

EMPLOYEES' RETIREMENT SYSTEM

**of the
County of Milwaukee**



2022 Annual Report of the Pension Board

**as of and for the Years Ended
December 31, 2022 and 2021**

CITIZEN MEMBERS

Ronald Nelson, Vice Chairperson
Nicole Best
Anthony Johnson
Himanshu Parikh

RETIREE MEMBER

David Robles, Chairperson

EMPLOYEE MEMBERS

Jeffrey Gollner
Kessha Hobson
Jeremy Lucas
Deputy Rob Worzalla

Erika Bronikowski, Director
901 North 9th Street, Room 210-C
Milwaukee, Wisconsin 53233
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Employees' Retirement System of the County of Milwaukee

2022 Annual Report of the Pension Board

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EMPLOYEES' RETIREMENT SYSTEM (ERS)



Milwaukee County

Pension Board

David Robles
Chairperson

Ronald Nelson
Vice Chairperson

Himanshu Parikh
Nicole Best
Deputy Rob Worzalla
Jeffrey Gollner
Kessha Hobson
Jeremy Lucas
Anthony Johnson

Erika Bronikowski, Director
Retirement Plan Services

ERS Members:

We are pleased to present the 2022 Annual Report of your Pension Board. The Employees' Retirement System ("ERS") experienced a negative investment return for the year of (9.7%). Net position restricted for pensions decreased by (\$304.4) million. This decrease was mainly due to investment returns below the requirement. Total net position at the end of the year was \$1.67 billion. The management discussion and analysis, the financial statements, and the footnotes provide detailed information regarding the ERS's performance. The description of the ERS included in this report highlights major plan provisions. County Ordinances, labor agreements, Pension Board Rules, and Governmental Accounting Standards Board ("GASB") pronouncements prevail over the contents of this report. If you have any questions, please call (414) 278-4207.

Members who retire or otherwise leave Milwaukee County service have several options available with respect to pension benefits. To make informed decisions before terminating employment, members should fully understand and carefully consider the various options available.

Members considering retirement within the next few years are reminded to watch for announcements from the County for retirement information programs. Please check the Retirement website (<https://county.milwaukee.gov/EN/Human-Resources/Retirement-Services>) for further information regarding these programs. If you would like to meet with a Retirement Analyst to discuss retirement, please schedule an appointment by calling (414) 278-4207.

Remember to keep your beneficiary designations current by informing the Retirement office of any changes. Retired members should notify the Retirement office in writing of any address changes to ensure benefit payments and year-end Form 1099-R statements are properly mailed.

Respectfully,

The Pension Board

Independent Auditors' Report

To the Members of the Pension of
Employees' Retirement System of the County of Milwaukee

Opinion

We have audited the accompanying statements of fiduciary net position of the Employees' Retirement System of the County of Milwaukee (the Retirement System), as of December 31, 2022 and 2021, the statements of changes in fiduciary net position for the years 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.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Retirement System as of December 31, 2022 and 2021 and the changes in fiduciary net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Retirement System and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America; and for 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.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Retirement System's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Retirement System's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings and certain internal control-related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the required supplementary information, as listed in the table of contents be presented to supplement the basic financial statements. Such information is the responsibility of management and, 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.

Other Information

Management is responsible for the other information included in the annual report. The other information comprises the Letter from the Pension Board, Ten-year Historical Trend and related information on pages 33 through 37 but does not include the basic financial statements and our auditors' report thereon. Our opinion on the basic financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

Baker Tilly US, LLP

Milwaukee, Wisconsin
July 28, 2023

Management’s Discussion & Analysis — Required Supplementary Information
(Unaudited)
(In Thousands of Dollars)

Management is pleased to provide this overview and analysis of the financial activities of the Employees' Retirement System of the County of Milwaukee (“ERS”, or the “Retirement System”) for the year ended December 31, 2022. Readers are encouraged to consider the information presented in conjunction with the Financial Statements.

FINANCIAL HIGHLIGHTS

FIDUCIARY NET POSITION

- Fiduciary net position for the ERS decreased by (\$304,409) as of 12/31/22 vs. 12/31/21 following an increase of \$177,450 as of 12/31/21 vs. 12/31/20. During 2022, investment categories that experienced positive returns were Futures and Infrastructure. During 2021, investment categories that experienced positive returns were US Equity, Hedged Equity, Infrastructure, Private Equity, and Corporate Bonds.
- The rate of return on total assets of the pension fund, net of fees, was (9.7%), 16.5%, and 10.7%, for the years ended December 31, 2022, 2021, and 2020, respectively.
- Receivables increased by \$4,875 as of 12/31/22 vs. 12/31/21 due primarily to an increase in pending investment sales. Receivables decreased by (\$3,727) as of 12/31/21 vs. 12/31/20 due primarily to a decrease in pending investment sales.
- Other assets decreased by (\$6,260) as of 12/31/22 vs. 12/31/21 and increased by \$25,219 as of 12/31/21 vs. 12/31/20 due largely to changes in securities lending—collateral of (\$7,182) and \$24,516, respectively.
- Liabilities decreased by (\$7,433) as of 12/31/22 vs. 12/31/21. This decrease was due primarily to an increase in securities lending-collateral. Liabilities increased by \$22,329 as of 12/31/21 vs. 12/31/20. This increase was due primarily to an increase in securities lending-collateral.
- The ERS buys and sells financial futures contracts to improve the performance of the fund. The ERS purchases contracts that approximate the amount of cash held by US equity managers and cash used to pay benefits and expenses.

ADDITIONS AND DEDUCTIONS TO FIDUCIARY NET POSITION

- Total additions decreased by (\$482,434) in 2022 vs. 2021 and total additions increased \$123,188 in 2021 vs. 2020. The 2022 decrease is primarily the result of decreases in net appreciation (depreciation) in fair value of investments. The 2021 increase is primarily the result of increases in net appreciation (depreciation) in fair value of investments.
- Benefits paid to retirees & beneficiaries decreased by (\$1,464) in 2022 and decreased by (\$515) in 2021. The decrease in 2022 from 2021 was primarily due to the additional VCP Lump Sum payments that occurred in 2021.
- 2022 saw a (1.85%) decrease in retirements from 2021. 2021 saw a 32.5% increase in retirements from 2020. There was no significant reason for the decrease of retirements in 2022. The increase of retirements in 2021 were mainly due to the COVID-19 pandemic.
- Pursuant to Governmental Accounting Standards Board Statement No. 67, as of December 31, 2022, and December 31, 2021, the ERS funded ratio was 72.9% and 85.6%, respectively. The funding ratio gives an indication of how well the liabilities of the pension plan are funded. The higher the funding ratio, the better the plan is funded. The ratio increases are due to investment gains and pension contributions, and declines are due to investment losses, increases in plan benefits, large pension payouts, and underpayment by the County of pension annual required contributions.

The Board of Trustees of the ERS (“The Board”) has the responsibility for the overall performance of the Retirement System. The Board’s principal means to achieve this goal is by (1) determining an asset allocation policy which is expected to provide the long-term rate of return sufficient to fund benefits while minimizing the risk of loss through diversification, (2) selecting an appropriate number of investment managers to manage the assets within an asset class and monitoring the performance of such investment managers relative to specified benchmarks, and (3) implementing cost containment measures intended to reduce the investment fees and costs associated with investing the Retirement System’s assets. The Board is the fiduciary of the Retirement System and is responsible for carrying out the investment functions solely in the interest of the members and benefit recipients.

OVERVIEW OF THE FINANCIAL STATEMENTS

The discussion and analysis is intended to serve as an introduction to the Retirement System’s financial statements. The financial section is comprised of four components: (1) financial statements, (2) notes to the financial statements, (3) required supplementary information, and (4) other supplementary schedules.

Financial Statements – There are two financial statements presented for the plan. The Statements of Fiduciary Net Position as of December 31, 2022 and 2021 indicates the fiduciary net position available to pay future benefits and gives a snapshot of the financial assets available for pension benefits at a particular point in time. The Statements of Changes in Fiduciary Net Position for the years ended December 31, 2022 and 2021 provides a view of additions and deductions to the plan for the years presented.

Notes to financial statements – The notes provide additional information that is essential for a full understanding of the data provided in the financial statements.

(See independent auditors’ report)

Management's Discussion & Analysis — Required Supplementary Information
(Unaudited)
(In Thousands of Dollars)

Required supplementary information – The required supplementary information consists of a Schedule of Changes in the Net Pension Liability and Related Ratios, Schedule of County Contributions, Schedule of Investment Returns, and related notes concerning the funding status of the plan. These schedules provide historical trend information, that contribute to understanding the changes in the funded status of the plan over time.

Other supplementary schedules – The additional schedules (Ten-Year Historical Trend Information, Fiduciary Net Position at Fair Value for 2022-2013, Actual County and Participant Contributions for 2022-2013, Active Membership Statistics, Retirements and Survivors Statistics) are presented for the purpose of additional analysis.

COMPARATIVE FINANCIAL STATEMENTS

Retirement System's Fiduciary Net Position	12/31/2022	12/31/2021	12/31/2020	2022 vs. 2021	
				Difference	% Change
Assets					
Cash and cash equivalents	\$27,707	\$66,054	\$61,727	(\$38,347)	-58.05%
Receivables	8,692	3,817	7,544	4,875	127.72%
Investments, at fair value	1,637,173	1,909,283	1,735,323	(272,110)	-14.25%
Other assets	37,866	44,126	18,907	(6,260)	-14.19%
Total Assets	1,711,438	2,023,280	1,823,501	(\$311,842)	-15.41%
Liabilities					
Security lending obligations	35,919	43,101	18,585	(7,182)	-16.66%
Other liabilities	9,561	9,812	11,999	(251)	-2.56%
Total Liabilities	45,480	52,913	30,584	(7,433)	-14.05%
Net position restricted for pensions	\$1,665,958	\$1,970,367	\$1,792,917	(\$304,409)	-15.45%
2022 vs. 2021					
Retirement System's Changes in Fiduciary Net Position	12/31/2022	12/31/2021	12/31/2020	Difference	% Change
Additions					
Employer contributions	\$60,964	\$62,114	\$64,559	(\$1,150)	-1.85%
Member contributions	13,274	13,390	12,343	(116)	-0.87%
Tax levy	1,005	973	1,137	32	3.29%
Investment income (loss)	(174,120)	307,080	182,330	(481,200)	-156.70%
Total Additions	(98,877)	383,557	260,369	(482,434)	-125.78%
Deductions					
Benefit payments	(197,863)	(199,327)	(199,842)	1,464	-0.73%
Administrative expenses	(4,303)	(3,880)	(3,900)	(423)	10.90%
Withdrawals	(3,366)	(2,900)	(2,338)	(466)	16.07%
Total Deductions	(205,532)	(206,107)	(206,080)	575	-0.28%
Net increase (decrease) in net position	(304,409)	177,450	54,289	(481,860)	-271.55%
Net position restricted for pensions:					
Beginning of year	1,970,367	1,792,917	1,738,628	177,450	9.90%
End of year	\$1,665,958	\$1,970,367	\$1,792,917	(\$304,409)	-15.45%

Requests for financial information – The financial report is designed to provide the Pension Board, our membership, taxpayers, investment managers, and creditors with a general overview of the ERS's finances and to demonstrate the ERS's accountability for the funds under its stewardship. Please address any questions about this report or requests for additional financial information to:

EMPLOYEES' RETIREMENT SYSTEM OF THE COUNTY OF MILWAUKEE
STATEMENTS OF FIDUCIARY NET POSITION
AS OF:

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
ASSETS		
CASH AND CASH EQUIVALENTS	<u>\$ 27,707,041</u>	<u>\$ 66,053,830</u>
RECEIVABLES		
Due from sale of investments	3,603,016	282,282
Accrued interest and dividends	1,855,708	1,306,561
Plan members	524,273	512,528
Miscellaneous receivables	<u>2,709,221</u>	<u>1,716,318</u>
TOTAL RECEIVABLES	<u>8,692,218</u>	<u>3,817,689</u>
INVESTMENTS AT FAIR VALUE		
Domestic common and preferred stocks	412,680,375	522,199,131
Futures	4,414	540
Long/Short hedge funds	154,931,580	162,096,048
Fixed income	231,662,434	315,088,223
International common and preferred stocks	205,236,243	243,633,123
Real estate and REITs	127,169,260	148,324,710
Infrastructure	207,836,762	198,660,304
Private equity	<u>297,651,582</u>	<u>319,281,062</u>
TOTAL INVESTMENTS	<u>1,637,172,650</u>	<u>1,909,283,141</u>
OTHER ASSETS		
Software development costs, net (See Note 2)	1,946,683	1,025,002
Securities lending - collateral (See Note 6)	<u>35,919,428</u>	<u>43,100,974</u>
TOTAL OTHER ASSETS	<u>37,866,111</u>	<u>44,125,976</u>
TOTAL ASSETS	<u>1,711,438,020</u>	<u>2,023,280,636</u>
LIABILITIES		
Securities lending - collateral (See Note 6)	35,919,428	43,100,975
Miscellaneous payables	2,068,975	4,113,282
Payable for securities purchased	2,925,154	553,162
Payable to OBRA retirement plan	<u>4,566,424</u>	<u>5,145,712</u>
TOTAL LIABILITIES	<u>45,479,981</u>	<u>52,913,131</u>
NET POSITION RESTRICTED FOR PENSIONS	<u>\$ 1,665,958,039</u>	<u>\$ 1,970,367,505</u>

The accompanying notes are an integral part of these financial statements

EMPLOYEES' RETIREMENT SYSTEM OF THE COUNTY OF MILWAUKEE
STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEARS ENDED:

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
ADDITIONS:		
CONTRIBUTIONS		
County of Milwaukee	\$ 60,964,137	\$ 62,113,812
Plan participants	13,273,863	13,390,188
County of Milwaukee - tax levy	<u>1,004,832</u>	<u>973,085</u>
TOTAL CONTRIBUTIONS	<u>75,242,832</u>	<u>76,477,085</u>
INVESTMENT INCOME (LOSS)		
Net appreciation (depreciation) in fair value	(190,517,516)	283,681,606
Interest and dividends	7,177,435	7,280,980
Securities lending income	113,696	85,413
Other income	<u>11,352,121</u>	<u>18,156,724</u>
TOTAL INVESTMENT INCOME (LOSS)	(171,874,264)	309,204,723
Less: Securities lending rebates and fees, net	(36,339)	(27,299)
Less: Investment expense	<u>(2,209,044)</u>	<u>(2,097,555)</u>
Net investment income (loss)	<u>(174,119,647)</u>	<u>307,079,869</u>
TOTAL ADDITIONS	<u>(98,876,815)</u>	<u>383,556,954</u>
DEDUCTIONS:		
Benefits paid to retirees & beneficiaries	(197,863,370)	(199,326,814)
Administrative expenses	(4,302,473)	(3,879,753)
Withdrawal of membership accounts	<u>(3,366,808)</u>	<u>(2,899,720)</u>
TOTAL DEDUCTIONS	<u>(205,532,651)</u>	<u>(206,106,287)</u>
NET INCREASE (DECREASE) IN NET POSITION	(304,409,466)	177,450,667
NET POSITION RESTRICTED FOR PENSIONS		
Beginning of year	<u>1,970,367,505</u>	<u>1,792,916,838</u>
End of year	<u>\$ 1,665,958,039</u>	<u>\$ 1,970,367,505</u>

The accompanying notes are an integral part of these financial statements

Employees' Retirement System of the County of Milwaukee
Notes to the Financial Statements
For the Years Ended December 31, 2022 and 2021

(1) Description of Retirement System –

The following brief description of the provisions of the Employees' Retirement System of the County of Milwaukee ("ERS" or the "Retirement System") is provided for financial statement purposes only. Members should refer to Section 201.24 and Appendix B (ERS Rules) of the General Ordinances of Milwaukee County, and their respective collective bargaining agreements for complete details.

The Retirement System is a single-employer defined benefit plan that was created to encourage qualified personnel to enter and remain in the service of the County of Milwaukee (the "County") by providing for a system of retirement, disability and death benefits to or on behalf of its employees. Under Chapter 201 of the Laws of Wisconsin for 1937, the County was mandated to create the Retirement System as a separate legal entity. The County did so by passing Section 201.24 of the General Ordinances of Milwaukee County. The authority to manage and control the Retirement System is vested in the Pension Board of the ERS (the "Pension Board"). The Pension Board consists of a maximum of ten members – three members appointed by the County Executive (subject to confirmation by the County Board of Supervisors), three employee members elected by active employee members, two members appointed by the County Board chairperson, one employee member appointed by the Milwaukee Deputy Sheriffs' Association, and one retiree member elected by retirees.

On January 22, 2020 the Pension Board of the ERS approved a Pension Board Charter, which included the creation of four (4) committees to assist in the administration of the Pension Board's duties.

- The Appeals and Rules Committee has been established to assist the Pension Board in overseeing the review of appeals directed to the ERS and the adoption and amendment of Pension Board Rules. The Appeals and Rules Committee is an advisory committee to the Pension Board, and its proposed findings and recommendations are subject to final determination by the Pension Board. The purpose of the Appeals and Rules Committee is to ensure diligent analysis of all appeals, and, in addition, with advice of legal counsel, recommend changes to the Pension Board Rules.
- The Investment Committee has been established to assist in fulfilling its responsibilities in all matters relating to the investment and management of the ERS's assets. The Committee manages the ERS investment program for the benefit of plan beneficiaries with core objectives of maximizing long term investment return and minimizing investment risks with due consideration to the characteristics of the underlying actuarial liabilities.
- The Actuarial, Audit and Risk Committee has been established to assist the Pension Board in fulfilling its oversight responsibilities in the areas of internal controls, risk assessment, financial audits and actuarial audits and analyses, and resulting compliance matters.
- The Governance Committee has been established to assist the Pension Board in fulfilling its oversight responsibilities in the areas of Pension Board governance, Pension Board member training and evaluation, stakeholder communications, and the ERS's strategic planning.

The Pension Board, with the assistance of its actuarial professionals, determines and recommends how much the County should contribute to the ERS based on what the Pension Board believes is necessary to properly fund the current and future payment of benefits. The Pension Board oversees the tax qualification of the ERS and oversees the administration of the ERS in accordance with adopted County Ordinances (the "Ordinances"), any amendments to the Ordinances, and the ERS Rules. The Pension Board oversees the benefit payment process from the ERS to determine whether these payments are made in accordance with the Ordinances and the ERS Rules.

	<u>As of December 31</u>	
	<u>2022</u>	<u>2021</u>
Members		
Inactive plan members currently receiving benefits	7,829	7,886
Inactive plan members entitled to but not yet receiving benefits	1,305	1,262
Current employees	3,325	3,529
Total participants	12,459	12,677

Membership data above is as of January 1, 2022, the date of the actuary report used to determine the total pension liability for each year, and reasonably approximates membership data through December 31, 2022.

Contributions –

The Retirement System had been substantially noncontributory. However, starting in 2011, certain members began making mandatory contributions. Most full-time, regularly-appointed employees were required to make contributions starting in 2012. The employee contributions varied from 6.1% of compensation to 9.9% for 2022, and 6.2% of compensation to 9.7% for 2021. These percentages may change from year to year based on an analysis performed by the Retirement System’s actuary.

Employees who terminate County employment and are not eligible for an immediate pension payment may request a refund of all accumulated contributions made, with simple interest at 5% per annum. Effective December 19, 2013, employees, who terminate employment with the County, must request a refund of accumulated contributions within one hundred eighty (180) days of terminating County employment. Prior to December 19, 2013, terminated employees had sixty (60) days to request a refund of their contributions. The Retirement System will send an employee who terminates a written notice of the refund option. Any employee receiving this refund will forfeit his or her service credit and will no longer be a member of the ERS.

Contributions due from the County to the Retirement System consist of actuarially determined amounts sufficient to fund the annual service cost and interest on and amortization of the net pension liability less the expected contributions from the participants.

In 2012, the County of Milwaukee started receiving contributions from the State of Wisconsin for members who were transferred from Milwaukee County to the State of Wisconsin for future service. As a result of the agreement between the State and the County, non-vested members of the Retirement System were able to continue to accrue pension benefits with the ERS, while they were employed with the State. Once the member is vested, they are transferred to the state retirement plan, unless they remained in the same position and opted to remain in the Milwaukee County ERS plan. There are currently two employees that have opted to remain in the Milwaukee County ERS plan. The state employees were required to contribute 6.1% of their wages to the ERS in 2022 and 6.2% of their wages to the ERS in 2021, and the state contributed the same percentages to the County for 2022 and 2021.

The County makes contributions to the Retirement System based upon Actuarially Determined Contributions and legal requirements, at the discretion of the County Board. Data used in the determination of the contribution is based upon the prior fiscal year’s demographics. The actual contribution made to the pension plan is set during the County’s budget process and may differ from the Actuarially Determined Contribution as a result of changes in plan provisions implemented subsequent to establishment of the Actuarially Determined Contribution and budgetary restraints. During the year, the Retirement System accrues those contributions that the County has included in its current year’s budget. The County contribution recorded by the Retirement System was \$1,744,422 greater than, and \$1,468,575 greater than, the Actuarially Determined Contribution for 2022 and 2021, respectively.

The Actuarially Determined Contribution is calculated by the Retirement System’s actuary, hired by the Pension Board, using census data, following plan guidelines, and compared to current net assets. The objective is to calculate a contribution that allows the Retirement System to fulfill its obligations to its members.

Benefits –

The normal retirement benefit is a monthly pension for the life of the member beginning at normal retirement age. The pension amount is determined by the following formula:

$$\text{Multiplier} \times \text{Creditable Service} \times \text{Final Average Salary}$$

For most members, the normal retirement age is either 60 or 64 depending on factors including the ERS enrollment date and any relevant collective bargaining agreement. A few collective bargaining agreements also require a minimum of 5 years creditable service in addition to the age requirement. For deputy sheriff members, the normal retirement age is 57 or age 55 with 15 years of creditable service. Depending on enrollment date and collective bargaining agreement, some active members are eligible to retire when their age added to their years of creditable service equals 75 (the “Rule of 75”). The multiplier is determined by Ordinance, collective bargaining agreements, and the ERS enrollment date. At this time, the multiplier percentage can be 1.5%, 1.6%, 2% or 2.5%. A member’s three or five consecutive years of highest earnings are used to calculate their final average salary as defined by the Ordinance and labor agreements. Annually after retirement, the monthly benefit is increased by 2% of the benefit paid for the first full month of retirement, subject to IRS limits. By Ordinance, the maximum benefit (excluding post-retirement increases) payable to a member cannot exceed the sum of 80% of the member’s final average monthly salary.

For some members, depending on enrollment date and collective bargaining agreement, the member may elect to receive a backdrop benefit. This benefit permits an employee to receive a lump-sum payment plus a monthly pension benefit upon retirement. The lump-sum payment is the total of the monthly pension amounts, adjusted for post retirement increases that a member would be entitled to from a prior date (“backdrop date”) to the date that the member terminates employment plus compounded interest. The backdrop date must be at least one calendar year prior to the termination date and the member must have been eligible to retire as of that date. The member will be entitled to a post retirement increase based on the backdrop date once the member terminates employment.

In 2012, the County Board passed an ordinance limiting the amount of backdrop benefit for most eligible employees who choose a backdrop date after April 1, 2013. If the member chooses a backdrop date after April 1, 2013, then the monthly backdrop benefit is calculated using the member's final average salary, service credit, and applicable multipliers as of April 1, 2013.

A member who meets the requirements for an accidental disability retirement benefit is entitled to an amount computed in the same manner as a normal pension but not less than 60% of the member's final average salary for accidental disability (75% for a represented deputy sheriff). The ordinary disability pension will not be less than 25% of the member's final average salary. A total of 15 years of creditable service is required to apply for ordinary disability.

Most members are immediately vested upon attaining age 60 or 64. A vested member is eligible for a deferred pension beginning as of the member's normal retirement date.

A member who is 55 years of age and has 15 years of credited service may be eligible for and may elect to receive early reduced retirement benefits. The member would be entitled to a benefit equal to the normal retirement benefit with a lifetime reduction of 5% for each year prior to the normal retirement date.

Upon the death of a member (generally after 1 year of service and depending on collective bargaining agreements), a spouse with a dependent child as defined by Ordinance will receive 40% of the deceased member's salary, reduced by Social Security benefits payable to the spouse. An additional 10% of salary, reduced by Social Security benefits, is paid for each dependent child. Generally, the total benefit, including Social Security benefits, cannot exceed 90% of the prior salary level of the member. At age 60, the spouse will receive 50% of the normal retirement benefit based on the member's projected service to age 60. If there is no spouse or child, the death benefit payable to a designated beneficiary is equal to 50% of the deceased member's final average salary, but not to exceed \$2,000.

A member who becomes eligible for normal retirement, but continues to work may elect a Protective Survivorship Option ("PSO") designating a person to receive a pension (100% option) in the event of their death while in active service. Previously there had been a 50% option for PSOs; however, on December 17, 2015 the County Board of Supervisors amended Ordinance section 201.24(7.1) and removed that option. The PSO election must be filed in writing on an approved form. In the absence of an election, a surviving spouse will be paid a 100% survivorship pension.

Currently, members may choose among several benefit payment options when retiring. The available pension options are:

-Maximum Option

Benefit payable for the member's lifetime and ceases upon member's death.

-25% Joint & Survivor

This option is an actuarially reduced pension benefit that is payable over the life of the member. Upon the member's death, 25% of the pension benefit is payable over the life of a named beneficiary, if living;

-50% Joint & Survivor

This option is an actuarially reduced pension benefit that is payable over the life of the member. Upon the member's death, 50% of the pension benefit is payable over the life of a named beneficiary, if living;

-75% Joint & Survivor

This option is an actuarially reduced pension benefit that is payable over the life of the member. Upon the member's death, 75% of the pension benefit is payable over the life of a named beneficiary, if living;

-100% Joint & Survivor

This option is an actuarially reduced pension benefit that is payable over the life of the member. Upon the member's death, 100% of the pension benefit is payable over the life of a named beneficiary, if living;

-10 Year Certain and Life

This option is an actuarially reduced pension benefit payable over the member's life but is guaranteed for a period of 10 years. In the event the member should die within 10 years after the retirement date, the benefit continues to the named beneficiary for the balance of the 10 years.

Benefits of \$197.9 million and \$199.3 million were paid in 2022 and 2021, respectively, including periodic pension payments of \$184.2 million and \$185.7 million, respectively, and backdrop lump sum pension payments of \$13.7 million and \$13.6 million in 2022 and 2021, respectively.

(2) Summary of Significant Accounting Policies

Basis of Accounting –

The accompanying financial statements are prepared using the accrual basis of accounting. Employee and employer contributions are recognized as revenues in the period in which employee services are performed and expenses are recorded when the corresponding liabilities are incurred. Benefit payments to members are recognized in the period in which the payment was due to the member.

Reporting Entity –

As defined by accounting standards generally accepted in the United States of America (“U.S. GAAP”), the financial reporting entity consists of a primary government, as well as its component units, which are legally separate organizations for which the elected officials of the primary government are financially accountable. Based upon required criteria, the Retirement System has no component units and is not a component unit of any other government. These basic financial statements cover all of the defined benefits and operations administered by the Board for the ERS and the OBRA 1990 Retirement System of the County of Milwaukee.

Contributions –

The Retirement System records employee contributions as earned. Contributions earned but not yet received from the County are reflected as contributions receivable.

Investments –

Investments, primarily stocks, bonds, certain government loans and mortgage-backed certificates, are stated at quoted fair value. Temporary cash investments are valued at cost, which approximates fair value. Investments in venture capital partnerships, real estate, long/short hedge and infrastructure are valued at estimated fair value, as provided by the Retirement System’s investment managers. Investment transactions are recorded on the trade date. Dividends and interest are recorded as earned. Realized gains and losses are computed based on the average cost method. Unrealized gains and losses in the fair value of investments represent the net change in the fair value of the investments held during the period.

Investment securities, in general, are exposed to various risks, such as interest, 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 and that such changes could materially affect amounts reported in the Statements of Fiduciary Net Position.

A summary of cash and investments at cost is as follows:

	<u>As of December 31,</u>	
	<u>2022</u>	<u>2021</u>
Fixed income	\$257,711,166	\$296,725,502
Domestic common and preferred stocks	422,919,040	445,234,761
International common and preferred stocks	169,609,570	169,814,189
Long/Short hedge funds	100,347,935	84,742,138
Infrastructure	123,695,263	126,424,367
Real estate and REITs	71,485,503	70,919,823
Private equity	194,795,337	171,951,778
Cash & cash equivalents	26,060,721	62,264,788
Total investments at cost	\$1,366,624,535	\$1,428,077,346

Valuation of International Securities –

Securities and other assets and liabilities denominated in foreign currencies are translated into U.S. dollar amounts on the date of valuation. Purchases and sales of securities and income items denominated in foreign currencies are translated into U.S. dollar amounts on the respective dates of such transactions.

Software Development Costs –

Capitalized software development costs represent direct costs related to the development and implementation of software programs utilized in the Retirement System. The amounts are being amortized over ten years using the straight-line method. Amortization expense is included in Administrative Expenses in the accompanying Statements of Changes in Fiduciary Net Position.

	<u>As of December 31,</u>	
	<u>(in thousands of dollars)</u>	
	<u>2022</u>	<u>2021</u>
Software development costs		
Beginning balance	\$9,595	\$8,657
Acquisitions	1,164	938
Ending Balance	<u>\$10,759</u>	<u>\$9,595</u>
Accumulated amortization		
Beginning balance	\$8,570	\$8,335
Amortization expense.....	242	235
Ending Balance	<u>\$8,812</u>	<u>\$8,570</u>
Software development costs, net	<u>\$1,947</u>	<u>\$1,025</u>

Expenses –

Effective January 1, 2019, administrative expenses incurred by the County related to the Retirement System are paid as part of the tax levy. Such expenses totaled \$1,052,453 and \$1,019,703 in 2022 and 2021, respectively.

Rate of Return –

For the year ended December 31, 2022, and December 31, 2021, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was (9.7%) percent and 16.5% percent, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Use of Estimates –

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure 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 could differ from those estimates.

Contingencies –

Claims and judgments are recorded as liabilities if all conditions of Governmental Accounting Standards Board (“GASB”) pronouncements are met. Claims and judgments are recorded as expenses when the related liabilities are incurred.

Effect of New Accounting Standards on Current-Period Financial Statements –

The GASB has approved the following:

- Statement No. 94, Public-Private and Public-Public Partnerships and Availability Payment Arrangements
- Statement No. 96, Subscription-Based Information Technology Arrangements
- Statement No. 99, Omnibus 2022
- Statement No. 100, Accounting Changes and Error Corrections - an Amendment of GASB Statement No. 62
- Statement No. 101, Compensated Absences

When they become effective, application of these standards may restate portions of these financial statements.

3) Fair Value Measurements –

The GASB Board issued Statement 72 to update the existing standards on fair value (primarily Statement 31). A review of existing standards by the Board, found opportunities to improve the measurement of resources available to governments, and to increase comparability and accountability. Statement 72 was implemented January 1, 2016.

Three input categories are used to assist in the process:

Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities, most reliable.

Level 2: Quoted prices for similar assets or liabilities, quoted prices for identical or similar assets or liabilities in markets that are not active, or other than quoted prices that are observable.

Level 3: Unobservable inputs, least reliable.

U.S. treasury securities, equity securities, real estate investment trusts, and exchange traded funds classified as Level 1 are valued using active market pricing. These investments trade in robust markets where buyers and sellers can transact quickly and easily, making these investments highly liquid in nature. Additionally, futures contracts are considered in Level 1 valuations. These are defined as future contracts traded on an organized exchange based on an agreement to buy or sell at a fixed price on a future date.

Debt and debt derivative securities classified in Level 2 (including corporate securities, asset backed securities, foreign securities, SWAPS, etc.) 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 are readily available to market participants who are known to be actively involved in the market.

U.S. equity, international equity and equity derivative securities classified in Level 2 are securities whose values are derived daily from associated traded securities. They include pooled investments that give access to diversified portfolios of equity securities whose performance is tracked as a change in the total market cap of the associated fund. These investments can be purchased and sold daily based on the funds closing net asset value (NAV).

The system 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.

Valuation techniques should be applied consistently, though a change might be appropriate in certain circumstances. There were no changes to the methodologies during the years ended December 31, 2022 and December 31, 2021.

- *Real estate investments* consist of three core open-end real estate funds and two of these three core real estate managers have the opportunity to invest a small portion of their total allocation in value-add real estate investments, primarily in the US commercial space. The fair values of these investments have been determined using the NAV per share of the Retirement System's ownership interest in partners' capital. These investments are eligible for redemption on a quarterly basis with notice periods ranging from 30 – 90 days.
- *Short Hedge fund investments* consist of three open-end global long/short equity hedge fund of funds portfolios that primarily invests both long and short in publicly traded global equities. The fair values of these investments have been determined using the NAV per share of the investments. These investments are eligible for redemption on a quarterly basis with a notice period of 45 days.
- *Private equity fund investments* consist of ten private equity fund of funds, investing primarily in leveraged buyout funds, venture capital funds, special situation funds and secondary funds. The fair values of these investments have been determined using the NAV per share of the investments. These investments are not eligible for redemption.
- *Infrastructure investments* consist of two core open-end infrastructure funds that primarily invest in global infrastructure assets. The fair values of these investments have been determined using the NAV per share of the investments. These investments are eligible for redemption on a quarterly basis with a notice period of 90 days.

Fair Value Disclosure Requirements		Fair Value Measurements Using:		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable inputs (Level 2)	Significant Un- observable in- puts (Level 3)
12/31/2022				
Investments by fair value level:				
Equity Securities				
- Domestic Common Stocks	\$ 110,902,693	\$ 110,902,693	\$ -	\$ -
- Domestic Stock Funds	301,777,682	301,777,682	-	-
- International Stock Funds	205,236,243	187,295,665	17,940,578	-
TOTAL EQUITY SECURITIES	617,916,618	599,976,040	17,940,578	-
Fixed Income Securities				
- Corporate Bonds / US Gov't	142,392,401	-	142,392,401	-
- Corporate Bond Funds	47,012,459	47,012,459	-	-
- International Bond Funds	42,257,574	-	42,257,574	-
TOTAL FIXED INCOME SECURITIES	231,662,434	47,012,459	184,649,975	-
Futures				
- Futures Contracts	4,414	4,414	-	-
TOTAL FUTURES	4,414	4,414	-	-
TOTAL INVESTMENTS BY FAIR VALUE LEVEL	\$ 849,583,466	\$ 646,992,913	\$ 202,590,553	\$ -
Investments measured at the net asset value (NAV):				
Alternative Investments	Net Asset Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
- Long/Short Hedge Funds				
ABS INVESTMENT MANAGEMENT	\$ 51,969,295	\$ -	Quarterly	45 Days
PARAMETRIC DEF EQUITY FUND LLC	51,222,645	-	Monthly	5 Days
NEUBERGER BERMAN DEFENSE EQUITY	51,739,640	-	Monthly	7 Days
TOTAL ALTERNATIVE INVESTMENTS	154,931,580			
Private Equity				
- Venture Capital				
ADAMS STREET	87,281,526	10,928,743	Illiquid	--
MESIROW FINANCIAL	82,558,537	12,100,000	Illiquid	--
PROGRESSIVE INVESTMENT MANAGEMENT	311	-	Illiquid	--
SIGULER GUFF	57,002,413	8,540,000	Illiquid	--
FAIRVIEW	8,729,988	11,490,247	Illiquid	--
BPEA	24,231,627	27,350,000	Illiquid	--
BARINGS	12,535,015	12,004,193	Illiquid	--
STEPSTONE (formerly GREENSPRING)	5,086,084	3,360,000	Illiquid	--
OWL ROCK	14,909,097	21,000,000	Illiquid	--
ALLIANCE BERNSTEIN	5,316,984	29,750,000	Illiquid	--
- Infrastructure				
IFM INFRASTRUCTURE	93,600,708	-	Quarterly	90 Days
JP MORGAN INFRASTRUCTURE	114,236,054	-	Semi-Annually	90 Days
TOTAL PRIVATE EQUITY	505,488,344			
Real Estate and REITs				
- Real Estate				
AMERICAN REALTY ADVISORS	42,649,343	-	Quarterly	30 Days
MORGAN STANLEY PRIME PROPERTY FUND	58,790,672	-	Quarterly	90 Days
UBS TRUMBULL R/E	25,729,245	-	Quarterly	60 Days
TOTAL REAL ESTATE	127,169,260			
TOTAL INVESTMENTS MEASURED AT NAV	787,589,184			
TOTAL INVESTMENTS	\$ 1,637,172,650			

Fair Value Disclosure Requirements		Fair Value Measurements Using:		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable inputs (Level 2)	Significant Unobservable inputs (Level 3)
12/31/2021				
Investments by fair value level:				
Equity Securities				
- Domestic Common Stocks	\$ 120,483,440	\$ 120,483,440	\$ -	\$ -
- Domestic Stock Funds	401,715,690	401,715,690	-	-
- International Stock Funds	243,633,123	223,155,672	20,477,451	-
TOTAL EQUITY SECURITIES	765,832,253	745,354,802	20,477,451	-
Fixed Income Securities				
- Corporate Bonds / US Gov't	172,376,207	-	172,376,207	-
- Corporate Bond Funds	91,574,922	91,574,922	-	-
- International Bond Funds	51,137,095	-	51,137,095	-
TOTAL FIXED INCOME SECURITIES	315,088,223	91,574,922	223,513,301	-
Futures				
- Futures Contracts	540	540	-	-
TOTAL FUTURES	540	540	-	-
TOTAL INVESTMENTS BY FAIR VALUE LEVEL	\$ 1,080,921,017	\$ 836,930,264	\$ 243,990,753	\$ -
Investments measured at the net asset value (NAV):				
Net Asset Value		Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Alternative Investments				
- Long/Short Hedge Funds				
ABS INVESTMENT MANAGEMENT	\$ 81,053,767	\$ -	Quarterly	45 Days
PARAMETRIC DEF EQUITY FUND LLC	81,042,281	-	Monthly	5 Days
TOTAL ALTERNATIVE INVESTMENTS	162,096,048			
Private Equity				
- Venture Capital and Infrastructure				
ADAMS STREET	123,241,186	12,917,085	Illiquid	--
MESIROW FINANCIAL	96,767,783	17,600,000	Illiquid	--
PROGRESSIVE INVESTMENT MANAGEMENT	311	-	Illiquid	--
SIGULER GUFF	66,859,818	9,233,451	Illiquid	--
FAIRVIEW	6,595,555	4,275,000	Illiquid	--
BPEA	13,746,679	10,320,000	Illiquid	--
BARINGS	8,489,323	14,948,181	Illiquid	--
GREENSPRING	3,580,407	4,960,000	Illiquid	--
IFM INFRASTRUCTURE	96,157,326	-	Quarterly	90 Days
JP MORGAN INFRASTRUCTURE	102,502,978	-	Semi-Annually	90 Days
TOTAL PRIVATE EQUITY	517,941,366			
Real Estate and REITs				
- Real Estate				
AMERICAN REALTY ADVISORS	41,380,884	-	Quarterly	30 Days
MORGAN STANLEY PRIME PROPERTY FUND	75,901,093	-	Quarterly	90 Days
UBS TRUMBULL R/E	31,042,732	-	Quarterly	60 Days
TOTAL REAL ESTATE	148,324,710			
TOTAL INVESTMENTS MEASURED AT NAV	828,362,124			
TOTAL INVESTMENTS	\$ 1,909,283,141			

(4) Income Taxes –

Management submitted a supplemental report to the IRS in 2014, followed by a revised submission in 2017, that details any new compliance issues as well as proposed corrections. The IRS issued a determination and the corrections were processed by December 31, 2020.

(5) Contributions Required and Contributions Made –

The Retirement System's funding policy provides for periodic County contributions at actuarially determined rates that, expressed as percentages of annual covered payroll, are sufficient to accumulate sufficient assets to pay benefits when due. Payroll contribution rates are determined using the Aggregate Entry Age Normal method of funding. The Retirement System also uses the level percentage of payroll method to amortize the unfunded liability over a 20 year period. The significant actuarial assumptions used to compute the contribution requirements are the same as those used to compute the pension benefit obligation.

County contributions totaling \$60,964,137 and \$62,113,812 were recorded in 2022 and 2021, respectively. The 2022 contributions were \$1,744,422 above and the 2021 contributions were \$1,468,575 above the Funding Contribution Amount ("FCA"), respectively. In 2022, administrative expenses in the amount of \$1,052,453 (ERS of \$1,004,832 and OBRA of \$47,621) were paid by the Milwaukee County tax levy. In 2021, administrative expenses in the amount of \$1,019,703 (ERS of \$973,085 and OBRA of \$46,618) were paid by the Milwaukee County tax levy. The County contributions do not include contributions made by the members. Member contributions were \$13,273,863 for the year ended December 31, 2022 and \$13,390,188 for the year ended December 31, 2021. The difference was due to the change in the employee contribution percentages from 6.1%-9.9% of pensionable compensation in 2022 from 6.2%-9.7% in 2021. See the Schedule of Contributions in the Required Supplementary Information.

The 2022 and 2021 contributions reflected in the accompanying statements were actuarially determined as of January 1, 2021 and 2020. These amounts were included in the County's 2022 and 2021 budgets. The Retirement System's financial statements as of December 31, 2022 and December 31, 2021 reflects the 2022 and 2021 contributions that were fully paid in 2022 and 2021 respectively.

(6) Deposit and Investment Risk Disclosure –

As provided by state legislative act and County Ordinance, the Board has exclusive control and management responsibility of the Retirement System's funds and full power to invest the funds. In exercising its fiduciary responsibility, the Board is governed by the "prudent person" rule in establishing investment policy. The "prudent person" rule, requires the exercise of that degree of judgment, skill and care under the circumstances then prevailing which persons of prudence, discretion and intelligence exercise in the management of their own affairs, not in regard to speculation, but in regard to permanent disposition of their funds, considering the probable income as well as the probable safety of the principal. The Board has adopted a Statement of Investment Policy to formally document investment objectives and responsibilities. This policy establishes guidelines for permissible investments of the Retirement System. The Retirement System's investments are subject to various risks. Among them are credit risk, concentration of credit risk, custodial credit risk, interest rate risk, and foreign currency risk. Each of these risks is discussed in more detail below.

Concentration of Credit Risk –

Concentration of credit risk is a risk of loss that may be attributed to the magnitude of the Retirement System's investment in a single issuer, generally investments in any one issuer that represents five (5) percent or more of total investments. Investments issued or explicitly guaranteed by the U.S. Government and investments in mutual funds, external investment pools, and other pooled investments are excluded from this definition. The Retirement System has four investments in one issuer other than U.S. Government securities and mutual funds that exceed five (5) percent of the total investments.

Credit Risk –

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The credit risk of a debt instrument is measured by nationally recognized statistical rating agencies such as Moody's Investors Services ("Moody's") and Standard and Poor's ("S&P"). With the exception of the Northern Trust Aggregate Bond Index Fund portfolio, bonds purchased and owned in each portfolio must have a minimum quality rating of "Baa3" (Moody's) or "BBB-"(S&P). The average quality of each portfolio must be "A" or better. The fixed income securities for the Northern Trust Aggregate Bond Index Fund portfolio should have a minimum quality rating of "A", with the exception of 15% of the portfolio which may have a minimum quality rating of "BBB". Moody's quality rating of "BAA3" or above is considered investment grade. Of the \$9.6 million not rated by Moody's as of December 31, 2022, \$6.9 million was rated by S&P as investment grade ("BB-" or higher). As of December 31, 2022, \$2.7 million was not rated by S&P or Moody's. Of the \$17.0 million not rated by Moody's as of December 31, 2021, \$13.5 million was rated by S&P as investment grade ("BB-" or higher). As of December 31, 2021, \$3.5 million was not rated by S&P or Moody's. The credit quality ratings of investments in fixed income securities by Moody's as of December 31, 2022, and 2021, are as follows: (amounts are in thousands of dollars)

<u>Moody's Quality Ratings</u>	<u>12/31/2022 Fair Value</u>	<u>12/31/2021 Fair Value</u>
AAA	\$26,112	\$47,265
AA1	2,972	3,055
AA2	2,257	2,891
AA3	3,111	3,402
A1	8,184	4,012
A2	6,583	6,023
A3	5,407	5,095
BAA1	10,959	11,648
BAA2	9,415	10,247
BAA3	5,164	6,388
BA1	2,431	1,834
BA2	3,245	4,898
BA3	3,836	6,341
B1	2,283	1,819
B3	251	480
NR	9,606	17,030
Total Credit Risk Fixed Income Securities	\$101,816	\$132,428
U.S. Government and Agencies	40,576	39,948
NT Agg Bond Index Fund (Not Rated)	47,012	91,575
TCW Emerging Market Debt (Not Rated)	42,258	51,137
Total Investment in Fixed Income	\$231,662	\$315,088

Custodial Credit Risk – Deposits and Investments –

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 are held by the counterparty.

No formal policy exists on custodial risk. However, substantially all assets of the Retirement System are held in its name. The Retirement System did not own any repurchase agreements as of December 31, 2022 or December 31, 2021.

As of December 31, 2022 and 2021, all deposits with banks are fully insured by the Federal Depository Insurance Corporation or the State Deposit Guarantee Fund.

The following table presents the Retirement System’s total cash, deposits and cash equivalents as of December 31, 2022 and December 31, 2021: (amounts are in thousands of dollars)

	<u>Schedule of Cash and Cash Equivalent Investments</u>			
	<u>12/31/22</u>		<u>12/31/21</u>	
	<u>Carrying Value</u>	<u>Bank Balance</u>	<u>Carrying Value</u>	<u>Bank Balance</u>
Cash held by various investment managers.....	\$26,061	\$26,061	\$62,265	\$62,265
Deposits with banks.....	1,646	2,014	3,789	4,225
Total Deposits.....	\$27,707	\$28,075	\$66,054	\$66,490

The difference between the carrying value and bank balances are due to outstanding checks and deposits not yet processed by the bank.

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.

This footnote is a required disclosure when the Retirement System directly owns investments denominated in a foreign currency. The Retirement System has no directly owned investments denominated in foreign currencies.

Interest Rate Risk –

Interest rate risk is the risk that changes in interest rates will adversely affect the fair market value of an investment. Duration is a measure of an investment's sensitivity to changes in interest rates. The higher the duration, the greater the changes in fair value when interest rates change. The Option-Adjusted Duration for a security is the percentage price sensitivity to interest rates changes of 100 basis points (or 1.0%), as of December 31, 2022 and 2021. For example, an Option-Adjusted Duration of 5.20 means that the price of the security should fall approximately 5.20% for a 1.0% rise in the level of interest rates. Conversely, the price of a security should rise approximately 5.20% for a 1.0% fall in the level of interest rates. Interest rate changes will affect securities with negative durations in the opposite direction. The Option-Adjusted Duration method of measuring duration takes into effect the embedded options on cash flows.

The Retirement System does not have a formal investment policy that limits investment maturities as a means of managing exposure to losses arising from increasing interest rates with the exception of the cash equivalent portfolio. The investment policy limits the duration of individual securities held in the cash equivalent portfolio to 2.5 years. In addition, the duration of the entire cash equivalent portfolio should be between 1 and 2 years.

As of December 31, 2022 and 2021, the Retirement System had the following Option-Adjusted Durations for the fixed income investments: (amounts are in thousands of dollars)

<u>12/31/2022</u>		
	<u>Fair Value*</u>	<u>Option Adjusted Duration</u>
Asset Backed Securities	\$2,760	6.08
Commercial Mortgage-Backed	3,596	0.93
Corporate Bonds	65,316	5.86
Corporate Convertible Bonds	89	2.73
Government Agencies	5,165	7.87
Government Bonds	20,386	9.72
Government Mortgage Backed Securities	33,014	7.32
Municipal/Provincial Bonds	11,799	8.66
Non-Government Backed C.M.O.s	80	1.85
Other *	187	
	<u>142,392</u>	
NT Agg Bond Index Fund	47,012	
TCW Emerging Market Debt Fund	42,258	
Total	<u>\$231,662</u>	

* For 2022, this represents Fixed Income where the effective duration is unavailable—\$187 in Municipal/Provincial Bonds.

<u>12/31/2021</u>		
	<u>Fair Value*</u>	<u>Option Adjusted Duration</u>
Asset Backed Securities	\$2,741	4.85
Commercial Mortgage-Backed	8,880	1.06
Corporate Bonds	69,233	6.39
Corporate Convertible Bonds	100	3.65
Government Agencies	2,796	6.45
Government Bonds	37,021	10.33
Government Mortgage Backed Securities	34,893	4.65
Municipal/Provincial Bonds	16,328	8.93
Non-Government Backed C.M.O.s	104	1.56
Other *	280	
	<u>172,376</u>	
NT Agg Bond Index Fund	91,575	
TCW Emerging Market Debt Fund	51,137	
Total	<u>\$315,088</u>	

* For 2021, this represents Fixed Income where the effective duration is unavailable—\$280 in Municipal/Provincial Bonds.

Securities Lending –

Section 201.24 (9.1) of the General Ordinances of Milwaukee County and Board policies permit the ERS to lend its securities to broker-dealers and other entities with a simultaneous agreement to return the collateral for the same securities in the future. The ERS participates in such a securities lending program through its custodian, Northern Trust, acting as the ERS's securities lending agent. The ERS requires collateral from the borrower in the form of cash or securities. Collateral for domestic issues is set at 102% of the fair value of the securities loaned at the time of the initial transaction. If the value falls to 100% of the fair value of the securities loaned, additional collateral is obtained to reestablish collateral at 102% of the fair value of securities loaned. Collateral for international securities is maintained at a level of 105% of the fair value of securities loaned at all times. The securities lending program guidelines attempt to preserve capital while earning a moderate rate of return. Earnings from securities lending, after all fees are paid, are split on a percentage basis with the custodian. For 2022 and 2021, the net investment income realized from security lending was \$77,357 and \$58,114 respectively.

The ERS also invested in several commingled funds managed by Northern Trust that participated in securities lending programs. The earnings and losses attributable to the commingled funds' securities lending programs are combined with the commingled funds' performance and are not reported separately in the ERS's financial statements.

Securities loaned and the collateral held were as follows: (amounts are in thousands of dollars)

	As of December 31			
	2022		2021	
	Securities		Securities	
<u>Securities Lent for Cash Collateral</u>	Lent	Collateral	Lent	Collateral
Fixed income	\$23,537	\$24,115	\$26,981	\$27,593
Domestic stocks	11,459	11,805	15,123	15,508
Subtotal	34,996	35,920	42,104	43,101
<u>Securities Lent for Securities Collateral</u>				
Fixed income	3,750	3,859	7,427	7,629
Domestic stocks	3,536	3,622	1,434	1,465
Subtotal	7,286	7,481	8,861	9,094
Grand Total	\$42,282	\$43,401	\$50,965	\$52,195
Percent Collateral to Securities Loaned		102.65%		102.41%

The collateral received from securities lending transactions are recorded as assets at quoted fair value as of the financial statement date. The Retirement System records an identical amount as a liability, representing the obligation of the Retirement System to return the collateral at the time the borrower of the Retirement System's securities return those securities.

The collateral received from securities lending transactions includes cash (in thousands) of approximately \$35,920 and \$43,101 and U.S. Treasury securities, Domestic stocks, and REITs of approximately \$7,481 and \$9,094 for the years ended December 31, 2022 and 2021, respectively. Under the terms of the securities lending agreement, the Retirement System has the right to sell or pledge the cash collateral. The non-cash collateral in the amounts of approximately \$7,481 and \$9,094 for the years ended December 31, 2022 and 2021, respectively, is controlled by the custodian and, correspondingly, not reflected in the Statements of Fiduciary Net Position.

At year-end, the Retirement System has no credit risk exposure to borrowers because the amounts the Retirement System owes the borrowers exceed the amounts the borrowers owe the Retirement System. The contract with the Retirement System's custodian requires it to indemnify the Retirement System if a borrower fails to return the securities (and if the collateral is inadequate to replace the securities lent) or fails to pay the Retirement System for income distributions by the securities' issuers while the securities are on loan.

(7) Financial Instruments with Off-Balance Sheet Risks –

A 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. Forward commitments are entered into with the foreign exchange department of a bank located in a major money market. These transactions are entered into in order to hedge risks from exposure to foreign currency rate fluctuations. Recognition of realized gain or loss depends on whether the currency exchange rate has moved favorably or unfavorably to the contract holder upon termination of the contract. Prior to termination of the contract, the Retirement System records the amount receivable or payable at fair value, with the unrealized gain or loss reported as a component of net appreciation in fair value. All contracts are short-term in duration and mature within 90 days.

The ERS invests in financial futures contracts in order to improve the performance of the fund. The Retirement System purchases contracts that approximate the amount of cash held by US equity investment managers and cash used to pay benefits and expenses. Financial futures contracts are agreements to buy or sell a specified amount at a specified delivery or maturity date for an agreed upon price.

The market values of the futures contracts vary from the original contract price. A gain or loss is recognized and paid to or received from the clearinghouse. Financial futures represent an off balance sheet obligation, as there are no balance sheet assets or liabilities associated with those contracts. The cash or securities to meet these obligations are held in the investment portfolio. All contracts are short-term in duration and mature within 90 days.

The ERS is subject to credit risk in the event of non-performance by counter parties to financial futures and forward contracts. The ERS generally only enters into transactions with credit-worthy institutions. The Retirement System is exposed to market risk, the risk that future changes in market conditions may make an instrument less valuable. Exposure to market risk is managed in accordance with risk limits set by the ERS management and by buying or selling futures or forward contracts. The cash or securities to meet these obligations are held in the investment portfolio.

The futures contracts held by the Retirement System are as follows: (amounts are in thousands of dollars)

	<u>As of December 31</u>			<u>As of December 31</u>	
	<u>2022</u>	<u>2021</u>		<u>2022</u>	<u>2021</u>
US Equity Managers			Cash Used to Pay Benefits and Expenses		
<u>Cash Held</u>			<u>Cash Held</u>	\$17,735	\$50,623
US Equity Investment Managers	\$8,326	\$11,640			
			<u>Futures Purchased</u>		
<u>Futures Purchased</u>			Barclays AGG (Fixed Income)	6,028	19,381
S&P 500 (US Equity)	7,529	7,852	S&P 500 (US Equity)	7,336	23,317
Futures (Below) Cash	(797)	(3,788)	MSCI EAFE (International Equity)	2,437	7,894
			Total Futures Purchased	15,801	50,592
			Futures (Below) Cash	(1,934)	(31)
Market Value	\$1	\$1	Market Value	-	-
			Total Market Value	\$1	\$1

(8) Commitments and Contingencies –

The Retirement System is involved in litigation and certain other 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 financial statements.

(9) OBRA 1990 Retirement System of the County of Milwaukee –

The County established the OBRA 1990 Retirement System of the County of Milwaukee (“OBRA”) to cover seasonal and certain temporary employees who are not enrolled in the Retirement System. Assets of the OBRA system are commingled for investment purposes with the assets of the Retirement System. The assets of the Retirement System are legally available to pay benefits of either the ERS or OBRA. The Retirement System and OBRA are considered a single plan for financial reporting purposes.

Net assets identified for OBRA benefits as of December 31, 2022 and 2021 were as follows:

Statement of Fiduciary Net Position		
	(Unaudited)	
Assets	2022	2021
Cash	\$17,130	\$57,995
Assets held by Retirement System.....	4,566,424	5,145,712
Total assets	4,583,554	5,203,707
Liabilities		
Taxes Payable	(1,187)	(2,208)
Net position restricted for pensions	\$4,582,367	\$5,201,499

Changes in plan net position available for benefits for OBRA for the years ended December 31, 2022 and 2021, were as follows:

Statements of Change in Fiduciary Net Position		
	(Unaudited)	
	2022	2021
Contributions from the County	\$203,000	\$759,000
Contributions from the tax levy.....	47,621	46,618
Investment income (loss)	(403,289)	647,026
Investment and administrative expenses	(187,298)	(172,020)
Benefits paid	(279,165)	(265,473)
Net increase (decrease) in net position restricted for pensions	(\$619,132)	\$1,015,151

As of December 31, 2022 and 2021, respectively, there were 5,594 and 5,522 participants with vested benefits in OBRA. The total pension liability of OBRA at December 31, 2022 and 2021, was \$5,533,668 and \$5,182,496, respectively, leaving net assets available less than the total pension liability (asset) of \$951,301 and (\$19,003), respectively. These amounts are not reflected in the required supplementary information tables that follow the notes to the financial statements.

(10) Net Pension Liability

The components of the net pension (asset) liability of the Retirement System and OBRA at December 31, 2022 and December 31, 2021 were as follows:

ERS		
	<u>2022</u>	<u>2021</u>
Total pension liability.....	\$ 2,285,971,200	\$ 2,301,217,070
Plan fiduciary net position.....	<u>(1,665,958,039)</u>	<u>(1,970,367,505)</u>
Net pension liability.....	<u>\$ 620,013,161</u>	<u>\$ 330,849,565</u>
Plan fiduciary net position as a percentage of the total pension liability.....	72.9%	85.6%

OBRA		
	<u>2022</u>	<u>2021</u>
Total pension liability.....	\$ 5,533,668	\$ 5,182,496
Plan fiduciary net position.....	<u>(4,582,367)</u>	<u>(5,201,499)</u>
Net pension (asset) liability.....	<u>\$ 951,301</u>	<u>\$ (19,003)</u>
Plan fiduciary net position as a percentage of the total pension liability.....	82.8%	100.4%

Actuarial assumptions—The last actuarial valuation was performed as of January 1, 2022, and these amounts were used to roll forward the total pension liability for the year ended December 31, 2022, and was determined using the following actuarial assumptions, applied to all prior periods included in the measurement:

Valuation date	1/1/2022
Actuarial cost method	Entry Age Normal—Level Percentage of Pay
Asset valuation method	10-year smoothed market
Amortization methods	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 difference between projected and actual earnings is amortized over a closed period of five years.
Inflation Assumption	2.50%
Mortality Table	Pre-retirement: Males—RP-2006 Employee male, projected with generational projection using scale MP-2016. Females—RP-2006 Employee female, projected with generational projection using scale MP-2016. Health Retiree: Males—102% of RP-2006 Healthy Annuitant male, projected with generational projection using scale MP-2016. Females—107% of RP-2006 Healthy Annuitant female, projected with generational projection using scale MP-2016. Disables Retiree: Males—97% of RP-2006 Disabled male, projected with generational projection using scale MP-2016. Females—95% of RP-2006 Disabled female, projected with generational projection using scale MP-2016.
Experience study	The actuarial assumptions used for ERS were based on the results of an actuarial experience study for the period January 1, 2012 through December 31, 2016. The actuarial assumptions used for OBRA were based on the results of an actuarial experience study for the period January 1, 2012 through December 31, 2016.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of position plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of December 31, 2022 and 2021, respectively, are summarized in the following table:

<u>Asset Class</u>	<u>2022</u>		<u>2021</u>	
	<u>Policy</u>	<u>Long-term Expected Real Rate of Return *</u>	<u>Policy</u>	<u>Long-term Expected Real Rate of Return *</u>
Fixed income	23.50%	2.70%	23.50%	-0.10%
Domestic common and preferred stocks	26.00%	4.90%	26.00%	5.20%
International common and preferred stocks ...	15.50%	5.20%	15.50%	5.40%
Long/Short hedge funds	9.00%	3.10%	9.00%	2.60%
Infrastructure	10.00%	4.70%	10.00%	5.00%
Real estate and REIT's	5.00%	4.60%	5.00%	4.50%
Private equity	11.00%	9.20%	11.00%	9.00%
Cash & cash equivalents	0.00%	1.90%	0.00%	-1.80%
	<u>100.00%</u>		<u>100.00%</u>	

* Provided by Marquette Associates

Discount rate — The discount rate used to measure the total pension liability was 7.50 percent and 7.50 percent for 2022 and 2021, respectively. The projection of cash flows used to determine the discount rate assumed that the Retirement System's contributions will continue to follow the current funding policy. Based on those assumptions, the Retirement System's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members.

Sensitivity of the net pension liability to changes in the discount rate — The following presents the 2022 and 2021 net pension liability of the Retirement System, calculated using the discount rate of 7.50 percent, as well as what the Retirement System and OBRA's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.50 percent) or 1-percentage-point higher (8.50 percent) than the current rate:

	<u>2022</u>		
	<u>1% Decrease (6.50%)</u>	<u>Current Discount (7.50%)</u>	<u>1% Increase (8.50%)</u>
ERS' net pension liability.....	\$884,507,903	\$620,013,161	\$430,364,644
OBRA's net pension (asset) liability.....	\$1,001,651	\$951,301	(\$196,242)

	<u>2021</u>		
	<u>1% Decrease (6.50%)</u>	<u>Current Discount (7.50%)</u>	<u>1% Increase (8.50%)</u>
ERS' net pension liability.....	\$ 558,823,694	\$ 330,849,565	\$ 138,389,516
OBRA's net pension (asset) liability.....	\$ 745,982	\$ (19,003)	\$ (622,439)

11) Subsequent Events

The Retirement System has evaluated subsequent events occurring through July 28 2023, the date the financial statements were available to be issued for events requiring recording or disclosure in the Retirement System's financial statements. Management feels that no material events occurred that would require disclosure, except for the following:

In February 2023, the Pension Board took the following action:

- The Pension Board approved updated asset allocation targets after reviewing multiple options presented by their investment consultant, Marquette Associates. The revised asset allocation increases the target allocation of Fixed Income from 20% to 25%, reduces to Hedge Funds from 9% to 6%, and reduces Private Equity from 11% down to 9%. The asset allocation will eliminate the Hedged Equity asset class, and as a result, ABS will be liquidated. A new asset class, Core Plus Fixed Income will be added to the portfolio.
- The Pension Board approved the authorization to terminate ABS as a result of the new asset allocation targets.
- The Pension Board issued an RFP for a Core Plus Fixed Income manager.
- The Pension Board approved an amendment to OBRA Rule 107. The amendment to this Rule clarifies the procedures that RPS will take to pay out small benefits under Ordinance sections 203(4.4) and (4.5).

In April 2023, the Pension Board took the following action:

- The Pension Board approved amendments to ERS Rules 714 and 1027. The amendments to these Rules clarify which employees can apply for a disability retirement pension and the timeframes for application.
- The Pension Board approved amendments to ERS Rules 1026 and 1040. The amendments to these Rules delegate initial decisions related to disability retirements and reexaminations to the Director of RPS and provide appeal procedures for members to appeal the Director's determinations to the Appeals and Rules Committee.
- The Pension Board approved the authorization of an RFP for custodial services.
- The Pension Board approved a search for general banking services.

In May 2023, the Pension Board took the following action:

- The Pension Board approved updates to the ERS Investment Policy that incorporate the revised asset allocation targets that were approved during the February 2023 meeting.
- The Pension Board approved an amendment to ERS Rule 1014. The amendment to this Rule updates the definition of "actuarial equivalent" to align with the assumed rate of return and mortality table changes as a result of the Experience Study completed in 2022.
- The Pension Board approved an amendment to ERS Rule 1054. The amendment to this Rule clarifies which members are eligible to request refunds of their member contributions under Ordinance sections 201.24 (3.5).

In late 2022 a quinquennial Experience Study was completed. In February 2023, the Pension Board approved the following changes effective January 1, 2024, as a result of that study:

- The investment return assumption will be lowered from 7.5% to 7.4%. This is part of a phased-in approach where the rate will be decreased to 7.2% effective January 1, 2025, and 7.0% effective January 1, 2026.
- The salary scale assumptions for General Employees, Deputy Sheriffs, and Elected Officials were modified, with the General Employees and Deputy Sheriffs rates increasing for most ages while the Elected Officials rates decreased at all ages.
- The mortality for healthy post-retirement retirees was updated to a 50/50 blend of male and female Pub-2010 General Retired Lives Tables with rates (multiplied by 104% for males and 121% for females) projected to 2025 using mortality improvement scale MP-2021.
- The mortality for pre-retirement members was updated to the Pub-2010 Employee Tables with generational projection using mortality improvement scale MP-2021.
- The mortality for disability retirees was updated to the Pub-2010 Disabled Lives Tables (multiplied by 107% for males and 98% for females) with generational projection using mortality improvement scale MP-2021.
- Other demographic assumptions (such as retirement, termination, disability) were modified to match recent experience more closely.

11) Subsequent Events (cont'd)

In June and July 2023, the following occurred:

2023 Wisconsin Act 12 (Act 12) was enacted on June 20, 2023. Act 12 contains various provisions that have fiscal impacts to Milwaukee County, including local government program funding for shared revenue, additional sales tax authority, and potential changes to the Employees' Retirement System of the County of Milwaukee (ERS). The additional sales tax authority and the potential changes to the ERS require a two-thirds majority vote of the full Milwaukee County Board, to become effective. The Milwaukee County Board has up to two years to adopt the sales tax changes and changes to the ERS. On July 27, 2023, the County Board approved a resolution 23-719 to implement the additional sales tax and provide that all new Milwaukee County employees who start on or after January 1, 2025 would become members of the Wisconsin Retirement System. As of the date of this document, The County Executive still has to sign the legislation, and documents need to be sent to the State of Wisconsin to make the actions noted above effective.

Act 12 provides Milwaukee County with the option to increase its sales tax collection rate by 0.4%, from 0.5% to 0.9%. The additional 0.4% sales tax is estimated to result in approximately \$82.2 million in annual sales tax collections in 2024, if a resolution/ordinance is adopted and delivered to the Wisconsin Secretary of Revenue by September 1, 2023. In addition, Act 12 provides counties across the state with additional shared revenue, and Milwaukee County will receive \$7.6 million of the statewide increase. The shared revenue increase occurs with or without the approval of the sales tax.

If the 0.4% sales tax from Act 12 is adopted, the sales tax proceeds would only be available to fund both the unfunded pension liability and Pension Obligation Bonds (POBs) until the ERS is fully funded or for thirty years, whichever is earlier. The ERS has a \$620 million unfunded pension liability as of January 1, 2023, based on market value of assets and a 7.5% rate of return assumption. Milwaukee County issued POBs in 2009 which at the end of 2023 will have an outstanding balance of \$199 million. The POBs will require annual payments for funding through 2030.

As the Milwaukee County Board has adopted the sales tax increase, the County would be required to have all new employees, who start on or after January 1, 2025, join the Wisconsin Retirement System (WRS). This would result in a "soft close" of the ERS. There will be additional costs of joining WRS, since the continuing "normal cost" of that plan is higher than the ERS. In addition, the County would be required to reduce its actuarial rate of return to 6.8% to match the rate of return used by the WRS as of January 1, 2024.

REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY AND RELATED RATIOS

Last 9 Fiscal Years

<u>ERS</u>	<u>2022</u>	<u>2021</u>	<u>2020</u>	<u>2019</u>
Total pension liability				
Service cost	\$ 17,857,874	\$ 17,592,776	\$ 17,355,963	\$ 15,800,135
Interest	166,384,489	166,629,760	167,745,110	171,350,196
Differences between expected and actual experience	1,741,945	13,970,444	1,993,825	(16,270,627)
Changes in assumptions	-	-	-	52,178,675
Benefit payments including refunds of member contributions	(201,230,178)	(202,226,534)	(202,179,563)	(195,786,444)
Net change in total pension liability	(15,245,870)	(4,033,554)	(15,084,665)	27,271,935
Total pension liability—beginning	2,301,217,070	2,305,250,624	2,320,335,289	2,293,063,354
Total pension liability—ending	\$ 2,285,971,200	\$ 2,301,217,070	\$ 2,305,250,624	\$ 2,320,335,289
Plan fiduciary net position				
Contributions—employer	\$ 60,964,137	\$ 62,113,812	\$ 64,558,405	\$ 57,316,293
Contributions—member	13,273,863	13,390,188	12,342,595	13,217,363
Net investment income (loss)	(173,114,815)	308,052,954	183,466,752	248,691,426
Benefit payments, including refunds of member contributions	(201,230,178)	(202,226,534)	(202,179,563)	(195,786,444)
Administrative expenses	(4,302,473)	(3,879,753)	(3,899,576)	(3,120,727)
Net change in plan fiduciary net pension	(304,409,466)	177,450,667	54,288,613	120,317,911
Total plan fiduciary net position—beginning	1,970,367,505	1,792,916,838	1,738,628,225	1,618,310,314
Total plan fiduciary net position—ending	\$ 1,665,958,039	\$ 1,970,367,505	\$ 1,792,916,838	\$ 1,738,628,225
Net pension liability—ending	\$ 620,013,161	\$ 330,849,565	\$ 512,333,786	\$ 581,707,064
Plan fiduciary net position as a percentage of total pension liability	72.9%	85.6%	77.8%	74.9%
Covered-employee payroll	\$ 202,112,385	\$ 204,754,607	\$ 200,365,711	\$ 191,043,797
Net pension liability as a percentage of covered-employee payroll	306.8%	161.6%	255.7%	304.5%

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 auditor's report and notes to required supplementary information)

REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY AND RELATED RATIOS

Last 9 Fiscal Years (continued)

ERS	2018	2017	2016	2015	2014
Total pension liability					
Service cost	\$ 15,874,798	\$ 15,190,699	\$ 16,094,324	\$ 15,740,283	\$ 15,299,451
Interest	172,254,741	173,929,104	173,972,802	171,661,372	172,040,282
Differences between expected and actual experience	(751,483)	(2,919,790)	16,052,053	41,648,688	(17,331,161)
Changes in assumptions	-	63,931,243	-	-	-
Benefit payments including refunds of member contributions	(202,163,452)	(198,590,749)	(212,662,113)	(188,819,565)	(177,366,124)
Net change in total pension liability	(14,785,396)	51,540,507	(6,542,934)	40,230,778	(7,357,552)
Total pension liability—beginning	2,307,848,750	2,256,308,243	2,262,851,177	2,222,620,399	2,229,977,951
Total pension liability—ending	\$ 2,293,063,354	\$ 2,307,848,750	\$ 2,256,308,243	\$ 2,262,851,177	\$ 2,222,620,399
Plan fiduciary net position					
Contributions—employer	\$ 61,177,816	\$ 53,660,695	\$ 50,625,672	\$ 39,080,593	\$ 19,005,395
Contributions—member	12,651,528	12,330,305	12,143,510	9,324,866	10,051,605
Net investment income (loss)	(34,842,454)	252,828,178	110,336,000	39,451,296	96,725,837
Benefit payments, including refunds of member contributions	(202,163,452)	(198,590,749)	(212,662,113)	(188,819,564)	(177,366,124)
Administrative expenses	(4,921,689)	(5,502,195)	(4,912,501)	(5,465,123)	(5,066,956)
Net change in plan fiduciary net pension	(168,098,251)	114,726,234	(44,469,432)	(106,427,932)	(56,650,243)
Total plan fiduciary net position—beginning	1,786,408,565	1,671,682,331	1,716,151,763	1,822,579,695	1,879,229,938
Total plan fiduciary net position—ending	\$ 1,618,310,314	\$ 1,786,408,565	\$ 1,671,682,331	\$ 1,716,151,763	\$ 1,822,579,695
Net pension liability—ending	\$ 674,753,040	\$ 521,440,185	\$ 584,625,912	\$ 546,699,414	\$ 400,040,704
Plan fiduciary net position as a percentage of total pension liability	70.6%	77.4%	74.1%	75.8%	82.0%
Covered-employee payroll	\$ 189,451,404	\$ 186,213,740	\$ 194,871,557	\$ 191,432,915	\$ 188,605,492
Net pension liability as a percentage of covered-employee payroll	356.2%	280.0%	300.0%	285.6%	212.1%

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 auditor's report and notes to required supplementary information)

REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY AND RELATED RATIOS

Last 9 Fiscal Years

OBRA	<u>2022</u>	<u>2021</u>	<u>2020</u>	<u>2019</u>
Total pension liability				
Service cost	\$ 97,999	\$ 93,834	\$ 118,290	\$ 126,616
Interest	385,568	359,481	654,510	507,827
Differences between expected and actual experience	146,771	162,672	(4,421,202)	1,464,247
Changes in assumptions	-	-	-	368,265
Benefit payments including refunds of member contributions	(279,166)	(265,473)	(256,265)	(312,584)
Net change in total pension liability	351,172	350,514	(3,904,667)	2,154,371
Total pension liability—beginning	5,182,496	4,831,982	8,736,649	6,582,278
Total pension liability—ending	\$ 5,533,668	\$ 5,182,496	\$ 4,831,982	\$ 8,736,649
Plan fiduciary net position				
Contributions—employer	\$ 203,000	\$ 759,000	\$ 536,000	\$ 519,000
Net investment income (loss)	(355,668)	693,645	697,231	501,003
Benefit payments, including refunds of member contributions	(279,166)	(265,473)	(256,265)	(312,584)
Administrative expenses	(187,298)	(172,020)	(220,575)	(220,924)
Net change in plan fiduciary net pension	(619,132)	1,015,152	756,391	486,495
Total plan fiduciary net position—beginning	5,201,499	4,186,347	3,429,956	2,943,461
Total plan fiduciary net position—ending	\$ 4,582,367	\$ 5,201,499	\$ 4,186,347	\$ 3,429,956
Net pension (asset) liability—ending	\$ 951,301	\$ (19,003)	\$ 645,635	\$ 5,306,693
Plan fiduciary net position as a percentage of total pension liability	82.8%	100.4%	86.6%	39.3%
Covered-employee payroll	\$ 3,003,400	\$ 2,720,682	\$ 3,226,456	\$ 3,388,230
Net pension liability as a percentage of covered-employee payroll	31.7%	(0.7%)	20.0%	156.6%

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 auditor's report and notes to required supplementary information)

REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY AND RELATED RATIOS
Last 9 Fiscal Years (continued)

OBRA	2018	2017	2016	2015	2014
Total pension liability					
Service cost	\$ 110,678	\$ 110,678	\$ 95,763	\$ 111,283	\$ 97,190
Interest	447,541	370,220	320,348	298,507	297,724
Differences between expected and actual experience	502,160	676,340	405,683	103,770	(233,437)
Changes in assumptions	-	222,590	-	-	-
Benefit payments including refunds of member contributions	(284,300)	(179,481)	(244,349)	(206,452)	(126,636)
Net change in total pension liability	776,079	1,200,347	577,445	307,108	34,841
Total pension liability—beginning	5,806,199	4,605,852	4,028,407	3,721,299	3,686,458
Total pension liability—ending	\$ 6,582,278	\$ 5,806,199	\$ 4,605,852	\$ 4,028,407	\$ 3,721,299
Plan fiduciary net position					
Contributions—employer	\$ 904,000	\$ 833,000	\$ 819,000	\$ 440,000	\$ 440,000
Net investment income	346,862	242,489	87,752	37,449	98,786
Benefit payments, including refunds of member contributions	(284,300)	(179,481)	(244,349)	(206,452)	(126,636)
Administrative expenses	(228,372)	(204,323)	(459,362)	(520,844)	(454,752)
Net change in plan fiduciary net pension	738,190	691,685	203,041	(249,847)	(42,602)
Total plan fiduciary net position—beginning	2,205,271	1,513,586	1,310,545	1,560,392	1,602,994
Total plan fiduciary net position—ending	\$ 2,943,461	\$ 2,205,271	\$ 1,513,586	\$ 1,310,545	\$ 1,560,392
Net pension liability—ending	\$ 3,638,817	\$ 3,600,928	\$ 3,092,266	\$ 2,717,862	\$ 2,160,907
Plan fiduciary net position as a percentage of total pension liability	44.7%	38.0%	32.9%	32.5%	41.9%
Covered-employee payroll	\$ 3,282,100	\$ 3,640,233	\$ 3,926,027	\$ 3,925,214	\$ 3,477,968
Net pension liability as a percentage of covered-employee payroll	110.9%	98.9%	78.8%	69.2%	62.1%

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 auditor's report and notes to required supplementary information)

SCHEDULE OF COUNTY CONTRIBUTIONS
Last 10 Fiscal Years

ERS

FYE December 31	2022	2021	2020	2019	2018
Actuarially Determined Contribution (ADC)	\$ 72,493,578	\$ 74,035,425	\$ 74,588,403	\$ 69,999,642	\$ 71,422,581
Contributions related to ADC	74,238,000	75,504,000	76,901,000	70,533,656	72,194,000
Contribution deficiency/(excess)	\$ (1,744,422)	\$ (1,468,575)	\$ (2,312,597)	\$ (534,014)	\$ (771,419)
Covered Employee Payroll	\$202,112,385	\$204,754,607	\$200,365,711	\$191,043,797	\$189,451,404
Contributions as a percentage of Covered Employee Payroll	36.73%	36.88%	38.38%	36.92%	38.11%

FYE December 31	2017	2016	2015	2014	2013
Actuarially Determined Contribution (ADC)	\$ 65,799,451	\$ 63,067,396	\$ 57,853,824	\$ 29,564,925	\$ 32,136,934
Contributions related to ADC	65,991,000	62,769,182	48,405,459	29,057,000	30,952,781
Contribution deficiency/(excess)	\$ (191,549)	\$ 298,214	\$ 9,448,365	\$ 507,925	\$ 1,184,153
Covered Employee Payroll	\$186,213,740	\$194,871,557	\$191,432,915	\$188,605,492	\$189,131,711
Contributions as a percentage of Covered Employee Payroll	35.44%	32.21%	25.29%	15.41%	16.37%

OBRA

FYE December 31	2022	2021	2020	2019	2018
Actuarially Determined Contribution (ADC)	\$ 169,677	\$ 347,107	\$ 712,043	\$ 485,515	\$ 577,392
Contributions related to ADC	203,000	759,000	536,000	519,000	904,000
Contribution deficiency/(excess)	\$ (33,323)	\$ (411,893)	\$ 176,043	\$ (33,485)	\$ (326,608)
Covered Employee Payroll	\$ 3,003,400	\$ 2,720,682	\$ 3,226,456	\$ 3,388,230	\$ 3,282,100
Contributions as a percentage of Covered Employee Payroll	6.76%	27.90%	16.61%	15.32%	27.54%

FYE December 31	2017	2016	2015	2014	2013
Actuarially Determined Contribution (ADC)	\$ 804,281	\$ 826,567	\$ 770,384	\$ 373,500	\$ 388,625
Contributions related to ADC	833,000	819,000	440,000	440,000	360,000
Contribution deficiency/(excess)	\$ (28,719)	\$ 7,567	\$ 330,384	\$ (66,500)	\$ 28,625
Covered Employee Payroll	\$ 3,640,233	\$ 3,926,027	\$ 3,925,214	\$ 3,477,968	\$ 7,735,644
Contributions as a percentage of Covered Employee Payroll	22.88%	20.86%	11.21%	12.65%	4.65%

Notes to Schedules

Valuation date: Actuarially Determined Contributions (ADC) are calculated as of the January 1 of the fiscal year in which the contribution is made. That is, the contribution calculated for fiscal year ending December 31, 2022 is from the January 1, 2022 actuarial valuation. The contributions related to the ADC are a combination of employee contributions made during the fiscal year and the lump sum employer contribution made for the year.

The methods and assumptions used to calculate the Actuarially Determined Contributions are in the respective January 1 actuarial valuation reports. Prior to fiscal year ending December 31, 2014 the ADC shown is calculated based upon GASB No 25.

(See independent auditors' report and notes to required supplementary information)

**REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF INVESTMENT RETURNS**

Last 9 Fiscal Years

Fiscal Year	Total Investment Plan Assets	Annual Money-Weighted Rate of Return, Net of Investment Expense
2022	\$1,637,172,650	(9.7%) *
2021	\$1,909,283,141	16.5% *
2020	\$1,735,323,182	10.7% *
2019	\$1,695,060,315	16.0% *
2018	\$1,572,748,783	(2.4%)*
2017	\$1,722,450,819	15.8% *
2016	\$1,610,341,450	6.9% *
2015	\$1,634,904,202	2.2% *
2014	\$1,715,303,583	5.3% *

* Calculated by Marquette Associates, Inc.

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)

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION
As of and for the year ended December 31, 2022

1. This information presented is 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	1/1/2022
Actuarial cost method	Aggregate Entry Age Normal
Asset valuation method	10-year smoothed market
<u>Amortization methods:</u>	
Contribution variance	Level dollar, closed
Administrative expenses	Level dollar, closed
All other unfunded liability	Level percent of payroll, closed
<u>Remaining amortization periods:</u>	
Contribution variance	5 years
Administrative expenses	10 years
All other unfunded liability	30 years
<u>Actuarial Assumptions:</u>	
Investment rate of return	7.50%
Projected salary increases	3.50% to 6.21%, varying by age, including inflation and productivity
Post-retirement benefit increases	2%, simple

2. The total pension liability contained in the Schedule of Net Pension Liability and Related Ratios was provided by the Retirement System and OBRA's actuary. The net pension liability is measured as the total pension liability less the amount of the fiduciary net position of the Retirement System and OBRA.
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)

TEN-YEAR HISTORICAL TREND INFORMATION

REVENUES BY SOURCE AND EXPENSES BY TYPE

(UNAUDITED)

Revenues by Source

Fiscal Year	Participant Contributions(1a)	County Contributions (1b)	Investment Income (Loss)(2)	Total
2022	\$13,273,863	\$61,968,969	(\$171,874,264)	(\$96,631,432)
2021	13,390,188	63,086,897	309,204,723	385,681,808
2020	12,342,595	65,694,995	184,434,199	262,471,789
2019	13,217,378	58,985,392	251,262,642	323,465,412
2018	12,651,528	61,177,816	(31,954,618)	41,874,726
2017	12,330,305	53,660,695	256,014,405	322,005,405
2016	12,143,510	50,625,672	112,917,408	175,686,590
2015	9,324,866	39,080,593	42,890,830	91,296,289
2014	10,051,605	19,005,395	99,655,955	128,712,955
2013	8,954,525	21,998,256	260,834,765	291,787,546

Expenses by Type

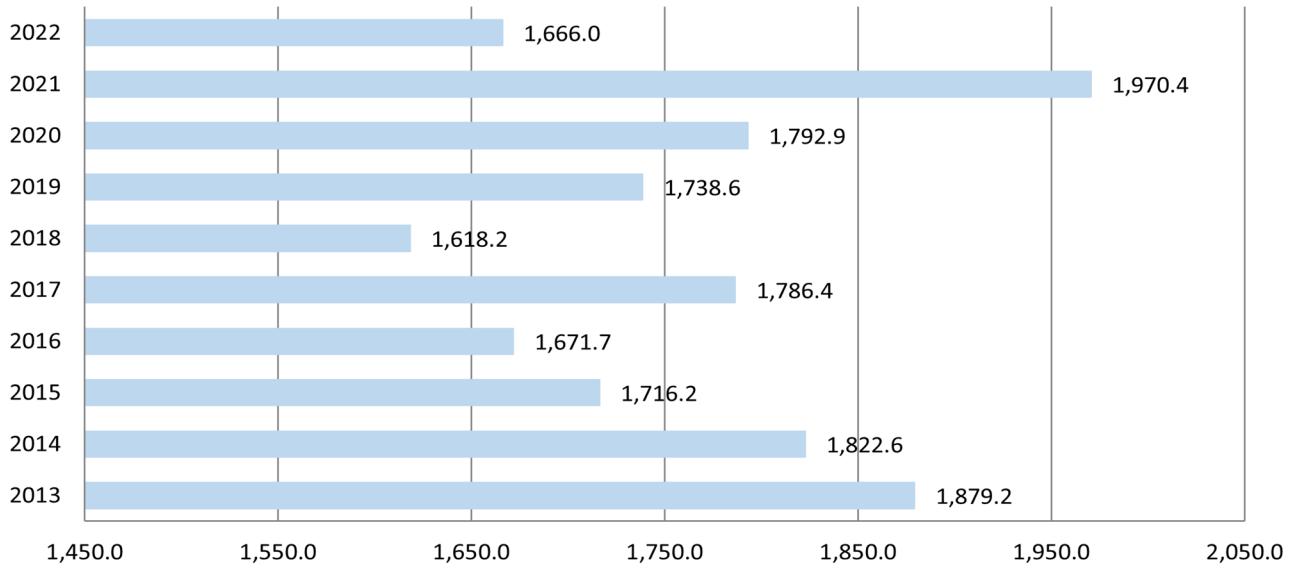
Fiscal Year	Benefits(3)	Investment and Administrative Expenses (4)	Withdrawals	Total
2022	\$197,863,370	\$6,511,516	\$3,366,808	\$207,741,694
2021	199,326,814	5,977,308	2,899,720	208,203,842
2020	199,841,888	5,965,486	2,337,675	208,145,049
2019	193,688,372	7,227,413	2,098,073	203,013,858
2018	200,240,292	7,900,468	1,923,161	210,063,921
2017	196,852,807	8,688,421	1,737,942	207,279,170
2016	211,163,822	7,493,909	1,498,291	220,156,022
2015	187,512,204	8,904,657	1,307,360	197,724,221
2014	176,263,605	7,997,073	1,102,520	185,363,198
2013	172,583,835	7,963,552	444,848	180,992,235

FOOTNOTES ARE IN THOUSANDS OF DOLLARS

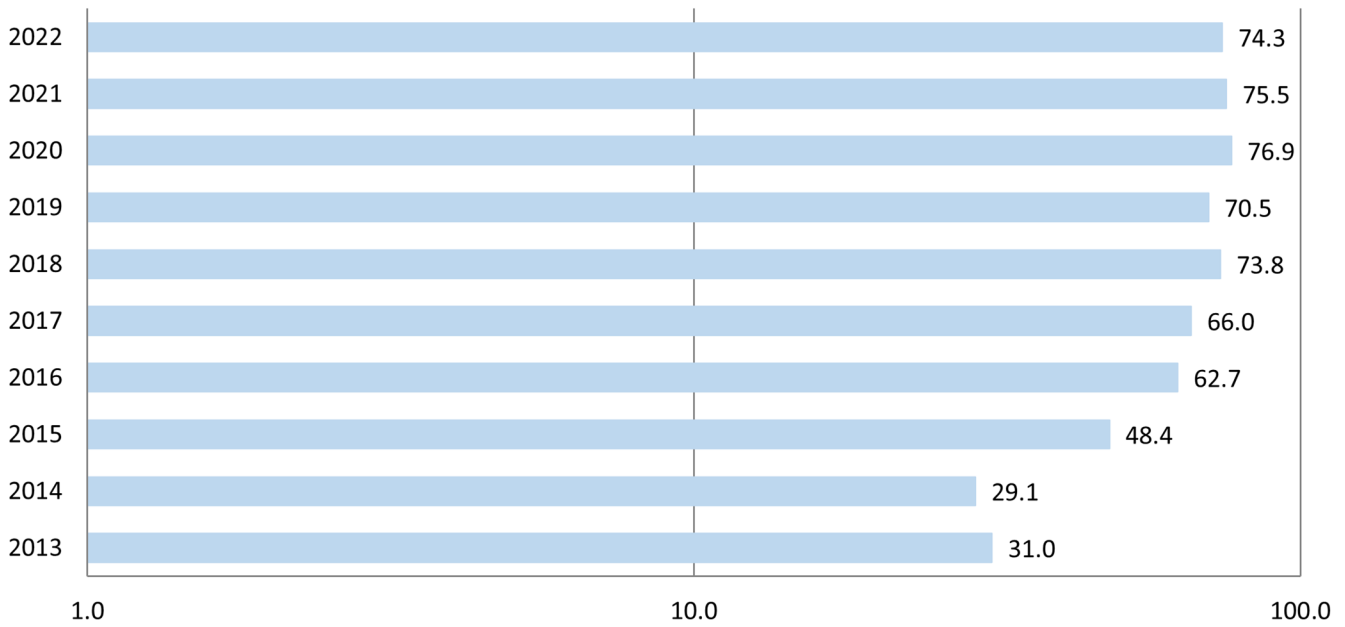
- (1a) Participant contributions are calculated by the actuary and are a percentage of the employees' pensionable compensation.
- (1b) County contributions are set during the County's budget process and are made at the discretion of the County Board.
- (2) Includes interest and dividends, net appreciation (depreciation) of fair value, net security lending income and other income.
- (3) Included in the benefits for 2022, 2021, 2020, 2019, 2018, 2017, 2016, 2015, 2014, and 2013 are back drop lump-sum payments of \$13.7, \$13.6, \$12.6, \$11.9, \$20.7, \$19.9, \$24.4, \$19.8, \$12.6, and \$11.7 respectively.
- (4) There was a decrease in investment and administrative expenses of \$1,452 from the past ten years ago, due mainly to the following expenses:
- Outside consultants support for retirement systems completed in 2022. Outside consultants have increased \$404.8 from 2013, and increased \$40.4 from 2021;
 - Milwaukee County OCC has taken over more involvement in pension litigation resulting in a decrease of (\$640.6) from 2013. There was an increase in litigation of \$56.6 from 2021;
 - Salaries and wages/benefits have increased by \$21.5 since 2021;
 - Investment Manager Fees decreased (\$1,305.6) from 2013, due to fees and increased index funds;
 - Software maintenance expenses increased by \$493.8 mainly due to the Pension Administration Systems upgrade that occurred in 2022.

(See independent auditors' report)

Fiduciary Net Position at Fair Value 2022-2013
(in millions of dollars)
(unaudited)



Actual County and Participant Contributions 2022-2013
(in millions of dollars)
(unaudited)



(See independent auditors' report)

ACTIVE MEMBERSHIP STATISTICS

(unaudited)

	<u>2022</u>	<u>2021</u>
Members as of January 1.....	3,325	3,529
Changes During the Year:		
New enrollments.....	549	418
Terminations.....	(300)	(249)
Retirements.....	(140)	(124)
Deaths in active service.....	(3)	(6)
Withdrawals	<u>(216)</u>	<u>(243)</u>
Members as of December 31.....	<u>3,215</u>	<u>3,325</u>

RETIREMENTS AND SURVIVORS STATISTICS (unaudited)

	Retirements Granted								Survivors & Benefi- ciaries	Total
	Maximum Pension	Option								
		Refund	100%	75%	50%	25%	10-yr.	Other		
1-Jan-22	3,209	166	1,455	309	877	540	319	41	913	7,829
Changes During the Year:										
Adjustments (actuary)*	9	-	-	(1)	1	1	-	-	1	11
Retirements	111	-	35	11	19	21	26	-	64	287
Benefits Expired	-	-	-	-	-	-	-	-	(7)	(7)
Pensioner deaths	(112)	(13)	(56)	(3)	(47)	(6)	(6)	(1)	(57)	(301)
31-Dec-22	3,217	153	1,434	316	850	556	339	40	914	7,819

*Adjustments as a result of reclassifications made to beginning balances by the actuary

(See independent auditors' report)

LIST OF CONSULTANTS AND INVESTMENT MANAGERS
as of December 31, 2022

Legal Advisors

Milwaukee County
Corporation Counsel
Margaret Daun

Reinhart, Boerner, Van Deuren S.C.
Jessica P. Culotti
Milwaukee, Wisconsin

Actuary

Segal Consulting
Chicago, Illinois

Investment Consultant

Marquette Associates, Inc.
Chicago, Illinois

Cash Equitization Manager

The Northern Trust Company
Chicago, Illinois

Fixed-Income Investment Managers

Galliard Capital Management
Minneapolis, Minnesota

The Northern Trust Company
Chicago, Illinois

TCW Emerging Market
Los Angeles, California

U.S. Equity Investment Managers

Boston Partners
Boston, Massachusetts

Silvercrest Asset Management Group
New York, New York

Northern Trust Investments
Chicago, Illinois

Infrastructure Managers

IFM Investment Advisor
New York, New York

JP Morgan Investment Management
New York, New York

Disbursing Agent

County Treasurer

Custodian/Securities Agent

The Northern Trust Company
Chicago, Illinois

Medical Board

Managed Medical Review Organization, Inc.
Novi, Michigan

International Investment Managers

Northern Trust Investments
Chicago, Illinois

QMA

Newark, NJ

Real Estate Investment Managers

American Realty Advisors
Los Angeles, California

Morgan Stanley Real Estate
New York, New York

UBS Realty Investors, LLC
Hartford, Connecticut

Private Equity Managers

Adams Street Partners
Chicago, Illinois

Siguler Guff & Company, LLC
New York, New York

Mesirow Financial Equity Management
Chicago, Illinois

Fairview Private Markets
West Hartford, Connecticut

BPEA

Boston, Massachusetts

Barings Emerging Generation Fund
Charlotte, NC

StepStone VC Global Partners X
Owings Mills, Maryland

LIST OF CONSULTANTS AND INVESTMENT MANAGERS (cont.)
as of December 31, 2022

Long/Short Hedge Managers

ABS Investment Management
Greenwich, Connecticut

Parametric
Minneapolis, Minnesota

Neuberger Berman
Chicago, Illinois

Private Dept Managers

Alliance Bernstein
Chicago, Illinois

Owl Rock
New York, New York

(See independent auditors' report)

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