Municipal Employees' Annuity and Benefit Fund of Chicago

A Pension Trust Fund of the City of Chicago
Chicago, Illinois

2020

Comprehensive Annual Financial Report

For the Fiscal Years Ended December 31, 2020 and 2019

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Annuity and Benefit Fund of Chicago

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For the Fiscal Years Ended December 31, 2020 and 2019

Prepared by Administrative Staff of the
Municipal Employees' Annuity and Benefit Fund of Chicago
321 North Clark Street, Suite 700
Chicago, Illinois 60654

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Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Municipal Employees' Annuity and Benefit Fund of Chicago, Illinois

For its Comprehensive Annual
Financial Report
For the Fiscal Year Ended

December 31, 2019

RETIREMENT BOARD As of July 1, 2021

VERNA R. THOMPSON
Supervisor of Traffic Control Aides
Elected Trustee

WILLIAM CANNING
Supervisor Fire Communications
Elected Trustee

ROBERT DEGNAN
Foreman of Hoisting Engineers
Elected Trustee

RESHMA SONI
City Comptroller
Department of Finance
Ex-Officio Trustee

MELISSA CONYEARS-ERVIN
City Treasurer
Ex-Officio Trustee

A five-member Retirement Board is the governing body of the Municipal Employees' Annuity and Benefit Fund of Chicago (MEABF). By statute, the Retirement Board shall consist of two ex-officio members, the City Comptroller and the City Treasurer, and three members who are employees and elected by the contributing members.

The Retirement Board is ultimately responsible for the operation, administration and management of all the activities of MEABF. Having oversight of the investment activities, the Retirement Board sets investment policies and objectives, hires investment managers and investment consultants and reviews investment performance. The Retirement Board also approves the MEABF operating budget and approves or denies benefit claims.

The Retirement Board appoints the Executive Director, and retains consultants for investment, actuarial, audit, legal and other provisional services necessary for the transaction of business.

The Retirement Board meets monthly and holds special meetings as needed. As members of the Retirement Board, they receive no compensation.

Municipal Employees' Annuity & Benefit Fund of Chicago
A Pension Trust Fund of the City of Chicago

Verna R. Thompson
President
Elected

Reshma Soni
Vice President
Ex-Officio

Melissa Conyears-Ervin
Treasurer
Ex-Officio

Robert P. Degnan
Recording Secretary
Elected

William Canning
Elected

Dennis White
Executive Director

321 N. Clark Street
Suite 700, Chicago, IL
60654-4767
(312) 236-4700

info@meabf.org

LETTER OF TRANSMITTAL

July 1, 2021

To the Retirement Board of the Municipal Employees' Annuity & Benefit Fund of Chicago

It is with great pleasure that we submit the Comprehensive Annual Financial Report (CAFR) for the Municipal Employees' Annuity and Benefit Fund of Chicago (MEABF or the Plan), a pension trust fund of the City of Chicago, for the fiscal years ended December 31, 2020, and 2019.

The CAFR provides an overview of the Plan, comprehensive accounting of Plan activities and operations, detailed financial and actuarial information, investment performance, statistical information and Plan stewardship. A full version of the report is available on the web at http://www.meabf.org/publications.php.

Calibre CPA Group, LLC has issued an unmodified ("clean") opinion on the Plan's financial statements as of December 31, 2020 and 2019. The independent auditor's report is located at the front of the Financial Section of this report.

Financial Reporting

Management Responsibility - Responsibility for the preparation, accuracy, completeness and fairness of the presentation, including all disclosures, made in this report rests with management. To the best of our knowledge and belief, the information contained in this report is complete; all disclosures necessary to enable the reader to gain an understanding of MEABF activities have been included.

Plan management is responsible for establishing and maintaining a system of internal controls. The system provides management with reasonable, but not absolute, assurance regarding the safeguarding of assets against loss, theft, or unauthorized disposition and the reliability of the financial records from which the financial reports are prepared. The concept of reasonable assurance recognizes that the cost of a control should not exceed anticipated benefits.

Accounting System – The Plan's financial statements have been prepared in accordance with generally accepted accounting principles applied on a consistent basis, in accordance with the standards and requirements of the Governmental Accounting Standards Board (GASB). The financial statements are prepared on the accrual basis of accounting.

Management's Discussion and Analysis – Management's discussion and analysis (MD&A), which immediately follows the Independent Auditor's Report in the Financial Section, provides an additional narrative introduction, and an overview and analysis of the basic financial statements. This transmittal is designed to complement the MD&A and should be read in conjunction with it.

Plan Administration

MEABF is administered under the direction of a Retirement Board responsible for the oversight, management and administration of the Plan. The Retirement Board is comprised of three elected members and two ex-officio members (the City Treasurer and the City Comptroller). The Retirement Board has a fiduciary duty to act solely in the best interests of the Plan members.

To help carry out their responsibilities, the Retirement Board appoints an Executive Director and retains consultants for investment, actuarial, audit, legal and other provisional services necessary for the transaction of business. The Executive Director oversees the administration of the Plan and reports to the Retirement Board.

Plan Profile

MEABF is a pension trust fund of the City of Chicago and is administered under Chapter 40, Act 5, Article 1,8 and 20 of the Illinois Compiled Statutes (Statutes). The Plan is a defined benefit single employer plan that was established in 1921 by the Illinois State legislature, which is the governing body that sets benefit levels, as well as employee and employer contribution levels for financing the Plan.

In accordance with the statutes, MEABF administers age and service retirement benefits, survivor benefits, post-retirement increases and duty and ordinary disability benefits to eligible members. As of December 31, 2020, MEABF served a total of 31,327 active members (16,317) Tier 1 members (52%), 6,997 Tier 2 members (22%) and 8,013 Tier 3 members (26%); 25,471 retirees and beneficiaries; and 20,139 inactive members. For a more detailed description of the Plan, its membership, benefit provisions and eligibility requirements, please read Note 7 of the Notes to Financial Statements in the Financial Section.

Actuarial Funding Status

An actuarial valuation of the Plan is conducted annually, and an experience review is performed and approved by the Retirement Board every five years. In the actuarial valuation as of December 31, 2020, performed by the Plan's independent actuary, Segal Consulting, the total actuarial accrued liability, actuarial value of assets and the total unfunded actuarial accrued liability of MEABF amounted to $17,847.2 million, $3,977.0 million, and $13,870.2 million, respectively. The total actuarial accrued liability and the total unfunded actuarial liability include $32.4 million of Other Postemployment Benefits (O*PEB)*. As of December 31, 2020, MEABF has a funded ratio of 22.3% (actuarial value of assets divided by actuarial liabilities).

GASB 67 requires certain disclosure requirements and a calculation of a blended discount rate that varies from the discount rate used for funding purposes if a projection of the Plan's assets and future contributions are insufficient to pay benefits to current members. Due to Public Act 100-0023 being enacted to provide a funding mechanism that is projected to make all benefit payments to current members, the GASB blended discount rate calculation results in the same discount rate as used for funding purposes. As a result, the total pension liability for financial reporting (GASB 67) equals the actuarial accrued liability for funding purposes. For 2020, utilizing the requirements of GASB 67, the total pension liability was $17,814.8 million, leaving a net pension liability of $13,724.6 million. In 2020, based on the requirements of GASB 68, the Plan Sponsor (City of Chicago) must reflect this liability on their financial statements. The 2020 net pension liability was an increase of 4.1% compared to 2019.

Actuarial Funding Status (continued)

MEABF is funded by employer and member contributions in accordance with the funding policy specified under the Illinois Pension Code (40 ILCS 5/8). As of December 31, 2020, as mandated by state statute, member contributions are set at 8.5% of pensionable salary for Tier 1 and Tier 2 members and 11.5% of pensionable salary for Tier 3 members. Employer contributions are specified amounts of $421 million in 2020, $499 million in 2021 and $576 million in 2022. During 2020 the City of Chicago prepaid $60 million less cost of prepayment of $0.4million of the 2021 contributions in 2020. Starting in 2023 employer contributions are calculated as a level percent of payroll sufficient to bring the total assets of the Plan up to 90% of the actuarial accrued liability by the end of 2058. The statutory employer contributions have been less than the actuarially determined contributions for the past eighteen years growing over time.

In the opinion of Segal Consulting, the Plan's Consulting Actuary, the fixed-dollar contributions through 2022 leave the Plan's vulnerable to adverse experience. Given the low funded ratio, the Plan is still at risk of potential insolvency if an economic recession or investment market downturn were to occur in the near term. If the Plan becomes insolvent, the employer will be required to make contributions on a "pay as you go" basis, which means the employer would have to pay all benefits as they become due. Additional discussion relating to funding is provided in the Actuarial Section.

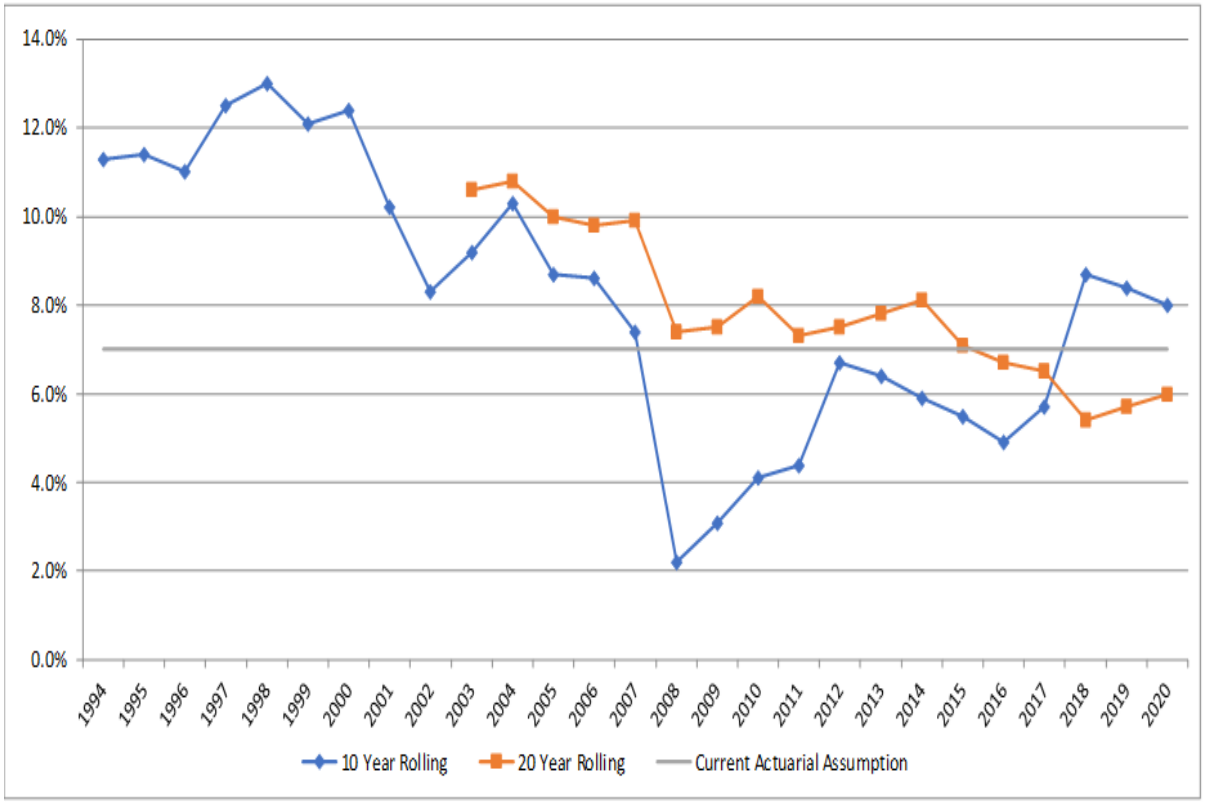
Investments

Plan assets are invested in accordance with the "Prudent Person Rule" for the sole purpose of providing benefits to Plan members. The Plan's portfolio is diversified globally amongst various asset classes, investment styles, and economic sectors in an effort to achieve optimal long-term return, at a pre-determined level of risk. The Plan's Actuary assumes a long-term investment return of 7.0%. In 2020, the Plan's investment portfolio returned, net-of-fees, 10.0% compared to 11.8% of the policy benchmark. **Going forward, the Plan's ability to meet its return objective over the long term will continue to be challenged as invested assets are liquidated to pay monthly benefits**. During fiscal year 2020, approximately $366.3 million was liquidated to assist in meeting benefit payment obligations.

Economic Condition and Outlook

Much of the story in 2020 was dominated by the pandemic and its impact worldwide. The S&P 500 fell 34% in late Quarter 1 from peak to trough due to the shutdown of economy. The market has since recovered due to multiple factors including but not limited to progress on COVID treatments/vaccines, accommodative monetary policy, fiscal stimulus packages, and reopening of economy. The S&P 500% ended the year with 18.4% and much of the market was the same. Much of 2021 will depend on continued progress on COVID cases, vaccine issuance and distribution, and reopening of economy worldwide.

The chart below compares ten and twenty-year rolling returns to the actuarially assumed rate of return. Over the long-term, MEABF has historically outperformed the assumed rate of return. However, the effects of the "Tech Bubble" (2000-2002) and the "Great Recession" (2008-2009) has a drag on our performance. Despite the sell-off in Quater1 2020 at the on-set of COVID, the portfolio has rebounded and ended the year with 10.0% return for the year. The Retirement Board will continue to structure the portfolio in accordance with the target asset allocation mix, which minimize downside risk and maximize the risk adjusted return, to position the portfolio to achieve long-term performance goals and objectives.



The Investment Section contains a summary of the Retirement Board's investment policy, including goals and objectives, and a comprehensive analysis of the Plan's portfolio performance for the fiscal year 2020.

Plan Initiatives

Investments:

The Retirement Board took the following actions in 2020:

- Global Equity: The Board approved a search for a global low volatility mandate in 2019. The search was initiated and conducted in the fourth quarter of 2019. The strategy was funded in January 2020 and was funded by decreasing the international equities by 5% and was awarded and split equally between two global low volatility managers.

- Hedge Funds: The Board approved guideline changes to the existing hedge fund of fund manager from long/short equities to multi-strategy in 2019. The staff continues its efforts in diversifying away the equity beta in the hedge fund portfolio by on-boarding hedge fund credit solutions and private credit solutions.

Operations

The following quantifies some of the accomplishments of the Plan and the volume of services provided during fiscal year 2020:

Accomplishments:

- In response to the worldwide pandemic and in accordance with orders from Mayor Lori Lightfoot and Governor J.B. Pritzker, MEABF virtualized its entire daily operations and continued to pay members benefits uninterrupted.
- Initiated a virtualized signature process with DocuSign.
- Successfully switched death reporting vendor that resulted in improved death reporting on members by providing daily notifications as opposed to weekly notifications.
- To lessen the risk of transmission of COVID-19 for our retired members, the Annual Signature Verification project was limited to members with a Power of Attorney or those using an agent to verify their health.

Services:

Benefit Payment Services

- 307,813 annuity benefit payments to retirees and beneficiaries totaling $940.5 million.
- 25,471 annuitants at year-end 2020, 21,877 or 86% remained Illinois residents and 3,594 or 14% were out-of-state residents. Approximately 15,748 annuitants residing in the City of Chicago received benefit payments totaling $594.7 million annually.
- 25,550 annual benefit statements showing new benefit amounts and deductions for 2020 were mailed to annuity benefit recipients.
- 1,207 new retirees, spouse/reversionary/child annuitants added to annuity payroll. 1,287 retirees, spouse/reversionary/child annuitants removed from payroll due to death or termination.
- 3,484 disability benefit payments to disabled participants totaling $9.5 million. At year-end, there were 146 disabled participants receiving ordinary disability benefits and 130 disabled participants were receiving duty disability benefits.
- 28,757 1099Rs issued for tax reporting purposes.

Member Services

- 3,425 benefit estimates mailed.
- 165,258 phone calls received.
- 28,147 statements of contributions mailed to active participants.
- Responded to approximately 48 requests made in accordance with Illinois Freedom of Information Act.

Withdrawals of Contributions

- 757 lump sum payments to members not eligible for retirement.
- 484 lump sum payments of spousal contributions.
- 27 lump sum payments in lieu of annuity.
- 83 lump sum payments to beneficiaries.

Document management

- 31,174 documents (87,000 pages) indexed and scanned during 2020.

Certificate of Achievement for Excellence in Financial Reporting

The Plan was awarded a Certificate of Achievement for Excellence in Financial Reporting for its CAFR for the year ended December 31, 2019, by the Government Finance Officers Association of the United States and Canada (GFOA). The Plan has received this prestigious award in each of the last 31 years.

To be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized CAFR that satisfies both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one-year only. We believe this report conforms to the program requirements and we are submitting it to the GFOA to determine its eligibility for award.

Acknowledgments

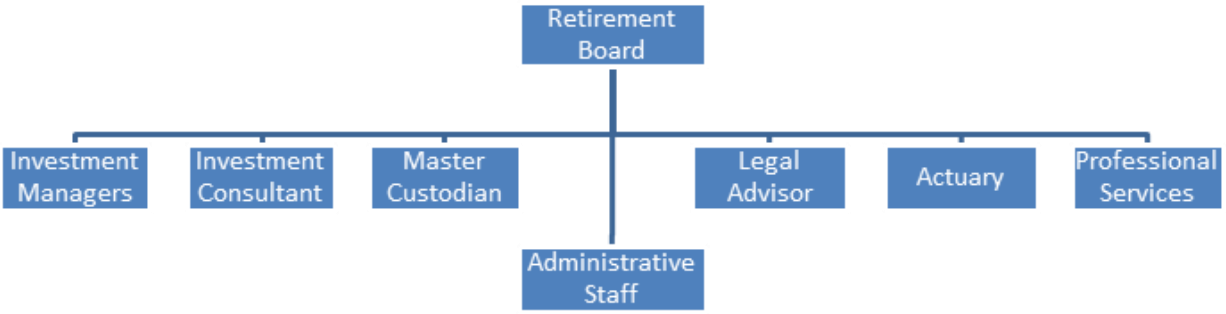
We extend our profound gratitude to the entire Retirement Board for their commitment, leadership and continued support and to the advisors and consultants. We thank the dedicated MEABF staff for their tireless efforts in serving the needs of members. We are grateful to all those who contributed to this project.

Respectively submitted,

Dennis White
Executive Director

Sandra Shelby
Comptroller

ORGANIZATION CHART



CONSULTANTS AND ADVISORS

Investment Consultant
Brian Wrubel
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Chicago, IL

Auditor
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Actuary
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Matthew A. Strom, FSA, MAAA, EA, FSA
Segal Consulting
Chicago, IL

Custodian
Melissa Conyears-Ervin
City Treasurer
Chicago, IL

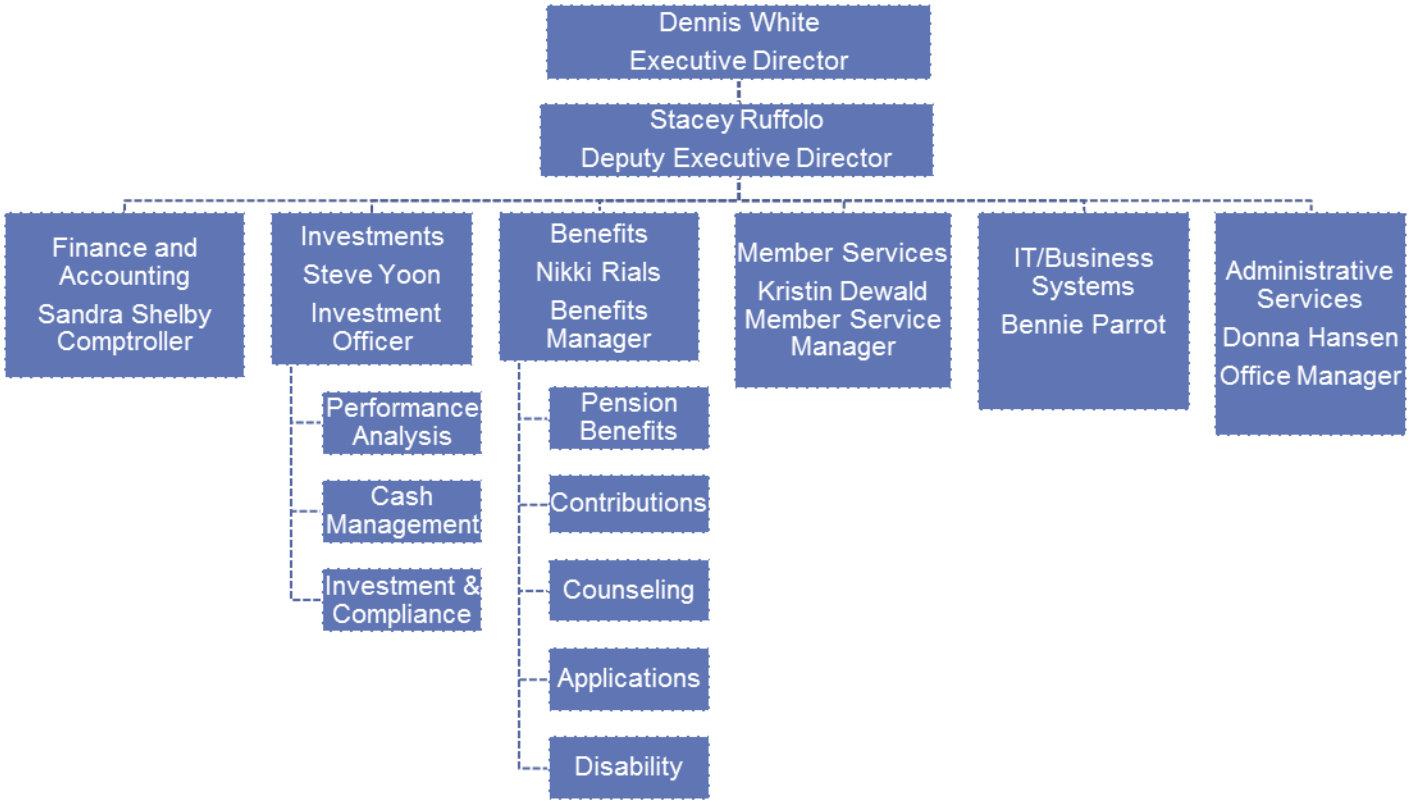
Legal Advisor
Mary Pat Burns
Burke, Burns & Pinelli, Ltd
Chicago, IL

Medical Advisor
Terence Sullivan, M.D.
Chicago, IL

Investment Managers and Investment Fees - are listed on pages 72-73 and 62-64

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

Administrative Staff (As of July 1, 2021)



Appointed by the Retirement Board, the Executive Director and his staff are responsible for the day-to-day administration and operation. The administrative staff also implements the investment policies and decisions of the Retirement Board and the benefit provisions of the Plan. The administrative staff of Forty (40) full time employees serves 31,327 actively contributing members; 25,471 retirees and surviving beneficiaries; and 20,139 inactive members.

FINANCIAL

CALIBRE
CPA GROUP
230 West Monroe Street, Suite 310
Chicago, IL60606
312.655.0037 Phone 312.655.9145 Fax

Report of Independent Auditors

The Retirement Board
Municipal Employees' Annuity & Benefit Fund
of Chicago
Chicago, Illinois

We have audited the statement of fiduciary net position of Municipal Employees' Annuity & Benefit Fund of Chicago (the Plan), a Fiduciary Unit of the City of Chicago, as of December 31, 2020 and 2019, and the related statement of changes in fiduciary net position for the years then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audit 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 Plan's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control. Accordingly, we express no such opinion. An audit also includes 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 Municipal Employees' Annuity & Benefit Fund of Chicago as of December 31, 2020 and 2019, and the changes in its fiduciary net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and other supplementary information on pages 14 through 21 and pages 56 through 60 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquires of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our 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 taken as a whole. The schedules of administrative expenses, investment management compensation, and professional and consulting costs 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. The information has been subjected to the auditing procedures applied in the audits of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, such information is fairly stated in all material respects in relation to the basic financial statements as a whole.

Calibre CPA Group, PLLC

Chicago, Illinois
May 21, 2021

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

This Management Discussion and Analysis (MD&A) of the Municipal Employees' Annuity and Benefit Fund of Chicago ("MEABF" or the "Plan") provides a narrative overview and analysis of the financial activities of MEABF for the years ended December 31, 2020 and 2019. Readers are encouraged to read the MD&A in conjunction with the financial statements to better understand the financial condition and performance of MEABF during the year ended December 31, 2020. Information for fiscal years 2019 and 2018 is presented for comparative purposes.

Financial Highlights

- The Plan's fiduciary net position increased by $9.6 million to $4,090.2 million as of December 31, 2020, compared to an increase of $166.4 million, from $3,914.2 million to $4,080.6 as of December 31, 2019.

- The Plan has continued to liquidate portfolio assets to supplement the disbursement of benefit payments. During fiscal year 2020, approximately $366.3 million in portfolio assets were liquidated compared to $471.1 million in fiscal year 2019 and $523.5 million in fiscal year 2018.

- MEABF's total investment portfolio generated a positive return of 10.0 percent in 2020 on a net-of-fees basis. The net returns in 2019 and 2018 were positive 16.8 percent and negative 5.7 percent, respectively. The total portfolio return in 2020 was above the 7.0 percent actuarial investment return assumptions.

- On a fair value basis, this year's money weighted investment rate of return net of investment expense, was 9.3 percent, compared with the last year's return of 16.4 percent.

- Total additions as reported in the statements of changes in fiduciary net position decreased by $136.7 million or 12.1 percent to $991.8 million in 2020 from $1,128.5 million in 2019.

- Total deductions as reported in the statements of changes in fiduciary net position increased by $20.1 million or 2.1 percent to $982.2 million in 2020 from $962.1 million in 2019.

- Annuity benefits paid to retirees and beneficiaries increased by $25.8 million or 2.8 percent to $940.5 million for fiscal year 2020, compared to an increase of $36.0 million or 4.1 percent to $914.7 million in fiscal year 2019 from $878.7 million in fiscal year 2018.

- The December 31, 2020 financial actuarial valuation calculated a total pension liability of $17,814.8 million and the net pension liability of $13,724.6 million.

- As of the December 31, 2020, the most recent funding actuarial valuation, the Plan's unfunded actuarial accrued liability increased to $13,870.2 million from $13,283.4 million from the prior year. As of the December 31, 2020, the most recent funding actuarial valuation, the Plan's funded ratio was 22.3 percent compared with a funded ratio of 23.2 percent for the prior year.

Overview of the Financial Statements

This discussion and analysis are an introduction to the Plan's basic financial statements prepared on an accrual basis of accounting in accordance with Governmental Accounting Standards Board (GASB) pronouncements and reflect all financial activities. The Plan's basic financial statements include (1) Statements of fiduciary net position (2) Statements of changes in fiduciary net position (3) Notes to the financial statements. In addition to the basic financial statements, this financial report also contains required supplementary information and other supplementary schedules.

1. Basic Financial Statements: The *statements of fiduciary net position* restricted for pension benefits report Plan assets at fair value, liabilities and the resulting fiduciary net position (assets - liabilities = fiduciary net position) at year-end. The *statements of changes in fiduciary net position* report the results of financial activities that occurred during the fiscal year, disclosing the additions to fiduciary net position, such as contributions and net investment income, and deductions from fiduciary net position such as benefit payments and administrative expenses. The resulting net increase (decrease) in fiduciary position (additions - deductions = net increase (decrease) in fiduciary position) reflects the change in net fiduciary position reported in the *statements of fiduciary net position.*

2. Notes to the Basic Financial Statements: The *notes to the financial statements* are an integral part of the financial statements and include additional information not readily evident in the statements themselves. The notes also include schedules to provide a better understanding of the data provided in the financial statements.

3. Required Supplementary Information: The required supplementary information following the notes to the financial statements is required by GASB. It provides historical information and additional details considered useful in evaluating the financial condition of the Plan. It includes schedules related to the net pension liability, contributions from employer, the annual money weighted rate of return on pension plan investments and net OPEB liability.

4. Other Supplementary Schedules: Additional supplemental schedules include detailed information regarding administrative expenses, consulting costs and investment management fees.

Fiduciary Net Position Restricted for Pension Benefits (in millions)

(As of December 31, 2020, 2019 and 2018)

	2020	2019	2018
Assets			
Cash, receivables and other assets	$ 478.2	$ 467.5	$ 380.4
Investments, at fair value	3,635.2	3,631.0	3,559.2
Invested securities lending collateral	184.0	144.9	121.9
Total assets	4,297.4	4,243.4	4,061.5
Liabilities			
Accrued expenses and other liabilities	23.2	17.9	25.4
Securities lending collateral	184.0	144.9	121.9
Total liabilities	207.2	162.8	147.3
Fiduciary net position restricted for pension benefits	$ 4,090.2	$ 4,080.6	$ 3,914.2

Fiduciary net position restricted for pension benefits increased by $9.6 million during fiscal year 2020 to $4,090.2 million from $4,080.6 million in 2019. Invested assets at fair value increased by $4.2 million in 2020 to $3,635.2 from $3,631.0 million in 2019. The gain in assets would have been significantly higher if portfolio assets were not liquidated to supplement the disbursement of benefit payments during the year. During 2020, approximately $366.3 million in portfolio assets were liquidated compared to $471.1 million during 2019 and $523.5 million during 2018.

Summary of Investments (in millions)

(As of December 31, 2020, 2019 and 2018)

	2020	2019	2018
Fixed income	$ 783.2	$ 840.7	$ 899.5
Domestic equity	1,006.1	961.0	880.9
International equity	718.9	751.4	682.1
Hedged equity	410.6	404.2	394.4
Real estate	346.5	366.0	408.5
Private equity	113.5	141.2	165.2
Infrastructure	72.6	16.8	-
Short-term investments	183.8	149.7	128.6
	$ 3,635.2	$ 3,631.0	$ 3,559.2

The asset values reflected above fluctuate from year-to-year, both in aggregate and by asset class, based on the combination of factors such as investment performance, liquidations within certain asset classes, and rebalancing of assets within the overall portfolio.

Investment performance. For fiscal year 2020, the Plan's total investment portfolio generated a positive 10.0 percent return net-of fees, compared to a positive 11.8 percent of the policy benchmark. 2020 returns were below the positive 16.8 percent return net-of-fees generated in 2019. Hedge fund and international equity performance was the highlight of the portfolio performing above its benchmark, while domestic equity and fixed income trailed its respective benchmarks for the year. Real Estate performed modestly above its respective benchmark. Per asset class, domestic equity generated 18.4 percent net-of-fees compared to 20.8 percent for Wilshire 5000 Total Market Index. International equity generated 14 percent return net-of-fees compared to 11.1 percent for the MSCI ACWI ex US. Hedged equity generated 8.9 percent net-of- fees compared to 4.6 percent of HFRX Equity Hedge Index. Fixed income generated 5.8 percent return net-of-fees compared to the Barclays Aggregate Bond Index of 7.5 percent. Lastly, real estate generated a 0.7 percent return net-of-fees compared to 0.5 percent for the NCREIF Property Index.

Liquidations within certain asset classes. Liquidations are due to the large operating cash flow deficits that the Plan faces as a result of the shortfall between inflows, in the form of contributions, and outflows, primarily comprised of retirement benefits and refunds required to pay by law. In total, MEABF had to liquidate approximately $366.3 million of investments to meet the Plan's cash flow needs for 2020 compared to $471.1 million in 2019. Liquidity came mainly from liquid assets; domestic equity, international equity and fixed income.

Rebalancing of assets within the overall portfolio. In 2020, there was no new asset classes added to the portfolio. The regular sale of assets to meet the Plan's cash flow needs was done in accordance with aligning the Plan's investment portfolio with its target allocation.

Additions and Deductions to Fiduciary Net Position (in millions)
(As of December 31, 2020, 2019 and 2018)

	2020	2019	2018
Additions			
Employer contributions	$ 498.6	$ 421.0	$ 349.6
Member contributions	157.8	146.6	138.4
Total contributions	656.4	567.6	488.0
Net investment income (loss)	334.7	560.3	(206.1)
Net security lending income (loss)	0.7	0.6	1.1
Total additions	991.8	1,128.5	283.0
Deductions			
Annuity benefits	940.5	914.7	878.7
Disability benefits	9.5	10.3	10.4
Healthcare subsidy	1.6	2.7	-
Refunds of contributions	23.5	27.7	27.1
Administrative expense	7.1	6.7	6.6
Total deductions	982.2	962.1	922.8
Net change	9.6	166.4	(639.8)
Fiduciary net position restricted for pensions			
Beginning of year	4,080.6	3,914.2	4,554.0
End of year	$ 4,090.2	$ 4,080.6	$ 3,914.2

Additions

Total additions as reported in the Statements of Changes in Fiduciary Net Position decreased by $136.7 million or 12.1 percent in 2020 to $991.8 million from $1,128.5 million in 2019.

Additions from employer contributions increased by $77.6 million to $498.6 million in 2020 from $421.0 million in 2019. The net increase is due to the amendment of Public Act 100-0023 (new funding structure) that was put into law during 2017 that requires the employer to remit $499.0 million in 2021 for 2020 contributions and $421.0 million in 2020 for 2019 contributions. Due to a prepayment agreement with the Employer, The Fund received $60.0 million of the $499.0 million contributions in 2020. For financial reporting purposes both the net contribution receivable and net employer contributions reflects the required amount, implicit and explicit cost of $0.4 million associated with the prepayment. Additions from member contributions increased by $11.2 million to $157.8 million in 2020, from $146.6 million in 2019. The increase is mainly due to a $10.7 million increase in contributions from Board of Education members. Detail regarding active member contribution requirement can be found in note 7 Pension and Other Postemployment Benefit.

Additions (continued)

Additions from investment income decreased by $225.6 million in 2020 to $334.7 million in 2020 from $560.3 million in 2019. The decrease was mainly due to the investment portfolio generating lower returns of 10.0 percent in 2020 compared to 16.8 percent in 2019. Other contributing factors were:

- Decrease in net appreciation on investments by $204.2 million to $280.0 million in 2020 compared to $484.2 million in 2019.
- Decrease in income from investments by $21.7 million to $69.8 million in 2020 compared to $91.5 million in 2019.
- Decrease in direct investment fees by $0.3 million to $15.1 million in 2020 from $15.4 million in 2019.

MEABF can earn additional investment income by allowing a third-party provider to lend a portion of its securities to borrowers on its behalf. The borrower provides collateral on borrowed securities, which is invested in order to earn interest. Securities lending activities generated net income of $0.7 million in 2020 compared to $0.6 million in 2019.

Deductions

MEABF's assets are primarily used to pay annuity benefits, disability benefits, refunds of contributions and the costs of administering the Plan. Deductions from fiduciary net position increased by $20.1 million or 2.1 percent to $982.2 million in 2020 from $962.1 million in 2019. Benefits paid out exceed member and employer contributions by $341.8 million, $468.1 million, and $516.8 million in fiscal years 2020, 2019 and 2018, respectively. In order to supplement benefit payments, the Plan liquidated portfolio assets by approximately $366.3 million, $471.1 million, and $523.5 million in fiscal years 2020, 2019 and 2018, respectively.

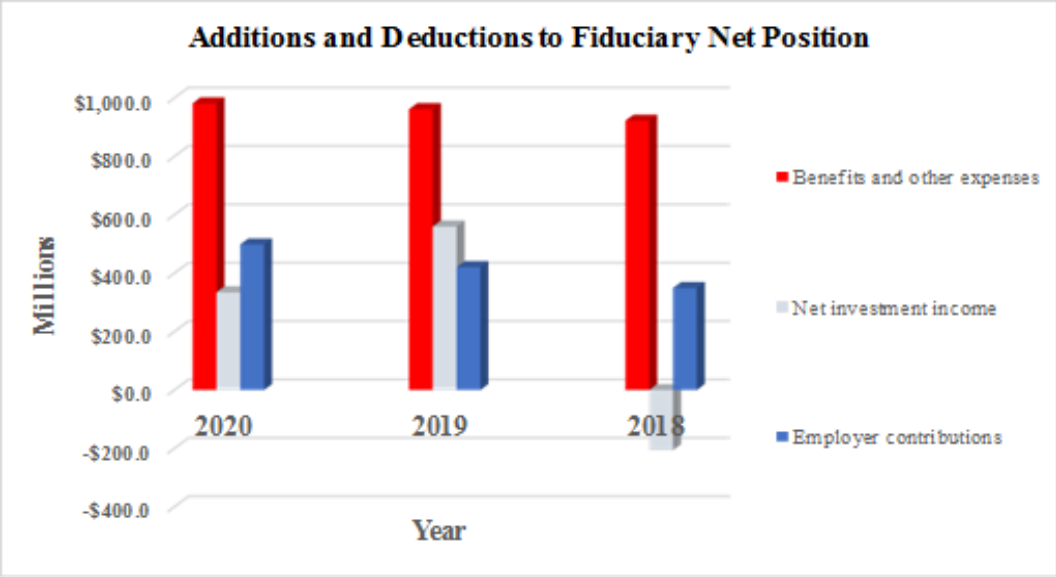
Annuity benefits paid increased by $25.8 million or 2.8 percent to $940.5 million in 2020 from $914.7 million in 2019. The net increase is primarily due to the compounded annual 3.0 percent adjustment for eligible annuitants. The average annual employee annuity benefit increased to $42,053 in 2020 from $40,819 in 2019. The number of new employee annuitants decreased in 2020 to 1,207 from 1,280 in 2019. There were 25,471 retirees and beneficiaries at year-end December 31, 2019 compared to 25,544 at the beginning of the year.

Disability benefits paid decreased by $0.8 million or 7.8 percent to $9.5 million in 2020 from $10.3 million paid in 2019. This net decrease is attributable to a decrease in the number of participants receiving disability. There were 276 participants on disability at year-end December 31, 2020 compared to 298 at the beginning of the year.

Refunds of contributions decreased by $4.2 million to $23.5 million in 2020 from $27.7 million in 2019. The decrease is mainly due to a decrease of other refunds of contributions distributed to employee not eligible for annuities. Other refunds of contribution decreased by $3.9 million to $14.9 million in 2020 compared to $18.8 million in 2019 Refund of spousal contributions decreased slightly by $0.3 million to $8.6 million in 2020 compared to $8.9 million 2019.

Deductions (continued)

Administrative expenses expense increased slightly by $0.4 million to $7.1 million in 2020 from $6.7 million in 2019. Detail relating to administrative expenses can be found in the Schedule of Administrative located under Supporting Schedules.



Total Pension Liability (TPL) and Net Pension Liability (NPL)

The total pension liability (TPL) determines the total obligation for the Plan's pension benefits related to costs incurred as a result of years of service, changes in benefit terms, changes in actuarial assumptions, and any differences between the actuarial assumptions and actual experience. The Plan's fiduciary net position (FNP) determines the assets available for future pension payment stream. Analogous to the unfunded actuarial accrued liability, Net Pension Liability (NPL) is the Total Pension Liability (TPL), net of the Plan's Fiduciary Net Position (FNP).

Total Pension Liability (TPL) and Net Pension Liability (NPL) (continued)

At December 31, 2020, the components of the net pension liability of the employer were as follows (in millions):

Total pension liability	$	17,814.8
Plan fiduciary net position		4,090.2
Employer's net pension liability	$	13,724.6
Plan fiduciary net position as a percentage of the total pension liability		22.96%

Total OPEB Liability and Net OPEB Liability

The total OPEB liability determines the total obligation for the Plan's postemployment healthcare benefits related to costs incurred as a result of years of service, changes in benefit terms, changes in actuarial assumptions, and any differences between the actuarial assumptions and actual experience. The Plan's fiduciary net position determines the assets available for future postemployment healthcare benefit payment stream. Analogous to the unfunded actuarial accrued liability, Net OPEB Liability is the Total OPEB Liability, net of the Plan's Fiduciary Net Position.

Total OPEB liability	$	32.4
Plan fiduciary net position		-
Employer's net OPEB liability	$	32.4
Plan fiduciary net position as a percentage of the total OPEB liability		0.00%

Funding Status

The Plan, since inception, has been funded by utilizing a static multiple of employee contributions. This structure has led to significant underfunding of the Plan which continues to reduce assets as benefits paid far exceed contributions received.

Over the last few years, attempts to change the funding mechanism for the Plan to ensure the long-term solvency have been declared unconstitutional due to changes made to the existing benefit structure. On July 6, 2017, a new funding structure was included in Public Act 100-0023 to increase employer contributions from the City of Chicago.

Public Act 100-0023 requires contributions from the City of Chicago to be equal to $266 million in payment year 2018; $344 million in payment year 2019; $421 million in payment year 2020; $499 million in payment year 2021, and $576 million in payment year 2022. For payment year 2023 through 2058, the City of Chicago is required to make contributions on an actuarial calculated funding plan that is projected to bring the Fund to 90% funding by 2058.

Request for Information

Additional information is available on our website www.meabf.org or by request. Please direct your request to:

Mr. Dennis White
Executive Director
Municipal Employees' Annuity and Benefit Fund of Chicago
321 N. Clark Street, Suite 700
Chicago, IL 60654

Statements of Fiduciary Net Positions
(December 31, 2020 and 2019)

	2020	2019
Assets		
Cash and cash equivalents	$ 519,448	$ 512,365
Receivables		
Contributions from the City of Chicago, net of allowance for loss of $2,626,780 in 2020 and $4,911,453 in 2019	445,634,439	425,853,730
Member contributions	10,009,273	9,230,041
Interest and dividends	9,749,906	11,247,926
Due from broker	10,181,307	19,307,297
Miscellaneous	1,672,787	858,521
Total receivables	477,247,712	466,497,515
Investments, at fair value		
Fixed income	783,202,603	840,676,660
Hedged equity	410,553,990	404,199,085
Domestic and international equity	1,725,000,698	1,712,450,693
Real estate	346,508,144	365,980,218
Private equity	113,531,723	141,264,793
Infrastructure	72,568,452	16,763,717
Short-term investments	183,815,715	149,699,151
Total investments	3,635,181,325	3,631,034,317
Invested securities lending collateral	184,008,488	144,948,932
Property and equipment, net of accumulated depreciation and amortization of $124,711 in 2020 and $25,193 in 2019	441,976	420,039
Total assets	4,297,398,949	4,243,413,168
Liabilities		
Due to broker	14,070,692	10,820,708
Accounts payable and accrued expenses	9,080,685	7,001,038
Securities lending collateral	184,008,488	144,948,932
Total liabilities	207,159,865	162,770,678
Net position restricted for pension benefits	$ 4,090,239,084	$ 4,080,642,490

See accompanying notes to financial statements

Statements of Changes in Fiduciary Net Position

Years ended December 31, 2020 and 2019

	2020	2019
Additions		
Contributions from the City of Chicago	$ 498,598,904	$ 421,000,000
Member contributions	157,797,710	146,645,216
Total contributions	656,396,614	567,645,216
Investment income		
Net appreciation (depreciation) in fair value of investments	280,011,860	484,172,072
Interest	25,745,499	35,239,302
Dividends	34,825,310	43,871,087
Income from real estate investments	9,237,207	12,381,844
	349,819,876	575,664,305
Less investment expenses	(15,136,414)	(15,362,181)
Net income (loss) from investing activities	334,683,462	560,302,124
Security lending activities		
Securities lending income	1,623,485	3,288,770
Borrower rebates	(656,790)	(2,547,201)
Bank fees	(247,198)	(103,691)
Net income from securities lending activities	719,497	637,878
Total additions	991,799,573	1,128,585,218
Deductions		
Benefits		
Annuity payments	940,526,176	914,653,034
Disability benefits	9,511,321	10,323,869
Post-employment healthcare subsidies	1,607,400	2,731,425
Total benefits	951,644,897	927,708,328
Refund of member contributions	23,440,140	27,674,608
Administrative expenses	7,117,942	6,740,268
Total deductions	982,202,979	962,123,204
Net change	9,596,594	166,462,014
Net position restricted for pension benefits		
Beginning of year	4,080,642,490	3,914,180,476
End of year	$ 4,090,239,084	$ 4,080,642,490

See accompanying notes to financial statements

Note 1 – Summary of Significant Accounting Policies

Reporting Entity - As defined by U.S. generally accepted accounting principles established by the Governmental Accounting Standards Board (GASB), the financial reporting entity consists of a primary government, as well as its component units, which are legally separate organizations for which the elected officials of the primary government are financially accountable. Financial accountability is defined as:

(1) Appointment of a voting majority of the component unit's board and either a) the ability to impose will by the primary government, or b) the possibility that the component unit will provide a financial benefit to or impose a financial burden on the primary government; or

(2) Fiscal dependency on the primary government.

Based upon the required criteria, the Plan has no component units. The Plan is considered a component unit fund of the City of Chicago and, as such, is included in the City of Chicago's financial statements as a pension trust fund. Accordingly, these financial statements present only Municipal Employees' Annuity & Benefit Fund of Chicago ("MEABF") and are not intended to present fairly the financial position of the City of Chicago and the result of its operations in conformity with U.S. generally accepted accounting principles.

Basis of Accounting *- The financial statements are prepared using the accrual basis of accounting. Employee and employer contributions are recognized in the period when due, pursuant to formal commitments as well as statutory or contractual requirements. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan.*

Use of Estimates - The preparation of financial statements in accordance with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts and fiduciary net position at the date of the financial statements and the actuarial information included in the required supplementary information as of the valuation date, the changes in fiduciary net position during the reporting period and, when applicable, disclosures of the contingent assets and liabilities at the date of the financial statements. Actual results may differ from those estimates.

Risks and Uncertainties - The Plan invests in various investment securities. Investment securities are exposed to various risks such as interest rate, market and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of the investment securities will occur in the near term and that such changes could materially affect the amounts reported in the statements of fiduciary net position.

Cash and Cash Equivalents - Cash and cash equivalents include cash on hand and on deposit with the Treasurer of the City of Chicago as well as investments held by the City Treasurer on behalf of the Plan with original maturities of less than 90 days.

Note 1. Summary of Significant Accounting Policies (continued)

Investments - The Plan is authorized to invest in bonds, notes, and other obligations of the U.S. Government; corporate debentures and obligations; insured mortgage notes and loans; common and preferred stocks; stock options; real estate; and other investment vehicles as set forth in the Illinois Compiled Statutes. Income on all investments is recognized on the accrual basis. Gains and losses on sales and exchanges of investments are recognized on the transaction date of such sale or exchange. Dividend income is recognized based on dividends declared.

Investments are reported at fair value. 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. Fair values of marketable securities are based primarily on quotations from national security exchanges. Investments in short-term obligations are carried at cost which approximates fair value. Certain short-term obligations, such as United States Treasury Bills and discount paper, are carried at fair value. Fair values for bonds, stocks, forward contracts, future contracts, rights and warrants are determined by quoted market prices. Fair values of hedged equity investments are determined using quoted market prices of underlying funds, when available. If quoted market prices are not available, then fair value is determined by underlying fund managers. Fair values of real estate and infrastructure are based upon independent appraisals. Fair values of private equity investments are primarily based on the general partner determined fair value.

Administrative Expenses - Administrative expenses are budgeted and approved by MEABF's Board of Trustees (Board). Funding for these expenses is included in the employer contributions as mandated in the Illinois State Statutes Chapter 40, Pension Article 5/8-190.

Income Taxes - The Plan is exempt from federal and state income taxes and has received a favorable determination letter under Internal Revenue Code (IRC) section 401(a).

Issued Accounting Pronouncements Not Yet Effective - GASB Statement No. 87, *Leases* was established to improve accounting and financial reporting for leases by governments. This Statement increases the usefulness of governmental financial statements by requiring recognition of certain lease assets and liabilities for leases that were previously classified as operating leases. Statement No. 87 establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Statement No. 87 is effective for the Plan's fiscal year ending December 31, 2022.

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

Note 2. Investment Policies, Asset Allocation and Money-Weighted Rate of Return

Investment Policy - 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 prudent diversification of the portfolio across a broad selection of distinct asset classes. The Plan's investment policy discourages the use of cash equivalents, except to meet liquidity needs, and aims to refrain from dramatically shifting asset class allocations over the short term.

The following table represents the Board's adopted asset allocation policy as of December 31, 2020 and 2019:

Asset Class	2020 Target	2019 Target
Fixed income	25%	25%
Global Equity	5%	5%
Domestic equity	26%	26%
International equity	17%	17%
Hedge funds	10%	10%
Private equity	5%	5%
Real estate	10%	10%
Infrastructure	2%	2%
	100%	100%

Money-Weighted Rate of Return - For the years ended December 31, 2020 and 2019, the annual money-weighted rate of return on Plan investments, net of investment expense, 9.3 percent and 16.4 percent, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Note 3. Deposits and Investments

Deposits that are held locally in the Plan's name are held by the Treasurer of the City of Chicago, ex-officio Treasurer of the Plan. At December 31, 2020 and 2019, the Plan's book balances of cash are $519,448 and $512,365, respectively. The actual bank balances at December 31, 2020 and 2019 are $519,048 and $511,965, respectively. All non-investment related bank balances at year end are insured or collateralized at 102% of the principal amount.

Custodial credit risk is the risk that, in the event of a financial institution failure, the Plan will not be able to recover deposits or collateral securities that are in possession of an outside party. Deposits are exposed to custodial credit risk if they are not covered by deposit insurance and are (a) uncollateralized, (b) collateralized with securities held by the pledging financial institution or (c) collateralized with securities held by the pledging financial institution's trust department or agent but not in the Plan's name. The Plan does not have a formal policy relating to custodial risk. As of December 31, 2020 and 2019, $11,109,770 and $6,864,887, respectively, of the Plan's deposits with its custodian Northern Trust were exposed to custodial credit risk.

Note 3. Deposits and Investments (continued)

Certain Plan investments are held by a bank administered trust fund. There were no individual investments representing 5% or more of the Plan's net position as of December 31, 2020 and 2019.

The Plan's investments are reported at fair value in the accompanying statements of fiduciary net position. The methods used to measure fair value may produce an amount that may not be indicative of net realizable value or reflective of future fair values. Furthermore, although the Plan believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

Accounting standards provide the framework for measuring fair value which provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy are described as follows:

Level 1 - Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that the Plan has the ability to access.

Level 2 - Inputs to the valuation methodology include other significant observable inputs including:

- Quoted prices for similar assets or liabilities in active markets;
- Quoted prices for identical or similar assets or liabilities in inactive markets;
- Inputs other than quoted prices that are observable for the asset or liability; and
- Inputs that are derived principally from or corroborated by observable market data by correlation or other means.

If the asset or liability has a specified (contractual) term, the Level 2 input must be observable for substantially the full term of the asset or liability.

Level 3 - Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

The asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs.

Following are descriptions of the valuation methodologies used for investments measured at fair value. There have been no changes in the methodologies used at December 31, 2020 and 2019.

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.

Equity and equity derivative securities classified in Level 1 are valued using prices quoted in active markets for those securities.

Note 3. Deposits and Investments (continued)

Debt securities and short-term investment securities classified in Level 2 are valued using matrix pricing techniques maintained by the various pricing vendors. Matrix pricing is used to value securities based on the securities relationship to a benchmark's quoted price. Equity securities classified in Level 2 are securities with a theoretical price calculated by applying a standardized formula to derive a price from a related security.

Equity securities and other assets classified in Level 3 are valued with last trade data having limited trading volume.

The valuation method for certain fixed income and alternative investments is based on the investments' NAV per share (or its equivalent), provided by the investment managers. The NAV is based on the fair value of the underlying investments held by the fixed income and alternative investment less their liabilities. This practical expedient is not used when it is determined to be probable that the Plan will sell the investment for an amount different than the reported NAV.

Note 3 – Deposits and Investments (continued)

The following table summarizes the valuation of MEABF investments by the fair value hierarchy levels as of December 31, 2020.

	December 31, 2020			
Description	Total	Quoted Market Prices for Asset (Level 1	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments measured at fair value				
Equity securities				
Common stock	$ 1,718,095,358	$ 1,716,178,724	$ 971,830	$ 944,804
Preferred stock	2,456,125	2,400,546	-	55,579
Stapled securities	2,890,260	2,890,260	-	-
Rights/warrants	746,470	21,849	5,994	718,627
Funds - equities ETF	638,720	638,720	-	-
Convertible Equity	-	-	-	-
Unit Trust Equity	173,765	173,765	-	-
Total equity securities	1,725,000,698	1,722,303,864	977,824	1,719,010
Debt securities				
Government bonds	97,661,552	-	97,661,552	-
Government agencies	47,542,667	-	47,542,667	-
Municipal/provincial bonds	21,423,293	-	21,423,293	-
Corporate bonds	314,636,482	-	314,635,581	901
Corporate convertible bonds	634,138	-	634,138	-
Bank loans	126,988,595	-	126,988,595	-
Government mortgage-backed securities	70,546,101	-	70,546,101	-
Government-issued commercial mortgage-backed	9,673,954	-	9,673,954	-
Commercial mortgage-backed	7,054,290	-	7,054,290	-
Asset backed securities	12,860,206	-	12,860,206	-
Non-government backed CMO's	6,908,076	-	6,908,076	-
Index linked government bonds	3,531,556	-	3,531,556	-
Total debt securities	719,460,910	-	719,460,009	901
Short-term investment securities				
Funds - short-term investment securities	183,815,715	-	183,790,507	25,208
Total investments measured by fair value levels	2,628,277,323	$ 1,722,303,864	$ 904,228,340	$ 1,745,119
Investments measured at NAV				
Commingled fixed income funds	63,741,693			
Commingled Infrastructure	72,568,452			
Hedge funds	410,553,990			
Private equity partnerships	113,531,723			
Real estate	346,508,144			
Total investments measured at NAV	1,006,904,002			
Total investments measured at fair value	$ 3,635,181,325			
Collateral from securities lending	$ 184,008,488		$ 184,008,488	

Note 3 – Deposits and Investments (continued)

The following table summarizes the valuation of MEABF investments by the fair value hierarchy levels as of December 31, 2019.

	December 31, 2019			
Description	Total	Quoted Market Prices for Asset (Level 1	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments measured at fair value				
Equity securities				
Common stock	$ 1,705,379,787	$ 1,703,396,599	$ 1,888,080	$ 95,108
Preferred stock	3,789,101	3,788,307	-	794
Stapled securities	2,391,960	2,391,960	-	-
Rights/warrants	125,034	38,308	211	86,515
Funds - equities ETF	690,757	690,757	-	-
Convertible Equity	803	803	-	-
Unit Trust Equity	73,251	73,251	-	-
Total equity securities	1,712,450,693	1,710,379,985	1,888,291	182,417
Debt securities				
Government bonds	120,080,524	-	120,080,524	-
Government agencies	26,174,432	-	26,174,432	-
Municipal/provincial bonds	24,429,023	-	24,429,023	-
Corporate bonds	331,006,740	-	329,241,381	1,765,359
Corporate convertible bonds	171,952	-	171,952	-
Bank loans	145,554,601	-	145,554,601	-
Government mortgage-backed securities	83,354,078	375,000	82,979,078	-
Government-issued commercial mortgage-backed	8,488,765	-	8,488,765	-
Commercial mortgage-backed	7,610,102	-	7,610,102	-
Asset backed securities	21,547,018	-	21,547,018	-
Non-government backed CMO's	6,635,113	-	6,635,113	-
Index linked government bonds	4,570,761	-	4,570,761	-
Total debt securities	779,623,109	375,000	777,482,750	1,765,359
Short-term investment securities				
Funds - short-term investment securities	149,699,151	11,667	149,662,276	25,208
Total investments measured by fair value levels	2,641,772,953	$ 1,710,766,652	$ 929,033,317	$ 1,972,984
Investments measured at NAV				
Commingled fixed income funds	61,053,551			
Commingled Infrastructure	16,763,717			
Hedge funds	404,199,085			
Private equity partnerships	141,264,793			
Real estate	365,980,218			
Total investments measured at NAV	989,261,364			
Total investments measured at fair value	$ 3,631,034,317			
Collateral from securities lending	$ 144,948,932		$ 144,948,932	

Note 3 – Deposits and Investments (continued)

Investments measured at NAV for fair value are not subject to level classification. The Plan's investments in certain entities that are measured at the NAV per share (or its equivalent) is presented on the following table.

2020	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Commingled fixed income funds	$ 63,741,693	$ -	Quarterly	60 Days
Commingled infrastructure	72,568,452	-	Quaterly	45 Days
Hedge funds	410,553,990	-	Monthly, Quaterly	5, 7, 30, or 90 Days
Private equity funds	113,531,723	24,082,920	Not Eligible	N/A
Real estate funds	346,508,144	286,388	Quarterly - Open-end, Not Eligible - Closed - end	10, 30 or 365 Days - Open-end
	$ 1,006,904,002	$ 24,369,308		

2019	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Commingled fixed income funds	$ 61,053,551	$ -	Quarterly	60 Days
Commingled infrastructure	16,763,717	59,571,000	Quaterly	45 Days
Hedge funds	404,199,085	-	Monthly, Quaterly	5, 7, 30, 90 or 91 Days
Private equity funds	141,264,793	22,168,639	Not Eligible	N/A
Real estate funds	365,980,218	286,388	Quarterly - Open-end, Not Eligible - Closed - end	10, 30 or 365 Days - Open-end
	$ 989,261,364	$ 82,026,027		

Commingled Fixed Income Funds - This type of investment consists of fixed income securities diversified in high yield, bank loans, and private debt securities.

Commingle Infrastructure - This type includes investment in open-end infrastructure fund. Investment in open-end funds have limited redemption availability as redemption opportunities are based on available liquidity.

Hedge Funds - This type of investment consists of multi-strategy and long/short equity hedge fund-of-funds.

Private Equity Funds - This type of investment includes limited partnerships. Generally, the types of partnership strategies included in these portfolios are venture capital, buyouts, special situations, mezzanine, and distressed debt. Private equity partnerships have an approximate life of 10-15 years and are considered illiquid. Redemptions are restricted over the life of the partnership. During the life of the partnerships, distributions are received as underlying investments are realized. The Plan has no plans to liquidate the total portfolio.

Note 3 – Deposits and Investments (continued)

Real Estate Funds - This type includes investments in open and closed-end real estate funds. Investments in open-end funds have limited redemption availability as redemption opportunities are based on available liquidity. Closed-end funds do not offer redemptions. Distributions from closed-end funds will be received as the underlying investments are liquidated. The Plan has no plans to liquidate the total portfolio.

Note 3 – Deposits and Investments (continued)

Foreign Currency Risk

Foreign currency risk is the risk that changes in currency exchange rates will adversely affect the fair value of an investment or a deposit. Forward currency contracts may be used to manage exposure to foreign currencies. The Plan has not adopted a formal policy related to foreign currency risk. The Plan's exposure to foreign currency risk at December 31, 2020 was as follows:

Currency	Equities *	Fixed Income	Short-term Investments	Total	Percentage
Australian dollar	$ 31,137,009	$ -	$ 193,493	$ 31,330,502	4.3%
Brazilian real	7,590,350	-	133,678	7,724,028	1.1%
British pound sterling	79,806,382	-	2,450,242	82,256,624	11.3%
Canadian dollar	27,678,210	-	186,401	27,864,611	3.8%
Chilean peso	111,864	-	50,829	162,693	0.0%
Chinese yuan renminbi	870,026		(370,663)	499,363	0.1%
Colombian peso	238,368	-	30,098	268,466	0.0%
Czech koruna	961,025	-	4,262	965,287	0.1%
Danish krone	21,364,108	-	693,045	22,057,153	3.0%
Egyptian pound	269,362	-	9,942	279,304	0.0%
Euro	156,361,611	-	1,556,846	157,918,457	21.6%
HK offshore Chinese yuan renminbi	16,030,073	-	405,571	16,435,644	2.2%
Hong Kong dollar	59,477,430	-	526,459	60,003,889	8.2%
Hungarian forint	713,953	-	11,571	725,524	0.1%
Indian Rupee	19,800,778	116	3,257,835	23,058,729	3.2%
Indonesian rupiah	2,352,283	-	56,690	2,408,973	0.3%
Japanese yen	142,149,596	-	1,158,571	143,308,167	19.6%
Kenyan shilling	273,169	-	-	273,169	0.0%
Kuwaiti dinar	171,664		5	171,669	0.0%
Malaysian ringgit	508,062	-	43,433	551,495	0.1%
Mexican peso	3,633,716	-	158,494	3,792,210	0.5%
New Israeli shekel	6,390,074	-	44,463	6,434,537	0.9%
New Taiwan dollar	23,877,495	-	92,920	23,970,415	3.3%
New Zealand dollar	3,757,971	-	21,707	3,779,678	0.5%
Norwegian krone	5,531,808	-	95,378	5,627,186	0.8%
Philippine peso	2,284,099	-	43,140	2,327,239	0.3%
Polish zloty	2,476,295	-	29,572	2,505,867	0.3%
Qatari riyal	185,261	-	15,158	200,419	0.0%
Russian ruble	406,574	-	-	406,574	1.2%
Singapore dollar	8,232,738	-	173,680	8,406,418	0.1%
South African rand	4,794,576	-	76,971	4,871,547	0.7%
South Korean won	21,094,122	-	45,223	21,139,345	2.9%
Swedish krona	23,282,694	-	620,401	23,903,095	3.3%
Swiss franc	43,557,879	-	(1,901)	43,555,978	6.0%
Thai baht	627,904	-	30,903	658,807	0.1%
Turkish lira	738,522	-	(10,071)	728,451	0.1%
United Arab Emirates dirham	171,494	-	6,771	178,265	0.0%
Total held in foreign currency	$ 718,908,545	$ 116	$ 11,841,117	$ 730,749,778	100.0%

* Includes forward contracts, rights and warrants.

Note 3 – Deposits and Investments (continued)

For comparative purposes, the Plan's exposure to foreign currency risk at December 31, 2019 was as follows:

Currency	Equities *	Fixed Income	Short-term Investments	Total	Percentage
Australian dollar	$ 32,085,734	$ -	$ 396,354	$ 32,482,088	4.3%
Brazilian real	19,137,896	-	65,116	19,203,012	2.5%
British pound sterling	107,309,447	-	1,049,405	108,358,852	14.2%
Canadian dollar	24,768,886	-	995,106	25,763,992	3.4%
Chilean peso	273,731	-	95,938	369,669	0.0%
Colombian peso	1,000,492	-	80,154	1,080,646	0.1%
Czech koruna	907,657	-	9,555	917,212	0.1%
Danish krone	16,666,798	-	367,314	17,034,112	2.2%
Egyptian pound	72,733	-	9,744	82,477	0.0%
Euro	162,043,206	-	1,929,337	163,972,543	21.6%
HK offshore Chinese yuan renminbi	-	-	1,203	1,203	0.0%
Hong Kong dollar	64,228,422	-	175,714	64,404,136	8.5%
Hungarian forint	2,106,892	-	12,018	2,118,910	0.3%
Indian Rupee	24,020,976	114	111,998	24,133,088	3.2%
Indonesian rupiah	3,942,782	-	93,390	4,036,172	0.5%
Japanese yen	149,363,849	-	1,014,700	150,378,549	19.8%
Kenyan shilling	332,950	-	-	332,950	0.0%
Malaysian ringgit	746,791	-	92,315	839,106	0.1%
Mexican peso	3,199,646	-	90,318	3,289,964	0.4%
New Israeli shekel	5,053,711	-	57,726	5,111,437	0.7%
New Taiwan dollar	23,778,786	-	170,143	23,948,929	3.1%
New Zealand dollar	1,438,307	-	93,779	1,532,086	0.2%
Norwegian krone	6,414,353	-	111,721	6,526,074	0.9%
Philippine peso	1,667,071	-	41,022	1,708,093	0.2%
Polish zloty	2,131,129	-	18,880	2,150,009	0.3%
Qatari riyal	431,748	-	22,729	454,477	0.1%
Russian ruble	1,192,093	-	-	1,192,093	0.2%
Singapore dollar	5,755,315	-	148,250	5,903,565	0.8%
South African rand	4,752,968	-	101,346	4,854,314	0.6%
South Korean won	16,908,637	-	251,817	17,160,454	2.3%
Swedish krona	21,854,399	-	733,375	22,587,774	3.0%
Swiss franc	43,097,539	-	99,240	43,196,779	5.7%
Thai baht	3,012,458	-	30,908	3,043,366	0.4%
Turkish lira	486,726	-	18,363	505,089	0.1%
United Arab Emirates dirham	1,215,095	-	81,579	1,296,674	0.2%
Total held in foreign currency	$ 751,399,223	$ 114	$ 8,570,557	$ 759,969,894	100.0%

* Includes forward contracts, rights and warrants.

Note 3 – Deposits and Investments (continued)

Interest Rate Risk

As of December 31, 2020, the Plan had the following investments and maturities:

Investment Type	Total Fair Value	1 Year or Less	1 - 6 Years	6 - 10 Years	10 or More Years	Maturity not Determined
Asset backed	$ 12,860,206	$ -	$ 5,492,507	$ 322,327	$ 7,045,372	$ -
Bank loans	126,988,595	2,116,031	105,250,519	19,525,823	-	96,222
Commercial mortgage backed	7,054,290	-	-	932,485	6,121,805	-
Corporate bonds	314,636,482	7,022,936	177,332,708	113,099,690	17,181,148	-
Corporate convertible bonds	634,138	-	634,138	-	-	-
Government agencies	47,542,667	17,986,374	22,442,519	7,113,774	-	-
Government bonds	97,661,552	5,652,877	42,347,648	46,672,406	2,988,621	-
Government mortgage backed	70,546,101	5,114	524,824	5,692,955	64,323,208	-
Government-issued commercial mortgage-backed	9,673,954	-	8,834,035	523,550	316,369	-
Index linked government bonds	3,531,556	-	2,986,277	545,279	-	-
Municipal / provincial bonds	21,423,293	-	5,105,840	6,819,350	9,498,103	-
Non-government backed CMO's	6,908,076	-	-	210,822	6,697,254	-
Other fixed incomes	63,741,693	-	-	-	-	63,741,693
Total	$ 783,202,603	$ 32,783,332	$ 370,951,015	$ 201,458,461	$ 114,171,880	$ 63,837,915

As of December 31, 2019, the Plan had the following investments and maturities:

Investment Type	Total Fair Value	1 Year or Less	1 - 6 Years	6 - 10 Years	10 or More Years	Maturity not Determined
Asset backed	$ 21,547,018	$ -	$ 13,173,659	$ 1,238,664	$ 7,134,695	$ -
Bank loans	145,554,601	1,758,981	110,407,911	33,387,709	-	-
Commercial mortgage backed	7,610,102	-	-	993,236	6,616,866	-
Corporate bonds	331,006,740	7,455,451	202,728,938	109,487,520	11,334,831	-
Corporate convertible bonds	171,952	-	-	171,952	-	-
Government agencies	26,174,432	4,474,746	11,490,015	10,209,671	-	-
Government bonds	120,080,524	8,878,541	49,150,179	44,491,160	17,560,644	-
Government mortgage backed	83,354,078	25,295	824,542	7,437,442	75,066,799	-
Government-issued commercial mortgage-backed	8,488,765	-	6,315,591	1,776,671	396,503	-
Index linked government bonds	4,570,761	-	-	4,570,761	-	-
Municipal / provincial bonds	24,429,023	5,188,902	4,993,121	7,057,430	7,189,570	-
Non-government backed CMO's	6,635,113	-	-	246,580	6,388,533	-
Other fixed incomes	61,053,551	-	-	-	-	61,053,551
Total	$ 840,676,660	$ 27,781,916	$ 399,083,956	$ 221,068,796	$ 131,688,441	$ 61,053,551

Note 3 - Deposits and Investments (continued)
Credit Risk

The following table reflects credit ratings of fixed income securities held by the Plan as of December 31, 2020:

S & P Credit Rating	Fair Value	Asset Backed Securities	Bank Loans	Commercial Mortgage Backed	Corporate Bonds	Corporate Convertible Bonds	Government Agencies	Government Bonds	Government Mortgage Backed	Government Issued Commercial Mortgage Backed	Index Linked Government Bonds	Municipal/ Provincial Bonds	Non-Government Backed CMO's	Other Fixed Income
U.S. Government	$ 194,323,590	$ 144,714	$ -	$ -	$ -	$ -	$ 12,765,713	$ 97,661,552	$ 70,546,101	$ 9,673,954	$ 3,531,556	$ -	$ -	$ -
AAA	11,025,055	4,093,531	-	508,922	2,447,976	-	-	-	-	-	-	3,974,626	-	-
AA	61,678,357	1,045,046	-	128,783	11,181,543	-	34,776,954	-	-	-	-	12,385,499	2,160,532	-
A	92,843,715	2,026,927	-	-	87,703,445	-	-	-	-	-	-	2,162,305	951,038	-
BBB	121,496,194	745,000	5,091,812	-	115,064,099	184,188	-	-	-	-	-	-	411,095	-
BB	82,326,451	246,050	28,527,162	-	52,847,010	-	-	-	-	-	-	-	706,229	-
B	90,250,879	-	58,919,620	-	30,940,973	-	-	-	-	-	-	-	390,286	-
CCC	15,408,846	516,699	7,333,815	-	7,108,382	449,950	-	-	-	-	-	-	-	-
CC	948,877	-	948,877	-	-	-	-	-	-	-	-	-	-	-
C	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D	1,821,322	-	1,442,058	-	178,095	-	-	-	-	-	-	-	201,169	-
NR	111,079,317	4,042,239	24,725,251	6,416,585	7,164,959	-	-	-	-	-	-	2,900,863	2,087,727	63,741,693
Total	$ 783,202,603	$ 12,860,206	$ 126,988,595	$ 7,054,290	$ 314,636,482	$ 634,138	$ 47,542,667	$ 97,661,552	$ 70,546,101	$ 9,673,954	$ 3,531,556	$ 21,423,293	$ 6,908,076	$ 63,741,693

The following table reflects credit ratings of fixed income securities held by the Plan as of December 31, 2019:

S & P Credit Rating	Fair Value	Asset Backed Securities	Bank Loans	Commercial Mortgage Backed	Corporate Bonds	Corporate Convertible Bonds	Government Agencies	Government Bonds	Government Mortgage Backed	Government Issued Commercial Mortgage Backed	Index Linked Government Bonds	Municipal/ Provincial Bonds	Non-Government Backed CMO's	Other Fixed Income
U.S. Government	$ 208,362,543	$ 185,810	$ -	$ -	$ -	$ -	$ 596,683	$ 111,359,568	$ 83,354,078	$ 8,295,643	$ 4,570,761	$ -	$ -	$ -
AAA	17,613,860	9,445,445	-	847,082	1,276,971	-	-	-	-	-	-	6,044,362	-	-
AA	57,509,944	2,383,107	-	434,581	14,823,920	-	25,577,749	-	-	-	-	12,311,940	1,978,647	-
A	101,225,347	2,786,137	-	-	93,435,723	-	-	-	-	-	-	3,943,102	1,060,385	-
BBB	114,514,923	919,812	11,669,996	-	100,719,114	-	-	-	-	-	-	-	1,206,001	-
BB	115,307,391	284,570	47,533,571	-	67,205,347	-	-	-	-	-	-	-	283,903	-
B	98,786,689	-	56,554,749	-	41,938,603	-	-	-	-	-	-	-	293,337	-
CCC	15,623,778	566,752	9,750,997	-	5,306,029	-	-	-	-	-	-	-	-	-
CC	175,912	-	175,912	-	-	-	-	-	-	-	-	-	-	-
C	217,403	-	217,403	-	-	-	-	-	-	-	-	-	-	-
D	665,646	-	361,212	-	55,737	-	-	-	-	-	-	-	248,697	-
NR	110,673,224	4,975,385	19,290,761	6,328,439	6,245,296	171,952	-	8,720,956	-	193,122	-	2,129,619	1,564,143	61,053,551
Total	$ 840,676,660	$ 21,547,018	$ 145,554,601	$ 7,610,102	$ 331,006,740	$ 171,952	$ 26,174,432	$ 120,080,524	$ 83,354,078	$ 8,488,765	$ 4,570,761	$ 24,429,023	$ 6,635,113	$ 61,053,551

US Govt = Guaranteed by US Government
NR = Not Rated

The Plan does not have a formal policy in regard to aggregate credit quality of fixed income holdings. The Plan utilizes external investment management firms to invest in fixed income securities and credi quality is addressed within the guidelines of the mandate. Unless allowed by the mutually agreed upon guidelines of the mandate, all securities invested in are investment grade. If a holding falls below investment grade, the manager will either sell the security or will inform the Plan of the lower rating and why they believe that it is prudent to continue to hold the security as they believe that the security will return to investment grade

Note 4 – Derivatives

The derivative instruments were recorded at fair value as of December 31, 2020 and 2019. Derivative instruments include forward foreign exchange contracts, futures contracts, rights and warrants. Derivative transactions 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. Market risk is the possibility that a change in market prices or currency rates will cause the value of a financial instrument to decrease or become more costly to settle. The Plan's investment managers may invest in derivatives if permitted by the guidelines of their mandate.

Foreign Currency Forward Contracts

Foreign currency forward contracts are used by certain investment managers to protect against the currency risk in the Plan's international equity portfolios. A foreign currency forward contract is an agreement to buy or sell a specific amount of a foreign currency at a specified delivery or maturity date for an agreed-upon price. Foreign currency forward contracts are marked-to-market on a daily basis. The gains or losses resulting from changes in contract values are included in investment income in the Statement of Changes in Fiduciary Net Position. The Plan experienced a realized gain (loss) of $(7,896) and $(14,262) on foreign currency forward contracts in 2020 and 2019, respectively. As of December 31, 2020, the Plan's outstanding foreign currency forward contracts were as follows:

	Pending Foreign Exchange Purchases	Pending Foreign Exchange Sales	Unrealized Gain (Loss)	Changed in Unrealized Gain (Loss)
Australian dollar	$ 25,909	$ -	$ 585	$ 295
Brazil real	-	-	-	(517)
British pound sterling	218,701	-	7,090	6,092
Canadian dollar	10,827	(21,172)	(22)	(313)
Czech koruna	-	(25,529)	(205)	(205)
Danish krone	-	(58,104)	(500)	(500)
Euro	47,833	(113,640)	(563)	(1,727)
Hong Kong dollar	148,982	-	(19)	(19)
Japanese yen	320,254	-	1,987	2,466
Malaysian ringgit	-	-	-	6
New Taiwan dollar	-	-	-	140
New Zealand dollar	-	(51,194)	(905)	(905)
Norwegian krone	-	(42,466)	(1,188)	(1,341)
Philippine peso	-	-	-	(27)
Polish zloty	-	-	-	(218)
Singapore dollar	-	(5,367)	(56)	(56)
South African rand	7,110	-	172	172
Swedish krona	-	(28,250)	(799)	(799)
Swiss franc	12,656	(117,247)	(565)	(663)
Thai baht	-	(29,217)	(1,867)	(1,867)
United States dollar	485,015	(781,956)	-	-
	$ 1,277,287	$ (1,274,142)	$ 3,145	$ 14

Note 4 – Derivatives (continued)

For comparative purposes, as of December 31, 2019 the Plan's outstanding foreign currency forward contracts were as follows:

	Pending Foreign Exchange Purchases	Pending Foreign Exchange Sales	Unrealized Gain (Loss)	Changed in Unrealized Gain (Loss)
Australian dollar	$ 15,157	$ -	$ 290	$ 682
Brazil real	82,783	-	517	747
British pound sterling	154,088	(57,173)	997	(69)
Canadian dollar	17,579	-	291	1,736
Euro	166,103	-	1,164	276
Hong Kong dollar	-	-	-	87
Japanese yen	195,650	-	(479)	(8,998)
Malaysian ringgit	41,964	-	(6)	(6)
New Taiwan dollar	-	(78,429)	(139)	(139)
Norwegian krone	53,809	-	153	153
Philippine peso	78,677	-	27	27
Polish zloty	90,915	-	218	218
South African rand	-	-	-	(4,145)
Swiss franc	6,399	-	98	(504)
Thai baht	-	-	-	245
United States dollar	135,335	(899,726)	-	-
	$ 1,038,459	$ (1,035,328)	$ 3,131	$ (9,690)

Futures Contracts

Certain international investment managers utilize equity futures contracts to replicate underlying securities they wish to gain exposure to in the portfolio. A financial futures contract is an agreement to buy or sell a specific amount of an asset at a specified delivery or maturity date for an agreed-upon price. Futures contracts are traded on organized exchanges, thereby minimizing credit risk. The net change in the futures contract value is settled daily in cash with the exchanges which results in the contract having a fair value of zero at the end of each trading day. The cash or securities to fulfill these obligations are held in the investment portfolio. As the fair value of the futures contract varies from the original contract price, a gain or loss is paid to or received from the clearinghouse and recognized in the Statement of Changes in Fiduciary Net Position. The realized gain (loss) on equity futures contracts as of December 31, 2020 and 2019 was $25,796 and $1,026,430, respectively.

As of December 31, 2020 and 2019, open futures contracts had the following values:

	2020	2019
Total futures	$ 3,441,606	$ 6,110,389

Note 4 – Derivatives (continued)

Rights and Warrants

Rights and warrants provide investment managers the right, but not the obligation, to purchase or sell a company's stock at a fixed price until a specified expiration date. Rights are normally issued with common stock and expire after two to four weeks. Warrants typically are issued together with a bond or preferred stock and may not expire for several years. The fair value of rights and warrants is reported in the investments in the Statement of Fiduciary Net Position. The gain or loss from rights and warrants is included in the investment income in the Statement of Changes in Fiduciary Net Position. As of December 31, 2020, the Plan's investments in rights and warrants were as follows:

Derivative Type	Notional Value	Fair Value	Change in Fair Value
Total rights and warrants	$ 194,866	$ 746,470	$ 330,633

For comparative purposes, as of December 31, 2019, The Plan's investments in rights and warrants were as follows:

Derivative Type	Notional Value	Fair Value	Change in Fair Value
Total rights and warrants	$ 167,972	$ 125,034	$ 75,499

Note 5 – Securities Lending

Under the provisions of state statutes, the Plan utilizes a securities lending agent to lend securities (both equity and fixed income) to qualified third parties in exchange for collateral that will be returned for the same securities in the future. As of July 1, 2019, Northern Trust Co. became the Plan's securities lending agent succeeding Citibank NA. Northern Trust manages the securities lending program and receives cash, securities, or irrevocable letters of credit as collateral. The collateral received cannot be pledged or sold by the Plan unless the borrower defaults. All loans can be terminated on demand by either the Plan or the borrower. At December 31, 2020, the average term of the loans was 116 days (78 days in 2019). Marking to market is performed every business day and the borrower is required to deliver additional collateral when necessary, so that the collateral held for all loans to the borrower will at least equal the fair value of all borrowed securities. U.S. security loan agreements are initially collateralized at 102% of the fair value of loaned securities. International securities are initially collateralized at 105% of the fair value of loaned securities. Cash collateral is invested in tri-party repurchase agreements and bank deposits, which at December 31, 2020 had a weighted average maturity of 30 days (25 days in 2019). As of December 31, 2020 and 2019, the Plan had loaned to borrower's securities with a fair value of $ 201,891,859 and $165,754,096, respectively. As of December 31, 2020 and 2019, the Plan received from borrowers' cash collateral of $184,008,488 and $144,948,932, respectively. As of December 31, 2020 and 2019, the Plan received non-cash collateral from borrowers of $ 22,570,535 and $25,098,518, respectively.

Note 5 – Securities Lending (continued)

Securities lending net income for the years ended December 31, 2020 and 2019 was $719,497 and $637,878, respectively.

A summary of securities loaned at fair value as of December 31:

	2020	2019
Securities loaned - cash collateral		
Fixed income		
Domestic corporate fixed income	$ 18,993,085	$ 20,241,268
U.S. Government agencies	16,640,936	1,019,266
U.S. Government bonds	45,484,771	21,661,224
Equity		
Domestic equities	93,000,064	92,458,367
International equities	6,079,920	6,096,600
Total securities loaned - cash collateral	180,198,776	141,476,725
Securities loaned - non cash collateral		
Fixed income		
U.S. Corporate Fixed	-	173,527
U.S. Government bonds	11,585,215	11,260,908
Equity		
Domestic equities	2,792,965	4,508,667
International equities	7,314,903	8,334,269
Total securities loaned - non cash collateral	21,693,083	24,277,371
Total	$ 201,891,859	$ 165,754,096

Note 6 – Property and Equipment

Property and equipment are stated at cost. Depreciation has been provided using the straight-line method over periods ranging from 5-8 years. Leasehold improvements are amortized using the straight-line method over the remaining term of the lease. Major outlays for additions and improvements are capitalized if equal to or greater than $4,000. Maintenance and repairs are charged to expense. A summary of property and equipment at December 31, 2020 and 2019 is as follows:

	2020	2019
Pension benefit system	$ 512,155	$ 382,043
Computers	33,849	42,506
Office equipment	20,683	20,683
	566,687	445,232
Less: accumulated depreciation and amortization	124,711	25,193
Net property and equipment	$ 441,976	$ 420,039

Depreciation and amortization expense was $108,175 and $9,306 for years ended December 31, 2020 and 2019.

Note 7 – Pension and Other Postemployment Benefit-Related Note Disclosures

A. Pension Plan Description

General:

Municipal Employees' Annuity and Benefit Fund of Chicago (MEABF, or the Plan) is the administrator of a single employer defined benefit plan that was established in 1921 to provide retirement annuities and disability benefits for covered employees and for survivors and other beneficiaries of such employees. The Plan is administered under Chapter 40, Act 5, Article 8 of the Illinois Compiled Statutes. Benefit and contribution provisions are established by the Statutes and may be amended only by the Illinois state legislature. The Retirement Board, comprised of two ex-officio members (the City Comptroller and the City Treasurer) and three elected members, is authorized to carry out the provisions of Chapter 40, Act 5, Article 8 of the Illinois Compiled Statutes. The Retirement Board appoints the executive director, an actuary, an auditor, consultants, and employees necessary for the transaction of business. The Retirement Board meets monthly and receives no compensation but is reimbursed for necessary expenses. The Plan is included in the City of Chicago's financial reports as a component unit.

Membership:

Any employee of the City of Chicago or the Board of Education employed under the provisions of the municipal personnel ordinance except for policemen, firemen, teachers, and those classified by the municipal personnel ordinance as labor service, or any person employed by the Municipal Employees' Annuity and Benefit Fund of Chicago (Plan) who is not participating in any other pension fund or retirement system is also covered by the Plan. The payroll for employees covered by the Plan for the years ended December 31, 2020 and 2019 were $1,861,905,323 and $1,802,790,156, respectively.

Note 7 – Pension and Other Postemployment Benefit-Related Note Disclosures (continued)

Plan membership at December 31 is as follows:

	2020	2019
Active employees (includes members currently receiving disability benefits)		
Vested	13,707	14,037
Non-vested	17,620	18,125
	31,327	32,162
Retirees and beneficiaries currently receiving benefits	25,471	25,544
Terminated employees entitled to benefits but not yet receiving them	2,132	2,101
Terminated employees entitled to a refund of contributions	18,007	16,633
Total	76,937	76,440

Pension legislation (Public Act 96-0889) was approved during 2010 and established two distinct classes of membership with different retirement eligibility conditions and benefit provisions levels. On July 6, 2017, Illinois Public Act 100-0023 was enacted which added a third class of membership with different retirement eligibility conditions and contribution levels. For convenience, the Plan uses a tier concept to distinguish these groups, generally:

Tier 1 - Participants that became members before January 1, 2011.
Tier 2 - Participants that first became members on or after January 1, 2011.
Tier 3 - Participants that first became members on or after July 6, 2017; or a Tier 2 member who Irrevocably elected between October 1 and November 15, 2017 to be subject to Tier 3 Eligibility conditions and contribution levels (“Elective Tier 3 Member”)

A member’s classification is determined based upon the date the member becomes a contributing member in a designated reciprocal system/fund codified in the Illinois Pension Code.

Refunds of Employee Contributions

If an employee leaves covered employment without qualifying for an annuity, accumulated contributions are refunded with interest at 3% per annum, to the date of termination of services subject to certain exceptions. Certain disability pension credits are not refundable.

Note 7 – Pension and Other Postemployment Benefit-Related Note Disclosures (continued)

Employee Pension

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 60 or more with at least 10 years of service or 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 times the final average salary (highest (average or predominate, whichever is greater) annual salary for any 4 consecutive years within the last 10 years of service immediately preceding the date of retirement). If the employee retires prior to age 60, the annuity shall be reduced by ¼ of 1% for each month the employee is under age 60 if the employee has less than 25 years of service. The annuity is not discounted if the employee is age 50 with at least 30 years of service. An employee with at least 10, 20, or 30 years of service can withdraw and receive a minimum formula annuity at 60, 55, or 50, respectively. The original annuity is limited to 80% of the highest average annual salary, adjusted for annual IRC §401(a) (17) and §415 limitations. Employees withdrawing from service at age 60 or older with at least 10 years of service are entitled to a minimum annuity of $850 per month.

Tier 2 employees age 67 or more with at least 10 years of service are entitled to receive an unreduced annuity benefit or a reduced annuity benefit at age 62 with 10 years of service. The annuity is discounted 1/2 percent for each full month 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 prior to retirement.

Tier 3 employees age 65 or more with at least 10 years of service are entitled to receive an unreduced annuity benefit or a reduced annuity benefit at age 60 with 10 years of service. The annuity is discounted 1/2 percent for each full month the employee is under age 65. Final average salary is calculated using salary from the eight highest consecutive years within the last 10 years of service prior to retirement.

Under Tier 2 and Tier 3, pensionable salary was limited to $115,929 in 2020 and $114,952 in 2019, increased each year by the lesser of 3 percent or one-half of the annual unadjusted percentage increase in the Consumer Price Index-U (but not less than zero). These figures are provided to the Plan by the Illinois Department of Insurance.

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Automatic Increase in Employee Annuity

Tier 1: An employee annuitant under Tier 1 is eligible to receive an increase of 3.0 percent of the currently payable annuity (compound). This increase begins in January of the year of the first payment date following the earlier of:

1) the later of the third anniversary of retirement or age 53, or
2) the later of the first anniversary of retirement or age 60

Tier 2: An employee annuitant under Tier 2 who is eligible to receive an increase in annuity benefit, shall receive an annual increase equal to the lesser of 3.0 percent or one-half of the annual unadjusted percentage increase in the Consumer Price Index-U (but not less than zero) as measured in the preceding 12 month period ending with the September preceding the increase. The increase is based on the amount of the originally granted benefit (simple). This increase begins in January of the year of the first payment date following the later of:

1) the attainment of age 67, or
2) the first anniversary of the annuity start date.

Note 7 – Pension and Other Postemployment Benefit-Related Note Disclosures (continued)

Automatic Increase in Employee Annuity (continued)

Tier 3: An employee annuitant under Tier 3 who is eligible to receive an increase in annuity benefit, shall receive an annual increase equal to the lesser of 3.0 percent or one-half of the annual unadjusted percentage increase in the Consumer Price Index-U (but not less than zero) as measured in the preceding 12 month period ending with the September preceding the increase. The increase is based on the amount of the originally granted benefit (simple). This increase begins in January of the year of the first payment date following the later of:

1) the attainment of age 65, or
2) the first anniversary of the annuity start date.

Surviving Spouse Pension

Tier 1: Upon the death of an employee under Tier 1, the surviving spouse meeting certain eligibility requirements, is entitled to a spouse annuity. There are three basic methods ("money purchase method", "minimum formula annuity method" and the "minimum annuity method") used to determine the amount of spouse's annuity for an ordinary death (not duty-related death). The surviving spouse is entitled to the largest benefit, but the annuity cannot exceed an amount equal to 50% of the highest salary earned by the employee.

Under Tier 2 and Tier 3, the annuity payable to the surviving spouse of an employee is equal to 66 2/3% of the participant's earned retirement annuity at the date of death without a reduction due to age.

Automatic Increase in Spouse Annuity

Under Tier 2 and Tier 3, the surviving spouse of an employee shall receive an annual increase equal to the lesser of 3.0 percent or one-half of the annual unadjusted percentage increase in the Consumer Price Index-U (but not less than zero) as measured in the preceding 12 month period ending with the September preceding the date of the increase. This increase is based on the amount of the originally granted survivor's benefit (simple). This annual increase begins on January 1 following the commencement of the surviving spouse's annuity if the deceased member died while receiving an annuity benefit or on January 1 following the first anniversary of the commencement of the annuity otherwise.

Child Annuity

Under Tier 1, Tier 2 and Tier 3, an annuity is provided for any unmarried child of a deceased employee who is under the age of 18 if the child was conceived or born before withdrawal from service. The employee's death must occur while the employee is in service or in receipt of an annuity. The child's annuity is an amount equal to $220 a month when there is a surviving spouse and $250 when there is no surviving spouse, subject to maximum limitations.

Ordinary Disability

Under Tier 1, Tier 2 and Tier 3, an employee who becomes disabled as the result of any cause other than an accidental injury incurred while in the performance of an act of duty is entitled to an ordinary disability benefit at the amount equal to 50% of the employee's annual salary at the time of disablement. An employee can receive ordinary disability for a period equal to one fourth of his service credits up to a lifetime maximum of 5 years.

Note 7 – Pension and Other Postemployment Benefit-Related Note Disclosures (continued)

Duty Disability

Under Tier 1, Tier 2 and Tier 3, an employee who becomes disabled as the result of an accidental injury incurred while in the performance of an act of duty is entitled to a duty disability benefit in the amount equal to 75% of the employee's annual salary at the time of injury, reduced by any benefits received by the employee under the provisions of the Workers' Compensation Act. This benefit is limited to age 65 or 5 years from the latest injury, whichever is latest.

Funding Policy

The funding objective is to meet all expected future obligations to Plan participants through its Plan assets and contributions from employee and employer. Member and employer contribution rates are established by state law and may be amended only by the Illinois State Legislature.

Member Contributions

Active members are required to contribute a percentage of their pensionable salary to MEABF. Tier 1 and Tier 2 members contribute 8.5% of their salary (6.5% to provide employee annuity, 1.5% to provide a surviving spouse annuity and .5% to provide post-retirement increases in annuity) in accordance with the statutes. Tier 3 members contribute 11.5% of their pensionable salary (9.5% to provide employee annuity, 1.5% to provide a surviving spouse annuity and .5% to provide post-retirement increases in annuity) in accordance with the statutes.

Under Tier 1, Tier 2 and Tier 3, the employer deducts or picks up the employee's contributions before federal income tax is withheld and remits the contributions collected to the Plan. Member contributions earn interest at the rate of 3% per annum and may be refundable. Employees receiving ordinary or duty disability benefits are credited with a percentage of salary for pension purposes just as though the employee were working but these credits are not refundable. Tier 1 and Tier 2 are credited with 8.5% of salary and Tier 3 is credited with 11.5% of salary.

While the amount of pensionable salary upon which member contributions are made under Tier 1 has no limitation, pensionable salary of active employees under Tier 2 and Tier 3 was limited to $115,929 in 2020 and $114,952 in 2019, increased each year by the lesser of 3 percent or one-half of the annual unadjusted percentage increase in the Consumer Price Index-U (but not less than zero) as measured in the preceding 12 month period ending with the September preceding the November 1, which is the date the new amount will be calculated and made available to the pension funds.

Note 7 – Pension and Other Postemployment Benefit-Related Note Disclosures (continued)

Employer Contributions

The City of Chicago is required by state statutes to contribute the remaining amounts necessary to finance the requirements of MEABF. Effective July 6, 2017, legislation (Public Act 100-0023) which included a new funding structure to increase employer contributions was put into law. The new structure provides for fixed dollar contributions for payment years 2018 through 2022. For payment years 2023 to 2058 the employer's required annual contribution shall be equal to the sum of the employer's portion of the projected normal cost for that fiscal year, plus an amount determined on a level percentage of employee payroll that is sufficient to bring the total actuarial assets of the Plan up to 90% of the total actuarial liabilities of the Plan by the end of 2058.

The actuarial determined contribution (ADC) is determined by using the entry age normal actuarial funding method. MEABF uses the level dollar open method to amortize the unfunded liability over a thirty year period. The actuarial valuation of the Plan shows that an actuarially determined contribution needed to adequately finance MEABF is $1,167,153,830 and $1,117,387,759 for fiscal years 2020 and 2019, respectively. The statutory employer contributions have been less than the actuarially determined contributions for the past seventeen years. Contribution rates may be increased only by an amendment by the State Legislature to the Illinois Pension Code.

Net Pension Liability of Participating Employer

The components of the net pension liability as of December 31, 2020 and 2019, were as follows:

	2020	2019
Total pension liability	$ 17,814,812,242	$ 17,260,356,470
Plan fiduciary net position	4,090,239,084	4,080,642,490
Employer's net pension liability	13,724,573,158	13,179,713,980
Plan fiduciary net position as a percentage of total pension liability	22.96%	23.64%

Note 7 – Pension and Other Postemployment Benefit-Related Note Disclosures (continued)

Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of December 31, 2020 and 2019, using actuarial assumptions applied to all periods included in the measurement.

	2020	2019
Inflation	2.50%	2.50%
Salary increase	3.50% to 7.75% (1.50% to 6.50% for 2020-2022), varying by years of service	3.50% to 7.75% (1.50% to 6.50% for 2019-2022), varying by years of service
Investment rate of return	7.00%, net of investment expense	7.00%, net of investment expense
Municipal bond rate	2.12% based on the Bond Buyer 20-Bond Index of general obligation municipal bonds as of December 31, 2020	2.74% based on the Bond Buyer 20-Bond Index of general obligation municipal bonds as of December 31, 2019
Cost of living adjustments	Tier 1: 3.0% compound	Tier 1: 3.0% compound
	Tier 2 & 3: the lesser of 3.0% or one-half the change in CPI, simple	Tier 2 & 3: the lesser of 3.0% or one-half the change in CPI, simple

Post-retirement mortality rates for December 31, 2020 and 2019 were based on the RP-2014 Healthy Annuitant Mortality Table, set forward two years for males and one year for females, and projected generationally using scale MP-2016. Pre-retirement mortality rates were based on 120% of the RP-2014 Employee Mortality Tables projected generationally using scale MP-2016.

The actuarial assumptions used in the December 31, 2020 and 2019, valuation was based on the results of actuarial experience study for the period January 1, 2012 through December 31, 2016.

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. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of December 31, 2020 and 2019 are summarized in the table on the next page.

Note 7 – Pension and Other Postemployment Benefit-Related Note Disclosures (continued)

	2020		2019	
	Target allocation	Long-term expected real rate of return	Target allocation	Long-term expected real rate of return
Fixed income	25%	2.3%	25%	0.1%
Global Equity	5%	7.5%	5%	5.3%
Domestic equity	26%	7.3%	26%	5.1%
International equity	17%	7.5%	17%	5.3%
Hedge funds	10%	5.5%	10%	3.3%
Private equity	5%	10.8%	5%	8.6%
Real estate	10%	6.0%	10%	3.8%
Infrastructure	2%	7.3%	2%	5.1%

Discount rate

The discount rate used to measure the total pension liability was 7.0% for December 31, 2020 and 2019. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made according to the contribution rate applicable for each member's tier and that employer contributions will be made as specified by Public Act 100-0023. For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected employer contributions and contributions from future plan members that are intended to fund the service cost of future plan members and their beneficiaries are not included. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine total pension liability.

Sensitivity of the net pension liability to changes in the discount rate

The following presents the net pension liability as of December 31, 2020, calculated using the discount rate of 7.0%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1 percentage point lower (6.0%) or 1 percentage point higher (8.0%) than the current rate:

	1% Decrease (6.0%)	Current Discount Rate (7.0%)	1% Increase (8.0%)
Net pension liability			
December 31, 2020	$ 15,939,911,322	$ 13,724,573,158	$ 11,883,469,820

Note 7 – Pension and Other Postemployment Benefit-Related Note Disclosures (continued)

Sensitivity of the net pension liability to changes in the discount rate (continued)

For comparative purposes, the net pension liability as of December 31, 2019, calculated using the discount rate of 7.0%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1 percentage point lower (6.0%) or 1 percentage point higher (8.0%) than the current rate:

	1% Decrease (6.0%)	Current Discount Rate (7.0%)	1% Increase (8.0%)
Net pension liability December 31, 2019	$ 15,340,000,339	$ 13,179,713,980	$ 11,386,325,948

B. Other Post Employment Benefit Plan (OPEB) – Healthcare Subsidy for City of Chicago Retirees

During the year ended December 31, 2019, in response to a lawsuit, the Circuit Court of Cook County ruled that all eligible City of Chicago employee annuitants (both current and future employee annuitants, but not spousal or child annuitants) of MEABF are entitled to receive a health insurance premium subsidy of $25 per month from MEABF, representing partial reimbursement for healthcare costs, for each month after December 31, 2016, in which they qualify.

City of Chicago employee annuitants hired before April 4, 2003 who retired on or after August 23, 1989 with 15 years of service and age 65 years or older are eligible for this subsidy. On June 30, 2020, the Appellate Court of Illinois (First District) revised the eligibility date for the subsidies from the hire date of April 4, 2003 to June 30, 2003. As such, City of Chicago employee annuitants hired before April 4, 2003 who retired on or after August 23, 1989 with 15 years of service and age 65 years or older are eligible for the subsidy. City of Chicago retirees must participate in the current City-sponsored or Labor-sponsored healthcare plans and have deductions taken from their annuities in order to qualify for the reimbursement, effective January 1, 2020, and going forward.

The health insurance premium subsidy payments described above are funded from the statutorily required contributions received by the City of Chicago. In 2020 and 2019, the contributions allocated for this benefit and payments for the health insurance premium subsidies totaled $1,607,400 and $2,731,425, respectively. These amounts represent subsidy payments to eligible employee annuitants for each month after December 31, 2016 through December 31, 2020, in which they qualify.

At December 31, 2020 and 2019, participants consisted of the following:

	2020	2019
Active members	5,956	6,305
Annuitants currently receiving subsidiy benefits	6,858	6,826
Inactive members entitled to subsidy benefits but not yet receiving them	293	649
Total	13,107	13,780

Note 7 – Pension and Other Postemployment Benefit-Related Note Disclosures (continued)

Net OPEB Liability of Participating Employer

The components of the net OPEB liability as of December 31, 2020 and 2019, were as follows:

	2020	2019
Total OPEB liability	$ 32,414,697	$ 35,938,912
Plan fiduciary net position	-	-
Employer's net OPEB liability	32,414,697	35,938,912
Plan fiduciary net position as a percentage of total OPEB liability	0.00%	0.00%

Actuarial Assumptions

The total OPEB liability was determined by an actuarial valuation as of December 31, 2020 and 2019, using the actuarial assumptions applied to all periods included in the measurement.

	2020	2019
Inflation	2.50%	2.50%
Investment rate of return	7.00%, net of investment expense	7.00%, net of investment expense
Municipal bond rate	2.12% based on the Bond Buyer 20-Bond Index of general obligation municipal bonds as of December 31, 2020	2.74% based on the Bond Buyer 20-Bond Index of general obligation municipal bonds as o December 31, 2019

Post-retirement mortality rates for December 31, 2020 and 2019 were based on the RP-2014 Health Annuitant Mortality Tables, set forward two years for males and one year for females, and projected generationally using scale MP-2016. Pre-retirement mortality rates were based on 120% of the RP-2014 Employee Mortality Tables projected generationally using scale MP-2016.

The actuarial assumptions used in the December 31, 2020 and 2019 valuation were based on the results of an actuarial experience study for the period January 1, 2012 through December 31, 2016.

Discount Rate

Since there are no assets dedicated to the OPEB plan, the discount rate used to measure the total OPEB liability was 2.12% and 2.74%, based on the municipal bond index for December 31, 2020 and 2019, respectively.

Note 7 – Pension and Other Postemployment Benefit-Related Note Disclosures (continued)

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

The following presents the net OPEB liability as of December 31, 2020, calculated using the discount rate of 2.12%, as well as what the net OPEB liability would be if it were calculated using a discount rate that is 1 percentage point lower (1.12%) or 1 percentage point higher (3.12%) than the current rate:

	1% Decrease (1.12%)	Current Discount Rate (2.12%)	1% Increase (3.12%)
Net OPEB liability December 31, 2020	$ 36,083,739	$ 32,414,697	$ 29,322,504

For comparative purposes, the net OPEB liability as of December 31, 2019, calculated using the discount rate of 2.74%, as well as what the net OPEB liability would be if it were calculated using a discount rate that is 1 percentage point lower (1.74%) or 1 percentage point higher (3.74%) than the current rate:

	1% Decrease (1.74%)	Current Discount Rate (2.74%)	1% Increase (3.74%)
Net OPEB liability December 31, 2019	$ 40,225,889	$ 35,938,912	$ 32,340,099

Note 8 – Net Position Held in Trust for Pension Benefits

Reserves represent the components of the Plan's net position. Reserves are established from member and employer contributions and the accumulation of investment income after satisfying investment and administrative expenses. At least once a year, before any transfer is made from these reserves, interest at 3% is credited to these reserves. The reserves do not represent the present value of assets needed, as determined by actuarial valuation, to satisfy retirement and other benefits as they become due. The Plan's major classes of reserves are as follows:

	2020	2019
City Contribution Reserves	$ 2,014,087,534	$ 1,948,410,853
Salary Deduction Reserves	2,031,724,824	1,957,203,841
Prior Services Reserves	11,214,990,625	10,873,527,127
Annuity Payment Reserve	2,585,076,896	2,516,090,720
Optional Reserve Account	1,161,700	1,062,841
	17,847,041,579	17,296,295,382
Unreserved Net Deficit	(13,756,802,495)	(13,215,652,892)
	$ 4,090,239,084	$ 4,080,642,490

Note 8 – Net Position Held in Trust for Pension Benefits

City Contribution Reserves

Amounts contributed by the City for age and service annuity, surviving spouse annuity and supplemental annuity shall be credited to this reserve. When the employee annuity or surviving spouse annuity is granted the amount in this reserve for such annuity will be transferred to the annuity payment fund reserves.

Salary Deduction Reserves

Amounts contributed by the employee or amounts credited for the employee for age and service annuity and surviving spouse annuity shall be credited to this reserve. When the employee annuity or surviving spouse annuity is granted the amount in this reserve for such annuity will be transferred to the annuity payment fund reserves.

Annuity Payment Reserves

Amounts transferred from the City contribution reserves and the salary deduction reserves for annuities which have been granted will be credited to this reserve.

Prior Service Reserves

Amounts contributed by the City for minimum annuities shall be credited to this reserve.

Optional Reserves

Amounts contributed by the aldermen for the alternative plan.

Note 9 – Operating Leases

Office Lease

MEABF moved to a new office location on March 1, 2011 under a fifteen-year, non-cancelable lease agreement with Hines REIT 321 North Clark Street LLC. The lease currently requires monthly payments of $64,440. The Plan received rent abatements for the initial six full months of the term of the lease, and the initial three calendar months of the third, the fourth, the fifth and sixth lease year and the initial two calendar months of the seventh lease year. Monthly lease payments are subject to an escalation clause for increases in real estate taxes and maintenance expenses.

Following is a summary of estimated future lease payments under the Plan's operating lease as of December 31, 2020:

Year Ending December 31,	
2021	$ 771,562
2022	792,377
2023	813,571
2024	835,154
2025	857,140
January & February 2026	145,453
Total	$ 4,215,257

Total rent expense was $719,690 and $488,387 for 2020 and 2019, respectively. Rent expense for the year ended December 31, 2019 is net of a $168,570 cash allowance received from the landlord under the terms of the lease.

Note 10 – Risk Management

MEABF carries liability insurance coverage provided by private insurance carriers. In order to limit the risk of asset loss from theft, fraud, robbery or burglary, the Plan carries a government crime policy. The Plan carries fiduciary liability insurance that limits the risk of loss arising from court challenges to fiduciary decisions. The Plan also carries cyber liability insurance that limits the risk of defense costs and settlements as a result of failure to protect or the wrongful release of confidential information of participants, beneficiaries and employees of the Plan.

Note 11 – Commitments and Contingencies

Investment Commitments

As of December 31, 2020, approximately $24.3 million of capital committed to investments in commingled infrastructure, private equity and real estate funds were undrawn. As of December 31, 2019, approximately $82.0 million in commingled infrastructure, private equity and real estate funds were undrawn. The Plan believes that the capital may take up to three years to be fully requested.

Note 11 – Commitments and Contingencies- (continued)

Litigation

The Plan is subject to claims arising in the ordinary course of its operations. Although the outcome of these lawsuits are not presently determinable, in the opinion of the Plan's management and legal counsel, the resolution of these matters will not have a material adverse effect on the Plan's financial statements.

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.* (13- CH-17450; 1-17-162356), seeking class certification and an order requiring the City and the defendant pension funds to continue subsidizing retiree healthcare insurance premiums past the June 30, 2013, statutory expiration date. Following litigation filed in both the federal and state courts, the Illinois Appellate Court, on June 29, 2017, issued an order which in part affirmed the Circuit Court's dismissal order and held that the subsidies under the 1983 and 1985 amendments are protected benefits under the pension protection clause of the Illinois Constitution. As such, under the Appellate Court Mandate those employee-retirees that joined the defendant pension funds prior to June 30, 2003 are entitled to continue to receive the 1983 provided subsidies (as it relates to the police and fire funds) of $55 per month if non-Medicare-eligible and $21 per month if Medicare-eligible subsidies or $25 (as it relates to the municipal and laborer funds) if the employee-annuitant is 65 years or older with at least 25 years of service. The Appellate Court remanded the case back to the Circuit Court for the purpose of allowing the presiding judge to determine the mechanics of the payments. Thereafter, the Circuit Court issued several orders which in substance: (i) further defined the group of employee annuitants entitled to the statutory subsidies and (ii) reaffirmed prior rulings that the funds have no obligation to contract for insurance. The Circuit Court confirmed that under the 1983 and 1985 amendments, employee-retirees that are otherwise eligible to receive the subsidies must participate in a group retiree healthcare plan and facilitate the payment of the retiree's healthcare premium through a deduction of his or her monthly annuity check. Obligations related to the payment of the statutory subsidy to qualified annuitants under the 1985 amendment are reflected in the financial statements which represent payments made by the Fund in 2020 for amounts owed to qualified annuitants for the 2017, 2018, 2019 and 2020 subsidy payments consistent with the requirements of the Circuit Court order and Appellate Court Mandate.

Note 12 – Deferred Compensation Plan

The Fund is a governmental eligible employer within the meaning of Code Section 457(e)(1)(A) and has established a deferred compensation plan (457(b)) for eligible employees. Individual contributions to the plan are equal to the amount of salary reductions elected by each participant for the year up to a maximum allowable by Internal Revenue Service regulations. Total employee contributions were $292,911 and $291,320 for 2020 and 2019, respectively. Employer contributions are not allowed.

Note 13 – Significant Uncertainties

The COVID-19 pandemic, whose effects first became known in January 2020, is having a broad impact on commerce and financial markets around the world. The extent of the impact of the pandemic on the Plan's operational and financial performance will depend on certain developments, including the duration and spread of the outbreak and its impacts on the Plan's members, vendors, and City of Chicago, all of which, at present, cannot be determined. Accordingly, the extent to which the pandemic may impact the Plan's fiduciary net position and changes in fiduciary net position is uncertain, and the accompanying financial statements include no adjustments relating to the effects of this pandemic.

Note 14 – Subsequent Events

All subsequent events have been evaluated through May 21, 2021, which is the date the financial statements were available to be issued. This review and evaluation revealed no other material event or transaction which would require an adjustment to or disclosure in the accompanying financial statements

Required Supplementary Information (Unaudited)

Schedule of Changes in Employer's Net Pension Liability

	2020	2019	2018	2017	2016	2015	2014
Total pension liability							
Service cost	$ 236,301,503	$ 228,465,350	$ 223,528,365	$ 572,533,631	$ 619,743,849	$ 226,816,035	$ 247,243,416
Interest	1,190,694,341	1,159,252,774	1,123,347,772	915,710,984	878,369,406	909,066,895	1,025,763,903
Change of benefit terms	-	-	-	-	-	2,140,009,339	(1,990,706,362)
Differences between expected and actual experience	100,937,565	16,675,541	95,540,469	(177,754,999)	(127,119,398)	(109,835,037)	(5,504,116)
Changes of assumptions	-	-	-	(7,431,191,282)	(578,920,424)	8,711,754,654	-
Benefit payments, including refunds of employee contributions	(973,477,637)	(952,651,511)	(916,198,485)	(888,173,535)	(859,671,662)	(826,036,323)	(798,622,811)
Net change in total pension liability	554,455,772	451,742,154	526,218,121	(7,008,875,201)	(67,598,229)	11,051,775,563	(1,521,825,970)
Total pension liability - beginning	17,260,356,470	16,808,614,316	16,282,396,195	23,291,271,396	23,358,869,625	12,307,094,062	13,828,920,032
Total pension liability - ending (a)	$ 17,814,812,242	$ 17,260,356,470	$ 16,808,614,316	$ 16,282,396,195	$ 23,291,271,396	$ 23,358,869,625	$ 12,307,094,062
Plan fiduciary net position							
Contributions - employer	496,991,504	418,268,575	349,574,257	261,763,635	149,718,491	149,225,191	149,746,748
Contributions - employee	157,797,710	146,645,216	138,399,727	134,764,920	130,390,848	131,428,103	129,971,981
Net investment income (loss)	335,402,959	560,940,002	(204,974,702)	610,515,096	281,419,146	114,025,290	283,281,925
Benefit payments, including refunds of employee contributions	(973,477,637)	(952,651,511)	(916,198,485)	(888,173,535)	(859,671,662)	(826,036,323)	(798,622,811)
Administrative expenses	(7,117,942)	(6,740,268)	(6,638,608)	(6,473,006)	(7,056,784)	(6,701,000)	(6,567,842)
Other - OPEB termination	-	-	-	5,393,581	-	-	-
Net change in plan fiduciary net position	9,596,594	166,462,014	(639,837,811)	117,790,691	(305,199,961)	(438,058,739)	(242,189,999)
Plan fiduciary net position - beginning	4,080,642,490	3,914,180,476	4,554,018,287	4,436,227,596	4,741,427,557	5,179,486,296	5,421,676,295
Plan fiduciary net position - ending (b)	$ 4,090,239,084	$ 4,080,642,490	$ 3,914,180,476	$ 4,554,018,287	$ 4,436,227,596	$ 4,741,427,557	$ 5,179,486,296
Employer's net pension liability ending (a)-(b)	$ 13,724,573,158	$ 13,179,713,980	$ 12,894,433,840	$ 11,728,377,908	$ 18,855,043,800	$ 18,617,442,068	$ 7,127,607,766

This is a 10 year schedule however, the information is not required to be presented retroactively. Information will be added to this schedule until 10 years of information is available.

Schedule of Employer's Net Pension Liability

	2020	2019	2018	2017	2016	2015	2014
Total pension liability	$ 17,814,812,242	$ 17,260,356,470	$ 16,808,614,316	$ 16,282,396,195	$ 23,291,271,396	$ 23,358,869,625	$ 12,307,094,062
Plan fiduciary net position	4,090,239,084	4,080,642,490	3,914,180,476	4,554,018,287	4,436,227,596	4,741,427,557	5,179,486,296
Employer's net pension liability	13,724,573,158	13,179,713,980	12,894,433,840	11,728,377,908	18,855,043,800	18,617,442,068	7,127,607,766
Plan fiduciary net position as a percentage of total pension liability	22.96%	23.64%	23.29%	27.97%	19.05%	20.30%	42.09%
Covered payroll	$ 1,861,905,323	$ 1,802,790,156	$ 1,734,595,691	$ 1,686,532,720	$ 1,646,939,238	$ 1,643,480,973	$ 1,602,977,593
Employer's net position liability as a percentage of covered-employee payroll	737.13%	731.07%	743.37%	695.41%	1144.85%	1132.81%	444.65%

This is a 10 year schedule however, the information is not required to be presented retroactively. Information will be added to this schedule until 10 years of information is available.

Schedule of Employer contributions

Year Ended December 31,	Actuarially Determined Contributions	Contributions in Relation to the Actuarially Determined Contributions	Contributions Deficiency	Covered Payroll	Contributions as a Percentage of Employee Payroll
2020	$ 1,167,153,830	$ 496,991,504	$ 670,162,326	$ 1,861,905,323	26.8%
2019	1,117,387,759	418,268,575	699,119,184	1,802,790,156	23.2%
2018	1,049,915,647	349,574,257	700,341,390	1,734,595,691	20.2%
2017	1,005,456,621	261,763,635	743,692,986	1,686,532,720	15.5%
2016	961,769,955	149,718,491	812,051,464	1,646,939,238	9.1%
2015	677,200,246	149,225,191	527,975,055	1,643,480,973	9.1%
2014	839,038,303	149,746,748	689,291,555	1,602,977,593	9.3%
2013	820,022,689	148,196,884	671,825,805	1,580,288,709	9.4%
2012	690,822,553	148,858,655	541,963,898	1,590,793,702	9.4%
2011	611,755,567	147,009,321	464,746,246	1,605,993,339	9.2%

Prior to 2014, the Actuarially Determined Contribution is the same as the Annual Required Contribution as determined under GASB 25

Schedule of Investment Returns

Year Ended December 31,	Annual Money-Weighted Rate of Return, Net of Investment Expense
2020	9.3%
2019	16.4%
2018	(5.2%)
2017	14.9%
2016	6.4%
2015	2.1%
2014	4.8%

This is a 10 year schedule however, the information is not required to be presented retroactively. Information will be added to this schedule until 10 years of information is available.

Notes to Required Supplementary Information – Pension

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

Valuation date	December 31, 2020
Actuarial cost method	Entry-Age Normal
Amortization method	30 years open, level dollar amortization
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment rate of return	7.00%, net of investment expense
Projected salary increases	3.5% to 7.75% (1.5% to 6.5% for 2020-2022), varying by years of service.
Mortality	Post-retirement mortality rates were based on the RP-2014 Healthy Annuitant Mortality Tables, set forward two years for males and one year for females and projected generationally using Scale MP-2016. Pre-retirement mortality rates were based on 120% of the RP-2014 Employee Mortality Tables projected generationally using Scale MP-2016.
Inflation rate	2.50%
Cost of living adjustments	Tier 1: 3% compound Tier 2 & 3: The lesser of 3% or one-half of the change in CPI simple

Schedule of Changes in Employer's NET OPEB Liability

	2020	2019	
Total OPEB liability			
Service cost	$ 263,826	$ 118,424	
Interest	969,934	1,295,859	
Change of benefit terms	-	-	
Differences between expected and actual experience	(5,128,018)	(350,163)	
Changes of assumptions	1,977,443	4,752,619	
Benefit payments	(1,607,400)	(2,731,425)	
Net change in total OPEB liability	(3,524,215)	3,085,314	
Total OPEB liability - beginning	35,938,912	32,853,598	*
Total OPEB liability - ending (a)	$ 32,414,697	$ 35,938,912	
Plan fiduciary net position			
Contributions - employer	$ 1,607,400	$ 2,731,425	
Contributions - employee	-	-	
Net investment income (loss)	-	-	
Benefit payments	(1,607,400)	(2,731,425)	
Administrative expenses	-	-	
Other	-	-	
Net change in plan fiduciary net position	-	-	
Plan fiduciary net position - beginning	-	-	
Plan fiduciary net position - ending (b)	$ -	$ -	
Employer's net OPEB liability ending (a)-(b)	$ 32,414,697	$ 35,938,912	

**Beginning balance as of January 1, 2019 established to reflect Circuit Court of Cook County ruling requiring health insurance subsidy benefit retroactive for each month after December 31, 2016 for certain employee annuitants.*

This is a 10 year schedule however, the information is not required to be presented retroactively. Information will be added to this schedule until 10 years of information is available.

Schedule of Employer's NET OPEB Liability

	2020	2019
Total OPEB liability	$ 32,414,697	$ 35,938,912
Plan fiduciary net position	-	-
Employer's net OPEB liability	32,414,697	35,938,912
Plan fiduciary net position as a percentage of total OPEB liability	0.00%	0.00%
Covered payroll	$ 1,861,905,323	$ 1,802,790,156
Employer's net OPEB liability as a percentage of covered-employee payroll	1.74%	1.99%

This is a 10 year schedule however, the information is not required to be presented retroactively. Information will be added to this schedule until 10 years of information is available.

Schedules of Administrative Expenses

Years Ended December 31, 2020 and 2019

	2020	2019
Personnel		
Administrative salaries	$ 3,206,961	$ 3,377,402
Payroll taxes	45,400	48,160
Employee benefits	1,338,722	1,300,614
	4,591,083	4,726,176
Professional services		
Actuarial valuation	63,347	73,985
Legal services	156,773	206,805
Medical	75,000	75,000
Audit	42,500	39,000
Legislative liaison services	19,700	18,480
Benefit payment services	419,764	442,558
IT consulting	90,641	34,277
Other consulting	187,596	45,456
	1,055,321	935,561
Communication		
Printing and publications	43,866	28,011
Postage	82,712	90,245
Telephone and communications	54,291	35,289
	180,869	153,545
Occupancy and utilities		
Office rent	719,690	488,387
Utilities	8,787	10,494
Office maintenance	2,514	558
	730,991	499,439
Other operating expense		
Fiduciary and insurance	245,637	255,828
Office supplies and equipment	10,053	17,437
Technical expense	133,986	55,929
Depreciation	108,175	9,306
Equipment rental and maintenance	5,867	7,533
Training and travel	1,320	22,277
Contractual services	34,350	34,543
Dues and subscriptions	17,466	17,320
Miscellaneous	2,824	5,374
	559,678	425,547
Total administrative expense	$ 7,117,942	$ 6,740,268

Schedules of Investment Management Compensation

Years Ended December 31, 2020 and 2019

	2020	2019
Fixed income managers		
Crescent Capital Management	$ 378,589	$ 361,512
Garcia Hamilton	142,901	135,113
LM Capital Group	210,321	221,508
MacKay Shields	444,708	499,094
NIS	142,023	133,215
Segall Bryant & Hamill	166,352	190,747
Symphony Asset Management	521,162	699,345
Total fixed income managers	2,006,056	2,240,534
Domestic equity managers		
Ariel Investments	369,802	397,793
Great Lakes Advisors	140,649	193,511
Kayne Anderson	361,780	327,639
Nuveen	218,482	291,268
Rhumbline Advisers	82,755	92,608
Total domestic equity managers	1,173,468	1,302,819
Global equity managers		
Acadian Asset Management	155,291	-
Attucks Asset Management	949,094	905,368
BMO	150,656	-
Total global equity managers	1,255,041	905,368
International equity managers		
Cornerstone Capital Management	383,731	418,847
LSV Asset Management	430,932	533,705
Nothern Trust Company	62,763	114,107
Segall Bryant & Hamill	370,336	536,648
Walter Scott & Partners	585,931	676,475
William Blair	836,061	879,899
Total international equity managers	2,669,754	3,159,681

Schedules of Investment Management Compensation (continued)

Years Ended December 31, 2020 and 2019

	2020	2019
Hedged equity managers		
K2 Advisors	$ 249,194	$ 498,388
The Rock Creek Group	1,412,601	1,499,712
Parametric Defensive Equity	333,675	247,132
Neuberger Berman US PutWrite	168,742	155,460
Total hedged equity managers	2,164,212	2,400,692
Real estate managers		
AFL-CIO Building Trust	937,034	1,154,204
American Realty	800,325	817,865
J P Morgan	1,137,949	1,228,594
Mesirow Real Estate	220,583	306,704
Tishman Speyer	-	37,420
UBS Realty Advisors	-	1,840
Walton Street Partners	-	16,944
Total real estate managers	3,095,891	3,563,571
Private equity managers		
Adams Street Partners	223,455	283,354
GoldPoint Partners	58,207	72,385
Hispania Partners	-	34,036
Hopewell Ventures	17,651	23,597
Levine Leichtman	157,304	195,820
Mesirow Financial	165,324	185,340
Midwest Mezzanine Fund	72,024	93,380
Muller & Monroe	40,000	60,000
Prudential Capital Partners	280,286	82,608
Stepstone	47,628	12,500
TRG Management	14,696	21,116
Total private equity managers	1,076,575	1,064,136
Infrastructure managers		
Ullico	940,957	184,669

Schedules of Investment Management Compensation (continued)

Years Ended December 31, 2020 and 2019

	2020	2019
Total investment management fees	$ 14,381,954	$ 14,821,470
Other investment expenses		
Investment Consultant	290,000	290,000
Master Custodian	464,278	250,711
Investment Legal Services	182	-
Total other investment expenses	754,460	540,711
Total investment expenses	$ 15,136,414	$ 15,362,181

Schedules of Professional and Consulting Costs

Years Ended December 31, 2020 and 2019

	2020	2019
Legal advisors	$ 156,773	$ 206,805
Medical advisors	75,000	75,000
Consulting actuary	63,347	73,985
Other consulting	297,937	98,213
Auditor	42,500	39,000
Benefit payment services	419,764	442,558
Total professional and consulting cost	$ 1,055,321	$ 935,561

Investment

This report includes the summary from the Investment Consultant regarding 2020 investment results; certification letter from the Plan's custodian for 2020; a summary of the Plan's investment goals, objectives, and guidelines; and informative investment schedules for your review. Data provided to the Plan by its custodian and its investment consultant form the basis for the information that is presented throughout the Investment Section. All portfolio rates of return are presented using a time-weighted rate of return methodology based on fair values. The figures in the Investment Section of the Comprehensive Annual Financial Report may marginally differ from those found in the Financial Section. This is due to a lag in reporting associated with certain classes of investments. The figures found in the Investment Section represent final figures for 2020.

MarquetteAssociates

May 27, 2021

The Board of Trustees
Municipal Employees' Annuity & Benefit Fund of Chicago
321 N. Clark Street, Suite 700
Chicago, IL 60654-4767

Dear Trustees:

Marquette Associates would like to provide a summary of the investment results for the Municipal Employees' Annuity & Benefit Fund of Chicago for the year ended December 31, 2020.

Interest rates decreased and credit spreads tightened over the year providing strong returns for investment grade fixed income with the Barclays Aggregate Bond Index up 7.5%. Long duration and high-quality bonds outperformed for the year. U.S. Equities had a strong year, with the S&P 500 returning +18.4% and the Russell 2000 returning +20.0%. Large cap and growth stocks outperformed significantly, with the Russell 1000 Growth besting the Russell 2000 Value by 33.9% for the year.

Broad International equity markets (MSCI All Country World ex-U.S.) underperformed the U.S. markets but were still positive for the year, up 10.7%. Emerging markets (MSCI Emerging Markets Index) outperformed developed markets, up 18.3% for the year. Private Real Estate continued to provide a steady income return but volatility from the COVID pandemic hit real estate prices. Overall, Real Estate ended 2020 up 1.6%.

The Municipal Employees' Annuity & Benefit Fund of Chicago's investment assets totaled $3.66 billion on December 31, 2020. This represented a decrease of $2.01 million from December 31, 2019, of which +$351.29 million was due to investment gains, and -$353.30 million due to withdrawals for benefits and expenses.

The Total Fund returned +10.3% for calendar 2020, net of fees, underperforming the Policy Benchmark's return of +12.7%. The Fund ranked in the 57th percentile in the Investment Metrics Public Defined Benefit Fund over $1 billion peer universe for the period. The 5-year annualized return for the Fund was +8.3% versus +9.2% for the benchmark, ranking the Fund in the 85th percentile.

Factors contributing to 2020 performance include:

- Fixed Income – Solid returns from the asset class, but underperforming the broad fixed income market, due to allocation to senior loans, and modest manager underperformance.

- U.S. Equity – Strong returns in 2020, with large cap stocks significantly outperforming mid and small cap stocks, and growth significantly outperforming value for the year. MEABF's U.S. Equity Composite underperformed its benchmark, mainly due to the Plan's policy overweight to value, and mid and small cap equities.

- International Equity – MEABF's International Equity Composite outperformed for the year, due mainly to significant active manager outperformance and overweights to emerging markets and small-cap.

- Hedge Funds – The asset class provided solid returns for the year, as hedge fund strategies generally did not capture the full market upside in 2020. PutWrite strategies outperformed hedged equity, and MEABF's managers outperformed overall.

- Real Estate – Managers provided steady income returns for the year, with slight price depreciation. Real Estate was drag on the MEABF total portfolio return in such a strong year for equities.

- Private Equity – The asset class provided strong returns for the year, returning roughly 23.8%. Private holdings outperformed overall public equities in 2020.

MEABF continues to invest in a well-diversified portfolio of assets to provide growth opportunities for Plan assets in the years to come. The Plan implements this diversified portfolio by using a combination of active and passive management. The Plan continues to have a strong focus on reducing investment management fees.

Sincerely,

Brian Wrubel
President & CEO

James R. Wesner, CFA
Managing Director

NORTHERN TRUST

To the Board of Trustees and the Executive Director:

The Northern Trust Company as custodian ("Master Custodian") of assets of the Municipal Employees' Annuity and Benefit Fund of Chicago ("Fund") held by it in a custodial account (the "Account") has provided annual Statements of Account for the Account to the Fund which to the best of its knowledge provide a complete and accurate reflection of The Northern Trust Company's record of the investments, receipts, disbursements, purchases and sales of securities and other transactions pertinent to the Account for the period January 1, 2020 through December 31, 2020.

In addition to the custody of assets in the Account, pursuant to and in accordance with the terms of the amended and restated Master Custody Agreement among the Board of Trustees of the Fund and The Northern Trust Company dated September 1, 2013 as amended (the "Custody Agreement"), The Northern Trust Company provided and continues to provide the following services as Master Custodian:

1. Receive and hold all amounts paid to the Account by the Board of Trustees.
2. Accept and deliver securities in connection with investment transactions in the Account in accordance with the instructions of appointed Investment Managers.
3. Collect dividends and registered interest payments.
4. Collect matured or called securities and coupons to the extent provided in the operating guidelines of The Northern Trust Company in effect from time to time.
5. Invest cash balances held from time to time in the individual investment management accounts of the Account in short term-cash equivalent securities.
6. Facilitate the exercising of rights of ownership, including but not limited to, proxy voting, stock subscriptions and conversion rights as directed by the Fund or its appointed investment managers.
7. Hold securities in the Account in the name of the Fund or nominee form or other means as provided in the Custody Agreement.
8. Use the Federal Book Entry Account System for deposit of Treasury securities and clearing corporations as defined in Article 8 of the Illinois Uniform Commercial Code for the deposit of securities.
9. Employ agents to the extent provided in the Custody Agreement.
10. Provide disbursement services.
11. Provide security fail float income to the extent provided in the operating guidelines of The Northern Trust Company in effect from time to time.
12. Lend Securities in the Account pursuant to a Securities Lending Agreement entered into by and between the Board of Trustees and The Northern Trust Company.

THE NORTHERN TRUST COMPANY

By: Anton J. Britton

Anton J. Britton
Senior Vice President

The Northern Trust Company

50 South La Salle Street
Chicago, Illinois 60603
312-630-6000

Investment Authority and Responsibility

The authority granted to the Retirement Board of the Municipal Employees' Annuity and Benefit Fund of Chicago (the "Board") related to investment decisions can be found in the Illinois Compiled Statutes, Chapter 40, Act 5, Section 8-201 and 8-201.1. Section 1-113 also defines investments deemed to be prudent. Any fiduciary with investment authority is required to discharge his or her duties with respect to the Plan with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character with like aims.

In order to clarify the roles and responsibilities of the Board and the various investment professionals engaged by the Board, the following responsibilities have been designated:

The Board, with the assistance of an Investment Consultant and Investment Staff, assume the responsibility for establishing goals, objectives and guidelines to direct the investment activity of the Plan.

The Board engages various managers to make investments in accordance with agreed-upon guidelines and applicable statutes. These managers, acting as fiduciaries, apply their professional judgment in making investment decisions. Managers are given full discretion within their assigned mandate to select, acquire, maintain and dispose of individual investments as authorized by contract.

Plan-level Investment Goals and Objectives

The Board sets the goals and objectives of the investment portfolio solely in the interest of the Plan, its participants and their beneficiaries. The performance objectives of the Plan are threefold:

- The Plan is to meet or exceed its actuarial return assumption of 7.0% on a net-of-fees basis over time with a level of risk deemed appropriate by the Board while maintaining liquidity sufficient to cover benefit payments and other obligations.
- The Plan is to outperform the risk-adjusted return, net-of-fees, of the Plan's policy benchmark.
- The Plan is to rank in at least the top half of the universe of comparable institutional investors with similar risk/return parameters consistently over time.

Investment Manager Goals, Objectives and Guidelines

The guidelines for a particular investment mandate are set at the time of hiring and are included in the contractual agreement between the Plan and the investment manager. The guidelines specify the types of the investments that can be made and contain certain constrains in order to limit risk. Given the investment guidelines, certain goals and objectives are set. Generally, they are as follows:

- Each investment manager is expected to outperform by a mutually agreed upon premium over the set benchmark on a risk-adjusted-basis over a market cycle (typically a three- to five-year period).
- The total net-of-fees return for the mandate should rank above the median within the respective peer universe.
- The investment manager shall attempt to achieve its return objectives while maintaining an appropriate level of risk as determined by the Board and/or as specified in the investment contract.

Risk Management

Risk management is essential to the Plan's mission and to the success of the Plan's investment program. Most investment decisions have a risk component that must be considered. When making investment decisions, the Board shall make a reasonable effort to consider all risks—liquidity risk, market risk, business risk, credit risk, currency risk, interest rate risk, inflationary risk, etc.— within the context of the Plan's overall portfolio. The Board, with assistance from staff and its investment consultant, shall, taking into account the Plan's ability and the Board's willingness to assume risk, determine an appropriate risk tolerance level for the Plan. Determining the risk tolerance level shall serve as the first step in crafting an appropriate target asset allocation, setting investment goals and objectives, and making other investment-related decisions.

Asset Allocation

The Plan's assets are diversified to minimize risk and to maximize risk adjusted returns. Diversification is accomplished by utilizing appropriate asset allocation targets. Upon advice from staff and the Plan's investment consultant, the Board shall adopt appropriate asset allocation targets. The target allocation mix includes the traditional domestic & international equity and fixed income investments as well as alternative investments such as hedged equity, private equity, and real assets. Proper diversification within each asset class is based on establishing complementary investment objectives and management styles. The Board, staff and investment consultant will review the asset allocation at least annually and consider changes as deemed prudent.

Cash Flow Needs & Portfolio Rebalancing

The extensive operating cash flow needs of the Plan require the liquidation of investment assets on a monthly basis. Liquidity will be primarily drawn from asset classes that exceed their respective allocation targets in an effort to move the Plan's overall asset allocation closer to target allocations.

Should the regular monthly liquidity events associated with benefit payments not be sufficient to keep the portfolio in line with the target allocations, the Plan's portfolio may need to be rebalanced by shifting assets from one asset class to another. In these instances, the investment consultant and staff will bring a rebalancing plan to the Board for its approval. Upon approval by the Board, the staff will work to transition the assets.

Investment Management Fee

The Plan has made conscious efforts to reduce overall investment management expenses to coincide with our liquidity risks and on-going battle with our funding status. Since 2014, invested assets have been reduced by 28.3% while fee reduction was 38.1%. Over the years, the Fund's investment management fees have reduced significantly while maintaining asset allocation targets and return/risk profiles.

Following factors have attributed to the Fund's success in reducing investment management fees:

- Consolidate over-diversification of managers while moving to passive management in more efficient markets.
- Partnership with existing managers with long relationship in an effort to reduce fees.
- Negotiate with potential investment manager candidates for a highly competitive fee structure.
- Leverage consultant relationship with investment managers to help negotiate and reduce fee structure.

The Board, staff and investment consultant understand the importance of fee reduction within the Plan and are having discussions with managers on a continuous basis.

Investment Managers*

As of December 31, 2020

Acadian Asset Management
Boston, Massachusetts
Global Low Volatility

Adams Street Partners
Chicago, Illinois
Private Equity Direct Partnerships
Private Equity Fund of Funds

American Realty Advisors
Glendale, California
Real Estate Core Fund

Ariel Investments
Chicago, Illinois
Domestic Equity Small/Mid Cap Value

Attucks Asset Management
Chicago, Illinois
Emerging Manager of Managers – Global Equity

BMO Global Asset Management
Chicago, Illinois
Global Low Volatility

Capri Capital Partners
Chicago, Illinois
Real Estate Partnership
Real Estate Mezzanine Fund

Crescent Capital Group
Los Angeles, California
High Yield Fixed Income

First Analysis
Chicago, Illinois
Private Equity Direct Partnerships

Garcia Hamilton & Associates
Houston, Texas
Fixed Income Core

GoldPoint Partners
New York, New York
Private Equity Mezzanine Fund

Hispania Capital Partners
Chicago, Illinois
Private Equity Direct Partnership

Invesco Private Capital
New York, New York
Private Equity Fund of Funds

JP Morgan Asset Management
New York, New York
Real Estate Core Fund

K2 Advisors
Stamford, Connecticut
Hedged Equity Fund of Funds

Kayne, Anderson, Rudnick Investment Management
Los Angeles, California
Domestic Equity Small Cap Value

Levine Leichtman
Beverly Hills, California
Private Equity Mezzanine Funds

LM Capital
San Diego, California
Fixed Income Core

LSV Asset Management
Chicago, Illinois
International Equity Large Cap Value

MacKay Shields
New York, New York
Fixed Income High Yield
International Equity Large Cap

Mesirow Financial
Chicago, Illinois
Private Equity Direct Partnerships
Private Equity Funds of Funds
Real Estate Direct Partnership

Midwest Mezzanine Funds
Chicago, Illinois
Private Equity Mezzanine Funds

MK Capital
Chicago, Illinois
Private Equity Direct Partnership

Morgan Stanley
West Conshohocken, Pennsylvania
Private Equity Secondary Fund of Funds

Muller & Monroe Asset Management
Chicago, Illinois
Private Equity Funds of Funds

Neuberger Berman
Chicago, Illinois
Defensive Equity

NIS
Milwaukee, Wisconsin
Fixed Income Core

Northern Trust Asset Management
Chicago, Illinois
International Equity All-World Ex-US Index
International Equity Small Cap Index

Nuveen
Chicago, Illinois
Domestic Equity Small Cap Value

Parametric
Minneapolis, MN
Defensive Equity

PNC Bank - AFL/CIO
Washington, D.C.
Real Estate Core Fund

Prudential Capital Partners
Chicago, Illinois
Private Equity Mezzanine Fund

RCP Advisors
Chicago, IL
Private Equity Secondary Fund of Funds

RhumbLine Advisors
Boston, Massachusetts
Domestic Equity Large Cap Core Index
Domestic Equity Mid Cap Growth Index

The Rock Creek Group
Washington, D.C.
Hedged Equity Fund of Funds

Segall Bryant & Hamill
Chicago, Illinois
Fixed Income Intermediate
Small-Cap International

StepStone Group
San Diego, California
PrivateEquity Fund of Funds

Tishman Speyer
New York, New York
Real Estate Partnership

TRG Management
New York, New York
International Private Equity Direct Partnership

UBS Realty Investors
Hartford, Connecticut
Real Estate Partnership

Ullico
Washington, D.C.
Infrastructure Core Fund

Walter Scott & Partners
Edinburgh, Scotland
International Equity Large Cap Growth

Walton Street Capital
Chicago, Illinois
Real Estate Partnerships

William Blair & Company
Chicago, Illinois
Emerging Markets Equity

Woodland Venture Management
Chicago, Illinois
Private Equity Direct Partnership

*List does not include legacy managers who have less than $1 million remaining balance.

Portfolio Performance

As of December 31, 2020

Performance Returns by Asset Class

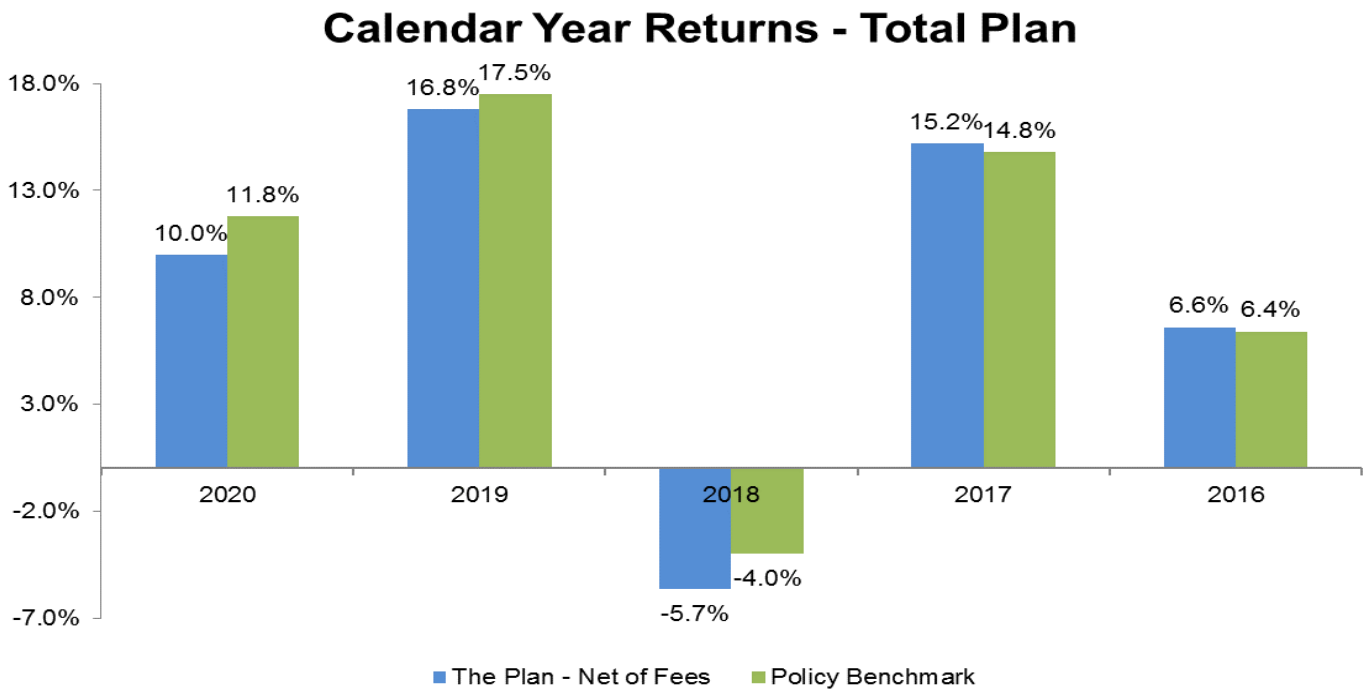
	Calendar Year Returns					Annualized Returns		
	2020	2019	2018	2017	2016	3 Yrs	5 Yrs	10 Yrs
Total Plan								
The Plan - Net of Fees	10.0%	16.8%	-5.7%	15.2%	6.6%	6.7%	8.3%	7.7%
Policy Benchmark	11.8%	17.5%	-4.0%	14.8%	6.4%	8.4%	9.2%	7.7%
Fixed Income								
The Plan	5.8%	8.7%	-0.1%	4.0%	6.5%	4.7%	5.0%	4.4%
Barclays Cap Aggregate Bond Index	7.5%	8.7%	0.0%	3.5%	2.6%	5.3%	4.4%	3.8%
Domestic Equity								
The Plan	18.4%	28.8%	-8.5%	19.8%	11.3%	11.7%	13.2%	12.1%
S&P 500 Index	18.4%	31.5%	-4.4%	21.8%	12.0%	14.2%	15.2%	13.9%
Wilshire 5000 Index	20.8%	31.0%	-5.3%	21.0%	13.4%	14.5%	15.5%	13.8%
Russell 2000 Index	19.9%	25.5%	-11.0%	14.6%	21.3%	3.7%	9.7%	8.7%
International Equity								
The Plan	14.0%	23.4%	-16.8%	32.1%	2.6%	5.4%	9.7%	6.2%
MSCI ACWI ex U.S. Index	11.1%	21.5%	-14.2%	27.2%	4.5%	4.9%	8.9%	4.9%
Real Estate								
The Plan	0.7%	4.5%	6.4%	6.4%	7.6%	3.9%	5.2%	8.8%
NCREIF Property Index	0.5%	6.4%	6.7%	7.0%	8.0%	4.9%	5.9%	9.0%
Private Equity								
The Plan	23.8%	11.0%	5.1%	9.9%	12.3%	13.0%	12.2%	12.2%
Cambridge Associates Private Equity Index	28.1%	15.1%	9.8%	19.3%	10.0%	17.4%	16.2%	14.0%
Hedged Equity								
The Plan	8.9%	13.8%	-6.0%	10.9%	-1.1%	5.1%	5.0%	5.5%
HFRX Equity Hedge Index	4.6%	10.7%	-9.4%	10.0%	0.1%	1.6%	2.9%	0.8%

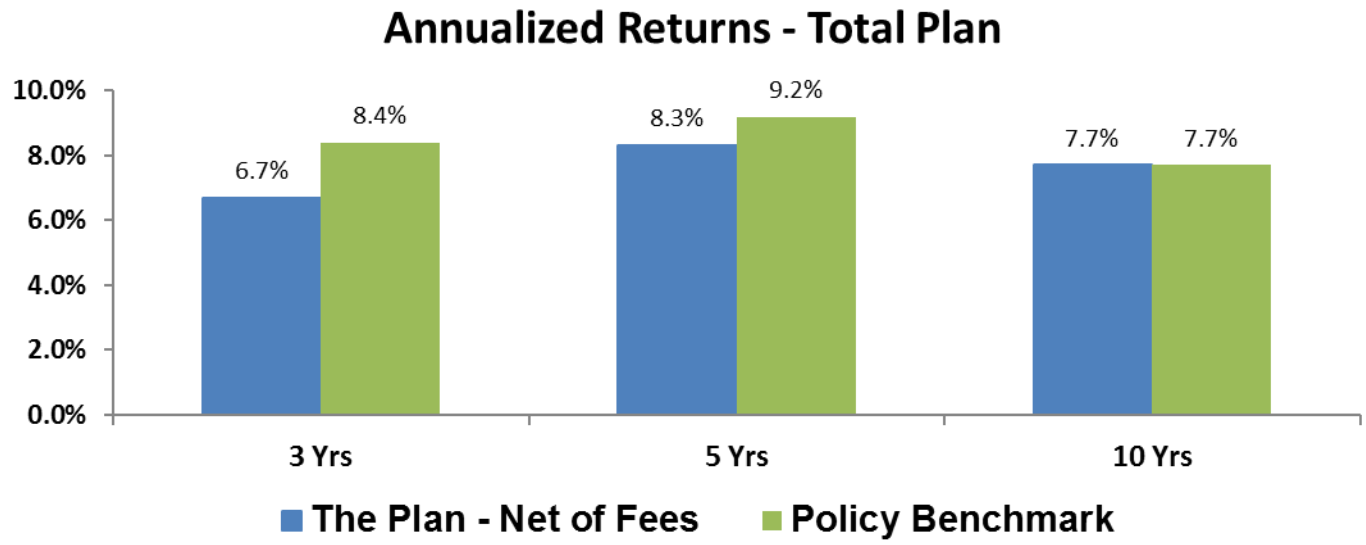
Returns are calculated using the time-weighted rate of return method.

Returns are presented net-of-fees.

Source: Marquette Associates, Investment Consultant

Portfolio Performance (Continued)



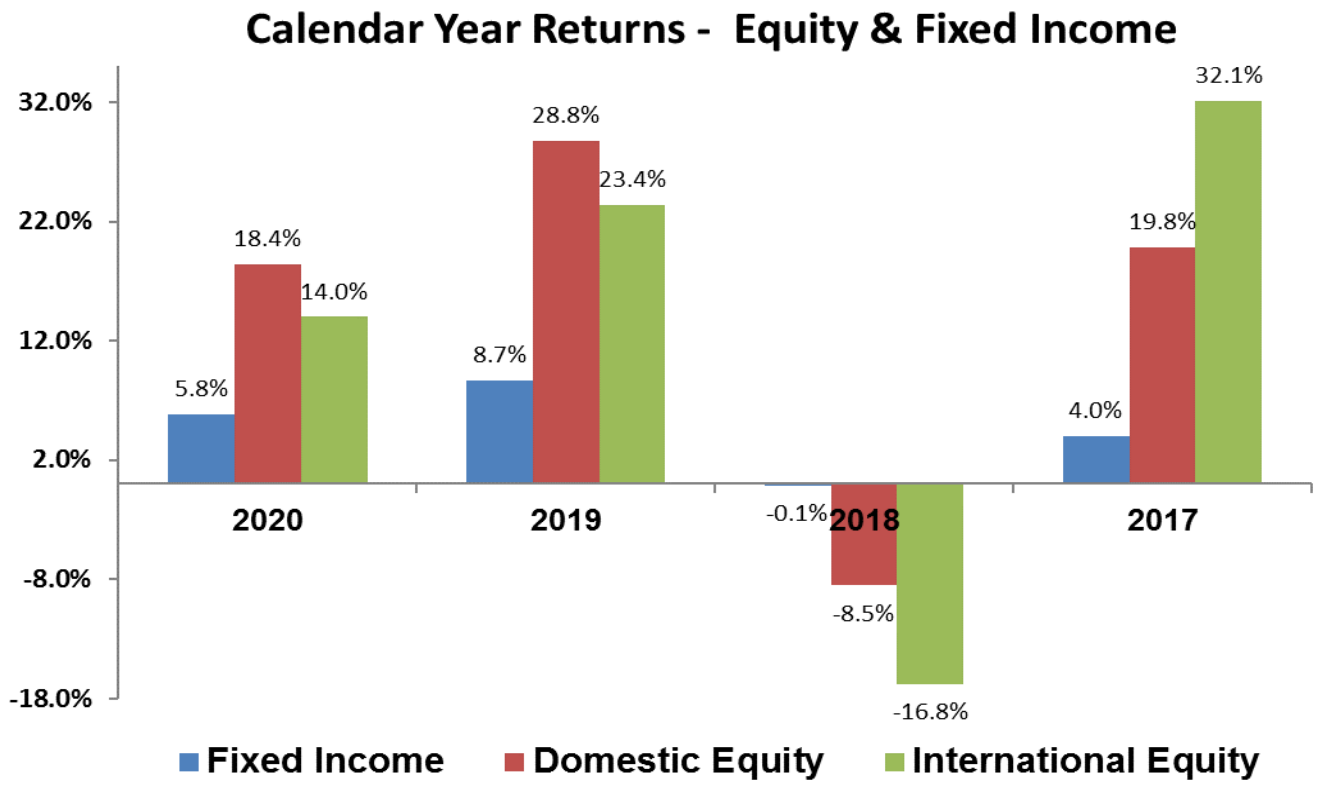


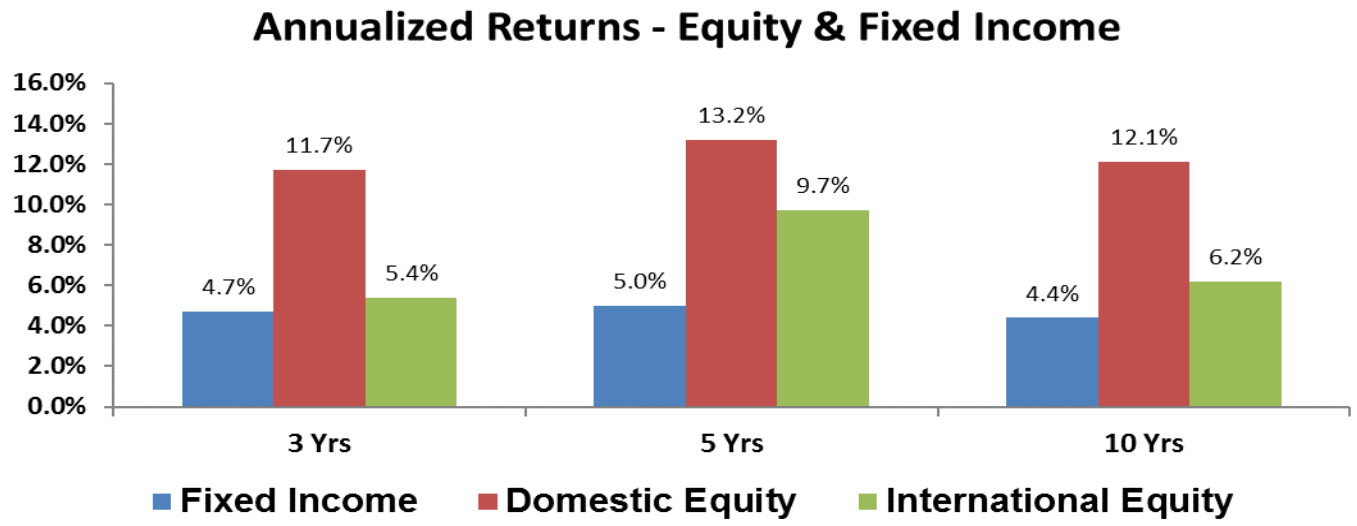
Returns are calculated using the time-weighted rate of return method.

Returns are presented net-of-fees.

Source: Marquette Associates, Investment Consultant

Portfolio Performance (Continued)





Returns are calculated using the time-weighted rate of return method.

Returns are presented net-of-fees.

Source: Marquette Associates, Investment Consultant

Portfolio Summary

As of December 31, 2020 and December 31, 2019

Investment Summary and Asset Allocation

	As of December 31, 2020			As of December 31, 2019		
Asset Category	**Fair Value**	**Percent of Total**	**Target**	**Fair Value**	**Percent of Total**	**Target**
Fixed Income	$ 783,202,603	21.5%	25%	$ 840,676,660	23.2%	25%
Domestic Equity	884,643,691	24.3%	26%	961,051,471	26.5%	26%
Global Equity	141,813,241	3.9%	5%			
International Equity	698,543,766	19.2%	17%	751,399,223	20.7%	22%
Hedged Equity	410,553,990	11.3%	10%	404,199,085	11.1%	10%
Real Estate	346,508,144	9.5%	10%	365,980,218	10.1%	10%
Infrastructure	72,568,452	2.0%	2%	16,763,717	0.5%	2%
Private Equity	113,531,723	3.1%	5%	141,264,793	3.9%	5%
Short-term*	183,815,715	5.1%	0%	149,699,151	4.1%	0%
Total Investments	**$ 3,635,181,325**	**100.0%**	**100%**	**$ 3,631,034,317**	**100.0%**	**100%**

(1) Balance may not sum due to rounding

(2) Global equity is comprised of both domestic and international securities

(3) Total equity is comprised of Domestic Equity, Global Equity, and International Equity

**Short-term investments include cash necessary to pay following month's benefits and residual cash balance of active investment managers*

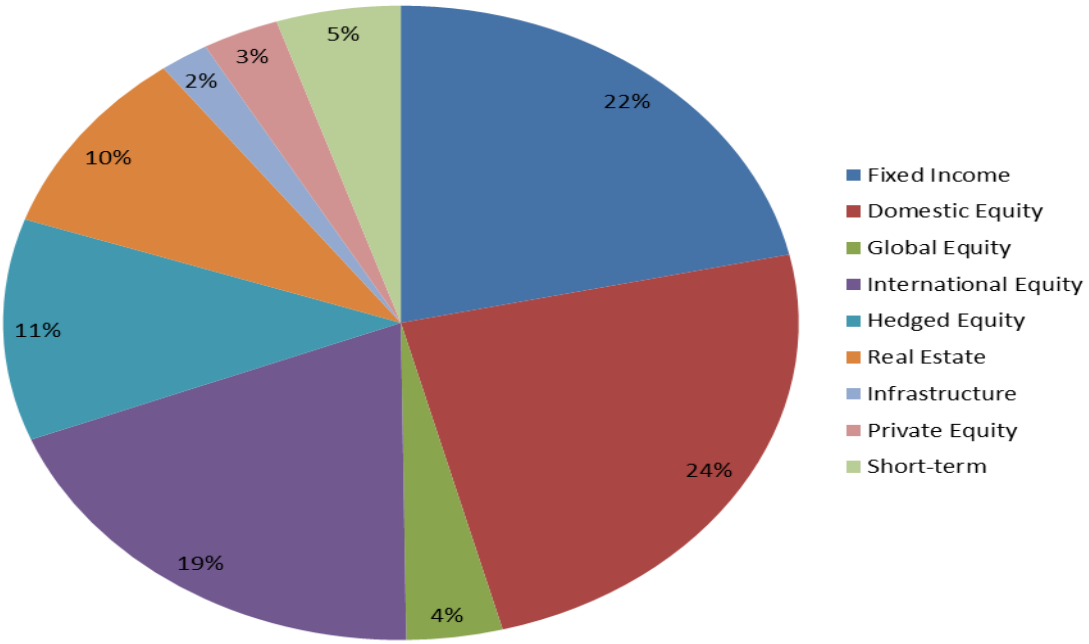
Source: Investment Audit

Portfolio Asset Allocation

As of December 31, 2020

Asset Class	Target Allocation	Actual Allocation
Fixed Income	25%	22%
Domestic Equity	26%	24%
Global Equity	5%	4%
International Equity	17%	19%
Hedged Equity	10%	11%
Real Estate	10%	10%
Infrastructure	2%	2%
Private Equity	5%	3%
Short-term	0%	5%
Total	**100%**	**100%**

Actual Asset Allocation as of December 31, 2020



Components may not sum to totals due to rounding.

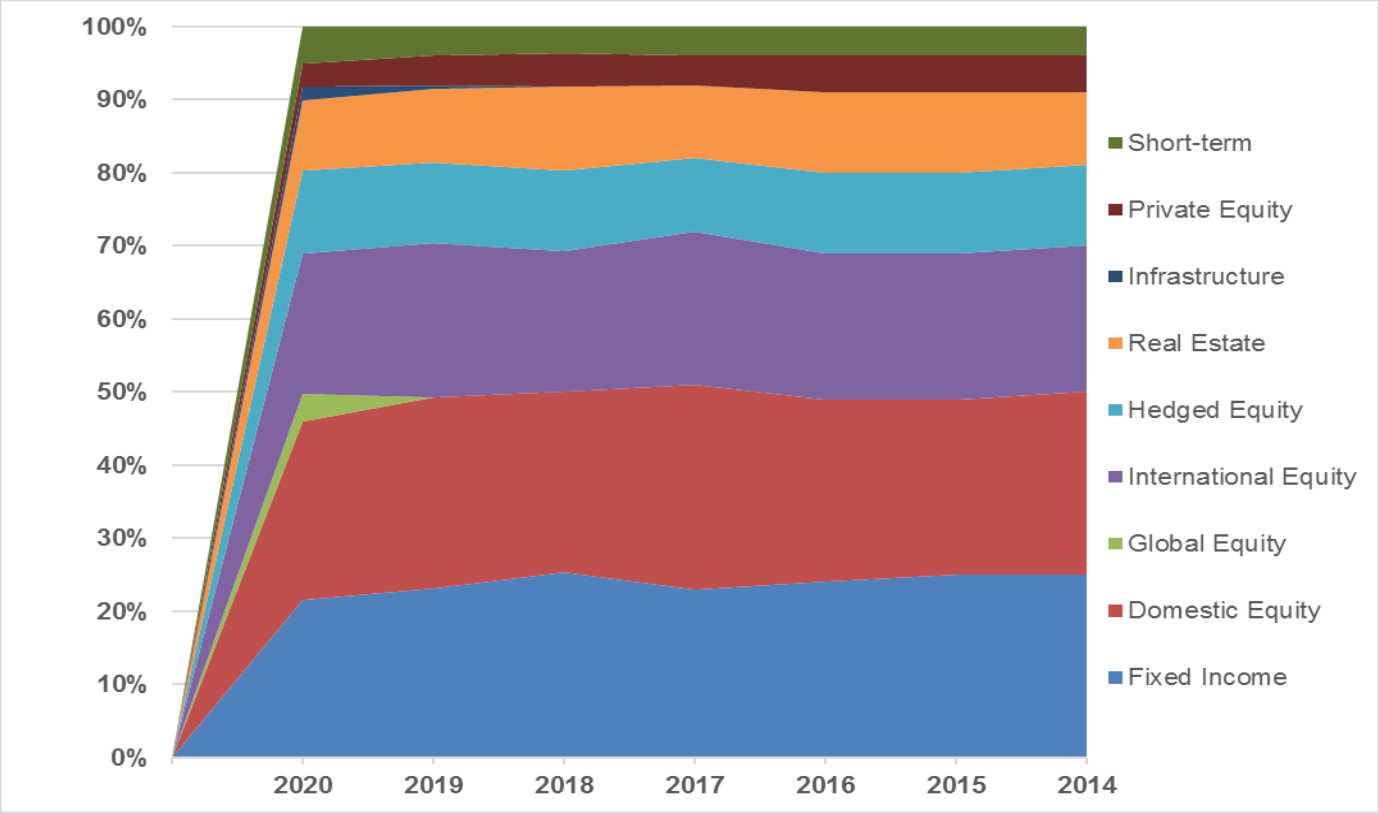
Source: Northern Trust Custody Statements

Portfolio Asset Allocation (continued)

Last Seven Years

Asset Class	2020	2019	2018	2017	2016	2015	2014
Fixed Income	22%	23%	25%	23%	24%	25%	25%
Domestic Equity	24%	26%	25%	28%	25%	24%	25%
Global Equity	4%	0%	0%	0%	0%	0%	0%
International Equity	19%	21%	19%	21%	20%	20%	20%
Hedged Equity	11%	11%	11%	10%	11%	11%	11%
Real Estate	10%	10%	11%	10%	11%	11%	10%
Infrastructure	2%	1%	0%	0%	0%	0%	0%
Private Equity	3%	4%	5%	4%	5%	5%	5%
Short-term	5%	4%	4%	4%	4%	4%	4%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Last Seven Years Asset Allocation



Components may not sum to totals due to rounding.

Source: Northern Trust Custody Statements

Domestic Equity Portfolio Summary

As of December 31, 2020

Sector Allocation

Sector	Fair Value	% of Total	S&P 500
Information Technology	$ 234,603,513	23.32%	23.20%
Health Care	131,815,639	13.10%	12.95%
Consumer Discretionary	127,324,939	12.66%	14.20%
Industrials	127,183,644	12.64%	9.05%
Financials	123,554,517	12.28%	9.75%
Communication Services	91,985,810	9.14%	10.39%
Consumer Staples	58,965,142	5.86%	7.20%
Materials	36,339,781	3.61%	2.94%
Real Estate	32,749,442	3.26%	4.35%
Utilities	19,659,133	1.95%	2.65%
Energy	15,875,006	1.58%	3.32%
Miscellaneous/Unclassified	6,035,586	0.60%	0.00%
Total	$ 1,006,092,153	100.00%	100.00%

(1) Total Domestic Equity Fair Value includes ~12% of Global Equity Portfolio

Top 10 Holdings

Name of Security	Sector	Shares	Fair Value	% of U.S. Equity
APPLE INC COM STK	Information Technology	264,056.00	$ 35,037,591	3.5%
MICROSOFT CORP COM	Information Technology	132,199.00	29,403,702	2.9%
AMAZON COM INC COM	Consumer Discretionary	7,082.00	23,065,578	2.3%
FACEBOOK INC COM USD0.000006 CL 'A'	Communication Services	40,131.00	10,962,184	1.1%
ALPHABET INC CAPITAL STOCK USD0.001 CL A	Communication Services	5,393.00	9,451,988	0.9%
ALPHABET INC CAP STK USD0.001 CL C	Communication Services	5,088.00	8,913,565	0.9%
TESLA INC COM USD0.001	Consumer Discretionary	12,109.00	8,544,958	0.8%
BERKSHIRE HATHAWAY INC-CL B	Financials	34,702.00	8,046,353	0.8%
JOHNSON & JOHNSON COM USD1	Health Care	51,121.00	8,045,423	0.8%
VISA INC COM CL A STK	Information Technology	29,776.00	6,512,904	0.6%
Total		**581,657.00**	**$ 147,984,246**	**14.7%**

Note: A complete listing of the portfolio holdings is available for review at the Plan office.

Components may not sum to totals due to rounding.

Source: Northern Trust Custody Statements

International Equity Portfolio Summary

As of December 31, 2020

Country Allocation

Country	Fair Value	% of Total	MSCI ACWI ex US
Japan	$ 142,149,596	19.77%	15.86%
United Kingdom	79,561,651	11.07%	8.79%
China	59,899,374	8.33%	12.20%
Germany	44,390,434	6.17%	5.86%
Switzerland	43,600,011	6.06%	6.04%
France	37,444,388	5.21%	6.94%
Australia	30,712,094	4.27%	4.42%
Canada	27,662,353	3.85%	6.32%
Netherlands	25,116,081	3.49%	2.41%
Taiwan	23,877,495	3.32%	3.98%
Sweden	23,639,624	3.29%	2.10%
Denmark	21,358,331	2.97%	1.58%
Korea, Republic of	21,094,122	2.93%	4.20%
India	19,800,778	2.75%	2.89%
Hong Kong	16,478,154	2.29%	2.04%
Spain	15,594,960	2.17%	1.53%
Italy	14,953,280	2.08%	1.49%
Singapore	8,266,835	1.15%	0.65%
Brazil	7,590,350	1.06%	1.59%
Finland	7,287,844	1.01%	0.66%
Israel	6,369,802	0.89%	0.38%
Norway	5,531,808	0.77%	0.37%
Belgium	4,857,795	0.68%	0.61%
South Africa	4,794,576	0.67%	1.08%
New Zealand	4,168,640	0.58%	0.19%
Mexico	3,632,996	0.51%	0.54%
Austria	2,942,074	0.41%	0.11%
Poland	2,476,295	0.34%	0.21%
Indonesia	2,352,283	0.33%	0.42%
Philippines	2,284,099	0.32%	0.23%
Portugal	1,604,723	0.22%	0.11%
Ireland	1,559,657	0.22%	0.44%
Remaining Countries	5,856,042	0.81%	3.76%
Total	$ 718,908,545	100.00%	100.00%

(1) Total International Equity Fair Value includes ~3% of Global Equity Portfolio

Components may not sum to totals due to rounding.

Source: Northern Trust Custody Statements

International Equity Portfolio Summary (Continued)

As of December 31, 2020

Top 10 Holdings

Name of Security	Country	Sector	Shares	Fair Value	% of Int'l Equity
APPLE INC COM STK	United States	Information Technology	264,056	$ 35,037,591	4.87%
MICROSOFT CORP COM	United States	Information Technology	132,199	29,403,702	4.09%
AMAZON COM INC COM	United States	Consumer Discretionary	7,082	23,065,578	3.21%
TENCENT HLDGS LIMITED COMMON STOCK	China	Communication Services	183,892	13,375,947	1.86%
ADR TAIWAN SEMICONDUCTOR MANUFACTURING SPON ADS EACH REP 5 ORD TWD10	Taiwan	Information Technology	118,689	12,941,849	1.80%
FACEBOOK INC COM USD0.000006 CL 'A'	United States	Communication Services	40,131	10,962,184	1.52%
SAMSUNG ELECTRONIC KRW100	Korea, Republic of	Information Technology	129,850	9,682,270	1.35%
ALPHABET INC CAPITAL STOCK USD0.001 CL A	United States	Communication Services	5,393	9,451,988	1.31%
ALPHABET INC CAP STK USD0.001 CL C	United States	Communication Services	5,088	8,913,565	1.24%
TESLA INC COM USD0.001	United States	Consumer Discretionary	12,109	8,544,958	1.19%
Total			**898,489**	**$ 161,379,631**	**22.45%**

Note: A complete listing of the portfolio holdings is available for review at the Plan office.

Components may not sum to totals due to rounding.

Source: Northern Trust Custody Statements

Fixed Income Portfolio Summary

As of December 31, 2020

Sector Allocation

Sector	Fair Value	% of Total	Barclay Agg
Corporate Bonds	$ 314,636,482	40.17%	27.40%
Bank Loans	126,988,595	16.21%	0.00%
Government Bonds	97,661,552	12.47%	37.00%
Government Mortgage Backed Securities	70,546,101	9.01%	26.80%
Other Fixed Income	63,741,693	8.14%	4.00%
Government Agencies	47,542,667	6.07%	1.60%
Municipal/Provincial Bonds	21,423,293	2.74%	0.70%
Asset Backed Securities	12,860,206	1.64%	0.30%
Gov't-issued Commercial Mortgage-Backed	9,673,954	1.24%	0.00%
Commercial Mortgage-Backed	7,054,290	0.90%	2.20%
Non-Government Backed C.M.O.s	6,908,076	0.88%	0.00%
Index Linked Government Bonds	3,531,555	0.45%	0.00%
Corporate Convertible Bonds	634,138	0.08%	0.00%
Total	**$ 783,202,603**	**100.00%**	**100.00%**

Top 10 Holdings

Name of Security	Sub Asset Class	Fair Value	% of Fixed Income
US TREASURY N/B 1.5% DUE 02-15-2030 REG	Government Bonds	$ 8,495,175	1.08%
UNITED STATES TREAS NTS 2.625% DUE 02-15-2029 REG	Government Bonds	7,444,577	0.95%
UNITED STATES OF AMER TREAS BD 2.375% 5-15-2027	Government Bonds	7,395,299	0.94%
FED AGRIC MTG CORP MEDIUM TERM NTS .07575% 01-25-2022	Government Agencies	6,862,097	0.88%
FNMA FANNIE MAE 2.125 04-24-2026	Government Agencies	5,698,076	0.73%
UNITED STATES TREAS DTD 02/15/2015 2% DUE 02-15-2025 REG	Government Bonds	5,246,254	0.67%
JPMORGAN CHASE & 3.625% DUE 12-01-2027	Corporate Bonds	4,773,457	0.61%
STARBUCKS CORP 3.55% 08-15-2029	Corporate Bonds	4,654,802	0.59%
US TREASURY N/B 2.25% 11-15-2024	Government Bonds	4,309,062	0.55%
GOLDMAN SACHS 3.5% DUE 01-23-2025	Corporate Bonds	4,304,272	0.55%
Total		**$ 59,183,071**	**7.56%**

Note: A complete listing of the portfolio holdings is available for review at the Plan office.

Components may not sum to totals due to rounding.

Source: Northern Trust Custody Statements

Domestic Equity Brokerage Commissions

As of December 31, 2020

Broker Name	Commissions	Shares
TELSEY ADVISORY GROUP*	$ 84,985	1,720,152
LOOP CAPITAL MARKETS LLC*	49,696	3,249,003
PENSERRA SECURITIES LLC*	24,515	1,500,904
CABRERA CAPITAL MARKETS LLC*	15,424	684,371
WILLIAMS CAPITAL GROUP L.P.,THE*	10,722	554,302
MORGAN STANLEY & CO. LLC	10,153	210,642
J.P. MORGAN SECURITIES LLC	8,184	171,640
ACADEMY SECURITIES INC.*	6,316	315,800
ITG INC.	5,622	1,055,820
NORTH SOUTH CAPITAL LLC*	5,185	259,234
CAPITAL INSTITUTIONAL SERVICES INC-EQUITIES	5,006	250,289
RAYMOND JAMES & ASSOCIATES, INC.	4,538	108,986
CANTOR FITZGERALD & CO.	4,321	150,108
JONESTRADING INSTITUTIONAL SERVICES, LLC.	4,259	144,529
WILLIAM BLAIR & COMPANY, L.L.C.	4,031	91,871
INSTINET, LLC	3,787	277,918
ROBERT W. BAIRD & CO. INCORPORATED	3,442	105,734
NEEDHAM AND COMPANY LLC	3,230	66,000
CASTLEOAK SEC / CANTOR CLEARING*	2,993	149,625
PIPER JAFFRAY & CO	2,989	92,260
STEPHENS INC	2,835	66,204
CL KING*	2,622	92,183
BLAYLOCK ROBERT VAN LLC	2,276	113,800
KEYBANC CAPITAL MARKETS INC	2,141	61,022
STIFEL, NICOLAUS & COMPANY, INCORPORATED	2,022	61,536
CANACCORD GENUITY INC.	2,014	40,275
JEFFERIES LLC	1,805	134,364
GOLDMAN, SACHS & CO.	1,803	49,871
CREDIT SUISSE SECURITIES (USA) LLC	1,517	144,276
CORNERSTONE MACRO LLC	1,442	70,689
LIQUIDNET INC	1,320	171,096
BMO CAPITAL MARKETS CORP.	766	21,037
CRAIG HALLUM	760	15,200
KEEFE BRUYETTE	703	28,533
VIRTU AMERICAS LLC	602	76,944
WELLS FARGO BANK MINNESOTA NA	529	22,505
D. A. DAVIDSON & CO.	525	34,805
FIDELITY CAPITAL MARKETS (DIV OF NFSC)	512	128,106
JOHNSON RICE & COMPANY LLC	500	28,019
OPPENHEIMER & CO. INC.	498	10,996
JMP SECURITIES	409	21,359
SANFORD C. BERNSTEIN & CO., LLC	371	77,333
MISCHLER FINANCIAL GROUP INC-EQUITIES*	313	19,907
Other Brokers	1,565	117,329
Total	**$ 289,251**	**12,766,577**

** Women, minority, or disabled-owned brokerage firm.*

Components may not sum to totals due to rounding.

Source: Northern Trust Custody Statements

International Equity Brokerage Commissions

As of December 31, 2020

Broker Name	Commissions	Shares
BNY CONVERGEX EXECUTION SOLUTIONS	$ 71,476	19,668,473
CLSA SINGAPORE PTE LTD.	60,383	3,838,163
PERSHING LLC	56,479	943,167
MORGAN STANLEY AND CO., LLC	36,166	4,215,433
CLSA LIMITED	34,038	15,587,693
DAIWA CAPITAL MARKETS AMERICA INC.	28,931	661,169
BNP PARIBAS SECURITIES SERVICES SA	27,814	3,652,684
JPMORGAN CHASE BANK, N.A.	26,713	141,881
MERRILL LYNCH INTERNATIONAL LIMITED	24,477	2,248,167
UBS AG LONDON BRANCH	22,664	1,876,800
BANK OF AMERICA CORPORATION	18,714	1,147,090
CITIGROUP GLOBAL MARKETS INC.	17,332	1,557,533
CREDIT SUISSE SECURITIES (USA) LLC	13,301	8,015,237
GOLDMAN SACHS INTERNATIONAL	12,584	3,705,054
INSTINET EUROPE LIMITED	11,397	1,500,419
INVESTMENT TECHNOLOGY GROUP LTD.	11,064	2,735,139
UBS SECURITIES ASIA LIMITED	10,975	1,660,804
J.P. MORGAN SECURITIES PLC	10,082	3,532,386
ITG AUSTRALIA LIMITED	8,331	7,237,443
UBS AG	7,718	1,279,312
CABRERA CAPITAL MARKETS LLC*	7,562	6,565,454
FOX-PITT, KELTON LIMITED	7,318	28,979
JPMORGAN SECURITIES (ASIA PACIFIC)	7,069	1,750,673
BANQUE PARIBAS PARIS	7,065	1,282,871
CREDIT SUISSE SECURITIES(EUROPE)LTD	6,237	3,553,920
CITIGROUP GLOBAL MARKETS LIMITED	6,204	127,075
GOLDMAN, SACHS AND CO.	6,126	938,971
JEFFERIES LLC.	5,649	340,491
J.P. MORGAN SECURITIES LLC	5,308	1,021,515
CLSA SECURITIES KOREA LTD.	4,959	128,773
CREDIT AGRICOLE SECURITIES, INC.	4,957	32,656
KOREA INVESTMENTS AND SECURITIES CO	4,378	58,487
CLSA INDIA LIMITED	4,235	311,138
JOH. BERENBERG,GOSSLER UND CO.KG	4,103	95,194
PERSHING LIMITED	4,073	29,125
Other Brokers	115,708	25,963,898
Total	**$ 711,590**	**127,433,267**

** Women, minority, or disabled-owned brokerage firm.*

Components may not sum to totals due to rounding.

Source: Northern Trust Custody Statements

Investment Fees

As of December 31, 2020 (in thousands)

	2020	2019
Investment Management Fees	**Fees**	**Fees**
Fixed Income	$ 2,006	$ 2,240
Domestic Equity	1,173	1,303
International Equity	2,670	3,160
Global Equity	1,255	905
Hedged Equity	2,164	2,401
Real Estate	3,096	3,564
Infrastructure	941	184
Private Equity	1,077	1,064
	$14,382	$ 14,821
Other Investment Fees		
Custodial Services - Domestic	$ 289	$ 217
Other Global Custodial Services	175	34
Investment Advisory Services	290	290
	$ 754	$ 541
Total Investment Fees	**$15,136** (1)	**$ 15,362** (2)

(1)Total investment fees for 2020 represent approximately 39 bps of total investments.

(2)Total investment fees for 2019 represent approximately 41 bps of total investments.

For a schedule of investment fees by category, please refer to the schedule "Investment Management Compensation" in the financial section on pages 62-64.

Components may not sum to totals due to rounding.

Actuarial

All schedules listed for the Actuarial Section are prepared by the Actuaries.

Segal Consulting
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May 24, 2021

The Retirement Board of the
Municipal Employees' Annuity and Benefit Fund of Chicago
321 North Clark Street, Suite 700
Chicago, Illinois 60654-4767

Dear Board Members:

We are pleased to submit this annual Actuarial Valuation and Review as of December 31, 2020. It summarizes the actuarial data used in the valuation; establishes the net pension liability under Governmental Accounting Standards Board (GASB) Statement No. 67 as of December 31, 2020, the pension expense for the fiscal year ending December 31, 2020, under GASB Statement No. 68, the net OPEB liability as of December 31, 2020, under GASB Statement No. 74, the OPEB expense for the fiscal year ending December 31, 2020, under GASB Statement No. 75, and the actuarially determined contribution for the year ending December 31, 2021; and analyzes the preceding year's experience.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Municipal Employees' Annuity and Benefit Fund of Chicago (MEABF or Fund or Plan).

Asset and Membership Data

The census information and financial information on which our calculations were based was prepared by the Fund staff. That assistance is gratefully acknowledged. We have not subjected the census data to any auditing procedures, but have examined the data for reasonableness and consistency with the prior year's data.

Actuarial Assumptions and Methods

The actuarial assumptions and methods are set by the Board of Trustees, based upon recommendations made by the Fund's actuary. The assumptions and methods used for the December 31, 2020, actuarial valuation were based on an experience analysis covering the five-year period ending December 31, 2016, and were adopted by the Board, effective December 31, 2017. These actuarial assumptions and methods comply with the parameters set by the Actuarial Standards of Practice and the parameters for disclosure of GASB 67, 68, 74 and 75. Further, in our opinion, the assumptions as approved by the Board appear to be reasonably related to the experience of the Fund. The investment return assumption is based on the Fund being invested according to the target asset allocation in the Investment Policy Statement. **To the extent that the liquidation of assets to pay benefit payments and expenses requires a shift in investment allocation to more liquid, lower return asset classes, a lower discount rate may be required in the future.**

Funding Adequacy

MEABF is funded by employer and member contributions in accordance with the funding policy specified under the Illinois Pension Code (40 ILCS 5/8), which was revised on July 6, 2017 by Public Act 100-0023. For 2021 and 2022, employer contributions are specified amounts: $499[1] million in payment year 2021 and $576 million in payment year 2022. Starting in 2023, employer contributions are calculated as the sum of the employer normal cost for that fiscal year plus an amount determined as a level percent of payroll sufficient to bring the total assets of the Fund up to 90% of the actuarial accrued liability by the end of 2058. **The fixed-dollar contributions through 2022 leave the Fund vulnerable to adverse experience. Given the low funded ratio, the Fund is still at risk of potential insolvency if an economic recession or investment market downturn were to occur in the near term. We strongly recommend an actuarial funding method that targets 100% funding where payments at least cover interest on the unfunded actuarial liability and a portion of the principal balance. If the Fund becomes insolvent, the employer will be required to make contributions on a "pay as you go" basis, which means the employer would have to pay all benefits as they become due.**

Financial Results and Membership Data

This report includes the following schedules for the Actuarial and Financial sections of the Comprehensive Annual Financial Report which were prepared by Segal:

- Actuarial

  Active Member Valuation Data
  Retirees and Beneficiaries Added to and Removed from Rolls
  Solvency Test
  Analysis of Financial Experience

- Financial

  Schedule of Funding Progress
  Schedule of Employer Contributions

Limitation of Actuarial Measurements

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in plan provisions or applicable law.

Qualifications

The actuarial calculations were directed under our supervision. We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Plan.

Sincerely,

Segal Consulting, a Member of The Segal Group, Inc.

By:

Matthew A. Strom, FSA, MAAA, EA
Senior Vice President and Actuary

Kim M. Nicholl, FSA, FCA, MAAA, EA
Senior Vice President and Actuary

Valuation Summary

Purpose

This report has been prepared by Segal to present a valuation of the Municipal Employees' Annuity and Benefit Fund of Chicago (MEABF or Fund or Plan) as of December 31, 2020. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- The benefit provisions of the Fund, as outlined in 40 ILCS 5/8 and administered by the Retirement Board;
- The characteristics of covered active members, inactive vested members, and retirees and beneficiaries as of December 31, 2020, provided by MEABF staff;
- The assets of the Plan as of December 31, 2020, provided by MEABF staff;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

Valuation Highlights

The following key findings were the result of this actuarial valuation:

1. **MEABF remains at risk of insolvency due to the current low funding level and nature of the fixed-ramp contributions through 2022, which do not change when the Fund experiences unfavorable investment performance.**

2. For the year ended December 31, 2020, Segal has estimated the asset return on a fair value basis to be 9.1%. After gradual recognition of investment gains and losses under the actuarial smoothing method, the actuarial rate of return was 8.0%. This represents an experience gain when compared to the assumed rate of 7.0%. As of December 31, 2020, the actuarial value of assets ($3.98 billion) represents 97% of the fair value ($4.09 billion).

3. The fair value of assets as of December 31, 2020 is $4.09 billion, which includes $3.64 billion of investments and $439 million of employer contributions receivable. As the employer contributions increase in the future, the receivable employer contributions become a larger percentage of the reported fair value of assets.

4. The funded ratio based on the actuarial value of assets over the actuarial accrued liability as of December 31, 2020, is 22.3%, compared to 23.2% as of December 31, 2019. Using the fair value of assets, the funded ratio as of December 31, 2020, is 22.9%, compared to 23.6% as of December 31, 2019.

5. For the fiscal year beginning January 1, 2021, the actuarially determined contribution (ADC) for pension benefits based on the Board's funding policy is $1,218,360,892. By statute, the expected employer contribution for 2021 (payable in 2022) is $576,000,000. **Compared to the actuarially determined contribution of $1,218,360,892, the contribution deficiency is $642,360,892. Each year there is a contribution deficiency leads to an increased deficiency in all future years.**

6. The total statutorily required contribution for 2020 (payable in 2021) was $499,000,000. The City of Chicago prepaid $60 million of the total statutorily required contribution in July 2020. The remaining $439 million will be paid in 2021, less $401,096 as a cost for the pre-payment, for a total remaining contribution of $438,598,904.

7. When measuring pension liability for GASB purposes, the Entry Age actuarial cost method is used, which is the same method that is used for funding purposes. In addition, because of the statutorily-required employer contributions under Public Act 100-0023, which are expected to increase substantially over time, the GASB blended discount rate calculation results in the same discount rate (7.00%) that is used for funding purposes as of December 31, 2020. This means that the total pension liability (TPL) measure for financial reporting shown in this report will match the actuarial accrued liability (AAL) measure for funding.

8. The net pension liability (NPL) is equal to the difference between the TPL and the Plan's fiduciary net position. The Plan's fiduciary net position is equal to the fair value of assets. The NPL increased from $13,179,713,980 as of December 31, 2019, to $13,724,573,158 as of December 31, 2020. The increase in the NPL is primarily due to contributions received during the year being less than the cost of benefits accrued during the year and interest on the unfunded liability.

9. City of Chicago employee annuitants that were hired prior to July 1, 2003 (both current and future employee annuitants, but not spouse or child annuitants) are entitled to receive a health care insurance premium subsidy of $25 per month from the Fund for each month after December 31, 2016. As directed by Fund staff, we have treated the health care insurance premium subsidy as being paid from plan assets. For purposes of developing employer contributions, expected future subsidies are included in projected benefit payments and the cost is included in the statutorily-required contributions based on the 90% funding target in 2058. The City may wish to consider a separate funding source for the health insurance subsidy. At a minimum, the additional contribution would be equal to expected amount of subsidy payments each year; in effect, funding the health care insurance premium subsidy on a pay-as-you-go basis. The total liability for this benefit decreased from $35.9 million as of December 31, 2019 to $32.4 million as of December 31, 2020 . This is reported as an OPEB liability under GASB 74/75.

10. The total unrecognized investment gain as of December 31, 2020, is $113,201,191. This investment gain will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, to the extent it is not offset by recognition of investment losses derived from future experience. This implies that earning the assumed rate of investment return of 7.0% per year (net of expenses) on a fair value basis will result in investment gains on the actuarial value of assets in the next few years.

11. The current method used to determine the actuarial value of assets yields an amount that is 97.2% of the fair value of assets as of December 31, 2020. Guidelines in Actuarial Standards of Practice No. 44 (Selection and Use of Asset Valuation Methods for Pension Valuations) recommend that asset values fall within a reasonable range around the corresponding fair value. We believe the actuarial asset method currently complies with these guidelines.

12. This actuarial valuation report as of December 31, 2020, is based on financial data as of that date. Changes in the value of assets subsequent to that date are not reflected.

Summary of Key Valuation Results

		2020	2019
Funding ratios as of December 31:			
Actuarial accrued liability*		$17,847,226,939	$17,296,295,382
Fair value of assets		4,090,239,084	4,080,642,490
Unfunded actuarial accrued liability on a fair value basis		13,756,987,855	13,215,652,892
Funded ratio on a fair value basis		22.92%	23.59%
Actuarial value of assets		$3,977,037,893	$4,012,852,196
Unfunded actuarial accrued liability on an actuarial value basis		13,870,189,046	13,283,443,186
Funded ratio on an actuarial value basis		22.28%	23.20%
Book value of assets		$3,377,121,009	$3,475,766,782
Unfunded actuarial accrued liability on a book value basis		14,470,105,930	13,820,528,600
Funded ratio on a book value basis		18.92%	20.10%
Demographic data as of December 31:			
Number of retirees and beneficiaries		25,471	25,544
Number of inactive members		20,139	18,734
Number of active members		31,327	32,162
Total pensionable salary supplied by the Fund		$1,861,905,323	$1,802,790,156
Average pensionable salary		$59,435	$56,053
Contribution requirement for Fiscal Year:	**2022**	**2021**	**2020**
Statutory City contribution**	$959,998,033	$576,000,000	$499,000,000
Actuarially determined contribution requirment	N/A	1,218,360,892	1,167,153,830

**Includes pension and OPEB. OPEB liabilities are calculated at the Municipal Bond-Index Rate (2.74% for 2019 and 2.12% for 2020)*

***As established by Public Act 100-0023. City contributions are shown in the year that they will be booked. The contributions will be paid in the following year.*

****Based on the Board's funding policy*

Summary of Key Valuation Results - Pension

	2021	2020
Contributions for plan year beginning January 1:		
Actuarially determined contribution requirement	$1,218,360,892	$1,167,153,830
Expected employer contributions	576,000,000	499,000,000
Actual employer contributions*	-	498,598,904
Funding elements for plan year beginning January 1:		
Employer normal cost, including administrative expenses, adjusted for timing	$103,224,424	$99,585,105
Fair value of assets	4,090,239,084	4,080,642,490
Actuarial value of assets	3,977,037,893	4,012,852,196
Actuarial accrued liability	17,814,812,242	17,260,356,470
Unfunded actuarial accrued liability on an actuarial value basis	13,837,774,349	13,247,504,274
Funded ratio on an actuarial value basis	22.32%	23.25%
GASB information as of December 31 of the prior year:		
Long-term expected rate of return	7.00%	7.00%
Municipal bond index	2.12%	2.74%
Single equivalent discount rate	7.00%	7.00%
Total pension liability	$17,814,812,242	$17,260,356,470
Plan fiduciary net position	4,090,239,084	4,080,642,490
Net pension liability	13,724,573,158	13,179,713,980
Plan fiduciary net position as a percentage of total pension liability	22.96%	23.64%

**Receivable amount to be paid the following year. $438,598,904 is a receivable amount to be paid the following year, $60,000,000 of the 2020 contribution requirement was paid in July 2020.*

Summary of Key Valuation Results - OPEB

Contributions for plan year beginning January 1:		
Actuarially determined contribution requirement	N/A	N/A
Expected employer contributions	-	-
Actual employer contributions	-	-
Funding elements for plan year beginning January 1:		
Employer normal cost, including administrative expenses, adjusted for timing	$176,888	$282,294
Fair value of assets	-	-
Actuarial value of assets	-	-
Actuarial accrued liability	$32,414,697	$35,938,912
Unfunded actuarial accrued liability on an actuarial value basis	$32,414,697	$35,938,912
Funded ratio on an actuarial value basis	0.0%	0.0%
GASB information as of December 31 of the prior year:		
Discount rate	2.12%	2.74%
Total OPEB liability	$32,414,697	$35,938,912

Summary of Key Valuation Results

The valuation was made with respect to the following data supplied to us:

1. Pensioners as of the valuation date (including 4,085 beneficiaries)		25,471
2. Members inactive during year ended December 31, 2020 with vested rights		2,132
3. Members active during the year ended December 31, 2020		31,327
Fully vested	13,707	
Not vested	17,620	
4. Other non-vested inactive members as of the valuation date		18,007

Determination of Actuarial Accrued Liability*:

	Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
1. Active members			
a. Retirement benefits	$ 7,281,235,555	$ 1,285,734,574	$ 5,995,500,981
b. Death benefits	120,058,796	35,303,500	84,755,296
c. Withdrawal benefits	717,071,681	526,700,579	190,371,102
d. Total	8,118,366,032	1,847,738,653	6,270,627,379
2. Inactive vested members	481,734,358	-	481,734,358
3. Inactive non-vested members	166,023,248	-	166,023,248
4. Retirees and beneficiaries	10,896,427,257	-	10,896,427,257
5. Total	$ 19,662,550,895	$ 1,847,738,653	$ 17,814,812,242

Determination of Unfunded Actuarial Accrued Liability:

1. Actuarial accrued liability	$ 17,814,812,242
2. Actuarial value of assets ($4,090,239,084 at fair value)	3,977,037,893
3. Unfunded actuarial accrued liability	$ 13,837,774,349

**Excludes OPEB liabilities*

Summary of Actuarial Valuation Results (Continued)

Summary of Actuarial Valuation Results

Components of normal cost:	Tier 1		Tier 2		Tier 3		Total	
	% of Payroll	Amount	% of Payroll	Amount	% of Payroll	Amount	% of Payroll	Amount
1 Retirement	10.28%	$115,883,756	5.72%	$22,650,756	6.40%	$25,229,428	8.54%	$163,763,940
2 Turnover	3.52%	39,689,832	2.69%	10,645,814	3.31%	13,045,031	3.30%	$63,380,677
3 Mortality	0.23%	2,616,513	0.25%	1,003,579	0.23%	917,775	0.24%	$4,537,867
4 Disability	0.75%	8,456,801	0.75%	2,970,455	0.75%	2,955,993	0.75%	14,383,249
5 Total normal cost: (1) + (2) + (3) + (4)	14.78%	$166,646,902	9.41%	$37,270,604	10.69%	$42,148,227	12.83%	$246,065,733
6 Total normal cost, adjusted for timing*	15.29%	172,380,896	9.73%	38,553,012	11.06%	43,598,465	13.27%	254,532,373
7 Administrative expenses	0.37%	4,185,078	0.37%	1,470,010	0.37%	1,462,854	0.37%	7,117,942
8 Total normal cost, including administrative expenses: (6) + (7)	15.66%	$176,565,974	10.11%	$40,023,022	11.43%	$45,061,319	13.64%	$261,650,315
9 Expected employee contributions**							-8.44%	(161,859,498)
10 Employer normal cost: (8) + (9)							5.20%	$99,790,817
11 Employer normal cost, adjusted for timing***							5.36%	103,224,424

** Reflects timing adjustment to the middle of the year. Excludes OPEB*

*** Based on payroll, adjusted to the middle of the year*

**** Reflects timing adjustment to the end of the year*

Actuarially Determined Contribution - Pension

		Year Beginning January 1, 2021	
		Amount	% of Payroll
1	Total normal cost*	$254,532,373	13.27%
2	Administrative expenses	7,117,942	0.37%
3	Expected employee contributions**	-161,859,498	-8.44%
4	Employer normal cost: (1) + (2) + (3)	99,790,817	5.20%
5	Employer normal cost, adjusted for timing***	103,224,424	5.38%
6	Actuarial accrued liability****	17,814,812,242	
7	Actuarial value of assets	3,977,037,893	
8	Unfunded/(overfunded) actuarial accrued liability: (6) - (7)	13,837,774,349	
9	Payment on unfunded actuarial accrued liability, adjusted for timing***	1,115,136,468	58.15%
10	Actuarially determined contribution: (5) + (9)	$1,218,360,892	63.53%
11	Projected payroll	$1,917,766,564	

** Reflects timing adjustment to the middle of the year. Excludes OPEB Liabilities*

*** Based on payroll, adjusted to the middle of the year*

**** Employer contributions are assumed to be paid at the end of the year*

*****Excludes OPEB liabilites*

Plan Membership

	December 31, 2020	December 31, 2019
Active Members		
Number*	31,327	32,162
Tier 1	16,317	17,293
Tier 2	6,997	7,650
Tier 3	8,013	7,219
Vested	13,707	14,037
Non-vested	17,620	18,125
Average age	46.5	46.0
Average years of service	11.2	10.9
Average annual salary	$59,435	$56,053
Inactive Members		
Number	20,139	18,734
Average age	47.0	47.5
Average years of service	3.7	3.8
Retirees		
Number	21,386	21,423
Average age	73.2	73.1
Average annual benefit	$42,048	$40,824
Deferred	0	0
Surviving		
Number	3,867	3,897
Average age	78.5	78.6
Average annual benefit	$16,620	$16,020
Reversionary annuitants		
Number	121	124
Average age	75.4	76.0
Average annual benefit	$4,968	$5,100
Children	97	100
Total members	76,937	76,440

**Includes 298 and 276 members receiving disability benefits for 2019 and 2020, respectively*

Actuarial Experience

To calculate the actuarially determined contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. Overall favorable experience relative to the assumptions (an actuarial gain) causes a decrease in the contribution requirement. On the other hand, overall less favorable experience relative to the assumptions (an actuarial loss) causes an increase in the contribution requirement.

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The total loss is $60,535,358; $35,846,593 from investment gains offset by $96,381,951 in losses from all other sources. The net experience variation from individual sources other than investments was approximately 0.5% of the actuarial accrued liability.

This chart provides a summary of the actuarial experience during the past year:

Actuarial Experience for Year Ended December 31, 2020		
1	Net gain/(loss) from investments	$35,846,593
2	Net gain/(loss) from administrative expenses	-377,674
3	Net gain/(loss) from other experience	-96,004,277
4	Net experience gain/(loss): (1) + (2) + (3)	-$60,535,358

Investment Rate of Return

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the MEABF's investment policy. For valuation purposes, the assumed rate of return on the actuarial value of assets for the 2020 Plan year was 7.00%. The actual rate of return on an actuarial basis for the 2020 Plan year was 7.99%. Since the actual return for the year was greater than the assumed return, the Fund experienced an actuarial gain during the year ended December 31, 2020 with regard to its investments.

Actuarial Value Investment Experience for Year Ended December 31, 2020	
1. Actual return	$289,992,062
2. Average value of assets	3,630,649,562
3. Actual rate of return: (1) ÷ (2)	7.99%
4. Assumed rate of return	7.00%
5. Expected return: (2) x (4)	254,145,469
6. Actuarial gain/(loss): (1) – (5)	$35,846,593

Administrative Expenses

Administrative expenses for the year ended December 31, 2020 totaled $7,117,942 compared to the assumption of $6,740,268. This resulted in a loss of $377,674 for the year.

Other Experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- the extent of turnover among the participants,
- retirement experience (earlier or later than projected),
- mortality (more or fewer deaths than projected),
- the number of disability retirements (more or fewer than projected), and
- salary increases (greater or smaller than projected.

The net loss from this other experience for the year ended December 31, 2020 amounted to $96,004,277, which is approximately 0.5% of the actuarial accrued liability.

A brief summary of the demographic gain/(loss) experience of the Fund for the year ended December 31, 2020 is shown in the chart below:

Experience Due to Changes in Demographics for Year Ended December 31, 2020

1.	More turnover than expected	-$265,070
2.	More or earlier retirement than expected	-22,585,455
3.	More deaths than expected among retirees and beneficiaries	55,304,903
4.	Greater salary/service increases than expected for continuing actives	-140,233,284
5.	New entrants	-9,833,632
6.	Demographic gain associated with OPEB liability	5,128,018
7.	Miscellaneous	16,480,243
8.	Total	-$96,004,277

Development of Unfunded Actuarial Accrued Liability

	Year Ending December 31				
	2020	2019	2018	2017	2016
1 Unfunded actuarial accrued liability at beginning of year*	$13,283,443,186	$12,612,970,144	$11,825,624,451	$10,464,982,455	$9,840,134,873
2 Normal cost at beginning of year*	243,081,392	234,883,135	229,786,056	246,761,737	255,682,691
3 Total contributions	-656,396,614	-567,645,216	-487,973,984	-396,528,555	-287,834,877
4 Interest					
(a) Unfunded actuarial accrued liability and normal cost	$946,856,721	$899,349,730	$843,878,736	$803,380,814	$757,186,317
(b) Total contributions	-7,330,997	-5,045,776	-4,762,064	-4,962,323	-4,801,261
(c) Total interest: (4a) + (4b)	939,525,724	894,303,954	839,116,672	798,418,491	752,385,056
5 Expected unfunded actuarial accrued liability:	$13,809,653,688	$13,174,512,017	$12,406,553,195	$11,113,634,128	$10,560,367,743
(1) + (2) + (3) + (4c)					
6 Changes due to (gain)/loss from:					
(a) Investments	-$35,846,593	$53,467,350	$110,783,177	-$33,329,605	-$22,722,207
(b) Demographics and other	96,381,951	19,524,907	95,633,772	-116,622,006	-72,663,081
(c) Total changes due to (gain)/loss: (6a) + (6b)	60,535,358	72,992,257	206,416,949	-149,951,611	-95,385,288
7 Change due to plan provisions	0	35,938,912	0	0	0
8 Change in actuarial assumptions	0	0	0	861,941,934	0
9 Unfunded actuarial accrued liability at end of year*:	$13,870,189,046	$13,283,443,186	$12,612,970,144	$11,825,624,451	$10,464,982,455
(5) + (6c) + (7) + (8)					

**Includes pension and OPEB liabilities for years ended December 31, 2016 and earlier, and December 31, 2019 and each year thereafter.*

Development of Employer Costs

In order to evaluate the sufficiency of the statutorily-required employer contribution, the Board has established an actuarially determined contribution funding policy. The amount of actuarially determined contribution is comprised of an employer normal cost payment and a payment on the unfunded actuarial accrued liability. This total amount is then divided by the projected payroll for active members to determine the actuarially determined contribution of 63.53% of payroll. The actuarially determined contribution is based on a 30-year, level dollar amortization of the unfunded actuarial accrued liability. A 30-year "rolling" amortization will never fully fund the unfunded actuarial accrued liability.

Actuarially Determined Contribution - Pension

		Year Beginning January 1, 2021	
		Amount	% of Payroll
1	Total normal cost*	$254,532,373	13.27%
2	Administrative expenses	7,117,942	0.37%
3	Expected employee contributions**	-161,859,498	-8.44%
4	Employer normal cost: (1) + (2) + (3)	99,790,817	5.20%
5	Employer normal cost, adjusted for timing***	103,224,424	5.38%
6	Actuarial accrued liability****	17,814,812,242	
7	Actuarial value of assets	3,977,037,893	
8	Unfunded/(overfunded) actuarial accrued liability: (6) - (7)	13,837,774,349	
9	Payment on unfunded actuarial accrued liability, adjusted for timing***	1,115,136,468	58.15%
10	Actuarially determined contribution: (5) + (9)	$1,218,360,892	63.53%
11	Projected payroll	$1,917,766,564	

** Reflects timing adjustment to the middle of the year. Excludes OPEB Liabilities*

*** Based on payroll, adjusted to the middle of the year*

**** Employer contributions are assumed to be paid at the end of the year*

*****Excludes OPEB liabilites*

The contribution requirements as of December 31, 2020, are based on all of the data described in the previous sections, the actuarial assumptions, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

Development of Employer Costs (Continued)

Reconciliation of Actuarially Determined Contribution

The chart below details the changes in the actuarially determined contribution from the prior valuation to the current year's valuation.

Reconciliation of Actuarially Determined Contributions from December 31, 2019 to December 31, 2020

Actuarially Determined Contribution as of December 31, 2019	**$1,167,153,830**
Effect of plan amendment	$0
Effect of change in asset method	0
Effect of expected change in amortization payment due to payroll growth	0
Effect of rolling amortization period	-11,931,597
Effect of change in administrative expense assumption	390,669
Effect of change in other actuarial assumptions	0
Effect of contributions (more)/less than actuarially determined contribution	54,782,007
Effect of investment (gain)/loss	-2,919,657
Effect of other (gains)/losses on accrued liability	8,365,117
Effect of net other changes: (gain)/loss	2,520,523
Total change	51,207,062
Actuarially Determined Contribution as of December 31, 2020	**$1,218,360,892**

Comparison of Employer Contribution to Actuarially Determined Contribution

Plan Year Ended December 31	Actuarially Determined Contributions (ADC)*	Actual Contributions**	Percentage Contributed
2011	$634,559,144	$156,525,374	24.7%
2012	705,454,416	158,380,709	22.5%
2013	834,398,482	157,704,971	18.9%
2014	848,864,496	158,797,631	18.7%
2015	686,373,727	157,716,475	23.0%
2016	970,112,414	157,444,029	16.2%
2017	1,005,456,621	261,763,635	26.0%
2018	1,049,915,647	349,574,257	33.3%
2019	1,117,387,759	421,000,000	37.7%
2020	1,167,153,830	498,598,904	42.7%
2021	1,218,360,892	--	--

** Prior to 2015, this amount was the Annual Required Contribution (ARC). Includes pension and OPEB.*

***Receivable amount to be paid the following year. A portion of the 2020 payment was made during calendar year 2020*

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL)* (b)	Unfunded (Overfunded) AAL (UAAL) (b)-(a)	Funded Ratio (a)/(b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b) - (a)] / (c)
12/31/2011	$5,552,291,417	$12,292,930,124	$6,740,638,707	45.17%	$1,605,993,339	419.72%
12/31/2012	5,073,320,275	13,475,376,963	8,402,056,688	37.65%	1,590,793,702	528.17%
12/31/2013	5,114,207,803	13,828,920,032	8,714,712,229	36.98%	1,580,288,709	551.46%
12/31/2014	5,039,297,432	12,307,094,062	7,267,796,630	40.94%	1,602,977,593	453.39%
12/31/2015	4,815,126,844	14,647,114,971	9,831,988,127	32.87%	1,643,480,973	598.24%
12/31/2016	4,590,366,241	15,055,348,696	10,464,982,455	30.49%	1,646,939,238	635.42%
12/31/2017	4,456,771,744	16,282,396,195	11,825,624,451	27.37%	1,686,532,720	701.18%
12/31/2018	4,195,644,172	16,808,614,316	12,612,970,144	24.96%	1,734,595,691	727.25%
12/31/2019	4,012,852,196	17,260,356,470	13,247,504,274	23.25%	1,802,790,156	734.83%
12/31/2020	3,977,037,893	17,814,812,242	13,837,774,349	22.32%	1,861,905,323	743.21%

**Excludes OPEB*

Solvency Test

Actuarial Valuation Date	(1) Active and Inactive Member Contribution	(2) Retirees and Beneficiaries	(3) Active and Inactive Members (ER Financial Portion)	Actuarial Value of Assets	Portion (%) of Present Value Covered By Assets (1)	(2)	(3)
12/31/2011	$ 1,724,683,910	$6,803,140,300	$ 3,928,347,812	$ 5,552,291,417	100.00%	56.26%	0.00%
12/31/2012	1,724,021,890	7,633,045,219	4,280,392,937	5,073,320,275	100.00%	43.88%	0.00%
12/31/2013	1,763,193,047	7,938,850,949	4,154,449,370	5,114,207,803	100.00%	42.21%	0.00%
12/31/2014	1,816,477,893	7,029,523,772	3,478,587,338	5,039,297,432	100.00%	45.85%	0.00%
12/31/2015	1,874,982,804	8,427,968,220	4,352,310,693	4,815,126,844	100.00%	34.89%	0.00%
12/31/2016	1,918,150,355	8,725,032,932	4,412,165,409	4,590,366,241	100.00%	30.63%	0.00%
12/31/2017	1,952,652,300	9,905,000,389	4,424,743,506	4,456,771,744	100.00%	25.28%	0.00%
12/31/2018	1,992,398,627	10,308,704,123	4,507,511,566	4,195,644,172	100.00%	21.37%	0.00%
12/31/2019*	2,049,285,500	10,648,208,601	4,598,801,281	4,012,852,196	100.00%	18.44%	0.00%
12/31/2020*	2,127,044,611	10,919,860,748	4,800,321,580	3,977,037,893	100.00%	16.94%	0.00%

**Includes pension and OPEB*

Reconciliation of Member Data

	Active Members*	Inactive Members	Retirees	Beneficiaries	Total
Number as of December 31,	32,162	18,734	21,423	4,121	76,440
New members	2,198	N/A	N/A	N/A	2,198
Terminations	-2,039	2,039	0	0	0
Retirements	-704	-185	889	N/A	0
Died with beneficiary	-25	-5	-213	243	0
Died without beneficiary	-29	-14	-725	-316	-1,084
Refunds	-406	-339	0	0	-745
Rehire	170	-170	0	N/A	0
Net transfers	0	79	0	0	79
Temporary annuity expired	N/A	N/A	-4	-21	-25
Data adjustment	0	0	16	58	74
Number as of December 31,	31,327	20,139	21,386	4,085	76,937

** Includes members receiving disability benefits*

History of Active Member Valuation Data

Actuarial Valuation Date	Active Members	Percent increase	Annual Salaries	Percent increase	Average Salary	Percent increase	CPI Chicago*
12/31/2011	31,976	4.07%	$1,605,993,339	4.19%	$50,225	0.12%	2.06%
12/31/2012	31,326	(2.03%)	1,590,793,702	(0.95%)	50,782	1.11%	1.68%
12/31/2013	30,647	(2.17%)	1,580,288,709	(0.66%)	51,564	1.54%	0.51%
12/31/2014	30,160	(1.59%)	1,602,977,593	1.44%	53,149	3.07%	1.48%
12/31/2015	30,683	1.73%	1,643,480,973	2.53%	53,563	0.78%	0.00%
12/31/2016	30,296	(1.26%)	1,646,939,238	0.21%	54,362	1.49%	1.86%
12/31/2017	30,922	2.07%	1,686,532,720	2.40%	54,542	0.33%	1.66%
12/31/2018	31,285	1.17%	1,734,595,691	2.85%	55,445	1.66%	1.07%
12/31/2019	32,162	2.80%	1,802,790,156	3.93%	56,053	1.10%	2.23%
12/31/2020	31,327	(2.60%)	1,861,905,323	3.28%	59,435	6.03%	0.89%
Average Increase/(Decrease last 5 years		0.42%		2.53%		2.10%	1.54%

**CPI-Chicago as of the valuation date*

History of Retirees and Beneficiaries Added to Payrolls 2011 – 2020

Valuation Date	Added to Payroll		Removed from Payroll		Payroll End of Year		Average Annual Benefit	Increase in Average Benefit
	Number	Annual Benefits*	Number	Annual Benefits	Number	Annual Benefits		
Employee Annuitants (Male and Female)								
12/31/2011	1,149	$ 55,405,692	774	$ 20,754,048	18,813	$607,077,636	32,269	3.94%
12/31/2012	1,559	68,828,940	758	20,349,840	19,614	655,556,736	33,423	3.58%
12/31/2013	1,242	57,147,576	743	21,682,632	20,113	691,021,680	34,357	2.79%
12/31/2014	1,054	37,110,852	756	23,299,656	20,411	704,832,876	34,532	0.51%
12/31/2015	990	65,756,124	817	23,871,948	20,584	746,717,052	36,277	5.05%
12/31/2016	1,107	58,094,440	772	25,721,880	20,919	779,089,612	37,243	2.66%
12/31/2017	1,148	62,453,527	930	30,481,722	21,137	811,061,417	38,372	3.03%
12/31/2018	1,086	64,883,087	830	29,664,303	21,393	846,280,201	39,559	3.09%
12/31/2019	981	62,186,925	951	34,004,036	21,423	874,463,090	40,819	3.19%
12/31/2020	905	61,399,969	942	36,513,245	21,386	899,349,814	42,053	3.02%
Surviving Spouse and Reversionary Annuitants								
12/31/2011**	362	$ 4,152,804	241	$ 3,479,496	4,403	$ 54,594,060	12,399	(0.06)%
12/30/2012	237	4,168,092	286	3,217,812	4,354	55,544,340	12,757	2.89%
12/31/2013	270	4,593,708	279	3,096,132	4,345	57,041,916	13,128	2.91%
12/31/2014	265	4,648,596	310	3,713,844	4,300	57,976,668	13,483	2.70%
12/31/2015	251	4,185,900	291	3,681,516	4,260	58,481,052	13,728	1.82%
12/31/2016	235	4,862,474	282	3,544,440	4,213	59,799,086	14,194	3.39%
12/31/2017	261	5,053,290	343	4,653,334	4,131	60,199,042	14,573	2.67%
12/31/2018	255	5,539,163	304	4,043,991	4,082	61,694,214	15,114	3.71%
12/31/2019	268	5,701,160	329	4,335,344	4,021	63,060,030	15,683	3.76%
12/31/2020	284	6,322,659	317	4,500,408	3,988	64,882,281	16,269	3.74%

** Annual benefits added to payroll include post-retirement increase amounts.*

*** Number added in 2011 includes 121 reversionary annuitants that are also surviving spouses.*

Actuarial Reserve Liabilities as of December 31, 2020

	2020	2019
Accrued Liability for Active and Inactive Participants*	$6,918,384,985	$6,633,875,188
Reserves for:		
Service Retirement Pension	$9,697,693,910	$9,463,906,695
Future Spouses of Current Retirees	716,661,983	697,138,039
Surviving Spouse Pension	481,131,538	464,477,941
Child Annuitants	939,826	958,607
OPEB Benefits	32,414,697	35,938,912
Total Accrued Liability**	17,847,226,939	17,296,295,382
Actuarial Net Assets	3,977,037,893	4,012,852,196
Unfunded Actuarial Liabilities	13,870,189,046	13,283,443,186

** Accrued liability for active participants includes retirement liability for members in ordinary or duty disability status. Liability for disability benefits is recognized as a one-year term cost of 0.75 percent of pay added to the normal cost.*

*** Includes pension and OPEB*

Statutory Reserves as of December 31, 2020

	Annuity Payment Fund	Prior Service Fund	Total
Statutory Reserve*			
Retirees	$ 1,922,077,648	$ 6,580,649,776	$ 8,502,727,424
Future Surviving Spouses	443,625,384	495,454,397	939,079,781
Spouses**	219,373,864	183,518,729	402,892,593
Annual Benefits			
Retirees	$ 235,392,161	$ 663,957,653	$ 899,349,814
Future Surviving Spouses	N/A	N/A	N/A
Spouses**	33,508,978	31,373,303	64,882,281

**As required by State statutes, Statutory Reserves are calculated using the Combined Annuity Mortality Table with interest at 3.00 percent per annum, except for employees and spouses of employees who were participants on or before January 1, 1952, for whom the American Experience Table of Mortality with interest at 4.00 percent per annum is used.*

***Surviving spouses also include reversionary annuitants.*

Actuarial Assumptions and Actuarial Cost Method

Rationale for Assumptions: The information and analysis used in supporting each assumption that has a significant effect on this actuarial valuation is shown in the Experience Review dated September 21, 2017, with a follow-up report dated March 12, 2018. Current data is reviewed in conjunction with each annual valuation.

Mortality Rates:

Post-retirement: The RP-2014 Healthy Annuitant Mortality Table, set forward two years for males and one year for females, projected generationally using scale MP-2016 (effective December 31, 2017).

Pre-retirement: 120% of the RP-2014 Employee Mortality Tables, projected generationally using scale MP-2016 (effective December 31, 2017).

The mortality tables specified above were determined to reasonably reflect the mortality experience of the Plan as of the valuation date. The mortality table was then adjusted to future years using generational projection under scale MP-2016 to reflect future mortality improvements.

Termination Rates: These service-based rates are based on recent experience of the Fund (effective December 31, 2017).

Service	Rate (%)	Service	Rate (%)
0-0.99	17.00	12 - 12.99	4.25
1-1.99	16.00	13 - 13.99	4.00
2-2.99	14.00	14 - 14.99	3.75
3-3.99	12.00	15 - 15.99	3.50
4-4.99	10.00	16 - 16.99	3.25
5-5.99	8.00	17 - 17.99	3.00
6-6.99	7.00	18 - 18.99	2.75
7-7.99	6.50	19 - 19.99	2.50
8-8.99	6.00	20 - 20.99	2.25
9-10.99	5.00	21+	2.00
11-11.99	4.50		

Retirement Rates: For employees first hired prior to January 1, 2011, rates of retirement are based on the recent experience of the Fund (effective December 31, 2017).

Tier 1:

	Age and Service-Based Retirement Rates							
Service	**50 - 54**	**55 - 59**	**60 - 64**	**65**	**66 - 67**	**68 - 69**	**70 - 79**	**80+**
10 - 11		0%	8%	40%	30%	30%	35%	100%
12 - 19		0%	8%	30%	15%	20%	22.5%	100%
20 - 24		8%	10%	30%	15%	20%	22.5%	100%
25 - 29		8%	10%	35%	22.5%	20%	22.5%	100%
30	20%	8%	15%	35%	22.5%	20%	22.5%	100%
31 - 32	20%	8%	15%	40%	22.5%	20%	30%	100%
33 - 34	25%	13%	15%	40%	22.5%	20%	30%	100%
35 - 39	25%	13%	15%	45%	22.5%	20%	30%	100%
40+	50%	50%	50%	50%	50%	50%	50%	100%

Tier 2: For employees first hired on or after January 1, 2011 and before July 6, 2017, rates of retirement for each age from 62 to 80 were used (effective December 31, 2011).

Age	Rate
62	40%
63 - 69	20%
70 - 79	45%
80 +	100%

Tier 3: For employees first hired on or after July 6, 2017, rates of retirement for each age from 62 to 80 were used (effective December 31, 2018).

Age	Rate
60	40%
61 – 69	20%
70 – 79	45%
80 +	100%

Disability Benefit Valuation: Disability benefits are valued in normal cost as 0.75% of projected payroll (effective December 31, 2005).

Valuation of Inactive Participants: Inactive members with less than 10 years of service are assumed to take an immediate refund of his or her account balance. For inactive members with 10 or more years of service, the money purchase benefit is estimated by projecting the account balance (including employer contributions, when applicable) to the earliest retirement age. This estimated money purchase benefit is increased by 15% to account for the possibility that the minimum annuity formula is more valuable. For inactive members with 10 or more service and salary information available, the minimum annuity benefit is valued, if it is more valuable than the money purchase benefit.

Unknown Data for Participants: Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.

Spouse: 85% of members are assumed to be married, female spouses are assumed to be four years younger than male spouses, and 100% of spouses are assumed to be opposite gender (effective December 31, 1999).

Member Contributions: Based on payroll, adjusted to the middle of the year.

Net Investment Return: 7.00% per year, net of investment expense (effective December 31, 2017)

Inflation: 2.50% per year (effective December 31, 2017)

Salary Increases:

Service	Rate for Years 2019 - 2022 (%)	Rate for 2023 and After (%)
0 - 0.99	6.50	7.75
1 – 1.99	5.50	7.25
2 – 2.99	4.50	6.75
3 – 3.99	3.50	6.25
4 – 4.99	3.25	5.75
5 – 5.99	3.00	5.25
6 – 6.99	2.75	4.75
7 – 7.99	2.50	4.50
8 – 8.99	2.25	4.25
9 – 9.99	2.25	4.00
10–25.99	2.25	3.75
26+	1.50	3.50

Administrative Expenses:	Equal to actual expenses for the prior year. For purposes of the 50-year projection, future administrative expenses are assumed to increase by 2.5% each year
Actuarial Value of Assets:	Fair value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual fair return and the expected return on the fair value, and is recognized over a five - year period (effective December 31, 1999).
Actuarial Cost Method:	Entry Age Normal. Under this method, a normal cost is calculated for each employee that is the level annual contribution as a percent of pay required to be made from the employee's date of hire for as long as he/she remains active so that sufficient assets will be accumulated to provide his/her benefit. The accrued liability is the difference between the present value of all future benefits and the present value of all future normal costs.

Summary of Plan Provisions

This exhibit summarizes the major provisions of the Fund included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Membership:	Any employee of the City of Chicago or the Board of Education employed under the provisions of the municipal personnel ordinance or any person employed by the Municipal Employees' Annuity and Benefit Fund of Chicago who is not participating in any other pension fund or retirement system is covered by the Fund. Current and former employees of the Chicago Housing Authority and the Public Building Commission who have service in this Plan or who reinstate service in this Plan, may elect to participate in this Plan with respect to their employment with the Chicago Housing Authority or the Public Building Commission under certain circumstances.
Tiers:	Tier 1: First hired before January 1, 2011 Tier 2: First hired from non-reciprocal Fund on or after January 1, 2011 and before July 6, 2017 Tier 3: First hired on or after July 6, 2017 or former Tier 2 members that elected to make a one-time irrevocable election to switch to Tier 3 ("elective" Tier 3)
Employee Contributions:	Tier 1 and Tier 2 members of the Fund are required to contribute 8.5% of pensionable salary to the Fund as follows: 6.5% for the employee's retirement annuity, 1.5% for the spouse's annuity, and 0.5% for the automatic increases in the retirement annuity. Tier 3 members of the Fund are required to contribute 11.5% of pensionable pay. However, member contribution rate will be the normal cost rate, if less than 11.5%, but not lower than 8.5%. Once the Fund reaches 90% funded, the member contribution rate will be lowered to 7.5% and remain at 7.5% unless the funded ratio drops below 75%.

Final Average Salary:	For Tier 1 members, the final average salary is the average salary of the highest four consecutive years within the last 10 years of service prior to retirement. For Tier 2 and Tier 3 members, the final average salary is the average pensionable salary of the highest eight consecutive years within the last 10 years of service prior to retirement. Pensionable salary is limited to $106,800 in 2011, increased by the lesser of 3% or ½ of the change in CPI-U, not less than zero. For 2020, the salary limit was $115,929.
Employee Retirement Annuity:	
Money Purchase Formula	
Eligibility	Tier 1, the earlier of: • Age 60 and in active employment • Age 55 and 10 years of service Tier 2: Age 62 and 10 years of service Tier 3: Age 60 and 10 years of service
Amount	The annuity is based on all employee and City contributions. However, for Tier 1 members who retire before age 60 with less than 20 years of service, the annuity is based on employee contributions plus 1/10th of the City contributions for each year of service over 10. Maximum is 60% of highest salary.
Minimum Annuity Formula	
Eligibility	Tier 1, the earlier of: • Age 60 and in active employment • Age 60 and 10 years of service • Age 55 and 20 years of service • Age 50 and 30 years of service Tier 2: Age 62 and 10 years of service Tier 3: Age 60 and 10 years of service
Amount	The annuity is equal to 2.4% for each year of service times final average salary. For Tier 1 members under age 60 with less than 25 years of service, the annuity is reduced by 0.25% for each month that the member is under age 60. For Tier 2 members under age 67, the annuity is reduced by 0.50% for each month that the member is under age 67. For Tier 3 members under age 65, the annuity is reduced by 0.50% for each month that the member is under age 65. Maximum is 80% of final average salary.

Post-Retirement Increase:	Tier 1: An employee annuitant is eligible to receive an annual increase of 3% of the current payable annuity (compound). This increase begins in January of the year of the first payment date following the earlier of: 1) the later of the third anniversary of retirement or age 53, or 2) the later of the first anniversary of retirement or age 60 Tier 2 and Tier 3: An employee annuitant or surviving spouse who is eligible to receive an increase in annuity benefit, shall receive an annual increase equal to the lesser of 3% or ½ of the annual unadjusted percentage increase in the Consumer Price Index-U. The increase is based on the amount of the originally granted benefit (simple). This increase begins in January of the year of the first payment date following the later of: 1) the attainment of age 67 for Tier 2 members or age 65 for Tier 3 members, or 2) the first anniversary of the annuity start date
Reversionary Annuity:	An employee may elect to reduce his or her annuity by an amount less than or equal to $400 to provide a reversionary annuity for a spouse, parent, child, brother, or sister, to begin upon the employee's death. The election must be made before retirement and have been in effect one year prior to death. The one-year requirement is waived if the beneficiary is the employee's spouse. The death of the employee before retirement voids this election. The reversionary annuity for a spouse when added to the spouse's annuity cannot exceed 100% of the employee's reduced annuity. The amount of the monthly reversionary annuity is determined by multiplying the amount of the monthly reduction in the employee's annuity by a factor based on the age of the employee and the difference between the ages of the employee and the reversionary annuitant at the start date of the employee's annuity.
Elected City Officer's Optional Plan:	An alternative plan for elected officials of 3% of final salary for the first eight years, 4% for the next four years, and 5% thereafter, subject to an 80% maximum, is available. The elected official must contribute an additional 3% of salary to receive these benefits. This plan also includes alternative widow and disability benefit formulas. This plan became effective upon approval from the IRS on September 17, 1991. Public Act 100-0023 closed this Plan to officers elected after July 6, 2017.

Spouse Annuity:	The surviving spouse annuity is the greater of the annuity under the money purchase formula or the minimum annuity formula. Surviving spouses who remarry on or after September 4, 2000, will not have their annuities terminated.
Money Purchase Formula	When an employee retires, the spouse's annuity is fixed, based on employee and City contributions for the spouse's annuity and a joint life age factor. If the employee dies in service, the spouse's annuity is based on all contributions. For 3% annuities fixed on or after August 1, 1983, the "Combined Annuity Mortality Table" shall continue to be used; however, surviving spouse's single life annuities and reversionary annuities shall be computed using the best factor (the factor producing the highest annuity), without regard to gender.
Minimum Annuity Formula	If the employee retires or dies in service and is at least age 55 with 20 or more years of service, or is at least age 50 with 30 or more years of service, the spouse's annuity is equal to half the amount of the annuity the employee was entitled to receive at the time of retirement or death in service. This annuity must be reduced by 0.25% for each month the spouse is under age 55 (or age 50 if the employee had at least 25 years of service) at the time the employee retires or dies in service. If the employee dies while receiving a retirement annuity, the spouse is eligible for an annuity of one half of the employee's annuity at death. This annuity is reduced by 0.25% for each month the spouse is under age 55 (or age 50 if the employee had at least 25 years of service) at the time of the employee's death. If the employee dies in service with at least 10 years of service, the spouse is entitled to an annuity of half of the minimum formula annuity earned and accrued to the credit of the employee at the date of death. This annuity is not reduced due to the age of the employee or spouse. The spouse is eligible for this annuity only if the marriage was in effect for at least 10 years. The spouse will receive a minimum annuity of $800 per month if the employee retires with at least 10 years of service or dies in service with at least five years of service. For Tier 2 and Tier 3 members, the annuity payable to the surviving spouse is equal to 66 2/3% of the participant's accrued retirement annuity without a reduction due to age.
Child Annuity:	A child's annuity is provided for an unmarried child of a deceased employee who is under the age of 18, if the child was born before the withdrawal from service. The annuity is $220 per month while the spouse of the deceased employee is alive and $250 per month if the spouse is deceased.

Ordinary Disability Benefit:

This benefit is granted for disabilities incurred other than in performance of an act of duty and is 50% of salary as of the last day worked. The first payment shall be made one month after the disablement occurs provided the employee is not then in receipt of salary. Length of time on disability is limited to a maximum of 25% of the employee's total service or five years, whichever occurs first.

The Fund contributes salary deductions for annuity purposes for the ordinary disability benefit. Such amounts contributed by the Fund after December 31, 2000, while the employee is receiving ordinary disability benefits, are not refundable to the employee and will be used for annuity purposes only.

Duty Disability Benefit:

Any employee who becomes disabled as the result of an injury incurred in the performance of any act of duty has a right to receive a duty disability benefit in the amount of 75% of salary at date of injury, plus $10 a month for each unmarried child less than age 18. Child's duty disability benefit is limited to 15% of the employee's salary as of the date of injury. Duty disability benefits begin one day after the later of the last day worked or the last day paid.

If the disability has resulted from any mental disorder, physical defect or disease which existed at the time such injury was sustained, the duty disability benefit shall be 50% of salary at date of injury. Disablement because of heart attacks, strokes, or any disablement due to heart disease shall not be considered the result of an accident suffered in the performance of duty. However, the employee will receive service credit and the City will contribute salary deductions for annuity purposes if the employee is receiving Workers' Compensation.

A duty disability benefit is payable to age 65 if the disability benefits begin before age 60. For an employee who begins disability on or after age 60, disability benefits will continue for five years. A duty disability benefit which continues for more than five years and which starts before the employee's age 60, will be increased by 10% on January 1st of the sixth year.

The City contributes salary deductions for annuity purposes for the duty disability benefit. Such amounts contributed by the City after December 31, 1981, while the employee is receiving duty disability benefits, are not refundable to the employee and will be used for annuity purposes only.

Refunds:

Tier 1:

An employee who resigns before age 55, or before age 60 with less than 10 years of service, is entitled to all salary deductions accumulated with interest to date of resignation, plus the 0.50% deducted for annuity increase purposes without interest.

Tier 2 and Tier 3:

An employee who resigns before age 62 (or age 60 for Tier 3) without regard to length of service, or who resigns with less than 10 years of service regardless of age, is entitled to all salary deductions accumulated with interest to date of resignation, plus the 0.50% deducted for annuity increase purposes without interest.

All Tiers:

Amounts contributed by the employee, excluding the 0.50% deductions for annuity increase, that have not been paid out as annuity are refundable to the employee's estate with interest to the date of retirement or death, if the employee died in service.

If the annuity of an employee or spouse is less than $800 a month, the employee or spouse may elect to receive a refund in lieu of an annuity.

If unmarried at the time of retirement, the employee is entitled to a refund, with interest, of contributions made for the spouse's annuity.

Plan Year: January 1 through December 31

OPEB Healthcare Subsidy: All eligible City of Chicago employee annuitants (both current and future employee annuitants, but not spouse or child annuitants) are entitled to receive a health care insurance premium subsidy of $25 per month from the Fund for each month after December 31, 2016.

Eligibility Requirements:

- Retired on or after August 23, 1989
- Hired before April 4, 2003
- 15 years of service

Statistical

The Statistical Section presents additional information to provide financial users with added historical perspective, context and detail to assist in using the information in the financial statements; and additional analytical information on Plan membership data, retirement benefits and other postemployment benefits.

The schedules beginning on page 118 through page 120 show financial trends information that assist users in understanding and assessing how the Plan's financial position has changed over time. A schedule on page 121 allocates revenues or additions to fiduciary net position by source. A schedule on page 122 allocates expenses or deductions from fiduciary net position by type. The schedule on page 123 shows the refunds of contributions and the schedule on page 124 allocate the total benefits that were paid.

The schedules presented immediately following the financial trends information contain additional analytical information on the level of monthly or annual benefits by type of benefit, by number of retirees, and years of service. A schedule on page 125 provides information on the average monthly benefit payments to new retirees. Schedules on pages 126 and 127 provides information on average employee retirement benefit payable, current retirees and beneficiaries by range of pension amounts, history of retirees and beneficiaries by type of benefit, and covered employees by age and years of service. A schedule on page 128 provides information on Plan membership data.

Changes in Fiduciary Net Position

(Last ten years)

	2020	2019	2018	2017	2016
Additions:					
Employer contributions	$ 498,598,904	$ 421,000,000	$ 349,574,257	$ 261,763,635	$ 157,444,029
Member contributions	157,797,710	146,645,216	138,399,727	134,764,920	130,390,848
Net investment income	335,402,959	560,940,002	(204,974,702)	610,515,096	281,419,146
Other additions	-	-	-	5,393,581	-
Total Additions	$ 991,799,573	$ 1,128,585,218	$ 282,999,282	$1,012,437,232	$ 569,254,023
Deductions:					
Annuities	$ 940,526,176	$ 914,653,034	$ 878,738,782	$ 842,632,392	$ 813,092,340
Disabilities	9,511,321	10,323,869	10,415,725	11,711,092	12,004,051
Healthcare Subsidy	1,607,400	2,731,425	-	-	7,725,538
Refunds	23,440,140	27,674,608	27,043,978	33,830,051	34,575,271
Administrative Expenses	7,117,942	6,740,268	6,638,608	6,473,006	7,056,784
Total Deductions	$ 982,202,979	$ 962,123,204	$ 922,837,093	$ 894,646,541	$ 874,453,984
Net Increase/(Decrease)	9,596,594	166,462,014	(639,837,811)	117,790,691	(305,199,961)
Beginning of year	4,080,642,490	3,914,180,476	4,554,018,287	4,436,227,596	4,741,427,557
End of year	$ 4,090,239,084	$ 4,080,642,490	$3,914,180,476	$4,554,018,287	$ 4,436,227,596

Changes in Fiduciary Net Position (continued)

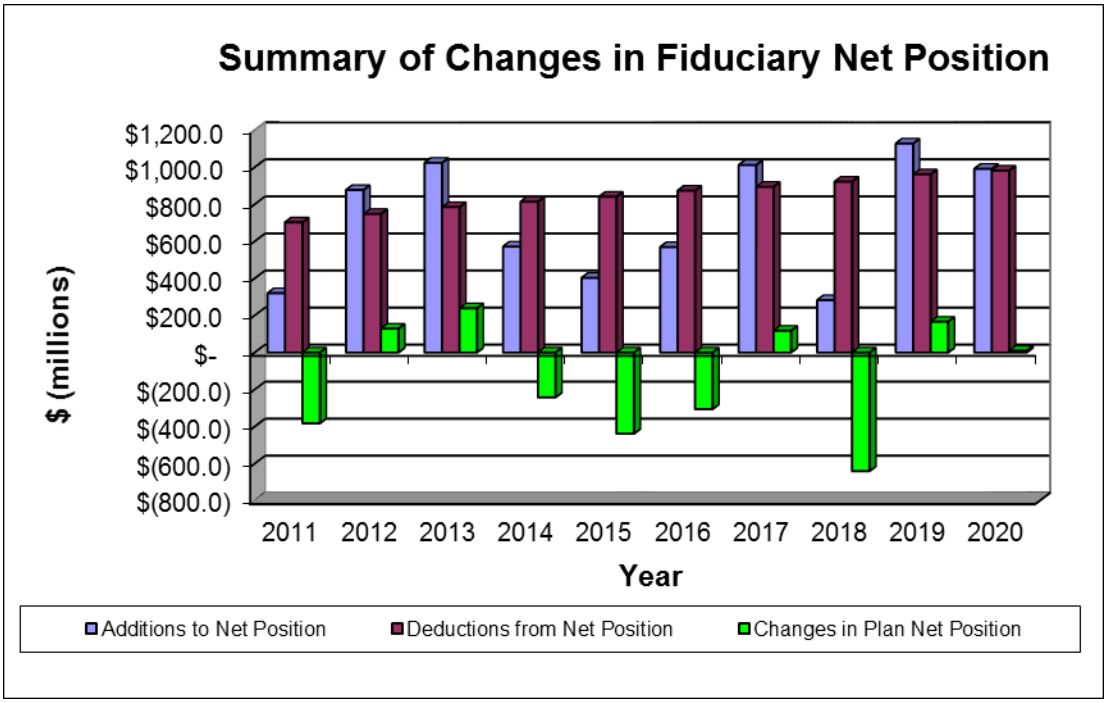
(Last ten years)

	2015	2014	2013	2012	2011
Additions:					
Employer contributions	$ 157,716,475	$ 158,797,631	$ 157,704,971	$ 158,380,709	$ 156,525,374
Member contributions	131,428,104	129,971,981	131,532,173	130,266,293	132,596,417
Net investment income	114,025,290	283,268,612	735,272,432	589,198,468	31,583,226
Other additions	-	13,313	-	-	-
Total Additions	$ 403,169,869	$ 572,051,537	$ 1,024,509,576	$ 877,845,470	$ 320,705,017
Deductions:					
Annuities	$ 782,083,805	$ 754,391,331	$ 723,880,608	$ 681,508,540	$ 640,090,207
Disabilities	12,266,647	11,905,700	12,158,883	13,643,816	13,963,941
Health Care Subsidy	8,491,284	9,050,883	9,508,087	9,522,054	9,516,053
Refunds	31,685,872	32,325,780	33,456,449	36,908,784	32,104,031
Administrative Expenses	6,701,000	6,567,842	6,498,913	6,841,486	7,375,338
Total Deductions	$ 841,228,608	$ 814,241,536	$ 785,502,940	$ 748,424,680	$ 703,049,570
Net Increase/(Decrease)	(438,058,739)	(242,189,999)	239,006,636	129,420,790	(382,344,553)
Beginning of year	5,179,486,296	5,421,676,295	5,182,669,659	5,053,248,869	5,435,593,422
End of year	$4,741,427,557	$ 5,179,486,296	$ 5,421,676,295	$ 5,182,669,659	$ 5,053,248,869

Summary of Changes in Fiduciary Net Position

(Last ten years)

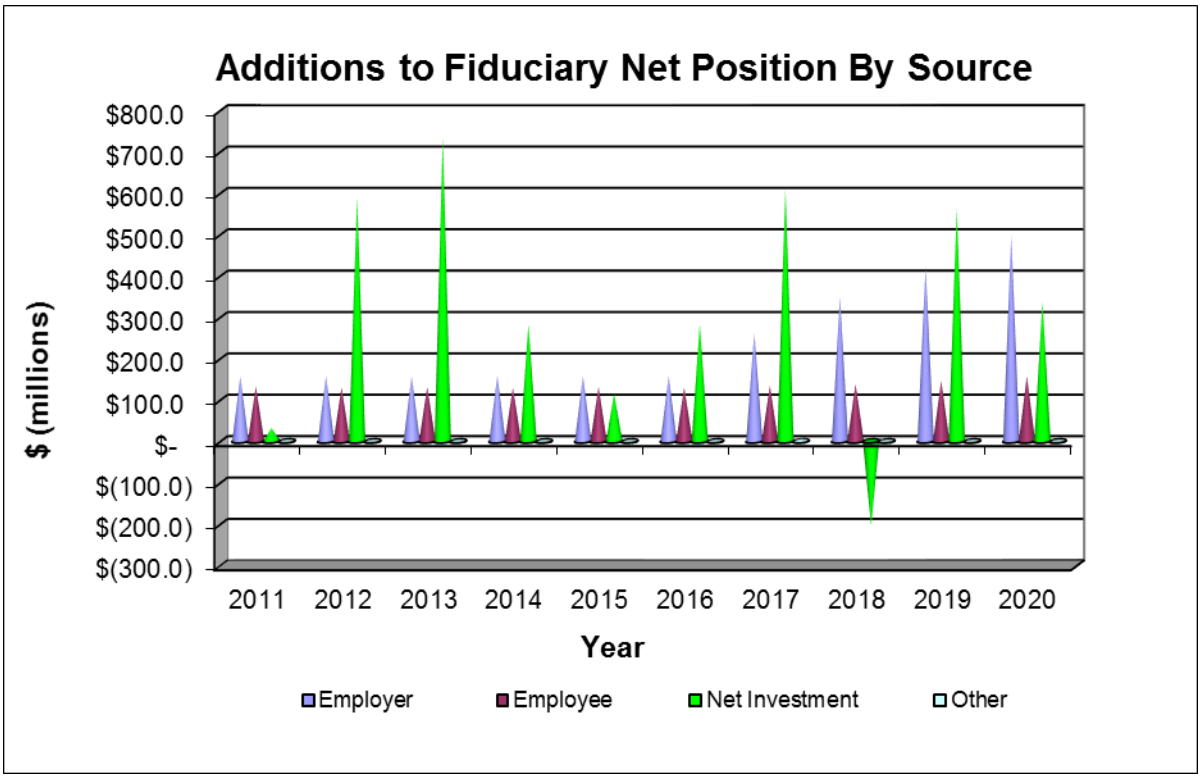
Year	Additions to Net Position	Deductions from Net Position	Increase (Decrease) in Net Position
2011	$ 320,705,017	$ 703,049,570	$ (382,344,553)
2012	877,845,470	748,424,680	129,420,790
2013	1,024,509,576	785,502,940	239,006,636
2014	572,051,537	814,241,536	(242,189,999)
2015	403,169,869	841,228,608	(438,058,739)
2016	569,254,023	874,453,984	(305,199,961)
2017	1,012,437,232	894,646,541	117,790,691
2018	282,999,282	922,837,093	(639,837,811)
2019	1,128,585,218	962,123,204	166,462,014
2020	991,799,573	982,202,979	9,596,594



Additions to Fiduciary Net Position By Source

(Last ten years)

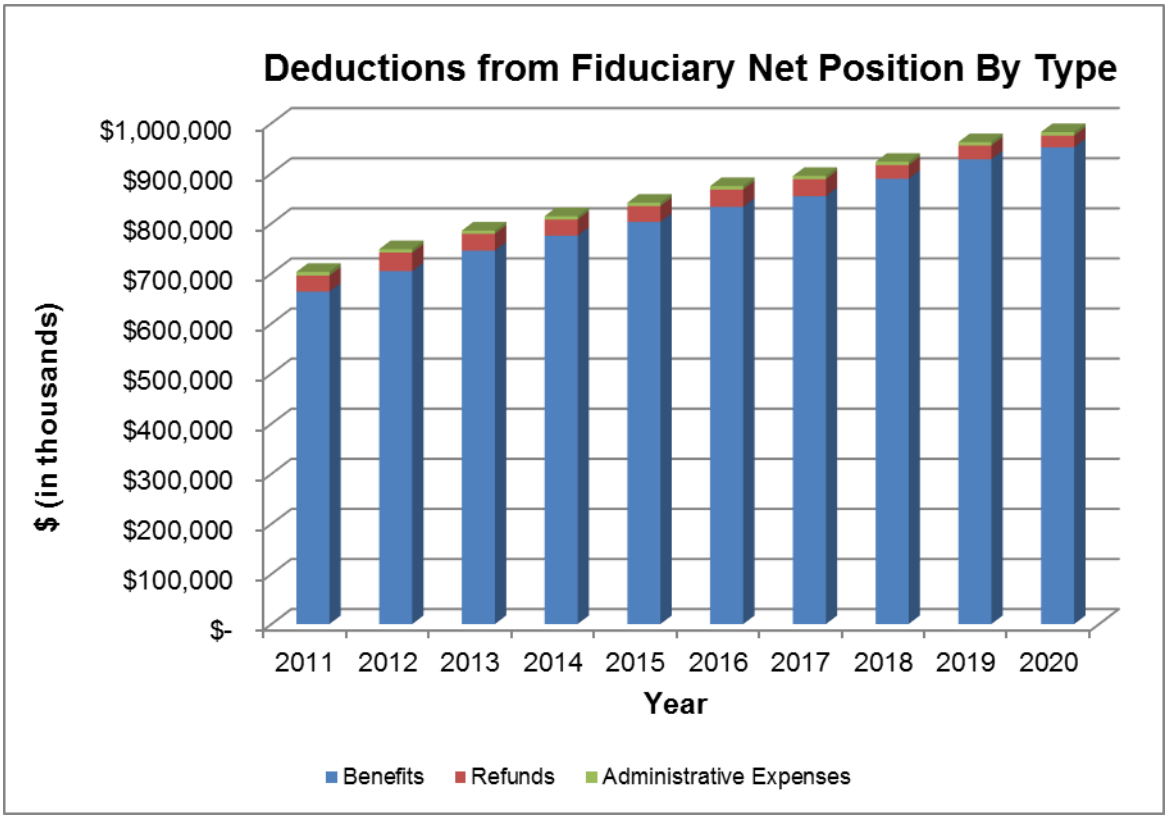
Year	Employer Contributions	Employee Contributions	Investment Income (net of expense)	Other Income	Total
2011	$ 156,525,374	$ 132,596,417	$ 31,583,226	$ -	$ 320,705,017
2012	158,380,709	130,266,293	589,198,468	-	877,845,470
2013	157,704,971	131,532,173	735,272,432	-	1,024,509,576
2014	158,797,631	129,971,981	283,268,612	13,313	572,051,537
2015	157,716,475	131,428,104	114,025,290	-	403,169,869
2016	157,444,029	130,390,848	281,419,146	-	569,254,023
2017	261,763,635	134,764,920	610,515,096	5,393,581	1,012,437,232
2018	349,574,257	138,399,727	(204,974,702)	-	282,999,282
2019	421,000,000	146,645,216	560,940,002	-	1,128,585,218
2020	498,598,904	157,797,710	335,402,959	-	991,799,573



Deductions from Fiduciary Net Position By Type

(Last ten years)

Year	Benefits	Refunds	Administrative Expense	Total
2011	$ 663,570,201	$ 32,104,031	$ 7,375,338	$ 703,049,570
2012	704,674,410	36,908,784	6,841,486	748,424,680
2013	745,547,578	33,456,449	6,498,913	785,502,940
2014	775,347,914	32,325,780	6,567,842	814,241,536
2015	802,841,736	31,685,872	6,701,000	841,228,608
2016	832,821,929	34,575,271	7,056,784	874,453,984
2017	854,343,484	33,830,051	6,473,006	894,646,541
2018	889,154,507	27,043,978	6,638,608	922,837,093
2019	927,708,328	27,674,608	6,740,268	962,123,204
2020	951,644,897	23,440,140	7,117,942	982,202,979



Refunds by Type

(Last ten years)

Year	Separation	Death	Others[1]	Total
2011	$ 29,482,493	$ 1,976,182	$ 645,356	$ 32,104,031
2012	34,519,018	2,389,915	(149)	36,908,784
2013	30,765,181	2,711,770	(20,502)	33,456,449
2014	29,219,994	3,211,181	(105,395)	32,325,780
2015	27,325,678	4,570,458	(210,264)	31,685,872
2016	30,676,911	3,899,766	(1,406)	34,575,271
2017	31,091,785	3,160,126	(421,860)	33,830,051
2018	25,002,075	2,549,529	(507,626)	27,043,978
2019	24,727,609	3,138,908	(191,909)	27,674,608
2020	19,701,721	2,791,287	947,132	23,440,140

[1] Others include transfer of contributions to other Funds and refunds due to error in deductions

Benefits by Type - Last ten years

	2020	2019	2018	2017	2016
Annuities:					
Employee	$ 875,714,653	$ 851,367,370	$ 816,753,591	$ 781,897,484	$ 753,153,639
Surviving Spouse	64,523,211	62,959,842	61,678,713	60,357,230	59,627,061
Children	288,312	325,822	306,478	377,678	311,640
Total Annuities	940,526,176	914,653,034	878,738,782	842,632,392	813,092,340
Disabilities:					
Ordinary	6,569,404	7,381,403	6,717,495	7,351,851	7,685,452
Duty	2,941,917	2,942,466	3,698,230	4,359,241	4,318,599
Total Disabilities	9,511,321	10,323,869	10,415,725	11,711,092	12,004,051
Postemployment Healthcare					
Employee	1,607,400	2,731,425	-	-	6,530,366
Surviving Spouse	-	-	-	-	1,194,032
Children	-	-	-	-	1,140
Total Healthcare Subsidy	1,607,400	2,731,425	-	-	7,725,538
Total Benefits	$ 951,644,897	$ 927,708,328	$ 889,154,507	$ 854,343,484	$ 832,821,929

	2015	2014	2013	2012	2011
Annuities:					
Employee	$ 723,152,347	$ 696,095,106	$ 666,939,420	$ 624,554,190	$ 584,973,939
Surviving Spouse	58,554,347	57,902,663	56,522,097	56,494,913	54,600,246
Children	377,111	393,562	419,091	459,437	516,022
Total Annuities	782,083,805	754,391,331	723,880,608	681,508,540	640,090,207
Disabilities:					
Ordinary	8,315,568	8,067,664	8,161,747	9,477,385	9,708,906
Duty	3,951,079	3,838,036	3,997,136	4,166,431	4,255,035
Total Disabilities	12,266,647	11,905,700	12,158,883	13,643,816	13,963,941
Postemployment Healthcare					
Employee	7,219,202	7,726,595	8,137,318	8,120,476	8,070,084
Surviving Spouse	1,270,277	1,319,793	1,363,359	1,395,783	1,439,177
Children	1,805	4,495	7,410	5,795	6,792
Total Healthcare Subsidy	8,491,284	9,050,883	9,508,087	9,522,054	9,516,053
Total Benefits	$ 802,841,736	$ 775,347,914	$ 745,547,578	$ 704,674,410	$ 663,570,201

History of Average Pension Benefit Payments to New Retirees[1]

(Last ten years)

Retirement Effective Dates		Year of Service 10-14	15-19	20-24	25-29	30 & Over	Total
2011	Average Monthly Benefit at Retirement	$1,350	$1,981	$2,432	$3,459	$ 4,696	$ 3,361
	Average Final Average Salary	$4,261	$4,506	$4,661	$5,265	$ 6,046	$ 5,257
	Number of Active Recipients	66	88	193	185	311	843
2012	Average Monthly Benefit at Retirement	$1,295	$2,014	$2,391	$3,362	$ 4,506	$ 3,230
	Average Final Average Salary	$4,400	$4,893	$4,533	$5,094	$ 5,737	$ 5,125
	Number of Active Recipients	93	132	274	254	418	1,171
2013	Average Monthly Benefit at Retirement	$1,304	$1,998	$2,348	$3,259	$ 4,446	$ 3,065
	Average Final Average Salary	$4,456	$4,890	$4,314	$4,953	$ 5,668	$ 5,030
	Number of Active Recipients	104	106	204	216	290	920
2014	Average Monthly Benefit at Retirement	$1,169	$1,760	$2,290	$3,137	$ 4,350	$ 2,891
	Average Final Average Salary	$4,161	$4,528	$4,597	$4,877	$ 5,644	$ 4,921
	Number of Active Recipients	93	92	185	203	223	796
2015	Average Monthly Benefit at Retirement	$1,275	$1,959	$2,279	$3,405	$ 4,446	$ 3,048
	Average Final Average Salary	$4,439	$4,685	$4,387	$5,174	$ 5,724	$ 5,031
	Number of Active Recipients	68	119	171	180	227	765
2016	Average Monthly Benefit at Retirement	$1,347	$1,909	$2,350	$3,383	$ 4,795	$ 3,126
	Average Final Average Salary	$5,096	$4,836	$4,604	$5,199	$ 6,276	$ 5,306
	Number of Active Recipients	83	113	208	199	237	840
2017	Average Monthly Benefit at Retirement	$1,306	$1,938	$2,480	$3,687	$ 4,889	$ 3,273
	Average Final Average Salary	$4,734	$4,860	$4,841	$5,526	$ 6,293	$ 5,434
	Number of Active Recipients	91	122	197	247	245	902
2018	Average Monthly Benefit at Retirement	$1,551	$2,030	$2,741	$3,973	$ 5,285	$ 3,628
	Average Final Average Salary	$5,590	$4,998	$5,247	$6,017	$ 6,854	$ 5,961
	Number of Active Recipients	82	126	167	201	272	848
2019	Average Monthly Benefit at Retirement	$1,336	$1,961	$2,713	$4,002	$ 5,175	$ 3,598
	Average Final Average Salary	$4,624	$4,985	$5,305	$6,141	$ 6,716	$ 5,953
	Number of Active Recipients	74	94	158	177	247	750
2020	Average Monthly Benefit at Retirement	$1,262	$2,048	$2,606	$4,249	$ 5,272	$ 3,710
	Average Final Average Salary	$4,790	$5,032	$5,126	$6,488	$ 6,863	$ 6,044
	Number of Active Recipients	72	90	143	161	254	720

[1] *This schedule excludes reciprocal annuities, money purchase annuities and minimum annuities*

Source of Data: Actuarial Valuation and Review as of December 31, 2020

Average Employee Retirement Benefits Payable
(last ten years)

Valuation Date	Average Annual Benefit	Average Current Age Of Retirees	Average Benefit At Retirement Current Year	Average Age At Retirement Current Year	Average Service Years At Retirement Current Year
12/31/2011	$32,269	72.7	$34,513	62.1	24.86
12/30/2012	$33,423	72.6	$33,508	62.7	24.81
12/30/2013	$34,357	72.6	$31,177	63.0	23.55
12/30/2014	$34,532	72.7	$29,775	62.5	23.35
12/31/2015	$36,277	72.8	$31,686	62.6	23.48
12/30/2016	$37,243	72.9	$32,000	62.0	23.50
12/30/2017	$38,372	72.9	$34,413	62.0	24.16
12/30/2018	$39,559	73.0	$37,678	62.2	24.45
12/31/2019	$40,819	73.1	$37,670	62.2	24.49
12/30/2020	$42,053	73.2	$39,526	62.7	24.88

Source of Data: Actuarial Valuation and Review as of December 31, 2020

Current Retirees & Beneficiaries by Range of Pension Amounts

As of December 31, 2020

Amount of Monthly Benefit	Number of Employee Annuitants	Number of Spouse Annuitants	Number of Reversionary Annuitants	Number of Child Annuitants	Total Number of Annuitants
Under $500	704	176	80	97	1,057
$500 - $999	1,406	1,755	34	-	3,195
$1,000 - $1,499	2,590	631	4	-	3,225
$1,500 - $1,999	2,513	464	3	-	2,980
$2,000 - $2,499	1,751	352	-	-	2,103
$2,500 - $2,999	1,858	252	-	-	2,110
$3,000 - $3,499	1,522	139	-	-	1,661
$3,500 - $3,999	1,242	70	-	-	1,312
$4,000 - $4,499	1,199	17	-	-	1,216
$4,500 - $4,999	1,094	5	-	-	1,099
$5,000 - $5,499	1,011	5	-	-	1,016
$5,500 - $5,999	988	1	-	-	989
$6,000 - $6,499	808	-	-	-	808
$6,500 - $6,999	769	-	-	-	769
$7,000 & Over	1,931	-	-	-	1,931
Totals	**21,386**	**3,867**	**121**	**97**	**25,471**

Source of Data: Actuarial Valuation and Review as of December 31, 2020

History of Retirees and Beneficiaries By Type of Benefit

(Last ten years)

Valuation	Annuitants				Disability		Compensation	Reciprocal	
Date	Employee	Spouse	Child	Reversionary	Ordinary	Duty	Annuitants*	Employee	Spouse
12/31/2011	16,230	3,910	164	129	346	264	2	2,583	364
12/30/2012	16,874	3,864	149	129	280	250	2	2,740	361
12/30/2013	17,320	3,844	141	138	227	213	2	2,793	363
12/30/2014	17,553	3,798	141	139	195	225	2	2,858	363
12/30/2015	17,697	3,757	118	134	187	213	2	2,887	369
12/29/2016	17,954	3,706	102	128	178	216	2	2,965	379
12/30/2017	18,113	3,633	114	124	162	211	2	3,024	374
12/30/2018	18,304	3,597	102	119	158	164	2	3,089	366
12/30/2019	18,273	3,540	100	122	165	133	2	3,150	359
12/29/2020	18,220	3,519	97	117	146	130	2	3,166	352

** Compensation annuitants also included with spouse annuitants*

Source of Data: Actuarial Valuation and Review as of December 31, 2020

Covered Employees by Age & Years of Service

Attained	Completed Years of Service										
Age	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	Total
Under 20	17	17	-	-	-	-	-	-	-	-	34
20-24	178	640	18	-	-	-	-	-	-	-	836
25-29	299	1,906	399	11	-	-	-	-	-	-	2,615
30-34	237	1,920	1,027	185	23	-	-	-	-	-	3,392
35-39	194	1,635	1,009	454	213	48	-	-	-	-	3,553
40-44	146	1,308	896	454	477	285	44	-	-	-	3,610
45-49	138	1,001	814	497	503	691	274	30	-	-	3,948
50-54	82	848	682	484	624	829	539	226	3	-	4,317
55-59	79	532	521	450	677	866	583	379	68	2	4,157
60-64	42	342	365	312	488	610	477	352	124	20	3,132
65-69	10	103	127	147	193	215	198	159	67	23	1,242
70 & Over	6	42	40	31	75	96	71	73	29	28	491
Total	**1,428**	**10,294**	**5,898**	**3,025**	**3,273**	**3,640**	**2,186**	**1,219**	**291**	**73**	**31,327**

Source of Data: Actuarial Valuation and Review as of December 31, 2020

10-Year History of Plan Membership

(Last ten years)

Year	Member Active	Member Inactive	Retirees	Beneficiaries	Total
2011	31,976	12,762	18,815	4,567	68,120
2012	31,326	13,465	19,617	4,503	68,911
2013	30,647	14,254	20,116	4,486	69,503
2014	30,160	15,495	20,414	4,441	70,510
2015	30,683	16,268	20,586	4,378	71,915
2016	30,296	16,876	20,921	4,315	72,408
2017	30,922	17,549	21,138	4,245	73,854
2018	31,285	17,575	21,393	4,184	74,437
2019	32,162	18,734	21,423	4,121	76,440
2020	31,327	20,139	21,386	4,085	76,937

10-Year History of Covered Employees

(Last ten years)

Year	Male Participants	Female Participants	Total Participants
2011	12,828	19,148	31,976
2012	12,696	18,630	31,326
2013	12,622	18,025	30,647
2014	12,464	17,696	30,160
2015	12,618	18,065	30,683
2016	12,482	17,814	30,296
2017	12,518	18,404	30,922
2018	12,424	18,861	31,285
2019	12,515	19,647	32,162
2020	12,134	19,193	31,327

Source of Data: Actuarial Valuation and Review as of December 31, 2020

Appendix A

APPENDIX A

LEGISLATIVE CHANGES IN PLAN PROVISIONS 2011 THROUGH 2020

2011 Session

Public Act 97-0530 (SB 1672)

- Approved August 23, 2011.
- Requires all pension funds and retirement systems subject to the Code to comply with the federal Heroes Earnings Assistance and Relief Tax Act of 2008.

Public Act 97-0609 (SB 1831)

- Approved August 26, 2011.
- Applies to those members hired on or after January 1, 2012.
- Provides that if a new hire is receiving a retirement annuity or pension and accepts a contractual position to provide services to a governmental entity from which he or she has retired, then that person's annuity or pension will be suspended during that contractual service.
- Makes it a Class A misdemeanor for a pensioner who is seeking contractual employment to fail to notify certain persons about his or her retirement status before accepting an employment contract.

Public Act 97-0504 (HB 1670)

- Approved August 23, 2011.
- Amends the Open Meetings Act.
  - Requires each elected or appointed member of a public body subject to this Act who is such a member on the effective date of the amendatory Act to successfully complete the electronic training curriculum developed and administered by the Public Access Counselor.
  - Requires those members to complete the training not later than one year after the effective date of the amendatory Act.
  - Requires each elected or appointed member of a public body subject to the Act who becomes such a member after the effective date of the amendatory Act to successfully complete the electronic training curriculum developed and administered by the Public Access Counselor.
  - Requires those members to complete the training not later than the 90th day after the date the member either (i) takes the oath of office, if the member is required to take an oath of office to assume the person's duties as a member of the public body or (ii) otherwise assumes responsibilities as a member of the public body, if the member is not required to take an oath of office to assume the person's duties as a member of the governmental body.
  - Requires each member who successfully completes the curriculum to file a copy of the certificate of completion with the public body.
  - Provides that the failure of one or more members of a public body to complete the training required by this Section does not affect the validity of an action taken by the public body.
  - Provides that an elected or appointed member of a public body subject to this Act who has successfully completed the required training and filed a copy of the certificate of completion with the public body is not required to subsequently complete that training.

APPENDIX A

2012 Session

Public Act 97-0651 (HB 3813)

- Approved and effective January 5, 2012.
- Requires any reasonable suspicion of fraud against the Fund to be reported to the State's Attorney for investigation.
- Changes provisions for Union Leaves of Absence as follows:
  - Service credit can be accrued only for union leaves that begin before the effective date of this amendatory Act.
  - "Any pension plan established by the local labor organization" is defined as any pension plan in which the member can receive credit as a result of his membership in the local labor organization. This is a declaration of existing law.
  - Salary used for calculation of final average salary must be a salary paid by an employer, not by the union. This is a declaration of existing law.
  - Minimum annuity section 11-134 is changed to add to the final average salary the product of (1) final average salary, (2) the average percentage increase in the CPI during the leave of absence, and (3) the number of years of leave of absence. This does not seem to deal with a situation where the employee may have been on leave within the last 10 years but is last with Municipal. It also only amends paragraph (f-1) which applies to those members who go on annuity on or after the attainment of age 60.
  - Does not change that contributions are based on current salary with the union.

Public Act 97-0967 (HB 3969)

- Approved and effective August 16, 2012.
- Applies if the member retired after the effective date with less than 2 years of service in a participating system under the Reciprocal Act after General Assembly service.
- Requires that if the final average salary in a participating system is used to calculate the annuity, the employer must pay the General Assembly Retirement System for any increased cost of the General Assembly annuity that is attributable to the higher salary under the participating system.

2013 Session

Public Act 98-0043 (HB 1584)

- Approved and effective June 28, 2013.
- Changes the duration of health insurance supplement payments to eligible employee annuitants to "Beginning July 1,2008, and until such time as the city no longer provides a health care plan for such annuitants or December 31, 2016, whichever comes first.

Public Act 98-0433 (HB 2620)

- Approved and effective August 16, 2013.
- Allows for an additional exception to the RFP process for obtaining investment services for "contracts for follow-on funds with the same fund sponsor through close-end funds".

APPENDIX A

2014 Session

Public Act 98-0641 (SB 1922)

- Approved and effective June 9, 2014.
- Implements a funding policy designed to achieve 90% funded ratio by 2055.
- Provides for incrementally increased employer contribution multiple, which eventually converts to actuarial-based funding.
- Caps the current pension levy at the full required city contribution amount.
- Creates payment obligation to the fund; provides enforcement.
- Provides for incrementally increased employee contributions.
- Tier 1: Ties annual increase in retirement annuity to inflation, subject to 3% cap, delays initial annual increase by one year, and eliminates annual increases in 2017, 2019 and 2025 for most annuitants.
- Tier 2: Reduces minimum retirement age by 2 years, delays the initial annual increase by one year for some retirees, and eliminates the annual increases in 2025.

Public Act 98-1022 (SB 452)

- Approved and effective August 22, 2014.
- Requires investment managers and consultants entering into a contract to disclose information on use of vendors owned by minorities, females, and persons with disabilities.
- Requires minority consideration to be "within the bounds of financial and fiduciary prudence."
- Defines "minority investment managers" and requires funds to adopt a policy to increase goals for utilization. Requires annual review.
- Declares it is the public policy of the State to encourage use of minority investment managers.

2015 Session

Public Act 99-0462 (SB 1334)

- Approved August 25, 2015.
- Sets aspirational goals that, beginning January 1, 2016, at least 20% of the total funds under management be managed by emerging investment managers and that at least 20% of the investment advisors be minorities, females, and persons with disabilities.
- Sets the aspirational goal that, beginning January 1, 2016, at least 20% of contracts for "information technology services", "accounting services", "insurance brokers", "architectural and engineering services", and "legal services" be awarded to businesses owned by minorities, females, and person with disabilities.

Jones et al. v. Municipal Employees' Annuity and Benefit Fund of Chicago, et al.
Johnson et al. v. Municipal Employees' Annuity and Benefit Fund of Chicago, et al.

- Public Act 98-0641 was ruled unconstitutional by the circuit court on July 24, 2015. On March 24, 2016, the Illinois Supreme Court affirmed the circuit court's decision.
- Restores full automatic annual increase, the date of initial increase and eliminates increase holidays
- For Tier 2, changes retirement age for unreduced benefits back to age 67 and for reduced benefits to age 62.
- Eliminates new funding policy.

APPENDIX A

2016 Session

Public Act 99-0683 (HB 6030)

- Approved July 29, 2016.
- Requires every pension fund or retirement system under the Code to develop and implement, by no later than June 30, 2017, a process to identify annuitants who are deceased. The process shall require the pension fund or retirement system to check for any deceased annuitants at least once per month and shall include the use of commonly accepted methods to identify persons who are deceased, which include but are not limited to, the use of a third party entity that specializes in the identification of deceased persons, the use of data provided by the Social Security Administration, the use of data provided by the Department of Public Health's Office of Vital Records, or the use of any other method that is commonly used by other states to identify deceased persons.

2017 Session

Public Act 100-0023 (SB 0042)

- Approved July 6, 2017 (effective date).
- Creates a new tier of benefit eligibility and contribution requirements for members (Tier 3) who first become members on or after the effective date of the Act. Benefit structure would be consistent with a Tier 2 member, except as reflected below:
    - Members would contribute 11.5%
    - Beginning January 1, 2018, members would contribute the lesser of 11.5% or the normal cost of the accrued benefit calculated on an annual basis; not less than 8.5%
    - Qualified members would be able to retire at 65 years of age undiscounted and 60 to 64 years of age discounted.
- A Tier 2 member would have from October 1 to November 15, 2017 to make an irrevocable election to become a Tier 3 member.
- Creates an optional benefits structure for certain Tier 2 members. Must be passed by resolution or ordinance by the governing body of the local government.
- Requires law department employees first hired after the effective date of the Act to be members of the Fund.
- The City of Chicago will increase contributions to the Fund from 2018 to 2022 (ramp period) and then begin paying a required contribution to achieve 90% funding in 40 years (2058).
- The Fund's ability to subrogate a disability injury of a member that was caused by a third party.
- Closes the Alternative Annuity for City Officers Plan to officers who first become an elected officer after the effective date of the Act.
- Felony conviction. Any refund to a person who was convicted of a felony that was in relation to their service as a municipal employee, shall be reduced by any benefit received by the person prior to the calculation of the refund. This relates to persons who first became members after the effective date of the Act.

2017 Session (continued)

Public Act 100-0334 (HB0350)

- Approved and effective August 25, 2017.
- Provides for the forfeiture of benefits for any person who otherwise would receive a survivor benefit who is convicted of any felony relating to or arising out of or in connection with the service of the member from whom the benefit results.
- Provides that this legislation will not affect any right to survivor benefits prior to the effective date of this Act.

Public Act 100-0542 (SB1714)

- Approved and effective November 8, 2017.
- Amends the General Provisions Article 1 of the Illinois Pension Code.
- Requires an investment consultant to annually disclose to the Board (of a retirement system, pension fund, or investment board) the following:
    - Total searches conducted for investment services in the prior year
    - Total searches conducted for investment services in the prior year that include minority owned, female owned, or businesses owned by persons with a disability (MWDBE), number of MWDBE recommendations made, and amounts awarded to the MWDBE
    - Requires a consultant to disclose any compensation or economic opportunity received in the last 24 months from any investment advisors recommended to or retained by the Board (of a retirement system, pension fund, or investment board).
    - Requires consideration of these disclosures before awarding any contract for consulting services.

2018 Session

Public Act 100-1166 (HB0166)

- Approved and effective 1/4/19.
- Trailer bill to SB0042 (Public Act 100-0023).
- Clarifies what qualifies a participant as a Tier 3 member.
- Clarifies the member contribution rate once the MEABF achieves 90% funding.

2019 Session

Public Act 101-0069 (HB2824)

- Approved and effective 7/12/19.
- Changes the date by which members receive retroactive annuity payments to be 1 year prior to the date the application for annuity is received by the Board.
- Provides that the Board can extend the frequency at which a member receiving disability payments from the Fund must be examined by a Board appointed physician.
- Provides that the Board will not be liable if a member experiences financial loss due to depositing their annuity payment with a financial institution that is possibly not federally insured.

Public Act 101-0473 (HB2460)

- Approved in August 2019 and effective January 1, 2020.
- Sustainable Investing Principles was approved by the Board and adopted by MEABF's Investment Policy Statement in December 2019.
- Requires the Board and other fiduciaries to regularly consider material, relevant, and decision-useful sustainability factors in evaluating investment decisions.

2019 Session (continued)

Public Act 101-0233 (HB814)

- Approved August 9, 2019 and effective January 1, 2020.
- Amends the Open Meetings Act.
- Provides that an elected or appointed member of a municipality may satisfy training requirements by taking a course sponsored or conducted by an organization as designated under the Illinois Municipal Code.
- Provides content requirements for training.
- Provides a certificate of completion must be issued to each elected or appointed member who successfully completes that training.

Public Act 101-0177 (HB 834)

- Effective July 31, 2019.
- Amends the Equal Pay Act of 2003.
- Provides that exceptions to the equal pay requirement based on sex also applies to the equal pay requirement for African American employees.
- Provides that an employer may not disclose salary or wage information without written authorization from the employee whose information is being requested.
- Provides that specified provisions shall not be construed to prevent an employer from providing benefit information in relation to a position or engage in discussions with an applicant about their expectations regarding benefits.
- Provides that an employer is not in violation of specified provisions when an applicant volunteers salary and benefit history on the condition that the employer does not consider or rely on the information given voluntarily as a factor in determining whether to offer a job or determine future salary, benefits, or other compensation.

Public Act 101-0459 (HB 2124)

- Approved and effective August 26, 2019.
- Also amends the Open Meetings Act.
- Provides that a public body may hold a closed meeting to discuss the appointment, employment, compensation, discipline, performance, or dismissal of specific employees, independent contractors in a park, recreational, or educational setting, or specific volunteers of the public body or legal counsel for the public body.

Public Act 101-0005 (SB 196)

- Approved and effective May 15, 2019.
- Provides that appointments made to the State Board of Elections occurring in 2019 shall be made and submitted by the Governor no later than May 15.

2019 Session (continued)

Public Act 101-0546 (SB 1264)

- Approved August 23, 2019 and effective January 1, 2020.
- Amends the Revised Uniform Unclaimed Property Act.
- Provides that the Act does not apply to any annuity, pension, or benefit funds held in a fiduciary capacity by a retirement system.
- Provides that property assumed as abandoned in an annuity, pension, or benefit fund held in a fiduciary capacity shall be reported to the administrator.
- Provides that no retirement system shall pay any benefit funds held in a fiduciary capacity to the administrator.

Public Act 101-0343 (SB 1624)

- Approved August 9, 2019 and effective January 1, 2020.
- Amends the Personal Information Protection Act.
- Provides that an information breach to more than 500 Illinois residents as a result of a single breach must be reported to the Attorney General no later than when notice is provided to the consumer.
- Provides that the Attorney General may publish information concerning the breach.

Public Act 101-0434 (SB 1713)

- Approved August 20, 2019 and effective January 1, 2020.
- Amends the Freedom Information Act.
- Provides exemptions from disclosure a public body's confidential bank and credit card account information where the disclosure of this information could result in public loss.

APPENDIX A

2020 Session

Public Act 101-0640 (SB 2135)

- Approved and effective June 12, 2020.
- Provides the following provisions that may be enacted by the government due to the COVID-19 pandemic:
    - Meetings subject to the Open Meetings Act can be conducted by audio or video conference without a quorum of the members physically present under certain conditions.
    - No public entity will be considered in violation of this Act for failure to respond to a request between March 10, 2020 and June 1,2020 as long as the entity responds within 30 days of the effective date of this Act.
    - The deadlines for filling statements of economic interest on or after March 17, 2020 are suspended until August 1, 2020.
    - Allows for notaries and witnesses to perform their duties using two-way audio-video communication technology that allows video and audio interaction between the individual signing the document, the witness, and the notary public.

Public Act 101-0642 (SB 1863)

- Approved and effective June 16, 2020.
- Creates the Conduct of the 2020 General Election Article in the Code.
- Establishes November 3, 2020 as a State holiday to be known as General Election Day to be observed throughout the State.
- Provides that all government offices shall be closed unless said office is being used for election day services or as a polling place.
- Also provides for changes to the following: vote by mail, first time voters, the public dissemination of information, early voting, election judges, additional duties of elections authorities, and 2020 county party conventions.

End of Report

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