

---

**State of Wisconsin**  
**Additional/Voluntary Filing # 2024-04**

Dated January 19, 2024

---

This Additional/Voluntary Filing does not concern an event described in Securities and Exchange Act Rule 15c2-12, as amended. The State of Wisconsin provides this information as it may be material to the financial evaluation of one or more obligations of the State of Wisconsin.

**Issuer:** State of Wisconsin

**CUSIP Numbers:** 977055 Prefix (All)                      977056 Prefix (All)  
97705L Prefix (All)                              97705M Prefix (All)  
977087 Prefix (All)                              97709T Prefix (All)  
977123 Prefix (All)                              977100 Prefix (All)

**Type of Information:** Financial/Operating Data Disclosures; Additional Financial Information

The Wisconsin Department of Employee Trust Funds (ETF) has released its **Annual Comprehensive Financial Report (ACFR) for the year ended December 31, 2022**. The attached ACFR is not for the State of Wisconsin; rather it addresses the Wisconsin Retirement System (WRS) and other benefit plans administered by ETF.

The State of Wisconsin is providing this Additional/Voluntary Filing with the Municipal Securities Rulemaking Board through its Electronic Municipal Market Access system. This Additional/Voluntary Filing is also available on the State of Wisconsin Capital Finance Office website and State of Wisconsin investor relations website at:

[doa.wi.gov/capitalfinance](http://doa.wi.gov/capitalfinance)  
[wisconsinbonds.com](http://wisconsinbonds.com)

The undersigned represents that he is the Capital Finance Director, State of Wisconsin Capital Finance Office, which is the office of the State of Wisconsin responsible for providing additional/voluntary filings, annual reports, and Event Filings pursuant to the State's Master Agreement on Continuing Disclosure (Amended and Restated March 1, 2019) and is authorized to distribute this information publicly.

/s/ AARON M. HEINTZ

---

Aaron M. Heintz, Capital Finance Director  
State of Wisconsin Capital Finance Office  
Wisconsin Department of Administration

101 East Wilson Street, FLR 10  
Madison, WI 53703

Phone: 608.267.1836

Email: [DOACapitalFinanceOffice@wisconsin.gov](mailto:DOACapitalFinanceOffice@wisconsin.gov)

Websites: [doa.wi.gov/capitalfinance](http://doa.wi.gov/capitalfinance)  
[wisconsinbonds.com](http://wisconsinbonds.com)

Annual Comprehensive Financial Report

# 2022

For the Year Ending December 31, 2022





# ANNUAL COMPREHENSIVE FINANCIAL REPORT 2022

For the Year Ending December 31, 2022

State of Wisconsin Department of Employee Trust Funds  
Cindy Klimke-Armatoski, Chief Trust Financial Officer

Wisconsin Department of Employee Trust Funds  
PO Box 7931  
Madison, WI 53707-7931  
1-877-533-5020  
<https://etf.wi.gov>



State of Wisconsin  
Department of Employee Trust Funds

ET-8501

The Department of Employee Trust Funds does not discriminate on the basis of disability in the provision of programs, services, or employment. If you are speech, hearing, or visually impaired and need assistance, call toll free 1-877-533-5020 or 608-266-3285. Wisconsin Relay Service (for speech and hearing impaired), dial 7-1-1.

# TABLE OF CONTENTS

## Introductory Section

Letter of Transmittal .....	3
Professional Award .....	7
ETF Boards and Department Organization .....	8

## Financial Section

Independent Auditor's Report .....	14
Management's Discussion and Analysis .....	17
Financial Statements	
Statement of Fiduciary Net Position .....	34
Statement of Changes in Fiduciary Net Position .....	36
Statement of Net Position - Proprietary Funds .....	38
Statement of Revenues, Expenses, and Changes in Fund Net Position - Proprietary Funds .....	39
Statement of Cash Flows - Proprietary Funds .....	40
Notes to Financial Statements .....	41
Required Supplementary Information .....	106

## Statistical Section

Wisconsin Retirement System .....	126
Group Health Insurance .....	142
Group Life Insurance .....	144
Duty Disability Insurance .....	148
Income Continuation Insurance .....	151
Employee Reimbursement Accounts Program .....	153
Department of Employee Trust Funds Administrative Expenses .....	155

## Actuarial Section

Actuarial Certification Letter .....	158
WRS Actuarial Statement of Assets and Liabilities .....	160
Summary of WRS Benefit Provisions .....	161
Actuarial Method and Assumptions Used in WRS Valuations .....	164

## Investment Section

Investments .....	182
-------------------	-----

## Contributions Paid and Employer Unfunded Liability Balances

State Agencies .....	194
Public Authorities .....	195
Cities .....	196
Villages .....	200
Special Districts .....	207
Towns .....	212
Counties .....	219
School Districts .....	221
Technical Colleges .....	230
Cooperative Educational Service Agencies (CESAs) .....	231

# INTRODUCTORY SECTION

The background features a series of overlapping, wavy shapes in various shades of blue and white. The top right corner is dominated by a dense, overlapping pattern of thin blue lines that form a large, curved shape. Below this, there are several larger, smoother, overlapping shapes in lighter and darker blue tones, creating a sense of depth and movement.

State of Wisconsin  
Department of Employee Trust Funds

Wisconsin Department of Employee Trust Funds



**STATE OF WISCONSIN**  
**Department of Employee Trust**  
**Funds**  
**A. John Voelker**  
 SECRETARY

Wisconsin Department of  
 Employee Trust Funds  
 PO Box 7931  
 Madison WI 53707-7931

1-877-533-5020 (toll free)  
 Fax (608) 267-4549  
<http://etf.wi.gov>

January 5, 2024

GOVERNOR TONY EVERS  
 MEMBERS OF THE STATE LEGISLATURE  
 PUBLIC EMPLOYEES, EMPLOYERS AND OTHER INTERESTED PARTIES:

We are pleased to present the Annual Comprehensive Financial Report (ACFR) of the Wisconsin Department of Employee Trust Funds (ETF) for the year ended December 31, 2022. This report provides comprehensive information about ETF, the Wisconsin Retirement System (WRS), and other employee benefit programs administered by ETF. The WRS continues to be financially strong and one of the best funded public pension systems in the country.

Responsibility for the accuracy of the data and the fairness and completeness of this presentation, including all disclosures, rests with the management of ETF. To the best of our knowledge, the enclosed information is accurate in all material respects and is reported in a manner designed to provide a fair representation of the financial position and results of ETF operations.

As required by Wis. Stat. § 13.94 (1) (dd), the Legislative Audit Bureau (LAB) has completed a financial audit of ETF and issued an unmodified (“clean”) opinion on the financial statements for the year ended December 31, 2022. The independent auditor's report is located at the beginning of the Financial Section of this ACFR.

Management’s Discussion and Analysis (MD&A) immediately follows the independent auditor's report and provides a narrative introduction, overview, and analysis of the financial statements. The MD&A complements this Letter of Transmittal and should be read in conjunction with it.

### **Historical Overview**

The WRS was created effective January 1, 1982. The system covers state and local public employees, including faculty and staff of the University of Wisconsin System, local police and firefighters, and all publicly employed teachers in the state. Those not included are employees of the City of Milwaukee and Milwaukee County, who are covered under separate retirement systems. However, during 2023, Wisconsin Act 12 was signed into law providing that if the city or county imposes new sales taxes, new employees are enrolled in the WRS. Additionally, the law closes the retirement system of the City of Milwaukee and the Milwaukee County to new employees. Pension coverage for local government employees has been in place since 1891, when the legislature required Milwaukee to create a pension fund for retired and disabled police and firefighters. The legislature has since extended pension coverage to other public employees, along with creating group life and health insurance programs.

The Group Insurance Board (GIB) was created in 1959 to monitor the administration of the life and health insurance programs. ETF was created in 1967 to administer the various retirement and related benefit programs.

The WRS consistently ranks among the 10 largest public pension funds in the U.S. and provides retirement benefits for approximately 678,000 current and former state and local government employees. As of December 31, 2022, the WRS had 260,504 active employees; 232,384 annuitants (retirees, disabilitants, and



beneficiaries); and 185,017 inactive participants with deferred benefits payable. The WRS is composed of 28% state employees and 72% local employees.

### **ETF Mission and Responsibilities**

ETF's mission is "to develop and deliver quality benefits and services to our customers while safeguarding the integrity of the Trust." ETF administers retirement benefits, including an optional, supplemental retirement savings plan, health and sick leave benefits, disability benefits, life insurance, income continuation insurance, and pre-tax savings accounts to pay for eligible expenses such as health care and dependent day care. There are five different statutory boards with responsibilities for programs operated by the Department. The ETF Board is both the overall governing body for the Department and the general policy-setting and trustee board for the WRS.

Participation by eligible employees is mandatory for retirement and Social Security, but optional for the other programs. The State of Wisconsin Investment Board (SWIB) invests the trust fund monies of the benefit programs, with the exception of group life insurance assets, which are held by the third-party administrator.

ETF is responsible for:

- Collecting monies due the trust funds.
- Calculating and ensuring appropriate disbursement of benefit payments from the trust funds.
- Providing information to, and answering inquiries from, participating employees and employers.
- Establishing the controls, systems, and procedures necessary to ensure the appropriate administration and security of the trust.

### **Major Initiatives**

ETF's strategic goals include:

- Create an effortless customer experience,
- Implement outcomes-driven performance measurement and process management,
- Build a talented and agile workforce, and
- Implement modern, secure, and resilient information technologies.

ETF continues its multiyear program to replace an increasingly fragile information technology infrastructure. Modernizing information technology and business processes will be critical to accomplishing the above goals and responsibilities. Working with the system vendor, employers, and third-party administrators, staff are configuring and testing an Insurance Administration System (IAS). The IAS is scheduled to go live in 2024. Work will begin on a new pension administration system following the IAS implementation.

This past year we have also completed a market search, proof of concept, and product selection for an Identity Proofing Solution. Identity proofing is the activity of verifying, with a high degree of certainty, that a person is who they claim to be. This is essential to mitigate fraudulent use of systems going online in 2024. Information security continues to be front and center of our modernization efforts.

Data management is another key component to our modernization efforts. Staff are working to improve the reliability and sharing of data across systems. This includes enhanced data governance, developing a data quality framework, implementing a master data management program and architecture for the use and maintenance of data across systems, developing a data lake to store data from current and new systems to support reporting needs, and providing data literacy training to staff to improve the ability to make data-driven decisions.

The work noted above are examples demonstrating ETF's commitment and focus to fulfill our mission of providing quality benefits and services to our customers while safeguarding the integrity of the trust.



## Funding Status

### PENSION PLAN

The funded status of the WRS measures the extent to which the system has accumulated enough assets to pay the benefits earned by participants. The funded ratio is the ratio of plan assets to estimated future liabilities. The assets can be measured using either the current fair value or a smoothed funding value. The fair value measurement gives a more timely measurement, but can be extremely volatile. The funding value measurement, where gains and losses are smoothed over a five-year period, is less representative of current fair value, but better presents the funding trends without the year-to-year volatility.

The WRS continues to be one of the best funded public employee retirement systems in the country. A well-funded system ensures that a lifetime of benefits can be paid to today's workers without burdening the next generation of taxpayers with higher contributions. The financial strength of the WRS is attributable to its unique plan design, funding discipline at the state and local levels, strong governance, and the effective investment strategies of the SWIB.

The funding value-based ratio of the WRS remains 100% as of December 31, 2022. The fair value-based ratio, calculated in accordance with standards issued by the Governmental Accounting Standards Board, is 96%. This is a decrease from 106% and was primarily the result of negative market returns in 2022.

### OTHER EMPLOYEE BENEFIT PROGRAMS

The Health Insurance Fund consists of a State plan and a Local plan. The plans include three separate risk pools, including a fully insured medical Health Maintenance Organization pool, a self-insured pharmacy benefit pool, and a self-insured dental benefit pool. The GIB monitors the activity and reserve balances by plan type and within each plan's risk pools; and considers the total reserve balance to set annual premium rates. The GIB policy specifies a range in which the reserve balances should fall as a percentage of projected premiums (for medical) or projected claims (for pharmacy and dental). The table below shows the reserve balances as of December 31, 2022, the projected reserve balance as of December 31, 2023, and the projected variance from reserve target as of December 31, 2023.

	Health Insurance Reserves (In Millions)							
	State Plan				Local Plan			
	Medical	Pharmacy	Dental	Total	Medical	Pharmacy	Dental	Total
Reserve Balance 12/31/2022	\$84.9	\$37.3	\$23.0	\$145.2	(\$3.7)	\$18.0	\$0.1	\$14.4
Projected Reserve Balance 12/31/2023	87.1	(48.3)	24.7	63.5	(4.2)	16.6	(0.3)	12.1
Projected 2024 Premiums or Claims	1,302.0	516.1	60.7	1,878.8	243.3	73.2	2.4	318.9
GIB reserve policy range (% of projected premiums or claims)	3%-5%	8%-10%	5%-7%		3%-5%	8%-10%	5%-7%	
Mid-point reserve target	52.1	46.4	3.6	102.1	9.7	6.6	0.1	16.4
Projected variance from reserve target as of 12/31/2023	\$35.0	(\$94.7)	\$21.1	(\$38.6)	(\$13.9)	\$10.0	(\$0.4)	(\$4.3)

Per the reserve policy, the GIB may decide to spread recommended rate adjustments so the reserve target is reached over a period of years rather than in one year. At its August 2023 meeting, the GIB adopted a multiyear plan to bring reserves back within target range.

Please refer to Note 9, Other Post-Employment Benefit (OPEB) Plans Administered by ETF, and the Statistical Section for the funding status of other employee benefit programs.

**Investments**

As noted earlier, the SWIB invests the trust fund monies of the program's ETF administrators. General market decreases, higher inflation, increasing interest rates, and global supply chain issues contributed to decreasing asset values in 2022. The Core Fund ended the year with a net loss of 12.9% in 2022. The Variable Fund ended 2022 with a net loss of 17.8%. The Core Fund and Variable Fund had net assets of approximately \$123 billion as of December 31, 2022.

A complete discussion of investment returns, activities, asset allocation strategy, and policies governing those activities can be found in the Investment Section.

**Legislative Initiatives**

In 2022, there was no legislation enacted that significantly affected the WRS and the employee benefit programs administered by ETF.

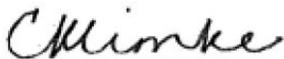
**Acknowledgments**

We would like to express our appreciation to the Governor, members of the Legislature, members of the boards, staff, employers, participants, and all those whose efforts and interest combine to ensure the successful operation of our system, while protecting the integrity of the trust funds.

Sincerely,



A. John Voelker  
Secretary



Cindy Klimke-Armatoski  
Chief Trust Financial Officer



Public Pension Coordinating Council  
***Public Pension Standards Award  
For Funding and Administration  
2022***

Presented to

**Wisconsin Department of Employee Trust Funds**

In recognition of meeting professional standards for  
plan funding and administration as  
set forth in the Public Pension Standards.

*Presented by the Public Pension Coordinating Council, a confederation of*

National Association of State Retirement Administrators (NASRA)  
National Conference on Public Employee Retirement Systems (NCPERS)  
National Council on Teacher Retirement (NCTR)



Alan H. Winkle  
Program Administrator

## ETF Boards and Department Organization

The individuals who serve on the boards that provide oversight for the Department of Employee Trust Funds (ETF) play important roles. Board decisions affect hundreds of thousands of individuals who participate in the retirement programs funded by the trust funds as well as other benefit programs ETF operates for Wisconsin.

This section explains how board membership is determined and how membership overlaps. Under state law, members of the boards are chosen in a variety of ways. Some members are ex-officio, some are direct appointees of the Governor, others are appointed to fixed terms from lists submitted to the governor by specified organizations, and still others are directly elected by active participants or retirees.

The members and officers of each board are listed below, along with a short explanation of board responsibilities. Membership on the boards as of December 31, 2022, is as follows:

### » *Employee Trust Funds Board (13 Members)*

This board has general oversight of ETF; appoints the ETF Secretary; approves tables used for computing benefits, contribution rates and actuarial assumptions; authorizes all annuities except for disability; approves or rejects ETF administrative rules; and generally oversees administration of the benefit programs, except group health, life and income continuation insurance plans, employee reimbursement account, commuter benefit, and health savings account and deferred compensations programs.

State law sets ETF Board membership criteria, with some members appointed by the Teachers Retirement Board (TR Board) and the Wisconsin Retirement Board (WR Board). The ETF Board has established three committees to assist the Board in fulfilling its fiduciary and oversight responsibilities: an Executive Committee, an Audit Committee and a Budget and Operations Committee. The Executive Committee oversees the effective

operation of Board and other Committee meetings and reviews personnel matters relating to the Department and the Secretary. The Audit Committee reviews the adequacy and effectiveness of the Department's system of internal controls, including those relating to information technology systems, and the Department's accounting and financial reporting systems. The Budget and Operations Committee reviews the biennial budget process and the Department's operating budget, as well as the Department's strategic business and information technology planning activities.

### Board Members

#### **Chair: William Ford**

Elected by WRS annuitants. WRS annuitant as defined for purposes other than life insurance under Wis. Stat. § 40.02 (4)

#### **Vice Chair: John David**

Appointed by the WR Board. Any WR Board member. Wis. Stat. § 15.16 (1) (b)

#### **Secretary: Steven Wilding**

Appointed by WR Board. WR Board member appointed by the Governor to the WR Board as an employee of a participating local government. Wis. Stat. § 15.165 (3) (b) 3, 6 or 7

#### **Stephen Arnold**

Appointed by the Governor, with Senate confirmation. Public member who is not a participant or beneficiary in the WRS. The appointee must have substantial actuarial, employee benefit or insurance experience. Wis. Stat. § 15.16 (1) (c)

#### **Jen Fogel**

Ex officio; Administrator of the Division of Personnel Management in the Department of Administration or the Administrator's designee. Wis. Stat. § 15.16 (1) (intro.)

#### **Chris Heller**

Appointed by the TR Board. TR Board member who is a public school or vocational school teacher. Wis. Stat. § 15.16 (1) (a) 1



## INTRODUCTORY SECTION

**Wayne Koessl**

Appointed by WR Board. WR Board member appointed by the Governor to the WR Board as a chief executive or member of the governing body of a participating local government. Wis. Stat. § 15.165 (3) (b) 1, 2, 4, 5 or 8

**Katy Lounsbury**

Ex officio; Governor or the Governor's designee on the Group Insurance Board. Wis. Stat. § 15.16 (1) (intro.)

**Angela Miller**

Appointed by WR Board. WR Board member appointed by the Governor to the WR Board as a participating state employee or public member who is not a participant or beneficiary of the WRS. Wis. Stat. § 15.165 (3) (b) 7 or 8

**Amy Mizialko**

Appointed by the TR Board. TR Board member elected by City of Milwaukee teacher participating employees. Wis. Stat. § 15.16 (1) (a) 3

**Leilani Paul**

Elected by educational support personnel. WRS participant who is either a public school district educational support employee or a technical college district educational support employee. Wis. Stat. § 15.16 (1) (f)

**Roberta Rasmus**

Appointed by the TR Board. TR Board member appointed by the Governor to the TR Board who is a public school administrator or school board member. Wis. Stat. § 15.16 (1) (a) 4

**David Schalow**

Appointed by TR Board. TR Board member appointed by the Governor as a University of Wisconsin (UW) System representative who is a teacher participant in the WRS. Wis. Stat. § 15.16 (1) (a) 2

» **Wisconsin Retirement Board (9 Members)**

The WR Board advises the ETF Board on matters relating to retirement; approves or rejects administrative rules; authorizes or terminates disability benefits for non-teachers; and hears appeals of disability rulings. This board appoints four members to the ETF Board and one non-

teaching member to the State of Wisconsin Investment Board.

**Board Members****Chair: John David**

Appointed by the Governor from a list of five names submitted by the Board of Directors of the League of Wisconsin Municipalities. Chief executive or member of the governing body of a participating city or village. From a different county than subds. 2 and 3. Wis. Stat. § 15.165 (3) (b) 1

**Vice Chair: Steven Wilding**

Appointed by the Governor. Participating employee of a participating city or village. From a different county than subds. 1 and 2. Wis. Stat. § 15.165 (3) (b) 3

**Secretary: Julie Wathke**

Appointed by the Governor. County clerk or deputy county clerk. From a different county than subds. 4 and 6. Wis. Stat. § 15.165 (3) (b) 5

**Nathan Houdek**

Ex officio; Commissioner of Insurance or an experienced actuary in the Office of the Commissioner designated by the Commissioner. Wis. Stat. § 15.165 (3) (b) 9

**Wayne E. Koessl**

Appointed by the Governor from a list of five names submitted by the executive committee of the Wisconsin Counties Association. Chairperson or member of the governing body of a participating county or town. From a different county than subds. 5 and 6. Wis. Stat. § 15.165 (3) (b) 4

**Angela Miller**

Appointed by the Governor. Participating state employee. Wis. Stat. § 15.165 (3) (b) 7

**Christy Schwan**

Appointed by the Governor. Public member who is not a participant or beneficiary of the WRS. Wis. Stat. § 15.165 (3) (b) 8

**Herbert Stinski**

Appointed by the Governor. Participating employee and principal finance officer of a participating city or village and from a different

county that subds. 1 and 3. Wis. Stat. § 15.165 (3) (b) 2

**Mary Von Ruden**

Appointed by the Governor. Participating employee from a participating local employer other than a city or village. From a different county than subds. 4 and 5. Wis. Stat. § 15.165 (3) (b) 6

» **Teachers Retirement Board (13 Members)**

The TR Board advises the ETF Board on retirement and other benefit matters involving public school, technical college, state and university teachers; acts on administrative rules and authorizes or terminates teacher disability benefits and hears disability benefit appeals. Nine of the 13 members are elected. This board appoints four members to the ETF Board and one teacher participant to the State of Wisconsin Investment Board.

**Board Members**

**Chair: Brent Grochowski**

Elected by public school teachers. Public school teacher. Wis. Stat. § 15.165 (3) (a) 1

**Vice Chair: Chris Heller**

Elected by public school teachers. Public school teacher. Wis. Stat. § 15.165 (3) (a) 1

**Secretary: Esther Ancel**

Elected by annuitants who were teacher participants. Annuitant who was a teacher participant in the WRS. Wis. Stat. § 15.165 (3) (a) 6

**Adam Balz**

Elected by public school teachers. Public school teacher. Wis. Stat. § 15.165 (3) (a) 1

**Ryan Kamien**

Elected by public school teachers. Public school teacher. Wis. Stat. § 15.165 (3) (a) 1

**Amy Mizialko**

Elected by Milwaukee Public School District teachers who are participating employees. City of Milwaukee teacher who is a participating employee in the WRS. Wis. Stat. § 15.165 (3) (a) 7

**Allison Pratt**

Elected by public school teachers. Public school teacher. Wis. Stat. § 15.165 (3) (a) 1

**Anton (Tony) Przybylski Jr.**

Elected by participating Wisconsin technical college teachers. Public school teacher from a technical college district who is a participating employee in the WRS. Wis. Stat. § 15.165 (3) (a) 2

**David Schalow**

Appointed by the Governor. UW teacher participant in the WRS (not from same campus as other UW teacher representative). Wis. Stat. § 15.165 (3) (a) 4

**Vacant**

Elected by public school teachers. Public school teacher. Wis. Stat. § 15.165 (3) (a) 1

**Vacant**

Appointed by the Governor. UW teacher participant in the WRS (not from same campus as other UW teacher representative). Wis. Stat. § 15.165 (3) (a) 4

**Vacant**

Appointed by the Governor. Public school administrator who is not a classroom teacher. Wis. Stat. § 15.165 (3) (a) 3

**Vacant**

Appointed by the Governor. Member of a school board. Wis. Stat. § 15.165 (3) (a) 5

» **Group Insurance Board (11 Members)**

This board sets policy for the group health, life, and income continuation insurance plans as well as employee reimbursement account, commuter benefit, and health savings account programs for state employees and the group health, life and income continuation insurance plans for local employers who choose to offer them. The board also can provide other insurance plans, if employees pay the entire premium.

**Board Members**

**Chair: Herschel Day**

Appointed by the Governor. Insured participant in the WRS who is a teacher. Wis. Stat. § 15.165 (2)

**Vice Chair: Nathan Houdek**

Ex officio; Commissioner of Insurance or Commissioner's designee. Wis. Stat. § 15.165 (2)

## INTRODUCTORY SECTION

**Secretary: Nancy Thompson**

Appointed by the Governor. Chief executive or member of the governing body of a local unit of government that is a participating employer. Wis. Stat. § 15.165 (2)

**Daniel Fields**

Appointed by the Governor. Insured participant in the WRS who is a retired employee. Wis. Stat. § 15.165 (2)

**Jen Flogel**

Ex officio; Administrator of the Division of Personnel Management in the Department of Administration or the Administrator's designee. Wis. Stat. § 15.16 (1) (intro.)

**Erin Hillson**

Appointed by the Governor. Insured participant in the WRS who is an employee of a local unit of government. Wis. Stat. § 15.165 (2)

**Walter Jackson**

Appointed by the Governor. Insured participant in WRS who is not a teacher. Wis. Stat. § 15.165 (2)

**Katy Lounsbury**

Ex officio; Governor or Governor's designee. Wis. Stat. § 15.165 (2)

**Brian Pahnke**

Ex officio; Secretary of Department of Administration or Secretary's designee. Wis. Stat. § 15.165 (2)

**Nathan Ugoretz**

Appointed by the Governor. No membership requirement. Wis. Stat. § 15.165 (2)

**Bob Wimmer**

Ex officio; Attorney General or his/her designee. Wis. Stat. § 15.165 (2)

**» *Deferred Compensation Board (5 Members)***

This board sets policy, contracts with investment and administrative service providers, and oversees administration of the Deferred Compensation Program. The board is responsible for establishing criteria and procedures for selecting and evaluating investment options offered by the Program. The Governor, with senate confirmation, appoints all

board members; there are no statutory requirements for appointments.

**Board Members****Chair: Jason Rothenberg**

Appointed by the Governor, with Senate confirmation. No membership requirements. Wis. Stat. § 15.165 (4)

**Vice Chair: Terrance Craney**

Appointed by the Governor, awaiting Senate Confirmation. No membership requirements. Wis. Stat. § 15.165 (4)

**Secretary: Connie Haberkorn**

Appointed by the Governor, with Senate confirmation. No membership requirements. Wis. Stat. § 15.165 (4)

**William Stebbins**

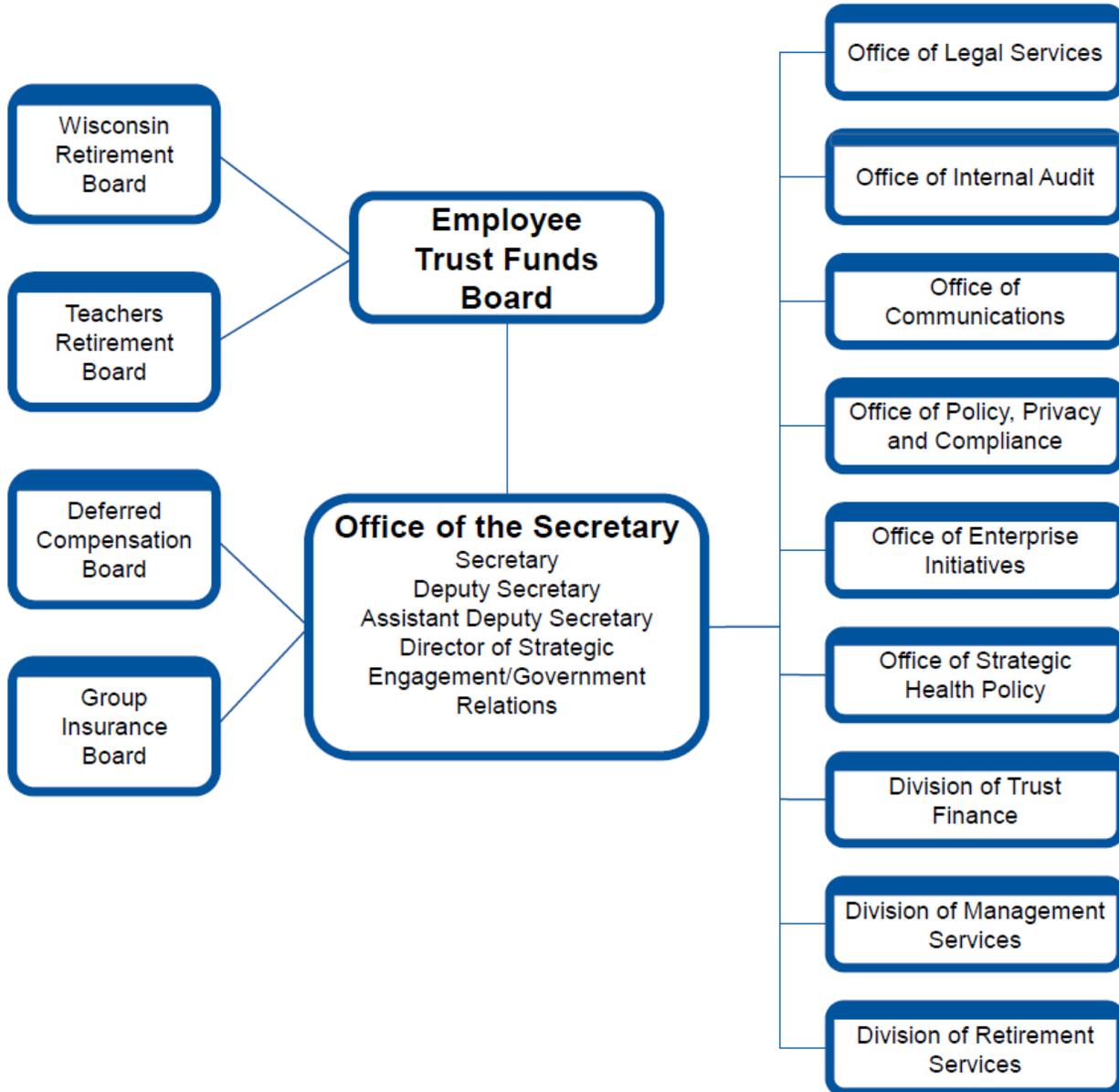
Appointed by the Governor, with Senate confirmation. No membership requirements. Wis. Stat. § 15.165 (4)

**Kate Fleming**

Appointed by the Governor, awaiting Senate confirmation. No membership requirements. Wis. Stat. § 15.165 (4)

» *Department Organization*

The Department of Employee Trust Funds had 275.2 permanent positions at the end of 2022. The Department's organization chart as of December 31, 2022 is shown below:





## INTRODUCTORY SECTION

### » *2022 ETF Management Staff*

Secretary: A. John Voelker  
Deputy Secretary: Shirley Eckes  
Assistant Deputy Secretary: Pamela Henning

Director of Strategic Engagement/Government Relations: Tarna Hunter

Division of Retirement Services  
Administrator: Matt Stohr

Division of Management Services  
Administrator: Steve Mueller

Division of Trust Finance  
Administrator: Cindy Klimke-Armatoski

Office of Strategic Health Policy  
Director: Eileen Mallow

Office of Internal Audit  
Director: Yikchau Sze

Office of Communications  
Director: Mark Lamkins

Office of Policy, Privacy and Compliance  
Director: Steve Hurley

Office of Enterprise Initiatives  
Director: Michelle Baxter

Office of Legal Services  
Director: Diana Felsmann

### » *Consulting Actuaries*

Gabriel, Roeder, Smith & Company  
Southfield, Michigan

Segal Consulting  
Atlanta, Georgia

Milliman, Inc.  
Portland, Maine

### » *Auditors*

Legislative Audit Bureau  
Madison, Wisconsin

### » *Third-Party Administrators*

#### **Pharmacy Benefits Manager**

Navitus Health Solutions, LLC  
Madison, Wisconsin

#### **Dental Insurance**

Delta Dental  
Stevens Point, Wisconsin

#### **Wellness and Disease Management Program**

WebMD Health Services  
Portland, Oregon

#### **Income Continuation Insurance**

The Hartford  
Hartford, Connecticut

#### **Deferred Compensation**

Empower Retirement  
Greenwood Village, Colorado

#### **Employee Reimbursement Accounts / Commuter Benefits Program**

Optum Financial  
Eden Prairie, Minnesota

#### **Life Insurance**

Securian Financial Group, Inc  
Saint Paul, Minnesota

# FINANCIAL SECTION

The background features a series of overlapping, wavy shapes in various shades of blue and white. These shapes are composed of multiple thin, parallel lines that create a sense of depth and movement. The overall aesthetic is clean, modern, and professional.

State of Wisconsin  
Department of Employee Trust Funds

Wisconsin Department of Employee Trust Funds



STATE OF WISCONSIN

# Legislative Audit Bureau

Joe Chrisman  
State Auditor

22 East Mifflin Street, Suite 500  
Madison, Wisconsin 53703

Main: (608) 266-2818  
Hotline: 1-877-FRAUD-17

[www.legis.wisconsin.gov/lab](http://www.legis.wisconsin.gov/lab)  
[AskLAB@legis.wisconsin.gov](mailto:AskLAB@legis.wisconsin.gov)

## **Independent Auditor's Report on the Financial Statements and Other Reporting Required by *Government Auditing Standards***

Senator Eric Wimberger and  
Representative Robert Wittke, Co-chairpersons  
Joint Legislative Audit Committee

Members of the Employee Trust Funds Board and  
Mr. A. John Voelker, Secretary  
Department of Employee Trust Funds

### **Report on the Audit of the Financial Statements**

#### **Opinions**

We have audited the Statement of Fiduciary Net Position, the Statement of Changes in Fiduciary Net Position, and the related notes for the following fiduciary funds administered by the State of Wisconsin Department of Employee Trust Funds (ETF) as of and for the year ended December 31, 2022: Wisconsin Retirement System, Supplemental Health Insurance Conversion Credit, Employee Reimbursement Accounts/Commuter Benefits, State Retiree Life Insurance, Local Retiree Life Insurance, Milwaukee Retirement Systems, and Local Retiree Health Insurance. We have also audited the Statement of Net Position; Statement of Revenues, Expenses, and Changes in Net Position; Statement of Cash Flows; and related notes for the following proprietary funds administered by ETF as of and for the year ended December 31, 2022: Duty Disability Insurance, Health Insurance, Income Continuation Insurance, State Retiree Health Insurance, and Accumulated Sick Leave Conversion Credit.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the respective financial position of each fiduciary fund and each proprietary fund as of December 31, 2022, the changes in financial position and, where applicable, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

#### **Basis for Opinions**

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, which is issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditor's Responsibility for the Audit of the Financial Statements section. We are required to be independent of ETF 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 opinions.

#### **Emphases of Matter**

As discussed in Note 1 to the financial statements, the financial statements referred to in the first paragraph present only the fiduciary and proprietary funds administered by ETF and do not purport to, and do not, present fairly the financial position of the State of Wisconsin as of December 31, 2022, the changes in

its financial position or, where applicable, its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

As discussed in Note 3 to the financial statements, the financial statements include investments that do not have readily ascertainable market prices. Some of these investments are valued based on a variety of third-party pricing methods and others, such as private fund investments, are reported based on net asset value. Because of the inherent uncertainty of valuation, these estimated values may differ from the values that could be realized in a secondary market transaction or the amount ultimately realized.

Our opinions are not modified with respect to these matters.

### **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.

### **Auditor's Responsibility 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 auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance. Therefore, reasonable assurance is not a guarantee that an audit conducted in accordance with auditing standards generally accepted in the United States of America and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than 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 auditing standards generally accepted in the United States of America and *Government Auditing Standards*, we exercised professional judgment and maintained professional skepticism throughout the audit. We also identified and assessed the risks of material misstatement of the financial statements, whether due to fraud or error, and designed and performed audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.

In addition, we obtained an understanding of internal control relevant to the audit in order to design audit procedures that were appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of ETF's internal control. Accordingly, no such opinion is expressed. We also evaluated the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, and evaluated the overall presentation of the financial statements.

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 management's discussion and analysis on pages 17 through 33 and the following information found on pages 106 through 125 be presented to supplement the financial statements: claims development information for

public entity risk pools; the Wisconsin Retirement System's Schedules of Changes in Net Pension Liability (Asset) and Related Ratios, Schedule of Required Employer Contributions, and Schedule of Investment Returns; the State Retiree Life Insurance Schedules of Changes in Net OPEB Liability (Asset) and Related Ratios, the Local Retiree Life Insurance Schedules of Changes in Net OPEB Liability (Asset) and Related Ratios, and the State and Local Retiree Life Insurance Schedule of Investment Returns; the Supplemental Health Insurance Conversion Credit's Schedules of Changes in Net OPEB Liability (Asset) and Related Ratios, Schedule of Required Employer Contributions, and Schedule of Investment Returns; and the Notes to the Required Supplementary Information. Such information is the responsibility of management and, although not a part of the financial statements, is required by the Governmental Accounting Standards Board (GASB) that considers it to be an essential part of financial reporting for placing the 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. These procedures 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 financial statements, and other knowledge we obtained during our audit of the 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 sections listed in the table of contents entitled Introductory Section, Statistical Section, Actuarial Section, Investment Section, and Contributions Paid and Employer Unfunded Liability Balances, but does not include the financial statements and our auditor's report thereon. Our opinions on the financial statements do not cover the other information, and we do not express an opinion or provide any other form of assurance thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the financial statements, or whether 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.

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

In accordance with *Government Auditing Standards*, we have also issued our report dated January 5, 2024, and published in report 24-1, on our consideration of ETF's internal control over financial reporting; our testing of its compliance with certain provisions of laws, regulations, and contracts; and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of ETF's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* and should be used in considering ETF's internal control over financial reporting and compliance.

LEGISLATIVE AUDIT BUREAU



January 5, 2024

## Management's Discussion and Analysis

Management of the Wisconsin Department of Employee Trust Funds (ETF) presents this discussion and analysis of the financial activities for the year ended December 31, 2022. This narrative is intended to supplement the financial statements which follow and should be read in conjunction with the note disclosures, which are an integral part of the financial statements.

ETF administers a defined benefit pension trust and other employee benefit plans for approximately 678,000 members, retirees, and beneficiaries.

### » *Overview of the Financial Statements*

The following discussion and analysis is intended to serve as an introduction to ETF's financial statements. The financial statements include:

- Statement of Fiduciary Net Position
- Statement of Changes in Fiduciary Net Position
- Statement of Net Position – Proprietary Funds
- Statement of Revenues, Expenses, and Changes in Fund Net Position – Proprietary Funds
- Statement of Cash Flows – Proprietary Funds
- Notes to Financial Statements

Funds are categorized as either fiduciary or proprietary based on the design, purpose and activities of the fund.

Fiduciary funds are used to report assets held by ETF as trustee for others. ETF is responsible for handling the assets placed under its control. The fiduciary funds reported by ETF include:

- Wisconsin Retirement System (WRS)
- Supplemental Health Insurance Conversion Credit (SHICC)
- Employee Reimbursement Accounts/Commuter Benefits (ERA/CB)
- State Retiree Life Insurance
- Local Retiree Life Insurance
- Milwaukee Retirement Systems
- Local Retiree Health Insurance

The activities in the proprietary funds operate similar to a private business. Fees are charged for services provided, and the focus is on determining financial position, operating and non-operating income, cash flows, and changes in net position. The proprietary funds reported by ETF include:

- Duty Disability Insurance
- Health Insurance
- Income Continuation Insurance
- State Retiree Health Insurance
- Accumulated Sick Leave Conversion Credit (ASLCC)

### » *Financial Statements*

The Statement of Net Position provides a snapshot of account balances at a point in time. It reports the assets available for future payments to benefit recipients, along with any liabilities that are owed as of the statement date. The full accrual basis of accounting is used.

The difference between assets and liabilities represents the net value of assets held in trust for future benefit payments. These amounts are called “Net Position - Restricted for Pensions, Other Post-Employment Benefits, and Other Purposes” for fiduciary funds and “Net Position Restricted (Unrestricted) for Benefits” for proprietary funds.

The Statement of Changes in Fiduciary Net Position for fiduciary funds and the Statement of Revenues, Expenses, and Changes in Fund Net Position for proprietary funds display the effect of transactions that occurred during the calendar year. For fiduciary funds, additions less deductions equals the net increase (decrease) in net position. For proprietary funds, revenues less expenses equals the change in net position. This net increase (decrease) reflects the change in the value of net position that occurred between the current and prior year.

Notes to the Financial Statements are an integral part of the financial statements and provide additional information that is essential for a comprehensive understanding of the data reported in the financial statements. The notes describe the accounting and administrative policies under which ETF operates, significant account balances and activities, material risks, obligations, contingencies, and subsequent events, if any.

The Required Supplementary Information (RSI) includes:

- Public Entity Risk Pools Claims Development
- Schedules of Changes in Net Pension Liability (Asset) and Related Ratios - WRS
- Schedule of Required Employer Contributions - WRS
- Schedule of Investment Returns - WRS
- Schedules of Changes in Net OPEB Liability (Asset) and Related Ratios - State and Local Retiree Life Insurance
- Schedule of Investment Returns - State and Local Retiree Life Insurance
- Schedules of Changes in Net OPEB Liability (Asset) and Related Ratios - SHICC
- Schedule of Required Employer Contributions - SHICC
- Schedule of Investment Returns - SHICC

The financial statements and related notes are prepared in accordance with Generally Accepted Accounting Principles (GAAP) established by the Governmental Accounting Standards Board (GASB).



## FINANCIAL SECTION

» *Financial Highlights*

<b>Net Position By Program As of December 31 (In Thousands)</b>				
<b>Program</b>	<b>2022</b>	<b>2021</b>	<b>\$ Change</b>	<b>% Change</b>
Wisconsin Retirement System	\$ 118,368,226	\$ 141,847,701	\$ (23,479,475)	(17)%
Supplemental Health Insurance Conversion Credit	1,148,788	1,371,706	(222,918)	(16)
Employee Reimbursement Accounts/Commuter Benefits	3,025	1,950	1,075	55
State Retiree Life Insurance	303,246	319,606	(16,360)	(5)
Local Retiree Life Insurance	241,630	248,190	(6,560)	(3)
Milwaukee Retirement Systems	200,505	252,426	(51,921)	(21)
Local Retiree Health Insurance	0	0	0	0
Duty Disability Insurance	153,152	331,443	(178,291)	(54)
Health Insurance	159,605	227,516	(67,911)	(30)
Income Continuation Insurance	103,206	137,512	(34,306)	(25)
State Retiree Health Insurance	0	0	0	0
Accumulated Sick Leave Conversion Credit	(702,846)	(254,144)	(448,702)	(177)
<b>Total</b>	<b>\$119,978,537</b>	<b>\$144,483,906</b>	<b>\$ (24,505,369)</b>	<b>(17)%</b>

» *Analysis of WRS Financial Activity*

The WRS is a cost-sharing, multiple-employer public employee retirement system established by the State of Wisconsin to provide pension benefits for state and local government employees. The system is administered in accordance with Wis. Stat. § 40. ETF, under the direction of the ETF Board, is responsible for administration of the WRS, including collecting contributions from employers and paying retirement benefits to WRS participants. The State of Wisconsin Investment Board (SWIB) is responsible for managing WRS investments.

The system's funding objective is to meet its long-term benefit obligations through contributions and investment income. Contributions and the income from investments provide the reserves needed to finance the benefits provided under the programs.

Net Position of the WRS decreased by \$23.5 billion or 17%, when comparing \$141.8 billion in 2021 to \$118.4 billion in 2022. This was primarily a result of losses on investments due to less favorable market conditions.

The WRS funding ratio under the funding methodology used to establish required contributions continues to be 100% as of December 31, 2022. Under the GASB financial reporting method, the WRS is 96% funded as of December 31, 2022. As of December 31, 2022, the WRS had a Net Pension Liability of \$5.3 billion compared to a Net Pension Asset of \$8.1 billion as of December 31, 2021. The decrease of approximately \$13.4 billion is primarily attributable to losses on investments due to less favorable market conditions in 2022. The Total Pension Liability decreased from \$133.8 billion in 2021 to \$123.7 billion in 2022.

The following tables show comparative summaries of the WRS net position and the changes in the WRS net position for 2022 and 2021.

<b>Summary of WRS Net Position</b>				
<b>As of December 31</b>				
(In Millions)				
	<b>2022</b>	<b>2021</b>	<b>\$ Change</b>	<b>% Change</b>
<b>Assets</b>				
Cash and Cash Equivalents	\$ 4,948	\$ 6,817	\$ (1,869)	(27)%
Receivables	6,324	11,564	(5,240)	(45)
Investments at Fair Value	142,585	168,509	(25,924)	(15)
Securities Lending Collateral	1,702	396	1,306	330
Other Assets	35	25	10	40
<b>Total Assets</b>	<b>\$ 155,594</b>	<b>\$ 187,311</b>	<b>\$ (31,717)</b>	<b>(17)%</b>
<b>Liabilities</b>				
Core Investment Due To Other Benefit Programs	\$ 4,083	\$ 4,957	\$ (874)	(18)%
Variable Investment Due To Other Benefit Programs	19	20	(1)	(5)
Obligation Under Reverse Repurchase Agreements	17,690	17,012	678	4
Investment Payables	5,674	13,533	(7,859)	(58)
Securities Lending Collateral Liability	5,413	1,157	4,256	368
Other Payables	4,347	8,784	(4,437)	(51)
<b>Total Liabilities</b>	<b>\$ 37,226</b>	<b>\$ 45,463</b>	<b>\$ (8,237)</b>	<b>(18)%</b>
<b>Net Position - Restricted for Pensions</b>	<b>\$ 118,368</b>	<b>\$ 141,848</b>	<b>\$ (23,480)</b>	<b>(17)%</b>

<b>Summary of Changes in WRS Net Position</b>				
<b>For the Years Ended December 31</b>				
(In Millions)				
	<b>2022</b>	<b>2021</b>	<b>\$ Change</b>	<b>% Change</b>
Contributions	\$ 2,258	\$ 2,252	\$ 6	0 %
Net Investment Income (Loss)	(18,703)	21,056	(39,759)	(189)
<b>Total Additions</b>	<b>\$ (16,445)</b>	<b>\$ 23,308</b>	<b>\$ (39,753)</b>	<b>(171)%</b>
Benefit Expenses	\$ 7,004	\$ 6,395	\$ 609	10 %
Administrative Expenses	31	31	0	0
<b>Total Deductions</b>	<b>\$ 7,035</b>	<b>\$ 6,426</b>	<b>\$ 609</b>	<b>9 %</b>
<b>Net Increase (Decrease) in Net Position</b>	<b>\$ (23,480)</b>	<b>\$ 16,882</b>	<b>\$ (40,362)</b>	<b>(239)%</b>
<b>Net Position - Beginning of Year</b>	<b>\$ 141,848</b>	<b>\$ 124,966</b>	<b>\$ 16,882</b>	<b>14 %</b>
<b>Net Position - End of Year</b>	<b>\$ 118,368</b>	<b>\$ 141,848</b>	<b>\$ (23,480)</b>	<b>(17)%</b>



## FINANCIAL SECTION

### Cash and Cash Equivalents

Cash and Cash Equivalents decreased by \$1.9 billion, or 27%, when comparing calendar year-end 2022 to 2021. This decrease is primarily attributable to rebalancing the Core Retirement Investment Trust Fund (Core Fund) asset allocation and changes in investment strategies at year-end. Also, securitized cash positions and synthetic exposure accounts used to manage liquidity and leverage can change significantly during a given period. These investment strategies require adequate levels of margin to meet risk mitigation requirements.

Routine rebalancing activities fluctuate throughout the year and can impact cash balances at a point in time. See Note 3, Deposits, Investments and Securities Lending Transactions, for additional information on rebalancing activities.

### Receivables

Receivables decreased by \$5.2 billion, or 45%, when comparing calendar year-end 2022 to 2021. This decrease is primarily due to a decrease in the balance for Investment Sales Receivable, which is dependent upon the timing and settlement of securities transactions. Approximately 46% of the Investment Sales Receivable balance relates to the use of To Be Announced (TBA) securities. TBA securities are derivative contracts that consist of mortgage-backed securities (MBS) issued by the Government National Mortgage Association, a government entity, and by government-sponsored enterprises, such as the Federal National Mortgage Association or the Federal Home Loan Mortgage Corp. The term TBA is derived from the fact that the actual MBS that will be delivered to fulfill a TBA trade is not designated at the time the trade is made. Instead, the specific pool of mortgages making up the MBS is announced 48 hours prior to the established trade settlement date. Eligibility rules and standards for MBS pools deliverable into TBA contracts ensure that delivered MBS pools are fungible. TBA securities sold create a receivable in the Statement of Fiduciary Net Position because payment for TBA securities is not made until the settlement date. Other routine rebalancing activities, where investment positions were sold but pending settlement, also contributed to the change in receivables as of December 31, 2022.

### Securities Lending Collateral

Securities Lending Collateral increased by \$1.3 billion when comparing calendar year-end 2022 to 2021. The balance consists of cash received as collateral for securities lending transactions. As of December 31, 2022, SWIB's securities lending agent released \$3.7 billion in cash from the Securities Lending Collateral pool to SWIB. This cash plus Securities Lending Collateral equals the Securities Lending Collateral Liability as of December 31, 2022. The cash released provides liquidity for other investment strategies.

### Securities Lending Collateral Liability

Securities Lending Collateral Liability increased by \$4.3 billion when comparing calendar year-end 2022 to 2021 related to an increase in lending activities primarily used to support the Core Fund liquidity needs. Investment policies permit the use of both cash and treasury securities as collateral to support short positions.

### Obligation Under Reverse Repurchase Agreements

Obligation Under Reverse Repurchase Agreements increased by \$678 million, or 4%, when comparing calendar year-end 2022 to 2021. Reverse repurchase agreements represent the simultaneous sale and agreement to repurchase specific assets for a pre-determined price, plus interest, at a future date.

The proceeds from these agreements are invested in Treasury Inflation-Protected Securities (TIPS). During 2022, SWIB increased its capacity to participate in reverse repurchase agreements, providing access to low-cost financing needed to maintain SWIB's strategic allocation targets.

### Investment Payables

Investment Payables decreased by \$7.9 billion, or 58%, when comparing calendar year-end 2022 to 2021. The majority of this decrease is due to investment purchases payable, which is dependent upon the timing and settlement of pending purchase transactions. Investment purchases payable primarily relate to the use of TBA securities, which accounts for about 68% of the investment purchases payable balance as of December 31, 2022. Purchased TBA securities create a payable in the WRS Statement of Fiduciary Net Position because payment for TBA securities is not made until the settlement date. Other routine rebalancing activities, where investment positions were purchased but pending settlement, also contributed to the change in Investment Payables as of December 31, 2022.

### Other Payables

Other Payables decreased by \$4.4 billion, or 51%, when comparing calendar year-end 2022 to 2021 primarily due to Short Sell Obligations. Short sale transactions are created when a security not owned by the portfolio is sold in anticipation of purchasing the security at a lower price in the future. The decrease in short sales is largely due to a decrease in equity short sales outpaced an increase in fixed income short sales. The equity short sales decrease was primarily driven by a fundamental change to SWIB's global equity investing strategy during 2022. The increase in fixed income short sales was driven by increased activity within SWIB's active fixed income strategies.

### Contributions and Investment Earnings

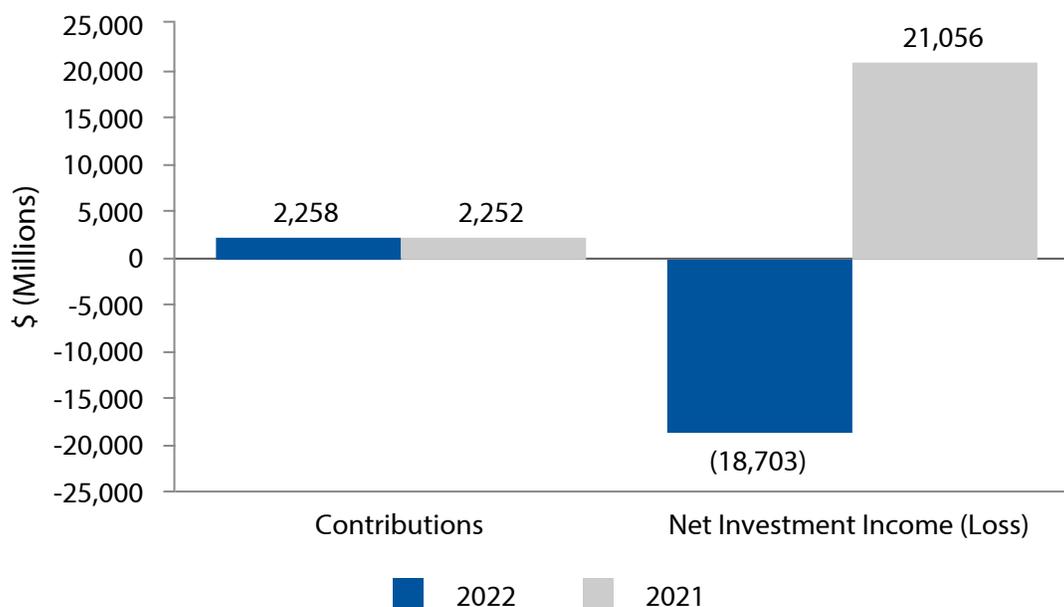
The retirement benefits provided by the WRS are funded from pension trust fund revenue. The primary sources of revenue are investment income generated from the investment of plan assets and contributions for active members made by members and their employers.

Total contributions and investment earnings in 2022, were \$(16.4) billion compared to \$23.3 billion in 2021. As the chart below shows, contributions increased by \$6 million, while investment income decreased by \$39.8 billion. The increase in contributions from 2021 to 2022 was primarily driven by an increase in covered payroll for the year, partially offset by a reduction in most contribution rates. The decrease in investment income during 2022 is primarily attributable to less favorable market conditions across several asset classes during 2022. The total Core Fund had a net investment return of (12.9)% in 2022 compared to 16.9% in 2021, and a total Variable Retirement Investment Trust (Variable Fund) net investment return of (17.8)% in 2022, compared to 20.0% in 2021.



## FINANCIAL SECTION

### Contributions and Net Investment Income (Loss)



The assets of the WRS are valued at fair market value and invested in the Core Fund and the Variable Fund, which are collectively the Retirement Funds. All WRS members have at least half, if not all, of their pension contributions invested in the Core Fund. The Core Fund is a diversified, balanced fund invested for the long-term needs of the WRS. Diversification helps to stabilize the effects of market changes. The investment objective of this trust fund is to meet or exceed an average of 6.8% annual nominal return over the long-term. This objective is based on market rate of return and actuarial assumptions needed to meet the obligations of the WRS. The Variable Fund allows active employees participating in the WRS to put up to half of their pension fund contributions into this global stock fund. Approximately 14% of WRS members participate in the Variable Fund. By statute, the Variable Fund invests in stocks and provides participants the potential for higher returns in exchange for higher risk. The investment objective of the Variable Fund is to meet or exceed broad equity market indices over a full market cycle.

SWIB is responsible for managing the assets of the WRS. SWIB invests in external legal entities managed by external investment managers to gain exposure to select investment strategies. In exchange for their investment management services, the external managers charge a fee within the entity they manage. These fees are typically assessed as a percentage of SWIB's commitment to, or investment in, the external entity. The fees assessed to these external entities are recorded as a fee within the external entity and are thus included in the Net Increase (Decrease) in the Fair Value of Investments within the Statement of Changes in Fiduciary Net Position. Accordingly, these fees are reported as supplemental information in the table Schedule of WRS External Management Fees.

<b>Schedule of WRS External Management Fees</b> <b>For the Calendar Year Ended December 31, 2022<sup>1</sup></b> (In Thousands)	
Private Equity <sup>2</sup>	\$ 509,629
Hedge Funds <sup>3</sup>	252,533
Real Estate <sup>2</sup>	235,880
External Investment Management <sup>4</sup>	109,842
<b>Total Fees</b>	<b>\$ 1,107,884</b>

<sup>1</sup>Includes performance based fees.

<sup>2</sup>Included within Private Fund Investments in the Statement of Fiduciary Net Position.

<sup>3</sup>Included within Multi Asset Investments in the Statement of Fiduciary Net Position.

<sup>4</sup>Includes external investment management fees incurred within certain external funds as well as approximately \$46.9 million in fees paid to external managers in exchange for services they provide within SWIB-custodied accounts, which are included in the Statement of Changes in Fiduciary Net Position.

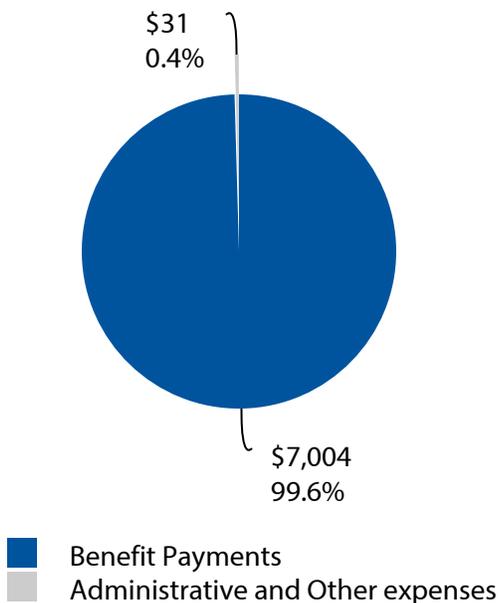
*Additional information about external management fees is presented in Note 3, Deposits, Investments and Securities Lending Transactions.*

## Expenses - Deductions from Plan Net Position

The primary expenses of the WRS include annuity benefits for retirees, disability annuitants and beneficiaries, refunds of contributions to former members, and expenses associated with the administration of the retirement plans. Benefit payments totaled \$7.0 billion in 2022, an increase of \$0.6 billion or 10% over the 2021 amount of \$6.4 billion. This increase was due to an increase in retired participants from 226,605 as of December 31, 2021, to 232,384 as of December 31, 2022, as well as increases in annuities starting with the May 1, 2022 annuity payment. Administrative expenses of approximately \$31 million accounted for less than 0.4% of the deductions to net position in 2022 and remained relatively consistent from 2021.

Investment expenses are deducted from investment income and were \$779 million in 2022, an increase of 79% from \$435 million in 2021. The increase was primarily related to interest paid to counterparties, as short-term interest rates rose during 2022. This resulted in higher interest paid on reverse repurchase agreements which are used to finance certain investment strategies. An increase in securities lending borrow rebates also contributed to the increase in investment expense.

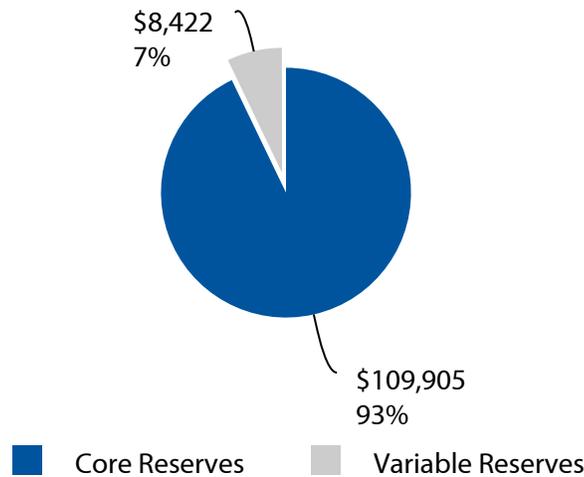
### Expenses as of December 31, 2022 (In Millions)



#### Retirement Reserves

The funds accumulated by the WRS to meet current and future obligations to retirees and beneficiaries are derived from the excess of revenue over expenses. Reserves have been established to reflect legal restrictions established by Wisconsin Statutes on the use of funds. The higher level of funding a plan achieves, the larger the accumulation of assets and the greater the investment income potential. In 2022, expenses exceeded revenues, leading to a decrease of \$23.4 billion in the retirement reserves. This decrease was primarily related to the decrease in investment earnings in 2022. The reserves are invested in either the Core Fund or the Variable Fund. Approximately 93% of the reserves are invested in the Core Fund and 7% are invested in the Variable Fund.

**Total Reserves Core vs. Variable  
as of December 31, 2022  
(In Millions)**



**Summary of Pension Plan Reserve Balances  
For the Years Ended December 31  
(In Millions)**

<b>Total Reserves</b>	<b>2022</b>	<b>2021</b>	<b>Increase (Decrease)</b>
Annuity	\$ 76,510	\$ 75,530	\$ 980
Employee	22,300	22,469	(169)
Employee Additional	276	268	8
Employer	26,032	26,406	(374)
Market Recognition Account (WRS Only)	(6,791)	17,039	(23,830)
<b>Total Reserves</b>	<b>\$ 118,327</b>	<b>\$ 141,712</b>	<b>\$ (23,385)</b>

*Additional information about reserves is presented in Note 7, Statutory Reserves.*



## FINANCIAL SECTION

## Members, Retirees, Beneficiaries, and Employers

Approximately 260,500 active members were employed with 1,586 WRS-participating employers as of December 31, 2022. The number of inactive, retirees, and other annuitants totaled 417,401 as of December 31, 2022. Total members served by the WRS in 2022 was approximately 678,000 as shown in the following tables.

**Distribution of Active Members  
As of December 31**

Active Member Category	2022		2021	
	Number	Percent of Total	Number	Percent of Total
General	133,569	51.3 %	132,650	51.3 %
Teachers	103,860	39.9	102,753	39.7
Elected/Executive/Judges	1,242	0.5	1,264	0.5
Protective with Social Security	19,008	7.2	19,220	7.4
Protective without Social Security	2,825	1.1	2,760	1.1
<b>Total Active Members</b>	<b>260,504</b>	<b>100.0 %</b>	<b>258,647</b>	<b>100.0 %</b>

Additional information about members is presented in Note 4, Description of the Wisconsin Retirement System, and in the Statistical Section.

**Distribution of Inactive, Retirees, and Beneficiaries  
As of December 31**

Inactive, Retirees, Beneficiaries	2022		2021	
	Number	Percent of Total	Number	Percent of Total
Inactive Members:				
Terminated Participants	181,536	43.5 %	174,573	43.1 %
Alternate Payees	3,481	0.8	3,498	0.9
Retirees and Beneficiaries:				
Retirement Annuitants	224,644	53.8	218,846	54.0
Disability Annuitants	6,260	1.5	6,305	1.6
Death Beneficiary Annuitants	1,480	0.4	1,454	0.4
<b>Total Inactive, Retiree, and Beneficiaries</b>	<b>417,401</b>	<b>100.0 %</b>	<b>404,676</b>	<b>100.0 %</b>

Additional information about inactive, retirees, and beneficiaries is presented in Note 4, Description of the Wisconsin Retirement System, and in the Statistical Section.

The table below presents the number of participating employers by category.

<b>Distribution of Employers As of December 31</b>		
<b>Employer</b>	<b>2022</b>	<b>2021</b>
State Agencies, UW and Public Authorities	56	56
Cities	189	189
Counties	71	71
Villages	298	291
Towns	306	287
School Districts	421	421
Cooperative Educational Service Agencies	12	12
WI Technical College System Districts	16	16
Special Districts	217	212
<b>Total Employers</b>	<b>1,586</b>	<b>1,555</b>

### Actuarial Valuations and Funding Progress - Pension Plan

ETF's actuarial consultant performs an actuarial valuation of the WRS each year to determine funding requirements and establish contribution rates. The funding policy provides for periodic employer contributions at actuarially determined rates that will remain relatively level over time as a percentage of payroll and will accumulate sufficient assets to meet the costs of all benefits when due. The latest valuation of the pension plan was performed by Gabriel, Roeder, Smith & Company (GRS). Under the funding methodology, the WRS is 100% funded as of December 31, 2022. For financial reporting purposes, a funding ratio is calculated in accordance with GASB pension accounting standards. Under these standards, the WRS was 96% funded as of December 31, 2022.

#### » Analysis of Other Program Financial Activities

#### Supplemental Health Insurance Conversion Credit Program

The SHICC Program provides additional sick leave credits to eligible employees with at least 15 years of service, which increases their sick leave account balance that can be used to pay for post-retirement health insurance premiums.

Net Position of the SHICC program decreased by \$222.9 million from \$1.4 billion in 2021 to \$1.1 billion in 2022. The decrease is primarily a result of losses on investments due to less favorable market conditions.

For 2022, the SHICC Program collected \$5.4 million in contributions compared to \$15.7 million in 2021, a decrease of 65%. The decrease in contributions resulted from a lower contribution rate in 2022 compared to 2021. Additionally, Contributions Receivable decreased \$1.1 million from 2021, a decrease of 64%. This decrease was caused by the lower contribution rate in 2022 compared to 2021.

The program incurred expenses that remained relatively unchanged when comparing \$53.2 million in 2022 to \$53.3 million in 2021. Total liabilities for the program decreased \$137 thousand from 2021 to 2022. The 2022 liability represents payables due to other benefit programs.



## FINANCIAL SECTION

An actuarial valuation, in accordance with GASB standards, shows a Net OPEB Asset of \$102.8 million as of December 31, 2022. The program Fiduciary Net Position as a percentage of the Total OPEB Liability is 110%. Additional information on this valuation can be found in Note 9, Other Post-Employment Benefit (OPEB) Plans Administered by ETF.

As of December 31, 2022, there were approximately 96,700 members participating in the SHICC Program. Total participation in the SHICC Program varies from the ASLCC program participation because of different eligibility requirements. Participation is comprised of approximately 22,300 retirees and beneficiaries, 400 inactive non-retired members, and 74,000 active members. Active members may become eligible for the SHICC benefit upon meeting the eligibility requirements. Total participation increased 2% from 2021.

### Employee Reimbursement Accounts/Commuter Benefits Program

The ERA Program reimburses qualifying medical and dependent care expenses, while the CB Program reimburses qualifying transportation expenses for employees of the State of Wisconsin who sign up for pre-tax payroll deductions.

The ERA/CB Program had a net position of \$3.0 million as of December 31, 2022. This was an increase of \$1.1 million compared to \$1.9 million as of December 31, 2021.

For 2022, the ERA/CB Program collected \$37.4 million in contributions compared to \$39.1 million in 2021. This decrease was primarily due to a decrease in annual election amounts per member. The program paid benefits and expenses of \$36.4 million in 2022, which was a decrease of \$2.1 million from \$38.5 million in 2021. This decrease was primarily caused by a decrease in paid claims related to dependent care expenses.

During 2022, there were approximately 20,700 members participating in medical reimbursement, 3,000 members participating in commuter benefits, and 3,500 members participating in dependent care reimbursement accounts compared to 21,100 medical, 2,700 commuter benefits, and 3,500 dependent care accounts in 2021.

### State Retiree Life Insurance Program

The State Retiree Life Insurance Program provides fully paid-up life insurance benefits for post-age 64 retired employees of the State of Wisconsin and pre-age 65 annuitants who pay for their coverage.

The State Retiree Life Insurance Program's net position of \$303.2 million as of December 31, 2022 decreased \$16.4 million from the prior year. The decrease is primarily caused by benefit expense exceeding contributions and investment income.

During 2022, the State Retiree Life Insurance Program collected \$1.8 million in contributions compared to \$1.7 million in 2021. The current employer contribution schedule includes annual increases of 5% for nine years, as approved by the GIB in August 2019. The program incurred expenses of \$27.0 million in 2022 compared to \$24.6 million in 2021. This increase was primarily caused by higher benefit expenses in 2022, which increased 10% compared to 2021. Contributions received for pre-age 65 annuitants are reported as a reduction to benefit expense, in accordance with GASB Statement No. 74, "Financial Reporting for Post-Employment Benefit Plans Other Than Pension Plans."

An actuarial valuation, in accordance with GASB standards, shows a Net OPEB Liability of \$659.7 million as of December 31, 2022. The plan Fiduciary Net Position as a percentage of the Total OPEB Liability was 31%. Additional information on this valuation can be found in Note 9, Other Post-Employment Benefit (OPEB) Plans Administered by ETF.

As of December 31, 2022, there were 36,089 members participating in the State Retiree Life Insurance Program, which was a 2% increase in participants from 2021.

### **Local Retiree Life Insurance Program**

The Local Retiree Life Insurance Program provides fully paid-up life insurance benefits for post-age 64 retired employees of participating local governments in Wisconsin and pre-age 65 annuitants who pay for their coverage.

The Local Retiree Life Insurance Program's net position of \$241.6 million as of December 31, 2022 decreased \$6.6 million from the prior year. The decrease is primarily caused by benefit expenses exceeding contributions and investment income.

During 2022, the Local Retiree Life Insurance Program collected \$2.0 million in contributions, similar to 2021. The program incurred expenses of \$15.5 million in 2022 compared to \$11.9 million in 2021, an increase of 30%. This increase was primarily caused by higher benefit expenses in 2022, which increased 32% compared to 2021. Contributions received from pre-age 65 annuitants are reported as a reduction to benefit expense, in accordance with GASB Statement No. 74.

An actuarial valuation, in accordance with GASB standards, shows a Net OPEB Liability of \$381.0 million as of December 31, 2022. The plan Fiduciary Net Position as a percentage of the Total OPEB Liability was 39%. Additional information on this valuation can be found in Note 9, Other Post-Employment Benefit (OPEB) Plans Administered by ETF.

As of December 31, 2022, there were 50,670 members participating in the Local Retiree Life Insurance Program, which was a 2% increase in participants from 2021.

### **Milwaukee Retirement Systems**

The Milwaukee Retirement Systems (MRS) invests funds with the WRS. Since 2014, the MRS only invests funds from two Milwaukee Public Schools Supplemental Retirement Plans.

The MRS had a net position of \$200.5 million as of December 31, 2022. This was a decrease of \$51.9 million compared to \$252.4 million as of December 31, 2021. During 2022, the MRS deposited \$1.0 million compared to \$3.4 million in 2021. The MRS distributed \$19.9 million in 2022, an increase of \$10.3 million from 2021. The program experienced an investment loss of \$33.0 million in 2022 compared to an investment gain of \$37.4 million in 2021. The decrease was a result of unfavorable market conditions in 2022 compared to 2021.

Additional information on the MRS can be found in Note 10, Milwaukee Retirement Systems.

### **Local Retiree Health Insurance Program**

Through the Local Retiree Health Insurance Program, participants may choose a health plan within specific provider networks (i.e. Health Maintenance Organizations). Required premiums are collected from retired employees of participating local government employers in Wisconsin.

---

## FINANCIAL SECTION

The Local Retiree Health Insurance Program had a net position of zero as of December 31, 2022 and 2021.

For 2022, the Local Retiree Health Insurance Program collected \$23.5 million in contributions from retirees, a 2% decrease from \$23.9 million in 2021, primarily due to decreased enrollment. The program incurred other benefit expenses of \$24.8 million in 2022 compared to \$25.0 million in 2021, primarily due to increased pharmacy rebates applied.

There were approximately 2,000 members participating in the Local Retiree Health Insurance Program as of December 31, 2022, which was a 4% decrease in participants in 2021. Additional information for the Local Retiree Health Insurance Program can be found in Note 9, Other Post-Employment Benefit (OPEB) Plans Administered by ETF.

### Duty Disability Insurance Program

The Duty Disability Insurance Program pays special disability benefits to protective occupation participants in the WRS. The program is self-insured, and the risk is shared between the State of Wisconsin and local government employers in the program.

The Duty Disability Insurance Program had a net position of \$153.2 million as of December 31, 2022. This was a decrease of \$178.3 million compared to \$331.4 million as of December 31, 2021. The program experienced an investment loss of \$109.2 million in 2022 compared to an investment gain of \$126.4 million in 2021. The decrease in investment income is primarily attributable to unfavorable market conditions.

For 2022, the Duty Disability Insurance Program collected \$2.0 million in contributions from participating employers, a 51% decrease from \$4.0 million in 2021, due to a significant decrease in contribution rates due to the strong financial position of the fund. The program incurred operating expenses of \$71.1 million in 2022 compared to \$93.3 million in 2021, a decrease of 24% primarily due to a decrease in the change of actuarially determined liabilities impacting expenses.

As of December 31, 2022, there were approximately 22,000 members participating in the Duty Disability Insurance Program, a decrease of less than 1% from 2021. Additional information for the Duty Disability Insurance Program can be found in Note 8, Public Entity Risk Pools.

### Health Insurance Program

The Health Insurance Program is a comprehensive benefit plan providing coverage for active employees of the State of Wisconsin and participating local governments. The state and local health plans each include separately managed risk pools for medical, pharmacy and dental benefits.

The Health Insurance Program had a net position of \$159.6 million as of December 31, 2022. This was a decrease of \$67.9 million compared to \$227.5 million as of December 31, 2021. The program experienced investment loss of \$28.6 million in 2022 compared to \$37.6 million investment income in 2021.

For 2022, the Health Insurance Program collected \$1,411.9 million in contributions from participating employers, a 2% increase from \$1,382.6 million in 2021, primarily due to increased insurance premiums. The program incurred operating expenses of \$1,451.3 million in 2022 compared to \$1,413.4 million in 2021, an increase of 3% primarily due to increased pharmacy claims.

As of December 31, 2022, there were approximately 79,000 active members participating in the Health Insurance Program, which was less than a 1% increase in participants from December 31, 2021. Additional information for the Health Insurance Program can be found in Note 8, Public Entity Risk Pools.

### **Income Continuation Insurance (ICI) Program**

The ICI Program pays disability benefits for employees of the State of Wisconsin and participating local governments in Wisconsin who enroll in the program. Employee premiums are based on sick leave accumulation and the waiting period selected.

The ICI Program had a net position of \$103.2 million as of December 31, 2022. This was a decrease of \$34.3 million compared to \$137.5 million as of December 31, 2021. The program experienced an investment loss of \$29.5 million due to unfavorable market conditions in 2022, compared to an investment gain of \$31.6 million in 2021.

For 2022, the ICI Program collected \$21.2 million in contributions from State agencies, a 46% decrease from \$39.4 million in 2021, primarily due to a 50% premium rate decrease for the State ICI Program. Rates were decreased due to the improved financial position of the program. Local employers continued to have a premium holiday. The program incurred operating expenses of \$26.2 million in 2022 compared to \$23.5 million in 2021, an increase of 11% primarily due to an increase in the actuarially determined liabilities impacting expenses and increased benefit payment expenses.

As of December 31, 2022, there were approximately 53,900 members participating in the ICI Program. This includes approximately 12,400 local employees and 41,500 state employees. Local employees had an increase of 7% and state employees had a 2% decrease in participants from 2021. Additional information for the ICI Program can be found in Note 8, Public Entity Risk Pools.

### **State Retiree Health Insurance Program**

Through the State Retiree Health Insurance Program, participants may choose a health plan within specific provider networks (i.e. HMOs). Required premiums are collected from retired employees of the State of Wisconsin.

The State Retiree Health Insurance Program had a net position of zero as of December 31, 2022 and 2021.

For 2022, the State Retiree Health Insurance Program collected \$246.7 million in contributions from retirees, a 0.4% decrease from \$247.6 million in 2021. The program incurred benefit expenses of \$270.7 million in 2022 compared to \$266.8 million in 2021, an increase of 1% primarily due to increased pharmacy claims.

As of December 31, 2022, there were approximately 29,200 members participating in the State Retiree Health Insurance Program, which was a 2% increase in participants from 2021. Additional information for the State Retiree Health Insurance Program can be found in Note 9, Other Post-Employment Benefit (OPEB) Plans Administered by ETF.

### **Accumulated Sick Leave Conversion Credit (ASLCC) Program**

The ASLCC Program allows retirees of the State of Wisconsin, the UW System, the UW Hospital and Clinics Authority, and other state authorities, at the time of their retirement, to convert the value of their unused sick leave accumulation into an account to be used to pay for post-retirement health insurance.

The ASLCC Program had a net position of \$(702.8) million as of December 31, 2022. This was a decrease of



---

## FINANCIAL SECTION

\$448.7 million compared to \$(254.1) million as of December 31, 2021. The program experienced an investment loss of \$270.8 million due to unfavorable market conditions in 2022, compared to an investment gain of \$311.5 million in 2021.

For 2022, the ASLCC Program collected \$38.0 million in contributions from participating employers compared to \$41.7 million in 2021, a decrease of 9%. The decrease in contributions resulted from a decrease in the contribution rate, partially offset by higher earnings reported by employers. The program incurred expenses of \$215.9 million in 2022, an increase of \$74.0 million from \$141.9 million in 2021. The change in the compensated absences liability from year to year impacted expenses and was the primary reason for the change. Additional information on compensated absences can be found in Note 1, Summary of Significant Accounting Policies.

As of December 31, 2022, there were approximately 99,500 members participating in the ASLCC Program. Participation is comprised of approximately 19,100 retirees and others using ASLCC credits; 6,400 retirees or inactive non-retired members who may use ASLCC credits in the future; and 74,000 active members. Active members may become eligible for the ASLCC benefit upon meeting the eligibility requirements. Total participation increased 2% from 2021.

### » *Financial Contact*

This financial report is designed to provide a general overview of ETF's finances. Questions concerning any of the information provided in this report should be addressed to ETF at P.O. Box 7931, Madison, Wisconsin, 53707-7931.



**Wisconsin Department of Employee Trust Funds**  
**Statement of Fiduciary Net Position**  
**December 31, 2022** (In Thousands)

	Pension Trust Fund		Other Employee Benefit Trust Funds			
	Wisconsin Retirement System		Supplemental Health Insurance Conversion Credit	Employee Reimbursement Accounts/Commuter Benefits		
<b>Assets:</b>						
Equity In Pooled Cash and Cash Equivalents	\$	4,947,833	\$	0	\$	10,286
Securities Lending Collateral		1,702,300		0		0
Prepaid Expenses		26,047		4,351		1,600
Receivables:						
Contributions Receivable		234,898		628		4
Federal Subsidy Receivable		0		0		0
Prior Service Contributions Receivable		5,130		0		0
Benefit Overpayments Receivable		2,666		2		399
Due From Other Benefit Programs		2,775		457		3
Miscellaneous Receivables		71		0		9
Securities Lending Income Receivable		4,454		0		0
Interest and Dividends Receivable		504,249		0		40
Rebates Receivable		0		0		0
Investment Sales Receivable		5,569,609		0		0
Total Receivables		6,323,852		1,087		455
Investments at Fair Value:						
Equities		56,639,942		0		0
Fixed Income Investments		44,730,410		0		0
Private Fund Investments		31,718,665		0		0
Multi Asset Investments		7,682,286		0		0
Preferred Securities		512,888		0		0
Convertible Securities		12,862		0		0
Foreign Currency Contracts		51,004		0		0
Options Contracts		(103)		0		0
Financial Futures Contracts		(3,065)		0		0
Swaps		(22,874)		0		0
To Be Announced Securities		1,263,200		0		0
Investment In Core Fund		0		1,143,614		0
Investment In Variable Fund		0		0		0
Investment Contract		0		0		0
Total Investments		142,585,215		1,143,614		0
Capital Assets - Net of Accum. Depreciation		9,075		0		0
Total Assets		155,594,322		1,149,052		12,341
<b>Liabilities:</b>						
Core Investment Due To Other Benefit Programs		4,083,057		0		0
Variable Investment Due To Other Benefit Programs		19,242		0		0
Obligation Under Reverse Repurchase Agreements		17,689,749		0		0
Short Sell Obligations		3,643,331		0		0
Securities Lending Collateral Liability		5,413,300		0		0
Collateral Due to Counterparty		47,028		0		0
Benefits Payable		507,597		0		9,239
Unearned Revenue		8		0		1
Due To Other Benefit Programs		3,902		264		76
Miscellaneous Payables		144,964		0		0
Investment Payables		5,673,918		0		0
Total Liabilities		37,226,096		264		9,316
<b>Net Position - Restricted for Pensions, Other Post-Employment Benefits, and Other Purposes</b>	\$	118,368,226	\$	1,148,788	\$	3,025

The accompanying notes are an integral part of the financial statements.

Continued on next page



## FINANCIAL SECTION

**Wisconsin Department of Employee Trust Funds**  
**Statement of Fiduciary Net Position**  
**December 31, 2022** (In Thousands)

	Other Employee Benefit Trust Funds		Investment Trust Fund	Custodial Fund
	State Retiree Life Insurance	Local Retiree Life Insurance	Milwaukee Retirement Systems	Local Retiree Health Insurance
<b>Assets:</b>				
Equity In Pooled Cash and Cash Equivalents	\$ 0	\$ 0	\$ 0	\$ 0
Securities Lending Collateral	0	0	0	0
Prepaid Expenses	0	0	0	27
Receivables:				
Contributions Receivable	0	0	0	0
Federal Subsidy Receivable	0	0	0	1,635
Prior Service Contributions Receivable	0	0	0	0
Benefit Overpayments Receivable	0	0	0	1
Due From Other Benefit Programs	0	0	0	3,635
Miscellaneous Receivables	122	167	0	1
Securities Lending Income Receivable	0	0	0	0
Interest and Dividends Receivable	0	0	0	0
Rebates Receivable	0	0	0	2,647
Investment Sales Receivable	0	0	0	0
<b>Total Receivables</b>	<b>122</b>	<b>167</b>	<b>0</b>	<b>7,919</b>
Investments at Fair Value:				
Equities	0	0	0	0
Fixed Income Investments	0	0	0	0
Private Fund Investments	0	0	0	0
Multi Asset Investments	0	0	0	0
Preferred Securities	0	0	0	0
Convertible Securities	0	0	0	0
Foreign Currency Contracts	0	0	0	0
Options Contracts	0	0	0	0
Financial Futures Contracts	0	0	0	0
Swaps	0	0	0	0
To Be Announced Securities	0	0	0	0
Investment In Core Fund	0	0	181,264	0
Investment In Variable Fund	0	0	19,241	0
Investment Contract	305,772	243,255	0	0
<b>Total Investments</b>	<b>305,772</b>	<b>243,255</b>	<b>200,505</b>	<b>0</b>
Capital Assets - Net of Accum. Depreciation	0	0	0	0
<b>Total Assets</b>	<b>305,894</b>	<b>243,422</b>	<b>200,505</b>	<b>7,946</b>
<b>Liabilities:</b>				
Core Investment Due To Other Benefit Programs	0	0	0	0
Variable Investment Due To Other Benefit Programs	0	0	0	0
Obligation Under Reverse Repurchase Agreements	0	0	0	0
Short Sell Obligations	0	0	0	0
Securities Lending Collateral Liability	0	0	0	0
Collateral Due to Counterparty	0	0	0	0
Benefits Payable	2,170	1,470	0	567
Unearned Revenue	356	154	0	1,507
Due To Other Benefit Programs	21	29	0	5,832
Miscellaneous Payables	101	139	0	40
Investment Payables	0	0	0	0
<b>Total Liabilities</b>	<b>2,648</b>	<b>1,792</b>	<b>0</b>	<b>7,946</b>
<b>Net Position - Restricted for Pensions, Other Post-Employment Benefits, and Other Purpose</b>	<b>\$ 303,246</b>	<b>\$ 241,630</b>	<b>\$ 200,505</b>	<b>\$ 0</b>

Continued from previous page

The accompanying notes are an integral part of the financial statements.



**Wisconsin Department of Employee Trust Funds**  
**Statement of Changes in Fiduciary Net Position**  
**For the Year Ended December 31, 2022**  
(In Thousands)

	Pension Trust Fund	Other Employee Benefit Trust Funds	
	Wisconsin Retirement System	Supplemental Health Insurance Conversion Credit	Employee Reimbursement Accounts/ Commuter Benefits
<b>Additions:</b>			
Contributions:			
Employer Contributions	\$ 1,175,881	\$ 5,438	\$ 1,159
Member Contributions	1,082,040	0	36,196
Total Contributions	2,257,921	5,438	37,355
Deposits	0	0	0
Investment Income:			
Net Increase (Decrease) in Fair Value of Investments	(21,239,109)	0	0
Interest, Dividend, and Other Investment Income	2,606,477	(175,166)	147
Securities Lending Income	140,328	0	0
Less:			
Investment Income Distributed to Other Benefit Programs	644,371	0	0
Investment Expense	(778,521)	0	0
Securities Lending Fees	(76,178)	0	0
Net Investment Income (Loss)	(18,702,632)	(175,166)	147
Interest on Prior Service Receivable	324	0	0
Federal Subsidy Income	0	0	0
Service Reimbursement Income	0	0	0
Miscellaneous Income	0	0	18
Total Additions	(16,444,387)	(169,728)	37,520
<b>Deductions:</b>			
Benefits and Refunds:			
Retirement, Disability, and Beneficiary	6,949,119	0	0
Separation Benefits	54,797	0	0
Other Benefit Expense	0	52,512	35,340
Distributions	0	0	0
Carrier Administrative Expenses	0	0	476
Administrative Expenses	30,788	678	629
Other Expenses	384	0	0
Total Deductions	7,035,088	53,190	36,445
<b>Net Increase (Decrease)</b>	(23,479,475)	(222,918)	1,075
<b>Net Position - Beginning of Year</b>	141,847,701	1,371,706	1,950
<b>Net Position - End of Year</b>	\$ 118,368,226	\$ 1,148,788	\$ 3,025

The accompanying notes are an integral part of the financial statements.

Continued on next page



## FINANCIAL SECTION

**Wisconsin Department of Employee Trust Funds**  
**Statement of Changes in Fiduciary Net Position**  
**For the Year Ended December 31, 2022**  
(In Thousands)

	Other Employee Benefit Trust Funds		Investment Trust Fund	Custodial Fund
	State Retiree Life Insurance	Local Retiree Life Insurance	Milwaukee Retirement Systems	Local Retiree Health Insurance
<b>Additions:</b>				
Contributions:				
Employer Contributions	\$ 1,777	\$ 2,007	\$ 0	\$ 0
Member Contributions	0	0	0	23,531
Total Contributions	1,777	2,007	0	23,531
Deposits	0	0	997	0
Investment Income:				
Net Increase (Decrease) in Fair Value of Investments	0	0	0	0
Interest, Dividend, and Other Investment Income	8,753	6,761	(33,028)	146
Securities Lending Income	0	0	0	0
Less:				
Investment Income Distributed to Other Benefit Programs	0	0	0	0
Investment Expense	0	0	0	0
Securities Lending Fees	0	0	0	0
Net Investment Income (Loss)	8,753	6,761	(33,028)	146
Interest on Prior Service Receivable	0	0	0	0
Federal Subsidy Income	0	0	0	1,851
Service Reimbursement Income	122	167	0	0
Miscellaneous Income	0	0	0	5
Total Additions	10,652	8,935	(32,031)	25,533
<b>Deductions:</b>				
Benefits and Refunds:				
Retirement, Disability, and Beneficiary	0	0	0	0
Separation Benefits	0	0	0	0
Other Benefit Expense	26,021	13,838	0	24,772
Distributions	0	0	19,890	0
Carrier Administrative Expenses	869	1,490	0	436
Administrative Expenses	122	167	0	325
Other Expenses	0	0	0	0
Total Deductions	27,012	15,495	19,890	25,533
<b>Net Increase (Decrease)</b>	(16,360)	(6,560)	(51,921)	0
<b>Net Position - Beginning of Year</b>	319,606	248,190	252,426	0
<b>Net Position - End of Year</b>	\$ 303,246	\$ 241,630	\$ 200,505	\$ 0

Continued from previous page

The accompanying notes are an integral part of the financial statements.



**Wisconsin Department of Employee Trust Funds**  
**Statement of Net Position - Proprietary Funds**  
**December 31, 2022**  
(In Thousands)

	Enterprise Funds				Internal Service Fund
	Duty Disability Insurance	Health Insurance	Income Continuation Insurance	State Retiree Health Insurance	Accumulated Sick Leave Conversion Credit
<b>Assets</b>					
Current Assets:					
Investment In Core Fund	\$ 712,299	\$ 110,865	\$ 197,049	\$ 0	\$ 1,737,964
Prepaid Expenses	0	1,214	0	197	9,194
Rebates Receivable	0	54,911	0	34,855	0
Federal Subsidy Receivable	0	0	0	24,564	0
Contributions Receivable	198	213	1	0	4,391
Due From Other Benefit Programs	236	74,274	0	33,544	2,893
Benefit Overpayments Receivable	274	3	2,922	251	1
Miscellaneous Receivables	0	52	4	18	0
<b>Total Current Assets</b>	<b>713,007</b>	<b>241,532</b>	<b>199,976</b>	<b>93,429</b>	<b>1,754,443</b>
<b>Total Assets</b>	<b>713,007</b>	<b>241,532</b>	<b>199,976</b>	<b>93,429</b>	<b>1,754,443</b>
<b>Liabilities</b>					
Current Liabilities:					
Benefits Payable	3,091	13,410	39	6,062	0
Premiums Payable	0	6,929	0	0	0
Unearned Revenue	0	19,460	0	18,031	0
Current Portion of Estimated Future Benefits	39,809	1,450	20,843	245	0
Current Portion of Compensated Absences	0	0	0	0	110,882
Due To Other Benefit Programs	0	38,690	220	68,515	111
Miscellaneous Payables	0	1,988	0	576	0
<b>Total Current Liabilities</b>	<b>42,900</b>	<b>81,927</b>	<b>21,102</b>	<b>93,429</b>	<b>110,993</b>
Noncurrent Liabilities:					
Noncurrent Portion of Estimated Future Benefits	516,955	0	75,668	0	0
Noncurrent Portion of Compensated Absences	0	0	0	0	2,346,296
<b>Total Noncurrent Liabilities</b>	<b>516,955</b>	<b>0</b>	<b>75,668</b>	<b>0</b>	<b>2,346,296</b>
<b>Total Liabilities</b>	<b>559,855</b>	<b>81,927</b>	<b>96,770</b>	<b>93,429</b>	<b>2,457,289</b>
<b>Net Position Restricted (Unrestricted) For Benefits</b>	<b>\$ 153,152</b>	<b>\$ 159,605</b>	<b>\$ 103,206</b>	<b>\$ 0</b>	<b>\$ (702,846)</b>

The accompanying notes are an integral part of the financial statements.



## FINANCIAL SECTION

**Wisconsin Department of Employee Trust Funds**  
**Statement of Revenues, Expenses, and Changes in Fund Net Position - Proprietary Funds**  
**For the Year Ended December 31, 2022**  
(In Thousands)

	Enterprise Funds				Internal Service Fund
	Duty Disability Insurance	Health Insurance	Income Continuation Insurance	State Retiree Health Insurance	Accumulated Sick Leave Conversion Credit
Operating Revenues:					
Contributions	\$ 1,984	\$ 1,411,926	\$ 21,182	\$ 246,675	\$ 38,023
Federal Subsidy	0	0	0	34,327	0
Miscellaneous Income	(4)	0	125	9	0
<b>Total Operating Revenues</b>	<b>1,980</b>	<b>1,411,926</b>	<b>21,307</b>	<b>281,011</b>	<b>38,023</b>
Operating Expenses:					
Benefit Expense	70,238	1,426,013	22,258	270,667	215,165
Carrier Administrative Expenses	0	12,620	2,658	7,429	0
Administrative Expenses	864	12,705	1,236	4,788	717
<b>Total Operating Expenses</b>	<b>71,102</b>	<b>1,451,338</b>	<b>26,152</b>	<b>282,884</b>	<b>215,882</b>
<b>Operating Income (Loss)</b>	<b>(69,122)</b>	<b>(39,412)</b>	<b>(4,845)</b>	<b>(1,873)</b>	<b>(177,859)</b>
Nonoperating Revenues:					
Investment Income	(109,169)	(28,634)	(29,465)	1,789	(270,843)
Penalties and Fees	0	135	4	84	0
<b>Total Nonoperating Revenues</b>	<b>(109,169)</b>	<b>(28,499)</b>	<b>(29,461)</b>	<b>1,873</b>	<b>(270,843)</b>
<b>Net Income (Loss)</b>	<b>(178,291)</b>	<b>(67,911)</b>	<b>(34,306)</b>	<b>0</b>	<b>(448,702)</b>
<b>Total Net Position - Beginning of Year</b>	<b>331,443</b>	<b>227,516</b>	<b>137,512</b>	<b>0</b>	<b>(254,144)</b>
<b>Total Net Position - End of Year</b>	<b>\$ 153,152</b>	<b>\$ 159,605</b>	<b>\$ 103,206</b>	<b>\$ 0</b>	<b>(702,846)</b>

The accompanying notes are an integral part of the financial statements.



**Wisconsin Department of Employee Trust Funds**  
**Statement of Cash Flows - Proprietary Funds**  
**For the Year Ended December 31, 2022**  
(In Thousands)

	Enterprise Funds				Internal Service Fund
	Duty Disability Insurance	Health Insurance	Income Continuation Insurance	State Retiree Health Insurance	Accumulated Sick Leave Conversion Credit
<b>Cash Flows from Operating Activities</b>					
Cash Received for Rebates	\$ 0	\$ 71,064	\$ 0	\$ 56,345	\$ 0
Cash Received (Paid) for Employer Contributions	0	0	0	0	38,590
Cash Received (Paid) for Insurance Premiums	2,343	1,419,169	21,181	254,419	0
Cash Received (Paid) for Employee Benefits	(37,171)	(1,512,924)	(21,134)	(301,144)	(115,126)
Cash Paid for Administrative Services	(1,117)	(23,586)	(3,983)	(11,501)	(786)
Miscellaneous Income (Expense)	(4)	0	125	9	0
Net Cash Provided (Used) by Operating Activities	(35,949)	(46,277)	(3,811)	(1,872)	(77,322)
<b>Cash Flows from Noncapital Financing Activities</b>					
Penalties and Fees	0	119	0	83	0
Net Cash Provided (Used) by Noncapital Financing Activities	0	119	0	83	0
<b>Cash Flows from Investing Activities</b>					
Investment Income (Loss)	(109,169)	(28,634)	(29,464)	1,789	(270,843)
Decrease (Increase) in Investment in Core Fund	145,118	74,792	33,275	0	348,165
Net Cash Provided (Used) by Investing Activities	35,949	46,158	3,811	1,789	77,322
<b>Net Increase (Decrease) in Cash and Cash Equivalents</b>	0	0	0	0	0
<b>Equity in Pooled Cash and Cash Equivalents at Beginning of Year</b>	0	0	0	0	0
<b>Equity in Pooled Cash and Cash Equivalents at End of Year</b>	0	0	0	0	0
<b>Reconciliation of Operating Income (Loss) to Net Cash Provided (Used) by Operating Activities</b>					
Operating Income (Loss)	(69,122)	(39,412)	(4,845)	(1,873)	(177,859)
Adjustments to Reconcile Operating Income (Loss) to Net Cash Provided (Used) by Operating Activities					
Changes in Assets and Liabilities:					
Decrease (Increase) in Rebates Receivable	0	(15,953)	0	(10,919)	0
Decrease (Increase) in Federal Subsidy Receivable	0	0	0	5,097	0
Decrease (Increase) in Contributions Receivable	218	(213)	(1)	0	252
Decrease (Increase) in Miscellaneous Receivables	0	22	0	(4)	0
Decrease (Increase) in Benefit Overpayments Receivable	(48)	(1)	318	27	1
Decrease (Increase) in Prepaid Expenses	0	212	0	(4)	(95)
Decrease (Increase) in Due From Other Benefit Programs	61	(298)	0	2,821	305
Increase (Decrease) in Estimated Future Benefits	33,004	(118)	921	(33)	100,767
Increase (Decrease) in Premiums Payable	0	6,929	0	0	0
Increase (Decrease) in Unearned Revenue	0	2,505	0	112	0
Increase (Decrease) in Benefits Payable	110	1,511	(114)	1,073	0
Increase (Decrease) in Miscellaneous Payables	0	957	(229)	306	(1)
Increase (Decrease) in Due to Other Benefit Programs	(172)	(2,418)	139	1,525	(692)
Total Adjustments	33,173	(6,865)	1,034	1	100,537
Net Cash Provided (Used) by Operating Activities	\$ (35,949)	\$ (46,277)	\$ (3,811)	\$ (1,872)	\$ (77,322)

The accompanying notes are an integral part of the financial statements.

## NOTES TO FINANCIAL STATEMENTS

# 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

## » *Presentation Basis*

The financial statements have been prepared in conformity with Generally Accepted Accounting Principles (GAAP) for government units as prescribed by the Governmental Accounting Standards Boards (GASB). Wisconsin Department of Employee Trust Funds (ETF) is not a general-purpose government and does not present government-wide statements. These statements are not intended to present the financial activity of the State of Wisconsin as a whole. The funds administered by ETF are included in the State of Wisconsin financial reporting entity and are presented in the State's Annual Comprehensive Financial Report.

The assets and operations of ETF are accounted for in the funds described below. Department-wide administrative expenses, capital assets, and general fund activities are most closely associated with the WRS fund and have been blended with that fund for presentation. All material intrafund transactions have been eliminated from fund financial statements. Interfund transactions have not been eliminated.

## *Fiduciary Funds*

Fiduciary funds are used to show assets held by ETF as trustee for others.

## *Pension Trust Funds*

**Wisconsin Retirement System (WRS):** This fund is used to account for the collection of member and employer contributions; investment of assets; and payment of retirement, disability, and death benefits to former employees, and their beneficiaries, of the State of Wisconsin and participating local governments in Wisconsin.

## *Other Employee Benefit Trust Funds*

**Supplemental Health Insurance Conversion Credit (SHICC):** This fund is used to account for the collection of employer contributions, investment of assets, and purchase of post-retirement health insurance premiums for retired employees of the State of Wisconsin and their beneficiaries. This program provides a limited employer match of member credits earned through the Accumulated Sick Leave Conversion Credit (ASLCC) program.

**Employee Reimbursement Accounts/Commuter Benefits (ERA/CB):** This fund is used to account for the collection of voluntary payroll deferrals, investment of assets, and reimbursement of qualifying medical, dependent care, and transportation expenses for employees of the State of Wisconsin, in compliance with Internal Revenue Code Section 125 and Section 132.

**State Retiree Life Insurance (SRL):** This fund is used to account for the accumulation of assets and the payment of life insurance benefits for retired employees of the State of Wisconsin.

**Local Retiree Life Insurance (LRL):** This fund is used to account for the accumulation of assets and the payment of life insurance benefits for retired employees of participating local governments in Wisconsin.

## Investment Trust Fund

**Milwaukee Retirement Systems (MRS):** This fund is used to account for the receipt, investment, and disbursement of funds from other public pension funds in Wisconsin.

## Custodial Fund

**Local Retiree Health Insurance (LRH):** This fund is used to account for the collection of retiree contributions, the investment of assets, the purchase of health insurance coverage, and the payment of health insurance claims for retired employees of participating local governments in Wisconsin.

## Proprietary Funds

Proprietary funds distinguish operating revenues and expenses from non-operating items. Operating revenues and expenses generally result from providing services in connection with a proprietary fund's principal ongoing operations. The principal ongoing operations for these proprietary funds are: collecting premiums and using the accumulated premiums and investment income to pay benefits. Revenues and expenses not directly related to the principal ongoing operations are classified as non-operating.

## Enterprise Funds

**Duty Disability Insurance (DDI):** This fund is used to account for the collection of employer contributions, investment of assets, and payment of special disability benefits to protective occupation participants in the WRS.

**Health Insurance:** This fund is used to account for the collection of employee and employer contributions, the investment of assets, the purchase of health insurance coverage, and the payment of health insurance claims for current employees of both the State of Wisconsin and participating local governments in Wisconsin.

**Income Continuation Insurance (ICI):** This fund is used to account for the collection of employee and employer contributions, the investment of assets, and the payment of disability benefits for employees of both the State of Wisconsin and participating local governments in Wisconsin.

**State Retiree Health Insurance (SRH):** This fund is used to account for the collection of retiree contributions, the investment of assets, the purchase of health insurance coverage, and the payment of health insurance claims for retired employees of the State of Wisconsin.

## Internal Service Fund

**Accumulated Sick Leave Conversion Credit (ASLCC):** This fund is used to account for the collection of employer contributions, investment of assets, and purchase of post-retirement health insurance premiums for retired employees of the State of Wisconsin and their beneficiaries. This benefit allows employees, at the time of their retirement, to convert the value of their unused sick leave accumulation into an account to be used to pay for post-retirement health insurance. The ASLCC program is reported as an internal service fund because the program benefits only State employees.



## FINANCIAL SECTION

» *Measurement Focus and Basis of Accounting*

The financial statements have been prepared in accordance with GAAP. All fiduciary and proprietary funds are accounted for using the flow of economic resources measurement focus and the accrual basis of accounting. Under the accrual basis of accounting, contributions are recognized in the accounting period in which the underlying earnings on which the contributions are based are paid and the employer has made a formal commitment to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of each plan. Securities transactions and the related gains and losses are recorded on a trade date basis. Dividend income is recorded on the ex-dividend date, and interest income is accrued as earned.

» *Investments*

The assets of the programs were invested in one or more of the following funds: Core Retirement Investment Trust Fund (Core Fund) and Variable Retirement Investment Trust Fund (Variable Fund), which are collectively the Retirement Fund, State Investment Fund (SIF), or held by third-party administrator, as shown in table below.

<b>Benefit Plan</b>	<b>Core Fund*</b>	<b>Variable Fund*</b>	<b>State Investment Fund</b>	<b>Third-Party Administrator</b>
Wisconsin Retirement System	✓	✓		
Supplemental Health Insurance Conversion Credit	✓			
Employee Reimbursement Accounts/Commuter Benefits			✓	
State Retiree Life Insurance				✓
Local Retiree Life Insurance				✓
Milwaukee Retirement Systems	✓	✓		
Local Retiree Health Insurance	✓			
Duty Disability Insurance	✓			
Health Insurance	✓			
Income Continuation Insurance	✓			
State Retiree Health Insurance	✓			
Accumulated Sick Leave Conversion Credit	✓			

\* Excess cash of the Core Fund and Variable Fund are invested in the State Investment Fund.

Retirement Fund earnings are allocated between the WRS and other benefit programs based on the average balance invested for each program. Retirement Fund earnings allocated to other benefit programs are classified as "Investment Income Distributed to Other Benefit Programs" on the WRS Statement of Changes in Fiduciary Net Position. The total amount invested by the other benefit programs included in the Retirement Funds is presented as "Core Investment Due To Other Benefit Programs" and "Variable Investment Due To Other Benefit Programs" on the WRS Statement of Fiduciary Net Position. Investments for the Retiree Life Insurance Funds are held by the plan administrator and classified as "Investment Contract" in the Statement of Fiduciary Net Position.

Investments in the SIF are classified as “Equity in Pooled Cash and Cash Equivalents” in the Statement of Fiduciary Net Position. The SIF is a pool of cash balances of various state and local government units with the investment objectives to provide safety, liquidity, and competitive rates of return.

The State of Wisconsin Investment Board (SWIB) manages the Retirement Funds and SIF with oversight by the SWIB's Board of Trustees, as authorized in Wis. Stat. § 25.15 and § 25.17. SWIB is not registered with the Securities and Exchange Commission as an investment company.

### » *Funding Value of Assets*

While investments are measured at fair value for financial statement presentation, a funding value of assets is used in evaluating the funded status of the benefit plans and in determining future contribution requirements. Funding value does not include deferred market gains and losses that have not yet been distributed from the Market Recognition Account (MRA) to the program reserves. See Note 7, Statutory Reserves, for further explanation of the MRA. As of December 31, 2022, the funding value of reserves were as follows (in Millions):

<b>Benefit Plan</b>	<b>Reserves at Funding Value</b>	<b>Deferred Market Gains (Losses)</b>	<b>Reserves at Fair Value</b>
Wisconsin Retirement System	\$ 125,159.7	\$ (6,791.5)	\$ 118,368.2
Income Continuation Insurance*	109.9	(6.7)	103.2
Duty Disability Insurance*	197.3	(44.1)	153.2
ASLCC*	(580.1)	(122.7)	(702.8)
SHICC	1,215.0	(66.2)	1,148.8
Health Insurance*	172.5	(12.9)	159.6
State Retiree Health Insurance	(6.0)	6.0	0.0
Local Retiree Health Insurance	0.0	0.0	0.0

\*The Reserves at Funding Value and the Reserves at Fair Value for Income Continuation Insurance, Duty Disability Insurance, and Health Insurance programs have been reduced by the estimated future claims for the benefit plans and by a compensated absences liability for the Accumulated Sick Leave Conversion Credit program.

### » *Administrative Expenses*

ETF administrative costs are financed by a separate appropriation and are allocated to each benefit plan administered by ETF in accordance with Wis. Stat. § 40.04. The sources of funds for this appropriation are investment earnings and third-party reimbursements received from the various programs administered by ETF. Total ETF administrative expenses for the year were \$54.4 million. Costs for third-party administrators are reported as "Carrier Administrative Expenses" within each program.

SWIB incurs expenses related to investing the trust funds. As authorized by Wis. Stat. § 25.187 (2), these costs are charged directly to the investment income of each trust fund.



## FINANCIAL SECTION

» *Capital Assets*

Capital assets consist of office furniture, equipment, computer software (purchased or externally acquired and internally generated software), and certain capitalizable costs related to leased office space. ETF capitalizes purchased assets in excess of \$5,000 at cost and capitalizes internally-generated software and other intangible assets in excess of \$1 million. Costs incurred related to leased office space are valued at purchase price or construction cost plus any costs necessary to place the asset into use. Assets are depreciated over an estimated useful life, ranging from 5 to 20 years, using the straight-line method of depreciation.

As of December 31, 2022, the total value of capital assets was \$20.4 million. The accumulated depreciation is \$11.3 million for a net capital asset value of \$9.1 million. Net capital asset value is primarily comprised of \$5.8 million of costs related to the future occupancy of office space leased by SWIB and \$3.2 million of internally generated software.

» *Compensated Absences*

The ASLCC fund reports liabilities for compensated absences for sick leave calculated based on the vesting method prescribed in GASB Statement No. 16 "Accounting for Compensated Absences." The amounts reported are based on sick leave balances earned but not used and salary rates as of December 31, 2022. The roll-forward of compensated absences payable for the year ended December 31, 2022 is as follows:

<b>Compensated Absences Payable</b> (In Millions)				
<b>December 31, 2021</b>	<b>Additions</b>	<b>Reductions</b>	<b>December 31, 2022</b>	<b>Due Within One Year</b>
\$2,356.4	\$215.2	\$114.4	\$2,457.2	\$110.9

**» Interfund Assets/Liabilities**

Interfund assets and liabilities as of December 31, 2022, consist of the following:

<b>Due To/From Other Benefit Programs</b>														
(In Thousands)														
	WRS	ERA/ CB	Health Insurance	SRH	LRH	Life Insurance	SRL	LRL	DDI	ICI	ASLCC	SHICC	Deferred Comp.	Total
WRS	\$ 0	\$ 76	\$ 1,514	\$ 720	\$ 27	\$ 167	\$ 21	\$ 29	\$ 0	\$ 221	\$ 0	\$ 0	\$ 0	\$ 2,775
ERA/CB	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Health Insurance	301	0	0	67,794	5,804	0	0	0	0	0	111	264	0	74,274
SRH	0	0	33,544	0	0	0	0	0	0	0	0	0	0	33,544
LRH	3	0	3,632	0	0	0	0	0	0	0	0	0	0	3,635
Life Insurance	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SRL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LRL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DDI	236	0	0	0	0	0	0	0	0	0	0	0	0	236
ICI	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ASLCC	2,893	0	0	0	0	0	0	0	0	0	0	0	0	2,893
SHICC	457	0	0	0	0	0	0	0	0	0	0	0	0	457
Deferred Comp.	9	0	0	0	0	0	0	0	0	0	0	0	0	9
<b>Total</b>	<b>\$3,902</b>	<b>\$ 76</b>	<b>\$ 38,690</b>	<b>\$68,514</b>	<b>\$ 5,831</b>	<b>\$ 167</b>	<b>\$ 21</b>	<b>\$ 29</b>	<b>\$ 0</b>	<b>\$ 221</b>	<b>\$ 111</b>	<b>\$ 264</b>	<b>\$ 0</b>	<b>\$ 117,826</b>

**Due From Other Benefit Programs**
**Due To Other Benefit Programs**

Totals may vary from the financial statements due to rounding.

The outstanding balances between benefit programs primarily result from the time lag between when actual receipts and disbursements are made and when those amounts are allocated between benefit programs. All liabilities are expected to be paid within one year of the balance sheet date of December 31, 2022.

**» Use of Estimates**

The preparation of financial statements in accordance with GAAP requires management to make estimates that affect amounts reported herein. Due to the inherent uncertainty involved, actual results could differ from those estimates.

## 2 ACCOUNTING CHANGES

No accounting changes occurred during calendar year 2022.

### 3 DEPOSITS, INVESTMENTS AND SECURITIES LENDING TRANSACTIONS

#### » *Valuation of Securities*

The investments of the Retirement Funds are reported in the Statement of Fiduciary Net Position at fair value as prescribed by GASB and in accordance with Wis. Stat. § 25.17 (14). Unrealized gains and losses are reflected in the Statement of Changes in Fiduciary Net Position as “Net Increase (Decrease) in Fair Value of Investments.”

The fair value of the Retirement Funds’ assets is obtained or estimated in accordance with a pricing hierarchy established with SWIB’s custodian, Bank of New York Mellon (BNY Mellon). As prescribed by the hierarchy, a variety of independent pricing sources are used to price assets based on type, class, or issue.

When a portfolio includes securities or instruments for which the custodial bank does not receive fair value information from its vendor pricing sources, a variety of third-party pricing methods are used, including appraisals, pricing models, and other methods deemed acceptable by industry standards.

The “Equity in Pooled Cash and Cash Equivalents” account reported in the Statement of Fiduciary Net Position consists of short-term investments used to meet the liquidity requirements of the Retirement Funds. Equity in Pooled Cash and Cash Equivalents held by the Retirement Funds can include cash on deposit, foreign currencies, cash posted as collateral to counterparties, repurchase agreements, certificates of deposit, time deposits, U.S. Treasury Bills, short-term investment funds, and other U.S. or foreign liquid financial instruments with maturities that are generally less than three months. Equity in Pooled Cash and Cash Equivalents are reported at fair value or cost, which approximates fair value.

Privately held debt, which is included as “Fixed Income Investments” in the Statement of Fiduciary Net Position, is priced using approaches that value each holding based on the best available information using the following hierarchy of pricing sources:

1. Custodian-supplied prices for assets that can be priced in accordance with the pricing hierarchy established with SWIB’s custodian.
2. Prices provided by a third party with expertise in the debt markets.

For private market investments where no readily ascertainable market value exists, including limited partnerships and real estate pooled funds, fair value is estimated based on the net asset values (NAV) provided by the general partner. Due to the reporting timing of private market investment managers, reported fair values as of December 31, 2022 are based on actual September 30, 2022 reporting, which has been adjusted to reflect cash flows occurring from October 1, 2022 through December 31, 2022. The reported fair value is considered an estimate that may differ from the value that could be realized in a secondary market transaction, or the amount ultimately realized. The financial statements of the limited partnerships and real estate pooled funds are audited by independent auditors annually.

Certain portfolios invest in privately held companies alongside a strategic partner, such as a limited partnership fund manager. These co-investments are valued by SWIB’s strategic partners, who often employ independent valuation agents and use a variety of methodologies including reviews of subsequent financing rounds, discounted cash flow analyses, cash flow multiples analyses, reviews of market comparable sales or metrics, and reviews of third-party appraisals.

Real estate investments owned by SWIB in limited liability companies are valued by independent appraisers every three years. In years when appraisals are not performed, properties are informally appraised by the asset advisor. Each year audited financial statements are prepared for each property.

SWIB employs portfolio strategies which comprise investments across multiple asset classes. The “Multi Asset Investments” account in the Statement of Fiduciary Net Position consists primarily of hedge funds. SWIB values hedge funds based on monthly statements or estimated returns received from each of the hedge fund’s administrators. A third-party administrator’s responsibility is to independently account for the hedge fund’s activity and calculate the NAV of the fund. Generally, hedge fund administrators price financial instruments traded in active markets based on quoted market prices or binding dealer quotations. For certain over-the-counter (OTC) instruments, fair value is determined based on valuation models used by the administrator or independent valuation agent. Annually, the financial statements prepared by the administrator are audited by independent auditors.

Derivative financial instruments are marked to market daily, with valuation changes recognized in income during the period the instruments are held and when the instrument is sold or expires. The nature and use of derivative instruments are discussed later in this note.

A limited number of securities are carried at cost. Certain non-public or closely-held investments are not reported at fair value but are carried at cost, as no independent price quotes are available to estimate fair value for these securities.

### » Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations to SWIB. Fixed income credit risk investment guidelines outline the minimum ratings required at the time of purchase by individual portfolios, or groups of portfolios, based on the portfolios’ investment objectives. In addition, some fixed income portfolios are required to always carry a minimum weighted average rating. Information regarding SWIB’s credit risk related to derivative instruments is discussed later in this note.

The table entitled Credit Quality Distribution displays the lowest credit rating assigned by nationally recognized statistical rating organizations on debt securities held by the Retirement Funds as of December 31, 2022. Included in this table are fixed income securities, including certain short-term securities, classified as “Equity in Pooled Cash and Cash Equivalents” in the Statement of Fiduciary Net Position. Also included are interest rate sensitive investments held in the Retirement Funds’ securities lending collateral reinvestment pools, which are managed by SWIB’s securities lending program. Additional information regarding the securities lending program is discussed later in this note.

The table also includes SWIB’s investment in commingled fixed income funds, which are not rated. Although the funds themselves are not assigned ratings, external management investment guidelines govern minimum credit quality standards for the investments within each portfolio. These standards are determined based on the investment objectives and risk parameters of each fund.



## FINANCIAL SECTION

**Retirement Funds  
Credit Quality Distribution  
As of December 31, 2022**  
(In Thousands)

Rating	Fair Value	% of Total
AAA/Aaa	\$ 413,510	0.9 %
AA/Aa	27,766,607	57.1
A	1,590,005	3.3
A-1/P-1	20,000	0.0
A-2/P-2	358,439	0.7
BBB/Baa	4,217,605	8.7
BB/Ba	2,996,728	6.2
B	4,172,061	8.6
CCC/Caa or below	475,792	1.0
Not Rated	1,751,651	3.6
Commingled Fixed Income Funds	4,784,384	9.9
Total	<u>\$ 48,546,782</u>	<u>100.0 %</u>

SWIB held \$17.7 billion in reverse repurchase agreements as of December 31, 2022. Investment guidelines permit certain portfolios to enter into reverse repurchase agreements, which are a sale of securities with a simultaneous agreement to repurchase the securities in the future at the same price plus a stated rate of interest. The market value of the securities underlying reverse repurchase agreements exceeds the cash received, providing the counterparty a margin against a decline in the market value of the securities. If the counterparty defaults on their obligation to sell these securities back to SWIB or provide cash of equal value, SWIB could suffer an economic loss equal to the difference between the market value of the underlying securities plus accrued interest and the agreement obligation, including accrued interest.

SWIB enters into reverse repurchase agreements with various counterparties, and such transactions are governed by Master Repurchase Agreements. Master Repurchase Agreements are negotiated contracts and contain terms in which SWIB seeks to minimize counterparty credit risk. SWIB also controls credit exposures by limiting trades with any one counterparty to stipulated amounts. The counterparty credit exposure is managed through the transfer of margin, in the form of cash or securities, between SWIB and the counterparty. The Retirement Funds' counterparty credit exposure for reverse repurchase agreements as of December 31, 2022 is summarized in the table entitled Reverse Repurchase Agreements, Counterparty Credit Exposure.

**Retirement Funds  
Reverse Repurchase Agreements Counterparty Credit Exposure  
As of December 31, 2022**  
(In Thousands)

Fair Value of Collateral Held by Counterparty	\$ 18,096,460
Less:	
Cash due to Counterparty	17,689,748
Collateral and Interest due to Counterparty	<u>50,277</u>
Total due to Counterparty	<u>17,740,025</u>
Net Counterparty Credit Exposure	<u>\$ 356,435</u>

The cash proceeds from reverse repurchase agreements are reinvested by the Retirement Funds. The maturities of the purchases made with the proceeds of reverse repurchase agreements are not necessarily matched to the maturities of the agreements. The agreed upon yields earned by the counterparty for the reverse repurchase agreements held were between 4.1% and 4.5% as of December 31, 2022. Portfolio guidelines require agreements to mature between one and 90 days.

The cash due to counterparties resulting from reverse repurchase agreements is reported as "Obligation Under Reverse Repurchase Agreements" and the interest due to counterparties is included in "Investment Payables" in the Statement of Fiduciary Net Position.

### » Custodial Credit Risk

SWIB's custodial credit risk policy addresses the primary risks associated with safekeeping and custody. It requires that SWIB's custodial institution be selected through a competitive bid process and that the institution be designated a Systemically Important Financial Institution (SIFI) by the U.S. Federal Reserve. The policy also requires that SWIB be reflected as beneficial owner on all securities entrusted to the custodian and that SWIB have access to safekeeping and custody accounts. The custodian is also required to carry insurance covering errors and omissions, and they must provide SWIB with an annual report on internal controls, prepared in accordance with the Statement on Standards for Attestation Engagements. In addition, SWIB management has established a system of controls for the oversight of services and related processes performed by the custodian. SWIB's current custodial bank was selected in accordance with these guidelines and meets all the requirements stipulated in the custodial credit risk policy.

*Deposits* - Custodial credit risk related to deposits is the risk that, in the event of the failure of a depository financial institution, SWIB will not be able to recover deposits that are in possession of an outside party. Cash deposits totaled \$400.1 million as of December 31, 2022. Of the total, \$92.4 million was collateralized by securities borrowed. The remaining deposits, totaling \$310.5 million, were uninsured and uncollateralized. These uninsured deposits represent the U.S. dollar equivalent of balances held in foreign currencies in SWIB's custodian's nominee name, cash posted as collateral for derivative transactions, and cash collateral posted in excess of the market value of securities borrowed by SWIB for short sales. In addition to cash deposits, the Retirement Funds held \$20.0 million in time deposits as of December 31, 2022.

*Investments* - Custodial credit risk for investments is the risk that, in the event of failure of the counterparty to a transaction, SWIB will not be able to recover the value of investments that are in the possession of an outside party. The Retirement Funds held repurchase agreements totaling \$1.6 billion as of December 31, 2022. These repurchase agreements were tri-party agreements held in a short-term cash management portfolio managed by SWIB's custodian. The underlying securities for these agreements were held by the tri-party agent, not in SWIB's name.

The Core Trust Fund holds committed repos with a major equity derivative clearing organization (counterparty) for an agreed upon commitment amount, from which the counterparty can fully or partially draw upon at their discretion during the commitment period. A separate account is established at the asset custodian in SWIB's name to hold the available cash and the collateral from the counterparty if any of the commitment amount is drawn. For the undrawn commitment amount, the counterparty pays SWIB a commitment fee. Any cash amounts drawn are structured as repo transactions where SWIB receives a fee and U.S. Treasuries as collateral with a margin percentage greater than 100%. Draws are limited to a maximum of 30 days, and accordingly the term of each repo transaction is also limited to 30 days. The counterparty is rated AA+ and is a Systematically Important Financial Market Utility. Collateral is marked to market daily. A separate financial services company acts as SWIB's agent and provides indemnification in the event of the counterparty's default.

## FINANCIAL SECTION

SWIB holds Institutional Client Account Agreements with prime brokers. These agreements include, but are not limited to the execution, settlement, and clearance of securities, commodities, and other financial products and transactions, including borrowings related to the transactions, commodities, other financial assets, and the extension of credit to SWIB. The Account Agreement is treated as a master netting agreement, a securities contract within the meaning of the United States Bankruptcy Code, or a netting contract within the meaning of the Federal Deposit Insurance Corporation Improvement Act of 1991.

SWIB manages relationships with prime brokers, including instructing asset transfers and margin movements regarding collateral. Collateral is held by the prime brokers and any affiliated entity, and is commingled in their accounts along with the right of rehypothecation in accordance with applicable law. Collateral consists of cash, treasuries, and securities subject to prime broker rules and standard terms. Separate agreements govern lock-up rates and fees for borrows, as well as lending and other fees, as applicable. Margin calculation is included in the lock-up terms and rates charged may vary by portfolio. Certain changes can only be made with advance notice based on a lock-up term of 29 days. The prime brokers are designated a SIFI. Although SWIB monitors these counterparties, there is no guarantee the counterparty will not become insolvent and there is no certainty that SWIB would not incur losses due to its assets being unavailable for a period of time, ultimately receiving less than a full recovery of its assets, or both.

**» Concentration of Credit Risk**

Concentration of credit risk is the risk of loss attributed to the magnitude of an organization's investment in a single issuer. SWIB limits concentrations of credit risk by establishing investment guidelines for individual portfolios or groups of portfolios that generally restrict issuer concentrations in any one company or Rule 144A securities to less than 5% of the portfolio's market value. The Retirement Funds did not hold any investments with a single issuer, exclusive of investments issued or explicitly guaranteed by the U.S. government, representing 5% or more of the Retirement Funds' value as of December 31, 2022.

**» Interest Rate Risk**

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. SWIB uses several methods to manage interest rate risk. Fixed income instruments held by the Retirement Funds include investments with variable rate securities, stepped rate securities, securities with no coupon, such as discount notes, and coupons that range between 0.0% and 13.0% as of December 31, 2022.

SWIB analyzes long and intermediate term portfolios' interest rate risk using various duration calculations. Modified duration, which is stated in years, is the measure of price sensitivity of a fixed income security to an interest rate change of 100 basis points. The calculation is based on the weighted average of the present values for all cash flows. Some investments are analyzed using an option-adjusted duration calculation which is similar to the modified duration method. Option-adjusted duration incorporates the duration-shortening effect of any embedded call provisions in the securities. Duration statistics are weighted by the dollar value of the position to compute an average duration for each investment type.

Short-term portfolios' interest rate risk is analyzed using the weighted average maturity to next reset. Weighted average maturity is the maturity of each position in a portfolio weighted by the dollar value of the position to compute an average maturity for the portfolio as a whole. This measure indicates a portfolio's sensitivity to interest rate changes: a longer weighted average maturity implies greater volatility in response to interest rate changes.

SWIB's investment guidelines related to interest rate risk vary by portfolio. Some fixed income portfolios require management within a range of a targeted duration, while others require a weighted average maturity at or below a specified number of days or years.

The Interest Rate Sensitivity by Investment Type table below presents the aggregated interest rate exposure for the Retirement Funds' assets as of December 31, 2022. Weighted average maturity, where reset dates are assumed to be the effective maturity date for the security, is presented for repurchase agreements and short-term pooled investments. Longer-term instruments held by the Retirement Funds are presented using modified duration, as this measure more accurately states the interest rate sensitivity of these investments. This duration measure is calculated using reset dates for some floating rate instruments, such as term loans. Information about the interest rate sensitivity of derivative contracts is discussed later in this note.

SWIB invests in securities with contractual cash flows, such as asset-backed securities, leveraged loans, and U.S. government agencies. These types of structured product investments may be highly sensitive to interest rate changes, as they may be subject to early payment in a period of declining interest rates. The resulting changes in timing, or possible reduction in expected total cash flows, affect the fair value of these securities.

**Retirement Funds**  
**Interest Rate Sensitivity by Investment Type\***  
**As of December 31, 2022**

<b>Investment Type</b>	<b>Fair Value (In Thousands)</b>	<b>Weighted Average Duration (Years)</b>	<b>Weighted Average Maturity (Days)</b>
U.S. Treasury Inflation Protected Securities	\$ 21,649,759	6.6	
Corporate Bonds and Private Placements	10,313,274	5.4	
U.S. Treasury Securities	4,238,621	8.6	
Leveraged Loans	1,913,116	0.7	
Asset Backed Securities	1,349,682	2.3	
U.S Government Agencies	1,343,996	5.7	
Foreign Government/Agency Bonds	1,250,146	6.9	
Repurchase Agreements	808,975		13
Commercial Paper	379,674		20
Municipal Bonds	138,433	8.0	
Time Deposits	20,000		61
Commingled Funds:			
Short Term Cash Management	3,513,673		20
Emerging Market Fixed Income	973,902	4.8	
Exchange Traded	653,531	4.4	
<b>Total</b>	<b>\$ 48,546,782</b>		

\*Excludes derivatives.



## FINANCIAL SECTION

**» Foreign Currency Risk**

Foreign currency risk is the risk that changes in exchange rates will adversely impact the fair value of an investment. It includes the risk that currencies in which a portfolio's investments are denominated and currencies in which a portfolio has taken on a long or short active position will decline or appreciate in value relative to the U.S. dollar.

Foreign currency exchange rates may fluctuate significantly for a number of reasons, including the forces of supply and demand in the foreign exchange markets, actual or perceived changes in interest rates, intervention by U.S. or foreign governments or central banks, currency controls, or political developments in the U.S. or abroad.

SWIB's policies include foreign currency risk management objectives relating to each individual portfolio. These guidelines address the foreign currency management activities permitted for each portfolio based on the portfolio mandates, risk tolerances, and objectives. SWIB also employs discretionary currency overlay strategies at the total fund level when currency market conditions suggest such strategies are warranted. Additional information related to the management of foreign currencies through the use of derivative instruments is discussed later in this note.

The table entitled Currency Exposures by Investment Type presents the Retirement Fund investments which were exposed to foreign currency risk as of December 31, 2022.

**Retirement Funds**  
**Currency Exposure by Investment Type**<sup>1,3</sup>  
**December 31, 2022**  
**Stated in U.S. Dollars**  
 (In Thousands)

Currency	Cash and Cash Equivalents	Equities	Fixed Income	Private Fund Investments	Preferred Securities	Financial Futures Contracts	Short Sell Obligations <sup>2</sup>	Swaps	Total <sup>4</sup>
Australian Dollar	\$ 5,678	\$ 723,240	\$ 0	\$ 0	\$ 0	\$ (183)	\$ (42,763)	\$ 0	\$ 685,972
Brazilian Real	1,129	64,171	0	0	3,334	0	0	(154)	68,480
Canadian Dollar	20,378	1,225,893	0	0	0	(2,853)	(106,085)	0	1,137,333
Chilean Peso	0	0	0	0	0	0	0	(222)	(222)
Chinese Yuan Renminbi (Onshore)	(30)	0	0	0	0	0	0	(31)	(61)
Czech Republic Koruna	159	0	0	0	0	0	0	(255)	(96)
Denmark Krone	291	241,973	0	0	0	0	(14,275)	0	227,989
Euro Member Countries	23,216	4,019,039	87,187	2,014,425	97,057	3,386	(497,578)	0	5,746,732
Hong Kong Dollar	4,312	379,185	0	0	0	0	(26,864)	0	356,633
Indian Rupee	112	96,626	0	0	0	0	0	0	96,738
Indonesian Rupiah	0	15,986	0	0	0	0	0	0	15,986
Israeli Shekel	385	32,762	0	0	0	0	(3,563)	0	29,584
Japanese Yen	(10,484)	2,702,284	0	0	0	2,139	(200,041)	0	2,493,898
Korean (South) Won	(127)	57,033	0	0	0	0	0	(14)	56,892
Malaysian Ringgit	0	0	0	0	0	0	0	276	276
Mexican Peso	(1,522)	39,833	0	0	0	0	0	(23)	38,288
New Zealand Dollar	820	35,394	0	0	0	0	(987)	0	35,227
Norwegian Krone	495	103,163	0	0	0	0	(13,600)	0	90,058
Philippine Peso	93	23,158	0	0	0	0	0	0	23,251
Poland Zloty	548	0	0	0	0	0	0	(27)	521
Singapore Dollar	1,233	142,367	0	0	0	0	(16,398)	0	127,202
South African Rand	(450)	29,155	0	0	0	0	0	(35)	28,670
Sweden Krona	3,788	480,953	0	1,636	0	0	(77,280)	0	409,097
Swiss Franc	307	1,015,915	0	0	0	0	(232,744)	0	783,478
Taiwan New Dollar	280	127,994	0	0	0	0	0	0	128,274
Thailand Baht	0	24,403	0	0	0	0	0	0	24,403
United Kingdom Pound	18,510	2,003,091	0	372,803	0	1,830	(131,475)	0	2,264,759
<b>Total<sup>4</sup></b>	<b>\$ 69,121</b>	<b>\$ 13,583,618</b>	<b>\$ 87,187</b>	<b>\$ 2,388,864</b>	<b>\$ 100,391</b>	<b>\$ 4,319</b>	<b>\$ (1,363,653)</b>	<b>\$ (485)</b>	<b>\$ 14,869,362</b>

<sup>1</sup> Commingled funds (including limited partnerships and other pooled vehicles) represent investments where the Retirement Funds own only a portion of the overall fund. While the overall fund may be denominated in U.S. dollars, the underlying investments may be exposed to foreign currency risk in various currencies. Commingled funds are shown in the denomination used by the fund for financial reporting.

<sup>2</sup> Short Sell Obligations are reported as liabilities in the Statement of Fiduciary Net Position. They are included in the above table because they have exposure to foreign currency risk.

<sup>3</sup> Investment types holding instruments denominated only in U.S. Dollars are not included in the above table. At calendar year-end, these include: Convertible Securities, Fixed Income Short Sales, Multi Asset Investments, To Be Announced Securities, Options Contracts, Swaps, and Obligation Under Reverse Repurchase Agreements.

<sup>4</sup> Totals may not add due to rounding.



## FINANCIAL SECTION

**» Fair Value of Investments**

Fair value measurements of the investments held by the WRS are categorized by the hierarchy established by generally accepted accounting principles. The hierarchy, which has three levels, is based on the valuation inputs used to measure the fair value of the investment.

*Level 1* - Investments reflect unadjusted quoted prices in active markets for identical assets.

*Level 2* - Investments reflect prices that are based on inputs that are either directly or indirectly observable for an asset (including quoted prices for similar assets), which may include inputs in markets that are not considered to be active.

*Level 3* - Investments reflect prices based upon valuation techniques in which significant inputs or significant value drivers are unobservable.

The fair value hierarchy gives the highest priority to Level 1 inputs and the lowest priority to Level 3. When the inputs used to measure fair value fall within different levels of the hierarchy, the level within which the fair value measurement is categorized is based on the lowest level input that is significant to fair value. The categorization of investments within the hierarchy is based upon the pricing transparency of the instrument and does not represent the investment's overall risk.

Commingled investments are not categorized under the fair value hierarchy but are disclosed within this note as investments measured at NAV.

The fair value measurements of investments as of December 31, 2022 are found in the table entitled Investments by Fair Value Level.

**Retirement Funds**  
**Investments by Fair Value Level**  
**As of December 31, 2022**  
 (In Thousands)

Asset Type	Fair Value			TOTAL
	Level 1	Level 2	Level 3	
<b>Cash Equivalents</b>				
Commercial Paper	\$ 0	\$ 0	\$ 65,920	\$ 65,920
Money Market Funds	400,000	0	0	400,000
<b>Total Cash Equivalents</b>	<b>400,000</b>	<b>0</b>	<b>65,920</b>	<b>465,920</b>
<b>Equities</b>				
Domestic	29,752,012	33	149,953	29,901,998
International	13,569,363	39	14,217	13,583,619
<b>Total Equities</b>	<b>43,321,375</b>	<b>72</b>	<b>164,170</b>	<b>43,485,617</b>
<b>Fixed Income</b>				
Asset Backed Securities	0	1,320,191	29,491	1,349,682
Corporate Bonds and Private Placements	0	9,890,544	238,330	10,128,874
Exchange Traded Funds	653,531	0	0	653,531
Foreign Government/Agency Bonds	0	1,246,766	3,380	1,250,146
Leveraged Loans	0	1,545,358	367,759	1,913,117
Municipal Bonds	0	138,433	0	138,433
U.S. Government Agencies	0	1,343,996	0	1,343,996
U.S. Treasury Inflation Protected Securities	0	21,649,758	0	21,649,758
U.S. Treasury Securities	14,921	4,223,700	0	4,238,621
<b>Total Fixed Income</b>	<b>668,452</b>	<b>41,358,746</b>	<b>638,960</b>	<b>42,666,158</b>
<b>Preferred Securities</b>				
Domestic	0	164,038	248,458	412,496
International	100,391	0	0	100,391
<b>Total Preferred Securities</b>	<b>100,391</b>	<b>164,038</b>	<b>248,458</b>	<b>512,887</b>
<b>Convertibles</b>				
	0	0	12,862	12,862
<b>Derivatives</b>				
Foreign Exchange Contracts	0	51,004	0	51,004
Futures	(3,066)	0	0	(3,066)
Options	(103)	0	0	(103)
Swaps	0	(22,874)	0	(22,874)
To Be Announced Securities	0	1,263,200	0	1,263,200
<b>Total Derivatives</b>	<b>(3,169)</b>	<b>1,291,330</b>	<b>0</b>	<b>1,288,161</b>
<b>Short Sales</b>				
	(3,503,095)	(140,231)	(4)	(3,643,330)
<b>Total</b>	<b>\$ 40,983,954</b>	<b>\$ 42,673,955</b>	<b>\$ 1,130,366</b>	<b>\$ 84,788,275</b>



---

## FINANCIAL SECTION

Securities classified as Level 1 are generally valued at the official closing price (usually the last trade price). Such investments generally include exchange-traded securities such as equities, preferred stock, certain derivative instruments, and exchange-traded funds. U.S. Treasury Bills and only the most recently-issued U.S. Treasury Notes and Bonds are classified as Level 1, as available pricing for these securities is similarly reliable to exchange-traded securities.

Securities classified as Level 2 are valued using observable inputs provided by third-party pricing services generally using either a bid evaluation or a matrix-pricing technique. Bid evaluations may include market quotations that are based on yields, maturities, call features, and ratings. Matrix-pricing is used to value securities based on their relationship to benchmark market prices for securities with similar interest rates, maturities, and credit ratings. Pricing in this level may also include market approaches that incorporate benchmark interest rates. Debt securities comprise the majority of the Level 2 investments as they are generally traded using a dealer market, with lower trading volumes than Level 1 securities. OTC derivative instruments, such as swaps, To Be Announced Securities (TBAs), and foreign exchange contracts, are also included in Level 2 because they are priced using a market approach that considers benchmark interest rates and foreign exchange rates.

Level 3 investments are generally valued using significant inputs that are unobservable to the marketplace. This may occur if an investment is illiquid or its value is based on estimates. Asset Backed Securities included in Level 3 represent private placements that are valued at purchase price when third-party valuations are unavailable. Equities, convertibles, and preferred securities included in the Level 3 hierarchy are generally privately held securities valued using valuation models such as price multiples incorporating comparable public companies, discounted cash flows and milestone valuation models. In some instances of privately held preferred securities, fair value is determined based on recent financing rounds. Bank loans, which are included in corporate bonds and private placements within the Level 3 category, are priced by vendors using proprietary models which may incorporate unobservable inputs. Cash and Cash Equivalents included in Level 3 represent securities priced at cost. Typically, due to their short-term nature, cost approximates fair value for these investments. Other factors such as infrequent trading, an inactive market, or adjusted quoted prices may also result in Level 3 measurements.

**» Investments Measured at NAV**

The fair value of investments in certain cash funds, fixed income funds, equities, private fund investments, equity limited partnerships, and hedge funds are based on the investments' NAV per share (or its equivalent) provided by the investment manager. The December 31, 2022 investments valued using NAV are shown in the table entitled Investments Measured at NAV.

**Retirement Funds  
Investments Measured at NAV  
As of December 31, 2022  
(In Thousands)**

<b>Investments Measured at NAV</b>	<b>Fair Value</b>	<b>Unfunded Commitments</b>	<b>Redemption Frequency</b>	<b>Redemption Notice Period<sup>8</sup></b>
Cash and Cash Equivalents <sup>1</sup>	\$ 3,513,674	\$ 0	Daily	Same Day
Fixed Income <sup>2</sup>	1,873,447	0	Daily, Monthly	5-30 days
Fixed Income Limited Partnerships <sup>3</sup>	511,007	0	Monthly	45 days
Private Fund Investments <sup>4</sup>	31,718,665	13,872,934	N/A	N/A
Equities <sup>5</sup>	11,421,223	0	Daily, Monthly, Quarterly	2-50 days
Equity Limited Partnerships <sup>6</sup>	1,733,102	0	Monthly	5-15 days
Hedge Funds <sup>7</sup>	7,682,286	787,235	Various	Various
<b>Total</b>	<b>\$ 58,453,404</b>	<b>\$ 14,660,169</b>		

<sup>1</sup>This category consists of short-term cash funds with the investment objective of safety of principal and liquidity while earning a competitive money market rate of return. The short-term cash funds have daily liquidity with same day notice.

<sup>2</sup>This category includes fixed income managers which can invest across the credit quality spectrum, in varying geographies. The external asset managers require a redemption notice period of between 5 to 30 days, and the funds have daily and monthly liquidity.

<sup>3</sup>The Fixed Income Limited Partnership fund invests in Leveraged Loans. The manager requires a redemption notice period of 45 days and assets can be redeemed monthly.

<sup>4</sup>Private Fund Investments include direct, co-investments, LLCs with existing SWIB general partners, direct secondary investments, and fund of funds. These investments are illiquid and are generally not resold or redeemed. Distributions from each fund are received as the underlying investments are liquidated or over the life of the investment. The table entitled Limited Partnerships - Estimated Remaining Life provides an estimate of the period over which the underlying assets are expected to be liquidated. As of December 31, 2022, there are four partial and full redemption sales planned in 2023 on the secondary market. The anticipated sale price of this fund is not expected to be materially different than the NAV as of December 31, 2022.

<sup>5</sup>This category includes long-only equity managers (88%) with various fundamental, quantitative, and other approaches spanning various styles, geographies, and market cap weights. These long-only manager investments can be redeemed either daily, monthly, or quarterly with between 2 and 50 business days' notice. The remaining 12% of this category represents emerging markets equity index funds with an investment strategy designed to track the return of the given segment of the emerging equity markets. These investments can be redeemed daily with 2 business days' notice.

<sup>6</sup>Equity Limited Partnership funds invest in U.S. and global equity. The external asset managers require a redemption notice period between 5 to 15 days and can be redeemed monthly. These investments represent open-ended funds that are readily redeemable.

<sup>7</sup>Hedge Fund investments are private investment funds that seek to produce absolute returns using a broad range of strategies. In certain instances, Hedge Fund investments are structured as limited partnerships, whereby participants receive distributions over the life of the fund. The estimated remaining life for some funds structured as limited partnerships are either between 5-10 years or greater than 10 years. Additional information relating to Hedge Funds can be found later in this note.

<sup>8</sup>Redemption terms described for NAV investments reflect contractual agreements and assume withdrawals are made without adverse market impact and under normal market conditions.



---

**FINANCIAL SECTION****» Private Fund Investments**

Private Fund Investments include private equity and real estate.

Private Equity Limited Partnerships included the following investment strategies as of December 31, 2022:

*Leveraged Buyout* - This strategy acquires the controlling interest of a private company using a significant amount of borrowed capital (leverage).

*Distressed Debt* - This strategy can invest in public and private companies undergoing financial distress, a turnaround in business operations, or which are believed to be undervalued because of a discrete extraordinary event.

*Growth Equity* - This strategy is an investment opportunity in relatively mature companies that are going through a transformational event in their lifecycle with potential for significant growth.

*Venture Capital* - This strategy invests in companies with potential for significant growth (generally small to early stage emerging firms).

*Private Debt* - This strategy includes any debt held by or extended to privately held companies. The debt securities can be senior debt, mezzanine debt, and structured capital but commonly involve non-bank institutions making loans to private companies or buying those loans on the secondary market.

*Secondaries* - This strategy provides a market for investors to sell or purchase positions in private markets funds.

Real Estate limited partnerships generally consisted of the following investment strategies as of December 31, 2022:

*Core* - Core investments are expected to deliver a significant percentage of their return from income and should experience lower volatility than Opportunistic and Value investments due to lower leverage, higher occupancy, and asset location.

*Value* - Value investments typically have significant near-term leasing, repositioning, and/or renovation risk. This strategy is expected to have modest initial operating revenues with potential for substantial income growth and will likely encounter greater volatility than Core strategies, but lower volatility than Opportunistic strategies.

*Opportunistic* - Opportunistic investments usually have significant development, lease-up, financial restructuring, and/or liquidity risk with little or no initial operating income. This strategy typically uses the highest leverage, is expected to achieve most of its return from future capital gains, and is likely to encounter greater volatility than Core and Value strategies.

Private equity and real estate limited partnerships are generally structured to provide distributions to participants of the fund as the holdings of the partnership are liquidated over time. The table entitled Limited Partnerships - Estimated Remaining Life illustrates the distribution of estimated remaining liquidation periods for the limited partnership holdings as of December 31, 2022.

**Retirement Funds**  
**Limited Partnerships - Estimated Remaining Life**  
**As of December 31, 2022**  
 (In Thousands)

Limited Partnership Type	Estimated Remaining Life				Total
	< 5 Years	5 - 10 Years	> 10 Years	N/A <sup>2</sup>	
Private Fund Investments <sup>1</sup>	\$ 10,026,300	\$ 16,775,059	\$ 2,975,421	\$ 1,941,885	\$ 31,718,665
Equity Limited Partnerships	0	0	0	1,733,102	1,733,102
Fixed Income Limited Partnership	0	0	0	511,007	511,007
<b>Total</b>	<b>\$ 10,026,300</b>	<b>\$ 16,775,059</b>	<b>\$ 2,975,421</b>	<b>\$ 4,185,994</b>	<b>\$ 33,962,774</b>

<sup>1</sup> Estimated remaining life represents subjective estimates, assuming normal market conditions.

<sup>2</sup> N/A investments represent open-ended funds that are readily redeemable.

### » Hedge Funds

Hedge Fund investments are private investment funds that seek to produce absolute returns using a broad range of strategies. The Retirement Funds participated in the following Hedge Fund strategies as of December 31, 2022:

*Long/Short Equity* - This strategy invests both long and short in publicly-traded stocks. These managers vary in their use of short selling and leverage.

*Event-Driven* - This strategy seeks to gain an advantage from pricing inefficiencies that may occur before or after a corporate action or related event, such as a merger, spinoff, earnings call, bankruptcy, or restructuring.

*Tactical Trading* - This strategy invests in indices, commodities, interest rate instruments, and currencies as a result of relative value or directional forecasts from a systematic or discretionary approach.

*Relative Value* - This strategy uses a range of fixed income arbitrage, insurance linked, long-short credit, and/or quantitative strategies that seek to take advantage of price differentials.

*Multistrategy* - This strategy employs a wide range of strategies and instruments in managing assets.

*Special Opportunities* - This strategy seeks to invest in special situations, which may include co-investments or interests in the equity or revenues of external investment managers.

When redeeming Hedge Fund investments, the agreements governing the investment often require advanced notice and may restrict the timing of withdrawals. The table entitled Hedge Fund Redemption Timing depicts redemption terms, independent of other contractual restrictions like lock-up periods as discussed below, for SWIB's Hedge Fund investments as of December 31, 2022.



## FINANCIAL SECTION

**Retirement Funds  
Hedge Fund Redemption Timing  
As of December 31, 2022**

<b>Redemption Frequency</b>	<b>Redemption Notice Period (Days)</b>	<b>Fair Value (In Thousands)</b>
Monthly	30 - 92	\$ 2,097,563
Quarterly <sup>1,3,4</sup>	30 - 180	3,688,196
Semi - Annual	30 - 60	679,953
Other <sup>1,2,4</sup>	0 - 90, N/A	1,216,574
<b>Total</b>		<b>\$ 7,682,286</b>

<sup>1</sup> Includes one or more funds that are in the process of being fully redeemed, with final distribution expected in 2023.

<sup>2</sup> Includes one or more funds that are structured as limited partnerships, whereby withdrawals are not permitted, but the participants receive distributions over the life of the fund.

<sup>3</sup> Includes one or more funds that have a funding date of January 1st, 2023. SWIB was contractually obligated to wire funds to the fund manager prior to the funding date.

<sup>4</sup> Includes one or more funds that are subject to rolling locks, whereby the fund automatically re-locks unless a withdrawal request is submitted.

Hedge Fund agreements can also include lock-up periods, which restrict investors from redeeming their investment during a specified time frame. Lock-up periods help portfolio managers mitigate liquidity risks. Lock-ups can be hard, where redemptions are not permitted for a specified time period, or soft, where redemptions are permitted provided the investor pays a penalty. In certain instances, a fund may have both hard and soft lock-up restrictions. In addition, in certain investments, Hedge Fund managers may be allowed to institute a rolling lock-up. A fund with a rolling lock-up period requires investors to commit to an initial lock-up period, and, if the investor does not submit a redemption notice within a set time prior to expiration of the lock-up, the lock-up is reset.

The table entitled Hedge Fund Lock-ups reflects the lock-up terms for the Hedge Fund investments held as of December 31, 2022.

**Retirement Funds  
Hedge Fund Lock-ups  
As of December 31, 2022**

Hedge Fund Lock Type	Duration of Lock (Years)	Year of Lock Expiration	Fair Value (In Thousands)
Hard Lock <sup>3</sup>	1 - 3	2023 - 2024	\$ 821,368
Rolling Lock	1 - 3	2023 - 2025	334,646
Soft	1	2023	426,706
None <sup>1</sup>	N/A	N/A	5,172,446
Other <sup>2</sup>	N/A	N/A	927,120
Total			<u>\$ 7,682,286</u>

<sup>1</sup> Includes one or more funds that are in the process of being fully redeemed, with final distribution expected in 2023.

<sup>2</sup> Includes one or more funds that are structured as limited partnerships, whereby withdrawals are not permitted but the participants receive distributions over the life of the fund.

<sup>3</sup> Includes one or more funds that have a funding date of January 1st, 2023. SWIB was contractually obligated to wire funds to the fund manager prior to the funding date.

Similar to lock-ups, Hedge Fund agreements also commonly incorporate gating restrictions. An investor-level gate limits redemption on a particular redemption date to a specified percentage of the investor's account value, while a fund-level gate may limit total investor withdrawals on a particular redemption date to a percentage of aggregated fund-level (or master fund-level) NAV. In certain instances, funds can have both investor and fund-level gates in place. Such funds are reflected in the Investor Level category. The table entitled Hedge Fund Gates summarizes the Hedge Fund gates in place as of December 31, 2022.

**Retirement Funds  
Hedge Fund Gates  
As of December 31, 2022  
(In Thousands)**

Hedge Fund Gate Type	Gate Range	Fair Value
Investor Level	12.5% - 50.0%	\$ 3,387,031
Fund Level <sup>1,3</sup>	8.3% - 25.0%	780,457
None	N/A	2,461,024
Other <sup>2</sup>	N/A	1,053,774
Total		<u>\$ 7,682,286</u>

<sup>1</sup> Includes one or more funds that are in the process of being fully redeemed, with final distribution expected in 2023.

<sup>2</sup> Includes one or more funds that are structured as limited partnerships, whereby withdrawals are not permitted but the participants receive distributions over the life of the fund.

<sup>3</sup> Includes one or more funds that have a funding date of January 1st, 2023. SWIB was contractually obligated to wire funds to the fund manager prior to the funding date.

## FINANCIAL SECTION

» *Derivative Instruments*

A derivative instrument, as defined by GASB Statement No. 53 "Accounting and Financial Reporting for Derivative Instruments," is a financial instrument or other contract that has the following characteristics:

- *Settlement factors* - It has (1) one or more reference rates and (2) one or more notional amounts or payment provisions or both. Those terms determine the amount of the settlement or settlements and, in some cases, whether or not a settlement is required.
- *Leverage* - It requires no initial net investment or an initial net investment that is smaller than would be required for other types of contracts expected to have a similar response to changes in market factors.
- *Net settlement* - Its terms require or permit net settlement, it can readily be settled net by a means outside the contract, or it provides for delivery of an asset that puts the recipient in a position not substantially different from net settlement.

Derivative instruments may be used to implement investment strategies for the Retirement Funds. All derivative instruments are subjected to risk analysis and monitoring processes at the portfolio, asset class, and fund levels. Investment guidelines define allowable derivative activity for each portfolio and are based on the investment objectives approved by the Board. Where derivative instruments are permitted, guidelines stipulate allowable types and the manner and degree to which they are to be used.

Gains and losses for all derivative instruments are reported in the Statement of Changes in Fiduciary Net Position as "Net Increase (Decrease) in Fair Value of Investments." SWIB invests in derivative instruments directly and indirectly through commingled or pooled investment vehicles. Information relating to investments held in commingled funds is not separately disclosed in the financial statements or the accompanying footnotes, consistent with GASB reporting requirements.

A derivative instrument can take the form of an individually negotiated contract between the Retirement Funds and a specific counterparty. These types of negotiated positions are known as OTC contracts and can be structured as either uncleared or cleared.

Uncleared OTC contracts are non-standardized bilateral contracts that do not include the use of a centralized intermediary, such as a clearinghouse. Uncleared OTC transactions are subject to regulatory requirements with respect to data reporting and recordkeeping, trading relationship documentation, business conduct standards, portfolio reconciliation, and margin collection and posting. For these transactions, master netting agreements and credit support annexes governing the credit relationship and collateral exchange between two parties are put in place to mitigate counterparty credit risk.

Cleared OTC contracts offer additional protections to trade participants. These types of transactions employ the use of an intermediary between counterparties. The intermediary, known as a clearinghouse, serves to facilitate trading and mitigate risks. While not completely standardized, these contracts involve a high degree of standardization. Once cleared, the clearinghouse steps in as the counterparty to all trades. Regulatory bodies govern the tools and procedures for risk mitigation such as margin requirements and daily mark to market.

In addition to trading OTC, derivative contracts can also be transacted on established exchanges. These are called exchange-traded contracts and are completely standardized. Like cleared OTC contracts, the clearinghouse is an intermediary to the trade, reducing risks and standardizing the exchange of margin.

The table entitled Derivative Contract Types summarizes the differences between OTC and exchange-traded contracts.

<b>Retirement Funds Derivative Contract Types</b>		
<b>Uncleared (OTC)</b>	<b>Cleared (OTC)</b>	<b>Exchange-Traded</b>
Trades negotiated OTC	Trades negotiated OTC	Trades executed on organized exchanges
Customized trade terms are agreed upon by counterparties	Trades limited to standardized terms	Trades limited to standardized terms
Traded bilaterally between counterparties	Trades are submitted through a clearinghouse, which is counterparty	Trades are booked with exchange's clearinghouse, which is counterparty
Margin (collateral) often exchanged but subject to negotiation between counterparties.	Mandatory margin requirements	Mandatory margin requirements
Common example: Forward Contracts	Common example: Credit Default Swaps	Common example: Futures Contracts

Collateral postings are commonplace for derivative contracts and vary based on the type of contract traded. SWIB posted \$356.2 million in cash and \$827.8 million in securities as collateral for derivative positions as of December 31, 2022. More information regarding collateral requirements is included below.

### **Uncleared OTC Derivative Instruments**

Inherent in the use of uncleared OTC derivative instruments, the Retirement Funds may be exposed to counterparty credit risk. Counterparty credit risk is the risk that a derivative instrument counterparty may fail to meet its payment obligations under the terms of the derivative contract. SWIB seeks to mitigate this risk through counterparty credit evaluations and approvals, counterparty credit limits, and exposure monitoring procedures. Additionally, policies have been established which seek to implement master netting arrangements with counterparties that permit the closeout and netting of transactions with the same counterparty upon the occurrence of certain events, such as payment default, rating downgrade, bankruptcy, illegality, or force majeure. Agreements may also require daily collateral postings to further mitigate credit risk.

The table entitled OTC Derivative Instruments Subject to Counterparty Credit Risk summarizes, by credit rating, the Retirement Funds' exposure to counterparty credit risk relating to uncleared OTC contracts as of December 31, 2022, without respect to any collateral or netting agreement.



## FINANCIAL SECTION

**Retirement Funds**  
**OTC Derivative Instruments Subject to Counterparty Credit Risk**  
**As of December 31, 2022**  
(In Thousands)

<b>Counterparty Credit Rating</b>	<b>FX Receivables</b>	<b>Swap Receivables</b>	<b>To Be Announced Receivables<sup>1</sup></b>	<b>Warrant Receivables<sup>1,2</sup></b>	<b>Total<sup>3</sup></b>
AA	\$ 171,597	\$ 0	\$ 0	\$ 0	\$ 171,597
A	3,433,900	6,356,482	1,599	0	9,791,981
Not Rated	0	0	0	91	91
Total	<u>\$ 3,605,497</u>	<u>\$ 6,356,482</u>	<u>\$ 1,599</u>	<u>\$ 91</u>	<u>\$ 9,963,669</u>

<sup>1</sup>Exposure to counterparty credit risk for To Be Announced Securities and Warrants is limited to unrealized gains on open positions.

<sup>2</sup>Warrants issued by privately held company that is not rated by statistical credit rating organization.

<sup>3</sup>Aggregate amount of liabilities included in master netting arrangements was \$9.7 billion as of December 31, 2022.

The aggregate fair value of receivables relating to uncleared OTC derivative contracts was \$10.0 billion as of December 31, 2022. This amount represents the maximum loss that would be recognized at the reporting date if all counterparties failed to perform as contracted. This maximum exposure is reduced to \$460.7 million as of December 31, 2022 when counterparty collateral and master netting arrangements are considered. SWIB had credit exposure to 27 uncleared OTC counterparties as of December 31, 2022.

### Cleared OTC and Exchange-Traded Derivatives

Counterparty credit risk is mitigated by an intermediary for cleared OTC and exchange-traded derivative contracts. For these types of derivative investments, a clearinghouse interposes itself as counterparty to all trades and extends a guarantee that trades will be settled as originally intended and to ensure performance and margin requirements are imposed. The requirements are established with the intent to cover nearly all expected price changes based on market risk. Margin payments are settled daily based upon the price movements of the contracts, thereby significantly reducing counterparty credit risk.

### » Foreign Currency Spot and Forward Contracts

Foreign Currency Spot and Forward contracts are uncleared OTC agreements between two parties to exchange designated currencies at a specific time in the future. No cash is exchanged when a foreign exchange spot or forward contract is initiated. Depending upon market movements, forward contracts may require collateral postings either to SWIB or to counterparties. Spot contracts are exempt from collateralization. For deliverable contracts, amounts due are paid or received on the contracted settlement date. In other instances (most often in emerging markets), contracts are established as non-deliverable forwards (NDFs). Unlike deliverable contracts, NDFs are only settled in U.S. dollars.

Currency exposure management is permitted through the use of currency derivative instruments. Direct hedging of currency exposure back to the U.S. dollar is permitted when consistent with the strategy of the portfolio. Cross-currency exposure management seeking to transfer out of an exposed currency and into a benchmark currency is also permitted. SWIB may employ discretionary currency overlay strategies when currency market conditions suggest such strategies are warranted.

Losses may arise from future changes in the value of the underlying currency, or if the counterparties do not perform under the terms of the contract. Spot and forward contracts are valued daily with the changes in fair value included in "Net Increase (Decrease) in Fair Value of Investments" in the Statement of Changes in Fiduciary Net Position. The net receivable or payable for spot and forward contracts is reflected as "Foreign Currency Contracts" in the Statement of Fiduciary Net Position. The tables entitled Foreign Currency Spot and

Forward Contracts present the fair value of foreign currency spot and forward contract assets and liabilities held by the Retirement Funds as of December 31, 2022.

<b>Retirement Funds</b> <b>Foreign Currency Spot and Forward Contracts</b> <b>December 31, 2022</b> (In Thousands)			
<b>Currency</b>	<b>Notional (local currency)</b>	<b>Fair Value (\$U.S.)</b>	<b>Unrealized Gain(Loss) (\$U.S.)</b>
<b>Foreign Currency Contract Receivables</b>			
Australian Dollar	53,700	\$ 36,454	\$ 1,380
Brazilian Real	109,421	20,604	446
Canadian Dollar	189,050	139,534	(107)
Chilean Peso	7,986,798	9,334	865
Chinese Yuan Renminbi	139,537	20,250	495
Colombian Peso	178,022,783	36,323	280
Czech Republic Koruna	1,266,237	55,894	3,780
Danish Krone	69,050	9,917	276
Euro Member Countries	242,819	259,389	7,353
Hong Kong Dollar	66,312	8,498	9
Hungarian Forint	32,923,454	87,319	12,269
Indian Rupee	789,635	9,540	70
Indonesian Rupiah	300,828,917	19,447	284
Israeli Shekel	26,718	7,574	(231)
Japanese Yen	95,083,467	722,842	66,472
Mexican Peso	103,358	5,235	92
New Zealand Dollar	2,754	1,742	30
Norwegian Krone	1,337,380	136,030	3,238
Philippine Peso	904,991	16,212	(14)
Poland Zloty	207,080	47,138	5,158
Singapore Dollar	15,840	11,822	151
South African Rand	644,127	37,624	702
South Korean Won	15,243,701	12,135	472
Sweden Krona	3,766,191	362,607	552
Switzerland Franc	58,799	63,614	1,362
Taiwanese New Dollar	166,307	5,453	(66)
Thailand Baht	979,872	28,491	148
United Kingdom Pound	46,544	56,001	136
United States Dollar	1,378,473	1,378,473	0
<b>Total Receivables</b>		<b>\$ 3,605,496</b>	<b>\$ 105,602</b>



## FINANCIAL SECTION

**Retirement Funds**  
**Foreign Currency Spot and Forward Contracts**  
**December 31, 2022**  
(In Thousands)

<b>Currency</b>	<b>Notional (local currency)</b>	<b>Fair Value (\$U.S.)</b>	<b>Unrealized Gain(Loss) (\$U.S.)</b>
<b>Foreign Currency Contract Payables</b>			
Australian Dollar	(100,208) \$	(67,995) \$	(66)
Brazilian Real	(93,044)	(17,520)	(313)
Canadian Dollar	(172,753)	(127,504)	543
Chilean Peso	(15,494,228)	(18,061)	(534)
Chinese Yuan Renminbi	(407,708)	(59,169)	(1,253)
Colombian Peso	(82,693,266)	(16,933)	(491)
Czech Republic Koruna	(1,498,623)	(66,152)	(7,057)
Danish Krone	(67,858)	(9,740)	(43)
Euro Members Countries	(906,555)	(969,696)	(31,419)
Hong Kong Dollar	(65,290)	(8,366)	0
Hungarian Forint	(22,072,179)	(58,544)	(4,480)
Indian Rupee	(1,471,149)	(17,732)	111
Indonesian Rupiah	(81,797,400)	(5,290)	(105)
Israeli Shekel	(6,095)	(1,733)	51
Japanese Yen	(31,867,751)	(242,002)	(5,821)
Mexican Peso	(292,436)	(14,811)	169
New Zealand Dollar	(3,892)	(2,462)	(8)
Norwegian Krone	(536,268)	(54,473)	(652)
Philippine Peso	(2,292,332)	(41,064)	(90)
Poland Zioty	(244,281)	(55,608)	(1,741)
Singapore Dollar	(12,620)	(9,411)	(103)
South African Rand	(1,037)	(61)	0
South Korean Won	(9,658,948)	(7,687)	(202)
Sweden Krona	(578,154)	(55,511)	(398)
Switzerland Franc	(30,551)	(33,031)	(70)
Taiwan New Dollar	(1,222,838)	(40,093)	300
Thailand Baht	(1,451,545)	(42,205)	(917)
United Kingdom Pound	(60,017)	(72,201)	(9)
United States Dollar	(1,439,437)	(1,439,437)	0
Total Payables		<u>(3,554,492)</u>	<u>(54,598)</u>
Net		<u>\$ 51,004</u>	<u>\$ 51,004</u>

**» Futures Contracts**

A futures contract is an exchange-traded agreement to buy or sell a financial instrument, index, or commodity at an agreed upon price and specified date in the future.

The fair value of futures contracts represents the unrealized gain (loss) on the contracts, since trade inception, and is reflected as “Financial Futures Contracts” in the Statement of Fiduciary Net Position. Futures contracts are marked to market daily, based upon the closing market price of the contract at the board of trade or exchange on which they are traded. Gains and losses resulting from investments in futures contracts are included in the “Net Increase (Decrease) in Fair Value of Investments” in the Statement of Changes in Fiduciary Net Position.

Futures contracts involve, to varying degrees, risk of loss in excess of the margin deposited with the clearinghouse. Losses may arise from future changes in the value of the underlying instrument. Futures contracts may be entered into for purposes such as the following:

- To efficiently gain or adjust market exposures for rebalancing;
- To adjust sector, interest rate, or duration exposures; and
- To securitize cash or act as a substitute for cash market transactions.

The table entitled Futures Contracts presents the Retirement Funds investments in futures contracts as of December 31, 2022.

<b>Retirement Funds Futures Contracts As of December 31, 2022 (In Thousands)</b>				
<b>Futures Contract Description</b>	<b>Position</b>	<b>Expiration</b>	<b>Notional Amount</b>	<b>Fair Value*</b>
Commodity	Long	Jan 23 - Mar 24	\$ 386,628	\$ 4,603
	Short	Jan 23 - Dec 23	(232,891)	(3,787)
Currency	Long	Jan 23 - Mar 23	58,366	266
	Short	Jan 23 - Mar 23	(52,361)	(364)
Equity Index	Long	Mar 23	2,169,083	(47,262)
	Short	Jan 23 - May 23	(1,492,180)	38,418
Fixed Income	Long	Mar 23	4,607,044	(11,599)
	Short	Mar 23	(1,061,081)	16,081
Interest Rate	Short	Dec 23	(297,691)	579
<b>Total</b>			<b>\$ 4,084,917</b>	<b>\$ (3,065)</b>

\* Fair Value includes foreign currency gains (losses).

The table entitled Futures Contracts with Interest Rate Sensitivity presents the interest rate sensitivity of fixed income futures contracts as of December 31, 2022. Duration, which is stated in years, is the measure of price sensitivity of a fixed income security to an interest rate change of 100 basis points. Duration statistics presented in this table are weighted by the notional value of each position to compute an average duration for the contract types held.



## FINANCIAL SECTION

**Retirement Funds**  
**Futures Contracts with Interest Rate Sensitivity**  
**As of December 31, 2022**  
(In Thousands)

<b>Contract Type</b>	<b>Position</b>	<b>Notional Amount</b>	<b>Fair Value</b>	<b>Weighted Average Duration (Years)</b>
U.S. Treasury Notes	Long	\$ 3,627,843	\$ (5,867)	3.9
U.S. Treasury Notes	Short	(532,588)	2,113	2.8
U.S. Treasury Bonds	Long	979,201	(5,731)	15.7
U.S. Treasury Bonds	Short	(118,127)	4,431	14.5
Foreign Government Bonds	Short	(410,366)	9,536	5.4
Short-Term Interest Rate	Short	(297,691)	579	0.2
Total		<u>\$ 3,248,272</u>	<u>\$ 5,061</u>	

## » Options

An options contract gives the purchaser of the contract the right, but not the obligation, to buy (call) or sell (put) the security or index underlying the contract at an agreed upon price on or before the expiration date of the contract. The seller of the contract is subject to market risk, while the purchaser is subject to credit risk and market risk, to the extent of the premium paid to enter into the contract.

Trust fund rebalancing policies and certain portfolio investment guidelines permit the use of exchange-traded and OTC options. Investment guidelines allow options to be used to improve market exposure efficiency, enhance expected returns, or provide market exposure hedges. Exchange rules require that the seller of short exchange-traded option contracts cover these positions either by collateral deposits in the form of cash or by pledging, in escrow, the actual securities that would be transferred to the contract purchaser in the event the options contract was exercised. In the case of OTC options, investment guidelines mitigate counterparty credit risk by establishing minimum credit ratings and requiring master netting agreements with provisions for collateral exchanges.

The fair value of option contracts is based upon the closing market price of the contract and is reflected as "Options Contracts" in the Statement of Fiduciary Net Position. Gains and losses as a result of investments in option contracts are included in the "Net Increase (Decrease) in Fair Value of Investments" in the Statement of Changes in Fiduciary Net Position. The table entitled Options Contracts presents the fair value of option contracts as of December 31, 2022.

**Retirement Funds**  
**Options Contracts**  
**As of December 31, 2022**  
(In Thousands)

<b>Description</b>	<b>Contract Type</b>	<b>Position</b>	<b>Exchange-Traded (EXCH) vs. OTC</b>	<b>Expiration</b>	<b>Notional</b>	<b>Fair Value</b>	<b>Unrealized Gain (Loss)</b>
Equity	CALL	Long	EXCH	Jan 23 - Jun 23	\$ 2,089	\$ 179	\$ 6
Equity	CALL	Short	EXCH	Jan 23 - Jun 23	(24,236)	(248)	710
Equity	PUT	Short	EXCH	Jan 23 - Jun 23	(3,451)	(33)	43
Total					<u>\$ (25,598)</u>	<u>\$ (102)</u>	<u>\$ 759</u>

**» Swaps**

Swaps are negotiated contractual agreements between two parties which can be either cleared or uncleared OTC investments. As specified in SWIB's investment guidelines, swaps may be used as an alternative to physical securities when it is deemed advantageous for portfolio construction. In addition, swaps may be used to adjust asset class exposures for the Retirement Funds. Guideline limits and soft risk parameters for each portfolio are applied to the aggregate exposures which includes both physical and synthetic securities. A synthetic security is a security or combination of securities that mirrors the properties of another reference security.

Throughout the calendar year, the Retirement Funds held positions in Total Return Swaps (TRS), Interest Rate Swaps (IRS), and Credit Default Swaps (CDS). The table entitled Open Swap Positions lists the open swap contracts held as of December 31, 2022.

**Retirement Funds  
Open Swap Positions  
As of December 31, 2022  
(In Thousands)**

Type	Maturity Date	Reference Rate	Notional Amount	Fair Value	Unrealized Gain (Loss)
Credit Default	Jun-27	N/A <sup>1</sup>	\$ 24,750	\$ 472	\$ 143
Credit Default	Jun-27	N/A <sup>2</sup>	(23,750)	(492)	(463)
Credit Default	Dec-27	N/A <sup>1</sup>	100,500	5,614	(3,113)
Credit Default	Dec-27	N/A <sup>2</sup>	(1,015,000)	(8,121)	(11,479)
Interest Rate <sup>3</sup>	Jan-25	Pay Floating BRL-CDL, Receive Fixed 12.93	7,122	29	29
Interest Rate <sup>3</sup>	Jun-27	Pay Floating 6-Month PLN-WIBOR, Receive Fixed 4.97	3,019	(141)	110
Interest Rate <sup>3</sup>	Sep-27	Pay Floating 3-Month ZAR-JIBAR, Receive Fixed 8.00	13,304	(108)	(64)
Interest Rate <sup>3</sup>	Sep-27	Receive Fixed 3.64, Pay Floating 3-Month KRW-CD 91D	9,648	(14)	30
Interest Rate <sup>3</sup>	Sep-27	Receive Fixed 5.49, Pay Floating 6-Month PLN-WIBOR	5,009	140	140
Interest Rate <sup>3</sup>	Sep-27	Receive Fixed 6.55, Pay Floating 6-Month PLN-WIBOR	16,090	(432)	(443)
Interest Rate <sup>3</sup>	Sep-27	Receive Fixed 7.49, Pay Floating 3-Month ZAR-JIBAR	7,505	209	(118)
Interest Rate <sup>3</sup>	Oct-27	Pay Floating 6-Month PLN-WIBOR, Receive Fixed 6.83	2,265	59	59
Interest Rate <sup>3</sup>	Oct-27	Pay Floating 6-Month PLN-WIBOR, Receive Fixed 7.90	5,008	347	347
Interest Rate <sup>3</sup>	Nov-27	Pay Floating 3-Month ZAR-JIBAR, Receive Fixed 8.17	4,898	(9)	(9)
Interest Rate <sup>3</sup>	Dec-27	Pay Floating 1W CNY Fixed Repo Rate, Receive Fixed 2.68	6,181	(31)	(31)
Interest Rate <sup>3</sup>	Dec-27	Pay Floating 28D MXN-TIIE, Receive Fixed 8.95	4,592	24	(28)
Interest Rate <sup>3</sup>	Dec-27	Pay Floating 28D MXN-TIIE, Receive Fixed 9.35	4,315	91	92
Interest Rate <sup>3</sup>	Dec-27	Pay Floating 28D MXN-TIIE, Receive Fixed 8.54	3,776	(43)	(43)
Interest Rate <sup>3</sup>	Dec-27	Pay Floating 3-Month MYR-KLIBOR, Receive Fixed 4.06	6,266	85	85
Interest Rate <sup>3</sup>	Dec-27	Pay Floating 3-Month MYR-KLIBOR, Receive Fixed 4.37	6,992	191	191
Interest Rate <sup>3</sup>	Dec-27	Receive Floating 3-Month ZAR-JIBAR, Pay Fixed 8.86	5,285	(130)	(111)
Interest Rate <sup>3</sup>	Mar-28	Pay Floating 28D MXN-TIIE, Receive Fixed 8.48	3,525	(31)	(52)
Interest Rate <sup>3</sup>	Nov-32	Pay Floating 3-Month ZAR-JIBAR, Receive Fixed 9.16	2,830	3	3
Interest Rate <sup>3</sup>	Dec-32	Receive Floating 6-Month CZK-PRIBOR, Pays Fixed 5.43	3,974	(255)	(255)
Interest Rate <sup>3</sup>	Mar-33	Pay Floating 28D MXN-TIIE, Receive Fixed 8.25	2,372	(64)	(64)
Interest Rate <sup>3</sup>	Jan-25	Pay Floating BRL-CDI, Receives Fixed 11.67	11,034	(178)	(178)



## FINANCIAL SECTION

Type	Maturity Date	Reference Rate	Notional Amount	Fair Value	Unrealized Gain (Loss)
Interest Rate <sup>3</sup>	Jan-27	Pay Floating BRL-CDI, Receives Fixed 12.64	\$ 2,435	\$ (5)	\$ (5)
Interest Rate <sup>3</sup>	Mar-28	Receive Floating CLP-ICP, Pay Fixed 5.26	3,414	40	40
Interest Rate <sup>3</sup>	Mar-28	Receive Floating CLP-ICP, Pay Fixed 5.38	2,260	15	15
Interest Rate <sup>3</sup>	Dec-32	Receive Floating CLP-ICP, Pay Fixed 6.74	2,514	(277)	(277)
Total Return	Jan-23	Receive 1-Day Fed Fund plus Spread, Pay Equity Index Return	230,867	(2,067)	(2,067)
Total Return	Jan-23	Receive Equity Index Return, Pay 1-Day Fed Fund plus Spread	45,064	672	672
Total Return	Jan-23	Pay 1-Day U.S. SOFR plus Spread, Receive Equity Index Return	(138,316)	5,472	5,472
Total Return	Feb-23	Pay 1-Day Fed Fund plus Spread, Receive Equity Index Return	(162,307)	6,008	6,008
Total Return	Feb-23	Pay 1-Day U.S. SOFR plus Spread, Receive Equity Index Return	(371,345)	0	0
Total Return	Mar-23	Pay 1-Day U.S. SOFR plus Spread, Receive Equity Index Return	(498,948)	(1,121)	(1,121)
Total Return	Mar-23	Pay 1-Day Fed Fund plus Spread, Receive Equity Index Return	(46,241)	(667)	(667)
Total Return	Apr-23	Pay 1-Day U.S. SOFR plus Spread, Receive Equity Index Return	(384,367)	(400)	(400)
Total Return	May-23	Pay 1-Day U.S. SOFR plus Spread, Receive Equity Index Return	(274,677)	(311)	(311)
Total Return	Jun-23	Pay 1-Day Fed Fund plus Spread, Receive Equity Index Return	(95,653)	691	691
Total Return	Jun-23	Pay 1-Day U.S. SOFR plus Spread, Receive Equity Index Return	(569,156)	9,803	9,803
Total Return	Jul-23	Pay 1-Day Fed Fund plus Spread, Receive Equity Index Return	(92,840)	1,992	1,992
Total Return	Jul-23	Pay 1-Day U.S. SOFR plus Spread, Receive Equity Index Return	(469,431)	(3,563)	(3,563)
Total Return	Aug-23	Pay 1-Day Fed Fund plus Spread, Receive Equity Index Return	(45,144)	(234)	(234)
Total Return	Aug-23	Pay 1-Day U.S. SOFR plus Spread, Receive Equity Index Return	(414,270)	(24,357)	(24,358)
Total Return	Sep-23	Receive 1-Day Fed Fund plus Spread, Pay Equity Index Return	394,333	9,149	9,149
Total Return	Sep-23	Pay 1-Day Fed Fund plus Spread, Receive Equity Index Return	(402,769)	(5,989)	(5,989)
Total Return	Sep-23	Pay 1-Day U.S. SOFR plus Spread, Receive Equity Index Return	(497,319)	25,939	25,939
Total Return	Oct-23	Pay 1-Day U.S. SOFR plus Spread, Receive Equity Index Return	(511,112)	(30,052)	(30,051)
Total Return	Nov-23	Pay 1-Day U.S. SOFR plus Spread, Receive Equity Index Return	(190,494)	(1,446)	(1,446)
Total Return	Jan-24	Pay 1-Day U.S. SOFR plus Spread, Receive Equity Index Return	(92,547)	4,178	4,178
Total Return	Feb-24	Pay 1-Day U.S. SOFR plus Spread, Receive Equity Index Return	(46,310)	(200)	(200)
Total Return	May-24	Pay 1-Day U.S. SOFR plus Spread, Receive Equity Index Return	(200,858)	(11,810)	(11,810)
Total Return	Jul-24	Pay 1-Day Fed Fund plus Spread, Receive Equity Index Return	(204,101)	(1,549)	(1,549)
Total			<u>\$ (5,805,808)</u>	<u>\$ (22,874)</u>	<u>\$ (35,311)</u>

<sup>1</sup> SWIB sold credit protection in exchange for periodic payments.

<sup>2</sup> SWIB bought credit protection in exchange for periodic payments.

<sup>3</sup> Denotes instrument is highly sensitive to interest rate changes.

Open CDS contracts represent cleared OTC positions where SWIB gains exposure to credit protection. Under the terms of the contract, SWIB receives or pays periodic payments and, in exchange, agrees to pay or receive a formula-driven amount to counterparties for losses incurred if stipulated credit events occur. CDS spreads are sensitive to credit spread and interest rate changes. The fair value of a CDS is determined using the closing price as reported by the applicable clearinghouse.

IRS positions represent cleared OTC contracts where fair value is determined using the closing price as reported by the applicable clearinghouse. IRS positions are sensitive to changes in interest rates. One stream of future interest payments is exchanged for another between counterparties. In most cases, interest rate swaps include the exchange of a fixed interest rate for a floating rate.

The open TRS contracts represent uncleared OTC positions where SWIB gains exposure to the return of the underlying equity index and, in exchange, agrees to pay or receive the stipulated rate benchmark, plus or minus a spread. The rate benchmark is based on the 1-day Fed Funds Rate set by the Federal Open Market Committee (FOMC), or the 1-day U.S. Secured Overnight Financing Rate (SOFR) published by the Federal Reserve of New York and is sensitive to interest rate changes. The fair value of a TRS is based on the change in quoted market price of the underlying equity index and represents the unrealized gain (loss) on the contracts since trade inception.

The fair value of CDS, IRS, and TRS is reflected as "Swaps" in the Statement of Fiduciary Net Position. Gains and losses resulting from investments in swap contracts are included in the "Net Increase (Decrease) in Fair Value of Investments" in the Statement of Changes in Fiduciary Net Position. Any interest owed but not yet paid relating to swap contracts is reported within "Investment Payables" in the Statement of Fiduciary Net Position. Interest expense relating to swap contracts is reported as "Investment Expense" in the Statement of Changes in Fiduciary Net Position.

### » *To Be Announced Securities*

TBA mortgage-backed securities are uncleared OTC forward contracts consisting of mortgage-backed securities (MBS) issued by Government National Mortgage Association, a government entity, and by government-sponsored enterprises such as the Federal National Mortgage Association or the Federal Home Loan Mortgage Corp. The term TBA is derived from the fact that the actual MBS that will be delivered to fulfill a TBA trade is not designated at the time the trade is made. Instead, the specific pool of mortgages comprising the MBS is announced 48 hours prior to the established trade settlement date. Eligibility rules and standards for MBS pools deliverable into TBA contracts ensure that delivered MBS pools are fungible. Payment for TBA securities is not made until the settlement date.

Certain portfolio investment guidelines allow for both long and short TBA positions. To mitigate counterparty credit risk, guidelines establish minimum credit ratings and require master netting agreements which include provisions for collateral exchanges.

TBAs, much like their underlying MBS securities, may be highly sensitive to interest rate changes. This is because the MBS pool on which these forward contracts are based can be subject to early payment in a period of declining interest rates. The price of TBAs can fluctuate as the marketplace predicts changes in timing, or possible reductions in expected cash flows, associated with a change in interest rates. The table entitled TBA Contracts includes the interest rate sensitivity of TBA contracts as of December 31, 2022. Duration, which is stated in years, is the measure of price sensitivity of a fixed income security to an interest rate change of 100 basis points. Duration statistics presented in this table are weighted by the fair value of each position to compute an average duration for the contracts held.



## FINANCIAL SECTION

**Retirement Funds  
TBA Contracts  
As of December 31, 2022  
(In Thousands)**

<b>Position</b>	<b>Contract Maturity</b>	<b>Fair Value</b>	<b>Unrealized Gain (Loss)</b>	<b>Weighted Average Duration (Years)</b>
Long	Jan - Mar 23	\$ 1,547,400	\$ (5,748)	6.9
Short	Jan - Feb 23	(284,200)	1,129	7.8
Total		<u>\$ 1,263,200</u>	<u>\$ (4,619)</u>	

The fair value of TBAs is reflected in "To Be Announced Securities" in the Statement of Fiduciary Net Position. The unrealized gain (loss) associated with these contracts is included within the "Net Increase (Decrease) in Fair Value of Investments" in the Statement of Changes in Fiduciary Net Position.

### » Warrants

A warrant is a contract that entitles the holder to buy the underlying stock of the issuing company at a specified price. Warrants and options are similar as both allow the holder special rights to buy securities. However, warrants differ from options in that they provide additional financing to the issuing company when exercised. As of December 31, 2022, SWIB held warrant contracts valued at \$0.4 million. Warrants are included in the "Equities" section in the Statement of Fiduciary Net Position. The associated unrealized loss of \$1.3 million is included in the "Net Increase (Decrease) in Fair Value of Investments" in the Statement of Changes in Fiduciary Net Position.

### » Securities Lending Transactions

State statutes and Board policies permit SWIB to use investments of the Retirement Funds to enter into securities lending transactions. These transactions involve the lending of securities to broker-dealers and other entities in exchange for collateral, in the form of cash or securities, with the simultaneous agreement to return the collateral for identical securities in the future. SWIB utilizes agents to lend the Retirement Funds' directly held domestic and international securities. When the Retirement Funds' securities are delivered to a borrower as part of a securities lending agreement, the borrower is required to place collateral with the lending agent equal to at least 102% of the loaned securities' fair value, including interest accrued, as of the delivery date, if the securities and the collateral are denominated in the same currency. If securities are loaned against collateral denominated in a different currency, the borrower is required to place collateral with the lending agent totaling at least 105% of the loaned securities' fair value, including interest accrued, as of the delivery date. Collateral is marked to market daily and adjusted as needed to maintain the required minimum level. Pledging or selling non-cash collateral securities cannot be done without a borrower default. On December 31, 2022, the fair value of the securities on loan to counterparties was approximately \$13.6 billion.

Cash collateral is reinvested by the lending agents in either a U.S. dollar cash collateral pool or a pool denominated in Euros. These pools are administered in accordance with contractual investment guidelines which are designed to minimize the risk of principal loss and provide a modest rate of return. Investment guidelines limit credit and liquidity risk by restricting new investments to repurchase agreements collateralized with high quality U.S. government, U.S. government agencies, and sovereign debt securities. To further reduce credit risk, in addition to maintaining collateral greater than 100% of the loaned securities, SWIB's agents provide indemnification to SWIB against counterparty default. The earnings generated from the collateral investments or fees, plus or minus the rebates received from or paid to the dealers and less fees paid

to agents, results in the net earnings from lending activities, which are then split on a percentage basis with the lending agent. Cash from the U.S. dollar pool may be posted as collateral relating to short sale transactions and it earns the Overnight Bank Funding rate plus 10 basis points. Additional information relating to short sales is discussed later in this note. As of December 31, 2022, one of SWIB's securities lending agents released \$3.7 billion in cash from the Invested Securities Lending Collateral pool to SWIB. The cash released is used to provide liquidity for other investment strategies. The Securities Lending Collateral Liability is fully collateralized when the cash released is combined with the Invested Securities Lending Collateral.

As of December 31, 2022, the Retirement Funds had minimal credit risk exposure to borrowers as loans are collateralized in excess of 100%. In addition to the cash collateral reinvestment indemnification, the contracts with the lending agents require indemnification for the Retirement Funds if the borrowers fail to return the loaned securities and the collateral is inadequate to replace the securities lent. The Retirement Funds are also indemnified against losses resulting from violations of investment guidelines.

The majority of security loans are open-ended and can be terminated on demand by the Retirement Funds or the borrower. Maturities of investments made with cash collateral are not necessarily matched to the maturities of the securities loaned because most loans do not have a fixed maturity date. The risk that SWIB would be unable to return collateral to securities borrowers upon termination of the loan is mitigated by the highly liquid nature of investments held in the collateral reinvestment pools and investments held by SWIB. The average maturities of the loans and the average maturities of the assets held in the collateral reinvestment pools were similar as of December 31, 2022.

Securities lending is allowed in certain commingled fund investments. As an investor in such funds, SWIB does not own the underlying securities. External asset managers of commingled funds manage securities lending activity for all investors within the fund and do not separately report on securities lending activity. Earnings of these commingled funds are reported in the Statement of Changes in Fiduciary Net Position as "Net Increase (Decrease) in Fair Value of Investments."

### » *Short Sell Obligations*

The Retirement Funds may sell a security it does not own in anticipation of purchasing the security later at a lower price. This is known as a short sale transaction. For the duration of the short sale transaction, a liability is recorded under "Short Sell Obligations" in the Statement of Fiduciary Net Position. The liability presented in the Statement of Fiduciary Net Position represents the fair value of the shorted securities necessary for delivery to the purchaser and is marked to market daily. Realized and unrealized gains and losses associated with short sales are recorded in the Statement of Changes in Fiduciary Net Position, in the "Net Increase (Decrease) in Fair Value of Investments" account. Prior to executing a short sale, SWIB borrows the security from a party currently holding it. While the transaction is open, the Retirement Funds incur expenses for securities borrowing costs. In addition, as a security borrower, the Retirement Funds may incur dividend and interest expense and such payments must be remitted to the security lender during the loan. During the duration of the borrow, there may be corporate action elections requiring the borrower to deliver items such as cash or securities to the lender. Expenses resulting from short sales are included in "Investment Expense" in the Statement of Changes in Fiduciary Net Position.

Risks arise from short sales due to the possible illiquidity of the securities markets and from potential adverse movements in security values. The cost to acquire the securities sold short may exceed the amount of proceeds initially received, as well as the amount of the liability recorded as "Short Sell Obligations" in the Statement of Fiduciary Net Position. Short sales expose the short seller to potentially unlimited liability as there is no upward limit on the price a shorted security can reach. Certain portfolio guidelines permit short sales and mitigate risks in various ways, including limiting the total value of short sales as a percentage of



## FINANCIAL SECTION

portfolio value, establishing portfolio versus benchmark tracking error limits, and monitoring other statistical and economic risk measures of the portfolio. Investment performance and risk associated with each portfolio are measured against benchmarks and monitored by management.

When a short sale occurs, the shorting portfolio must borrow the security and deliver it to the buyer. If the shorted security is owned by another Retirement Fund portfolio, investment policies allow the borrowing of the shorted securities from other Retirement Fund portfolios, including inter-fund borrowings. In addition to borrowing securities from existing Retirement Fund portfolios, SWIB may borrow securities from external sources. These borrowings are facilitated by SWIB's custodian.

Except in the case of borrowings within the same trust fund, the Retirement Funds are required to post collateral to the lender, at the required rate of 102% for in-currency loans and 105% for cross-currency loans. The Retirement Funds posted \$96.2 million in cash and \$2.1 billion in securities as collateral to security lenders representing \$22.3 million in excess of the fair market value of the securities borrowed as of December 31, 2022. If the security lender recalled the security and SWIB was not able to supply the lender with the security, the lender would be permitted to use SWIB's collateral to fund the purchase of the security.

### » *Investment Policy and Asset Allocation*

As part of its fiduciary responsibilities, SWIB is required by Wis. Stat. § 25.15 (2)(b) "to diversify investments in order to minimize the risk of large losses, unless under the circumstances it is clearly prudent not to do so, considering each trust's or fund's portfolio as a whole at any point in time." SWIB exercises this duty in part by establishing its investment policy and by setting the asset allocation.

SWIB's Board of Trustees has established the asset allocation pursuant to a comprehensive and ongoing evaluation of the appropriate risk and return standards for each fund under management. The Board of Trustees consists of nine members meeting specific requirements as follows:

- Six Governor-appointed and State Senate-approved members, including:
  - Four with at least ten years investment experience;
  - One with at least ten years financial experience and who works for a local government participant in the Local Government Investment Pool; and
  - One additional member;
- Educator participant in the WRS appointed by the Teachers Retirement Board;
- Non-educator participant in the WRS appointed by the Wisconsin Retirement Board; and
- Secretary of the Department of Administration or designee.

The Board-approved investment policy for the WRS is intended to assist in development of a diversified portfolio of investments within acceptable risk parameters. The policy represents a delegation of standing authority to the SWIB's Executive Director/Chief Investment Officer and investment managers within the organization to make prudent investments within the investment guidelines, pursuant to Wis. Stat. § 15.02 (4) and Wis. Stat. § 25.15 (2) and Wisconsin Administrative Code IB 2.02.

Additionally, the Investment Committee (IC) was created to provide oversight of SWIB investments within the parameters established by the Board of Trustees. Oversight includes analysis of risk and investment returns of the portfolios, asset classes, and Core and Variable Funds. The IC is responsible for proposing to the Board of Trustees changes to the WRS investment policy, approving investment guidelines or strategies for internally-managed portfolios, approving the general strategies for each asset class, and for approving new investment and derivative instruments. The Board of Trustees reserves all rights to modify and amend IC guidelines at any time at its discretion.

The IC approved WRS Investment Guidelines include several policies, including a derivatives use policy, rebalancing procedures, and a leverage use policy. The derivatives use policy sets forth the objectives, monitoring, and reporting guidelines relating to derivative investments. The rebalancing procedures used in both mandatory and discretionary asset class rebalancing are described in the Investment Guidelines, and the leverage use policy describes SWIB's leverage philosophy. The total amount of policy leverage is approved by the Board of Trustees through the WRS asset allocation process.

The Board adopts the Retirement Funds' asset allocation policy, based on recommendations by the IC, the Board's asset allocation consultant, Executive Director/Chief Investment Officer, and Head Economist & Asset and Risk Allocation Chief Investment Officer. SWIB undertakes a comprehensive review of its strategic asset allocation plan every other year, including asset/liability modeling, to determine a suitable target allocation for each asset class included in the Core and Variable Funds, and an annual review to assess whether any interim adjustments should be made. The strategic nature of these reviews contemplates a long-term time horizon over which potential results are evaluated. This exercise is not an attempt to predict short-term market movements, but an effort to understand the long-term impacts of poor, normal, and above average market results.

In addition to potential future market impact, SWIB also contemplates the objectives of the funds, the impact of actuarial analysis, and the soundness of investment return and risk expectations. SWIB's asset allocation policies reflect the Board's program of risk allocation that involves reducing equity exposure by leveraging lower volatility assets, such as fixed income securities. This investment strategy results in Core Fund strategic targets which exceed 100% of invested assets. Currently, the Board has approved an asset allocation target of 15% policy leverage for the Core Fund subject to an allowable range of up to 20%.

SWIB's asset allocation review process also includes assumptions regarding expected rates of return. Long-term (e.g. 30-year) expected real rates of return on pension plan investments are determined using a building block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected real rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

The table entitled Asset Allocation Targets and Expected Returns presents the policy asset allocation targets and the best estimates of expected geometric rates of return for each major asset class as of December 31, 2022. In determining asset allocation targets, investments may be categorized differently than they are within the financial statements. The financial statements generally include more detail on types of assets when compared to asset allocation targets. For example, SWIB management considers inflation-sensitive assets separately from other fixed income investments for asset allocation purposes. During 2022, SWIB discontinued the use of the Multi-Asset category for asset allocation and investment performance reporting; however, the category is still used for financial statement purposes for representing SWIB's hedge fund investments.



## FINANCIAL SECTION

**Retirement Funds**  
**Asset Allocation Targets and Expected Returns<sup>1</sup>**  
**As of December 31, 2022**

<b>Core Fund Asset Class</b>	<b>Asset Allocation %</b>	<b>Long-Term Expected Nominal Rate of Return %</b>	<b>Long-Term Expected Real Rate of Return %<sup>2</sup></b>
Public Equity	48 %	7.6 %	5.0 %
Public Fixed Income	25	5.3	2.7
Inflation Sensitive Assets	19	3.6	1.1
Real Estate	8	5.2	2.6
Private Equity/Debt	15	9.6	6.9
Total Core Fund <sup>3</sup>	<u>115 %</u>	7.4 %	4.8 %
<b>Variable Fund Asset Class</b>			
U.S. Equities	70 %	7.2 %	4.6 %
International Equities	30	8.1	5.5
Total Variable Fund	<u>100 %</u>	7.7 %	5.1 %

<sup>1</sup>Asset allocations are managed within established ranges; target percentages may differ from actual monthly allocations.

<sup>2</sup>New England Pension Consultants Long Term U.S. CPI (Inflation) Forecast: 2.5%.

<sup>3</sup>The investment policy used for the Core Fund involves reducing equity exposure by leveraging lower-volatility assets, such as fixed income securities. This results in an asset allocation beyond 100%. Currently, an asset allocation target of 15% policy leverage is used, subject to an allowable range of up to 20%.

### » Annual Money-Weighted Rate of Return

Money-weighted rate of return expresses investment performance, net of pension plan investment expense, adjusted for the changing amounts actually invested. For the year ended December 31, 2022, the money-weighted rate of return for the Core Fund was (12.94)% and (18.02)% for the Variable Fund.

## 4 DESCRIPTION OF THE WISCONSIN RETIREMENT SYSTEM

The WRS is a cost-sharing, multiple-employer public employee retirement system established by the State of Wisconsin to provide pension benefits for state and local government employees. WRS benefits and other plan provisions are established by Wis. Stat. § 40. Benefit terms may only be modified by legislation. ETF, under the direction of the ETF Board, is responsible for the administration of the WRS.

### » Employee Trust Funds Board

The ETF Board has general oversight of ETF, appoints the ETF Secretary, and oversees administration of the benefit programs, other than group insurance and deferred compensation. The ETF Board is comprised of 13 members, including:

- The Governor or the Governor's designee on the Group Insurance Board;
- The Administrator of the Department of Administration's Division of Personnel Management or the Administrator's designee;



- Four members appointed by the Teachers Retirement Board (an advisory board to the ETF Board);
- Four members appointed by the Wisconsin Retirement Board (an advisory board to the ETF Board);
- A public member who is not a participant in or beneficiary of the WRS, with at least 5 years of experience in actuarial analysis, administration of an employee benefit plan or significant administrative responsibility in a major insurer;
- A WRS annuitant; and
- A participant in the WRS who is a technical college or public school district educational support personnel employee.

» *WRS Employers*

The WRS is open to all public employers in Wisconsin. Participation is optional, except that participation is mandatory for school districts with respect to teachers, some municipalities with respect to police and firefighters, and all counties except Milwaukee County. As of December 31, 2022, the number of participating employers was:

State Agencies, UW and Public Authorities	56
Cities	189
Counties	71
Villages	298
Towns	306
School Districts	421
Cooperative Educational Service Agencies	12
Wisconsin Technical College System Districts	16
Special Districts	<u>217</u>
Total Employers	<u><u>1,586</u></u>



## FINANCIAL SECTION

» *WRS Membership*

All eligible employees of a participating employer who are expected to work at least 1,200 hours per year (880 hours per year for teachers and school district educational support employees) must be covered by the WRS. As of December 31, 2022, the WRS membership consisted of:

<b>Current Employees:</b>	
General	133,569
Teachers	103,860
Elected/Executive/Judges	1,242
Protective with Social Security	19,008
Protective without Social Security	2,825
Total Current Employees	260,504
<b>Inactive Participants:</b>	
Terminated Participants	181,536
Alternate Payees	3,481
Total Inactive Participants*	185,017
<b>Retirees and Beneficiaries Currently Receiving Benefits:</b>	
Retirement Annuitants	224,644
Disability Annuitants	6,260
Death Beneficiary Annuitants	1,480
Total Annuitants	232,384
Total Participants	677,905

\*Approximately 1,370 inactive participants are receiving Long-Term Disability Insurance benefits.

» *WRS Benefits*

The WRS provides retirement benefits as well as death and disability benefits. Vesting requirements have changed over time, as follows:

- Participants in the system prior to January 1, 1990 were fully vested at the time they met participation requirements;
- For participants entering the system from January 1, 1990, to April 23, 1998, creditable service in each of five years was required for vesting;
- All active participants in the system at any time from April 24, 1998 to June 30, 2011 are fully vested; and
- 2011 Wisconsin Act 32 generally requires participants hired on or after July 1, 2011 to have five years of creditable service to be vested.



Employees who retire at or after age 65 (54 for protective occupations and 62 for elected officials and executive service retirement plan participants, if hired on or before 12/31/2016) are entitled to a retirement benefit based on a formula factor, their final average earnings, and creditable service. Formula factors are shown in the table below:

Employment Category	Service Before 1/1/2000	Service Between 2000 and 2011	Service After 2011
General and Teachers	1.765%	1.6%	1.6%
Executive and Elected	2.165	2.0*	1.6*
Protective with Social Security	2.165	2.0	2.0
Protective without Social Security	2.665	2.5	2.5

\*2011 Wisconsin Act 10 changed the Executive and Elected formula factor from 2.0% to 1.6%. The effective date of the change varies among different employee categories, and generally applies to the service earned after Act 10 effective date (i.e. June 29, 2011).

Final average earnings is the average of the participant's three highest annual earnings periods. Creditable service includes current service and prior service for which a participant received earnings and made contributions as required. Creditable service also includes creditable military service. The retirement benefit will be calculated as a money purchase benefit based on the member's contributions plus matching employer's contributions, with interest, if that benefit is higher than the formula benefit.

Vested participants may retire at or after age 55 (50 for protective occupations) and receive an actuarially-reduced benefit. Participants terminating covered employment prior to eligibility for an annuity may either receive member-required contributions plus interest as a separation benefit or leave contributions on deposit and defer application until eligible to receive a retirement benefit.

### » *Post-Retirement Adjustments*

The Employee Trust Funds Board may periodically adjust annuity payments from the retirement system based on annual investment performance in accordance with Wis. Stat. § 40.27. An increase (or decrease) in annuity payments may result when investment gains (losses), together with other actuarial experience factors, create a surplus (shortfall) in the reserves, as determined by the system's consulting actuary. Annuity increases are not based on cost of living or other similar factors. For Core Fund annuities, decreases may be applied only to previously granted increases. By law, Core Fund annuities cannot be reduced to an amount below the original, guaranteed amount (the "floor") set at retirement.



## FINANCIAL SECTION

The Core and Variable Fund annuity adjustments granted during the past 10 years are as follows:

Year	Core Fund Adjustment	Variable Fund Adjustment
2013	(9.6)%	9.0 %
2014	4.7	25.0
2015	2.9	2.0
2016	0.5	(5.0)
2017	2.0	4.0
2018	2.4	17.0
2019	0.0	(10.0)
2020	1.7	21.0
2021	5.1	13.0
2022	7.4	15.0

The negative Core Fund annuity adjustment in 2013 was primarily due to the Fund's \$21.0 billion investment decline in 2008, caused by the global economic crisis. Core Fund gains and losses are recognized over a five-year period.

### » Long-Term Receivables

The "Prior Service Contributions Receivable" in the Statement of Fiduciary Net Position represents the WRS unfunded actuarial accrued liability (UAAL), determined under the plan's Frozen Initial Liability funding methodology. This liability is being amortized as a level percentage of payroll over a 40-year period beginning January 1, 1990, for employers in the WRS prior to 2009. The remaining balance is expected to be fully amortized by December 31, 2029. Liabilities for employers joining the WRS beginning in 2009 are amortized over 30 years. Interest is assessed on the outstanding liability at year-end at the assumed earnings rate. The level-percentage-of-payroll amortization method results in a relatively lower dollar contribution in earlier years than in later years, when payrolls have increased. During the early years of the amortization period, payments made are less than annual interest assessments, resulting in an increase in the liability. As payrolls increase annually, prior service payments increase proportionally until they exceed annual interest and ultimately fully liquidate the liability at the end of the amortization period. State law requires the accrued retirement cost to be funded. As of December 31, 2022 the receivable balance was \$5.1 million.

### » Variable Retirement Option

Prior to 1980, WRS participants could opt to have half of their required contributions and matching employer contributions invested in the Variable Fund. Retirement benefits were adjusted for the difference between the investment experience of the Core Fund and the Variable Fund. Provisions for allowing members to withdraw from the Variable Fund were added with the passage of Chapter 221, Laws of 1979. The Variable Fund was closed to new membership after April 30, 1980. 1999 Wisconsin Act 11 reopened the Variable Fund for existing and future participants, effective January 1, 2001. As of December 31, 2022, there were 49,629 active and inactive members and 43,007 annuitants participating in the Variable Fund.

### » *Municipal Police and Firefighters Pension Group*

As of March 31, 1978, administration of certain local funds for police officers and firefighters was assumed by the Wisconsin Retirement Fund. This included approximately 2,000 members. As of December 31, 2022, approximately 14 annuitants or their beneficiaries remained in the system. This group was closed to new members after January 1, 1948.

The liability for retirement benefits for these annuitants is funded by the employers, as benefit payments are made. Annuity reserves for these police and firefighter annuities are established by a transfer from the employer accumulation reserve at the time the annuity is approved. Earnings on these reserves are used to fund annuity adjustments on the same basis as for WRS annuitants. The unfunded liability for these annuitants as of December 31, 2022 was \$0.3 million.

### » *Annuity Supplement - General Fund*

As authorized under 1985 Wis. Stat. § 40.27 (1), the State's General Fund provides certain supplemental annuity benefits to annuitants receiving a continuing annuity on or before September 1974. The benefit is subject to continuation of the appropriation by the Legislature. ETF serves as a clearing agent for its payment. Total supplemental annuity benefits paid were approximately \$37,000 in 2022.

## 5 CONTRIBUTIONS REQUIRED AND MADE

### » *Required Contributions*

WRS contribution rates are determined by the "entry age normal with a frozen initial liability" actuarial method. This is a "level contribution" actuarial method intended to keep employer and member contribution rates at a level percentage of payroll over the years. This method determines the amount of contributions necessary to fund: 1) the current service cost, which represents the estimated amount necessary to pay for benefits earned by the members during the current service year plus actuarial gains or losses arising from the difference between actual and assumed experience; and 2) the prior service cost, which represents the estimated amount necessary to pay for unfunded benefits earned prior to the employer becoming a participating employer in the WRS and the past service cost of benefit improvements. The 2022 contribution requirements were determined by the December 31, 2020 actuarial valuation.

Member contributions are deducted from the member's salary and remitted to ETF by the participating employer. Employers generally may not pay the member-required contribution. The member-required contribution is one-half of the actuarially-determined contribution rate for General category members, which includes teachers and members in the Executive and Elected Official category. By statute, member required contributions for Protective occupation category members are the same rate as General category members. Employers are required to contribute the remainder of the actuarially determined contribution rate.



## FINANCIAL SECTION

**Contribution rates in effect during 2022 by employment category**

Employment Category	Employer Current	Employer Prior *	Member	Total
General, Teachers, Executive and Elected Officials	6.50 %	0.00 %	6.50 %	13.00 %
Protective Occupation with Social Security	12.00	0.02	6.50	18.52
Protective Occupation without Social Security	16.40	0.96	6.50	23.86

\*The employer prior service contribution rate is a weighted average of individual employer rates.

**Contributions required and made during 2022**

	Contributions (In Millions)	Percentage of Payroll
Employer Current Service	\$ 1,174.7	7.18%
Employer Prior Service*	1.0	0.01
Member Required	1,064.1	6.50

\*Employer prior service contributions are recorded in the Statement of Fiduciary Net Position as a reduction in the Prior Service Contribution Receivable. Contributions include both mandatory and voluntary payments received from participating employers. Some prior service contributions received after year-end are included in Contributions, but are not in the determination of Prior Service Contributions Receivable. This is due to a difference in how these payments are treated for actuarial and financial reporting purposes.

Employers also contributed approximately \$114,000 in reimbursement for benefits paid in accordance with Wis. Stat. § 62.13, Police and Firefighters Pension Program.

**» Member and Employer Additional Contributions**

Contributions in addition to those required contributions by members and/or employers may be made to the retirement system. These contributions are held in separate reserve accounts and are subject to certain restrictions as to amount, form of benefit payments, tax status, etc.

## 6 NET PENSION LIABILITY (ASSET) OF PARTICIPATING EMPLOYERS - WRS

The components of the Net Pension Liability (Asset) of the participating employers as of December 31, 2022 were as follows (in Millions):

Total Pension Liability <sup>1</sup>	<u>\$ 123,665.93</u>
Plan Fiduciary Net Position <sup>2</sup>	<u>\$ 118,368.23</u>
Participating Employer's Net Pension Liability (Asset)	<u>\$ 5,297.70</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	95.72 %

<sup>1</sup>Includes the impact of known Market Recognition Account deferred gains/losses on the liability for dividend payments.

<sup>2</sup>Immaterial differences may exist between the Plan Fiduciary Net Position used in the actuarial valuation and that reported in the Statement of Fiduciary Net Position, due to the timing of the actuarial valuation.

Additional information as of the latest actuarial valuations follows:

Actuarial Valuation Date:	December 31, 2021
Measurement Date of Net Pension Liability (Asset):	December 31, 2022
Experience Study:	January 1, 2018 - December 31, 2020 Published November 19, 2021
Actuarial Cost Method:	Entry Age Normal
Asset Valuation Method:	Fair Value
Long-Term Expected Rate of Return:	6.8%
Discount Rate:	6.8%
Salary Increases:	
Wage Inflation	3.0%
Senior/Merit	0.1% - 5.6%
Mortality:	2020 WRS Experience Mortality Table
Post-retirement Adjustments:*	1.7%

\*No post-retirement adjustments is guaranteed. Actual adjustments are based on recognized investment return, actuarial experience and other factors. 1.7% is assumed annual adjustments based on the investment return assumption and the post-retirement discount rate. Includes the impact of known Market Recognition Account deferred gains/losses on the liability for dividend payments.

Actuarial assumptions are based on an experience study conducted in 2021 that covered a three-year period from January 1, 2018 to December 31, 2020. The Total Pension Liability for December 31, 2022, is based on a roll-forward of the liability calculated from the December 31, 2021 actuarial valuation.

A single discount rate of 6.8% was used to measure the Total Pension Liability for the current and prior year. The discount rate is based on the expected rate of return on pension plan investments. Because of the unique structure of the WRS, the 6.8% expected rate of return implies that a dividend of approximately 1.7% will always be paid after reflecting known changes in the Market Recognition Account. For purposes of the single discount rate, it was assumed that the dividend would always be paid.

The projection of cash flows used to determine the single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments (including expected dividends) of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

## FINANCIAL SECTION

» *Sensitivity of the Net Pension Liability (Asset) to Changes in the Discount Rate*

The following presents the plan's Net Pension Liability (Asset), calculated using a single discount rate of 6.8%, as well as what the plan's Net Pension Liability (Asset) would be if it were calculated using a single discount rate that is one percentage point lower or one percentage point higher (in Millions):

	Discount Rate		
	1% Decrease 5.8%	Current Discount Rate 6.8%	1% Increase 7.8%
Total Pension Liability	\$ 135,951.13	\$ 123,665.93	\$ 115,214.76
Plan Fiduciary Net Position	118,368.23	118,368.23	118,368.23
Net Pension Liability (Asset)	\$ 17,582.91	\$ 5,297.70	\$ (3,153.46)

Amounts may not foot due to rounding

For the WRS, the determination of liabilities also depends on the assumed dividend that is linked to the interest rate used in the liability calculation. Therefore, the following table shows an alternative set of Sensitivity Analysis, which varies the assumed dividend in conjunction with the change in the discount rate. For the liabilities shown below, the assumed dividend was 0.8% for the 5.8% discount rate, 1.7% for the 6.8% discount rate, and 2.7% for the 7.8% discount rate (in Millions):

	Discount Rate		
	1% Decrease 5.8%	Current Discount Rate 6.8%	1% Increase 7.8%
Total Pension Liability	\$ 128,542.57	\$ 123,665.93	\$ 120,196.56
Plan Fiduciary Net Position	118,368.23	118,368.23	118,368.23
Net Pension Liability (Asset)	\$ 10,174.34	\$ 5,297.70	\$ 1,828.33

Amounts may not foot due to rounding

## 7 STATUTORY RESERVES

The following reserves have been established to reflect legal restrictions on the use of pension trust funds.

» *Employee Accumulation Reserve*

As authorized by Wis. Stat. § 40.04 (4), this reserve includes all required and voluntary member contributions, including contributions made by the employer on behalf of the employee. This reserve may only be used to pay lump sum benefits or transfers to the Annuity Reserve to fund annuities. All legal restrictions on use of this reserve were met during the year. The Employee Accumulation Reserve is fully funded.

**Employee Accumulation Reserve balances as of December 31, 2022**

(In Millions)

	<b>Core</b>	<b>Variable</b>	<b>Total</b>
Employee Required	\$ 20,296.6	\$ 2,003.0	\$ 22,299.6
Employee Additional	260.8	15.3	276.1
<b>Total</b>	<u>\$ 20,557.4</u>	<u>\$ 2,018.3</u>	<u>\$ 22,575.7</u>

**» Employer Accumulation Reserve**

As authorized by Wis. Stat. § 40.04 (5), this reserve includes all required employer contributions, including contributions for amortization of the unfunded accrued actuarial liability. This reserve may only be used to pay lump sum benefits or transfers to the Annuity Reserve to fund annuities. All legal restrictions on use of this reserve were met during the year. The Employer Accumulation Reserve is 100% funded.

**Employer Accumulation Reserve balances as of December 31, 2022**

(In Millions)

	<b>Core</b>	<b>Variable</b>	<b>Police and Firefighters</b>	<b>Total</b>
Employer Accumulation	\$ 24,029.2	\$ 2,003.0	\$ 0.0	\$ 26,032.2
Less: Unfunded Actuarial Accrued Liability	0.0	0.0	(0.3)	(0.3)
<b>Net Employer Accumulation</b>	<u>\$ 24,029.2</u>	<u>\$ 2,003.0</u>	<u>\$ (0.3)</u>	<u>\$ 26,031.9</u>

**» Annuity Reserve**

As authorized by Wis. Stat. § 40.04 (6), this reserve includes the present value of all annuities. The present value of new annuities is transferred from the Employee Accumulation Reserve and the Employer Accumulation Reserve to the Annuity Reserve. This reserve may only be used for the payment of annuities and death benefits to annuitants. All legal restrictions on use of this reserve were met during the year. The Annuity Reserve is fully funded.

**Annuity Reserve balances as of December 31, 2022**

(In Millions)

	<b>Core</b>	<b>Variable</b>	<b>Police and Firefighters</b>	<b>Total</b>
Annuity Reserve	\$ 72,108.2	\$ 4,400.5	\$ 1.1	\$ 76,509.8

**» Market Recognition Account**

As authorized by Wis. Stat. § 40.04 (3), this reserve is used to smooth the flow of investment income into the Employee, Employer, and Annuity Reserves and other benefit plans invested in the Core Fund. Under the MRA, all investment income, including realized and unrealized market gains and losses, is deposited into the MRA. At year-end, income equal to the assumed earnings rate is recognized. Any surplus or shortfall in earnings is recognized equally over five years.

## FINANCIAL SECTION

Year-end balances in the MRA for the last five years after annual distributions were as follows (in Millions):

<u>As of:</u>	<u>MRA</u>
December 31, 2018	\$ (4,916)
December 31, 2019	\$ 5,712
December 31, 2020	\$ 11,070
December 31, 2021	\$ 17,659
December 31, 2022	\$ (7,038)

## 8 PUBLIC ENTITY RISK POOLS

ETF operates and reports three public entity risk pools: Health Insurance, Income Continuation Insurance (ICI), and Duty Disability Insurance. In accordance with GASB Statement No. 10 "Accounting and Financial Reporting for Risk Financing and Related Insurance Issues" and GASB Statement No. 30 "Risk Financing Omnibus-an amendment of GASB Statement No. 10," these funds are accounted for as enterprise funds.

ETF also administers the Group Life Insurance Program for current State of Wisconsin employees and employees of participating local public employers. All public employers in the state are eligible to participate. The insurance carrier guarantees coverage and employers and active employees pay premiums directly to the insurance carrier. Because ETF primarily accounts for administrative costs for the fund, it is not reported in the ETF ACFR.

### » *Health Insurance Fund*

The Health Insurance Fund offers group health insurance for current employees of the State of Wisconsin and of participating local public employers. All public employers in the state are eligible to participate. The State of Wisconsin and 408 local employers participated during the year.

The Health Insurance Fund includes three separate risk pools. The first pool includes those members who have chosen health insurance coverage from a Health Maintenance Organization (HMO). All liabilities for medical claims for these participants are the responsibility of the HMO and are not included in the unpaid claims analysis or in the Required Supplementary Information (RSI).

The second pool includes self-insured pharmacy benefits for all members. Liabilities for this pool are presented in the unpaid claims analysis and in the Required Supplementary Information.

The third pool includes self-insured dental benefits for members selecting dental insurance. Prior to 2016, dental benefits were included as part of the HMO coverage. Liabilities for this pool are presented in the unpaid claims analysis and in the Required Supplementary Information.

### » *Income Continuation Insurance Fund*

The Income Continuation Insurance (ICI) Fund offers both long-term and short-term disability benefits (up to 75% of the average monthly earnings) for current employees of the State of Wisconsin and participating local public employers. All public employers in Wisconsin are eligible to participate. The State of Wisconsin and 290 local employers currently participate in the plan, and it is self-insured. Since March 2012, premiums have been suspended for the local employers as a result of the funded status of the local employer program.

### » *Duty Disability Insurance Fund*

The Duty Disability Insurance Fund offers special disability insurance for State of Wisconsin and local WRS participants in protective occupations. Participation in the program is mandatory for all WRS employers with protective occupation employees. The State of Wisconsin and 505 local employers currently participate. The plan is self-insured, and the risk is shared between the State of Wisconsin and local government employers in the plan.

The Duty Disability Insurance program is intended to compensate WRS protective category employees for duty-related disabilities. Benefits are payable for duty-related injuries or diseases that are likely to be permanent and that cause the employee to retire, accept reduced pay or a light-duty assignment, or that impair the employee's promotional opportunities.

Contributions are actuarially determined and are employer paid. Contributions are based on a graduated, experience-rated formula. During 2022, contribution rates ranged from 0.04% to 1.12% of covered payroll based on employer experience.

### » *Public Entity Risk Pool Accounting Policies*

**Basis of Accounting:** All public entity risk pools are accounted for in enterprise funds using the full accrual basis of accounting and the flow of economic resources measurement focus.

**Valuation of Investments:** Assets of the Health Insurance, ICI, and Duty Disability Insurance funds are invested in the Core Retirement Investment Trust Fund and are valued at fair value.

**Unpaid Claims Liabilities:** The fund establishes claims liabilities based on estimates of the ultimate cost of claims that have been reported but not settled and of claims that have been incurred but not reported. The estimate includes the effects of inflation and other societal and economic factors. Adjustments to claims liabilities are charged or credited to expense in the periods in which they are made. Unpaid claims liability is presented at face value and is not discounted for Health Insurance. These liabilities are discounted using an interest rate of 6.8% for the ICI and Duty Disability Insurance programs. The liabilities of the ICI, Health Insurance, and Duty Disability Insurance programs were determined by actuarial methods. Face value of the liability for these programs is not available.

**Administrative Expenses:** All maintenance expenses are expensed in the period they are incurred. Acquisition costs are immaterial and are treated as maintenance expenses.

**Reinsurance:** Health insurance plans provided by HMOs are fully insured by outside insurers. All remaining risk is self-insured with no reinsurance coverage.



## FINANCIAL SECTION

**Risk Transfer:** Participating employers are not subject to supplemental assessments in the event of deficiencies. If the assets of a fund were exhausted, participating employers would not be responsible for the fund's liabilities.

**Premium Setting:** Premiums for Health Insurance and ICI are established by the Group Insurance Board (GIB) and ETF Board for Duty Disability Insurance in consultation with actuaries.

**Statutory Authority:** All programs are operated in accordance with Wis. Stat. § 40.

**Unpaid Claims Liabilities:** Each fund establishes a liability for both reported and unreported insured events, which is an estimate of future payments of losses. The following represents changes in those aggregate liabilities for each fund during the past year (in Millions).

	Income Continuation Insurance		Duty Disability Insurance		Pharmacy Benefits*		Dental	
	2022	2021	2022	2021	2022	2021	2022	2021
<b>Unpaid claims and claim adjustment expenses at beginning of the calendar year:</b>	\$ 95.7	\$ 96.4	\$ 523.8	\$ 467.7	\$ (39.0)	\$ (33.7)	\$ 1.6	\$ 1.5
<b>Incurred claims and claim adjustment expenses:</b>								
Provision for insured events of the current calendar year	23.2	24.5	40.6	38.1	198.6	188.4	46.7	46.0
Changes in provision for insured events of prior calendar years	(0.9)	(4.7)	29.6	54.3	0.0	0.2	(0.1)	(0.1)
Total incurred claims and claim adjustment expenses	22.3	19.8	70.2	92.4	198.6	188.6	46.6	45.9
<b>Payments:</b>								
Claims and claim adjustment expenses attributable to insured events of the current calendar year	4.5	4.7	0.0	0.0	253.5	227.4	45.3	44.4
Claims and claim adjustment expenses attributable to insured events of prior calendar years	16.8	15.8	37.2	36.4	(39.0)	(33.5)	1.5	1.4
Total payments	21.3	20.5	37.2	36.4	214.5	193.9	46.8	45.8
<b>Total unpaid claims and claim adjustment expenses at end of the calendar year</b>	<b>\$96.7</b>	<b>\$95.7</b>	<b>\$556.8</b>	<b>\$523.8</b>	<b>\$(54.9)</b>	<b>\$(39.0)</b>	<b>\$ 1.4</b>	<b>\$ 1.6</b>

\*Total unpaid claims at the end of 2022 is \$54.9 million in rebates due from pharmaceutical companies. Total unpaid claims at the end of 2021 is \$39.0 million in rebates due from pharmaceutical companies.

Amounts may not foot due to rounding

## 9 OTHER POST-EMPLOYMENT BENEFIT (OPEB) PLANS ADMINISTERED BY ETF

ETF administers five OPEB plans: the State Retiree Life Insurance, the Local Retiree Life Insurance, the State Retiree Health Insurance, the Local Retiree Health Insurance, and the Supplemental Health Insurance Conversion Credit.

### Governance Boards

The Group Insurance Board (GIB) sets policy for the life insurance as well as the health insurance programs for state employees and for local employers who chose to offer them. Membership of the GIB is comprised of the following positions as required by Wisconsin Statutes:

- Appointed by the Governor (no membership requirement);
- Ex officio, Administrator in Department of Administration, Division of Personnel Management (or their designee);
- Appointed by the Governor (insured participant in the WRS who is a teacher);
- Appointed by the Governor (insured participant in the WRS who is a retiree);
- Ex officio, Secretary of the Department of Administration (or their designee);
- Appointed by the Governor (insured participant in the WRS who is an employee of a local government unit);
- Appointed by the Governor (insured participant in the WRS who is not a teacher);
- Ex officio, Attorney General (or their designee);
- Appointed by the Governor (chief executive or member of the governing body of a local government that is a participating employer);
- Ex officio, Commissioner of Insurance (or their designee); and
- Ex officio, Governor (or their designee).

The ETF Board has statutory authority (Wis. Stat. § 40.95) for the SHICC program administration and oversight. The ETF Board is comprised of 13 members, as summarized in Note 4, Description of the Wisconsin Retirement System.

### Plan Descriptions

#### » *Retiree Life Insurance Plans*

The State Retiree Life Insurance plan includes the State of Wisconsin (State), the University of Wisconsin, and other component units of the State, and is considered a single-employer defined benefit OPEB plan. The Local Retiree Life Insurance plan includes participating employees of 732 local government employers as of December 31, 2022 and is considered a cost-sharing multiple-employer defined benefit OPEB plan. The plans are reported as Other Post-Employment Benefit Trust Funds. The plans provide post-employment life insurance coverage to all eligible employees of participating employers. The plans are established by Wis. Stat. § 40.70. ETF, under the direction of the GIB, is responsible for the administration of the life insurance programs. ETF contracts with Securian Financial Group, Inc. (Securian) as a third-party administrator for the Retiree Life Insurance plans. Benefit terms may be modified by the GIB, subject to state and federal legislative constraints.



## FINANCIAL SECTION

## Membership

**Enrollment Eligibility:** Generally, members may enroll during a 30-day enrollment period after their date of hire. Members may also enroll after the initial 30-day enrollment period with evidence of insurability. Members under evidence of insurability enrollment must enroll in group life insurance coverage before age 55 to be eligible for Basic or Supplemental coverage.

Membership as of December 31, 2022, included:

	<u>State</u>	<u>Local</u>	<u>Total</u>
Active*	49,999	74,611	124,610
Inactive:			
Pre-Age 65 Annuitants	6,345	9,901	16,246
Post-Age 64 Annuitants	29,744	40,769	70,513
Totals	<u>86,088</u>	<u>125,281</u>	<u>211,369</u>

\*Active members include disabled.

## Contributions

The GIB approves contribution rates annually based on recommendations from the insurance carrier. Recommended rates are based on an annual valuation, taking into consideration an estimate of the present value of future benefits and the present value of future contributions. A portion of employer contributions made during a member's working lifetime funds a post-retirement benefit.

Employers are required to pay the following contributions based on active member contributions to provide them with Basic Coverage after age 65. There are no employer contributions required for pre-age 65 annuitant coverage. If a member retires prior to age 65, premium payments must continue until age 65 for the member to be eligible for the benefit after age 65.

<b>State and Local Retiree Life Insurance Employer Contribution Rates For the year ended December 31, 2022</b>		
<u>Coverage Type</u>	<u>State</u>	<u>Local</u>
50% Post Retirement Coverage	28% of member contribution	40% of member contribution
25% Post Retirement Coverage	N/A	20% of member contribution

Member contributions are based upon nine age bands through age 69 and an additional eight age bands for those age 70 and over. Participating employees must pay monthly contribution rates per \$1,000 of coverage until the age of 65 (age 70 if active). The member contribution rates in effect for the year ended December 31, 2022 are as listed below:

**Life Insurance  
Member Contribution Rates  
As of December 31, 2022**

Attained Age	State *		Local *	
	Basic	Supplemental	Basic	Supplemental
Under 30	\$ 0.0486	\$ 0.0486	\$ 0.0500	\$ 0.0500
30-34	0.0486	0.0486	0.0600	0.0600
35-39	0.0486	0.0486	0.0700	0.0700
40-44	0.0730	0.0730	0.0800	0.0800
45-49	0.1216	0.1216	0.1200	0.1200
50-54	0.1945	0.1945	0.2200	0.2200
55-59	0.2674	0.2674	0.3900	0.3900
60-64	0.3647	0.3647	0.4900	0.4900
65-69	0.4741	0.4741	0.5700	0.5700

\* Disabled members under age 70 receive a waiver-of-premium benefit.

The subsequent table provides total contributions earned during 2022 by employers and pre-age 65 annuitants to fund post-retirement benefits.

**State and Local Retiree Life Insurance  
Contributions Earned  
For the year ended December 31, 2022**

Contribution Type	State	Local
Employer	\$ 1,776,716	\$ 2,006,410
Pre-age 65 Annuitants*	4,389,689	6,381,658
<b>Total</b>	<b>\$ 6,166,405</b>	<b>\$ 8,388,068</b>

\* Contributions for pre-age 65 annuitants are recorded as a reduction of benefit expense in the Statement of Changes in Fiduciary Net Position.

## Description of Benefits

**Retirement Eligibility:** At retirement, the member must have active group life insurance coverage and satisfy the following:

- WRS coverage prior to January 1, 1990, or
- At least one month of group life insurance coverage in each of five calendar years after 1989

and one of the following:

- Eligible for an immediate WRS benefit, or
- At least 20 years from their WRS creditable service as of January 1, 1990, plus their years of group life insurance coverage after 1989, or
- At least 20 years on the payroll of their last employer.

In addition, terminating members and retirees must continue to pay the member contributions until age 65 (age 70 if active).



## FINANCIAL SECTION

**Basic Coverage Benefits:** After retirement, basic coverage is continued for life in these amounts of the insurance in force before retirement:

Percentage of Basic Coverage Continuing		
Age	State	Local
Before age 65	100%	100%
While age 65	75%	75%
While age 66	50%	50%
After age 66	50%	50%/25% Employer Election

**Supplemental Coverage Benefits:** After retirement, supplemental coverage may be continued until age 65 at 100% of the amount of the insurance in force before retirement at the employee's expense.

**Additional Coverage Benefits:** After retirement, additional coverage may be continued until age 65 at 100% of the amount of the insurance in force before retirement at the employee's expense.

**Spouse and Dependent Coverage Benefits:** After retirement, the coverage is terminated.

### Program Investments

**Investment Contract with Insurance Carrier:** Investments for the Retiree Life Insurance funds are held with the insurance carrier, Securian, and are classified as "Investment Contract" in the Statement of Fiduciary Net Position. In accordance with the administrative agreement between the GIB and Securian, interest is calculated and credited to the Retiree Life Insurance funds based on the rate of return for a segment of the insurance carrier's general fund, specifically 10 Year A- Bonds (as a proxy and not tied to any specific investments). The funds invested during the year earn interest based on that year's rate of return for 10 Year A- Bonds. The overall aggregate interest rate is calculated using a tiered approach based on the year the funds were invested and the rate of return for that year. Investment interest is credited based on the aggregate rate of return and assets are not adjusted to fair market value. Furthermore, the insurance carrier guarantees the principal amounts of the reserves, including all interest previously credited thereto. No significant contract changes occurred during the year.

The targeted asset allocation and expected rates of return are presented in the following table:

#### State and Local Retiree Life Insurance Asset Allocation Targets and Expected Returns As of December 31, 2022

Asset Class	Index	Target Allocation	Long-Term Expected Geometric Real Rate of Return
U.S. Intermediate Credit Bonds	Bloomberg U.S. Interm Credit	50%	2.45%
U.S. Mortgages	Bloomberg U.S. MBS	50%	2.83%
Inflation			2.30%
Long-Term Expected Rate of Return			4.25%



The annual money-weighted rate of return on plan investments is shown in the below table. The money-weighted rate of return expresses investment performance, net of OPEB plan investment expense, adjusted for the changing amounts actually invested.

The long-term expected rate of return remained unchanged from the prior year at 4.25%. The expected inflation rate remained unchanged from the prior year at 2.30%. The long-term expected rate of return is determined by adding expected inflation to expected long-term real returns and reflecting expected volatility and correlation.

**State and Local Retiree Life Insurance Plans  
Schedule of Investment Returns  
Annual Money-Weighted Rate of Return**

	<b>2022</b>
State Retiree Life Insurance Plan	2.82%
Local Retiree Life Insurance Plan	2.77%

### State Retiree Life Insurance Net OPEB Liability (Asset) of Participating Employers

The components of the Net OPEB Liability (Asset) of the participating State employers as of December 31, 2022 were as follows (in Millions):

Total OPEB Liability	\$	963.00
Plan Fiduciary Net Position*		303.25
Participating Employer's Net OPEB Liability (Asset)	\$	659.75
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability		31.49 %

\*An immaterial difference may exist between the Plan Fiduciary Net Position used in the actuarial valuation and that reported in the Statement of Fiduciary Net Position, due to the timing of the actuarial valuation.



## FINANCIAL SECTION

Additional information as of the latest actuarial valuation follows:

Actuarial Valuation Date:	January 1, 2022
Measurement Date of Net OPEB Liability (Asset):	December 31, 2022
Experience Study:	January 1, 2018 - December 31, 2020 Published November 19, 2021
Actuarial Cost Method:	Entry Age Normal
20 Year Tax-Exempt Municipal Bond Yield*	3.72%
Long-Term Expected Rate of Return:	4.25%
Discount Rate:	3.75%
Salary Increases:	
Wage Inflation	3.00%
Senior/Merit	0.1% - 5.6%
Mortality:	2020 WRS Experience Mortality Table

\* Based on the Bond Buyers GO index.

Some actuarial assumptions used in this valuation, including the wage inflation, mortality, and separation rates, are based upon an experience study conducted in 2021 that covered a three-year period from January 1, 2018 to December 31, 2020. The Total OPEB Liability for December 31, 2022 is based upon a roll-forward of the liability calculated from the January 1, 2022 actuarial valuation.

A discount rate of 3.75% was used to measure the Total OPEB Liability for the current year, as opposed to a discount rate of 2.15% for the prior year. The change in the discount rate was primarily caused by the increase in the municipal bond rate from 2.06% as of December 31, 2021 to 3.72% as of December 31, 2022. The projection of cash flows used to determine the single discount rate assumed that employer contributions will be made according to the current employer contribution schedule and that contributions are made by plan members retiring prior to age 65. At their August 2019 meeting, the GIB approved an annual premium rate increase of 5% for nine years, effective April 1, 2020.

Based on these assumptions, the plan's fiduciary net position was projected to be insufficient to make all projected future benefit payments of current active and inactive employees. Therefore, the discount rate for calculating the Total OPEB Liability was applied to benefit payments, to the extent that the plan's fiduciary net position is projected to be sufficient to make projected benefit payments, and the municipal bond rate applied to benefit payment to the extent that the plan's fiduciary net position is projected to be insufficient. The plan's fiduciary net position was projected to be available to make projected future benefit payments of current plan members through December 31, 2033. Therefore, the long-term expected rate of return on plan investments was applied through 2033 and the municipal bond index rate was applied for all remaining periods of projected benefit payments to determine the Total OPEB Liability.



### Sensitivity of the State Retiree Life Insurance Net OPEB Liability (Asset) to Changes in the Discount Rate

The following presents the plan's Net OPEB Liability (Asset) and shows what the plan's Net OPEB Liability (Asset) would be if it was calculated using a single discount rate that is one percentage point lower or one percentage point higher (in Millions):

	Discount Rate		
	1% Decrease 2.75%	Current Rate 3.75%	1% Increase 4.75%
Total OPEB Liability	\$ 1,164.2	\$ 963.0	\$ 807.1
Plan Fiduciary Net Position	303.2	303.2	303.2
Net OPEB Liability (Asset)	\$ 861.0	\$ 659.7	\$ 503.9

Amounts may not foot due to rounding

### Local Retiree Life Insurance Net OPEB Liability (Asset) of Participating Employers

The components of the Net OPEB Liability (Asset) of the participating local employers as of December 31, 2022, were as follows (in Millions):

Total OPEB Liability	\$ 622.61
Plan Fiduciary Net Position*	241.63
Participating Employer's Net OPEB Liability (Asset)	<u>\$ 380.98</u>
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	38.81 %

\*An immaterial difference may exist between the Plan Fiduciary Net Position used in the actuarial valuation and that reported in the Statement of Fiduciary Net Position, due to the timing of the actuarial valuation.

Additional information as of the latest actuarial valuations follows:

Actuarial Valuation Date:	January 1, 2022
Measurement Date of Net OPEB Liability (Asset):	December 31, 2022
Experience Study:	January 1, 2018 - December 31, 2020 Published November 19, 2021
Actuarial Cost Method:	Entry Age Normal
20 Year Tax-Exempt Municipal Bond Yield*	3.72%
Long-Term Expected Rate of Return:	4.25%
Discount Rate:	3.76%
Salary Increases:	
Wage Inflation	3.00%
Senior/Merit	0.1% - 5.6%
Mortality:	2020 WRS Experience Mortality Table

\* Based on the Bond Buyers GO index

## FINANCIAL SECTION

Some actuarial assumptions used in this valuation, including the wage inflation, mortality, and separation rates, are based upon an experience study conducted in 2021 that covered a three-year period from January 1, 2018 to December 31, 2020. The Total OPEB Liability for December 31, 2022 is based upon a roll-forward of the liability calculated from the January 1, 2022 actuarial valuation.

A discount rate of 3.76% was used to measure the Total OPEB Liability for the current year, as opposed to discount rate of 2.17% for the prior year. The change in the discount rate was primarily caused by the increase in the municipal bond rate from 2.06% as of December 31, 2021 to 3.72% as of December 31, 2022. The projection of cash flows used to determine the single discount rate assumed that employer contributions will be made according to the current employer contribution schedule and that contributions are made by plan members retiring prior to age 65.

Based on these assumptions, the plan's fiduciary net position was projected to be insufficient to make all projected future benefit payments of current active and inactive employees. Therefore, the discount rate for calculating the Total OPEB Liability was applied to benefit payments, to the extent that the plan's fiduciary net position is projected to be sufficient to make projected benefit payments, and the municipal bond rate applied to benefit payment to the extent that the plan's fiduciary net position is projected to be insufficient. The plan's fiduciary net position was projected to be available to make projected future benefit payments of current plan members through December 31, 2036. Therefore, the long-term expected rate of return on plan investments was applied through 2036 and the municipal bond index rate was applied for all remaining periods of projected benefit payments to determine the Total OPEB Liability.

### Sensitivity of the Local Retiree Life Insurance Net OPEB Liability (Asset) to Changes in the Discount Rate

The following presents the plan's Net OPEB Liability (Asset) and shows what the plan's Net OPEB Liability (Asset) would be if it was calculated using a single discount rate that is one percentage point lower or one percentage point higher (in Millions):

	Discount Rate		
	1% Decrease 2.76%	Current Rate 3.76%	1% Increase 4.76%
Total OPEB Liability	\$ 761.1	\$ 622.6	\$ 516.5
Plan Fiduciary Net Position	241.6	241.6	241.6
Net OPEB Liability (Asset)	\$ 519.5	\$ 381.0	\$ 274.9

### » Retiree Health Insurance Plans

The Retiree Health Insurance plans offer group health insurance to retired State of Wisconsin and local government employees. Retirees pay the full premium amount. The State Retiree Health Insurance Fund includes the State, the University of Wisconsin, and other component units of the State. The Local Retiree Health Insurance Fund includes 408 local government employers. The State Retiree plan is reported as an enterprise fund and the Local Retiree plan is reported as a fiduciary custodial fund. The plans are not administered as trusts. Therefore, each participating employer is responsible for reporting the plan in accordance with GASB Statement No. 75 "Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions." The Retiree Health Insurance Funds contain certain non-OPEB components relating to post-Medicare pharmacy and health insurance benefits.

ETF and the GIB have statutory authority for program administration and oversight [Wis. Stat. § 15.165 (2) and Wis. Stat. § 40.03 (6)].

## Membership

State of Wisconsin and local government employees participating in the State Health Insurance Plan or the Wisconsin Public Employers Insurance Plan (local government plans) are eligible to continue their health insurance coverage after leaving covered employment. Membership as of December 31, 2022 included 29,227 former state employees or their beneficiaries and 2,004 former local government employees and beneficiaries.

## Description of Benefits

Retirees may choose between several health plans with specific provider networks (i.e. Health Maintenance Organizations (HMO), Preferred Provider Organizations (PPO) or Medicare Advantage). The health plans must follow GIB guidelines for eligibility and program requirements. All health plans offer a prescribed benefit package called Uniform Benefits and participate in a yearly competitive premium rate bid process.

The pharmacy benefit is self-insured by the GIB and administered by Navitus Health Solutions. The dental benefit is self-insured by the GIB and administered by Delta Dental.

Effective January 1, 2012, prescription drug coverage for Medicare eligible retirees enrolled in the State group health insurance program is provided by a self-funded Medicare Part D Employer Group Waiver Plan (EGWP). A Medicare "Wrap" product is also included to provide full coverage to members, as required by Uniform Benefits, when they reach the Medicare coverage gap, also known as the "donut hole."

### » Supplemental Health Insurance Conversion Credit Program

The SHICC program includes the State of Wisconsin, the University of Wisconsin, and other component units of the State, and is considered a single-employer defined benefit OPEB plan. The SHICC program is reported as an Other Post-Employment Benefit Trust Fund. The SHICC program was established by Wis. Stat. § 40.95 and is defined in the state compensation plan (Wis. Stat. § 230.12 (9)).

The SHICC program allows members with more than 15 years of eligible service to convert unused sick leave balances into credits to pay for post-retirement health insurance premiums. The SHICC benefit provides a limited match of the members credits earned through the Accumulated Sick Leave Conversion Credit (ASLCC) program. ASLCC program credits are computed at the time of retirement, layoff, or death by multiplying the number of hours of unused sick leave by the highest hourly pay rate at which the employee accrued sick leave that is eligible for conversion. Employment category and number of years of service are also factored into the calculation (as noted in the table below). The SHICC program also includes a provision for the restoration of 500 hours of credits upon retirement, layoff, or death, provided at least 500 hours of accrued sick leave were used for a single injury or illness during the three years immediately preceding the retirement, layoff, or death while in state service.

All ASLCC program credits must be used before the SHICC program credits. Unused ASLCC and SHICC credits have no cash value, are carried forward from year to year without interest, and when total health insurance premiums paid on behalf of the retired employee equal or exceed the conversion credits, no further payments are made under the ASLCC and SHICC programs. ASLCC and SHICC credits may be escrowed indefinitely after



## FINANCIAL SECTION

retirement for participants who provide evidence of comparable health insurance coverage from another source.

### Description of Benefits

The SHICC program provides matching sick leave hours to participants retiring (or terminating employment) with 15 or more years of eligible service, as noted below. These sick leave hours are in addition to, but generally do not exceed, the unused sick leave balances that are used to calculate benefits provided under the ASLCC program.

Employment Category	Benefit Eligible Hours*
Protective	Match up to 78 hours (9.75 days) per full year of service through 24 years, plus 104 hours (13 days) per full year of service over 24 years.
Others	Match up to 52 hours (6.5 days) per full year of service through 24 years, plus up to 104 hours (13 days) per full year of service over 24 years.

\*The SHICC program also includes a restoration benefit of up to 500 hours when certain criteria are met.

The SHICC program also provides benefits after a member's death. The member's surviving spouse and/or dependents may be eligible to use SHICC credits to pay State of Wisconsin Group Health Insurance premiums under the following conditions:

- Member was covered by the State of Wisconsin Group Health Insurance Program under a family policy on the member's date of death and the member is either employed by the state on the date of death or the member is receiving a retirement disability benefit; or
- Member has preserved SHICC credits as described in the Preserved Balance Eligibility section below and the member dies before becoming a WRS annuitant; or
- Member has escrowed SHICC credits as described in the Escrow Balance Eligibility Section below and the member dies.

### Eligibility and Membership

Generally, to be eligible to use SHICC credits to pay post-retirement health insurance premiums, members with 15 years of adjusted continuous service (or their insured surviving spouse and/or dependents) must be covered under the State of Wisconsin Group Health Insurance Program. If a member with 20 years of service leaves eligible service prior to retirement, the benefit is vested.

Membership as of December 31, 2022 included:

Employment Status	Count
Retirees and Beneficiaries	22,287
Inactive, Non-retired Members	435
Active Members	73,954
Total	<u>96,676</u>

**Retirement Eligibility:** At retirement, the member must have State of Wisconsin Group Health Insurance Program coverage and satisfy the following:

- Retire on an immediate annuity; or
  - Retire and receive a lump-sum benefit; or
  - Qualify for a Wisconsin Retirement System (WRS) disability retirement benefit, long-term disability benefit or a protective occupation duty disability insurance benefit under Wis. Stat. § 40.65;
- or
- Have 20 years of WRS creditable service and are eligible for an immediate retirement benefit, but have chosen not to apply for retirement or disability benefit immediately (see Escrow Eligibility section below).

**Escrow Eligibility:** At retirement, eligible members may elect to escrow their SHICC credits (to be used at a later date) if they have comparable health insurance coverage through another source.

**Preserved Eligibility:** If not eligible for an immediate annuity, SHICC eligible members must satisfy the following to defer vested (preserved) SHICC credits to pay health premiums when becoming a WRS annuitant:

- Terminate with 20 years of WRS creditable service (providing they do not elect a WRS separation benefit) or
- State constitutional officer, a member or an officer of the legislature or the head of a state department or agency who was appointed by the governor with senate confirmation and are not eligible for an immediate annuity when terminating from state employment (providing they do not elect a WRS separation benefit).

**Permanent Layoff Eligibility:** If not eligible for an immediate annuity and the member is permanently laid off from State employment, the member must have at least 15 years of adjusted continuous service to use SHICC credits to pay health premiums for up to five years after the layoff begins.

## Contributions

The ETF Board approves contribution rates annually, based on recommendations from the actuary. Recommended rates are based on an annual valuation, taking into consideration an estimate of the present value of future benefits and the present value of future contributions, in accordance with Wis. Stat. § 40.05 (4)(by). Employer contributions made during a member's working lifetime fund a post-retirement benefit. Employers made contributions totaling \$5.4 million based upon a percentage of active member earnings for the year ending December 31, 2022.

## SHICC Net OPEB Liability (Asset) of Participating Employers

The components of the Net OPEB Liability (Asset) of the participating state employers as of December 31, 2022, were as follows (in Millions):

Total OPEB Liability	\$	1,045.97
Plan Fiduciary Net Position*		1,148.79
Participating Employer's Net OPEB Liability (Asset)	\$	(102.82)
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability		109.83 %

\*An immaterial difference may exist between the Plan Fiduciary Net Position used in the actuarial valuation and that reported in the Statement of Fiduciary Net Position, due to the timing of the actuarial valuation.



## FINANCIAL SECTION

Additional information as of the latest actuarial valuation follows:

Actuarial Valuation Date:	December 31, 2022
Measurement Date of Net OPEB Liability (Asset):	December 31, 2022
Wisconsin Sick Leave Conversion Credit Programs Experience Study:	January 1, 2018 - December 31, 2020 Published November 18, 2021
WRS Experience Study:	January 1, 2018 - December 31, 2020 Published November 19, 2021
Actuarial Cost Method:	Entry Age Normal
Long-Term Expected Rate of Return:	6.8%
Discount Rate:	6.8%
Salary Increases:	
Wage Inflation	3.0%
Senior/Merit	0.1% - 5.6%
Mortality:	2020 WRS Experience Mortality Table
Healthcare Cost Trend Rate:	5.75% for the first year grading down to an ultimate healthcare trend rate of 3.5% over an 11 year period
Health Care Premiums:	Actual premium amounts are used for current annuitants. For all non-annuitants (active, preserved, and escrowed members), average premiums are calculated based on non Medicare and Medicare rates for one person and two person coverages.
Participation:	100% of active and preserved members will begin using sick leave credits immediately upon reaching eligibility
Usage for Escrowed Benefits:	50% of members currently in escrow status will at some point begin using their sick leave balances to pay for health care costs.
Sick Leave Accumulation:	The assumed annual sick leave accumulation for each individual is at their same rate as in the past (earned less used), but not more than 100% of the gross earned rate based on the person's employer and not less than 25% of their gross earned rate. The assumed annual gross earned rates range from 6.4 to 16.25 days depending on the employer.

\*Note that mortality assumptions were not applied to members who currently have healthcare coverage for more than one person since the benefit may be transferred to a beneficiary upon death.

Actuarial assumptions are based upon experience studies conducted in 2021 on the WRS and Wisconsin Sick Leave Conversion Credit programs that covered a three-year period from January 1, 2018 to December 31, 2020.

A discount rate of 6.8% was used to measure the Total OPEB Liability for the current and prior year. The projection of cash flows used to determine the single discount rate assumed that employer contributions will be made at rates equal to the actuarially determined contribution rate.

Based on these assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

## Long-Term Expected Return on Plan Assets

The long-term expected rate of return on OPEB 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 OPEB 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. The long-term expected rate of return is reviewed every three years in conjunction with the Wisconsin Retirement System experience study. For each major asset class that is included in the OPEB plan's target asset allocation as of December 31, 2022 these best estimates of geometric real rates of return are shown below:

### Core Asset Allocation Targets and Expected Returns<sup>1</sup>

Asset Class	Asset Allocation	Long-Term Expected Real Rate of Return % <sup>2</sup>
Public Equity	48%	5.0%
Public Fixed Income	25	2.7
Inflation Sensitive Assets	19	1.1
Real Estate	8	2.6
Private Equity/Debt	15	6.9
Total Core Fund <sup>3</sup>	115%	4.8%
Long-Term Expected Rate of Return		6.8%

<sup>1</sup>Asset allocations are managed within established ranges; target percentages may differ from actual monthly allocations

<sup>2</sup>New England Pension Consultants Long Term U.S. CPI (Inflation) Forecast: 2.5%

<sup>3</sup>The investment policy used for the Core Fund involves reducing equity exposure by leveraging lower-volatility assets, such as fixed income securities. This results in an asset allocation beyond 100%. Currently, an asset allocation target of 15% policy leverage is used, subject to an allowable range of up to 20%.

## Sensitivity of the SHICC Net OPEB Liability (Asset) to Changes in the Discount Rate

The following presents the plan's Net OPEB Liability (Asset) and shows what the plan's Net OPEB Liability (Asset) would be if it were calculated using a single discount rate that is one percentage point lower or one percentage point higher (in Millions):

	Discount Rate		
	1% Decrease 5.80%	Current Rate 6.80%	1% Increase 7.80%
Total OPEB Liability	\$ 1,158.4	\$ 1,046.0	\$ 949.4
Plan Fiduciary Net Position	1,148.8	1,148.8	1,148.8
Net OPEB Liability (Asset)	\$ 9.6	\$ (102.8)	\$ (199.4)

## Sensitivity of the SHICC Net OPEB Liability (Asset) to the Healthcare Cost Trend Rate Assumption

The following presents the plan's Net OPEB Liability (Asset), calculated using the assumed healthcare cost trend rate, as well as what the plan's Net OPEB Liability (Asset) would be if it were calculated using the assumed trend rate that is one percent lower or one percent higher (in Millions):



## FINANCIAL SECTION

## Healthcare Cost Trend Rate

	1% Decrease	Current Rate	1% Increase
Total OPEB Liability	\$ 976.4	\$ 1,046.0	\$ 1,113.1
Plan Fiduciary Net Position	1,148.8	1,148.8	1,148.8
Net OPEB Liability (Asset)	\$ (172.4)	\$ (102.8)	\$ (35.7)

## 10 MILWAUKEE RETIREMENT SYSTEMS

The Milwaukee Retirement Systems (MRS), consisting of two funds within the Milwaukee Public Schools Retirement System, is reported as an Investment Trust Fund. MRS provides assets to ETF for investing in the Core and Variable Funds, described in the Investments section of Note 1, Summary of Significant Accounting Policies. The Core and Variable Funds are managed by SWIB, with oversight by a board of trustees as authorized in Wis. Stat. § 25.17. Participation of the MRS in the Core and Variable Funds is described in the Wisconsin Administrative Code, § ETF 10.12. Monthly, ETF distributes pro-rata shares of total Core Fund and total Variable Fund earnings, less administrative expenses to the MRS accounts. The MRS accounts are adjusted to fair value and gains/losses are recorded directly in the accounts per Wisconsin Administrative Code, § ETF 10.12 (2).

No state statute, legal provision, or legally-binding guarantee exists to support the value of shares. As of December 31, 2022, the Core and Variable Funds held \$122.9 billion in investment-related accounts, of which \$4.9 billion is classified as cash equivalents. In addition, the Core and Variable Funds held \$1.7 billion of securities lending collateral.

Summary information by investment classification in accordance with GASB Statement No. 31 "Accounting and Financial Reporting for Certain Investments and for External Investment Pools," for the Core and Variable Funds as of December 31, 2022 is presented in Note 3, Deposits, Investments and Securities Lending Transactions. Condensed financial data for the Core and Variable Funds for the year ended December 31, 2022 is presented on the next page.

**Core and Variable Retirement Investment Funds**  
**Condensed Statements of Net Investment Position**  
**As of December 31, 2022**  
 (In Thousands)

<b>Assets:</b>	<b>Core</b>	<b>Variable</b>	<b>Combined*</b>
Cash and Cash Equivalents	\$ 4,447,610	\$ 494,186	\$ 4,941,796
Securities Lending Collateral	1,418,121	284,179	1,702,300
Prepaid Items	26,039	8	26,047
Capital Assets	5,816	0	5,816
Investment Receivables	5,969,753	108,559	6,078,312
Investments, at fair value	134,745,052	7,840,163	142,585,215
Total Assets	<u>146,612,391</u>	<u>8,727,095</u>	<u>155,339,486</u>
<b>Liabilities:</b>			
Securities Lending Collateral Liability	5,129,121	284,178	5,413,299
Obligation Under Reverse Repurchase Agreements	17,689,749	0	17,689,749
Short Sell Obligations	3,643,331	0	3,643,331
Collateral Due to Counterparty	46,758	270	47,028
Investment Payables	5,667,743	6,175	5,673,918
Total Liabilities	<u>32,176,702</u>	<u>290,623</u>	<u>32,467,325</u>
<b>Net Position Held in Trust for:</b>			
Other Investment Pool Participants	114,254,425	8,417,230	122,671,655
Milwaukee Retirement Systems	181,264	19,242	200,506
<b>Total</b>	<u>\$ 114,435,689</u>	<u>\$ 8,436,472</u>	<u>\$ 122,872,161</u>

\*Combined totals may vary from financial statements due to rounding and non-investment activity.

**Core and Variable Retirement Investment Funds**  
**Condensed Statements of Changes in Net Investment Position**  
**As of December 31, 2022**  
 (In Thousands)

<b>Additions:</b>	<b>Core</b>	<b>Variable</b>	<b>Combined*</b>
Net Increase (Decrease) in Fair Value of Investments	\$ (19,203,948)	\$ (2,035,161)	\$ (21,239,109)
Interest, Dividend, and Other Investment Income	2,471,468	135,008	2,606,476
Securities Lending Income	129,796	10,532	140,328
Total Additions	<u>(16,602,684)</u>	<u>(1,889,621)</u>	<u>(18,492,305)</u>
<b>Deductions:</b>			
Investment Expense	770,933	7,587	778,520
Securities Lending Fees	71,790	4,389	76,179
Net Withdrawals by Pool Participants	4,375,064	586,417	4,961,481
Total Deductions	<u>5,217,787</u>	<u>598,393</u>	<u>5,816,180</u>
Net Increase (Decrease)	<u>(21,820,471)</u>	<u>(2,488,014)</u>	<u>(24,308,485)</u>
<b>Net Investment Position Held in Trust</b>			
Beginning of Year	136,256,160	10,924,486	147,180,646
End of Year	<u>\$ 114,435,689</u>	<u>\$ 8,436,472</u>	<u>\$ 122,872,161</u>

\*Combined totals may vary from financial statements due to rounding and non-investment activity.

# 11 CONTINGENCIES, RELATED PARTIES, AND LITIGATION

## » *Loss Contingencies*

No loss contingencies occurred during calendar year 2022.

## » *Related Party Transactions*

During 2022, the Core Fund entered into reverse repurchase agreements with the State Investment Fund (SIF), for which the investment assets are managed by SWIB as a counterparty. The transactions were governed by a Master Repurchase Agreement and credit exposure is also managed through the transfer of margin between the Core Fund and SIF. As of December 31, 2022, the Core Fund held \$4.7 billion in a bilateral reverse repurchase agreement with the SIF. The repurchase agreement was an overnight agreement collateralized with U.S. Treasury securities in the amount of 102%. The Core Fund enters into similar reverse repurchase agreements with other counterparties. The Core and Variable Funds are also participants in the SIF, with investments totaling \$2.2 billion and \$361.9 million, respectively, as of December 31, 2022. The SIF is a short-term, commingled fund with the investment objective of safety of principal and liquidity while earning a competitive money market rate of return.

## » *Litigation*

On March 8, 2019, ETF filed a complaint in Dane County Circuit Court against Vitech. The complaint intends to remedy damages suffered when Vitech breached its contract with ETF by failing to fulfill its promises according to the provisions of the contract. In response to the complaint, Vitech filed a counterclaim against ETF. The case is set for a status conference on January 10, 2024. Any resolution of this dispute is not anticipated to have a material effect on the WRS' financial position.

## REQUIRED SUPPLEMENTARY INFORMATION

### » PUBLIC ENTITY RISK POOLS

#### Claims Development Information

The tables on the following pages illustrate how the funds' earned revenues and investment income compare to related costs of loss and other expenses assumed by the funds as of the end of each of the last ten years. The rows of the tables are defined as follows:

1. **Net Earned Required Contributions and Investment Revenues.** Shows the total of each calendar year's earned contribution revenues and investment revenues.
2. **Unallocated Expense.** Shows each calendar year's other operating costs of the fund, including overhead and claims expenses not allocable to individual claims.
3. **Estimated Incurred Claims and Expenses as of the End of the Policy Year.** Shows the fund's incurred claims and allocated claim adjustment expense (both paid and accrued) as originally reported as the end of the first year in which the event that triggered coverage under the contract occurred (called policy year).
4. **Paid Claims (Cumulative) as of Year-End.** Shows the cumulative amounts paid as of the end of successive years for each policy year.
5. **Re-estimated Incurred Claims and Expenses.** Shows how each policy year incurred claims increased or decreased as of the end of successive policy years. This annual re-estimation results from new information received on known claims, reevaluation of existing information on known claims, as well as emergence of new claims not previously known.
6. **Increase (Decrease) in Estimated Incurred Claims from End of Policy Year.** Compares the latest re-estimated incurred claims amount to the amount originally established (line 3) and shows whether this latest estimate of claims cost is greater or less than originally thought.

As data for individual policy years mature, the correlation between original estimates and re-estimated amounts is commonly used to evaluate the accuracy of incurred claims currently recognized in less mature policy years. The columns of the tables show data for successive policy years.



## FINANCIAL SECTION

**Public Entity Risk Pools**  
**Required Supplementary Information**  
**Pharmacy Benefit Claims Development Information**  
(In Millions)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1. Net Earned Required Contributions and Investment Revenues	\$ 159.6	\$ 157.7	\$ 166.5	\$ 214.3	\$ 223.5	\$ 176.0	\$ 154.0	\$ 176.0	\$ 209.1	\$ 167.8
2. Unallocated Expense	4.4	6.0	6.0	5.9	5.8	4.6	4.5	4.6	5.0	6.1
3. Estimated Incurred Claims and Expenses as of the End of the Policy Year	149.0	163.5	176.9	156.0	164.5	156.1	155.0	176.1	188.4	198.6
4. Paid Claims (Cumulative) as of Year-End:*										
End of Policy Year	156.6	173.4	196.4	171.0	183.3	177.8	182.7	209.8	227.4	253.5
One Year Later	148.3	163.5	177.0	151.0	159.9	151.7	155.1	176.1	188.3	
Two Years Later	148.3	163.5	177.1	151.0	160.0	151.5	155.3	176.2		
Three Years Later	148.3	163.5	177.1	151.0	160.0	151.5	155.3			
Four Years Later	148.3	163.5	177.1	151.0	160.0	151.5				
Five Years Later	148.3	163.5	177.1	151.0	160.0					
Six Years Later	148.3	163.5	177.1	151.0						
Seven Years Later	148.3	163.5	177.1							
Eight Years Later	148.3	163.5								
Nine Years Later	148.3									
5. Re-estimated Incurred Claims and Expenses:										
End of Policy Year	149.0	163.5	176.9	156.0	164.5	156.1	155.0	176.1	188.4	198.6
One Year Later	148.3	163.5	177.0	151.0	159.9	151.5	155.1	176.1	188.3	
Two Years Later	148.3	163.5	177.1	151.0	159.9	151.5	155.3	176.2		
Three Years Later	148.3	163.5	177.1	151.0	159.9	151.5	155.3			
Four Years Later	148.3	163.5	177.1	151.0	159.9	151.5				
Five Years Later	148.3	163.5	177.1	151.0	159.9					
Six Years Later	148.3	163.5	177.1	151.0						
Seven Years Later	148.3	163.5	177.1							
Eight Years Later	148.3	163.5								
Nine Years Later	148.3									
6. Increase (Decrease) in Estimated Incurred Claims and Expenses from End of Policy Year	\$ (0.7)	\$ 0.0	\$ 0.2	\$ (5.0)	\$ (4.6)	\$ (4.6)	\$ 0.3	\$ 0.1	\$ (0.1)	\$ 0.0

\*Paid Claims include payments expected to be reimbursed as rebate payments from participating pharmaceutical companies. Incurred claims are presented net of anticipated rebates.

In accordance with GASB Statement No. 10, retiree health is excluded from risk pool reporting and is not included with the active health information in this table.



**Public Entity Risk Pools**  
**Required Supplementary Information**  
**Dental Insurance Claims Development Information**  
(In Millions)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1. Net Earned Required Contributions and Investment Revenues	\$ 0.0	\$ 0.0	\$ 0.0	\$ 41.9	\$ 44.3	\$ 45.6	\$ 47.4	\$ 48.8	\$ 49.4	\$ 45.9
2. Unallocated Expense	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	1.0	0.8
3. Estimated Incurred Claims and Expenses as of the End of the Policy Year	0.0	0.0	0.0	44.1	44.4	43.8	45.9	38.1	46.0	46.7
4. Paid Claims (Cumulative) as of Year-End:										
End of Policy Year	0.0	0.0	0.0	42.2	43.4	42.9	44.1	36.6	44.4	45.3
One Year Later	0.0	0.0	0.0	44.0	44.3	43.8	45.2	38.0	45.9	
Two Years Later	0.0	0.0	0.0	44.0	44.3	43.8	45.2	38.0		
Three Years Later	0.0	0.0	0.0	44.0	44.3	43.8	45.2			
Four Years Later	0.0	0.0	0.0	44.0	44.3	43.8				
Five Years Later	0.0	0.0	0.0	44.0	44.3					
Six Years Later	0.0	0.0	0.0	44.0						
Seven Years Later	0.0	0.0	0.0							
Eight Years Later	0.0	0.0								
Nine Years Later	0.0									
5. Re-estimated Incurred Claims and Expenses:										
End of Policy Year	0.0	0.0	0.0	44.1	44.4	43.8	45.9	38.1	46.0	46.7
One Year Later	0.0	0.0	0.0	44.0	44.3	43.8	45.2	38.0	45.9	
Two Years Later	0.0	0.0	0.0	44.0	44.3	43.8	45.2	38.0		
Three Years Later	0.0	0.0	0.0	44.0	44.3	43.8	45.2			
Four Years Later	0.0	0.0	0.0	44.0	44.3	43.8				
Five Years Later	0.0	0.0	0.0	44.0	44.3					
Six Years Later	0.0	0.0	0.0	44.0						
Seven Years Later	0.0	0.0	0.0							
Eight Years Later	0.0	0.0								
Nine Years Later	0.0									
6. Increase (Decrease) in Estimated Incurred Claims and Expenses from End of Policy Year	\$ 0.0	\$ 0.0	\$ 0.0	\$ (0.1)	\$ (0.1)	\$ 0.0	\$ (0.7)	\$ (0.1)	\$ (0.1)	\$ 0.0

\*Prior to 2016 Dental Benefits were included as part of fully insured HMO coverage.

In accordance with GASB Statement No. 10, retiree health is excluded from risk pool reporting and is not included with the active health information in this table.



## FINANCIAL SECTION

**Public Entity Risk Pools**  
**Required Supplementary Information**  
**Income Continuation Insurance Claims Development Information**  
(In Millions)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1. Net Earned Required Contributions and Investment Revenues	\$ 25.7	\$ 20.5	\$ 16.3	\$ 27.1	\$ 38.3	\$ 24.7	\$ 54.7	\$ 61.6	\$ 71.0	\$ (8.3)
2. Unallocated Expense	2.0	5.7	1.8	3.0	1.8	2.7	3.0	3.2	3.7	3.9
3. Estimated Incurred Claims and Expenses as of the End of the Policy Year	36.0	20.5	22.8	20.7	17.7	19.2	22.6	24.8	24.5	23.2
4. Paid Claims (Cumulative) as of Year-End:										
End of Policy Year	6.4	5.9	6.6	5.6	4.6	4.2	4.1	4.0	4.7	4.5
One Year Later	11.8	11.9	12.5	10.6	9.5	8.9	8.0	8.7	10.0	
Two Years Later	13.8	13.6	14.3	12.5	11.4	10.9	9.3	10.6		
Three Years Later	15.1	14.8	15.7	13.8	12.7	12.3	10.1			
Four Years Later	16.0	15.8	16.6	14.8	13.8	13.4				
Five Years Later	17.0	16.5	17.4	15.6	14.7					
Six Years Later	17.9	17.2	18.1	16.3						
Seven Years Later	18.8	17.8	18.7							
Eight Years Later	19.7	18.4								
Nine Years Later	20.6									
5. Re-estimated Incurred Claims and Expenses:										
End of Policy Year	36.0	20.5	22.8	20.7	17.7	19.2	22.6	24.8	24.5	23.2
One Year Later	22.6	20.4	23.9	21.1	18.7	19.1	13.8	17.5	20.9	
Two Years Later	24.0	22.5	23.4	22.3	19.6	19.9	14.0	17.9		
Three Years Later	24.3	22.2	23.9	21.0	19.7	19.8	14.4			
Four Years Later	23.5	21.5	22.9	21.3	21.0	21.0				
Five Years Later	24.3	22.0	23.4	21.6	20.8					
Six Years Later	25.0	22.0	22.8	21.9						
Seven Years Later	25.5	22.3	22.6							
Eight Years Later	25.9	22.4								
Nine Years Later	26.2									
6. Increase (Decrease) in Estimated Incurred Claims and Expenses from End of Policy Year	\$ (9.8)	\$ 1.9	\$ (0.2)	\$ 1.2	\$ 3.1	\$ 1.8	\$ (8.2)	\$ (6.9)	\$ (3.6)	\$ 0.0



**Public Entity Risk Pools**  
**Required Supplementary Information**  
**Duty Disability Insurance Claims Development Information**  
(In Millions)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1. Net Earned Required Contributions and Investment Revenues	\$ 0.0	\$ 0.0	\$ 0.0	\$ 50.3	\$ 100.5	\$ (13.3)	\$ 123.3	\$ 106.0	\$ 130.4	\$ (107.2)
2. Unallocated Expense	0.0	0.0	0.0	1.8	4.5	0.8	0.6	0.8	0.9	0.9
3. Estimated Incurred Claims and Expenses as of the End of the Policy Year	0.0	0.0	0.0	11.9	19.2	20.4	33.6	34.0	38.1	40.6
4. Paid Claims (Cumulative) as of Year-End:										
End of Policy Year	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
One Year Later	0.0	0.0	0.0	0.4	0.3	0.2	0.1	0.1	0.1	
Two Years Later	0.0	0.0	0.0	1.1	0.7	0.7	0.4	0.3		
Three Years Later	0.0	0.0	0.0	2.2	1.3	1.4	0.9			
Four Years Later	0.0	0.0	0.0	3.3	2.0	2.2				
Five Years Later	0.0	0.0	0.0	4.4	2.6					
Six Years Later	0.0	0.0	0.0	5.7						
Seven Years Later	0.0	0.0	0.0							
Eight Years Later	0.0	0.0								
Nine Years Later	0.0									
5. Re-estimated Incurred Claims and Expenses:										
End of Policy Year	0.0	0.0	0.0	11.9	19.2	20.4	33.6	34.0	38.1	40.6
One Year Later	0.0	0.0	0.0	6.2	2.9	4.3	0.9	1.6	2.9	
Two Years Later	0.0	0.0	0.0	11.7	5.4	8.5	6.7	3.3		
Three Years Later	0.0	0.0	0.0	14.8	7.4	9.3	8.9			
Four Years Later	0.0	0.0	0.0	17.7	9.1	10.6				
Five Years Later	0.0	0.0	0.0	19.7	10.3					
Six Years Later	0.0	0.0	0.0	24.8						
Seven Years Later	0.0	0.0	0.0							
Eight Years Later	0.0	0.0								
Nine Years Later	0.0									
6. Increase (Decrease) in Estimated Incurred Claims and Expenses from End of Policy Year	\$ 0.0	\$ 0.0	\$ 0.0	\$ 12.9	\$ (8.9)	\$ (9.8)	\$ (24.7)	\$ (30.7)	\$ (35.2)	\$ 0.0

\*Prior to 2016 data not available.



## FINANCIAL SECTION

**Wisconsin Retirement System**  
**Schedules of Changes in Net Pension Liability (Asset) and Related Ratios**  
(In Millions)

Calendar Year Ended December 31	2022	2021	2020	2019	2018
<b>Total Pension Liability</b>					
Service Cost	\$ 2,178.9	\$ 2,019.3	\$ 1,975.8	\$ 1,902.5	\$ 1,860.9
Interest on the Total Pension Liability	8,933.5	8,157.5	7,480.7	6,888.1	7,169.7
Difference between Expected and Actual Experience <sup>1</sup>	(14,230.1)	9,453.1	6,376.7	5,473.3	(4,968.3)
Assumption Changes	0.0	1,829.1	0.0	0.0	361.5
Benefit Payments	(6,949.1)	(6,352.7)	(5,939.4)	(5,646.3)	(5,516.2)
Refunds of Member Contributions	(54.8)	(42.0)	(38.9)	(44.1)	(40.2)
<b>Net Change in Total Pension Liability</b>	<u>(10,121.6)</u>	<u>15,064.3</u>	<u>9,855.0</u>	<u>8,573.5</u>	<u>(1,132.6)</u>
<b>Total Pension Liability - Beginning</b>	<u>133,787.5</u>	<u>118,723.3</u>	<u>108,868.3</u>	<u>100,294.8</u>	<u>101,427.3</u>
<b>Total Pension Liability - Ending (a)</b>	<u><u>\$ 123,665.9</u></u>	<u><u>\$ 133,787.5</u></u>	<u><u>\$ 118,723.3</u></u>	<u><u>\$ 108,868.3</u></u>	<u><u>\$ 100,294.8</u></u>
<b>Plan Fiduciary Net Position</b>					
Employer Contributions <sup>2</sup>	\$ 1,175.9	\$ 1,164.6	\$ 1,133.3	\$ 1,046.9	\$ 1,030.5
Member Contributions	1,082.0	1,086.8	1,053.2	987.7	973.0
Pension Plan Net Investment Income (Loss)	(18,702.3)	21,056.6	16,698.6	19,049.5	(4,049.4)
Benefit Payments	(6,949.1)	(6,352.7)	(5,939.4)	(5,646.3)	(5,516.2)
Refunds of Member Contributions	(54.8)	(42.0)	(38.9)	(44.1)	(40.2)
Pension Plan Administrative Expense	(31.2)	(31.9)	(33.3)	(34.2)	(31.6)
Other <sup>3</sup>	0.0	0.0	0.0	(3.9)	(25.4)
<b>Net Change in Plan Fiduciary Net Position</b>	<u>(23,479.5)</u>	<u>16,881.3</u>	<u>12,873.6</u>	<u>15,355.7</u>	<u>(7,659.4)</u>
<b>Plan Fiduciary Net Position - Beginning</b>	<u>141,847.7</u>	<u>124,966.4</u>	<u>112,092.8</u>	<u>96,737.1</u>	<u>104,396.5</u>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<u><u>\$ 118,368.2</u></u>	<u><u>\$ 141,847.7</u></u>	<u><u>\$ 124,966.4</u></u>	<u><u>\$ 112,092.8</u></u>	<u><u>\$ 96,737.1</u></u>
<b>Net Pension Liability(Asset) - Ending (a) - (b)</b>	\$ 5,297.7	\$ (8,060.2)	\$ (6,243.1)	\$ (3,224.5)	\$ 3,557.7
<b>Plan Fiduciary Net Position as a Percentage of Total Pension</b>	95.72 %	106.02 %	105.26 %	102.96 %	96.45 %
<b>Covered Employee Payroll</b>	\$ 16,361.3	\$ 15,780.8	\$ 15,359.9	\$ 14,832.5	\$ 14,301.4
<b>Net Pension Liability(Asset) as a Percentage of Covered Employee Payroll</b>	32.38 %	(51.08)%	(40.65)%	(21.74)%	24.88 %

Immaterial differences may exist between the amounts in this schedule and those reported in the Statement of Changes in Fiduciary Net Position.

Amounts may not foot due to rounding

<sup>1</sup> Starting with 2015, this item includes the impact of known Market Recognition Account deferred gains/losses on the liability for dividend payments.

<sup>2</sup> Employer contributions shown in the above tables includes Employer Required Contributions in addition to Reduced Retirement Contributions and Additional Contributions paid by employer on behalf of employee.

<sup>3</sup> Other for 2018 relates to an impairment loss on a capital asset.



**Wisconsin Retirement System**  
**Schedules of Changes in Net Pension Liability (Asset) and Related Ratios**  
(In Millions)

Calendar Year Ended December 31	2017	2016	2015	2014	2013
<b>Total Pension Liability</b>					
Service Cost	\$ 1,842.9	\$ 1,814.1	\$ 1,787.9	\$ 1,757.0	\$ 1,745.0
Interest on the Total Pension Liability	6,627.2	6,372.4	6,347.1	6,089.3	5,680.7
Difference between Expected and Actual Experience <sup>1</sup>	4,459.5	150.3	(4,247.3)	437.3	2,659.9
Assumption Changes	0.0	0.0	1,412.0	0.0	0.0
Benefit Payments	(5,211.3)	(5,022.9)	(4,823.6)	(4,540.2)	(4,224.7)
Refunds of Member Contributions	(38.4)	(39.3)	(37.6)	(34.4)	(33.3)
<b>Net Change in Total Pension Liability</b>	<b>7,679.9</b>	<b>3,274.6</b>	<b>438.5</b>	<b>3,708.9</b>	<b>5,827.7</b>
<b>Total Pension Liability - Beginning<sup>2</sup></b>	<b>93,747.4</b>	<b>90,129.7</b>	<b>89,691.2</b>	<b>85,982.2</b>	<b>80,154.6</b>
<b>Total Pension Liability - Ending (a)</b>	<b>\$ 101,427.3</b>	<b>\$ 93,404.3</b>	<b>\$ 90,129.7</b>	<b>\$ 89,691.2</b>	<b>\$ 85,982.2</b>
<b>Plan Fiduciary Net Position</b>					
Employer Contributions <sup>3</sup>	\$ 1,017.6	\$ 963.1	\$ 977.7	\$ 987.8	\$ 914.7
Member Contributions	965.5	921.9	937.2	941.9	871.3
Pension Plan Net Investment Income (Loss)	14,875.4	7,273.1	(673.1)	4,891.0	11,347.3
Benefit Payments	(5,211.3)	(5,022.9)	(4,823.6)	(4,540.2)	(4,224.7)
Refunds of Member Contributions	(38.4)	(39.3)	(37.6)	(34.4)	(33.3)
Pension Plan Administrative Expense	(26.1)	(20.4)	(22.7)	(24.0)	(22.9)
Other <sup>3</sup>	0.0	0.0	0.0	0.0	0.0
<b>Net Change in Plan Fiduciary Net Position</b>	<b>11,582.7</b>	<b>4,075.4</b>	<b>(3,642.1)</b>	<b>2,222.0</b>	<b>8,852.4</b>
<b>Plan Fiduciary Net Position - Beginning<sup>4</sup></b>	<b>92,813.8</b>	<b>88,504.7</b>	<b>92,146.8</b>	<b>89,924.7</b>	<b>81,072.3</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 104,396.5</b>	<b>\$ 92,580.1</b>	<b>\$ 88,504.7</b>	<b>\$ 92,146.8</b>	<b>\$ 89,924.7</b>
<b>Net Pension Liability(Asset) - Ending (a) - (b)</b>	<b>\$ (2,969.1)</b>	<b>\$ 824.2</b>	<b>\$ 1,625.0</b>	<b>\$ (2,455.6)</b>	<b>\$ (3,942.5)</b>
<b>Plan Fiduciary Net Position as a Percentage of Total Pension</b>	102.93 %	99.12 %	98.20 %	102.74 %	104.59 %
<b>Covered Employee Payroll</b>	\$ 13,943.1	\$ 13,706.0	\$ 13,530.5	\$ 13,219.5	\$ 12,884.8
<b>Net Pension Liability(Asset) as a Percentage of Covered Employee Payroll</b>	(21.29)%	6.01 %	12.01 %	(18.58)%	(30.60)%

Immaterial differences may exist between the amounts in this schedule and those reported in the Statement of Changes in Fiduciary Net Position.

Amounts may not foot due to rounding

<sup>1</sup> Starting with 2015, this item includes the impact of known Market Recognition Account deferred gains/losses on the liability for dividend payments.

<sup>2</sup> As of calendar year 2017, the Long-Term Disability Insurance (LTDI) program is reported within the Wisconsin Retirement System (WRS). Beginning of year liabilities for 2017 were adjusted by \$343,079,422 to reflect the LTDI program.

<sup>3</sup> Employer contributions shown in the above tables includes Employer Required Contributions in addition to Reduced Retirement Contributions and Additional Contributions paid by employer on behalf of employee.

<sup>4</sup> As of calendar year 2017, the LTDI program is reported within the WRS. Beginning of year net position for 2017 was adjusted by \$233,691,533 to reflect the LTDI program.



## FINANCIAL SECTION

**Wisconsin Retirement System  
Schedule of Required Employer Contributions**  
(In Millions)

<b>Calendar Year Ending December 31,</b>	<b>Actuarially Determined Contributions</b>	<b>Actual Contributions</b>	<b>Contribution Deficiency (Excess)</b>	<b>Covered Payroll</b>	<b>Actual Contributions as % of Covered Payroll</b>
2013	\$905	\$905	\$0	\$12,885	7.02%
2014	977	977	0	13,220	7.39
2015	968	968	0	13,531	7.15
2016	954	954	0	13,706	6.96
2017	1,015	1,015	0	13,943	7.28
2018	1,028	1,028	0	14,301	7.19
2019	1,045	1,045	0	14,832	7.05
2020	1,131	1,131	0	15,360	7.37
2021	1,163	1,163	0	15,781	7.37
2022	1,175	1,175	0	16,361	7.18

**Wisconsin Retirement System  
Schedule of Investment Returns**  
**Annual Money-Weighted Rate of Return, Net of Investment Expenses**

	<b>2022</b>	<b>2021</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>
Core Fund	(12.94)%	17.03 %	15.06 %	19.49 %	(3.56)%	15.85 %	8.29 %	(0.63)%	5.44 %	13.18 %
Variable Fund	(18.02)%	19.98 %	17.05 %	28.80 %	(7.61)%	23.27 %	10.49 %	(1.11)%	7.24 %	28.78 %



**State Retiree Life Insurance**  
**Schedules of Changes in Net OPEB Liability (Asset) and Related Ratios**  
(In Millions)

Calendar Year Ended December 31	2022	2021	2020	2019	2018	2017
<b>Total OPEB Liability</b>						
Service Cost	\$ 49.0	\$ 46.3	\$ 36.3	\$ 25.4	\$ 30.7	\$ 26.1
Interest on the Total OPEB Liability	28.0	27.4	30.0	33.2	31.2	30.7
Difference between Expected and Actual Experience	(5.3)	3.3	(10.5)	(6.2)	(17.5)	(5.3)
Assumption Changes	(350.1)	13.4	138.5	223.0	(94.9)	49.0
Benefit Payments	(26.0)	(23.7)	(24.7)	(19.8)	(19.5)	(17.7)
<b>Net Change in Total OPEB Liability</b>	<b>(304.4)</b>	<b>66.7</b>	<b>169.6</b>	<b>255.6</b>	<b>(70.0)</b>	<b>82.8</b>
<b>Total OPEB Liability - Beginning</b>	<b>1,267.4</b>	<b>1,200.7</b>	<b>1,031.1</b>	<b>775.5</b>	<b>845.5</b>	<b>762.6</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 963.0</b>	<b>\$ 1,267.4</b>	<b>\$ 1,200.7</b>	<b>\$ 1,031.1</b>	<b>\$ 775.5</b>	<b>\$ 845.5</b>
<b>Plan Fiduciary Net Position</b>						
Employer Contributions	\$ 1.8	\$ 1.7	\$ 1.5	\$ 1.1	\$ 1.4	\$ 1.4
Net Investment Income	8.9	8.8	9.8	10.4	10.9	11.5
Benefit Payments	(26.0)	(23.7)	(24.7)	(19.8)	(19.5)	(17.7)
OPEB Plan Administrative Expense	(1.0)	(0.9)	(0.9)	(0.8)	(0.7)	(0.6)
Other	0.0	0.0	0.0	13.1 *	0.0	0.0
<b>Net Change in Plan Fiduciary Net Position</b>	<b>(16.3)</b>	<b>(14.1)</b>	<b>(14.3)</b>	<b>4.0</b>	<b>(7.9)</b>	<b>(5.4)</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>319.6</b>	<b>333.7</b>	<b>348.0</b>	<b>344.0</b>	<b>352.0</b>	<b>357.4</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 303.3</b>	<b>\$ 319.6</b>	<b>\$ 333.7</b>	<b>\$ 348.0</b>	<b>\$ 344.0</b>	<b>\$ 352.0</b>
<b>Net OPEB Liability(Asset) - Ending (a) - (b)</b>	<b>\$ 659.7</b>	<b>\$ 947.8</b>	<b>\$ 867.0</b>	<b>\$ 683.1</b>	<b>\$ 431.5</b>	<b>\$ 493.5</b>
<b>Plan Fiduciary Net Position as a Percentage of Total OPEB Liability</b>	31.49 %	25.22 %	27.80 %	33.75%	44.36%	41.63%
<b>Covered Employee Payroll</b>	\$ 3,645.2	\$ 3,529.3	\$ 3,456.5	\$ 3,299.5	\$ 3,182.5	\$ 3,184.0
<b>Net OPEB Liability (Asset) as a Percentage of Covered Employee Payroll</b>	18.10 %	26.85 %	25.08 %	20.70%	13.56%	15.50%
<b>Key Assumptions</b>						
Discount Rate	3.75 %	2.15 %	2.22 %	2.84 %	4.20 %	3.60 %
Long-Term Expected Rate of Return	4.25 %	4.25 %	4.25 %	4.25 %	5.00 %	5.00 %
20 Year Tax-Exempt Municipal Bond Yield	3.72 %	2.06 %	2.12 %	2.74 %	4.10 %	3.44 %

\*Transfer from Active Life Insurance Program.

Immaterial differences may exist between the amounts in this schedule and those reported in the Statement of Changes in Fiduciary Net Position.

Amounts may not foot due to rounding



## FINANCIAL SECTION

**Local Retiree Life Insurance**  
**Schedules of Changes in Net OPEB Liability (Asset) and Related Ratios**  
(In Millions)

Calendar Year Ended December 31	2022	2021	2020	2019	2018	2017
<b>Total OPEB Liability</b>						
Service Cost	\$ 34.8	\$ 33.9	\$ 26.7	\$ 17.0	\$ 21.1	\$ 18.1
Interest on the Total OPEB Liability	18.8	18.7	20.2	21.7	20.4	19.8
Difference between Expected and Actual Experience	(16.4)	(10.7)	(12.5)	(9.5)	(11.0)	(4.9)
Assumption Changes	(240.0)	6.3	97.7	159.4	(65.1)	33.5
Benefit Payments	(13.8)	(10.4)	(12.8)	(9.3)	(7.6)	(7.3)
<b>Net Change in Total OPEB Liability</b>	(216.6)	37.8	119.2	179.3	(42.2)	59.2
<b>Total OPEB Liability - Beginning</b>	839.2	801.4	682.2	502.9	545.1	485.9
<b>Total OPEB Liability - Ending (a)</b>	<u>\$ 622.6</u>	<u>\$ 839.2</u>	<u>\$ 801.4</u>	<u>\$ 682.2</u>	<u>\$ 502.9</u>	<u>\$ 545.1</u>
<b>Plan Fiduciary Net Position</b>						
Employer Contributions	\$ 2.0	\$ 2.0	\$ 2.0	\$ 1.8	\$ 1.9	\$ 2.1
Net Investment Income	6.9	6.7	7.3	7.5	7.6	7.6
Benefit Payments	(13.8)	(10.4)	(12.8)	(9.3)	(7.6)	(7.3)
OPEB Plan Administrative Expense	(1.7)	(1.5)	(1.5)	(1.4)	(1.2)	(1.2)
Other	0.0	0.0	0.0	12.9 *	0.0	0.0
<b>Net Change in Plan Fiduciary Net Position</b>	(6.6)	(3.2)	(5.0)	11.5	0.7	1.2
<b>Plan Fiduciary Net Position - Beginning</b>	248.2	251.4	256.4	244.9	244.2	243.1
<b>Plan Fiduciary Net Position - Ending (b)</b>	<u>\$ 241.6</u>	<u>\$ 248.2</u>	<u>\$ 251.4</u>	<u>\$ 256.4</u>	<u>\$ 244.9</u>	<u>\$ 244.2</u>
<b>Net OPEB Liability (Asset) - Ending (a) - (b)</b>	\$ 381.0	\$ 591.0	\$ 550.0	\$ 425.8	\$ 258.0	\$ 300.9
<b>Plan Fiduciary Net Position as a Percentage of Total OPEB Liability</b>	38.81%	29.57%	31.36%	37.58%	48.69%	44.81%
<b>Covered Employee Payroll</b>	\$4,471.4	\$4,418.5	\$4,307.4	\$4,228.2	\$4,115.0	\$4,205.3
<b>Net OPEB Liability (Asset) as a Percentage of Covered Employee Payroll</b>	8.52%	13.38%	12.77%	10.07%	6.27%	7.15%
<b>Key Assumptions</b>						
Discount Rate	3.76 %	2.17 %	2.25 %	2.87 %	4.22 %	3.63 %
Long-Term Expected Rate of Return	4.25 %	4.25 %	4.25 %	4.25 %	5.00 %	5.00 %
20 Year Tax-Exempt Municipal Bond Yield	3.72 %	2.06 %	2.12 %	2.74 %	4.10 %	3.44 %

\*Transfer from Active Life Insurance Program.

Immaterial differences may exist between the amounts in this schedule and those reported in the Statement of Changes in Fiduciary Net Position.

Amounts may not foot due to rounding



**State and Local Retiree Life Insurance  
Schedule of Investment Returns  
Annual Money-Weighted Rate of Return, Net of Investment Expenses**

	<b>2022</b>	<b>2021</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>
State Retiree Life Insurance	2.82%	2.67%	2.86%	3.09%	3.16%	3.19%
Local Retiree Life Insurance	2.77%	2.65%	2.84%	3.05%	3.10%	3.13%



## FINANCIAL SECTION

**Supplemental Health Insurance Conversion Credit**  
**Schedules of Changes in Net OPEB Liability (Asset) and Related Ratios**  
(In Millions)

Calendar Year Ended December 31	2022	2021	2020	2019	2018	2017
<b>Total OPEB Liability</b>						
Service Cost	\$ 25.7	\$ 23.5	\$ 24.1	\$ 25.5	\$ 23.4	\$ 23.1
Interest on the Total OPEB Liability	70.0	63.7	64.4	65.5	66.0	65.9
Difference between Expected and Actual Experience	(39.9)	(36.2)	(47.6)	(55.3)	(41.6)	(31.6)
Assumption Changes	0.0	120.4	0.0	0.0	25.2	0.0
Benefit Payments	(52.5)	(52.6)	(49.5)	(53.0)	(55.4)	(56.4)
<b>Net Change in Total OPEB Liability</b>	3.2	118.7	(8.6)	(17.2)	17.6	0.9
<b>Total OPEB Liability - Beginning</b>	1,042.7	924.0	932.6	949.8	932.2	931.3
<b>Total OPEB Liability - Ending (a)</b>	<u>\$ 1,046.0</u>	<u>\$ 1,042.7</u>	<u>\$ 924.0</u>	<u>\$ 932.6</u>	<u>\$ 949.8</u>	<u>\$ 932.2</u>
<b>Plan Fiduciary Net Position</b>						
Employer Contributions	\$ 5.4	\$ 15.7	\$ 15.1	\$ 14.4	\$ 18.2	\$ 17.9
Net Investment Income (Loss)	(175.2)	200.6	159.5	180.3	(36.5)	141.8
Benefit Payments	(52.5)	(52.6)	(49.5)	(53.0)	(55.4)	(56.4)
OPEB Plan Administrative Expense	(0.7)	(0.7)	(0.6)	(0.3)	(0.3)	(0.3)
<b>Net Change in Plan Fiduciary Net Position</b>	(222.9)	162.9	124.4	141.3	(74.0)	102.9
<b>Plan Fiduciary Net Position - Beginning</b>	1,371.7	1,208.8	1,084.4	943.1	1,017.1	914.1
<b>Plan Fiduciary Net Position - Ending (b)</b>	<u>\$ 1,148.8</u>	<u>\$ 1,371.7</u>	<u>\$ 1,208.8</u>	<u>\$ 1,084.4</u>	<u>\$ 943.1</u>	<u>\$ 1,017.1</u>
<b>Net OPEB Liability(Asset) - Ending (a) - (b)</b>	\$ (102.8)	\$ (329.0)	\$ (284.8)	\$ (151.8)	\$ 6.8	\$ (84.8)
<b>Plan Fiduciary Net Position as a Percentage of Total OPEB Liability</b>	109.83%	131.55%	130.82%	116.27%	99.29%	109.10%
<b>Covered Employee Payroll</b>	\$ 5,423.5	\$ 5,215.5	\$ 5,018.5	\$ 4,796.1	\$ 4,562.6	\$ 4,454.5
<b>Net OPEB Liability(Asset) as a Percentage of Covered Employee Payroll</b>	(1.90)%	(6.31)%	(5.67)%	(3.16)%	0.15%	(1.90)%

Immaterial differences may exist between the amounts in this schedule and those reported in the Statement of Changes in Fiduciary Net Position.

Values may not add due to rounding

**Supplemental Health Insurance Conversion Credit  
Schedule of Required Employer Contributions**  
(In Millions)

<b>Calendar Year Ending December 31,</b>	<b>Actuarially Determined Contributions</b>	<b>Actual Contributions</b>	<b>Contribution Deficiency (Excess)</b>	<b>Covered Payroll</b>	<b>Actual Contributions as % of Covered Payroll</b>
2017	17.9	17.9	0.0	4,454.5	0.40%
2018	18.2	18.2	0.0	4,562.6	0.40%
2019	14.4	14.4	0.0	4,796.1	0.30%
2020	15.1	15.1	0.0	5,018.5	0.30%
2021	15.7	15.7	0.0	5,215.5	0.30%
2022	5.4	5.4	0.0	5,423.5	0.10%

**Supplemental Health Insurance Conversion Credit  
Schedule of Investment Returns**  
**Annual Money-Weighted Rate of Return, Net of Investment Expenses**

	<b>2022</b>	<b>2021</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>
Core Fund	(12.94)%	17.03%	15.06%	19.49%	(3.56)%	15.85%



## FINANCIAL SECTION

## NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

» *Wisconsin Retirement System (WRS)**Changes in Benefit Terms and Assumptions related to Pension Liabilities (Assets)*

**Benefit Terms:** There were no recent changes in benefit terms.

**Assumptions:**

Based on a three-year experience study conducted in 2021 covering January 1, 2018 through December 31, 2020, the ETF Board adopted assumption changes that were used to measure the total pension liability beginning with the year-end December 31, 2021, including the following:

- Lowering the long-term expected rate of return from 7.0% to 6.8%.
- Lowering the discount rate from 7.0% to 6.8%.
- Lowering the price inflation rate from 2.5% to 2.4%.
- Lowering the post-retirement adjustments from 1.9% to 1.7%.
- Changing mortality assumptions to reflect updated trends by transitioning from the Wisconsin 2018 Mortality Table to the 2020 WRS Experience Mortality Table.

Based on a three-year experience study conducted in 2018 covering January 1, 2015 through December 31, 2017, the ETF Board adopted assumption changes that were used to measure the total pension liability beginning with the year ended December 31, 2018, including the following:

- Lowering the long-term expected rate of return from 7.2% to 7.0%.
- Lowering the discount rate from 7.2% to 7.0%.
- Lowering the wage inflation rate from 3.2% to 3.0%.
- Lowering the price inflation rate from 2.7% to 2.5%.
- Lowering the post-retirement adjustments from 2.1% to 1.9%.
- Changing mortality assumptions to reflect updated trends by transitioning from the Wisconsin 2012 Mortality Table to the Wisconsin 2018 Mortality Table.

**Significant methods and assumptions used in calculating Wisconsin Retirement System Actuarially Determined Contributions:**

	<b>2022</b>	<b>2021</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>
Valuation Date:	December 31, 2020	December 31, 2019	December 31, 2018	December 31, 2017	December 31, 2016
Actuarial Cost Method:	Frozen Entry Age				
Amortization Method:	Level Percent of Payroll-Closed Amortization Period				
Amortization Period:	30 Year closed from date of participation in WRS	30 Year closed from date of participation in WRS	30 Year closed from date of participation in WRS	30 Year closed from date of participation in WRS	30 Year closed from date of participation in WRS
Asset Valuation Method:	Five Year Smoothed Market (Closed)				
<b>Actuarial Assumptions</b>					
Net Investment Rate of Return:	5.4%	5.4%	5.4%	5.5%	5.5%
Weighted based on assumed rate for:					
Pre-retirement:	7.0%	7.0%	7.0%	7.2%	7.2%
Post-retirement:	5.0%	5.0%	5.0%	5.0%	5.0%
<b>Salary Increases</b>					
Wage Inflation:	3.0%	3.0%	3.0%	3.2%	3.2%
Seniority/Merit:	0.1%-5.6%	0.1%-5.6%	0.1%-5.6%	0.1%-5.6%	0.1%-5.6%
Post-retirement Benefit Adjustments*:	1.9%	1.9%	1.9%	2.1%	2.1%
Retirement Age:	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2018 valuation pursuant to an experience study of the period 2015-2017.	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2018 valuation pursuant to an experience study of the period 2015-2017.	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2018 valuation pursuant to an experience study of the period 2015 - 2017.	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2015 valuation pursuant to an experience study of the period 2012 - 2014.	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2015 valuation pursuant to an experience study of the period 2012 - 2014.
Mortality:	Wisconsin 2018 Mortality Table. The rates based on actual WRS experience adjusted for future mortality improvements using the MP-2018 fully generational improvement scale (multiplied by 60%).	Wisconsin 2018 Mortality Table. The rates based on actual WRS experience adjusted for future mortality improvements using the MP-2018 fully generational improvement scale (multiplied by 60%).	Wisconsin 2018 Mortality Table. The rates based on actual WRS experience adjusted for future mortality improvements using the MP-2018 fully generational improvement scale (multiplied by 60%).	Wisconsin 2012 Mortality Table. The rates based on actual WRS experience adjusted for future mortality improvements using the MP-2015 fully generational improvement scale (multiplied by 50%).	Wisconsin 2012 Mortality Table. The rates based on actual WRS experience adjusted for future mortality improvements using the MP-2015 fully generational improvement scale (multiplied by 50%).

\*No post-retirement adjustment is guaranteed. Actual adjustments are based on recognized investment return, actuarial experience and other factors. Value is the assumed annual adjustment based on the investment return assumption and the post-retirement discount rate.



## FINANCIAL SECTION

### Significant methods and assumptions used in calculating Wisconsin Retirement System Actuarially Determined Contributions:

	2017	2016	2015	2014	2013
Valuation Date:	December 31, 2015	December 31, 2014	December 31, 2013	December 31, 2012	December 31, 2011
Actuarial Cost Method:	Frozen Entry Age	Frozen Entry Age	Frozen Entry Age	Frozen Entry Age	Frozen Entry Age
Amortization Method:	Level Percent of Payroll-Closed Amortization Period	Level Percent of Payroll-Closed Amortization Period	Level Percent of Payroll-Closed Amortization Period	Level Percent of Payroll-Closed Amortization Period	Level Percent of Payroll-Closed Amortization Period
Amortization Period:	30 Year closed from date of participation in WRS	30 Year closed from date of participation in WRS	30 Year closed from date of participation in WRS	30 Year closed from date of participation in WRS	30 Year closed from date of participation in WRS
Asset Valuation Method:	Five Year Smoothed Market (Closed)	Five Year Smoothed Market (Closed)	Five Year Smoothed Market (Closed)	Five Year Smoothed Market (Closed)	Five Year Smoothed Market (Closed)
<b>Actuarial Assumptions</b>					
Net Investment Rate of Return:	5.5%	5.5%	5.5%	5.5%	5.5%
Weighted based on assumed rate for:					
Pre-retirement:	7.2%	7.2%	7.2%	7.2%	7.2%
Post-retirement:	5.0%	5.0%	5.0%	5.0%	5.0%
<b>Salary Increases</b>					
Wage Inflation:	3.2%	3.2%	3.2%	3.2%	3.2%
Seniority/Merit:	0.1%-5.6%	0.1%-5.6%	0.1%-5.6%	0.1%-5.6%	0.1%-5.6%
Post-retirement Benefit Adjustments*:	2.1%	2.1%	2.1%	2.1%	2.1%
Retirement Age:	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2015 valuation pursuant to an experience study of the period 2012 - 2014.	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2012 valuation pursuant to an experience study of the period 2009 - 2011.	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2012 valuation pursuant to an experience study of the period 2009 - 2011.	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2012 valuation pursuant to an experience study of the period 2009 - 2011.	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2009 valuation pursuant to an experience study of the period 2006 - 2008.
Mortality:	Wisconsin 2012 Mortality Table. The rates based on actual WRS experience adjusted for future mortality improvements using the MP-2015 fully generational improvement scale (multiplied by 50%).	Wisconsin 2012 Mortality Table. The rates based on actual WRS experience projected to 2017 with scale BB to all for future improvements (margin) in mortality.	Wisconsin 2012 Mortality Table. The rates based on actual WRS experience projected to 2017 with scale BB to all for future improvements (margin) in mortality.	Wisconsin 2012 Mortality Table. The rates based on actual WRS experience projected to 2017 with scale BB to all for future improvements (margin) in mortality.	Wisconsin Projected Experience Table - 2005 for women and 90% of the Wisconsin Projected Experience Table - 2005 for men.

\*No post-retirement adjustment is guaranteed. Actual adjustments are based on recognized investment return, actuarial experience and other factors. Value is the assumed annual adjustment based on the investment return assumption and the post-retirement discount rate.

## » *Retiree Life Insurance Plans*

### *Changes in Benefit Terms and Assumptions related to Retiree Life OPEB Liabilities (Assets)*

**Benefit Terms:** There were no recent changes in benefit terms.

**Assumptions:** In addition to the rate changes detailed in the tables above, the State of Wisconsin Employee Trust Funds Board adopted economic and demographic assumption changes based on a three-year experience study performed for the Wisconsin Retirement System. These assumptions are used in the actuarial valuations of OPEB liabilities (assets) for the retiree life insurance programs and are summarized below.

The assumption changes that were used to measure the December 31, 2021 total OPEB liabilities include the following:

- Lowering the price inflation rate from 2.5% to 2.4%.
- Changing mortality assumptions to reflect updated trends by transitioning from the Wisconsin 2018 Mortality Table to the 2020 WRS Experience Mortality Table.

The assumption changes that were used to measure the December 31, 2018 total OPEB liabilities include the following:

- Lowering the long-term expected rate of return from 5.00% to 4.25%.
- Lowering the wage inflation rate from 3.2% to 3.0%.
- Lowering the price inflation rate from 2.7% to 2.5%.
- Changing mortality assumptions to reflect updated trends by transitioning from the Wisconsin 2012 Mortality Table to the Wisconsin 2018 Mortality Table.

## » *Supplemental Health Insurance Conversion Credit (SHICC)*

### *Changes in Benefit Terms and Assumptions related to SHICC OPEB Liabilities (Assets)*

**Benefit Terms:** There were no recent changes in benefit terms.

**Assumptions:** Based upon experience studies conducted in 2021 on the WRS and Wisconsin Sick Leave Conversion Credit programs that covered a three-year period from January 1, 2018 through December 31, 2020, the ETF Board adopted assumption changes that were used to measure the total OPEB liability (asset) beginning with the year-end December 31, 2021, including the following:

- Lowering the long-term expected rate of return from 7.00% to 6.8%.
- Lowering the discount rate from 7.0% to 6.8%.
- Lowering the price inflation rate from 2.5% to 2.4%.
- Changing mortality assumptions to reflect updated trends by transitioning from the Wisconsin 2018 Mortality Table to the 2020 WRS Experience Mortality Table.
- Changing the healthcare cost trend rate from an increase of 3.0% in each future year to 6.0% for the first year and declining each future year to an ultimate trend rate of 3.5% over a 12-year period.
- Changing health care premium assumptions to reflect one person and two person coverage for non Medicare and Medicare along with an election percentage assumption of 50%. Previously, the average non Medicare and Medicare premiums were based on active annuitant data with a 10% increase applied to the average premium.

## FINANCIAL SECTION

- Changing the escrowed benefit usage assumption to reflect that 50% of escrowed members will at some point begin using their sick leave balance to pay for health care costs. The present value of future benefits is now calculated by drawing down each member's account balance using the same average premiums applicable to active members and a 50% factor applied to the present value to account for the 50% escrowed benefit usage assumption. Previously, the present value of future benefits was calculated by taking the balance on deposit for escrowed annuitants multiplied by the ratio of the present value of future benefits for active status annuitants to the balance on deposit for active status annuitants multiplied by 50%.
- Changing the sick leave accumulation assumption to reflect that each individual is at their same rate as in the past (earned less used), but not more than 100% of the gross earned rate based on the person's employer and not less than 25% of their gross earned rate. The assumed annual gross earned rates range from 6.4 to 16.25 days, depending on the employer. Previously, each individual was assumed to continue using sick leave at the same rate as in the past but not less than 25% nor more than 75% of the person's annual accrual rate (usually 16.25 days).

Based upon a three-year experience study conducted in 2018 that covered the period from January 1, 2015 through December 31, 2017, the ETF Board adopted assumption changes that were used to measure the total OPEB liability (asset), beginning with the year-end December 31, 2018, including the following:

- Lowering the long-term expected rate of return from 7.2% to 7.0%.
- Lowering the discount rate from 7.2% to 7.0%.
- Lowering the wage inflation rate from 3.2% to 3.0%.
- Lowering the price inflation rate from 2.7% to 2.5%.
- Changing mortality assumptions to reflect updated trends by transitioning from the Wisconsin 2012 Mortality Table to the Wisconsin 2018 Mortality Table.
- Changing the healthcare cost trend rate from an increase of 3.2% in each future year to 3.0%.

**Significant methods and assumptions used in calculating SHICC Actuarially Determined Contributions:**

	<b>2022</b>	<b>2021</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>
Valuation Date:	December 31, 2020	December 31, 2019	December 31, 2018	December 31, 2017	December 31, 2016
Actuarial Cost Method:	Frozen Entry Age				
Amortization Method:	Level Percent of Payroll, (Closed)				
Remaining Amortization Period:	5 years	6 years	7 years	8 years	9 years
Asset Valuation Method:	Five Year Smoothed Market (Closed)				
Salary Increases					
Wage Inflation:	3.0%	3.0%	3.0%	3.2%	2.0%
Seniority/Merit:	0.1%-5.6%	0.1%-5.6%	0.1%-5.6%	0.1%-5.6%	0.1%-5.6%
Investment Rate of Return:	7.0%	7.0%	7.0%	7.2%	7.2%
Retirement Age:	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2018 valuation pursuant to an experience study of the period 2015-2017.	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2018 valuation pursuant to an experience study of the period 2015-2017.	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2018 valuation pursuant to an experience study of the period 2015-2017.	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2015 valuation pursuant to an experience study of the period 2012-2014.	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2015 valuation pursuant to an experience study of the period 2012-2014.
Mortality:	Fully generational mortality utilizing the WRS 2018 Mortality Table adjusted for future mortality improvements using the MP-2018 fully generational improvement scale (multiplied by 60%)	Fully generational mortality utilizing the WRS 2018 Mortality Table adjusted for future mortality improvements using the MP-2018 fully generational improvement scale (multiplied by 60%)	Fully generational mortality utilizing the WRS 2018 Mortality Table adjusted for future mortality improvements using the MP-2018 fully generational improvement scale (multiplied by 60%)	Fully generational mortality utilizing the WRS 2012 Mortality Table adjusted for future mortality improvements using the MP-2015 fully generational improvement scale (multiplied by 50%)	Fully generational mortality utilizing the WRS 2012 Mortality Table adjusted for future mortality improvements using the MP-2015 fully generational improvement scale (multiplied by 50%)
Healthcare Trend Rates:	3.0%	3.0%	3.0%	3.2%	3.2%
Other Information					
Notes:	There were no benefit changes during the year.	There were no benefit changes during the year.	There were no benefit changes during the year.	There were no benefit changes during the year	There were no benefit changes during the year.



## FINANCIAL SECTION

***Significant methods and assumptions used in calculating SHICC Actuarially Determined Contributions:***

	<u>2017</u>
Valuation Date:	December 31, 2015
Actuarial Cost Method:	Frozen Entry Age
Amortization Method:	Level Percent of Payroll, (Closed)
Remaining Amortization Period:	10 years
Asset Valuation Method:	Five Year Smoothed Market (Closed)
Salary Increases	
Inflation:	2.0%
Seniority/Merit:	0.1%-5.6%
Investment Rate of Return:	7.2%
Retirement Age:	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2015 valuation pursuant to an experience study of the period 2012-2014.
Mortality:	Fully generational mortality utilizing the WRS 2012 Mortality Table adjusted for future mortality improvements using the MP-2015 fully generational improvement scale (multiplied by 50%)
Health Care Trend Rates:	3.2%
Other Information	
Notes:	There were no benefit changes during the year.

Beginning with 2017 this 10 year schedule is built prospectively.

# STATISTICAL SECTION

The background features a series of overlapping, wavy lines in shades of blue and grey. These lines create a sense of movement and depth. In the lower right quadrant, there is a grid of thin, light blue lines that forms a mesh-like pattern, adding a technical or data-oriented feel to the design.

State of Wisconsin  
Department of Employee Trust Funds

Wisconsin Department of Employee Trust Funds

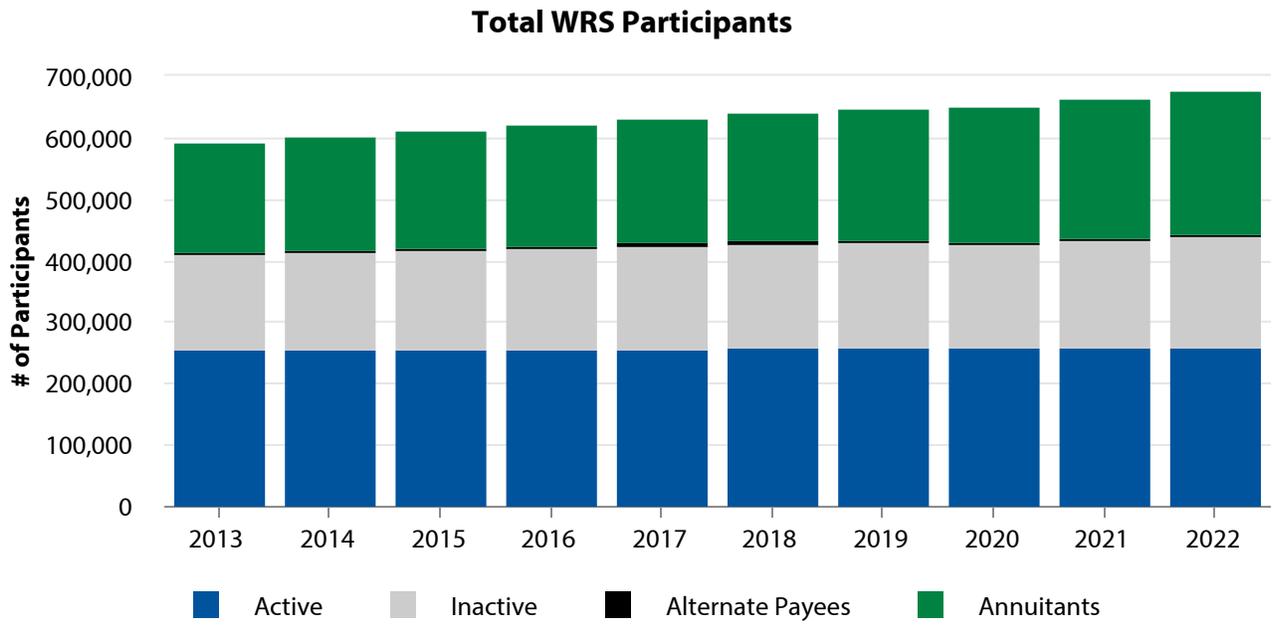
**Wisconsin Retirement System (WRS) Statistics****WRS Active Participants by Employment Category**

Year	General	Teachers	Executives and Elected Officials	Protective Occupations With Social Security	Protective Occupations Without Social Security	Totals
<b>State Participants</b>						
2013	42,898	21,065	730	8,398	0	73,091
2014	42,982	21,279	732	8,900	0	73,893
2015	42,498	21,282	728	8,528	0	73,036
2016	42,460	21,722	727	8,605	0	73,514
2017	42,485	22,354	715	8,531	0	74,085
2018	41,939	22,841	712	8,405	0	73,897
2019	41,948	23,653	731	8,428	0	74,760
2020	41,672	23,784	718	8,458	0	74,632
2021	41,057	23,839	718	7,862	0	73,476
2022	41,201	24,795	716	7,472	0	74,184
<b>Local Participants</b>						
2013	91,422	77,995	679	10,856	2,745	183,697
2014	90,900	78,339	677	10,703	2,743	183,362
2015	90,887	77,979	668	10,773	2,734	183,041
2016	91,383	78,128	642	10,863	2,755	183,771
2017	90,622	78,384	636	10,934	2,752	183,328
2018	91,193	78,394	605	11,045	2,777	184,014
2019	92,218	78,677	591	11,237	2,768	185,491
2020	91,313	78,681	574	11,291	2,758	184,617
2021	91,593	78,914	546	11,358	2,760	185,171
2022	92,368	79,065	526	11,536	2,825	186,320
<b>Total Participants</b>						
2013	134,320	99,060	1,409	19,254	2,745	256,788
2014	133,882	99,618	1,409	19,603	2,743	257,255
2015	133,385	99,261	1,396	19,301	2,734	256,077
2016	133,843	99,850	1,369	19,468	2,755	257,285
2017	133,107	100,738	1,351	19,465	2,752	257,413
2018	133,132	101,235	1,317	19,450	2,777	257,911
2019	134,166	102,330	1,322	19,665	2,768	260,251
2020	132,985	102,465	1,292	19,749	2,758	259,249
2021	132,650	102,753	1,264	19,220	2,760	258,647
2022	133,569	103,860	1,242	19,008	2,825	260,504



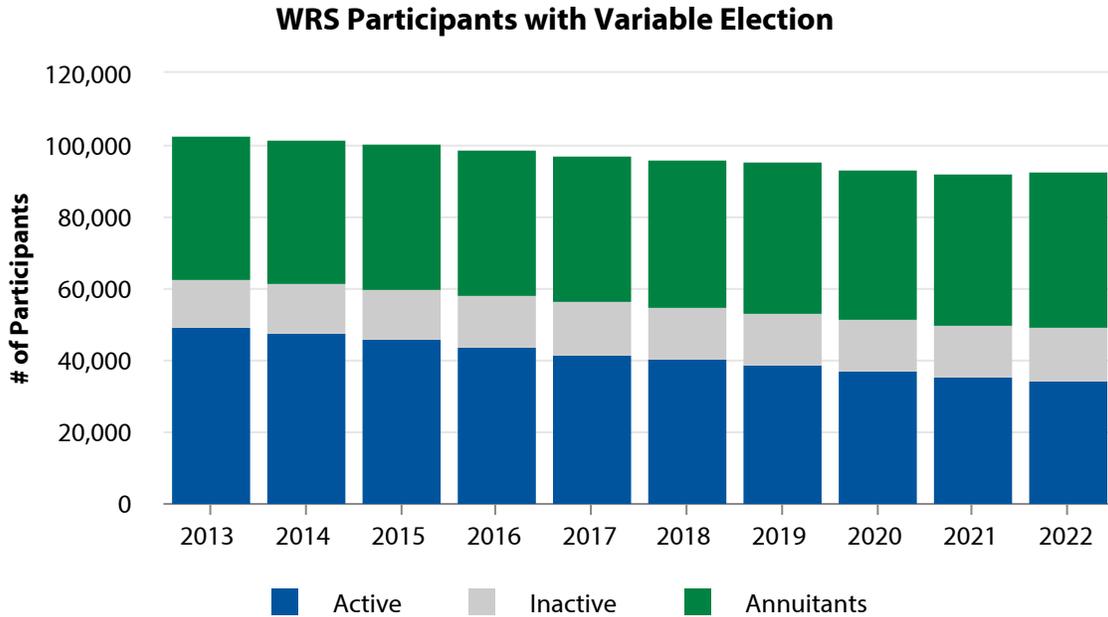
STATISTICAL SECTION

Total WRS Participants					
Year	Active	Inactive	Alternate Payees	Annuityants	Total Participants
2013	256,788	153,721	4,040	180,056	594,605
2014	257,255	157,072	4,051	185,605	603,983
2015	256,077	161,851	4,111	191,795	613,834
2016	257,285	163,145	4,046	197,647	622,123
2017	257,413	167,996	4,093	203,300	632,802
2018	257,911	170,869	4,053	209,059	641,892
2019	260,251	169,261	3,904	215,070	648,486
2020	259,249	168,944	3,468	221,019	652,680
2021	258,647	174,573	3,498	226,605	663,323
2022	260,504	181,536	3,481	232,384	677,905





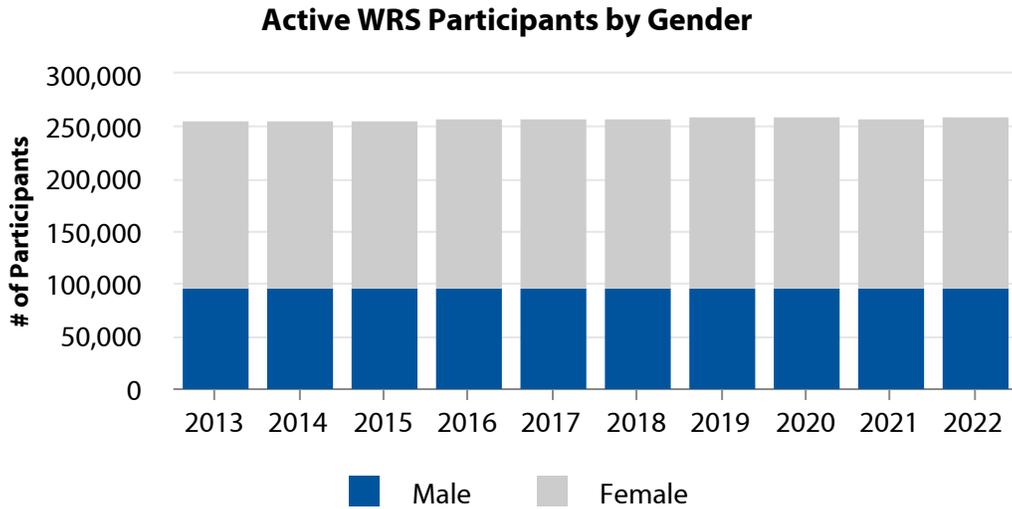
WRS Participants with Variable Election				
Year	Active	Inactive	Annuitants	Totals
2013	49,299	13,376	40,317	102,992
2014	47,671	13,805	40,402	101,878
2015	45,931	14,276	40,152	100,359
2016	44,083	14,223	40,647	98,953
2017	41,935	14,572	40,877	97,384
2018	40,288	14,747	41,187	96,222
2019	38,786	14,724	41,777	95,287
2020	36,963	14,521	41,753	93,237
2021	35,630	14,575	42,251	92,456
2022	34,389	15,240	43,007	92,636



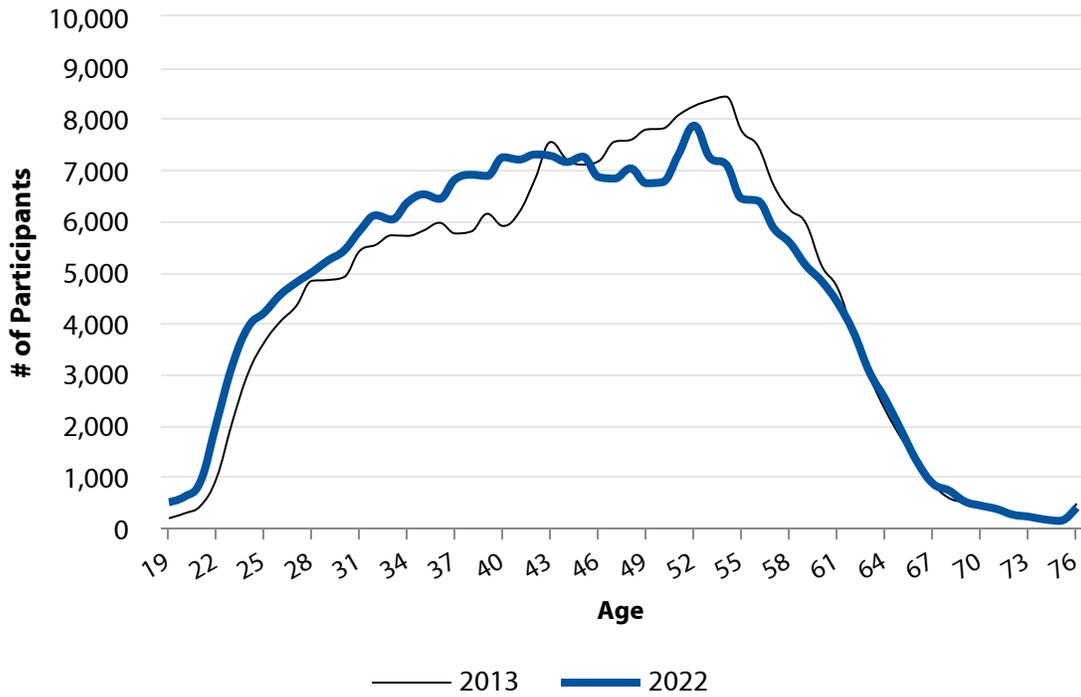


STATISTICAL SECTION

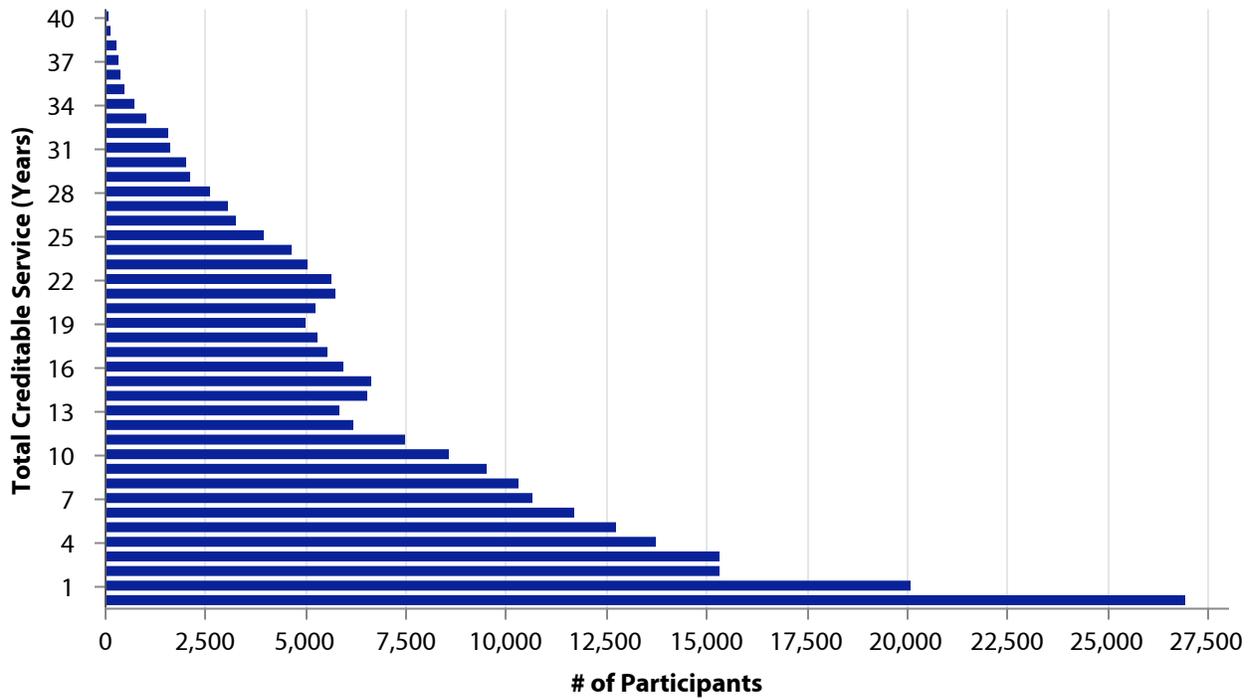
Active WRS Participants by Gender								
Year	Teachers		Protective Occupations		All Other Participants		Totals	
	Male	Female	Male	Female	Male	Female	Male	Female
2013	30,979	68,115	18,354	3,840	47,908	87,592	97,241	159,547
2014	30,949	68,669	18,337	4,009	48,155	87,136	97,441	159,814
2015	30,621	68,640	18,094	3,941	47,971	86,810	96,686	159,391
2016	30,708	69,142	18,192	4,031	47,913	87,299	96,813	160,472
2017	30,915	69,823	18,128	4,089	47,975	86,483	97,018	160,395
2018	30,891	70,344	18,080	4,147	47,966	86,483	96,937	160,974
2019	31,078	71,252	18,178	4,255	48,360	87,128	97,616	162,635
2020	31,004	71,461	18,130	4,377	47,994	86,283	97,128	162,121
2021	30,984	71,769	17,805	4,175	47,789	86,125	96,578	162,069
2022	31,163	72,697	17,697	4,136	48,122	86,689	96,982	163,522



### WRS Active Participants by Age



### WRS Active Participants by Creditable Service





## STATISTICAL SECTION

### WRS Covered Payroll by Employer Type (In Millions)

Local Employers								
Year	School Districts	Counties	Cities	Technical Colleges	Villages	Towns	Special Districts	Totals
2013	\$ 4,956	\$ 1,551	\$ 1,244	\$ 616	\$ 233	\$ 66	\$ 187	\$ 8,853
2014	5,042	1,591	1,287	603	238	69	188	9,018
2015	5,167	1,629	1,318	611	246	70	195	9,236
2016	5,199	1,656	1,340	615	252	73	210	9,345
2017	5,292	1,703	1,379	620	267	68	151	9,480
2018	5,414	1,750	1,426	631	280	71	158	9,730
2019	5,563	1,810	1,479	642	292	75	166	10,027
2020	5,691	1,890	1,532	648	309	77	185	10,332
2021	5,870	1,898	1,552	658	320	71	188	10,557
2022	6,065	1,976	1,609	666	335	77	200	10,928

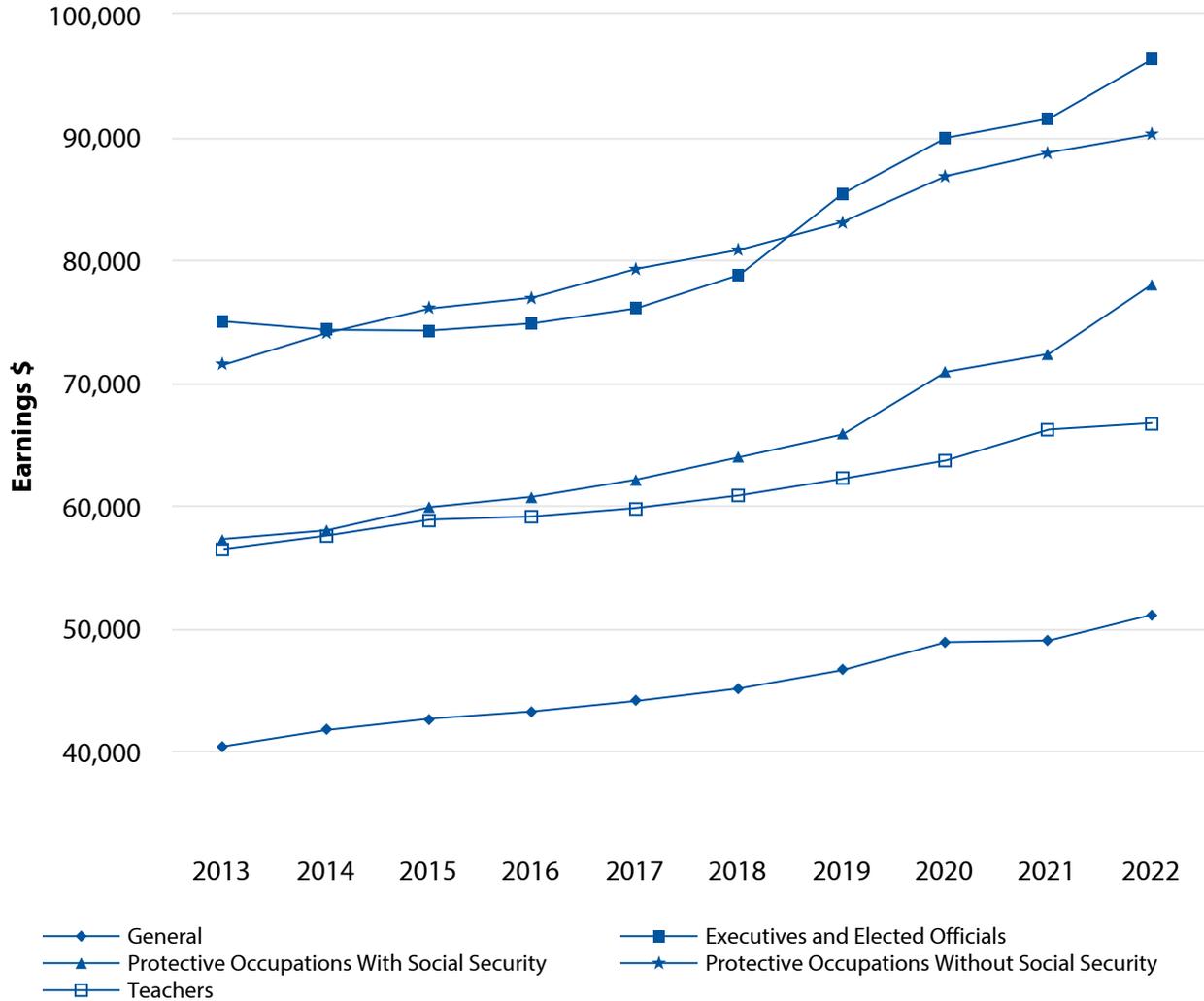
State Employers				Total All Employers
Year	State Agencies	University	Totals	
2013	\$ 2,212	\$ 1,820	\$ 4,032	\$ 12,885
2014	2,306	1,895	4,201	13,219
2015	2,372	1,922	4,294	13,530
2016	2,432	1,929	4,361	13,706
2017	2,496	1,967	4,463	13,943
2018	2,536	2,035	4,571	14,301
2019	2,664	2,141	4,805	14,832
2020	2,830	2,198	5,028	15,360
2021	2,871	2,353	5,224	15,781
2022	3,048	2,385	5,433	16,361

### WRS Covered Payroll by Employment Category (In Millions)

Year	General	Teachers	Executives and Elected Officials	Protective Occupations with Social Security	Protective Occupations without Social Security	Totals
2013	\$ 5,638	\$ 5,809	\$ 109	\$ 1,129	\$ 200	\$ 12,885
2014	5,815	5,923	111	1,163	207	13,219
2015	5,951	6,064	112	1,191	212	13,530
2016	6,045	6,118	112	1,217	214	13,706
2017	6,135	6,230	111	1,248	219	13,943
2018	6,295	6,385	113	1,283	225	14,301
2019	6,548	6,603	116	1,333	232	14,832
2020	6,788	6,765	121	1,444	242	15,360
2021	6,882	7,079	121	1,450	249	15,781
2022	7,211	7,232	124	1,536	258	16,361



### Average Annual Earnings



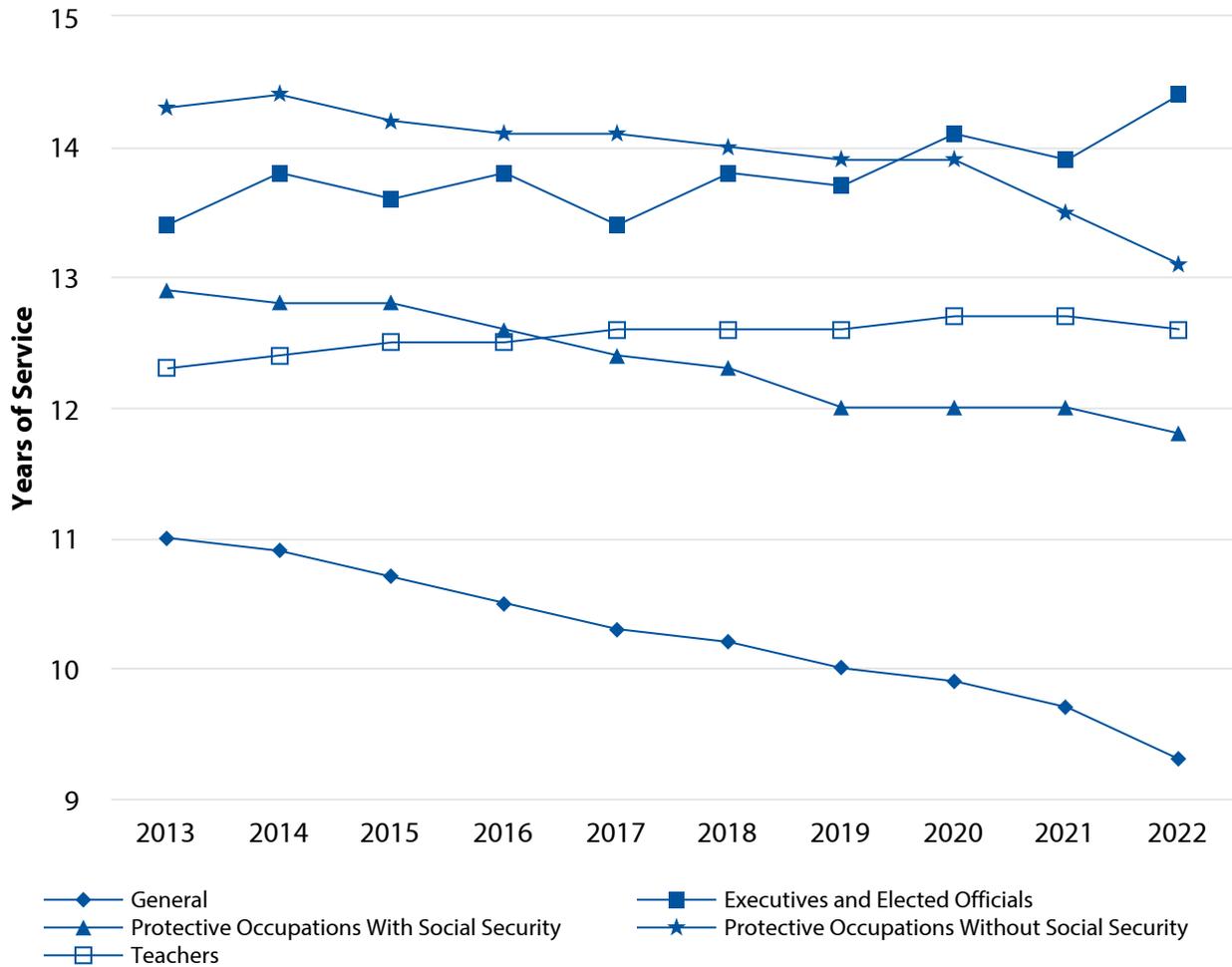
### Average Annual Earnings

Year	General	Teachers	Executives and Elected Officials	Protective Occupations With Social Security	Protective Occupations Without Social Security	Average
2013	\$ 40,422	\$ 56,480	\$ 74,996	\$ 57,294	\$ 71,460	\$ 48,403
2014	41,750	57,569	74,312	57,999	74,051	49,634
2015	42,669	58,864	74,252	59,881	76,045	50,770
2016	43,268	59,133	74,838	60,733	76,942	51,273
2017	44,114	59,814	76,059	62,127	79,274	52,162
2018	45,135	60,842	78,791	63,947	80,819	53,273
2019	46,627	62,195	85,394	65,806	83,087	54,782
2020	48,904	63,679	89,931	70,885	86,824	57,026
2021	49,035	66,203	91,496	72,357	88,740	58,219
2022	51,137	66,731	96,330	78,020	90,204	59,955



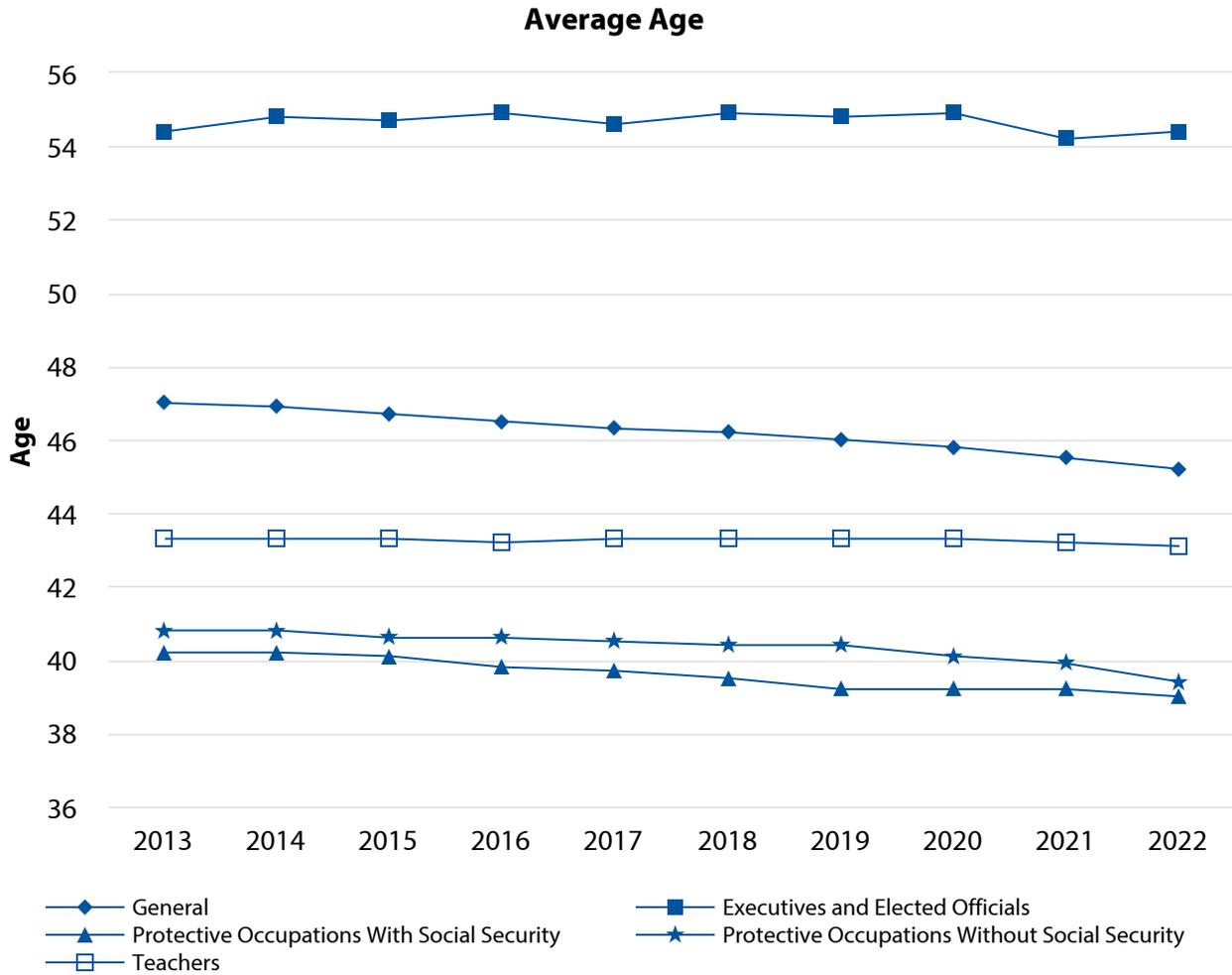
STATISTICAL SECTION

**Average Creditable Service**



**Average Creditable Years of Service**

Year	General	Teachers	Executives and Elected Officials	Protective Occupations With Social Security	Protective Occupations Without Social Security	Average
2013	11.0	12.3	13.4	12.9	14.3	11.7
2014	10.9	12.4	13.8	12.8	14.4	11.7
2015	10.7	12.5	13.6	12.8	14.2	11.6
2016	10.5	12.5	13.8	12.6	14.1	11.5
2017	10.3	12.6	13.4	12.4	14.1	11.4
2018	10.2	12.6	13.8	12.3	14.0	11.4
2019	10.0	12.6	13.7	12.0	13.9	11.2
2020	9.9	12.7	14.1	12.0	13.9	11.2
2021	9.7	12.7	13.9	12.0	13.5	11.1
2022	9.3	12.6	14.4	11.8	13.1	10.9



Average Age						
Year	General	Teachers	Executives and Elected Officials	Protective Occupations With Social Security	Protective Occupations Without Social Security	Average
2013	47.0	43.3	54.4	40.2	40.8	45.1
2014	46.9	43.3	54.8	40.2	40.8	45.0
2015	46.7	43.3	54.7	40.1	40.6	44.8
2016	46.5	43.2	54.9	39.8	40.6	44.7
2017	46.3	43.3	54.6	39.7	40.5	44.6
2018	46.2	43.3	54.9	39.5	40.4	44.5
2019	46.0	43.3	54.8	39.2	40.4	44.4
2020	45.8	43.3	54.9	39.2	40.1	44.3
2021	45.5	43.2	54.2	39.2	39.9	44.1
2022	45.2	43.1	54.4	39.0	39.4	43.9



## STATISTICAL SECTION

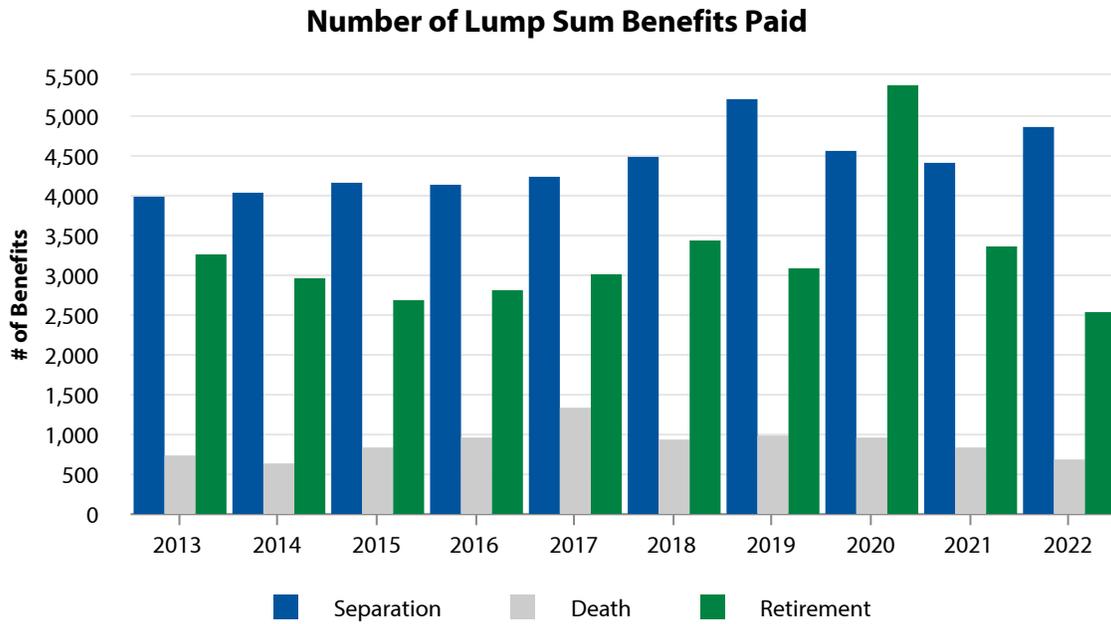
**WRS Active Participants by Employer Type**

<b>Local Employers</b>								
<b>Year</b>	<b>School Districts</b>	<b>Counties</b>	<b>Cities</b>	<b>Technical Colleges</b>	<b>Villages</b>	<b>Towns</b>	<b>Special Districts</b>	<b>Totals</b>
2013	108,504	33,044	22,251	9,873	4,746	1,550	3,729	183,697
2014	108,565	32,836	22,211	9,751	4,717	1,519	3,763	183,362
2015	108,492	32,746	22,177	9,487	4,716	1,501	3,922	183,041
2016	109,245	32,757	22,071	9,393	4,789	1,489	4,027	183,771
2017	109,969	32,760	22,236	9,340	4,908	1,367	2,748	183,328
2018	110,457	32,890	22,326	9,162	4,969	1,384	2,826	184,014
2019	111,700	33,007	22,448	9,055	5,046	1,400	2,835	185,491
2020	111,181	32,862	22,244	8,829	5,055	1,385	3,061	184,617
2021	112,170	32,405	22,302	8,817	5,142	1,291	3,044	185,171
2022	113,078	32,345	22,473	8,833	5,224	1,322	3,045	186,320

<b>State Employers</b>				<b>Totals All Employers</b>
<b>Year</b>	<b>State Agencies</b>	<b>University</b>	<b>Totals</b>	
2013	41,333	31,758	73,091	256,788
2014	42,063	31,830	73,893	257,255
2015	42,096	30,940	73,036	256,077
2016	42,741	30,773	73,514	257,285
2017	42,941	31,144	74,085	257,413
2018	42,553	31,344	73,897	257,911
2019	42,841	31,919	74,760	260,251
2020	43,093	31,539	74,632	259,249
2021	42,495	30,981	73,476	258,647
2022	42,474	31,710	74,184	260,504

<b>Number of Lump Sum Benefits Paid</b>			
<b>Year</b>	<b>Separation</b>	<b>Death</b>	<b>Retirement</b>
2013	3,998	740	3,281
2014	4,061	662	2,987
2015	4,167	855	2,710
2016	4,155	968	2,832
2017	4,250	1,362	3,027
2018	4,497	949	3,445
2019	5,227	991	3,102
2020	4,565	981	5,407
2021	4,416	849	3,365
2022	4,864	691	2,555

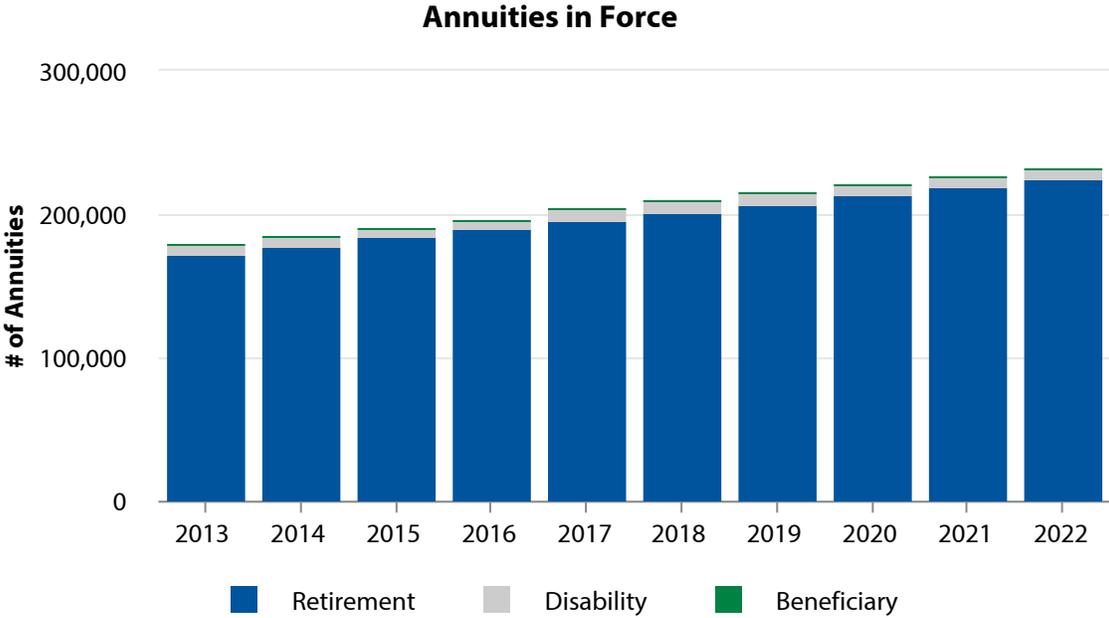




STATISTICAL SECTION

Number of Annuities in Force				
Year	Retirement	Disability*	Beneficiary	Totals
2013	172,430	6,393	1,233	180,056
2014	177,959	6,363	1,283	185,605
2015	184,180	6,305	1,310	191,795
2016	190,111	6,198	1,338	197,647
2017	195,762	8,532	1,349	205,643
2018	201,466	8,281	1,379	211,126
2019	207,362	8,163	1,419	216,944
2020	213,268	8,007	1,448	222,723
2021	218,846	7,861	1,454	228,161
2022	224,644	7,680	1,480	233,804

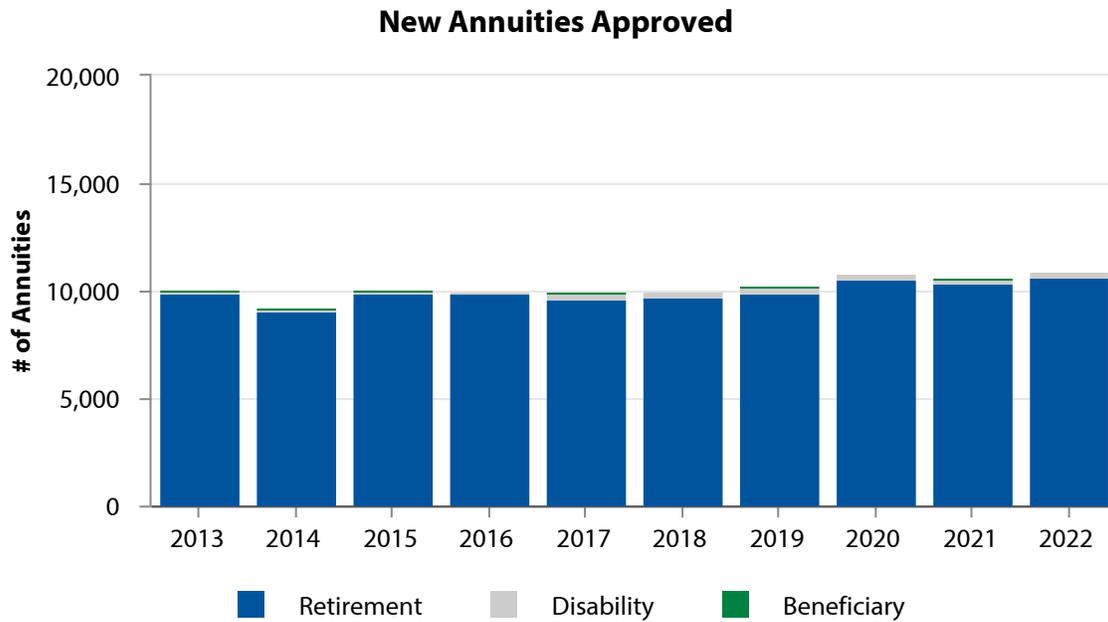
\*Beginning in 2017, Disability count includes annuities in force for the Long-Term Disability Insurance program.





Number of New Annuities Approved				
Year	Retirement	Disability*	Beneficiary	Totals
2013	9,889	146	70	10,105
2014	9,080	125	69	9,274
2015	9,881	124	57	10,062
2016	9,866	98	62	10,026
2017	9,591	327	42	9,960
2018	9,735	230	70	10,035
2019	9,936	264	72	10,272
2020	10,529	274	73	10,876
2021	10,346	231	55	10,632
2022	10,663	242	66	10,971

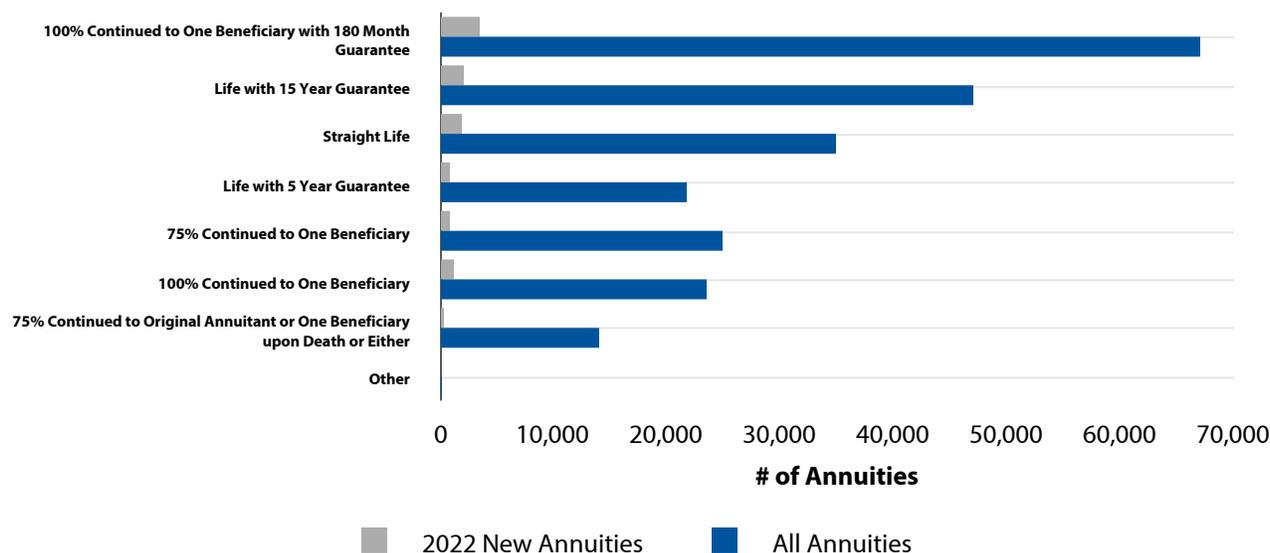
\*Beginning in 2017, Disability count includes annuities in force for the Long-Term Disability Insurance program.





## STATISTICAL SECTION

## Annuities by Payment Option



## Average Monthly Annuities by Years of Service

	Years of Service									
	0 - 5	>5 - 10	>10 - 15	>15 - 20	>20 - 25	>25 - 30	>30 - 35	>35 - 40	>40 - 45	Over 45
Average Monthly Annuity	\$ 588	\$ 743	\$ 1,016	\$ 1,471	\$ 2,122	\$ 3,012	\$ 3,737	\$ 4,771	\$ 6,721	\$11,815
Average Final Average Salary	\$25,652	\$38,320	\$ 42,666	\$ 50,170	\$56,662	\$62,140	\$63,370	\$64,428	\$68,265	\$76,919
Number of Annuitants	7,941	21,311	25,115	28,342	30,803	34,422	42,811	15,799	2,881	343

## Annuities by Type of Benefit

Monthly Annuity Amount	Total Number of Annuities	Type of Annuity			Annuity Payment Option			
		Retirement	Disability*	Beneficiary	Life Annuity	Life with Guarantee	Joint Survivor	Other*
\$ 0 - 500	23,955	23,006	512	437	3,950	9,060	10,923	22
>\$ 500 - 1,000	35,725	34,066	1,015	644	6,772	12,723	16,184	46
>\$ 1,000 - 1,500	29,720	28,074	1,261	385	5,306	9,529	14,863	22
>\$ 1,500 - 2,000	27,099	25,605	1,239	255	4,174	7,991	14,921	13
>\$ 2,000 - 2,500	25,196	23,911	1,142	143	3,445	6,904	14,836	11
>\$ 2,500 - 3,000	23,627	22,627	881	119	2,936	6,068	14,615	8
>\$ 3,000 - 3,500	20,266	19,537	630	99	2,480	5,084	12,697	5
>\$ 3,500 - 4,000	15,885	15,368	437	80	2,004	3,972	9,907	2
>\$ 4,000 - 4,500	11,773	11,406	313	54	1,414	2,869	7,488	2
>\$ 4,500 - 5,000	8,234	8,008	197	29	980	1,892	5,361	1
Over \$ 5,000	19,100	18,752	233	115	2,240	4,195	12,661	4
<b>Total</b>	<b>240,580</b>	<b>230,360</b>	<b>7,860</b>	<b>2,360</b>	<b>35,701</b>	<b>70,287</b>	<b>134,456</b>	<b>136</b>

\*Includes annuities in force for the Long Term Disability Insurance program.



**WRS Additions by Source<sup>1</sup>**  
(In Thousands)

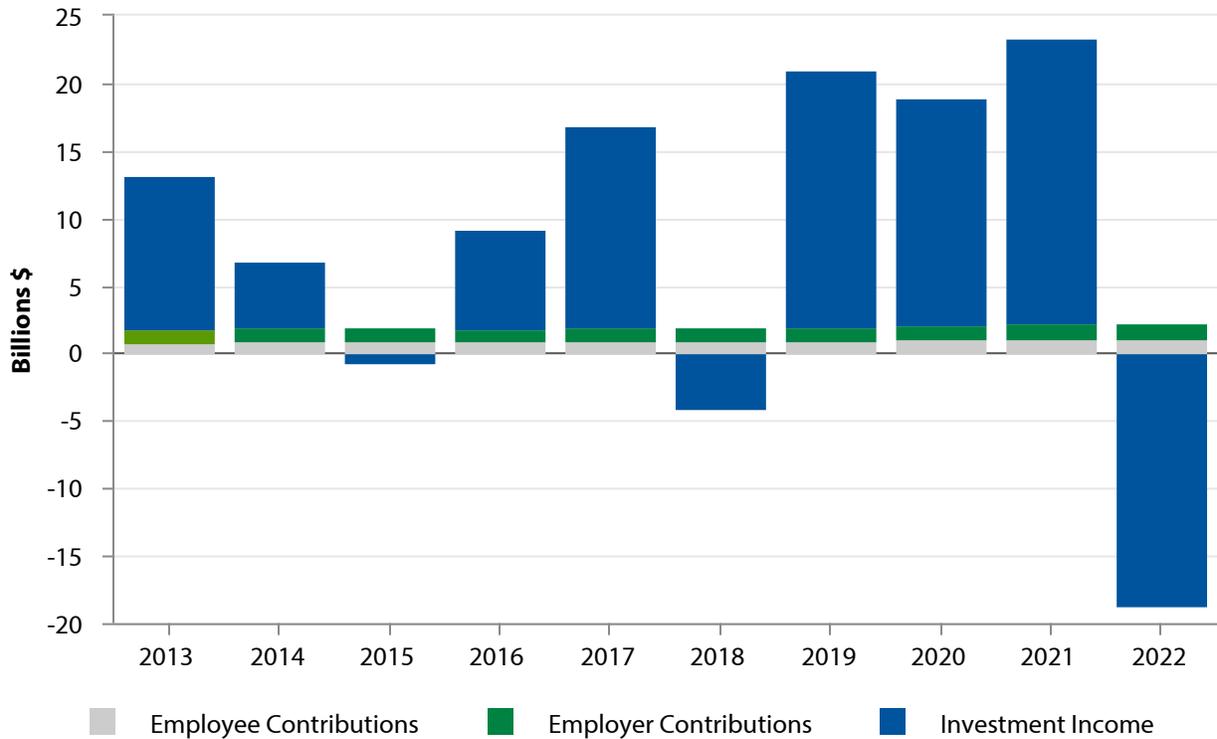
Year	Member Contributions <sup>2</sup>		Employer Contributions <sup>3</sup>			Total Additions (Losses)	
	Dollars	% of Annual Payroll	Dollars	% of Annual Payroll	Investment Income		
2013	\$ 871,260	6.8 %	\$ 914,698	7.1 %	\$ 11,343,231	\$ 4,065	\$ 13,133,254
2014	906,499	6.9	1,023,197	7.7	4,888,241	2,774	6,820,711
2015	937,225	6.9	977,734	7.2	(674,988)	1,865	1,241,836
2016	921,864	6.7	963,122	7.0	7,271,531	1,538	9,158,055
2017	965,453	6.9	1,017,559	7.3	14,868,726	6,688	16,858,426
2018	972,950	6.8	1,030,508	7.2	(4,050,511)	1,156	(2,045,897)
2019	987,662	6.7	1,046,942	7.1	19,048,821	721	21,084,146
2020	1,053,243	6.9	1,133,316	7.4	16,698,111	445	18,885,115
2021	1,086,782	6.9	1,164,586	7.4	21,056,192	366	23,307,926
2022	1,082,040	6.6	1,175,881	7.2	(18,702,632)	324	(16,444,387)

<sup>1</sup> Employee required contributions made in accordance with statutory requirements. Employer required contributions were made in accordance with actuarially-determined contribution requirements.

<sup>2</sup> Member contributions include all employee required, employee additional and benefit adjustment contributions, including those paid by the employer on behalf of the employee.

<sup>3</sup> Employer contributions include all employer required contributions, including contributions for unfunded actuarial accrued liability.

**WRS Additions by Source**





## STATISTICAL SECTION

### WRS Deductions by Type (In Thousands)

#### Age and Service Benefits

Year	Retirees	Beneficiaries	Disability Benefits*	Death Benefits	Separation Benefits	Administrative Expense	Other Expense	Total Deductions
2013	\$ 4,035,378	\$ 18,177	\$ 132,934	\$ 38,211	\$ 33,271	\$ 22,858	\$ 0	\$ 4,280,829
2014	4,308,893	19,531	135,924	33,597	34,401	24,037	42,303	4,598,686
2015	4,587,211	20,736	140,493	31,850	37,642	22,709	43,296	4,883,937
2016	4,759,185	21,557	140,542	30,366	39,276	20,426	71,271	5,082,623
2017	4,972,504	21,784	185,677	31,302	38,358	26,133	0	5,275,758
2018	5,215,991	69,404	189,280	41,513	40,234	31,613	25,449	5,613,484
2019	5,365,679	60,422	187,461	32,701	44,106	34,198	3,902	5,728,469
2020	5,621,013	96,552	188,432	33,368	38,858	33,251	5	6,011,479
2021	6,047,235	75,606	194,125	35,743	42,042	31,625	243	6,426,619
2022	6,639,819	63,517	205,963	39,820	54,797	30,788	384	7,035,088

\*Beginning in 2017, balance includes expenses related to Long-Term Disability Insurance program.

### WRS Participating Employers Current Year and Nine Years Ago

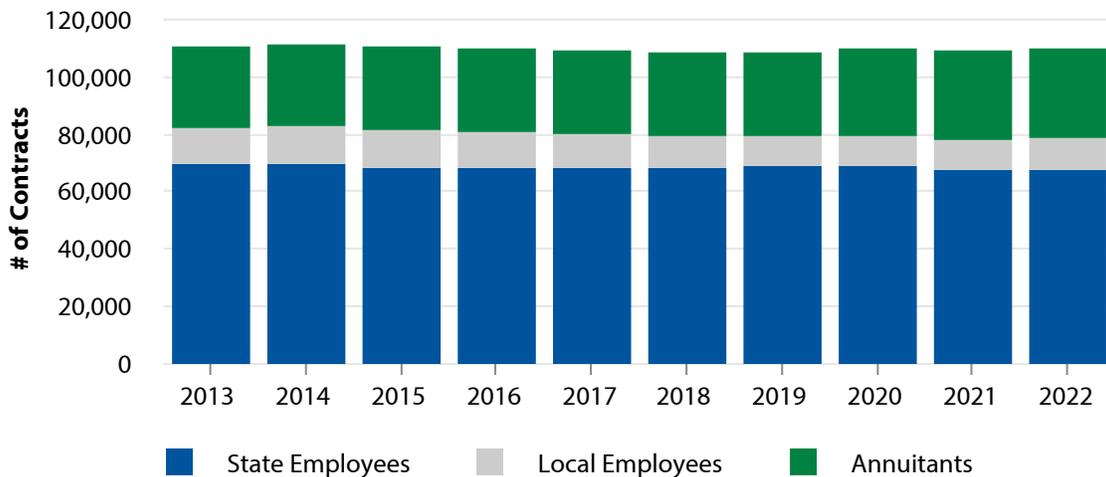
Participating Government	2022			2013		
	Covered Employees	Rank	Percentage of Total System	Covered Employees	Rank	Percentage of Total System
State of Wisconsin	74,184	1	28.5 %	73,091	1	28.5 %
Milwaukee Teachers Retirement System	5,492	2	2.1	5,938	2	2.3
Madison Metro School District	4,311	3	1.7	4,748	3	1.8
Green Bay Area School District	3,075	4	1.2	2,945	4	1.1
City of Madison	3,011	5	1.2	2,876	5	1.1
Kenosha Unified School District	2,657	6	1.0	2,712	6	1.1
Racine Unified School District	2,599	7	1.0	2,677	7	1.0
Dane County	2,569	8	1.0	2,399	8	0.9
Appleton Area School District	1,947	9	0.7	1,773	10	0.7
Eau Claire Area School District	1,527	10	0.6	1,418	16	0.6
All Other	159,132		61.0	156,211		60.9
Total (1,586 employers)	260,504		100.0 %	256,788		100.0 %



## Group Health Insurance Program Statistics

Group Health Insurance Contracts							
Year	Active Employees	Continuants	Annuitants			Total Retired	Totals
			Annuity Deduction	Sick Leave Conversion	Direct Pay		
<b>State</b>							
2013	69,772	367	9,187	14,701	1,777	25,665	95,804
2014	70,219	178	8,913	15,074	1,823	25,810	96,207
2015	68,964	160	8,903	15,800	1,664	26,367	95,491
2016	68,463	180	8,550	16,453	1,568	26,571	95,214
2017	68,864	170	8,359	16,824	1,509	26,692	95,726
2018	68,468	192	8,260	17,238	1,376	26,874	95,534
2019	69,273	191	8,486	17,566	1,298	27,350	96,814
2020	69,251	149	8,713	18,171	1,223	28,107	97,507
2021	67,900	161	8,820	18,728	1,208	28,756	96,817
2022	68,209	136	9,206	19,181	840	29,227	97,572
<b>Local</b>							
2013	12,749	80	2,295	N/A	253	2,548	15,377
2014	12,890	43	2,283	N/A	252	2,535	15,468
2015	12,957	47	2,164	N/A	238	2,402	15,406
2016	12,812	37	2,003	N/A	205	2,208	15,057
2017	11,640	46	1,800	N/A	187	1,987	13,673
2018	11,351	50	1,735	N/A	185	1,920	13,321
2019	10,281	49	1,703	N/A	159	1,862	12,192
2020	10,643	46	1,872	N/A	178	2,050	12,739
2021	10,690	34	1,909	N/A	186	2,095	12,819
2022	10,814	25	1,868	N/A	136	2,004	12,843

### Group Health Insurance Contracts\*



\*For display purposes, state and local continuants were statistically insignificant and therefore not included in this chart.



## STATISTICAL SECTION

<b>Group Health Insurance Premiums by Source</b> (In Thousands)							
<b>Year</b>	<b>Employer and Employee *</b>	<b>Annuitant</b>	<b>Sick Leave Conversion</b>	<b>Medicare</b>	<b>Stabilization</b>	<b>Life Insurance Conversion</b>	<b>Totals</b>
<b>State</b>							
2013	\$ 1,082,211	\$ 64,201	\$ 133,809	\$ 19,438	\$ 0	\$ 485	\$ 1,300,144
2014	1,128,667	67,624	141,449	18,633	0	640	1,357,013
2015	1,173,419	71,537	155,688	23,053	0	681	1,424,378
2016	1,113,654	73,035	166,994	24,767	0	845	1,379,295
2017	1,130,698	75,086	171,961	20,339	0	797	1,398,881
2018	1,119,360	70,336	166,854	22,545	13,754	805	1,393,655
2019	1,119,001	68,424	161,386	28,473	0	673	1,377,957
2020	1,187,147	63,628	155,704	31,275	(29)	525	1,438,250
2021	1,203,884	65,990	163,980	32,375	0	624	1,466,853
2022	1,225,511	64,118	166,420	34,326	0	627	1,491,002
<b>Local</b>							
2013	\$ 206,812	\$ 15,843	\$ 0	\$ 2,047	\$ 0	\$ 3	\$ 224,705
2014	219,413	15,938	0	1,808	0	6	237,165
2015	222,514	15,783	0	2,051	0	6	240,354
2016	222,052	15,194	0	1,982	0	9	239,237
2017	195,553	14,459	0	1,835	0	1	211,848
2018	195,610	14,432	0	1,661	0	0	211,703
2019	173,085	12,702	0	1,759	0	0	187,546
2020	189,526	14,631	0	1,719	0	0	205,876
2021	202,979	16,725	0	1,945	0	0	221,649
2022	209,172	16,280	0	1,852	0	4	227,308

\* Breakout between employer and employee paid portions of active participant health insurance premiums is not available.

**Group Life Insurance Program Statistics**

<b>Group Life Insurance Premiums Collected</b>										
<b>(In Thousands)</b>										
<b>Year</b>	<b>Employee</b>					<b>Employer</b>			<b>Totals</b>	
	<b>Basic</b>	<b>Supplemental</b>	<b>Additional</b>	<b>Spouse and Dependent</b>	<b>Total</b>	<b>Basic</b>	<b>Suppl</b>	<b>Total</b>		
<b>State</b>										
2013	\$ 6,235	\$ 4,513	\$ 7,008	\$ 1,222	\$ 18,978	\$ 2,926	\$ 1,222	\$ 4,148	\$ 23,125	
2014	6,323	4,573	7,351	1,217	19,465	3,028	1,262	4,290	23,755	
2015	6,412	4,625	7,639	1,204	19,880	3,071	1,275	4,346	24,226	
2016	6,519	4,688	7,912	1,193	20,312	3,074	1,271	4,345	24,657	
2017	6,573	4,700	8,156	1,202	20,631	3,106	1,274	4,380	25,011	
2018	6,768	4,847	8,644	1,226	21,484	3,233	1,329	4,562	26,046	
2019	6,971	4,989	9,019	1,223	22,202	3,335	1,371	4,706	26,908	
2020	7,510	5,358	10,077	1,145	24,090	3,624	1,483	5,107	29,197	
2021	8,110	5,780	10,993	1,089	25,971	3,959	1,618	5,577	31,549	
2022	8,641	6,138	11,818	1,068	27,664	4,197	1,707	5,905	33,586	
<b>Local</b>										
2013	\$ 10,497	\$ 2,736	\$ 7,575	\$ 1,216	\$ 22,024	\$ 3,264	\$ 17	\$ 3,281	\$ 25,305	
2014	10,561	2,789	7,737	1,209	22,296	3,317	16	3,334	25,629	
2015	10,640	2,897	7,992	1,196	22,725	3,495	18	3,513	26,238	
2016	10,976	3,072	8,312	1,191	23,551	3,576	19	3,595	27,146	
2017	10,973	3,127	8,517	1,185	23,802	3,682	21	3,703	27,505	
2018	11,130	3,202	8,718	1,172	24,222	3,714	19	3,733	27,955	
2019	11,373	3,296	8,948	1,176	24,793	3,766	21	3,786	28,579	
2020	11,537	3,406	9,196	1,165	25,304	3,836	21	3,857	29,161	
2021	11,772	3,489	9,397	1,134	25,792	3,925	22	3,946	29,738	
2022	11,923	3,512	9,466	1,054	25,955	3,901	22	3,923	29,878	



## STATISTICAL SECTION

### Group Life Insurance In Force (In Thousands)

Year	Pre-Age 65 Insurance			Post-Age 64 Insurance	Spouse and Dependent	Totals
	Basic	Supplemental	Additional			
<b>State</b>						
2013	\$ 3,327,163	\$ 2,387,599	\$ 3,424,431	\$ 536,246	\$ 562,840	\$ 10,238,279
2014	3,392,305	2,431,610	3,563,096	581,765	570,825	10,539,601
2015	3,449,798	2,462,720	3,673,851	628,843	566,585	10,781,797
2016	3,592,964	2,537,127	3,870,341	685,322	568,225	11,253,979
2017	3,690,966	2,594,857	4,008,538	735,296	559,785	11,589,442
2018	3,704,144	2,587,730	4,043,321	779,130	562,535	11,676,860
2019	3,805,980	2,650,322	4,195,591	826,410	570,400	12,048,703
2020	3,954,029	2,743,689	4,415,771	869,042	564,610	12,547,141
2021	4,035,540	2,790,014	4,543,087	907,193	552,305	12,828,139
2022	4,164,464	2,844,780	4,631,887	946,751	559,540	13,147,423
<b>Local</b>						
2013	\$ 4,340,129	\$ 1,412,278	\$ 4,146,681	\$ 369,512	\$ 810,265	\$ 11,078,865
2014	4,440,538	1,458,009	4,263,886	401,639	805,950	11,370,022
2015	4,537,463	1,534,501	4,408,995	433,245	807,400	11,721,604
2016	4,706,013	1,620,126	4,609,255	472,046	803,760	12,211,200
2017	4,747,370	1,646,364	4,718,591	509,136	795,935	12,417,396
2018	4,822,753	1,686,176	4,832,893	537,175	796,730	12,675,727
2019	4,938,311	1,756,604	5,006,277	569,561	790,590	13,061,343
2020	5,019,565	1,804,113	4,837,614	600,924	775,685	13,037,901
2021	5,146,614	1,853,367	4,947,767	632,120	758,820	13,338,688
2022	5,217,269	1,877,841	4,893,086	660,161	743,055	13,391,412

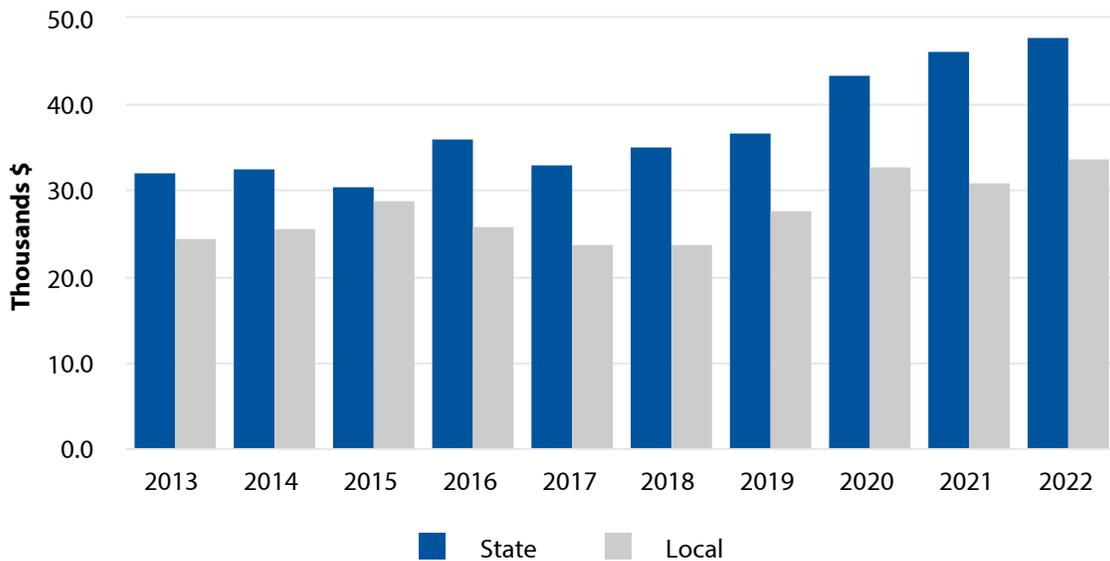


**Group Life Insurance Paid Claims**  
(In Thousands)

Year	Pre-Age 65 Insurance			Post-Age 64 Insurance	Spouse and Dependent	Living Benefits*	Totals
	Life	AD&D	Disability				
<b>State</b>							
2013	\$ 17,179	\$ 284	\$ 323	\$ 12,894	\$ 1,309	\$ 252	\$ 32,241
2014	13,243	1,314	1,512	14,772	1,091	792	32,724
2015	14,302	45	6	14,180	887	1,111	30,531
2016	19,808	935	(475)	13,897	966	894	36,025
2017	15,337	736	(955)	16,168	842	1,089	33,217
2018	16,223	1,136	(1,341)	17,130	857	1,273	35,278
2019	16,588	788	(1,022)	18,644	992	874	36,863
2020	20,932	78	(1,761)	22,159	1,021	1,372	43,801
2021	21,446	1,359	(563)	22,895	1,062	124	46,323
2022	23,276	892	(1,521)	23,240	1,062	921	47,869
<b>Local</b>							
2013	\$ 14,456	\$ 1,305	\$ 6	\$ 7,415	\$ 1,331	\$ 37	\$ 24,550
2014	13,195	1,468	1,484	7,337	1,246	928	25,658
2015	16,181	1,225	611	8,705	1,051	1,165	28,938
2016	13,216	743	1,245	8,954	1,202	504	25,864
2017	12,846	486	(245)	8,993	1,031	764	23,875
2018	12,325	993	(1,136)	9,705	1,000	1,035	23,923
2019	15,636	661	(1,222)	11,000	887	726	27,688
2020	17,510	1,551	(1,531)	13,205	1,227	815	32,777
2021	15,597	1,654	(251)	12,650	1,097	352	31,099
2022	17,347	1,210	(238)	13,917	962	472	33,671

\* Living Benefits may originate as Pre-Retirement, Post-Retirement or Spouse and Dependent Benefits

**Group Life Insurance Paid Claims**



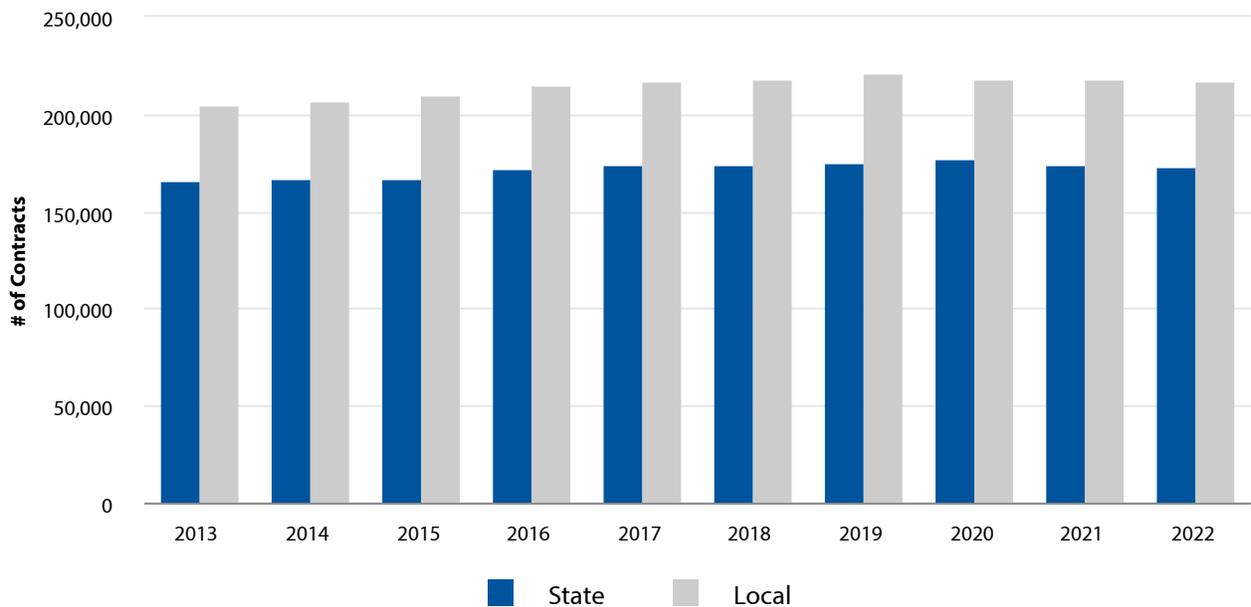


STATISTICAL SECTION

**Group Life Insurance Contracts and Participants**

Year	Pre-Age 65 Insurance			Post-Age 64 Insurance	Spouse and Dependent	Total Contracts	Total Participants
	Basic	Supplemental	Additional				
<b>State</b>							
2013	56,516	39,940	26,297	20,025	23,203	165,981	76,541
2014	56,652	39,958	26,237	21,168	23,478	167,493	77,820
2015	56,194	39,441	26,120	22,396	23,309	167,460	78,590
2016	58,073	40,135	27,009	23,767	23,393	172,377	81,840
2017	58,470	40,611	27,337	24,973	23,020	174,411	83,443
2018	57,990	39,705	26,928	26,050	23,063	173,736	84,040
2019	58,274	39,723	27,151	27,092	23,329	175,569	85,366
2020	58,288	39,629	27,348	28,137	23,609	177,011	86,425
2021	56,715	38,383	26,687	28,967	23,084	173,836	85,682
2022	56,344	37,621	26,134	29,744	22,810	172,653	86,088
<b>Local</b>							
2013	83,519	26,111	35,166	27,049	33,297	205,142	110,568
2014	83,887	26,288	35,241	28,634	33,117	207,167	112,521
2015	84,087	27,065	35,355	30,209	33,230	209,946	114,296
2016	86,252	28,163	36,194	31,927	32,810	215,346	118,179
2017	85,914	28,258	36,167	33,644	32,786	216,769	119,558
2018	85,838	28,291	36,096	35,525	32,828	218,578	121,363
2019	86,223	28,754	36,370	37,034	32,571	220,952	123,257
2020	85,298	28,837	33,810	38,378	31,946	218,269	123,676
2021	85,027	28,731	33,344	39,633	31,303	218,038	124,660
2022	84,512	28,534	32,808	40,769	30,677	217,300	125,281

**Life Insurance Contracts**



## Duty Disability Insurance Statistics

(In Millions)

Year	Employers	Active Participants	Disabilitants	Benefit Payments*	Contributions	Average Contribution Rate
2013	512	21,976	973	\$ 31	\$ 54	4.06 %
2014	506	22,346	990	32	9	0.70
2015	497	22,035	1,002	33	9	0.64
2016	496	22,223	1,007	34	4	0.28
2017	495	22,217	1,014	43	9	0.61
2018	493	22,227	1,025	25	10	0.66
2019	502	22,433	1,026	48	8	0.51
2020	499	22,507	1,026	38	4	0.24
2021	501	21,980	1,021	92	4	0.24
2022	506	21,833	1,013	70	2	0.11

\*Benefit Payments increased in 2021 primarily due to \$54.0 million change in actuarially determined liabilities.

## Duty Disability Insurance Funded Status

(In Millions)

Year	Assets	Liabilities*	Unfunded (Overfunded) Liability	Percent Funded	Covered Payroll	UAAL as % of Covered Payroll
2013	\$ 568.9	\$ 507.1	\$ (61.8)	112.2 %	\$ 1,328.2	(4.7)%
2014	567.2	513.2	(54.0)	110.5	1,370.7	(3.9)
2015	592.8	448.1	(144.7)	132.3	1,401.3	(10.3)
2016	603.8	523.2	(80.6)	115.4	1,430.8	(5.6)
2017 *	641.4	464.8	(176.6)	138.0	1,467.6	(12.0)
2018	645.0	454.6	(190.4)	141.9	1,508.1	(12.6)
2019	662.0	466.3	(195.7)	142.0	1,565.6	(12.5)
2020	696.3	467.7	(228.6)	148.9	1,685.8	(13.6)
2021	747.7	523.8	(223.9)	142.7	1,698.5	(13.2)
2022	757.2	556.8	(200.4)	136.0	1,793.7	(11.2)

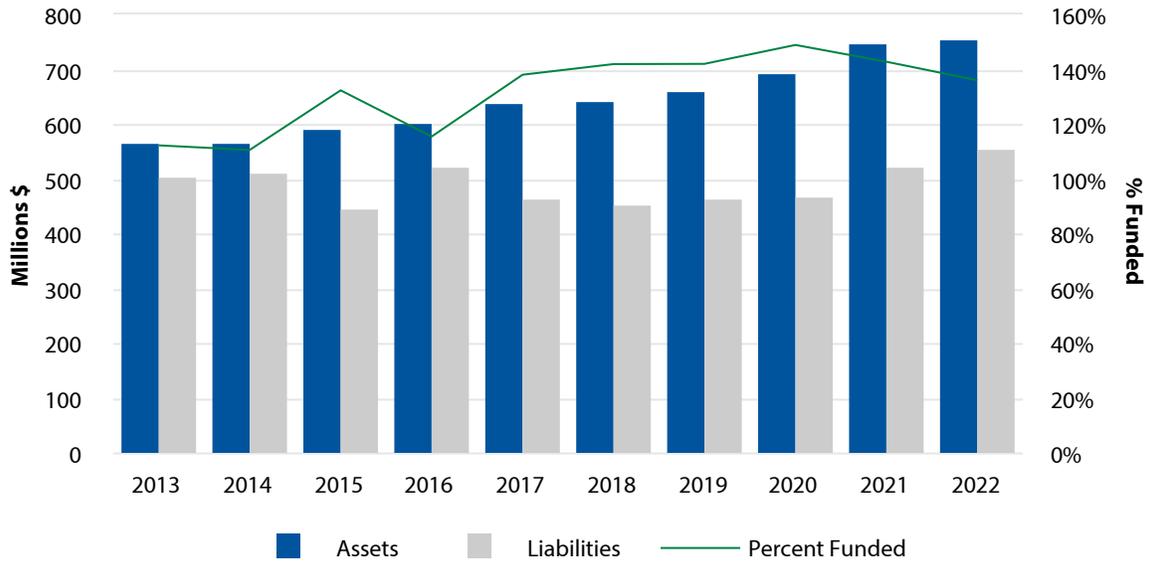
UAAL = Unfunded Actuarial Accrued Liability.

\*Beginning in 2017, Duty Disability Insurance is reported as an enterprise fund following GASB Statement No. 10. This resulted in a change in the way the actuarial liability is calculated compared to prior years.



STATISTICAL SECTION

**Duty Disability Insurance Funding**



**Duty Disability Insurance  
Participating Employers  
Current Year and Nine Years Ago**

Participating Government	2022			2013		
	Covered Employees	Rank	Percentage of Total System	Covered Employees	Rank	Percentage of Total System
State of Wisconsin	7,432	1	34.0 %	8,388	1	38.2 %
City of Madison	868	2	4.0	833	2	3.8
Dane County	406	3	1.9	430	3	2.0
City of Green Bay	371	4	1.7	374	4	1.7
City of Kenosha	344	5	1.6	338	5	1.5
City of Racine	279	6	1.3	335	6	1.5
City of Waukesha	221	7	1.0	211	9	1.0
City of West Allis	219	8	1.0	225	8	1.0
City of Oshkosh	214	9	1.0	200	10	0.9
City of Appleton	200	10	0.9	200	11	0.9
All Other	11,279		51.6	10,442		47.5
<b>Total (506 employers)</b>	<b>21,833</b>		<b>100.0 %</b>	<b>21,976</b>		<b>100.0 %</b>

<b>Duty Disability Insurance Annuities by Type of Benefit</b>			
<b>Monthly Benefit Amount</b>	<b>Number of Annuitants</b>	<b>Type of Annuity</b>	
		<b>Disability</b>	<b>Beneficiary</b>
\$ 0 - 500	112	109	3
\$ 500 - 1,000	71	56	15
\$ 1,000 - 1,500	73	68	5
\$ 1,500 - 2,000	80	78	2
\$ 2,000 - 2,500	87	81	6
\$ 2,500 - 3,000	81	76	5
\$ 3,000 - 3,500	86	84	2
\$ 3,500 - 4,000	113	106	7
\$ 4,000 - 4,500	85	82	3
\$ 4,500 - 5,000	76	74	2
Over \$ 5,000	149	144	5
<b>Total</b>	<b>1,013</b>	<b>958</b>	<b>55</b>

This table excludes annuitants whose benefit is totally offset by other income sources.

<b>Duty Disability Insurance Average Monthly Benefit by Years of Service</b>							
	<b>Years of Service</b>						
	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35
Average Monthly Annuity	\$ 3,657	\$ 3,922	\$ 3,621	\$ 3,056	\$ 2,000	\$ 1,203	\$ 955
Average Final Average Salary	\$ 2,922	\$ 3,637	\$ 3,867	\$ 4,160	\$ 4,459	\$ 4,848	\$ 5,407
Number of Annuitants	60	174	211	260	207	91	9

This table excludes annuitants for whom years of service data is not available



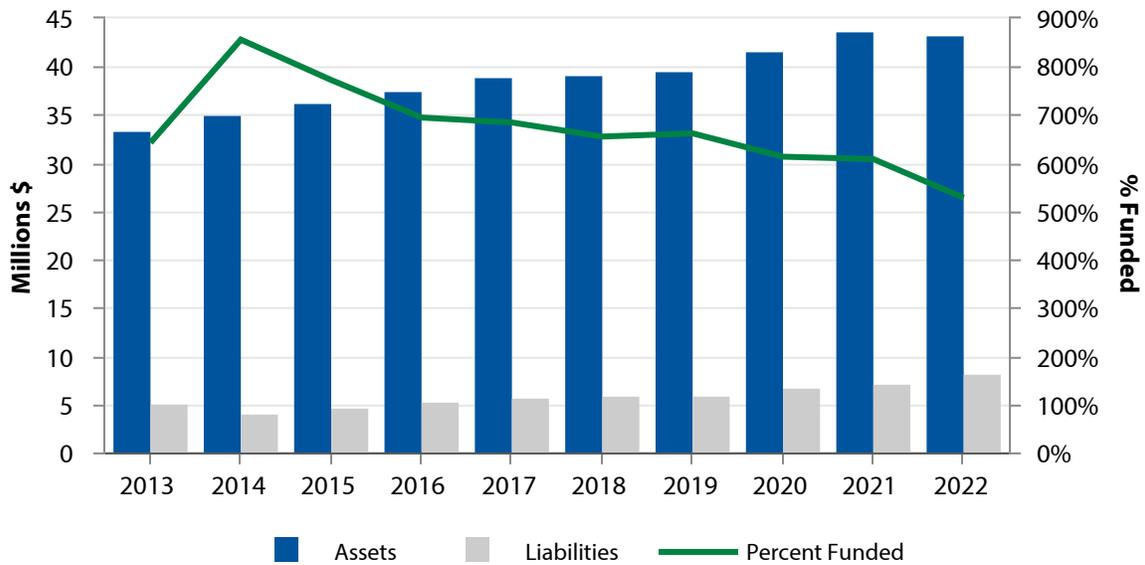
STATISTICAL SECTION

**Local Income Continuation Insurance Program Statistics**

(In Millions)

Year	Members	New Claims	Assets	Liabilities	Unfunded (Overfunded) Liability	Funded Ratio
2013	8,344	130	\$ 33.4	\$ 5.2	\$ (28.2)	642.3 %
2014	8,463	118	35.1	4.1	(31.0)	856.1
2015	8,597	137	36.3	4.7	(31.6)	772.3
2016	8,710	149	37.5	5.4	(32.1)	694.4
2017	8,431	129	39.0	5.7	(33.3)	684.2
2018	9,434	195	39.3	6.0	(33.3)	655.0
2019	9,942	203	39.7	6.0	(33.7)	661.7
2020	11,176	210	41.7	6.8	(34.9)	613.2
2021	11,573	214	43.8	7.2	(36.6)	608.3
2022	12,402	272	43.3	8.2	(35.1)	528.0

**Local Income Continuation Insurance Funding**



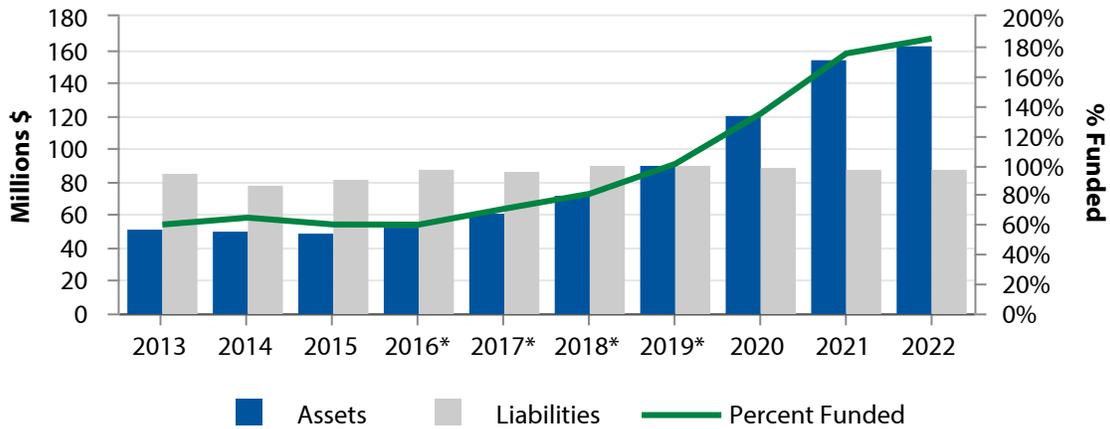
### State Income Continuation Insurance Program Statistics

(In Millions)

Year	Members	New Claims	Assets	Liabilities	Unfunded (Overfunded) Liability	Funded Ratio
2013	51,692	1,648	\$ 51.4	\$ 85.9	\$ 34.5	59.8 %
2014	51,379	1,645	50.8	78.8	28.0	64.5
2015	49,769	1,581	49.4	82.5	33.1	59.9
2016*	47,005	1,434	52.6	88.0	35.4	59.8
2017*	48,780	1,413	61.3	87.0	25.7	70.5
2018*	47,110	1,386	72.9	90.5	17.6	80.6
2019*	45,805	1,253	90.7	90.1	(0.6)	100.7
2020	44,418	1,262	120.4	89.5	(30.9)	134.5
2021	42,450	1,238	154.7	88.4	(66.3)	175.0
2022	41,523	1,081	163.4	88.3	(75.1)	185.1

\*Restated Members count.

### State Income Continuation Insurance Funding



\*Restated Members count.



## STATISTICAL SECTION

## Employee Reimbursement Accounts (ERA) and Commuter Benefits Program Statistics

### Salary Reductions and Claims

Year	Medical					Dependent Care				
	Accounts	Salary Reductions	Claims	Forfeitures	Carryover	Accounts	Salary Reductions	Claims	Forfeitures	Carryover
2013	12,956	\$ 15,149,278	\$14,922,337	\$ 226,941	\$ 0	\$ 2,469	\$ 9,750,422	\$9,675,871	\$ 74,551	\$ 0
2014	13,370	16,163,180	15,911,661	251,519	0	2,672	10,496,707	10,398,333	98,374	0
2015	14,496	17,522,880	17,363,053	159,827	922,961	2,964	11,258,100	11,063,383	194,717	0
2016	17,562	21,212,300	20,278,280	235,481	1,621,500	3,284	12,668,920	12,440,766	228,154	0
2017	19,102	22,051,502	21,521,725	281,232	1,870,045	3,343	12,996,661	12,761,819	234,842	0
2018	20,097	23,022,646	22,131,963	511,974	2,248,754	3,648	14,255,991	13,915,793	340,198	0
2019	21,479	23,395,884	22,699,187	600,183	2,345,268	3,890	15,370,021	15,016,412	353,609	0
2020*	21,077	23,310,135	22,266,815	72,185	3,316,403	3,948	13,725,071	13,164,471	101,619	458,981
2021	21,139	21,687,761	21,864,226	642,213	2,497,725	3,461	16,847,979	16,627,950	679,010	0
2022	20,659	21,367,735	20,725,142	433,472	2,706,846	3,488	13,996,103	13,619,557	376,546	0

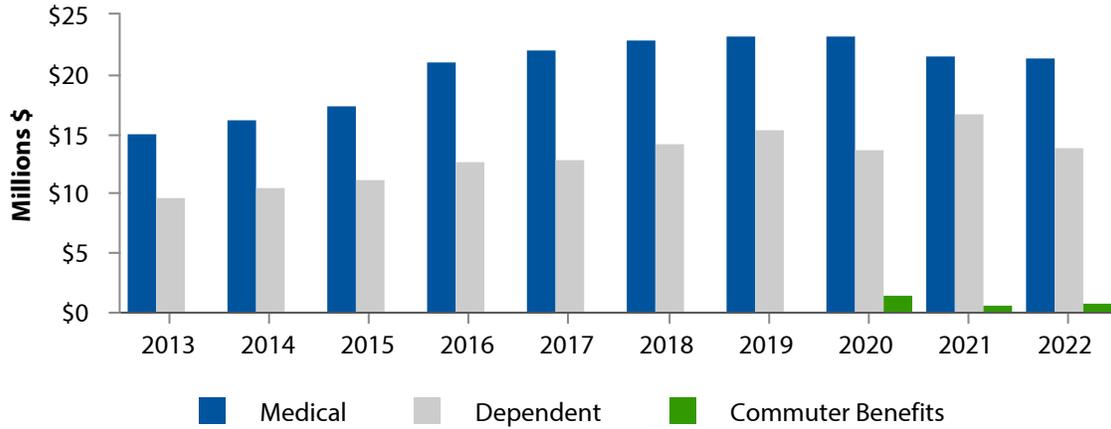
\*As part of the Consolidated Appropriations Act of 2021, a one-time provision was approved by the GIB to allow a \$2500 Dependent Care carryover for plan year 2020 into 2021.

### Salary Reductions and Claims

#### Commuter Benefits - Parking and Transit

Year	Accounts	Salary Reductions	Claims	Forfeitures	Carryover
2013					
2014					
2015					
2016					
2017					
2018					
2019					
2020	2,809	1,465,736	951,585	37,881	780,047
2021	2,739	595,087	582,701	59,165	733,268
2022	3,032	832,234	734,299	52,805	778,398

Commuter Benefits program will be built prospectively.

**ERA and Commuter Benefits Salary Reductions**


Commuter Benefits program will be built prospectively.

**ERA and Commuter Benefits Administrative Funding<sup>1</sup>**

Year	Receipts				Expenses			Surplus / (Deficit)
	Fees <sup>2</sup>	Interest	Forfeitures	Totals	Administrator	State	Total	
2013	\$ 500,554	\$ 3,910	\$ 301,492	\$ 805,956	\$ 786,888	\$ 230,327	\$ 1,017,215	\$ (211,259)
2014	671,414	3,685	349,893	1,024,992	847,955	388,875	1,236,830	(211,838)
2015	667,768	5,371	354,544	1,027,683	516,225	246,118	762,343	265,340
2016	536,844	8,647	463,635	1,009,126	592,241	398,038	990,279	18,847
2017	566,568	67,035	516,074	1,149,677	644,467	277,945	922,412	227,265
2018	563,894	115,912	852,173	1,531,979	783,699	293,648	1,077,347	454,632
2019	269,693	168,102	953,792	1,391,587	801,449	354,966	1,156,415	235,172
2020	465,360	34,903	211,685	711,948	788,943	552,431	1,341,374	(629,426)
2021	0	3,987	1,380,388	1,384,375	478,804	533,850	1,012,654	371,721
2022	1,159,295	146,599	862,823	2,168,717	475,700	628,918	1,104,618	1,064,099

<sup>1</sup>Prior to 2020, amounts presented relate to ERA program. Beginning in 2020 amounts include ERA and Commuter Benefits programs.

<sup>2</sup>ETF did not charge an administrative fee to employers for 2021.



## STATISTICAL SECTION

## Administrative Expense Statistics

<b>Administrative Expenses</b> (In Thousands)								
<b>Third-Party Administrator Contracts</b>								
Year	WRS <sup>3</sup>	ERA / Commuter Benefits	Group Health				ICI	Deferred Comp.
			Medical	Dental <sup>1</sup>	Wellness <sup>2</sup>	Pharmacy		
2013	\$ 1,881	\$ 874	\$ 2,286	\$ 0	\$ 0	\$ 8,756	\$ 1,419	\$ 2,484
2014	13,189	942	2,874	0	0	10,700	5,026	2,890
2015	3,104	576	2,938	0	0	10,779	1,508	3,126
2016	5,571	647	3,149	1,190	0	10,683	2,380	1,999
2017	2,170	667	3,342	1,212	7,738	10,593	1,231	2,966
2018	881	819	1,318	1,250	8,013	9,331	2,146	3,936
2019	399	895	733	1,266	8,114	9,363	2,259	5,880
2020	407	789	720	1,234	7,254	9,569	2,306	6,708
2021	0	479	1,033	1,291	6,994	10,072	2,744	7,928
2022	0	476	874	1,146	6,861	11,604	2,658	8,152

Year	ETF Expenses	Investment Expenses	Total Administration
2013	\$ 33,514	\$ 362,011	\$ 413,225
2014	36,355	356,811	428,787
2015	32,795	350,036	404,862
2016	36,647	391,427	453,693
2017	43,052	487,384	560,355
2018	45,949	691,202	764,845
2019	50,486	839,819	919,214
2020	51,973	741,562	822,522
2021	52,413	435,466	518,420
2022	54,385	778,521	864,677

<sup>1</sup>Prior to 2016, expense included in Medical cost.

<sup>2</sup>Prior to 2017, expense included in Medical cost.

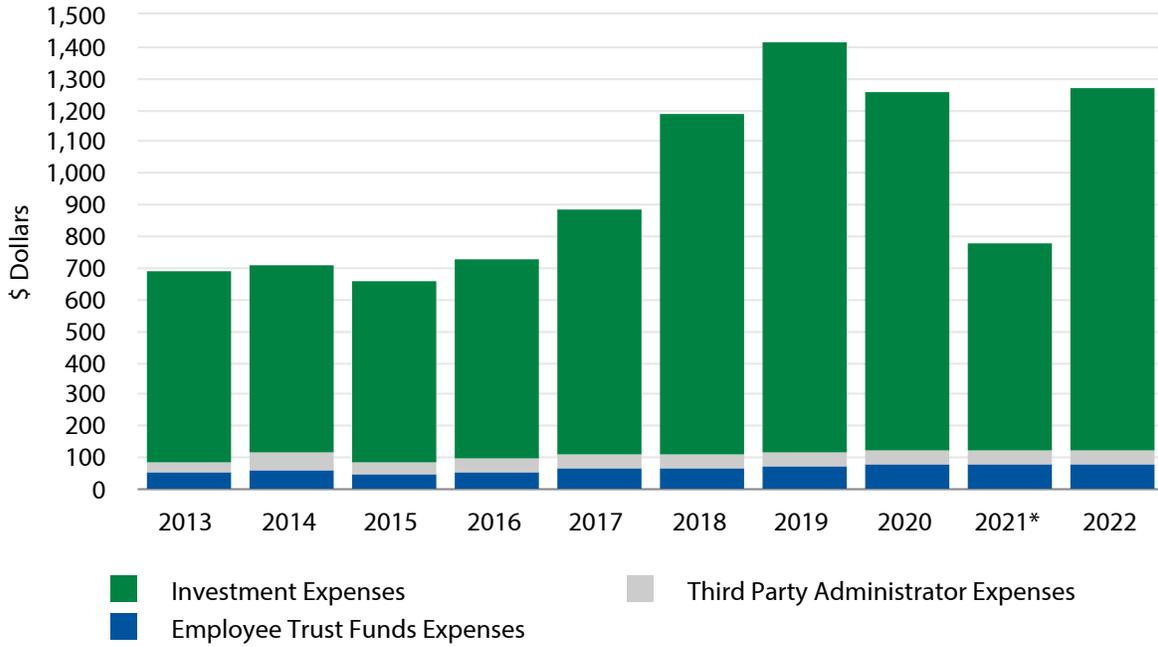
<sup>3</sup>Long-Term Disability Insurance program is reported within the WRS.

## Administrative Expenses per Participant

Year	Participants	Employee Trust Funds		Investment Expenses		Third-Party Administrators		Total Administration	
		Amount (\$000's)	Per Participant	Amount (\$000's)	Per Participant	Amount (\$000's)	Per Participant	Amount (\$000's)	Per Participant
2013	594,605	\$ 33,514	\$ 56.4	\$ 362,011	\$ 608.8	\$ 17,700	\$ 29.8	\$ 413,225	\$ 695.0
2014	603,983	36,355	60.2	356,811	590.8	35,621	59.0	428,787	709.9
2015	613,834	32,795	53.4	350,036	570.2	22,031	35.9	404,862	659.6
2016	622,123	36,647	58.9	391,427	629.2	25,619	41.2	453,693	729.3
2017	632,802	43,052	68.0	487,384	770.2	29,919	47.3	560,355	885.5
2018	641,892	45,949	71.6	691,202	1,076.8	27,694	43.1	764,845	1,191.5
2019	648,486	50,486	77.9	839,819	1,295.0	28,909	44.6	919,214	1,417.5
2020	652,680	51,973	79.6	741,562	1,136.2	28,987	44.4	822,522	1,260.2
2021*	663,323	52,413	79.0	435,466	656.5	30,541	46.0	518,420	781.5
2022	677,905	54,385	80.2	778,521	1,148.4	31,771	46.9	864,677	1,275.5

\* Investment expenses decreased primarily due to an accounting change for fees paid to certain external investment managers.

### Administrative Expenses per Participant



\* Investment expenses decreased primarily due to an accounting change for fees paid to certain external investment managers.

# ACTUARIAL SECTION

The background features a complex abstract design. It consists of several overlapping, wavy, ribbon-like shapes in various shades of blue and grey. These shapes flow across the page, creating a sense of movement and depth. In the lower right quadrant, there is a dense grid of thin, light blue lines that forms a textured, mesh-like appearance. The overall aesthetic is clean, modern, and professional.

State of Wisconsin  
Department of Employee Trust Funds

Wisconsin Department of Employee Trust Funds

800.521.0498 | P: 248.799.9000 | [www.grsconsulting.com](http://www.grsconsulting.com)

July 13, 2023

Employee Trust Funds Board  
c/o ETF  
P.O. Box 7931  
Madison, Wisconsin 53707-7931

Re: Wisconsin Retirement System (WRS)  
Actuarial Valuation as of December 31, 2022

Ladies and Gentlemen:

The basic financial objective of the WRS is to establish and receive contributions which:

- When expressed in terms of percents of active member payroll, will remain approximately level from generation-to-generation; and
- When combined with present assets and future investment return, will be sufficient to meet the financial obligations of WRS to present and future retirees and beneficiaries.

The purpose of the valuation was to determine contribution rates for the 2024 fiscal year. The valuation should not be relied upon for any other purpose. The valuation process develops contribution rates that are sufficient to fund the plan's normal cost (i.e., the costs assigned by the valuation method to the year of service about to be rendered), as well as to fund unfunded actuarial accrued liabilities as a level percent of active member payroll over a finite period. The valuations were completed based upon population data, asset data, and plan provisions in effect on December 31, 2022. Note that GRS also prepares separate financial reporting information for accounting purposes.

The valuation was based upon information, furnished by the plan's administrative staff, concerning Retirement System benefits, financial transactions, and individual members, terminated members, retirees and beneficiaries. We checked the data for internal and year-to-year consistency, but did not audit the data. As a result, we do not assume responsibility for the accuracy or completeness of the data provided.

The actuary prepared the following supporting schedules for the Annual Comprehensive Financial Report:

Percent Increase in Salaries  
Single Life Retirement Values  
Rates of Retirement for Those Eligible to Retire  
Early Retirement Pattern  
Percentage of Active Members Withdrawing (Select and Ultimate)  
Percentage of Active Members becoming Disabled  
Solvency Test  
Summary of Accrued and Unfunded Accrued Liabilities

Assets are valued on a statutory market related basis that recognizes assumed return fully each year and spreads each year's gain or loss above or below assumed return over a closed five-year period.

## ACTUARIAL SECTION

Employee Trust Funds Board  
 July 13, 2023  
 Page 2

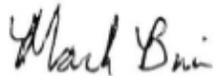
Actuarial valuations are based upon assumptions regarding future activity in specific risk areas including, but not limited to, the rates of investment return and payroll growth, eligibility for the various classes of benefits, and longevity among retired lives. The Board adopts these assumptions after considering the advice of the actuary and other professionals. The assumptions and the methods are in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. Each actuarial valuation takes into account all prior differences between actual and assumed experience in each risk area and adjusts the contribution rates as needed. The December 31, 2022 valuations were based upon assumptions that were recommended in connection with a study of experience covering the 2018-2020 period. Future actuarial measurements may differ significantly from those presented in the valuations due to such factors as experience differing from that anticipated by actuarial assumptions, changes in plan provisions, actuarial assumptions/methods or applicable law. Due to the limited scope of the assignment, we did not perform an analysis of the potential range of future measurements. The valuation report includes various risk factors but does not include an assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of the assignment. However, assessment of risk including stress testing for the WRS was conducted in the fall of 2021 in conjunction with the State of Wisconsin Investment Board and a separate study commissioned in the fall of 2020 by the Department of Employee Trust Funds. Readers desiring a more complete understanding of the actuarial condition of the WRS are encouraged to obtain and read the complete valuation reports. The material in the Actuarial Section and Financial Section of this Annual Report contains some, but not all, of the information in the valuation reports.

The valuation was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation. We performed tests to ensure that the model reasonably represents that which is intended to be modeled. We are relying on the GRS actuaries and Internal Software, Training, and Processes Team who developed and maintain the model.

Based upon the results of the December 31, 2022 valuations, we are pleased to report to the Board that the Wisconsin Retirement System is meeting its basic financial objective and continues to operate in accordance with actuarial principles of level percent of payroll financing.

Mark Buis, James D. Anderson, and Richard C. Koch Jr. are Members of the American Academy of Actuaries (MAAA), and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,  
 Gabriel, Roeder, Smith & Company



Mark Buis, FSA, EA, FCA, MAAA



James D. Anderson, FSA, EA, FCA, MAAA



Richard C. Koch Jr., FSA, EA, MAAA

MB/JDA/RCK:bd





## ACTUARIAL SECTION

**WISCONSIN RETIREMENT SYSTEM**  
**ACTUARIAL STATEMENT OF ASSETS AND LIABILITIES**  
(In Millions)

	December 31, 2022	December 31, 2021	Increase (Decrease)
<b>Assets and Employer Obligations</b>			
Net Assets			
Cash, Investments and Receivables			
Less: Payables and Suspense Items			
Core Division	\$ 116,687.3	\$ 113,841.3	\$ 2,846.0
Variable Division	8,424.2	10,824.1	(2,399.9)
Totals	<u>125,111.5</u>	<u>124,665.4</u>	<u>446.1</u>
Obligations of Employers			
Unfunded Accrued Liability	5.1	5.8	(0.7)
<b>Total Assets</b>	<u>\$ 125,116.6</u>	<u>\$ 124,671.2</u>	<u>\$ 445.4</u>
Reserves and Surplus			
Reserves			
Actuarial Present Value of Projected Benefits Payable to Terminated Vested Participants and Active Members:			
Member Normal Contributions	\$ 22,299.4	\$ 22,469.3	\$ (169.9)
Member Additional Contributions	276.0	268.2	7.8
Employer Contributions	26,029.8	26,405.0	(375.2)
Total Contributions	<u>48,605.2</u>	<u>49,142.5</u>	<u>(537.3)</u>
Actuarial Present Value of Projected Benefits Payable to Current Retirees and Beneficiaries:			
Core Annuities	70,987.2	65,085.4	5,901.8
Variable Annuities	5,586.5	4,866.0	720.5
Total Annuities	<u>76,573.7</u>	<u>69,951.4</u>	<u>6,622.3</u>
Total Reserves	<u>125,178.9</u>	<u>119,093.9</u>	<u>6,085.0</u>
Surplus			
Core Annuity Reserve Surplus	1,121.2	4,825.3	(3,704.1)
Variable Annuity Reserve Surplus	(1,183.5)	752.0	(1,935.5)
Total Surplus	<u>(62.3)</u>	<u>5,577.3</u>	<u>(5,639.6)</u>
<b>Total Reserves and Surplus</b>	<u>\$ 125,116.6</u>	<u>\$ 124,671.2</u>	<u>\$ 445.4</u>



## ACTUARIAL SECTION

## SUMMARY OF WRS BENEFIT PROVISIONS

### Normal Retirement Eligibility

The age a participant becomes eligible for an unreduced age and service annuity is:

General		Protective Occupation		Executive and Elected <sup>2</sup>	
Age	Service	Age	Service	Age	Service
65	Any <sup>1</sup>	54	Any <sup>1</sup>	62	Any <sup>1</sup>
57	30	53	25	57	30

<sup>1</sup>Participants first employed after 1989 and terminated before April 24, 1998 must have creditable service in five calendar years. Participants first employed after June 30, 2011 must have five years of creditable service.

<sup>2</sup>These conditions apply to those people hired on or before December 31, 2016. For others, the General eligibility conditions apply.

### Normal Retirement Annuity

The age and service annuity payable at Normal Retirement Age is based on Final Average Earnings (FAE) and Creditable Service (CS) as follows:

Group	Multiplier for Service Rendered		
	Before 2000	Between 2000 and 2011	After 2011
Executive group and elected officials	2.165%	2.0%	1.6%
Protective occupation participants covered by Social Security	2.165%	2.0%	2.0%
Protective occupation participants not covered by Social Security	2.665%	2.5%	2.5%
All other participants	1.765%	1.6%	1.6%

FAE is generally the average of the three highest years of earnings preceding retirement (July 1 - June 30 for teachers, educational support staff, and judges; calendar year for others). These years do not have to be consecutive. For legislators and state constitutional officers who are ineligible to receive pay increases during their term, FAE is the statutory rate of earnings at termination.

Maximum formula annuity is 85% of FAE for protective occupation participants not covered by Social Security, 65% of FAE for protectives covered by Social Security, and 70% for all other participants. If greater than the formula amount, an annuity equal to the actuarial equivalent of two times the required accumulated contributions is paid in lieu of the formula amount.

**Reduced Retirement:** Any participant who has attained age 55 and any protective occupation participant who has attained age 50 may apply for a reduced retirement annuity. The benefit is reduced 0.4% for each month that the annuity effective date precedes the Normal Retirement Age. For non-protective participants terminating after June 30, 1990, the 0.4% is reduced for months after the attainment of age 57 and before the annuity effective date by .001111% for each month of creditable service. Reduced Retirement was previously called Early Retirement.

**Voluntary Termination Before Immediate Benefit Eligibility:** A participant who terminates service before being eligible for a retirement annuity may either (1) receive a refund of accumulated contributions, or (2) leave contributions on deposit and apply for a retirement annuity on or after the minimum retirement age based upon age and accrued service at time of termination.

**Post-Retirement Adjustments:** Annuities are increased annually if the investment income credited to retired life funds is in excess of the assumed rate (presently 5%), other plan experiences are within projected ranges, and the resulting adjustment would be at least 0.5% (2.0% for the Variable Fund).

Previously granted adjustments can be revoked if the investment income is insufficient to support these previously granted increases. However, a Core Fund annuity cannot be reduced below the amount granted upon inception. Slightly different provisions apply to variable annuities.

**Disability Benefits:** Generally, disability means the inability to engage in any substantial gainful activity by reason of a medically determinable physical or mental impairment which can be expected to result in death or to be of long-continued and indefinite duration. Disability applicants must be participating employees who are under normal retirement age, have not already taken a WRS benefit, and who meet a service requirement.

For this purpose normal retirement age is:

- 65 for general employees and executives and elected officials hired after December 31, 2016.
- 62 for executives and elected officials hired on or before December 31, 2016.
- 53 for protective occupation employees with 25 or more years of creditable service.
- 54 for other protective occupation employees.

The service requirement is that during the seven years preceding application the individual must have earned:

- At least 6 months of service credit in five of those years or
- A total of five years of service credit.

The service credit requirement may be waived if the disability is work-related. Protective occupation employees who become disabled between the ages of 50 and 55, who have at least 15 years of service, and who can no longer perform the duties of their position may apply for a special disability benefit until age 55.

**Disability Amount:** The disability benefit is the WRS formula benefit based upon service projected to normal retirement age as described above, without regard to the reduced retirement reduction.

	<b>WRS Plan</b>	<b>Long-Term Disability Insurance (LTDI) Plan</b>
Participants Covered	- Participants continuously employed by a WRS employer since 10/15/92, who applied for disability benefits prior to 1/1/18, and did not elect LTDI coverage. - All participants who apply for disability benefits after 12/31/17.	- Participants who were eligible for WRS disability, but elected LTDI coverage and applied for disability benefits prior to 1/1/18. - Participants who were not eligible for WRS disability and applied for an LTDI benefit prior to 1/1/18.
Benefit to age 65*	WRS formula benefit based on service projected to normal retirement age.	40% of FAE for participants covered by Social Security; 50% of FAE for non-covered participants who cannot qualify for Social Security disability benefits.
Benefit at age 65*	Continuation of pre-65 amount.	WRS benefit accrued to date of disability plus 7% of FAE money purchase benefit during disability period, both of which are adjusted in accordance with the dividend rate.

\* Conversion age is later for participants becoming disabled after age 61.

## ACTUARIAL SECTION

**Death In Service:** Prior to age 50 for protective participants and age 55 for others, the benefit is the equivalent of twice the accumulated employee required and all additional contributions and employer amounts contributed prior to 1974 for teachers or 1966 for others. After age 50 for protective participants, and age 55 for others, the benefit is the amount that would have been paid if participant had retired and elected the 100% survivor option. The benefit is payable to an eligible beneficiary who must be a natural living person. If there is no eligible beneficiary, a refund of contributions is paid to the estate.

**Interest Credits:** For years after 1999 and for people with some active service after 1999, participant Core accounts (including the Variable and Core accounts) are credited with interest at the full (Core) effective rate. For others, accounts are credited with interest as shown below:

Date of Participation	Rate Credited For Purpose of	
	Money Purchase Minimum	Refunds
Prior to 1982	Core Effective Rate	Core Effective Rate
January 1, 1982 and later and terminated prior to January 1, 2000	5%	3%
January 1, 1982 and later and not terminated prior to January 1, 2000	Core Effective Rate	Core Effective Rate

Interest is credited on member Variable Fund accounts based on the prior year ending account balance and the Variable effective rate.

Interest on both Core and Variable member additional deposit accounts is based on the prior year ending account balance and the appropriate effective rate.

**Contribution Rates:** The financial objective of the WRS is to establish and receive contributions that will remain level from year to year and decade to decade.

Effective June 28, 2011, the member contribution for general category employees, teachers and executives and elected officials is equal to half the actuarially required contribution. The member contribution for protective occupations is the same percentage as general employees. The employer is responsible for the remainder of the actuarially determined contribution. The employer may not pay any portion of the member contribution unless provided for by a pre-existing collective bargaining agreement.

**Normal Form of Benefit:** The normal form of benefit is a straight life annuity with no death benefits. Optional forms of benefit which are actuarially reduced are listed below:

- A life annuity with 60 or 180 monthly payments guaranteed.
- A joint survivorship annuity with 75% continued to beneficiary.
- A joint survivorship annuity with 100% continued to beneficiary.
- A joint survivorship annuity reduced 25% upon either your death or your beneficiary's death.
- A joint survivorship annuity with 100% continued to beneficiary combined with 180 monthly payments guaranteed.

For formula benefit calculations, optional forms are calculated at the lower of the current age or age 62 (Normal Retirement Age for Protective occupations). If a retiree (and beneficiary if in receipt of a joint survivorship annuity) dies prior to receiving benefits which, in total, are at least equal to the members contributions, a "residual refund" for the difference is paid.

**Vesting:** Participants hired prior to July 1, 2011 vest immediately. After July 1, 2011, participants vest after five years of service.

## ACTUARIAL METHOD AND ASSUMPTIONS USED IN WRS VALUATIONS

The principal areas of risk assumption are:

1. Long-term rates of investment income likely to be generated by the assets of the retirement fund. This includes both realized and unrealized appreciation and depreciation.
2. Rates of mortality among participants, retirees and beneficiaries.
3. Rates of withdrawal of active participants.
4. Rates of disability among participants.
5. Patterns of salary increases to be experienced by participants.
6. The age and service distribution of actual retirements.

In an actuarial valuation, the actuary projects the monetary value of each assumption for each distinct experience group, for the next year and for each year over the next half-century or longer.

Once actual risk experience has occurred and been observed, it will not coincide exactly with assumed risk experience, regardless of the skill of the actuary, the completeness of the data, and the precision of the calculations. Each valuation provides a complete recalculation of assumed future risk experience and takes into account all past differences between assumed and actual risk experience. The result is a continual series of small adjustments to the computed contribution rate. From time to time it becomes necessary to adjust the package of risk measurements to reflect basic experience trends -- but not random year-to-year fluctuations.

The actuarial funding method used in the valuation was the Frozen Initial Liability (FIL) method. Under this method, the amount of remaining unfunded actuarial accrued liabilities at any valuation date is affected only by the monthly amortization payments, compound interest, the added liability created by new employer units, and any added liabilities caused by changes in benefit provisions.

### » *Economic Assumptions*

The **Investment Return Assumption** for plan assets is 6.8%.

For determining plan liabilities, the **Discount Rate** is 5.0% for retired participants, 5.0% for active and inactive participants following retirement, and 6.8% for active and inactive participants prior to their retirement. A valuation performed, assuming a 5.4% discount rate for all participants at all stages of life, reproduces the results of an actuarial valuation using the 5.0% post-retirement and 6.8% pre-retirement assumptions. Thus, the net discount rate assumed in the valuations was 5.4% per year, compounded annually (net after administrative expenses).

The **Wage Inflation Rate** assumed in this valuation was 3.0% per year. The wage inflation rate is defined as the portion of total pay increases for an individual that are due to macroeconomic forces, including productivity, price inflation, and labor market conditions. The wage inflation rate does not include pay changes related to individual merit and seniority effects.

No specific **Price Inflation** assumption is required to perform this valuation. The price inflation assumption used to evaluate the investment return assumption is 2.4%.

## ACTUARIAL SECTION

The assumed **Real Rate of Return** over wage inflation is defined as the portion of total investment return that is more than the assumed total wage growth rate. Considering other economic assumptions, the 6.8% pre-retirement investment return rate translates to an assumed real rate of return over wage inflation of 3.8%. The assumed real rate of return over price inflation is 4.4% considering an inflation assumption of 2.4%.

**Merit and Longevity pay increase assumptions** for individual active participants are shown for sample services below. An additional 3.0% recognizes wage inflation, including price inflation, productivity increases, and other macroeconomic forces.

### % Merit and Longevity Increase Next Year

Service	General Non-State (Not including Schools)	General State (Not Including Schools)	Executive/ Elected Non-State	Executive/ Elected State	University Teachers State
1	3.5%	3.5%	2.5%	2.5%	3.0%
2	3.5	3.5	2.5	2.5	3.0
3	3.1	3.1	2.0	2.0	2.9
4	2.8	2.8	1.6	1.6	2.8
5	2.5	2.5	1.1	1.1	2.7
10	1.5	1.5	0.2	0.2	2.2
15	1.1	1.1	0.2	0.2	1.7
20	0.9	0.9	0.2	0.2	1.2
25	0.6	0.6	0.2	0.2	0.9
30	0.4	0.4	0.2	0.2	0.7

### % Merit and Longevity Increase Next Year

Service	Public School Teachers Non-State	Protective Occupation With Social Security (SS) Non-State	Protective Occupation With SS State	Protective Occupation Without SS Non-State
1	5.6%	4.8%	4.8%	5.5%
2	5.6	4.8	4.8	5.5
3	5.2	4.1	4.1	4.7
4	4.7	3.5	3.5	3.8
5	4.3	2.8	2.8	3.0
10	2.6	1.1	1.1	0.9
15	1.4	0.8	0.8	0.5
20	0.6	0.7	0.7	0.4
25	0.3	0.6	0.6	0.3
30	0.2	0.5	0.5	0.2

**» Decrement Probabilities**

The Active Member Population is assumed to remain constant. For purposes of financing the unfunded liabilities, total payroll is assumed to grow at the wage inflation rate of 3.00% per year.

The mortality table used to measure mortality for retired participants was the 2020 WRS Experience Tables. The rates in this table were based on actual WRS experience adjusted for future mortality improvements using the MP-2021 fully generated improvement scale from a base year of 2010. This mortality assumption was adopted by the Board in connection with the 2018-2020 Experience Study. Sample retirement values from this table are shown below. This assumption is used to measure the probabilities of participants dying before retirement and the probabilities of each benefit payment being made after retirement.

**Single Life Retirement Values (Retired Participants)**

2020 WRS Experience Table With 5% Interest

Sample Attained Ages in 2022	Present Value of \$1 Monthly for Life*		Future Life Expectancy (years)*		Mortality Rates*	
	Males	Females	Males	Females	Males	Females
40	\$ 216.63	\$ 219.72	47.1	49.2	0.064%	0.043%
45	208.66	212.41	41.9	44.0	0.082	0.054
50	198.55	203.05	36.7	38.7	0.122	0.087
55	186.05	191.58	31.6	33.6	0.244	0.225
60	171.19	178.16	26.7	28.7	0.419	0.350
65	153.77	162.04	22.0	23.9	0.681	0.498
70	133.63	142.62	17.5	19.3	1.130	0.791
75	111.11	120.17	13.4	14.9	2.060	1.508
80	87.53	96.20	9.7	11.0	3.936	3.023
85	64.98	72.84	6.7	7.7	7.585	5.947

*\*With a fully generational mortality table, the mortality rate depends on the year of birth. Later years of birth will correspond to a lower mortality rate at a given age.*



## ACTUARIAL SECTION

The values shown above are for non-disabled participants in 2022. For disabled participants, the following table is used:

**Single Life Retirement Values (Disabled Participants)**  
2020 WRS Experience Table With 5% Interest

Sample Attained Ages in 2022	Present Value of \$1 Monthly for Life		Future Life Expectancy (years)		Mortality Rates*	
	Males	Females	Males	Females	Males	Females
40	\$ 175.46	\$ 182.24	32.2	35.0	0.982%	0.868%
45	164.89	172.56	28.2	30.9	1.232	1.118
50	153.34	162.16	24.5	27.1	1.721	1.589
55	141.56	151.92	21.2	23.7	2.309	2.027
60	129.85	141.65	18.2	20.6	2.941	2.384
65	117.89	129.69	15.4	17.5	3.502	2.520
70	104.54	114.20	12.8	14.4	4.120	2.940
75	88.93	95.88	10.2	11.2	5.266	4.132
80	72.07	77.05	7.8	8.4	7.521	6.443
85	56.01	60.11	5.7	6.2	11.337	10.304

*\*With a fully generational mortality table, the mortality rate depends on the year of birth. Later years of birth will correspond to a lower mortality rate at a given age.*

**Active Participant Mortality Rates**

The active participant mortality assumption is used to measure the probability of participants becoming deceased while in service.

Sample Attained Ages in 2022	Mortality Rates*	
	Males	Females
20	0.000400	0.000165
25	0.000214	0.000129
30	0.000351	0.000226
35	0.000512	0.000325
40	0.000640	0.000428
45	0.000820	0.000544
50	0.001190	0.000783
55	0.001879	0.001245
60	0.003102	0.001962
65	0.005005	0.003016
70	0.007489	0.004983
75	0.010923	0.009507
80	0.021800	0.019586

*\*With a fully generational mortality table, the mortality rate depends on the year of birth. Later years of birth will correspond to a lower mortality rate at a given age.*





## ACTUARIAL SECTION

**Rates of Retirement for Those Eligible to Retire: Normal Retirement Pattern**

% Retiring Next Year

Age	Public Schools Non-State		Protective*		
	Male	Female	With SS Non-State	With SS State	W/O SS Non-State
50	0.0%	0.0%	6.0%	7.5%	3.0%
51	0.0	0.0	8.0	9.0	3.5
52	0.0	0.0	11.0	11.0	4.5
53	0.0	0.0	34.0	25.0	17.0
54	0.0	0.0	32.0	20.0	24.0
55	0.0	0.0	26.0	20.0	29.0
56	0.0	0.0	23.0	20.0	32.0
57	31.0	27.5	27.0	20.0	23.0
58	29.0	27.5	21.0	20.0	27.0
59	28.0	26.0	23.0	20.0	40.0
60	27.0	29.0	22.0	20.0	25.0
61	26.0	27.0	30.0	20.0	25.0
62	39.0	36.0	35.0	25.0	31.0
63	33.0	31.0	27.0	25.0	40.0
64	30.0	30.0	30.0	36.0	40.0
65	32.0	38.5	34.0	38.0	40.0
66	35.0	44.0	35.0	38.0	100.0
67	31.0	31.0	35.0	38.0	100.0
68	28.0	30.0	35.0	38.0	100.0
69	20.0	30.0	35.0	38.0	100.0
70	30.0	32.0	100.0	100.0	100.0
71	25.0	25.0	100.0	100.0	100.0
72	25.0	25.0	100.0	100.0	100.0
73	25.0	25.0	100.0	100.0	100.0
74	25.0	25.0	100.0	100.0	100.0
75	100.0	100.0	100.0	100.0	100.0

\*Includes reduced retirements for protective with 20+ years of service.

**Rates of Retirement for Those Eligible to Retire: Reduced Retirement Pattern**

% Retiring Next Year

Age	General Non-State		General State		Executive/ Elected Non-State	Executive/ Elected State
	Male	Female	Male	Female		
55	7.3%	7.0%	5.5%	6.0%	2.5%	6.0%
56	6.0	7.0	6.5	8.0	2.5	6.0
57	5.2	5.5	5.5	6.0	2.5	6.0
58	5.6	6.5	5.5	9.0	2.5	6.0
59	5.9	7.0	6.5	7.5	2.5	6.0
60	9.3	9.5	9.0	10.0	5.0	6.0
61	8.0	9.5	12.5	11.0	5.0	6.0
62	19.0	16.0	16.0	18.0	1.0	6.0
63	20.0	18.0	17.0	19.5	1.0	3.0
64	18.0	18.0	21.0	18.0	1.0	3.0

**Rates of Retirement for Those Eligible to Retire: Reduced Retirement Pattern**

% Retiring Next Year

Age	University State		Public Schools Non-State	
	Male	Female	Male	Female
55	3.3%	5.0%	12.0%	11.0%
56	3.3	5.0	13.0	13.0
57	4.0	5.0	13.0	12.0
58	4.0	5.5	12.0	13.0
59	4.4	6.0	14.3	13.5
60	4.8	7.5	16.0	17.0
61	4.8	9.0	16.0	17.0
62	7.0	11.0	23.0	24.0
63	8.3	12.0	21.0	24.0
64	11.5	14.5	21.0	24.0



## ACTUARIAL SECTION

The assumed rates of separation from employment prior to service retirement due to disability and other causes are shown below for sample ages. For other terminations it was assumed that a percentage, depending on age of participants terminating after age 35 with five or more years of service, will leave their contributions on deposit and be paid a benefit at normal retirement age and that the remaining participants would take a separation benefit. The percentage taking a separation benefit is 25% at age 35, grading downward to 0% at retirement eligibility. All participants terminating prior to normal retirement age with less than five years of service were assumed to take a separation benefit.

**Assumed Termination Rates**  
% of Active Participants Terminating

Age	Service	General Non-State		General State		Executive/ Elected Non-State	Executive/ Elected State	University State	
		Male	Female	Male	Female			Male	Female
	0-1	17.7%	20.0%	17.2%	19.5%	25.0%	19.0%	14.0%	14.1%
	1-2	12.5	15.0	12.9	15.5	20.0	16.0	13.8	14.0
	2-3	9.0	11.5	9.5	12.5	17.0	13.0	12.6	12.7
	3-4	7.1	9.6	7.4	10.0	16.0	12.5	11.0	10.0
	4-5	6.6	9.0	7.3	8.7	13.0	12.0	8.6	9.3
	5-6	5.3	7.4	6.1	7.8	4.0	6.0	8.5	8.1
	6-7	4.8	6.3	5.2	6.9	4.0	6.0	7.0	7.0
	7-8	4.6	6.0	5.1	6.0	4.0	6.0	5.6	5.6
	8-9	4.1	5.7	4.5	5.6	4.0	6.0	4.6	4.9
	9-10	4.0	5.0	3.6	5.5	4.0	6.0	4.3	4.3
Under 30	10 & Up	3.2	4.9	3.1	4.8	4.5	4.5	4.2	4.0
35		2.8	4.1	2.7	3.9	4.5	4.5	4.0	4.0
40		2.4	3.2	2.6	3.0	4.2	4.5	3.4	3.7
45		2.0	2.9	2.4	2.7	3.7	4.2	2.8	3.2
50		1.7	2.5	1.9	2.1	3.2	3.7	2.3	2.7
54		1.6	2.2	1.7	1.8	3.0	3.5	2.2	2.5



**Assumed Termination Rates**  
% of Active Participants Terminating

Age	Service	Public Schools Non-State		Protective		
		Male	Female	With SS Non-State	With SS State	W/O SS Non-State
	0-1	12.6%	12.0%	15.6%	18.8%	4.5%
	1-2	11.6	10.0	9.4	15.5	4.0
	2-3	8.5	8.5	5.3	10.5	2.0
	3-4	6.0	6.2	4.4	6.5	1.8
	4-5	5.6	5.8	4.2	5.5	1.7
	5-6	4.5	4.8	3.3	5.0	1.3
	6-7	3.7	4.1	3.2	4.5	1.2
	7-8	2.9	3.5	3.0	4.0	0.9
	8-9	2.6	3.4	2.7	3.5	0.8
	9-10	2.5	3.0	2.3	3.3	0.7
Under 30	10 & Up	2.0	2.2	2.1	2.9	0.7
35		1.6	1.9	1.8	2.4	0.6
40		1.4	1.6	1.5	1.8	0.6
45		1.4	1.4	1.4	1.4	0.5
50		1.3	1.2	1.3	1.2	0.5
54		1.3	1.2	1.3	1.2	0.5



## ACTUARIAL SECTION

**Disability Rates**

% of Active Participants Becoming Disabled

Age	General Non-State		General State		Executive/ Elected Non-State	Executive/ Elected State	University State	
	Male	Female	Male	Female			Male	Female
20	0.01%	0.00%	0.01%	0.01%	0.00%	0.00%	0.00%	0.01%
25	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.01
30	0.01	0.02	0.01	0.04	0.00	0.00	0.00	0.01
35	0.01	0.02	0.01	0.05	0.01	0.01	0.00	0.03
40	0.03	0.03	0.03	0.07	0.01	0.01	0.01	0.04
45	0.06	0.05	0.06	0.10	0.01	0.01	0.02	0.04
50	0.13	0.07	0.13	0.16	0.02	0.02	0.03	0.07
55	0.24	0.13	0.24	0.29	0.09	0.09	0.08	0.11
60	0.43	0.18	0.43	0.41	0.11	0.11	0.11	0.17

% of Active Participants Becoming Disabled

Age	Public Schools Non-State		Protective		
	Male	Female	With SS Non-State	With SS State	W/O SS Non-State
20	0.01%	0.01%	0.02%	0.02%	0.03%
25	0.01	0.01	0.02	0.02	0.03
30	0.01	0.01	0.02	0.02	0.03
35	0.01	0.01	0.03	0.03	0.03
40	0.01	0.02	0.04	0.05	0.05
45	0.03	0.05	0.05	0.07	0.10
50	0.08	0.10	0.09	0.11	0.55
55	0.14	0.14	1.39	1.73	0.41
60	0.24	0.21	2.34	2.92	0.12

**Summary of Member Valuation Data****General Participants and Teachers**

<b>Valuation Date</b>	<b>Participating Employers</b>	<b>Active Participants</b>	<b>Annual Payroll (In Millions)</b>	<b>Annual Average Pay (\$)</b>	<b>% Increase In Average Pay</b>
12/31/2013	1,450	231,973	\$ 11,270.0	\$ 48,584	2.0%
12/31/2014	1,454	232,433	11,574.0	49,794	2.5
12/31/2015	1,457	232,646	12,016.6	51,652	3.7
12/31/2016	1,463	233,693	12,163.8	52,050	0.8
12/31/2017	1,473	233,845	12,364.7	52,876	1.6
12/31/2018	1,479	234,367	12,680.7	54,106	2.3
12/31/2019	1,484	236,496	13,150.9	55,607	2.8
12/31/2020	1,504	235,450	13,553.1	57,563	3.5
12/31/2021	1,523	235,403	13,961.4	59,309	3.0
12/31/2022	1,554	237,429	14,443.2	60,832	2.6

**Executive Group and Elected Officials**

<b>Valuation Date</b>	<b>Participating Employers</b>	<b>Active Participants</b>	<b>Annual Payroll (In Millions)</b>	<b>Annual Average Pay (\$)</b>	<b>% Increase In Average Pay</b>
12/31/2013	249	1,397	\$ 106.0	\$ 76,125	2.9%
12/31/2014	251	1,401	109.0	77,998	2.5
12/31/2015	254	1,396	112.2	80,372	3.0
12/31/2016	252	1,369	111.3	81,300	1.2
12/31/2017	245	1,351	110.8	82,013	0.9
12/31/2018	241	1,317	112.6	85,497	4.2
12/31/2019	235	1,322	116.0	87,746	2.6
12/31/2020	230	1,292	121.0	93,620	6.7
12/31/2021	230	1,264	121.0	95,696	2.2
12/31/2022	224	1,242	124.4	100,122	4.6

**Protective With Social Security**

<b>Valuation Date</b>	<b>Participating Employers</b>	<b>Active Participants</b>	<b>Annual Payroll (In Millions)</b>	<b>Annual Average Pay (\$)</b>	<b>% Increase In Average Pay</b>
12/31/2013	512	19,290	\$ 1,121.0	\$ 58,127	1.8%
12/31/2014	506	19,533	1,151.0	58,916	1.4
12/31/2015	497	19,301	1,190.9	61,701	4.7
12/31/2016	496	19,468	1,217.4	62,533	1.3
12/31/2017	495	19,465	1,248.4	64,136	2.6
12/31/2018	499	19,450	1,282.7	65,949	2.8
12/31/2019	508	19,665	1,333.4	67,806	2.8
12/31/2020	505	19,749	1,443.8	73,105	7.8
12/31/2021	506	19,220	1,449.9	75,437	3.2
12/31/2022	512	19,008	1,535.8	80,798	7.1



## ACTUARIAL SECTION

### Protective Without Social Security

Valuation Date	Participating Employers	Active Participants	Annual Payroll (In Millions)	Annual Average Pay (\$)	% Increase In Average Pay
12/31/2013	58	2,736	\$ 197.0	\$ 71,960	1.4%
12/31/2014	58	2,733	204.0	74,487	3.5
12/31/2015	57	2,734	210.3	76,920	3.3
12/31/2016	56	2,755	213.2	77,387	0.6
12/31/2017	56	2,752	219.2	79,651	2.9
12/31/2018	55	2,777	225.5	81,203	1.9
12/31/2019	55	2,768	232.2	83,887	3.3
12/31/2020	55	2,758	242.1	87,769	4.6
12/31/2021	56	2,760	248.6	90,062	2.6
12/31/2022	55	2,825	257.9	91,297	1.4

### All Participants

Valuation Date	Participating Employers	Active Participants	Annual Payroll (In Millions)	Annual Average Pay (\$)	% Increase In Average Pay
12/31/2013	1,479	255,396	\$ 12,694.0	\$ 49,703	2.0%
12/31/2014	1,482	256,100	13,038.0	50,910	2.4
12/31/2015	1,487	256,077	13,530.0	52,836	3.8
12/31/2016	1,495	257,285	13,705.7	53,270	0.8
12/31/2017	1,499	257,413	13,943.1	54,166	1.7
12/31/2018	1,507	257,911	14,301.4	55,451	2.4
12/31/2019	1,516	260,251	14,832.5	56,993	2.8
12/31/2020	1,537	259,249	15,359.9	59,248	4.0
12/31/2021	1,555	258,647	15,780.8	61,013	3.0
12/31/2022	1,586	260,504	16,361.3	62,806	2.9

**Summary of Accrued and Unfunded Accrued Liabilities**

(In Millions)

Valuation Year	Aggregate Accrued Liabilities	Valuation Assets	Assets as % of Accrued Liabilities	Unfunded Accrued Liabilities	Annual Active Member Payroll	UAL as % of Annual Active Member Payroll
2013	\$ 85,328.7	\$ 85,276.1	99.9%	\$ 52.6	\$ 12,884.8	0.4%
2014	89,392.1	89,360.4	100.0	31.7	13,219.5	0.2
2015	91,526.5	91,502.4	100.0	24.1	13,530.5	0.2
2016	95,414.0	95,396.2	100.0	17.8	13,706.0	0.1
2017	100,819.3	100,802.5	100.0	16.8	13,943.1	0.1
2018	101,422.3	101,410.5	100.0	11.8	14,301.4	0.1
2019	106,532.4	106,524.4	100.0	8.0	14,832.5	0.1
2020	114,265.0	114,259.2	100.0	5.8	15,359.9	0.0
2021	124,671.2	124,665.4	100.0	5.8	15,780.8	0.0
2022	125,116.6	125,111.5	100.0	5.1	16,361.3	0.0

**Funding Metrics**

(In Millions)

Valuation Date Dec 31	Actuarial Value of Assets	Frozen Initial Liability (FIL) Accrued Liability For				Percent Funded for			
		Annuitants and Beneficiaries	Member Contribs.	Active and Inactive Members	Total	Annuitants and Beneficiaries	Participant Contribs.	Active and Inactive Members	Total
2013	\$ 85,276.1	\$ 48,460.5	\$ 15,559.2	\$ 21,309.0	\$ 85,328.7	100.0%	100.0%	99.8%	99.9%
2014	89,360.4	51,131.1	16,259.3	22,001.7	89,392.1	100.0	100.0	99.9	100.0
2015	91,502.4	52,851.8	16,707.2	21,967.5	91,526.5	100.0	100.0	99.9	100.0
2016	95,396.2	55,764.0	17,361.7	22,288.3	95,414.0	100.0	100.0	99.9	100.0
2017	100,802.5	59,224.9	18,434.4	23,160.0	100,819.3	100.0	100.0	99.9	100.0
2018	101,410.5	60,242.9	18,455.6	22,723.9	101,422.4	100.0	100.0	99.9	100.0
2019	106,524.4	63,657.8	19,487.0	23,387.6	106,532.4	100.0	100.0	100.0	100.0
2020	114,259.2	68,759.8	20,884.4	24,620.8	114,265.0	100.0	100.0	100.0	100.0
2021	124,665.4	75,528.7	22,737.5	26,405.0	124,671.2	100.0	100.0	100.0	100.0
2022	125,111.5	76,511.4	22,575.4	26,029.8	125,116.6	100.0	100.0	100.0	100.0

## ACTUARIAL SECTION

## WRS Contribution Rates

### » Notes to Contribution Rates Schedule

Prior to June 28, 2011, the member contribution rate was set by Wis. Stat. § 40.05 (1), and part or all the required member contributions could be paid by the employer on behalf of the employee. Effective June 28, 2011, the member contribution rate for general and executive/elected category employees is equal to the general category rate. Employers may not pay the member contribution on their behalf unless provided for by an existing collective bargaining agreement.

The unfunded liability was recalculated in 1990 to reflect benefit improvements and is being amortized on a level percentage of salary basis over a period of 40 years beginning January 1, 1990, for the employers in the WRS prior to 2009, or on the effective date of the employer's participation, whichever is later. Liabilities for employers joining the WRS beginning in 2009 are amortized over 30 years. Prior service rates vary by employers. The percentage reported represents a weighted average.

#### General Participants and Teachers

	Current Cost	Prior Cost	Employer Total	Employee	BAC	Total
2013	6.65%	0.10%	6.75%	6.65%	0.00%	13.40%
2014	7.00	0.00	7.00	7.00	0.00	14.00
2015	6.80	0.00	6.80	6.80	0.00	13.60
2016	6.60	0.00	6.60	6.60	0.00	13.20
2017	6.80	0.07	6.87	6.80	0.00	13.67
2018	6.70	0.03	6.73	6.70	0.00	13.43
2019	6.55	0.02	6.57	6.55	0.00	13.12
2020	6.75	0.04	6.79	6.75	0.00	13.54
2021	6.75	0.03	6.78	6.75	0.00	13.53
2022	6.50	0.00	6.50	6.50	0.00	13.00

#### Executive Group and Elected Officials

	Current Cost	Prior Cost	Employer Total	Employee	BAC	Total
2013	7.00%	0.00%	7.00%	7.00%	0.00%	14.00%
2014	7.75	0.00	7.75	7.75	0.00	15.50
2015	7.70	0.00	7.70	7.70	0.00	15.40
2016	6.60	0.00	6.60	6.60	0.00	13.20
2017	6.80	0.07	6.87	6.80	0.00	13.67
2018	6.70	0.03	6.73	6.70	0.00	13.43
2019	6.55	0.02	6.57	6.55	0.00	13.12
2020	6.75	0.04	6.79	6.75	0.00	13.54
2021	6.75	0.03	6.78	6.75	0.00	13.53
2022	6.50	0.00	6.50	6.50	0.00	13.00

**Protective With Social Security**

	<b>Current Cost</b>	<b>Prior Cost</b>	<b>Duty Disability</b>	<b>Employer Total</b>	<b>Employee</b>	<b>BAC</b>	<b>Total</b>
2013	9.75%	0.00%	4.10%	13.85%	6.65%	0.00%	20.50%
2014	10.10	0.00	0.70	10.80	7.00	0.00	17.80
2015	9.50	0.00	0.60	10.10	6.80	0.00	16.90
2016	9.40	0.00	0.30	9.70	6.60	0.00	16.30
2017	10.60	0.08	0.60	11.28	6.80	0.00	18.08
2018	10.70	0.03	0.70	11.43	6.70	0.00	18.13
2019	10.55	0.00	0.48	11.03	6.55	0.00	17.58
2020	11.65	0.01	0.24	11.90	6.75	0.00	18.65
2021	11.75	0.01	0.24	12.00	6.75	0.00	18.75
2022	12.00	0.02	0.11	12.13	6.50	0.00	18.63

**Protective Without Social Security**

	<b>Current Cost</b>	<b>Prior Cost</b>	<b>Duty Disability</b>	<b>Employer Total</b>	<b>Employee</b>	<b>BAC</b>	<b>Total</b>
2013	12.35%	0.30%	4.10%	16.75%	6.65%	0.00%	23.40%
2014	13.70	0.30	0.70	14.70	7.00	0.00	21.70
2015	13.10	0.30	0.60	14.00	6.80	0.00	20.80
2016	13.20	0.20	0.30	13.70	6.60	0.00	20.30
2017	14.90	0.14	0.60	15.64	6.80	0.00	22.44
2018	14.90	0.05	0.70	15.65	6.70	0.00	22.35
2019	14.95	0.09	0.48	15.52	6.55	0.00	22.07
2020	16.25	0.02	0.24	16.51	6.75	0.00	23.26
2021	16.35	0.01	0.24	16.60	6.75	0.00	23.35
2022	16.40	0.96	0.11	17.47	6.50	0.00	23.97

## ACTUARIAL SECTION

## Analysis of Actuarial Experience WRS

### Gains and Losses in Accrued Liabilities During 2022 Resulting Differences Between Assumed Experience and Actual Experience (In Millions)

Type of Activity	General	Executive and Elected	Protective Occupation With Social Security	Protective Occupation Without Social Security	Total
<b>Normal Retirement</b>					
If members retire at older ages or with lower final average pay than assumed, there is a gain. If younger ages or higher pay, there is a loss.	\$(15.3)	\$(0.1)	\$(15.6)	\$(5.4)	\$(36.4)
<b>Reduced Retirement</b>					
If fewer members choose reduced retirement than assumed, there is a loss. If more reduced retirements, there is a gain.	(20.9)	0.0	(2.9)	(0.4)	(24.2)
<b>Death with Benefit</b>					
If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(1.6)	0.0	(0.2)	(0.2)	(2.0)
<b>Disability Retirement</b>					
If disability claims are less than assumed, there is a gain. If more claims, a loss.	3.6	0.0	(1.7)	0.1	2.0
<b>Other Separations</b>					
If more liabilities are released by separations than assumed, there is a gain. If smaller releases, a loss.	36.6	(0.4)	0.9	0.4	37.5
<b>Salary Increases</b>					
If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	(116.3)	(0.8)	(221.3)	(18.6)	(357.0)
<b>Investment Return</b>					
If there is greater investment income than assumed, there is a gain. If less income, a loss.	(83.1)	8.9	(45.9)	(11.7)	(131.8)
<b>Other Activity</b>	(67.6)	(4.6)	(2.3)	(1.3)	(75.8)
<b>Total Gain (Loss)</b>	<b>\$(264.6)</b>	<b>\$3.0</b>	<b>\$(289.0)</b>	<b>\$(37.1)</b>	<b>\$(587.7)</b>
<b>% of accrued liability</b>	<b>(0.6)%</b>	<b>1.9%</b>	<b>(6.1)%</b>	<b>(3.5)%</b>	<b>(1.2)%</b>

**Changes in Number of Annuities - WRS**

Year	Annuity Type	Beginning	Additions	Deletions	Ending
2022	Retirement	218,846	10,663	4,865	224,644
	Disability	7,861	242	423	7,680
	Beneficiary	1,454	66	40	1,480
	<b>Total</b>	<b>228,161</b>	<b>10,971</b>	<b>5,328</b>	<b>233,804</b>
2021	Retirement	213,268	10,346	4,768	218,846
	Disability	8,007	231	377	7,861
	Beneficiary	1,448	55	49	1,454
	<b>Total</b>	<b>222,723</b>	<b>10,632</b>	<b>5,194</b>	<b>228,161</b>
2020	Retirement	207,362	10,529	4,623	213,268
	Disability	8,163	274	430	8,007
	Beneficiary	1,419	73	44	1,448
	<b>Total</b>	<b>216,944</b>	<b>10,876</b>	<b>5,097</b>	<b>222,723</b>
2019	Retirement	201,466	9,936	4,040	207,362
	Disability	8,281	264	382	8,163
	Beneficiary	1,379	72	32	1,419
	<b>Total</b>	<b>211,126</b>	<b>10,272</b>	<b>4,454</b>	<b>216,944</b>
2018	Retirement	195,762	9,735	4,031	201,466
	Disability	6,091	2,382	192	8,281
	Beneficiary	1,349	70	40	1,379
	<b>Total</b>	<b>203,202</b>	<b>12,187</b>	<b>4,263</b>	<b>211,126</b>
2017	Retirement	190,111	9,591	3,940	195,762
	Disability	6,198	98	205	6,091
	Beneficiary	1,338	42	31	1,349
	<b>Total</b>	<b>197,647</b>	<b>9,731</b>	<b>4,176</b>	<b>203,202</b>
2016	Retirement	184,180	9,866	3,935	190,111
	Disability	6,305	98	205	6,198
	Beneficiary	1,310	62	34	1,338
	<b>Total</b>	<b>191,795</b>	<b>10,026</b>	<b>4,174</b>	<b>197,647</b>
2015	Retirement	177,959	9,881	3,660	184,180
	Disability	6,363	124	182	6,305
	Beneficiary	1,283	57	30	1,310
	<b>Total</b>	<b>185,605</b>	<b>10,062</b>	<b>3,872</b>	<b>191,795</b>
2014	Retirement	172,430	9,080	3,551	177,959
	Disability	6,393	125	155	6,363
	Beneficiary	1,233	69	19	1,283
	<b>Total</b>	<b>180,056</b>	<b>9,274</b>	<b>3,725</b>	<b>185,605</b>
2013	Retirement	165,966	9,889	3,425	172,430
	Disability	6,473	146	226	6,393
	Beneficiary	1,216	70	53	1,233
	<b>Total</b>	<b>173,655</b>	<b>10,105</b>	<b>3,704</b>	<b>180,056</b>

Beginning in 2018, disability count includes Long-Term Disability Insurance annuities.

# INVESTMENT SECTION

The background features a series of overlapping, wavy shapes in various shades of blue and white. These shapes are composed of multiple thin, parallel lines that create a sense of depth and movement. The overall aesthetic is clean, modern, and professional.

State of Wisconsin  
Department of Employee Trust Funds

Wisconsin Department of Employee Trust Funds

## Investments

### Prepared by the State of Wisconsin Investment Board

#### » MESSAGE FROM THE EXECUTIVE DIRECTOR/CHIEF INVESTMENT OFFICER

The headlines said it all. On Dec. 30, 2022 CNBC reported “Stocks fall to end Wall Street’s worst year since 2008, S&P 500 finishes 2022 down nearly 20%.” Early in 2023, another CNBC article declared “2022 was the worst-ever year for U.S. bonds.” MarketWatch.com wrote “2022 was ‘the biggest outlier year’ in markets history as stocks and bonds both plunged.”

Investing in that environment, the Wisconsin Retirement System’s (WRS) Core Trust Fund ended the year with a net loss of 12.92% and a five-year positive net return of 6.16%. The Core Fund’s 10-year and 20-year returns net of external manager fees continued to exceed its target return of 6.80%. SWIB outperformed its benchmarks for all these periods.

The Core Fund’s smoothing mechanism, which levels out annual gains and losses over five-year periods, was built precisely for times like these. Despite a difficult 2022 in the markets, WRS beneficiaries saw a modest, positive annuity adjustment this spring thanks largely to strong absolute investment returns in 2019, 2020, and 2021. Contribution rates for WRS employers and employees are expected to remain stable.

SWIB met several of its organizational goals during 2022. SWIB expanded its investment capabilities with the successful launch of a leveraged loans strategy that is managed internally and supported by SWIB staff on an industry-leading bank loan technology platform. SWIB also worked to enhance its collateral and liquidity management, attaining readiness to comply with new market regulations impacting margin requirements. In 2022, SWIB also continued to strengthen its information security program, through multiple updates and enhancements to its technical infrastructure and additional staff training related to cyber risk prevention. In addition, SWIB completed several critical technology updates and implemented new platforms to support the private markets portfolio and research management. Lastly, SWIB continued its strategic investment in people, processes, and technology to enable improved data and service quality and to better support our investment strategies.

Significant market corrections like we experienced in 2022 further reinforce the importance of maintaining a fully funded pension system and implementing an investment strategy that can weather a variety of market climates. SWIB and the WRS are well-positioned to confront whatever challenges might be in store for investors in 2023.



Edwin Denson  
Executive Director/Chief Investment Officer

## INVESTMENT SECTION

**» ABOUT THE INVESTMENT BOARD**

SWIB is a trusted and skilled investment organization contributing to the strong financial future of the beneficiaries of the funds entrusted to it. An independent state agency governed by Wis. Stat. § 25, SWIB is responsible for managing the assets of the fully funded Wisconsin Retirement System (WRS), the State Investment Fund (SIF), and other separately managed funds. The SIF is a pool of invested cash balances of the WRS and various state and local government units. Other funds managed by SWIB include the State Life Insurance Fund, Historical Society Trust Fund, Injured Patients and Families Compensation Fund, and University of Wisconsin System Trust Funds.

SWIB was created under Wis. Stat. § 15.76 and its duties to invest these funds are provided in Wis. Stat. § 25. SWIB is a fiduciary and is governed by the “prudent investor” standard, which requires it to use the diligence, skill, and care that a prudent person acting in a similar capacity and with the same resources would use in managing a large public pension fund. The law also requires SWIB to make investment decisions and conduct its operations solely to fulfill the purpose of the funds under management.

SWIB is governed by a nine-person, independent Board of Trustees. Trustees appoint the executive director and set the governing policies for SWIB. The executive director/chief investment officer (ED/CIO) oversees the staff, develops and recommends agency and investment policies for Board adoption, and ensures adherence to state law and policies. The ED/CIO serves as chair of the Investment Committee. The Investment Committee provides oversight of SWIB’s investments and reports to and makes recommendations to the Trustees.

**» WISCONSIN RETIREMENT SYSTEM**

Approximately 678,000 people participate in the WRS, including current and former employees of Wisconsin’s state agencies, most local governments, and school districts in Wisconsin. Contributions made to the WRS by these employees and their employers are invested by SWIB to finance retirement and other benefits.

The larger of the two trust funds comprising the WRS is the Core Fund. The Core Fund had a Net Investment Position of \$114.4 billion as of December 31, 2022. All WRS members have at least half, and most have all, of their pension contributions invested in the Core Fund. It is a diversified, balanced fund invested for the long-term needs of the WRS. Diversification helps stabilize the effects of market changes. The investment objective of this trust fund is to meet or exceed an annual average nominal return of 6.8% over the long-term. This return target is set by ETF with input from external consultants using several factors including market returns, estimated wage growth, and other actuarial assumptions.

Active employees participating in the WRS have the option of allocating half of their pension fund contributions to the Variable Fund, which almost entirely consists of global equity investments. Approximately 14% of WRS members participate in the Variable Fund, which maintained a Net Investment Position of \$8.4 billion as of December 31, 2022. By law, the Variable Fund invests primarily in equity securities and provides participants the potential for higher returns while bearing greater risk. The investment objective of the Variable Fund is to meet or exceed broad equity market indices over a full market cycle.

**WRS Time-Weighted Annualized Returns**
**As of December 31, 2022**

	Net of All Fees and Costs		Net of External Manager Fees	
	One Year	Five Years	Ten Years	Twenty Years
Core Fund	(12.9) %	6.2 %	7.3 %	7.7 %
Core Fund Benchmark	(13.3)	5.7	6.8	7.4
Variable Fund	(17.8)	6.5	9.8	8.8
Variable Fund Benchmark	(18.1)	6.5	9.7	8.8

The investments of the Retirement Funds are reported in the Statement of Fiduciary Net Position at fair value as prescribed by GASB and in accordance with Wis. Stat. § 25.17 (14). Unrealized gains and losses are reflected in the Statement of Changes in Fiduciary Net Position as "Net Increase (Decrease) in Fair Value of Investments."

The fair value of the Retirement Funds is obtained or estimated in accordance with a pricing hierarchy established with SWIB's custodian. As prescribed by the hierarchy, a variety of independent pricing sources are used to price assets based on type, class, or issue.

When a portfolio includes securities or instruments for which the custodial bank does not receive fair value information from its vendor pricing sources, a variety of third-party pricing methods are used, including appraisals, pricing models, and other methods deemed acceptable by industry standards.

The "Equity in Pooled Cash and Cash Equivalents" category reported in the Statement of Fiduciary Net Position consists of short-term investments used to meet the liquidity requirements of the Retirement Funds. Equity in Pooled Cash and Cash Equivalents held by the Retirement Funds can include cash on deposit, foreign currencies, cash posted as collateral to counterparties, repurchase agreements, certificates of deposit, time deposits, U.S. Treasury Bills, short-term investment funds, and other U.S. or foreign liquid financial instruments with maturities that are generally less than three months. Equity in Pooled Cash and Cash Equivalents are reported at fair value or cost, which approximates fair value.

Privately held debt, which is included as "Fixed Income investments" in the Statement of Fiduciary Net Position, is priced using approaches that value each holding based on the best available information using the following hierarchy of pricing sources:

- Custodian-supplied prices for assets that can be priced in accordance with the pricing hierarchy established with SWIB's custodian.
- Prices provided by a third party with expertise in the debt markets.

For private market investments where no readily ascertainable market value exists, including limited partnerships and real estate pooled funds, fair value is estimated based on the net asset values (NAV) provided by the general partner. Due to the reporting timing of private market investment managers, reported fair values as of December 31, 2022 are based on actual September 30, 2022 reporting, which has been adjusted to reflect cash flows occurring from October 1, 2022 through December 31, 2022. The reported fair value is considered an estimate that may differ from the value that could be realized in a secondary market transaction, or the amount ultimately realized. The financial statements of the limited partnerships and real estate pooled funds are audited by independent auditors annually.



## INVESTMENT SECTION

Certain portfolios invest in privately held companies alongside a strategic partner, such as a limited partnership fund manager. These co-investments are valued by SWIB's strategic partners, who often employ independent valuation agents and use a variety of methodologies including reviews of subsequent financing rounds, discounted cash flow analyses, cash flow multiples analyses, reviews of market comparable sales or metrics, and reviews of third-party appraisals.

Real estate investments owned by SWIB in limited liability companies are valued by independent appraisers every three years. In years when appraisals are not performed, properties are informally appraised by the asset advisor. Each year audited financial statements are prepared for each property.

SWIB employs portfolio strategies which comprise investments across multiple asset classes. The "Multi-Asset Investments" account in the Statement of Fiduciary Net Position consists primarily of hedge funds. SWIB values hedge funds based on monthly statements or estimated returns received from each of the hedge fund's administrators.

A third-party administrator's responsibility is to independently account for the hedge fund's activity and calculate the NAV of the fund. Generally, hedge fund administrators' price financial instruments traded in active markets based on quoted market prices or binding dealer quotations. For certain over the counter (OTC) instruments, fair value is determined based on valuation models used by the administrator or independent valuation agent. Annually, the financial statements prepared by the administrator are audited by independent auditors.

Derivative financial instruments are marked to market daily, with valuation changes recognized in income during the period the instruments are held and when the instrument is sold or expires.

A limited number of securities are carried at cost. Certain non-public or closely held investments are not reported at fair value but are carried at cost, as no independent price quotes are available to estimate fair value for these securities.

### » INVESTMENT POLICY

As part of its fiduciary responsibilities, SWIB is required by Wis. Stat. § 25.15 (2)(b) "to diversify investments in order to minimize the risk of large losses, unless under the circumstances it is clearly prudent not to do so, considering each trust's or fund's portfolio as a whole at any point in time." SWIB exercises this duty in part by establishing its investment policy and by setting the asset allocation.

The Board-approved investment policy for the WRS is intended to assist in development of a diversified portfolio of investments within acceptable risk parameters. The policy represents a delegation of standing authority to the ED/CIO and investment managers within the organization to make prudent investments within the investment guidelines, pursuant to Wis. Stat. § 15.02 (4) and Wis. Stat. § 25.15 (2) and section IB 2.02 of the Wisconsin Administrative Code.

Additionally, the Investment Committee (IC) was created to provide oversight of SWIB investments within the parameters established by the Board of Trustees. Oversight includes analysis of risk and investment returns of the portfolios, asset classes, and Core and Variable Funds. The IC is responsible for proposing to the Board of Trustees changes to the WRS investment policy, approving investment guidelines or strategies for internally managed portfolios, approving the general strategies for each asset class, and for approving new investment and derivative instruments. The Board of Trustees reserves all rights to modify and amend IC guidelines at any time at its discretion.

The IC-approved WRS Investment Guidelines include several policies, including a derivatives use policy, rebalancing procedures, and a leverage use policy. The derivatives use policy sets forth the objectives,

monitoring, and reporting guidelines relating to derivative investments. The rebalancing procedures used in both mandatory and discretionary asset class rebalancing are described in the Investment Guidelines, and the leverage use policy describes SWIB's leverage philosophy. The total amount of policy leverage is approved by the Board of Trustees through the WRS asset allocation process.

## » SCHEDULE OF INVESTMENT RESULTS

The tables below present returns for the Core and Variable Funds on a total fund basis as well as by asset class. Appropriate benchmark returns are provided for comparison purposes.

<b>Time-Weighted Core Fund and Asset Class Returns*</b>			
<b>As of December 31, 2022</b>			
	<b>1-Year Return %</b>	<b>5-Year Return %</b>	<b>10-Year Return %</b>
Core Fund	(12.9) %	6.2 %	7.3 %
<i>Benchmark</i>	(13.3)	5.7	6.8
Public Equities	(17.8)	5.7	8.5
<i>Aggregated Equities Benchmark</i>	(18.0)	6.0	8.6
Fixed Income	(13.9)	0.4	1.3
<i>Aggregated Fixed Income Benchmark</i>	(12.7)	0.4	1.2
Inflation Sensitive	(11.8)	2.3	0.7
<i>Aggregated Inflation Sensitive Benchmark</i>	(11.9)	2.2	0.6
Real Estate	16.8	9.4	11.0
<i>100% ODCE Benchmark (since 1/1/13)</i>	21.0	9.3	9.8
Private Equity/Debt	3.9	17.4	15.1
<i>Aggregated Private Equity Benchmark</i>	0.4	14.0	12.5
Alpha Pool Overlay	3.1	3.8	3.1
<i>Aggregated Alpha Pool Overlay Benchmark</i>	0.0	0.5	1.4

\*Core Fund returns presented net of all fees, except for the 10-Year return is net of external manager fees. Asset class returns are net of external manager fees.

<b>Time-Weighted Variable Fund and Asset Class Returns*</b>			
<b>As of December 31, 2022</b>			
	<b>1-Year Return %</b>	<b>5-Year Return %</b>	<b>10-Year Return %</b>
Variable Fund	(17.8) %	6.5 %	9.8 %
<i>Benchmark</i>	(18.1)	6.5	9.7
Public Equities	(17.8)	6.5	9.8
<i>Aggregated Equities Benchmark</i>	(18.1)	6.5	9.7

\*Returns presented net of all fees, except for the 10-Year return is net of external manager fees.

## INVESTMENT SECTION

## » ASSET ALLOCATION

SWIB's Board of Trustees has established the asset allocation pursuant to a comprehensive and ongoing evaluation of the appropriate risk and return standards for each fund under management.

The Board adopts the Retirement Funds' asset allocation policy, based on recommendations by the IC, the Board's asset allocation consultant, ED/CIO, and Head Economist & Asset and Risk Allocation Chief Investment Officer. SWIB undertakes a comprehensive review of its strategic asset allocation plan every other year, including asset/liability modeling, to determine a suitable target allocation for each asset class included in the Core and Variable Funds, and an annual review to assess whether any interim adjustments should be made. The strategic nature of these reviews contemplates a long-term time horizon over which potential results are evaluated. This exercise is not an attempt to predict short-term market movements, but an effort to understand the long-term impacts of poor, normal, and above average market results.

In addition to potential future market impact, SWIB also contemplates the objectives of the funds, the impact of actuarial analysis, and the soundness of investment return and risk expectations. SWIB's asset allocation policies reflect the Board's program of risk allocation that involves reducing equity exposure by leveraging lower volatility assets, such as fixed income securities. This investment strategy results in Core Fund strategic targets which exceed 100% of invested assets. Currently, the Board has approved an asset allocation target of 15% policy leverage for the Core Fund subject to an allowable range of up to 20%.

SWIB's asset allocation review process also includes assumptions regarding expected rates of return. Long-term (e.g., 30-year) expected real rates of return on pension plan investments are determined using a building block method in which best estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected real rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

The table entitled Asset Allocation Targets and Expected Returns presents the policy asset allocation targets and the best estimates of expected geometric rates of return for each major asset class as of December 31, 2022.

**Retirement Funds  
Asset Allocation Targets and Expected Returns<sup>1</sup>  
As of December 31, 2022**

<b>Core Fund Asset Class</b>	<b>Asset Allocation %</b>	<b>Long-Term Expected Nominal Rate of Return %</b>	<b>Long-Term Expected Real Rate of Return %<sup>2</sup></b>
Public Equity	48 %	7.6 %	5.0 %
Public Fixed Income	25	5.3	2.7
Inflation Sensitive Assets	19	3.6	1.1
Real Estate	8	5.2	2.6
Private Equity/Debt	15	9.6	6.9
<b>Total Core Fund<sup>3</sup></b>	<b>115 %</b>	<b>7.4 %</b>	<b>4.8 %</b>
<b>Variable Fund Asset Class</b>			
U.S. Equities	70 %	7.2 %	4.6 %
International Equities	30	8.1	5.5
<b>Total Variable Fund</b>	<b>100 %</b>	<b>7.7 %</b>	<b>5.1 %</b>

<sup>1</sup>Asset allocations are managed within established ranges; target percentages may differ from actual monthly allocations.

<sup>2</sup>New England Pension Consultants Long Term U.S. CPI (Inflation) Forecast: 2.5%.

<sup>3</sup>The investment policy used for the Core Fund involves reducing equity exposure by leveraging lower-volatility assets, such as fixed income securities. This results in an asset allocation beyond 100%. Currently, an asset allocation target of 15% policy leverage is used, subject to an allowable range of up to 20%.

In determining asset allocation targets, investments may be categorized differently than they are within the financial statements. For example, SWIB management considers inflation-sensitive assets separately from other fixed income investments for asset allocation purposes.

## INVESTMENT SECTION

## » WRS LARGEST HOLDINGS

<b>WRS Largest Equity Holdings</b>			
<b>As of December 31, 2022</b>			
<b>(In Thousands)</b>			
<b>Issuer</b>	<b>Shares</b>	<b>Fair Value</b>	<b>% of Total Equities</b>
MICROSOFT CORP	5,171,295	\$ 1,240,180	2.19 %
APPLE INC	9,532,648	1,238,577	2.19
ALPHABET INC	7,670,823	678,873	1.20
AMAZON.COM INC	6,592,562	553,775	0.98
ROCHE HOLDING AG	1,239,683	389,852	0.69
VISA INC	1,513,159	314,374	0.56
SHELL PLC	9,696,574	271,780	0.48
UNITEDHEALTH GROUP INC	509,137	269,934	0.48
EXXON MOBIL CORP	2,245,181	247,643	0.44
JOHNSON & JOHNSON	1,388,158	245,218	0.43

<b>WRS Largest Fixed Income Holdings</b>				
<b>As of December 31, 2022</b>				
<b>(In Thousands)</b>				
<b>Security*</b>	<b>Coupon Rate</b>	<b>Maturity Date</b>	<b>Fair Value</b>	<b>% of Total Fixed Income</b>
U.S. TREAS-CPI INFLAT	0.125	1/15/2031	\$ 852,160	1.91 %
U.S. TREAS-CPI INFLAT	0.125	7/15/2031	829,284	1.85
U.S. TREAS-CPI INFLAT	0.125	10/15/2026	788,346	1.76
U.S. TREAS-CPI INFLAT	0.125	10/15/2024	784,999	1.75
U.S. TREAS-CPI INFLAT	0.500	1/15/2028	764,080	1.71
U.S. TREAS-CPI INFLAT	0.375	7/15/2025	752,555	1.68
U.S. TREAS-CPI INFLAT	0.125	7/15/2030	746,515	1.67
U.S. TREAS-CPI INFLAT	0.375	1/15/2027	718,398	1.61
U.S. TREAS-CPI INFLAT	0.250	1/15/2025	712,559	1.59
U.S. TREAS-CPI INFLAT	0.125	10/15/2025	660,553	1.48

\*U.S. TREAS-CPI INFLAT - Treasury Inflation Protected Securities

Listing of largest holdings does not include externally managed commingled funds.

A complete list of WRS investments can be found using the following link.

<http://www.swib.state.wi.us/publications>

**» WRS INVESTMENT INCOME AND FEES**

Investment Expense includes transaction-related expenses, certain external management fees, and expenses tied to Core Fund operations.

Transaction-related expenses are reflected in Investment Operating Expense and Securities Lending Fees. These expenses often relate to the execution of specific investment transactions like short sales. In this example, the dividends a shorted security must pay are reflected as dividend expense. Two transaction related expense types—commissions and trade execution fees—are excluded from Investment Operating Expense and are instead included in Net Increase (Decrease) in the Fair Value of Investments in the Statement of Changes in Fiduciary Net Position. These expenses are not readily separable from the acquisition or disposal of an investment. External investment management fees include base fees and performance fees paid to external managers when they are managing assets on SWIB's behalf within accounts held in SWIB's name. Administrative-related expenses are included in Internal Operating Expenses. Professional Services Expenses include legal fees, research and data services, and investment consulting fees.

<b>Schedule of WRS Investment Income and Fees</b>			
<b>For the Calendar Year Ended December 31, 2022</b>			
(In Thousands)			
	<b>Core Fund</b>		<b>Variable Fund</b>
Investment Income (Loss)	\$ (16,602,684)	\$	(1,889,621)
Less:			
Investment Operating Expense*	609,715		146
Internal Operating Expense*	75,562		2,861
Custodial, Bank Fees and Operating Services*	5,756		454
Professional Services Expenses*	35,983		1,150
External Investment Management Fees*	43,917		2,976
Securities Lending Fees	71,790		4,389
<b>Net Investment Income (Loss)</b>	<b>\$ (17,445,407)</b>	<b>\$</b>	<b>(1,901,597)</b>

\*These expenses are combined and reported as "Investment Expense" in the Statement of Changes in Fiduciary Net Position



## INVESTMENT SECTION

SWIB invests in external legal entities managed by external investment managers to gain exposure to select investment strategies. In exchange for their investment management services, the external managers charge a fee within the entity they manage. These fees are typically assessed as a percentage of SWIB's commitment to, or investment in, the external entity. The fees assessed to these external entities are recorded as a fee within the external entity and are thus included in the Net Increase (Decrease) in the Fair Value of Investments within the Statement of Changes in Fiduciary Net Position.

<b>Schedule of WRS External Management Fees</b>		
<b>For the Calendar Year Ended December 31, 2022<sup>1</sup></b>		
(In Thousands)		
Private Equity <sup>2</sup>	\$	509,629
Hedge Funds <sup>3</sup>		252,533
Real Estate <sup>2</sup>		235,880
External Investment Management <sup>4</sup>		109,842
<b>Total Fees</b>	<b>\$</b>	<b>1,107,884</b>

<sup>1</sup>Includes performance based fees.

<sup>2</sup>Included within Private Fund Investments in the Statement of Fiduciary Net Position.

<sup>3</sup>Included within Multi Asset Investments in the Statement of Fiduciary Net Position.

<sup>4</sup>Includes external investment management fees incurred within certain external funds as well as approximately \$46.9 million in fees paid to external managers in exchange for services they provide within SWIB-custodied accounts, which are included in the Statement of Changes in Fiduciary Net Position.

**» INVESTMENT SUMMARY**
**Core Fund Summary of Investments by Asset Type\***

**As of December 31, 2022**  
(In Thousands)

<b>Asset Type</b>	<b>Fair Value</b>	<b>% of Total Investments</b>
Equities	\$ 48,794,465	36.2 %
Fixed Income	44,730,410	33.2
Private Fund Investments	31,718,665	23.5
Multi Asset	7,682,286	5.7
Preferred Securities	507,778	0.4
Convertible Securities	12,862	0.0
To Be Announced Securities	1,263,200	0.9
Foreign Currency Contracts	50,856	0.1
Option Contracts	(103)	0.0
Futures Contracts	7,507	0.0
Swaps	(22,874)	0.0
<b>Total Core Fund Investments</b>	<b>\$ 134,745,052</b>	<b>100.0 %</b>

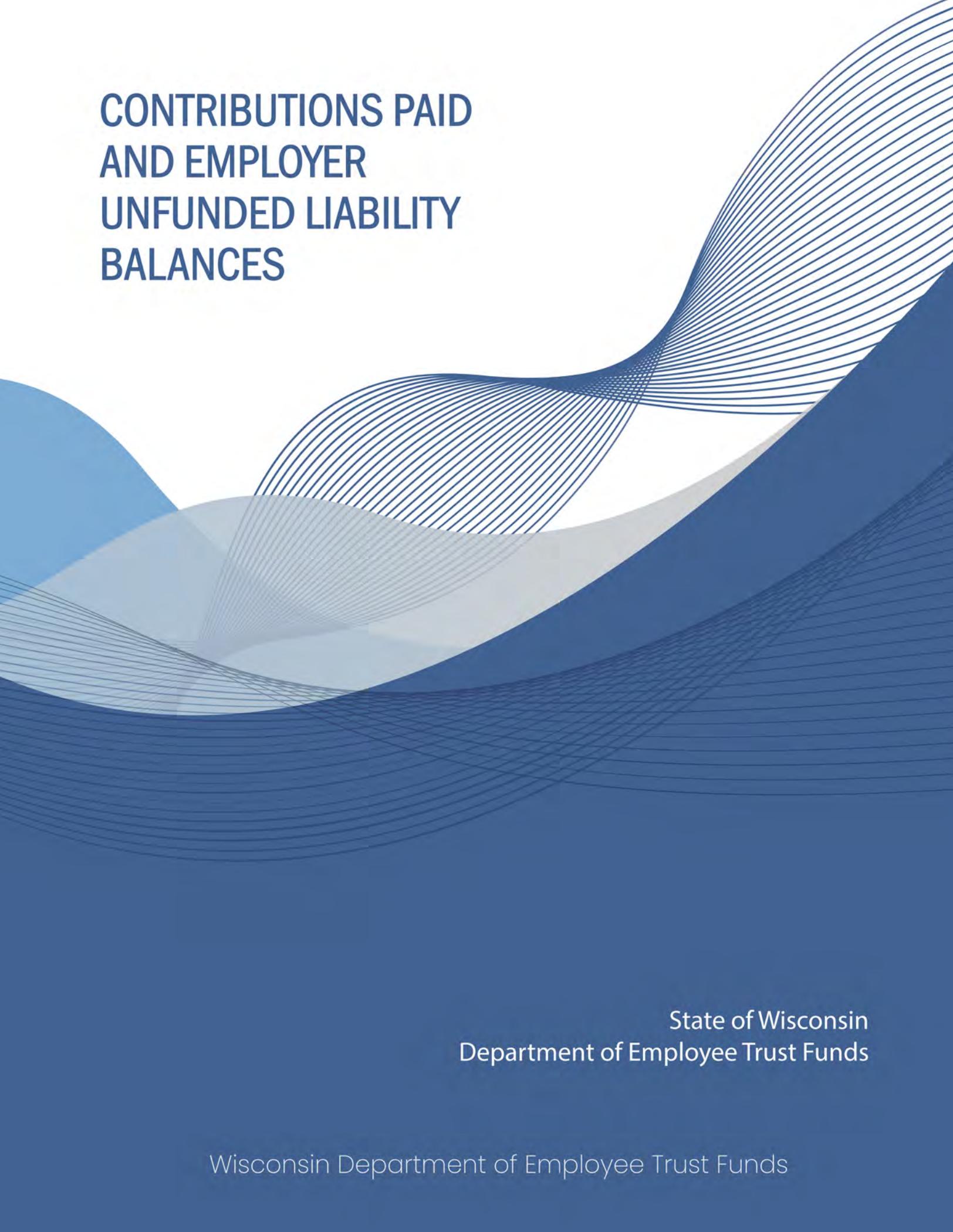
\*Does not include investment related liabilities

**Variable Fund Summary of Investments by Asset Type\***

**As of December 31, 2022**  
(In Thousands)

<b>Asset Type</b>	<b>Fair Value</b>	<b>% of Total Investments</b>
Equities	\$ 7,845,477	100.0 %
Preferred Securities	5,109	0.1
Foreign Currency Contracts	148	0.0
Futures Contracts	(10,572)	(0.1)
<b>Total Variable Fund Investments</b>	<b>\$ 7,840,162</b>	<b>100.0 %</b>

\*Does not include investment related liabilities



# CONTRIBUTIONS PAID AND EMPLOYER UNFUNDED LIABILITY BALANCES

State of Wisconsin  
Department of Employee Trust Funds

Wisconsin Department of Employee Trust Funds



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
<b>State Agencies</b>					
ADMINISTRATION, DEPT OF	\$ 102,834,848	\$ 7,681,192	\$ 6,686,105	\$ 14,367,296	\$ 0
AGRIC TRADE CONS PROT, DEPT OF	39,981,311	2,918,646	2,598,786	5,517,432	0
BD FOR PEOPLE WITH DEVELOP DIS	601,677	43,923	39,109	83,032	0
BOARD AGING & LONG TERM CARE	2,136,420	155,959	138,867	294,827	0
BRD OF COMMSRS OF PUBLIC LANDS	728,955	53,214	47,382	100,596	0
CHILDREN & FAMILIES, DEPT OF	54,353,590	3,968,286	3,533,352	7,501,638	0
CORRECTIONS, DEPT OF	599,139,567	65,574,343	38,946,234	104,520,577	0
COURTS - STATE	83,156,043	6,070,401	5,405,160	11,475,561	0
DISTRICT ATTORNEYS	39,921,524	2,909,105	2,594,827	5,503,932	0
EDUCATIONAL COMMUNICATIONS BD	3,386,614	248,271	220,994	469,265	0
ELECTIONS COMMISSION	2,221,663	162,182	144,408	306,590	0
EMPLOYEE TRUST FUNDS, DEPT OF	21,001,573	1,533,122	1,365,101	2,898,223	0
EMPLOYMENT RELATIONS COMM	535,425	39,086	34,803	73,889	0
ETHICS COMMISSION	586,837	42,839	38,144	80,984	0
EXECUTIVE OFFICE	2,590,187	189,085	168,362	357,447	0
FINANCIAL INSTITUTIONS, DEPT	9,827,381	717,402	638,779	1,356,181	0
HEALTH SERVICES, DEPT OF	413,227,062	34,953,066	26,860,400	61,813,465	0
HIGHER EDUCATIONAL AIDS BOARD	553,231	40,386	35,960	76,346	0
HISTORICAL SOCIETY - STATE	10,400,018	759,206	676,000	1,435,206	0
INSURANCE COMMISSIONR'S OFFICE	9,262,812	676,188	602,083	1,278,271	0
INVESTMENT BOARD	50,292,397	3,671,349	3,269,007	6,940,356	0
JUDICIAL COMMISSION	154,572	11,284	10,047	21,331	0
JUSTICE, DEPT OF	55,657,515	4,632,882	3,617,735	8,250,617	0
KICKAPOO RESERVE MANGMT BD	253,520	18,507	16,479	34,986	0
LABOR & INDUSTRY REVIEW COMM	1,632,229	119,153	106,095	225,248	0
LEGIS ASSEMBLY - CHIEF CLERK	16,402,281	1,197,482	1,066,244	2,263,726	0
LEGISLATIVE AUDIT BUREAU	4,983,844	363,822	323,950	687,772	0
LEGISLATIVE COUNCIL STAFF	2,244,322	163,836	145,881	309,717	0
LEGISLATIVE FISCAL BUREAU	2,729,968	199,288	177,449	376,736	0
LEGISLATIVE REFERENCE BUREAU	3,469,985	253,309	225,550	478,859	0
LEGISLATIVE TECH SERV BUREAU	3,307,819	241,471	215,009	456,480	0
LEGISLATURE - SENATE	12,308,941	898,553	800,086	1,698,638	0
LIEUTENANT GOVERNOR'S OFFICE	300,433	21,932	19,528	41,460	0
LOWER WIS. STATE RIVERWAY BD.	139,650	10,194	9,077	19,272	0
MILITARY AFFAIRS, DEPT OF	30,246,590	2,623,365	1,966,263	4,589,628	0
NATURAL RESOURCES, DEPT OF	171,651,843	14,164,875	11,157,262	25,322,138	0
PUBLIC DEFENDER'S OFFICE	43,319,531	3,162,337	2,815,773	5,978,110	0
PUBLIC INSTRUCTION, DEPT OF	39,210,775	2,863,208	2,549,379	5,412,587	0
PUBLIC SERVICE COMMISSION	11,389,611	831,445	740,326	1,571,771	0
REVENUE, DEPT OF	72,479,190	5,364,751	4,711,047	10,075,798	0
SAFETY & PROFESS SVCES, DEPT	15,191,250	1,108,967	987,430	2,096,397	0
SECRETARY OF STATE'S OFFICE	146,924	10,726	9,550	20,276	0
STATE FAIR PARK BOARD	5,195,002	393,709	337,923	731,632	0
TOURISM, DEPARTMENT OF	2,277,708	166,274	148,050	314,324	0
TRANSPORTATION, DEPT OF	208,032,570	18,457,190	12,631,867	31,089,057	0
TREASURER'S OFFICE - STATE	76,964	5,618	5,003	10,621	0
VETERANS AFFAIRS, DEPT OF	45,754,722	3,361,456	2,974,199	6,335,655	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
WIS TECH COLLEGE SYS BOARD	\$ 4,167,946	\$ 304,261	\$ 270,917	\$ 575,178	\$ 0
WISCONSIN ECON DEVELOP CORP	9,649,297	628,770	628,456	1,257,225	0
WORKFORCE DEVELOPMENT, DEPT OF	93,729,026	6,845,329	6,094,874	12,940,203	0
Total State Agencies (50)	\$ 2,302,843,163	\$ 200,831,245	\$ 148,805,312	\$ 349,636,556	\$ 0
UNIVERSITY OF WISCONSIN SYSTEM	\$ 2,385,255,377	\$ 175,232,282	\$ 155,091,232	\$ 330,323,515	\$ 0
<b>Public Authorities</b>					
BEYOND VISION*	\$ 3,736,587	\$ 298,577	\$ 235,756	\$ 534,333	\$ 550,611
FOX RIVER NAVIGATION SYS AUTH	328,198	24,185	21,500	45,685	0
HEALTH & EDUC FACILITIES AUTH	429,876	13,234	42,649	55,884	0
HOUSING & ECON DEVELOP AUTH	13,023,244	950,699	846,511	1,797,210	0
UW HOSPITAL AUTHORITY	727,938,957	53,249,526	47,421,015	100,670,541	0
Total Public Authorities (5)	\$ 745,456,862	\$ 54,536,221	\$ 48,567,431	\$ 103,103,653	\$ 550,611
Total State of Wisconsin (56)	\$ 5,433,555,402	\$ 430,599,748	\$ 352,463,975	\$ 783,063,724	\$ 550,611

\*Prior to 2020, referred to as WISCRAFT INC - ENT FOR BLIND



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
<b>Cities</b>					
ABBOTSFORD, CITY OF	\$ 599,850	\$ 38,990	\$ 38,990	\$ 77,980	\$ 0
ADAMS, CITY OF	798,137	68,699	51,879	120,577	65,543
ALGOMA, CITY OF	2,987,063	213,579	194,159	407,738	0
ALMA, CITY OF	326,761	21,688	21,240	42,927	0
ALTOONA, CITY OF	3,233,068	288,674	210,149	498,823	0
AMERY, CITY OF	1,538,759	129,951	100,019	229,970	0
ANTIGO, CITY OF	4,816,452	576,162	219,908	796,071	0
APPLETON, CITY OF	46,130,480	4,439,225	2,999,110	7,438,335	0
ARCADIA, CITY OF	1,690,493	127,383	107,496	234,879	0
ASHLAND, CITY OF	5,669,066	627,296	339,328	966,624	0
AUGUSTA, CITY OF	656,459	58,394	38,431	96,825	0
BARABOO, CITY OF	6,531,934	636,381	345,726	982,107	0
BARRON, CITY OF	2,044,631	155,681	132,901	288,582	0
BAYFIELD, CITY OF	696,435	54,066	45,269	99,335	0
BEAVER DAM, CITY OF	8,576,382	925,208	557,868	1,483,075	2,701,057
BELOIT, CITY OF	23,479,426	2,372,111	1,526,173	3,898,284	0
BERLIN, CITY OF	3,296,460	254,902	214,270	469,172	0
BLACK RIVER FALLS, CITY OF	2,877,393	227,394	187,031	414,425	0
BLAIR, CITY OF	527,760	42,130	34,305	76,435	0
BLOOMER, CITY OF	1,320,698	129,066	70,921	199,987	0
BOSCOBEL, CITY OF	1,715,093	136,134	111,481	247,615	0
BRILLION, CITY OF	1,049,936	101,163	67,433	168,596	0
BRODHEAD, CITY OF	1,541,607	124,808	100,204	225,012	0
BROOKFIELD, CITY OF	28,218,356	2,891,865	1,834,370	4,726,235	0
BUFFALO CITY, CITY OF	79,831	5,189	5,189	10,378	0
BURLINGTON, CITY OF	5,352,394	529,343	347,905	877,248	0
CEDARBURG, CITY OF	7,344,988	600,666	477,425	1,078,091	0
CHETEK, CITY OF	282,453	42,768	9,598	52,367	0
CHILTON, CITY OF	1,554,083	133,311	101,015	234,327	0
CHIPPEWA FALLS, CITY OF	7,564,108	901,155	381,931	1,283,086	0
CLINTONVILLE, CITY OF	3,003,496	241,399	195,227	436,626	0
COLBY, CITY OF	470,562	30,587	30,587	61,174	0
COLUMBUS, CITY OF	2,595,064	207,660	159,647	367,307	0
CORNELL, CITY OF	617,258	49,474	40,120	89,594	0
CRANDON, CITY OF	714,220	59,756	45,069	104,825	0
CUBA CITY, CITY OF	772,717	62,529	50,227	112,756	0
CUDAHY, CITY OF	9,742,830	1,024,770	634,050	1,658,820	0
CUMBERLAND, CITY OF	1,003,934	92,341	65,256	157,597	0
DARLINGTON, CITY OF	1,048,633	90,901	63,479	154,380	0
DE PERE, CITY OF	12,055,709	1,234,607	783,621	2,018,228	0
DELAFIELD, CITY OF	3,093,163	280,807	201,056	481,862	0
DELAVAN, CITY OF	3,875,414	381,935	219,582	601,518	0
DODGEVILLE, CITY OF	2,094,566	186,836	136,147	322,982	0
DURAND, CITY OF	721,554	60,727	46,901	107,628	0
EAGLE RIVER, CITY OF	1,811,385	141,541	117,740	259,281	0
EAU CLAIRE, CITY OF	39,013,539	3,805,525	2,541,199	6,346,724	0
EDGERTON, CITY OF	1,894,105	160,029	123,117	283,146	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
ELKHORN, CITY OF	\$ 5,477,584	\$ 497,413	\$ 356,043	\$ 853,456	\$ 0
ELROY, CITY OF	850,284	63,461	55,268	118,730	0
EVANSVILLE, CITY OF	2,865,084	230,777	186,230	417,007	0
FENNIMORE, CITY OF	1,527,561	121,074	98,788	219,861	0
FITCHBURG, CITY OF	13,643,644	1,241,907	886,838	2,128,745	0
FOND DU LAC, CITY OF	24,820,472	2,700,279	1,511,584	4,211,863	0
FORT ATKINSON, CITY OF	5,280,273	461,858	343,216	805,074	0
FOUNTAIN CITY, CITY OF	217,359	14,128	14,128	28,257	0
FOX LAKE, CITY OF	640,374	47,849	41,624	89,474	0
FRANKLIN, CITY OF	15,882,595	1,592,922	1,033,608	2,626,530	0
GALESVILLE, CITY OF	603,971	52,460	39,258	91,718	0
GILLETT, CITY OF	582,324	51,930	37,849	89,779	0
GLENDALE, CITY OF	5,776,831	599,286	375,383	974,669	0
GLENWOOD CITY, CITY OF	469,187	38,939	30,497	69,437	0
GREEN BAY, CITY OF	70,527,673	7,608,878	4,639,887	12,248,765	0
GREEN LAKE, CITY OF	785,206	73,912	42,172	116,084	0
GREENFIELD, CITY OF	18,365,339	1,801,231	1,195,068	2,996,299	0
GREENWOOD, CITY OF	529,658	52,053	26,493	78,546	0
HARTFORD, CITY OF	8,539,398	710,899	558,474	1,269,372	0
HAYWARD, CITY OF	928,906	84,788	60,379	145,167	0
HILLSBORO, CITY OF	615,724	48,603	40,022	88,625	0
HORICON, CITY OF	1,375,762	115,306	89,424	204,730	0
HUDSON, CITY OF	7,138,788	682,183	403,018	1,085,201	0
HURLEY, CITY OF	1,025,632	90,230	66,663	156,893	0
INDEPENDENCE, CITY OF	419,159	33,510	27,245	60,755	9,618
JANESVILLE, CITY OF	35,579,069	3,666,155	2,312,129	5,978,284	0
JEFFERSON, CITY OF	4,457,297	341,586	289,457	631,043	0
JUNEAU, CITY OF	1,259,015	100,016	76,832	176,848	0
KAUKAUNA, CITY OF	13,446,296	1,166,750	871,594	2,038,344	0
KENOSHA, CITY OF	61,472,858	6,507,974	4,025,346	10,533,320	0
KEWAUNEE, CITY OF	1,044,998	92,063	67,925	159,988	0
KIEL, CITY OF	2,409,180	193,908	156,597	350,505	0
LA CROSSE, CITY OF	35,500,005	3,787,939	2,078,429	5,866,368	0
LADYSMITH, CITY OF	1,908,254	153,872	123,300	277,173	0
LAKE GENEVA, CITY OF	6,709,613	629,846	421,835	1,051,680	0
LAKE MILLS, CITY OF	3,453,068	270,988	224,450	495,438	0
LANCASTER, CITY OF	1,618,729	135,263	105,218	240,481	0
LODI, CITY OF	1,662,668	131,880	108,073	239,954	0
LOYAL, CITY OF	506,981	44,714	32,954	77,668	12,076
MADISON, CITY OF	234,029,411	22,114,637	15,211,285	37,325,922	0
MANAWA, CITY OF	526,076	42,788	34,195	76,983	92,926
MANITOWOC, CITY OF	26,680,079	2,417,430	1,734,549	4,151,979	0
MARINETTE, CITY OF	6,837,556	799,227	331,234	1,130,461	0
MARION, CITY OF	478,857	42,483	31,126	73,608	0
MARKESAN, CITY OF	550,237	48,861	35,765	84,627	0
MARSHFIELD, CITY OF	12,915,684	1,304,160	840,247	2,144,408	0
MAUSTON, CITY OF	1,927,101	165,691	125,262	290,952	0
MAYVILLE, CITY OF	2,033,045	168,188	132,148	300,336	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
MEDFORD, CITY OF	\$ 2,339,384	\$ 185,932	\$ 152,060	\$ 337,991	\$ 0
MELLEN, CITY OF	383,995	30,072	24,960	55,031	0
MENASHA, CITY OF	10,527,530	1,076,148	684,290	1,760,438	0
MENOMONIE, CITY OF	8,502,262	913,007	552,648	1,465,656	0
MEQUON, CITY OF	9,739,653	906,648	631,592	1,538,240	0
MERRILL, CITY OF	7,953,376	811,787	516,968	1,328,755	0
MIDDLETON, CITY OF	11,800,422	1,045,039	767,027	1,812,066	0
MILTON, CITY OF	2,439,124	205,528	158,543	364,071	0
MINERAL POINT, CITY OF	1,030,566	88,096	66,987	155,083	0
MONDOVI, CITY OF	883,691	75,078	57,440	132,518	0
MONONA, CITY OF	5,307,387	492,902	344,812	837,715	0
MONROE, CITY OF	5,061,730	441,489	329,012	770,502	0
MONTELLO, CITY OF	378,266	24,587	24,587	49,175	49,452
MONTREAL, CITY OF	170,621	11,090	11,090	22,181	0
MOSINEE, CITY OF	1,285,967	114,560	83,588	198,148	0
MUSKEGO, CITY OF	8,295,881	744,035	539,233	1,283,268	0
NEENAH, CITY OF	15,605,755	1,585,837	1,013,634	2,599,471	0
NEILLSVILLE, CITY OF	1,072,693	86,481	69,725	156,206	0
NEKOOSA, CITY OF	1,445,498	138,364	78,757	217,121	0
NEW BERLIN, CITY OF	18,999,360	1,831,159	1,234,960	3,066,119	0
NEW HOLSTEIN, CITY OF	2,083,922	160,417	137,230	297,647	0
NEW LISBON, CITY OF	964,901	76,902	62,719	139,620	0
NEW LONDON, CITY OF	4,829,887	391,528	313,943	705,471	0
NEW RICHMOND, CITY OF	5,522,384	452,266	358,956	811,222	0
NIAGARA, CITY OF	743,175	69,714	40,230	109,943	0
OAK CREEK, CITY OF	22,156,928	2,078,931	1,440,175	3,519,106	0
OCONOMOWOC, CITY OF	9,622,409	748,800	625,457	1,374,257	0
OCONTO FALLS, CITY OF	1,707,550	144,496	110,991	255,487	0
OCONTO, CITY OF	2,738,728	284,636	178,018	462,654	0
OMRO, CITY OF	1,475,504	126,841	95,908	222,749	0
ONALASKA, CITY OF	6,991,898	770,967	376,200	1,147,166	0
OSHKOSH, CITY OF	42,455,750	4,273,456	2,759,545	7,033,002	0
OSSEO, CITY OF	705,894	59,844	45,884	105,728	0
OWEN, CITY OF	451,532	37,662	29,350	67,011	0
PARK FALLS, CITY OF	1,380,007	118,039	87,812	205,851	0
PESHTIGO, CITY OF	358,578	48,885	17,596	66,480	0
PEWAUKEE, CITY OF	6,775,317	617,608	440,396	1,058,004	0
PHILLIPS, CITY OF	845,798	76,358	49,981	126,339	0
PITTSVILLE, CITY OF	88,712	10,681	5,766	16,447	0
PLATTEVILLE, CITY OF	4,392,160	362,010	285,491	647,501	0
PLYMOUTH, CITY OF	4,668,582	372,992	303,458	676,450	0
PORT WASHINGTON, CITY OF	6,025,128	522,162	386,299	908,461	0
PORTAGE, CITY OF	5,108,158	483,458	332,030	815,488	0
PRAIRIE DU CHIEN, CITY OF	2,131,948	209,641	114,415	324,057	0
PRESCOTT, CITY OF	1,817,371	161,486	118,129	279,615	0
PRINCETON, CITY OF	696,054	60,740	45,244	105,984	0
RACINE, CITY OF	56,411,198	5,688,481	3,666,733	9,355,214	0
REEDSBURG, CITY OF	7,630,239	595,593	496,150	1,091,743	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
RHINELANDER, CITY OF	\$ 6,149,846	\$ 631,321	\$ 397,259	\$ 1,028,580	\$ 0
RICE LAKE, CITY OF	6,053,045	562,369	393,421	955,791	0
RICHLAND CENTER, CITY OF	3,161,684	246,624	205,509	452,133	0
RIPON, CITY OF	3,311,673	286,706	201,468	488,173	0
RIVER FALLS, CITY OF	8,645,174	683,058	563,818	1,246,876	0
SCHOFIELD, CITY OF	480,555	31,300	31,172	62,472	0
SEYMOUR, CITY OF	1,207,165	100,667	78,823	179,489	0
SHAWANO, CITY OF	4,121,441	363,087	267,894	630,981	0
SHEBOYGAN FALLS, CITY OF	3,065,956	291,158	171,498	462,656	0
SHEBOYGAN, CITY OF	29,709,258	2,900,667	1,936,180	4,836,847	0
SHELL LAKE, CITY OF	639,825	51,643	41,469	93,112	0
SHULLSBURG, CITY OF	452,252	33,321	29,396	62,718	0
SOUTH MILWAUKEE, CITY OF	10,588,760	1,112,364	686,391	1,798,755	0
SPARTA, CITY OF	3,874,261	339,613	250,484	590,097	0
SPOONER, CITY OF	1,718,794	140,335	107,034	247,369	0
ST CROIX FALLS, CITY OF	1,291,854	126,861	71,420	198,281	0
ST FRANCIS, CITY OF	5,348,947	628,408	347,682	976,090	0
STANLEY, CITY OF	914,592	94,610	45,067	139,676	0
STEVENS POINT, CITY OF	16,291,809	1,632,005	1,066,479	2,698,484	0
STOUGHTON, CITY OF	7,623,482	603,057	495,526	1,098,583	0
STURGEON BAY, CITY OF	6,902,053	675,172	448,633	1,123,805	0
SUN PRAIRIE, CITY OF	16,155,214	1,395,452	1,050,238	2,445,690	0
SUPERIOR, CITY OF	18,598,547	1,825,017	1,207,540	3,032,557	0
THORP, CITY OF	483,185	38,964	31,407	70,371	0
TOMAH, CITY OF	5,757,607	570,188	335,695	905,883	0
TOMAHAWK, CITY OF	1,767,736	149,653	114,903	264,556	0
TWO RIVERS, CITY OF	8,943,746	894,658	581,343	1,476,001	0
VERONA, CITY OF	6,623,419	590,646	430,523	1,021,169	0
VIROQUA, CITY OF	2,104,821	177,049	136,323	313,373	0
WASHBURN, CITY OF	1,033,756	84,759	67,194	151,953	0
WATERLOO, CITY OF	1,945,725	158,155	126,472	284,627	0
WATERTOWN, CITY OF	11,810,296	1,117,045	767,669	1,884,714	0
WAUKESHA, CITY OF	43,693,026	4,444,376	2,841,681	7,286,057	0
WAUPACA, CITY OF	3,945,361	354,886	228,269	583,155	0
WAUPUN, CITY OF	4,580,167	388,087	291,279	679,366	0
WAUSAU, CITY OF	22,661,496	2,339,344	1,475,012	3,814,356	0
WAUTOMA, CITY OF	979,208	84,637	63,649	148,286	0
WAUWATOSA, CITY OF	34,994,354	3,762,114	2,280,954	6,043,067	0
WEST ALLIS, CITY OF	39,187,042	4,154,270	2,547,157	6,701,427	0
WEST BEND, CITY OF	15,776,216	1,684,720	1,025,456	2,710,176	0
WESTBY, CITY OF	1,098,303	86,231	71,390	157,621	0
WEYAUWEGA, CITY OF	849,106	74,022	52,658	126,681	0
WHITEHALL, CITY OF	1,039,649	79,730	67,577	147,308	0
WHITEWATER, CITY OF	5,835,664	495,993	379,319	875,312	0
WISCONSIN DELLS, CITY OF	3,900,544	328,232	253,535	581,768	0
WISCONSIN RAPIDS, CITY OF	17,062,519	1,589,340	1,110,734	2,700,074	0
Total Cities (189)	\$ 1,609,305,576	\$ 156,521,448	\$ 103,494,477	\$ 260,015,929	\$ 2,930,672



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
<b>Villages</b>					
ADELL, VILLAGE OF	\$ 89,318	\$ 5,806	\$ 5,806	\$ 11,611	\$ 0
ALBANY, VILLAGE OF	433,225	35,786	28,160	63,946	0
ALLOUEZ, VILLAGE OF	1,999,727	129,982	129,982	259,965	0
ALMOND, VILLAGE OF	43,861	2,851	2,851	5,702	0
AMHERST, VILLAGE OF	265,119	17,291	17,175	34,466	0
ARENA, VILLAGE OF	265,046	24,381	17,228	41,609	0
ARGYLE, VILLAGE OF	332,784	28,252	18,001	46,253	0
ARLINGTON, VILLAGE OF	165,407	10,752	10,751	21,503	0
ASHWAUBENON, VILLAGE OF	9,473,034	925,189	612,825	1,538,015	0
ATHENS, VILLAGE OF	248,350	19,612	16,143	35,755	0
AVOCA, VILLAGE OF	175,284	13,021	11,393	24,414	0
BALDWIN, VILLAGE OF	1,861,757	179,783	115,948	295,731	0
BALSAM LAKE, VILLAGE OF	322,112	20,937	20,937	41,874	0
BANGOR, VILLAGE OF	901,042	66,582	58,568	125,149	0
BAY CITY, VILLAGE OF	138,809	9,023	9,023	18,045	0
BAYSIDE, VILLAGE OF	3,661,065	295,260	237,969	533,229	0
BELGIUM, VILLAGE OF	381,821	24,819	24,819	49,638	0
BELLEVILLE, VILLAGE OF	1,137,639	95,804	73,947	169,751	0
BELLEVUE, VILLAGE OF (BROWN)	1,551,044	100,884	100,828	201,712	0
BELMONT, VILLAGE OF	459,877	35,835	29,892	65,727	0
BENTON, VILLAGE OF	330,996	24,872	21,515	46,387	0
BIG BEND, VILLAGE OF	384,790	38,058	25,012	63,070	0
BIRCHWOOD, VILLAGE OF	234,176	18,831	15,222	34,052	0
BIRNAMWOOD, VILLAGE OF	94,682	6,168	6,140	12,309	0
BIRON, VILLAGE OF	248,603	16,159	16,158	32,317	0
BLACK CREEK, VILLAGE OF	366,165	27,532	23,801	51,333	0
BLACK EARTH, VILLAGE OF	402,109	26,226	26,048	52,274	0
BLANCHARDVILLE, VILLAGE OF	294,818	23,265	19,163	42,428	0
BLOOMFIELD, VILLAGE OF	1,009,745	98,943	62,378	161,322	0
BLUE MOUNDS, VILLAGE OF	267,788	21,751	17,406	39,158	0
BLUE RIVER, VILLAGE OF	140,062	9,104	9,104	18,208	0
BONDUEL, VILLAGE OF	235,899	17,266	15,333	32,600	0
BOWLER, VILLAGE OF	46,925	3,050	3,050	6,100	0
BOYCEVILLE, VILLAGE OF	447,526	36,936	29,018	65,955	0
BOYD, VILLAGE OF	212,767	14,470	13,830	28,299	0
BRANDON, VILLAGE OF	271,328	17,637	17,636	35,273	0
BRISTOL, VILLAGE OF	1,164,225	94,243	75,675	169,918	316,172
BROOKLYN, VILLAGE OF	315,581	20,513	20,513	41,026	0
BROWN DEER, VILLAGE OF	5,303,205	492,599	344,831	837,430	0
BROWNSVILLE, VILLAGE OF	221,011	14,366	14,366	28,732	0
BROWNTOWN, VILLAGE OF	69,114	4,492	4,492	8,985	0
BRUCE, VILLAGE OF	183,222	11,910	11,909	23,819	0
BUTLER, VILLAGE OF	1,268,491	123,692	82,452	206,144	0
BUTTERNUT, VILLAGE OF	115,827	7,529	7,529	15,058	0
CADOTT, VILLAGE OF	609,638	52,843	34,596	87,439	0
CALEDONIA, VILLAGE OF (RACINE)	9,941,078	1,039,267	646,053	1,685,320	0
CAMBRIA, VILLAGE OF	250,639	16,292	16,292	32,583	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
CAMBRIDGE, VILLAGE OF	\$ 499,356	\$ 33,029	\$ 31,887	\$ 64,916	\$ 0
CAMERON, VILLAGE OF	502,469	39,456	32,945	72,401	0
CAMP DOUGLAS, VILLAGE OF	485,275	47,876	31,543	79,419	0
CAMPBELLSPORT, VILLAGE OF	510,580	36,519	33,188	69,707	0
CASCADE, VILLAGE OF	145,894	9,483	9,483	18,966	0
CASCO, VILLAGE OF	68,224	4,437	4,432	8,869	0
CASHTON, VILLAGE OF	601,903	45,549	39,124	84,673	0
CEDAR GROVE, VILLAGE OF	388,371	25,310	25,179	50,488	0
CENTURIA, VILLAGE OF	259,729	16,883	16,882	33,766	426
CHASEBURG, VILLAGE OF	92,546	6,016	6,016	12,031	0
CHENEQUA, VILLAGE OF	1,064,099	113,375	69,166	182,541	0
CLAYTON, VILLAGE OF	154,081	10,856	9,925	20,782	0
CLEAR LAKE, VILLAGE OF	579,714	48,997	37,682	86,678	0
CLEVELAND, VILLAGE OF	378,229	28,287	24,582	52,868	0
CLINTON, VILLAGE OF	796,722	73,047	51,787	124,834	0
CLYMAN, VILLAGE OF	101,291	6,584	6,584	13,168	0
COBB, VILLAGE OF	128,545	8,356	8,355	16,711	0
COCHRANE, VILLAGE OF	86,692	5,635	5,635	11,270	0
COLEMAN, VILLAGE OF	234,373	18,426	15,234	33,660	0
COLFAX, VILLAGE OF	610,295	45,349	39,669	85,018	0
COLOMA, VILLAGE OF	230,605	16,251	14,990	31,241	0
COMBINED LOCKS, VILLAGE OF	477,295	31,024	31,024	62,048	0
COON VALLEY, VILLAGE OF	241,556	18,582	15,701	34,283	0
COTTAGE GROVE, VILLAGE OF	2,384,579	207,448	154,998	362,446	0
CRIVITZ, VILLAGE OF	334,247	51,135	21,726	72,861	0
CROSS PLAINS, VILLAGE OF	1,398,586	111,602	90,908	202,510	0
DALLAS, VILLAGE OF	61,655	4,008	4,008	8,015	0
DANE, VILLAGE OF	227,670	14,798	14,798	29,597	0
DARIEN, VILLAGE OF	381,940	24,826	24,826	49,652	0
DE SOTO, VILLAGE OF	70,036	4,552	4,552	9,105	0
DEERFIELD, VILLAGE OF	546,485	35,550	35,493	71,043	0
DEFORREST, VILLAGE OF	4,282,968	376,251	278,394	654,644	0
DENMARK, VILLAGE OF	413,014	26,846	26,846	53,692	0
DICKEYVILLE, VILLAGE OF	250,931	19,718	16,311	36,028	0
DOUSMAN, VILLAGE OF	316,951	20,602	20,602	41,204	0
DRESSER, VILLAGE OF	304,695	27,895	15,438	43,333	0
EAGLE, VILLAGE OF	316,127	29,750	20,548	50,298	0
EAST TROY, VILLAGE OF	2,102,344	196,783	136,652	333,436	0
EASTMAN, VILLAGE OF	83,850	5,451	5,449	10,901	0
EDGAR, VILLAGE OF	358,783	26,866	23,321	50,187	0
EGG HARBOR, VILLAGE OF	545,962	35,489	35,487	70,976	0
ELEVA, VILLAGE OF	196,694	15,658	12,785	28,443	0
ELK MOUND, VILLAGE OF	437,783	33,202	28,456	61,658	0
ELKHART LAKE, VILLAGE OF	794,512	65,028	51,644	116,671	0
ELLSWORTH, VILLAGE OF	1,178,858	114,044	62,622	176,666	0
ELM GROVE, VILLAGE OF	3,489,580	326,678	230,093	556,772	0
ELMWOOD, VILLAGE OF	195,175	14,930	11,917	26,847	0
EPHRAIM, VILLAGE OF	436,887	28,398	28,397	56,795	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
ETTRICK, VILLAGE OF	\$ 186,003	\$ 12,090	\$ 12,090	\$ 24,181	\$ 0
FAIRCHILD, VILLAGE OF	55,841	4,615	3,630	8,244	0
FAIRWATER, VILLAGE OF	75,078	4,880	4,880	9,760	0
FALL CREEK, VILLAGE OF	432,661	34,193	28,123	62,316	0
FALL RIVER, VILLAGE OF	339,153	29,961	22,045	52,006	0
FERRYVILLE, VILLAGE OF	44,884	2,918	2,918	5,835	0
FONTANA ON GNVA LK, VILLAGE OF	1,860,082	167,389	120,792	288,180	0
FOX CROSSING, VILLAGE OF	5,993,627	543,570	389,586	933,156	0
FOX POINT, VILLAGE OF	3,278,972	299,495	213,134	512,629	0
FREDERIC, VILLAGE OF	406,545	28,878	26,347	55,224	0
FREMONT, VILLAGE OF	137,077	9,240	8,910	18,150	0
FRIENDSHIP, VILLAGE OF	195,924	12,735	12,735	25,470	0
GAYS MILLS, VILLAGE OF	160,431	10,428	10,428	20,856	0
GENOA CITY, VILLAGE OF	1,069,147	91,642	69,494	161,137	0
GERMANTOWN, VILLAGE OF	9,141,620	841,236	594,206	1,435,442	0
GILMAN, VILLAGE OF	248,840	19,502	16,175	35,676	0
GRAFTON, VILLAGE OF	5,900,290	526,379	386,025	912,404	0
GRANTON, VILLAGE OF	166,251	10,806	10,806	21,613	0
GRANTSBURG, VILLAGE OF	548,506	45,916	35,494	81,410	0
GRATIOT, VILLAGE OF	50,000	3,250	3,250	6,500	0
GREENDALE, VILLAGE OF	7,857,172	845,519	510,716	1,356,235	0
GREENVILLE, VILLAGE OF	2,309,011	170,441	150,086	320,527	0
GRESHAM, VILLAGE OF	496,486	33,278	31,265	64,543	0
HALES CORNERS, VILLAGE OF	3,204,885	318,348	208,317	526,665	0
HAMMOND, VILLAGE OF	670,746	55,913	43,599	99,512	0
HARRISON, VILLAGE OF	1,335,011	92,168	86,776	178,944	0
HARTLAND, VILLAGE OF	3,811,390	352,118	247,741	599,859	0
HAUGEN, VILLAGE OF	41,422	2,692	2,692	5,385	0
HAWKINS, VILLAGE OF	70,192	4,562	4,562	9,125	0
HAZEL GREEN, VILLAGE OF	542,965	41,739	35,293	77,032	0
HIGHLAND, VILLAGE OF	217,634	16,791	14,146	30,937	0
HILBERT, VILLAGE OF	293,784	19,096	19,096	38,192	0
HIXTON, VILLAGE OF	61,731	4,013	4,013	8,025	10,087
HOBART, VILLAGE OF	1,605,777	157,273	104,376	261,648	0
HOLLANDALE, VILLAGE OF	80,672	5,244	5,244	10,487	0
HOLMEN, VILLAGE OF	2,633,780	223,418	171,883	395,301	0
HORTONVILLE, VILLAGE OF	1,175,151	100,697	76,385	177,082	0
HOWARD, VILLAGE OF	3,651,657	265,645	237,358	503,003	0
HOWARDS GROVE, VILLAGE OF	330,765	21,500	21,500	42,999	0
HUSTISFORD, VILLAGE OF	700,075	45,539	45,471	91,010	50,751
IOLA, VILLAGE OF	469,195	36,724	28,230	64,954	0
IRON RIDGE, VILLAGE OF	170,019	14,409	11,051	25,460	0
JACKSON, VILLAGE OF	2,963,207	275,768	192,609	468,377	0
JOHNSON CREEK, VILLAGE OF	1,049,156	83,241	67,889	151,130	0
JUNCTION CITY, VILLAGE OF	98,219	6,384	6,384	12,769	0
KENDALL, VILLAGE OF	161,389	10,490	10,490	20,981	0
KEWASKUM, VILLAGE OF	1,355,951	121,640	88,137	209,777	0
KIMBERLY, VILLAGE OF	1,483,165	96,405	96,405	192,811	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
KOHLER, VILLAGE OF	\$ 1,328,191	\$ 121,733	\$ 86,332	\$ 208,066	\$ 0
KRONENWETTER, VILLAGE OF	1,449,283	126,296	94,203	220,500	0
LA FARGE, VILLAGE OF	443,051	30,509	28,798	59,307	0
LA VALLE, VILLAGE OF	101,152	7,654	5,496	13,150	0
LAC LA BELLE, VILLAGE OF	49,893	3,243	3,243	6,486	0
LAKE DELTON, VILLAGE OF	3,740,252	366,815	244,146	610,961	0
LAKE HALLIE, VILLAGE OF	1,078,141	111,883	64,892	176,775	0
LAKE NEBAGAMON, VILLAGE OF	194,408	12,637	12,637	25,273	0
LANNON, VILLAGE OF	110,948	10,307	7,212	17,518	0
LENA, VILLAGE OF	316,489	23,887	20,572	44,459	0
LINDEN, VILLAGE OF	153,879	10,610	10,002	20,612	0
LITTLE CHUTE, VILLAGE OF	4,995,687	443,615	324,720	768,335	0
LOGANVILLE, VILLAGE OF	46,095	2,996	2,996	5,992	0
LOMIRA, VILLAGE OF	636,827	54,707	41,394	96,101	0
LONE ROCK, VILLAGE OF	80,475	5,231	5,231	10,462	0
LUCK, VILLAGE OF	646,800	52,309	42,042	94,352	11,548
LUXEMBURG, VILLAGE OF	321,242	23,974	20,881	44,855	0
MAPLE BLUFF, VILLAGE OF	1,379,776	142,536	89,686	232,222	0
MARATHON CITY, VILLAGE OF	593,550	48,441	38,581	87,022	0
MARSHALL, VILLAGE OF	1,227,435	111,681	79,783	191,464	0
MATTOON, VILLAGE OF	94,940	6,171	6,171	12,342	0
MAZOMANIE, VILLAGE OF	437,131	28,727	28,100	56,827	0
MCFARLAND, VILLAGE OF	4,442,409	399,216	288,756	687,973	0
MENOMONEE FALLS, VILLAGE OF	16,505,892	1,807,428	863,981	2,671,409	0
MERRIMAC, VILLAGE OF	183,912	11,954	11,954	23,909	0
MERTON, VILLAGE OF (WAUKESHA)	88,360	7,780	3,707	11,487	0
MILLTOWN, VILLAGE OF	394,886	31,685	25,668	57,352	0
MINONG, VILLAGE OF	277,399	22,237	18,031	40,268	0
MISHICOT, VILLAGE OF	401,931	37,043	26,126	63,168	0
MONTFORT, VILLAGE OF	180,910	11,777	11,741	23,519	0
MONTICELLO, VILLAGE OF	405,198	33,996	26,338	60,334	0
MOUNT HOREB, VILLAGE OF	3,759,894	306,405	242,396	548,802	0
MT PLEASANT, VILLAGE OF	14,983,449	1,603,240	973,739	2,576,978	0
MUKWONAGO, VILLAGE OF	4,287,032	385,127	278,657	663,784	0
MUSCODA, VILLAGE OF	731,625	58,259	47,556	105,814	0
NECEDAH, VILLAGE OF	364,936	25,484	23,721	49,205	0
NESHKORO, VILLAGE OF	73,729	4,792	4,792	9,585	94,546
NEW GLARUS, VILLAGE OF	1,142,414	92,521	74,235	166,757	0
NEWBURG, VILLAGE OF	238,507	16,367	15,503	31,870	0
NICHOLS, VILLAGE OF	51,904	3,374	3,374	6,748	0
NORTH FOND DU LAC, VILLAGE OF	2,616,928	243,187	170,100	413,287	0
NORTH FREEDOM, VILLAGE OF	124,386	8,085	8,085	16,170	0
NORTH HUDSON, VILLAGE OF	657,179	60,422	42,716	103,138	0
OCONOMOWOC LAKE, VILLAGE OF	696,101	76,121	45,246	121,368	0
ONTARIO, VILLAGE OF	179,387	13,948	11,660	25,608	0
OOSTBURG, VILLAGE OF	486,340	31,612	31,612	63,224	0
OREGON, VILLAGE OF	3,951,778	338,513	257,133	595,646	0
ORFORDVILLE, VILLAGE OF	441,936	35,267	28,726	63,993	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
OSCEOLA, VILLAGE OF	\$ 1,164,011	\$ 108,057	\$ 64,984	\$ 173,041	\$ 0
OXFORD, VILLAGE OF (MARQUETTE)	128,627	9,210	8,361	17,571	0
PADDOCK LAKE, VILLAGE OF	446,575	29,027	29,027	58,054	0
PALMYRA, VILLAGE OF	667,158	65,689	43,345	109,034	0
PARDEEVILLE, VILLAGE OF	678,783	44,121	44,121	88,242	0
PEPIN, VILLAGE OF	262,795	20,198	17,081	37,279	0
PEWAUKEE, VILLAGE OF	3,249,358	297,409	211,208	508,617	0
PLAIN, VILLAGE OF	240,308	15,620	15,620	31,240	0
PLAINFIELD, VILLAGE OF	235,040	18,274	15,278	33,551	0
PLEASANT PRAIRIE, VILLAGE OF	15,870,015	1,351,176	1,031,551	2,382,727	0
PLOVER, VILLAGE OF	5,148,734	472,148	334,668	806,816	0
PORT EDWARDS, VILLAGE OF	832,303	64,782	54,100	118,881	0
POUND, VILLAGE OF	100,554	6,536	6,536	13,072	0
POYNETTE, VILLAGE OF	1,009,775	81,658	65,635	147,293	0
PRAIRIE DU SAC, VILLAGE OF	1,379,268	89,653	89,651	179,305	0
PRAIRIE FARM, VILLAGE OF	630,557	41,020	40,951	81,971	0
PULASKI, VILLAGE OF	1,230,568	108,519	79,987	188,506	0
RANDOLPH, VILLAGE OF	575,815	44,427	37,428	81,855	23,319
RANDOM LAKE, VILLAGE OF	436,202	31,020	28,353	59,373	0
RAYMOND, VILLAGE OF	276,295	18,622	17,297	35,918	0
READSTOWN, VILLAGE OF	68,753	5,388	3,550	8,938	0
REDGRANITE, VILLAGE OF	292,471	25,607	19,011	44,618	0
REEDSVILLE, VILLAGE OF	314,372	24,109	20,434	44,543	0
RIB LAKE, VILLAGE OF	190,073	15,099	12,355	27,454	0
RICHFIELD, VILLAGE OF	784,206	50,974	50,973	101,947	0
RIO, VILLAGE OF	371,345	30,567	24,137	54,704	0
RIVER HILLS, VILLAGE OF	1,790,610	174,943	116,390	291,333	0
ROBERTS, VILLAGE OF	713,822	59,577	46,399	105,976	0
ROCHESTER, VILLAGE OF	340,219	22,115	22,114	44,229	0
ROCK SPRINGS, VILLAGE OF	72,626	4,721	4,721	9,441	0
ROCKLAND, VILLAGE OF	174,752	11,359	11,359	22,718	0
ROSENDALE, VILLAGE OF	208,274	15,777	13,538	29,315	0
ROSHOLT, VILLAGE OF	79,727	7,261	4,936	12,197	0
ROTHSCHILD, VILLAGE OF	2,077,065	191,107	135,009	326,116	0
SALEM LAKES, VILLAGE OF	1,874,111	155,351	121,818	277,168	0
SAUK CITY, VILLAGE OF	1,195,066	77,680	77,679	155,359	0
SAUKVILLE, VILLAGE OF	2,134,190	195,148	138,723	333,871	0
SHARON, VILLAGE OF	641,106	58,899	41,672	100,571	0
SHERWOOD, VILLAGE OF	445,440	28,953	28,954	57,907	0
SHIOCTON, VILLAGE OF	334,855	26,559	21,766	48,325	0
SHOREWOOD HILLS, VILLAGE OF	1,216,009	108,268	78,911	187,178	0
SHOREWOOD, VILLAGE OF	5,186,517	464,075	337,125	801,200	0
SIREN, VILLAGE OF	428,378	37,232	27,845	65,077	0
SISTER BAY, VILLAGE OF	904,077	58,765	58,765	117,530	0
SLINGER, VILLAGE OF	2,479,224	219,568	161,149	380,717	0
SOLDIERS GROVE, VILLAGE OF	186,949	12,219	12,085	24,304	0
OLON SPRINGS, VILLAGE OF	157,439	10,234	10,234	20,467	0
SOMERS, VILLAGE OF	2,037,853	188,747	133,911	322,657	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
SOMERSET, VILLAGE OF	\$ 1,276,855	\$ 107,987	\$ 82,995	\$ 190,983	\$ 0
SOUTH WAYNE, VILLAGE OF	46,680	3,034	3,034	6,068	0
SPENCER, VILLAGE OF	779,311	70,392	46,864	117,257	0
SPRING GREEN, VILLAGE OF	526,602	42,886	34,230	77,115	0
SPRING VALLEY, VILLAGE OF	282,057	21,199	18,334	39,532	0
ST NAZIANZ, VILLAGE OF	175,364	11,399	11,399	22,797	0
STAR PRAIRIE, VILLAGE OF	156,725	10,187	10,187	20,374	0
STOCKBRIDGE, VILLAGE OF	66,580	4,328	4,328	8,655	0
STODDARD, VILLAGE OF	209,100	13,592	13,592	27,183	0
STRATFORD, VILLAGE OF	527,588	43,032	34,293	77,325	0
STRUM, VILLAGE OF	344,104	29,156	22,324	51,480	430
STURTEVANT, VILLAGE OF	1,493,327	152,141	97,066	249,208	0
SUAMICO, VILLAGE OF	1,577,831	112,845	102,559	215,404	0
SULLIVAN, VILLAGE OF	72,307	4,700	4,700	9,400	0
SUMMIT, VILLAGE OF (WAUKESHA)	1,427,471	144,937	92,786	237,723	0
SURING, VILLAGE OF	312,584	24,408	20,318	44,726	0
SUSSEX, VILLAGE OF	3,588,711	275,913	234,234	510,147	0
TAYLOR, VILLAGE OF	103,365	6,719	6,719	13,437	0
THERESA, VILLAGE OF	215,554	16,952	14,011	30,963	0
THIENSVILLE, VILLAGE OF	1,413,127	133,955	91,854	225,809	0
TREMPEALEAU, VILLAGE OF	996,784	77,362	64,791	142,153	0
TURTLE LAKE, VILLAGE OF	750,555	72,073	42,835	114,908	0
TWIN LAKES, VILLAGE OF	2,718,839	247,278	172,222	419,500	0
UNION CENTER, VILLAGE OF	142,436	9,827	9,258	19,086	0
UNION GROVE, VILLAGE OF	984,685	64,006	64,003	128,010	0
VALDERS, VILLAGE OF	559,614	36,375	36,375	72,750	0
VERNON, VILLAGE OF (WAUKESHA)	496,745	37,247	32,288	69,535	0
VESPER, VILLAGE OF	89,916	5,844	5,845	11,689	0
WALDO, VILLAGE OF	46,316	3,011	3,011	6,021	0
WALES, VILLAGE OF	190,447	12,379	12,379	24,758	0
WALWORTH, VILLAGE OF	1,002,243	94,117	65,142	159,259	0
WARRENS, VILLAGE OF	171,255	11,132	11,132	22,263	0
WATERFORD, VILLAGE OF	1,896,528	154,268	123,275	277,543	0
WAUKESHA, VILLAGE OF (WAUKESHA)	457,592	45,066	29,743	74,809	0
WAUNAKEE, VILLAGE OF	5,209,489	442,486	338,617	781,103	0
WAUSAUKEE, VILLAGE OF	220,908	14,359	14,359	28,718	0
WAUZEKA, VILLAGE OF	111,521	7,249	7,249	14,498	0
WEBSTER, VILLAGE OF	122,013	14,690	7,931	22,621	0
WEST BARABOO, VILLAGE OF	330,525	23,362	21,484	44,846	0
WEST MILWAUKEE, VILLAGE OF	3,084,477	307,183	200,491	507,674	0
WEST SALEM, VILLAGE OF	1,236,658	113,389	80,383	193,772	0
WESTFIELD, VILLAGE OF	354,866	28,731	23,066	51,797	0
WESTON, VILLAGE OF (MARATHON)	2,365,127	153,734	153,734	307,468	0
WHITE LAKE, VILLAGE OF	146,294	9,509	9,509	19,018	0
WHITEFISH BAY, VILLAGE OF	4,832,885	439,055	314,137	753,192	0
WHITELAW, VILLAGE OF	103,363	6,719	6,719	13,437	0
WHITING, VILLAGE OF	278,477	18,101	18,101	36,202	0
WILD ROSE, VILLAGE OF	242,839	19,331	15,785	35,116	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
WILLIAMS BAY, VILLAGE OF	\$ 1,448,960	\$ 129,846	\$ 94,182	\$ 224,029	\$ 34,502
WILSON, VILLAGE OF	45,722	2,972	2,972	5,944	5,336
WIND POINT, VILLAGE OF	253,287	16,464	16,464	32,927	0
WINDSOR, VILLAGE OF	1,194,094	77,617	77,616	155,233	0
WINNECONNE, VILLAGE OF	821,927	72,656	52,090	124,746	0
WITHEE, VILLAGE OF	109,246	7,101	7,101	14,202	0
WONEWOC, VILLAGE OF	375,615	27,461	24,394	51,855	0
WOODVILLE, VILLAGE OF	649,030	56,726	42,187	98,913	0
WRIGHTSTOWN, VILLAGE OF	943,428	77,542	61,323	138,865	0
WYOCENA, VILLAGE OF	138,033	8,972	8,972	17,944	0
YORKVILLE, VILLAGE OF	149,016	9,686	9,686	19,372	0
Total Villages (298)	\$ 335,439,761	\$ 29,740,835	\$ 21,521,928	\$ 51,262,756	\$ 547,117

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
<b>Special Districts</b>					
ADRC OF THE NORTHWOODS	\$ 323,226	\$ 21,010	\$ 21,010	\$ 42,020	\$ 0
ALBANY HOUSING AUTHORITY	43,408	2,821	2,822	5,643	0
ALGOMA CITY HOUSING AUTH	31,632	2,056	2,056	4,112	0
ALGOMA SANITARY DIST	547,715	35,601	35,601	71,203	0
ALLENTON SANITARY DIST	18,320	1,191	1,191	2,382	0
ANTIGO CITY HOUSING AUTH	361,532	23,500	23,500	46,999	0
APPLETON CITY HOUSING AUTH	960,534	62,436	62,435	124,871	0
ARENA FIRE DEPARTMENT	63,801	4,147	4,147	8,294	0
ASHLAND CITY HOUSING AUTH	413,634	26,886	26,886	53,773	0
ASHLAND COUNTY HOUSING AUTH	723,031	46,997	46,997	93,994	0
BALSAM LK-CENTURIA JOINT PD	175,063	21,078	11,379	32,457	0
BARABOO JT FIRE & EMS DIST	1,596,468	187,623	103,611	291,234	0
BARRON CO HOUSING AUTHORITY	271,030	17,639	17,596	35,235	0
BAY AREA RURAL TRANSIT COMMISS	462,309	30,050	30,050	60,100	0
BAYFIELD COUNTY HOUSING AUTH	144,965	9,423	9,423	18,846	0
BAY-LAKE REGIONAL PLAN COMM	607,841	39,510	39,510	79,020	0
BELLEVILLE FIRE AND EMS DIST	95,544	11,503	6,210	17,714	0
BIG CEDAR LAKE PROT/REHAB DIST	5,594	364	364	727	0
BROCKWAY SANITARY DISTRICT #1	58,508	3,803	3,803	7,606	0
BROOKLYN FIRE & EMS DISTRICT	63,911	7,695	4,154	11,849	0
BRUCE VILLAGE HOUSING AUTH	104,181	6,772	6,772	13,544	0
BURLINGTON CITY HOUSING AUTH	56,550	3,676	3,676	7,351	0
CAMBRIDGE FIRE & EMS COMM	517,850	62,507	33,503	96,010	0
CAMBRIDGE-OAKLAND WSTEWTR COMM	145,431	9,453	9,453	18,906	0
CAPITAL AREA REG PLAN COMM	690,672	44,894	44,894	89,788	0
CENTRAL BROWN CTY WATER AUTH	135,000	8,775	8,775	17,550	0
CHILTON CITY HOUSING AUTH	46,489	3,022	3,022	6,044	0
CHIPPEWA CO HOUSING AUTH	556,892	36,198	36,198	72,396	0
CHIPPEWA FIRE DISTRICT	844,847	99,030	54,915	153,945	0
CITY-COUNTY DATA CENTER COMM	2,232,621	145,117	145,117	290,234	0
CLINTONVILLE CITY HOUS AUTH	117,967	7,668	7,668	15,336	0
COLBY/ABBOTSFORD JT POLICE COM	569,175	71,192	31,780	102,972	0
CONSOL KOSHKONONG SANITARY DIS	375,143	24,384	24,384	48,769	0
COUNTRY ESTATES SAN DIST	29,293	1,904	1,904	3,808	0
CROSS PLAINS AREA EMS	223,544	26,915	14,530	41,445	0
CUMBERLAND MUNICIPAL UTILITY	998,689	64,915	64,915	129,829	0
DANE COUNTY DIST #1 EMS	108,607	13,076	7,059	20,136	0
DANE COUNTY HOUSING AUTHORITY	649,859	42,241	42,242	84,483	0
DANE-IOWA WASTEWATER COMM	192,663	12,523	12,523	25,047	0
DARBOY JOINT SANITARY DIST #1	331,777	21,566	21,566	43,132	0
DEER-GROVE EMS DIST	681,932	82,105	44,326	126,430	0
DEFORREST WINDSOR FIRE & EMS	760,553	92,413	45,823	138,236	0
DELAFIELD-HARTL WATER POL CNTL	571,589	37,153	37,153	74,307	0
DELAVAN LAKE SANITARY DISTRICT	588,633	38,262	38,261	76,523	0
DELLS-DELTON EMS COMM	1,350,277	162,352	87,768	250,120	0
DELTON FIRE & AMBULANCE COMM	213,153	25,664	13,855	39,519	0
DODGE COUNTY HOUSING AUTHORITY	197,970	12,868	12,868	25,736	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
DOOR CTY TOURISM ZONE COMM	\$ 71,095	\$ 4,630	\$ 4,612	\$ 9,242	\$ 0
EAGLE RIVER UNION AIRPORT	118,784	7,721	7,721	15,442	0
EAST CENTRAL WIS REG PLAN COMM	1,145,418	74,452	74,453	148,905	0
EASTERN COLUMBIA CTY JM COURT	62,387	4,055	4,055	8,110	0
EAU CLAIRE CITY HOUSING AUTH	673,102	43,751	43,751	87,502	0
EAU CLAIRE COUNTY HOUSING AUTH	176,746	11,489	11,489	22,977	0
EAUCLAIRE CITY-CO HEALTH DPT	4,451,979	289,380	289,379	578,759	0
EDGERTON CITY HOUSING AUTH	154,359	10,459	9,607	20,067	0
EDGERTON FIRE PROT DIST	598,404	72,048	38,896	110,944	0
ELLSWORTH AREA AMBULANCE SERV	313,993	38,070	20,145	58,215	0
EVEREST METRO POLICE COMM	2,648,345	307,586	172,143	479,729	0
FISH CREEK SANITARY DIST #1	251,017	16,316	16,316	32,632	0
FITCH-RONA EMS DISTRICT	1,968,931	237,055	127,978	365,033	0
FOND DU LAC CITY HOUSING AUTH	732,025	47,582	47,582	95,164	0
FONTANA/WALWORTH WTR POL CN CM	372,230	24,195	24,195	48,390	0
FOX LAKE INL LAKE PROT & REHAB	50,024	3,252	3,252	6,503	0
FOX LAKE WASTEWATER CONTR COMM	15,163	986	986	1,971	0
FOX WEST REGIONAL SEWER COMM	189,334	12,307	12,307	24,613	0
FREEDOM SANITARY DISTRICT #1	177,633	11,546	11,546	23,092	0
GB/BROWN CO PRO FTBLL STAD DIS	54,958	3,572	3,572	7,145	0
GOODMAN SANITARY DISTRICT NO 1	73,000	6,773	6,745	13,518	0
GREAT DIVIDE AMB SERV	1,013,227	65,860	65,860	131,720	0
GREEN BAY METRO SEWERAGE DIST	8,530,832	554,506	554,505	1,109,011	0
GREEN LAKE SANITARY DISTRICT	325,980	21,189	21,189	42,378	0
HA OF THE CITY OF S MILWAUKEE	152,495	9,912	9,912	19,824	0
HARMONY GROVE-OKEE JT SEW COMM	149,316	9,706	9,705	19,411	0
HEART OF THE VALLEY MET SEW DS	861,554	56,001	56,001	112,002	0
HOLMEN AREA FIRE DEPT	453,955	54,656	29,507	84,163	0
HUDSON CITY HOUSING AUTHORITY	61,530	3,999	3,999	7,999	0
HUM SRV CTR ONIDA VILAS FORST	2,606,177	169,403	169,402	338,805	0
HURLEY HOUSING AUTHORITY	70,844	4,605	4,605	9,210	0
IPLS LIBRARY SYSTEMS	880,540	60,940	53,530	114,470	0
IRON RIVER SANITARY DIST #1	106,097	6,896	6,896	13,793	0
JEFFERSON CITY HOUSING AUTH	95,409	6,202	6,202	12,403	0
KAUKAUNA CITY HOUSING AUTH	166,979	11,194	10,514	21,707	0
KEGONSA SANITARY DISTRICT	90,722	5,897	5,897	11,794	0
KELLY LAKE SANITARY DIST #1	56,767	3,690	3,690	7,380	0
KENOSHA JOINT SERVICES	4,567,230	296,871	296,871	593,742	0
KETTLE MORAINES FIRE DISTRICT	119,647	18,386	3,797	22,183	0
LA CROSSE CITY HOUSING AUTH	1,122,762	72,981	72,979	145,960	0
LADYSMITH HOUSING AUTH	120,195	7,813	7,813	15,625	0
LAKE COMO SANITARY DIST #1	419,306	27,255	27,255	54,510	18,813
LAKE COUNTRY FIRE & RESCUE	2,220,547	260,796	143,670	404,466	0
LAKE MILLS CITY HOUSING AUTH	115,433	7,503	7,503	15,006	0
LAKE RIPLEY MGT DISTRICT	57,637	3,746	3,746	7,493	0
LAKELAND SANITARY DISTRICT #1	294,265	19,127	19,127	38,255	0
LAONA SANITARY DISTRICT #1	88,007	5,721	5,720	11,441	0
LEAGUE OF WISC MUNICIPALITIES	1,236,927	80,400	80,400	160,800	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
LINCOLN COUNTY HOUSING AUTH	\$ 115,387	\$ 7,500	\$ 7,500	\$ 15,000	\$ 0
LODI COMMUNITY AMBULANCE SERV	230,772	27,785	15,000	42,785	0
LYONS SANITARY DISTRICT #2	81,343	5,287	5,287	10,575	0
MADLINE SANITARY DISTRICT	66,282	4,308	4,308	8,617	0
MADISON METRO SEWERAGE DIST	10,782,094	700,836	700,836	1,401,672	0
MANITOWOC CITY HOUSING AUTH	138,972	9,034	9,033	18,066	0
MANITOWOC-CALUMET LIB SYS	105,265	6,842	6,842	13,684	0
MARINETTE CITY HOUSING AUTH	219,624	14,276	14,276	28,551	0
MARSHALL AREA EMS DIST #14	368,469	41,676	23,951	65,627	0
MARSHFIELD CDA	339,362	22,480	21,637	44,117	0
MARSHFIELD ELECTRIC & WATER	4,045,927	262,986	262,986	525,971	0
MENASHA ELECTRIC & WATER	3,142,848	204,286	204,285	408,570	0
MENOMONIE CITY HOUSING AUTH	213,139	13,854	13,854	27,708	0
MEQUON - THIENSVILLE LIBRARY	534,475	34,740	34,740	69,480	0
MERCER SANITARY DISTRICT #1	164,320	10,681	10,681	21,362	0
MERRILL CITY HOUSING AUTHORITY	430,868	28,006	28,006	56,012	0
MIDDLETON FIRE DISTRICT	485,591	69,121	31,564	100,685	0
MID-MORAINES MUNICIPAL COURT	348,339	22,642	22,642	45,284	0
MILTON & MILTON TOWNSHIP FIRE DEPT	674,867	79,042	43,866	122,908	0
MILWAUKEE CO FED LIB SYS	412,947	27,067	26,616	53,683	0
MISSISSIPPI RIVER REG PLAN COM	242,195	15,743	15,743	31,485	0
MONARCH LIBRARY SYSTEM	503,060	32,700	32,698	65,398	0
MONROE CITY HOUSING AUTHORITY	179,499	11,667	11,667	23,335	0
MOSINEE FIRE DIST	161,374	19,430	10,489	29,919	0
MT HOREB AREA FIRE DEPT	547,771	90,054	35,605	125,659	0
MUNI COURT W WAUKESHA COUNTY	133,478	8,680	8,672	17,352	0
NEW GLARUS EMS	127,245	15,320	8,271	23,591	0
NEW LONDON CITY HOUSING AUTH	85,280	5,543	5,543	11,086	0
NEW RICHMOND AMBULANCE	539,235	35,050	35,050	70,101	0
NICOLET FEDERATED LIBRARY SYS	287,319	18,676	18,676	37,352	0
NORTH CENTRAL HEALTH CARE FAC	40,142,780	2,609,288	2,609,281	5,218,569	0
NORTH CENTRAL WIS REG PLAN COM	461,926	30,025	30,025	60,050	0
NORTH SHORE FIRE DEPT	9,833,289	1,674,090	639,163	2,313,253	0
NORTH SHORE WATER COMMISSION	567,505	36,888	36,888	73,776	0
NORTHERN MORAINES UTILITY COMM	122,420	7,957	7,957	15,915	0
NORTHERN WATERS LIBRARY SERV	406,873	26,447	26,447	52,894	0
NORTHWEST REGIONAL PLAN COMM	1,037,970	67,468	67,468	134,936	0
NORWAY SANITARY DISTRICT #1	310,914	20,210	20,209	40,419	0
OCONTO CITY HOUSING AUTHORITY	125,049	8,127	8,128	16,256	0
ONEIDA-VILAS TRANSIT COMM	224,270	14,579	14,578	29,156	0
OREGON AREA FIRE - EMS DIST	756,156	91,042	49,150	140,192	0
ORFORDVILLE VOL FIRE PROT DIST	18,147	2,185	1,180	3,364	0
OSHKOSH CITY HOUSING AUTHORITY	1,536,841	99,896	99,895	199,791	0
OUTAGAMIE COUNTY HOUSING AUTH	1,120,875	72,858	72,856	145,714	0
OUTAGAMIE WAUPC CO FED LIBR SY	577,732	37,553	37,553	75,106	0
PHELPS SANITARY DISTRICT #1	61,603	4,004	4,004	8,008	0
PLEASANT SPRINGS SAN DIS #1	79,403	5,161	5,161	10,322	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
PLYMOUTH CITY HOUSING AUTH	\$ 47,872	\$ 3,112	\$ 3,112	\$ 6,223	\$ 0
PORTAGE COUNTY HOUSING AUTH	175,798	11,427	11,427	22,854	0
PRAIRIE DU SAC JT SEWER COMM	82,304	5,350	5,350	10,700	0
PRAIRIE LAKES LIBRARY SYSTEM	440,112	28,607	28,607	57,215	0
RACINE COUNTY HOUSING AUTH	555,752	36,124	36,124	72,248	0
REEDSBURG AREA AMBULANCE SVCES	710,289	85,519	46,169	131,688	0
REEDSVILLE VIL HOUSING AUTH	38,146	2,480	2,479	4,959	0
RHINELANDER CITY HOUSING AUTH	153,956	2,645	2,112	4,756	0
RIB MOUNTAIN METRO SEW DIST	614,981	39,974	39,974	79,948	0
RICE LAKE CITY HOUSING AUTH	298,125	61,717	19,378	81,095	0
RICHLAND CENTER CITY HOUS AUTH	98,042	6,373	6,373	12,746	0
RICHLAND FIRE DEPARTMENT	21,809	2,626	1,418	4,043	0
RIPON AREA FIRE DISTRICT	77,872	9,376	5,062	14,437	0
RIVER FALLS CITY HOUSING AUTH	376,489	24,472	24,472	48,944	538
SAUK CITY HOUSING AUTHORITY	19,215	1,249	1,249	2,498	0
SAUK COUNTY HOUSING AUTHORITY	267,849	17,410	17,410	34,820	0
SAUK PRAIRIE AMBULANCE ASSOC	154,490	18,603	10,039	28,642	0
SAUK PRAIRIE POLICE COMMISSION	1,187,512	144,807	63,140	207,947	0
SAUK PRAIRIE RECREATION COMM	131,980	8,579	8,579	17,157	0
SAWYER COUNTY HOUSING AUTH	158,704	10,316	10,316	20,632	0
SAWYER LCO TRANSIT COMM	486,464	31,620	31,620	63,240	0
SHAWANO CITY HOUSING AUTHORITY	262,556	17,066	17,067	34,133	0
SHAWANO COUNTY HOUSING AUTH	371,712	24,162	24,161	48,323	0
SHAWANO LAKE SANITARY DIST #1	683,151	44,405	44,405	88,809	0
SHAWANO MUNICIPAL UTILITIES	1,461,909	95,024	95,024	190,048	0
SHEBOYGAN CITY HOUSING AUTH	432,413	28,111	28,104	56,215	0
SHELL LAKE CITY HOUS AUTH	59,402	3,861	3,861	7,722	0
SILVER LAKE SAN. DIST.	277,256	18,022	18,022	36,043	0
SLINGER VILLAGE HOUSING AUTH	44,880	2,917	2,917	5,835	0
SOUTH AREA FIRE & EMS DIST	1,660,116	198,244	107,908	306,151	0
SOUTH CENTRAL LIBRARY SYSTEM	2,675,074	173,880	173,880	347,760	0
SOUTHEASTERN WIS REG PLAN COMM	4,705,120	305,834	305,833	611,667	0
SOUTHWEST WIS LIBRARY SYSTEM	215,505	14,008	14,008	28,016	0
SOUTHWESTERN WIS REG PLAN COMM	468,774	30,470	30,471	60,941	0
SPOONER FIRE DISTRICT	67,650	8,145	4,397	12,542	0
ST JOSEPH SANITARY DISTRICT #1	30,852	2,005	2,005	4,011	0
STEVENS POINT CITY HOUS AUTH	564,272	36,678	36,678	73,356	0
SULLIVAN JT WASTEWATER COMM	88,562	5,757	5,757	11,514	0
SUPERIOR CITY HOUSING AUTH	1,363,770	88,645	88,645	177,289	0
TAYLOR COUNTY HOUSING AUTH	63,381	4,120	4,120	8,240	0
THORP CITY HOUSING AUTHORITY	119,568	7,772	7,772	15,544	0
THREE LAKES SANITARY DIST #1	35,146	2,284	2,284	4,569	0
TREMPEALEAU COUNTY HOUS AUTH	300,301	19,520	19,519	39,039	19,352
TRI-M SANITARY DISTRICT	52,497	3,412	3,412	6,825	0
UNIFIED COMMUNITY SERVICES	2,431,362	158,041	158,040	316,080	0
VALLEY RIDGE CLEAN WATER COMM	54,219	3,524	3,524	7,049	0
VANGUARD ELECTRIC UTIL COMM	424,176	27,572	27,572	55,143	0
VIROQUA CITY HOUSING AUTHORITY	200,811	13,053	13,053	26,106	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
WABENO SANITARY DISTRICT #1	\$ 56,959	\$ 3,702	\$ 3,702	\$ 7,405	\$ 0
WALTER E OLSON MEMORIAL LIB	125,701	8,171	8,171	16,341	0
WALWORTH COUNTY METRO SEW DIST	1,450,588	94,289	94,288	188,577	76,154
WASHBURN CITY HOUSING AUTH	142,279	9,254	9,243	18,497	0
WASHBURN COUNTY HOUSING AUTH	82,219	5,344	5,344	10,689	0
WATERTOWN CITY HOUSING AUTH	141,581	9,203	9,202	18,405	0
WAUKESHA CITY HOUSING AUTH	747,499	48,588	48,588	97,175	0
WAUNAKEE AREA EMS	562,403	67,713	36,556	104,270	0
WAUNAKEE AREA FIRE DIST	79,068	5,140	5,140	10,279	0
WAUNAKEE WATER & LIGHT	1,548,349	100,709	100,577	201,286	0
WAUPACA CHAIN O'LAKES SAN DIST	70,180	4,562	4,562	9,123	0
WAUSAUKEE VILLAGE HOUS AUTH	183,238	11,911	11,910	23,821	0
WEST BEND CITY HOUSING AUTH	273,343	17,767	17,767	35,535	0
WEST CENTRAL WI BISOLIDS COMM	182,962	11,893	11,893	23,785	0
WEST CENTRAL WIS REG PLAN COMM	915,560	59,512	59,511	119,023	0
WESTERN LAKES FIRE DIST	3,780,632	447,600	245,925	693,525	0
WESTERN RACINE CO SEWERAGE DIS	129,202	8,398	8,398	16,796	0
WINDING RIVERS LIBRARY SYS	563,706	36,641	36,641	73,282	0
WINNEFOX LIBRARY SYSTEM	826,793	53,742	53,742	107,484	0
WIS DELLS-LAKE DELTON SEW COMM	283,887	18,453	18,453	36,906	0
WISCONSIN COUNTIES ASSOCIATION	2,434,304	158,230	158,230	316,460	0
WISCONSIN MUNIC MUTAL INS CO	834,653	60,576	47,929	108,505	0
WISCONSIN RAPIDS CITY HS AUTH	429,758	27,934	27,934	55,869	0
WISCONSIN TOWNS ASSOCIATION	746,637	48,532	48,531	97,063	0
WISCONSIN VALLEY LIBRARY SRV	492,012	31,981	31,981	63,962	0
WPPI ENERGY	12,270,936	796,074	796,030	1,592,104	0
Total Special Districts (217)	\$ 199,745,446	\$ 15,572,809	\$ 12,936,508	\$ 28,509,312	\$ 114,857



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
<b>Towns</b>					
ADDISON, TOWN OF(WASHINGTON)	\$ 158,767	\$ 10,320	\$ 10,320	\$ 20,640	\$ 0
AGENDA, TOWN OF (ASHLAND)	95,217	6,189	6,189	12,378	0
ALBAN, TOWN OF (PORTAGE)	69,704	4,531	4,531	9,062	0
ALBION, TOWN OF (DANE)	158,245	10,286	10,286	20,572	0
ALBION, TOWN OF (JACKSON)	47,692	3,101	3,100	6,201	0
ALGOMA, TOWN OF (WINNEBAGO)	202,570	13,167	13,167	26,334	0
ANSON, TOWN OF (CHIPPEWA)	70,340	4,572	4,572	9,144	0
ARBOR VITAE, TOWN OF (VILAS)	222,847	14,565	14,405	28,970	0
ARMSTRONG CREEK, TOWN (FOREST)	43,340	2,817	2,817	5,634	0
ASHIPPUN, TOWN OF (DODGE CO)	103,979	6,759	6,758	13,517	0
ASHLAND, TOWN OF (ASHLAND)	47,821	3,108	3,108	6,217	0
ATHELSTANE, TOWN OF(MARINETTE)	108,194	7,033	7,033	14,065	0
AZTALAN, TOWN OF(JEFFERSON)	49,481	3,216	3,216	6,433	0
BAILEYS HARBOR, TOWN OF (DOOR)	512,078	33,330	33,241	66,570	0
BALSAM LAKE, TOWN OF (POLK)	66,682	4,334	4,334	8,669	0
BARABOO, TOWN OF (SAUK)	62,602	4,069	4,069	8,138	0
BARKSDALE, TOWN OF (BAYFIELD)	69,156	4,772	4,219	8,990	0
BARNES, TOWN OF (BAYFIELD)	285,994	18,590	18,590	37,179	0
BARRON, TOWN OF (BARRON)	32,020	2,081	2,081	4,163	0
BAYVIEW, TOWN OF (BAYFIELD)	79,585	5,187	5,159	10,346	0
BEAR CREEK, TOWN OF (SAUK)	65,605	4,264	4,264	8,529	0
BELMONT, TOWN OF (LAFAYETTE)	8,386	545	545	1,090	0
BELOIT, TOWN OF (ROCK)	3,065,828	322,854	199,279	522,132	0
BENNETT, TOWN OF (DOUGLAS)	100,555	6,536	6,536	13,072	0
BERGEN, TOWN OF (VERNON)	58,090	3,776	3,776	7,552	0
BERRY, TOWN OF (DANE)	109,061	7,094	7,084	14,178	0
BIRCHWOOD, TOWN OF (WASHBURN)	70,193	4,563	4,563	9,125	0
BLACK EARTH, TOWN OF (DANE)	61,147	3,975	3,975	7,949	0
BLOOMING GROVE, TOWN OF(DANE)	202,257	13,147	13,147	26,293	0
BLUE MOUNDS, TOWN OF (DANE)	52,308	3,400	3,400	6,801	0
BOULDER JUNCTION, TOWN (VILAS)	228,938	14,881	14,881	29,762	0
BRADLEY, TOWN OF (LINCOLN)	131,101	8,522	8,522	17,043	0
BRIGHAM, TOWN OF (IOWA)	130,927	8,510	8,510	17,021	0
BRISTOL, TOWN OF (DANE)	153,365	9,969	9,969	19,937	0
BROCKWAY, TOWN OF (JACKSON)	177,077	11,510	11,510	23,020	0
BROOKFIELD, TOWN OF (WAUKESHA)	3,226,051	328,763	209,694	538,457	0
BROOKLYN, TOWN OF (GREEN)	88,400	5,746	5,746	11,492	0
BROTHERTOWN, TOWN OF(CALUMET)	57,977	3,769	3,768	7,537	0
BUCHANAN, TOWN OF(OUTAGAMIE)	213,120	13,853	13,853	27,705	0
BURKE, TOWN OF (DANE)	231,853	15,071	15,070	30,141	0
BURLINGTON, TOWN OF (RACINE)	360,562	23,437	23,437	46,873	0
CABLE, TOWN OF (BAYFIELD)	234,544	15,708	14,783	30,491	0
CAMPBELL, TOWN OF (LA CROSSE)	708,360	66,338	46,043	112,382	0
CAREY, TOWN OF (IRON)	50,732	3,298	3,298	6,595	0
CASSIAN, TOWN OF (ONEIDA)	132,503	8,613	8,613	17,225	0
CEDAR LAKE, TOWN OF (BARRON)	73,602	4,784	4,784	9,568	0
CEDARBURG, TOWN OF (OZAUKEE)	641,873	41,722	41,722	83,444	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
CHETEK, TOWN OF (BARRON)	\$ 82,173	\$ 5,341	\$ 5,341	\$ 10,682	\$ 0
CHIPPEWA, TOWN OF (ASHLAND)	99,181	6,447	6,447	12,894	0
CHRISTIANA, TOWN OF (DANE)	169,839	11,044	11,035	22,079	0
CLAYTON, TOWN OF (POLK)	49,631	3,226	3,226	6,452	0
CLAYTON, TOWN OF (WINNEBAGO)	572,022	41,236	37,181	78,417	0
CLEAR LAKE, TOWN OF (POLK)	119,413	7,762	7,762	15,524	0
CLEVELAND, TOWN OF (MARATHON)	38,102	2,477	2,477	4,953	0
CLIFTON, TOWN OF (MONROE)	39,370	2,559	2,559	5,118	0
CLINTON, TOWN OF (BARRON)	60,856	3,956	3,956	7,911	0
CLOVER, TOWN OF (BAYFIELD)	119,214	8,125	7,372	15,497	0
CLOVERLAND, TOWN OF (VILAS)	20,907	1,359	1,359	2,718	0
COLBY, TOWN OF (CLARK)	52,409	3,407	3,407	6,813	0
COLFAX, TOWN OF (DUNN)	47,400	3,081	3,081	6,162	0
CORNING, TOWN OF (LINCOLN)	78,055	5,074	5,074	10,147	0
COTTAGE GROVE, TOWN OF (DANE)	285,196	18,538	18,538	37,076	0
CRESCENT, TOWN OF (ONEIDA)	149,500	9,717	9,718	19,435	0
CROSS PLAINS, TOWN OF (DANE)	98,503	6,403	6,403	12,805	0
CRYSTAL LAKE, TOWN OF (BARRON)	126,984	8,254	8,254	16,508	0
DAIRYLAND, TOWN OF (DOUGLAS)	73,112	4,752	4,752	9,505	0
DARIEN, TOWN OF (WALWORTH)	115,878	7,532	7,532	15,065	0
DECATUR, TOWN OF (GREEN CO)	53,847	3,500	3,500	7,000	0
DELAVAN, TOWN OF (WALWORTH)	1,671,971	205,164	77,231	282,395	0
DELTA, TOWN OF (BAYFIELD)	101,685	6,610	6,610	13,219	0
DELTON, TOWN OF (SAUK)	205,722	13,372	13,372	26,744	0
DOVER, TOWN OF (RACINE)	367,424	23,883	23,883	47,765	0
DOVRE, TOWN OF (BARRON)	56,221	3,654	3,654	7,309	0
DRAPER, TOWN OF (SAWYER)	82,435	7,074	7,064	14,138	0
DRUMMOND, TOWN OF (BAYFIELD)	293,305	19,065	19,065	38,130	0
DUNBAR, TOWN OF (MARINETTE)	90,114	5,857	5,857	11,715	0
DUNKIRK, TOWN OF (DANE)	132,100	8,587	8,586	17,173	0
DUNN, TOWN OF (DANE)	558,652	38,833	33,791	72,624	0
EAGLE POINT, TOWN OF (CHIPPEWA)	139,997	9,132	9,067	18,200	0
EAGLE, TOWN OF (WAUKESHA)	246,109	16,160	15,997	32,157	0
EAST TROY, TOWN OF (WALWORTH)	747,226	71,884	46,166	118,050	0
EASTON, TOWN OF (MARATHON)	108,305	7,040	7,040	14,080	0
EAU GALLE, TOWN OF (DUNN)	58,573	3,807	3,807	7,614	0
EDEN, TOWN OF (IOWA)	41,360	2,688	2,688	5,377	0
EGG HARBOR, TOWN OF (DOOR)	54,920	3,570	3,570	7,140	0
ELCHO, TOWN OF (LANGLADE)	97,506	6,645	6,031	12,676	0
ELK MOUND, TOWN OF (DUNN)	57,029	3,707	3,707	7,414	0
EMERY, TOWN OF (PRICE)	43,154	2,900	2,710	5,610	0
ERIN, TOWN OF (WASHINGTON)	173,411	11,272	11,272	22,543	0
EUREKA, TOWN OF (POLK)	66,331	4,312	4,312	8,623	0
EXETER, TOWN OF (GREEN)	98,874	6,427	6,427	12,854	0
FARMINGTON, TOWN OF (LACROSSE)	151,710	9,861	9,861	19,722	0
FARMINGTON, TOWN OF (WAUPACA)	56,281	3,658	3,658	7,317	0
FLAMBEAU, TOWN OF (RUSK)	19,380	1,260	1,260	2,519	0
FLORENCE, TOWN OF (FLORENCE)	1,044,666	67,904	67,903	135,807	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
FRANKLIN, TOWN OF (MANITOWOC)	\$ 74,400	\$ 4,836	\$ 4,836	\$ 9,672	\$ 0
FREEDOM, TOWN OF (OUTAGAMIE)	240,326	15,622	15,620	31,242	0
FREEDOM, TOWN OF (SAUK)	68,706	4,466	4,466	8,932	0
FULTON, TOWN OF (ROCK)	65,536	4,260	4,260	8,520	0
GENESEE, TOWN OF (WAUKESHA)	285,827	18,579	18,579	37,158	0
GENEVA, TOWN OF (WALWORTH)	954,541	93,464	62,045	155,509	0
GEORGETOWN, TOWN OF (POLK)	46,800	3,042	3,042	6,084	193,018
GERMANTOWN, TOWN (JUNEAU)	142,152	9,240	9,240	18,480	0
GIBRALTAR, TOWN OF (DOOR)	553,474	43,620	35,976	79,596	0
GILMAN, TOWN OF (PIERCE)	62,090	4,036	4,036	8,072	0
GOODMAN, TOWN OF (MARINETTE)	92,226	6,015	5,974	11,989	0
GORDON, TOWN OF (DOUGLAS)	177,076	11,510	11,510	23,020	0
GRAND CHUTE, TOWN OF (OUTAGAME)	9,288,300	916,600	603,750	1,520,350	0
GRAND RAPIDS, TOWN OF (WOOD)	838,794	84,724	53,958	138,681	0
GRANT, TOWN OF (PORTAGE)	47,116	3,062	3,063	6,125	0
GRATIOT, TOWN OF (LAFAYETTE)	86,840	5,645	5,645	11,289	0
GREEN LAKE, TOWN OF (GRN LAKE)	49,362	3,209	3,209	6,417	0
GREENFIELD, TOWN OF (LACROSSE)	76,874	4,997	4,997	9,994	0
GREENWOOD, TOWN OF (VERNON)	49,482	3,216	3,216	6,433	0
HAMBURG, TOWN OF (VERNON)	70,958	4,612	4,612	9,225	0
HARRISON, TOWN OF (GRANT)	42,841	2,785	2,785	5,569	0
HAY RIVER, TOWN OF (DUNN)	56,000	3,640	3,640	7,280	0
HAYWARD, TOWN OF (SAWYER)	245,668	19,547	15,808	35,355	0
HAZELHURST, TOWN OF (ONEIDA)	137,887	8,963	8,963	17,925	0
HIGHLAND, TOWN OF (IOWA)	94,250	6,126	6,126	12,253	0
HILES, TOWN OF (FOREST)	109,934	7,146	7,146	14,292	0
HUDSON, TOWN OF (ST CROIX)	104,337	6,782	6,782	13,564	0
HUGHES, TOWN OF (BAYFIELD)	91,254	5,932	5,932	11,863	0
HULL, TOWN OF (PORTAGE)	298,359	19,441	19,393	38,834	0
IRON RIVER, TOWN OF (BAYFIELD)	419,274	38,282	27,140	65,422	0
ITHACA, TOWN OF (RICHLAND)	51,263	3,332	3,332	6,664	0
IXONIA, TOWN OF (JEFFERSON)	533,352	39,904	34,668	74,572	0
JACKSON, TOWN OF (WASHINGTON)	239,081	15,540	15,540	31,081	0
JEFFERSON, TOWN OF (JEFFERSON)	51,021	3,316	3,316	6,633	0
KELLY, TOWN OF (BAYFIELD)	55,564	3,612	3,612	7,223	0
KIMBALL, TOWN OF (IRON)	111,809	7,268	7,268	14,535	0
KNIGHT, TOWN OF (IRON)	70,634	4,591	4,591	9,183	0
KNOWLTON, TOWN OF (MARATHON)	71,621	4,655	4,655	9,311	0
KOMENSKY, TOWN OF (JACKSON)	56,758	7,378	0	7,378	0
KOSHKONONG, TOWN OF (JEFFERSON)	174,843	11,365	11,365	22,730	0
LA POINTE, TOWN OF (ASHLAND)	930,507	73,155	60,483	133,638	0
LA VALLE, TOWN OF (SAUK)	205,498	16,261	13,357	29,618	0
LAC DU FLAMBEAU, TOWN (VILAS)	356,650	23,183	23,182	46,365	0
LAFAYETTE, TOWN OF (CHIPPEWA)	241,502	15,698	15,697	31,396	0
LAFAYETTE, TOWN OF (WALWORTH)	66,786	4,406	4,276	8,682	0
LAKE HOLCOMBE, TOWN (CHIPPEWA)	65,153	4,309	4,161	8,470	0
LAKE, TOWN OF (MARINETTE)	50,537	3,287	3,282	6,570	0
LAKE, TOWN OF (PRICE)	146,642	9,532	9,532	19,063	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
LAKETOWN, TOWN OF (POLK)	\$ 63,440	\$ 4,124	\$ 4,124	\$ 8,247	\$ 0
LAMARTINE, TOWN OF (FONDDULAC)	55,610	3,615	3,615	7,229	0
LANARK, TOWN OF (PORTAGE)	47,136	3,064	3,064	6,128	0
LAND O LAKES, TOWN OF (VILAS)	334,435	21,738	21,738	43,477	0
LAONA, TOWN OF (FOREST)	217,603	17,040	14,144	31,184	0
LAWRENCE, TOWN OF (BROWN CO)	663,954	43,157	43,157	86,314	0
LEBANON, TOWN OF (DODGE)	122,314	7,950	7,950	15,901	0
LEDGEVIEW, TOWN OF (BROWN)	904,082	58,765	58,765	117,531	0
LINCOLN, TOWN OF (EAU CLAIRE)	69,409	4,512	4,512	9,023	0
LINCOLN, TOWN OF (TREMPEALEAU)	58,277	3,788	3,788	7,576	0
LINCOLN, TOWN OF (VILAS)	50,000	3,250	3,250	6,500	0
LINN, TOWN OF (WALWORTH)	880,677	92,542	53,328	145,870	0
LINWOOD, TOWN OF (PORTAGE)	49,207	3,198	3,198	6,397	0
LISBON, TOWN OF (WAUKESHA)	1,331,801	114,138	86,567	200,705	0
LODI, TOWN OF (COLUMBIA)	105,834	6,879	6,879	13,758	0
LUCAS, TOWN OF (DUNN)	66,788	4,341	4,341	8,682	0
LUDINGTON, TOWN OF (EAU CLAIRE)	56,800	4,751	2,633	7,384	0
LYNDON, TOWN OF (SHEBOYGAN)	84,436	5,488	5,488	10,977	0
LYONS, TOWN OF (WALWORTH)	176,155	11,450	11,450	22,900	0
MADISON, TOWN OF (DANE)	1,311,795	126,670	85,267	211,937	0
MANITOWOC RAPIDS, TOWN (MANITWC)	99,788	6,486	6,486	12,972	0
MAPLE, TOWN OF (DOUGLAS)	93,750	6,094	6,094	12,188	0
MARENGO, TOWN OF (ASHLAND)	84,275	5,478	5,478	10,956	0
MARIETTA, TOWN OF (CRAWFORD)	74,329	4,831	4,831	9,663	0
MARION, TOWN OF (WAUSHARA)	33,335	2,167	2,167	4,334	0
MARTELL, TOWN OF (PIERCE)	59,941	3,896	3,896	7,792	0
MAZOMANIE, TOWN OF (DANE)	92,109	5,987	5,987	11,974	0
MEDFORD, TOWN OF (TAYLOR)	59,814	3,888	3,888	7,776	0
MEDINA, TOWN OF (DANE)	157,940	10,266	10,266	20,532	0
MERCER, TOWN OF (IRON)	413,110	26,851	26,852	53,703	0
MERRIMAC, TOWN OF (SAUK)	63,393	4,121	4,121	8,241	0
MERTON, TOWN OF (WAUKESHA)	832,656	54,124	54,123	108,247	0
MIDDLETON, TOWN OF (DANE)	415,700	27,020	27,020	54,040	0
MILLTOWN, TOWN OF (POLK)	152,602	9,919	9,919	19,838	0
MINOCQUA, TOWN OF (ONEIDA)	1,682,977	147,077	109,393	256,471	390,244
MINONG, TOWN OF (WASHBURN)	199,932	12,996	12,996	25,992	0
MISHICOT, TOWN OF (MANITOWOC)	58,051	3,773	3,773	7,547	0
MONTROSE, TOWN OF (DANE)	94,444	6,268	6,010	12,278	0
MORSE, TOWN OF (ASHLAND)	109,387	7,110	7,110	14,220	0
MOSCOW, TOWN OF (IOWA)	39,520	2,569	2,569	5,138	0
MUKWONAGO, TOWN (WAUKESHA)	930,866	93,463	55,098	148,562	0
NAMAKAGON, TOWN OF (BAYFIELD)	136,424	8,868	8,868	17,735	0
NECEDAH, TOWN OF (JUNEAU)	97,306	6,325	6,325	12,650	0
NEENAH, TOWN OF (WINNEBAGO)	61,935	4,026	4,026	8,052	0
NEW GLARUS, TOWN OF (GREEN)	116,514	7,580	7,566	15,147	0
NEW HAVEN, TOWN OF (DUNN)	64,541	4,195	4,195	8,390	0
NEW HOLSTEIN, TOWN OF (CALUMET)	62,123	4,487	3,589	8,076	0
NEWBOLD, TOWN OF (ONEIDA)	342,337	22,252	22,252	44,504	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
NORWAY, TOWN OF (RACINE)	\$ 666,788	\$ 48,258	\$ 43,143	\$ 91,401	\$ 0
OAK GROVE, TOWN OF (BARRON)	77,847	5,060	5,060	10,120	0
OAKDALE, TOWN OF (MONROE)	122,282	7,948	7,948	15,897	0
OAKLAND, TOWN OF (JEFFERSON)	198,018	12,871	12,871	25,742	0
OCONOMOWOC, TOWN OF (WAUKESHA)	1,665,656	161,911	108,267	270,179	0
OMA, TOWN OF (IRON)	138,849	9,025	9,025	18,050	0
ONALASKA, TOWN OF (LA CROSSE)	207,615	13,495	13,495	26,990	0
OREGON, TOWN OF (DANE)	230,690	14,995	14,995	29,990	0
ORIENTA, TOWN OF (BAYFIELD)	49,582	3,223	3,223	6,446	0
OSCEOLA, TOWN OF (POLK)	123,840	8,048	8,047	16,095	0
OTTAWA, TOWN OF (WAUKESHA)	79,395	5,160	5,161	10,321	0
PARKLAND, TOWN OF (DOUGLAS)	101,623	6,605	6,605	13,211	0
PELICAN, TOWN OF (ONEIDA)	112,601	7,319	7,319	14,638	0
PEMBINE, TOWN OF (MARINETTE)	96,349	6,263	6,263	12,525	0
PHELPS, TOWN OF (VILAS)	306,452	19,920	19,919	39,839	0
PINE LAKE, TOWN OF (ONEIDA)	164,262	10,677	10,677	21,354	0
PLEASANT SPRINGS, TOWN(DANE)	224,771	14,610	14,610	29,220	0
PLEASANT VALLEY, TOWN(EAUCLR)	143,745	9,343	9,343	18,687	0
PLOVER, TOWN OF (PORTAGE)	72,491	4,712	4,712	9,424	0
PORT WASHINGTON, TOWN(OZAUKEE)	44,250	2,876	2,876	5,753	0
PORT WING, TOWN OF (BAYFIELD)	137,152	8,915	8,915	17,830	0
POUND, TOWN OF (MARINETTE)	57,315	3,725	3,725	7,451	0
PRAIRIE LAKE, TOWN OF (BARRON)	151,146	9,824	9,824	19,649	0
PRESQUE ISLE, TOWN OF(VILAS)	283,975	18,786	18,131	36,917	0
PRESTON, TOWN OF (ADAMS)	83,309	5,415	5,415	10,830	0
PRIMROSE, TOWN OF (DANE)	58,132	3,778	3,779	7,557	0
QUINCY, TOWN OF (ADAMS)	111,597	7,254	7,254	14,507	0
RANTOUL, TOWN OF (CALUMET)	66,454	4,320	4,320	8,639	0
RIB MOUNTAIN, TOWN (MARATHON)	819,897	53,294	53,294	106,587	0
RICE LAKE, TOWN OF (BARRON)	152,195	9,893	9,893	19,786	0
RICHMOND, TOWN OF (WALWORTH)	77,460	5,035	5,035	10,070	0
RIDGEVILLE, TOWN OF (MONROE)	51,935	3,376	3,376	6,752	0
RIPON, TOWN OF(FOND DU LAC)	117,076	11,562	7,610	19,172	0
RIVER FALLS, TOWN OF (PIERCE)	162,587	10,592	10,545	21,137	0
ROME, TOWN OF (ADAMS)	1,445,289	126,082	92,814	218,896	0
RUDOLPH, TOWN OF (WOOD)	37,770	2,455	2,455	4,910	0
RUTLAND, TOWN OF (DANE)	153,220	9,959	9,959	19,919	0
SANBORN, TOWN OF (ASHLAND)	129,507	8,418	8,418	16,836	0
SCOTT, TOWN OF (BROWN)	354,582	23,048	23,048	46,096	0
SCOTT, TOWN OF (SHEBOYGAN)	80,499	5,232	5,232	10,465	0
SEVASTOPOL, TOWN OF (DOOR)	60,000	3,900	3,900	7,800	0
SEYMOUR, TOWN OF (EAU CLAIRE)	51,527	3,607	3,092	6,699	0
SHARON, TOWN OF (PORTAGE)	122,686	7,977	7,972	15,949	0
SHARON, TOWN OF (WALWORTH)	48,820	3,173	3,173	6,347	0
SHEBOYGAN, TOWN OF (SHEBOYGAN)	853,344	55,468	55,468	110,935	0
SHELBY, TOWN OF (LA CROSSE)	684,472	48,095	44,482	92,577	0
SOMERSET, TOWN OF (ST CROIX)	209,266	13,602	13,602	27,204	0
SOUTH LANCASTER, TOWN (GRANT)	52,909	3,439	3,439	6,878	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
SPARTA, TOWN OF (MONROE)	\$ 97,360	\$ 5,623	\$ 5,623	\$ 11,247	\$ 0
SPIRIT, TOWN OF (PRICE)	40,128	2,608	2,608	5,217	0
SPRING BROOK, TOWN OF (DUNN)	89,728	5,832	5,832	11,665	0
SPRING GREEN, TOWN OF (SAUK)	63,209	4,109	4,109	8,217	0
SPRING GROVE, TOWN OF (GREEN)	46,009	2,991	2,991	5,981	0
SPRING LAKE, TOWN OF (PIERCE)	67,618	4,395	4,395	8,790	0
SPRINGDALE, TOWN OF (DANE)	109,991	7,151	7,148	14,299	0
SPRINGFIELD, TOWN OF (DANE)	168,940	10,981	10,981	21,962	0
SPRINGFIELD, TOWN OF (JACKSON)	55,832	3,629	3,629	7,258	0
ST CROIX FALLS, TOWN OF (POLK)	96,930	6,301	6,300	12,601	0
ST GERMAIN, TOWN OF (VILAS)	326,085	19,902	19,380	39,282	0
STANLEY, TOWN OF (BARRON)	125,715	8,171	8,171	16,343	0
STANTON, TOWN OF (DUNN)	84,552	5,496	5,496	10,992	0
STETTIN, TOWN OF (MARATHON)	181,340	11,787	11,787	23,574	0
STOCKBRIDGE, TOWN OF(CALUMET)	92,786	6,031	6,031	12,062	0
STOCKTON, TOWN OF (PORTAGE)	198,137	12,879	12,879	25,758	0
STRONGS PRAIRIE, TOWN OF(ADMS)	39,995	2,600	2,600	5,199	0
SUGAR CREEK, TOWN OF(WALWORTH)	121,563	7,902	7,901	15,803	0
SULLIVAN, TOWN OF (JEFFERSON)	96,501	6,273	6,273	12,545	0
SUMMIT, TOWN OF (DOUGLAS)	159,471	10,366	10,366	20,731	0
SUMMIT, TOWN OF (JUNEAU)	50,344	3,272	3,272	6,545	0
SUMNER, TOWN OF (BARRON)	60,595	1,961	5,916	7,877	0
SUN PRAIRIE, TOWN OF (DANE)	167,841	10,910	10,910	21,819	0
SUPERIOR, TOWN OF (DOUGLAS)	146,698	9,535	9,535	19,071	0
TAINTER, TOWN OF (DUNN)	145,122	9,433	9,433	18,866	0
THERESA, TOWN OF (DODGE)	79,286	5,154	5,154	10,307	0
THREE LAKES, TOWN OF (ONEIDA)	874,525	75,643	56,463	132,106	0
TIFFANY, TOWN OF (DUNN)	51,149	3,325	3,325	6,649	0
TRADE LAKE, TOWN OF (BURNETT)	66,822	4,543	4,144	8,687	0
TREMPELEAU, TOWN (TREMPELEAU)	89,443	5,814	5,814	11,628	0
TRENTON, TOWN OF (WASHINGTON)	204,166	13,271	13,271	26,542	0
TRIPP, TOWN OF (BAYFIELD)	67,355	4,378	4,378	8,756	0
TROY, TOWN OF (WALWORTH)	188,056	12,224	12,224	24,447	0
TURTLE LAKE, TOWN OF (BARRON)	69,215	4,499	4,499	8,998	0
UNION, TOWN OF (ROCK)	64,135	4,169	4,169	8,338	0
UNITY, TOWN OF (CLARK)	34,605	2,249	2,249	4,499	0
VERMONT, TOWN OF (DANE)	60,480	3,931	3,931	7,862	0
VERONA, TOWN OF (DANE)	233,718	16,498	13,885	30,383	0
VIENNA, TOWN OF (DANE)	188,992	12,285	12,285	24,569	0
VIROQUA, TOWN OF (VERNON)	129,650	9,749	7,106	16,855	0
WABENO, TOWN OF (FOREST)	90,493	7,003	5,882	12,885	0
WALWORTH, TOWN OF (WALWORTH)	124,500	8,093	8,092	16,185	0
WARREN, TOWN OF (ST CROIX)	43,921	2,855	2,855	5,710	0
WASCOTT, TOWN OF (DOUGLAS)	246,162	16,820	16,001	32,821	0
WASHINGTON, TOWN OF (DOOR)	536,983	42,557	34,904	77,461	0
WASHINGTON, TOWN OF (LACROSSE)	65,477	4,256	4,256	8,512	0
WASHINGTON, TOWN OF (SAUK)	69,267	4,502	4,502	9,005	0
WASHINGTON, TOWN OF (VILAS)	194,741	12,658	12,658	25,316	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
WASHINGTON, TOWN OF(EAUCLAIRE)	349,240	22,701	22,700	45,402	0
WATERFORD, TOWN OF (RACINE)	1,268,262	129,434	82,437	211,871	0
WAYNE, TOWN OF (LAFAYETTE)	56,653	3,682	3,682	7,365	0
WESCOTT, TOWN OF (SHAWANO)	346,101	22,497	22,497	44,993	0
WEST BEND, TOWN OF(WASHINGTON)	200,336	13,021	13,022	26,043	0
WEST POINT, TOWN (COLUMBIA)	27,010	1,756	1,756	3,511	0
WEST SWEDEN, TOWN OF (POLK)	50,265	3,267	3,267	6,534	0
WESTFIELD, TOWN OF (SAUK)	46,575	3,027	3,027	6,055	0
WESTFORD, TOWN OF (RICHLAND)	45,005	2,926	2,925	5,851	0
WESTPORT, TOWN OF (DANE)	679,361	52,346	35,971	88,317	0
WHEATLAND, TOWN OF (VERNON)	100,589	6,538	6,538	13,077	0
WHEATON, TOWN OF (CHIPPEWA)	123,512	8,028	8,028	16,057	0
WHITEWATER, TOWN OF (WALWORTH)	65,329	4,246	4,246	8,493	0
WILSON, TOWN OF (SHEBOYGAN)	197,285	12,824	12,823	25,647	0
WILTON, TOWN OF (MONROE)	48,522	3,154	3,154	6,308	0
WINTER, TOWN OF (SAWYER)	213,324	13,866	13,866	27,732	0
WIOTA, TOWN OF (LAFAYETTE)	54,981	3,574	3,574	7,147	0
WOOD RIVER, TOWN OF (BURNETT)	61,846	4,020	4,020	8,040	0
WOODRUFF, TOWN OF (ONEIDA)	639,823	62,284	41,588	103,873	0
Total Towns (306)	\$ 76,586,416	\$ 6,173,907	\$ 4,912,215	\$ 11,086,125	\$ 583,262

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
<b>Counties</b>					
ADAMS COUNTY	\$ 14,351,481	\$ 1,061,928	\$ 932,994	\$ 1,994,922	\$ 0
ASHLAND COUNTY	8,419,418	667,056	507,165	1,174,221	0
BARRON COUNTY	20,355,064	1,448,378	1,323,079	2,771,456	0
BAYFIELD COUNTY	10,127,141	758,881	630,763	1,389,644	0
BROWN COUNTY	87,973,644	6,536,946	5,719,307	12,256,253	0
BUFFALO COUNTY	6,251,367	480,337	377,492	857,829	0
BURNETT COUNTY	7,946,633	580,242	516,530	1,096,771	0
CALUMET COUNTY	17,716,198	1,282,496	1,151,557	2,434,053	0
CHIPPEWA COUNTY	22,256,257	1,580,782	1,450,949	3,031,731	0
CLARK COUNTY	26,648,322	1,857,864	1,732,141	3,590,005	0
COLUMBIA COUNTY	26,800,019	2,027,530	1,654,897	3,682,427	0
CRAWFORD COUNTY	8,223,441	680,411	484,907	1,165,318	0
DANE COUNTY	199,912,566	15,475,080	13,002,109	28,477,189	0
DODGE COUNTY	43,307,921	3,077,926	2,791,586	5,869,512	0
DOOR COUNTY	21,516,003	1,774,797	1,398,542	3,173,338	0
DOUGLAS COUNTY	15,757,367	1,179,321	1,024,230	2,203,551	0
DUNN COUNTY	24,909,163	1,810,825	1,564,890	3,375,715	0
EAU CLAIRE COUNTY	34,983,584	2,461,856	2,275,659	4,737,515	0
FLORENCE COUNTY	4,008,628	319,163	262,428	581,591	0
FOND DU LAC COUNTY	46,489,532	3,397,420	2,949,801	6,347,220	0
FOREST COUNTY	5,890,100	478,819	382,357	861,176	0
GRANT COUNTY	16,724,602	1,199,554	1,086,799	2,286,352	0
GREEN COUNTY	19,153,556	1,391,937	1,244,980	2,636,917	0
GREEN LAKE COUNTY	11,246,869	815,108	731,048	1,546,156	0
IOWA COUNTY	9,895,175	768,440	643,187	1,411,627	0
IRON COUNTY	5,207,687	381,152	338,500	719,653	0
JACKSON COUNTY	10,885,482	796,069	707,457	1,503,526	0
JEFFERSON COUNTY	32,984,905	2,560,695	2,144,701	4,705,395	0
JUNEAU COUNTY	14,984,877	1,160,929	974,019	2,134,947	0
KENOSHA COUNTY	62,834,712	5,167,761	3,708,232	8,875,993	0
KEWAUNEE COUNTY	8,536,052	647,937	554,844	1,202,781	0
LA CROSSE COUNTY	53,940,355	3,676,285	3,506,087	7,182,372	0
LAFAYETTE COUNTY	18,385,439	1,323,587	1,194,386	2,517,973	0
LANGLADE COUNTY	8,764,492	667,057	550,036	1,217,093	0
LINCOLN COUNTY	12,460,488	941,783	809,932	1,751,715	0
MANITOWOC COUNTY	28,920,473	2,346,007	1,710,833	4,056,839	0
MARATHON COUNTY	49,062,351	3,556,785	3,189,053	6,745,837	0
MARINETTE COUNTY	19,824,862	1,454,835	1,288,615	2,743,450	0
MARQUETTE COUNTY	11,122,147	894,865	722,939	1,617,805	0
MENOMINEE COUNTY	3,515,740	258,381	228,524	486,906	0
MONROE COUNTY	19,539,191	1,387,083	1,279,442	2,666,524	0
OCONTO COUNTY	15,491,086	1,148,338	1,006,923	2,155,261	0
ONEIDA COUNTY	16,250,047	1,231,766	1,055,925	2,287,690	0
OUTAGAMIE COUNTY	67,475,182	4,792,962	4,385,887	9,178,849	0
OZAUKEE COUNTY	33,133,812	2,387,220	2,157,703	4,544,923	0
PEPIN COUNTY	5,263,456	416,686	329,986	746,672	0
PIERCE COUNTY	16,621,822	1,334,678	1,004,933	2,339,610	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
POLK COUNTY	21,234,262	1,605,799	1,301,275	2,907,073	0
PORTAGE COUNTY	30,712,180	2,223,583	1,996,292	4,219,875	0
PRICE COUNTY	7,777,134	575,992	505,514	1,081,506	0
RACINE COUNTY	58,691,469	4,736,044	3,822,989	8,559,034	0
RICHLAND COUNTY	12,476,564	873,635	811,464	1,685,099	0
ROCK COUNTY	76,280,407	5,840,910	4,805,147	10,646,057	0
RUSK COUNTY	8,335,235	646,534	540,181	1,186,715	0
SAUK COUNTY	35,642,327	2,731,797	2,320,039	5,051,836	0
SAWYER COUNTY	10,153,341	757,305	659,967	1,417,273	0
SHAWANO COUNTY	18,602,932	1,391,860	1,207,294	2,599,155	0
SHEBOYGAN COUNTY	45,088,902	3,237,591	2,929,025	6,166,616	0
ST CROIX COUNTY	35,625,961	2,684,013	2,316,560	5,000,573	0
TAYLOR COUNTY	9,628,452	702,833	625,849	1,328,682	0
TREMPEALEAU COUNTY	24,474,487	1,768,181	1,528,876	3,297,057	0
VERNON COUNTY	13,857,776	989,913	900,723	1,890,637	0
VILAS COUNTY	10,726,416	846,397	698,259	1,544,656	0
WALWORTH COUNTY	51,345,320	3,969,026	3,102,983	7,072,008	0
WASHBURN COUNTY	10,295,116	739,543	669,652	1,409,195	0
WASHINGTON COUNTY	40,556,210	3,020,168	2,636,155	5,656,322	0
WAUKESHA COUNTY	96,752,415	7,072,063	6,208,495	13,280,559	0
WAUPACA COUNTY	23,505,353	1,737,979	1,528,582	3,266,560	0
WAUSHARA COUNTY	14,649,699	1,152,092	952,458	2,104,549	0
WINNEBAGO COUNTY	59,501,244	4,699,198	3,658,245	8,357,444	0
WOOD COUNTY	33,720,412	2,506,257	2,079,764	4,586,021	0
Total Counties (71)	\$ 1,975,702,323	\$ 148,154,671	\$ 126,494,142	\$ 274,648,805	\$ 0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
<b>School Districts</b>					
ABBOTSFORD SCHOOL DISTRICT	\$ 4,324,946	\$ 281,509	\$ 280,734	\$ 562,243	\$ 0
ADAMS-FRIENDSHIP AREA SCH DIST	10,422,987	678,882	676,106	1,354,988	0
ALBANY SCHOOL DISTRICT	2,984,848	194,017	194,016	388,032	0
ALGOMA SCHOOL DISTRICT	4,962,478	322,565	322,562	645,127	0
ALMA CENTER-HUMBRD-MERIL SCH D	4,507,254	293,405	292,539	585,943	0
ALMA SCHOOL DISTRICT	1,937,188	125,918	125,917	251,835	0
ALMOND-BANCROFT SCHOOL DIST	2,731,272	180,110	175,655	355,765	0
ALTOONA SCHOOL DISTRICT	11,788,077	766,227	766,224	1,532,451	0
AMERY SCHOOL DISTRICT	12,112,140	788,073	786,840	1,574,912	0
ANTIGO UNIFIED SCHOOL DISTRICT	14,798,068	961,901	961,856	1,923,757	0
APPLETON AREA SCHOOL DISTRICT	102,630,634	6,670,905	6,670,480	13,341,385	0
ARBOR VITAE-WOODRUFF JSD #1	4,204,285	272,921	272,920	545,841	0
ARCADIA SCHOOL DISTRICT	10,534,996	684,780	684,776	1,369,556	0
ARGYLE SCHOOL DISTRICT	2,250,611	146,907	146,290	293,198	0
ARROWHEAD UNION HIGH SCH DIST	14,983,955	973,960	973,957	1,947,916	0
ASHLAND SCHOOL DISTRICT	12,114,934	787,576	787,372	1,574,948	0
ASHWAUBENON SCHOOL DISTRICT	22,230,682	1,445,003	1,444,997	2,890,000	0
ATHENS SCHOOL DISTRICT	3,345,782	217,478	217,476	434,954	0
AUBURNDALE SCHOOL DISTRICT	4,749,107	308,694	308,692	617,386	0
AUGUSTA SCHOOL DISTRICT	5,605,656	364,388	364,363	728,751	0
BALDWIN-WOODVILLE AREA SCH DIS	12,476,626	810,989	810,983	1,621,972	0
BANGOR SCHOOL DISTRICT	4,168,027	270,928	270,918	541,846	0
BARABOO SCHOOL DISTRICT	21,404,267	1,391,289	1,391,280	2,782,569	0
BARNEVELD SCHOOL DISTRICT	2,877,549	187,102	186,982	374,083	0
BARRON AREA SCHOOL DISTRICT	9,265,974	602,298	602,292	1,204,591	0
BAYFIELD SCHOOL DISTRICT	6,709,159	436,100	436,097	872,196	0
BEAVER DAM UNIFIED SCHOOL DIST	23,631,962	1,536,877	1,536,526	3,073,402	0
BEECHER DUNBAR PEMBINE SCH DIS	2,097,895	136,380	136,348	272,727	0
BELLEVILLE SCHOOL DISTRICT	6,484,230	421,477	421,475	842,952	0
BELMONT COMMUNITY SCHOOL DIST	2,700,829	176,855	174,254	351,110	0
BELOIT SCHOOL DISTRICT	46,072,583	3,087,809	2,994,467	6,082,276	0
BELOIT TURNER SCHOOL DISTRICT	10,663,363	693,122	693,118	1,386,240	0
BENTON SCHOOL DISTRICT	1,728,624	112,362	112,361	224,723	0
BERLIN AREA SCHOOL DISTRICT	9,906,419	643,920	643,918	1,287,838	0
BIG FOOT UHS SCH DIST	3,401,843	221,121	221,120	442,241	0
BIRCHWOOD SCHOOL DISTRICT	2,239,145	145,546	145,545	291,091	0
BLACK HAWK SCHOOL DISTRICT	2,994,385	194,636	194,635	389,271	0
BLACK RIVER FALLS SCH DIST	13,110,998	852,224	852,217	1,704,441	0
BLAIR-TAYLOR SCHOOL DISTRICT	4,571,925	297,569	296,783	594,351	0
BLOOMER SCHOOL DISTRICT	7,825,196	508,642	508,638	1,017,280	0
BONDUEL SCHOOL DISTRICT	5,075,367	329,902	329,899	659,801	0
BOSCOBEL SCHOOL DISTRICT	6,193,959	403,318	401,899	805,217	0
BOWLER SCHOOL DISTRICT	2,940,100	191,109	191,108	382,216	0
BOYCEVILLE COMMUNITY SCH DIST	4,862,385	316,056	316,055	632,111	0
BRIGHTON SCH DIST #1	1,019,735	64,976	64,762	129,739	0
BRILLION PUBLIC SCHOOL DIST	6,123,991	398,063	398,060	796,123	0
BRISTOL, TOWN, SCH DIST #1	6,136,768	398,925	398,892	797,817	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
BRODHEAD SCHOOL DISTRICT	\$ 7,834,294	\$ 509,230	\$ 509,228	\$ 1,018,458	\$ 0
BROWN DEER SCHOOL DISTRICT	12,652,533	830,418	826,674	1,657,093	0
BRUCE SCHOOL DISTRICT	3,805,823	247,419	247,378	494,798	0
BURLINGTON AREA SCHOOL DIST	22,755,824	1,489,543	1,489,197	2,978,740	0
BUTTERNUT SCHOOL DISTRICT	1,746,150	113,984	113,500	227,484	0
CADOTT COMM SCHOOL DISTRICT	6,360,448	413,431	413,430	826,861	0
CAMBRIA-FRIESLAND SCHOOL DIST	3,204,607	208,301	208,299	416,600	0
CAMBRIDGE SCHOOL DISTRICT	7,097,892	461,853	461,847	923,700	0
CAMERON SCHOOL DISTRICT	7,630,906	496,015	496,011	992,025	0
CAMPBELLSPORT SCHOOL DISTRICT	9,206,310	598,413	598,410	1,196,823	0
CASHTON SCHOOL DISTRICT	4,390,871	285,408	285,407	570,815	0
CASSVILLE SCHOOL DISTRICT	1,701,315	110,586	110,586	221,172	0
CEDAR GROVE-BELGIUM SCH DIST	6,424,622	417,618	417,588	835,206	0
CEDARBURG SCHOOL DISTRICT	21,041,807	1,367,725	1,367,721	2,735,446	0
CHEQUAMEGON SCHOOL DISTRICT	5,577,242	362,525	362,521	725,046	0
CHETEK-WEYERHAEUSER AREA SD	7,325,467	476,158	476,156	952,314	0
CHILTON SCHOOL DISTRICT	7,415,374	482,051	481,949	964,001	0
CHIPPEWA FALLS AREA UNIF SCH	31,194,115	2,027,620	2,027,616	4,055,236	0
CLAYTON SCHOOL DISTRICT	2,778,476	180,603	180,601	361,204	0
CLEAR LAKE SCHOOL DISTRICT	4,110,957	267,214	267,213	534,427	0
CLINTON COMMUNITY SCHOOL DIST	7,667,361	496,194	495,909	992,103	0
CLINTONVILLE PUBLIC SCH DIST	9,518,943	620,110	617,358	1,237,468	0
COCHRANE-FOUNTAIN CITY SCH DIS	3,580,533	232,735	232,736	465,471	0
COLBY SCHOOL DISTRICT	4,689,694	302,321	301,795	604,116	0
COLEMAN SCHOOL DISTRICT	4,217,758	274,161	274,158	548,319	0
COLFAX SCHOOL DISTRICT	5,156,252	335,160	335,157	670,317	0
COLUMBUS SCHOOL DISTRICT	8,400,918	547,595	547,489	1,095,085	0
CORNELL SCHOOL DISTICT	3,065,601	199,264	199,265	398,530	0
CRANDON SCHOOL DISTRICT	6,246,360	406,017	406,014	812,031	0
CRIVITZ SCHOOL DISTRICT	4,825,121	313,636	313,634	627,270	0
CUBA CITY SCHOOL DISTRICT	5,118,692	332,718	332,716	665,434	0
CUDAHY SCHOOL DISTRICT	18,778,978	1,226,004	1,225,653	2,451,657	0
CUMBERLAND SCHOOL DISTRICT	7,159,040	465,341	465,338	930,680	0
DARLINGTON COMM SCHOOL DIST	6,111,506	397,249	397,247	794,496	0
DC EVEREST AREA SCHOOL DIST	41,665,946	2,708,295	2,708,296	5,416,591	0
DEERFIELD COMM SCHOOL DISTRICT	5,621,756	365,416	365,414	730,830	0
DEFORREST AREA SCHOOL DISTRICT	30,855,128	2,005,592	2,005,584	4,011,176	0
DELAVAN-DARIEN SCHOOL DISTRICT	15,012,597	976,504	975,928	1,952,432	0
DENMARK SCHOOL DISTRICT	10,349,683	673,017	672,309	1,345,326	0
DEPERE UNIFIED SCHOOL DISTRICT	26,905,561	1,748,870	1,748,859	3,497,728	0
DESOTO AREA SCHOOL DISTRICT	3,554,702	231,451	230,662	462,113	0
DODGELAND SCHOOL DISTRICT	6,014,453	390,943	390,941	781,884	0
DODGEVILLE SCHOOL DISTRICT	8,832,767	574,136	574,132	1,148,267	0
DRUMMOND SCHOOL DISTRICT	2,611,628	170,555	168,956	339,511	0
DURAND-ARKANSAW SCHOOL DIST	5,834,319	379,234	379,231	758,465	0
EAST TROY COMMUNITY SCH DIST	10,839,271	704,557	704,553	1,409,110	0
EAU CLAIRE AREA SCHOOL DIST	77,123,437	5,045,177	5,034,697	10,079,874	0
EDGAR SCHOOL DISTRICT	3,589,981	233,352	233,350	466,703	0



## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
EDGERTON SCHOOL DISTRICT	\$ 13,317,287	\$ 865,627	\$ 865,624	\$ 1,731,251	\$ 0
ELCHO SCHOOL DISTRICT	2,258,319	142,569	146,791	289,360	0
ELEVA-STRUM SCHOOL DISTRICT	4,627,196	300,769	300,768	601,537	0
ELK MOUND AREA SCHOOL DISTRICT	7,569,925	492,106	492,100	984,206	0
ELKHART LAKE-GLENBEULAH SCH DS	3,966,724	257,839	257,837	515,676	0
ELKHORN AREA SCHOOL DISTRICT	24,777,065	1,610,522	1,610,514	3,221,036	0
ELLSWORTH COMM SCH DIST	11,278,266	734,363	731,816	1,466,179	0
ELMBROOK SCHOOL DISTRICT	57,601,845	3,744,139	3,744,124	7,488,263	0
ELMWOOD SCHOOL DISTRICT	2,988,865	194,277	194,277	388,554	0
ERIN SCH DIST #2	1,850,925	120,313	120,311	240,623	0
EVANSVILLE COMM SCH DIST	12,730,135	827,432	827,505	1,654,937	0
FALL CREEK SCHOOL DISTRICT	5,364,281	348,679	348,678	697,356	0
FALL RIVER SCHOOL DISTRICT	3,427,321	223,016	222,776	445,792	0
FENNIMORE COMMUNITY SCH DIST	5,973,658	388,288	388,287	776,575	0
FLAMBEAU SCHOOL DISTRICT	4,213,508	273,880	273,878	547,759	0
FLORENCE COUNTY SCH DIST	3,752,488	243,913	243,912	487,825	0
FOND DU LAC SCHOOL DISTRICT	49,620,596	3,225,394	3,225,242	6,450,636	0
FONTANA JT SCH DIST #8 ETAL	2,037,724	132,539	132,366	264,905	0
FORT ATKINSON SCHOOL DISTRICT	22,955,719	1,492,126	1,492,127	2,984,253	0
FOX POINT JT SCH DIST # 2 ETAL	7,807,842	507,512	507,510	1,015,022	0
FRANKLIN PUBLIC SCHOOL DIST	33,269,967	2,161,782	2,164,512	4,326,294	0
FREDERIC SCHOOL DISTRICT	4,121,971	268,253	267,608	535,861	0
FREEDOM AREA SCHOOL DISTRICT	10,495,097	682,230	682,139	1,364,369	0
GALESVILLE SCHOOL DISTRICT ETAL	10,410,536	676,687	676,684	1,353,371	0
GENEVA JT SCH DIST #4 ETAL	1,310,761	85,201	85,200	170,400	0
GENOA CITY JT SCH DIST #2 ETAL	3,675,360	240,500	237,297	477,797	0
GERMANTOWN SCHOOL DISTRICT	26,269,317	1,719,657	1,707,849	3,427,506	0
GIBRALTAR AREA SCHOOL DISTRICT	7,156,482	465,173	465,172	930,345	0
GILLETT SCHOOL DISTRICT	3,949,263	256,703	256,702	513,405	0
GILMAN SCHOOL DISTRICT	2,603,929	169,256	169,256	338,512	0
GILMANTON SCHOOL DISTRICT	971,951	63,177	63,177	126,354	0
GLENDALE-RIVER HILLS SCH DIST	9,226,707	599,739	599,736	1,199,475	0
GLENWOOD CITY SCHOOL DISTRICT	4,493,058	292,051	292,049	584,100	0
GOODMAN-ARMSTRONG SCHOOL DIST	968,962	62,983	62,982	125,965	0
GRAFTON SCHOOL DISTRICT	13,669,653	888,532	888,529	1,777,060	0
GRANTON AREA SCHOOL DISTRICT	2,043,775	132,846	132,845	265,692	0
GRANTSBURG SCHOOL DISTRICT	9,074,543	603,098	601,929	1,205,027	0
GREEN BAY AREA PUBLIC SCHOOLS	167,219,678	10,870,370	10,854,281	21,724,651	0
GREEN LAKE SCHOOL DISTRICT	2,406,740	156,447	156,428	312,875	0
GREENDALE SCHOOL DISTRICT	21,775,238	1,415,396	1,415,391	2,830,788	0
GREENFIELD SCHOOL DISTRICT	26,474,243	1,720,868	1,720,863	3,441,731	0
GREENWOOD SCHOOL DISTRICT	3,104,709	202,228	201,806	404,034	0
GRESHAM SCHOOL DIST	2,264,516	147,246	147,144	294,390	0
HAMILTON SCHOOL DISTRICT	32,665,924	2,123,302	2,123,290	4,246,593	0
HARTFORD JT SCH DIST #1 ETAL	10,846,188	705,085	705,077	1,410,162	0
HARTFORD UNION HIGH SCH DIST	9,112,329	589,169	588,890	1,178,059	0
HARTLAND JT SCH DIST #3 ETAL	8,336,917	541,904	541,901	1,083,806	0
HAYWARD COMMUNITY SCHOOL DIST	13,822,821	898,484	898,481	1,796,965	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
HERMAN-NEOSHO-RUBICON SD	\$ 2,371,235	\$ 154,131	\$ 154,130	\$ 308,261	\$ 0
HIGHLAND SCHOOL DISTRICT	1,674,786	108,861	108,861	217,722	0
HILBERT SCHOOL DISTRICT	3,122,951	202,993	202,991	405,984	0
HILLSBORO SCHOOL DISTRICT	4,407,016	286,418	286,416	572,834	0
HOLMEN SCHOOL DISTRICT	31,337,098	2,038,326	2,038,191	4,076,517	0
HOLY HILL AREA SCHOOL DIST	3,059,580	198,639	198,578	397,217	0
HORICON SCHOOL DISTRICT	5,288,914	343,782	343,780	687,562	0
HORTONVILLE AREA SCHOOL DIST	24,584,658	1,597,931	1,597,925	3,195,855	0
HOWARDS GROVE SCHOOL DISTRICT	6,634,945	431,892	431,271	863,163	0
HOWARD-SUAMICO SCHOOL DISTRICT	39,866,337	2,591,329	2,591,317	5,182,645	0
HUDSON SCHOOL DISTRICT	40,837,609	2,661,306	2,660,486	5,321,792	0
HURLEY SCHOOL DISTRICT	3,452,142	225,355	225,217	450,572	0
HUSTISFORD SCHOOL DISTRICT	2,719,434	176,766	176,764	353,530	0
INDEPENDENCE SCHOOL DISTRICT	3,059,710	198,883	198,882	397,766	0
IOLA-SCANDINAVIA SCHOOL DIST	4,600,769	301,899	296,204	598,103	0
IOWA-GRANT SCHOOL DISTRICT	5,750,441	374,276	373,508	747,784	0
ITHACA SCHOOL DISTRICT	3,142,001	204,261	204,201	408,462	0
JANESVILLE SCHOOL DISTRICT	74,875,771	4,866,965	4,866,909	9,733,875	0
JEFFERSON SCHOOL DISTRICT	13,762,746	895,477	894,933	1,790,410	0
JOHNSON CREEK SCHOOL DISTRICT	4,706,150	305,900	305,898	611,798	0
JUDA SCHOOL DISTRICT	1,821,858	118,362	118,355	236,717	0
KANSASVILLE DOVER DIST #1	681,381	44,290	44,290	88,580	0
KAUKAUNA AREA SCHOOL DISTRICT	25,763,967	1,674,664	1,674,656	3,349,320	0
KENOSHA UNIFIED SCH DIST #1	153,971,112	10,014,287	10,013,574	20,027,861	0
KETTLE MORAINNE SCHOOL DISTRICT	25,957,109	1,687,222	1,687,213	3,374,435	0
KEWASKUM SCHOOL DISTRICT	11,474,520	745,971	745,719	1,491,690	0
KEWAUNEE SCHOOL DISTRICT	6,561,057	426,472	426,469	852,941	0
KICKAPOO AREA SCHOOL DISTRICT	3,601,089	234,073	234,071	468,144	0
KIEL AREA SCHOOL DISTRICT	8,321,440	542,187	542,133	1,084,319	0
KIMBERLY AREA SCHOOL DISTRICT	30,519,398	1,983,766	1,983,757	3,967,524	0
KOHLER SCHOOL DISTRICT	4,514,967	293,473	293,473	586,946	0
LA CROSSE SCHOOL DISTRICT	57,570,130	3,742,073	3,742,060	7,484,133	0
LAC DU FLAMBEAU SCH DIST #1	7,716,218	501,559	501,556	1,003,115	0
LADYSMITH-HAWKINS SCH DIST	5,525,703	359,323	359,045	718,368	0
LAFARGE SCHOOL DISTRICT	2,196,100	144,685	142,747	287,431	0
LAKE COUNTRY SCH DIST	3,378,654	219,763	219,463	439,226	0
LAKE GENEVA GENOA CITY UHS	10,771,133	700,129	700,126	1,400,255	0
LAKE GENEVA JT SCH DIS #1 ETAL	12,420,057	807,308	807,305	1,614,613	0
LAKE HOLCOMBE SCHOOL DISTRICT	2,523,260	164,093	164,012	328,105	0
LAKE MILLS AREA SCHOOL DIST	10,552,620	685,925	685,922	1,371,847	0
LAKELAND UNION HIGH SCH DIST	7,437,504	484,735	483,439	968,174	0
LANCASTER COMM SCH DIST	7,175,542	466,416	466,412	932,828	0
LAONA SCHOOL DISTRICT	2,031,341	132,037	132,037	264,074	0
LENA PUBLIC SCHOOL DISTRICT	2,796,354	184,810	178,718	363,528	0
LINN JT SCH DIST #4 ETAL	1,091,385	71,228	70,654	141,882	0
LINN JT SCH DIST #6 ETAL	978,090	63,967	63,378	127,345	0
LITTLE CHUTE AREA SCHOOL DIST	10,124,102	658,068	658,066	1,316,134	0
LODI SCHOOL DISTRICT	11,039,068	717,543	717,541	1,435,084	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
LOMIRA SCHOOL DISTRICT	\$ 7,411,680	\$ 481,763	\$ 481,760	\$ 963,524	\$ 0
LOYAL SCHOOL DISTRICT	3,496,522	227,683	227,635	455,319	0
LUCK SCHOOL DISTRICT	3,455,808	224,743	224,513	449,255	0
LUXEMBURG-CASCO SCHOOL DIST	11,287,864	735,174	733,713	1,468,888	0
MADISON METRO SCHOOL DISTRICT	250,933,511	16,314,836	16,314,333	32,629,169	0
MANAWA SCHOOL DISTRICT	3,699,284	240,455	240,454	480,909	0
MANITOWOC PUBLIC SCHOOL DIST	39,178,393	2,542,650	2,538,372	5,081,022	0
MAPLE DALE-INDIAN HILL SCH DIS	4,173,175	271,257	271,256	542,514	0
MAPLE SCHOOL DISTRICT	9,132,524	593,617	593,615	1,187,232	0
MARATHON CITY SCHOOL DISTRICT	4,336,843	282,104	281,688	563,791	0
MARINETTE SCHOOL DISTRICT	12,397,730	805,859	805,855	1,611,713	0
MARION SCHOOL DISTRICT	2,396,124	155,748	155,747	311,495	0
MARKESAN SCHOOL DISTRICT	5,250,278	341,269	341,268	682,537	0
MARSHALL JT SCH DIST #2 ETAL	7,772,624	505,224	505,221	1,010,445	0
MARSHFIELD UNIFIED SCHOOL DIST	25,734,175	1,672,731	1,672,723	3,345,453	0
MAUSTON SCHOOL DISTRICT	9,955,591	647,498	646,827	1,294,325	0
MAYVILLE SCHOOL DISTRICT	7,680,788	499,253	499,253	998,506	0
MCFARLAND SCHOOL DISTRICT	20,080,127	1,305,232	1,305,193	2,610,425	0
MEDFORD AREA PUBLIC SCHL DIST	19,741,853	1,283,226	1,283,221	2,566,448	0
MELLEN SCHOOL DISTRICT	2,061,978	134,030	134,029	268,059	0
MELROSE-MINDORO SCHOOL DIST	5,853,175	380,459	380,458	760,917	0
MENASHA JOINT SCHOOL DISTRICT	26,306,842	1,708,547	1,705,213	3,413,759	0
MENOMINEE INDIAN SCHOOL DIST	10,423,197	677,514	677,510	1,355,023	0
MENOMONEE FALLS SCHOOL DISTRICT	30,227,497	1,975,040	1,964,792	3,939,832	0
MENOMONIE AREA SCHOOL DISTRICT	21,709,177	1,411,104	1,411,092	2,822,195	0
MEQUON-THIENSVILLE SCHOOL DIST	26,591,988	1,728,484	1,728,480	3,456,963	0
MERCER SCHOOL DISTRICT	1,498,643	97,412	97,412	194,824	0
MERRILL AREA COMMON PUB SCH	20,361,400	1,323,497	1,323,491	2,646,988	0
MERTON COMMUNITY SCHOOL DIST	5,214,700	338,957	338,955	677,912	0
MIDDLETON-CROSS PLNS SCH DIST	58,928,822	3,830,478	3,830,444	7,660,922	0
MILTON SCHOOL DISTRICT	24,097,570	1,566,349	1,566,342	3,132,691	0
MILWAUKEE TEACHERS RETIREM SYS	391,571,645	25,456,512	25,455,811	50,912,323	0
MINERAL POINT UNIF SCH DIST	5,174,301	336,330	336,329	672,659	0
MINOCQUA JT SCH DIST #1 M-H-LT	4,731,668	307,560	307,559	615,119	0
MISHICOT SCHOOL DISTRICT	6,294,751	409,160	409,159	818,320	0
MONDOVI SCHOOL DISTRICT	6,816,922	443,102	443,100	886,203	0
MONONA GROVE SCHOOL DISTRICT	27,523,510	1,788,059	1,788,009	3,576,068	0
MONROE SCHOOL DISTRICT	18,289,680	1,198,021	1,188,828	2,386,849	0
MONTELLO SCHOOL DISTRICT	5,358,960	348,334	348,333	696,667	0
MONTICELLO SCHOOL DISTRICT	2,733,103	177,654	177,652	355,306	0
MOSINEE SCHOOL DISTRICT	13,751,827	894,561	893,755	1,788,316	0
MOUNT HOREB AREA SCHOOL DIST	17,344,101	1,127,370	1,127,367	2,254,736	0
MUKWONAGO SCHOOL DISTRICT	33,059,008	2,148,844	2,148,835	4,297,679	0
MUSKEGO-NORWAY SCHOOL DISTRICT	34,021,378	2,211,396	2,211,387	4,422,784	0
NECEDAH AREA SCHOOL DISTRICT	5,521,672	358,911	358,909	717,820	0
NEENAH JOINT SCHOOL DISTRICT	41,677,950	2,709,079	2,709,067	5,418,147	0
NEILLSVILLE SCHOOL DISTRICT	5,463,937	357,278	353,036	710,314	0
NEKOOSA SCHOOL DISTRICT	7,871,863	511,676	511,673	1,023,349	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
NEW AUBURN SCHOOL DISTRICT	\$ 2,337,904	\$ 151,965	\$ 151,964	\$ 303,928	\$ 0
NEW BERLIN SCHOOL DISTRICT	28,792,378	1,871,511	1,871,506	3,743,017	0
NEW GLARUS SCHOOL DISTRICT	6,898,861	448,428	448,426	896,854	0
NEW HOLSTEIN SCHOOL DISTRICT	6,422,522	418,551	416,380	834,931	0
NEW LISBON SCHOOL DISTRICT	3,945,129	256,434	256,433	512,867	0
NEW LONDON SCHOOL DISTRICT	13,562,368	881,561	881,555	1,763,117	0
NEW RICHMOND SCHOOL DISTRICT	23,067,403	1,499,552	1,499,225	2,998,777	0
NIAGARA SCHOOL DISTRICT	3,212,081	208,787	208,786	417,573	0
NICOLET HIGH SCHOOL DISTRICT	11,727,967	762,319	762,318	1,524,637	0
NORRIS SCHOOL DISTRICT	1,606,594	104,429	104,429	208,857	0
NORTH CAPE CONSOLIDATED S D	1,441,940	93,727	93,727	187,454	0
NORTH CRAWFORD SCHOOL DISTRICT	3,868,724	251,469	251,467	502,936	0
NORTH FOND DU LAC SCH DIST	10,139,133	659,047	659,044	1,318,090	0
NORTH LAKE SCHOOL DISTRICT	1,757,550	114,242	114,241	228,483	0
NORTH LAKELAND SCHOOL DISTRICT	1,822,772	118,480	118,481	236,961	0
NORTHERN OZAUKEE SCHOOL DIST	5,512,660	358,326	358,324	716,650	0
NORTHLAND PINES SCHOOL DIST	11,547,439	750,587	750,584	1,501,171	0
NORTHWOOD SCHOOL DISTRICT	2,672,748	173,730	173,729	347,459	0
NORWALK-ONTARIO SCHOOL DIST	4,609,010	299,587	299,585	599,172	0
NORWAY-RAYMOND JT#7 SD	596,394	38,766	38,765	77,531	48,529
OAK CREEK-FRANKLIN JT SCH DIST	43,810,752	2,848,911	2,842,906	5,691,817	0
OAKFIELD SCHOOL DISTRICT	4,230,375	274,976	274,975	549,951	0
OCONOMOWOC AREA SCHOOL DIST	34,200,274	2,220,465	2,220,429	4,440,893	0
OCONTO FALLS PUBLIC SCH DIST	12,327,971	801,319	801,317	1,602,637	0
OCONTO UNIFIED SCHOOL DISTRICT	6,978,022	453,570	453,569	907,138	0
OMRO SCHOOL DISTRICT	7,941,683	516,215	516,212	1,032,427	0
ONALASKA SCHOOL DISTRICT	22,140,153	1,439,116	1,439,113	2,878,228	0
OOSTBURG SCHOOL DISTRICT	6,684,684	434,509	434,506	869,015	0
OREGON SCHOOL DISTRICT	34,614,577	2,249,975	2,249,970	4,499,945	0
OSCEOLA SCHOOL DISTRICT	12,273,898	797,807	797,804	1,595,611	0
OSHKOSH AREA SCHOOL DISTRICT	72,487,149	4,713,260	4,712,444	9,425,704	0
OSSEO-FAIRCHILD SCHOOL DIST	6,474,817	420,864	420,863	841,727	0
OWEN-WITHEE SCHOOL DISTRICT	3,464,010	225,163	225,162	450,325	0
PALMYRA-EAGLE AREA SCHOOL DIST	4,550,417	295,780	295,778	591,557	0
PARDEEVILLE AREA SCHOOL DIST	5,576,161	362,452	362,450	724,902	354,992
PARIS JT SCH DIST #1 ETAL	1,418,730	92,218	92,217	184,435	0
PARKVIEW SCHOOL DISTRICT	6,652,607	433,230	431,613	864,843	0
PECATONICA AREA SCHOOL DIST	3,822,643	248,473	248,472	496,945	0
PEPIN AREA SCHOOL DISTRICT	2,113,652	137,388	137,387	274,775	0
PESHTIGO SCHOOL DISTRICT	6,738,409	437,999	437,997	875,996	0
PEWAUKEE SCHOOL DISTRICT	20,568,922	1,336,983	1,336,980	2,673,964	0
PHELPS SCHOOL DISTRICT	1,411,350	91,738	91,738	183,476	0
PHILLIPS SCHOOL DISTRICT	5,697,054	370,310	370,309	740,619	0
PITTSVILLE SCHOOL DISTRICT	4,337,365	281,931	281,929	563,860	0
PLATTEVILLE SCHOOL DISTRICT	10,868,295	706,444	706,440	1,412,884	0
PLUM CITY SCHOOL DISTRICT	2,330,117	151,459	151,457	302,916	0
PLYMOUTH JOINT SCHOOL DISTRICT	16,083,848	1,046,895	1,045,389	2,092,284	0
PORT EDWARDS SCHOOL DISTICT	2,965,368	192,750	192,749	385,499	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
PORT WASHINGTON-SAUKVILLE SCH	\$ 19,046,899	\$ 1,238,053	\$ 1,238,048	\$ 2,476,101	\$ 0
PORTAGE COMMUNITY SCHOOL DIST	15,214,163	988,931	988,924	1,977,855	0
POTOSI SCHOOL DISTRICT	2,841,646	184,710	184,708	369,419	0
POYNETTE SCHOOL DISTRICT	7,272,448	472,782	472,710	945,492	0
PRAIRIE DU CHIEN AREA SCH DIST	7,850,262	510,270	510,267	1,020,537	0
PRAIRIE FARM PUBLIC SCH DIST	2,894,085	188,119	188,116	376,235	0
PRENTICE SCHOOL DISTRICT	2,635,889	171,776	171,765	343,541	0
PRESCOTT SCHOOL DISTRICT	9,252,699	610,552	591,715	1,202,267	0
PRINCETON SCHOOL DISTRICT	2,364,167	153,578	153,671	307,249	0
PULASKI COMMUNITY SCHOOL DIST	26,945,086	1,751,606	1,751,040	3,502,646	0
RACINE UNIFIED SCHOOL DISTRICT	145,273,624	9,442,813	9,442,792	18,885,605	0
RANDALL JT SCH DIST #1 ETAL	4,444,928	288,924	288,921	577,845	0
RANDOLPH SCHOOL DISTRICT	3,883,101	252,402	252,401	504,803	0
RANDOM LAKE SCHOOL DISTRICT	5,489,666	356,830	356,828	713,658	0
RAYMOND SCH DIST #14	2,722,027	176,933	176,932	353,865	0
REEDSBURG SCHOOL DISTRICT	20,664,868	1,343,223	1,343,216	2,686,439	0
REEDSVILLE SCHOOL DISTRICT	4,204,530	273,296	273,295	546,591	0
RHINELANDER SCHOOL DISTRICT	17,284,254	1,123,491	1,123,470	2,246,960	0
RIB LAKE SCHOOL DISTRICT	3,158,275	205,288	205,288	410,577	0
RICE LAKE AREA SCHOOL DISTRICT	17,070,073	1,115,086	1,113,134	2,228,220	0
RICHLAND SCHOOL DISTRICT	9,191,980	597,481	597,478	1,194,959	0
RICHMOND SCHOOL DISTRICT	2,038,179	135,388	129,576	264,963	0
RIO COMMUNITY SCHOOL DISTRICT	3,132,078	203,587	203,585	407,172	0
RIPON AREA SCHOOL DISTRICT	11,775,864	765,777	765,742	1,531,519	0
RIVER FALLS SCHOOL DISTRICT	23,220,647	1,534,350	1,509,347	3,043,697	0
RIVER RIDGE SCHOOL DISTRICT	3,806,941	247,453	247,451	494,904	0
RIVER VALLEY SCHOOL DISTRICT	8,763,286	569,616	569,613	1,139,229	0
RIVERDALE SCHOOL DISTRICT	4,272,650	277,726	277,719	555,445	0
ROSENDALE-BRANDON SCHOOL DIST	6,447,684	414,846	413,729	828,575	0
ROSHOLT SCHOOL DISTRICT	3,478,131	226,593	225,566	452,159	0
ROYALL SCHOOL DISTRICT	3,878,706	251,944	251,934	503,879	0
SALEM SCHOOL DISTRICT	7,087,245	460,354	460,309	920,662	0
SAUK PRAIRIE SCHOOL DISTRICT	19,615,874	1,275,097	1,274,974	2,550,070	0
SENECA SCHOOL DISTRICT	1,663,943	108,157	108,156	216,313	0
SEVASTOPOL SCHOOL DISTRICT	5,618,617	366,135	366,040	732,175	0
SEYMOUR COMMUNITY SCHOOL DIST	14,377,436	934,536	934,534	1,869,070	0
SHARON JT SCH DIST # 11 ETAL	1,394,586	90,648	90,648	181,297	0
SHAWANO SCHOOL DIST	14,875,896	966,940	966,934	1,933,875	0
SHEBOYGAN AREA SCHOOL DISTRICT	73,378,154	4,775,403	4,769,771	9,545,174	0
SHEBOYGAN FALLS SCHOOL DIST	11,493,469	747,078	747,075	1,494,153	0
SHELL LAKE SCHOOL DISTRICT	4,744,723	308,408	308,406	616,814	0
SHIOCTON SCHOOL DISTRICT	6,030,020	391,953	391,952	783,905	0
SHOREWOOD SCHOOL DISTRICT	16,855,720	1,095,629	1,095,622	2,191,250	0
SHULLSBURG SCHOOL DISTRICT	2,507,442	162,984	162,983	325,967	0
SILVER LAKE JT SCH DIS #1 ETAL	2,860,161	185,911	185,910	371,821	0
SIREN SCHOOL DISTRICT	3,562,239	231,546	231,545	463,091	0
SLINGER SCHOOL DISTRICT	19,389,741	1,260,335	1,260,332	2,520,667	0
OLON SPRINGS SCHOOL DISTRICT	2,568,198	166,934	166,933	333,868	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
SOMERSET SCHOOL DISTRICT	\$ 10,883,184	\$ 707,408	\$ 707,406	\$ 1,414,814	\$ 0
SOUTH MILWAUKEE SCHOOL DIST	23,514,149	1,538,051	1,537,430	3,075,481	0
SOUTH SHORE SCHOOL DISTRICT	1,978,629	128,612	128,611	257,223	0
SOUTHERN DOOR COUNTY SCH DIST	8,171,653	531,162	531,159	1,062,321	0
SOUTHWESTERN WISC COMM SCH DIS	3,124,983	203,125	203,124	406,249	0
SPARTA AREA SCHOOL DISTRICT	21,515,750	1,398,545	1,398,533	2,797,078	0
SPENCER SCHOOL DISTRICT	3,422,837	222,486	222,484	444,970	0
SPOONER AREA SCHOOL DISTRICT	8,505,634	552,868	552,866	1,105,733	0
SPRING VALLEY SCHOOL DISTRICT	5,225,077	339,633	339,631	679,263	0
ST CROIX CENTRAL SCH DIST	12,419,021	807,239	807,236	1,614,476	0
ST CROIX FALLS SCHOOL DISTRICT	8,833,165	574,158	574,156	1,148,314	0
ST FRANCIS SCHOOL DISTRICT #6	7,841,946	509,869	509,772	1,019,641	0
STANLEY-BOYD AREA SCHOOL DIST	7,204,558	468,300	468,297	936,597	0
STEVENS POINT AREA PUB SCH DIS	49,087,393	3,192,814	3,191,022	6,383,835	0
STOCKBRIDGE SCH DIST	1,432,377	93,105	93,105	186,210	0
STONE BANK SCHOOL DISTRICT	2,270,854	147,606	147,606	295,212	0
STOUGHTON AREA SCHOOL DISTRICT	21,398,744	1,394,331	1,390,527	2,784,858	0
STRATFORD SCHOOL DISTRICT	5,147,643	334,600	334,598	669,198	0
STURGEON BAY SCHOOL DISTRICT	9,271,839	602,702	602,642	1,205,344	0
SUN PRAIRIE AREA SCH DIS	68,467,574	4,450,898	4,450,842	8,901,740	0
SUPERIOR SCHOOL DISTRICT	36,173,052	2,362,726	2,358,032	4,720,758	0
SURING PUBLIC SCHOOL DISTRICT	2,817,441	183,136	183,134	366,270	0
SWALLOW SCHOOL DISTRICT	2,624,248	170,577	170,576	341,153	0
THORP SCHOOL DISTRICT	4,171,984	271,181	271,180	542,362	0
THREE LAKES SCHOOL DISTRICT	5,326,584	346,230	346,228	692,458	0
TIGERTON SCHOOL DISTRICT	1,615,942	105,036	105,037	210,073	0
TOMAH AREA SCHOOL DISTRICT	22,655,075	1,472,585	1,472,583	2,945,167	0
TOMAHAWK SCHOOL DISTRICT	8,126,590	528,231	528,229	1,056,460	0
TOMORROW RIVER SCHOOL DISTRICT	7,917,016	514,608	514,606	1,029,215	0
TREVOR-WILMOT CONS GR S.D.	3,861,398	250,993	250,991	501,984	0
TRI-COUNTY AREA SCH DIST-PLNFD	4,765,068	309,731	309,729	619,460	0
TURTLE LAKE SCHOOL DISTRICT	3,207,880	208,513	208,512	417,025	0
TWIN LAKES SCH DIST #4	2,508,847	163,066	163,075	326,141	0
TWO RIVERS PUBLIC SCHOOL DIST	12,388,050	805,472	805,446	1,610,918	0
UNION GROVE JT SCH DIS #1 ETAL	6,020,803	391,354	391,352	782,706	0
UNION GROVE UNION HIGH SCH DIS	6,509,259	423,105	423,103	846,208	0
UNITY SCHOOL DISTRICT	7,729,814	502,441	502,439	1,004,880	0
VALDERS AREA SCHOOL DISTRICT	7,103,420	461,723	461,722	923,445	0
VERONA AREA SCHOOL DISTRICT	48,012,620	3,121,033	3,120,634	6,241,667	0
VIROQUA AREA SCHOOL DISTRICT	8,285,270	538,546	538,543	1,077,089	0
WABENO AREA SCHOOL DISTRICT	3,967,593	257,895	257,894	515,789	0
WALWORTH JT SCH DIST # 1 ETAL	2,538,008	164,972	164,970	329,942	0
WASHBURN SCHOOL DISTRICT	4,452,649	289,425	289,423	578,848	0
WASHINGTON SCHOOL DISTRICT	651,286	42,375	42,293	84,668	0
WASHINGTON-CALDWELL SCH DIST	1,197,452	77,835	77,835	155,670	0
WATERFORD UNION HIGH SCH DIST	9,096,578	591,280	591,278	1,182,558	0
WATERFORD VIL JT SCH DIST #1	9,733,412	632,674	632,673	1,265,348	0
WATERLOO SCHOOL DISTRICT	5,658,869	367,830	367,827	735,657	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
WATERTOWN UNIFIED SCHOOL DIST	\$ 26,335,558	\$ 1,711,817	\$ 1,711,813	\$ 3,423,630	\$ 0
WAUKESHA SCHOOL DISTRICT	88,236,938	5,735,503	5,735,441	11,470,944	0
WAUNAKEE COMMUNITY SCHOOL DIST	34,670,657	2,253,757	2,253,598	4,507,354	0
WAUPACA SCHOOL DISTRICT	16,132,366	1,048,913	1,048,297	2,097,210	0
WAUPUN AREA SCHOOL DISTRICT	13,042,148	846,929	846,822	1,693,751	0
WAUSAU SCHOOL DISTRICT	64,590,612	4,210,790	4,202,253	8,413,043	0
WAUSAUKEE SCHOOL DISTRICT	3,043,889	197,854	197,853	395,707	0
WAUTOMA AREA SCHOOL DISTRICT	9,716,120	633,221	632,362	1,265,584	0
WAUWATOSA SCHOOL DISTRICT	46,161,156	3,000,482	3,000,480	6,000,962	0
WAUZEKA JT SCH DIST ETAL	2,185,042	142,028	142,028	284,056	0
WEBSTER SCHOOL DISTRICT	5,271,698	343,330	343,252	686,583	0
WEST ALLIS-WEST MILW SCH DIST	51,865,694	3,371,288	3,371,272	6,742,560	0
WEST BEND JT SCH DIST #1	43,273,972	2,827,796	2,814,069	5,641,865	0
WEST DEPERE SCHOOL DISTRICT	21,969,194	1,428,392	1,427,646	2,856,038	0
WEST SALEM SCHOOL DISTRICT	13,602,915	884,193	884,190	1,768,383	0
WESTBY AREA SCHOOL DISTRICT	7,387,011	480,179	480,156	960,335	0
WESTFIELD SCHOOL DISTRICT	6,680,911	434,263	434,260	868,524	0
WESTON SCHOOL DISTRICT	2,388,038	155,223	155,222	310,445	0
WESTOSHA CENTRAL HIGH SCH DIST	7,949,935	516,748	516,747	1,033,495	0
WEYAUWEGA-FREMONT SCHOOL DIST	5,544,659	362,640	362,006	724,646	0
WHEATLAND JT SCH DIST #1 ETAL	4,430,399	287,978	287,976	575,954	0
WHITE LAKE SCHOOL DISTRICT	1,345,375	87,450	87,449	174,899	0
WHITEFISH BAY SCHOOL DISTRICT	20,114,929	1,307,475	1,307,472	2,614,946	0
WHITEHALL SCHOOL DISTRICT	5,968,571	387,957	387,956	775,913	0
WHITEWATER UNIFIED SCHOOL DIST	14,637,739	952,465	951,426	1,903,891	0
WHITNALL SCHOOL DISTRICT	18,301,042	1,194,135	1,193,622	2,387,757	0
WILD ROSE SCHOOL DISTRICT	3,549,462	230,923	230,509	461,432	0
WILLIAMS BAY SCHOOL DISTRICT	4,676,440	303,970	303,969	607,939	0
WILMOT UNION HIGH SCHOOL DIST	8,689,866	564,843	564,841	1,129,684	0
WINNECONNE COMM SCHOOL DIST	11,158,016	725,277	725,273	1,450,550	0
WINTER SCHOOL DISTRICT	2,259,084	148,355	148,294	296,649	0
WISCONSIN DELLS SCHOOL DIST	11,819,850	766,042	766,031	1,532,073	0
WISCONSIN HEIGHTS SCHOOL DIST	5,832,605	498,566	379,119	877,686	0
WISCONSIN RAPIDS SCHOOL DIST	36,309,905	2,360,146	2,360,169	4,720,314	0
WITTENBERG-BIRNAMWOOD SCH DIST	7,639,569	496,573	496,572	993,145	0
WONEWOC & UNION CENTER SCH DIS	2,272,438	147,710	147,709	295,418	0
WRIGHTSTOWN COMMUNITY SCH DIST	8,268,419	537,454	537,450	1,074,904	0
YORKVILLE JT SCH DIST #2 ETAL	2,994,200	214,537	194,623	409,160	0
Total School Districts (421)	\$ 5,979,728,978	\$ 389,174,519	\$ 388,701,972	\$ 777,876,486	\$ 403,521



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
<b>Technical Colleges</b>					
BLACKHAWK TECHNICAL COLLEGE	\$ 15,593,064	\$ 1,013,553	\$ 1,013,550	\$ 2,027,103	\$ 0
CHIPPEWA VALLEY TECH COLLEGE	36,622,961	2,380,502	2,380,493	4,760,994	0
FOX VALLEY TECHNICAL COLLEGE	66,461,844	4,320,103	4,320,129	8,640,231	0
GATEWAY TECH COLLEGE	51,998,263	3,385,617	3,385,151	6,770,768	0
LAKESHORE TECHNICAL COLLEGE	19,081,311	1,240,293	1,240,287	2,480,580	0
MADISON AREA TECH COLLEGE	104,637,894	6,802,097	6,801,859	13,603,955	0
MID-STATE TECHNICAL COLLEGE	17,462,208	1,135,066	1,135,043	2,270,109	0
MILWAUKEE AREA TECH COLLEGE	114,358,125	7,438,105	7,437,187	14,875,291	0
MORAINES PARK TECHNICAL COLLEGE	29,322,206	1,905,949	1,905,946	3,811,895	0
NICOLET AREA TECHNICAL COLLEGE	11,548,183	750,635	750,632	1,501,267	0
NORTH CENTRAL TECH COLLEGE	29,817,053	1,938,110	1,938,125	3,876,235	0
NORTHEAST WISC TECH COLLEGE	56,754,155	3,689,029	3,689,024	7,378,053	0
NORTHWOOD TECHNICAL COLLEGE	26,415,401	1,717,009	1,717,003	3,434,012	0
SOUTHWEST WISC TECH COLLEGE	13,491,037	882,068	882,042	1,764,110	0
WAUKESHA CO TECHNICAL COLLEGE	40,476,351	2,631,141	2,630,962	5,262,103	0
WESTERN TECH COLLEGE	31,798,753	2,070,738	2,063,230	4,133,968	0
<b>Total Technical Colleges (16)</b>	<b>\$ 665,838,809</b>	<b>\$ 43,300,015</b>	<b>\$ 43,290,663</b>	<b>\$ 86,590,674</b>	<b>\$ 0</b>

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
<b>CESAs</b>					
CESA #1	\$ 7,651,129	\$ 497,326	\$ 497,324	\$ 994,650	\$ 0
CESA #2	7,456,837	484,713	484,682	969,395	0
CESA #3, FENNIMORE	2,420,887	157,358	157,357	314,715	0
CESA #4, LACROSSE	3,343,111	217,305	217,303	434,608	0
CESA #5, PORTAGE	13,061,561	849,006	849,002	1,698,008	0
CESA #6, OSHKOSH	13,581,725	893,454	882,813	1,776,267	0
CESA #7, GREEN BAY	9,099,382	593,092	590,976	1,184,068	0
CESA #8, GILLETT	5,540,458	359,757	360,033	719,790	0
CESA #9, TOMAHAWK	3,174,071	206,316	206,315	412,631	0
CESA #10, CHIPPEWA FALLS	9,342,909	607,293	607,290	1,214,582	0
CESA #11	8,730,252	567,469	567,466	1,134,935	0
CESA #12, ASHLAND	2,011,707	130,762	130,761	261,523	0
Total CESAs (12)	\$ 85,414,029	\$ 5,563,851	\$ 5,551,322	\$ 11,115,172	\$ 0
<b>Total WRS (1586)</b>	<b>\$ 16,361,316,740</b>	<b>\$ 1,224,801,803</b>	<b>\$ 1,059,367,202</b>	<b>\$ 2,284,168,983</b>	<b>\$ 5,130,040</b>

\* Includes contributions for WRS, Accumulated Sick Leave Conversion, Supplemental Health Insurance Conversion and Duty Disability