

**EMPLOYEES' RETIREMENT SYSTEM  
OF THE CITY OF MILWAUKEE**

**Basic Financial Statements and  
Supplementary Information as of and for the  
Year Ended December 31, 2016 and  
Independent Auditors' Report**

# Employees' Retirement System of the City of Milwaukee

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# INTRODUCTORY SECTION



City of Milwaukee  
Employees' Retirement System

**Bernard J. Allen**  
Executive Director

**David M. Silber, CFA, CAIA**  
Chief Investment Officer

**Melody Johnson**  
Interim Deputy Director

## Executive Director's Letter of Transmittal

June 19, 2017

On behalf of the Annuity and Pension Board of the Employees' Retirement System (ERS) of the City of Milwaukee, I am pleased to present the Basic Financial Statements for ERS for the year ended December 31, 2016. ERS provides retirement and disability benefits, counseling and other services to 27,387 members, beneficiaries and annuitants. ERS was created under Chapter 396 of the Laws of Wisconsin of 1937 and the City of Milwaukee Charter, Chapter 36. This report fulfills the legal reporting requirements of those laws.

It is the responsibility of ERS management to fairly present all financial information in conformity with generally accepted accounting principles. ERS has internal controls in place to provide reasonable assurance that these statements are free from material misstatement. The Independent Auditors' Report, found in the Financial Section of this report, also provides reasonable assurance that ERS financial statements are free from material misstatement.

As of December 31, 2016, the ERS funded ratio was 92.0%. Pursuant to the Government Accounting Standards Board (GASB) Statement No. 67, the ERS funded status is measured by comparing the market value of plan assets with the ERS actuarial accrued liability using the actuarial method prescribed in GASB Statement No. 67. This actuarial method differs from that employed by the ERS' independent actuary for funding purposes.

Lastly, I acknowledge the staff of ERS for rising to meet all the challenges we have faced and for their continuing dedication in providing superior customer service to all of our members.

A handwritten signature in cursive script that reads "Bernard J. Allen".

Bernard J. Allen  
*Executive Director*



## List of Principal Officials

### Annuity & Pension Board Members as of December 31, 2016:

#### **Elected Representative - Active:**

John Barmore - Board Chairman	Milwaukee Fire Department
Gust Petropoulos - Board Vice Chairman	Milwaukee Police Department
Carmelo Patti	Milwaukee Police Department

#### **Elected Representative - Retirees:**

Thomas Klusman	Retired
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#### **Appointed by the President of the Common Council:**

Nik Kovac	Alderman for 3rd District
Deborah Ford	Retired
Rudolph Konrad	Retired

#### **Appointed by the Mayor:**

Mark Nicolini	City of Milwaukee Budget Director
Gerald Pace	Milwaukee Public Schools
Larry Holland	Principal of Holland Properties LLC

#### **Ex-Officio Member:**

Martin Matson	City of Milwaukee Comptroller
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### Employees' Retirement System Administrative Personnel:

#### **Bernard J. Allen**

*Executive Director and Secretary*

#### **Melody Johnson**

*Interim Deputy Director*

#### **David M. Silber, CFA, CAIA**

*Chief Investment Officer*

#### **G. Spencer Coggs**

*Custodian of Funds*

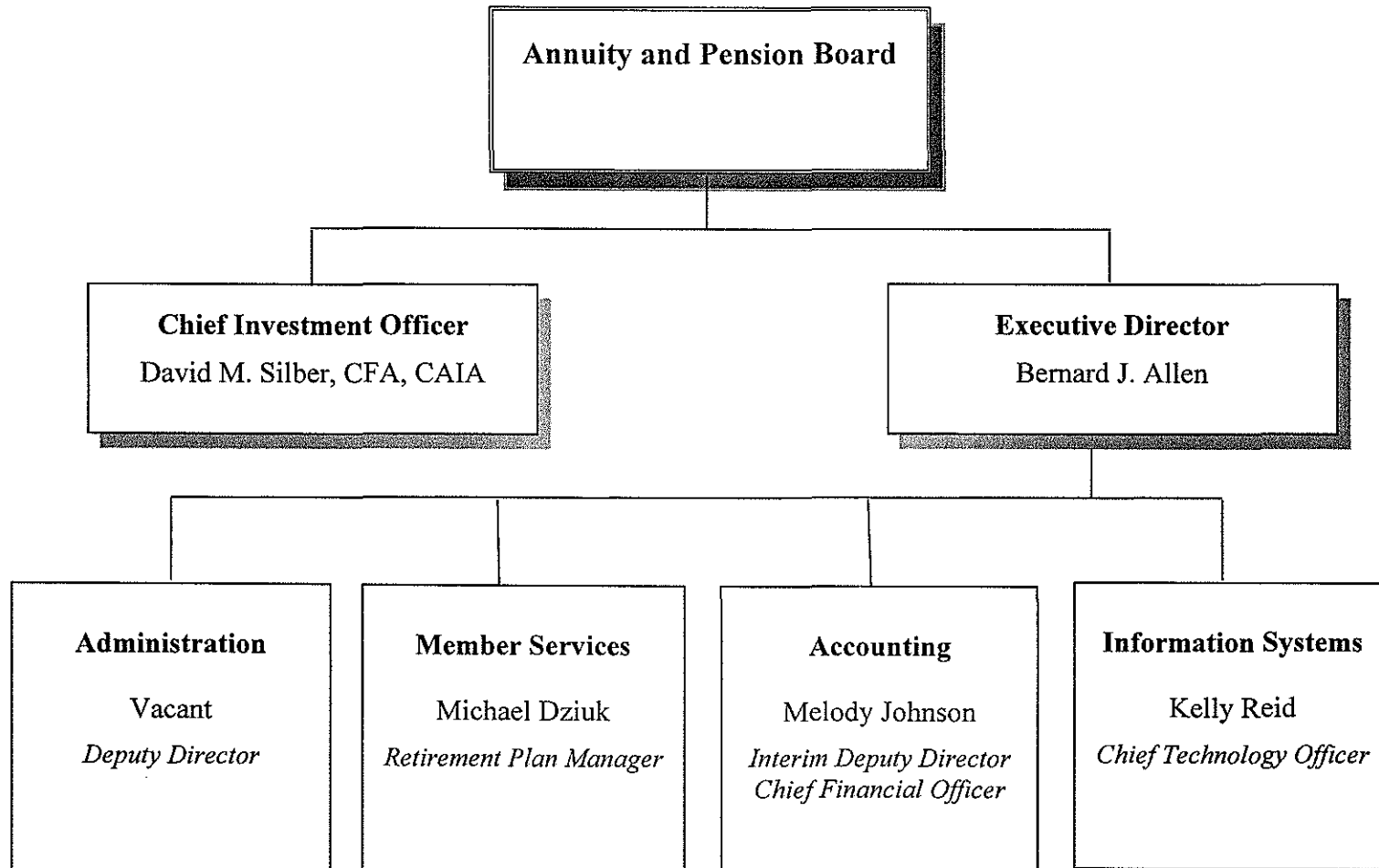
City of Milwaukee Treasurer

#### **Grant F. Langley**

*Legal Advisor*

City of Milwaukee Attorney

## Employees' Retirement System Organization Chart



# FINANCIAL SECTION

## INDEPENDENT AUDITORS' REPORT

To the Annuity and Pension Board of the Employees'  
Retirement System of the City of Milwaukee  
Milwaukee, Wisconsin

### **Report on the Financial Statements**

We have audited the accompanying statement of fiduciary net position of the Employees' Retirement System of the City of Milwaukee (the "Retirement System"), as of December 31, 2016, the statement of changes in fiduciary net position for the year then ended, and the related notes to the financial statements, which collectively comprise the Retirement System's basic financial statements as listed in the table of contents.

### ***Management's Responsibility for the Financial Statements***

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

### ***Auditors' Responsibility***

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit 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 auditors' 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 over financial reporting relevant to the Retirement System'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 Retirement System'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 the Retirement System as of December 31, 2016, and the changes in fiduciary net position of the Retirement System for the year then ended in conformity with accounting principles generally accepted in the United States of America.

## ***Other Matters***

### ***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, the Schedules of Changes in Net Pension Liability, Net Pension Liability, Contributions, and Investment Returns, and the notes to the required supplementary information as listed in the table of contents 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 inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

### ***Supplementary Information***

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Retirement System's basic financial statements. The Non-Consenter Combining Statement of Fiduciary Net Position and the Combining Non-Consenter Statement of Changes in Fiduciary Net Position are presented for purposes of additional analysis and are not a required part of the basic financial statements. The 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 audit 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, the Non-Consenter Combining Statement of Fiduciary Net Position and the Non-Consenter Combining Statement of Changes in Fiduciary Net Position are fairly stated in all material respects, in relation to the basic financial statements as a whole.

### ***Other Information***

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Retirement System's basic financial statements. The Executive Directors Letter of Transmittal, List of Principal Officers, and Organization Chart are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information has not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

**Other Reporting Required by *Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated June 19, 2017 on our consideration of the Retirement System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Retirement System's internal control over financial reporting and compliance.

*Baker Tilly Voichau Krause, LLP*

Milwaukee, Wisconsin  
June 19, 2017

MANAGEMENT'S DISCUSSION AND  
ANALYSIS SECTION (UNAUDITED)

## **EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)**

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*This Management Discussion is provided to facilitate a better understanding of the Employees' Retirement System of the City of Milwaukee (ERS) financial condition as of December 31, 2016, the results of operations for the year then ended, and the fiscal policies that govern its significant business operations. This narrative is a supplement to the audited financial statements presented in this document and, as such, should be read in conjunction with these statements.*

ERS is primarily responsible for administering retirement and disability benefits for employees of the City of Milwaukee and the following City Agencies (Agencies): Milwaukee Metropolitan Sewerage District, Wisconsin Center District, Veolia Water Milwaukee LLC, Milwaukee Housing and Redevelopment Authorities, non-certified staff of Milwaukee Public Schools, and some retirees of the Milwaukee Area Technical College.

The ERS pension trust fund is a defined benefit pension plan that provides monthly benefits to eligible retirees who have reach a minimum retirement age, and also provides monthly benefits to those eligible for disability.

ERS was initially created under the provisions of Chapter 396, laws of Wisconsin 1937. It is a section 401(a), Internal Revenue Code, qualified cost-sharing, multiple-employer defined benefit plan for participating public employees. Separate funds have been established to comply with legislation governing the ERS. During April 2000, the Common Council of the City of Milwaukee adopted legislation known as the Global Pension Settlement (GPS). GPS increased benefits to current and future retirees and also allowed changes to ERS administration, including permitting the use of ERS funds to pay costs related to plan administration. Members enrolled prior to June 28, 2000 can elect whether to consent to the provisions of GPS, while members enrolled on or after that date are automatically subjected to the provisions of GPS.

### **Discussion of Funds within the Employees' Retirement System Plan**

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#### **Global Combined Fund**

The Global Combined Fund provides retirement and disability benefits to members who consented to GPS, and members enrolled on or after June 28, 2000. Approximately 98.9% of ERS membership is accounted for in the Global Combined Fund.

#### **Employers' Reserve Fund**

The City of Milwaukee and Agencies participating in ERS may voluntarily contribute to the Employers' Reserve Fund. Deposits to the Employers' Reserve Fund may be used to fund contribution requirements, but this requires a formal resolution from the City or Agency directing a fund transfer.

#### **Securities Lending Fund**

Northern Trust, the custodian for ERS, administers the securities lending program. In this program, ERS earns fees for lending out securities. All borrowers are required to provide cash collateral.

Revenue generated from the program is deposited in the Securities Lending Fund and is restricted for payment of ERS administration and operation expenses. Any revenue not expended by the end of the year is transferred to the Retirement Fund in the following year.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)**

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**Non-Consenter Funds**

Non-Consenter Funds provide retirement and disability benefits for members who have not consented to GPS. Benefits paid from these funds do not include the enhanced benefits provided by GPS.

- **Retirement Fund:** The Retirement Fund provides for retirement and ordinary (non-work related) disability benefits for non-consenting members enrolled prior to February 1, 1996.
- **Combined Retirement Fund:** The Combined Retirement Fund provides for retirement and disability benefits (both ordinary and duty related) for non-consenting members enrolled on or after February 1, 1996.
- **General Employees' Duty Disability Fund:** The General Employees' Duty Disability Fund provides for duty disability benefits for non-consenting general (non-fire and police) members enrolled prior to February 1, 1996.

**Dormant Non-Consenter Funds**

The two Dormant Non-Consenter Funds have no members and no member balances, and, as a result, these funds are not disclosed in the financial statements. Since it is remotely possible that current non-consenting members could qualify for benefits in the future, the Board has not officially closed these funds.

- **Firemen and Policemen's Duty Disability Fund:** This fund provides for duty disability benefits for non-consenting fire and police members enrolled prior to February 1, 1996. As of December 31, 2004, all former members had consented to GPS, and their balances were transferred to the Global Combined Fund. The fund is still active, but is not likely to be used again.
- **Firemen's Heart and Lung Fund:** This fund accounts for fire heart and lung duty disability benefits of non-consenters. As of December 31, 2002, all former members had either consented to GPS or were deceased. The fund is still active, but is not likely to be used again.

**Fiduciary Funds**

Fiduciary Funds are for assets held in a trustee capacity for others and cannot be used to support the primary governments own interests.

- **Policemen's Annuity and Benefit Fund:** As discussed in Note 11, on December 14, 2005, the Policemen's Annuity and Benefit Fund (PABF) board adopted a resolution to dissolve and to liquidate all assets of the fund, and transfer the assets and full administrative control to ERS. Assets were transferred to the ERS custodian, Northern Trust, in early 2006 and the ERS board assumed custodial authority and responsibility for the fund's assets on January 3, 2006.

PABF is accounted for as a separate fiduciary fund, and a separate valuation is prepared by the actuary. The PABF is funded by an annual tax levy, or reimbursements from the City. During 2016, benefits totaling \$293,358 were paid to 27 annuitants and widows.

Due to nominal activity within the PABF, it is not included in the Analysis of Financial Position and Results of Operations section of the Management Discussion and Analysis.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)**

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**Financial Highlights**

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- Total assets of ERS increased by \$174,117,000 and 3.4% during 2016. Contributions and income from investments exceeded benefit payments, causing an increase in total assets held for investment.
- As members consent to the Global Pension Settlement, their member balances are transferred from the Non-consenter fund to the Global Combined Fund. Balances transferred for 2016 totaled \$2,506,000.
- As of December 31, 2016, pursuant to GASB Statement No. 67, the ERS funded ratio is 92.0%.
- For 2016, Northern Trust, the ERS custodian, reported a positive 8.8% annual net of fees total fund return, while in 2015 the return was 0.5%. As of December 31, 2016, the fund's five-year performance ranked in the top quartile of the Callan Associates database. This database consists of public employee pension funds, including both Callan client funds and surveyed non-client funds.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)**

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## **Overview of the Financial Statements**

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The ERS Financial Statements contain the following:

- 1.) Basic Financial Statements
- 2.) Notes to Basic Financial Statements
- 3.) Required Supplementary Information
- 4.) Supplementary Information
- 5.) Other Information.

This information presents the net position restricted for pensions and all funds under ERS administration. Currently, the Annuity and Pension Board is responsible for the administration of plan assets for ERS and the Policemen's Annuity and Benefit Fund (PABF). Due to nominal activity, PABF is reported as a fiduciary fund in these statements.

- 1.) **Basic Financial Statements.** Basic Financial Statements consist of the Statement of Fiduciary Net Position and the Statement of Changes in Fiduciary Net Position.

Statement of Fiduciary Net Position: Total assets minus total liabilities at year-end equals the net position restricted for pensions, which is also found on the Statement of Changes in Fiduciary Net Position. Total assets include cash balances, investments itemized by category, accounts receivable and other assets. Total liabilities include benefits payable, reimbursements due to the City for costs to administer the plan, and amounts for investment purchases that were initiated but not settled at year-end.

Statement of Changes in Fiduciary Net Position: Contributions and net investment income are additions, and expenses and benefit payments are deductions. Fund transfers are also reported as changes in fund balances to arrive at the end of year net position restricted for pensions. The Statement of Changes in Fiduciary Net Position explains how the net position reserved for pensions changed during the year.

- 2.) **Notes to Basic Financial Statements.** The financial statement notes provide additional information that is essential to understanding the basic financial statements. The notes are described below:
  - Note 1: Provides a general description of ERS and an overview of the common benefits available to various groups of members.
  - Note 2: Summarizes significant ERS accounting policies.
  - Note 3: Describes consent status changes in relation to the Global Pension Settlement.
  - Note 4: Summarizes employer transactions in the Employers' Reserve Fund.
  - Note 5: Summarizes the net pension liability of participating retirement plans.
  - Note 6: References ten-year historical trend information found within the Required Supplementary Information section.
  - Note 7: Discusses expenses paid as a part of administering ERS, including manager fees and administrative costs.
  - Note 8: Discusses ERS' income tax status per the Internal Revenue Service determination letter.
  - Note 9: Discusses ERS' investments and the associated types of risk exposure. It also discusses securities lending requirements and amounts on loan.

(See Independent Auditors' Report)

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)**

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**2.) Notes to Basic Financial Statements (cont.)**

- Note 10: Describes contingencies involving ERS.
- Note 11: Describes the transfer of fiduciary responsibility of the Policemen's Annuity and Benefit Fund to ERS.
- Note 12: Describes the required actuarial contributions due from the member agencies.
- Note 13: Discusses subsequent events that may impact the financial statements

**3.) Required Supplementary Information.** Required supplementary information presents the actuarial performance and financial condition of funds administered by ERS. The following is presented for both the Employees' Retirement System of the City of Milwaukee and the Policemen's Annuity and Benefits Fund - The City of Milwaukee:

- Schedule of Changes in Net Pension Liability,
- Schedules of Net Pension Liability and Investment Returns,
- Schedule of Contributions,
- Notes to Required Supplementary Information for the ERS & PABF,
- Management's Discussion and Analysis

**4.) Supplementary Information.** Additional information separately reports the Combining Statement of Fiduciary Net Position and the Combining Statement of Changes in Fiduciary Net Position for all the non-consenter retirement and disability funds.

**5.) Other Information.** Other information includes the Executive Director's Letter of Transmittal, a List of Principal Officers, the ERS Organizational Chart and the Independent Auditors' Report.



**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)**

**Analysis of Fiduciary Net Position**

**Changes in Assets**

*(\$ in thousands)*

	2016	2015	Percentage Change
<b>Assets</b>			
Cash and cash equivalents	\$ 91,257	\$ 121,387	-24.8%
Investments	4,835,776	4,622,443	4.6%
Receivables	33,676	26,292	28.1%
Software development and equipment (net of depr)	280	126	122.2%
Securities lending collateral	317,521	334,145	-5.0%
<b>Total Assets</b>	<b>\$ 5,278,510</b>	<b>\$ 5,104,393</b>	<b>3.4%</b>
<b>Liabilities</b>			
Benefits payable	\$ 159	\$ 111	43.2%
Unearned Contributions	17,808	-	100.0%
City of Milwaukee	963	10,765	-91.1%
Securities lending obligation	317,485	334,145	-5.0%
Investments purchased	55,426	7,064	684.6%
<b>Total Liabilities</b>	<b>\$ 391,841</b>	<b>\$ 352,085</b>	<b>11.3%</b>
<b>Net Position Restricted for Pensions</b>	<b>\$ 4,886,669</b>	<b>\$ 4,752,308</b>	<b>2.8%</b>

Presented above are the total assets for 2016 and 2015, respectively. Income from investments and contributions exceeded benefit payments, causing an increase in total assets held for investment.

Receivable increases are primarily due to the increase in investment sales that were initiated but not settled at year-end. The liabilities increase is primarily due to increases in investment purchases that were initiated but not settled at year-end, and unearned contributions resulting from prepayments of actuarial contributions.

In 2003, ERS capitalized hardware and software development costs for the MERITS pension administration system. MERITS was placed in service during August 2006. Capitalized costs associated with the development and implementation of MERITS were fully depreciated as of December 31, 2014. During the current year, ERS capitalized computer equipment totaling \$275,633. Maintenance costs are expensed in the year they are incurred.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)**

**Analysis of Changes in Fiduciary Net Position**

**Analysis of Operations**

*(\$ in thousands)*

	2016	2015	Percentage Change
<b>Additions</b>			
Employer Contributions	\$ 74,095	\$ 72,198	2.6%
Member Contributions	35,918	49,553	-27.5%
Net appreciation (devaluation) in fair value of investments	317,937	(4,939)	-6537.3%
Interest, dividends and other investment income	102,159	71,583	42.7%
Less: investment expense	(36,349)	(31,662)	14.8%
<b>Total Additions:</b>	<b>\$ 493,760</b>	<b>\$ 156,733</b>	<b>215.0%</b>
<b>Deductions</b>			
Administrative expenses	\$ (8,096)	\$ (9,686)	-16.4%
Benefits paid	(346,937)	(333,336)	4.1%
Refund of contributions	(4,366)	(14,553)	-70.0%
<b>Total Deductions</b>	<b>\$ (359,399)</b>	<b>\$ (357,575)</b>	<b>0.5%</b>
<b>Net Increase (Decrease) after Net Position Transfers</b>	<b>\$ 134,361</b>	<b>\$ (200,842)</b>	
<b>Net Position Restricted for Pensions</b>			
Beginning of year	4,752,308	4,953,150	
End of year	<b>\$ 4,886,669</b>	<b>\$ 4,752,308</b>	

Employer contributions required of the City and Agencies, as determined by the actuary, totaled \$80,288,433 in 2016, and \$79,838,581 in 2015. Employer payments are due by January 31 of the following year. Early payment by the City and some Agencies resulted in discounts totaling \$6,409,708 and \$7,640,658 in 2016 and 2015, respectively. Investments earned net income of \$383,747,000 in 2016, compared to net income of \$34,982,000 in 2015. Market conditions experienced during 2016 account for the increase.

Administrative expenses decreased by \$1,590,000 and 16.4% in 2016, when compared to 2015. This is due to a general decreases in operating expenses incurred by the plan. Benefits paid increased to \$346,937,000 in 2016 from \$333,336,000 in 2015, due primarily to pension escalators and an increase in the number of retirees.

In 2016, \$2,506,000 was reallocated from the non-consenter funds to the Global Combined Fund for non-consenter members who consented to GPS during 2016. The January 1, 2016, valuation reflects the impact of this change.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)**

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**Analysis of Investment Position and Strategies**

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ERS has one strategy that governs asset allocation for all funds, except the Employer's Reserve Fund for the City of Milwaukee. The Employer's Reserve Fund is subject to investment guidelines approved by the City. ERS fund resources are pooled and invested according to the strategy. Net income from investments is allocated to individual funds based on fund balances at the beginning of the year.

The table below reports investment and benchmark returns for each Asset Class for 2016 and 2015. Callan Associates, the ERS real estate consultant for 2016, provided return information for Real Estate. Northern Trust, the ERS custodian, provided information for the other asset classes.

In 2016, the Total Fund produced a positive return, and outperformed when compared to the overall benchmark. Within the fund, all asset classes produced positive returns. Public Equity, Fixed Income, Real Estate, and Absolute Return outperformed their respective benchmarks. Private Equity and Real Assets underperformed their respective benchmarks.

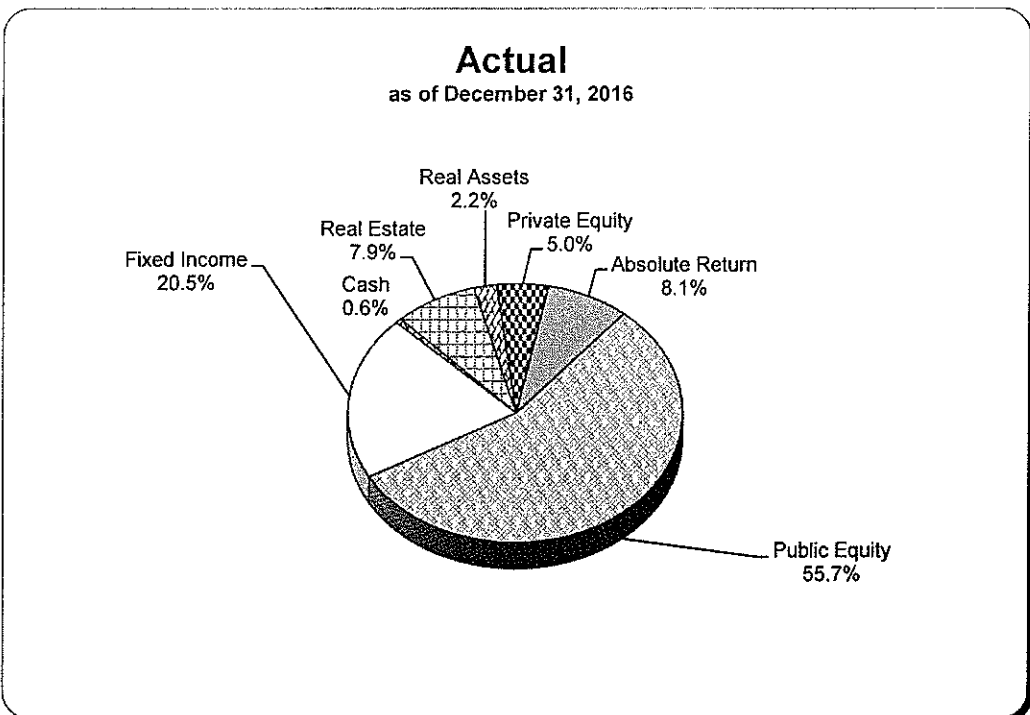
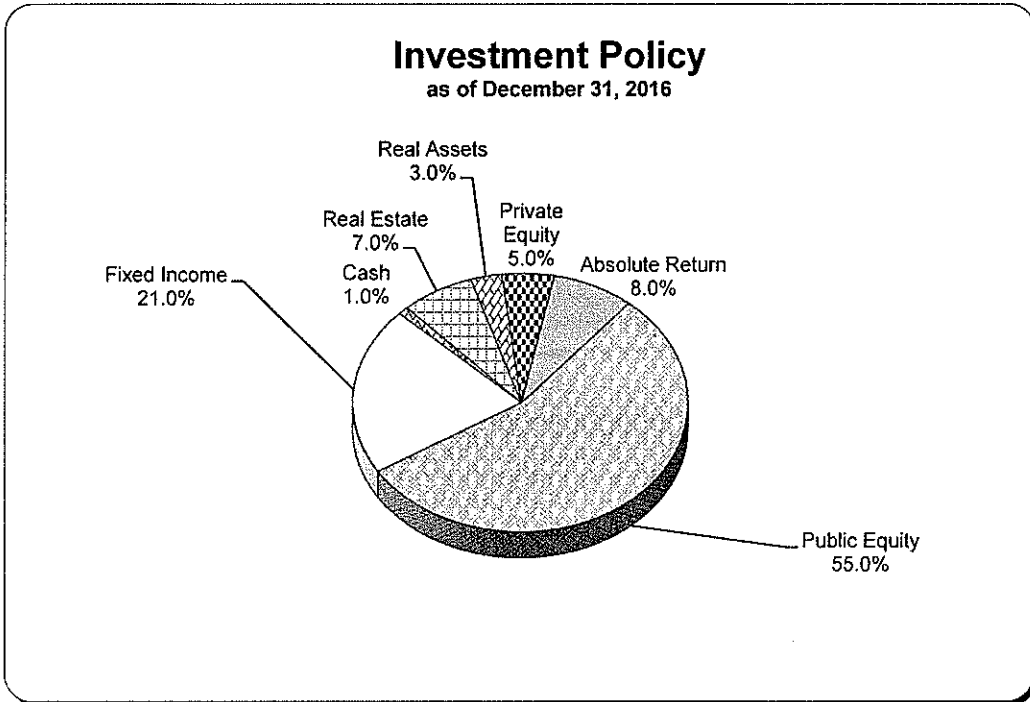
Asset Class	Benchmark	2016 Returns		2015 Returns	
		Net	Benchmark	Net	Benchmark
Public Equity	ACWI IMI*	9.4%	8.4%	-0.8%	-0.4%
Fixed Income	Barclays Capital Aggregate	7.4%	2.7%	-2.6%	0.6%
Real Estate	NCREIF Fund Index ODCE	9.0%	7.8%	14.3%	14.0%
Real Assets	Blended Benchmark**	6.6%	12.4%	N/A	N/A
Private Equity	Cambridge Private Equity Index	9.1%	13.0%	12.4%	5.7%
Absolute Return	90 Day Treasury Bill + 3%	5.1%	3.3%	4.7%	3.1%
Total Fund	Reference Index	8.8%	7.3%	0.5%	1.3%

\* 2015 Public Equity benchmark was 48% Russell 3000, 35% MSCI EAFE, 17% MSCI ACWI

\*\*35% Barclays U.S. TIPS, 20% S&P Global Infrastructure, 20% S&P Global Natural Resources, 15% Bloomberg Commodity, 10% FTSE NAREIT

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE  
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)**

As of December 31, 2016, the asset allocation for all ERS funds complied with the allocation tolerance ranges established at the Board's December 19, 2016 meeting, and the Employer's Reserve Fund complied with the investment guidelines approved by the City of Milwaukee.

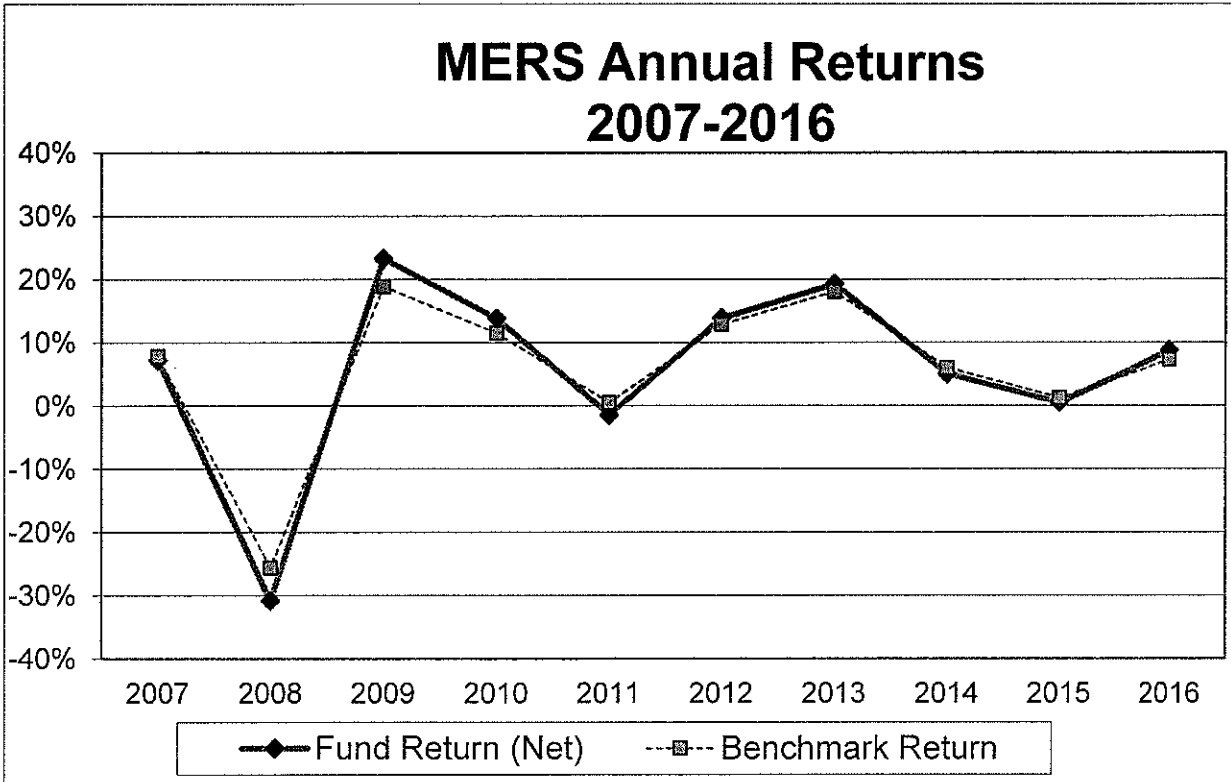


(See Independent Auditors' Report)

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE  
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)**

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Over the ten-year period ending December 31, 2016, the Fund returned 4.8% annually net of fees, and the benchmark returned 5.1%.



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### Requests for Information

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Members of the Annuity and Pension Board and ERS senior management are fiduciaries of the pension fund, and therefore, are responsible for ensuring that ERS assets are used exclusively for the benefit of plan participants and their beneficiaries. This financial report is designed to provide an overview of the financial condition of ERS, and to account for the resources entrusted to ERS for the benefit of its stakeholders. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

Bernard J. Allen  
Executive Director and Secretary  
Employees' Retirement System - City of Milwaukee  
789 North Water Street, Suite 300  
Milwaukee, WI 53202

(See Independent Auditors' Report)

# BASIC FINANCIAL STATEMENTS

## EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE

### Statement of Fiduciary Net Position As of December 31, 2016 (in thousands)

	Employees' Retirement System Funds				Fiduciary Fund		Total
	Global Combined Fund	Non-conserter Retirement Funds	Employers' Reserve Fund	Securities Lending Fund	Total Employees' Retirement System Fund	Total Policemen's Annuity & Benefit Fund	
<b>ASSETS</b>							
CASH AND CASH EQUIVALENTS	\$ 87,666	\$ 967	\$ 1,131	\$ 1,493	\$ 91,257	\$ 3	\$ 91,260
INVESTMENTS (Notes 2 and 9)							
Bonds and collateralized mortgage obligations	994,567	3,187	14,837	-	1,012,591	-	1,012,591
Common and preferred stocks	1,335,726	4,280	-	-	1,340,006	-	1,340,006
Blackrock Global Alpha Tilts	294,261	942	-	294	295,203	-	295,203
Blair William Emerging	41,771	134	-	-	41,905	-	41,905
COLTV Stock Index Fund	495,327	1,588	-	-	496,915	-	496,915
DFA Invt Dimensions	193,125	619	-	-	193,744	-	193,744
DFA Small Cap Fund	212,068	679	-	-	212,747	-	212,747
Newton	88,487	284	-	-	88,771	-	88,771
Principal	107,151	343	-	-	107,494	-	107,494
AQR Emerging Equities Fund	101,510	325	-	-	101,835	-	101,835
Hedge equity	302,821	970	-	-	303,791	-	303,791
Real estate investments	392,411	1,257	-	-	393,668	-	393,668
Private equity	246,316	790	-	-	247,106	-	247,106
<b>Total Investments</b>	<b>4,805,541</b>	<b>15,398</b>	<b>14,837</b>	<b>-</b>	<b>4,835,776</b>	<b>-</b>	<b>4,835,776</b>
RECEIVABLES AND OTHER ASSETS							
Employer (Note 2)	68	-	-	-	68	-	68
Member (Note 2)	109	-	-	-	109	-	109
Actuarially determined contributions (Note 12)	-	55	-	-	55	-	55
Interest, dividends and foreign tax recoverable (Note 2)	9,052	28	29	-	9,109	-	9,109
Investments sold	24,214	77	-	44	24,335	-	24,335
Software development and equipment, net of depreciation (Note 2)	280	-	-	-	280	-	280
Securities lending collateral (Note 9)	-	-	-	317,521	317,521	-	317,521
<b>Total Receivables and Other Assets</b>	<b>33,723</b>	<b>160</b>	<b>29</b>	<b>317,565</b>	<b>351,477</b>	<b>-</b>	<b>351,477</b>
<b>Total Assets</b>	<b>4,926,930</b>	<b>16,525</b>	<b>15,997</b>	<b>319,058</b>	<b>5,278,510</b>	<b>3</b>	<b>5,278,513</b>
LIABILITIES							
Benefits payable	159	-	-	-	159	-	159
Unearned contributions	17,808	-	-	-	17,808	-	17,808
City of Milwaukee (Notes 4 and 7)	963	-	-	-	963	-	963
Securities lending obligation (Note 9)	-	-	-	317,485	317,485	-	317,485
Investments purchased	54,724	175	527	-	55,426	-	55,426
<b>Total Liabilities</b>	<b>73,654</b>	<b>175</b>	<b>527</b>	<b>317,485</b>	<b>391,841</b>	<b>-</b>	<b>391,841</b>
<b>NET POSITION RESTRICTED FOR PENSIONS</b>	<b>\$ 4,853,276</b>	<b>\$ 16,350</b>	<b>\$ 15,470</b>	<b>\$ 1,573</b>	<b>\$ 4,886,669</b>	<b>\$ 3</b>	<b>\$ 4,886,672</b>

See Independent Auditors' Report.

The footnotes are an integral part of the basic financial statements.

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**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**

**Statement of Changes in Fiduciary Net Position**  
**For the Year Ended December 31, 2016**  
(in thousands)

	Employees' Retirement System Funds				Fiduciary Fund		Total
	Global Combined Fund	Non-consenter Retirement Funds	Employers' Reserve Fund	Securities Lending Fund	Total Employees' Retirement System Fund	Total Policemen's Annuity & Benefit Fund	
<b>ADDITIONS</b>							
<b>Contributions</b>							
Employer (Note 5)	\$ 73,950	\$ 145	\$ -	\$ -	\$ 74,095	\$ 122	\$ 74,217
Member	35,893	25	-	-	35,918	-	35,918
<b>Total Contributions</b>	<b>109,843</b>	<b>170</b>	<b>-</b>	<b>-</b>	<b>110,013</b>	<b>122</b>	<b>110,135</b>
<b>Investment Income</b>							
Net appreciation in fair value of investments	316,802	1,015	1	119	317,937	-	317,937
Interest, dividends and other investment income	99,262	318	195	2,384	102,159	-	102,159
<b>Total Investment Income</b>	<b>416,064</b>	<b>1,333</b>	<b>196</b>	<b>2,503</b>	<b>420,096</b>	<b>-</b>	<b>420,096</b>
Investment Expense (Note 7)	(35,402)	-	(18)	(929)	(36,349)	-	(36,349)
<b>Net Investment Income</b>	<b>380,662</b>	<b>1,333</b>	<b>178</b>	<b>1,574</b>	<b>383,747</b>	<b>-</b>	<b>383,747</b>
<b>Total Additions</b>	<b>490,505</b>	<b>1,503</b>	<b>178</b>	<b>1,574</b>	<b>493,760</b>	<b>122</b>	<b>493,882</b>
<b>DEDUCTIONS</b>							
Administrative expenses (Note 7)	(6,763)	-	-	(1,333)	(8,096)	(11)	(8,107)
Benefits paid	(346,793)	(144)	-	-	(346,937)	(293)	(347,230)
Refunds of contributions	(4,232)	(134)	-	-	(4,366)	-	(4,366)
<b>Total Deductions</b>	<b>(357,788)</b>	<b>(278)</b>	<b>-</b>	<b>(1,333)</b>	<b>(359,399)</b>	<b>(304)</b>	<b>(359,703)</b>
<b>NET POSITION CHANGES</b>							
Net increase (decrease) in net position before transfers	132,717	1,225	178	241	134,361	(182)	134,179
Net position transfers (Notes 3, 4 and 11)	2,506	(2,506)	-	-	-	-	-
<b>Net Increase (Decrease) in Net Position</b>	<b>135,223</b>	<b>(1,281)</b>	<b>178</b>	<b>241</b>	<b>134,361</b>	<b>(182)</b>	<b>134,179</b>
<b>NET POSITION RESTRICTED FOR PENSIONS</b>							
<b>Beginning of Year</b>	<b>4,718,053</b>	<b>17,631</b>	<b>15,292</b>	<b>1,332</b>	<b>4,752,308</b>	<b>185</b>	<b>4,752,493</b>
<b>End of Year</b>	<b>\$ 4,853,276</b>	<b>\$ 16,350</b>	<b>\$ 15,470</b>	<b>\$ 1,573</b>	<b>\$ 4,886,669</b>	<b>\$ 3</b>	<b>\$ 4,886,672</b>

See Independent Auditors' Report.

The footnotes are an integral part of the basic financial statements.



# NOTES TO BASIC FINANCIAL STATEMENTS

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**NOTES TO BASIC FINANCIAL STATEMENTS**  
**AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2016**

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**1. DESCRIPTION OF RETIREMENT SYSTEM**

The following description of the more common provisions of the Employees' Retirement System of the City of Milwaukee (Retirement System or ERS) is provided for financial statement purposes only. The provisions reflect changes to the Retirement System enacted in 2000, known as the Global Pension Settlement (GPS). GPS increased benefits to current and future retirees and also allowed changes to the ERS administration, including permitting the use of ERS funds to pay costs related to plan administration. The 98.9% of existing members who have consented to GPS are accounted for in the Global Combined Fund. Members who have not consented are accounted for in one or more of the non-consenter funds. Refer to Chapter 36 of the City of Milwaukee Charter for more complete information.

GPS requires that members enrolled through June 28, 2000 provide written consent to ERS in order to be eligible for the benefit enhancements of GPS. Members enrolled after June 28, 2000, are automatically eligible and are included in the Combined Fund.

Subsequent to completion of the January 1, 2016 actuarial valuation, 13 members who were enrolled as of June 28, 2000 and had not consented to GPS, elected to consent. The January 1, 2017 actuarial valuation reflects the impact of this change.

**Plan Administration**

The Retirement System was established pursuant to the Retirement Act (Chapter 396 of the Laws of Wisconsin of 1937) to provide payment of retirement and other benefits to employees of the City of Milwaukee (City). Chapter 441 of the Laws of Wisconsin of 1947 made the benefits contractual and vested. The ERS is a cost-sharing, multi-employer plan, which provides benefits to employees of the Milwaukee Metropolitan Sewerage District, Wisconsin Center District, Veolia Water Milwaukee LLC, Milwaukee Housing and Redevelopment Authorities, non-certified staff of Milwaukee Public Schools, and some employees of the Milwaukee Area Technical College (Agencies). City employees comprise approximately 54.5% of the active participants in the Retirement System.

Member contributions to the ERS are required under Chapter 36-08-7. The City of Milwaukee in its legislative capacity has sole authority to make changes to Chapter 36, and to set contribution requirements and benefit terms. It is a section 401(a), Internal Revenue Code, qualified cost-sharing, multiple-employer defined benefit plan for participating public employees.

Contribution rates, as a percentage of earnable compensation, are as follows:

- |                           |   |
|---------------------------|---|
| (a) General Employees     | 5.5% (tier 1 – enrolled prior to January 1, 2014)   |
|                           | 4.0% (tier 2 – enrolled on or after January 1, 2014)  |
| (b) Firemen and Policemen | 7.0%  |
| (c) Elected Officials     | 7.0% (tier 1 – enrolled prior to January 1, 2014 and elected to an office prior to January 1, 2014; if enrolled prior to January 1, 2014, and elected for the first time to an office on or after January 1, 2014, and employee was paying contributions prior to being elected, employee pays contributions at the rate they were paying prior to becoming an elected official; if enrolled prior to January 1, 2014, and elected for the first time to an office on or after January 1, 2014, and employer was picking up contributions on behalf of the employee prior to being elected, employer pays 7.0%) |
|                           | 4.0% (tier 2 – enrolled on or after January 1, 2014)  |

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**NOTES TO BASIC FINANCIAL STATEMENTS**  
**AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2016**

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**1. DESCRIPTION OF RETIREMENT SYSTEM (cont.)**

Commencing in 1990, contributions of one dollar of each police officer's longevity pay per year are made by police officers on their own behalf. This excludes sergeant of police, detective lieutenant and any ranks above same.

In addition to the above percentage contributions, additional contributions were required of general city employees who were enrolled as active members after January 1, 2000. To participate in the Global Combined Fund, each new member was required to contribute 1.6% of his or her pensionable earnings for a period of eight years. However, the 1.6% required contributions did not apply to members required to make member contributions under 36-08-7-a or c.

The Annuity and Pension Board (Board) administers the Retirement System. The Board has eleven members consisting of the following:

- Three representatives appointed by the President of the Common Council
- Three representatives appointed by the Mayor of the City of Milwaukee
- One representative elected by retired members of the ERS
- The City Comptroller, who serves as an ex-officio voting member
- Three representatives elected by the active ERS members from each individual group; one each from the Fire Department, the Police Department, and the General City

Full-time employees, part-time employees who are eligible under adopted rules and regulations, and elected officials who have evidenced their intent to join are members of the Retirement System.

The 2011 Wisconsin Act 10, known as the governor's Budget Repair Bill, created Wis. Stat. 62.623 addresses payment of contributions in an employee retirement system of a first class city. The Act requires certain members to pay employee required contributions, and prohibits their employer from making contributions on their behalf.

Effective February 1, 2015, General City employees are required to contribute either 5.5% or 4% of their earnable compensation each pay period through payroll deductions. Pursuant to Wisconsin Act 10, the City of Milwaukee and member Agencies cannot make contributions on behalf of their employees.

Effective December 20, 2015 (First pay period of 2016), Police employees are required to contribute 7.0% of their earnable compensation each pay period. The City no longer pays member contributions on behalf of these employees.

Effective December 20, 2015 (First pay period of 2016), Fire employees contribute 7% of their earnable compensation as member contributions each pay period. The City no longer pays member contributions on behalf of Fire employees.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**

**NOTES TO BASIC FINANCIAL STATEMENTS  
AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2016**

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**1. DESCRIPTION OF RETIREMENT SYSTEM (cont.)**

**Benefits Provided**

The normal retirement benefit is a monthly pension for the life of the member. A service retirement allowance is payable to any member who meets one of the following eligibility criteria:

<u>Class</u>	<u>Enrollment Date</u>	<u>Eligibility for Service Retirement*</u>
General City	Prior to January 1, 2014	Age 60, or Age 55 with 30 years of creditable service
General City	On/after January 1, 2014	Age 65, or Age 60 with 30 years of creditable service
Fire	Prior to July 30, 2016	Age 57, or Age 49 with 22 years of creditable fire or police service
Fire	On/after July 30, 2016	Age 57, or Age 52 with 25 years of creditable fire service
Police	Prior to December 20, 2015	Age 57, or Any age with 25 years of creditable fire or police service
Police	On/after December 20, 2015	Age 57, or Age 50 with 25 years of creditable police service

*\*These eligibility criteria assume consent to the provisions of the Global Pension Settlement (GPS); most members have consented to GPS*

For General City employees, the service retirement allowance is 2%, or 1.6% for members enrolled on or after January 1, 2014, of the member's final average salary (the highest average of earnable compensation during any 3 years preceding retirement, death or termination) for each year of creditable service. The service retirement allowance for General City employees who retire after January 1, 1989, cannot exceed 70% of their final average salary.

For police officers and firefighters, the retirement allowance is 2.5% of their final average salary (computed on the year of creditable service during which earnable compensation was highest) for each year of creditable service. The retirement allowance for firefighters hired after March 1, 1989, and police officers hired after July 1, 1989, is limited to 90% of their final average salary (excluding any imputed service credit provided under the GPS).

For elected officials enrolled prior to January 1, 2014, the retirement allowance is 2.6% of their final average salary for each year of creditable service as an elected official for years before 1996 and is limited to 70% of the final average salary. For the years 1996 and forward, the accrual rate is 2.5% (For the Mayor, the accrual rate is 2.0%) for creditable service, imputed military service, or seasonal service and is limited to 70% of their final average salary. However, elected officials who were enrolled prior to 2014 and are first elected to office on or after January 1, 2014, have an accrual rate of 2% for each year if they contribute 5.5% of their earnable compensation, or 2.5% for each year if they contribute 7% of their earnable compensation. For elected officials enrolled on or after January 1, 2014, the accrual rate is 1.6% of their final average salary for each year of creditable service as an elected official, and is limited to 70% of their final average salary.

# EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE

## NOTES TO BASIC FINANCIAL STATEMENTS AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2016

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### 1. DESCRIPTION OF RETIREMENT SYSTEM (cont.)

Chapter 36 of the Milwaukee City Charter addresses pension escalators. General City employees participating in the Global Combined Fund and enrolled prior to January 1, 2014 and retiring on a service retirement allowance on or after January 1, 2000, are eligible for a pension escalator of 1.5% on the second, third and fourth anniversaries of their retirement, and 2% on each anniversary thereafter. Police officers and firefighters participating in the Global Combined Fund retiring on a service retirement allowance on or after January 1, 2000, are eligible for a pension escalator based upon the percentage increase in the prior year's Consumer Price Index-All Urban Consumers (CPI-U), effective on their first anniversary and each anniversary thereafter. The percentage increase is determined annually by measuring the change in the Index from November to November of each year. The pension escalator is guaranteed to be at least two percent, but is capped at three percent.

General City employees enrolled on or after January 1, 2014, retiring on a service retirement allowance are eligible for a pension escalator of 2% on their fifth anniversary of retirement and each anniversary thereafter.

Rules governing pension escalators provided to retirees retiring prior to January 1, 2000, before the Global Pension Settlement, differ from those described herein. In addition, a one-time "catch up" adjustment was provided in January of 1996 to employees who retired on a service retirement allowance on or before September 30, 1987, to partially offset the increase in inflation. For a complete description of the escalator rules, see Chapter 36 of the Milwaukee City Charter.

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

- a. **Basis of Accounting:** The financial statements are prepared using the accrual basis of accounting. Retirement and other contributions are recorded when due. Investment income is recognized when earned and expenditures are recorded when incurred.
- b. **Reporting Entity:** This report includes all of the funds of the ERS and the PABF. The reporting entity for the ERS consists of the primary government and its component units. Component units are legally separate organizations for which the elected officials of the primary government are financially accountable or other organizations for which the nature and significance of their relationship with the primary government are such that their exclusion would cause the reporting entity's financial statements to be misleading. The primary government is financially accountable if:
  - 1) It appoints a voting majority of the organization's governing body and it is able to impose its will on that organization;
  - 2) It appoints a voting majority of the organization's governing body and there is a potential for the organization to provide specific financial benefits to, or impose specific financial burdens on, the primary government; or
  - 3) The organization is fiscally dependent on and there is a potential for the organization to provide specific financial benefits to, or impose specific financial burdens on, the primary government.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**NOTES TO BASIC FINANCIAL STATEMENTS**  
**AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2016**

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**2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)**

Certain legally separate, tax exempt organizations should also be reported as a component unit entity if all of the following criteria are met:

- 1) The economic resources received or held by the separate organization are entirely or almost entirely for the direct benefit of the primary government, its component units, or its constituents;
- 2) The primary government is entitled to, or has the ability to otherwise access, a majority of the economic resources received or held by the separate organization;
- 3) The economic resources received or held by an individual organization that the specific primary government, or its component units, is entitled to, or has the ability to otherwise access, are significant to that primary government.

Component units are reported using one of two methods, discrete presentation or blending. Generally, component units should be discretely presented in a separate column in the financial statements. A component unit should be reported as part of the primary government using the blending method if it meets any one of the following criteria:

- 1) The primary government and the component unit have substantively the same governing body and a financial benefit or burden relationship exists,
- 2) The primary government and the component unit have substantively the same governing body and management of the primary government has operational responsibility for the component unit,
- 3) The component unit serves or benefits, exclusively or almost exclusively, the primary government rather than its citizens, or
- 4) The total debt of the component unit will be paid entirely or almost entirely from resources of the primary government.

**Blended Component Units**

CMERS Low Beta, LLC

CMERS Low Beta, LLC was created by the ERS to serve as a hedge fund of funds investment vehicle for the Retirement System. The LLC is a legally separate entity governed by a board of directors appointed by the Annuity and Pension Board of the ERS. UBS Hedge Fund Solutions serves as investment manager for the hedge fund of funds portfolio. Although it is legally separate entity, the LLC is reported and included as part of the ERS because its sole purpose is for the benefit of the Retirement System. MUFG Alternative Fund Services (Cayman) Limited is the administrator and Ernst and Young is the external auditor for the LLC. Separate financial statements are issued annually for CMERS Low Beta, LLC.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**NOTES TO BASIC FINANCIAL STATEMENTS**  
**AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2016**

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**2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)**

- c. Contributions:** The Retirement System records employee contributions as they are earned. Contributions earned but not yet received from the City, participating city agencies and members are reported as contributions receivable. Overpayments and prepayments of contributions are reported as liabilities.

At January 1, 2016 the measurement date, membership of the plan was as follows:

Plan members currently receiving benefits	12,763
Inactive plan members entitled to, but not yet receiving benefits	3,338
Current employees:	
Vested	8,080
Non-vested	<u>2,902</u>
Total	<u><u>27,083</u></u>

This membership data is as of January 1, 2016, and reasonably approximates membership data through December 31, 2016.

- d. Cash and Cash Equivalents:** Cash and cash equivalents, in accordance with Governmental Accounting Standards Board (GASB) Statement 9, are composed of cash in local banks, cash held by the custodian, and cash equivalents. Cash equivalents are defined as short-term, highly liquid investments that are both (a) readily convertible to known amounts of cash and (b) so near maturity they present insignificant risk of changes in value due to changes in interest rates. Investments with an original maturity of three months or less are considered cash equivalents. Restricted securities held as collateral for Securities Lending are not included as cash equivalents.
- e. Investments:** Investments of the Retirement System are reported at fair value in accordance with GASB Statements 31 and 72. Fair value is defined as the amount that a plan can reasonably expect to receive for an investment in a current sale between a willing buyer and a willing seller. The fair value of investments is based on published market prices and quotations from major investment brokers at current exchange rates, as available. Many factors are considered in arriving at that value. In general, however, bonds and mortgage obligations are valued based on yields currently available on comparable securities of issuers with similar credit ratings.

Receivables and payables relating to investment transactions that were initiated but not settled at year-end, are recorded as assets or liabilities.

Real estate consists of equity and debt participation in diversified real estate investments. The majority of properties in the portfolio are offices, industrial warehouses, multi-family and retail. Real estate investments are carried at market value, which approximates fair value, as of December 31, 2016. Annual assessments performed by independent professional appraisers are used for market values.

Private equity consists of equity and debt participation in diversified private equity investments. The majority of investments in the portfolio consist of buyouts and venture capital. Private equity investments are carried at market value, which approximates fair value, as of December 31, 2016.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**NOTES TO BASIC FINANCIAL STATEMENTS**  
**AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2016**

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**2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)**

The Retirement System has investments in certain derivative vehicles, including interest rate, credit, index volatility, and currency futures; bond futures; deliverable and non-deliverable forward contracts; bond forwards; currency forwards; currency options; options on bond futures, U.S. equity indices, U.S. equity index futures, volatility indices, volatility futures, and ETFs; total return swaps; and to-be-announced (TBA) securities. The ERS allows UBS Hedge Fund Solutions to allocate funds within CMERS Low Beta, LLC to hedge fund managers who may invest in derivatives including, but not limited to, the derivatives listed earlier. Derivative investments comply with the Annuity and Pension Board Investment Policy and Guidelines. Additional information on derivatives for ERS, including the notional and contractual amounts, market values and unrealized gains and losses of holdings, are contained in Note 9.

All investments are made in accordance with the provisions of Section 36-09 of Chapter 36 of the Milwaukee City Charter. The provisions require several funds of the Retirement System to be invested within the requirements of ss. 40.03(1) (n) and 62.63 (3) Wisconsin Statutes. During 2016, investments were in compliance with the Annuity and Pension Board Investment Policy and Guidelines.

Investments in stocks of corporations in 2016, as measured by their cost, did not exceed 56.8% of the total assets.

The Retirement System invests in financial instruments such as U.S. Treasury Strips, collateralized mortgage obligations and asset backed securities. Investment managers may temporarily invest small amounts of available cash in short-term investments prior to purchasing securities.

The Retirement System's international equity managers may invest in warrants and foreign exchange forward contracts as a hedge for foreign currency fluctuations. The unrealized gains and losses on these positions as of December 31, 2016, are detailed in Note 9.

Investment securities, in general, are exposed to various risks, such as interest rate, credit, and overall market volatility. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the values of investment securities will occur in the near term. These value changes could materially affect the amounts reported in the Statement of Fiduciary Net Position.

- f. Investment Income:** Dividends, interest and realized gains and losses are recorded as earned. Investment income is allocated to each individual fund based on fund balances at the beginning of the year.
- g. Estimates:** The financial statements are presented in conformity with generally accepted accounting principles. These principles require management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results may differ from those estimates.



# EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE

## NOTES TO BASIC FINANCIAL STATEMENTS AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2016

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### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

- h. Capitalization:** The Retirement System capitalizes hardware and software development costs. Amounts incurred for hardware (including printers, monitors, disk drives, network infrastructure, switches) are capitalized in a yearly hardware pool and depreciated over three years. Capitalized costs are depreciated over their useful lives, with a half of a year's depreciation expensed in the year of acquisition.

Costs related to the development of the Pension Management Information System were capitalized as Software Development costs. The system went live in 2006 and as of December 31, 2014, the development costs were fully depreciated. As of December 31, 2016, the cost of the Retirement System's hardware and software development totaled \$17,533,946 and accumulated depreciation totaled \$17,253,767. During 2016, depreciation of \$121,847 was recognized and included in Administrative Expenses in the accompanying Statement of Changes in Fiduciary Net Position.

- i. Contingencies:** Claims and judgments are recorded if all the conditions of GASB pronouncements are met. Claims and judgments are recorded as expenses when the related liabilities are probable and management can reasonably estimate the amounts.
- j. New Pronouncements:** In February 2016, GASB issued *Statement No. 72, Fair Value Measurement and Application*. This statement requires disclosures to be made about fair value measurements, the level of fair value hierarchy, and valuation techniques. Governments should organize these disclosures by type of asset or liability reported at fair value. It also requires additional disclosures regarding investments in certain entities that calculate net asset value per share (or its equivalent). The requirements of this statement are effective for periods beginning after June 15, 2015. ERS adopted the guidance for the 2016 fiscal year. The impact of adopting this statement is reflected in the basic financial statements.

In December 2015, the GASB issued *Statement No. 79, Certain External Investment Pools and Pools Participants*. This statement addresses accounting and financial reporting for certain external investment pools and pools participants. Specifically, it establishes criteria for an external investment pool to qualify for making the election to measure all of its investments at amortized cost for financial reporting purposes. This Statement establishes additional note disclosure requirements for qualifying external investment pools that measure all of their investments at amortized cost for financial reporting purposes and for governments that participate in those pools.

In March 2016, the GASB issued *Statement No. 82, Pension Issues* (an amendment of GASB Statements No. 67, No. 68, and No.73). The objective of this Standard is to improve consistency in the application of pension accounting and financial reporting requirements. The requirements of this Statement will improve financial reporting by enhancing consistency in the application of financial reporting requirements to certain pension issues.

When Statement No. 79 and Statement No. 82 become effective, application of these standards may result in restatement of a portion of these financial statements.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**NOTES TO BASIC FINANCIAL STATEMENTS**  
**AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2016**

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**3. CONSENT STATUS CHANGES**

Members who have not consented to the GPS have either objected to the settlement or never responded. The deadline to consent of April 24, 2004, has been extended indefinitely for those who never responded. Often, non-responders consent to GPS at the time they apply for benefits. As of the January 1, 2016, actuarial valuation, 295 members were non-consenting, including 87 active members, 191 inactive members, and 17 benefit recipients. During 2016, 13 members elected to consent to the GPS, resulting in a transfer of \$2,506,000 to the Global Combined Fund from the non-consenter funds.

**4. EMPLOYERS' RESERVE FUND**

The City of Milwaukee and other Agencies participating in the Retirement System may voluntarily contribute to the Employers' Reserve Fund which was established per Section 36-08-8 of Chapter 36. Deposits to the Employers' Reserve Fund may be used to fund contribution requirements, but this requires a formal resolution directing a fund transfer. Employers' Reserve Fund resources are invested according to City of Milwaukee investment policies.

For 2016, there was no transfer from the Employers' Reserve Fund. As of December 31, 2016, the City of Milwaukee is the only employer participating in the fund.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**NOTES TO BASIC FINANCIAL STATEMENTS**  
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**5. NET PENSION LIABILITY OF PARTICIPATING PLANS**

**Employees' Retirement System (ERS)**

The components of the pension liability of the ERS at December 31, 2016, were as follows (in thousands):

Total pension liability	\$	5,312,763
Plan fiduciary net position		(4,886,669)
ERS's net pension liability	\$	426,094
Plan fiduciary net position as a percentage of the total pension liability		91.98%

**Actuarial assumptions for ERS:** The last actuarial valuation was performed as of January 1, 2016, and these amounts were used to roll-forward the total pension liability for the year ended December 31, 2016. The valuation was determined using the following actuarial assumptions, which were applied to all prior periods included in the measurement:

Valuation Date	January 1, 2016
Actuarial Cost Method	Entry Age Normal – Level Percentage of Pay
Amortization Method	For pension expense; the difference between expected and actual liability experience and changes of assumptions are amortized over the average of the expected remaining service lives of all members. The differences between projected and actual earnings are amortized over a closed period of five years.
Asset Valuation Method	Market Value
Actuarial Assumptions:	
Investment Rate of Return	8.25% for calendar years through 2017, and 8.50% beginning with calendar year 2018
Projected Salary Increases	General City 3.0% - 7.5% Police & Fire 3.0% - 14.4%
Inflation Assumption	3.00%
Cost of Living Adjustments	Vary by Employee Group as explained in summary of plan provisions
Mortality Table	For regular retirees and for survivors, the RP-2000 Combined Mortality Table projected nine years using Scale AA. Future generational rates are projected from 2009 based on Scale AA. For duty and ordinary disability retirees, use the RP-2000 Disability Mortality Table. For death in active service, the rates are similar to those used for regular retirees and survivors with a 6-year setback.
Experience Study	The actuarial assumptions used in December 31, 2016 valuation were based on the results of an actuarial experience study for the period January 1, 2007-December 31, 2011.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**

**NOTES TO BASIC FINANCIAL STATEMENTS  
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**5. NET PENSION LIABILITY OF PARTICIPATING PLANS (cont.)**

The long-term expected rate of return on the ERS investments was determined from the experience review performed by the consultants, Conduent HR Consulting, LLC. The results of the experience review were adopted by the Board at the December 2012 meeting.

The rate of return assumption was based on the Retirement System's target asset allocation. In the experience review, the consultants developed best estimate ranges of expected future real rates of return (net of inflation) for the portfolio, based on the expected returns of each major asset class and their weights within the portfolio. The consultants used an econometric model that forecasts a variety of economic environments and then calculates asset class returns based on functional relationships between the economic variables and the asset classes. Expected investment expenses were subtracted and expected inflation was added to arrive at the long term expected nominal return. The rate for the expected long term expected return was selected for the portfolio such that there was a better than 50% likelihood of the emerging returns exceeding the expected return.

Best estimates of arithmetic real rates of return (net of inflation) for each major asset class included in the Retirement System's target asset allocation as of December 31, 2016 are listed in the table below:

<u>Asset Class</u>	<u>Policy</u>	<u>Actual</u>	<u>Long-term Expected Real Rate of Return*</u>
Public Equity	55.00%	55.72%	8.32%
Fixed Income	21.00%	20.50%	1.87%
Cash	1.00%	0.62%	0.92%
Real Estate	7.00%	7.95%	6.82%
Real Assets	3.00%	2.20%	5.63%
Private Equity	5.00%	4.96%	12.52%
Absolute Return	8.00%	8.05%	4.67%
	<u>100.00%</u>	<u>100.00%</u>	

\* Rates provided by Conduent HR Consulting, LLC.

**Discount Rate for ERS:** The discount rate used to measure the total pension liability was 8.50 percent. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current contribution rate and that contributions from the City and Agencies will be made at contractually required rates, as determined by the actuary. Based on those assumptions, the ERS' fiduciary net position was projected to be available to make projected future benefit payments for current members. The cross over analysis produced a single rate of 8.50 percent, which reflects the long-term expected rate of return on ERS investments. Based on the analysis, the discount rate was applied to all periods of projected benefit payments to determine the total pension liability.

**Sensitivity of the ERS net pension liability to changes in the discount rate:** The following presents the net pension liability for the ERS calculated using the discount rate of 8.50 percent, a discount rate that is 1-percentage-point lower (7.50 percent) and a discount rate that is 1-percentage-point higher (9.50 percent) (in thousands):

	<u>1% Decrease (7.50%)</u>	<u>Current Discount (8.50%)</u>	<u>1% Increase (9.50%)</u>
ERS' net pension liability (asset) \$	\$ 1,004,645	\$ 426,094	\$ (61,855)

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**NOTES TO BASIC FINANCIAL STATEMENTS**  
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**5. NET PENSION LIABILITY OF PARTICIPATING PLANS (cont.)**

**Policemen's Annuity and Benefit Fund (PABF)**

The components of the net pension liability of the PABF at December 31, 2016, were as follows (in thousands):

Total pension liability	\$	948
Plan fiduciary net position		(3)
PABF's net pension liability	\$	945
Plan fiduciary net position as a		
percentage of the total pension liability		0.32%

**Actuarial assumptions for PABF:** The last actuarial valuation was performed as of January 1, 2016, and these amounts were used to roll-forward the total pension liability for the year ended December 31, 2016. The valuation was determined using the following actuarial assumptions, which were applied to all prior periods included in the measurement:

Valuation Date	January 1, 2016
Actuarial Cost Method	Entry Age Normal – Level dollar amount
Amortization Method	For pension expense; the difference between expected and actual liability experience and changes of assumptions are recognized immediately. The differences between projected and actual earnings are amortized over a closed period of five years.
Asset Valuation Method	Market Value
Actuarial Assumptions:	
Investment Rate of Return	8.25% for calendar years through 2017, and 8.50% beginning with calendar year 2018
Projected Salary Increases	None - The Plan is Closed
Inflation Assumption	3.00%
Mortality Table	For regular retirees and for survivors, the RP-2000 Combined Mortality Table with nine years of projected improvements for males and females, include full generational projection using mortality improvement Scale AA.
Experience Study	The actuarial assumptions used in December 31, 2016 valuation were based on the results of an actuarial experience study for the period January 1, 2007- December 31, 2011.

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**5. NET PENSION LIABILITY OF PARTICIPATING PLANS (cont.)**

The long-term expected rate of return on the PABF investments was determined from the experience review performed by the consultants, Conduent HR Consulting, LLC. The results of the experience review were adopted by the Board at the December 2012 meeting.

The rate of return assumption was based on the target asset allocation. In the experience review, the consultants developed best estimate ranges of expected future real rates of return (net of inflation) for the portfolio, based on the expected returns of each major asset class and their weights within the portfolio. The consultants used an econometric model that forecasts a variety of economic environments and then calculates asset class returns based on functional relationships between the economic variables and the asset classes. Expected investment expenses were subtracted and expected inflation was added to arrive at the long term expected nominal return. The rate for the expected long term expected return was selected for the portfolio such that there was a better than 50% likelihood of the emerging returns exceeding the expected return.

Best estimates of arithmetic real rates of return (net of inflation) for each major asset class included in the Retirement System's target asset allocation as of December 31, 2016 are listed in the table below:

<b>Asset Class</b>	<b>Policy</b>	<b>Actual</b>	<b>Long-term Expected Real Rate of Return*</b>
Public Equity	55.00%	55.72%	8.32%
Fixed Income	21.00%	20.50%	1.87%
Cash	1.00%	0.62%	0.92%
Real Estate	7.00%	7.95%	6.82%
Real Assets	3.00%	2.20%	5.63%
Private Equity	5.00%	4.96%	12.52%
Absolute Return	8.00%	8.05%	4.67%
	100.00%	100.00%	

*\* Rates provided by Conduent HR Consulting, LLC.*

**Discount rate for PABF:** The discount rate used to measure the total pension liability was 3.71 percent. The PABF is closed to new members and PABF's fiduciary net position was projected to be insufficient to make all projected future benefit payments for current annuitants. Therefore, the 20-year Municipal Bond Rate was applied to all periods of projected benefit payments to determine the total pension liability.

**Sensitivity of the PABF net pension liability to changes in the discount rate:** The following presents the net pension liability of the PABF calculated using the discount rate of 3.71 percent, a discount rate that is 1-percentage-point lower (2.71 percent), and a discount rate that is 1-percentage-point higher (4.71 percent) than the current rate (in thousands):

	<b>1% Decrease (2.71%)</b>	<b>Current Discount (3.71%)</b>	<b>1% Increase (4.71%)</b>
PABF's net pension liability \$	\$ 973	\$ 945	\$ 919

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**NOTES TO BASIC FINANCIAL STATEMENTS**  
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**6. TEN-YEAR HISTORICAL TREND INFORMATION**

Ten-year historical trend information is designed to provide information about progress made in accumulating sufficient assets to pay benefits when due. With the implementation of GASB 67, the only schedule that has ten years of historical information available is the Schedule of Contributions. See the Required Supplementary Information section of these financial statements.

**7. EXPENSES**

Under the Milwaukee City Charter, as provided in the GPS, administrative and investment expenses of the Retirement System are the direct obligation of the Global Combined Fund. Expenses are normally paid by the City of Milwaukee and then reimbursed to the City by ERS.

Investment manager fees of approximately \$35,402,000 and administrative expenses of approximately \$6,763,000 were charged to the Global Combined Fund in 2016. In addition, the Annuity and Pension Board authorized the payment of \$1,333,000 of administrative costs from the Securities Lending Fund during 2016. This reduced the amount needed from the Global Combined Fund for costs to administer the Retirement System (see Note 9).

**8. INCOME TAX STATUS**

The most recent determination letter is dated February 7, 2017, with the Internal Revenue Service (IRS) stating that the Retirement System, as then designed and in conjunction with the proposed amendments required by the IRS, was in compliance with the applicable requirements of the Internal Revenue Code. The Retirement System's management believes that the plan is currently designed and being operated in compliance with the applicable requirements of the Internal Revenue Code. Therefore, the accompanying basic financial statements reflect no provision for income taxes.

**9. INVESTMENTS**

**Investment Policies**

The Retirement System's policy for the allocation of invested assets is established, and amended, as needed, by the ERS Board. Plan assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the Retirement System. The following was the ERS Board's adopted asset allocation policy as of December 31, 2016:

<u>Asset Class</u>	<u>Policy</u>
Public Equity	55.00%
Fixed Income	21.00%
Cash	1.00%
Real Estate	7.00%
Real Assets	3.00%
Private Equity	5.00%
Absolute Return	8.00%
	<hr/> 100.00%

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**

**NOTES TO BASIC FINANCIAL STATEMENTS  
AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2016**

**9. INVESTMENTS (cont.)**

*Rate of return.* For the year ended December 31, 2016, the annual money-weighted rate of return on ERS investments, net of pension plan investment expense, was 8.77 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

**Fair Value Measurement**

The Retirement System categorizes their fair value measurements within the fair value hierarchy established by generally accepted accounting principles. ERS had the following recurring fair value measurements as of December 31, 2016 (in thousands):

Investment Type	Fair Market Value	Fair Value Measurements Using		
		Level 1	Level 2	Level 3
Bonds and collateralized mortgage obligations	\$ 1,012,591		\$ 1,009,807	\$ 2,784
Common and preferred stocks	1,340,006	1,321,630	18,232	144
Blackrock Global Alpha Tilts	295,203		295,203	
Blair William Emerging	41,905		41,905	
COLTV Stock Index Fund	496,915		496,915	
DFA Invt Dimensions	193,744		193,744	
DFA Small Cap Fund	212,747		212,747	
Newton	88,771		88,771	
Principal	107,494		107,494	
AQR Emerging Equities Fund	101,835			101,835
Hedge equity	303,791			303,791
<b>Total assets in the Fair Value Hierarchy</b>	<b>\$ 4,195,002</b>	<b>\$ 1,321,630</b>	<b>\$ 2,464,818</b>	<b>\$ 408,554</b>
Investments measured at Net Asset Value *	640,774			
<b>Investments at Fair Value</b>	<b>\$ 4,835,776</b>			

\* - Per GASB 72, investments that are measured using the net asset value per share (or its equivalent) are not classified in the fair value hierarchy. The fair value presented in this table are intended to permit reconciliation of the fair value hierarchy to the line items presented in the Statement of Fiduciary Net Position.

The hierarchy is based on the valuation inputs used to measure the fair value of the asset and give the highest priority (Level 1) to unadjusted quoted prices in active markets for identical assets or liabilities and the lowest priority (Level 3) to unobservable inputs.

**Level 1:** Unadjusted quoted prices for identical instruments in active markets.

**Level 2:** Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable.

**Level 3:** Valuations derived from valuation techniques in which significant inputs are unobservable.



**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**NOTES TO BASIC FINANCIAL STATEMENTS**  
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**9. INVESTMENTS (cont.)**

The following is a description of the valuation methodologies used for assets measured at fair value. There were no changes to the methodologies during the year ended December 31, 2016.

U.S. treasury securities, equity securities, Real Estate Investment Trusts, and Exchange Traded Funds classified in Level 1 are valued using prices quoted in active markets for those securities.

Debt and debt derivative securities classified in Level 2 are valued using either a bid evaluation or a matrix pricing technique. Bid evaluations may include market quotations, yields, maturities, call features and ratings. Matrix pricing is used to value securities based on the securities relationship to benchmark quoted prices. Index linked debt securities are valued by multiplying the external market price feed by the applicable day's Index Ratio. Level 2 debt securities also have nonproprietary information from multiple independent sources that were readily available to market participants who are known to be actively involved in the market. Equity and equity derivative securities classified in Level 2 are securities whose values are derived daily from associated traded securities.

The System's assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each asset or liability. When inputs used to measure fair value fall into different levels in the fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation.

Real assets and private real estate are valued using the net asset value (NAV) per share (or its equivalent). These investments are considered "alternative investments" and, unlike more traditional investments, generally do not have readily obtainable market values and take the form of limited partnerships. These investments are valued based on the partnerships' audited financial statements. If December 31 statements are available, those values are used. If December 31 values are not available, the valuation is adjusted from the most recently available valuation taking into account subsequent calls and distributions, adjusted for unrealized appreciation/depreciation, other income, and fees.

The summary of unfunded commitments for these types of alternative investments is reported below (in thousands).

<u>Investment Type</u>	<u>Fair Value</u>	<u>Unfunded Commitments</u>	<u>Redemption Frequency (If Currently Eligible)</u>	<u>Redemption Notice Period</u>
Private Equities	\$ 247,106	\$ 238,980	NA	NA
Real Estate Investments - Non-Core	91,953	33,733	NA	NA
Real Estate Investments - Core	301,715	18,056	Quarterly	90 Days
Totals	<u>\$ 640,774</u>	<u>\$ 290,769</u>		

**Private Equities.** This consists of four "fund of funds" managers that invest in a multitude of underlying private equity funds. The primary investment type of the underlying funds is buyout and growth equity. Investments can never be redeemed from the funds. Instead, distributions are received through the liquidation of the underlying assets of the funds. It is expected that the funds will be liquidated over the next 15-20 years. The funds are valued on a quarterly basis using appraisals based on the best estimate of market value.

# EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE

## NOTES TO BASIC FINANCIAL STATEMENTS AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2016

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### 9. INVESTMENTS (cont.)

**Real Estate Investments – Non-Core.** This consists of 24 closed-end funds that invest primarily in U.S. commercial real estate. Investments can never be redeemed from the funds. Instead, distributions are received through the liquidation of the underlying assets of the funds. It is expected that the funds will be liquidated over the next 7 to 10 years. The funds are valued on a quarterly basis using appraisals based on the best estimate of market value.

**Real Estate Investments – Core.** This consists of nine open-end funds that invest primarily in U.S. commercial real estate. Investments can be redeemed from the funds on a quarterly basis with 90 days' notice, subject to availability of sufficient capital to cover the redemption. The funds are valued on a quarterly basis using appraisals based on the best estimate of market value.

### Deposits and Custodial Credit Risk

Custodial credit risk is the risk that, in the event a financial institution or counterparty fails, the Retirement System will not be able to recover the value of its deposits, investments, or securities. Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the Retirement System's name, and held by the counterparty. As of December 31, 2016, no investments or securities were exposed to custodial credit risk.

The Retirement System is also exposed to custodial credit risk for uncollateralized cash and cash equivalents that are not covered by federal depository insurance. As of December 31, 2016, cash and cash equivalents of \$234,966 were exposed to custodial credit risk.

The Retirement System was established to provide for the present and future retirement, disability, and death and survivor benefit payments for all city and city agency employees. All of the funds of the Retirement System taken in the aggregate constitute a special trust subject to applicable local, state, and federal laws, including but not limited to sections 36-15, 36-09-1, and 36-09-6 of the Milwaukee City Charter.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**NOTES TO BASIC FINANCIAL STATEMENTS**  
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**9. INVESTMENTS (cont.)**

As of December 31, 2016, the fair market carrying value of the investments are as follows (in thousands):

<u>Investment Type</u>	<u>Carrying Value</u>
Short Term Bills & Notes	\$ 6,481
Common Stock	1,304,369
Preferred Stock	15,729
Convertible Equity	2,420
Corporate Convertible Bonds	17,279
COLTV Stock Index Fund	496,915
Blair William Emerging	41,905
DFA Small Cap Fund	212,747
DFA Invt Dimensions	193,744
Blackrock Global Alpha Tilts	295,203
Newton	88,771
Principal	107,494
AQR Emerging Equities Fund	101,835
Right & Warrants	209
Government Bonds	239,223
Government Agencies	2,970
Municipal/Provincial Bonds	19,001
Corporate Bonds	630,910
Gov Mortgage Backed Sec	63,350
Gov Issued Comm Mort	20,556
Comm Mortgage Backed Sec	8,905
Asset Backed Securities	16,667
Other Fixed Income	4,528
Real Estate Investments	393,668
Private Equities	247,106
Hedge-Equity	303,791
Total	<u>\$ 4,835,776</u>

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**NOTES TO BASIC FINANCIAL STATEMENTS**  
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**9. INVESTMENTS (cont.)**

**Interest Rate Risk**

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The Retirement System's investment guidelines limit how much each fixed income manager may deviate duration from their respective benchmarks. Duration is the approximate percentage change in price for a 100-basis-point change in yield. Depending on the investment manager, the duration of the Retirement Systems active fixed income managers must either be between 80% and 250% of the duration of the Barclays Capital Aggregate Index or +/- 2 years of the Barclays Capital Aggregate Index. As of December 31, 2016, the segmented time distribution of the various investment types of debt securities for the Retirement System is as follows (in thousands):

<b>Investment Type</b>	<b>Fair Market Value</b>	<b>1 Year or Less</b>	<b>1 to 5 Years</b>	<b>6 to 10 Years</b>	<b>More than 10 Years</b>
Asset Backed Securities	\$ 17,478	\$ -	\$ 17,478	\$ -	\$ -
Commercial Mortgage-Backed	8,905	-	-	-	8,905
Corporate Bonds	383,018	19,295	117,087	144,743	101,893
Corporate Convertible Bonds	17,279	-	6,109	-	11,170
Government Agencies	2,970	2,970	-	-	-
Government Bonds	383,045	43,413	171,182	122,600	45,850
Government Mortgage Backed Securities	170,689	1	62,770	54,986	52,932
Gov't-issued Commercial Mortgage-Backed	20,556	545	3,869	16,142	-
Municipal/Provincial Bonds	19,129	-	11,697	-	7,432
Short Term Bills and Notes	6,802	6,802	-	-	-
Totals	<u>\$ 1,029,871</u>	<u>\$ 73,026</u>	<u>\$ 390,192</u>	<u>\$ 338,471</u>	<u>\$ 228,182</u>

\*\*\*Assets held in commingled funds are classified based on the individual fund's characteristics as of 12/31/2016. As a result, Fair Market Values for individual Investment Type within this table may differ from the Values by Investment Type provided on page 41.

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**NOTES TO BASIC FINANCIAL STATEMENTS  
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**9. INVESTMENTS (cont.)**

**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 deposit. ERS investment guidelines allow foreign currency contracts for defensive hedging purposes. One manager's guidelines also allow for active investment in currency futures, currency forwards, and currency options. In addition, the guidelines recommend adequate diversification by country and currency. As of December 31, 2016, the Retirement System's exposure to foreign currency risk, expressed in U.S. Dollars, is as follows (in thousands):

<b>Foreign Currency</b>	<b>Equities</b>	<b>Fixed Income</b>	<b>Real Estate and Private Equity</b>	<b>Total Fair Market Value</b>
Australian dollar	\$ 11,251	\$ 4,642	\$ -	\$ 15,893
Brazilian real	12,268	1,763	-	14,031
British pound sterling	140,069	938	5,018	146,025
Canadian dollar	20,106	20,311	-	40,417
Danish krone	4,911	-	-	4,911
Euro	205,825	-	4,971	210,796
Hong Kong dollar	14,705	-	-	14,705
Japanese yen	124,255	-	3,720	127,975
Mexican peso	-	7,581	-	7,581
New Zealand dollar	462	10,952	-	11,414
Norwegian krone	1,151	3,100	-	4,251
South Korean won	23,557	-	-	23,557
Swedish krona	15,227	-	-	15,227
Swiss franc	45,364	-	-	45,364
<b>Totals</b>	<b>\$ 619,151</b>	<b>\$ 49,287</b>	<b>\$ 13,709</b>	<b>\$ 682,147</b>

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**

**NOTES TO BASIC FINANCIAL STATEMENTS  
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**9. INVESTMENTS (cont.)**

**Credit Risk of Debt Securities**

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The Retirement System's investment guidelines require its fixed income managers to have an Investment Grade average portfolio. The Retirement System's active fixed income managers are allowed to hold a maximum of 20% of their respective portfolio's market value in issues rated B- or B3, and an additional 5% may be invested in non-rated issues. The quality ratings of investments in fixed income securities of the Retirement System as described by Standard & Poor's as of December 31, 2016, are as follows (in thousands):

Investment Type	Fair Market Value	AAA	AA	A	BBB	BB	B	CCC	D	Not Rated	
										US Government Guaranteed	Quality Rating Not Available
Asset Backed Securities	\$ 17,478	\$ 15,071	\$ 660	\$ 227	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,520
Commercial Mortgage-Backed	8,905	1,325	862	24	2,304	-	-	-	-	-	4,390
Corporate Bonds	383,018	77,418	11,253	57,225	114,112	79,384	33,820	423	9,383	-	-
Corporate Convertible Bonds	17,279	-	-	5,042	3,694	3,411	2,705	-	2,427	-	-
Government Agencies	2,970	-	2,970	-	-	-	-	-	-	-	-
Government Bonds	383,045	112,220	9,209	23,159	20,037	1,763	-	-	-	211,642	5,015 **
Government Mortgage Backed Securities	170,689	76,211	4,294	11,807	15,028	-	-	-	-	63,349	-
Gov't-issued Commercial Mortgage-Backed	20,556	-	-	-	-	-	-	-	-	20,556	-
Municipal/Provincial Bonds	19,129	1,587	32	10,078	-	-	7,432	-	-	-	-
Short Term Bills and Notes	6,802	151	80	90	-	-	-	-	-	6,481	-
<b>Totals</b>	<b>\$ 1,029,871</b>	<b>\$ 283,983</b>	<b>\$ 29,360</b>	<b>\$ 107,652</b>	<b>\$ 155,175</b>	<b>\$ 84,558</b>	<b>\$ 43,957</b>	<b>\$ 423</b>	<b>\$ 11,810</b>	<b>\$ 302,028</b>	<b>\$ 10,925</b>

\*\* Government Bonds listed as Not Rated by S&P are rated Investment Grade by Moody.

\*\*\* Assets held in commingled funds are classified based on the individual fund's characteristics as of 12/31/2016. As a result, Fair Market Values for individual Investment Type within this table may differ from the Values by Investment Type provided on page 41.

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**NOTES TO BASIC FINANCIAL STATEMENTS**  
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**9. INVESTMENTS (cont.)**

**Derivatives**

The ERS' Statement of Investment Policy written objectives and guidelines governing the investment of Fund assets allows separate account investment managers to use forward contracts and derivatives traded on a recognized derivatives exchange for hedging and efficient portfolio management purposes if the Board approves their use within the individual manager's written guidelines. No assets shall be committed to futures, options, options on futures, forwards and other derivatives unless approved by the Board.

Prohibited investments in separate accounts include mortgage interest only, principal only, inverse floaters or other CMO derivatives that have uncertain or volatile duration or price movement.

In 2016, the Retirement System's separate account investment managers utilized currency forwards, bond forwards, bond futures, currency options, interest rate futures and options on a bond futures contract. Currency forwards are necessary to purchase or sell non-U.S. securities. Bond forwards and futures are sometimes more liquid and easier to trade than the respective underlying security and can allow an investment manager to reduce the costs of constructing an efficient portfolio. A long position in an options contract can result in a more efficiently constructed portfolio because it can provide exposures, for example currency or duration exposure, with substantially reduced downside risk because the maximum loss possible is equal to the price of the option premium.

Currency Forwards

A foreign currency forward is a contractual agreement between two parties to pay or receive amounts of foreign currency at a future date in exchange for another currency at an agreed upon exchange rate. The Retirement System's International Equity and Global Equity managers entered into foreign exchange positions, such as forward and spot contracts, to hedge foreign currency exposure or obtain a currency for a pending cash transaction. The ERS has two Fixed Income managers who are allowed to invest globally. One of them only enters into spot contracts to obtain a currency for a pending cash transaction. The other global fixed income manager enters into currency forward and spot contracts for the purposes of achieving a positive return in addition to the reasons stated above. The majority of the contracts are short-term in duration and mature within 90 days. However, as of December 31, 2016, some contract positions had longer durations that did not exceed 3 years.

Bond Forwards

A bond forward is a non-standardized contractual agreement between two parties to buy or sell a pre-determined amount of a bond at a future date in exchange for a price agreed upon today. The Retirement System's Global Fixed Income manager entered into bond forward contracts for the purposes of hedging and achieving a positive return. The ERS' bond forward contracts held as of December 31, 2016, had maturities of up to 30 years.

# EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE

## NOTES TO BASIC FINANCIAL STATEMENTS AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2016

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### 9. INVESTMENTS (cont.)

#### Bond and Interest Rate Futures

A futures contract is a standardized contractual agreement between two parties, made through an organized exchange, to buy or sell a pre-determined amount of a bond at a future date in exchange for a price agreed upon today. The counterparty credit risk for a futures contract is generally less than privately negotiated forward contracts because the organized exchange acts as a clearinghouse that typically settles net changes to futures contract values daily. The ERS' Global Fixed Income manager entered into bond and interest rate futures contracts for the purposes of hedging and achieving a positive return. ERS had no futures contracts as of December 31, 2016.

#### Currency Options

An option contract provides one party the right, but not the obligation, to buy or sell a specific amount of a specific security or index at a fixed price within a predetermined time period for a nonrefundable fee. The ERS' Global Fixed Income manager uses currency options to employ currency hedging strategies. ERS had no currency options contracts as of December 31, 2016.

#### Option on a Bond Futures

An option contract on a bond future provides one party the right, but not the obligation, to buy or sell a pre-determined amount of a bond futures contract (defined above) within a predetermined time period for a nonrefundable fee. The ERS' Global Fixed Income manager uses options on bond futures to adjust duration exposure. The ERS did not hold any options on bond futures as of December 31, 2016.

The following table summarizes the aggregate notional or contractual amounts for the ERS' separate account managers as of December 31, 2016 (in thousands):

	Notational/ Contractual Amounts	Fair Market Value
Foreign exchange forward spot contracts receivable	\$ 1,696	\$ 1,706
Foreign exchange forward spot contracts payable	(1,696)	(1,699)
Foreign exchange forward long-term receivable	390	390
Foreign exchange forward long-term payable	(390)	(390)

The total exposure of all hedges is limited to 100% of the total portfolio value, at market. Shorting currency exposure in countries without any underlying security exposure is prohibited.

The ERS is also exposed to market risk, the risk that future changes in market conditions may make an instrument less valuable. Exposure to market risk is managed through the limits placed on an investment manager within the Statement of Investment Policy.

The ERS is exposed to credit risk in the event of non-performance by counterparties to financial instruments. Typical counterparties for ERS are major financial institutions and broker-dealers. A counterparty's financial condition, cash on hand, and general credit worthiness is evaluated prior to entering into a transaction. In addition, ratings agencies' evaluations are reviewed.



**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**

**NOTES TO BASIC FINANCIAL STATEMENTS  
AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2016**

**9. INVESTMENTS (cont.)**

The following table summarizes the counterparty credit risk amounts for the ERS' for derivatives as of December 31, 2016 (in thousands):

<u>Investment Type</u>		A	BBB	Exchange Traded	Not Rated Quality Rating Not Available
<b>Assets</b>					
Warrants	Equity Contracts	\$ -	\$ -	\$ -	\$ 209
<b>Liabilities</b>					
Forwards	Foreign Exchange Contracts	-	-	-	(1)
<b>Total Value by Rating</b>		<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 208</u>

**Securities Lending**

ERS started the securities lending program in 1993. Eligible securities are loaned out through the ERS custodian, Northern Trust. ERS earns a daily fee for securities loaned and incurs a reduction in earnings per the indemnification agreement with the custodian. Each security loan is initially collateralized by securities or cash for at least 102% of its market value (105% for international securities). Collateral is held by the custodian. Cash collateral received from borrowers is invested in a short-term investment pool, which is managed by Northern Trust

Revenue earned from securities lending is used to offset expenses of the Retirement System. If revenues are not expended within one calendar year following receipt, the remaining amount is distributed to the Non-Consenter Retirement Fund. For the year ended December 31, 2016, the Retirement System earned revenue from securities lending of approximately \$2,503,000, and paid custodian fees and rebates of \$928,578. The ERS also disbursed \$1,333,000 to offset some of the Retirement System's administrative costs.

As of December 31, 2016, ERS has securities on loan with a fair value of \$310,424,121 and the short-term collateral investment pool has a fair value of \$317,521,076.

<u>Investment Type</u>	<u>Securities on Loan Fair Value</u>
Global Equities	\$ 18,826,242
US Corporate Fixed	34,833,272
US Equities	112,183,115
US Government Fixed	144,581,492
<b>Totals</b>	<u><u>\$ 310,424,121</u></u>

The two main risks in securities lending are counterparty risk and collateral investment risk. Counterparty risk is the risk that the borrower defaults on a loan and is unable to return the security. The ERS' contract with Northern Trust indemnifies ERS of any losses suffered as a result of the securities lending program due to counterparty default. Collateral investment risk is the risk that an investment in a collateral option becomes impaired or decreases in value. ERS is responsible to refund any losses to the borrower as a result of losses in the collateral pool. As of December 31, 2016, the ERS' collateral pool was trading at or near fair market value with no impairments.

# **EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**

## **NOTES TO BASIC FINANCIAL STATEMENTS AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2016**

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### **10. COMMITMENTS AND CONTINGENCIES**

The Retirement System is involved in litigation and disputes arising during the normal course of operations. Management does not believe the settlement of such matters will have a material impact on the Retirement System's basic financial statements.

### **11. FIDUCIARY RESPONSIBILITY OF THE POLICEMEN'S ANNUITY & BENEFIT FUND**

On December 14, 2005, the Policemen's Annuity and Benefit Fund (PABF) board adopted a resolution to dissolve and to liquidate all assets of the fund, and transfer the assets and full administrative control to the ERS. Charter Ordinances ss. 35-01-3-b and 36-15-1-e, enacted under common council file #050744, transferred the administrative and managerial responsibilities of the PABF to the ERS, authorizing the ERS Annuity and Pension Board to invest the assets of the PABF and to manage its operations. All assets of the PABF were transferred to the systems custodian, Northern Trust, early in 2006. The ERS board assumed custodial authority and responsibility for the fund's assets on January 3, 2006. These resources are disclosed as a separate fiduciary fund and valuations were prepared by the ERS actuary.

The plan's funding policy is specified in the Milwaukee City Charter, Chapter 35, as amended by Charter Ordinances, Numbers 356 and 357. The annual requirement consists of an amount sufficient to amortize the present value of benefits to all active and retired employees less the value of actuarial assets in the Fund by a series of level payments over the remainder of the funding period. File numbers 950930 and 970052 provide that the Board shall adopt the assumptions which the actuary uses in the annual valuation and tax levy certification. This contribution will comply with GASB, which requires that the annual required contributions (ARC) of the employer should be actuarially determined and have a provision for amortizing the unfunded liability. In general, GASB allows an amortization period of up to 30 years, but 10 years was deemed appropriate for this Fund. No tax levy was budgeted for 2016.

As of December 31, 2016, the composition of the PABF consisted of 4 annuitants and 23 widows. When all annuitants and widows are deceased, the fund is to be closed and remaining funds are to be remitted back to the City of Milwaukee.

The Policemen's Annuity and Benefit Fund may become insolvent on an actuarial basis. Because of this, the City of Milwaukee will begin funding the benefits and administrative expenses on a monthly basis.

### **12. ACTUARIALY DETERMINED CONTRIBUTIONS FROM MEMBER AGENCIES**

The Retirement System requires regular payroll contributions from its agencies and members for all active employees covered by the plan on a biweekly basis. To provide for disciplined, predictable and stable funding of pension obligations as a percentage of covered compensation, the City amended its charter to revise the method used to determine employer contributions to the ERS Combined Fund (referred to as the Stable Employer Contribution Policy). This amendment repealed the full-funding limit. The amendment achieves stable and predictable contribution levels.

### **13. SUBSEQUENT EVENTS**

The Retirement System evaluated events occurring through June 19, 2017, the date the financial statements were available to be issued, for subsequent events requiring recording or disclosure in the Plan's financial statements. Management feels no material events occurred.

# REQUIRED SUPPLEMENTARY INFORMATION

(See Independent Auditors' Report)

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**Required Supplementary Information**  
**Schedule of Changes in the Net Pension Liability**  
**Last 3 Fiscal Years**  
**(in thousands)**

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total pension liability			
Service cost	\$ 70,377	\$ 70,500	\$ 69,693
Interest	430,745	418,874	409,899
Differences between expected and actual experience	(9,921)	(30,035)	-
Changes of assumptions	-	(5,206)	-
Benefit payments including refunds of member contributions	(351,303)	(347,889)	(342,569)
Net change in total pension liability	139,898	106,244	137,023
Total pension liability - beginning	5,172,865	5,066,621	4,929,598
Total pension liability - ending	<u>\$ 5,312,763</u>	<u>\$ 5,172,865</u>	<u>\$ 5,066,621</u>
Plan fiduciary net position			
Contributions - employer	\$ 74,095	\$ 72,198	\$ 72,844
Contributions - member	35,918	49,553	43,663
Net investment income	383,747	34,982	238,985
Benefit payments, including refunds of member contributions	(351,303)	(347,889)	(342,569)
Administrative expense	(8,096)	(9,686)	(10,831)
Net change in plan fiduciary net pension	134,361	(200,842)	2,092
Plan fiduciary net position - beginning	4,752,308	4,953,150	4,951,058
Plan fiduciary net position - ending	<u>\$ 4,886,669</u>	<u>\$ 4,752,308</u>	<u>\$ 4,953,150</u>
Net pension liability - ending	<u>\$ 426,094</u>	<u>\$ 420,557</u>	<u>\$ 113,471</u>

The plan implemented GASB Statement No. 67 in the fiscal year 2014. Information calculated utilizing GASB 67 prior to fiscal year 2014 is not available.

See independent auditors' report and notes to required supplementary information.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**Required Supplementary Information**  
**Schedules of Net Pension Liability and Investment Returns**  
**Last 3 Fiscal Years**  
**(in thousands)**

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**Schedule of Net Pension Liability**

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total pension liability	\$ 5,312,763	\$ 5,172,865	\$ 5,066,621
Plan fiduciary net position	<u>(4,886,669)</u>	<u>(4,752,308)</u>	<u>(4,953,150)</u>
Net pension liability	<u>\$ 426,094</u>	<u>\$ 420,557</u>	<u>\$ 113,471</u>
Plan fiduciary net position as a percentage of total pension liability	91.98%	91.87%	97.76%
Covered employee payroll	\$ 583,950	\$ 535,802	\$ 529,939
Net pension liability as a percentage of covered employee payroll	72.97%	78.49%	21.41%

**Schedule of Investment Returns**

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Annual money-weighted rate of return, net of investment expense	8.77%	0.63%	5.17%

The plan implemented GASB Statement No. 67 in the fiscal year 2014. Information for calculating the effects of GASB 67 prior to fiscal year 2014 is not available.

See independent auditors' report and notes to required supplementary information.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**Required Supplementary Information**  
**Schedule of Contributions**  
**Last 10 Fiscal Years**  
**(in thousands)**

	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Actuarially Determined Contributions	\$ 74,095	\$ 72,198	\$ 72,844	\$ 79,533	\$ 73,159	\$ -	\$ -	\$ 60,098	\$ -	\$ -
Contributions in relation to the actuarially determined contribution	74,095	72,198	72,844	79,533	73,159	-	-	60,098	-	-
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered employee payroll	\$ 583,950	\$ 535,802	\$ 529,939	\$ 521,651	\$ 523,738	\$ 525,181	\$ 538,218	\$ 553,846	\$ 536,558	\$532,412
Contributions as a percentage of covered-employee payroll	12.69%	13.47%	13.75%	15.25%	13.97%	0.00%	0.00%	10.85%	0.00%	0.00%

See independent auditors' report and notes to required supplementary information.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**Notes to Required Supplementary Information**  
**As of and for the year ended December 31, 2016**

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1. This information presented in the required supplementary schedules, for pension funding purposes, was based on the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation is as follows:

Valuation Date	January 1, 2016
Actuarial Cost Method	Projected Unit Credit
Amortization Method	Closed – Level Percent of Pay Pay assumed to grow 3% per year
Remaining Amortization Period	18 years as of January 1, 2016
Asset Valuation Method	5-year smoothed market, 20% corridor
Actuarial Assumptions:	
Investment Rate of Return	8.50% return for calendar years 2000 through 2012, 8.25% for calendar years 2013 through 2017, and 8.50% beginning with calendar year 2018
Projected Salary Increases	General City 3.0% - 6.9% Police & Fire 3.0% - 10.5%
Inflation Assumption	3.00%
Cost of Living Adjustments	Vary by Employee Group as explained in summary of plan provisions
Mortality Table	For regular retirees and for survivors, the RP-2000 Combined Mortality Table with mortality improvements projected to the year 2009 for males and females, include full generational projection using mortality improvement Scale AA.
Experience Study	The actuarial assumptions used in December 31, 2016 valuation were based on the results of an actuarial experience study for the period January 1, 2007-December 31, 2011.

2. The total pension liability contained in the Schedule of Net Pension Liability was provided by the Retirement Systems actuary, Conduent HR Consulting, LLC. The net pension liability is measured as the total pension liability less the amount of the fiduciary net position of the Retirement System.
3. The required employer contributions and percent of contributions made are presented in the Schedule of Contributions.

See independent auditors' report and notes to required supplementary information.

**POLICEMEN'S ANNUITY AND BENEFITS FUND – THE CITY OF MILWAUKEE**  
**Required Supplementary Information**  
**Schedule of Changes in the Net Pension Liability**  
**Last 3 Fiscal Years**  
**(in thousands)**

	2016	2015	2014
Total pension liability			
Interest	\$ 40	\$ 45	\$ 61
Differences between expected and actual experience	(14)	(29)	-
Changes of assumptions	(18)	7	-
Benefit payments including refunds of member contributions	(293)	(421)	(493)
Net change in total pension liability	(285)	(398)	(432)
Total pension liability - beginning	1,233	1,631	2,063
Total pension liability - ending	\$ 948	\$ 1,233	\$ 1,631
Plan fiduciary net position			
Contributions - employer	\$ 122	\$ 541	\$ 241
Net investment income	-	1	20
Benefit payments, including refunds of member contributions	(293)	(421)	(493)
Administrative expense	(11)	(82)	(34)
Net change in plan fiduciary net position	(182)	39	(266)
Plan fiduciary net position - beginning	185	146	412
Plan fiduciary net position - ending	\$ 3	\$ 185	\$ 146
Net pension liability (asset) - ending	\$ 945	\$ 1,048	\$ 1,485

The plan implemented GASB Statement No. 67 in the fiscal year 2014. Information for calculating the effects of GASB 67 prior to fiscal year 2014 is not available.

See independent auditors' report and notes to required supplementary information.



**POLICEMEN'S ANNUITY AND BENEFITS FUND – CITY OF MILWAUKEE**  
**Required Supplementary Information**  
**Schedules of Net Pension Liability and Investment Returns**  
**Last 3 Fiscal Years**  
**(in thousands)**

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**Schedule of Net Pension Liability**

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total pension liability	\$ 948	\$ 1,233	\$ 1,631
Plan fiduciary net position	(3)	(185)	(146)
Net pension liability (asset)	<u>\$ 945</u>	<u>\$ 1,048</u>	<u>\$ 1,485</u>
Plan fiduciary net position as a percentage of total pension liability	0.32%	15.00%	8.95%
Covered employee payroll (Plan Closed)	\$ -	\$ -	\$ -
Net pension liability (asset) as a percentage of covered employee payroll	N/A	N/A	N/A

**Schedule of Investment Returns**

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Annual money-weighted rate of return, net of investment expense	8.77%	0.63%	5.17%

The plan implemented GASB Statement No. 67 in the fiscal year 2014. Information for calculating the effects of GASB 67 prior to fiscal year 2014 is not available.

**POLICEMEN'S ANNUITY AND BENEFITS FUND – CITY OF MILWAUKEE**  
**Required Supplementary Information**  
**Schedule of Contributions**  
**Last 10 Fiscal Years**  
**(in thousands)**

	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Actuarially Determined Contributions	\$ 133	\$ 188	\$ 207	\$ 228	\$ 222	\$ 209	\$ 269	\$ 330	\$ 41	\$ 57
Contributions in relation to the actuarially determined contribution	133	188	207	228	222	209	269	330	41	57
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered employee payroll	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contributions as a percentage of covered-employee payroll	-	-	-	-	-	-	-	-	-	-

See independent auditors' report and notes to required supplementary information.

**POLICEMEN'S ANNUITY AND BENEFITS FUND – THE CITY OF MILWAUKEE**  
**Notes to Required Supplementary Information**  
**As of and for the year ended December 31, 2016**

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1. This information presented in the required supplementary schedules, for pension funding purposes, was based on the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation is as follows:

Valuation Date	January 1, 2016
Actuarial Cost Method	Projected Unit Credit
Amortization Method	Open – Level Dollar
Remaining Amortization Period	10 Years
Asset Valuation Method	Market Value
Actuarial Assumptions:	
Investment Rate of Return	8.50% return for calendar years 2000 through 2012, 8.25% for calendar years 2013 through 2017, and 8.50% beginning with calendar year 2018
Projected Salary Increases	None - The Plan is Closed
Inflation Assumption	3.00%
Mortality Table	For regular retirees and for survivors, the RP-2000 Combined Mortality Table with nine years of projected improvements for males and females, include full generational projection using mortality improvement Scale AA.
Experience Study	The actuarial assumptions used in December 31, 2016 valuation were based on the results of an actuarial experience study for the period January 1, 2007- December 31, 2011.

2. The total pension liability contained in the Schedule of Net Pension Liability was provided by the Retirement System's actuary, Conduent HR Consulting, LLC. The net pension liability is measured as the total pension liability less the amount of the fiduciary net position of the Retirement System.
3. The required employer contributions and percent of those contributions actually made are presented in the Schedule of Contributions.

See independent auditors' report and notes to required supplementary information.

# SUPPLEMENTARY INFORMATION

(See Independent Auditors' Report)

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**Combining Statement of Fiduciary Net Position**  
**Non-Consenter Funds**  
**As of December 31, 2016**  
**(in thousands)**

	Retirement Fund	Combined Retirement Fund	General Employes' Duty Disability Fund	Firemen's and Policemen's Duty Disability Fund	Firemen's Heart and Lung Fund	Firemen's and Policemen's Survivorship Fund	Total
<b>ASSETS</b>							
CASH AND CASH EQUIVALENTS	\$ 650	\$ 310	\$ 7	\$ -	\$ -	\$ -	\$ 967
INVESTMENTS (Notes 2 and 9):							
Bonds and collateralized mortgage obligations	2,361	806	20	-	-	-	3,187
Common and preferred stocks	3,170	1,083	27	-	-	-	4,280
Blackrock Global Alpha Tilts	698	238	6	-	-	-	942
Blair William Emerging	99	34	1	-	-	-	134
COLTV Stock Index Fund	1,177	401	10	-	-	-	1,588
DFA Invt Dimensions	458	157	4	-	-	-	619
DFA Small Cap Fund	504	172	3	-	-	-	679
Newton	210	72	2	-	-	-	284
Principal	254	87	2	-	-	-	343
AQR Emerging Equities Fund	241	82	2	-	-	-	325
Hedge equity	719	245	6	-	-	-	970
Real estate investments	931	318	8	-	-	-	1,257
Private equity	585	200	5	-	-	-	790
<b>Total Investments</b>	<b>11,407</b>	<b>3,895</b>	<b>96</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>15,398</b>
RECEIVABLES AND OTHER ASSETS							
Actuarially determined contributions (Note 12)	-	55	-	-	-	-	55
Interest, dividends and foreign tax recoverable (Note 2)	21	7	-	-	-	-	28
Investments sold	57	20	-	-	-	-	77
<b>Total Receivables and Other Assets</b>	<b>78</b>	<b>82</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>160</b>
<b>Total Assets</b>	<b>12,135</b>	<b>4,287</b>	<b>103</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>16,525</b>
<b>LIABILITIES</b>							
Investments purchased	130	44	1	-	-	-	175
<b>Total Liabilities</b>	<b>130</b>	<b>44</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>175</b>
<b>NET POSITION RESTRICTED FOR PENSIONS</b>	<b>\$ 12,005</b>	<b>\$ 4,243</b>	<b>\$ 102</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 16,350</b>

See Independent Auditors' Report.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE**  
**Combining Statement of Changes in Fiduciary Net Position**  
**Non-Consenter Funds**  
**For the Year Ended December 31, 2016**  
**(in thousands)**

	Retirement Fund	Combined Retirement Fund	General Employes' Duty Disability Fund	Firemen's and Policemen's Duty Disability Fund	Firemen's Heart and Lung Fund	Firemen's and Policemen's Survivorship Fund	Total
<b>ADDITIONS</b>							
<b>Contributions</b>							
Employer (Note 5)	\$ -	\$ 145	\$ -	\$ -	\$ -	\$ -	\$ 145
Member	18	7	-	-	-	-	25
<b>Total Contributions</b>	<b>18</b>	<b>152</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>170</b>
<b>Investment Income</b>							
Net appreciation (devaluation) in fair value of investments	752	257	6	-	-	-	1,015
Interest, dividends and other investment income	236	80	2	-	-	-	318
<b>Total Investment Income</b>	<b>988</b>	<b>337</b>	<b>8</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,333</b>
Investment Expense (Note 7)	-	-	-	-	-	-	-
<b>Net Investment Income</b>	<b>988</b>	<b>337</b>	<b>8</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,333</b>
<b>Total Additions</b>	<b>1,006</b>	<b>489</b>	<b>8</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,503</b>
<b>DEDUCTIONS</b>							
Benefits paid	(113)	(31)	-	-	-	-	(144)
Refunds of contributions	(91)	(43)	-	-	-	-	(134)
<b>Total Deductions</b>	<b>(204)</b>	<b>(74)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(278)</b>
<b>NET POSITION CHANGES</b>							
Net increase (decrease) in net position before transfers	802	415	8	-	-	-	1,225
Net position transfers (Notes 3, 4 and 11)	(2,355)	(131)	(20)	-	-	-	(2,506)
<b>Net Increase (Decrease) in Net Position</b>	<b>(1,553)</b>	<b>284</b>	<b>(12)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(1,281)</b>
<b>NET POSITION RESTRICTED FOR PENSIONS</b>							
Beginning of Year	13,558	3,959	114	-	-	-	17,631
End of Year	\$ 12,005	\$ 4,243	\$ 102	\$ -	\$ -	\$ -	\$ 16,350

See Independent Auditors' Report.