payable during disability until the employee attains age 65. If the disability begins after age 60, the benefit is payable during disability for a period of 5 years.

Recipients of duty disability benefits also have a right to receive child's disability benefits of $10 per month on account of each unmarried child less than age 18. Total children's disability benefits shall not exceed 15% of the employee's salary.

Ordinary Disability Benefits. Ordinary disability benefits are provided for employees who become disabled as the result of any cause other than injury incurred in the performance of an act of duty. The amount of the benefit is 50% of the employee's annual salary at the time of disability. The CEABF also contributes the 8.5% (9% for County Police) of salary normally contributed by the employee for pension purposes.

Ordinary disability benefits are payable after the first 30 days of disability provided the employee is not then in receipt of salary. Ordinary disability benefits are payable until the first of the following shall occur:

(a) the disability ceases; or
(b) the date that total payments equal the lesser of (1) 1/4 of the total service rendered prior to disability, and (2) five years.

An employee unable to return to work at the expiration of ordinary disability benefit is entitled to an annuity beginning on the date of the employee's withdrawal from service regardless of age on such date.

Brief Summary of Benefit Provisions (continued)

Death Benefit. Upon the death of an active or retired employee, a death benefit of $1,000 is payable to the employee's designated beneficiary or to the employee's estate if no beneficiary has been designated.

Group Health Benefits. The CEABF may pay all or any portion of the premium for health insurance on behalf of each annuitant who participates in any of the CEABF's health care Plans. As of January 1, 2005, the CEABF is paying 55% of the premiums for retiree annuitants and 70% of the premiums for survivor annuitants.

Refund to Employee Upon Withdrawal From Service. Upon withdrawal from service, an employee under the age of 55, or anyone with less than 10 years of service is eligible for a refund. The employee is entitled to a refund of the amount accumulated to his or her credit for age and service annuity and the survivor's annuity together with the total amount contributed for the automatic annual increase, without interest. Upon receipt of such refund, the employee forfeits all rights to benefits from the CEABF.

Election of Refund in Lieu of Annuity. If an employee's annuity or spouse's annuity is less than $150.00 per month, such employee or spouse annuitant may elect a refund of the employee's accumulated contributions in lieu of a monthly annuity.

Refund For Surviving Spouse's Annuity. If an employee is unmarried at the time of retirement, all contributions for surviving spouse's annuity will be refunded with interest at the rate of 3% per year, compounded annually.

Refund of Remaining Amounts. In the event that the total amount accumulated to the account of employee from employee contributions for annuity purposes has not been paid to the employee and surviving spouse as a retirement or surviving spouse's annuity before the death of the survivor of the employee and spouse, a refund of any excess amount shall be paid to the children of the employee, in equal parts, or if there are no children, to the beneficiaries of the employee or the administrator of the estate.

Employee Contributions. Employees contribute through salary deductions 8.5% (9% for County Police) of salary to the CEABF, 6.5% (7% for County Police) being for the retirement annuity. 1.5% being for the surviving spouse's annuity, and .5% being for the automatic increase in retirement annuity.

Employer Contributions. The County levies a tax annually equal to the total amount of contributions made by employees in the calendar year 2 years prior to the year of the levy, multiplied by 1.54.

Employer Pick-up of Employee Contributions. Since April 15, 1982, regular employee contributions have been designated for federal income tax purposes as being made by the employer. The employee's W-2 salary is therefore reduced by the amount of contribution. For pension purposes, the salary remains unchanged. For purposes of benefits, refunds, and financing, these contributions are treated as employee contributions.

Brief Summary of Benefit Provisions (continued)

Persons Who First Become Participants On or After January 1, 2011

The following changes to the aforementioned provisions apply to persons who first become participants on or after January 1, 2011 (Tier 2 employees):

1. The highest salary for annuity purposes is equal to the average monthly salary obtained by dividing the participant's total salary during the 96 consecutive months of service within the last 120 months of service in which the total compensation was the highest by the number of months in that period.

2. For 2011, the annual salary is limited to the Social Security wage base of $106,800. Limitations for future years shall automatically be increased by the lesser of 3% or one-half of percentage change in the Consumer Price Index-U for the 12 months ending in September.

3. A participant is eligible to retire with unreduced benefits at age 67 with at least 10 years of service credit. However, a participant may elect to retire at age 62 with at least 10 years of service credit and receive a retirement annuity reduced by one-half of 1% for each month that his or her age is under 67.

4. The initial survivor's annuity is equal to 66-2/3% of the participant's earned retirement annuity at the date of death, subject to automatic annual increases of the lesser of 3% or one-half of the increase in the Consumer Price Index-U for the 12 months ending in September, based on the originally granted survivor's annuity.

5. Automatic annual increases in the retirement annuity then being paid are equal to the lesser of 3% or one-half the annual change in the Consumer Price Index-U, whichever is less, based on the originally granted retirement annuity.

6. Refund upon withdrawal from service. Upon withdrawal from service, an employee who withdraws from service before age 62 regardless of length of service or withdraws with less than 10 years of service regardless of age is entitled to a refund of total contributions made by the employee without interest.

Description of Actuarial Methods and Valuation Procedures

Actuarial Cost Method

Liabilities and contributions shown in this report are computed using the **Entry Age Actuarial Cost Method** of funding.

Sometimes called a "funding method," this is a particular technique used by actuaries for establishing the amount and incidence of the annual actuarial cost of pension Plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily the annual contribution to the Plan is comprised of (1) the normal cost and (2) an amortization payment on the unfunded actuarial accrued liability.

Under the Entry Age Actuarial Cost Method, the **Normal Cost** is computed as the level percentage of pay which, if paid from the earliest time each Member would have been eligible to join the Plan if it then existed (thus, entry age) until his retirement or termination, would accumulate with interest at the rate assumed in the valuation to a fund sufficient to pay all benefits under the Plan.

The Normal Cost for the Plan is determined by summing individual results for each active Member and determining an average normal cost rate by dividing the summed individual normal costs by the total payroll of Members before assumed retirement age.

The **Actuarial Accrued Liability** under this method at any point in time is the theoretical amount of the fund that would have accumulated had annual contributions equal to the Normal Cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date.)

The **Unfunded Actuarial Accrued Liability** is the excess of the Actuarial Accrued Liability over the Actuarial Value of Plan Assets actually on hand on the valuation date. The Unfunded Actuarial Accrued Liability is amortized over 30 years assuming 2% increase using amortization layers. per the IGA.

Under this method experience gains or losses, i.e. decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the Unfunded Actuarial Accrued Liability.

Description of Actuarial Methods and Valuation Procedures (continued)

Asset Valuation Method

The actuarial value of assets is based on a five-year smoothing method and is determined by spreading the effect of each year's investment return in excess of or below the expected return. The Fair Value of assets at the valuation date is reduced by the sum of the following:

(i) 80% of the return to be spread during the first year preceding the valuation date,
(ii) 60% of the return to be spread during the second year preceding the valuation date,
(iii) 40% of the return to be spread during the third year preceding the valuation date, and
(iv) 20% of the return to be spread during the fourth year preceding the valuation date.

The return to be spread is the difference between (1) the actual investment return on Fair Value and (2) the expected return on Fair Value.

Valuation Procedures

No actuarial liability is included for members who terminated non-vested prior to the valuation date, except those due a refund of contributions.

No termination or retirement benefits were projected to be greater than the dollar limitation required by the Internal Revenue Code Section 415 for governmental Plans.

Annual increases in salary were limited to the dollar amount defined under Internal Revenue Code Section 401(a)(17) for affected members.

Summary of Actuarial Assumptions and Changes in Assumptions

The actuarial assumptions used for the December 31, 2014 actuarial valuation are summarized below. The mortality rate, termination rate, retirement rate, and salary assumptions are based on an experience analysis of CEABF, over the period 2009 through 2012. These assumptions were adopted by the Board as of December 31, 2013, based on the recommendation from the actuary.

Mortality Rates. RP-2000 Blue Collar Mortality Table, base year 2000,fully generational based on Scale BB.

Termination Rates. Termination rates based on the recent experience of the CEABF were used. The following is a sample of the termination rates used:

Rates of Termination
Age at Entrance

Attained	Males				Females			
Age	22	27	32	37	22	27	32	37
22	.225				.200			
27	.128	.145			.115	.183		
32	.030	.116	.165		.030	.117	.165	
37	.030	.030	.105	.141	.030	.030	.093	.114
42	.030	.030	.030	.085	.030	.030	.030	.060
47	.030	.030	.030	.030	.030	.030	.030	.030

Summary of Actuarial Assumptions and Changes in Assumptions (continued)

Retirement Rates. For persons who became participants prior to January 1, 2011, rates of retirement for each age from 50 to 75 based on the recent experience of the CEABF. The following are samples of the rates of retirement used:

Less Than 30 Years of Service at Retirement

	Rates of Retirement	
Age	**Males**	**Females**
50-54	.040	.040
55-58	.080	.060
59	.150	.100
60	.150	.150
61-64	.125	.145
65-69	.225	.200
70	.250	.200
71	.300	.240
72	.350	.280
73	.400	.320
74	.450	.360
75	1.000	1.000

30 or More Years of Service at Retirement

	Rates of Retirement	
Age	**Males**	**Females**
50-54	.350	.300
55-59	.275	.200
60	.225	.400
61-64	.225	.250
65-69	.270	.200
70	.450	.200
71	.540	.240
72	.630	.280
73	.720	.320
74	.810	.360
75	1.000	1.000

Retirement Rates for Deputy Sheriffs Who Are Members of the Cook County Police Department With 20 or More Years of Service at Retirement

	Rates of Retirement	
Age	**Males**	**Females**
50-59	.100	.100
60-64	.200	.200
65	1.000	1.000

Summary of Actuarial Assumptions and Changes in Assumptions (continued)

Retirement Rates. For persons who became or will become participants on or after January 1, 2011, rates of retirement for each age from 62 to 75 were used. The following are samples of the rates of retirement that were used:

Age	Rates of Retirement Males	Rates of Retirement Females
62	.400	.350
64	.225	.150
67	.400	.350
70	.450	.200
75	1.000	1.000

Interest Rate. 7.5% per year, compounded annually.

Inflation Rate. 3.25% per year, compounded annually.

Salary Rate (net of inflation):

Age	Rate
25	.0375
30	.0275
35	.0175
40	.0075
45+	.0050

Loading for Reciprocal Benefits. Costs and liabilities of active employees were loaded by 1% for reciprocal annuities where the County is the last employer. It was assumed that 50% of inactive members with one or more year of service would receive a reciprocal annuity where the County is not the last employer. These reciprocal annuities were valued as of the member's retirement date as 10 times an inactive member's accumulated contributions.

Marital Status. 85% of participants were assumed to be married.

Spouse's Age. The spouse of a male employee was assumed to be four years younger than the employee. The spouse of a female employee was assumed to be four years older than the age of the employee.

Inactives. Benefits were estimated based on service and pay and valued as deferred to 55 annuities.

Glossary of Terms

Actuarial Accrued Liability	Total accumulated cost to fund pension benefits arising from service in all prior years.
Actuarial Cost Method	Technique used to assign or allocate, in a systematic and consistent manner, the expected cost of a pension Plan for a group of Plan members to the years of service that give rise to that cost.
Actuarial Present Value of Future Benefits	Amount which, together with future interest, is expected to be sufficient to pay all future benefits.
Actuarial Valuation	Study of probable amounts of future pension benefits and the necessary amount of contributions to fund those benefits.
Actuary	Person who performs mathematical calculations pertaining to pension and insurance benefits based on specific procedures and assumptions.
Annual Required Contribution	Disclosure measure of annual pension cost.
GASB 67	Governmental Accounting Standards Board Statement Number 67.
Maturity Ratio	The ratio of the actuarial accrued liability for members who are no longer active to the total actuarial accrued liability. A ratio of over 50% indicates a mature Plan. The higher the maturity ratio, the more volatile the contribution rate will be from year to year given actuarial gains and losses.
Normal Cost	That portion of the actuarial present value of benefits assigned to a particular year in respect to an individual participant or the plan as a whole.
Unfunded Actuarial Accrued Liability (UAAL)	The portion of the actuarial accrued liability not offset by plan assets.
Vested Benefits	Benefits which are unconditionally guaranteed regardless of employment status.

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Actuarial Certification - Postemployment Healthcare

CONDUENT

July 14, 2017

Board of Trustees

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

Chicago, Illinois

Ladies and Gentlemen:

This report summarizes the actuarial valuation results of County Employees' and Officers' Annuity and Benefit Fund of Cook County ("CEABF" or "the Fund") as of December 31, 2016 performed by Conduent HR Services ("Conduent").

The purpose of this valuation is to determine the Annual Required Contribution ("ARC") for the Plan year January 1, 2017 through December 31, 2017, as well as the funded status of the Plan as of the valuation date December 31, 2016. The ARC and funded status are determined in accordance with GASB Statement No. 43, Financial Reporting for Postemployment Benefit Plans Other than Pension Plans ("GASB 43"). The results may also be used by the government of Cook County for use in determining the County's ARC and Annual OPEB Cost ("AOC") in accordance with GASB Statement No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefit Other Than Pensions ("GASB 45").

The actuarial valuation is based on unaudited financial data, working rates, plan information and census data provided by Fund staff and summarized in this report. The calculations rely on this information and are only as accurate as the information provided. The benefits considered in this valuation are postretirement health only. The County may offer other postemployment benefits that warrant measurement under GASB 45. However, the scope of this valuation is limited to the County's postretirement health and welfare benefit program as described in this report. The actuary did not verify the data and information submitted but did perform tests for consistency and reasonableness.

All costs, liabilities and other factors under the Plan were determined in accordance with generally accepted actuarial principles and procedures. An actuarial cost method is used to measure the actuarial liabilities which we believe is reasonable.

The actuary for CEABF performs an analysis of plan experience periodically and recommends changes in basic assumptions if, in the opinion of the actuary, assumption changes are needed to more accurately reflect expected future experience. On January 9, 2014 the Retirement Board adopted revised assumptions for use in valuing the Plan. These assumptions were based on an experience analysis performed by Conduent, which reviewed experience for the four-year period ending December 31, 2012. Additional changes to health care specific assumptions were made in the current year to account for recent experience and trends. We believe the economic and

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demographic assumptions used are reasonable for financial accounting purposes and represent a reasonable estimate of the plan's future economic and demographic experience. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown on pages 133-141.

The assumptions and methods used to determine the ARC of CEABF as outlined in this report and all supporting schedules meet the parameters and requirements pursuant to GASB 43 and GASB 45. Based on member data and asset information provided by the Fund staff, we have prepared the Schedule of Funding Progress and Schedule of Employer Contributions that are included in the Financial Section of the Comprehensive Annual Financial Report.

The undersigned are Members of the American Academy of Actuaries and in combination meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. To the best of the undersigned actuaries' knowledge, the actuarial statement contained in this report is complete and accurate. The calculations in this report have been prepared in accordance with all Applicable Actuarial Standards of Practice. We are available to answer any questions on the material contained in the report or to provide explanations or further details as may be appropriate.

CONDUENT, INC

Robert Besenhofer, ASA, MAAA	Larry Langer, EA, ASA, MAAA, FCA
Director, Health	Principal, Retirement

Actuarial Valuation - Postemployment Healthcare

Overview

The County Employees' and Officers' Annuity and Benefit Fund of Cook County ("CEABF" or "the Fund") offers health benefits to separated and retired employees of Cook County and their eligible dependents. This report presents the results of the actuarial valuation of the Plan benefits as of the valuation date of December 31, 2016.

Purpose

This report had been prepared at the request of the Fund for use in financial reporting of CEABF under GASB 43. The results may also be used for purposes of the County's financial statements under GASB 45. It may not be appropriate for other purposes, such as analyzing proposed design alternatives, funding, pricing or option evaluation. Use of this report for any other purpose may not be appropriate and may result in mistaken conclusions due to failure to understand applicable assumptions, methodologies or inapplicability of the report for that purpose. No one may make any representations or warranties based on any statements or conclusions contained in this report without the written consent of Conduent.

Membership

Summary of Membership Data

	Year Ending December 31,	
	2016	**2015**
1. Annuitants Currently Receiving Benefits	8,954	8,783
2. Separated Employees Entitled To Benefits But Not Yet Receiving Them	1,489	1,371
3. Active Employees	20,969	21,596
4. Total Number of Members	31,412	31,750

Changes in Plan Provisions

The following changes in benefits and other plan provisions in the Retiree Health Insurance actuarial valuation have been made since the last valuation performed as of December 31, 2015:

- Beginning on January 1, 2017, Medicare prescription drugs are provided through an Employee Group Waiver Plan ("EGWP") with a wrap. The plan provides the same benefits to retirees, but the EGWP is a Medicare Part D plan specifically for Cook County retirees. As a result of this change, Cook County no longer applies for the Retiree Drug Subsidy.

- Working premium rates were updated for 2017.

Changes in Actuarial Assumptions, Methods, or Procedures

The following changes in the actuarial assumptions or valuation procedures in the Retiree Health Insurance actuarial valuation have been made since the last valuation performed as of December 31, 2015:

- The per capita plan costs were updated to reflect the most recent year of claims experience.

- Future retirees are assumed to elect among the plan choices in the same proportion as employees who retired during the last year. This election percentage was updated to reflect current retiree experience.

- The estimate of the High-Cost Plan Excise Tax was updated based on the 2017 working premium rates.

Changes in the Actuarial Accrued Liability (AAL)

	Accrued Liability (AAL)	% Change
December 31, 2015 Report	$2,134,106,707	
Expected Growth Due to the Passage of Time	117,004,930	5.5%
Demographic Experience	6,739,963	0.3%
Updated Per Capita Health Plan Experience	(12,673,780)	-0.6%
Change in Participant Contributions	(43,525,150)	-1.9%
Update EGWP	(303,726,630)	-13.8%
Change in Estimated Excise Tax	59,878,648	3.2%
December 31, 2016 Report	$1,957,804,688	-8.3%

Development of Annual Required Contribution (ARC)

Development of Employer Contribution	December 31, 2016 Valuation ARC for Fiscal Year 2017	December 31, 2015 Valuation ARC for Fiscal Year 2016
1. Annual Payroll	$1,609,559,234	$1,597,597,077
2. Actuarial Accrued Liability		
a. Active Members	1,078,864,621	1,201,154,866
b. Inactive Members with Deferred Benefits	53,611,442	53,632,394
c. Retired Members and Beneficiaries Receiving Benefits	825,328,625	879,319,447
d. Total (a. + b. + c.)	1,957,804,688	2,134,106,707
3. Actuarial Value of Assets	-	-
4. Unfunded Actuarial Accrued Liability (UAAL)	1,957,804,688	2,134,106,707
5. UAAL as a Percent of Annual Payroll	121.6%	133.6%
6. Amortization Payment for UAAL		
a. Amount	115,016,890	125,374,262
b. As a % of pay	7.1%	7.8%
7. Employer Normal Cost		
a. Amount	65,273,779	73,568,847
b. As a % of pay	4.1%	4.6%
8. Interest Cost	7,057,754	7,735,405
9. Annual Required Contribution (6. + 7. + 8.)	187,348,423	206,678,514
10. Pay-go Costs for the Year [1]	47,425,231	53,656,038
11. Amortization Period (years)	30	30

[1] *Source: Estimated amount for 2017; for 2016 as provided by CEABF. 2016 Pay-as-you-go costs are net of prescription drug rebates, but do not reflect the Retiree Drug Subsidy offset, due to GASB 43/45 accounting rules.*

Schedule of Funding Progress

A history of the GASB Statement No. 45 liabilities and assets follows:

Actuarial Valuation Date December 31,	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Liability	Funded Ratio	Covered Payroll	UAAL as a Percentage of Payroll
2009	$ -	$1,686,872,018	$1,686,872,018	0.0%	$1,498,161,713	112.6%
2010	-	1,724,622,462	1,724,622,462	0.0%	1,494,093,569	115.4%
2011	-	1,678,571,388	1,678,571,388	0.0%	1,456,444,123	115.3%
2012	-	1,845,609,132	1,845,609,132	0.0%	1,478,253,368	124.9%
2013	-	1,978,767,490	1,978,767,490	0.0%	1,484,269,715	133.3%
2014	-	1,980,088,617	1,980,088,617	0.0%	1,514,550,023	130.7%
2015	-	2,134,106,707	2,134,106,707	0.0%	1,597,597,077	133.6%
2016	-	1,957,804,688	1,957,804,688	0.0%	1,609,559,234	121.6%

Schedule of Employer Contributions

A history of the GASB Statement No. 45 required contributions and actual percentages follow:

Fiscal Year Ended December 31,	Annual Required Contribution (ARC)	Employer Contribution	Employer Contribution as a Percent of ARC
2009	$157,964,519	$35,779,228	22.65%
2010	163,823,488	40,183,057	24.53%
2011	165,176,771	38,185,306	23.12%
2012	156,700,388	37,986,237	24.24%
2013	178,698,965	40,097,630	22.44%
2014	189,907,202	43,957,458	23.15%
2015	190,871,452	50,756,817	26.59%
2016[1]	206,678,514	49,565,249	23.98%

[1] *Source: Total Employer's Contribution for 2016 as provided by CEABF.*

GASB 45 Net OPEB Obligation (NOO) as of December 31, 2016

1. NOO as of December 31, 2015 [1]	$1,010,795,474
2. Annual Required Contribution (ARC)	206,678,514
3. Interest on NOO	45,485,796
4. Adjustment to ARC	(62,054,294)
5. Annual OPEB Cost for 2016 (2. + 3. + 4.)	190,110,016
6. Total Employer Contribution for 2016 [2]	49,565,249
7. NOO as of December 31, 2016 (1. + 5. - 6.)	$1,151,340,241

[1] *Source: FYE 2015 CAFR. This number was not calculated or reviewed by Conduent.*
[2] *Source: Total Employer's Contribution for 2016 as provided by CEABF*

Summary of Substantive Plan Provisions

Eligibility

Tier 1 retirement (hired before January 1, 2011)
• Age 50 and 10 years of service

Tier 2 retirement (hired on or after January 1, 2011)
• Age 62 and 10 years of service

All active employee members who separate with 10 or more years of service can receive postretirement health benefits under the Plan upon receipt of annuity benefits, provided that if they elect to retire under the Illinois Reciprocal Act, CEABF is their final retirement system.

Surviving dependents of actively employed members and surviving dependents of covered annuitants are eligible for postretirement health benefits under the Plan upon receipt of annuity benefits.

Eligible annuitants may cover their spouses and dependent children under the age of 26 and all disabled children (no age limitation).

Medical Plans

Non-Medicare retirees can choose from:

• United Healthcare Choice HMO
• United Healthcare Choice Plus PPO

Medicare eligible retirees can choose from:

• United Healthcare Choice HMO
• United Healthcare Choice Plus PPO

All Medicare plans are supplemental to Medicare Part A & B benefits.

A retail and mail pharmacy benefit through CVS/Caremark is included with the election of any medical plan.

Summary of Substantive Plan Provisions (continued)

Contributions

CEABF pays 52% of the total premium for all post-Medicare retiree annuitants and pre-Medicare retiree annuitants on the Choice plan, including the cost of family coverage, and 67% of the total premium for all post-Medicare survivor annuitants and pre-Medicare survivor annuitants on the Choice plan, including the cost of family coverage.

CEABF pays 47% of the total premium for all pre-Medicare retiree annuitants on the Choice Plus plan, including the cost of family coverage, and 62% of the total premium for all pre-Medicare survivor annuitants on the Choice Plus plan.

The following are the annual working rates effective January 1, 2017. These rates represent an estimated cost of self-insured coverage and include administrative expenses.

	Choice HMO	Choice Plus PPO
Single w/o Medicare	$14,388	$18,036
Two w/o Medicare	28,776	36,072
Single w/ Medicare	5,760	5,208
Two w/ Medicare	11,520	10,416

Assumptions and Methods

The actuarial assumptions used for the December 31, 2016 actuarial valuation are summarized below. The mortality rate, termination rate, retirement rate and salary assumptions are based on an experience analysis of CEABF, over the period 2009 through 2012. These assumptions were adopted by the Board on January 9, 2014.

Valuation Date December 31, 2016

Discount Rate 4.50%

Salary Scale

Age	Inflation	Merit	Total
<21	3.25%	4.75%	8.00%
21	3.25%	4.55%	7.80%
22	3.25%	4.35%	7.60%
23	3.25%	4.15%	7.40%
24	3.25%	3.95%	7.20%
25	3.25%	3.75%	7.00%
26	3.25%	3.55%	6.80%
27	3.25%	3.35%	6.60%
28	3.25%	3.15%	6.40%
29	3.25%	2.95%	6.20%
30	3.25%	2.75%	6.00%
31	3.25%	2.55%	5.80%
32	3.25%	2.35%	5.60%
33	3.25%	2.15%	5.40%
34	3.25%	1.95%	5.20%
35	3.25%	1.75%	5.00%
36	3.25%	1.55%	4.80%
37	3.25%	1.35%	4.60%
38	3.25%	1.15%	4.40%
39	3.25%	0.95%	4.20%
40	3.25%	0.75%	4.00%
41	3.25%	0.55%	3.80%
42+	3.25%	0.50%	3.75%

Assumptions and Methods (continued)

Termination Rates The following is a sample of the termination rates used:

Age at Entrance

Attained	Males			Females		
Age	27	32	37	27	32	37
27	.145			.183		
32	.116	.165		.117	.165	
37	.030	.105	.141	.030	.093	.114
42	.030	.030	.085	.030	.030	.060
47	.030	.030	.030	.030	.030	.030

Retirement Rates For deputy sheriffs who are members of the Cook County Police department who became participants prior to January 1, 2011 (Tier 1):

Service at retirement	< 20 Years		≥20 Years	
Age	Male	Female	Male	Female
50	.010	.012	.100	.100
55	.060	.072	.100	.100
60	.250	.216	.200	.200
65	.150	.120	1.000	1.000
70	.250	.200	1.000	1.000
75	1.000	1.000	1.000	1.000

For other members who became participants prior to January 1, 2011 (Tier 1):

Service at retirement	< 30 Years		≥30 Years	
Age	Male	Female	Male	Female
50	.040	.040	.350	.300
55	.080	.060	.275	.200
60	.150	.150	.225	.400
65	.225	.200	.270	.200
70	.250	.200	.450	.200
75	1.000	1.000	1.000	1.000

Assumptions and Methods (continued)

For members who became participants on or after January 1, 2011 (Tier 2):

Age	Male	Female
62	.400	.350
64	.225	.150
67	.400	.350
70	.450	.200
75	1.000	1.000

Mortality Rates The RP-2000 Blue Collar table, base year 2000, fully generational based on scale BB.

Disability Rates Included in termination and retirement rates.

Anticipated Plan Participation 70% of eligible employees are assumed to elect retiree medical benefits.

30% of vested terminated employees are assumed to elect retiree medical benefits upon retirement, and are assumed to retire according to the rates below:

Age	% Who Elect
55-59	6%
60-61	20%
62-64	5%
65-69	20%
70-74	25%
75	15%
76+	0%

Based on recent experience, future annuitants are assumed to elect from among the available plans as follows:

% Who Elect	Choice HMO	Choice Plus PPO
Pre-Medicare	94%	6%
Post-Medicare	71%	29%

Current annuitants who elect coverage are assumed to remain in coverage. Current annuitants who have waived or deferred coverage are not assumed to participate in the future.

Dependent Coverage 40% of future annuitants are assumed to cover a dependent. 40% of surviving dependents are assumed to elect coverage upon the death of an actively employed member and are assumed to commence benefits when the actively employed member would have reached age 61. Males are assumed to be 4 years older than females. Actual ages were used for dependents of current annuitants.

Assumptions and Methods (continued)

Medicare Coordination

Medicare is assumed to remain the primary payer for current and future retirees and spouses who are at least age 65 and who are currently on Medicare. Medicare is assumed to become primary for 95% of retirees and spouses who retired before January 1, 2014 and who are not yet age 65, when they attain that age. For all other retirees and spouses, Medicare is assumed to be the primary payer at the time they reach age 65.

Per Capita Health Plan Costs

Estimated net annual per capita incurred claim costs per covered adult for fiscal 2017 at age 65, reflecting administrative expenses, drug rebates, and the Retiree Drug Subsidy.

	Choice Plan	Choice Plus Plan
Not Medicare eligible	$15,732	$17,556
Medicare eligible	4,896	3,924

Per capita medical costs were developed using a 50/50 blend of a methodology which bases the costs on the medical working rates provided by the Fund for calendar year 2017, and a methodology which bases the costs on 2016 claims experience. The resulting costs were adjusted for age morbidity.

The valuation relies on the accuracy of the rate calculations. We understand that the rates represent medical benefit costs only for annuitants under the Fund.

Assumptions and Methods (continued)

Age-Based Morbidity

Per capita costs are adjusted to reflect expected cost differences due to age and gender. The morbidity factors for pre-Medicare morbidity were developed from "Health Care Costs—From Birth to Death" sponsored by the Society of Actuaries and prepared by Dale H. Yamamoto (May 2013). Table 4 from Mr. Yamamoto's study formed the basis of Medicare morbidity factors that are gender distinct and assumed a cost allocation of 60% for pharmacy, 20% for inpatient, 10% for outpatient, and 10% for professional services. Adjustments were made to Table 4 factors for inpatient costs at age 70 and below to smooth out what appears to be a spike in utilization for Medicare retirees gaining healthcare for the first time through Medicare. While such retirees were included in the study, their specific experience is not applicable for a valuation of an employer retiree medical plan where participants had group active coverage before retirement. Morbidity factors at sample ages are shown below:

Age	Male	Female
50	0.4612	0.5736
55	0.6085	0.6667
60	0.7829	0.7791
65	1.0000	0.9438
70	1.1873	1.1094
75	1.2752	1.2009
80	1.3381	1.2697
85	1.3479	1.3171
90	1.3235	1.3303

Health Care Cost Trend Rates

Health care cost trend rates apply to expected claims, premiums and retiree contributions:

Year	Pre-Medicare	Post-Medicare
2017	7.50%	6.00%
2018	7.25%	5.75%
2019	7.00%	5.50%
2020	6.75%	5.25%
2021	6.50%	5.00%
2022	6.25%	4.75%
2023	6.00%	4.75%
2024	5.75%	4.75%
2025	5.50%	4.75%
2026	5.25%	4.75%
2027	5.00%	4.75%
2028+	4.75%	4.75%

Assumptions and Methods (continued)

Census Data	The active, deferred vested, and retiree census were provided by the Fund.
Actuarial Cost Method	The entry age actuarial cost as a percentage of earnings was used.
Amortization Method	30 years open, level dollar.
Assets	The valuation assumes CEABF or the County has not set aside any assets to prefund its retiree medical liabilities.
IBNR	The calculations do not include any explicit amount for incurred but not reported claims (IBNR).
Retiree Drug Subsidy	CEABF will no longer be receiving the Retiree Drug Subsidy due to their switch to an EGWP plan effective January 1, 2017.
Miscellaneous	The valuation was prepared on an on-going plan basis. This assumption does not imply that an obligation to continue the plan actually exists.

Assumptions and Methods (continued)

Considerations of the Patient Protection and Affordable Care Act (PPACA)

Summary of Effects of Selected Provisions

Early Retiree Reinsurance Program: Effective 6/1/2010. Due to the short-term nature of the payments expected to be received under this program it is assumed to have no future impact on CEABF.

Removal of Lifetime/Annual Maximum: The plan is not subject to the requirement to eliminate lifetime maximums, since it is a retiree only plan.

Expansion of Child Coverage to Age 26: The impact of covering retiree children to age 26 is assumed to have already been reflected in the working rates provided and in the claims experience.

Medicare Part D Retiree Drug Subsidy: CEABF will no longer be receiving the Retiree Drug Subsidy due to their switch to an EGWP plan effective January 1, 2017.

Excise Tax on High-Cost Employer Health Plans (aka "Cadillac Tax") - Effective 1/1/2020: We performed a projection of the calculation on the Plan using a CPI of 3.25%, separating non-Medicare and Medicare retiree coverage for testing purposes. The tax amount expected is based on projected net employer costs for Medicare retirees, as this is the way we expect costs to be determined for tax purposes. The projection indicates that the overall increase in liability would be approximately 3.2% and we have adjusted the results accordingly. Additional commentary on this issue can be found on the following pag

Other Revenue Raisers: The PPACA legislation includes a variety of other revenue raisers that involve additional costs on employers, providers (such as medical device manufacturers) and insurers. We considered these factors when developing the trend assumption used.

Other: We have not identified any other specific provision of the PPACA legislation that would be expected to have a significant impact on the measured obligation. As additional guidance on the legislation is issued, we will continue to monitor any potential impacts.

Assumptions and Methods (continued)

High-Cost Plan Excise Tax: The PPACA legislation added a new High-Cost Plan Excise Tax (also known as the "Cadillac Tax") starting in calendar year 2020. For valuation purposes, we assumed that the value of the tax will be passed back to the Plan in higher premium rates.

Based on our understanding of the tax, we think it is clear that the tax does not apply directly to CEABF. Rather, the tax applies to the administrator of the benefits, UnitedHealthcare, which in turn is then expected to pass the additional cost along to CEABF.

The tax is 40% of the excess of a) the cost of coverage over b) the limit. We modeled the cost of the tax by calculating "a" (the cost of coverage) using the working rates projected with trend. We calculated "b" (the limit) starting with the statutory limits ($10,200 single and $27,500 family), adjusted for the following:

- Limits will increase from 2018 to 2019 by 4.25% (CPI plus 1%);
- Limits will increase after 2019 by 3.25% (CPI); and
- For retirees over age 55 but not on Medicare, the limit is increased by an additional dollar amount of $1,650 for single coverage, $3,450 for family coverage .[1]

We also examined the possibility that the limits would be increased due to excess trend. An estimate of trend for the period from 2010 through 2018 for the federal standard Blue Cross Blue Shield option (using actual increase rates from 2010 to 2016 and the valuation trend from 2016 to 2018) is compared to the statutory "assumed" 55% trend, with trend in excess of 55% applied on the base amount before the additional amount for "early" retirees. However, it appears due to favorable experience in the federal benchmark Blue Cross Blue Shield plan that there will not be any excess trend.

[1] *These additional amounts are available at other ages for plans sponsored by an employer where the majority of employees are engaged in high risk professions including law enforcement officers and fire fighters. Since only a minority of the retirees included in this valuation is police and fire, we are assuming that this exception would not apply.*

Description of Actuarial Methods and Valuation Procedures

Actuarial Cost Method

Liabilities and contributions shown in this report are computed using the **Entry Age Actuarial Cost Method** of funding.

Sometimes called a “funding method,” this is a particular technique used by actuaries for establishing the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily the annual contribution to the plan is comprised of (1) the normal cost and (2) an amortization payment on the unfunded actuarial accrued liability.

Under the Entry Age Actuarial Cost Method, the **Normal Cost** is computed as the level percentage of pay which, if paid from the earliest time each Member would have been eligible to join the Plan if it then existed (thus, entry age) until his retirement or termination, would accumulate with interest at the rate assumed in the valuation to a fund sufficient to pay all benefits under the Plan.

The **Actuarial Accrued Liability** under this method at any point in time is the theoretical amount of funding that would have accumulated had annual contributions equal to the Normal Cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date).

The **Unfunded Actuarial Accrued Liability** is the excess of the Actuarial Accrued Liability over the Actuarial Value of Plan Assets actually on hand on the valuation date. The Unfunded Actuarial Accrued Liability is amortized as a level dollar amount over an open 30-year period.

Under this method experience gains or losses, i.e. decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the Unfunded Actuarial Accrued Liability.

Glossary of Terms

Actuarial Accrued Liability	Total accumulated cost to fund OPEB benefits and expenses arising from service in all prior years.
Actuarial Cost Method	Technique used to assign or allocate, in a systematic and consistent manner, the expected cost of a OPEB plan for a group of plan members to the years of service that give rise to that cost.
Actuarial Present Value of Future Benefits	Amount which, together with future interest, is expected to be sufficient to pay all future benefits.
Actuarial Valuation	Study of probable amounts of future OPEB benefits and the necessary amount of contributions to fund those benefits.
Actuary	Person who performs mathematical calculations pertaining to OPEB and insurance benefits based on specific procedures and assumptions.
Annual Required Contribution	Disclosure measure of annual OPEB cost.
GASB 43	Governmental Accounting Standards Board Statement Number 43 which specifies how the Annual Required Contribution (ARC) is to be calculated and disclosure requirement for CEABF.
GASB 45	Government Accounting Standards Board Statement Number 45 which specifies how to calculate the Annual OPEB Cost that the employer recognizes.
Employer Normal Cost	That portion of the actuarial present value of benefits assigned to a particular year in respect to an individual participant or the Plan as a whole.
Unfunded Actuarial Accrued Liability (UAAL)	The portion of the actuarial accrued liability not offset by Plan assets.

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Additional Actuarial Tables

Schedule of Active Member Valuation Data - Pension Benefits

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase In Average Pay
12/31/07	23,456	$1,370,844,734	$58,443	5.7%
12/31/08	23,436	1,463,372,408	62,441	6.8%
12/31/09	23,570	1,498,161,713	63,562	1.8%
12/31/10	23,165	1,494,093,569	64,498	1.5%
12/31/11	22,037	1,456,444,123	66,091	2.5%
12/31/12	21,447	1,478,253,368	68,926	4.3%
12/31/13	21,287	1,484,269,715	69,727	1.2%
12/31/14	21,656	1,514,550,023	69,937	0.3%
12/31/15	21,596	1,572,417,298	72,811	4.1%
12/31/16	20,969	1,580,251,254	75,361	3.5%

Schedule of Retirees and Beneficiaries Added to and Removed from Rolls - Pension Benefits

	Added to Rolls		Removed from Rolls		End of Year Rolls		Average	% Increase in Average
Year Ended	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits	Annual Benefit	Annual Benefit
2007	910	$37,609,335	602	$ 9,344,686	14,018	$350,005,854	$24,968	6.4%
2008	791	32,064,586	517	8,641,406	14,292	373,429,034	26,129	4.6%
2009	693	43,524,587	510	9,455,204	14,475	407,498,417	28,152	7.7%
2010	917	40,259,064	538	10,616,859	14,854	437,140,622	29,429	4.5%
2011	1,158	55,308,088	580	12,124,191	15,432	480,324,519	31,125	5.8%
2012	1,374	58,601,319	632	14,697,753	16,174	524,228,085	32,412	4.1%
2013	992	52,564,737	489	10,006,848	16,677	566,785,974	33,986	4.9%
2014	929	52,208,075	530	11,628,617	17,076	607,365,432	35,568	4.7%
2015	1,323	69,890,199	802	22,262,895	17,597	654,992,736	37,222	4.7%
2016	968	58,252,392	656	18,067,979	17,909	695,177,149	38,817	4.3%

Schedule of Retirees and Beneficiaries Added to and Removed from Rolls - Postemployment Healthcare

	Added to Rolls		Removed from Rolls		End of Year Rolls		Average	% Change in Average
Year Ended	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits	Annual Benefit	Annual Benefit
2011	752	$4,513,262	381	$2,509,723	7,925	$46,904,340	$5,919	-0.4%
2012	640	3,715,909	386	6,655,532	8,179	43,964,717	5,375	-9.2%
2013	703	3,970,847	346	3,986,309	8,536	43,949,255	5,149	-4.2%
2014	556	2,308,094	501	2,229,694	8,591	48,487,043	5,644	9.6%
2015	631	8,261,563	439	2,119,662	8,783	54,628,944	6,220	10.2%
2016	570	989,701	399	1,962,607	8,954	53,656,038	5,992	-3.7%

Solvency Test - Pension Benefits

Year Ended	Accrued Liabilities for: (1) Active and Inactive Members Accumulated Contributions	(2) Members Currently Receiving Benefits	(3) Active and Inactive Member Employer Portion	Actuarial Value of Assets	Percent of Accrued Liabilities Covered by Assets (1)	(2)	(3)
2007	$1,569,401,144	$4,035,560,084	$3,781,326,569	$8,059,879,804	100%	100%	65%
2008	1,650,186,209	4,258,683,439	4,188,158,217	8,036,074,797	100%	100%	51%
2009	1,749,058,834	5,043,516,963	4,696,505,501	7,945,567,096	100%	100%	25%
2010	1,824,472,753	5,373,790,587	4,824,959,545	7,982,368,659	100%	100%	16%
2011	1,662,273,117	5,902,779,764	5,063,221,680	7,897,102,116	100%	100%	7%
2012	1,821,792,594	6,431,295,762	5,168,398,587	7,833,882,926	100%	93%	0%
2013	1,854,155,647	6,822,552,230	4,959,868,300	8,381,444,287	100%	96%	0%
2014	1,897,951,260	7,295,515,219	4,947,080,874	8,810,509,070	100%	95%	0%
2015	1,914,569,837	7,864,534,443	5,157,487,056	8,991,018,918	100%	90%	0%
2016	1,967,965,799	8,305,339,574	5,183,468,612	9,488,223,349	100%	91%	0%

Solvency Test - Postemployment Healthcare

Year Ended	Accrued Liabilities for: (1) Active and Inactive Members Accumulated Contributions	(2) Members Currently Receiving Benefits	(3) Active and Inactive Member Employer Portion	Actuarial Value of Assets	Percent of Accrued Liabilities Covered by Assets (1)	(2)	(3)
2011	$ -	$605,375,403	$1,073,195,985	$ -	0%	0%	0%
2012	-	776,395,244	1,069,213,888	-	0%	0%	0%
2013	-	818,201,554	1,160,565,936	-	0%	0%	0%
2014	-	826,052,274	1,154,036,343	-	0%	0%	0%
2015	-	879,319,447	1,254,787,260	-	0%	0%	0%
2016	-	825,328,625	1,132,476,063	-	0%	0%	0%

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Statistical Section

This section contains additional schedules that are designed to supplement the information in the Comprehensive Annual Financial Report:

Statements of Changes in Plan Net Position – Pension Benefits and Postemployment Healthcare provides details on the specific sources and uses of funds.

Schedules of Retired Members by Benefit Type – Pension Benefits and Postemployment Healthcare provides details on the monthly pension amounts for retirement and survivor members, including those with postemployment healthcare.

Schedule of Average Benefit Payments – Pension Benefits and Postemployment Healthcare provides details on years of credited service, average monthly pension, average monthly final average salary, and the number of new retirees, including those with postemployment healthcare.

Schedule of Principal Participating Employers – Pension Benefits and Postemployment Healthcare provides details on employers who participate in the Plan.

Additional Schedules Required by Employer provides details on historical financial, investment and actuarial performance.

Statement of Changes in Pension Plan Fiduciary Net Position

For year ended December 31, 2016, with comparative totals for 9 years

	2016	2015	2014	2013	2012
Additions:					
Employer contributions	$ 414,703,155	$ 136,075,504	$ 146,075,414	$ 147,720,014	$ 152,734,539
Employee contributions	139,355,592	137,707,719	129,325,318	127,593,220	128,869,508
Net investment and net securities lending income (loss)	629,442,470	(21,896,696)	488,890,897	1,179,440,119	887,687,519
Other	4,046,158	4,380,293	3,753,960	4,041,145	4,212,209
Total additions	1,187,547,375	256,266,820	768,045,589	1,458,794,498	1,173,503,775
Deductions:					
Benefits					
Retirement	624,231,419	587,861,744	543,274,840	507,494,409	469,398,775
Survivors	47,919,324	45,002,859	41,865,298	38,761,919	35,762,286
Disability	10,707,260	10,332,441	10,515,760	10,909,478	12,265,257
Refunds					
Death	2,792,846	4,983,186	3,187,363	3,461,166	4,636,647
Separation	13,967,392	14,486,833	13,082,086	15,180,523	16,740,836
Other	9,941,984	13,803,152	10,077,912	11,231,341	11,704,243
Net adminstrative and miscellaneous expenses	5,373,555	5,151,110	5,010,206	4,324,634	4,303,353
Total deductions	714,933,780	681,621,325	627,013,465	591,363,470	554,811,397
Net increase (decrease)	472,613,595	(425,354,505)	141,032,124	867,431,028	618,692,378
Net position:					
Beginning of year	8,643,044,275	9,068,398,780	8,927,366,656	8,059,935,628	7,441,243,250
End of year	$9,115,657,870	$8,643,044,275	$9,068,398,780	$8,927,366,656	$8,059,935,628

For year ended December 31, 2016, with comparative totals for 9 years (continued)

	2011	2010	2009	2008	2007
Additions:					
Employer contributions	$ 162,667,160	$ 141,326,266	$ 147,934,643	$ 146,134,911	$ 226,721,014
Employee contributions	127,577,473	129,449,866	127,795,881	123,776,705	123,047,516
Net investment and net securities lending income (loss)	82,701,033	832,882,639	1,013,615,250	(1,858,853,846)	477,494,266
Other	3,380,437	8,248,307	6,087,899	4,382,353	4,142,324
Total additions	376,326,103	1,111,907,078	1,295,433,673	(1,584,559,877)	831,405,120
Deductions:					
Benefits					
Retirement	429,527,599	393,525,707	369,226,987	347,922,288	324,724,997
Survivors	33,003,057	30,307,794	27,837,079	25,815,860	23,645,235
Disability	13,961,631	13,789,106	13,510,567	13,234,974	13,038,555
Refunds					
Death	3,036,462	5,569,966	3,424,156	3,565,245	3,997,807
Separation	15,813,775	12,704,374	11,582,869	15,322,631	56,013,958
Other	10,315,098	6,767,478	5,397,886	5,836,226	6,611,592
Net adminstrative and miscellaneous expenses	4,078,843	4,074,955	4,248,287	4,172,536	4,450,330
Total deductions	509,736,465	466,739,380	435,227,831	415,869,760	432,482,474
Net increase (decrease)	(133,410,362)	645,167,698	860,205,842	(2,000,429,637)	398,922,646
Net position:					
Beginning of year	7,574,653,612	6,929,485,914	6,069,280,072	8,069,709,709	7,670,787,063
End of year	$7,441,243,250	$7,574,653,612	$6,929,485,914	$6,069,280,072	$8,069,709,709

Statement of Changes in Postemployment Healthcare Plan Net Position

For year ended December 31, 2016, with comparative totals for 9 years

	2016	2015	2014	2013	2012
Additions:					
Employer contributions	$49,565,249	$50,765,817	$43,957,458	$40,097,630	$37,986,237
Annuitant healthcare benefits contributions	41,650,333	37,635,349	37,358,502	35,927,206	33,948,728
Other	9,973,182	7,077,550	5,988,102	4,506,584	5,978,480
Total additions	101,188,764	95,469,716	87,304,062	80,531,420	77,913,445
Deductions:					
Healthcare benefits	101,188,764	95,469,716	87,304,062	80,531,420	77,913,445
Net increase (decrease)	-	-	-	-	-
Net position:					
Beginning of year	-	-	-	-	-
End of year	$ -	$ -	$ -	$ -	$ -

For year ended December 31, 2016, with comparative totals for 9 years (continued)

	2011	2010	2009	2008	2007
Additions:					
Employer contributions	$32,670,461	$40,183,057	$35,779,227	$37,781,310	$31,420,216
Annuitant healthcare benefits contributions	33,236,282	30,108,884	28,809,395	29,074,233	26,844,312
Other	14,233,879	4,717,744	5,653,995	2,699,033	5,860,228
Total additions	80,140,622	75,009,685	70,242,617	69,554,576	64,124,756
Deductions:					
Healthcare benefits	80,140,622	75,009,685	70,242,617	69,554,576	64,124,756
Net increase (decrease)	-	-	-	-	-
Net position:					
Beginning of year	-	-	-	-	-
End of year	$ -	$ -	$ -	$ -	$ -

Schedule of Retired Members by Benefit Type - Pension Benefits

As of December 31, 2016

Amount of Monthly Pension Benefit	Number of Recipients	Type of Pension Benefit 1	Type of Pension Benefit 2	Option Selected 1	Option Selected 2	Option Selected 3
$ 1 – $ 500	1,948	1,338	610	1,240	626	82
501 – 1,000	1,906	1,249	657	1,268	594	44
1,001 – 1,500	1,552	1,161	391	1,017	535	0
1,501 – 2,000	1,401	1,116	285	887	514	0
2,001 – 2,500	1,346	1,149	197	797	549	0
2,501 – 3,000	1,425	1,252	173	846	579	0
3,001 – 3,500	1,213	1,072	141	698	515	0
3,501 – 4,000	1,226	1,128	98	694	532	0
4,001 – 4,500	1,010	948	62	517	493	0
4,501 – 5,000	946	916	30	423	523	0
5,001 – 5,500	923	911	12	376	547	0
5,501 – 6,000	636	628	8	249	387	0
6,001 – 6,500	786	783	3	265	521	0
6,501 – 7,000	460	456	4	189	271	0
7,001 – 7,500	314	314	0	120	194	0
7,501 – 8,000	213	210	3	72	141	0
8,001 – 8,500	163	162	1	52	111	0
8,501 – 9,000	88	85	3	26	62	0
9,001 – 9,500	38	37	1	12	26	0
9,501 – 10,000	36	33	3	10	26	0
10,001 – 10,500	21	21	0	1	20	0
10,501 – 11,000	19	18	1	4	15	0
11,001 – 11,500	21	19	2	4	17	0
11,501 – 12,000	28	28	0	5	23	0
12,001 – 12,500	19	19	0	5	14	0
12,501 – 13,000	14	14	0	3	11	0
13,001 – 13,500	12	12	0	4	8	0
13,501 – 14,000	19	19	0	5	14	0
14,001 – 14,500	13	13	0	3	10	0
14,501 – 15,000	7	7	0	3	4	0
Over $15,000	106	104	2	26	80	0
Totals	**17,909**	**15,222**	**2,687**	**9,821**	**7,962**	**126**

Type of Pension Benefit
1. *Regular retirement*
2. *Survivor payment*

Option Selected
1. *Whole Life Annuity*
2. *65% Joint and Contingent Annuity*
3. *Temporary Annuity*

Schedule of Retired Members by Benefit Type - Postemployment Healthcare

As of December 31, 2016

Amount of Monthly Pension Benefit	Number of Recipients	Type of Pension Benefit		Option Selected		
		1	2	1	2	3
\$ 1 – \$ 500	167	67	100	133	23	11
501 – 1,000	367	154	213	300	67	0
1,001 – 1,500	505	325	180	383	122	0
1,501 – 2,000	635	479	156	447	188	0
2,001 – 2,500	709	600	109	459	250	0
2,501 – 3,000	847	732	115	555	292	0
3,001 – 3,500	795	691	104	511	284	0
3,501 – 4,000	830	765	65	530	300	0
4,001 – 4,500	675	630	45	401	274	0
4,501 – 5,000	627	603	24	331	296	0
5,001 – 5,500	637	630	7	312	325	0
5,501 – 6,000	447	441	6	212	235	0
6,001 – 6,500	582	579	3	229	353	0
6,501 – 7,000	329	326	3	167	162	0
7,001 – 7,500	225	225	0	107	118	0
7,501 – 8,000	161	158	3	66	95	0
8,001 – 8,500	119	118	1	44	75	0
8,501 – 9,000	57	55	2	17	40	0
9,001 – 9,500	23	22	1	11	12	0
9,501 – 10,000	25	22	3	8	17	0
10,001 – 10,500	18	18	0	1	17	0
10,501 – 11,000	10	10	0	2	8	0
11,001 – 11,500	16	14	2	4	12	0
11,501 – 12,000	22	22	0	5	17	0
12,001 – 12,500	14	14	0	3	11	0
12,501 – 13,000	6	6	0	1	5	0
13,001 – 13,500	9	9	0	2	7	0
13,501 – 14,000	11	11	0	4	7	0
14,001 – 14,500	11	11	0	2	9	0
14,501 – 15,000	3	3	0	2	1	0
Over \$15,000	72	71	1	16	56	0
Totals	**8,954**	**7,811**	**1,143**	**5,265**	**3,678**	**11**

Type of Pension Benefit
1. Regular retirement
2. Survivor payment

Option Selected
1. Whole Life Annuity
2. 65% Joint and Contingent Annuity
3. Temporary Annuity

Schedule of Average Benefit Payments - Pension Benefits

		Years of Credited Service						
		0-4	5-9	10-14	15-19	20-24	25-29	30+
2007	Average Monthly Pension	$ 355	$1,016	$1,921	$2,543	$3,404	$4,034	$4,477
	Average Monthly Final Average Salary	N/A	N/A	$5,435	$5,138	$5,506	$5,421	$5,907
	Number of New Retirees	71	65	156	158	127	59	119
2008	Average Monthly Pension	$ 382	$1,368	$1,871	$2,751	$3,394	$4,441	$4,575
	Average Monthly Final Average Salary	N/A	N/A	$5,719	$5,540	$5,682	$6,219	$6,048
	Number of New Retirees	69	43	121	128	121	76	91
2009	Average Monthly Pension	$ 302	$1,311	$2,055	$2,671	$3,682	$3,854	$4,491
	Average Monthly Final Average Salar	N/A	N/A	$6,649	$5,778	$6,095	$5,931	$5,992
	Number of New Retirees	58	30	77	96	100	59	120
2010	Average Monthly Pension	$ 335	$1,144	$1,855	$2,598	$3,349	$3,968	$4,278
	Average Monthly Final Average Salary	$5,927	$6,780	$5,616	$5,512	$5,319	$5,466	$5,408
	Number of New Retirees	74	38	92	122	153	72	176
2011	Average Monthly Pension	$ 439	$ 955	$1,931	$2,705	$3,686	$4,316	$4,537
	Average Monthly Final Average Salary	$6,747	$6,114	$6,090	$5,667	$5,948	$6,123	$5,712
	Number of New Retirees	74	30	138	157	212	131	267
2012	Average Monthly Pension	$ 432	$ 982	$1,828	$2,579	$3,273	$4,273	$4,578
	Average Monthly Final Average Salary	$7,369	$6,598	$5,733	$5,475	$5,391	$5,882	$5,795
	Number of New Retirees	97	35	110	167	210	113	287
2013	Average Monthly Pension	$ 469	$1,150	$1,864	$2,567	$3,334	$4,864	$4,813
	Average Monthly Final Average Salary	$7,331	$7,653	$5,999	$5,419	$5,597	$6,609	$6,087
	Number of New Retirees	60	44	113	123	168	132	275
2014	Average Monthly Pension	$ 421	$1,336	$1,767	$2,643	$3,770	$4,620	$4,829
	Average Monthly Final Average Salary	$6,611	$8,364	$5,943	$5,968	$6,296	$6,447	$6,131
	Number of New Retirees	53	33	104	119	155	135	246
2015	Average Monthly Pension	$ 485	$1,153	$1,756	$2,683	$3,696	$4,796	$5,011
	Average Monthly Final Average Salary	$8,264	$7,364	$6,060	$6,286	$6,382	$6,770	$6,363
	Number of New Retirees	73	43	106	110	180	165	329
2016	Average Monthly Pension	$ 466	$1,255	$2,105	$2,838	$3,683	$4,772	$4,977
	Average Monthly Final Average Salary	$7,292	$8,242	$6,926	$6,393	$6,256	$6,887	$6,339
	Number of New Retirees	44	31	101	108	131	128	233

N/A - Not Available

Schedule of Average Benefit Payments - Postemployment Healthcare

		Years of Credited Service						
		0-4	5-9	10-14	15-19	20-24	25-29	30+
2007	Average Monthly Pension	$ 380	$1,467	$2,153	$2,601	$3,530	$4,117	$4,630
	Average Monthly Final Average Salary	N/A	N/A	$5,721	$5,121	$5,486	$5,600	$6,056
	Number of New Retirees	3	13	77	109	87	37	82
2008	Average Monthly Pension	$ 150	$1,238	$1,830	$3,046	$3,418	$4,317	$4,585
	Average Monthly Final Average Salary	N/A	N/A	$5,050	$5,941	$6,128	$5,920	$6,016
	Number of New Retirees	1	10	62	76	70	47	72
2009	Average Monthly Pension	$ 399	$ 0	$2,031	$2,672	$3,434	$3,906	$4,398
	Average Monthly Final Average Salary	N/A	$ 0	$6,679	$5,804	$6,652	$5,994	$6,031
	Number of New Retirees	4	0	31	64	46	41	88
2010	Average Monthly Pension	$ 199	$1,468	$1,931	$2,784	$3,273	$4,141	$4,239
	Average Monthly Final Average Salary	$ 2,747	$7,743	$5,740	$5,673	$5,151	$5,639	$5,361
	Number of New Retirees	1	5	41	72	110	58	118
2011	Average Monthly Pension	$ 239	$ 783	$1,839	$2,852	$3,787	$4,056	$4,574
	Average Monthly Final Average Salary	$ 4,669	$5,044	$5,376	$5,729	$5,991	$5,710	$5,750
	Number of New Retirees	2	7	58	89	144	96	196
2012	Average Monthly Pension	$ 635	$1,127	$1,767	$2,746	$3,462	$4,572	$4,479
	Average Monthly Final Average Salary	$ 5,149	$7,880	$5,489	$5,552	$5,457	$6,193	$5,672
	Number of New Retirees	2	4	36	88	142	82	197
2013	Average Monthly Pension	$ 607	$ 868	$2,014	$2,674	$3,562	$4,739	$4,705
	Average Monthly Final Average Salary	$ 5,833	$4,857	$6,140	$5,441	$5,737	$6,441	$5,952
	Number of New Retirees	1	5	48	76	110	87	190
2014	Average Monthly Pension	$ 0	$ 609	$1,786	$2,682	$3,631	$4,768	$4,781
	Average Monthly Final Average Salary	$ 0	$4,183	$5,834	$5,718	$6,035	$6,521	$6,062
	Number of New Retirees	0	4	31	63	104	97	162
2015	Average Monthly Pension	$ 2,419	$1,150	$1,915	$3,078	$3,881	$4,965	$4,860
	Average Monthly Final Average Salary	$26,180	$8,620	$6,239	$6,854	$6,375	$6,890	$6,175
	Number of New Retirees	1	5	37	60	101	95	232
2016	Average Monthly Pension	$ 257	$1,148	$2,236	$3,009	$3,860	$5,242	$4,893
	Average Monthly Final Average Salary	$ 4,469	$6,816	$7,156	$6,548	$6,363	$7,282	$6,219
	Number of New Retirees	1	5	36	54	72	80	154

N/A - Not Available

Schedule of Principal Participating Employers - Pension Benefits and Postemployment Healthcare Combined

As of December 31, 2016 and 2007

	2016		2007	
Participating Employer	**Covered Employees**	**Percentage of Total Covered Employees**	**Covered Employees**	**Percentage of Total Covered Employees**
Cook County	20,969	99.85%	23,456	99.89%
County Employees' and Officers' Annuity and Benefit Fund of Cook County	31	0.15%	25	0.11%
Total	21,000	100.00%	23,481	100.00%

Additional Schedules Required by Employer

Schedule of Investment Rate of Return - Pension Benefits and Postemployment Healthcare Combined

Year Ended December 31,	Investment Rate of Return (Net of Fees)
2007	6.3%
2008	-24.5%
2009	18.0%
2010	12.4%
2011	1.2%
2012	12.5%
2013	15.1%
2014	5.9%
2015	-0.1%
2016	7.7%

Schedule of Actuarial Value of Assets vs. Fair Value of Assets - Pension Benefits and Postemployment Healthcare Combined

Year Ended December 31,	Actuarial Value of Assets	Fair Value of Assets	Actuarial Value as a Percentage of Fair Value
2007	$8,059,879,804	$8,069,709,709	99.9%
2008	8,036,074,797	6,069,280,072	132.4%
2009	7,945,567,096	6,929,485,914	114.7%
2010	7,982,368,659	7,574,653,612	105.4%
2011	7,897,102,116	7,441,243,250	106.1%
2012	7,833,882,926	8,059,935,628	97.2%
2013	8,381,444,287	8,927,366,656	93.9%
2014	8,810,509,070	9,068,398,780	97.2%
2015	8,991,018,918	8,643,044,275	104.0%
2016	9,488,223,349	9,115,657,870	104.1%

Schedule of Employer Contributions - Pension Benefits and Postemployment Healthcare Combined

Year Ended December 31,	Actuarially Required Contribution (ARC)	Tax Levy Requested	Actual Employer Contribution	Percentage of ARC Contributed
2007	$421,092,345	$264,846,000	$261,534,551	62.1%
2008	406,625,773	183,124,000	188,008,670	46.2%
2009	468,181,943	186,099,854	188,285,317	40.2%
2010	572,318,384	186,523,677	184,722,634	32.3%
2011	613,952,848	192,234,211	198,837,424	32.4%
2012	655,800,100	196,139,483	190,720,776	29.1%
2013	719,890,057	192,969,505	187,817,644	26.1%
2014	634,722,132	194,668,229	190,032,872	29.9%
2015	639,794,759	192,786,468	186,832,321	29.2%
2016	696,007,249	195,653,930	464,268,404[1]	66.7%

[1] *Includes supplemental employer contribution of $270,526,000.*

Schedule of Financial Condition - Pension Benefits and Postemployment Healthcare Combined for year ended December 31, 2016, with comparative totals for 9 years

	2016	2015	2014	2013	2012
Beginning Net Position (Fair Value)	$8,643,044,275	$9,068,398,780	$ 8,927,366,656	$ 8,059,935,628	$7,441,243,250
Additions:					
Employer contributions	464,268,404	186,832,321	190,032,872	187,817,644	190,720,776
Employee contributions	139,355,592	137,707,719	129,325,318	127,593,220	128,869,508
Annuitant health benefit contributions	41,650,333	37,635,349	37,358,502	35,927,206	33,948,728
Net investment income (loss)	629,442,470	(21,896,696)	488,890,897	1,179,440,119	887,687,519
Other	14,019,340	11,457,843	9,742,062	8,547,729	10,190,689
Total additions	1,288,736,139	351,736,536	855,349,651	1,539,325,918	1,251,417,220
Deductions:					
Benefits	784,046,767	738,666,760	682,959,960	637,697,226	595,339,763
Refunds	26,702,222	33,273,171	26,347,361	29,873,030	33,081,726
Administrative expenses	5,373,555	5,151,110	5,010,206	4,324,634	4,303,353
Total deductions	816,122,544	777,091,041	714,317,527	671,894,890	632,724,842
Ending Net Position (Fair Value)	$9,115,657,870	$8,643,044,275	$ 9,068,398,780	$ 8,927,366,656	$8,059,935,628
Actuarial Value of Assets	9,488,223,349	8,991,018,918	8,810,509,070	8,381,444,287	7,833,882,926
Actuarial Accrued Liabilities (AAL)	16,726,457,108	16,232,185,534	15,318,790,688	14,812,087,677	14,630,250,955
Unfunded AAL (UAAL) (Fair Value)	7,610,799,238	7,589,141,259	6,250,391,908	5,884,721,021	6,570,315,327
Unfunded AAL (UAAL) (Actuarial Value)	7,238,233,759	7,241,166,616	6,508,281,618	6,430,643,390	6,796,368,029
Funded Ratio (Fair Value)	54.5%	53.2%	59.2%	60.3%	55.1%
Funded Ratio (Actuarial Value)	56.7%	55.4%	57.5%	56.6%	53.5%

Schedule of Financial Condition - Pension Benefits and Postemployment Healthcare Combined for year ended December 31, 2016, with comparative totals for 9 years (continued)

	2011	2010	2009	2008	2007
Beginning Net Position (Fair Value)	$ 7,574,653,612	$6,929,485,914	$6,069,280,072	$8,069,709,709	$7,670,787,063
Additions:					
Employer contributions	195,337,621	181,509,323	183,713,870	183,916,221	258,141,230
Employee contributions	127,577,473	129,449,866	127,795,881	123,776,705	123,047,516
Annuitant health benefit contributions	33,236,282	30,108,884	28,809,395	29,074,233	26,844,312
Net investment income (loss)	82,701,033	833,052,844	1,013,615,250	(1,858,853,846)	477,494,266
Other	17,614,316	12,795,846	11,741,894	7,081,386	10,002,552
Total additions	456,466,725	1,186,916,763	1,365,676,290	(1,515,005,301)	895,529,876
Deductions:					
Benefits	556,632,909	512,632,292	480,817,250	456,527,698	425,533,543
Refunds	29,165,335	25,041,818	20,404,911	24,724,102	66,623,357
Administrative expenses	4,078,843	4,074,955	4,248,287	4,172,536	4,450,330
Total deductions	589,877,087	541,749,065	505,470,448	485,424,336	496,607,230
Ending Net Position (Fair Value)	$ 7,441,243,250	$7,574,653,612	$6,929,485,914	$6,069,280,072	$8,069,709,709
Actuarial Value of Assets	7,897,102,116	7,982,368,659	7,945,567,096	8,036,074,797	8,059,879,804
Actuarial Accrued Liabilities (AAL)	13,724,012,399	13,142,137,175	12,575,515,749	11,073,181,349	10,423,729,900
Unfunded AAL (UAAL) (Fair Value)	6,282,769,149	5,567,483,563	5,646,029,835	5,003,901,277	2,354,020,191
Unfunded AAL (UAAL) (Actuarial Value)	5,826,910,283	5,159,768,516	4,629,948,653	3,037,106,552	2,363,850,096
Funded Ratio (Fair Value)	54.2%	57.6%	55.1%	54.8%	77.4%
Funded Ratio (Actuarial Value)	57.5%	60.7%	63.2%	72.6%	77.3%

Schedule of Funding Progress - Pension Benefits and Postemployment Healthcare Combined

Year Ended December 31,	Actuarial Accrued Liabilities (AAL)	Actuarial Value of Assets	Fair Value of Net Position	Unfunded AAL (UAAL) (Actuarial Value)
2007	$10,423,729,900	$8,059,879,804	$8,069,709,709	$2,363,850,096
2008	11,073,181,349	8,036,074,797	6,069,280,072	3,037,106,552
2009	12,575,515,749	7,945,567,096	6,929,485,914	4,629,948,653
2010	13,142,137,175	7,982,368,659	7,574,653,612	5,159,768,516
2011	13,724,012,399	7,897,102,116	7,441,243,250	5,826,910,283
2012	14,630,250,955	7,833,882,926	8,059,935,628	6,796,368,029
2013	14,812,087,677	8,381,444,287	8,927,366,656	6,430,643,390
2014	15,318,790,688	8,810,509,070	9,068,398,780	6,508,281,618
2015	16,232,185,534	8,991,018,918	8,643,044,275	7,241,166,616
2016	16,726,457,108	9,488,223,349	9,115,657,870	7,238,233,759

Schedule of Funding Progress - Pension Benefits

Year Ended December 31,	Actuarial Accrued Liabilities (AAL)	Actuarial Value of Assets	Fair Value of Net Position	Unfunded AAL (UAAL) (Actuarial Value)
2007	$ 9,386,287,797	$8,059,879,804	$8,069,709,709	$1,326,407,993
2008	10,097,027,865	8,036,074,797	6,069,280,072	2,060,953,068
2009	11,489,081,298	7,945,567,096	6,929,485,914	3,543,514,202
2010	12,023,222,885	7,982,368,659	7,574,653,612	4,040,854,226
2011	12,628,274,561	7,897,102,116	7,441,243,250	4,731,172,445
2012	13,418,486,943	7,833,882,926	8,059,935,628	5,584,604,017
2013	13,636,576,177	8,381,444,287	8,927,366,656	5,255,131,890
2014	14,140,547,353	8,810,509,070	9,068,398,780	5,330,038,283
2015	14,936,591,336	8,991,018,918	8,643,044,275	5,945,572,418
2016	15,456,773,985	9,488,223,349	9,115,657,870	5,968,550,636

Schedule of Funding Progress - Pension Benefits and Postemployment Healthcare Combined (cont'd)

Unfunded AAL (UAAL) Fair Value	Funded Ratio Actuarial Value	Funded Ratio Fair Value	Covered Payroll	UAAL as a Percentage of Covered Payroll (Actuarial Value)	UAAL as a Percentage of Covered Payroll (Fair Value)
$2,354,020,191	77.3%	77.4%	$1,370,844,734	172.4%	171.7%
5,003,901,277	72.6%	54.8%	1,463,372,408	207.5%	341.9%
5,646,029,835	63.2%	55.1%	1,498,161,713	309.0%	376.9%
5,567,483,563	60.7%	57.6%	1,494,093,569	345.3%	372.6%
6,282,769,149	57.5%	54.2%	1,456,444,123	400.1%	431.4%
6,570,315,327	53.5%	55.1%	1,478,253,368	459.8%	444.5%
5,884,721,021	56.6%	60.3%	1,484,269,715	433.3%	396.5%
6,250,391,908	57.5%	59.2%	1,514,550,023	429.7%	412.7%
7,589,141,259	55.4%	53.2%	1,572,417,298	460.5%	482.6%
7,610,799,238	56.7%	54.5%	1,580,251,254	458.0%	481.6%

Schedule of Funding Progress - Pension Benefits (continued)

Unfunded AAL (UAAL) Fair Value	Funded Ratio Actuarial Value	Funded Ratio Fair Value	Covered Payroll	UAAL as a Percentage of Covered Payroll (Actuarial Value)	UAAL as a Percentage of Covered Payroll (Fair Value)
$1,316,578,088	85.9%	86.0%	$1,370,844,734	96.8%	96.0%
4,027,747,793	79.6%	60.1%	1,463,372,408	140.8%	275.2%
4,559,595,384	69.2%	60.3%	1,498,161,713	236.5%	304.3%
4,448,569,273	66.4%	63.0%	1,494,093,569	270.5%	297.7%
5,187,031,311	62.5%	58.9%	1,456,444,123	324.8%	356.1%
5,358,551,315	58.4%	60.1%	1,478,253,368	377.8%	362.5%
4,709,209,521	61.5%	65.5%	1,484,269,715	354.1%	317.3%
5,072,148,573	62.3%	64.1%	1,514,550,023	351.9%	334.9%
6,293,547,061	60.2%	57.9%	1,572,417,298	378.1%	400.2%
6,341,116,115	61.4%	59.0%	1,580,251,254	377.7%	401.3%

Schedule of Funding Progress - Postemployment Healthcare

Year Ended December 31,	Actuarial Accrued Liabilities (AAL)	Actuarial Value of Assets	Fair Value of Net Position	Unfunded AAL (UAAL) (Actuarial Value)
2007	$1,554,123,496	$ -	$ -	$1,554,123,496
2008	1,448,828,756	-	-	1,448,828,756
2009	1,686,872,018	-	-	1,686,872,018
2010	1,724,622,462	-	-	1,724,622,462
2011	1,678,571,388	-	-	1,678,571,388
2012	1,845,609,132	-	-	1,845,609,132
2013	1,978,767,490	-	-	1,978,767,490
2014	1,980,088,617	-	-	1,980,088,617
2015	2,134,106,707	-	-	2,134,106,707
2016	1,957,804,688	-	-	1,957,804,688

Schedule of Components of Change in Unfunded Liability - Pension Benefits and Postemployment Healthcare Combined

Year Ended December 31,	Salary Increase Higher/Lower than Assumed	Investment Returns Higher/Lower than Assumed	Employer Contributions Higher/Lower than Normal Cost Plus Interest	Changes in Actuarial Assumptions	Other Sources (1)	Total Change in Unfunded Liability
2007	$ 78,765,800	$(118,960,238)	$135,979,428	$ -	$ (173,829,946)	$ (78,044,956)
2008	160,614,779	481,086,534	198,154,784	-	(166,599,641)	673,256,456
2009	(138,750,205)	534,155,051	258,309,848	810,786,835	128,340,572	1,592,842,101
2010	(185,530,277)	364,312,504	349,354,012	-	1,683,624	529,819,863
2011	(138,554,686)	459,875,129	371,793,485	-	(25,972,161)	667,141,767
2012	34,073,219	376,601,751	252,886,106	-	305,896,670	969,457,746
2013	(184,385,510)	(586,433,767)	513,419,056	-	(108,324,418)	(365,724,639)
2014	(148,871,075)	(161,124,113)	423,103,748	-	(35,470,332)	77,638,228
2015	164,977,011	61,964,372	431,124,367	-	74,819,248	732,884,998
2016	2,613,304	14,518,350	196,813,036	-	(216,877,547)	(2,932,857)

(1) Includes but is not limited to health insurance, optional retirement experience and death, retirement and withdrawal experience.

Schedule of Funding Progress - Postemployment Healthcare (continued)

Unfunded AAL (UAAL) Fair Value	Funded Ratio Actuarial Value	Funded Ratio Fair Value	Covered Payroll	UAAL as a Percentage of Covered Payroll (Actuarial Value)	UAAL as a Percentage of Covered Payroll (Fair Value)
$1,554,123,496	0.0%	0.0%	$1,370,844,734	113.4%	113.4%
1,448,828,756	0.0%	0.0%	1,463,372,408	99.0%	99.0%
1,686,872,018	0.0%	0.0%	1,498,161,713	112.6%	112.6%
1,724,622,462	0.0%	0.0%	1,494,093,569	115.4%	115.4%
1,678,571,388	0.0%	0.0%	1,456,444,123	115.3%	115.3%
1,845,609,132	0.0%	0.0%	1,478,253,368	124.9%	124.9%
1,978,767,490	0.0%	0.0%	1,484,269,715	133.3%	133.3%
1,980,088,617	0.0%	0.0%	1,514,550,023	130.7%	130.7%
2,134,106,707	0.0%	0.0%	1,597,597,077	133.6%	133.6%
1,957,804,688	0.0%	0.0%	1,609,559,234	121.6%	121.6%

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