# LABORERS' AND RETIREMENT BOARD EMPLOYEES' <br> Annuity and Benefit Fund of Chicago <br> A Component Unit of the City of Chicago 

FinANCIAL Statements

DECEMBER 31, 2016

# LABORERS' AND RETIREMENT BOARD EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO 

Financial Statements with Additional Information

DECEMBER 31, 2016 AND 2015

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## Report of Independent Auditors

To the Board of Trustees of
Laborers' and Retirement Board Employees'
Annuity and Benefit Fund of Chicago
We have audited the accompanying financial statements of Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago (the Plan), a component unit of the City of Chicago, which comprise the statements of fiduciary net position as of December 31, 2016 and 2015, and the related statements of changes in fiduciary 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

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.

## Auditor's 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 from material misstatement.

An audit involves 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 entity's preparation and 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 entity's internal control. Accordingly, we express no such opinion. 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 the 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 above, present fairly, in all material respects, the fiduciary net position of Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago at December 31, 2016 and 2015, and the changes in fiduciary net position for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

## Other Matters

## Required Supplemental Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 3 through 9, Schedules of Changes in Net Pension Liability and Related Ratios Multiyear, Schedule of the Net Pension Liability Multiyear, Schedule of Contributions Multiyear, Schedule of Investment Returns Multiyear, Schedules of Funding Progress, Schedules of Employer Contributions, and Notes to the Schedules on pages 44 through 54 be presented to supplement the basic financial statements. Such information, although not 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 historic 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 audits 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.

## Other Information

Our audits were conducted for the purpose of forming an opinion on the financial statements that comprise the Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago's basic financial statements. The supplementary information such as the Schedules of Invested Assets, Schedules of Administrative Expenses, Investment Expenses and Professional Services and Schedules of Investment Expense on pages 55 through 57 are presented for purposes of additional analysis and are 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 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 basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary information is fairly stated in relation to the basic financial statements as a whole.

## Calibe CAA Group, PLLC

Chicago, IL
May 9, 2017

# Laborers’ and Retirement Board Employees <br> Annuity and Benefit Fund of Chicago 

## Management's Discussion and Analysis (Unaudited)

This discussion and analysis is prepared by the management staff of the Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago (the Plan) for the purpose of providing an overview of the Plan's financial activities for the years ended December 31, 2016 and 2015. We encourage readers to consider the information presented here in conjunction with the Plan's financial statements and actuarial report.

## Financial Highlights

- The net position for the Plan at December 31, 2016 was $\$ 1.17$ billion, a $\$ 71$ million decrease from the Plan's net position at December 31, 2015. The net position for the Plan at December 31, 2015 was $\$ 1.24$ billion, a $\$ 149$ million decrease from the Plan's net position at December 31, 2014. The net position is restricted for future benefit obligations. The decreases are largely attributable to a statutorily-defined funding mechanism which provides for inadequate contributions to the Plan and therefore required the Plan to liquidate over $\$ 130$ million of investment assets in both 2016 and 2015 to satisfy its financial obligations.
- The investment portfolio recorded a gain of $\$ 57.7$ million for fiscal year 2016 and a loss of $\$ 22.3$ million for 2015. During 2016, the Plan's portfolio generated a preliminary rate of return, net of fees, of $4.7 \%$, compared to $-1.5 \%$ for 2015.
- Based on the actuarial valuations as of December 31, 2016 and 2015, the overall funded ratios for the Plan were $50.4 \%$ and $53.0 \%$, respectively. For accounting purposes pursuant to GASB 67 and 68, which uses a Single Discount Rate and shorter amortization periods to measure the total pension liability, the funded ratio of the Plan was $31.6 \%$ for 2016 and $33.4 \%$ for 2015.
- Contribution revenue for 2016 totaled $\$ 31.7$ million, representing an increase of $0.9 \%$ from 2015. The 2015 contribution revenue of $\$ 31.4$ million represents an increase of $1.7 \%$ from 2014.
- Total benefits and refunds paid in 2016 were $\$ 156.5$ million, reflecting an increase of $1.2 \%$ over 2015 benefits and refunds paid of $\$ 154.7$ million. The 2015 benefits and refunds reflect an increase of $3.1 \%$ from 2014. The variance between 2016 and 2015 is primarily due to fluctuations in the annuity roll in 2016.
- Administrative and OPEB expense was $\$ 4.1$ million in 2016 compared to $\$ 3.8$ million in both 2015 and 2014. The increase is largely attributable to higher legal expenses, personnel costs, OPEB expenses and fiduciary liability insurance expenses for 2016.


## Overview of the Financial Statements of the Plan

This discussion and analysis is intended to serve as an introduction to the Plan's financial reporting which is comprised of the following components.

1. Basic Financial Statements: The two basic financial statements are the Statement of Fiduciary Net Position and the Statement of Changes in Fiduciary Net Position. The Statement of Fiduciary Net Position reports the balance of net assets restricted for payment of future pension benefits as of the fiscal year end, with comparative values reported as of the previous fiscal year end. The Statement of Changes in Fiduciary Net Position reports the net increase/(decrease) in net position for the fiscal year, with comparative values reported for the previous fiscal year. This increase/(decrease), when added to the previous year's net position, supports the total net position as reported in the Statement of Fiduciary Net Position.
2. Notes to the Financial Statements: Notes to the Financial Statements provide additional valuable information that assists the reader to better understand the Plan's financial position. The notes are an integral part of basic financial statements.
3. Required Supplementary Information: The required supplementary information consists of the Schedule and related notes of Changes in Net Pension Liability and Related Ratios Multiyear, Schedule of the Net Pension Liability Multiyear, Schedule of Contributions Multiyear, Schedule of Investment Returns Multiyear. Also included are Schedule of Funding Progress for OPEB liabilities, Schedule of Employer Contributions for OPEB liabilities for LABF as Employer and related notes. These schedules and related notes emphasize the long-term nature of pension funds and show the Plan's progress in accumulating sufficient assets to pay benefits when due. These schedules also present actuarial trend information for Other Postemployment Benefits (OPEB) that are associated with the Plan. The Plan participates in two different OPEB initiatives. First, the Plan provides a subsidy to annuitants who have chosen to participate in their former employer's postemployment group health care plan; however, this plan was terminated December 31, 2016. Secondly, the Plan as an employer, offers its retirees and their eligible dependents a postemployment group health care plan.
4. Supplementary Information: Schedules of Invested Assets, Schedules of Administrative Expense, Investment Expense, and Professional Services comprise the supplementary information.

## Financial Analysis

The Plan provides retirement benefits as well as survivor and disability benefits to qualifying City of Chicago and Board of Education employees whose job titles are defined as labor service under the provisions of the municipal personnel ordinance. Persons who are employed by certain annuity and benefit funds of the City of Chicago are also covered by the Plan. The benefits are funded by member and employer contributions and proceeds from investments. The summarized comparison shown on the next page indicates that the Net Position Restricted for Pension Benefits at December 31, 2016 amounted to $\$ 1.17$ billion, which was a decrease of $\$ 71$ million or $5.7 \%$ from $\$ 1.24$ billion at December 31, 2015. This decline compares to a decrease of $\$ 149$ million, or $10.8 \%$, in net assets that occurred between December 31, 2014 and December 31, 2015.

## Assets

An increase or decrease in invested assets is dependent upon both the performance of the Plan's investment portfolio as well as the need to liquidate from the portfolio to pay benefits and other operating expenses in a given year. Total assets decreased in 2016 by $\$ 89$ million or $6.7 \%$ compared to a $\$ 141$ million or $9.7 \%$ decrease in assets in 2015 from the prior year level. For 2016, the need to liquidate assets to augment inadequate statutorily-defined contributions contributed to the drop in assets. For 2015, negative investment returns and the need to liquidate assets contributed to a reduction in assets.

As of December 31, 2016, receivables were $13.6 \%$ higher than 2015 mainly due to unsettled trades of investment securities at year end. In 2015, total receivables were down $25 \%$ mainly due to higher unsettled purchases than sales of investment securities at year end. After fully depreciating a custom developed software program in 2016, the Plan's property and equipment is comprised only of server equipment.

Condensed Comparative Statements of Fiduciary Net Position

|  | December 31, |  |  | Net Change |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 | 2015 | 2014 |  | $\begin{gathered} 2015 \text { to } \\ 2016 \end{gathered}$ |  | $\begin{gathered} 2014 \text { to } \\ 2015 \end{gathered}$ |
| Receivables | \$ 19,276,276 | \$ 16,972,182 | \$ 22,553,541 | \$ | 2,304,094 | \$ | $(5,581,359)$ |
| Investments, at fair value | 1,155,169,663 | 1,231,659,831 | 1,371,106,277 |  | $(76,490,168)$ |  | $(139,446,446)$ |
| Invested securities lending cash collateral | 55,358,674 | 69,646,634 | 65,235,365 |  | (14,287,960) |  | 4,411,269 |
| Property and equipment | 5,255 | 178,186 | 416,509 |  | $(172,931)$ |  | $(238,323)$ |
| Total assets | 1,229,809,868 | 1,318,456,833 | 1,459,311,692 |  | (88,646,965) |  | $(140,854,859)$ |
| Deferred outflows: |  |  |  |  |  |  |  |
| Accumulated decrease in fair value of hedging derivatives | - | - | - |  | - |  | - |
| Liabilities | 60,736,411 | 79,733,409 | 70,432,068 |  | $(18,996,998)$ |  | 9,301,341 |
| Deferred inflows: |  |  |  |  |  |  |  |
| Accumulated increase in fair value of hedging derivatives | 1,332,733 | 66,179 | 786,734 |  | 1,266,554 |  | $(720,555)$ |
| Net position - restricted for |  |  |  |  |  |  |  |
| pension benefits | $\underline{\text { \$1,167,740,724 }}$ | $\underline{\text { \$1,238,657,245 }}$ | $\underline{\text { \$1,388,092,890 }}$ | \$ | $(70,916,521)$ | \$ | (149,435,645) |

## Liabilities

In 2016, the Plan's liabilities consisted primarily of the securities lending cash collateral liability and professional fees payable. The Plan's liabilities in 2016 were $\$ 19$ million lower than in 2015 due mainly to lower values of securities lending cash collateral liability. In 2015, the Plan's liabilities were $13.2 \%$ higher than in 2014 due to higher values of securities lending cash collateral liability and unsettled net purchases at year end. The change in liabilities over the past few years largely rests with activity in the securities lending program and unsettled trades at year end.

## Deferred Outflows and Inflows

Derivative instruments are used by the Plan to manage specific risks and to make investments. Examples include forward and futures contracts. The net fair value of derivatives used for hedging activities are reported as either deferred outflows or deferred inflows of resources. Deferred inflows of $\$ 1.3$ million for 2016 represent the net fair value of foreign currency forward contracts outstanding at December 31, 2016. For the year ended December 31, 2015, the Plan reported $\$ 66$ thousand in net deferred inflows as compared to net inflows of $\$ 787$ thousand the prior year. The outflow or inflow fluctuates depending on the net fair value of forward contracts at year end.

Condensed Comparative Statements of Changes in Fiduciary Net Position

|  | Year Ended December 31, |  |  |  |  |  | Net Change |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2014 |  | $\begin{gathered} 2015 \text { to } \\ 2016 \\ \hline \end{gathered}$ |  | $\begin{gathered} 2014 \text { to } \\ 2015 \end{gathered}$ |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Additions |  |  |  |  |  |  |  |  |  |  |
| Total contributions | \$ | 31,689,408 | \$ | 31,410,790 | \$ | 30,879,597 | \$ | 278,618 | \$ | 531,193 |
| Total investment income (loss) |  | 57,997,329 |  | (22,318,476) |  | 53,393,517 |  | 80,315,805 |  | (75,711,993) |
| Total additions |  | 89,686,737 |  | 9,092,314 |  | 84,273,114 |  | 80,594,423 |  | $(75,180,800)$ |
| Deductions |  |  |  |  |  |  |  |  |  |  |
| Benefits and refunds |  | 156,523,019 |  | 154,683,613 |  | 150,017,662 |  | 1,839,406 |  | 4,665,951 |
| Admin \& OPEB expense |  | 4,080,239 |  | 3,844,346 |  | 3,835,170 |  | 235,893 |  | 9,176 |
| Total deductions |  | 160,603,258 |  | 158,527,959 |  | 153,852,832 |  | 2,075,299 |  | 4,675,127 |
| Net increase (decrease) |  | $(70,916,521)$ |  | (149,435,645) |  | $(69,579,718)$ |  | 78,519,124 |  | $(79,855,927)$ |
| Net position - restricted |  |  |  |  |  |  |  |  |  |  |
| FOR PENSION BENEFITS |  |  |  |  |  |  |  |  |  |  |
| Beginning of year |  | 1,238,657,245 |  | 1,388,092,890 |  | 1,457,672,608 |  | $(149,435,645)$ |  | $(69,579,718)$ |
| Ending of year | \$ | 1,167,740,724 |  | 1,238,657,245 |  | 1,388,092,890 | \$ | $(70,916,521)$ | \$ | $(149,435,645)$ |

## Additions

Member contributions, employer contributions, and investment proceeds are the funding sources for benefit payments. In the years of 2016, 2015 and 2014, both member and employer contributions remained steady while activity in the financial markets was more volatile.

The 2016 investment return of $4.7 \%$ equated to an investment gain of $\$ 58$ million. The decline of $1.5 \%$ experienced in 2015 equated to an investment loss of $\$ 22$ million as compared to the modestly favorable return of $3.8 \%$ in 2014 resulting in a gain of $\$ 53$ million. Dividend and interest income fluctuated minimally between the three years.

## Deductions

Deductions consist primarily of annuity and disability benefit payments, contribution refunds, and administrative expenses (including office staff OPEB). Benefit and refund expense increased $1.2 \%$ in 2016 as compared to $3.1 \%$ in 2015 and $2.0 \%$ in 2014. The automatic annual increase in annuities for employee annuitants and overall fluctuations in annuity payments contribute to the variances year to year.

Total administrative and OPEB expenses increased $\$ 236$ thousand in 2016 as compared to 2015 which reflected little change in expenses compared to 2014. For 2016, higher legal expenses, fiduciary liability insurance premiums, personnel expenses, and future healthcare obligations were all factors which offset the savings experienced in software development, depreciation, IT consulting, and other administrative expenses.

Overall, Net Position - Restricted for Pension Benefits decreased by approximately $\$ 71$ million, or $5.7 \%$, in 2016 as compared to 2015 which saw a $\$ 149$ million decrease from the prior year. As shown in the table on page 6 , the growing disparity between contributions and total deductions, has the greatest impact on the Net Position at year end.

## Investment Performance

From a financial markets perspective, 2016 was a turbulent year marked by political upheaval. Based largely on concerns about slowing growth in China and falling oil prices, major stock market indices entered a tailspin in the first few weeks of the year. However, the stock indices began to climb soon thereafter when China unveiled further stimulus measures and the U.S. Federal Reserve announced that it would proceed cautiously with respect to interest rates. In June, the United Kingdom shocked the markets with its surprise vote to exit the European Union causing the U.S. stock market to swiftly fall in value, then rally to regain losses. Fortunately, stock prices continued to climb modestly preceding the U.S. presidential election in November. Then, following the surprise election of Donald Trump, the stock market quickly rallied on hopes that his administration would stimulate growth by following through on several campaign promises including cutting taxes, reducing regulation and increasing infrastructure spending. Major stock indices eventually hit all-time highs in 2016 and the S\&P 500 ended the year up $12 \%$. Elsewhere in the financial markets, stocks in emerging markets performed particularly well and bonds rallied for most of the year despite rising rates in November and December. In terms of the U.S. economy, there were many signs of improvement - unemployment fell to a nine-year low, the gross domestic product grew at a modest pace, retail sales figures were solid and the Federal Reserve approved its only rate hike of the year in December. All told, it was a good year for most investors.

## Investment Performance (continued)

The Plan's investment portfolio experienced a modest return in 2016. As reported by the Plan's investment consultant, the preliminary total investment return based on fair value, net of fees, was $4.7 \%$ in 2016 compared to $-1.5 \%$ in 2015 . In absolute terms, the only detractors from performance were international equity and real estate. U.S. equities, global equities, fixed income, GTAA, hedge funds and private equity all contributed positively to performance in 2016.

The following table provides additional details regarding performance by asset class over the one-year and five-year periods.

| Rates of Return for Fiscal 2016* |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Asset Category | $\begin{gathered} 1 \mathrm{Yr} \\ \text { Return } \% \\ \hline \end{gathered}$ | 5 Yrs <br> Return \% | Index Name | $\begin{gathered} 1 \mathrm{Yr} \\ \text { Return \% } \end{gathered}$ | 5 Yrs <br> Return \% |
| Fixed income | 7.2 | 3.0 | eA All Global Fixed Inc Net Median | 5.0 | 3.5 |
| Domestic equities | 11.9 | 12.6 | Russell 3000 | 12.7 | 14.7 |
| International equities | -1.7 | 4.5 | eA ACWI ex US All Cap Equity Net Median | 1.7 | 7.1 |
| Global equities | 5.5 | n/a | MSCI ACWI | 7.9 | 9.4 |
| Global asset allocation | 8.3 | n/a | 60\%MSCI ACWI Net / $40 \%$ BBgBarc Aggregate | 5.9 | 6.6 |
| Private equity *** | 1.3 | 7.8 | $\begin{aligned} & \text { Cambridge Assoc. US All } \\ & \text { PE } \end{aligned}$ | 8.1 | 11.9 |
| Real estate ${ }^{* * *}$ | -1.0 | 7.0 | NCREIF ODCE | 8.8 | 12.2 |
| Hedge funds *** | 1.0 | 4.0 | HFRI FOF | 0.5 | 3.4 |
| Total plan *** | 4.7 | 7.1 | Allocation Index** | 8.1 | 8.1 |

* Net of fees returns.
** The Allocation Index is an asset class-weighted benchmark designed to take into account the percentage of an asset class in a portfolio and the relationship to its corresponding benchmark.
*** As of December 31, 2016, the Plan awaits final fourth quarter return information for several portfolios within private equity, real estate, and hedge funds. Rates of return are subject to change.


## Actuarial Valuation

Each year, the Plan commissions an actuary to assess the financial strength of the Plan. The actuary compares the value of future benefits to the value of the Plan's assets. As prescribed by accounting standards, the actuary uses a valuation method different than fair value to determine the value of the Plan's assets. It differs in that the actuarial value of assets spreads investment gains and losses over a five-year period in an attempt to smooth out market volatility. For fiscal year 2016, the consulting actuary reports the Plan's actuarial liability was $\$ 2.51$ billion and the actuarial value of assets was $\$ 1.26$ billion. For 2015, the Plan's actuarial liability was $\$ 2.47$ billion and the actuarial value of assets was $\$ 1.31$ billion.

## Actuarial Valuation (continued)

The ratio of the assets to actuarial liabilities is termed the funded ratio and represents the percentage of assets available to pay the future benefits. The funded ratio, measured using the Actuarial Value of Assets, which reflects smoothing of the investment gains and losses over a five-year period, decreased from $53.0 \%$ in 2015 to $50.4 \%$ in 2016. This drop of $2.6 \%$ in the funded ratio is mainly attributable to unfavorable investment return on the actuarial value of assets due to recognition of investment losses in 2014, 2015, and 2016, and contributions less than Normal Cost plus interest on the Unfunded Actuarial Accrued Liability. For accounting and financial reporting pursuant to GASB 67 and 68, which uses a Single Discount Rate and shorter amortization periods to measure the total pension liability, the funded ratio of the Plan was $31.6 \%$ for 2016 and $33.4 \%$ for 2015.

## Future Outlook

The funded ratio is projected to continue to decline as the Plan experiences a growing operating cash flow deficit. With the reversal of Public Act 98-0641 in 2015 and the lack of a sufficient funding policy yet in place, the Plan faces significant financial challenges and is projected to become insolvent by 2027. The Plan awaits efforts of state legislators in passing a legislative solution, putting the Plan on a path toward long-term solvency.

## Request for Information

Questions about any information provided in this report should be addressed to:
Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago
Attn: Executive Director
321 N Clark St Ste 1300
Chicago IL 60654-4739

# Laborers' and Retirement Board Employees' <br> Annuity and Benefit Fund of Chicago 

Statements of Fiduciary Net Position
December 31, 2016 and 2015

| Assets | 2016 | 2015 |
| :---: | :---: | :---: |
|  |  |  |
| Receivables |  |  |
| Employer | 14,539,917 | \$ 14,624,677 |
| Plan member | 658,664 | 764,166 |
| Due from broker - net | 2,013,322 | - |
| Interest and dividends | 2,003,614 | 1,508,496 |
| Other receivables | 60,759 | 74,843 |
| Total receivables | 19,276,276 | 16,972,182 |
| Investments - at fair value |  |  |
| Cash and short-term investments | 27,042,260 | 42,960,083 |
| Equities | 611,831,285 | 663,261,420 |
| Fixed income | 223,888,913 | 222,185,829 |
| Private equity | 34,178,770 | 33,411,063 |
| Real estate | 63,490,674 | 45,786,624 |
| Hedge funds | 79,436,011 | 106,767,167 |
| Global asset allocation funds | 113,969,017 | 117,221,466 |
| Subtotal | 1,153,836,930 | 1,231,593,652 |
| Forward currency contracts - net | 1,332,733 | 66,179 |
| Securities lending cash collateral | 55,358,674 | 69,646,634 |
| Total investments - fair value | 1,210,528,337 | 1,301,306,465 |
| Property and equipment | 5,255 | 178,186 |
| Total assets | 1,229,809,868 | 1,318,456,833 |

Liabilities, Deferred Inflows and Net Position
Liabilities
Due to broker - net
Refunds, professional fees payable and other liabilities
OPEB liability
Securities lending cash collateral
Total liabilities

| - | $4,685,095$ |
| ---: | ---: |
| $2,702,842$ | $3,008,449$ |
| $2,674,895$ | $2,393,231$ |
| $55,358,674$ | $69,646,634$ |
| $60,736,411$ | $79,733,409$ |

Deferred inflows
Accumulated increase in fair value of hedging derivatives
1,332,733
66,179

Net position - restricted for pension benefits
\$1,167,740,724
\$1,238,657,245

See accompanying notes to financial statements.

# Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago 

## Statements of Changes in Fiduciary Net Position

Years Ended December 31, 2016 and 2015

|  | 2016 | 2015 |
| :---: | :---: | :---: |
| Additions |  |  |
| Contributions |  |  |
| Employer | \$ 14,443,495 | \$ 14,566,544 |
| Plan member | 17,245,913 | 16,844,246 |
| Total contributions | 31,689,408 | 31,410,790 |
| Investment income |  |  |
| Net appreciation (depreciation) in fair value of investments | 45,918,109 | $(34,248,125)$ |
| Interest | 6,223,155 | 5,397,240 |
| Dividends | 9,689,646 | 10,780,752 |
| Private equity income - net | 222,095 | 537,004 |
| Real estate operating income - net | 1,912,695 | 1,912,543 |
| Hedge funds income - net | 514,222 | 564,835 |
| Global asset allocation fund income - net | 2,121,924 | 2,285,626 |
| Less investment expenses | $\begin{aligned} & 66,601,846 \\ & (8,864,044) \end{aligned}$ | $\begin{array}{r} (12,770,125) \\ (9,980,397) \end{array}$ |
| Investment income (loss) - net | 57,737,802 | (22,750,522) |
| Securities lending |  |  |
| Income | 400,188 | 231,702 |
| Lender (borrower) rebates | $(64,000)$ | 276,587 |
| Bank fees | $(76,661)$ | $(76,243)$ |
| Securities lending income - net | 259,527 | 432,046 |
| Total additions | 89,686,737 | 9,092,314 |
| Deductions |  |  |
| Benefits | 153,762,147 | 152,167,262 |
| Refunds | 2,760,872 | 2,516,351 |
| Administrative and OPEB expenses | 4,080,239 | 3,844,346 |
| Total deductions | 160,603,258 | 158,527,959 |
| Net Change in net position | $(70,916,521)$ | $(149,435,645)$ |
| Net position - Restricted for pension benefits |  |  |
| Beginning of year | 1,238,657,245 | 1,388,092,890 |
| End of year | \$1,167,740,724 | \$1,238,657,245 |

See accompanying notes to financial statements.

# LAborers' and Retirement Board Employees' <br> Annuity and Benefit Fund of Chicago 

Notes to Financial Statements

December 31, 2016 AND 2015

## Note 1. Summary of Significant Accounting Policies

The Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago (the Plan) is administered in accordance with Chapter 40, Act 5, Articles 1 and 11 of the Illinois Compiled Statutes (the Statutes). The costs of administering the Plan are financed by employer contributions in conformance with state statutes.

Method of Accounting - The financial statements reflect an accrual basis of accounting. Plan member contributions are recognized in the period in which the contributions are due. Employer contributions are recognized when due and the employer, the City of Chicago, has made a formal commitment to provide the contributions. 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. Quoted market prices, when available, have been used to value investments. For equities, fair value is determined by using the closing price listed on the national securities exchanges as of December 31. Fair value for fixed income securities are determined principally by using quoted market prices provided by independent pricing services. Cash and short-term investments are valued at cost which approximates fair value. Global asset allocation funds and alternative investments, which include real estate, private equity investments and hedge funds, are valued using current estimates of fair value from the investment manager. Such valuations consider variables such as cash flow analysis, recent sales prices of investments, comparison of comparable companies' earnings multiples, withdrawal restrictions, annual audits, and other pertinent information. Because of the inherent uncertainty of the valuation for these other alternative investments, the estimated fair value may differ from the values that would have been used had a ready market existed. The reported values of real estate and private equity are current values unless that information was unavailable in which case the reported value will lag one quarter behind the date of these financial statements. The difference between the current value and the lag has been evaluated and determined not to be material.

Unsettled trades as of the end of the year are recorded net. At December 31, 2016 and 2015, $\$ 13,280,070$ and $\$ 12,193,684$, respectively, were due to broker and $\$ 15,293,392$ and $\$ 7,508,589$, respectively, were due from broker for unsettled trades.

Property and Equipment - Property and equipment are carried at cost. Major additions are capitalized while replacements, maintenance and repairs which do not improve or extend the lives of the respective assets are expensed currently. Depreciation is computed by using the straight line method over an estimated useful life of five years, except for the custom software package development which is depreciated over 10 years.

## Note 1. Summary of Significant Accounting Policies (continued)

Administrative Expenses - Administrative expenses are budgeted and approved by the Plan's Board of Trustees (the Board). Funding for these expenses is included in the employer contributions as mandated in Chapter 40, Act 5, Article 11 of the Statutes.

Reclassifications - Certain reclassifications have been made to prior year amounts to conform to the presentation for the current year. These reclassifications did not change the total net position - restricted for pension benefits or the changes in fiduciary net position from the totals previously reported.

Estimates - The preparation of financial statements in conformity with U.S. 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.

New Accounting Pronouncements - GASB Statement No. 72, Fair Value Measurement and Application, was established to address accounting and financial reporting issues related to fair value measurements. The definition of fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. This Statement provides guidance for determining a fair value measurement for financial reporting purposes. The Statement also provides guidance for applying fair value to certain investments and disclosures related to all fair value measurements. During the year ended December 31, 2016, the Plan adopted GASB Statement No. 72 and as a result the required fair value disclosures have been added for both December 31, 216 and 2015. Implementation had no impact on the reported amounts on the Statements of Fiduciary Net Position.

## Note 2. Plan Description

The Plan was established in 1935 and is governed by legislation contained in the Statutes, particularly Chapter 40, Act 5, Article 11 (the Article) which specifically and exclusively refers to the Plan. The Plan can be amended only by the Illinois Legislature. The Plan is a singleemployer defined benefit pension plan with a defined contribution minimum. The Plan was created for the purpose of providing retirement and disability benefits for employees of the City of Chicago (City) who are employed in a title recognized by the city as labor service and for the dependents of such employees.

## Note 2. Plan Description (CONTINUED)

The Statutes authorize a Board of Trustees of eight members to carry out the provisions of the Article. According to the Article, two members of the Board are ex officio, two are to be elected by the employee members of the Plan, one is to be elected by the retired members of the Plan, one is to be appointed by the local labor union and two are to be appointed by the Department of Human Resources (formerly the Department of Personnel). The two ex officio members are the City Comptroller or someone chosen from the Comptroller's office and the City Treasurer or someone chosen from the Treasurer's office. All members of the Board of Trustees 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 participant's individual 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 City Council of the City of Chicago a detailed report of the financial affairs and status of the reserves 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 Financial and Professional Regulation's (IDFPR) Division of Insurance, as well as another detailed annual report, the form and content of which is specified by the IDFPR's Division of Insurance.

Any employee of the City of Chicago or the Board of Education of the City employed under the provisions of the municipal personnel ordinance as labor service or any person employed by a retirement board of any annuity and benefit fund in the City is covered by the Plan. Currently, covered employees are required to contribute $8.5 \%$ of their salary to the Plan. If an employee leaves covered employment without qualifying for an annuity, accumulated contributions are refunded with interest. The City of Chicago, for its employer's portion, is required by the Statutes to contribute an amount equal to $8 \%$ of each individual employee's salary as well as the remaining amounts necessary to finance the requirements of the Plan. For the years ended December 31, 2016 and 2015, the City's total contribution is limited to an amount not more than the total amount of contributions made by the employees to the Plan in the calendar year two years prior to the current year, multiplied by 1.00 . The source of funds for the City's contribution has been designated by the Statutes and is derived from the City's annual property tax levy, or from any source legally available for this purpose, including but not limited to, the proceeds of city borrowings. The Plan is considered by the City to be a component unit of the City of Chicago and is included in the City's financial statements as a pension trust fund.

## Note 2. Plan Description (CONTINUED)

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

|  | 2016 | 2015 |
| :---: | :---: | :---: |
| Retirees and beneficiaries currently receiving benefits | 3,769 | 3,846 |
| Inactive plan members entitled to benefits (or a refund of contributions) but not yet receiving them | 1,476 | 1,455 |
| Active plan members (including plan members receiving disability benefits) |  |  |
| Vested | 2,019 | 2,081 |
| Non-vested | 803 | 735 |
| Total plan members | 8,067 | 8,117 |

The Plan provides retirement benefits as well as death and disability benefits. In 2010, legislation (Public Act 96-0889) was approved which in effect established two distinct classes of membership with different retirement eligibility conditions and benefit provisions. For convenience, the Plan uses a tier concept to distinguish these groups:

Tier 1 - Employees who first became members prior to January 1, 2011
Tier 2 - Employees who first became members on or after January 1, 2011

## Retirement Benefits:

Tier 1: Employees age 55 or more with at least 10 years of service are entitled to receive a money purchase annuity with partial City contributions if under age 60 with less than 20 years of service. Employees age 55 or more with at least 20 years of service or age 50 or more with at least 30 years of service are entitled to receive a minimum formula annuity of $2.4 \%$ per year of service, multiplied by the final average salary. Final average salary is calculated using salary from the highest four consecutive years within the last 10 years of service preceding retirement. If the employee retires prior to age 60 , the annuity shall be reduced by $1 / 4$ of $1 \%$ for each month the employee is under age 60 , unless the employee is 50 or over with at least 30 year of service or 55 or over with at least 25 years of service. The original annuity is limited to $80 \%$ of the highest average annual salary, adjusted for annual Internal Revenue Code (IRS) $\S 401$ (a)(17) and $\S 415$ limitations. There is a 10 -year deferred vested benefit payable at age 60. Employees who retire at age 60 or over with at least 10 years of service are entitled to a minimum of $\$ 850$ per month.

Tier 2: Employees with at least 10 years of service are entitled to receive an unreduced annuity benefit at age 67 or a reduced annuity benefit at age 62 with at least 10 years of service. The annuity shall be reduced by $1 / 2$ percent for each month that the employee is under age 67. Final average salary is calculated using salary from the eight highest consecutive years within the last 10 years of service preceding retirement. Pensionable salary is limited to $\$ 111,572$ in both 2016 and 2015, increased each year by the lesser of $3 \%$ or $1 / 2$ of the annual increase in the Consumer Price Index-Urban (CPI-U), but not less than zero.

## Note 2. Plan Description (CONTINUED)

## Post Retirement Increases:

Tier 1: Employee annuitants are eligible to receive an increase of $3 \%$ of the current annuity beginning the January of the year of the first payment date following the earlier of 1) the later of the third anniversary of retirement and age 53 and 2) the later of the first anniversary of retirement and age 60, and each year thereafter.

Tier 2: Employee annuitants are eligible to receive an increase based on the original annuity equal to the lesser of $3 \%$ or $1 / 2$ of the annual unadjusted percentage increase in the CPI-U (but not less than zero) beginning the January of the first payment date following the later of 1) age 67 and 2 ) the second anniversary of retirement.

## Spousal Annuity:

Tier 1: The eligible surviving spouse is entitled to a spousal annuity equal to $50 \%$ of the pension the member had earned at the date of death.

Tier 2: The surviving spouse is entitled to a spousal annuity equal to $66^{2} / 3 \%$ of the pension the member had earned at the date of death.

## Automatic Increase in Spousal Annuity:

Tier 1: There is no increase in annuity for spousal annuities.
Tier 2: The spousal annuity increase is either $1 / 2$ the rate of the CPI-U or $3 \%$, whichever is lower, and is applied to the original spousal annuity amount. If the CPI-U decreases or is zero, no increase is paid. The spouse is eligible for an increase on January $1^{\text {st }}$ occurring on or after the commencement of the member's annuity or occurring after the first anniversary of the commencement of the spousal annuity.

## Child's Annuity:

Under Tier 1 and Tier 2, annuities are provided for unmarried children of a deceased member who are under the age of 18 , if the child was born, or in esse, or legally adopted. The child's annuity is $\$ 220$ a month when there is an eligible surviving spouse or $\$ 250$ a month when there is no eligible surviving spouse.

## Duty Disability:

Under Tier 1 and Tier 2, an employee who becomes disabled as the result of an injury incurred in the performance of any act of duty, is entitled to receive a duty disability benefit in the amount equal to $75 \%$ of annual salary at the time of injury, reduced by any benefits received by the employee under the provisions of the Workers' Compensation Act.

## Ordinary Disability:

Under Tier 1 and Tier 2, an employee who becomes disabled as the result of any cause other than an injury incurred in the performance of an act of duty, is entitled to receive an ordinary disability benefit in the amount equal to $50 \%$ of annual salary as of the last day worked. An employee can receive ordinary disability for a period equal to $1 / 4$ of his service credits up to a maximum of 5 years.

## Note 2. Plan Description (CONTINUED)

## Refunds:

Tier 1: A member may take a refund if he withdraws from service and is under the age of 55 (with any length of service) or withdraws between the ages of 55 and 60 with less than 10 years of service.

Tier 2: A member may take a refund if he withdraws from service before the age of 62 (with any length of service) or withdraws with less than 10 years of service regardless of age.

## Note 3. Investments

## Fair Value Measurements

The Plan categorizes the fair value measurements of its investments based on the hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure an asset's fair value: Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; and Level 3 inputs are significant unobservable inputs. Investments that are measured at fair value using the net asset value (NAV) per share (or its equivalent) as a practical expedient are not classified in the fair value hierarchy.

## Note 3. Investments (CONTINUED)

The following is a summary of the inputs used as of December 31, 2016, in valuing investments carried at fair value:

| Description | December 31, 2016 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total | Quoted <br> Market <br> Prices for <br> Assets <br> (Level 1) |  | Significant Other Observable Inputs (Level 2) |  | Significant Unobservable Inputs (Level 3) |  |
| Equities |  |  |  |  |  |  |  |  |
| Common stock | \$ | 504,580,200 | \$ | 501,360,100 | \$ | 3,207,893 | \$ | 12,207 |
| Stapled securities |  | 317,514 |  | 317,514 |  | - |  | - |
| Exchange-traded fund |  | 5,336,190 |  | 5,336,190 |  | - |  | - |
| Rights and warrants |  | 297,959 |  | 297,959 |  | - |  | - |
| Other equity assets |  | 5,604,304 |  | 5,604,304 |  | - |  | - |
| Fixed income |  |  |  |  |  |  |  |  |
| Government bonds |  | 33,820,681 |  | - |  | 33,820,681 |  | - |
| Government agencies |  | 6,070,734 |  | - |  | 6,070,734 |  | - |
| Municipal/Provincial bonds |  | 661,346 |  | - |  | 661,346 |  | - |
| Corporate bonds |  | 54,396,631 |  | - |  | 54,294,320 |  | 102,311 |
| Bank loans |  | 2,276,460 |  | - |  | 2,276,460 |  | - |
| Government mortgage backed securities |  | 18,307,628 |  | - |  | 18,307,628 |  | - |
| Government-issued commercial mortgage-backed |  | 386,788 |  | - |  | 386,788 |  | - |
| Commercial mortgage-backed |  | 1,933,241 |  | - |  | 1,933,241 |  | - |
| Asset backed securities |  | 9,190,154 |  | - |  | 9,190,154 |  | - |
| Non-government backed C.M.O.s |  | 2,269,612 |  | - |  | 2,269,612 |  | - |
| Index linked government bonds |  | 11,867,224 |  | - |  | 11,867,224 |  | - |
| Foreign currency forward contract - net |  | 1,332,733 |  | 1,332,733 |  | - |  | - |
| Commercial paper |  | 339,354 |  | - |  | 339,354 |  | - |
| Invested securities lending collateral |  | 55,358,674 |  | - |  | 55,358,674 |  | - |
| Subtotal |  | 714,347,427 | \$ | 514,248,800 | \$ | 199,984,109 | \$ | 114,518 |

Investments that calculate net asset value

| Equity funds | $95,695,118$ |
| :--- | ---: |
| Fixed income funds | $82,708,414$ |
| Global asset allocation funds | $113,969,017$ |
| Hedge funds | $79,436,011$ |
| Private market partnerships | $34,178,770$ |
| Real estate | $63,490,674$ |

Subtotal
$469,478,004$

Cash and short-term investments
Total
\$ 1,210,528,337

## Note 3. Investments (CONTINUED)

Equity and fixed income securities, and investment derivative investments classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets issued by pricing vendors.

Commercial paper, equity and fixed income securities, and collateral from securities lending classified in Level 2 of the fair value hierarchy are valued using either a bid evaluation or a matrix pricing technique maintained by the various pricing vendors. Bid evaluations may include market quotations, yields, maturities, call features and ratings. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices.

Equity and fixed income securities classified in Level 3 of the fair value hierarchy are securities whose stated market price is unobservable by the market place. Many of these securities are priced by the issuers of industry groups. Fair value is defined as the quoted market value on the last trading day of the period. These prices are obtained from various pricing sources by the Plan's custodian bank.

## Note 3. Investments (CONTINUED)

The following is a summary of the inputs used as of December 31, 2015, in valuing investments carried at fair value:

| Description | December 31, 2015 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total | Quoted <br> Market <br> Prices for <br> Assets <br> (Level 1) |  | Significant <br> Other <br> Observable Inputs (Level 2) |  | Significant Unobservable Inputs (Level 3) |  |
| Equities |  |  |  |  |  |  |  |  |
| Common stock | \$ | 575,636,971 | \$ | 574,349,441 | \$ | 1,260,095 | \$ | 27,435 |
| Preferred stock |  | 805,139 |  | 805,139 |  | - |  | - |
| Exchange-traded fund |  | 6,339,583 |  | 5,838,410 |  | 501,173 |  | - |
| Rights and warrants |  | 1,113,298 |  | 1,113,298 |  | - |  | - |
| Other equity assets |  | 1,325,331 |  | 1,325,331 |  | - |  | - |
| Fixed income |  |  |  |  |  |  |  |  |
| Government bonds |  | 23,613,842 |  | - |  | 23,613,842 |  | - |
| Government agencies |  | 1,461,537 |  | - |  | 1,461,537 |  | - |
| Municipal/Provincial bonds |  | 1,009,127 |  | - |  | 1,009,127 |  | - |
| Corporate bonds |  | 24,777,539 |  | - |  | 24,777,539 |  | - |
| Corporate convertible bonds |  | 263,756 |  | - |  | 263,756 |  | - |
| Government mortgage backed securities |  | 19,457,981 |  | - |  | 19,457,981 |  | - |
| Government-issued commercial mortgage-backed |  | 168,666 |  | - |  | 168,666 |  | - |
| Commercial mortgage-backed |  | 2,238,768 |  | - |  | 2,238,768 |  | - |
| Asset backed securities |  | 10,273,863 |  | - |  | 10,273,863 |  | - |
| Non-government backed C.M.O.s |  | 3,355,885 |  | - |  | 3,355,885 |  | - |
| Index linked government bonds |  | 7,189,948 |  | - |  | 7,189,948 |  | - |
| Foreign currency forward contract - net |  | 66,179 |  | 66,179 |  | - |  | - |
| Commercial paper |  | 339,354 |  | - |  | 339,354 |  | - |
| Invested securities lending collateral |  | 69,646,634 |  | - |  | 69,646,634 |  | - |
| Subtotal |  | 749,083,401 | \$ | 583,497,798 | \$ | 165,558,168 | \$ | 27,435 |

Investments that calculate net asset value

| Equity funds | 78,041,098 |
| :---: | :---: |
| Fixed income funds | 128,374,917 |
| Global asset allocation funds | 117,221,466 |
| Hedge funds | 106,767,167 |
| Private market partnerships | 33,411,063 |
| Real estate | 45,786,624 |
| Subtotal | 509,602,335 |
| ash and short-term investments | 42,620,729 |
| Total | \$ 1,301,306,465 |

## Note 3. Investments (CONTINUED)

## Fair Value of Investments that Calculate Net Asset Value

Authoritative guidance on fair value measurements permits the Plan to measure the fair value of an investment entity that does not have a readily determinable fair value based upon the net asset value per share or its equivalent (NAV) of the investment.

The following table summarizes the Plan's investments in certain entities that calculate net asset value per share as fair value measurement as of December 31, 2016 and 2015:

| 2016 | Fair Value | Unfunded Commitments | Redemption <br> Frequency | Redemption <br> Notice Period |
| :---: | :---: | :---: | :---: | :---: |
| Equity funds | \$ 95,695,118 | \$ | As needed | Daily |
| Fixed income | 82,708,414 | - | As needed | Daily |
| Global asset allocation funds | 113,969,017 | - | As needed | Daily-Monthly |
| Hedge funds | 79,436,011 | 2,728,207 | As needed | 90 Days |
| Private market partnerships | 34,178,770 | 27,274,787 | N/A | Not eligible |
| Real estate | 63,490,674 | 12,255,498 | As needed / N/A | 90 Days or Not eligible |
|  | \$ 469,478,004 |  |  |  |
| 2015 | Fair Value | Unfunded <br> Commitments | Redemption Frequency | Redemption <br> Notice Period |
| Equity funds | \$ 78,041,098 | \$ | As needed | Daily |
| Fixed income | 128,374,917 | - | As needed | Daily |
| Global asset allocation funds | 117,221,466 | - | As needed | Daily-Monthly |
| Hedge funds | 106,767,167 | 3,927,003 | As needed | 90-95 Days |
| Private market partnerships | 33,411,063 | 11,600,999 | N/A | Not eligible |
| Real estate | 45,786,624 | 9,938,724 | As needed / N/A | 90 Days or Not eligible |
|  | \$509,602,335 |  |  |  |

Equity funds. One fund invests in quasi-equity securities in developed market countries, another invests in Indian shares and the final fund invests in emerging market small cap equities.

Fixed income funds. Six funds in 2016 and seven in 2015 in a variety of fixed income markets through various investments.

Global asset allocation funds. Two funds invest in a select group of underlying funds that implement several different investment strategies and invest in a variety of markets through a combination of sub-portfolios, commingled vehicles and direct-investments in securities.

Hedge funds. For 2016, five funds and eight funds in 2015 invest in a select group of underlying managers that implement a number of different alternative investment strategies and invest in a variety of markets through limited partnerships, limited liability companies and other investment entities.

## Note 3. Investments (CONTINUED)

Private real estate and private equity funds. In 2016, the real estate investments are nine core, value-add, and opportunistic real estate funds while there were eight funds in 2015. In 2016, the private equity funds are ten limited partnership interests in equity or debt securities of privately held companies while there were eight funds in 2015. Real estate closed-end funds and private equity funds are not eligible for redemption.

## Investment Policies, Asset Allocation and Money Weighted Rate of Return

Investments are governed by Articles 5/1 and 5/11, Chapter 40, of the Statutes. The prudent person rule, which establishes a standard of care for all fiduciaries, is an important aspect of the Statutes. The prudent person rule states that fiduciaries must discharge their duties with the care, skill, prudence and diligence that a prudent person acting in a like capacity and familiar with such matters would use under conditions prevailing at the time. 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 Statutes.

The Plan's policy in regard to the allocation of invested assets is established and may be amended by the Board. It is the policy of the Board to pursue an investment strategy that reduces risk through the prudent diversification of the portfolio across a broad selection of distinct asset classes. The following was the Board's adopted asset allocations as of December 31, 2016.

| Asset Class |  | Target |
| :--- | :--- | ---: |
| U.S. equity |  | $12.0 \%$ |
| Non U.S. equity |  | $18.0 \%$ |
| Global equity |  | $20.0 \%$ |
| Fixed income |  | $16.0 \%$ |
| Private markets |  | $8.0 \%$ |
| Real estate |  | $8.0 \%$ |
| Private real assets | $8.0 \%$ |  |
| Hedge funds |  | $7.0 \%$ |
| Global asset allocation (GAA) | $\underline{100.0 \%}$ |  |
|  |  |  |

For the year ended December 31, 2016, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was $5.0 \%$. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

## Note 3. Investments (CONTINUED)

## Investment Risk Factors

There are many factors that can affect the value of investments. Some, such as custodial credit risk, concentration of credit risk, interest rate risk, and foreign currency risk may affect both equity and fixed income securities. Equity securities respond to such factors as economic conditions, individual company earnings performance, and market liquidity, while fixed income securities are particularly sensitive to credit risk and risk associated with changes in interest rates.

## Investment Summary

All of the Plan's financial instruments are consistent with the permissible investments outlined in the Statutes. The following table presents the composition of investments, by investment type, as of December 31, 2016 and 2015. Individual investments that represent $5 \%$ or more of the Plan's net position restricted for pension benefits are separately identified.

|  | 2016 | 2015 |
| :---: | :---: | :---: |
| Cash and short-term investments | \$ 27,042,260 | \$ 42,960,083 |
| Equities |  |  |
| U.S. equities | 284,807,948 | 365,956,063 |
| Foreign equities | 231,328,219 | 219,264,259 |
| Equity funds | 95,695,118 | 78,041,098 |
| Total equities | 611,831,285 | 663,261,420 |
| Fixed income |  |  |
| U.S. Government obligations and municipal bonds | 48,380,574 | 37,735,429 |
| U.S. corporate bonds | 34,195,062 | 31,786,504 |
| Foreign fixed income | 58,604,863 | 24,288,978 |
| Fixed income funds | 82,708,414 | 128,374,917 |
| Total fixed income | 223,888,913 | 222,185,828 |
| Private equity | 34,178,770 | 33,411,064 |
| Real estate | 63,490,674 | 45,786,624 |
| Hedge funds | 79,436,011 | 106,767,167 |
| Global asset allocation funds |  |  |
| Wellington CTF Opportunistic Investment Fund | 82,665,238 | 77,309,846 |
| Other | 31,303,779 | 39,911,620 |
| Total global asset allocation funds | 113,969,017 | 117,221,466 |
| Subtotal | 1,153,836,930 | 1,231,593,652 |
| Forward currency contracts | 1,332,733 | 66,179 |
| Securities lending cash collateral | 55,358,674 | 69,646,634 |
| Total investments at fair value | $\underline{\underline{\$ 1,210,528,337}}$ | \$ 1,301,306,465 |

## Note 3. Investments (CONTINUED)

Short-term investments include commercial paper or notes having maturity of less than 90 days or pooled short-term investment funds managed by the Northern Trust. Under the terms of the investment agreement for these funds, Northern Trust may invest in a variety of short-term investment securities.

## Custodial Credit Risk

Custodial credit risk for deposits is the risk that in the event of a financial institution failure, the Plan's deposits may not be returned to it. The Plan does not have a formal deposit policy for custodial credit risk. As of December 31, 2016 and 2015, the following investments were uninsured and unregistered, with securities held by the counterparty or by its trust department or agent but not in the Plan's name.

Amount exposed to custodial credit-risk Investment in foreign currency

| 2016 |  | 2015 |
| :---: | :---: | :---: | :---: |
|  |  |  |
| $\$ \quad 1,328,749$ |  |  |

## Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations to pay interest or principal in a timely manner, or that negative perception of the issuer's ability to make payments will cause a decline in the security's price. U.S. Government obligations or obligations explicitly guaranteed by the U.S. Government are not considered to have credit risk and do not require disclosure of credit quality.

The investment portfolio of the Plan is managed by professional investment management firms. These firms are required to maintain diversified portfolios. The Plan does not have a formal policy on concentration of credit risk. Each investment manager complies with risk management guidelines individually assigned to them as part of their Investment Management Agreement.

A bond's credit quality is a standard used by the investment community to assess the issuer's ability to make interest payments and to ultimately make principal payments. Credit quality is evaluated by one of the independent bond-rating agencies, for example Moody's Investor Service (Moody's) or Standard and Poor's (S\&P). In the rating agency's opinion, the lower the rating, the greater the chance that the bond issuer will default, or fail to meet its payment obligations. The following table presents the credit risk profile, based on Moody's Investor Service for fixed income securities held by the Plan as of December 31, 2016 and 2015.

## Note 3. Investments (CONTINUED)

## Credit Risk (continued)

| Quality Rating | 2016 |  | 2015 |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
| Aaa | \$ | 35,955,994 | \$ | 23,773,916 |
| Aa |  | 5,464,465 |  | 4,195,721 |
| A |  | 15,542,602 |  | 7,659,752 |
| Baa |  | 23,725,461 |  | 21,024,625 |
| Ba |  | 18,286,155 |  | 5,978,731 |
| B |  | 11,866,992 |  | 4,063,663 |
| Caa |  | 1,359,666 |  | 2,314,400 |
| Ca |  | - |  | - |
| C |  | 219,709 |  | 246,364 |
| Not rated or unavailable |  | 10,259,503 |  | 4,500,737 |
| Total credit risk debt - securities |  | 122,680,547 |  | 73,757,909 |
| Guaranteed by U.S. government |  | 18,499,951 |  | 20,053,003 |
| Fixed income funds - not rated |  | 82,708,415 |  | 128,374,917 |
| Total fixed income | \$ | 223,888,913 | \$ | 222,185,829 |

## Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The price of a debt security typically moves in the opposite direction of the change in interest rates. The Plan does not have a formal investment policy that limits investment maturities as a means of managing its exposure to interest rate risk. However, the investment managers have diversified the portfolio to reduce the impact of losses in an individual investment and typically align the portfolio's duration with that of the benchmark.

## Note 3. Investments (CONTINUED)

## Interest Rate Risk (continued)

At December 31, 2016 and 2015, the following table shows the investments by investment type and maturity.

| December 31, 2016 |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Investment Type |  | Fair <br> Value |  | 1 Year or Less |  | $\begin{aligned} & 1+\text { to } 6 \\ & \text { Years } \end{aligned}$ |  | $\begin{gathered} 6+\text { to } 10 \\ \text { Years } \\ \hline \end{gathered}$ |  | $\begin{gathered} 10+ \\ \text { Years } \end{gathered}$ |  | Variable |
| Asset backed securities | \$ | 9,190,154 | \$ | - | \$ | 37,390 | \$ | 126,127 | \$ | 9,026,637 | \$ | - |
| Bank Loans |  | 2,276,460 |  | - |  | 550,532 |  | 1,725,928 |  | - |  | - |
| Commercial mortgage backed |  | 1,933,241 |  | - |  | - |  | - |  | 1,933,241 |  | - |
| Corporate bonds |  | 54,396,631 |  | 660,341 |  | 22,106,521 |  | 20,968,752 |  | 10,661,017 |  | - |
| Fixed income funds |  | 82,708,414 |  | - |  | - |  | - |  | - |  | 82,708,414 |
| Government agencies |  | 6,070,734 |  | - |  | 4,214,904 |  | - |  | 1,855,830 |  | - |
| Government bonds |  | 33,820,681 |  | 90,004 |  | 12,187,051 |  | 7,301,042 |  | 14,242,584 |  | - |
| Government mortgage backed |  | 18,307,628 |  | - |  | 134,307 |  | 239,202 |  | 9,210,524 |  | 8,723,595 |
| Government issued commercial mortgage backed |  | 386,788 |  | - |  | 386,788 |  | - |  | - |  | - |
| Index linked Government bonds |  | 11,867,224 |  | - |  | - |  | 8,695,205 |  | 3,172,019 |  | - |
| Municipal bonds |  | 661,346 |  | - |  | - |  | 125,911 |  | 535,435 |  | - |
| Non-government backed CMO's |  | 2,269,612 |  | - |  | 277,477 |  | - |  | 1,992,135 |  | - |
| Total fixed income | \$ | 223,888,913 |  | 750,345 |  | 39,894,970 |  | 39,182,167 |  | 52,629,422 | \$ | 91,432,009 |

December 31, 2015

| Investment Type |  | Fair <br> Value |  | 1 Year or Less |  | $\begin{gathered} 1+\text { to } 6 \\ \text { Years } \end{gathered}$ |  | $\begin{gathered} 6+\text { to } 10 \\ \text { Years } \\ \hline \end{gathered}$ |  | $\begin{gathered} 10+ \\ \text { Years } \end{gathered}$ |  | Variable |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Asset backed securities | \$ | 10,273,863 | \$ | - | \$ | 631,491 | \$ | 124,458 | \$ | 9,517,914 | \$ | - |
| Commercial mortgage backed |  | 2,238,768 |  | - |  | - |  | - |  | 2,238,768 |  | - |
| Corporate bonds |  | 25,041,295 |  | 609,778 |  | 7,575,248 |  | 8,247,524 |  | 8,608,745 |  | - |
| Fixed income funds |  | 128,374,917 |  | - |  | - |  | - |  | - |  | 128,374,917 |
| Government agencies |  | 1,461,537 |  | - |  | 123,071 |  | 476,529 |  | 861,937 |  | - |
| Government bonds |  | 23,613,842 |  | - |  | 3,324,538 |  | 4,869,499 |  | 15,419,805 |  | - |
| Government mortgage backed |  | 19,457,981 |  | - |  | 289,303 |  | - |  | 9,032,050 |  | 10,136,628 |
| Government issued commercial mortgage backed |  | 168,666 |  | - |  | 168,666 |  | - |  | - |  | - |
| Index linked Government bonds |  | 7,189,948 |  | - |  | - |  | 1,154,959 |  | 6,034,989 |  | - |
| Municipal bonds |  | 1,009,128 |  | - |  | - |  | 143,332 |  | 865,796 |  | - |
| Non-government backed CMO's |  | 3,355,884 |  | - |  | 507,297 |  | - |  | 2,848,587 |  | - |
| Total fixed income | \$ | $\underline{222,185,829}$ |  | 609,778 | \$ | 12,619,614 | \$ | 15,016,301 | \$ | 55,428,591 | \$ | 138,511,545 |

## Note 3. Investments (CONTINUED)

## Investment Results

During 2016 and 2015, net realized gains (losses) on investments sold, reflecting the difference between the proceeds received and cost value of securities sold, were $\$ 54,155,711$ and $\$ 38,898,727$, respectively. These amounts are included in the net appreciation (depreciation) in fair value of investments as reported on the Statement of Changes in Fiduciary Net Position. The calculation of realized gains and losses is independent of the calculation of net appreciation in the fair value of the Plan's investments. Investments purchased in a previous year and sold in the current year results in their realized gains and losses being reported in the current year and their net appreciation in Plan assets being reported in both the current and the previous year(s).

## Foreign Currency Risk

The international portfolio is constructed on the principles of diversification, quality, growth and value. Risk of loss arises from changes in currency exchange rates. While not having a formal investment policy governing foreign currency risk, the Plan does manage its exposure to fair value loss by requiring the international securities managers to maintain diversified portfolios to limit foreign currency and security risk. The Plan's exposure to foreign currency risk as of December 31, 2016 and 2015, is presented in the following table.

|  | 2016 | \% | 2015 | \% |
| :---: | :---: | :---: | :---: | :---: |
| Australian dollar | \$ 5,143,082 | 2.7\% | \$ 3,794,002 | 2.1\% |
| Brazilian real | 3,676,224 | 1.9 | 1,633,190 | 0.9 |
| Canadian dollar | 4,809,391 | 2.5 | 3,085,260 | 1.7 |
| Swiss franc | 11,276,679 | 5.8 | 6,165,653 | 3.3 |
| Danish krone | 5,936,061 | 3.1 | 6,426,178 | 3.5 |
| Euro | 43,688,326 | 22.7 | 46,335,039 | 25.3 |
| British pound sterling | 25,841,633 | 13.4 | 30,810,930 | 16.7 |
| Hong Kong dollar | 15,557,299 | 8.1 | 18,283,907 | 9.9 |
| Indonesian rupiah | 3,390,691 | 1.8 | 2,956,554 | 1.6 |
| New Israeli shekel | 993,846 | 0.5 | 973,335 | 0.5 |
| Japanese yen | 35,000,705 | 18.2 | 32,010,993 | 17.4 |
| South Korean won | 6,402,648 | 3.3 | 7,398,568 | 4.0 |
| Mexican peso | 4,296,680 | 2.2 | 1,586,675 | 0.9 |
| Malaysian ringgit | 825,199 | 0.4 | 543,567 | 0.3 |
| Norwegian krone | 3,996,791 | 2.1 | 4,587,388 | 2.5 |
| New Zealand dollar | $(1,468,452)$ | (0.8) | $(2,731,748)$ | (1.5) |
| Philippine peso | 1,037,995 | 0.5 | - | - |
| Polish zloty | 591,284 | 0.3 | 1,504 | - |
| Swedish krona | 11,110,898 | 5.8 | 9,799,525 | 5.3 |
| Singapore dollar | 1,316,957 | 0.7 | 1,011,724 | 0.5 |
| Thai baht | 3,213,780 | 1.7 | 1,455,318 | 0.8 |
| Turkish lira | 13 | - | 763,260 | 0.4 |
| South African rand | 6,015,670 | 3.1 | 7,188,288 | 3.9 |
| Total | \$192,653,400 | 100.0\% | \$ 184,079,110 | 100.0\% |

## Note 3. Investments (CONTINUED)

## Derivatives

The Plan's investment managers may enter into derivative transactions as permitted by their guidelines. A derivative financial instrument is an investment whose payoff depends on the value of an underlying, such as bond or stock prices, a market index, or commodity prices. Derivative financial instruments involve, to varying degrees, credit 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 terms. The Plan's managers seek to control this risk through counterparty credit evaluations and approvals, counterparty credit limits and exposure monitoring procedures. Market risk is the possibility that a change in interest or currency rates will cause the value of a financial instrument to decrease or become more costly to settle. The market risk associated with derivatives, the prices of which are constantly fluctuating, is regulated by imposing strict limits as to the types, amounts, and degree of risk that investment managers may undertake.

During the year, the Plan's derivative investments included foreign currency forward contracts and financial futures. Foreign currency forward contracts are used to hedge against the currency risk in the Plan's foreign stock and fixed income security portfolios. Financial futures are used to improve yield, adjust the duration of the fixed income portfolio, or to hedge changes in interest rates.

The following table summarizes the derivatives held within the Plan's investment portfolio as of December 31, 2016 and 2015:

| Derivative Type | 2016 |  |  |  | 2015 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Notional Amount |  | Fair <br> Value |  | Notional Amount |  | Fair <br> Value |  |
| Hedging derivative instruments |  |  |  |  |  |  |  |  |
| Foreign currency forward contracts purchased | \$ | - |  | \$ 96,846,033 | \$ | - |  | 58,492,409 |
| Foreign currency forward contracts sold |  | - |  | $(95,513,300)$ |  | - |  | (58,426,230) |
| Total hedging derivative instruments |  | - |  | 1,332,733 |  | - |  | 66,179 |
| Investment derivative instruments |  |  |  |  |  |  |  |  |
| Futures |  |  |  |  |  |  |  |  |
| Fixed income |  | $(2,403,761)$ |  | - |  | $(15,957,296)$ |  | - |
| Cash and cash equivalent |  | 4,948,000 |  | - |  | 6,294,671 |  | - |
| Total investment derivative instruments |  | 2,544,239 |  | - |  | $(9,662,625)$ |  | - |
| Total | \$ | 2,544,239 | \$ | \$ 1,332,733 |  | $(9,662,625)$ | \$ | 66,179 |

## Note 3. Investments (CONTINUED)

Foreign currency forward contracts are agreements to buy or sell a specific amount of a specific currency at a specified delivery or maturity date for an agreed upon price. The gain or loss on forward contracts is recognized as deferred inflows/outflows on the Statements of Fiduciary Net Position until the contract is closed or is sold at which time a gain or loss is recognized in the Statements of Changes in Fiduciary Net Position. The counterparties to the foreign currency forward contracts are banks which are rated A , or above, by rating agencies. The fair value of forward contracts outstanding at December 31, 2016 and 2015 is as follows:

| Currency | Fair Value |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  |
| Foreign currency exchange purchases: |  |  |  |  |
| Australian dollar | \$ | 3,696,711 | \$ | 1,097,421 |
| Canadian dollar |  | 1,750,601 |  | 1,578,289 |
| Swiss franc |  | 2,363,702 |  | 652,469 |
| Euro |  | 5,247,894 |  | 1,132,628 |
| British pound sterling |  | 3,844,344 |  | 2,775,504 |
| Hong Kong dollar |  | 27,360 |  | - |
| Indonesian rupiah |  | 10,497 |  | - |
| New Israeli shekel |  | - |  | 20,799 |
| Japanese yen |  | 3,885,853 |  | 2,138,909 |
| Mexican peso |  | 700,566 |  | - - |
| Norwegian krone |  | 4,494,231 |  | 3,661,694 |
| New Zealand dollar |  | 4,351,362 |  | 969,312 |
| Swedish krona |  | 5,661,489 |  | 2,826,835 |
| Thai baht |  | 20,925 |  | - |
| United States dollar |  | 60,726,732 |  | 41,293,411 |
| South African rand |  | 63,766 |  | 345,138 |
| Total purchases | \$ | 96,846,033 | \$ | 58,492,409 |

Note 3. Investments (CONTINUED)

| Currency | Fair Value |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  |
| Foreign currency exchange sales: |  |  |  |  |
| Australian dollar | \$ | $(7,517,706)$ | \$ | $(1,284,884)$ |
| Canadian dollar |  | $(3,636,968)$ |  | $(2,162,383)$ |
| Swiss franc |  | $(3,860,498)$ |  | $(6,337,525)$ |
| Euro |  | $(11,724,264)$ |  | $(9,193,762)$ |
| British pound sterling |  | $(7,671,300)$ |  | $(5,873,999)$ |
| Japanese yen |  | $(7,784,728)$ |  | $(3,326,697)$ |
| Mexican peso |  | $(1,864,693)$ |  | (1,320,311) |
| Norwegian krone |  | $(2,311,362)$ |  | $(494,383)$ |
| New Zealand dollar |  | $(7,356,993)$ |  | $(8,557,840)$ |
| Polish zloty |  | $(158,727)$ |  | $(173,187)$ |
| Swedish krona |  | $(3,647,341)$ |  | $(1,384,906)$ |
| Singapore dollar |  | - |  | $(1,568)$ |
| Thai baht |  | $(43,205)$ |  | $(3,121)$ |
| United States dollar |  | $(36,945,296)$ |  | $(17,295,850)$ |
| South African rand |  | $(990,219)$ |  | $(1,015,814)$ |
| Total sales | \$ | $(95,513,300)$ | \$ | $(58,426,230)$ |

Financial futures are similar to forward contracts, except futures contracts are standardized and traded on organized exchanges. As the market value of the underlying assets vary from the original contract price, a gain or loss is recognized in the Statements of Changes in Fiduciary Net Position and is settled through the clearinghouse.

Rights and warrants allow the Plan's investment managers to replicate any underlying security they wish to hold (sell) in the portfolio. Rights and warrants provide the holder with the right, but not the obligation, to buy or sell a company's stock at a predetermined price. Rights usually expire after a few weeks and warrants can expire from one to several years. These investments are reported within the equities classification.

The following table summarizes the changes in fair value, which were recognized as income in the Plan's Statements of Changes in Fiduciary Net Position for the year ended December 31, 2016 and 2015:

|  | Changes in Fair Value |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  |
| Derivative Type |  |  |  |  |
| Foreign currency forward contracts | \$ | 1,628,784 | \$ | 3,114,237 |
| Futures |  | $(657,868)$ |  | 226,813 |
| Rights/warrants |  | 9,463 |  | 285,646 |
| Total | \$ | 980,379 | \$ | 3,626,696 |

## Note 4. Securities Lending

The Statutes and the Board permit the Plan to lend its securities to broker-dealers and other entities with a simultaneous agreement to return the collateral for the same securities in the future. Deutsche Bank, acting as lending agent, lends securities for collateral in the form of cash, U.S. Government obligations and Non-U.S. sovereign debt securities equal to $102 \%$ of the fair value of domestic securities and foreign securities that are denominated in the same currency as the collateral provided plus accrued interest and $105 \%$ of the fair value of foreign securities that are not denominated in the same currency as the collateral provided plus accrued interest.

The Plan receives $85 \%$ of the net revenue derived from the securities lending activities, and the lending agent receives the remainder of the net revenue.

The Plan is currently not restricted as to the type of securities it may loan. 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 88 days at December 31, 2016 and 78 days at December 31, 2015; however, any loan may be terminated on demand by either the Plan or the borrower. Cash collateral may be invested in a short-term investment pool, which had an average weighted maturity of 16 days as of December 31, 2016 and an average weighted maturity of 14 days as of December 31, 2015. Cash collateral may also be invested in term loans, in which the investments (term loans) match the term of the securities loaned. These loans can be terminated on demand by either the lender or the borrower.

At December 31, 2016 and 2015, the Plan had no credit risk exposure to borrowers because the amounts owed to the borrowers exceeded the amounts owed to the Plan. At December 31, 2016 and 2015, the fair value of securities loaned was as follows:

|  | 2016 |  | 2015 |  |
| :---: | :---: | :---: | :---: | :---: |
| Equities | \$ | 44,331,068 | \$ | 65,858,512 |
| Fixed income |  | 9,609,004 |  | 1,926,108 |
| Total | \$ | 53,940,072 | \$ | 67,784,620 |

At December 31, 2016 and 2015, the securities loaned were collateralized as follows:

|  | 2016 |  | 2015 |  |
| :---: | :---: | :---: | :---: | :---: |
| Collateralized by cash | \$ | 55,358,674 | \$ | 69,646,634 |
| Collateralized by other than cash |  | - |  | - |
| Total | \$ | 55,358,674 | \$ | 69,646,634 |

During 2016 and 2015, there were no losses due to default of a borrower or the lending agent. The contract with the Plan requires the lending agent to indemnify the Plan if borrowers fail to return the securities (and if the collateral is inadequate to replace the securities lent) or fail to pay the Plan for income distributions by the issuers of securities while the securities are on loan.

## Note 5. Mortgage Backed Securities

The Plan invests in mortgage-backed securities, representing interests in pools of mortgage loans, as part of its interest rate risk management strategy. The mortgage-backed securities are not used to leverage investments in fixed income portfolios. The mortgage-backed securities held by the Plan were guaranteed by federally sponsored agencies, such as: Government National Mortgage Association, Federal National Mortgage Association and Federal Home Loan Mortgage Corporation.

The financial instruments are carried at fair value and are included in investments on the Statements of Fiduciary Net Position. The gain or (loss) on financial instruments is recognized and recorded on the Statements of Changes in Fiduciary Net Position as part of investment income.

## Note 6. Committed Cash

The Plan has entered into investment arrangements for hedge funds, real estate and private equity. As of December 31, 2016 and 2015, the Plan had approximately $\$ 42,258,493$ and $\$ 25,466,927$, in outstanding capital commitments, respectively.

## Note 7. Deferred Compensation Plan

The Plan offers its employees a deferred compensation plan established in accordance with Internal Revenue Code Section 457. The deferred compensation plan, which is funded through employee contributions, is available to all Plan employees and permits them to defer a portion of their salary until future years. The deferred compensation plan is managed by a third party administrator and participation by employees is optional. The assets of the deferred compensation plan are placed in trust with the third party for the exclusive benefit of the participants and their beneficiaries and are not considered assets of the Plan.

## Note 8. Summary of Employer Funding Policies

The City shall levy a tax annually which, when added to the amounts deducted from the salaries of the employees or otherwise contributed by them, will be sufficient for the requirements of the Plan. The tax will produce an amount that does not exceed the amount of contributions by the employees to the Plan made in the calendar year two years prior to the year for which the annual applicable tax is levied, multiplied by 1.00 .

When the balance of the prior service reserve equals its liabilities (including in addition to all other liabilities, the present value of all annuities, present or prospective, according to applicable mortality tables and rates of interest), the City shall cease to contribute the amounts to provide prior service annuities and other annuities and benefits.

## Note 8. Summary of Employer Funding Policies (continued)

The current actuarial studies of the Plan as of December 31, 2016 (2017 Tax Levy) and as of December 31, 2015 (2016 Tax Levy) indicated that a minimum annual contribution was required by the City to maintain the Plan on a minimum valuation basis. The recommended minimum annual contribution based on an annual payroll of $\$ 208,154,918$ for 2,822 members for the 2017 tax levy and $\$ 204,772,903$ for 2,816 active members for the 2016 tax levy is computed as follows:

|  | Tax Levy |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2017 |  | 2016 |  |
| Normal cost | \$ | 38,910,344 | \$ | 38,515,828 |
| 30 year level dollar amortization of unfunded liability (surplus) |  | 98,108,966 |  | 93,425,980 |
| Interest adjustment for semimonthly payment |  | 5,228,594 |  | 5,002,731 |
| Total minimum contribution <br> Less estimated plan member contributions |  | $\begin{aligned} & 142,247,904 \\ & (18,021,862) \end{aligned}$ |  | $\begin{aligned} & 136,944,539 \\ & (17,729,050) \end{aligned}$ |
| Annual required contribution (ARC) to be financed by tax levy* | \$ | 124,226,042 | \$ | 119,215,489 |
| Required tax levy multiple for Plan |  | 8.14 |  | 7.94 |

* Value for 2017 and 2016 ARC includes GASB No. 43 ARC of $\$ 0$ and \$2,182,389, respectively.


## Note 9. Net Pension Liability of the Plan

The components of the net pension liability of the Plan at December 31, 2016, were as follows:
Total pension liability
\$ 3,693,645,301
Plan fiduciary net position 1,167,740,724
Net pension liability
\$ 2,525,904,577
Plan fiduciary net position as a percentage of total pension liability

## Note 9. Net Pension Liability of the Plan (continued)

Actuarial Assumptions - The total pension liability was determined by an actuarial valuation as of December 31, 2016, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation
Salary increases

Investment rate of return
3.0 percent
3.75 percent per year, plus a service-based increase in the first 15 years
7.5 percent, net of investment expense, including inflation

Post-retirement mortality rates were based on the RP2000 Combined Healthy mortality table, sex distinct, set forward one year for males and setback 2 years for females. No adjustment is made for post-disabled mortality. The mortality table used is a static table and provides an estimated margin of 18 percent for future mortality improvements. Pre-retirement mortality rate is 80 percent of post-retirement mortality.

The actuarial assumptions used in the December 31, 2016 valuation were based on the results of an actuarial experience study for the period of January 1, 2004 through December 31, 2011.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are 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. Finally, the arithmetic portfolio expected return is converted into a geometric expected return by using assumed asset class standard deviations and correlations. Best estimates of arithmetic real rates of return for each major asset class included in the Plan's target asset allocation as of December 31, 2016 are summarized in the following table:

| Asset class |  | Long-term Expected <br> Real Rate of Return |
| :--- | :---: | :---: |
| U.S. equity |  | $6.4 \%$ |
| Non U.S. equity |  | 8.0 |
| Global equity |  | 6.8 |
| Fixed income |  | 2.6 |
| Hedge funds | 3.9 |  |
| Private markets | 7.2 |  |
| Global asset allocation | 4.3 |  |
| Real estate | 4.6 |  |

## Note 9. Net Pension Liability of the Plan (continued)

## Single Discount Rate

A Single Discount Rate of $4.17 \%$ was used to measure the total pension liability. This Single Discount Rate was based on an expected rate of return on pension plan investments of $7.50 \%$ and a municipal bond rate of $3.78 \%$ (based on the weekly rate closest to but not later than the measurement date of the "state \& local bonds" rate from Federal Reserve statistical release (H.15)). The projection of cash flows used to determine this Single Discount Rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between statutory contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position and future contributions were sufficient to finance the benefit payments only through the year 2027. As a result, the long-term expected rate of return on pension plan investments was applied to projected benefit payments through the year 2027, and the municipal bond rate was applied to all benefit payments after that date.

Regarding the sensitivity of the net pension liability to changes in the Single Discount Rate, the following presents the plan's net pension liability, calculated using a Single Discount Rate of $4.17 \%$, as well as what the plan's net pension liability would be if it were calculated using a Single Discount Rate that is 1-percentage-point lower or 1-percentage-point higher:

Sensitivity of Net Pension Liability
to the Single Discount Rate Assumption

|  | Current Single Discount Rate |  |  |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
|  | 1\% Decrease | Assumption | 1\% Increase |
|  | 3.17\% | 4.17\% | 5.17\% |
| Plan's net pension liability | \$ 3,054,406,676 | \$ 2,525,904,577 | \$ 2,091,389,983 |

## Note 10. Reserves for Actuarial Liabilities

The reserves for actuarial liabilities are based on an annual valuation submitted by the Plan's consulting actuary. The annual actuarial valuation establishes the reserves required for various statutory liabilities which arise from pension benefit schedules that are part of the current pension code legislation. Market value of net assets held in trust for pension benefits as of December 31, 2016 and 2015, were comprised of the following Plan surplus (deficit) balances:

|  | 2016 |  |  | 2015 |
| :---: | :---: | :---: | :---: | :---: |
| Prior Service Fund | \$ | 1,477,747,189 |  | 1,481,482,144 |
| City Contribution Fund |  | 270,944,305 |  | 259,686,979 |
| Salary Deduction Fund |  | 270,872,913 |  | 259,619,161 |
| Annuity Payment Fund and Reserve |  | 445,429,694 |  | 447,688,730 |
| Supplementary Payment Service |  | 69,562 |  | 69,562 |
| Fund Reserve - (deficit) |  | (1,297,322,939) |  | (1,209,889,331) |
| Net Position - Restricted for Pension Benefits | \$ | 1,167,740,724 |  | 1,238,657,245 |

The Prior Service Fund is a reserve account for the accumulation of City contributions to provide for: 1) employee and spouse annuities that are based on service performed before the Plan's effective date of July 1, 1935, and 2) any excess in minimum annuity formula requirements over the amounts required for age and service annuities and for spouse annuities.

The City Contribution Fund is used to accumulate amounts contributed by the City to provide for annuities based on age and service of each employee and spouse. An individual account is to be kept for each employee and spouse until the employee retires, at which time the individual account balances are transferred to the Annuity Payment Fund.

The Salary Deduction Fund is similarly used to accumulate deductions made from employee salaries for age and service annuities for the employee and spouse. Individual accounts are kept until the employee retires or withdraws from service before qualifying for an annuity. At retirement, account balances are transferred to the Annuity Payment Fund. In case an eligible employee elects to take a refund of contributions instead of an annuity, the contribution refund is charged to this reserve fund.

The Annuity Payment Fund receives the amounts transferred from the individual accounts in the City Contribution Fund and the Salary Deduction Fund when an employee retires and qualifies for an annuity. All age and service annuity payments are charged to this fund.

The Supplementary Payment Reserve was established in 1969 to fund postretirement benefit increases for future and current annuitants who elected to pay into the Plan the amount necessary to receive the postretirement benefits.

## Note 10. Reserves for Actuarial Liabilities (continued)

The Fund Reserve represents the difference between the actuarially determined present value of all future pension payments and the value of the Plan's assets plus the present value of future contributions. A surplus indicates that assets and future contributions exceed the expected requirements for future pension payments, while a deficit indicates that additional assets will be needed to provide for future benefits.

Note 11. Employer (Taxes) Receivable (Payable) - Net

|  | 2016 |  | 2015 |  |
| :---: | :---: | :---: | :---: | :---: |
| Employer contributions | \$ | 15,762,116 | \$ | 16,042,852 |
| Less allowance for uncollectible accounts |  | $(1,222,199)$ |  | $(1,418,175)$ |
| Total | \$ | 14,539,917 | \$ | 14,624,677 |

## Note 12. Lease Agreements

The Plan leases its office facilities under a fifteen year non-cancelable agreement in effect through February 28, 2026. The base rent has an abatement provision of 17 months. The Plan is amortizing the abated rent over the period covered by the agreement. Real estate taxes and maintenance charges are additional costs to the base rent and are subject to annual escalation. Rent expense, net of rent abatements, for the years ended December 31, 2016 and 2015 was $\$ 318,657$ and $\$ 276,434$, respectively. Future minimum rental payments required under noncancelable leases are as follows:

Year ending December 31,

| 2017 | $\$$ | 398,557 |
| :--- | ---: | ---: |
| 2018 | 403,547 |  |
| 2019 | 408,536 |  |
| 2020 | 413,525 |  |
| 2021 | 418,515 |  |
| 2022 through 2026 |  |  |
| $\quad$ Total | $\underline{\$ 1,797,173}$ |  |

## Note 13. Insurance Coverage

The Plan is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. The Plan has minimized the risk of loss through private insurance carriers for commercial, business owners, and automobile policies. The deductible for this insurance coverage ranges from $\$ 250$ to $\$ 500$ per occurrence. There has been no significant reduction of insurance coverage from the prior year. The Plan has not had any insurance claims filed or paid in the past five fiscal years.

The Plan has elected to self-insure against the risk of loss due to a breach in workmen's compensation claims. There have been no claims or settlements in the last five years.

## Note 14. Property and Equipment

Property and equipment detail for the years ended December 31, 2016 and 2015, is as follows:

|  | 2016 |  | 2015 |  |
| :---: | :---: | :---: | :---: | :---: |
| Office equipment | \$ | 110,114 | \$ | 264,131 |
| Custom software package |  | 6,457,788 |  | 6,457,788 |
|  |  | 6,567,902 |  | 6,721,919 |
| Accumulated depreciation |  | $(6,562,647)$ |  | $(6,543,733)$ |
| Property and equipment - net | \$ | 5,255 | \$ | 178,186 |

Depreciation expense for the years ended December 31, 2016 and 2015 was $\$ 172,931$ and $\$ 238,323$, respectively.

## Note 15. Other Post Employment Benefit Plan - City Retirees

Plan Description - The Plan and the City of Chicago agreed to share in the cost of the Settlement Health Care Plan, a single employer defined benefit plan for city retirees administered by the City of Chicago. This agreement was in effect beginning July 1, 2008 and was terminated at December 31, 2016. This plan provides medical and prescription drug benefits to eligible retirees, spouses, and dependent children.

Funding Policy - The Plan's contribution requirement is established by the state legislature and may be amended. From July 1, 2008 through December 31, 2016, the amount of Plan paid health care premiums is $\$ 95$ per month for non-Medicare recipients and $\$ 65$ per month for Medicare recipients. The remaining cost to participate in the program is borne by the City of Chicago and the annuitant.

## Note 15. Other Post Employment Benefit Plan - City Retirees (continued)

## Funding Policy (continued)

In this report, the Plan, in accordance with GASB No. 43, Financial Reporting for Postemployment Benefit Plans other than Pensions, includes disclosures of the separate annual required contribution (ARC) for Other Postemployment Benefits (OPEB). It also requires that the investment return assumption (or "discount rate") used to value OPEB liabilities be based on the estimated long-term yield on the investments expected to be used to finance the payment of benefits. The OPEB liabilities are considered to be funded on a pay-as-you-go basis. That is, the health insurance supplement is financed with current contributions, and no separate healthcare asset account exists to pay the health insurance supplement.

Annual Required Contribution - The Plan's annual required contribution, employer contribution, and the percentage of annual required contribution contributed to the Plan since fiscal year end 2011, are as follows:

| Fiscal <br> Year Ended | Annual Required <br> Contribution (ARC) | Employer <br> Contribution | Percentage <br> of ARC <br> Contributed |  |
| :---: | ---: | ---: | ---: | ---: |
| $12 / 31 / 2011$ | $\$$ | $3,542,982$ |  | $\$ 2,579,905$ |

At December 31, 2015, the number of annuitants or surviving spouses whose cost to participate in the program was subsidized, totaled 2,341 . As was noted in the plan description, the Plan was terminated on December 31, 2016.

Funded Status and Funding Progress - Pursuant to the provisions contained in P.A. 98-0043, the city terminated health insurance supplement payments to eligible annuitants as of December 31, 2016, resulting in no OPEB liability at December 31, 2016.

## Note 15. Other Post Employment Benefit Plan - City Retirees (continued)

## Funded Status and Funding Progress (continued)

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revisions as actual results are compared with past expectations and new estimates are made about the future. The Schedule of Funding Progress on page 51, presented as required supplementary information following the notes to the financial statements, presents multiyear trend information that shows whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

Actuarial Methods and Assumptions - Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the longterm perspective of the calculations.

The actuarial cost method used in the actuarial valuation was the entry age normal actuarial cost method. The actuarial assumptions included a $4.5 \%$ investment rate of return and an annual healthcare cost trend rate of $0 \%$ due to the fact that the OPEB is a fixed dollar subsidy and trend is not applicable. The assumptions include projected salary increases of $3.75 \%$ and an inflation rate of $3.0 \%$ per year. The actuarial value of assets is zero (no assets) as the OPEB is on a pay-as-you-go basis. For December 31, 2015, the amortization method is level dollar on a one year closed period.

## Note 16. Other Post Employment Benefit Plan: LABF as Employer

Plan Description - The Plan, as an employer, administers a single-employer postemployment healthcare plan (Retiree Health Plan). The Retiree Health Plan provides lifetime health and dental care insurance for eligible retirees and their spouses through the Plan's group health insurance plan, which covers both active and retired members. Currently, 9 retirees are in the plan and 20 active employees could be eligible at retirement.

Funding Policy - The contributions requirements of plan members and the Plan are established by the Plan's Board of Trustees. The required contribution is based on projected pay-as-you-go financing requirements. For 2016 and 2015, the Plan contributed $\$ 78,180$ and $\$ 70,513$, respectively, to the Plan. Plan members receiving benefits contributed $\$ 31,945$ in 2016 or 29.0\% of the total premiums for the year, through their required contributions of between $\$ 113$ and $\$ 1,112$ per month based on coverage. In 2015 Plan members contributed $\$ 27,372$ or $28.0 \%$ of the total premiums for the year through their required contributions of between $\$ 110$ and $\$ 1,080$ per month.

## Note 16. Other Post Employment Benefit Plan: LABF as Employer (Continued)

Annual OPEB Cost and Net OPEB Obligation - The Plan's annual other postemployment benefit (OPEB) expense is calculated based on the annual required contribution of the employer (ARC), an amount actuarially determined in accordance with the parameters of GASB Statement 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year and amortize any unfunded actuarial liabilities over a period not to exceed 30 years. The following table shows the components of the Plan's annual OPEB cost, the amount actually contributed to the plan, and changes in the Plan's net OPEB obligation to the Retiree Health Plan:

Fiscal Year Ended November 30,

|  | Fiscal Year Ended November 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  |
| Annual required contribution | \$ | 413,993 | \$ | 351,656 |
| Interest on net OPEB obligation |  | 107,695 |  | 96,713 |
| Adjustment to ARC |  | $(140,597)$ |  | $(126,260)$ |
| Annual OPEB expense |  | 381,091 |  | 322,109 |
| Contributions made |  | $(99,427)$ |  | $(78,061)$ |
| Increase in net OPEB obligation |  | 281,664 |  | 244,048 |
| Net OPEB obligation - beginning of year |  | 2,393,231 |  | 2,149,183 |
| Net OPEB obligation - end of year | \$ | 2,674,895 | \$ | 2,393,231 |

In 2016 and 2015, the Plan contributed $24.0 \%$ and $22.2 \%$, respectively, of the annual required OPEB contribution to the plan.

## Actuarial Valuation Information

| Actuarial | Value of Plan Net | Accrued | Actuarial | Funded | Covered Annual | Percentage of Covered |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
| Valuation | Assets | (AAL) | (UAL) | Ratio | Payroll | Payroll |
| Date * | (a) | (b) | (c) | (a/b) | (d) | (c/d) |
| 12/31/2015 | \$ - | \$3,755,775 | \$3,755,775 | 0.00\% | \$ 1,543,152 | 243.38\% |

[^0]
## Note 16. Other Post Employment Benefit Plan: LABF as Employer (Continued)

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The Schedule of Funding Progress on page 52, presented as required supplementary information following the notes to the financial statements, presents trend information that shows whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

Actuarial Methods and Assumptions - Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the longterm perspective of the calculations.

In the December 31, 2015, actuarial valuation, the entry age normal actuarial cost method was used. The actuarial assumptions included a $4.5 \%$ investment rate of return and an annual healthcare cost trend rate for medical of $8.5 \%$ per year graded down to $4.5 \%$ per year (ultimate trend in $0.5 \%$ increments) and a rate for dental of $4.5 \%$ per year. The assumption includes projected wage inflation of $3.75 \%$ per year. The actuarial value of assets is zero (no assets) as the OPEB is on a pay-as-you-go basis. The amortization method is level dollar on an open basis and the remaining amortization period at December 31, 2015 was 30 years.

## Note 17. Contingencies

On October 9, 2012, a civil action was filed in the Circuit Court of Cook County, Illinois, Carmichael, et al. v. Laborers' and Retirement Board Employees’ Annuity and Benefit Fund of Chicago, et al., Case No. 12 CH 37712, wherein the plaintiffs allege that amendments to the Illinois Pension Code in P.A. 97-0651 (the "Act") violate the U.S. and Illinois Constitution. The defendants include the Plan and the Plan's Board of Trustees, along with two other public employee pension funds and their respective boards.

On November 27, 2013 and September 29, 2014, the Circuit Court dismissed certain of Plaintiffs' claims with prejudice. On April 6, 2017, the Circuit Court heard oral argument on cross motions for summary judgment as to Plaintiffs' remaining claims, after which the Circuit Court took the matter under advisement. The Circuit Court's rulings may be appealed by one or more parties. In the event the pertinent portion of the Act is held to be unconstitutional by an unappealable final court order, the Plan would be required to pay the annuities in effect prior to the passage of P.A. 97-0651. This outcome would have no material actuarial impact since higher annuities were actually used and the Act affects a relatively small group of members. Plaintiffs do not make a prayer for monetary relief, but seek attorney's fees. The Plan is defending this lawsuit. The outcome of the lawsuit is uncertain

## NOTE 17. CONTINGENCIES (CONTINUED)

In July 2013, a group of plaintiffs purporting to represent retirees in four Chicago public pension funds filed a civil action, Underwood v. City of Chicago et al., seeking class certification and an order requiring the City of Chicago (the "City") and the defendant pension funds to continue subsidizing retiree health insurance premiums past the June 30, 2013 statutory expiration date. The City removed the case to federal court. The City's motion to dismiss was granted, but on appeal, the Seventh Circuit Court of Appeals vacated the district court's order and remanded the case with instructions for the district court to remand the case to the Circuit Court of Cook County. On April 9, 2015, the Plaintiffs moved to reinstate the Underwood complaint in the Circuit Court of Cook County, and their motion was granted. All defendants, including the Plan, moved to dismiss the Complaint. On December 3, 2015, the Court granted in part and denied in part the Plan's motion to dismiss, leaving only a claim for lifetime retiree health insurance benefits for employees working for the City between August 1985 and August 1989, based on an amendment to Article 11 of the Illinois Pension Code effective August 23, 1985. The Plaintiffs filed a Third Amended Complaint on January 13, 2016. All defendants again moved to dismiss. On July 21, 2016, the Circuit Court entered a written order granting in part the Defendants' motions to dismiss, other than claims by a group of employees that were hired by the City prior to August 21, 1989, who claim a right to a health care subsidy of $\$ 25$ per month under then-existing state law. Plaintiffs have appealed this ruling to the First District Illinois Appellate Court, where briefing has been completed. No date for oral argument has been set. The Plan continues to defend this lawsuit. The outcome is uncertain.

## Note 18. Subsequent Events

Subsequent events have been evaluated through May 9, 2017, which is the date the financial statements were available to be issued. This review and evaluation revealed no other new material event or transactions which would require additional adjustment to or disclosure in the accompanying financial statements.

## REQUIRED SUPPLEMENTARY INFORMATION

# Laborers' and Retirement Board Employees' <br> Annuity and Benefit Fund of Chicago 

## REQUIRED SUPPLEMENTARY INFORMATION

December 31, 2016 and 2015

## Schedules of Changes in Net Pension Liability and Related Ratios Multiyear



10 fiscal years will be built prospectively.

# Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago 

REQUIRED SUPPLEMENTARY INFORMATION

December 31, 2016

## Additional Notes to Schedules of Changes in Net Pension Liability and Related Ratios Multiyear

Beginning of year total pension liability for fiscal year 2016 uses a Single Discount Rate of 4.04\% and the benefit provisions and funding policy in effect as of the December 31, 2015, funding valuation. The Single Discount Rate of $4.04 \%$ was based on a long-term expected rate of return on pension plan investments of $7.50 \%$ used in the December 31, 2015, funding actuarial valuation for the years 2016 through 2027 and a long-term municipal bond rate as of December 30, 2015, of $3.57 \%$ for subsequent years.

End of year total pension liability for fiscal year 2016 uses a Single Discount Rate of $4.17 \%$ and the benefit provisions and funding policy in effect as of the December 31, 2016, funding actuarial valuation. The Single Discount Rate of $4.17 \%$ was based on a long-term expected rate of return on pension plan investments of $7.50 \%$ used in the December 31, 2016, funding actuarial valuation for the years 2016 through 2027 and a long-term municipal bond rate as of December 29, 2016, of $3.78 \%$ for subsequent years.

The increase in the total pension liability for fiscal year 2016 due to assumption changes and methods was due to the change in the long-term municipal bond rate from $3.57 \%$ as of December 30, 2015 , to $3.78 \%$ as of December 29, 2016. Changes in the assumptions and methods led to the change in the Single Discount Rate from $4.04 \%$ to $4.17 \%$ based on the long-term expected rate of return on pension plan investments of $7.50 \%$ used in the December 31, 2016, funding actuarial valuation and the long-term municipal bond rate of $3.57 \%$ as of December 30, 2015, and $3.78 \%$ as of December 29, 2016. This change was measured at the end of the year using the benefit provisions in effect as of the December 31, 2016, funding actuarial valuation.

# Laborers' and Retirement Board Employees' <br> Annuity and Benefit Fund of Chicago 

## REQUIRED SUPPLEMENTARY INFORMATION

December 31, 2016

## Schedule of the Net Pension Liability Multiyear

| FY Ending December 31, |  | Plan Net <br> Position | Net Pension Liability | Plan Net Position as a \% of Total Pension Liability | Covered Payroll* | Net Pension Liability as a \% of Covered Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2014 | \$2,162,905,734 | \$1,388,092,890 | \$ 744,812,844 | 64.18\% | \$202,673,014 | 382.30\% |
| 2015 | 3,712,615,936 | 1,238,675,245 | 2,473,958,691 | 33.36\% | 204,772,903 | 1208.15\% |
| 2016 | 3,693,645,301 | 1,167,740,724 | 2,525,904,577 | 31.61\% | 208,154,918 | 1213.47\% |

[^1]10 fiscal years will be built prospectively.

## Laborers' and Retirement Board Employees' <br> Annuity and Benefit Fund of Chicago

## Required Supplementary Information

December 31, 2016

## Schedule of Contributions Multiyear

Last 10 Fiscal Years

| FY Ending <br> December 31, | Actuarially <br> Determined <br> Contribution* | Actual <br> Contribution | Contribution Deficiency (Excess) | Covered Payroll** | Actual Contribution as a \% of <br> Covered Payroll | Statutory Contribution*** |  | atory bution y/(Excess) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2007 | \$ 21,725,805 | \$ 13,256,147 | \$ 8,469,658 | \$ 192,847,482 | 6.87\% | \$ 13,256,165 | \$ | 18 |
| 2008 | 17,652,023 | 15,232,804 | 2,419,219 | 216,744,211 | 7.03\% | 15,543,376 |  | 310,572 |
| 2009 | 33,517,429 | 14,626,771 | 18,890,658 | 208,626,493 | 7.01\% | 14,982,660 |  | 355,889 |
| 2010 | 46,664,704 | 15,351,944 | 31,312,760 | 199,863,410 | 7.68\% | 15,652,734 |  | 300,790 |
| 2011 | 57,258,593 | 12,778,697 | 44,479,896 | 195,238,332 | 6.55\% | 13,055,795 |  | 277,098 |
| 2012 | 77,566,394 | 11,852,905 | 65,713,489 | 198,789,741 | 5.96\% | 12,336,770 |  | 483,865 |
| 2013 | 106,199,410 | 11,583,051 | 94,616,359 | 200,351,820 | 5.78\% | 12,098,712 |  | 515,661 |
| 2014 | 106,018,725 | 12,160,815 | 93,857,910 | 202,673,014 | 6.00\% | 12,714,800 |  | 553,985 |
| 2015 | 79,850,835 | 12,412,471 | 67,438,364 | 204,772,903 | 6.06\% | 12,857,827 |  | 445,356 |
| 2016 | 117,033,100 | 12,603,498 | 104,429,603 | 208,154,918 | 6.05\% | 13,179,003 |  | 575,505 |

* The LABF Statutory Funding does not conform to Actuarial Standards of Practice, therefore, the actuarially determined contribution is equal to the normal cost plus an amount to amortize the unfunded liability using level dollar payments and a 30 year open amortization period.
${ }^{* *}$ Covered payroll shown is the amount in force as of the valuation date and likely differs from actual payroll paid during the fiscal year.
*** Excludes amounts paid for health insurance supplement.


# LAbORERS’ AND RETIREMENT BoArd Employees’ <br> Annuity and Benefit Fund of Chicago 

## REQUIRED SUPPLEMENTARY INFORMATION

DECEMBER 31, 2016

## Notes to Schedule of Contributions Multiyear

\(\left.$$
\begin{array}{ll}\text { Valuation date: } & \begin{array}{l}\text { December 31, } 2016\end{array} \\
\text { Notes: } & \begin{array}{l}\text { Actuarially determined contribution rates are calculated as of December } \\
\text { 31, which is } 12 \text { months prior to the end of the fiscal year in which } \\
\text { contributions are reported. }\end{array}
$$ <br>

Methods and Assumptions Used to Determine Contribution Rates as of the Valuation Date:\end{array}\right\}\)| Entry Age Normal |
| :--- | :--- |

# Laborers' and Retirement Board Employees' <br> Annuity and Benefit Fund of Chicago 

REQUIRED SUPPLEMENTARY INFORMATION
DECEMBER 31, 2016

## Notes to Schedule of Contributions Multiyear (CONTINUED)

| Investment Rate of Return | 7.50 percent as of the December 31, 2016 valuation. |
| :--- | :--- |
| Retirement Age | Experience-based table of rates that are specific to the type of eligibility <br> condition. Last updated for the December 31, 2012, valuation pursuant <br> to an experience study of the period January 1, 2004, through December <br> $31,2011$. |
| Mortality | RP2000 Combined Healthy mortality table, sex distinct, set forward one <br> year for males and setback two years for females. No adjustment is <br> made for post-disabled mortality. |

## Other Information:

Notes
There were no benefit changes during the year.

Method and Assumptions Used for Accounting Purposes as of the Valuation Date:

| Actuarial Cost Method: | Entry Age Normal |
| :--- | :--- |
| Asset Valuation Method: | Market |
| Discount Rate: | 4.04 percent as of the December 31, 2015 valuation |
|  | 4.17 percent as of the December 31, 2016 valuation |

# Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago 

## Required Supplementary Information

December 31, 2016

## Schedule of Investment Returns Multiyear

|  | 2016 | 2015 |  | 2014 |
| :--- | :--- | :--- | :--- | :--- |
| Annual money-weighted rate of return, <br> net of investment expense | $5.0 \%$ |  | $-1.5 \%$ |  |
|  |  |  | $3.2 \%$ |  |

10 fiscal years will be built prospectively.

# Laborers' and Retirement Board Employees' <br> Annuity and Benefit Fund of Chicago <br> Required Supplementary Information 

December 31, 2016

## Schedule of Funding Progress of OPEB Liabilities for City Retirees <br> (dollar amounts in thousands)

| Actuarial |  |  | Actuarial |  |  |  |  |  |  | UAAL as $\%$ of |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Valuation | Actuarial |  | Accrued |  | Unfunded |  | Funded | Covered |  | Covered |
| Date | Value of |  | Liability (AAL) |  | (Surplus) AAL |  |  |  |  | Payroll |
| December 31, |  |  | Entry Age (b) |  | (UAAL) (b-a) |  | Ratio (a/b) |  | yroll (c) | (b-a)/(c) |
| 2011 | \$ | - | \$ | 38,328 | \$ | 38,328 | 0.00\% | \$ | 195,238 | 19.63\% |
| 2012 |  | - |  | 38,653 |  | 38,653 | 0.00 |  | 198,790 | 19.44 |
| 2013 |  | - |  | 7,074 |  | 7,074 | 0.00 |  | 200,352 | 3.53 |
| 2014 |  | - |  | 4,593 |  | 4,593 | 0.00 |  | 202,673 | 2.27 |
| 2015 |  | - |  | 2,133 |  | 2,133 | 0.00 |  | 204,773 | 1.04 |
| $2016{ }^{1}$ |  | - |  | - |  | - |  |  |  |  |

${ }^{1}$ Pursuant to the provisions contained in P.A. 98-0043, the city terminated health insurance supplement payments to eligible annuitants as of December 31, 2016, resulting in no OPEB liability.

Schedule of Employer Contributions of OPEB Liabilities for City Retirees (dollar amounts in thousands)
$\left.\begin{array}{cccc}\begin{array}{c}\text { Year Ended } \\ \text { December 31, }\end{array} & & \begin{array}{c}\text { Annual } \\ \text { Required } \\ \text { Contribution }\end{array} & \end{array} \begin{array}{c}\text { Percentage } \\ \text { of ARC } \\ \text { Contributed }\end{array}\right]$

## Laborers' and Retirement Board Employees' <br> Annuity and Benefit Fund of Chicago

Required Supplementary Information
December 31, 2016

## Schedule of Funding Progress of OPEB Liabilities for LABF as Employer <br> (dollar amounts in thousands)

| Actuarial | Actuarial |  | Actuarial |  | Unfunded |  | Funded |  |  | UAAL as |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Valuation |  |  |  |  |  |  | Covered |  | Covered |
| Date | Value of |  | Liability (AAL) |  | (Surplus) AAL |  |  |  | Payroll |
| December 31, |  |  |  | ge (b) |  | (b-a) | Ratio (a/b) |  | oll (c) | (b-a)/(c) |
| 2006 | \$ | - | \$ | 1,875 | \$ | 1,875 | 0.00\% | \$ | 1,221 | 153.62\% |
| 2009 |  | - |  | 3,362 |  | 3,362 | 0.00 |  | 1,581 | 231.58 |
| 2012 |  | - |  | 3,318 |  | 3,318 | 0.00 |  | 1,536 | 216.01 |
| $2015{ }^{1}$ |  | - |  | 3,756 |  | 3,756 | 0.00 |  | 1,543 | 243.38 |

## Schedule of Employer Contributions of OPEB Liabilities for LABF as Employer

(dollar amounts in thousands)

| Year Ended <br> December 31, | Annual Required Contribution |  | Percentage <br> of ARC <br> Contributed |
| :---: | :---: | :---: | :---: |
| 2011 | \$ | 405 | 12.81\% |
| 2012 |  | 432 | 9.80 |
| 2013 |  | 288 | 12.41 |
| 2014 |  | 331 | 14.22 |
| 2015 |  | 352 | 22.20 |
| 2016 |  | 414 | 24.02 |

1 The next actuarial valuation is scheduled for December 31, 2017.

# LABORERS' AND RETIREMENT BOARD EMPLOYEES' Annuity and Benefit Fund of Chicago 

## REQUIRED SUPPLEMENTARY INFORMATION

December 31, 2016

## Notes to Schedule of Funding Progress and Schedule of Employer Contributions of OPEB LIABILITIES

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

Amortization method

Amortization period

Actuarial cost method

Asset valuation method

Actuarial assumptions:
OPEB investment rate of return ${ }^{1}$

Projected base salary increases ${ }^{1}$

Merit and seniority increases

City Retirees - Level Dollar; Closed Employees - Level Dollar; Open

City Retirees - 3 years
Employees - 30 Years

Entry Age Normal

No Assets (Pay-as-you-go)
4.5\%
3.75\% per year
${ }^{1}$ includes inflation at 3\% per year
$0.00 \%-6.25 \%$

# LABORERS' AND RETIREMENT BOARD EMPLOYEES' Annuity and Benefit Fund of Chicago 

## REQUIRED SUPPLEMENTARY INFORMATION

December 31, 2016

## Notes to Schedule of Funding Progress and Schedule of Employer Contributions OF OPEB LIABILITIES (CONTINUED)

Healthcare cost trend rate

Dental cost trend rate

City Retirees - $0.0 \%$ (Trend not applicable Fixed dollar subsidy)

Employees: $8.5 \%$ per year graded down $.5 \%$ per year through 2024; 4.5\% thereafter

Excess trend rate of $.34 \%$ over the base healthcare trend rate beginning in 2020 applied only to pre-Medicare per capita claim cost to account for the excise tax under the Health Care Reform Act.
4.5\% per year

## SUPPLEMENTARY INFORMATION

Laborers' and Retirement Board Employees'
Annuity and Benefit Fund of Chicago

| Cash and short-term investments | 2016 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Cost Value |  |  | Fair Value |  |  |
|  | \$ | 27,042 | 2.6\% | \$ | 27,042 | 2.3\% |
| U.S. equities |  | 257,128 | 24.4\% |  | 284,808 | 24.7\% |
| Foreign equities |  | 216,318 | 20.5\% |  | 231,328 | 20.0\% |
| Equity funds |  | 85,350 | 8.1\% |  | 95,695 | 8.3\% |
| U.S. Government obligations and municipal bonds |  | 49,115 | 4.7\% |  | 48,381 | 4.2\% |
| U.S. corporate bonds |  | 34,218 | 3.2\% |  | 34,195 | 2.9\% |
| Foreign fixed income securities |  | 62,177 | 5.9\% |  | 58,605 | 5.1\% |
| Fixed income funds |  | 74,420 | 7.0\% |  | 82,708 | 7.2\% |
| Private equity |  | 27,248 | 2.6\% |  | 34,179 | 3.0\% |
| Real estate |  | 51,991 | 4.9\% |  | 63,491 | 5.5\% |
| Hedge funds |  | 72,929 | 6.9\% |  | 79,436 | 6.9\% |
| Global Asset Allocation |  | 97,144 | 9.2\% |  | 113,969 | 9.9\% |
| Invested assets at cost/fair value | \$ | 1,055,080 | 99.9\% | \$ | 1,153,837 | 99.9\% |

## Laborers' and Retirement Board Employees' <br> Annuity and Benefit Fund of Chicago

## Schedules of Administrative Expenses, Investment Expenses and Professional Services

Years Ended December 31, 2016 and 2015

## Schedules of Administrative Expenses

Personnel services
Professional service
OPEB expense
Depreciation
Litigation expense
Occupancy and utilities
Fiduciary liability insurance premiums
Document retention
Supplies and equipment
Printing and technical services
Disaster recovery site
Telecommunications and internet
Postage
Miscellaneous
Total

## Schedules of Investment Expenses

Investment management fees
Other investment expenses
Investment consultant fee
Investment custody fees
Total

## Schedules of Professional Services

Actuarial valuation
Actuarial consultation
Auditing
Benefit check production
Custom software development
IT consultant
Legal services
Legislative consultant Medical consultant

Total

2016

| \$ | 2,055,436 | \$ | 1,935,307 |
| :---: | :---: | :---: | :---: |
|  | 630,638 |  | 653,052 |
|  | 381,091 |  | 322,109 |
|  | 172,931 |  | 238,323 |
|  | 71,413 |  | 5,658 |
|  | 355,185 |  | 325,391 |
|  | 213,934 |  | 164,719 |
|  | 6,648 |  | 4,944 |
|  | 48,257 |  | 59,570 |
|  | 31,665 |  | 37,231 |
|  | 30,586 |  | 35,549 |
|  | 31,977 |  | 22,778 |
|  | 16,646 |  | 14,345 |
|  | 33,832 |  | 25,370 |
| \$ | 4,080,239 | \$ | 3,844,346 |


| $\$$ | $8,241,591$ |  | $\$$ |
| :--- | ---: | :--- | ---: |
|  | 112,207 |  | $9,418,088$ |
| 296,082 |  | 30,557 |  |
|  | 214,164 |  |  |
|  |  | 321,667 |  |
|  |  |  |  |

\$

| 74,500 | $\$$ | 68,000 |
| ---: | :--- | ---: |
| 18,250 |  | 5,000 |
| 39,846 |  | 39,955 |
| 92,772 |  | 98,601 |
| 113,760 |  | 209,282 |
| 20,695 |  | 66,820 |
| 213,263 |  | 108,646 |
| 16,800 |  | 16,800 |
| 40,752 |  | 39,948 |
| 630,638 | $\$$ | 653,052 |

## Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago <br> Schedules of Investment Expense <br> Years Ended December 31, 2016 and 2015

| Investment Management Fees $\quad-\quad 2015$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
| AFL-CIO Housing Investment Trust | \$ | 92,744 | \$ | 95,973 |
| Apex Capital Management, Inc. |  | 127,314 |  | 14,312 |
| Ariel Investments, LLC |  | 479,195 |  | 565,837 |
| ASB Capital Management LLC |  | 215,594 |  | 197,019 |
| Baillie Gifford Overseas Ltd |  | 340,350 |  | 388,211 |
| Baird Advisors |  | 63,019 |  | 76,500 |
| BMO Harris Investment |  | 215,714 |  | 388,720 |
| Brightwood Capital Advisors, LLC |  | 3,893 |  | - |
| Capri Capital Partners LLC |  | - |  | 6,891 |
| Columbia Partners |  | - |  | 168,178 |
| EnTrust Partners Offshore LP |  | 357,982 |  | 493,287 |
| Fiera Capital Inc. |  | 290,670 |  | 242,855 |
| Glouston Capital Partners |  | 250,685 |  | - |
| Hexavest Inc. |  | 238,804 |  | 203,277 |
| Holland Capital Management |  | 177,513 |  | 319,266 |
| Hopewell Partners, LLC |  | 79,837 |  | 69,975 |
| John Buck Company |  | $(2,387)$ |  | 201,432 |
| Keeley Asset Management Corp. |  | 181,591 |  | 264,551 |
| Lighthouse Investment Partners, LLC |  | 216,945 |  | 211,576 |
| LM Capital Group, LLC. |  | 113,608 |  | 49,276 |
| Long Wharf Real Estate Partners LLC |  | 212,466 |  | - |
| Mesirow Financial Private Equity Advisors, Inc. |  | 244,356 |  | 302,256 |
| Mesirow Financial Investment Management, Inc. |  | 154,069 |  | 331,611 |
| MMF Capital Management LLC |  | 31,432 |  | 54,192 |
| Morgan Stanley AIP GP LP |  | 139,067 |  | 42,389 |
| Neuberger Berman Investment Advisers LLC |  | 344,986 |  | 322,994 |
| Newport Capital |  | 36,363 |  | 45,455 |
| Pantheon Ventures (US) LP |  | 270,000 |  | 375,000 |
| PIMCO |  | 292,457 |  | 474,332 |
| Pluscios Management LLC |  | 109,899 |  | 96,215 |
| Progress Investment Management Company, LLC |  | 680,185 |  | 639,937 |
| RhumbLine Advisers Limited Partnership |  | 5,140 |  | - |
| Rock Creek Group, LP |  | 130,779 |  | 182,717 |
| Stenham Asset Management Inc. |  | 64,136 |  | 84,823 |
| Thomas White International, Ltd. |  | 78,891 |  | 335,518 |
| UBS Global Asset Management |  | 62,236 |  | 125,184 |
| Vontobel Asset Management, Inc. |  | 407,982 |  | 391,356 |
| Wasatch Advisors Inc. |  | 375,948 |  | 274,564 |
| Wellington Management Company LLP |  | 598,610 |  | 753,887 |
| Western Asset Management Company |  | 258,225 |  | 291,340 |
| William Blair \& Company, L.L.C. |  | 301,293 |  | 337,182 |
| Total investment management fees |  | 8,241,591 |  | 9,418,088 |
| Other Investment Expenses |  |  |  |  |
| Northern Trust Company |  | 112,207 |  | 30,557 |
| Investment Consulting Fees |  |  |  |  |
| NEPC LLC |  | 296,082 |  | 321,667 |
| Investment Custody Fees |  |  |  |  |
| Northern Trust Company |  | 214,164 |  | 210,085 |
| Total investment expense | \$ | 8,864,044 | \$ | 9,980,397 |


[^0]:    * For a plan the size of the LABF as Employer plan, GASB allows a valuation report to be used for up to 3 years if there are not significant changes in plan design, premiums/claims, or demographics that would materially change the results. The next actuarial valuation is scheduled to be performed as of December 31, 2017 which will be completed in 2018.

[^1]:    * Covered payroll shown is the amount in force as of the valuation date and likely differs from actual payroll paid during the fiscal year.

