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**State of Wisconsin**  
**Additional/Voluntary Filing#2021-03**  
Dated February 15, 2021

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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 financial evaluation of one or more obligations of the State of Wisconsin.

**Issuer:** State of Wisconsin

**CUSIP Numbers:** 977055 Prefix (All)                      977056 Prefix (All)  
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**Type of Information:** Financial/Operating Data Disclosures; Additional Financial Information

The Wisconsin Department of Employee Trust Funds (ETF) has released its **Comprehensive Annual Financial Report (CAFR) for the year ended December 31, 2019**. The attached CAFR 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 web site and State of Wisconsin investor relations web site 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/ DAVID R. ERDMAN

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# COMPREHENSIVE ANNUAL FINANCIAL REPORT 2019

For the Year Ending December 31, 2019



State of Wisconsin  
Department of Employee Trust Funds





# COMPREHENSIVE ANNUAL FINANCIAL REPORT 2019

For the Year Ending December 31, 2019

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  
<http://etf.wi.gov>



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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.

State of Wisconsin  
Department of Employee Trust Funds

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# INTRODUCTORY SECTION



**STATE OF WISCONSIN**  
**Department of Employee Trust**  
**Funds**  
**Robert J. Conlin**  
 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>

February 11, 2021

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

We are pleased to present the Comprehensive Annual Financial Report (CAFR) of the Wisconsin Department of Employee Trust Funds (ETF) for the year ended December 31, 2019. This report provides comprehensive information about ETF, the Wisconsin Retirement System (WRS), and other benefit programs administered by ETF. As disclosed in Note 2 of the CAFR, we implemented a new accounting standard that required extensive research and resulted in significant changes to the reporting of the sick leave benefit programs. This caused delays in completing and auditing the CAFR.

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 the operations of ETF.

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, 2019. The independent auditor's report is located at the beginning of the Financial Section of this CAFR.

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. 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.

Currently, the WRS is composed of 29% state employees and 71% local employees. As of December 31, 2019, the WRS had 260,251 active employees, 215,070 annuitants (retirees, disabilitants, and beneficiaries), and 173,165 inactive employees with deferred benefits payable.

### **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, health, life, income continuation, long-term disability, and long-term care insurance programs, along with an employee reimbursement accounts program, commuter



benefits program, and a deferred compensation plan. ETF also administers retirement disability coverage and serves as the state's designated coverage agent for Social Security for Wisconsin public employers. 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.

All insurance programs are administered through contractual arrangements with private sector insurance carriers and service corporations. Participation by eligible employees is mandatory for retirement and Social Security, but optional for the other programs. ETF collects but does not invest the trust fund monies created for these programs. That responsibility rests with the State of Wisconsin Investment Board (SWIB).

ETF is responsible for:

- Collecting all monies due the trust funds.
- Calculating and ensuring appropriate disbursement of all 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.

### **Funding Status**

#### **PENSION PLAN**

The funded status of the WRS is the measure of 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 of assets or a smoothed funding value of assets. 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 level, strong governance, and the effective investment strategies of the SWIB.

The funding value-based ratio of the WRS remains 100% as of December 31, 2019. The fair value-based ratio, calculated in accordance with standards issued by the Governmental Accounting Standards Board, is 103%. This is an increase from 96.5%, and was primarily the result of higher market returns in 2019 compared to 2018.

#### **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 balance and sets annual premium rates. The GIB policy specifies a range in which the reserve balance should fall as a percentage of projected expenses. The table on the following page shows the reserve balance as of 12/31/19, the projected reserve balance, and projected surplus as of 12/31/2020.





	Health Insurance Reserves (In Millions)					
	State Plan			Local Plan		
	Medical	Pharmacy	Dental	Medical	Pharmacy	Dental
Reserve Balance 12/31/19	\$73.6	\$132.4	\$5.5	\$(2.0)	\$21.0	\$(0.2)
Projected Reserve Balance 12/31/2020	79.6	95.6	20.4	(1.8)	17.6	0.2
Projected 2021 Expense	1,087.4	345.9	60.2	171.9	50.0	1.9
GIB reserve policy (% of projected expense)	3%-5%	8%-10%	5%-7%	3%-5%	8%-10%	5%-7%
Mid-point reserve in accordance with GIB policy	43.5	31.1	3.6	6.9	4.5	0.1
Projected surplus 12/31/2020	\$36.1	\$64.5	\$16.8	\$(8.7)	\$13.1	\$0.1

At its August 2020 meeting, the GIB approved the drawdown of reserves, to policy targets, over the next three years to smooth health care premium rate increases to members and participating employers.

Please refer to Note 9 and the Statistical Section for the funding status of other employee benefit programs.

**Investments**

At December 31, 2019, the total assets of the Core and Variable investment portfolios was \$137.4 billion, an increase from \$116.7 billion at December 31, 2018. The increase was due to investment gains caused by more favorable market conditions in 2019 compared to 2018.

**Legislative Initiatives**

During 2019, there was no legislation enacted that significantly affected the WRS and the employee benefit programs administered by ETF.

**Administration**

ETF’s administration of the WRS continues to make it one of the most cost-efficient systems in terms of administrative expenses per member. In a recent public pension fund administration benchmarking study conducted by industry leader CEM Benchmarking, Inc., the annual per-member administrative expenses associated with the retirement and disability programs was \$87 for the WRS, compared to the average per-member cost of \$98 for peer retirement systems. ETF employs one full-time equivalent staff person per 1,595 members, compared to the peer system average of one per 1,515 members.

**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,

Robert J. Conlin  
Secretary

Cindy Klimke-Armatoski  
Chief Trust Financial Officer



Public Pension Coordinating Council

***Public Pension Standards Award  
For Funding and Administration  
2019***

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 fringe 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, 2019, 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 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: Wayne E. Koessl**

Appointed by the WR Board. WR Board member appointed by the Governor to the WR Board as a chairperson or member of a governing body of a participating county or town. Wis. Stat. § 15.16 (1)(b)1

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

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

#### **Secretary: Robert M. Niendorf**

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

#### **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)

#### **Malika Evanco**

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.)

**William Ford**

Elected by WRS annuitants. WRS annuitant. Wis. Stat. § 15.16 (1)(d)

**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

**Michael Langyel**

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

**Katy Lounsbury**

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

**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

**Steven Wilding**

Appointed by the WR Board. WR Board member appointed by the Governor to the WR Board as an employee of participating local government. Wis. Stat. § 15.16 (1)(b)2

**Vacant**

Appointed by the 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. § 15.16 (1)(b)3

**» 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 subs. 2 & 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 subs. 1 & 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 subs. 4 & 6. Wis. Stat. § 15.165 (3)(b)5

**Mark Afable**

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 subs. 5 & 6. Wis. Stat. § 15.165 (3)(b)4

**Herbert Stinski**

Appointed by the Governor. Participating employee and principal finance officer of a participating city or village. From a different county than subs. 1 & 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 subs. 4 & 5. Wis. Stat. § 15.165 (3)(b)6



INTRODUCTORY SECTION

**Vacant**

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

**Vacant**

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

» **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

**James Langkamp**

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

**David Wiltgen**

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)

**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)

**Harper Donahue IV**

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

**Malika Evanco**

Ex officio; Administrator in Department of Administration, Division of Personnel Management or Administrator's designee. Wis. Stat. § 15.165 (2)

**Dan Fields**

Appointed by the Governor. Insured participant in the WRS who is a retired employee. 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) (intro.)

**Brian Pahnke**

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

**Bob Wimmer**

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

**Vacant**

Appointed by the Governor. No membership requirement. 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: Edward D. Main**

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

**Vice Chair: Gail Hanson**

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

**Secretary: Arthur Zimmerman**

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

**Terrance Craney**

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

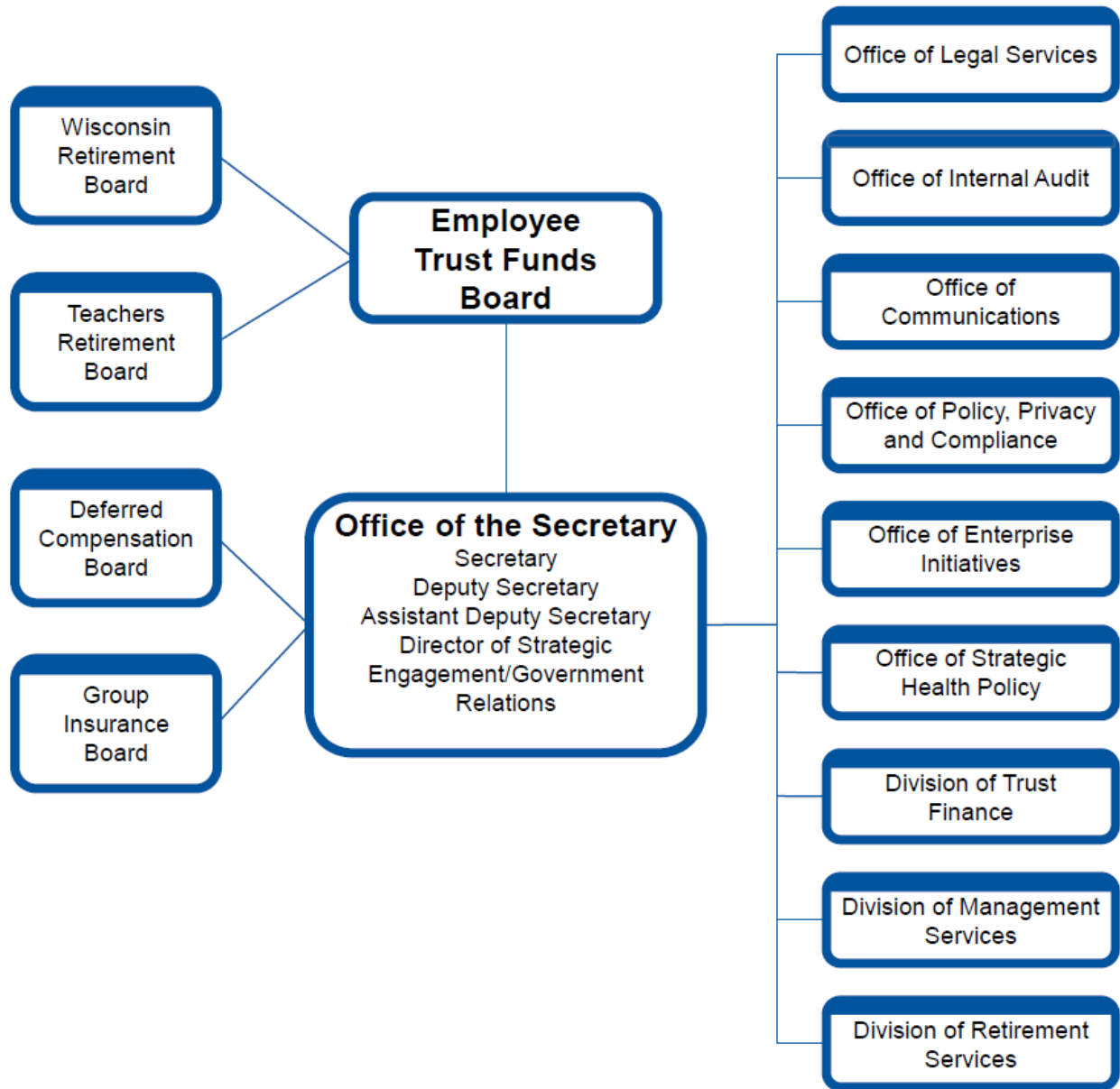
**Jason Rothenberg**

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

INTRODUCTORY SECTION

**Department Organization**

The Department of Employee Trust Funds had 274.2 permanent positions at the end of 2019. The Department’s organization chart is shown below:





» **2019 ETF Management Staff**

Secretary: Robert J. Conlin  
Deputy Secretary: John Voelker  
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: David Nispel

» **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**

The StayWell Company, LLC  
Saint Paul, Minnesota

**Income Continuation Insurance**

The Hartford  
Hartford, Connecticut

**Deferred Compensation**

Empower Retirement  
Greenwood Village, Colorado

**Employee Reimbursement Accounts /  
Commuter Benefits Program**

Total Administrative Services Corporation (TASC)  
Madison, Wisconsin

**Life Insurance**

Securian Financial Group, Inc  
Saint Paul, Minnesota



**FINANCIAL SECTION**



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 Robert Cowles and  
Representative Samantha Kerkman, Co-Chairpersons  
Joint Legislative Audit Committee

Members of the Employee Trust Funds Board and  
Mr. Robert J. Conlin, Secretary  
Department of Employee Trust Funds

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

We have audited the accompanying Statement of Fiduciary Net Position, 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, 2019: 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 accompanying Statement of Net Position; Statement of Revenues, Expenses, and Changes in Fund Net Position; Statement of Cash Flows; and the related notes for the following proprietary funds administered by ETF as of and for the year ended December 31, 2019: Duty Disability Insurance, Health Insurance, Income Continuation Insurance, Accumulated Sick Leave Conversion Credit, and State Retiree Health Insurance.

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

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

#### **Auditor's Responsibility**

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, which is issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the

## FINANCIAL SECTION

assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on these financial statements.

**Opinions**

In our opinion, the financial statements present fairly, in all material respects, the financial position of each fiduciary fund and each proprietary fund referred to in the first paragraph as of December 31, 2019, the respective changes in the financial position and, where applicable, cash flows for the year then ended, in accordance with accounting principles generally accepted in the United States of America.

**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, 2019, 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 2, ETF implemented Governmental Accounting Standards Board (GASB) Statement Number 84, *Fiduciary Activities*, which resulted in several changes in financial reporting. The State Retiree Health Insurance fund was reported as a fiduciary fund in the prior year, and under GASB Statement Number 84, it is now reported as a proprietary fund. In addition, changes were made in the financial reporting for the Accumulated Sick Leave Conversion Credit program, which had been reported as a fiduciary fund in the prior year. ETF reassessed the financial reporting for the two components of this program and separated the reporting into two funds: the Accumulated Sick Leave Conversion Credit fund and the Supplemental Health Insurance Conversion Credit fund. As a result, the Accumulated Sick Leave Conversion Credit fund is reported as an internal service fund and the liability for the program was calculated under GASB Statement Number 16, *Accounting for Compensated Absences*. The Supplemental Health Insurance Conversion Credit fund is reported as an other postemployment benefits (OPEB) plan, a fiduciary fund, as required by GASB Statement Number 74, *Financial Reporting for Postemployment Benefits Plans Other Than Pension Plans*. These changes resulted in adjustments to the beginning net position of the Accumulated Sick Leave Conversion Credit fund and the Supplemental Health Insurance Conversion Credit fund.

As discussed in Note 3 to the financial statements, the financial statements include investments that do not have readily ascertainable market prices and are valued based on a variety of third-party pricing methods. However, because of the inherent uncertainty of valuation, those estimated values may differ from the values that would have been used had a ready market for the investments existed.

Our opinions are not modified with respect to these matters.

**Other Matters**

*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 105 through 116 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, which include the related note; 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; and 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, which include the related note.

Such information, although not a part of the financial statements, is required by GASB, which considers it to be essential for placing the financial statements in an appropriate operational, economic, or historical context. In accordance with auditing standards generally accepted in the United States of America, we have applied certain limited procedures to the required supplementary information that included inquiries of management about the methods of preparing the information. We further compared 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.

*Accompanying Information*—Our audit was conducted for the purpose of forming opinions on the financial statements referred to in the first paragraph. The supplementary information included in 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 is presented for purposes of additional analysis and is not a required part of the financial statements. Such information has not been subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we do not express an opinion or provide any assurance on it.

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

In accordance with *Government Auditing Standards*, we have also issued a report, which was dated February 10, 2021, and published in report 21-3, on our consideration of ETF's internal control over financial reporting; our tests 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 result of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* and should be used when considering ETF's internal control over financial reporting and compliance.

LEGISLATIVE AUDIT BUREAU



Joe Chrisman  
State Auditor

February 10, 2021

## 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, 2019. 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 648,000 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 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
- 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
- Accumulated Sick Leave Conversion Credit (ASLCC)
- State Retiree Health Insurance

### » *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 displays the effect of financial 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 equal 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
- Schedule of Changes in Net Pension Liability (Asset) and Related Ratios-WRS
- Schedule of Required Employer Contributions-WRS
- Schedule of Investment Returns-WRS
- Schedule 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
- Schedule 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*

The following accounting changes were made for the year ended December 31, 2019. Note 2 further describes these changes.

ETF adopted GASB Statement No. 84 "Fiduciary Activities" for the year ended December 31, 2019. The statement provides guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. ETF considered the statement and reassessed the reporting fund type of benefit programs. The implementation of this standard resulted in several changes:

- Fiduciary activities are classified as one of the following: 1) pension (and other employee benefit) trust funds, 2) investment trust funds, 3) private-purpose trust funds, or 4) custodial funds.
- The Local Retiree Health Fund was historically reported as a fiduciary agency fund. With the implementation of this standard, it has changed to a fiduciary custodial fund presentation.
- The State Retiree Health Fund was historically reported as a fiduciary agency fund. With the implementation of this standard, it has changed to a proprietary fund presentation.
- ETF concluded the SHICC program is a defined benefit Other Post-Employment Benefit (OPEB) plan in accordance with GASB Statement No. 74 "Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans" and the ASLCC program is considered a compensated absence consistent with the provisions of GASB Statement No. 16 "Accounting for Compensated Absences". Previously, the benefit programs were collectively reported as a fiduciary fund.

Effective January 1, 2019, the Duty Disability Insurance and Income Continuation Insurance programs report the actuarially determined loss adjustment expense (LAE), or the expected present value of future expenses related to the ongoing management and settlement or payment of claims, with Estimated Future Benefits on the respective program's Statement of Net Position, differentiating between current and non-current portions. The related change in LAE will be reported as Benefit Expense on the respective programs Statement of Revenues, Expenses, and Changes in Fund Net Position. Historically the LAE was reported as Miscellaneous Payables, while the change in LAE was reported as Administrative Expenses.

Certain reclassifications have been made to the financial statements of the State Retiree Life Insurance and Local Retiree Life Insurance funds for claims incurred but not paid (Benefits Payable) prior to December 31, 2019, and for contributions received for life insurance coverage beginning after December 31, 2019 (Unearned Revenue). Presenting these amounts separately improves transparency and compliance with GAAP.

**NET POSITION BY PROGRAM**

AT DECEMBER 31

(In Thousands)

<b>Program</b>	<b>2019</b>	<b>2018*</b>	<b>\$ Change</b>	<b>% Change</b>
Wisconsin Retirement System	\$ 112,092,758	\$ 96,737,081	\$ 15,355,677	15.9 %
Supplemental Health Insurance Conversion Credit	1,084,365	943,054	141,311	15.0
Employee Reimbursement Accounts/Commuter Benefits	1,800	1,936	(136)	(7.0)
State Retiree Life Insurance	348,020	343,984	4,036	1.2
Local Retiree Life Insurance	256,403	244,898	11,505	4.7
Milwaukee Retirement Systems	207,410	174,648	32,762	18.8
Local Retiree Health Insurance	0	0	0	0.0
Duty Disability Insurance	227,128	152,534	74,594	48.9
Health Insurance	226,216	222,281	3,935	1.8
Income Continuation Insurance	51,026	18,354	32,672	178.0
Accumulated Sick Leave Conversion Credit	(574,845)	(685,189)	110,344	16.1
State Retiree Health Insurance	3,994	0	3,994	0.0
<b>Total</b>	<b>\$ 113,924,275</b>	<b>\$ 98,153,581</b>	<b>\$ 15,770,694</b>	<b>16.1 %</b>

\*Amounts for the prior year include restatement of prior year balances

The WRS funding ratio under the funding methodology used to establish required contributions continues to be 100% as of December 31, 2019. Under the GASB financial reporting method, the WRS is 103% funded as of December 31, 2019.

As of December 31, 2019, the WRS had a Net Pension Asset of \$3.2 billion compared to a Net Pension Liability of \$3.6 billion as of December 31, 2018. The increase of approximately \$6.8 billion is primarily attributable to gains on investments due to more favorable market conditions in 2019. The Total Pension Liability increased from \$100.3 billion in 2018 to \$108.9 billion in 2019.

### » 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 Chapter 40 of the Wisconsin Statutes. 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 increased by \$15.4 billion or 15.9% from \$96.7 billion in 2018 to \$112.1 billion in 2019. This was primarily a result of higher returns on investments due to favorable market conditions. The following tables show comparative summaries of the WRS net position and the changes in the WRS net position for 2019 and 2018.





## FINANCIAL SECTION

**SUMMARY OF WRS NET POSITION**

AT DECEMBER 31

(In Millions)

	2019	2018	\$ Change	% Change
<b>Assets</b>				
Cash and Cash Equivalents	\$ 4,668	\$ 4,037	\$ 631	15.6 %
Receivables	7,046	4,049	2,997	74.0
Investments at Fair Value	125,332	108,313	17,019	15.7
Securities Lending Collateral	471	467	4	0.9
Prepaid Expenses	32	10	22	220.0
Capital Assets	4	6	(2)	(33.3)
<b>Total Assets</b>	<b>\$ 137,553</b>	<b>\$ 116,882</b>	<b>\$ 20,671</b>	<b>17.7 %</b>
<b>Liabilities</b>				
Core Investment Due To Other Benefit Programs	\$ 3,983	\$ 3,494	\$ 489	14.0 %
Variable Investment Due To Other Benefit Programs	20	17	3	17.6
Obligation Under Reverse Repurchase Agreements	9,845	8,834	1,011	11.4
Investment Payables	6,035	3,800	2,235	58.8
Securities Lending Collateral Liability	471	467	4	0.9
Other Payables	5,106	3,533	1,573	44.5
<b>Total Liabilities</b>	<b>\$ 25,460</b>	<b>\$ 20,145</b>	<b>\$ 5,315</b>	<b>26.4 %</b>
<b>Net Position Restricted for Pensions</b>	<b>\$ 112,093</b>	<b>\$ 96,737</b>	<b>\$ 15,356</b>	<b>15.9 %</b>

**SUMMARY OF CHANGES IN WRS NET POSITION**

FOR THE YEAR ENDED DECEMBER 31

(In Millions)

	2019	2018	\$ Change	% Change
Contributions	\$ 2,034	\$ 2,003	\$ 31	1.5 %
Net Investment Income	19,049	(4,050)	23,099	570.3
Other Income	1	1	0	0.0
<b>Total Additions</b>	<b>\$ 21,084</b>	<b>\$ (2,046)</b>	<b>\$ 23,130</b>	<b>1,130.5 %</b>
Benefit Expenses	\$ 5,690	\$ 5,556	\$ 134	2.4 %
Administrative Expenses	34	32	2	6.3
Other Expenses	4	0	4	100.0
<b>Total Deductions</b>	<b>\$ 5,728</b>	<b>\$ 5,588</b>	<b>\$ 136</b>	<b>2.4 %</b>
<b>Loss due to Impairment of Capital Assets</b>	<b>\$ 0</b>	<b>\$ (25)</b>	<b>\$ 25</b>	<b>100.0 %</b>
<b>Net Increase (Decrease) in Net Position</b>	<b>\$ 15,356</b>	<b>\$ (7,659)</b>	<b>\$ 23,015</b>	<b>300.5 %</b>
<b>Net Position - Beginning of Year</b>	<b>\$ 96,737</b>	<b>\$ 104,396</b>	<b>\$ (7,659)</b>	<b>(7.3)%</b>
<b>Net Position - End of Year</b>	<b>\$ 112,093</b>	<b>\$ 96,737</b>	<b>\$ 15,356</b>	<b>15.9 %</b>

## Cash and Cash Equivalents

Cash and Cash Equivalents increased by \$631 million, or 15.6%, when comparing calendar year-end 2019 to 2018. The majority of the increase is attributed to SWIB holding an increase in securitized cash positions within certain synthetic portfolios. Securitized cash is invested in derivative instruments which provide SWIB with similar returns as if the physical securities were held, but with a greater degree of liquidity. Securitized cash positions can fluctuate throughout the year depending on a variety of conditions. At calendar year-end 2019, SWIB used its securitized cash positions to adjust risk and exposure to desired levels for internal portfolio restructuring/rebalancing activities. Additionally, increased liquidity was reserved to accommodate the funding of a new investment strategy in early 2020.

Also, SWIB utilized derivatives to implement strategic investment positions. Derivatives used for these strategies require defined levels of cash to conservatively provide for adequate levels of margin, near-term benefit payments, and to adjust risk to desired levels.

The increase in cash and cash equivalents was partially offset by the maturity of a short-term foreign discount bill held at calendar year-end 2018 that was used within an active investment strategy. The cash received upon maturity was subsequently reinvested in longer term investments.

Short-term investments with maturities generally less than three months are included in Cash and Cash Equivalents.

## Receivables

Receivables increased by \$3.0 billion, or 74.0%, when comparing calendar year-end 2019 to 2018. Most of this increase is due to an increase in the balance for Investment Sales Receivable, which is dependent upon the timing and settlement of pending sales transactions. The year-over-year increase was due to an ongoing transition at calendar year-end. The transition reallocated balances within the same asset class from a passive, externally managed account to an active, internally managed account. Other routine rebalancing activities, where investment positions were sold but pending settlement, also contributed to the change in Receivables at December 31, 2019.

About one third of the Receivables balance relates to SWIB's 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 on the Statement of Fiduciary Net Position because payment for TBA securities is not made until the settlement date.

## Prepaid Expenses

Prepaid Expenses increased by \$22 million when comparing calendar year-end 2019 to 2018. This change is not representative of a change in total expenses, but rather reflects a difference in timing for the billing and payment of the Core Retirement Investment Trust (Core Fund) operating budget expenses in 2019, as compared to the prior year.

## FINANCIAL SECTION

### Securities Lending Collateral and Securities Lending Collateral Liability

Securities Lending Collateral and Securities Lending Collateral Liability increased by \$4 million as of December 31, 2019, compared to December 31, 2018. These collateral balances represent cash received as collateral for securities lending transactions. SWIB increased its overall securities lending activity in 2019. The decrease in cash received as collateral was offset by an increase in securities received as collateral. The use of securities as collateral provides a more efficient option for securities lending activities, and therefore, reduced the demand for cash collateral in 2019.

Cash received as collateral for securities borrowed can be used by SWIB's internally managed portfolios to back short positions. As discussed later in this section, SWIB increased its internal shorting capacity in 2019. Investment policies permit the use of both cash and treasury securities as collateral to back short positions. The use of treasury securities as collateral provides a more efficient option to increase SWIB's internal shorting capacity. As a result, the demand for cash to be used as collateral for short positions decreased in 2019.

### Obligation Under Reverse Repurchase Agreements

Obligation Under Reverse Repurchase Agreements increased by \$1.0 billion, or 11.4%, when comparing calendar year-end 2019 to 2018. Reverse repurchase agreements involve the sale of assets with the simultaneous agreement to repurchase those 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 2019, SWIB increased its capacity to participate in reverse repurchase agreements, providing a low-cost way to obtain financing needed to maintain SWIB's strategic allocation targets. The increase in reverse repurchase agreements corresponds with the overall increase in the Core Fund's assets under management.

### Investment Payables

Investment Payables increased by \$2.2 billion, or 58.8%, when comparing calendar year-end 2019 to 2018. The majority of this increase is due to investment purchases payable, which is dependent upon the timing and settlement of pending purchase transactions. Corresponding with the increases in the Receivables balance, the increase in Investment Payables was due to a pending transition at calendar year-end. The transition reallocated balances within the same asset class from a passive, externally managed account to an active, internally managed account. Other routine rebalancing activities, where investment positions were purchased but pending settlement, also contributed to the change in Investment Payables at December 31, 2019.

The Investment payables balance also comprises SWIB's use of TBA securities, which accounts for about half of the balance at calendar year-end 2019. Purchased TBA securities create a payable on the Statement of Fiduciary Net Position because payment for TBA securities is not made until the settlement date.

### Other Payables

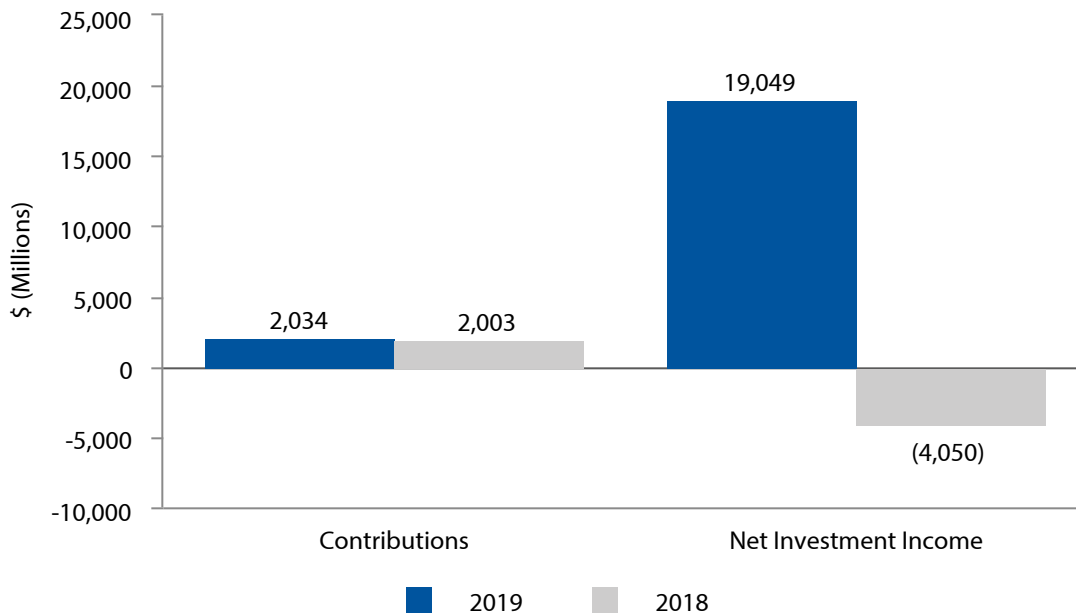
Other Payables increased by \$1.6 billion, or 44.5%, when comparing calendar year-end 2019 to 2018 primarily relating to Short Sell Obligations. Short sale transactions are created when a security not owned by the portfolio is sold in anticipation of purchasing the security at a lower price in the future. The increase in short sales is largely due to an internal equity strategy that magnifies active risk positions including the use of shorting to take advantage of securities that are deemed to be mispriced. The increased use of this strategy incorporates the use of long and short positions to take advantage of securities that are deemed to be either undervalued or overvalued. This strategy is expected to provide a more balanced impact from active positions and provide the ability to better manage risk.

## 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 for the year ended December 31, 2019, was \$21.1 billion compared to \$(2.0) billion in 2018. As the chart below shows, contributions remained relatively stable at about \$2.0 billion, while investment income increased by \$23.1 billion. The increase during 2019 is primarily attributable to more favorable market conditions, with a total Core Fund gross-of-fee investment return of 19.9% compared to (3.3)% in 2018, and a total Variable Retirement Investment Trust (Variable Fund) gross-of-fee investment return of 28.6%, compared to (7.9)% in 2018.

### Contributions and Net Investment Income



The assets of the WRS are valued at fair market value and are 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 7.0% 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 15% 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. See Note 3 for additional information on Investments and Securities Lending Transactions.



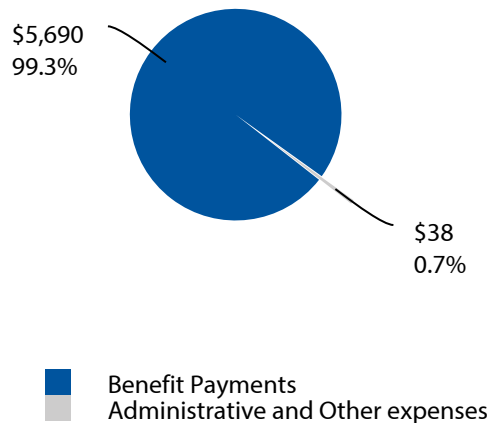
FINANCIAL SECTION

**Expenses - Deductions from Plan Net Position**

The primary expenses of the WRS include annuity benefits for retirees and beneficiaries, refunds of contributions to former members, and expenses associated with the administration of the retirement plans. Benefit payments for 2019 totaled \$5,690 million, an increase of \$134 million or 2.4% over the 2018 amount of \$5,556 million. This was due to the number of retired participants increasing from 209,059 as of December 31, 2018, to 215,070 as of December 31, 2019. Administrative and Other expenses of approximately \$38 million accounted for less than 1% of the deductions to net position in 2019, a \$6 million increase from \$32 million in 2018.

Investment expenses are deducted from investment income and were \$840 million in 2019, an increase of 21.5% from \$691 million in 2018. Approximately 85% of this change is due to an increase in transaction-related expenses from interest and dividends paid to counterparties as a result of increases in reverse repurchase agreements and short sale transactions as previously discussed. While short sale transactions are open, the Retirement Funds may incur dividend and interest expense and as such, payments must be remitted to the security lender during the course of the loan. The remaining increase in Investment Expense is primarily from increased base fees paid to external managers due to increased assets under management with such managers.

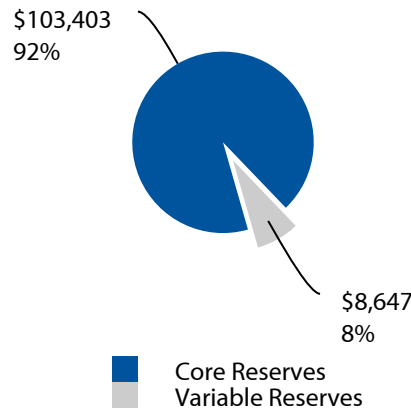
**Expenses as of December 31, 2019  
(In Millions)**



## 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 the level of funding a plan achieves, the larger the accumulation of assets and the greater the investment income potential. In 2019, revenues exceeded expenses, leading to an increase of \$15 billion in the retirement reserves. The increase was primarily related to the increase in investment earnings in 2019. The reserves are invested in either the Core Fund or the Variable Fund. Approximately 92% of the reserves are invested in the Core Fund and 8% are invested in the Variable Fund.

### Total Reserves Core vs. Variable as of December 31, 2019 (In Millions)



### SUMMARY OF PENSION PLAN RESERVE BALANCES

FOR THE YEARS ENDED DECEMBER 31

(In Millions)

Total Reserves	Increase		
	2019	(Decrease)	2018*
Annuity	\$ 63,658	\$ 3,448	\$ 60,210
Employee	19,272	997	18,275
Employee Additional	215	14	201
Employer	23,389	654	22,735
Market Recognition Account (WRS Only)	5,516	10,245	(4,729)
<b>Total Reserves</b>	<b>\$ 112,050</b>	<b>\$ 15,358</b>	<b>\$ 96,692</b>

\*Amounts for the prior year include restatement of prior year balances between annuity, employee and employer reserves.



FINANCIAL SECTION

**Members, Retirees, Beneficiaries and Employers**

Approximately 260,000 active members were employed with 1,516 WRS-participating employers as of December 31, 2019. The number of inactive, retirees and other annuitants totaled 388,235 at year-end. Total members served by the WRS in 2019 was approximately 648,000 as shown in the following tables.

**DISTRIBUTION OF ACTIVE MEMBERS**

AT DECEMBER 31

	2019		2018	
	Number	Percent of Total	Number	Percent of Total
General	134,166	51.6 %	133,132	51.6 %
Teachers	102,330	39.3	101,235	39.3
Elected/Executive/Judges	1,322	0.5	1,317	0.5
Protective with Social Security	19,665	7.5	19,450	7.5
Protective without Social Security	2,768	1.1	2,777	1.1
<b>Total Active Members</b>	<b>260,251</b>	<b>100.0 %</b>	<b>257,911</b>	<b>100.0 %</b>

*Additional information about members is presented in Note 4 and in the Statistical Section.*

**DISTRIBUTION OF INACTIVES, RETIREES, AND BENEFICIARIES**

AT DECEMBER 31

	2019		2018	
	Number	Percent of Total	Number	Percent of Total
Inactive Members:				
Terminated Participants	169,261	43.6 %	170,869	44.5 %
Alternate Payees	3,904	1.0	4,053	1.1
Retirees and Beneficiaries:				
Retirement Annuitants	207,362	53.4	201,466	52.4
Disability Annuitants	6,289	1.6	6,214	1.6
Death Beneficiary Annuitants	1,419	0.4	1,379	0.4
<b>Total Inactive, Retiree and Beneficiaries</b>	<b>388,235</b>	<b>100.0 %</b>	<b>383,981</b>	<b>100.0 %</b>

*Additional information about retirees and beneficiaries is presented in the Statistical Section.*

The number of participating employers by category as of 2019 and 2018, was:

**DISTRIBUTION OF EMPLOYERS**

AT DECEMBER 31

Employer	2019	2018
State Agencies, UW & Public Authorities	56	56
Cities	188	188
Counties	71	71
Villages	274	271
Towns	272	265
School Districts	421	422
Cooperative Educational Service Agencies	12	12
WI Technical College System Districts	16	16
Special Districts	206	206
<b>Total Employers</b>	<b>1,516</b>	<b>1,507</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, 2019. For financial reporting purposes, a funding ratio is calculated in accordance with GASB pension accounting standards. Under these standards, the WRS was 103% funded as of December 31, 2019.

**» Analysis of Other Program Financial Activities**
**Supplemental Health Insurance Conversion Credit (SHICC) 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.

During 2019, the SHICC collected \$14.4 million in contributions compared to \$18.2 million during 2018, a decrease of 20.9%. This decrease was primarily due to a reduction in the contribution rate. The fund incurred expenses of \$53.3 million in 2019 compared to \$55.7 million in 2018, a decrease of 4.3%. This decrease was primarily caused by lower health insurance premiums for certain retirees.

The SHICC had a net position of \$1.1 billion at December 31, 2019. This is an increase of \$141.3 million from a \$943.1 million net position in 2018. The increase is primarily due to investment gains experienced in 2019. Total Liabilities increased \$1.7 million from 2018 to 2019. The 2019 liability represents payables due to other benefit programs. This balance primarily results from restatements for changes in reporting for the SHICC program. Note 2 further discloses these changes.



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An actuarial valuation, in accordance with GASB standards, shows a Net OPEB Asset of \$151.8 million as of December 31, 2019. The fund Fiduciary Net Position as a percentage of the Total OPEB Liability is 116.3%. Additional information on this valuation can be found in Note 9.

There were approximately 98,200 members participating in the SHICC Program in 2019, comprised of approximately 24,600 retirees and beneficiaries, 300 inactive non-retired members, and 73,300 active members. The total number of members increased 2.7% from 2018 to 2019.

### Employee Reimbursement Accounts/Commuter Benefits Program

The Employee Reimbursement Accounts Program reimburses qualifying medical and dependent care expenses, while the Commuter Benefits Program reimburses qualifying transportation expenses, for employees of the State of Wisconsin who sign up for pre-tax payroll deductions.

During 2019, the Employee Reimbursement Accounts/Commuter Benefits Program collected \$41.0 million in contributions from participating employees compared to \$39.8 million during 2018. The increase was primarily due to a 6.8% increase in program participants. The program paid benefits and expenses of \$41.3 million in 2019, which was an increase of \$2.0 million from \$39.3 million in 2018.

The Employee Reimbursement Accounts/Commuter Benefits Program had a net position of \$1.8 million at December 31, 2019. This was a decrease of approximately \$0.1 million from a net position of \$1.9 million as of December 31, 2018.

There were 21,479 members that used the medical reimbursement accounts, 2,968 members that used commuter benefits, and 3,890 that used dependent care reimbursement accounts in 2019 compared to 20,097 medical, 2,970 commuter benefits, and 3,648 dependent care accounts in 2018.

### 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.

During 2019, the State Retiree Life Insurance Program collected \$1.1 million in contributions compared to \$1.4 million during 2018. The current employer contribution schedule includes annual increases of 5% in each of the next nine years, as approved by the GIB in August 2019. The program incurred expenses of \$20.7 million in 2019 compared to \$20.3 million in 2018. Contributions received for pre-age 65 annuitants are reported as a reduction to benefit expense, in accordance with GASB Statement No. 74.

The State Retiree Life Insurance Program had a net position of \$348.0 million at December 31, 2019. This is an increase of \$4.0 million from a \$344.0 million net position in 2018. Although benefit expenses continue to exceed contributions and investment income, the transfer from the Active Life Insurance Program of \$13.1 million resulted in a net increase.

Total Liabilities increased \$1.4 million from 2018 to 2019 primarily due to certain reclassifications. Claims incurred but not paid as of December 31, 2019 accounted for \$1.1 million of the change and were reported as Benefits Payable in 2019. Contributions received in 2019 relating to 2020 coverage accounted for \$0.3 million of the change and was reported as Unearned Revenue in 2019.

An actuarial valuation, in accordance with GASB standards, shows a Net OPEB Liability of \$683.1 million as of December 31, 2019. The plan Fiduciary Net Position as a percentage of the Total OPEB Liability was 34%. Additional information on this valuation can be found in Note 9.

There were 33,692 members participating in the State Retiree Life Insurance Program in 2019 which was a 2.4% increase in participants from 2018.

### **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.

During 2019, the Local Retiree Life Insurance Program collected \$1.8 million in contributions compared to \$1.9 million during 2018. The program incurred expenses of \$10.7 million in 2019 compared to \$8.8 million in 2018, an increase of 21.5% primarily due to an increase in claims. Contributions received from pre-age 65 annuitants are reported as a reduction to benefit expense, in accordance with GASB Statement No. 74.

The Local Retiree Life Insurance Program had a net position of \$256.4 million at December 31, 2019. This is an increase of \$11.5 million from a \$244.9 million net position in 2018. Although benefit expenses continue to exceed contributions and investment income, the transfer from the Active Life Insurance Program of \$12.9 million resulted in a net increase.

Total Liabilities increased \$0.5 million from 2018 to 2019 primarily due to certain reclassifications. Claims incurred but not paid as of December 31, 2019, accounted for \$0.3 million of the change and were reported as Benefits Payable in 2019. Contributions received in 2019 relating to 2020 coverage accounted for \$0.2 million of the change and were reported as Unearned Revenue in 2019.

An actuarial valuation, in accordance with GASB standards, shows a Net OPEB Liability of \$425.8 million as of December 31, 2019. The plan Fiduciary Net Position as a percentage of the Total OPEB Liability was 38%. Additional information on this valuation can be found in Note 9.

There were 46,952 members participating in the Local Retiree Life Insurance Program in 2019, which was a 3.0% increase in participants from 2018.

### **Milwaukee Retirement Systems**

The Milwaukee Retirement Systems (MRS) invests funds with the WRS. Since 2014, the MRS only invested funds from two Milwaukee Public Schools Supplemental Retirement Plans. During 2019, the MRS deposited \$9.5 million as compared to \$6.0 million in 2018. The MRS distributed \$11.7 million in 2019, a decrease of \$5.3 million in distributions from 2018. The program experienced an investment gain of \$34.9 million in 2019 compared to an investment loss of \$7.7 million in 2018.

The MRS had a fiduciary net position of \$207.4 million at December 31, 2019. This was a \$32.8 million increase in net position from \$174.6 million in 2018. Additional information on the MRS can be found in Note 10.

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

Through the Local 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 participating local government employers in Wisconsin.

## FINANCIAL SECTION

During 2019, the Local Retiree Health Insurance Program collected \$20.1 million in contributions from retirees, a 6% decrease from \$21.4 million collected in 2018, primarily caused by lower insurance premiums as a result of drawing down fund reserves. The program paid benefit expenses of \$21.0 million during 2019 compared to \$22.5 million in 2018, primarily due to increased pharmacy rebates, which offset expenses, as well as a decrease in enrollment.

Total assets and liabilities as of December 31, 2019, were \$7.3 million, an increase of \$1.9 million as compared to \$5.4 million as of December 31, 2018. More information about the Local Retiree Health Insurance Program can be found in Note 9.

### 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.

During 2019, the Duty Disability Insurance Program collected \$7.6 million in contributions from participating employers, a 26% decrease from \$10.2 million in 2018 due to a decrease in contribution rates. The program incurred benefits and expenses of \$48.7 million during 2019 compared to \$26.3 million in 2018. The change in actuarially determined liabilities from year to year impacts expenses and was the primary reason for the change.

The Duty Disability Insurance Program had a net position of \$227.1 million at December 31, 2019. This was an increase of \$74.6 million from a net position of \$152.5 million as of 2018. The program experienced investment gains of \$115.7 million in 2019 compared to investment losses of \$23.5 million for the prior year.

At December 31, 2019, approximately 22,433 members were participating in the program. Additional information for the Duty Disability Insurance Program can be found in Note 8.

### Health Insurance Program

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

During 2019, ETF collected \$1,284.6 million in contributions from participating employers, a decrease of \$21.9 million from 2018, and incurred expenses of \$1,323.2 million, an increase of \$22.4 million from 2018. The Health Insurance Program had a net position of \$226.2 million at December 31, 2019. This was an increase of \$3.9 million from the \$222.3 million net position in 2018. The program experienced investment gains of \$42.4 million during 2019, compared to an investment loss of \$9.0 million in 2018.

At December 31, 2019, approximately 79,800 active members from both state and local governments were participating in the Health Insurance Program, a decrease of 0.3% from 80,061 active members in 2018. Additional information for the Health Insurance Program can be found in Note 8.

### 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.

During 2019, the ICI Program collected \$33.2 million in contributions from State agencies, a 17% increase from \$28.4 million collected in 2018, primarily due to a 20% premium rate increase for the State ICI Program. The local employers continued to have a premium holiday. The ICI Program incurred operating expenses of \$22.0 million during 2019, compared to \$26.8 million in 2018, primarily due to a decrease in the change in actuarial determined liabilities.

The ICI Program had a net position of \$51.0 million at December 31, 2019. This was an increase of \$32.7 million from a net position of \$18.4 million as of 2018. The increase in net position was primarily due to investment gains of \$21.4 million in 2019, compared to investment losses of \$3.9 million in 2018.

At December 31, 2019, approximately 60,119 members were participating in the ICI program. This includes 9,942 local employees and 50,177 state employees. Local employees had an increase of 5.4% and state employees had a 1.6% decrease in members participating. Additional information for the ICI Program can be found in Note 8.

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

The ASLCC Program allows retirees of the State of Wisconsin, the University of Wisconsin (UW) System, the UW Hospital & 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.

During 2019, the ASLCC Program collected \$38.4 million in contributions from participating employers compared to \$36.5 million in 2018. The program incurred expenses of \$207.5 million in 2019, an increase of \$108.1 million from \$99.4 million in 2018. The change in the compensated absences liability from year to year impacts expenses and was the primary reason for the change.

The ASLCC Program has a net position of \$(574.8) million at December 31, 2019. This was an increase of \$110.4 million from a \$(685.2) million net position as of December 31, 2018. The program experienced investment income of \$279.5 million for 2019 as compared to investment losses of \$57.2 million for 2018.

As of December 31, 2019, there were approximately 73,000 active employees; 18,000 retirees and others using ASLCC credits; and 5,800 retirees that may use sick leave credits in the future.

### **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.

During 2019, the State Retiree Health Insurance Program collected \$230.5 million in contributions from retirees, a 3.2% decrease from \$238.0 million collected in 2018, primarily due to lower insurance premiums as a result of drawing down fund reserves. The program paid benefit expenses of \$244.7 million during 2019 compared to \$251.2 in 2018. The decrease was primarily due to increased pharmacy rebates, which offset expenses.

At December 31, 2019, the State Retiree Health Insurance program had a net position of \$4.0 million. In prior years, this was reported as a fiduciary agency fund which required assets and liabilities to equal, resulting in a net position of zero. The increase of \$4.0 million is the result of changing the presentation of this fund to a proprietary fund. More information about the State Retiree Health Insurance Program can be found in Note 9.



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**FINANCIAL SECTION****» *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, 2019** (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 & Cash Equivalents	\$	4,668,015	\$	8,041
Securities Lending Collateral		471,467		0
Prepaid Expenses		32,151	3,957	1,600
Receivables:				
Contributions Receivable		147,862	733	131
Federal Subsidy Receivable		0	0	0
Prior Service Contributions Receivable		10,850	0	0
Benefit Overpayments Receivable		2,242	0	162
Due From Other Benefit Programs		4,218	1,879	0
Miscellaneous Receivables		1,095	0	0
Securities Lending Income Receivable		2,448	0	0
Interest and Dividends Receivable		386,662	0	10
Rebates Receivable		0	0	0
Investment Sales Receivable		6,490,811	0	0
Total Receivables		7,046,188	2,612	303
Investments at Fair Value:				
Equities		66,011,290	0	0
Fixed Income Investments		36,427,253	0	0
Limited Partnerships		14,770,360	0	0
Multi Asset Investments		5,353,262	0	0
Real Estate		1,374,070	0	0
Preferred Securities		481,730	0	0
Convertible Securities		4,067	0	0
Foreign Currency Contracts		8,316	0	0
Options Contracts		(6,028)	0	0
Financial Futures Contracts		(29,913)	0	0
Swaps		24,037	0	0
To Be Announced Securities		913,743	0	0
Investment In Core Fund		0	1,089,241	0
Investment In Variable Fund		0	0	0
Investment Contract		0	0	0
Total Investments		125,332,187	1,089,241	0
Capital Assets - Net of Accum. Depreciation		3,532	0	0
Total Assets		137,553,540	1,095,810	9,944
<b>Liabilities:</b>				
Core Investment Due To Other Benefit Programs		3,983,479	0	0
Variable Investment Due To Other Benefit Programs		20,256	0	0
Obligation Under Reverse Repurchase Agreements		9,844,991	0	0
Short Sell Obligations		4,464,308	0	0
Securities Lending Collateral Liability		471,467	0	0
Collateral Due to Counterparty		104,964	0	0
Benefit and Loss Liability		0	0	0
Benefits Payable		399,642	0	6,567
Unearned Revenue		19	0	1,434
Due To Other Benefit Programs		7,671	11,445	70
Miscellaneous Payables		129,324	0	73
Investment Payables		6,034,661	0	0
Total Liabilities		25,460,782	11,445	8,144
<b>Net Position - Restricted for Pensions, Other Post-Employment Benefits, and Other Purposes</b>	\$	112,092,758	\$	1,800

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, 2019** (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 & Cash Equivalents	\$ 0	\$ 0	\$ 0	\$ 0
Securities Lending Collateral	0	0	0	0
Prepaid Expenses	0	0	0	36
Receivables:				
Contributions Receivable	0	0	0	0
Federal Subsidy Receivable	0	0	0	985
Prior Service Contributions Receivable	0	0	0	0
Benefit Overpayments Receivable	0	0	0	1
Due From Other Benefit Programs	0	0	0	5,051
Miscellaneous Receivables	94	126	0	1
Securities Lending Income Receivable	0	0	0	0
Interest and Dividends Receivable	0	0	0	0
Rebates Receivable	0	0	0	1,256
Investment Sales Receivable	0	0	0	0
Total Receivables	94	126	0	7,294
Investments at Fair Value:				
Equities	0	0	0	0
Fixed Income Investments	0	0	0	0
Limited Partnerships	0	0	0	0
Multi Asset Investments	0	0	0	0
Real Estate	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	187,154	0
Investment In Variable Fund	0	0	20,256	0
Investment Contract	349,353	256,852	0	0
Total Investments	349,353	256,852	207,410	0
Capital Assets - Net of Accum. Depreciation	0	0	0	0
Total Assets	349,447	256,978	207,410	7,330
<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
Benefit and Loss Liability	0	0	0	1
Benefits Payable	1,052	294	0	382
Unearned Revenue	282	155	0	1,340
Due To Other Benefit Programs	34	46	0	5,585
Miscellaneous Payables	59	80	0	22
Investment Payables	0	0	0	0
Total Liabilities	1,427	575	0	7,330
<b>Net Position - Restricted for Pensions, Other Post-Employment Benefits, and Other Purpose</b>	\$ 348,020	\$ 256,403	\$ 207,410	\$ 0

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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, 2019**

(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	\$ 1,046,942	\$ 14,369	\$ 329
Member Contributions	987,662	0	40,679
Total Contributions	2,034,604	14,369	41,008
Deposits	0	0	0
Investment Income:			
Net Increase (Decrease) in Fair Value of Investments	18,124,357	0	0
Interest	767,917	0	169
Dividends	1,386,282	0	0
Securities Lending Income	41,981	0	0
Other	250,489	180,271	0
Less:			
Investment Income Distributed to Other Benefit Programs	(673,484)	0	0
Investment Expense	(839,819)	0	0
Securities Lending Rebates and Fees	(8,902)	0	0
Net Investment Income	19,048,821	180,271	169
Interest on Prior Service Receivable	526	0	0
Service Reimbursement Income	0	0	0
Miscellaneous Income	195	0	3
Total Additions	21,084,146	194,640	41,180
<b>Deductions:</b>			
Benefits and Refunds:			
Retirement, Disability, and Beneficiary	5,646,263	0	0
Refund of Contributions	0	55	0
Separation Benefits	44,106	0	0
Other Benefit Expense	0	52,934	39,919
Distributions	0	0	0
Carrier Administrative Expenses	399	0	895
Administrative Expenses	33,799	340	502
Other Expenses	3,902	0	0
Total Deductions	5,728,469	53,329	41,316
<b>Net Increase (Decrease)</b>	15,355,677	141,311	(136)
<b>Net Position - Beginning of Year</b>	96,737,081	943,054	1,936
<b>Net Position - End of Year</b>	\$ 112,092,758	\$ 1,084,365	\$ 1,800

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

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FINANCIAL SECTION

**Wisconsin Department of Employee Trust Funds**  
**Statement of Changes in Fiduciary Net Position**  
**For the Year Ended December 31, 2019**  
(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	\$ 1,149	\$ 1,808	\$ 0	\$ 0
Member Contributions	0	0	0	20,141
Total Contributions	1,149	1,808	0	20,141
Deposits	0	0	9,545	0
Investment Income:				
Net Increase (Decrease) in Fair Value of Investments	0	0	0	0
Interest	0	0	0	0
Dividends	0	0	0	0
Securities Lending Income	0	0	0	0
Other	10,317	7,368	34,917	(274)
Less:				
Investment Income Distributed to Other Benefit Programs	0	0	0	0
Investment Expense	0	0	0	0
Securities Lending Rebates and Fees	0	0	0	0
Net Investment Income	10,317	7,368	34,917	(274)
Interest on Prior Service Receivable	0	0	0	0
Federal Subsidy Income	0	0	0	1,759
Service Reimbursement Income	94	126	0	0
Miscellaneous Income	0	0	0	2
Total Additions	11,560	9,302	44,462	21,628
<b>Deductions:</b>				
Benefits and Refunds:				
Retirement, Disability, and Beneficiary	0	0	0	0
Separation Benefits	0	0	0	0
Other Benefit Expense	19,857	9,358	0	21,027
Distributions	0	0	11,700	0
Carrier Administrative Expenses	714	1,258	0	373
Administrative Expenses	93	126	0	228
Other Expenses	0	0	0	0
Total Deductions	20,664	10,742	11,700	21,628
<b>Special Item - Transfer from Active Life Insurance Program</b>	13,140	12,945	0	0
<b>Net Increase (Decrease)</b>	4,036	11,505	32,762	0
<b>Net Position - Beginning of Year</b>	343,984	244,898	174,648	0
<b>Net Position - End of Year</b>	\$ 348,020	\$ 256,403	\$ 207,410	\$ 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, 2019**  
(In Thousands)

	Duty Disability Insurance	Health Insurance	Income Continuation Insurance	Accumulated Sick Leave Conversion Credit	State Retiree Health Insurance
<b>Assets</b>					
Current Assets:					
Investment In Core Fund	694,243	217,312	144,220	1,651,309	0
Prepaid Expenses	0	891	0	8,776	325
Rebates Receivable	0	27,949	0	0	18,875
Federal Subsidy Receivable	0	0	0	0	14,192
Contributions Receivable	597	177	0	1,954	0
Due From Other Benefit Programs	1,336	34,067	2	13,171	19,525
Benefit Overpayments Receivable	270	3	3,339	4	247
Miscellaneous Receivables	0	73	0	0	36
Total Current Assets	696,446	280,472	147,561	1,675,214	53,200
Total Assets	696,446	280,472	147,561	1,675,214	53,200
<b>Liabilities</b>					
Current Liabilities:					
Benefits Payable	2,994	9,951	47	0	3,091
Premiums Payable	0	1,287	0	0	0
Unearned Revenue	0	15,510	0	0	17,167
Current Portion of Estimated Future Benefits	35,898	1,753	19,999	0	258
Current Portion of Compensated Absences	0	0	0	110,326	0
Due To Other Benefit Programs	2	24,606	238	784	28,397
Miscellaneous Payables	0	1,149	188	2	293
Total Current Liabilities	38,894	54,256	20,472	111,112	49,206
Noncurrent Liabilities:					
Noncurrent Portion of Estimated Future Benefits	430,424	0	76,063	0	0
Noncurrent Portion of Compensated Absences	0	0	0	2,138,947	0
Total Noncurrent Liabilities	430,424	0	76,063	2,138,947	0
Total Liabilities	469,318	54,256	96,535	2,250,059	49,206
<b>Net Position Restricted (Unrestricted) For Benefits</b>	<b>\$ 227,128</b>	<b>\$ 226,216</b>	<b>\$ 51,026</b>	<b>\$ (574,845)</b>	<b>\$ 3,994</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, 2019**  
(In Thousands)

	Duty Disability Insurance	Health Insurance	Income Continuation Insurance	Accumulated Sick Leave Conversion Credit	State Retiree Health Insurance
Operating Revenues:					
Contributions	\$ 7,587	\$ 1,284,647	\$ 33,198	\$ 38,356	\$ 230,486
Federal Subsidy	0	0	0	0	28,473
Miscellaneous Income	13	0	111	0	0
<b>Total Operating Revenues</b>	<b>7,600</b>	<b>1,284,647</b>	<b>33,309</b>	<b>38,356</b>	<b>258,959</b>
Operating Expenses:					
Benefit Expense	48,088	1,301,722	18,968	206,834	244,691
Refunds of Contributions	0	0	0	128	0
Carrier Administrative Expenses	0	12,264	2,259	0	6,839
Administrative Expenses	588	9,201	786	528	3,155
<b>Total Operating Expenses</b>	<b>48,676</b>	<b>1,323,187</b>	<b>22,013</b>	<b>207,490</b>	<b>254,685</b>
<b>Operating Income (Loss)</b>	<b>(41,076)</b>	<b>(38,540)</b>	<b>11,296</b>	<b>(169,134)</b>	<b>4,274</b>
Nonoperating Revenues:					
Investment Income	115,670	42,373	21,374	279,478	(324)
Penalties and Fee	0	102	2	0	44
<b>Total Nonoperating Revenues</b>	<b>115,670</b>	<b>42,475</b>	<b>21,376</b>	<b>279,478</b>	<b>(280)</b>
<b>Net Income (Loss)</b>	<b>74,594</b>	<b>3,935</b>	<b>32,672</b>	<b>110,344</b>	<b>3,994</b>
<b>Change in Net Position</b>	<b>74,594</b>	<b>3,935</b>	<b>32,672</b>	<b>110,344</b>	<b>3,994</b>
<b>Total Net Position - Beginning of Year</b>	<b>152,534</b>	<b>222,281</b>	<b>18,354</b>	<b>(685,189)</b>	<b>0</b>
<b>Total Net Position - End of Year</b>	<b>\$ 227,128</b>	<b>\$ 226,216</b>	<b>\$ 51,026</b>	<b>\$ (574,845)</b>	<b>\$ 3,994</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, 2019**  
(In Thousands)

	Duty Disability Insurance	Health Insurance	Income Continuation Insurance	Accumulated Sick Leave Conversion Credit	State Retiree Health Insurance
<b>Cash Flows from Operating Activities</b>					
Cash Received for Rebates	\$ 0	\$ 46,027	\$ 0	\$ 0	\$ 34,317
Cash Received (Paid) for Employer Contributions	0	0	0	37,904	0
Cash Received (Paid) for Insurance Premiums	8,003	1,276,747	33,198	0	239,118
Cash Received (Paid) for Employee Benefits	(36,301)	(1,351,652)	(19,586)	(109,820)	(263,679)
Cash Paid for Administrative Services	(1,015)	(21,606)	(4,097)	(368)	(9,476)
Miscellaneous Income (Expense)	12	0	111	0	0
Net Cash Provided (Used) by Operating Activities	(29,301)	(50,484)	9,626	(72,284)	280
<b>Cash Flows from Noncapital Financing Activities</b>					
Penalties and Fees	0	102	2	0	44
Net Cash Provided (Used) by Noncapital Financing Activities	0	102	2	0	44
<b>Cash Flows from Investing Activities</b>					
Investment Income (Loss)	115,671	42,373	21,374	279,478	(324)
Decrease (Increase) in Investment in Core Fund	(86,370)	8,009	(31,002)	(207,194)	0
Net Cash Provided (Used) by Investing Activities	29,301	50,382	(9,628)	72,284	(324)
<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)	(41,076)	(38,540)	11,296	(169,134)	4,274
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	(1,504)	0	0	(3,321)
Decrease (Increase) in Federal Subsidy Receivable	0	0	0	0	(5,694)
Decrease (Increase) in Contributions Receivable	182	(177)	0	(159)	0
Decrease (Increase) in Miscellaneous Receivables	10	44	0	0	129
Decrease (Increase) in Benefit Overpayments Receivable	27	(4)	(113)	(4)	12
Decrease (Increase) in Prepaid Expenses	0	(452)	64	212	(133)
Decrease (Increase) in Due From Other Benefit Programs	(195)	(9,895)	33	(1,559)	774
Increase (Decrease) in Estimated Future Benefits	20,600	(3,712)	3,929	98,000	(2,379)
Increase (Decrease) in Premiums Payable	0	1,286	0	0	0
Increase (Decrease) in Unearned Revenue	0	1,530	0	0	(836)
Increase (Decrease) in Benefits Payable	23	270	(107)	0	43
Increase (Decrease) in Miscellaneous Payables	(8,874)	141	(4,423)	2	35
Increase (Decrease) in Due to Other Benefit Programs	2	529	(1,053)	358	7,376
Total Adjustments	11,775	(11,944)	(1,670)	96,850	(3,994)
Net Cash Provided (Used) by Operating Activities	\$ (29,301)	\$ (50,484)	\$ 9,626	\$ (72,284)	\$ 280

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). 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 Comprehensive Annual 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*

#### **Pension and Other Employee Benefit Trust Funds**

**Wisconsin Retirement System (WRS):** This fund is used to account for the collection of employee 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.

**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.

## 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.

## 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.

## 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. Security 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 WRS and the MRS are valued at fair value and are invested in the Core Retirement Investment Trust (Core Fund) and the Variable Retirement Investment Trust (Variable Fund), which are collectively the Retirement Funds. The assets of the Income Continuation Insurance, Duty Disability Insurance, Accumulated Sick Leave Conversion Credit, Supplemental Health Insurance Conversion Credit, Health Insurance, State Retiree Health Insurance, and Local Retiree Health Insurance programs are invested in the Core Fund. Earnings are allocated between the WRS and other benefit programs based on the average balance invested for each program. 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 Statement of Fiduciary Net Position. Investments for the Retiree Life Insurance Funds are held by the plan administrator and classified as "Investment Contract" on the Statement of Fiduciary Net Position. All other benefit plan assets are invested in the State Investment Fund (SIF). Investments in the SIF are classified as "Equity in Pooled Cash and Cash Equivalents" on the Statement of Fiduciary Net Position and "Cash and Cash Equivalents" on the Statement of Net Position – Proprietary Funds. 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 Board of Trustees, as authorized in Wis. Stat. § 25.17. SWIB is not registered with the Securities and Exchange Commission as an investment company.

**» *Funding Value of Assets***

While investments are valued 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 for further explanation of the MRA. As of December 31, 2019, the funding value of reserves (In Millions) was as follows:



Benefit Plan	Reserves at Funding Value	Deferred Market Gains (Losses)	Reserves at Fair Value
Wisconsin Retirement System	\$ 106,576.5	\$ 5,516.2	\$ 112,092.8
Income Continuation Insurance (1)	33.9	17.2	51.0
Duty Disability Insurance (1)	192.7	34.4	227.1
ASLCC (1)	(649.0)	74.2	(574.8)
SHICC	1,022.5	61.9	1,084.4
Health Insurance (1)	222.5	3.8	226.2
State Retiree Health Insurance	(0.7)	4.7	4.0
Local Retiree Health Insurance	0.0	0.0	0.0

<sup>(1)</sup> 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 administrative expenses for the year were approximately \$50 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.

### » *Capital Assets*

Capital assets consist of office furniture and equipment and computer software (purchased or externally acquired and internally generated software). ETF capitalizes furniture and equipment, and purchased computer software with a purchase price in excess of \$5,000, and internally-generated software and other intangible assets in excess of \$1 million. Assets are depreciated on a composite basis over an estimated life, ranging from 5 to 20 years, using the straight-line method of depreciation.

As of December 31, 2019, the total value of capital assets was \$12.3 million, less accumulated depreciation of \$8.8 million for a net capital asset value of \$3.5 million. The net capital asset value primarily relates to 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. The amounts reported are based on sick leave balances earned but not used and salary rates as of December 31, 2019. The roll-forward of compensated absences payable for the year ended December 31, 2019 is as follows:





FINANCIAL SECTION

**Compensated Absences Payable (In Millions)**

	12/31/2018	Additions	Reductions	12/31/2019	Due Within One Year
Compensated Absences Payable	\$2,151.3	\$206.8	\$108.8	\$2,249.3	\$110.3

» **Interfund Assets/Liabilities**

Interfund assets and liabilities at December 31, 2019, consist of the following (In Thousands):

**Due To/From Other Benefit Programs**

	WRS	ERA/ CB	Health Insurance	SRH	LRH	Life Insurance	SRL	LRL	DDI	ICI	ASLCC	SHICC	Deferred Comp.	Total
WRS	0	70	371	93	12	339	34	46	0	238	532	2,451	32	\$ 4,218
Health Insurance	128	0	0	27,990	5,556	0	0	0	0	0	68	325	0	\$ 34,067
SRH	0	0	19,508	0	17	0	0	0	0	0	0	0	0	\$ 19,525
LRH	17	0	4,719	315	0	0	0	0	0	0	0	0	0	\$ 5,051
DDI	1,336	0	0	0	0	0	0	0	0	0	0	0	0	\$ 1,336
ICI	0	0	0	0	0	0	0	0	2	0	0	0	0	\$ 2
ASLCC	4,502	0	0	0	0	0	0	0	0	0	0	8,669	0	\$ 13,171
SHICC	1,688	0	8	0	0	0	0	0	0	0	183	0	0	\$ 1,879
<b>Total</b>	<b>\$ 7,671</b>	<b>\$ 70</b>	<b>\$ 24,606</b>	<b>\$ 28,398</b>	<b>\$ 5,585</b>	<b>\$ 339</b>	<b>\$ 34</b>	<b>\$ 46</b>	<b>\$ 2</b>	<b>\$ 238</b>	<b>\$ 783</b>	<b>\$ 11,445</b>	<b>\$ 32</b>	<b>\$ 79,249</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 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.

» **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

ETF adopted GASB Statement No. 84 "Fiduciary Activities" for the year ended December 31, 2019. The statement provides guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. ETF considered the standard and reassessed the reporting fund type of benefit programs, resulting in several changes including the following:

- All fiduciary activities are now classified as one of the following: 1) pension (and other employee benefit) trust funds, 2) investment trust funds, 3) private-purpose trust funds, or 4) custodial funds.
- The Local Retiree Health Fund was historically reported as a fiduciary agency fund. With the implementation of this standard, it has changed to a fiduciary custodial fund presentation. Fiduciary funds require the reporting of a Statement of Net Position and a Statement of Changes in Fiduciary Net Position. This change did not result in any adjustment to the beginning balance.
- The State Retiree Health Fund was historically reported as a fiduciary agency fund. With the implementation of this standard it has changed to a proprietary fund presentation. Proprietary funds require the reporting of a Statement of Net Position, Statement of Revenues, Expenditures, and Changes in Fund Net Position, and Statement of Cash Flows. This change did not result in any adjustment to the beginning balance.
- ETF concluded the SHICC program is a defined benefit OPEB plan in accordance with GASB Statement No. 74 "Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans" and the ASLCC program is considered a compensated absence consistent with the provisions of GASB Statement No. 16 "Accounting for Compensated Absences". Previously, the ASLCC and SHICC benefit programs were collectively reported as a fiduciary fund.

In accordance with GASB Statement No. 74, a liability for estimated future benefits for the SHICC program is not recognized at the plan level. Instead, participating employers will recognize their proportionate share of the net OPEB liability or asset. The beginning net position of the SHICC program was restated for this change in reporting. The cumulative impact for all prior years made to the beginning net position was a net increase of \$991.6 million. The impact on prior year's statement of changes in fiduciary net position was a net increase of \$4.3 million. This change also resulted in additional disclosure requirements for the SHICC program, which are primarily included in Note 9, as well as a calculation of a net OPEB liability or asset.

The ASLCC program is reported as an internal service fund. The beginning net position of the ASLCC program was restated for this change in reporting and a remeasurement of certain liabilities. The cumulative impact to the beginning net position was a net decrease of \$591.3 million. The impact on prior year's statement of changes in fiduciary net position was an increase of \$1.4 million.

In addition, the SHICC and ASLCC beginning net positions were restated to correct benefit expense between SHICC, ASLCC, and other benefit programs. Based on analysis of historical activity, we identified errors in the method used to assign benefit expense between programs. The cumulative impact of this error resulted in decreases in net position of \$2.4 million and \$0.4 million for the SHICC and ASLCC programs respectively. The impacts on prior year's statements of changes in fiduciary net position for the SHICC and ASLCC programs resulted in additional Other Benefit Expense of \$0.3 million and \$0.1 million respectively.



FINANCIAL SECTION

A summary of the restatement is shown in the below table.

<b>Restatement of SHICC and ASLCC Net Position (In Thousands)</b>		
	<b>SHICC</b>	<b>ASLCC</b>
Net Position as of December 31, 2018 *	\$ (46,198)	\$ (93,425)
Change in Reporting	991,630	(591,338)
Adjustment for prior year activity	(2,378)	(426)
Net Position as of December 31, 2018, restated	<u>\$ 943,054</u>	<u>\$ (685,189)</u>

\*Note that the SHICC and ASLCC programs were previously reported together and reported a combined net position of (\$139,623) as of December 31, 2018.

ETF administers the Duty Disability Insurance and Income Continuation Insurance (ICI) programs for the State of Wisconsin and local government employers participating in the programs. Both programs include actuarially determined liabilities, including a loss adjustment expense (LAE) which is the expected present value of future expenses related to the ongoing management and settlement or payment of claims. Effective January 1, 2019, LAE will be reported with Estimated Future Benefits on the respective program's Statement of Net Position, differentiating between current and non-current portions. The related change in LAE will be reported as Benefit Expense on the respective program's Statement of Revenues, Expenses, and Changes in Fund Net Position. In previous reporting periods, the LAE was reported as Miscellaneous Payables, while the change in LAE was reported as Administrative Expense and Carrier Administrative Expenses for Duty Disability Insurance and ICI, respectively. There is no impact for either program on the beginning of the year or end of the year Net Position as of December 31, 2019 as a result of this change.

Certain reclassifications have been made to the financial statements of the State Retiree Life Insurance and Local Retiree Life Insurance funds for claims incurred but not paid (Benefits Payable) prior to December 31, 2019, and for contributions received for life insurance coverage beginning after December 31, 2019 (Unearned Revenue). Previously, the Benefits Payable and Unearned Revenue were combined with Investment Contract on the Statement of Fiduciary Net Position and Employer Contributions on the Statement of Changes in Fiduciary Net Position respectively. Presenting these amounts separately improves transparency and compliance with GAAP.

### 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 per section 25.17(14) of the Wisconsin Statutes. 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 on the Statement of Fiduciary Net Position consists of short-term investments, which are 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, 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 in "Fixed Income Investments" on 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 market

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 value as reported by the general partner. The capital account balance as stated in the most recent available quarterly reporting period is adjusted for subsequent cash flows to derive fair value. The financial statements of the limited partnerships and real estate pooled funds are audited by independent auditors annually.

Certain portfolios make investments in privately-held companies alongside a strategic partner, such as a limited partnership fund manager. These co-investments are valued by SWIB's strategic partner, who often employ independent valuation agents and use a variety of methodologies such as 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 properties wholly owned by SWIB 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 involve investments across multiple asset classes. The "Multi Asset Investments" account on 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 net asset value 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 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.



FINANCIAL SECTION

Derivative financial instruments are marked to fair value 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 is 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 since no independent quotation is 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 carry a minimum weighted average rating at all times. 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, 2019. Included in this table are fixed income securities, including certain short-term securities, classified as "Equity in Pooled Cash and Cash Equivalents" on 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 custodian. 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.

<b>Retirement Funds Credit Quality Distribution As of December 31, 2019</b> (In Thousands)		
<b>Rating</b>	<b>Fair Value</b>	<b>% of Total</b>
AAA/Aaa	\$ 501,441	1.2 %
A-1/P-1	5,682	0
AA/Aa	23,279,226	56.5
A-2/P-2	238,456	0.6
A	2,599,258	6.3
BBB/Baa	4,857,290	11.8
BB/Ba	1,893,733	4.6
B	1,290,841	3.1
CCC/Caa or below	259,063	0.6
Not Rated	1,477,792	3.6
Commingled Fixed Income Funds	4,835,231	11.7
<b>Total</b>	<b>\$ 41,238,013</b>	<b>100 %</b>

SWIB held \$9.8 billion in reverse repurchase agreements at December 31, 2019. 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 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 at December 31, 2019 is summarized in the table entitled Reverse Repurchase Agreements, Counterparty Credit Exposure.

<b>Retirement Funds Reverse Repurchase Agreements Counterparty Credit Exposure As of December 31, 2019 (In Thousands)</b>	
Fair Value of Collateral Held by Counterparty	\$10,115,115
Less:	
Cash due to Counterparty	9,844,991
Collateral and Interest due to Counterparty	173,503
Total due to Counterparty	10,018,494
Net Counterparty Credit Exposure	\$ 96,621

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 0.98% and 2.13% at December 31, 2019. 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" on the Statement of Fiduciary Net Position. The underlying assets, as well as the reinvested proceeds, are reported in the "Investments at Fair Value" section on the Statement of Fiduciary Net Position.

### » Custodial Credit Risk

**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 \$367.0 million as of December 31, 2019. Of the total, \$61.2 million was collateralized by securities borrowed. Depository insurance covered another \$47.4 million of the total. The remaining deposits, totaling \$258.4 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



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borrowed by SWIB for short sales. In addition to cash deposits, the Retirement Funds also held \$66.3 million in certificates of deposit, all of which were covered by depository insurance as of December 31, 2019.

**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 five repurchase agreements totaling \$411.5 million as of December 31, 2019. 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.

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" 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 be insured for errors and omissions and must provide SWIB with an annual report on internal controls, prepared in accordance with the Statement on Standards for Attestation Engagements. Furthermore, SWIB management has established a system of controls for the oversight of services and related processes of the custodian. SWIB's current custodial bank was selected in accordance with these guidelines and meets all requirements stipulated in the custodial credit risk policy.

### » *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 at December 31, 2019.

### » *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 a number of different 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 13.75% at December 31, 2019.

Generally, SWIB analyzes long- or 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 are required to be managed within a range of a targeted duration, while others are required to maintain a weighted average maturity at or below a specified number of days or years.

The table entitled Interest Rate Sensitivity by Investment Type presents the aggregated interest rate exposure for the Retirement Funds' assets at December 31, 2019. 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. The duration statistic is calculated utilizing 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 and U.S. government agencies. These types of structured product investments may be highly sensitive to interest rate changes in that they can 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, 2019**  
 (In Thousands)

<b>Investment Type</b>	<b>Fair Value</b>	<b>Weighted Average Duration (Years)</b>	<b>Weighted Average Maturity (Days)</b>
U.S Treasury Inflation Protected Securities	\$ 16,848,689	7.4	
Corporate Bonds & Private Placements	10,789,513	6.4	
U.S Treasury Securities	5,343,008	8.4	
Foreign Government/Agency Bonds	1,889,736	6.9	
Repurchase Agreements	411,534		2
Asset Backed Securities	387,359	1.9	
U.S Government Agencies	286,913	3.2	
Commercial Paper	251,331		22
Municipal Bonds	194,700	11.4	
Commingled Funds			
Short Term Cash Management	3,758,685		20
Emerging Market Fixed Income	998,688	5.9	
Exchange Traded	77,857	5.8	
<b>Total</b>	<b>\$ 41,238,013</b>		

\*Excludes derivatives





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**» 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 (short) active position, will decline (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 at December 31, 2019.

**Retirement Funds  
Currency Exposure by Investment Type  
December 31, 2019  
Stated in U.S. Dollars  
(In Thousands)**

Currency	Cash & Cash Equivalents	Equities	Fixed Income	Limited Partnerships	Preferred Securities	Financial Futures Contracts	Options	Short Sell Obligations	Total
Australian Dollar	\$ 8,908	\$ 930,656	\$ 23,022	\$ 0	\$ 0	\$ (356)	\$ 0	\$ (148,626)	\$ 813,604
Brazilian Real	66	102,495	2,128	0	14,877	0	0	0	119,566
Canadian Dollar	12,170	1,596,517	18,136	0	0	558	0	(219,290)	1,408,091
Chilean Peso	15	11,902	0	0	0	0	0	0	11,917
Czech Republic Koruna	66	605	0	0	0	0	0	0	671
Denmark Krone	349	350,857	0	0	0	0	0	(37,957)	313,249
Euro Member Countries	30,353	5,567,118	237,609	988,410	288,100	777	0	(593,006)	6,519,361
Hong Kong Dollar	1,138	996,645	0	0	0	0	0	(24,091)	973,692
Hungarian Forint	0	11,164	0	0	0	0	0	0	11,164
Indian Rupee	61	46,719	0	0	0	0	0	0	46,780
Indonesian Rupiah	132	22,806	0	0	0	0	0	0	22,938
Israeli Shekel	250	29,958	0	0	0	0	0	(4,007)	26,201
Japanese Yen	16,241	4,063,228	0	0	0	75	0	(477,368)	3,602,176
Korea (South) Won	51	243,352	0	0	400	0	0	0	243,803
Malaysian Ringgit	501	9,077	8,905	0	0	0	0	0	18,483
Mexican Peso	758	14,416	24,109	0	0	0	0	0	39,283
New Zealand Dollar	783	46,133	14,996	0	0	0	0	(11,763)	50,149
Norwegian Krone	458	117,254	0	0	0	0	0	(34,284)	83,428
Philippine Peso	294	10,269	0	0	0	0	0	0	10,563
Poland Zloty	304	28,962	4,802	0	0	0	0	0	34,068
Russian Ruble	5	0	0	0	0	0	0	0	5
Singapore Dollar	3,943	265,440	0	0	0	0	0	(23,931)	245,452
South African Rand	883	51,062	21,499	0	41	0	0	0	73,485
Sweden Krona	113	490,788	3,658	2,726	0	0	0	(75,618)	421,667
Swiss Franc	458	1,446,884	0	0	0	0	0	(128,825)	1,318,517
Taiwan New Dollar	3	176,227	0	0	0	0	0	0	176,230
Thailand Baht	0	43,762	0	0	0	0	0	0	43,762
Turkish Lira	2	73,904	0	0	0	0	0	0	73,906
United Kingdom Pound	21,413	2,881,269	18,843	270,639	46	623	0	(199,774)	2,993,059
<b>Total</b>	<b>\$ 99,718</b>	<b>\$19,629,469</b>	<b>\$ 377,707</b>	<b>\$ 1,261,775</b>	<b>\$ 303,464</b>	<b>\$ 1,677</b>	<b>\$ 0</b>	<b>\$(1,978,540)</b>	<b>\$19,695,270</b>

1) 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.

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

3) 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, Multi Asset Investments, Real Estate, TBAs, Option Contracts, Swaps and Obligation Under Reverse Repurchase Agreements.

4) Values may not add due to rounding.

### » 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.



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**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 net asset value (NAV).

The fair value measurements of investments as of December 31, 2019, are found in the table entitled Investments by Fair Value Level.

**Retirement Funds  
Investments by Fair Value Level  
As of December 31, 2019  
(In Thousands)**

Asset Type	Fair Value			TOTAL
	Level 1	Level 2	Level 3	
<b>Cash Equivalents</b>				
Certificates of Deposit	\$ 0	\$ 47,303	\$ 16,002	\$ 63,305
Commercial Paper	0	0	251,331	251,331
Corporate Bonds & Private Placements	0	0	759	759
<b>Total Cash Equivalents</b>	<b>0</b>	<b>47,303</b>	<b>268,092</b>	<b>315,395</b>
<b>Equities</b>				
Domestic	38,596,296	21,307	39,438	38,657,041
International	19,583,916	0	45,553	19,629,469
<b>Total Equities</b>	<b>58,180,212</b>	<b>21,307</b>	<b>84,991</b>	<b>58,286,510</b>
<b>Fixed Income</b>				
Asset Backed Securities	0	380,652	6,707	387,359
Corporate Bonds & Private Placements	0	10,140,094	62,006	10,202,100
Exchange Traded Funds	77,857	0	0	77,857
Foreign Government/Agency Bonds	0	1,889,736	0	1,889,736
Municipal Bonds	0	194,700	0	194,700
U.S. Government Agencies	0	286,813	0	286,813
U.S. Treasury Inflation Protected Securities	0	16,848,689	0	16,848,689
U.S. Treasury Securities	68,068	5,274,940	0	5,343,008
<b>Total Fixed Income</b>	<b>145,925</b>	<b>35,015,624</b>	<b>68,713</b>	<b>35,230,262</b>
<b>Real Estate</b>	<b>0</b>	<b>0</b>	<b>1,374,070</b>	<b>1,374,070</b>
<b>Preferred Securities</b>				
Domestic	0	129,310	48,957	178,267
International	303,464	0	0	303,464
<b>Total Preferred Securities</b>	<b>303,464</b>	<b>129,310</b>	<b>48,957</b>	<b>481,731</b>
<b>Convertibles</b>	<b>0</b>	<b>3,540</b>	<b>527</b>	<b>4,067</b>
<b>Derivatives</b>				
Foreign Exchange Contracts	0	8,316	0	8,316
Futures	(29,912)	0	0	(29,912)
Options	(6,027)	(2)	0	(6,029)
Swaps	0	24,037	0	24,037
To Be Announced Securities	0	913,743	0	913,743
<b>Total Derivatives</b>	<b>(35,939)</b>	<b>946,094</b>	<b>0</b>	<b>910,155</b>
<b>Equity Short Sales</b>	<b>(4,464,308)</b>	<b>0</b>	<b>0</b>	<b>(4,464,308)</b>
<b>Total</b>	<b>\$ 54,129,354</b>	<b>\$ 36,163,178</b>	<b>\$ 1,845,350</b>	<b>\$ 92,137,882</b>

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.



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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. Over-the-counter derivative instruments, such as swaps, TBAs, and foreign exchange contracts, are also included in Level 2 as 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. For the WRS, such investments primarily include directly-held real estate, which is valued using appraisals that include significant unobservable inputs. 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 public company comparables, 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, inactive market, or adjusted quoted prices may also result in Level 3 measurements.

### » *Investments Measured at NAV*

The fair value of investments in certain fixed income funds, private equity limited partnerships, stock funds, real estate limited partnerships, and hedge funds are based on the investments' net asset value (NAV) per share (or its equivalent), provided by the investee. The December 31, 2019 investments valued using NAV are shown in the table entitled Investments Measured at NAV and include commingled/pooled funds, private equity, and real estate limited partnerships.

**Retirement Funds  
Investments Measured at NAV  
As of December 31, 2019  
(In Thousands)**

Investments Measured at NAV	Fair Value	Unfunded Commitments <sup>(8)</sup>	Redemption Frequency	Redemption Notice Period <sup>(9)</sup>
Cash and Cash Equivalents <sup>(1)</sup>	\$ 3,758,685	\$ 0	Daily	Same Day
Fixed Income <sup>(2)</sup>	1,477,172	323,275	Daily, N/A	5 days, N/A
Private Equity Limited Partnerships <sup>(3)</sup>	9,175,514	6,218,971	N/A	N/A
Equities <sup>(4)</sup>	7,724,778	0	Daily, Monthly	2-30 days
Real Estate Limited Partnerships <sup>(5)</sup>	5,594,846	1,808,954	Quarterly, Annually, N/A	30-90 days, Other, N/A
Hedge Funds <sup>(6)</sup>	5,353,262	680,748	Various	Various
<b>Total <sup>(7)</sup></b>	<b>\$ 33,084,257</b>	<b>\$ 9,031,948</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 a long-only fixed income manager (68%), which can invest across the credit quality spectrum, in varying geographies, and can include derivatives, high yield and structured securities. The long-only manager requires a redemption notice period of 5 days and has daily liquidity. The remaining 32% of this category includes LLCs which invest in private real estate debt. These LLC investments distribute earnings over the life of the investment. The majority of these LLC investments have an average, estimated remaining life of less than 5 years. One LLC investment has an estimated remaining life of 5-10 years.

<sup>(3)</sup> Private Equity Limited Partnerships include direct, co-investments 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 will be received as the underlying investments are liquidated. The table entitled Limited Partnerships - Estimated Remaining Life provides an estimate of the period over which the underlying assets are expected to be liquidated. However, as of December 31, 2019, it is probable that approximately 4% of these investments will be sold in the secondary market. Buyers for these investments have been identified and the sale of these investments is expected to occur during 2020.

<sup>(4)</sup> This category includes long-only equity managers (68%) with various fundamental, quantitative and other approaches spanning various styles, geographies and market cap weights. The majority of these long-only manager investments can be redeemed monthly with between 10 and 15 business days' notice. One long-only manager investment can be redeemed daily with 30 days' notice. The remaining 32% 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 days' notice.

<sup>(5)</sup> This category includes funds that invest directly in real estate and real estate related assets. Approximately 72% of these investments are generally not resold or redeemed. Distributions from each fund will be received as the underlying investments are liquidated. The table entitled Limited Partnerships - Estimated Remaining Life provides an estimate of the period over which the underlying assets are expected to be liquidated. The remaining 28% of this category consists of open-ended funds that invest directly in real estate and real estate related assets. The majority of these investments can be redeemed quarterly with between 30 and 90 days' notice. One fund can be redeemed annually with notice provided in the first quarter of the calendar year.

<sup>(6)</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. Estimated remaining life for the majority funds structured as limited partnerships within the portfolio is between 5-10 years. One fund has an estimated remaining life of greater than 10 years. Additional information relating to Hedge Funds can be found later in this note.

<sup>(7)</sup> WRS had additional commitments of approximately \$1.5 billion, relating to funds that had secured commitments but not yet called capital as of December 31, 2019.

<sup>(8)</sup> WRS had additional unfunded commitments of approximately \$190,356, relating to assets measured at fair value.

<sup>(9)</sup> Redemption terms described for NAV investments reflect contractual agreements and assume withdrawals are made without adverse market impact under normal market conditions.

### » Private Equity and Real Estate Limited Partnerships

The Private Equity Limited Partnerships participated in the following investment strategies at December 31, 2019:

**Buyout** - This strategy acquires shares of a private company to gain a controlling interest.

**Mezzanine** - This strategy provides mezzanine debt to finance leveraged buyouts, recapitalizations, and corporate acquisitions.

**Special Situations** - 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.

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



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The Real Estate Limited Partnerships generally consisted of the following investment strategies at December 31, 2019:

**Core** - Core investments are expected to deliver a significant percentage of their return from income and should demonstrate 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.

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 Retirement Funds' private equity and real estate limited partnership holdings as of December 31, 2019.

**Retirement Funds**  
**Limited Partnerships - Estimated Remaining Life**  
**As of December 31, 2019**  
(In Thousands)

<u>Limited Partnership Type</u>	<u>Estimated Remaining Life*</u>				<u>Total</u>
	<u>&lt; 5 Years</u>	<u>5 - 10 Years</u>	<u>&gt; 10 Years</u>	<u>N/A</u>	
Private Equity	\$ 2,256,199	\$ 5,160,913	\$ 1,758,402	\$ 0	\$ 9,175,514
Real Estate	567,233	3,388,701	54,071	1,584,841	5,594,846
Total	<u>\$ 2,823,432</u>	<u>\$ 8,549,614</u>	<u>\$ 1,812,473</u>	<u>\$ 1,584,841</u>	<u>\$ 14,770,360</u>

\* Estimated remaining life represents subjective estimates, assuming normal market conditions.

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 at December 31, 2019:

**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 their holdings in indexes, 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.

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 at December 31, 2019.

**Retirement Funds  
Hedge Fund Redemption Timing  
As of December 31, 2019  
(In Thousands)**

Redemption Frequency	Redemption Notice Period (Days)	Fair Value
Monthly	5 - 90	\$ 1,387,487
Quarterly <sup>(1)</sup>	30 - 90	3,240,880
Semi - Annual <sup>(2)</sup>	30	41,947
Other <sup>(1)</sup> <sup>(3)</sup>	45 - 90, N/A	682,948
<b>Total</b>		<b>\$ 5,353,262</b>

<sup>(1)</sup> These categories include funds that are in the process of being fully redeemed, with final distribution expected in 2020.

<sup>(2)</sup> This category includes funds that have a funding date of January 1st, 2020. SWIB was contractually obligated to wire funds to the fund manager prior to the funding date.

<sup>(3)</sup> This category includes funds that are subject to rolling locks, whereby the fund automatically re-locks unless a withdrawal request is submitted. This category also includes funds that are structured as limited partnerships, whereby withdrawals are not permitted but the participants receive distributions over the life of the fund.

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.





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The table entitled Hedge Fund Lock-ups reflects the lock-up terms for the Hedge Fund investments held at December 31, 2019.

**Retirement Funds  
Hedge Fund Lock-ups  
As of December 31, 2019  
(In Thousands)**

Hedge Fund Lock Type	Initial Duration of Lock (Years)	Year of Lock Expiration	Fair Value
Hard Lock <sup>(1)(2)</sup>	1 - 3	2020 - 2022	\$ 589,911
Soft Lock	1	2020	91,067
Rolling Lock <sup>(1)</sup>	2 - 3	2020 - 2022	449,222
None <sup>(1)</sup>	N/A	N/A	4,121,524
Other <sup>(3)</sup>	N/A	N/A	101,538
<b>Total</b>			<b>\$ 5,353,262</b>

<sup>(1)</sup> These categories include funds that are in the process of being fully redeemed, with final distribution expected in 2020.

<sup>(2)</sup> This category includes funds that have a funding date of January 1st, 2020. SWIB was contractually obligated to wire funds to the fund manager prior to the funding date.

<sup>(3)</sup> This category includes funds that are structured as limited partnerships, whereby withdrawals are not permitted but the participants receive distributions over the life of the fund.

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) net asset value. 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 at December 31, 2019.

**Retirement Funds  
Hedge Fund Gates  
As of December 31, 2019  
(In Thousands)**

Hedge Fund Gate Type	Gate Range	Fair Value
Investor Level <sup>(1)(2)</sup>	12.5% - 25%	\$ 1,878,988
Fund Level <sup>(1)</sup>	8.33% - 30%	1,049,221
None <sup>(1)</sup>	N/A	2,323,515
Other <sup>(3)</sup>	N/A	101,538
<b>Total</b>		<b>\$ 5,353,262</b>

<sup>(1)</sup> These categories include funds that are in the process of being fully redeemed, with final distribution expected in 2020.

<sup>(2)</sup> This category includes funds that have a funding date of January 1st, 2020. SWIB was contractually obligated to wire funds to the fund manager prior to the funding date.

<sup>(3)</sup> This category includes funds that are structured as limited partnerships, whereby withdrawals are not permitted but the participants receive distributions over the life of the fund.

## » *Derivative Instruments*

A derivative instrument, as defined by GASB Statement No. 53, is a financial instrument or other contract that has all of 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 that would be 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 which have been approved by the Board of Trustees. 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 investments directly as well as indirectly through commingled or pooled investments. Information relating to investments held in commingled funds has not been 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 over-the-counter (OTC) contracts. OTC contracts can be structured as either "uncleared" or "cleared."

Uncleared OTC contracts are non-standardized bilateral contracts between counterparties and 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 types of contracts are called "exchange-traded" 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



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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 over-the-counter	Trades negotiated over-the-counter	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 \$247.9 million in cash and \$287.7 million in securities as collateral for derivatives positions as of December 31, 2019. 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, 2019, without respect to any collateral or netting agreement.

**Retirement Funds**  
**OTC Derivative Instruments Subject to Counterparty Credit Risk**  
**As of December 31, 2019**  
 (In Thousands)

<b>Counterparty Credit Rating</b>	<b>FX Receivables</b>	<b>Swap Receivables</b>	<b>To Be Announced Securities<sup>1</sup></b>	<b>Warrants<sup>1,2</sup></b>	<b>Total<sup>3</sup></b>
AA	\$ 814,883	\$ 0	\$ 0	\$ 0	\$ 814,883
A	3,588,471	570,776	3,568	0	4,162,815
BBB	632	0	0	0	632
Not Rated	0	0	0	9,126	9,126
					<u>\$ 4,987,456</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 \$4.9 billion at December 31, 2019.

The aggregate fair value of receivables relating to uncleared OTC derivative contracts was \$5.0 billion at December 31, 2019. 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 \$0 at December 31, 2019 when counterparty collateral and master netting arrangements are taken into account. The number of uncleared OTC counterparties with credit exposure at year end was 16.

### Cleared OTC and Exchange-Traded Derivative Instruments

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. To ensure performance, 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 permitted. In select portfolios, currencies of non-benchmark countries may be held through the use of forward contracts, provided that the notional value of any single non-benchmark currency does not exceed 5% of the market value of the portfolio. SWIB may employ discretionary currency overlay



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strategies at the total fund and asset class level 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" on the Statement of Changes in Fiduciary Net Position. The net receivable or payable for spot and forward contracts is reflected as "Foreign Currency Contracts" on the Statement of Fiduciary Net Position. The table entitled Foreign Currency Spot and Forward Contracts presents the fair value of foreign currency spot and forward contract assets and liabilities held by the Retirement Funds as of December 31, 2019.

**Retirement Funds**  
**Foreign Currency Spot and Forward Contracts**  
**December 31, 2019**  
 (In Thousands)

<b>Currency</b>	<b>Notional (local currency)</b>	<b>Fair Value (\$US)</b>	<b>Unrealized Gain(Loss) (\$US)</b>
<b>Foreign Currency Contract Receivables</b>			
Australian Dollar	169,256	119,003	2,778
Brazilian Real	102,088	25,317	673
Canadian Dollar	160,675	123,913	2,260
Chilean Peso	29,174,841	38,820	1,284
China Yuan Renminbi	224,055	32,083	225
Colombian Peso	11,004,997	3,341	172
Czech Republic Koruna	685,751	30,291	446
Danish Krone	131,480	19,763	135
Egypt Pound	83,596	5,193	297
Euro Member Countries	217,705	244,549	1,587
Hong Kong Dollar	294,084	37,738	147
Hungarian Forint	1,396,858	4,744	45
Indian Rupee	3,239,107	45,258	128
Indonesian Rupiah	488,170,073	34,925	570
Israeli Shekel	44,234	12,826	67
Japanese Yen	23,251,938	214,081	(176)
Korea (South) Won	13,623,395	11,819	167
Mexican Peso	453,320	23,752	478
New Zealand Dollar	38,255	25,811	836
Norway Krone	3,472,087	395,194	15,513
Peru Sol	24,161	7,278	121
Philippine Peso	243,844	4,794	7
Poland Zloty	129,143	34,101	658
Russian Ruble	2,148,307	34,353	1,074
Singapore Dollar	70,747	52,632	628
Sweden Krona	3,365,807	360,430	7,927
Switzerland Franc	196,298	202,817	2,897
Taiwan New Dollar	421,359	14,164	242
Thailand Baht	144,028	4,817	41
Turkish Lira	35,801	5,944	(93)
United Kingdom Pound	110,722	146,720	1,420
U.S. Dollar	2,087,515	2,087,515	0
<b>Total Receivables</b>		<b>4,403,986</b>	<b>42,554</b>



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**Retirement Funds**  
**Foreign Currency Spot and Forward Contracts**  
**December 31, 2019**  
 (In Thousands)

Currency	Notional (local currency)	Fair Value (\$US)	Unrealized Gain(Loss) (\$US)
<b>Foreign Currency Contract Payables</b>			
Australian Dollar	(173,633) \$	(122,069) \$	(2,375)
Brazil Real	(41,887)	(10,402)	(494)
Canadian Dollar	(206,831)	(159,505)	(2,702)
Chile Peso	(11,288,902)	(15,025)	(555)
China Yuan Renminbi	(95,244)	(13,605)	(47)
Colombian Peso	(29,410,088)	(8,928)	(444)
Czech Republic Koruna	(192,988)	(8,524)	(178)
Denmark Krone	(387,406)	(58,216)	(497)
Euro Members Countries	(1,258,125)	(1,414,686)	(15,835)
Hong Kong Dollar	(239,147)	(30,690)	(74)
Hungarian Forint	(3,148,823)	(10,695)	(141)
Indian Rupee	(609,796)	(8,496)	(66)
Indonesia Rupee	(166,546,392)	(11,960)	(255)
Israeli Shekel	(16,586)	(4,815)	(25)
Japanese Yen	(27,795,081)	(255,844)	(237)
Korea (South) Won	(6,128,397)	(5,317)	(157)
Mexican Peso	(259,381)	(13,707)	(304)
New Zealand Dollar	(97,944)	(66,125)	(1,901)
Norway Krone	(193,690)	(22,043)	(830)
Peru Sol	(21,716)	(6,542)	(136)
Philippines Peso	(197,765)	(3,890)	(15)
Poland Zioty	(11,437)	(3,020)	(74)
Singapore Dollar	(43,861)	(32,621)	(331)
South African Rand	(210,668)	(14,985)	(697)
Sweden Krona	(816,924)	(87,293)	(1,153)
Switzerland Franc	(117,301)	(121,211)	(1,346)
Taiwan New Dollar	(455,505)	(15,312)	(68)
Thailand Baht	(123,684)	(4,137)	(53)
Turkish Lira	(16,590)	(2,736)	14
United Kingdom Pound	(190,791)	(252,782)	(3,560)
U.S. Dollar	(1,610,489)	(1,610,489)	0
Total Payables		(4,395,670)	(34,536)
Net		\$ 8,316	\$ 8,018

**» 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" on 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" on 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, 2019.

<b>Retirement Funds Futures Contracts As of December 31, 2019</b> (In Thousands)				
Futures Contract Description	Position	Expiration	Notional Amount	Fair Value*
Commodity	Long	Jan 20 - Apr 20	\$ 88,416	\$ 2,664
	Short	Jan 20 - Mar 20	(33,093)	(113)
Currency	Long	Mar 20	87,918	1,284
	Short	Mar 20	(38,785)	(194)
Equity Index	Long	Jan 20 - Mar 20	2,117,002	11,988
	Short	Jan 20 - Apr 20	(284,674)	(5,644)
Fixed Income	Long	Mar 20	9,782,696	(65,436)
	Short	Mar 20	(3,096,191)	25,539
Total			\$ 8,623,289	\$ (29,912)

\* 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, 2019. 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.





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**Retirement Funds**  
**Futures Contracts with Interest Rate Sensitivity**  
**As of December 31, 2019**  
 (In Thousands)

Contract Type	Position	Notional Amount	Fair Value	Weighted Average Duration (Years)
U.S. Treasury Notes	Long	\$ 7,792,879	\$ (17,697)	3.5
U.S. Treasury Notes	Short	(2,672,240)	23,501	6.4
U.S. Treasury Bonds	Long	1,989,817	(47,739)	17.0
U.S. Treasury Bonds	Short	(6,721)	211	18.1
Foreign Government Bonds	Short	(417,230)	1,827	5.1
Total		<u>\$ 6,686,505</u>	<u>\$ (39,897)</u>	

## » Options

An option 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 options 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 option purchaser in the event the option contract were 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 options contracts is based upon the closing market price of the contract and is reflected as "Options Contracts" on the Statement of Fiduciary Net Position. Gains and losses as a result of investments in options contracts are included in the "Net Increase (Decrease) in Fair Value of Investments" on the Statement of Changes in Fiduciary Net Position. The table entitled Options Contracts presents the fair value of options contracts as of December 31, 2019. The Retirement Funds did not hold OTC options at December 31, 2019.

**Retirement Funds**  
**Options Contracts**  
**As of December 31, 2019**  
 (In Thousands)

Description	Contract Type	Position	Exchange-Traded (EXCH) vs. OTC	Expiration	Notional	Fair Value	Unrealized Gain (Loss)
Equity	CALL	Short	EXCH	Jan 20 - Apr 20	\$ (18,648)	\$ (620)	\$ (166)
Equity	PUT	Short	EXCH	Jan 20 - May 20	(56,123)	(499)	759
Equity	PUT	Long	EXCH	Jan 20 - Feb 20	8,901	251	(49)
Equity Index	CALL	Short	EXCH	Jan 20 - Mar 20	(226,155)	(4,342)	(2,643)
Equity Index	PUT	Short	EXCH	Jan 20 - Mar 20	(226,155)	(852)	1,861
Equity Index	PUT	Long	EXCH	Jan 20 - Mar 20	26,748	29	(51)
Fixed Income Index	PUT	Long	EXCH	Feb 20	2,032	4	(2)
Total					<u>\$ (489,400)</u>	<u>\$ (6,029)</u>	<u>\$ (291)</u>

**» Swaps**

Swaps are negotiated contractual agreements between two parties that can be cleared or uncleared OTC investments. As is 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) and Credit Default Swaps (CDS). The table entitled Open Swap Positions lists the open swap contracts held at December 31, 2019.

<b>Retirement Funds Open Swap Positions As of December 31, 2019 (In Thousands)</b>					
Type	Maturity Date	Reference Rate	Notional Amount	Fair Value	Unrealized Gain (Loss)
Credit Default	Dec-24	NA <sup>(1)</sup>	\$ 215,000	\$ 5,574	\$ 99
Credit Default	Dec-24	NA <sup>(1)</sup>	39,600	3,815	(30)
Credit Default	Dec-24	NA <sup>(2)</sup>	30,000	(1,009)	26
Credit Default	Dec-24	NA <sup>(2)</sup>	(155,000)	(4,019)	74
Total Return	Jan-20	Pay Equity Index Return, Receive 3-month LIBOR plus Spread	(110,414)	(33)	(33)
Total Return	Jan-20	Pay 3-month LIBOR plus Spread, Receive Equity Index Return	54,384	4,690	4,690
Total Return	Apr-20	Pay 3-month LIBOR plus Spread, Receive Equity Index Return	54,834	5,072	5,072
Total Return	Jun-20	Pay 3-month LIBOR plus Spread, Receive Equity Index Return	63,943	826	826
Total Return	Jul-20	Pay 3-month LIBOR plus Spread, Receive Equity Index Return	54,834	5,072	5,072
Total Return	Sep-20	Pay 3-month LIBOR plus Spread, Receive Equity Index Return	56,054	1,554	1,554
Total Return	Dec-20	Pay 3-month LIBOR plus Spread, Receive Equity Index Return	98,566	(262)	(262)
Total Return	Feb-21	Pay 3-month LIBOR plus Spread, Receive Equity Index Return	57,982	2,757	2,757
Total			<u>\$ 459,783</u>	<u>\$ 24,037</u>	<u>\$ 19,845</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

The open CDS contracts represent cleared OTC positions where SWIB sold (bought) credit protection. Under the terms of the contracts, SWIB receives (pays) periodic payments and, in exchange, agrees to pay (receive) a



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formula-determined 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 CDS is determined using the closing price as reported by the applicable clearinghouse.

The open TRS contracts represent uncleared OTC positions where SWIB receives (pays) the return of the underlying equity index, in exchange, agrees to pay (receive) the stipulated rate benchmark. The rate benchmark is based on the 3-month London Interbank Offering Rate (LIBOR) and is sensitive to interest rate changes. The fair value for TRS is determined 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 and TRS is reflected as “Swaps” on 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” on the Statement of Changes in Fiduciary Net Position.

» *To Be Announced Securities*

To be announced mortgage-backed (TBA) 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, 2019. 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.

<b>Retirement Funds TBA Contracts As of December 31, 2019</b> (In Thousands)				
Position	Contract Maturity	Fair Value	Unrealized Gain (Loss)	Weighted Average Duration (Years)
Long	Jan 20	\$ 2,976,944	\$ 3,341	3.0
Short	Jan 20	(2,063,201)	(2,644)	3.2
Total		<u>\$ 913,743</u>	<u>\$ 697</u>	

The fair value of TBAs is reflected in “To Be Announced Securities” on 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” on 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 in that the two instruments 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, 2019, SWIB held warrant contracts giving SWIB the right to purchase 169,582 shares of preferred stock at a price of 1 Euro per share. SWIB was issued these warrants in 2017 in conjunction with an investment in a privately held company. The \$9.3 million fair value of these warrants is based upon a third-party valuation and is included in “Equities” on the Statement of Fiduciary Net Position. The associated unrealized gain of \$9.1 million is included in the “Net Increase (Decrease) in Fair Value of Investments” on 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’s custodian acts as an agent in lending 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, so long as the securities and the collateral are denominated in the same currency. In the event that 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, 2019, the fair value of the securities on loan to counterparties was approximately \$12.0 billion.

Cash collateral is reinvested by the lending agent in two separate pools, a U.S. dollar cash collateral pool and 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 overnight repurchase agreements collateralized with high quality U.S. government, U.S. government agencies, and sovereign debt securities. To further reduce credit risk, SWIB’s custodian provides indemnification to SWIB against counterparty default. The earnings generated from the collateral investments, 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.

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At December 31, 2019, 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 contract with the lending agent requires it to indemnify 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. The average maturities of the loans and the average maturities of the assets held in the collateral reinvestment pools were similar at December 31, 2019.

Securities lending is allowed in certain commingled fund investments. As an investor in such funds, SWIB does not own the underlying securities and does not separately report on securities lending activity. All earnings of these 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" on the Statement of Fiduciary Net Position. The liability presented on 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 on 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 as such payments must be remitted to the security lender during the course of 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" on 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 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 is 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 \$62.9 million in cash and \$2,925.6 million in securities as collateral to security lenders representing \$87.4 million in excess of the fair market value of the securities borrowed as of December 31, 2019. 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 section 25.15(2)(b) of the Wisconsin Statutes "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
  - 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
- Secretary of the Department of Administration or designee

The Board of Trustees-approved investment policy 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 and investment managers within the organization to make prudent investments within the investment guidelines, pursuant to sections 15.02(4) and 25.15(2) of the Wisconsin Statutes 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 instruments and derivatives strategies. 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 financial leverage is approved by the Board of Trustees through the WRS asset allocation process.



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The Board of Trustees adopts the Retirement Funds’ asset allocation policy, based on recommendations by the IC, the Board of Trustees’s asset allocation consultant, Chief Investment Officer, and Managing Director of Asset and Risk Allocation. 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 of Trustees’s program of risk allocation that involves reducing equity exposure by leveraging low-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 10% financial leverage for the Core Fund subject to an allowable range of up to 15%.

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, 2019.

**Retirement Funds  
Asset Allocation Targets and Expected Returns  
As of December 31, 2019**

<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 %</b>
Global Equities	49 %	8.0 %	5.1 %
Fixed Income	24.5	4.9	2.1
Inflation Sensitive Assets	15.5	4.0	1.2
Real Estate	9	6.3	3.5
Private Equity/Debt	8	10.6	7.6
Multi-Asset	4	6.9	4.0
Total Core Fund	110 %	7.5 %	4.6 %
<b>Variable Fund Asset Class</b>			
U.S. Equities	70 %	7.5 %	4.6 %
International Equities	30	8.2	5.3
Total Variable Fund	100 %	7.8 %	4.9 %

New England Pension Consultants Long Term US CPI (Inflation) Forecast: 2.75%

Asset Allocations are managed within established ranges, target percentages may differ from actual monthly allocations.

For purposes of determining asset allocation targets, investments may be categorized differently than they are within the financial statements. For example, SWIB's management considers inflation-sensitive assets separately from other "fixed income" investments for asset allocation purposes.

#### » *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, 2019, the money-weighted rate of return for the Core Fund was 19.49% and 28.80% for the Variable Fund.

## 4 DESCRIPTION OF THE WISCONSIN RETIREMENT SYSTEM

The WRS is a cost-sharing, multiple-employer public employee retirement system established and administered by the State of Wisconsin to provide pension benefits for state and local government employees. WRS benefits and other plan provisions are established by Chapter 40 of the Wisconsin Statutes. 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;
- 4 members appointed by the Teachers Retirement Board (an advisory board to the ETF Board);
- 4 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.





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» *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, 2019, the number of participating employers was:

State Agencies, UW & Public Authorities	56
Cities	188
Counties	71
Villages	274
Towns	272
School Districts	421
Cooperative Educational Service Agencies	12
Wisconsin Technical College System Districts	16
Special Districts	206
Total Employers	<u>1,516</u>

» *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, 2019, the WRS membership consisted of:

<b>Current Employees:</b>	
General	134,166
Teachers	102,330
Elected / Executive / Judges	1,322
Protective with Social Security	19,665
Protective without Social Security	2,768
Total Current Employees	<u>260,251</u>
<b>Inactive Participants:</b>	
Terminated Participants	169,261
Alternate Payees	3,904
Total Inactive Participants	<u>173,165</u>
<b>Retirees and Beneficiaries Currently Receiving Benefits:</b>	
Retirement Annuitants	207,362
Disability Annuitants	6,289
Death Beneficiary Annuitants	1,419
Total Annuitants	<u>215,070</u>
Total Participants	<u>648,486</u>

*Approximately 1,850 inactive participants are receiving LTDI 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 required 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:

<b>Employment Category</b>	<b>Service Before 1/1/2000</b>	<b>Service Between 2000 and 2011</b>	<b>Service After 2011</b>
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 s. 40.27, Wis. Stat. 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 annuities, decreases may be applied only to previously granted increases. By law, Core annuities cannot be reduced to an amount below the original, guaranteed amount (the "floor") set at retirement.



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

Year	Core Adjustment (%)	Variable Adjustment (%)
2010	(1.3)	22.0
2011	(1.2)	11.0
2012	(7.0)	(7.0)
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)

The negative Core annuity adjustments from 2010 to 2013 were 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” on 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, 2019, the receivable balance was \$10.9 million.

» *Variable Retirement Option*

Prior to 1980, WRS participants could opt to have one-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, 2019, there were 53,510 active and inactive members and 41,777 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, 2019, approximately 33 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, 2019, was \$0.7 million.

### » *Annuity Supplement - General Fund*

As authorized under 1985 Wis. Stats. § 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 \$68,000 in 2019.

## 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 2019 contribution requirements were determined by the December 31, 2017, 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.



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**Contribution rates in effect during 2019 by employment category were:**

Employment Category	Employer Current	Employer Prior *	Member	Total
General, Teachers, Executive & Elected Officials	6.55%	0.02%	6.55%	13.12%
Protective Occupation with Social Security	10.55%	0.00%	6.55%	17.10%
Protective Occupation without Social Security	14.95%	0.09%	6.55%	21.59%

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

**Contributions required and made during 2019 were:**

	Contributions (In Millions)	Percentage of Payroll
Employer Current Service	\$ 1,045.0	7.05%
Employer Prior Service*	\$ 4.3	0.03%
Member Required	\$ 971.9	6.55%

\*Employer prior service contributions are recorded on 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 \$271,000 in reimbursement for benefits paid under the s. 62.13, Wis. Stat, Police and Firefighters Pension Program.

» *Member and Employer Additional Contributions*

Contributions in addition to those required contributions by employees 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 at December 31, 2019, were as follows (In Millions):

Total Pension Liability*	<u>\$108,868.30</u>
Plan Fiduciary Net Position**	<u>\$ 112,092.76</u>
Participating Employer's Net Pension Liability (Asset)	<u>\$ (3,224.46)</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	102.96 %

\*Includes the impact of known Market Recognition account deferred gains/losses on the liability for dividend payments.

\*\* 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, 2018
Measurement Date of Net Pension Liability (Asset):	December 31, 2019
Actuarial Cost Method:	Entry Age Normal
Asset Valuation Method:	Fair Value
Long-Term Expected Rate of Return:	7.0%
Discount Rate:	7.0%
Salary Increases:	
Inflation	3.0%
Senior/Merit	0.1% - 5.6%
Mortality:	Wisconsin 2018 Mortality Table
Post-retirement Adjustments:*	1.9%

\*No post-retirement adjustments is guaranteed. Actual adjustments are based on recognized investment return, actuarial experience and other factors. 1.9% 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 upon an experience study conducted in 2018 that covered a three-year period from January 1, 2015 to December 31, 2017. The Total Pension Liability for December 31, 2019, is based upon a roll-forward of the liability calculated from the December 31, 2018 actuarial valuation.

A single discount rate of 7.0% 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 7.0% expected rate of return implies that a dividend of approximately 1.9% 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.



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» *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 7.0%, 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):

	<b>1% Decrease (6.0%)</b>	<b>Current Discount Rate (7.0%)</b>	<b>1% Increase (8.0%)</b>
Total Pension Liability	\$ 120,396.31	\$ 108,868.30	\$ 100,249.79
Plan Fiduciary Net Position	112,092.76	112,092.76	112,092.76
Net Pension Liability (Asset)	<u>\$ 8,303.55</u>	<u>\$ (3,224.46)</u>	<u>\$ (11,842.97)</u>

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 1.0% for the 6.0% discount rate, 1.9% for the 7.0% discount rate, and 2.9% for the 8.0% discount rate (In Millions):

	<b>1% Decrease (6.0%)</b>	<b>Current Discount Rate (7.0%)</b>	<b>1% Increase (8.0%)</b>
Total Pension Liability	\$ 113,514.72	\$ 108,868.30	\$ 105,347.92
Plan Fiduciary Net Position	112,092.76	112,092.76	112,092.76
Net Pension Liability (Asset)	<u>\$ 1,421.96</u>	<u>\$ (3,224.46)</u>	<u>\$ (6,744.84)</u>

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. Stats. § 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 (In Millions) as of December 31, 2019, were:**

	Core	Variable	Total
Employee Required	\$ 17,215.9	\$ 2,056.3	\$ 19,272.2
Employee Additional	198.4	16.6	215.0
<b>Total</b>	<b>\$ 17,414.3</b>	<b>\$ 2,072.9</b>	<b>\$ 19,487.2</b>

Amounts may not foot due to rounding.

**» 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 100.00% funded.

**Employer Accumulation Reserve balances (In Millions) as of December 31, 2019, were:**

	Core	Variable	Police & Firefighters	Total
Employer Accumulation	\$ 21,333.9	\$ 2,056.3	\$ 0.0	\$ 23,390.2
Less: Unfunded Actuarial Accrued Liability	0.0	0.0	(0.7)	(0.7)
<b>Net Employer Accumulation</b>	<b>\$ 21,333.9</b>	<b>\$ 2,056.3</b>	<b>\$ (0.7)</b>	<b>\$ 23,389.5</b>

Amounts may not foot due to rounding.

**» 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 (In Millions) as of December 31, 2019, were:**

	Core	Variable	Police & Firefighters	Total
Annuity Reserve	\$ 59,138.4	\$ 4,517.4	\$ 2.3	\$ 63,658.1

**» 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 Market Recognition Account (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.





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

As of:	MRA
December 31, 2015	\$ (3,404)
December 31, 2016	\$ (3,086)
December 31, 2017	\$ 3,273
December 31, 2018	\$ (4,916)
December 31, 2019	\$ 5,712

## 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 CAFR.

### » 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 363 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 250 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 501 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 2019, contribution rates ranged from 0.17% to 4.42% 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 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 7.0% 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.



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

**Statutory Authority:** All programs are operated under the authority of Chapter 40, Wisconsin Statutes.

**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 (In Millions) for each fund during the past year.

	Income Continuation insurance*		Duty Disability Insurance*		Pharmacy Benefits		Dental	
	2019	2018	2019	2018	2019	2018	2019	2018
<b>Unpaid claims and claim adjustment expenses at beginning of the calendar year:</b>	\$ 96.5	\$ 92.7	\$ 454.6	\$ 464.8	\$ (21.9)	\$ (18.8)	\$ 0.9	\$ 1.0
<b>Incurred claims and claim adjustment expenses:</b>								
Provision for insured events of the current calendar year	22.6	19.2	33.6	20.4	155.0	156.1	45.9	43.8
Changes in provision for insured events of prior calendar years	(3.6)	4.5	14.5	4.7	(4.3)	(4.9)	0.0	(0.1)
Total incurred claims and claim adjustment expenses	19.0	23.7	48.1	25.1	150.7	151.2	45.9	43.7
<b>Payments:</b>								
Claims and claim adjustment expenses attributable to insured events of the current calendar year	4.1	4.2	0.0	0.0	182.7	177.8	44.1	42.9
Claims and claim adjustment expenses attributable to insured events of prior calendar years	15.3	15.6	36.4	35.3	(26.0)	(23.5)	0.9	0.9
Total payments	19.4	19.8	36.4	35.3	156.7	154.3	45.0	43.8
<b>Total unpaid claims and claim adjustment expenses at end of the calendar year</b>	<b>\$ 96.1</b>	<b>\$ 96.5</b>	<b>\$466.3</b>	<b>\$ 454.6</b>	<b>\$ (27.9)**</b>	<b>\$ (21.9)**</b>	<b>\$ 1.8</b>	<b>\$ 0.9</b>

\*The actuarial accrued liability related to Loss Adjustment Expense (LAE) was previously recorded to Carrier Administrative Expenses. Beginning with 2019, LAE is recorded to Benefit Expense, and as a result is included in the *Provision for insured events of the current calendar year*.

\*\*Total unpaid claims at the end of 2019 is \$27.9 million in rebates due from pharmaceutical companies. Total unpaid claims at the end of 2018 is the net of \$4.5 million in unpaid claims and \$26.4 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 those 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.

### 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 721 local government employers as of December 31, 2019, 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. Stats. § 40.70. ETF, under the direction of the Group Insurance Board (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.



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**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, 2019, included:

	State	Local	Total
Active*	51,674	76,305	127,979
Inactive:			
Pre-Age 65 Annuitants	6,600	9,918	16,518
Post-Age 64 Annuitants	27,092	37,034	64,126
Totals	<u>85,366</u>	<u>123,257</u>	<u>208,623</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.

State and Local Retiree Life Insurance Employer Contribution Rates For the year ended December 31, 2019		
Coverage Type	State	Local
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, 2019 are as listed below:

<b>Life Insurance Member Contribution Rates For the year ended December 31, 2019</b>				
<b>Attained Age</b>	<b>State *</b>		<b>Local *</b>	
	<b>Basic</b>	<b>Supplemental</b>	<b>Basic</b>	<b>Supplemental</b>
Under 30	\$0.04	\$0.04	\$0.05	\$0.05
30-34	0.04	0.04	0.06	0.06
35-39	0.04	0.04	0.07	0.07
40-44	0.06	0.06	0.08	0.08
45-49	0.11	0.11	0.12	0.12
50-54	0.17	0.17	0.22	0.22
55-59	0.23	0.23	0.39	0.39
60-64	0.32	0.32	0.49	0.49
65-69	0.41	0.41	0.57	0.57

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

The subsequent table provides the total contributions earned during 2019 by employers and pre-age 65 annuitants to fund post-retirement benefits.

<b>State and Local Retiree Life Insurance Contributions Earned For the year ended December 31, 2019</b>		
<b>Contribution Type</b>	<b>State</b>	<b>Local</b>
Employer	\$ 1,149,359	\$ 1,807,765
Pre-age 65 Annuitants*	3,693,470	5,899,468
<b>Total</b>	<b>\$ 4,842,829</b>	<b>\$ 7,707,233</b>

\* Contributions for pre-age 65 annuitants are recorded as a reduction of benefit expense on 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.



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

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

Age	% of Basic Coverage Continuing	
	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.

**Investment Contract with Insurance Carrier (Securian):** Investments for the Retiree Life Insurance funds are held with the insurance carrier, Securian, and are classified as "Investment Contract" on 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:

Asset Class	Index	Target Allocation	Long-Term Expected Geometric Real Rate of Return
US Credit Bonds	Barclays Credit	45%	2.12%
US Long Credit Bonds	Barclays Long Credit	5%	2.90%
US Mortgages	Barclays MBS	50%	1.53%
	Inflation		2.20%
	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 decreased slightly from 5.00% in the prior year to 4.25% in the current year. This change was primarily based on the target asset allocation and capital market expectations. The expected inflation rate also decreased slightly from 2.30% in the prior year to 2.20% in the current year. 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.

<b>State and Local Retiree Life Insurance Plans Schedule of Investment Returns Annual Money-Weighted Rate of Return</b>	
	2019
State Retiree Life Insurance	3.09%
Local Retiree Life Insurance	3.05%

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

The components of the Net OPEB Liability (Asset) of the participating State employers at December 31, 2019, were as follows (In Millions):

Total OPEB Liability	\$ 1,031.14
Plan Fiduciary Net Position*	348.02
Participating Employer's Net OPEB Liability (Asset)	<u>\$ 683.12</u>
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	33.75 %

\*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 valuation follows:

Actuarial Valuation Date:	January 1, 2019
Measurement Date of Net OPEB Liability (Asset):	December 31, 2019
Actuarial Cost Method:	Entry Age Normal
20 Year Tax-Exempt Municipal Bond Yield*	2.74%
Long-Term Expected Rate of Return:	4.25%
Discount Rate:	2.84%
Salary Increases:	
Wage Inflation	3.00%
Senior/Merit	0.1% - 5.6%
Mortality:	Wisconsin 2018 Mortality Table

\* Based on the Bond Buyers GO index.





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Actuarial assumptions are based upon an experience study conducted in 2018 that covered a three-year period from January 1, 2015 to December 31, 2017. The Total OPEB Liability for December 31, 2019, is based upon a roll-forward of the liability calculated from the January 1, 2019, actuarial valuation.

A discount rate of 2.84% was used to measure the Total OPEB Liability for the current year, as opposed to a discount rate of 4.20% for the prior year. The significant change in the discount rate was primarily caused by the decrease in the municipal bond rate from 4.10% as of December 31, 2018 to 2.74% as of December 31, 2019. 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. The current employer contribution schedule includes annual increases of 5% in each of the next nine years, as approved by the GIB in August 2019.

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 were calculated using a single discount rate that is one percentage point lower or one percentage point higher (In Millions):

	<b>1% Decrease (1.84%)</b>	<b>Current Discount Rate (2.84%)</b>	<b>1% Increase (3.84%)</b>
Total OPEB Liability	\$ 1,260.1	\$ 1,031.1	\$ 854.8
Plan Fiduciary Net Position	348.0	348.0	348.0
Net OPEB Liability (Asset)	<u>\$ 912.1</u>	<u>\$ 683.1</u>	<u>\$ 506.8</u>

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

The components of the Net OPEB Liability (Asset) of the participating local employers at December 31, 2019, were as follows (In Millions):

Total OPEB Liability	\$ 682.22
Plan Fiduciary Net Position*	<u>256.40</u>
Participating Employer's Net OPEB Liability (Asset)	<u>\$ 425.82</u>
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	37.58 %

\*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, 2019
Measurement Date of Net OPEB Liability (Asset):	December 31, 2019
Actuarial Cost Method:	Entry Age Normal
20 Year Tax-Exempt Municipal Bond Yield*	2.74%
Long-Term Expected Rate of Return:	4.25%
Discount Rate:	2.87%
Salary Increases:	
Wage Inflation	3.00%
Senior/Merit	0.1% - 5.6%
Mortality:	Wisconsin 2018 Mortality Table

\* Based on the Bond Buyers GO index.

Actuarial assumptions are based upon an experience study conducted in 2018 that covered a three-year period from January 1, 2015, to December 31, 2017. The Total OPEB Liability for December 31, 2019, is based upon a roll-forward of the liability calculated from the January 1, 2019, actuarial valuation.

A discount rate of 2.87% was used to measure the Total OPEB Liability for the current year, as opposed to discount rate of 4.22% for the prior year. The significant change in the discount rate was primarily caused by the decrease in the municipal bond rate from 4.10% as of December 31, 2018, to 2.74% as of December 31, 2019. 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



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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 were calculated using a single discount rate that is one percentage point lower or one percentage point higher (In Millions):

	1% Decrease (1.87%)	Current Discount Rate (2.87%)	1% Increase (3.87%)
Total OPEB Liability	\$ 844.4	\$ 682.2	\$ 558.8
Plan Fiduciary Net Position	256.4	256.4	256.4
Net OPEB Liability (Asset)	<u>\$ 588.0</u>	<u>\$ 425.8</u>	<u>\$ 302.4</u>

**» 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 363 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 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. Stats. § 15.165 (2) and 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, 2019, included 27,350 former state employees or their beneficiaries and 1,862 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 retirement for participants who provide evidence of comparable health insurance coverage from another source.

**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, 2019, included:

Employment Status	Count
Retirees and Beneficiaries	24,625
Inactive, Non-retired Members	328
Active Members	73,317
Total	<u>98,270</u>

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

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- 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 funds a post-retirement benefit. Employers made contributions totaling \$14.4 million based upon a percentage of active member earnings for the year ending December 31, 2019.

### 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.

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

Total OPEB Liability	\$ 932,597,864
Plan Fiduciary Net Position*	1,084,365,342
Participating Employer's Net OPEB Liability (Asset)	<u>\$ (151,767,478)</u>
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	116.27 %

\*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 valuation follows:

Actuarial Valuation Date:	December 31, 2019
Measurement Date of Net OPEB Liability (Asset):	December 31, 2019
Actuarial Cost Method:	Entry Age Normal
Long-Term Expected Rate of Return:	7.00%
Discount Rate:	7.00%
Salary Increases:	
Wage Inflation	3.00%
Senior/Merit	0.1% - 5.6%
Mortality:	Wisconsin 2018 Mortality Table
Healthcare Cost Trend Rate	3.20%



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Actuarial assumptions are based upon an experience study conducted in 2018 that covered a three-year period from January 1, 2015 to December 31, 2017 . The Total OPEB Liability is based upon an actuarial valuation as of December 31, 2019.

A discount rate of 7.00% 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.

Each individual sick leave balance at retirement was estimated assuming historical accrual and usage rates but not less than 25% nor more than 75% of the person's annual accrual 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.

**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):

	<b>1% Decrease (6.00%)</b>	<b>Current Discount Rate (7.00%)</b>	<b>1% Increase (8.00%)</b>
Total OPEB Liability	\$ 1,024.3	\$ 932.6	\$ 853.2
Plan Fiduciary Net Position	\$ 1,084.4	\$ 1,084.4	\$ 1,084.4
Net OPEB Liability (Asset)	\$ (60.1)	\$ (151.8)	\$ (231.2)

**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):

	<b>1% Decrease (2.20%)</b>	<b>Current Healthcare Cost Trend Rate Assumption (3.20%)</b>	<b>1% Increase (4.20%)</b>
Total OPEB Liability	\$ 868.9	\$ 932.6	\$ 993.1
Plan Fiduciary Net Position	\$ 1,084.4	\$ 1,084.4	\$ 1,084.4
Net OPEB Liability (Asset)	\$ (215.5)	\$ (151.8)	\$ (91.3)

## 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. The Core and Variable Funds are managed by SWIB, with oversight by a board of trustees as authorized in Wis. Stat. § 25.17. SWIB is not registered with the Securities and Exchange Commission as an investment company. 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. At December 31, 2019, the Core and Variable Funds held \$116.5 billion in investment related accounts, of which \$4.7 billion is classified as cash equivalents. In addition, the Core and Variable Funds held \$0.5 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 at December 31, 2019, is presented in Note 3. Condensed financial data for the Core and Variable Funds for the year ended December 31, 2019, is presented on the next page.





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**Core and Variable Retirement Investment Funds**  
**Condensed Statements of Net Position**  
**As of December 31, 2019**  
(In Thousands)

<b>Assets:</b>	<b>Core</b>	<b>Variable</b>	<b>Combined*</b>
Cash & Cash Equivalents	\$ 4,432,392	\$ 231,054	\$ 4,663,446
Securities Lending Collateral	441,770	29,697	471,467
Prepaid Items	30,537	1,614	32,151
Investment Receivables	6,861,026	18,894	6,879,920
Investments, at fair value	116,873,889	8,458,299	125,332,188
Total Assets	128,639,614	8,739,558	137,379,172
<b>Liabilities:</b>			
Securities Lending Collateral Liability	441,770	29,697	471,467
Obligation Under Reverse Repurchase Agreement	9,844,991	0	9,844,991
Short Sell Obligations	4,464,308	0	4,464,308
Collateral Due to Counterparty	104,694	270	104,964
Investment Payables	6,011,385	23,276	6,034,661
Total Liabilities	20,867,148	53,243	20,920,391
<b>Net Position Held in Trust for:</b>			
Other Investment Pool Participants	107,585,312	8,666,059	116,251,371
Milwaukee Retirement Systems	187,154	20,256	207,410
<b>Total</b>	\$ 107,772,466	\$ 8,686,315	\$ 116,458,781

\*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 Position  
As of December 31, 2019  
(In Thousands)**

<b>Additions:</b>	<b>Core</b>	<b>Variable</b>	<b>Combined*</b>
Net Increase (Decrease) in Fair Value of Investments	\$ 16,322,119	\$ 1,802,239	\$ 18,124,358
Interest	763,608	4,309	767,917
Dividends	1,234,035	152,247	1,386,282
Securities Lending Income	35,716	6,265	41,981
Other	250,488	0	250,488
Total Additions	<u>18,605,966</u>	<u>1,965,060</u>	<u>20,571,026</u>
<b>Deductions:</b>			
Investment Expense	833,117	6,702	839,819
Securities Lending Rebates and Fees	8,320	582	8,902
Net Withdrawals by Pool Participants	3,478,433	371,350	3,849,783
Total Deductions	<u>4,319,870</u>	<u>378,634</u>	<u>4,698,504</u>
Net Increase (Decrease)	<u>14,286,096</u>	<u>1,586,426</u>	<u>15,872,522</u>
<b>Net Investment Position Held in Trust</b>			
Beginning of Year	93,486,370	7,099,889	100,586,259
End of Year	<u>\$ 107,772,466</u>	<u>\$ 8,686,315</u>	<u>\$ 116,458,781</u>

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

## 11 CONTINGENCIES, RELATED PARTIES, SPECIAL ITEMS, & SUBSEQUENT EVENTS

### » *Loss Contingencies*

On September 5, 2008, the Internal Revenue Service (IRS) provided SWIB with a "Notice of Transferee Liability". This claim seeks taxes, penalties, and interest relating to the sale of Shockley Communications Corporation (SCC) stock in 2001.

SWIB is classified as a tax-exempt entity by the IRS. However, the IRS asserts that the shareholders' sale of SCC stock in 2001 should have been characterized as a sale of assets by SCC, on which SCC should have paid income taxes. Based on the theory of transferee liability, the IRS asserts that the former SCC shareholders, including SWIB, are liable for SCC's unpaid taxes, penalties, and interest.

SWIB has filed a petition in the United States Tax Court contesting the proposed IRS assessment. The principal shareholders of SCC were issued similar notices from the IRS and have been litigating their case through the Tax Court and United States Court of Appeals. In April 2014, SWIB and the IRS agreed to stay the Tax Court proceeding with respect to SWIB pending the resolution of the tax case initiated by the principal shareholders of SCC challenging the IRS' characterization of the SCC sale. In 2015, the Tax Court found that the principal shareholders of SCC were liable as putative transferees for the tax, penalties, and interest owed by SCC related to its sale. In October 2017, the 11<sup>th</sup> Circuit Court of Appeals upheld the 2015 Tax Court opinion with respect to the principal shareholders of SCC; concluding its litigation. Because SWIB has separate and distinct arguments

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from the principal shareholders of SCC, the Tax Court granted SWIB the opportunity to pursue its case with the Court. In 2018, SWIB's tax counsel and the IRS filed briefs with the Tax Court. In January 2020, SWIB was informed that the Tax Court had ruled in favor of the IRS. While SWIB has the option to appeal, as well as the ability to negotiate the final payment amount with the IRS, the adverse ruling from the Tax Court makes it more likely that SWIB's liability exposure will be higher than previously estimated.

Although SWIB's case is still ongoing, SWIB determined it was prudent to accrue a potential loss from the SCC transaction based on the Tax Court's adverse opinions against the principal shareholders and SWIB. SWIB's potential liability, as a putative transferee of SCC assets, is reasonably estimated to be between \$30.0 million and \$59.6 million as of December 31, 2019. Although results may differ, this estimated range of loss is based on a possible settlement strategy with the IRS and the maximum potential liability to the IRS for the taxes, interest, and potential penalties of SCC based on the Tax Court's decision against the principal shareholders and SWIB. Accordingly, since calendar year 2015, SWIB has accrued a loss of \$30 million, which represents the estimated minimum amount of the possible loss to which SWIB believes it may be exposed. Of the total \$30 million accrued loss, \$10 million was accrued in calendar year 2019 to account for the Tax Court's most recent adverse ruling.

In the ordinary course of operations, SWIB may be party to other various legal actions. SWIB's Chief Legal Counsel handles these matters either directly or with assistance of outside legal counsel. As of December 31, 2019, these matters are not anticipated to have a material financial impact on the WRS's financial position.

### » *Related Party Transactions*

During the calendar year, the Core Fund entered into reverse repurchase agreement transactions 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 investment guidelines limit exposure with the SIF to \$3.0 billion. Credit exposure is also managed through the transfer of margin between the Core Fund and SIF. As of December 31, 2019, the Core Fund held \$1.9 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 agreement transactions with other counterparties. The Core Fund is also a participant in the SIF, with an investment totaling \$2.7 billion at December 31, 2019. The SIF is a short-term, commingled fund with the investment objective of safety of principle and liquidity while earning a competitive money market rate of return.

### » *Special Items*

Special items are significant transactions or other events that are either unusual or infrequent and are within the control of management. In August 2019, the Group Insurance Board approved a recommendation from the Life Insurance program actuary to transfer reserves from the Active Life Insurance Program to the State Retiree Life Insurance and Local Retiree Life Insurance. As of December 31, 2019, \$13.1 million and \$12.9 million were transferred to the State Retiree Life Insurance and Local Retiree Life Insurance, respectively. These transfers are reported as "Special Item - Transfer from Active Life Insurance Program" on the Statement of Changes in Fiduciary Net Position and is included in "Investment Contract" in the Statement of Fiduciary Net Position.

### » *Subsequent Events*

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.

Each party filed Summary Judgment motions in circuit court. At hearings held in April and May 2020, the circuit court denied both motions. As a result, the Complaint and Counterclaim will move toward trial. The parties are currently engaged in discovery activities. The resolution of this dispute is not expected to have a material effect on the WRS's 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.



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

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1. Net Earned Required Contributions and Investment Revenues	\$ 178.9	\$ 169.9	\$ 153.7	\$ 159.6	\$ 157.7	\$ 166.5	\$ 214.3	\$ 223.5	\$ 176.0	\$ 154.0
2. Unallocated Expense	8.7	6.4	8.0	4.4	6.0	6.0	5.9	5.8	4.6	4.5
3. Estimated Incurred Claims and Expenses as of the End of the Policy Year	148.4	144.6	141.3	149.0	163.5	176.9	156.0	164.5	156.1	155.0
4. Paid Claims (Cumulative) as of Year-End:										
End of Policy Year	155.8	150.7	148.3	156.6	173.4	196.4	171.0	183.3	177.8	182.7
One Year Later	147.3	145.1	141.2	148.3	163.5	177.0	151.0	159.9	151.7	
Two Years Later	147.3	145.1	141.2	148.3	163.5	177.1	151.0	160.0		
Three Years Later	147.3	145.1	141.2	148.3	163.5	177.1	151.0			
Four Years Later	147.3	145.1	141.2	148.3	163.5	177.1				
Five Years Later	147.3	145.1	141.2	148.3	163.5					
Six Years Later	147.3	145.1	141.2	148.3						
Seven Years Later	147.3	145.1	141.2							
Eight Years Later	147.3	145.1								
Nine Years Later	147.3									
5. Re-estimated Incurred Claims and Expenses:										
End of Policy Year	148.4	144.6	141.3	149.0	163.5	176.9	156.0	164.5	156.1	155.0
One Year Later	147.3	145.1	141.2	148.3	163.5	177.0	151.0	159.6	151.5	
Two Years Later	147.3	145.1	141.2	148.3	163.5	177.1	151.0	159.9		
Three Years Later	147.3	145.1	141.2	148.3	163.5	177.1	151.0			
Four Years Later	147.3	145.1	141.2	148.3	163.5	177.1				
Five Years Later	147.3	145.1	141.2	148.3	163.5					
Six Years Later	147.3	145.1	141.2	148.3						
Seven Years Later	147.3	145.1	141.2							
Eight Years Later	147.3	145.1								
Nine Years Later	147.3									
6. Increase (Decrease) in Estimated Incurred Claims and Expenses from End of Policy Year	\$ (1.1)	\$ 0.5	\$ (0.1)	\$ (0.7)	\$ 0.0	\$ 0.2	\$ (5.0)	\$ (4.6)	\$ (4.6)	\$ 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.



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

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1. Net Earned Required Contributions and Investment Revenues	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 41.9	\$ 44.3	\$ 45.6	\$ 47.4
2. Unallocated Expense	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9
3. Estimated Incurred Claims and Expenses as of the End of the Policy Year	0.0	0.0	0.0	0.0	0.0	0.0	44.1	44.4	43.8	45.9
4. Paid Claims (Cumulative) as of Year-End:										
End of Policy Year	0.0	0.0	0.0	0.0	0.0	0.0	42.2	43.4	42.9	44.1
One Year Later	0.0	0.0	0.0	0.0	0.0	0.0	44.0	44.3	43.8	
Two Years Later	0.0	0.0	0.0	0.0	0.0	0.0	44.0	44.3		
Three Years Later	0.0	0.0	0.0	0.0	0.0	0.0	44.0			
Four Years Later	0.0	0.0	0.0	0.0	0.0	0.0				
Five Years Later	0.0	0.0	0.0	0.0	0.0					
Six Years Later	0.0	0.0	0.0	0.0						
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	0.0	0.0	0.0	44.1	44.4	43.8	45.9
One Year Later	0.0	0.0	0.0	0.0	0.0	0.0	44.0	44.3	43.8	
Two Years Later	0.0	0.0	0.0	0.0	0.0	0.0	44.0	44.3		
Three Years Later	0.0	0.0	0.0	0.0	0.0	0.0	44.0			
Four Years Later	0.0	0.0	0.0	0.0	0.0	0.0				
Five Years Later	0.0	0.0	0.0	0.0	0.0					
Six Years Later	0.0	0.0	0.0	0.0						
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	\$ 0.0	\$ 0.0	\$ 0.0	\$ (0.1)	\$ (0.1)	\$ 0.0	\$ 0.0

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



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

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1. Net Earned Required Contributions and Investment Revenues	\$ 25.0	\$ 16.6	\$ 25.0	\$ 25.7	\$ 20.5	\$ 16.3	\$ 27.1	\$ 38.3	\$ 24.7	\$ 54.7
2. Unallocated Expense	2.0	2.3	1.9	2.0	5.7	1.8	3.0	1.8	2.7	3.0
3. Estimated Incurred Claims and Expenses as of the End of the Policy Year	34.3	42.4	33.4	36.0	20.5	22.8	20.7	17.7	19.2	22.6
4. Paid Claims (Cumulative) as of Year-End:										
End of Policy Year	6.0	6.7	5.9	6.4	5.9	6.6	5.6	4.6	4.2	4.1
One Year Later	11.0	11.9	11.0	11.8	11.9	12.5	10.6	9.5	8.9	
Two Years Later	12.2	12.8	12.3	13.8	13.6	14.3	12.5	11.4		
Three Years Later	13.3	13.6	13.8	15.1	14.8	15.7	13.8			
Four Years Later	14.2	14.3	14.5	16.0	15.8	16.6				
Five Years Later	15.3	14.9	15.4	17.0	16.5					
Six Years Later	16.2	15.4	16.2	17.9						
Seven Years Later	17.0	15.9	17.0							
Eight Years Later	17.7	16.3								
Nine Years Later	18.4									
5. Re-estimated Incurred Claims and Expenses:										
End of Policy Year	34.3	42.4	33.4	36.0	20.5	22.8	20.7	17.7	19.2	22.6
One Year Later	23.0	22.3	23.1	22.6	20.4	23.9	21.1	18.7	19.1	
Two Years Later	20.1	20.0	20.9	24.0	22.5	23.4	22.3	19.6		
Three Years Later	20.1	19.5	20.9	24.3	22.2	23.9	21.0			
Four Years Later	21.2	19.5	20.5	23.5	21.5	22.9				
Five Years Later	22.5	19.5	21.0	24.3	22.0					
Six Years Later	23.0	19.7	21.5	25.0						
Seven Years Later	23.3	19.7	21.4							
Eight Years Later	24.1	20.0								
Nine Years Later	24.3									
6. Increase (Decrease) in Estimated Incurred Claims and Expenses from End of Policy Year	\$ (10.0)	\$ (22.4)	\$ (12.0)	\$ (11.0)	\$ 1.5	\$ 0.1	\$ 0.3	\$ 1.9	\$ (0.1)	\$ 0.0





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

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1. Net Earned Required Contributions and Investment Revenues	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 50.3	\$ 100.5	\$ (13.3)	\$ 123.3
2. Unallocated Expense	0.0	0.0	0.0	0.0	0.0	0.0	1.8	4.5	0.8	0.6
3. Estimated Incurred Claims and Expenses as of the End of the Policy Year	0.0	0.0	0.0	0.0	0.0	0.0	11.9	19.2	20.4	33.6
4. Paid Claims (Cumulative) as of Year-End:										
End of Policy Year	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
One Year Later	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.2	
Two Years Later	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.7		
Three Years Later	0.0	0.0	0.0	0.0	0.0	0.0	2.2			
Four Years Later	0.0	0.0	0.0	0.0	0.0	0.0				
Five Years Later	0.0	0.0	0.0	0.0	0.0					
Six Years Later	0.0	0.0	0.0	0.0						
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	0.0	0.0	0.0	11.9	19.2	20.4	33.6
One Year Later	0.0	0.0	0.0	0.0	0.0	0.0	6.2	2.9	4.6	
Two Years Later	0.0	0.0	0.0	0.0	0.0	0.0	11.7	5.8		
Three Years Later	0.0	0.0	0.0	0.0	0.0	0.0	15.8			
Four Years Later	0.0	0.0	0.0	0.0	0.0	0.0				
Five Years Later	0.0	0.0	0.0	0.0	0.0					
Six Years Later	0.0	0.0	0.0	0.0						
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	\$ 0.0	\$ 0.0	\$ 0.0	\$ 3.9	\$ (13.4)	\$ (15.8)	\$ 0.0

\*Prior to 2016 data not available.



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

Calendar Year Ended, December 31	2019	2018	2017	2016	2015	2014	2013
<b>Total Pension Liability</b>							
Service Cost	\$ 1,902.5	\$ 1,860.9	\$ 1,842.9	\$ 1,814.1	\$ 1,787.9	\$ 1,757.0	\$ 1,745.0
Interest on the Total Pension Liability	6,888.1	7,169.7	6,627.2	6,372.4	6,347.1	6,089.3	5,680.7
Difference between Expected and Actual Experience <sup>1</sup>	5,473.3	(4,968.3)	4,459.5	150.3	(4,247.3)	437.3	2,659.9
Assumption Changes	0.0	361.5	0.0	0.0	1,412.0	0.0	0.0
Benefit Payments	(5,646.3)	(5,516.2)	(5,211.3)	(5,022.9)	(4,823.6)	(4,540.2)	(4,224.7)
Refunds of Member Contributions	(44.1)	(40.2)	(38.4)	(39.3)	(37.6)	(34.4)	(33.3)
<b>Net Change in Total Pension Liability</b>	<b>8,573.5</b>	<b>(1,132.6)</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</b>	<b>100,294.8</b>	<b>101,427.3</b>	<b>93,747.4</b> <sup>2</sup>	<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>\$ 108,868.3</b>	<b>\$ 100,294.8</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>	\$ 1,046.9	\$ 1,030.5	\$ 1,017.6	\$ 963.1	\$ 977.7	\$ 987.8	\$ 914.7
Member Contributions	987.7	973.0	965.5	921.9	937.2	941.9	871.3
Pension Plan Net Investment Income	19,049.5	(4,049.4)	14,875.4	7,273.1	(673.1)	4,891.0	11,347.3
Benefit Payments	(5,646.3)	(5,516.2)	(5,211.3)	(5,022.9)	(4,823.6)	(4,540.2)	(4,224.7)
Refunds of Member Contributions	(44.1)	(40.2)	(38.4)	(39.3)	(37.6)	(34.4)	(33.3)
Pension Plan Administrative Expense	(34.2)	(31.6)	(26.1)	(20.4)	(22.7)	(24.0)	(22.9)
Other <sup>4</sup>	(3.9)	(25.4)	0.0	0.0	0.0	0.0	0.0
<b>Net Change in Plan Fiduciary Net Position</b>	<b>15,355.7</b>	<b>(7,659.4)</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</b>	<b>96,737.1</b>	<b>104,396.5</b>	<b>92,813.8</b> <sup>5</sup>	<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>\$ 112,092.8</b>	<b>\$ 96,737.1</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>\$ (3,224.5)</b>	<b>\$ 3,557.7</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>	102.96 %	96.45 %	102.93 %	99.12 %	98.20 %	102.74 %	104.59 %
<b>Covered Employee Payroll</b>	\$ 14,832.5	\$ 14,301.4	\$ 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>	(21.74)%	24.88 %	(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 Early Retirement Contributions and Additional Contributions paid by employer on behalf of employee.

<sup>4</sup> Other for 2018 relates to an impairment loss on a capital asset.

<sup>5</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 a % 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%

**Wisconsin Retirement System  
Schedule of Investment Returns  
Last Ten Calendar Years  
Annual Money-Weighted Rate of Return (IRR), Net of Investment Expenses**

	<b>2019</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
Core Trust Fund	19.49 %	(3.56)%	15.85 %	8.29 %	(0.63)%	5.44 %	13.18 %	13.40 %	1.25 %	11.92 %
Variable Trust Fund	28.80 %	(7.61)%	23.27 %	10.49 %	(1.11)%	7.24 %	28.78 %	16.94 %	(3.02)%	15.23 %

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

<b>Calendar Year Ended, December 31</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>
<b>Total OPEB Liability</b>			
Service Cost	\$ 25.4	\$ 30.7	\$ 26.1
Interest on the Total OPEB Liability	33.2	31.2	30.7
Difference between Expected and Actual Experience	(6.2)	(17.5)	(5.3)
Assumption Changes	223.0	(94.9)	49.0
Benefit Payments	(19.8)	(19.5)	(17.7)
<b>Net Change in Total OPEB Liability</b>	<b>255.6</b>	<b>(70.0)</b>	<b>82.8</b>
<b>Total OPEB Liability - Beginning</b>	<b>775.5</b>	<b>845.5</b>	<b>762.6</b>
<b>Total OPEB Liability - Ending (a)</b>	<b>\$ 1,031.1</b>	<b>\$ 775.5</b>	<b>\$ 845.5</b>
<b>Plan Fiduciary Net Position</b>			
Employer Contributions	1.1	1.4	1.4
Net Investment Income	10.4	10.9	11.5
Benefit Payments	(19.8)	(19.5)	(17.7)
OPEB Plan Administrative Expense	(0.8)	(0.7)	(0.6)
Other*	13.1	0.0	0.0
<b>Net Change in Plan Fiduciary Net Position</b>	<b>4.0</b>	<b>(7.9)</b>	<b>(5.4)</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>344.0</b>	<b>352.0</b>	<b>357.4</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 348.0</b>	<b>\$ 344.0</b>	<b>\$ 352.0</b>
<b>Net OPEB Liability(Asset) - Ending (a) - (b)</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>	<b>33.75%</b>	<b>44.36%</b>	<b>41.63%</b>
<b>Covered Employee Payroll</b>	<b>\$ 3,299.5</b>	<b>\$ 3,182.5</b>	<b>\$ 3,184.0</b>
<b>Net OPEB Liability (Asset) as a Percentage of Covered Employee Payroll</b>	<b>20.70%</b>	<b>13.56%</b>	<b>15.50%</b>

\*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.

Values may not add 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	2019	2018	2017
<b>Total OPEB Liability</b>			
Service Cost	\$ 17.0	\$ 21.1	\$ 18.1
Interest on the Total OPEB Liability	21.7	20.4	19.8
Difference between Expected and Actual Experience	(9.5)	(11.0)	(4.9)
Assumption Changes	159.4	(65.1)	33.5
Benefit Payments	(9.3)	(7.6)	(7.3)
<b>Net Change in Total OPEB Liability</b>	179.3	(42.2)	59.2
<b>Total OPEB Liability - Beginning</b>	502.9	545.1	485.9
<b>Total OPEB Liability - Ending (a)</b>	<u>\$ 682.2</u>	<u>\$ 502.9</u>	<u>\$ 545.1</u>
<b>Plan Fiduciary Net Position</b>			
Employer Contributions	\$ 1.8	\$ 1.9	\$ 2.1
Net Investment Income	7.5	7.6	7.6
Benefit Payments	(9.3)	(7.6)	(7.3)
OPEB Plan Administrative Expense	(1.4)	(1.2)	(1.2)
Other*	12.9	0.0	0.0
<b>Net Change in Plan Fiduciary Net Position</b>	11.5	0.7	1.2
<b>Plan Fiduciary Net Position - Beginning</b>	244.9	244.2	243.1
<b>Plan Fiduciary Net Position - Ending (b)</b>	<u>\$ 256.4</u>	<u>\$ 244.9</u>	<u>\$ 244.2</u>
<b>Net OPEB Liability (Asset) - Ending (a) - (b)</b>	\$ 425.8	\$ 258.0	\$ 300.9
<b>Plan Fiduciary Net Position as a Percentage of Total OPEB Liability</b>	37.58%	48.69%	44.81%
<b>Covered Employee Payroll</b>	\$ 4,228.2	\$ 4,115.0	\$ 4,205.3
<b>Net OPEB Liability (Asset) as a Percentage of Covered Employee Payroll</b>	10.07%	6.27%	7.15%

\*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.

Values may not add due to rounding.

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

	2019	2018	2017
State Retiree Life Insurance	3.09%	3.16%	3.19%
Local Retiree Life Insurance	3.05%	3.10%	3.13%

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

Calendar Year Ended, December 31	2019	2018	2017
<b>Total OPEB Liability</b>			
Service Cost	\$ 25.5	\$ 23.4	\$ 23.1
Interest on the Total OPEB Liability	65.5	66.0	65.9
Difference between Expected and Actual Experience	(55.3)	(41.6)	(31.6)
Assumption Changes	0.0	25.2	0.0
Benefit Payments	(53.0)	(55.4)	(56.4)
<b>Net Change in Total OPEB Liability</b>	(17.2)	17.6	0.9
<b>Total OPEB Liability - Beginning</b>	949.8	932.2	931.3
<b>Total OPEB Liability - Ending (a)</b>	<u>\$ 932.6</u>	<u>\$ 949.8</u>	<u>\$ 932.2</u>
<b>Plan Fiduciary Net Position</b>			
Employer Contributions	14.4	18.2	17.9
Net Investment Income	180.3	(36.5)	141.8
Benefit Payments	(53.0)	(55.4)	(56.4)
OPEB Plan Administrative Expense	(0.3)	(0.3)	(0.3)
<b>Net Change in Plan Fiduciary Net Position</b>	141.3	(74.0)	102.9
<b>Plan Fiduciary Net Position - Beginning</b>	943.1	1,017.1	914.1
<b>Plan Fiduciary Net Position - Ending (b)</b>	<u>\$ 1,084.4</u>	<u>\$ 943.1</u>	<u>\$ 1,017.1</u>
<b>Net OPEB Liability(Asset) - Ending (a) - (b)</b>	\$ (151.8)	\$ 6.8	\$ (84.8)
<b>Plan Fiduciary Net Position as a Percentage of Total OPEB Liability</b>	116.27%	99.29%	109.10%
<b>Covered Employee Payroll</b>	\$ 4,796.1	\$ 4,562.6	\$ 4,454.5
<b>Net OPEB Liability(Asset) as a Percentage of Covered Employee Payroll</b>	(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.



FINANCIAL SECTION

**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 a % 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%

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

	<b>2019</b>	<b>2018</b>	<b>2017</b>
Core Trust Fund	19.49%	(3.56)%	15.85%

## NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

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

Valuation Date:	December 31, 2017
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
Asset Valuation Method:	Five Year Smoothed Market (Closed)
Actuarial Assumptions	
Net Investment Rate of Return:	5.5%
Weighted based on assumed rate for:	
Pre-retirement:	7.2%
Post-retirement:	5.0%
Salary Increases	
Inflation:	3.2%
Seniority/Merit:	0.1%-5.6%
Post-retirement Benefit Adjustments:	2.1*

\*No post-retirement adjustment is guaranteed. Actual adjustments are based on recognized investment return, actuarial experience and other factors. 2.1% is the assumed annual adjustment based on the investment return assumption and the post-retirement discount rate.

### Significant methods and assumptions used in calculating SHICC Actuarially Determined Contributions:

Valuation Date:	December 31, 2017
Actuarial Cost Method:	Frozen Entry Age
Amortization Method:	Level Percentage of Payroll, Closed
Remaining Amortization Period:	8 years
Asset Valuation Method:	Five Year Smoothed Market (Closed)
Salary Increases	
Inflation:	3.2%
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% per year
Other Information:	
Notes	There were no benefit changes during the year.



**STATISTICAL SECTION**

## Wisconsin Retirement System (WRS) Statistics

### WRS Active Participants by Employment Category

Year	General	Teachers	Executives & Elected Officials	Protective Occupations With Social Security	Protective Occupations Without Social Security	Totals
<b>State Participants</b>						
2010	42,785	20,502	697	8,756	0	72,740
2011	41,136	20,184	717	8,354	0	70,391
2012	42,433	20,776	733	8,327	0	72,269
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
<b>Local Participants</b>						
2010	97,175	81,866	733	11,354	2,761	193,889
2011	93,797	78,348	720	11,280	2,718	186,863
2012	92,122	77,938	687	11,083	2,734	184,564
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
<b>Total Participants</b>						
2010	139,960	102,368	1,430	20,110	2,761	266,629
2011	134,933	98,532	1,437	19,634	2,718	257,254
2012	134,555	98,714	1,420	19,410	2,734	256,833
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

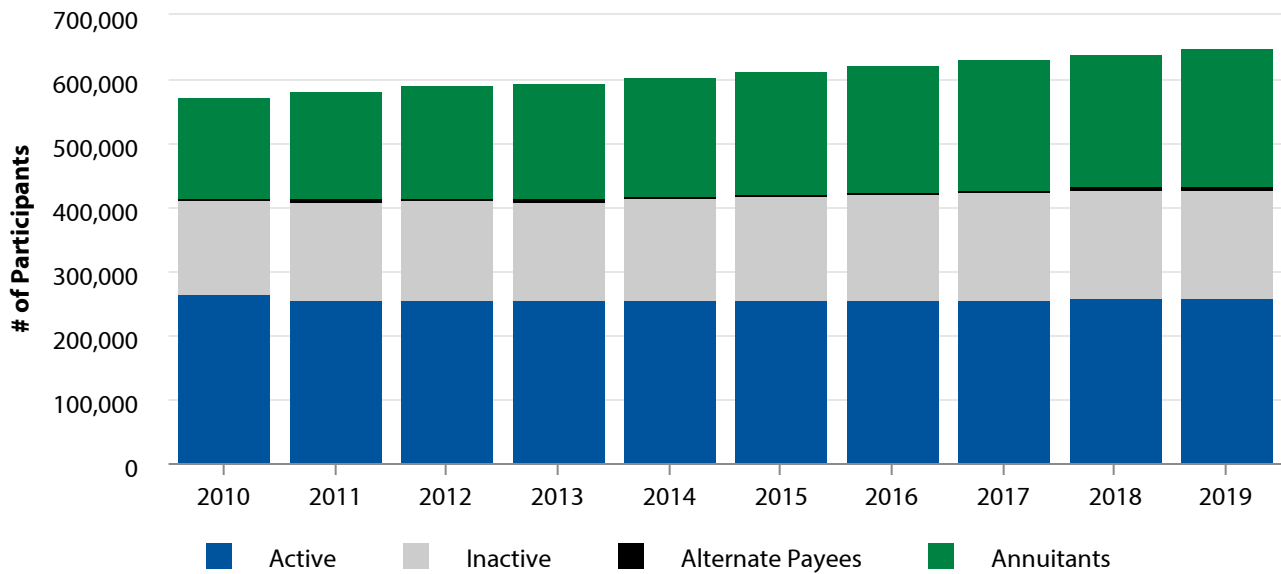


STATISTICAL SECTION

**Total WRS Participants**

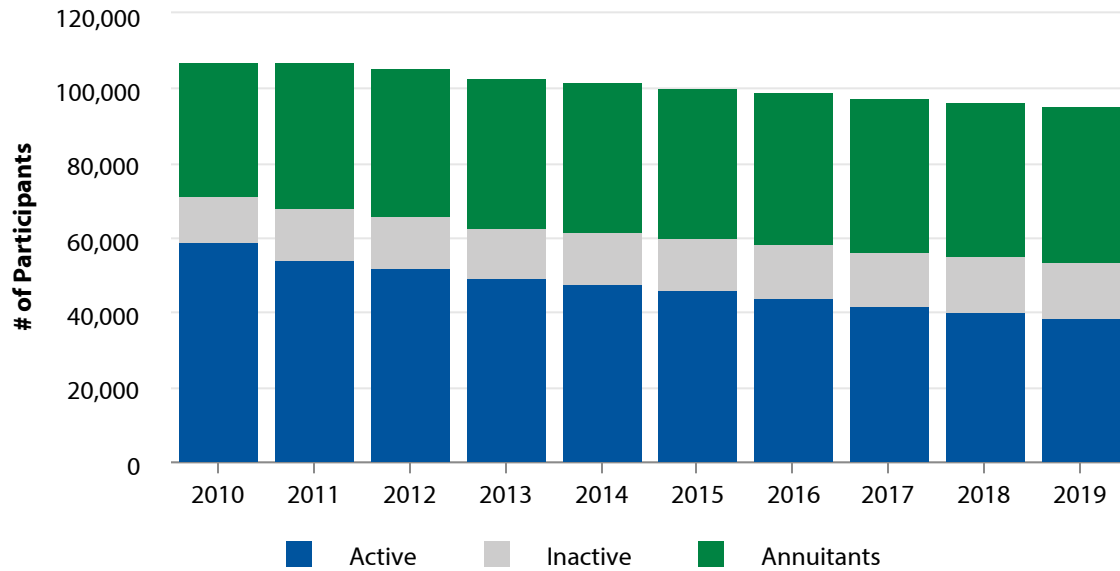
Year	Active	Inactive	Alternate Payees	Annuitants	Total Participants
2010	266,629	145,803	4,012	155,775	572,219
2011	257,254	153,123	4,063	167,453	581,893
2012	256,833	155,887	4,086	173,655	590,461
2013	256,788	153,721	4,040	180,056	594,605
2014	257,255	157,072	4,051	185,605	603,983
2015	256,077	161,851	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

**Total WRS Participants**



**WRS Participants with Variable Election**

Year	Active	Inactive	Annuitants	Totals
2010	58,781	12,519	35,866	107,166
2011	54,273	13,889	38,949	107,111
2012	51,771	13,858	39,873	105,502
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

**WRS Participants with Variable Election**


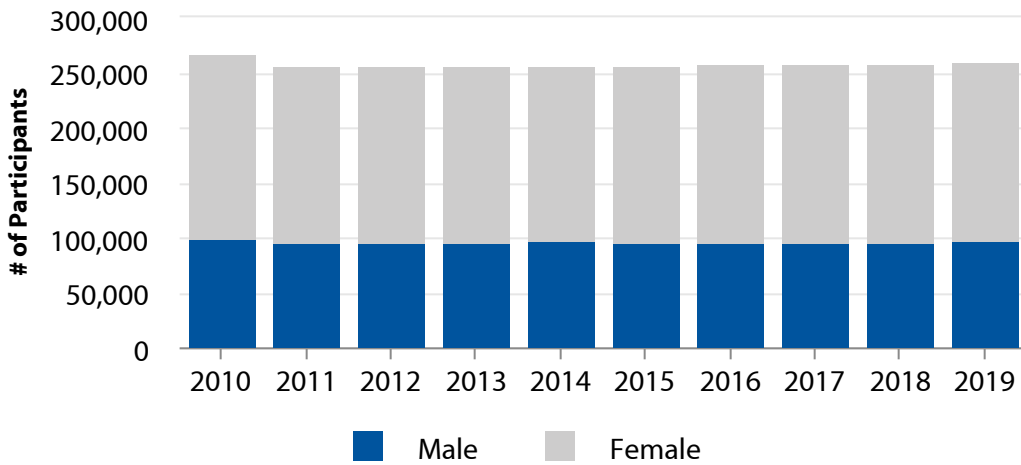


STATISTICAL SECTION

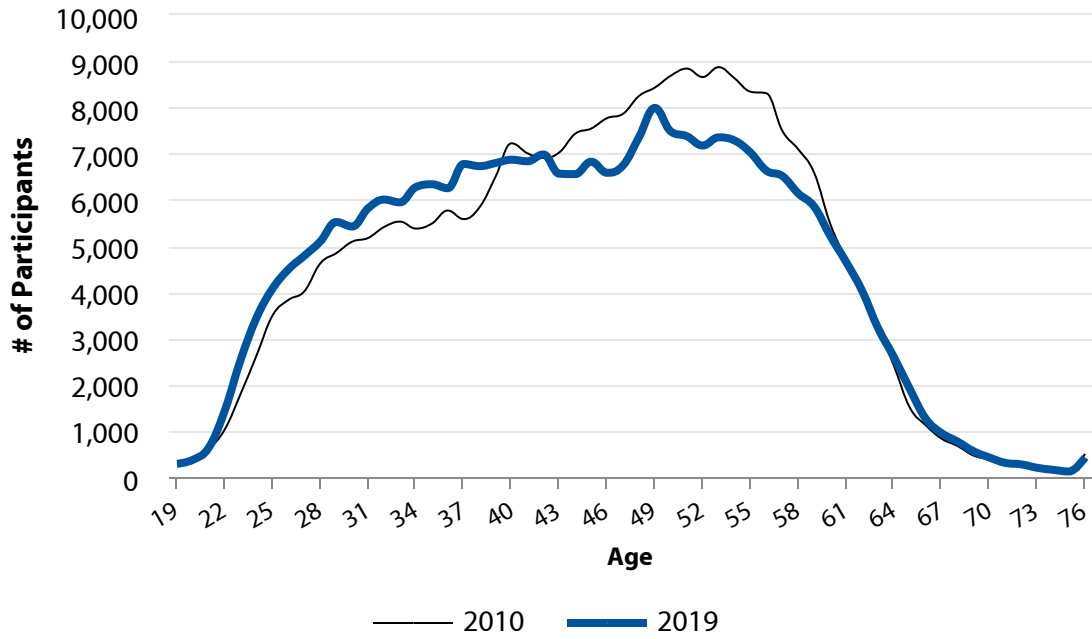
**Active WRS Participants by Gender**

Year	Teachers		Protective Occupations		All Other Participants		Totals	
	Male	Female	Male	Female	Male	Female	Male	Female
2010	32,155	70,213	18,744	4,127	49,563	91,827	100,462	166,167
2011	30,784	67,748	18,374	3,978	47,829	88,541	96,987	160,267
2012	30,983	67,761	18,278	3,866	47,836	88,109	97,097	159,736
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

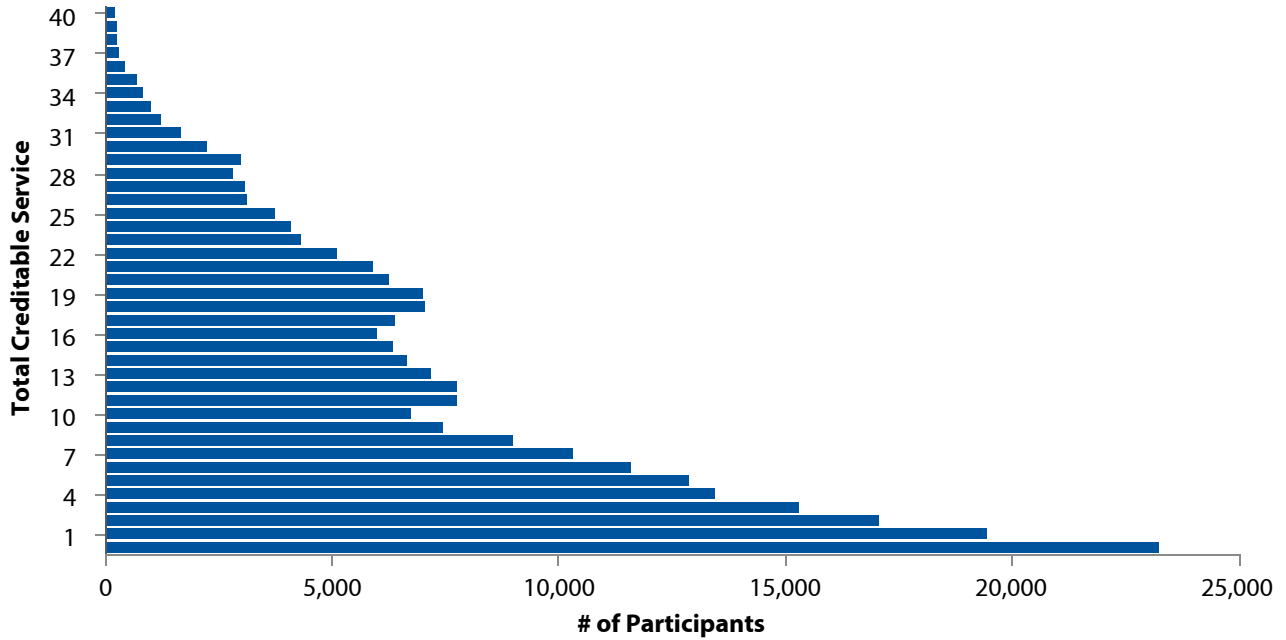
**Active WRS Participants by Gender**



**WRS Active Participants by Age**



**WRS Active Participants by Creditable Service**





STATISTICAL SECTION

**WRS Covered Payroll by Employer Type**

(In Millions)

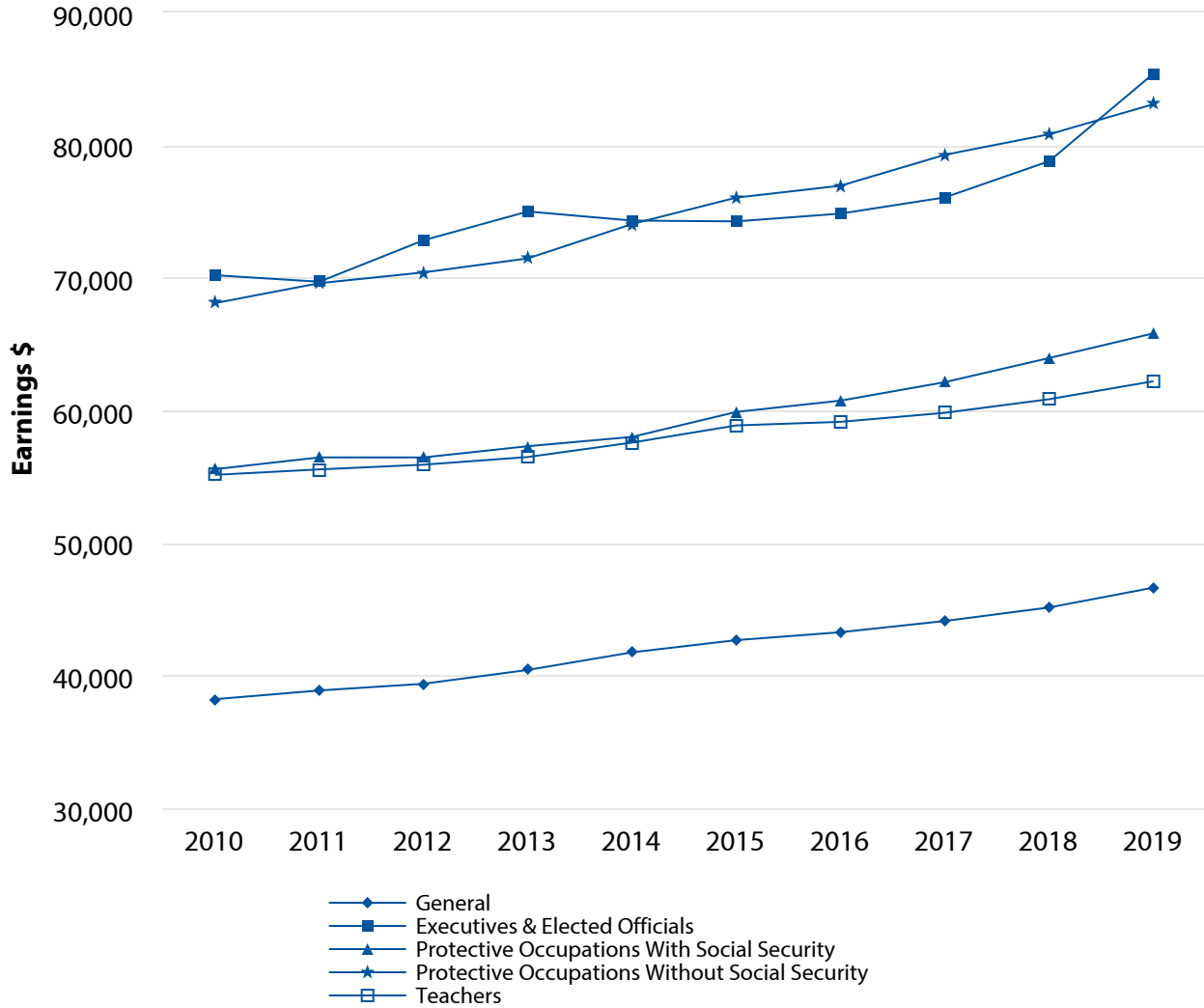
Local Employers								
Year	School Districts	Counties	Cities	Technical Colleges	Villages	Towns	Special Districts	Totals
2010	\$5,037	\$1,530	\$1,229	\$596	\$225	\$60	\$165	\$8,842
2011	5,006	1,537	1,236	607	227	63	171	8,847
2012	4,906	1,526	1,226	611	228	66	177	8,740
2013	4,956	1,551	1,244	616	233	66	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

State Government				Totals
Year	State Agencies	University	Totals	All Employers
2010	\$2,170	\$1,732	\$3,902	\$12,744
2011	2,126	1,746	3,872	12,719
2012	2,137	1,751	3,888	12,628
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

**WRS Covered Payroll by Employment Category**

(In Millions)

Year	General Employees	Teachers	Executives & Elected Officials	Protective Occupations with Social Security	Protective Occupations without Social Security	Totals
2010	\$5,504	\$5,809	\$105	\$1,136	\$190	\$12,744
2011	5,485	5,797	105	1,139	193	12,719
2012	5,496	5,707	107	1,122	196	12,628
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

**Average Annual Earnings**

**Average Annual Earnings**

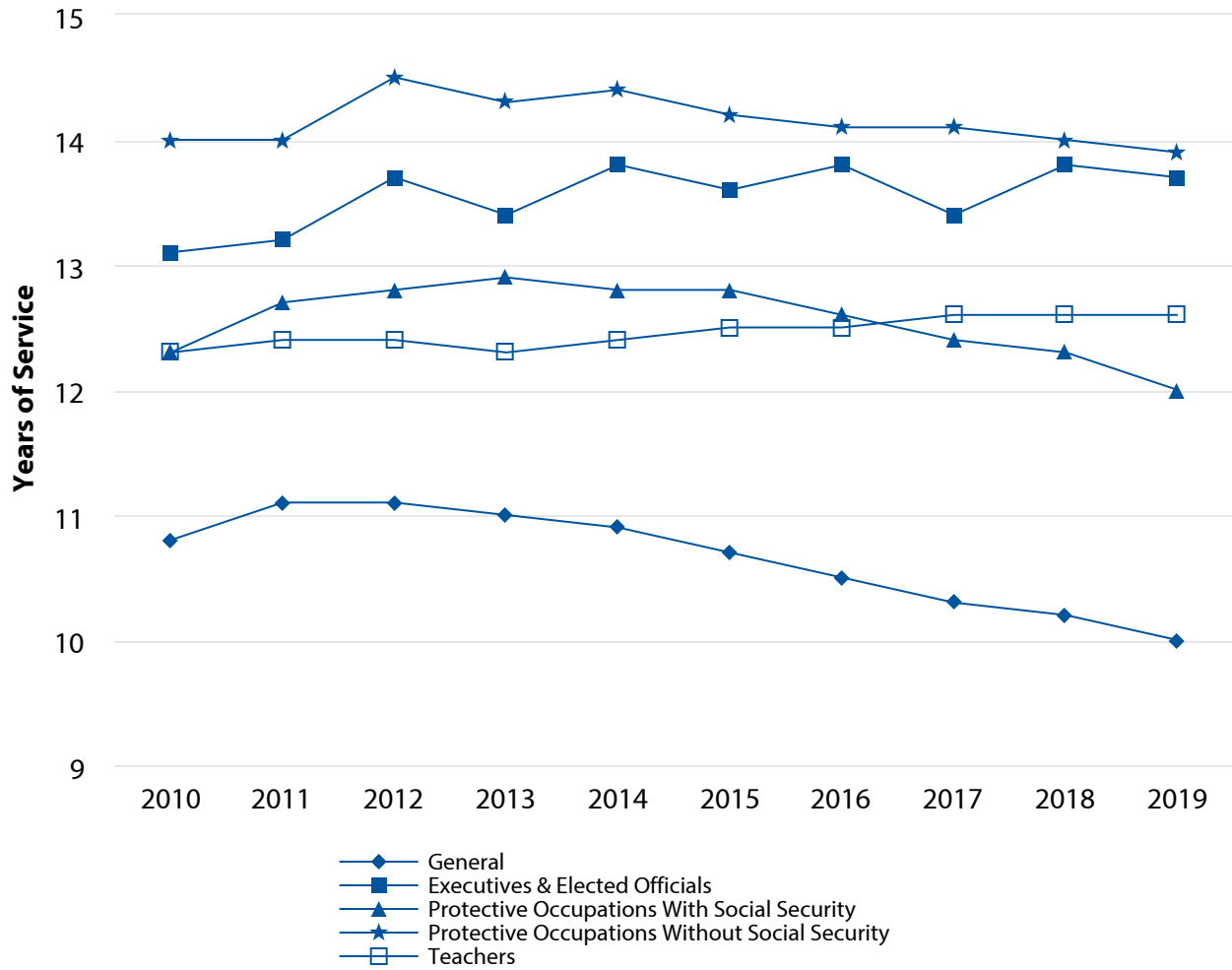
Year	General	Teachers	Executives & Elected Officials	Protective Occupations With Social Security	Protective Occupations Without Social Security	Average
2010	\$38,216	\$55,135	\$70,191	\$55,564	\$68,087	\$46,501
2011	38,874	55,546	69,699	56,451	69,590	47,098
2012	39,379	55,902	72,824	56,448	70,402	47,535
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





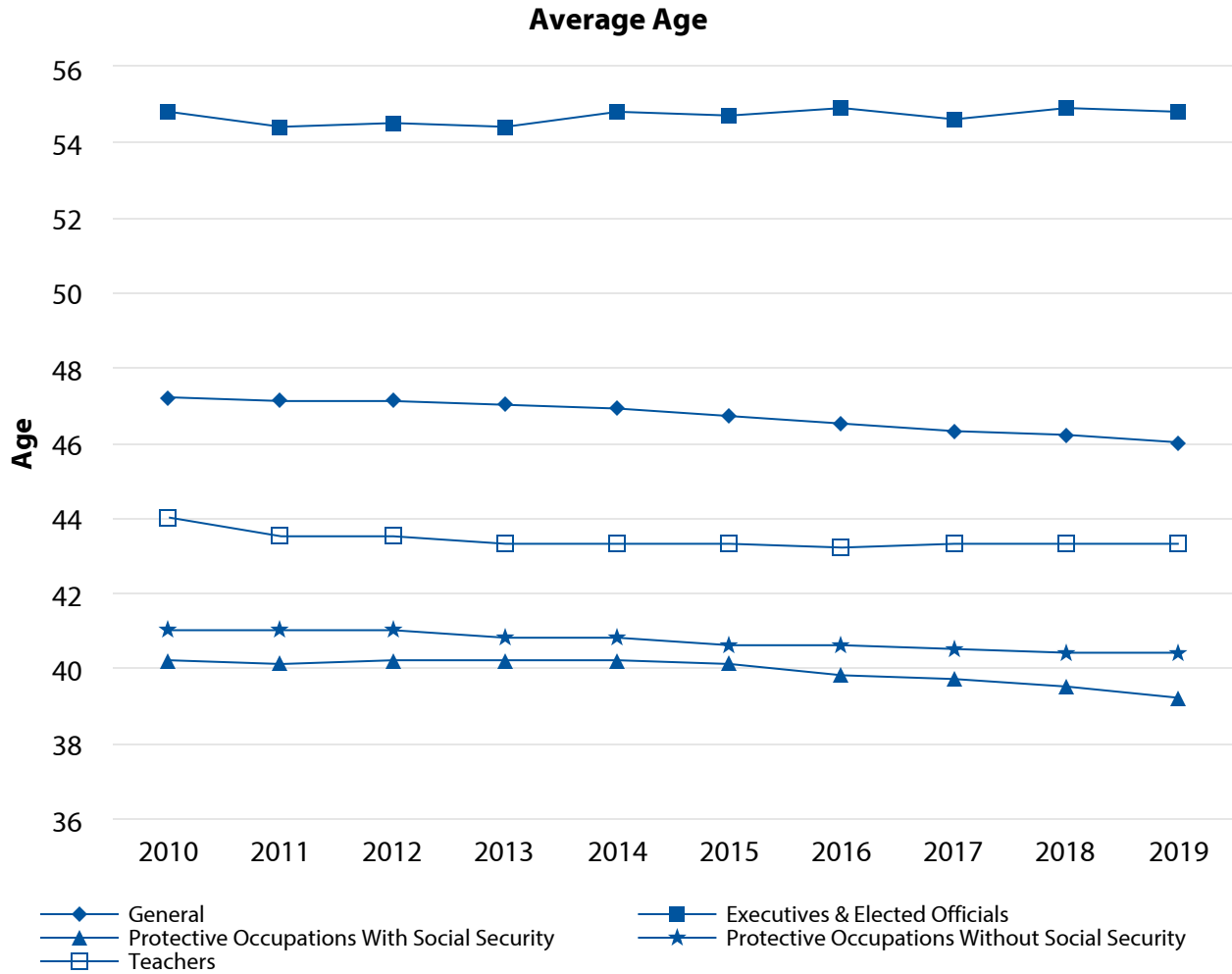
STATISTICAL SECTION

**Average Creditable Service**



**Average Creditable Service**

Year	General	Teachers	Executives & Elected Officials	Protective Occupations With Social Security	Protective Occupations Without Social Security	Average
2010	10.8	12.3	13.1	12.3	14.0	11.5
2011	11.1	12.4	13.2	12.7	14.6	11.8
2012	11.1	12.4	13.7	12.8	14.5	11.8
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


**Average Age**

Year	General	Teachers	Executives & Elected Officials	Protective Occupations With Social Security	Protective Occupations Without Social Security	Average
2010	47.2	44.0	54.8	40.2	41.0	45.4
2011	47.1	43.5	54.4	40.1	41.0	45.2
2012	47.1	43.5	54.5	40.2	41.0	45.2
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



STATISTICAL SECTION

**WRS Active Participants by Employer Type**

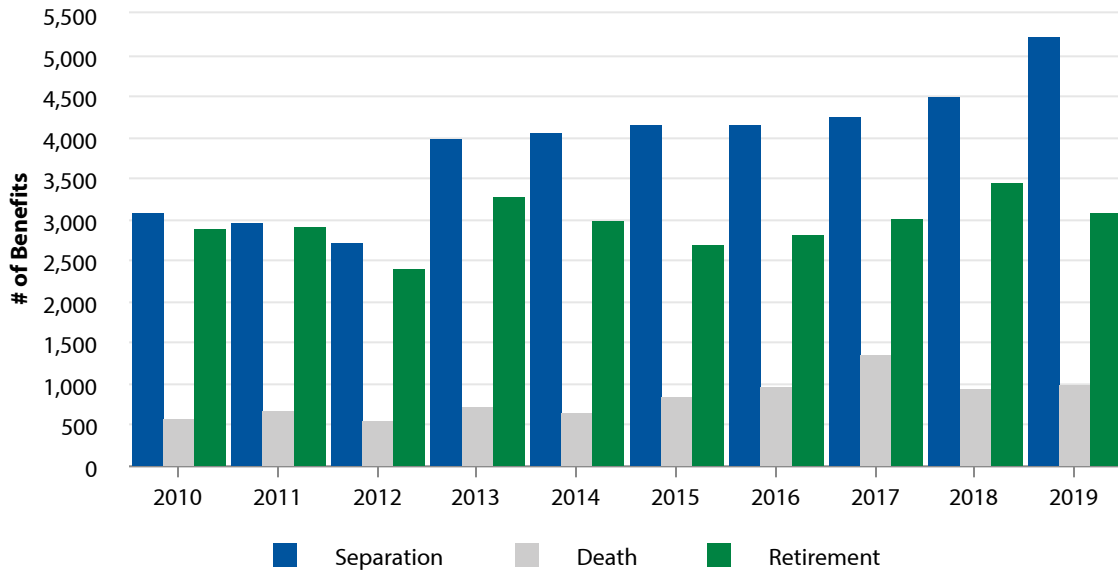
Year	Local Employers							Totals
	School Districts	Counties	Cities	Technical Colleges	Villages	Towns	Special Districts	
2010	114,882	34,652	23,661	10,431	5,031	1,507	3,725	193,889
2011	110,008	33,549	22,993	10,129	4,952	1,552	3,680	186,863
2012	108,758	33,045	22,506	10,036	4,838	1,566	3,815	184,564
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

Year	State Government			Totals
	State Agencies	University	Totals	All Employers
2010	41,215	31,525	72,740	266,629
2011	39,642	30,749	70,391	257,254
2012	40,745	31,524	72,269	256,833
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

**Number of Lump Sum Benefits Paid**

Year	Separation	Death	Retirement
2010	3,093	584	2,896
2011	2,979	670	2,929
2012	2,725	556	2,403
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

**Number of Lump Sum Benefits Paid**





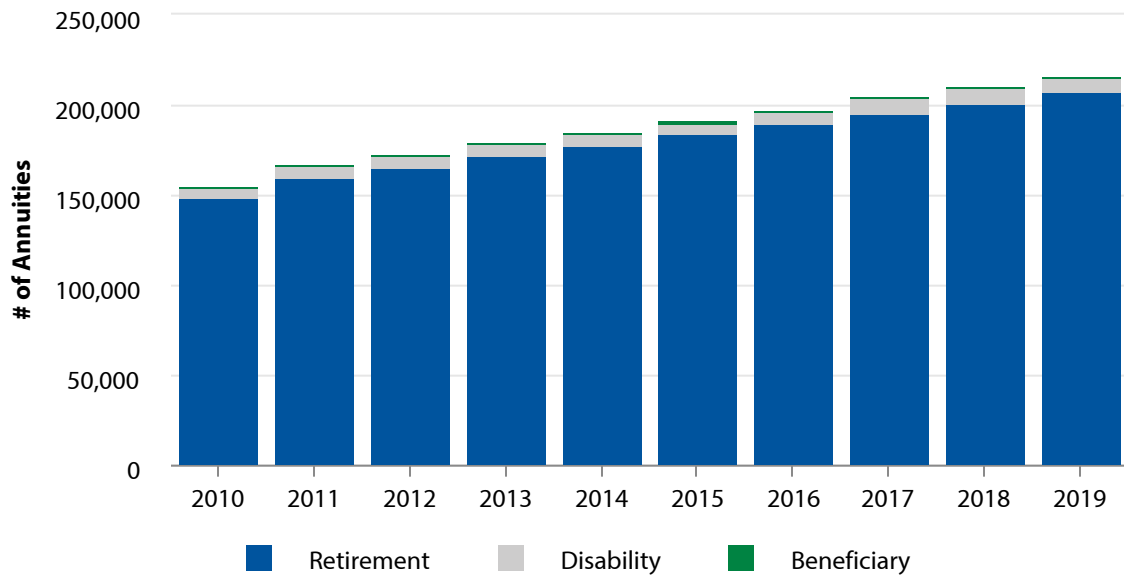
STATISTICAL SECTION

**Number of Annuities in Force**

Year	Retirement	Disability <sup>^</sup>	Beneficiary	Totals
2010	148,380	6,194	1,201	155,775
2011	160,044	6,201	1,208	167,453
2012	165,966	6,473	1,216	173,655
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

<sup>^</sup> Beginning in 2017, Disability count includes annuities in force for the Long-Term Disability Insurance program.

**Annuities in Force**

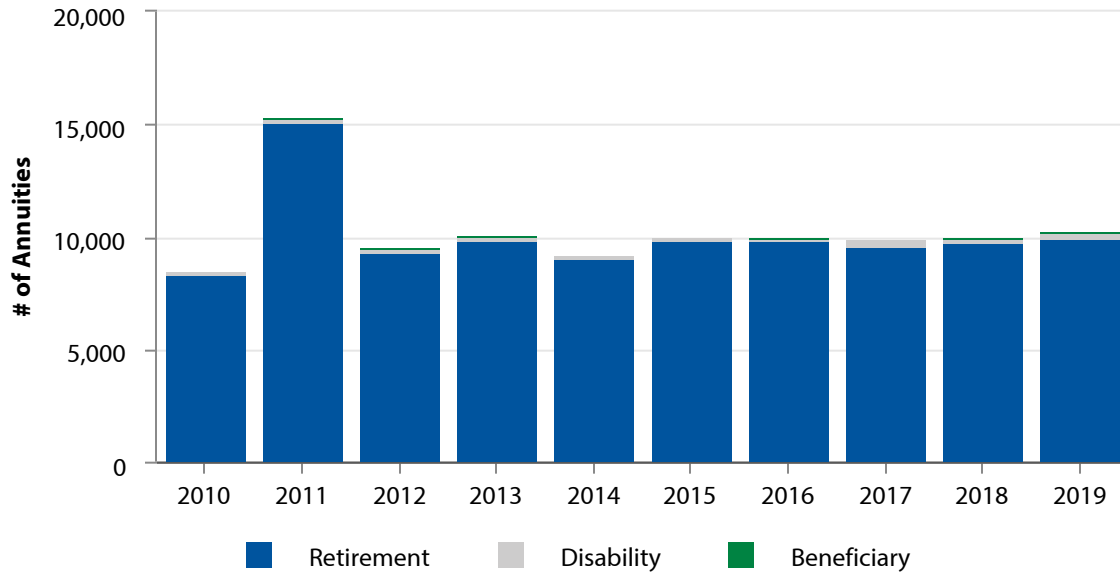


### Number of New Annuities Approved

Year	Retirement	Disability <sup>^</sup>	Beneficiary	Totals
2010	8,330	159	69	8,558
2011	15,096	196	60	15,352
2012	9,322	183	67	9,572
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

<sup>^</sup> Beginning in 2017, Disability count includes annuities in force for the Long-Term Disability Insurance program.

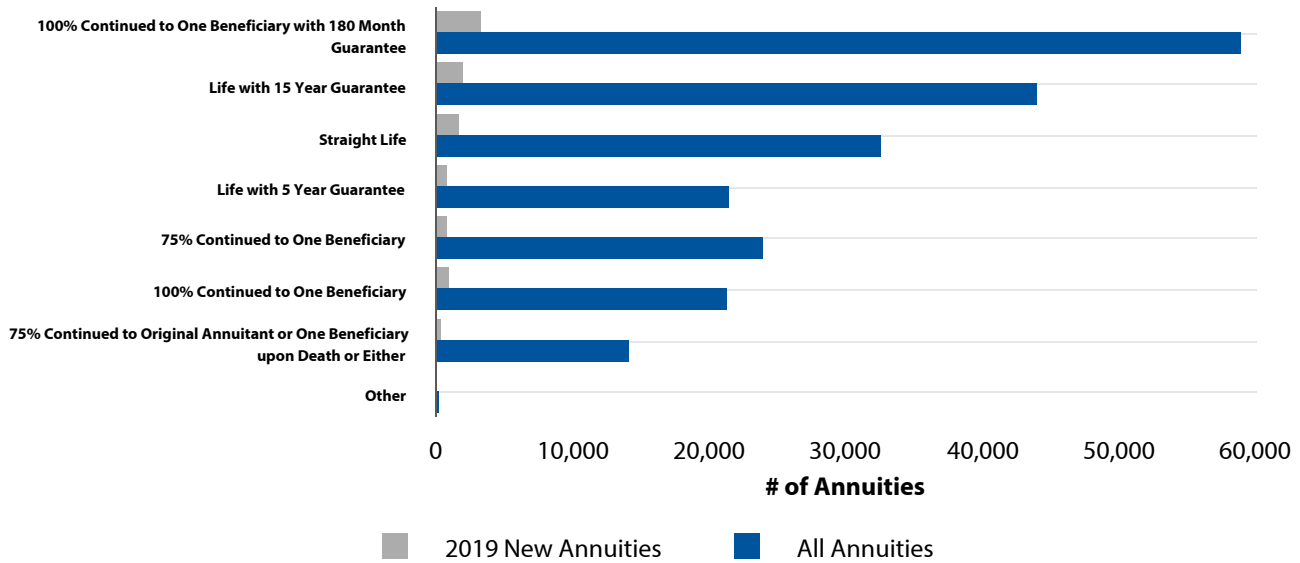
### New Annuities Approved





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	\$ 488	\$ 637	\$ 878	\$ 1,266	\$ 1,823	\$ 2,579	\$ 3,188	\$ 4,093	\$ 5,669	\$ 9,444
Average Final Average Salary	\$ 24,413	\$ 35,505	\$ 40,426	\$ 47,743	\$ 53,907	\$ 59,042	\$ 60,615	\$ 61,940	\$ 66,047	\$ 72,154
Number of Annuitants	7,412	19,324	23,331	26,068	27,790	31,751	40,709	15,509	2,657	271

**Annuities by Type of Benefit**

Monthly Annuity Amount	Total Number of Annuities	Type of Annuity			Annuity Payment Option			
		Retirement	Disability <sup>^</sup>	Beneficiary	Life Annuity	Life with Guarantee	Joint Survivor	Other <sup>^</sup>
\$ 0 - 500	28,513	27,281	675	557	4,889	11,130	12,463	31
\$ 500 - 1,000	35,043	33,014	1,354	675	6,669	12,442	15,894	38
\$ 1,000 - 1,500	30,543	28,508	1,672	363	5,210	9,755	15,558	20
\$ 1,500 - 2,000	27,735	26,010	1,541	184	4,133	8,023	15,568	11
\$ 2,000 - 2,500	26,258	24,953	1,180	125	3,291	7,046	15,912	9
\$ 2,500 - 3,000	22,958	22,087	756	115	2,812	5,974	14,167	5
\$ 3,000 - 3,500	17,157	16,553	523	81	2,142	4,345	10,666	4
\$ 3,500 - 4,000	11,956	11,585	320	51	1,453	2,931	7,571	1
\$ 4,000 - 4,500	7,865	7,657	175	33	973	1,897	4,994	1
\$ 4,500 - 5,000	4,951	4,849	85	17	545	1,172	3,233	1
Over \$ 5,000	9,643	9,497	70	76	1,166	2,071	6,401	5
<b>Total</b>	<b>222,622</b>	<b>211,994</b>	<b>8,351</b>	<b>2,277</b>	<b>33,283</b>	<b>66,786</b>	<b>122,427</b>	<b>126</b>

<sup>^</sup> Includes annuities in force for the Long Term Disability Insurance program.

**Revenues by Source <sup>(1)</sup>**

(In Thousands)

Year	Member Contributions <sup>(2)</sup>		Employer Contributions <sup>(3)</sup>		Investment Income	Other Income	Total Revenues
	Dollars	% of Annual Payroll	Dollars	% of Annual Payroll			
2010	\$787,460	6.2%	\$ 750,702	5.9%	\$ 8,317,435	\$ 990	\$ 9,856,588
2011	797,856	6.3	789,244	6.2	664,151	849	2,252,100
2012	757,151	6.0	799,350	6.3	9,858,710	678	11,415,889
2013	871,260	6.8	914,698	7.1	11,343,231	532	13,129,721
2014	906,499	6.9	1,023,197	7.7	4,888,240	642	6,818,578
2015	937,225	6.9	977,734	7.2	(674,988)	248	1,240,219
2016	921,864	6.7	963,122	7.0	7,271,531	341	9,156,858
2017	965,453	6.9	1,017,559	7.3	14,868,726	5,558	16,857,296
2018	972,950	6.8	1,030,508	7.2	(4,050,510)	382	(2,046,670)
2019	987,662	6.7	1,046,942	7.1	19,048,821	195	21,083,620

1 Employee required contributions made in accordance with statutory requirements. Employer required contributions were made in accordance with actuarially-determined contribution requirements.

2 Member contributions include all employee required, employee additional and benefit adjustment contributions, including those paid by the employer on behalf of the employee.

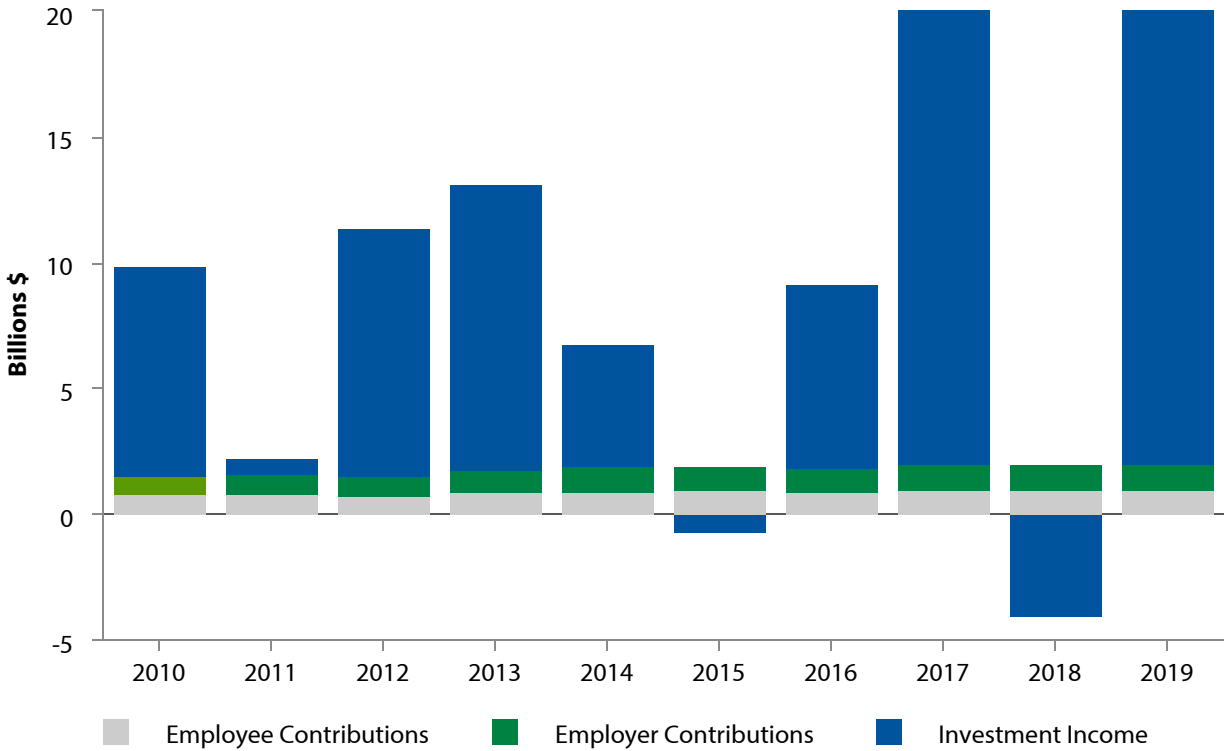
3 Employer contributions include all employer required contributions, including contributions for unfunded actuarial accrued liability.





STATISTICAL SECTION

Revenues by Source



Expenses by Type  
(In Millions)

Age and Service Benefits									
Year	Retirees	Beneficiaries	Disability Benefits <sup>^</sup>	Death Benefits	Separation Benefits	Administrative Expense	Other Expense	Total Expenses	
2010	3,683.2	17.2	\$ 145.2	\$ 29.1	\$ 26.4	\$ 17.6	\$ 0.0	\$	3,918.7
2011	3,941.6	17.8	144.4	33.1	28.0	18.6	0.0		4,183.5
2012	4,023.8	18.2	141.5	24.8	26.6	21.5	0.0		4,256.4
2013	4,035.5	18.2	132.9	38.0	33.3	22.9	0.0		4,280.8
2014	4,309.0	19.5	135.9	33.5	34.4	24.0	42.3		4,598.6
2015	4,587.3	20.7	140.5	31.8	37.6	22.7	43.3		4,883.9
2016	4,759.2	21.5	140.5	30.4	39.3	20.4	71.3		5,082.6
2017	4,972.5	21.8	185.7	31.3	38.4	26.1	0.0		5,275.8
2018	5,216.0	69.4	189.3	41.5	40.2	31.6	25.4		5,613.4
2019	5,365.7	60.4	187.5	32.7	44.1	34.2	3.9		5,728.5

<sup>^</sup> Beginning in 2017, balance includes expenses related to Long-Term Disability Insurance program.



**WRS Participating Employers  
Current Year and Nine Years Ago**

Participating Government	2019			2010		
	Covered Employees	Rank	Percentage of Total System	Covered Employees	Rank	Percentage of Total System
State of Wisconsin	74,760	1	28.8%	72,740	1	27.3%
Milwaukee Teachers Retirement System	5,706	2	2.2	6,747	2	2.6
Madison Metro School District	4,473	3	1.8	4,389	3	1.6
City of Madison	3,020	4	1.2	3,097	5	1.2
Green Bay Area School District	2,984	5	1.1	2,959	6	1.1
Kenosha Unified School District	2,719	6	1.0	3,211	4	1.2
Racine Unified School District	2,707	7	1.0	2,808	7	1.1
Dane County	2,466	8	0.9	2,382	8	0.9
Appleton Area School District	1,923	9	0.7	1,725	10	0.6
Waukesha School District	1,571	10	0.6	1,706	12	0.6
All Other	157,922		60.7	164,865		61.8
Total (1,516 employers)	260,251		100.0%	266,629		100.0%



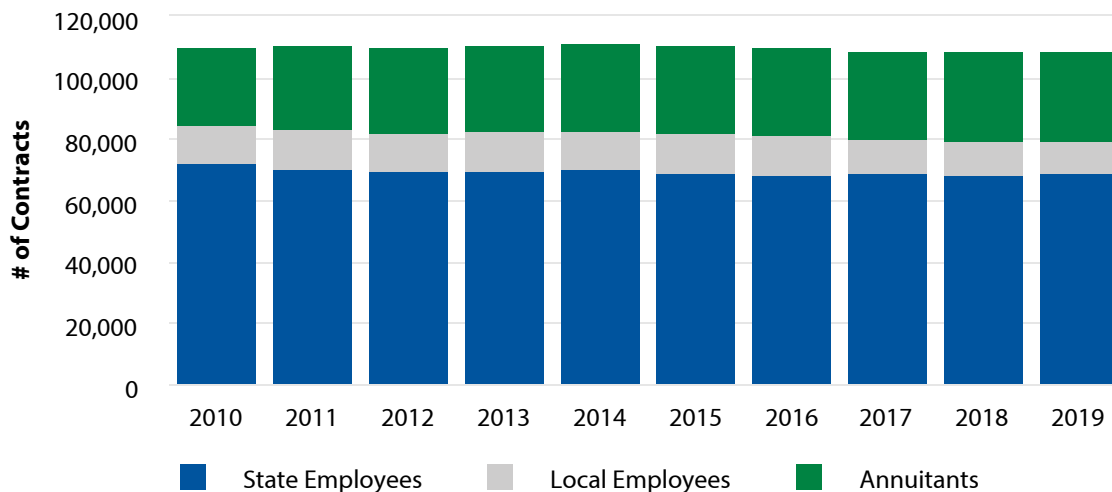
STATISTICAL SECTION

## 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>							
2010	72,313	478	9,179	11,788	1,732	22,699	95,490
2011	70,656	378	9,126	14,157	1,727	25,010	96,044
2012	69,650	430	9,146	14,398	1,827	25,371	95,451
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
<b>Local</b>							
2010	12,700	89	2,258	n/a	225	2,483	15,272
2011	12,826	86	2,284	n/a	236	2,520	15,432
2012	12,679	80	2,366	n/a	229	2,595	15,354
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

### Group Health Insurance Contracts\*



\*For display purposes, state and local continuants were statistically insignificant and therefore not included in this chart.



**Group Health Insurance Premiums by Source**  
(In Thousands)

Year	Employer & Employee *	Annuitant	Sick Leave Conversion	Medicare	Stabilization	Life Insurance Conversion	Totals
<b>State</b>							
2010	\$ 1,067,164	\$ 72,861	\$ 111,676	\$ 11,864	\$ 0	\$ 390	\$ 1,263,954
2011	1,112,382	73,166	130,840	11,733	0	464	1,328,585
2012	1,034,066	61,495	130,154	17,865	0	412	1,243,993
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
<b>Local</b>							
2010	\$ 189,480	\$ 16,407	n/a	\$ 574	\$ 0	\$ 7	\$ 206,468
2011	205,211	15,685	n/a	427	0	2	221,325
2012	198,476	15,011	n/a	1,846	0	3	215,336
2013	206,812	15,843	n/a	2,047	0	3	224,705
2014	219,413	15,938	n/a	1,808	0	6	237,165
2015	222,514	15,783	n/a	2,051	0	6	240,354
2016	222,052	15,194	n/a	1,982	0	9	239,237
2017	195,553	14,459	n/a	1,835	0	1	211,848
2018	195,610	14,432	n/a	1,661	0	0	211,703
2019	173,085	12,702	n/a	1,759	0	0	187,546

\* Breakout between employer and employee paid portions of active participant health insurance premiums is not available.



STATISTICAL SECTION

**Group Life Insurance Program Statistics**

**Group Life Insurance Premiums Collected**

(In Thousands)

Year	Employee					Employer			Totals	
	Basic	Supplemental	Additional	Spouse & Dependent	Total	Basic	Suppl	Total		
<b>State</b>										
2010	\$ 7,363	\$ 5,404	\$ 7,834	\$ 1,253	\$ 21,854	\$3,519	\$ 1,453	\$4,971	\$26,826	
2011	7,302	4,577	7,248	1,275	20,402	3,488	1,180	4,668	25,070	
2012	6,285	4,557	6,758	1,233	18,833	2,873	1,204	4,078	22,911	
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	
<b>Local</b>										
2010	\$ 10,950	\$ 2,642	\$ 7,636	\$ 1,329	\$ 22,558	\$3,247	\$ 53	\$3,300	\$25,858	
2011	10,933	2,702	7,761	1,298	22,694	3,250	54	3,304	25,997	
2012	10,612	2,692	7,666	1,248	22,218	3,319	51	3,370	25,588	
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	

**Group Life Insurance In Force**

(In Thousands)

Year	Pre-Age 65 Insurance			Post-Age 64 Insurance	Spouse & Dependent	Totals
	Basic	Supplemental	Additional			
<b>State</b>						
2010	\$ 3,302,757	\$ 2,410,238	\$ 3,247,085	\$ 396,600	\$ 601,900	\$ 9,958,580
2011	3,296,564	2,385,886	3,250,843	449,897	567,755	9,950,945
2012	3,231,871	2,321,576	3,258,782	493,214	561,610	9,867,053
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
<b>Local</b>						
2010	\$ 4,280,427	\$ 1,296,473	\$ 3,809,183	\$ 263,635	\$ 882,590	\$ 10,532,308
2011	4,303,919	1,364,577	3,903,476	296,558	852,035	10,720,565
2012	4,182,413	1,346,900	3,801,144	339,426	819,980	10,489,863
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



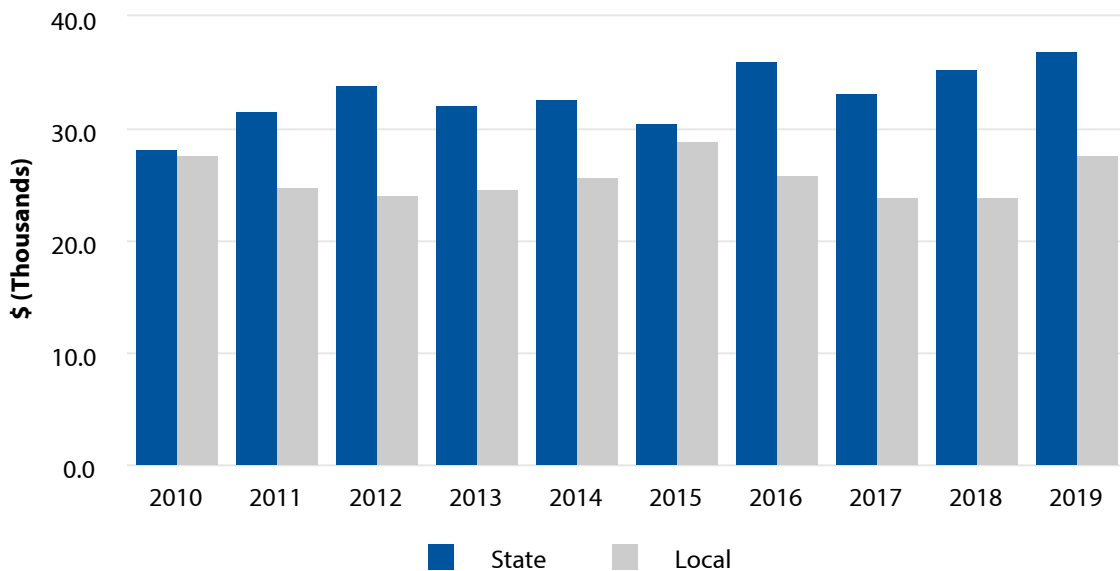
STATISTICAL SECTION

**Group Life Insurance Paid Claims**  
(In Thousands)

Year	Pre-Age 65 Insurance			Post-Age 64 Insurance	Spouse & Dependent	Living Benefits <sup>(1)</sup>	Totals
	Life	AD&D	Disability				
<b>State</b>							
2010	\$ 14,356	\$ 893	\$ 1,496	\$ 10,473	\$ 959	\$ 162	\$ 28,339
2011	16,749	1,285	1,184	9,881	1,241	1,211	31,551
2012	17,137	1,260	1,343	12,040	1,027	1,185	33,992
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
<b>Local</b>							
2010	\$ 16,512	\$ 1,513	\$ 943	\$ 5,954	\$ 1,458	\$ 1,332	\$ 27,712
2011	14,646	1,188	1,215	6,141	1,633	81	24,904
2012	13,704	788	1,175	6,588	1,180	655	24,090
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

<sup>1</sup> Living Benefits may originate as Pre-Retirement, Post-Retirement or Spouse & Dependent Benefits

**Group Life Insurance Paid Claims**

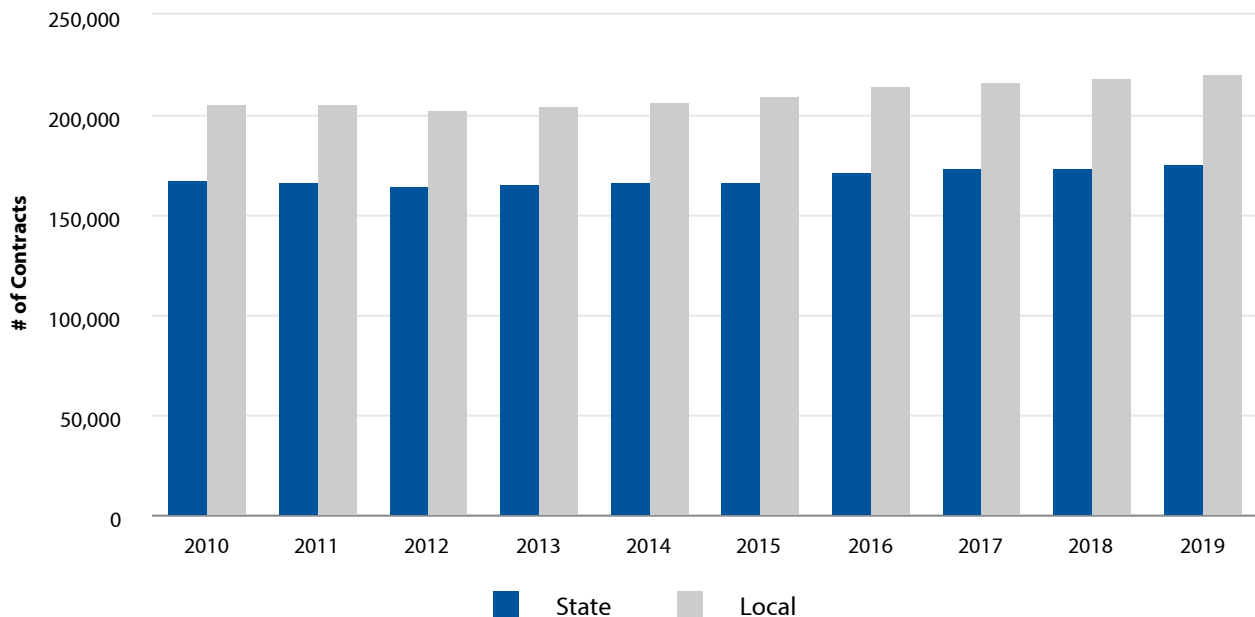




**Group Life Insurance Contracts and Participants**

Year	Pre-Age 65 Insurance			Post-Age 64 Insurance	Spouse & Dependent	Total Contracts	Total Participants
	Basic	Supplemental	Additional				
<b>State</b>							
2010	58,070	41,840	26,805	16,584	25,008	168,307	74,654
2011	57,673	41,247	26,503	17,847	23,446	166,716	75,520
2012	56,773	40,243	26,288	18,921	23,153	165,378	75,694
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
<b>Local</b>							
2010	86,828	25,336	35,257	22,671	36,340	206,432	109,499
2011	85,714	26,155	34,768	23,956	35,036	205,629	109,670
2012	83,863	26,053	33,833	25,573	33,704	203,026	109,436
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

**Life Insurance Contracts**







STATISTICAL SECTION

### Duty Disability Insurance Statistics

(In Millions)

Year	Employers	Active Participants	Disabilitants	Benefit Payments	Contributions	Average Contribution Rate
2010	504	22,871	938	\$30	\$52	3.91%
2011	503	22,352	957	30	53	3.98
2012	501	22,144	964	30	53	4.02
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

### Duty Disability Insurance Funded Status

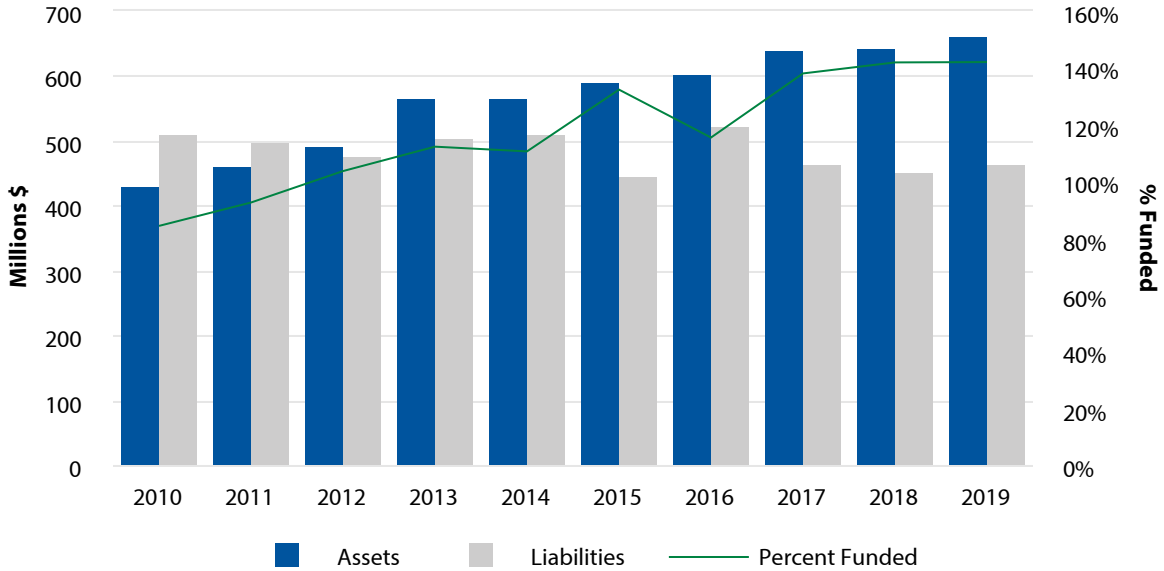
(In Millions)

Year	Assets	Liabilities*	Unfunded (Overfunded) Liability	Percent Funded	Covered Payroll	UAAL as % of Covered Payroll
2010	\$432.1	\$512.8	\$80.7	84.3%	\$1,326.3	6.1%
2011	461.6	499.0	37.4	92.5	1,332.7	2.8
2012	494.1	477.0	(17.1)	103.6	1,318.3	(1.3)
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)

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.

### Duty Disability Insurance Funding



### Duty Disability Insurance Participating Employers Current Year and Nine Years Ago

Participating Government	2019			2010		
	Covered Employees	Rank	Percentage of Total System	Covered Employees	Rank	Percentage of Total System
State of Wisconsin	8,462	1	37.8%	8,756	1	38.2 %
City of Madison	864	2	3.8	805	2	3.5
Dane County	455	3	2.0	449	3	2.0
City of Green Bay	371	4	1.7	359	4	1.6
City of Kenosha	346	5	1.5	342	5	1.5
City of Racine	315	6	1.4	342	6	1.5
City of West Allis	226	7	1.0	234	8	1.0
City of Waukesha	215	8	1.0	216	9	0.9
City of Oshkosh	207	9	0.9	198	11	0.9
City of Appleton	199	10	0.9	201	10	0.9
All Other	10,773		48.0	10,969		48.0
<b>Total (502 employers)</b>	<b>22,433</b>		<b>100.0%</b>	<b>22,871</b>		<b>100.0 %</b>



STATISTICAL SECTION

**Duty Disability Insurance  
Annuities by Type of Benefit**

Monthly Benefit Amount	Number of Annuitants	Type of Annuity	
		Disability	Beneficiary
\$ 1 - 500	29	29	0
\$ 500 - 1,000	59	42	17
\$ 1,000 - 1,500	70	64	6
\$ 1,500 - 2,000	104	100	4
\$ 2,000 - 2,500	104	96	8
\$ 2,500 - 3,000	95	92	3
\$ 3,000 - 3,500	112	106	6
\$ 3,500 - 4,000	111	107	4
\$ 4,000 - 4,500	92	89	3
\$ 4,500 - 5,000	85	84	1
Over \$ 5,000	108	104	4
<b>Total</b>	<b>969</b>	<b>913</b>	<b>56</b>

\* This table excludes annuitants whose benefit is totally offset by other income sources.

**Duty Disability Insurance  
Average Monthly Benefit by Years of Service**

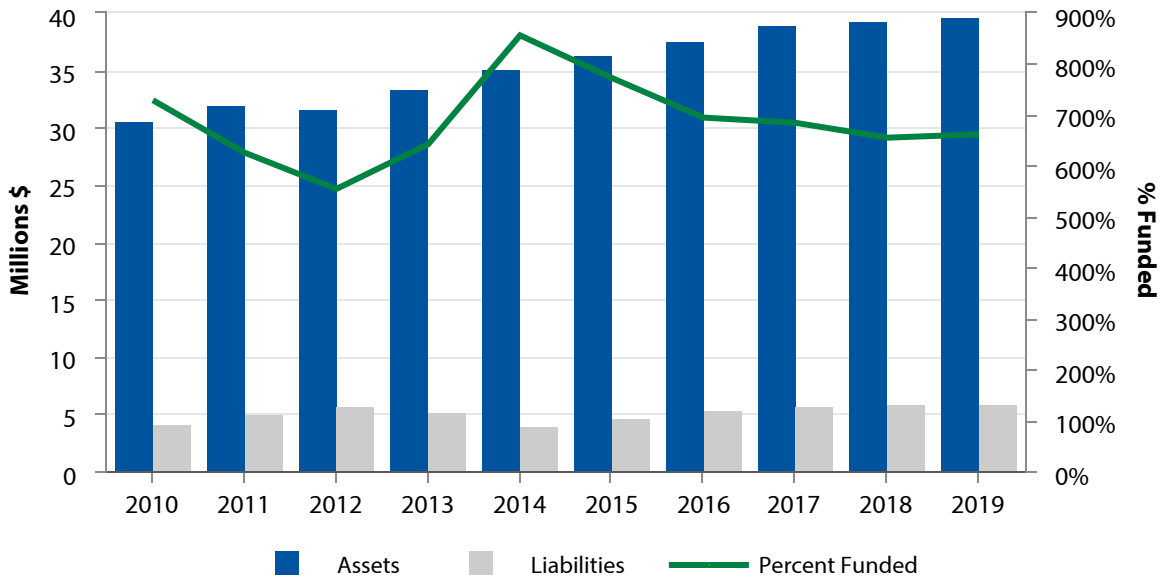
	Years of Service						
	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35
Average Monthly Annuity	\$ 3,478	\$ 3,934	\$ 3,561	\$ 3,066	\$ 2,352	\$ 1,739	\$ 2,237
Average Final Average Salary	\$ 2,696	\$ 3,508	\$ 3,700	\$ 4,039	\$ 4,152	\$ 4,564	\$ 5,810
Number of Annuitants	54	167	209	260	195	79	5

\* This table excludes annuitants for whom years of service data is not available

**Local Income Continuation Insurance Program Statistics**  
(In Millions)

Year	Members	New Claims	Assets	Liabilities	Unfunded (Overfunded) Liability	Funded Ratio
<b>Local</b>						
2010	7,964	75	\$30.6	\$4.2	\$(26.4)	728.6 %
2011	7,878	93	31.9	5.1	(26.8)	625.5
2012	7,593	90	31.6	5.7	(25.9)	554.4
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

**Local Income Continuation Insurance Funding**

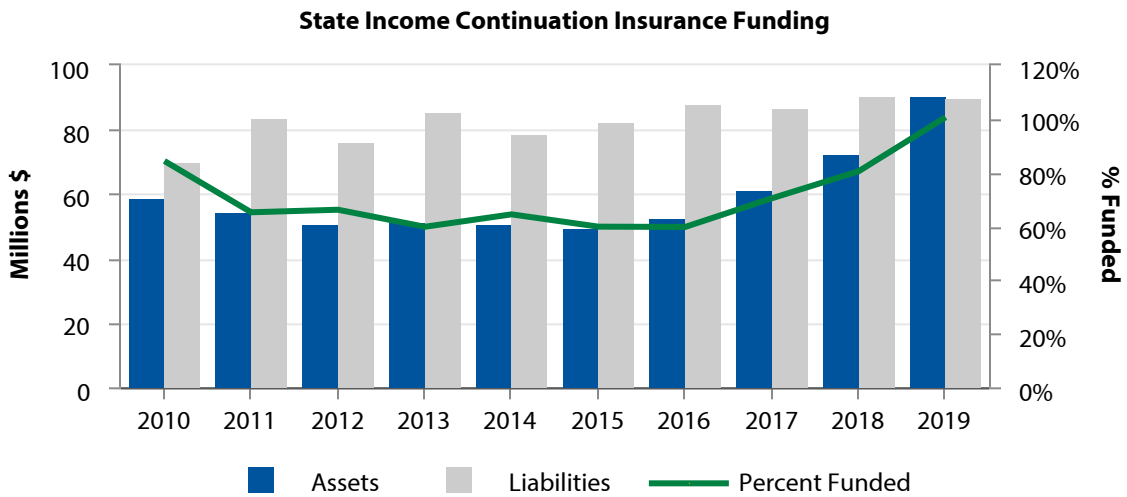




STATISTICAL SECTION

**State Income Continuation Insurance Program Statistics**  
(In Millions)

Year	Members	New Claims	Assets	Liabilities	Unfunded (Overfunded) Liability	Funded Ratio
<b>State</b>						
2010	56,068	1,415	\$59.3	\$70.3	\$11.0	84.4%
2011	52,573	1,545	54.6	83.7	29.1	65.2
2012	53,488	1,663	50.7	76.6	25.9	66.2
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	49,724	1,434	52.6	88.0	35.4	59.8
2017	51,295	1,413	61.3	87.0	25.7	70.5
2018	50,980	1,386	72.9	90.5	17.6	80.6
2019	50,177	1,253	90.7	90.1	(0.6)	100.7

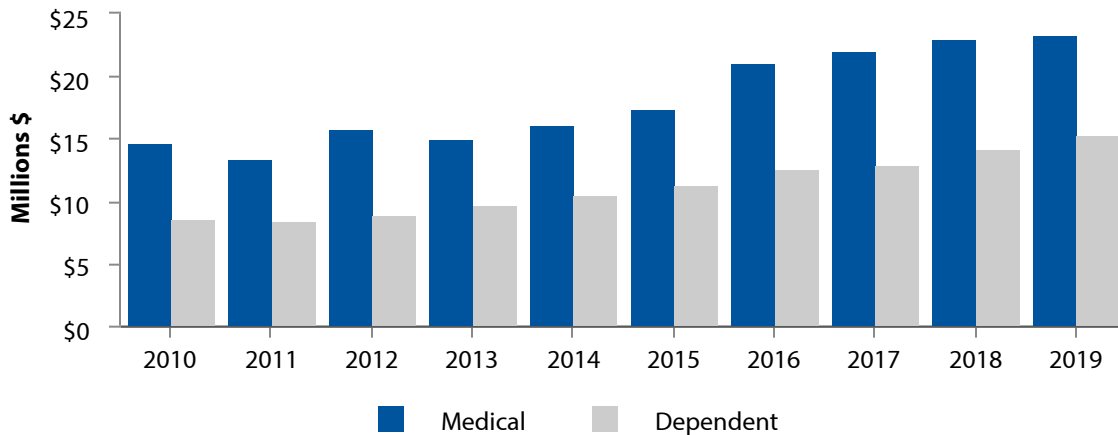


## Employee Reimbursement Accounts Program Statistics

### Salary Reductions and Claims

Year	Medical					Dependent Care				
	Accounts	Salary Reductions	Claims	Forfeitures	Carryover	Accounts	Salary Reductions	Claims	Forfeitures	
2010	11,428	\$ 14,690,079	\$14,496,161	\$ 193,918	\$ 0	\$ 2,166	\$ 8,737,997	\$ 8,668,217	\$ 69,780	
2011	10,723	13,498,149	13,373,269	124,880	0	2,133	8,476,558	8,420,493	56,065	
2012	12,373	15,948,452	15,828,849	119,603	0	2,245	8,911,658	8,847,562	64,096	
2013	12,956	15,149,278	14,922,337	226,941	0	2,469	9,750,422	9,675,871	74,551	
2014	13,370	16,163,180	15,911,661	251,519	0	2,672	10,496,707	10,398,333	98,374	
2015	14,496	17,522,880	17,363,053	159,827	922,961	2,964	11,258,100	11,063,383	194,717	
2016	17,562	21,212,300	20,278,280	235,481	1,621,500	3,284	12,668,920	12,440,766	228,154	
2017	19,102	22,051,502	21,521,725	281,232	1,870,045	3,343	12,996,661	12,761,819	234,842	
2018	20,097	23,022,646	22,131,963	511,974	2,248,754	3,648	14,255,991	13,915,793	340,198	
2019	21,479	23,395,884	22,699,187	600,183	2,345,268	3,890	15,370,021	15,016,412	353,609	

### ERA Salary Reductions



### ERA Administrative Funding

Year	Receipts				Expenses			Surplus / (Deficit)
	Fees	Interest	Forfeitures	Totals	Administrator	State	Total	
2010	\$430,071	\$ 9,449	\$ 263,698	\$ 703,218	\$ 709,032	\$117,967	\$ 826,999	\$ (123,781)
2011	427,725	10,435	180,945	619,105	681,803	111,024	792,827	(173,722)
2012	418,251	7,260	183,699	609,210	753,307	226,690	979,997	(370,787)
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



STATISTICAL SECTION

## Administrative Expense Statistics

### Administrative Expenses (In Thousands)

Year	ETF Expenses #	Investment Expenses	Third Party Administrator Contracts									Total Administration
			ERA	Commuter Benefits	Health	Dental*	Wellness^	Pharmacy	ICI	WRS	Deferred Comp	
2010	\$ 25,446	\$ 245,806	\$ 709	\$ 79	\$ 2,461	\$ 0	\$ 0	\$ 13,379	\$ 1,525	\$ 1,616	\$ 2,659	\$ 295,943
2011	28,775	241,413	682	77	2,264	0	0	9,056	1,449	1,692	2,639	287,935
2012	31,500	290,608	753	73	2,235	0	0	12,413	1,455	1,777	2,160	343,630
2013	33,514	362,011	787	87	2,286	0	0	8,756	1,419	1,881	2,484	413,526
2014	36,355	356,811	848	94	2,874	0	0	10,700	5,026	13,189	2,890	426,916
2015	32,795	350,036	516	60	2,938	0	0	10,779	1,508	3,104	3,126	413,579
2016	36,647	391,427	592	55	3,149	1,190	0	10,683	2,380	5,571	1,999	452,812
2017	43,052	487,384	645	22	3,342	1,212	7,738	10,593	1,231	2,170	2,966	560,355
2018	45,949	691,202	784	35	1,318	1,250	8,013	9,331	2,146	881	3,936	764,845
2019	50,486	839,819	801	94	733	1,266	8,114	9,363	2,259	399	5,880	919,214

\* Prior to 2016, expense included in Health cost

^ Prior to 2017, expense included in Health cost

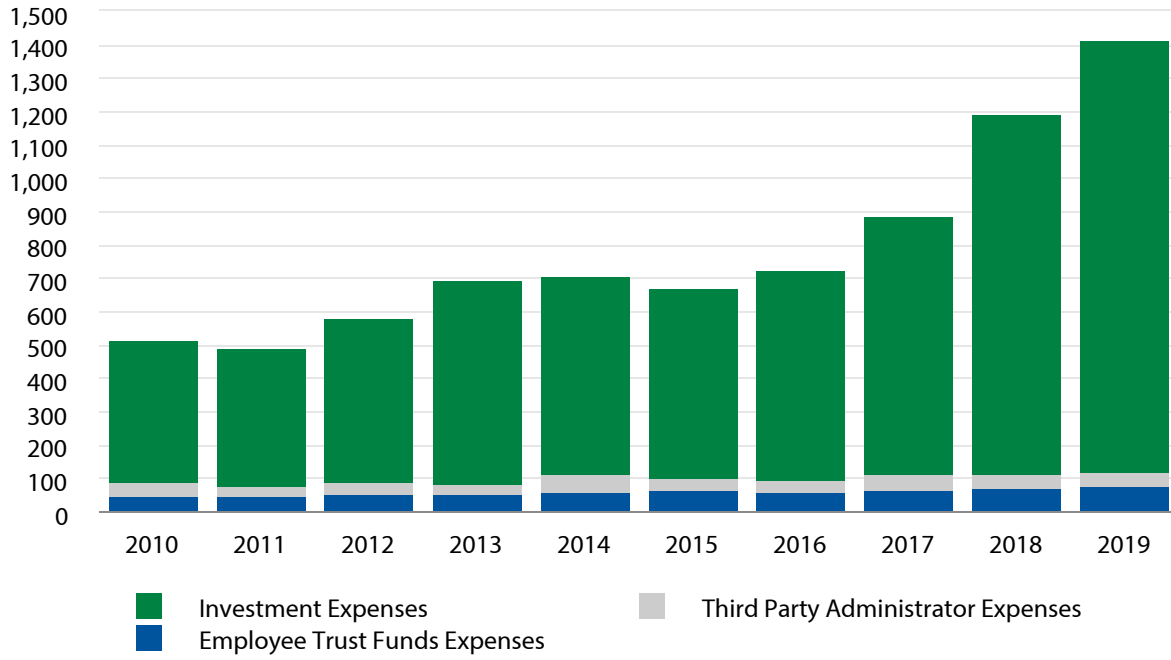
# Beginning in 2017, ETF Expenses include the change in the actuarial accrued liability related to loss adjustment expense for the Duty Disability Insurance program

### 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
2010	572,219	\$ 27,709	\$ 48.4	\$ 245,806	\$ 429.6	\$ 22,428	\$ 39.2	\$ 295,943	\$ 517.2
2011	581,893	28,664	49.3	241,413	414.9	17,859	30.7	287,936	494.8
2012	590,461	32,154	54.5	290,608	492.2	20,867	35.3	343,629	582.0
2013	594,605	33,817	56.9	362,011	608.8	17,699	29.8	413,527	695.5
2014	603,983	34,484	57.1	356,811	590.8	35,621	59.0	426,916	706.8
2015	613,834	41,512	67.6	350,036	570.2	22,031	35.9	413,579	673.8
2016	622,123	35,766	57.5	391,427	629.2	25,619	41.2	452,812	727.8
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

# Beginning in 2017, ETF Expenses include the change in the actuarial accrued liability related to loss adjustment expense for the Duty Disability Insurance program

### Administrative Expenses per Participant





**ACTUARIAL SECTION**

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October 5, 2020

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, 2019**

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 2021 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, 2019. 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 Comprehensive Annual 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

## ACTUARIAL SECTION

Employee Trust Funds Board  
October 5, 2020  
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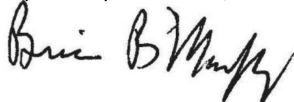
Assets are valued on a statutory market related basis that recognizes assumed return fully each year and spreads each year's gain or loss above or below assumed return over a closed five-year period.

Actuarial 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, 2019 valuations were based upon assumptions that were recommended in connection with a study of experience covering the 2015-2017 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, an additional assessment of risk including stress testing for the Wisconsin Retirement System was conducted in the fall of 2019 in conjunction with the State of Wisconsin Investment Board. 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 CAFR contains some, but not all, of the information in the valuation reports.

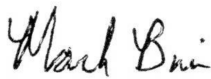
**Based upon the results of the December 31, 2019 valuations, we are pleased to report to the Board that the Wisconsin Retirement System is meeting its basic financial objective and continues to operate in accordance with actuarial principles of level percent of payroll financing.**

Brian B. Murphy, Mark Buis, and James D. Anderson 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,



Brian B. Murphy, FSA, EA, FCA, MAAA, PhD



Mark Buis, FSA, EA, FCA, MAAA



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BBM/MB/JDA:dj





## ACTUARIAL SECTION

**WISCONSIN RETIREMENT SYSTEM**  
**ACTUARIAL STATEMENT OF ASSETS AND LIABILITIES**  
(In Millions)

	December 31, 2019	December 31, 2018	Increase (Decrease)
<b>Assets and Employer Obligations</b>			
Net Assets			
Cash, Investments & Receivables			
Less: Payables & Suspense Items			
Core Division	\$ 97,876.0	\$ 94,304.5	\$ 3,571.5
Variable Division	8,648.5	7,106.0	1,542.5
Totals	106,524.5	101,410.5	5,114.0
Obligations of Employers			
Unfunded Accrued Liability	8.0	11.8	(3.8)
<b>Total Assets</b>	<b>\$ 106,532.5</b>	<b>\$ 101,422.3</b>	<b>\$ 5,110.2</b>
Reserves and Surplus			
Reserves			
Actuarial Present Value of Projected Benefits Payable to Terminated Vested Participants and Active Members:			
Member Normal Contributions	\$ 19,272.0	\$ 18,254.5	\$ 1,017.5
Member Additional Contributions	215.0	201.1	13.9
Employer Contributions	23,387.6	22,723.8	663.8
Total Contributions	42,874.6	41,179.4	1,695.2
Actuarial Present Value of Projected Benefits Payable to Current Retirees and Beneficiaries:			
Core Annuities	58,157.0	56,629.3	1,527.7
Variable Annuities	3,728.6	4,207.6	(479.0)
Total Annuities	61,885.6	60,836.9	1,048.7
Total Reserves	104,760.2	102,016.3	2,743.9
Surplus			
Core Annuity Reserve Surplus	981.4	(135.5)	1,116.9
Variable Annuity Reserve Surplus	790.9	(458.5)	1,249.4
Total Surplus	1,772.3	(594.0)	2,366.3
<b>Total Reserves and Surplus</b>	<b>\$ 106,532.5</b>	<b>\$ 101,422.3</b>	<b>\$ 5,110.2</b>



## 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 & Elected <sup>^</sup>	
Age	Service	Age	Service	Age	Service
65	Any*	54	Any*	62	Any*
57	30	53	25	57	30

\*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>^</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:

Multiplier for Service Rendered			Group
Before 2000	Between 2000 and 2011	After 2011	
2.165%	2.0%	1.6%	Executive group and elected officials
2.165%	2.0%	2.0%	Protective occupation participants covered by Social Security
2.665%	2.5%	2.5%	Protective occupation participants not covered by Social Security
1.765%	1.6%	1.6%	All other participants

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.

**Early Retirement:** Any participant who has attained age 55 and any protective occupation participant who has attained age 50 may apply for an early 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.

**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 early 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.



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**Death In Service:** (a) 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. (b) 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 any 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 at 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 one-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 7.0%.

For determining plan liabilities, the **Discount Rate** is 5.0% for retired participants, 5.0% for active and inactive participants following retirement, and 7.0% 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 7.0% pre-retirement assumptions. Thus, it can be said that 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 to be 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 2.5%.





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The assumed **Real Rate of Return** over wage inflation is defined to be the portion of total investment return that is more than the assumed total wage growth rate. Considering other economic assumptions, the 7.0% pre-retirement investment return rate translates to an assumed real rate of return over wage inflation of 4.0%. The assumed real rate of return over price inflation is 4.5% considering an inflation assumption of 2.5%.

**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.

<b>% Merit and Longevity Increase Next Year</b>						
<b>Service</b>	<b>General</b>	<b>University Teachers</b>	<b>Public School Teachers</b>	<b>Protective Occupation With SS</b>	<b>Protective Occupation Without SS</b>	<b>Executive/Elected</b>
1	3.5%	3.0%	5.6%	4.8%	5.5%	2.5%
2	3.5%	3.0%	5.6%	4.8%	5.5%	2.5%
3	3.1%	2.9%	5.2%	4.1%	4.7%	2.0%
4	2.8%	2.8%	4.7%	3.5%	3.8%	1.6%
5	2.5%	2.7%	4.3%	2.8%	3.0%	1.1%
10	1.5%	2.2%	2.6%	1.1%	0.9%	0.2%
15	1.1%	1.7%	1.4%	0.8%	0.5%	0.2%
20	0.9%	1.2%	0.6%	0.7%	0.4%	0.2%
25	0.6%	0.9%	0.3%	0.6%	0.3%	0.2%
30	0.4%	0.7%	0.2%	0.5%	0.2%	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 Wisconsin 2018 Mortality Table. The rates in this table were based on actual WRS experience adjusted for future mortality improvements using the MP-2018 fully generated improvement scale (multiplied by 60%). This mortality assumption was adopted by the Board in connection with the 2015-2017 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)**

Wisconsin 2018 Mortality Table With 5% Interest

Sample Attained Ages	Present Value of \$1 Monthly for Life*		Future Life Expectancy (years)*		Mortality Rates*	
	Males	Females	Males	Females	Males	Females
40	\$ 212.96	\$ 217.63	45.3	48.2	0.099%	0.061%
45	\$ 204.65	\$ 210.28	40.3	43.1	0.124%	0.092%
50	\$ 194.18	\$ 201.13	35.3	38.1	0.162%	0.134%
55	\$ 181.54	\$ 189.97	30.4	33.2	0.376%	0.241%
60	\$ 167.29	\$ 176.71	25.8	28.4	0.544%	0.352%
65	\$ 150.31	\$ 160.75	21.3	23.7	0.832%	0.526%
70	\$ 131.09	\$ 141.76	17.1	19.2	1.350%	0.874%
75	\$ 109.61	\$ 120.10	13.2	15.0	2.266%	1.581%
80	\$ 86.87	\$ 96.74	9.7	11.1	4.160%	2.976%
85	\$ 65.44	\$ 73.54	6.8	7.9	7.780%	5.984%

\*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.

The values shown above are for non-disabled participants in 2019. For disabled participants, the following table is used:

**Single Life Retirement Values (Disabled Participants)**

Wisconsin 2018 Mortality Table With 5% Interest

Sample Attained Ages	Present Value of \$1 Monthly for Life		Future Life Expectancy (years)		Mortality Rates*	
	Males	Females	Males	Females	Males	Females
40	\$ 199.56	\$ 207.83	37.7	41.8	0.143%	0.102%
45	\$ 187.92	\$ 198.13	32.8	36.7	0.235%	0.153%
50	\$ 174.47	\$ 186.35	28.0	31.8	0.466%	0.271%
55	\$ 158.72	\$ 172.25	23.4	27.0	0.629%	0.398%
60	\$ 140.24	\$ 155.41	19.1	22.4	1.096%	0.613%
65	\$ 119.88	\$ 135.75	15.0	18.0	1.778%	1.052%
70	\$ 97.88	\$ 113.76	11.3	13.9	3.068%	1.900%
75	\$ 75.72	\$ 90.28	8.2	10.2	5.815%	3.588%
80	\$ 56.09	\$ 67.67	5.7	7.1	10.710%	7.338%
85	\$ 40.07	\$ 49.49	3.9	4.9	17.284%	12.667%

\*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.



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**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	Mortality Rates*	
	Males	Females
20	0.000135	0.000081
25	0.000165	0.000090
30	0.000213	0.000123
35	0.000376	0.000222
40	0.000495	0.000307
45	0.000619	0.000461
50	0.000807	0.000670
55	0.001881	0.001208
60	0.002719	0.001759
65	0.004162	0.002634
70	0.006748	0.004373
75	0.011331	0.007914
80	0.020799	0.014897

*\*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.*

**Rates of Retirement for Those Eligible to Retire—Normal Retirement Pattern**

% Retiring Next Year

Age	General		Public School		University		Protective*		Exec.& Elected
	Male	Female	Male	Female	Male	Female	With S.S.	W/O S.S.	
50	0%	0%	0%	0%	0%	0%	6%	2%	0%
51	0	0	0	0	0	0	8	4	0
52	0	0	0	0	0	0	10	4	0
53	0	0	0	0	0	0	25	17	0
54	0	0	0	0	0	0	20	23	0
55	0	0	0	0	0	0	20	25	0
56	0	0	0	0	0	0	20	25	0
57	19	17	33	27	12	15	20	25	8
58	19	17	29	27	12	15	20	33	8
59	19	17	24	27	12	10	20	33	8
60	19	17	25	27	12	12	20	20	20
61	19	17	25	27	12	16	20	20	12
62	26	27	35	37	12	15	30	40	12
63	29	27	32	30	12	20	30	40	12
64	28	27	29	28	12	20	30	40	15
65	30	30	29	37	15	20	40	40	15
66	35	35	35	39	20	24	40	100	15
67	30	30	33	33	20	20	40	100	15
68	19	25	27	30	18	17	40	100	15
69	19	25	23	28	16	17	40	100	20
70	19	25	25	38	20	18	100	100	20
71	19	20	20	20	18	18	100	100	20
72	19	20	15	20	16	18	100	100	20
73	19	20	15	20	16	15	100	100	20
74	19	20	15	20	16	15	100	100	20
75	100	100	100	100	100	100	100	100	100

\*Includes reduced retirements for protective with 20+ years of service.



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**Rates of Retirement for Those Eligible to Retire—Early Retirement Pattern**

% Retiring Next Year

Age	General		Public School		University		Exec.& Elected
	Male	Female	Male	Female	Male	Female	
55	8.0%	7.0%	13.0%	12.0%	3.0%	5.0%	3.0%
56	8.0	7.0	13.0	12.0	3.0	5.0	3.0
57	4.8	5.5	12.0	12.0	3.0	5.0	3.0
58	5.7	6.5	13.0	12.0	3.0	5.0	3.0
59	6.8	7.0	14.0	13.0	4.0	5.0	3.0
60	8.5	9.5	14.0	17.0	5.5	9.0	5.0
61	9.0	9.5	15.0	17.0	5.5	9.0	5.0
62	17.0	16.0	21.0	23.0	7.4	12.0	2.0
63	18.0	18.0	21.0	23.0	7.4	12.0	2.0
64	17.0	18.0	21.0	23.0	10.0	15.0	2.0

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	Protective		Public Schools		University		Exec. & Elected	Other	
	With S.S.	W/O S.S.	Male	Female	Male	Female		Male	Female
0	16.0%	4.0%	18.5%	15.0%	16.0%	14.5%	14.0%	17.0%	20.0%
1	9.5	3.5	11.0	11.0	15.0	14.0	13.0	12.3	15.0
2	6.0	1.5	8.0	8.0	13.0	13.0	12.0	9.3	11.5
3	5.0	1.3	6.5	6.0	11.0	10.0	10.0	7.6	10.0
4	4.5	1.2	5.5	5.5	9.0	9.5	10.0	7.5	9.5
5	4.0	1.1	4.0	5.0	8.0	9.0	5.0	5.8	7.8
6	3.8	1.0	3.5	4.0	7.5	7.0	5.0	4.8	7.0
7	3.5	0.9	3.2	3.7	6.0	6.0	5.0	4.7	6.0
8	3.0	0.8	3.0	3.3	5.5	5.0	5.0	4.1	5.7
9	2.5	0.7	2.8	3.0	5.0	4.0	5.0	4.0	5.3
25 10 & Over	2.5	0.7	2.5	2.5	5.0	4.0	5.0	4.0	5.0
30	2.3	0.7	2.2	2.4	4.7	4.0	5.0	3.7	4.7
35	2.0	0.7	1.8	1.9	4.2	4.0	5.0	3.0	3.9
40	1.6	0.6	1.5	1.5	3.4	3.7	5.0	2.4	3.2
45	1.4	0.6	1.4	1.3	2.7	3.2	4.7	2.0	2.7
50	1.2	0.5	1.3	1.2	2.2	2.7	4.2	1.7	2.2
55	1.2	0.5	1.3	1.2	2.0	2.5	4.0	1.6	2.0
60	1.2	0.5	1.3	1.2	2.0	2.5	4.0	1.6	2.0

**Disability Rates**  
**% of Active Participants Becoming Disabled**

Age	Protective		Public Schools		University		Exec. & Elected		General	
	With S.S.	W/O S.S.	Male	Female	Male	Female	Male	Female	Male	Female
20	0.01%	0.03%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
25	0.01	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
30	0.01	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.02
35	0.01	0.03	0.00	0.01	0.00	0.02	0.01	0.01	0.01	0.02
40	0.02	0.04	0.01	0.01	0.00	0.02	0.01	0.01	0.02	0.03
45	0.02	0.08	0.02	0.04	0.01	0.02	0.01	0.01	0.04	0.04
50	0.04	0.46	0.06	0.07	0.01	0.04	0.02	0.02	0.09	0.06
55	0.61	0.34	0.12	0.10	0.04	0.06	0.09	0.09	0.17	0.12
60	1.02	0.10	0.19	0.15	0.06	0.09	0.11	0.11	0.30	0.16



ACTUARIAL SECTION

**Summary of Member Valuation Data**

**General Participants and Teachers**

Valuation Date	Participating Employers	Active Participants	Annual Payroll (In Millions)	Annual Average Pay (\$)	% Increase In Average Pay
12/31/2010	1,444	239,959	\$11,195.4	\$46,655	1.1%
12/31/2011	1,450	232,518	10,947.0	47,080	0.9
12/31/2012	1,450	231,765	11,041.0	47,639	1.2
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

**Executive Group and Elected Officials**

Valuation Date	Participating Employers	Active Participants	Annual Payroll (In Millions)	Annual Average Pay (\$)	% Increase In Average Pay
12/31/2010	254	1,418	\$101.2	\$71,394	0.9%
12/31/2011	257	1,393	98.6	70,802	(0.8)
12/31/2012	249	1,408	104.1	73,968	4.5
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

**Protective with Social Security**

Valuation Date	Participating Employers	Active Participants	Annual Payroll (In Millions)	Annual Average Pay (\$)	% Increase In Average Pay
12/31/2010	504	20,019	\$1,124.7	\$56,184	1.0%
12/31/2011	503	19,610	1,119.0	57,065	1.6
12/31/2012	501	19,353	1,105.1	57,104	0.1
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

**Protective Without 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>
12/31/2010	58	2,754	\$188.8	\$68,559	(0.9)%
12/31/2011	57	2,711	189.5	69,898	2.0
12/31/2012	57	2,727	193.5	70,949	1.5
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

**All Participants**

<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>
12/31/2010	1,474	264,150	\$12,610.1	\$47,738	1.0%
12/31/2011	1,480	256,232	12,354.1	48,215	1.0
12/31/2012	1,478	255,253	12,443.7	48,750	1.1
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





ACTUARIAL SECTION

**Summary of Accrued and Unfunded Accrued Liabilities**

(In Millions)

Valuation Year	Aggregate Accrued Liabilities	Valuation Assets	Assets as a % of Accrued Liabilities	Unfunded Accrued Liabilities	Annual Active Member Payroll	UAL as a % of Annual Active Member Payroll
2010	\$80,758.8	\$80,626.9	99.8%	\$131.9	\$12,744.0	1.0%
2011	79,039.3	78,940.0	99.9	99.3	12,855.6	0.8
2012	78,682.7	78,613.0	99.9	69.7	12,627.6	0.6
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

**Funding Metrics**

(In Millions)

Valuation Date Dec 31	Actuarial Value of Assets	F-I-L Accrued Liability For				Percent Funded for			
		Annuitants and Beneficiaries	Member Contribs.	Active & Inactive Members	Total	Annuitants and Beneficiaries	Participant Contribs.	Active & Inactive Members	Total
2010	\$80,626.9	\$41,139.0	\$16,253.6	\$23,366.2	\$80,758.8	100.0%	100.0%	99.4%	99.8%
2011	78,940.0	43,609.4	14,434.4	20,995.5	79,039.3	100.0	100.0	99.5	99.9
2012	78,613.0	44,055.5	14,401.1	20,226.1	78,682.7	100.0	100.0	99.7	99.9
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

## WRS Contribution Rates

### » Notes to Contribution Rates Schedule

1. Prior to June 28, 2011, the member contribution rate was set by Wis Stats. 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.

2. 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
2010	4.8%	0.2%	5.0%	5.0%	1.2%	11.2%
2011	5.1%	0.1%	5.2%	5.0%	1.5%	11.7%
2011*	5.8%	0.1%	5.9%	5.8%	0.0%	11.7%
2012	5.9%	0.1%	6.0%	5.9%	0.0%	11.9%
2013	6.65%	0.1%	6.75%	6.65%	0.0%	13.4%
2014	7.0%	0.0%	7.0%	7.0%	0.0%	14.0%
2015	6.8%	0.0%	6.8%	6.8%	0.0%	13.6%
2016	6.6%	0.0%	6.6%	6.6%	0.0%	13.2%
2017	6.8%	0.1%	6.9%	6.8%	0.0%	13.7%
2018	6.7%	0.0%	6.7%	6.7%	0.0%	13.4%
2019	6.6%	0.0%	6.6%	6.6%	0.0%	13.1%

#### Executive Group and Elected Officials

	Current Cost	Prior Cost	Employer Total	Employee	BAC	Total
2010	8.7%	0.0%	8.7%	3.2%	0.0%	11.9%
2011	9.4%	0.0%	9.4%	3.9%	0.0%	13.3%
2011*	6.65%	0.0%	6.65%	6.65%	0.0%	13.3%
2012	7.05%	0.0%	7.05%	7.05%	0.0%	14.1%
2013	7.0%	0.0%	7.0%	7.0%	0.0%	14.0%
2014	7.75%	0.0%	7.75%	7.75%	0.0%	15.5%
2015	7.7%	0.0%	7.7%	7.7%	0.0%	15.4%
2016	6.6%	0.0%	6.6%	6.6%	0.0%	13.2%
2017	6.8%	0.1%	6.9%	6.8%	0.0%	13.7%
2018	6.7%	0.0%	6.7%	6.7%	0.0%	13.4%
2019	6.6%	0.0%	6.6%	6.6%	0.0%	13.1%

\* 2011 WI Act 10 adjusted employee and employer contribution rates effective June 28, 2011



ACTUARIAL SECTION

**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>
2010	8.6%	0.0%	3.9%	12.5%	5.5%	0.0%	18.0%
2011	8.9%	0.0%	4.0%	12.9%	5.8%	0.0%	18.7%
2011*	8.9%	0.0%	4.0%	12.9%	5.8%	0.0%	18.7%
2012	9.0%	0.0%	4.0%	13.0%	5.9%	0.0%	18.9%
2013	9.75%	0.0%	4.1%	13.85%	6.65%	0.0%	20.5%
2014	10.1%	0.0%	0.7%	10.8%	7.0%	0.0%	17.8%
2015	9.5%	0.0%	0.6%	10.1%	6.8%	0.0%	16.9%
2016	9.4%	0.0%	0.3%	9.7%	6.6%	0.0%	16.3%
2017	10.6%	0.1%	0.6%	11.3%	6.8%	0.0%	18.1%
2018	10.7%	0.0%	0.7%	11.4%	6.7%	0.0%	18.1%
2019	10.6%	0.0%	0.5%	11.1%	6.6%	0.0%	17.6%

**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>
2010	11.3%	0.3%	3.9%	15.5%	3.9%	0.0%	19.4%
2011	12.2%	0.3%	4.0%	16.5%	4.8%	0.0%	21.3%
2011*	11.2%	0.3%	4.0%	15.5%	5.8%	0.0%	21.3%
2012	11.3%	0.3%	4.0%	15.6%	5.9%	0.0%	21.5%
2013	12.35%	0.3%	4.1%	16.75%	6.65%	0.0%	23.4%
2014	13.7%	0.3%	0.7%	14.7%	7.0%	0.0%	21.7%
2015	13.1%	0.3%	0.6%	14.0%	6.8%	0.0%	20.8%
2016	13.2%	0.2%	0.3%	13.7%	6.6%	0.0%	20.3%
2017	14.9%	0.1%	0.6%	15.6%	6.8%	0.0%	22.4%
2018	14.9%	0.1%	0.7%	15.7%	6.7%	0.0%	22.4%
2019	15.0%	0.0%	0.5%	15.5%	6.6%	0.0%	22.0%

\* 2011 WI Act 10 adjusted employee and employer contribution rates effective June 28, 2011

## Analysis of Actuarial Experience WRS

### Gains and Losses in Accrued Liabilities During 2019 Resulting Differences Between Assumed Experience & Actual Experience

(In Millions)

Type of Activity	General	Executive & 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.	\$0.9	\$(0.7)	\$(20.8)	\$(4.5)	\$(25.1)
<b>Early Retirement</b>					
If fewer members choose early retirement than assumed, there is a loss. If more early retirements, there is a gain.	(12.5)	(0.1)	(1.2)	0.5	(13.3)
<b>Death with Benefit</b>					
If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(3.7)	0.0	(0.1)	0.1	(3.7)
<b>Disability Retirement</b>					
If disability claims are less than assumed, there is a gain. If more claims, a loss.	(3.3)	(0.1)	(2.6)	0.5	(5.5)
<b>Other Separations</b>					
If more liabilities are released by separations than assumed, there is a gain. If smaller releases, a loss.	(13.5)	1.3	(0.9)	(0.4)	(13.5)
<b>Salary Increases</b>					
If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	(32.6)	(1.8)	(26.6)	(4.5)	(65.5)
<b>Investment Return</b>					
If there is greater investment income than assumed, there is a gain. If less income, a loss.	117.7	(1.3)	34.6	9.2	160.2
<b>Other Activity</b>	(111.4)	(4.5)	(4.9)	(1.3)	(122.1)
<b>Total Gain (Loss)</b>	<u>\$(58.4)</u>	<u>\$(7.2)</u>	<u>\$(22.5)</u>	<u>\$(0.4)</u>	<u>\$(88.5)</u>
<b>% of accrued liability</b>	(0.2)%	(4.0)%	(0.5)%	0.0%	(0.2)%



ACTUARIAL SECTION

**Changes in Number of Annuities - WRS**

Year	Annuity Type	Beginning	Additions	Deletions	Ending
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>
2012	Retirement	160,044	9,322	3,400	165,966
	Disability	6,201	183	(89)	6,473
	Beneficiary	1,208	67	59	1,216
	<b>Total</b>	<b>167,453</b>	<b>9,572</b>	<b>3,370</b>	<b>173,655</b>
2011	Retirement	148,380	15,096	3,432	160,044
	Disability	6,194	196	189	6,201
	Beneficiary	1,201	60	53	1,208
	<b>Total</b>	<b>155,775</b>	<b>15,352</b>	<b>3,674</b>	<b>167,453</b>
2010	Retirement	143,261	8,330	3,211	148,380
	Disability	6,224	159	189	6,194
	Beneficiary	1,186	69	54	1,201
	<b>Total</b>	<b>150,671</b>	<b>8,558</b>	<b>3,454</b>	<b>155,775</b>

Beginning in 2018, disability count includes Long-Term Disability Insurance annuities.

# INVESTMENT SECTION

## Investments

Prepared by the State of Wisconsin Investment Board

### » MESSAGE FROM THE EXECUTIVE DIRECTOR/CHIEF INVESTMENT OFFICER

An annual report is just that – an account of what happened over the course of a specific 365 day period. In 2019, both funds in the Wisconsin Retirement System (WRS), the Core Trust Fund (CTF) and the Variable Trust Fund (VTF), earned very strong gross returns of 19.9 percent and 28.6 percent, respectively. However, the true value that the State of Wisconsin Investment Board (SWIB) provides to WRS participants is measured over time periods stretching much further than one year. With the COVID-19 pandemic roiling markets in 2020, SWIB's prudent and sophisticated investment strategy that focuses on the long term is particularly important to the WRS's lasting success.

Executing that strategy requires top talent and technology, and SWIB continued to make investments in both in 2019. Talent and technology give SWIB the ability to manage a significant portion of the WRS's assets internally, and that allows SWIB to meet the challenges of the current market environment and beyond.

The Department of Employee Trust Funds Board has set an actuarial assumed rate of return of 7.0 percent for the WRS to remain fully funded. The CTF, the larger of the two WRS trust funds, ended 2019 with a 10-year gross return of 8.6 percent. The VTF, an optional stock-only fund, had a 10-year gross return of 11.2 percent. Both funds exceeded their performance benchmarks over the last one-, five-, and ten-year periods.

From 2009 through 2018, net investment income earned by SWIB represented 79 percent of total funding for the WRS. The U.S. public pension long-term average is only 63 percent, which indicates that in Wisconsin, public employers and employees bear less of the burden than those in most other states. When looking over the 20-year period ending in 2019, SWIB's active management and diversified investments generated \$37.2 billion for the CTF *above* what SWIB would have earned by simply investing in a low-cost passive portfolio consisting of 60 percent global equities and 40 percent U.S. investment grade bonds (assuming no contributions or withdrawals). *That* is the SWIB edge which provides so much long-term value to WRS participants.

The WRS is one of the few fully funded public pension plans in the U.S. It is the ninth largest public pension fund in America and the 25<sup>th</sup> largest public or private pension fund in the world. More than 648,000 current and former state and local government employees and their families count on the WRS for a portion of their retirement security. Keeping the WRS strong and stable is a responsibility we at SWIB are honored to have.

This 2019 Retirement Funds Annual Report proudly looks back at last year, but our vision at SWIB remains fixed on a horizon that is many years into the future.

A handwritten signature in black ink, appearing to read "David Villa".

David Villa  
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 us. SWIB is responsible for managing the assets of the WRS, the State Investment Fund (SIF), and other separately managed funds.

The largest portion of the assets managed by SWIB is the trust funds of the WRS. The assets managed by SWIB include the SIF, a pool of invested cash balances of the WRS and various state and local government units. The remaining assets are separately managed funds invested by SWIB including the Injured Patients and Families Compensation Fund, University of Wisconsin System Trust Funds, State Life Insurance Fund, and State Historical Society of Wisconsin Endowment Fund.

SWIB was created under section 15.76 of the state statutes and its duties to invest these funds are provided in Chapter 25 of the statutes. 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 (Board). The Board appoints the executive director and sets the overall policy 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.

SWIB publishes an annual report and a detailed schedule of investments as of the end of the calendar year. More information about SWIB and the funds it manages can be found at [www.swib.state.wi.us](http://www.swib.state.wi.us).

### » WISCONSIN RETIREMENT SYSTEM

The WRS is a hybrid defined benefit plan. It contains elements of both a 401(k), or defined contribution plan, and a defined benefit plan. More than 648,000 current and former state and local government employees and their families rely on the WRS for some of their retirement security.

The Core Fund, the larger of the two WRS funds, with diversified holdings in stocks, bonds, private equity, real estate, hedge funds, and other investments, had a gross return of 19.9 percent in 2019, which is ahead of its benchmark of 19.2 percent. SWIB’s outperformance is due to the investment strategy that has been implemented. That investment strategy is designed to weather a variety of economic environments to ensure the WRS is able to meet its obligations today and in the future. It also allows SWIB to meet one of its standards of responsibility that is outlined in state statutes. That statute, s. 25.15 (2) (b), says SWIB should “diversify investments in order to minimize the risk of large losses, unless under the circumstances it is clearly prudent not to do so.” Because of SWIB’s sound investment performance over the long-term, the Core Fund, which had a net asset value of approximately \$107.8 billion as of December 31, 2019, also outperformed its three-, five-, and ten-year benchmarks.

The objective of the Core Fund investment strategy is to earn returns comparable to the actuarial objective of 7.0 percent over the long-term, but with less risk than the typical 60 percent equities/40 percent fixed income portfolio. The 20-year annualized gross return for the Core Fund, as of December 31, 2019, was 6.4 percent, which is ahead of its benchmark of 6.0 percent.

The Variable Fund, an optional, U.S. and international stock fund, ended the year with a gross return of 28.6 percent, compared to its benchmark of 28.3 percent. The Variable Fund's net asset value was approximately \$8.7 billion as of December 31, 2019. As of December 31, 2019, the Variable Fund's 20-year annualized gross return was 5.9 percent, outperforming the benchmark return of 5.6 percent.

The investment strategy for the Variable Fund is to achieve returns equal to or above that of similar stock portfolios over a market cycle.

#### » BASIS OF PRESENTATION OF INVESTMENT DATA

The investments of the WRS are reported at fair value as prescribed by GASB and per section 25.17(14) of the Wisconsin Statutes. Unrealized gains and losses are included as investment income.

The fair value of the WRS assets 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.

Cash and cash equivalents consist of short-term investments which are used to meet the liquidity requirements of the WRS. Cash and cash equivalents held by the WRS can include cash on deposit, foreign currencies, cash posted as collateral to counterparties, repurchase agreements, certificates of deposit, 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. Cash and cash equivalents are reported at fair value or cost, which approximates fair value.

Exchange-traded securities such as equities, preferred stock, certain derivatives, and exchange-traded funds are generally valued at the official closing price (usually the last trade price) or the last bid price on the security's primary exchange.

Privately-held debt 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 bond market

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 value as reported by the general partner. The capital account balance as stated in the most recent available quarterly reporting period is adjusted for subsequent cash flows to derive fair value. The financial statements of the limited partnerships and real estate pooled funds are audited by independent auditors annually.

Certain portfolios make investments in privately-held companies alongside a strategic partner, such as a limited partnership fund manager. These co-investments are valued by SWIB's strategic partner, who often employ independent valuation agents and use a variety of methodologies such as 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.



## INVESTMENT SECTION

Real estate properties wholly owned by SWIB 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 involve investments across multiple asset classes. The "Multi Asset" category on SWIB's financial statements 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 net asset value 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 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 fair value 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 since no independent quotation is available to estimate fair value for these securities.

### » INVESTMENT POLICY

As part of SWIB's fiduciary responsibilities, SWIB is required by section 25.15(2)(b) of the Wisconsin Statutes "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 Executive Director/Chief Investment Officer and investment managers within the organization to make prudent investments within the investment guidelines, pursuant to sections 15.02(4) and 25.15(2) of the Wisconsin Statutes 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. Oversight includes analysis of risk and return of the portfolios, asset classes, and Core and Variable Funds. The IC is responsible for proposing to the Board 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 instruments and derivatives strategies. 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 financial leverage is approved by the Board 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 &amp; Asset Class Returns<sup>1</sup></b>			
<b>As of December 31, 2019</b>			
	<b>1-Year Return %</b>	<b>5-Year Return %</b>	<b>10-Year Return %</b>
Core Fund	19.9	7.8	8.5
<i>Benchmark</i>	19.2	7.5	8.1
Public Equities	28.0	9.0	9.8
<i>Aggregated Equities Benchmark</i>	27.6	8.9	9.6
Fixed Income	10.5	3.6	4.3
<i>Aggregated Fixed Income Benchmark</i>	10.1	3.4	3.9
Inflation Sensitive	8.4	2.0	3.3
<i>Aggregated Inflation Sensitive Benchmark</i>	8.4	1.9	2.9
Real Estate	6.0	9.5	10.7
<i>100% ODCE Benchmark (since 1/1/13)</i>	4.6	8.3	9.5
Private Equity/Debt	10.0	12.1	13.0
<i>Aggregated Private Equity Benchmark</i>	8.8	9.9	11.2
Multi Asset	20.6	5.9	6.7
<i>Aggregated Multi Asset Benchmark</i>	20.9	7.6	7.5

<sup>1</sup>Returns are gross of management fees and costs, with the exception of Real Estate, Private Equity/Debt and Multi-Asset, which are net of external manager fees.

<b>Time-Weighted Variable Fund &amp; Asset Class Returns<sup>1</sup></b>			
<b>As of December 31, 2019</b>			
	<b>1-Year Return %</b>	<b>5-Year Return %</b>	<b>10-Year Return %</b>
Variable Fund	28.6	9.8	11.2
<i>Benchmark</i>	28.3	9.7	11.0
Public Equities	28.6	9.8	11.2
<i>Aggregated Equities Benchmark</i>	28.3	9.7	11.0

<sup>1</sup>Returns are gross of management fees and costs.

## INVESTMENT SECTION

## » ASSET ALLOCATION

SWIB's Board 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, the Executive Director/Chief Investment Officer, and the Managing Director of Asset and Risk Allocation. 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 low-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 10% financial leverage for the Core Fund subject to an allowable range of up to 15%.

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, 2019.

**Retirement Funds**  
**Asset Allocation Targets and Expected Returns<sup>2</sup>**  
 As of December 31, 2019

<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>1</sup></b>
Global Equities	49.0 %	8.0 %	5.1 %
Fixed Income	24.5	4.9	2.1
Inflation Sensitive Assets	15.5	4.0	1.2
Private Equity/Debt	9.0	10.6	7.6
Real Estate	8.0	6.3	3.5
Multi-Asset	4.0	6.9	4.0
<b>Total Core Fund</b>	<b>110.0 %</b>	<b>7.5 %</b>	<b>4.6 %</b>
<b>Variable Fund Asset Class</b>			
U.S. Equities	70.0 %	7.5 %	4.6 %
International Equities	30.0	8.2	5.3
<b>Total Variable Fund</b>	<b>100.0 %</b>	<b>7.8 %</b>	<b>4.9 %</b>

<sup>1</sup>New England Pension Consultants Long Term US CPI (Inflation) Forecast: 2.75%

<sup>2</sup>Asset Allocations are managed within established ranges, target percentages may differ from actual monthly allocations.

For purposes of determining asset allocation targets, investments may be categorized differently than they are within the financial statements. For example, SWIB's 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, 2019</b>				
(In Thousands)				
<b>Issuer</b>	<b>Shares</b>	<b>Fair Value</b>	<b>% of Total Equities</b>	
MICROSOFT CORP	8,288,224	\$ 1,307,053	1.98 %	
APPLE INC	4,404,054	1,293,250	1.96	
ALPHABET INC	714,254	955,766	1.45	
AMAZON.COM INC	455,644	841,957	1.28	
FACEBOOK INC	2,428,571	498,464	0.76	
VISA INC	2,295,216	431,271	0.65	
WELLS FARGO & CO	7,262,911	390,745	0.59	
JPMORGAN CHASE & CO	2,791,899	389,191	0.59	
NESTLE SA	3,580,966	387,477	0.59	
ROYAL DUTCH SHELL PLC	11,785,240	385,701	0.58	

<b>WRS Largest Fixed Income Holdings</b>					
<b>As of December 31, 2019</b>					
(In Thousands)					
<b>Security<sup>1</sup></b>	<b>Coupon Rate</b>	<b>Maturity Date</b>	<b>Fair Value</b>	<b>% of Total Fixed Income</b>	
US TREAS-CPI INFLAT	0.375	7/15/2025	\$ 749,310	2.06 %	
US TREAS-CPI INFLAT	0.625	4/15/2023	726,206	1.99	
US TREAS-CPI INFLAT	0.375	7/15/2023	680,434	1.87	
US TREAS-CPI INFLAT	0.125	4/15/2021	641,682	1.76	
US TREAS-CPI INFLAT	0.125	4/15/2022	628,025	1.72	
US TREAS-CPI INFLAT	0.250	1/15/2025	618,406	1.70	
US TREAS-CPI INFLAT	0.625	1/15/2024	618,221	1.70	
US TREAS-CPI INFLAT	0.125	7/15/2022	613,732	1.68	
US TREAS-CPI INFLAT	0.750	7/15/2028	599,375	1.65	
US TREAS-CPI INFLAT	0.125	1/15/2023	578,092	1.59	

**<sup>1</sup>US 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**

<b>Schedule of WRS Investment Income and Fees</b>		
<b>For the Calendar Year Ended December 31, 2019</b>		
(In Thousands)		
	<u>Core Fund</u>	<u>Variable Fund</u>
Investment Income (Loss)	\$ 18,605,966	\$ 1,965,060
Investment Expense	(833,117)	(6,702)
Securities Lending Fees	(8,320)	(582)
<b>Net Investment Income (Loss)</b>	<u><u>\$ 17,764,529</u></u>	<u><u>\$ 1,957,776</u></u>

Investment Expense includes most transaction-related expenses, external management fees, and administrative-related expenses. Transaction-related expenses are incurred as part of executing a trade or investment strategy and include interest and dividend expenses and securities lending fees. Transaction-related expenses often represent payments to counterparties, rather than vendors, and are not invoiced to SWIB. SWIB does not include transaction-related expenses in its Total Cost of Management Plan as they are already captured in gross performance. Two types of transaction-related expenses, commission and trade execution fees, are excluded from Investment Expense and included in "Net Increase (Decrease) in the Net Position" on the Statement of Changes in Fiduciary Net Position as these fees are not readily separable from the acquisition or disposal of an investment. External management fees include base and performance fees paid to external managers. Administrative-related expenses include operating expenses, legal fees, custodial bank fees, research and data services, and investment consulting fees.

**» INVESTMENT SUMMARY**

<b>Core Fund Summary of Investments by Asset Type<sup>1</sup></b>		
<b>As of December 31, 2019</b>		
(In Thousands)		
<u>Asset Type</u>	<u>Fair Value</u>	<u>% of Total Investments</u>
Equities	\$ 57,580,752	49.3 %
Fixed Income	36,427,253	31.2
Limited Partnerships	14,770,360	12.6
Multi Asset	5,353,262	4.6
Real Estate	1,374,070	1.2
Preferred Securities	455,693	0.3
Convertible Securities	4,067	0.0
To Be Announced Securities	913,743	0.8
Foreign Currency Contracts	7,942	0.0
Option Contracts	(6,029)	0.0
Futures Contracts	(31,261)	0.0
Swaps	24,037	0.0
<b>Total Core Fund Investments</b>	<u><u>\$ 116,873,889</u></u>	<u><u>100.0 %</u></u>

<sup>1</sup>Does not include investment-related liabilities





INVESTMENT SECTION

**Variable Fund Summary of Investments by Asset Type**

**As of December 31, 2019**

(In Thousands)

Asset Type	Fair Value	% of Total Investments
Equities	\$ 8,430,538	99.7 %
Preferred Securities	26,038	0.3
Foreign Currency Contracts	374	0.0
Futures Contracts	1,349	0.0
<b>Total Variable Fund Investments</b>	<b>\$ 8,458,299</b>	<b>100.0 %</b>

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**CONTRIBUTIONS PAID  
AND EMPLOYER  
UNFUNDED LIABILITY  
BALANCES**



## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
<b>State Agencies</b>					
ADMINISTRATION, DEPT OF	\$ 89,435,955	\$ 6,960,062	\$ 5,858,097	\$ 12,818,159	\$ 0
AGRIC TRADE CONS PROT, DEPT OF	36,972,472	2,828,413	2,421,706	5,250,119	0
BD FOR PEOPLE WITH DEVELOP DIS	521,289	39,879	34,144	74,023	0
BOARD AGING & LONG TERM CARE	1,873,126	143,295	122,689	265,984	0
BRD OF COMMSRS OF PUBLIC LANDS	781,814	59,809	51,209	111,018	0
CHILDREN & FAMILIES, DEPT OF	46,610,345	3,577,706	3,062,696	6,640,402	0
CORRECTIONS, DEPT. OF	523,178,537	53,965,873	34,282,864	88,248,736	0
COURTS - STATE	76,341,046	5,845,636	5,004,824	10,850,460	0
DISTRICT ATTORNEYS	34,680,006	2,659,097	2,269,423	4,928,520	0
EDUCATIONAL COMMUNICATIONS BD	2,900,524	221,890	189,985	411,874	0
ELECTIONS COMMISSION	1,961,853	150,106	128,522	278,628	0
EMPLOYEE TRUST FUNDS, DEPT OF	17,971,462	1,374,816	1,177,132	2,551,948	0
EMPLOYMENT RELATIONS COMM	484,216	37,042	31,716	68,759	0
ETHICS COMMISSION	537,832	41,144	35,228	76,372	0
EXECUTIVE OFFICE	2,184,406	167,364	143,294	310,658	0
FINANCIAL INSTITUTIONS, DEPT	9,239,969	706,859	605,217	1,312,076	0
HEALTH SERVICES, DEPT OF	340,143,296	28,451,709	22,278,782	50,730,490	0
HIGHER EDUCATIONAL AIDS BOARD	464,909	35,565	30,452	66,017	0
HISTORICAL SOCIETY - STATE	9,293,043	710,925	608,702	1,319,626	0
INSURANCE COMMISSIONR'S OFFICE	8,844,486	676,604	579,313	1,255,917	0
INVESTMENT BOARD	31,625,800	2,424,548	2,071,487	4,496,036	0
JUDICIAL COMMISSION	132,190	10,113	8,659	18,771	0
JUSTICE, DEPT OF	51,618,463	4,397,870	3,381,271	7,779,141	0
KICKAPOO RESERVE MANGMT BD	268,086	20,509	17,560	38,068	0
LABOR & INDUSTRY REVIEW COMM	1,321,944	101,129	86,587	187,716	0
LEGIS ASSEMBLY - CHIEF CLERK	16,708,623	1,293,804	1,094,171	2,387,976	0
LEGISLATIVE AUDIT BUREAU	5,507,066	421,290	360,713	782,003	0
LEGISLATIVE COUNCIL STAFF	2,160,445	165,274	141,509	306,783	0
LEGISLATIVE FISCAL BUREAU	2,376,552	181,806	155,665	337,470	0
LEGISLATIVE REFERENCE BUREAU	3,390,840	259,467	222,032	481,499	0
LEGISLATIVE TECH SERV BUREAU	2,741,781	209,746	179,587	389,333	0
LEGISLATURE - SENATE	11,788,537	901,968	772,222	1,674,189	0
LIEUTENANT GOVERNOR'S OFFICE	287,095	21,963	18,805	40,767	0
LOWER WIS. STATE RIVERWAY BD.	131,422	10,054	8,608	18,662	0
MILITARY AFFAIRS, DEPT OF	25,320,977	2,224,376	1,660,320	3,884,696	0
NATURAL RESOURCES, DEPT OF	155,075,783	13,160,109	10,157,427	23,317,536	0
PUBLIC DEFENDER'S OFFICE	37,968,838	2,904,642	2,486,966	5,391,608	0
PUBLIC INSTRUCTION, DEPT OF	37,162,427	2,842,928	2,434,136	5,277,065	0
PUBLIC SERVICE COMMISSION	9,704,551	742,398	635,649	1,378,046	0
REVENUE, DEPT OF	68,355,176	5,263,218	4,477,185	9,740,402	0
SAFETY & PROFESS SVCES, DEPT	13,332,544	1,019,305	872,743	1,892,047	0
SECRETARY OF STATE'S OFFICE	153,710	11,759	10,068	21,827	0
STATE FAIR PARK BOARD	4,673,588	364,826	306,340	671,166	0
TOURISM, DEPARTMENT OF	1,691,304	129,384	110,781	240,165	0
TRANSPORTATION, DEPT OF	193,166,986	17,249,872	11,596,953	28,846,825	0
TREASURER'S OFFICE - STATE	78,001	5,967	5,109	11,076	0

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
VETERANS AFFAIRS, DEPT OF	\$ 53,711,057	\$ 4,129,369	\$ 3,520,261	\$ 7,649,630	\$ 0
WIS TECH COLLEGE SYS BOARD	4,111,998	314,568	269,336	583,904	0
WISCONSIN ECON DEVELOP CORP	8,561,631	560,787	560,787	1,121,574	0
WORKFORCE DEVELOPMENT, DEPT OF	79,324,688	6,069,515	5,196,728	11,266,243	0
Total State Agencies (50)	\$ 2,026,872,690	\$ 176,066,354	\$ 131,735,658	\$ 307,802,012	\$ 0
UNIVERSITY OF WISCONSIN SYSTEM	\$ 2,141,382,732	\$ 164,529,181	\$ 140,266,072	\$ 304,795,253	\$ 0
<b>Public Authorities</b>					
FOX RIVER NAVIGATION SYS AUTH	\$ 236,525	\$ 18,094	\$ 15,492	\$ 33,587	\$ 0
HEALTH & EDUC FACILITIES AUTH	360,788	47,263	—	47,263	0
HOUSING & ECON DEVELOP AUTH	11,819,641	904,202	774,187	1,678,389	0
UW HOSPITAL AUTHORITY	621,411,539	47,777,465	40,551,015	88,328,480	0
WISCRAFT INC - ENT FOR BLIND	2,910,092	240,082	190,611	430,694	579,000
Total Public Authorities (5)	\$ 636,738,585	\$ 48,987,107	\$ 41,531,306	\$ 90,518,412	\$ 579,000
Total State of Wisconsin (56)	\$ 4,804,994,007	\$ 389,582,642	\$ 313,533,036	\$ 703,115,677	\$ 579,000
<b>Cities</b>					
ABBOTSFORD, CITY OF	\$ 573,547	\$ 37,567	\$ 37,567	\$ 75,135	\$ 0
ADAMS, CITY OF	651,740	52,550	42,689	95,239	72,448
ALGOMA, CITY OF	3,461,545	239,801	226,731	466,532	0
ALMA, CITY OF	299,398	19,611	19,611	39,221	49,255
ALTOONA, CITY OF	2,565,579	212,291	168,046	380,337	0
AMERY, CITY OF	1,361,513	109,903	89,179	199,082	0
ANTIGO, CITY OF	4,517,218	432,748	295,878	728,626	0
APPLETON, CITY OF	43,662,657	3,976,395	2,859,895	6,836,290	0
ARCADIA, CITY OF	1,574,272	121,949	94,595	216,544	0
ASHLAND, CITY OF	5,627,784	623,170	312,099	935,269	0
AUGUSTA, CITY OF	599,327	45,631	35,648	81,279	0
BARABOO, CITY OF	6,403,603	613,461	319,528	932,989	0
BARRON, CITY OF	1,765,638	133,302	116,764	250,066	0
BAYFIELD, CITY OF	671,933	51,352	44,012	95,363	0
BEAVER DAM, CITY OF	7,745,342	764,617	507,219	1,271,835	2,537,971
BELOIT, CITY OF	23,173,688	2,357,430	1,518,072	3,875,501	0
BERLIN, CITY OF	2,446,273	192,524	160,231	352,755	0
BLACK RIVER FALLS, CITY OF	2,789,420	209,152	182,706	391,859	0
BLAIR, CITY OF	443,070	38,466	29,021	67,487	0
BLOOMER, CITY OF	419,555	58,542	13,915	72,457	0
BOSCOBEL, CITY OF	1,614,222	122,414	105,732	228,145	0
BRILLION, CITY OF	1,067,054	93,676	69,892	163,568	0
BRODHEAD, CITY OF	1,531,299	121,074	98,690	219,763	0
BROOKFIELD, CITY OF	25,943,567	2,520,490	1,699,365	4,219,855	0
BUFFALO CITY, CITY OF	67,209	4,402	4,402	8,804	0
BURLINGTON, CITY OF	4,627,531	405,380	301,779	707,159	0
CEDARBURG, CITY OF	6,724,172	518,266	440,434	958,700	0
CHETEK, CITY OF	230,807	36,156	3,704	39,860	0
CHILTON, CITY OF	1,326,376	115,339	86,877	202,217	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
CHIPPEWA FALLS, CITY OF	\$ 7,053,670	\$ 866,094	\$ 332,141	\$ 1,198,235	\$ 0
CLINTONVILLE, CITY OF	2,861,290	219,977	187,414	407,391	0
COLBY, CITY OF	445,325	29,169	29,169	58,338	0
COLUMBUS, CITY OF	2,522,764	194,871	156,815	351,686	0
CORNELL, CITY OF	585,076	44,988	38,322	83,311	0
CRANDON, CITY OF	703,880	58,148	42,427	100,575	0
CUBA CITY, CITY OF	730,410	56,159	47,842	104,001	0
CUDAHY, CITY OF	8,717,736	880,617	571,011	1,451,628	0
CUMBERLAND, CITY OF	1,066,486	86,431	69,854	156,285	0
DARLINGTON, CITY OF	1,038,762	89,907	59,291	149,198	0
DE PERE, CITY OF	10,457,330	1,016,095	684,956	1,701,052	0
DELAFIELD, CITY OF	2,951,569	250,576	193,328	443,904	0
DELAVAN, CITY OF	3,603,460	337,785	196,708	534,493	0
DODGEVILLE, CITY OF	1,670,185	134,663	109,397	244,060	0
DURAND, CITY OF	661,402	52,255	43,322	95,577	0
EAGLE RIVER, CITY OF	1,768,537	132,131	115,839	247,970	0
EAU CLAIRE, CITY OF	36,041,730	3,367,185	2,360,734	5,727,919	0
EDGERTON, CITY OF	1,776,012	142,353	116,329	258,681	0
ELKHORN, CITY OF	3,794,822	298,713	248,561	547,274	0
ELROY, CITY OF	732,506	54,243	47,980	102,223	0
EVANSVILLE, CITY OF	2,572,718	198,076	166,822	364,898	0
FENNIMORE, CITY OF	1,249,017	94,401	81,811	176,211	0
FITCHBURG, CITY OF	12,253,047	1,047,055	802,575	1,849,630	0
FOND DU LAC, CITY OF	23,067,146	2,479,996	1,382,420	3,862,416	0
FORT ATKINSON, CITY OF	5,082,878	416,633	331,688	748,322	0
FOUNTAIN CITY, CITY OF	212,693	14,015	13,848	27,863	0
FOX LAKE, CITY OF	480,686	35,226	31,485	66,711	0
FRANKLIN, CITY OF	13,827,280	1,380,928	905,753	2,286,681	0
GALESVILLE, CITY OF	543,786	44,029	35,251	79,280	0
GILLETT, CITY OF	521,817	42,866	34,179	77,045	0
GLENDALE, CITY OF	5,454,442	595,375	357,236	952,611	0
GLENWOOD, CITY OF	102,557	10,994	6,718	17,712	0
GREEN BAY, CITY OF	64,342,088	6,352,021	4,214,409	10,566,431	0
GREEN LAKE, CITY OF	686,890	67,420	31,287	98,707	0
GREENFIELD, CITY OF	17,266,613	1,605,445	1,130,965	2,736,409	0
GREENWOOD, CITY OF	512,428	45,317	27,393	72,710	0
HARTFORD, CITY OF	7,819,199	611,403	512,485	1,123,888	0
HAYWARD, CITY OF	834,420	70,657	54,654	125,311	0
HILLSBORO, CITY OF	576,173	42,661	37,739	80,401	0
HORICON, CITY OF	1,392,314	111,373	91,197	202,570	0
HUDSON, CITY OF	6,377,558	585,585	347,683	933,268	0
HURLEY, CITY OF	986,974	80,339	64,547	144,886	0
INDEPENDENCE, CITY OF	469,141	37,913	30,729	68,642	12,703
JANESVILLE, CITY OF	33,669,491	3,246,720	2,206,703	5,453,423	0
JEFFERSON, CITY OF	4,253,538	324,876	278,353	603,229	0
JUNEAU, CITY OF	1,140,199	92,788	66,341	159,129	0
KAUKAUNA, CITY OF	11,899,616	991,980	779,424	1,771,404	0
KENOSHA, CITY OF	57,954,582	5,783,073	3,764,837	9,547,910	0

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
KEWAUNEE, CITY OF	\$ 1,167,150	\$ 101,168	\$ 68,152	\$ 169,321	\$ 0
KIEL, CITY OF	1,952,034	150,641	127,858	278,499	0
LA CROSSE, CITY OF	35,174,534	3,589,104	2,017,197	5,606,301	0
LADYSMITH, CITY OF	1,727,219	132,774	112,015	244,789	0
LAKE GENEVA, CITY OF	5,349,499	544,290	246,965	791,255	0
LAKE MILLS, CITY OF	3,283,123	247,313	215,045	462,358	0
LANCASTER, CITY OF	1,506,307	116,129	98,354	214,482	0
LODI, CITY OF	1,434,492	105,879	93,959	199,838	0
LOYAL, CITY OF	460,759	38,284	30,180	68,464	12,069
MADISON, CITY OF	217,654,942	19,509,090	14,258,479	33,767,569	0
MANAWA, CITY OF	539,367	41,794	35,321	77,116	94,634
MANITOWOC, CITY OF	23,480,447	2,090,515	1,538,958	3,629,474	0
MARINETTE, CITY OF	6,064,360	707,276	263,708	970,984	0
MARION, CITY OF	230,581	24,718	15,103	39,821	0
MARKESAN, CITY OF	534,082	44,249	34,982	79,232	0
MARSHFIELD, CITY OF	12,162,122	1,180,178	797,512	1,977,691	0
MAUSTON, CITY OF	1,769,954	140,827	115,932	256,759	0
MAYVILLE, CITY OF	1,776,614	139,128	116,369	255,497	0
MEDFORD, CITY OF	2,298,780	175,436	150,227	325,664	0
MELLEN, CITY OF	339,607	25,807	22,244	48,051	0
MENASHA, CITY OF	9,706,308	1,007,484	635,773	1,643,257	0
MENOMONIE, CITY OF	7,927,568	958,159	381,438	1,339,597	0
MEQUON, CITY OF	8,445,498	734,785	553,179	1,287,964	0
MERRILL, CITY OF	7,254,325	699,915	475,159	1,175,074	0
MIDDLETON, CITY OF	10,759,820	886,340	704,768	1,591,108	0
MILTON, CITY OF	2,254,485	179,700	147,911	327,610	0
MINERAL POINT, CITY OF	910,366	74,268	59,803	134,070	1,072
MONDOVI, CITY OF	832,496	65,135	54,528	119,663	0
MONONA, CITY OF	4,906,456	428,560	318,201	746,761	0
MONROE, CITY OF	4,946,957	399,431	324,026	723,457	0
MONTELLO, CITY OF	352,569	24,268	21,918	46,186	49,577
MONTREAL, CITY OF	174,418	11,424	11,424	22,849	0
MOSINEE, CITY OF	1,235,268	102,435	80,910	183,345	0
MUSKEGO, CITY OF	7,706,785	657,862	504,795	1,162,656	0
NEENAH, CITY OF	14,580,270	1,407,054	955,008	2,362,062	0
NEILLSVILLE, CITY OF	1,083,069	85,860	69,304	155,164	0
NEKOOSA, CITY OF	1,520,684	139,095	80,812	219,907	0
NEW BERLIN, CITY OF	17,420,634	1,585,722	1,141,234	2,726,956	0
NEW HOLSTEIN, CITY OF	1,942,981	145,357	127,585	272,942	0
NEW LISBON, CITY OF	822,932	63,413	53,903	117,315	0
NEW LONDON, CITY OF	4,793,267	369,817	313,959	683,776	0
NEW RICHMOND, CITY OF	5,060,486	396,901	331,462	728,363	26,518
NIAGARA, CITY OF	695,065	68,588	31,436	100,024	0
OAK CREEK, CITY OF	20,287,753	1,851,384	1,329,728	3,181,113	0
OCONOMOWOC, CITY OF	8,422,509	628,065	551,673	1,179,739	0
OCONTO FALLS, CITY OF	1,527,192	118,465	100,031	218,497	0
OCONTO, CITY OF	2,416,313	231,149	156,443	387,592	0
OMRO, CITY OF	1,260,268	101,497	82,547	184,044	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
ONALASKA, CITY OF	\$ 6,046,016	\$ 644,709	\$ 301,493	\$ 946,202	\$ 0
OSHKOSH, CITY OF	37,849,361	3,583,183	2,480,090	6,063,273	0
OSSEO, CITY OF	633,907	50,760	41,521	92,281	0
OWEN, CITY OF	315,077	20,975	20,637	41,613	0
PARK FALLS, CITY OF	1,299,301	102,462	85,104	187,566	0
PESHTIGO, CITY OF	339,553	48,069	10,572	58,641	0
PHILLIPS, CITY OF	840,194	73,022	48,663	121,685	0
PITTSVILLE, CITY OF	76,991	8,253	5,043	13,296	0
PLATTEVILLE, CITY OF	4,122,588	320,828	270,120	590,949	0
PLYMOUTH, CITY OF	4,463,536	342,814	292,361	635,174	0
PORT WASHINGTON, CITY OF	5,212,340	420,198	341,409	761,607	0
PORTAGE, CITY OF	4,707,028	417,752	308,311	726,063	0
PRAIRIE DU CHIEN, CITY OF	2,018,458	194,836	102,109	296,945	0
PRESCOTT, CITY OF	1,462,618	121,784	95,802	217,586	0
PRINCETON, CITY OF	595,730	49,040	39,020	88,060	0
RACINE, CITY OF	54,654,395	5,441,965	3,579,827	9,021,792	0
REEDSBURG, CITY OF	5,953,511	450,571	389,955	840,526	0
RHINELANDER, CITY OF	5,769,084	561,009	377,845	938,854	0
RICE LAKE, CITY OF	5,653,906	508,410	370,961	879,371	0
RICHLAND CENTER, CITY OF	2,904,910	219,866	190,271	410,136	0
RIPON, CITY OF	3,195,504	269,441	187,351	456,792	0
RIVER FALLS, CITY OF	8,452,294	629,457	553,809	1,183,266	0
SCHOFIELD, CITY OF	515,801	37,033	33,785	70,818	0
SEYMOUR, CITY OF	1,196,466	101,787	69,146	170,932	0
SHAWANO, CITY OF	3,618,060	308,895	236,983	545,878	0
SHEBOYGAN FALLS, CITY OF	2,805,976	260,706	152,082	412,788	0
SHEBOYGAN, CITY OF	27,955,583	2,568,659	1,831,091	4,399,750	0
SHELL LAKE, CITY OF	582,754	49,782	37,489	87,271	0
SHULLSBURG, CITY OF	413,973	29,700	27,115	56,815	0
SOUTH MILWAUKEE, CITY OF	10,117,264	1,142,889	662,681	1,805,569	0
SPARTA, CITY OF	3,493,340	299,372	214,668	514,039	0
SPOONER, CITY OF	1,573,012	132,126	90,837	222,963	0
ST CROIX FALLS, CITY OF	945,169	91,760	46,457	138,218	0
ST FRANCIS, CITY OF	4,822,550	556,572	316,428	873,000	0
STANLEY, CITY OF	726,004	72,088	35,139	107,227	0
STEVENS POINT, CITY OF	14,660,335	1,475,183	960,252	2,435,435	0
STOUGHTON, CITY OF	7,034,407	534,372	460,754	995,126	0
STURGEON BAY, CITY OF	6,184,035	567,080	405,055	972,135	0
SUN PRAIRIE, CITY OF	12,787,029	1,059,639	839,440	1,899,078	0
SUPERIOR, CITY OF	17,524,968	1,767,323	1,148,225	2,915,548	0
THORP, CITY OF	516,678	40,371	33,842	74,213	0
TOMAH, CITY OF	5,139,382	457,079	280,378	737,458	0
TOMAHAWK, CITY OF	1,697,415	135,456	111,181	246,636	0
TWO RIVERS, CITY OF	8,387,805	859,096	549,401	1,408,497	1,596,802
VERONA, CITY OF	6,251,620	524,268	408,083	932,351	0
VIROQUA, CITY OF	1,903,070	152,149	123,562	275,711	1,115,594
WASHBURN, CITY OF	960,745	74,366	62,928	137,294	0
WATERLOO, CITY OF	1,760,504	137,185	115,313	252,498	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
WATERTOWN, CITY OF	\$ 10,276,267	\$ 926,234	\$ 673,095	\$ 1,599,329	\$ 0
WAUKESHA, CITY OF	40,833,125	3,920,468	2,674,869	6,595,337	0
WAUPACA, CITY OF	3,272,899	289,325	182,071	471,396	0
WAUPUN, CITY OF	4,300,437	373,624	250,991	624,615	0
WAUSAU, CITY OF	20,482,268	1,982,479	1,342,252	3,324,731	0
WAUTOMA, CITY OF	821,389	67,380	54,284	121,664	0
WAUWATOSA, CITY OF	31,471,798	3,183,397	2,062,366	5,245,763	0
WEST ALLIS, CITY OF	38,442,217	3,771,835	2,517,968	6,289,803	0
WEST BEND, CITY OF	14,443,039	1,453,994	946,365	2,400,359	0
WESTBY, CITY OF	941,639	70,444	61,678	132,122	0
WEYAUWEGA, CITY OF	747,939	62,535	48,990	111,525	0
WHITEHALL, CITY OF	985,933	73,858	64,578	138,436	0
WHITEWATER, CITY OF	5,512,701	440,913	361,082	801,995	0
WISCONSIN DELLS, CITY OF	3,518,300	280,429	230,449	510,878	0
WISCONSIN RAPIDS, CITY OF	15,564,918	1,365,911	1,019,502	2,385,414	0
<b>Total Cities (188)</b>	<b>\$ 1,478,525,414</b>	<b>\$ 137,653,086</b>	<b>\$ 95,116,902</b>	<b>\$ 232,769,988</b>	<b>\$ 5,568,643</b>

**Villages**

ADELL, VILLAGE OF	\$ 122,467	\$ 8,022	\$ 8,022	\$ 16,043	\$ 0
ALBANY, VILLAGE OF	429,505	34,399	28,133	62,532	0
ALLOUEZ, VILLAGE OF	1,958,914	128,309	128,309	256,618	0
AMHERST, VILLAGE OF	275,226	18,188	17,867	36,055	0
ARENA, VILLAGE OF	242,828	21,206	15,905	37,112	0
ARGYLE, VILLAGE OF	275,129	24,154	14,273	38,428	0
ARLINGTON, VILLAGE OF	131,209	8,594	8,594	17,188	0
ASHWAUBENON, VILLAGE OF	8,849,837	841,690	579,665	1,421,355	0
ATHENS, VILLAGE OF	209,557	16,199	13,726	29,925	0
AVOCA, VILLAGE OF	129,933	8,511	8,511	17,021	0
BALDWIN, VILLAGE OF	1,562,898	141,702	94,991	236,693	0
BALSAM LAKE, VILLAGE OF	314,243	21,762	20,583	42,345	0
BANGOR, VILLAGE OF	840,087	60,840	55,026	115,866	0
BAY CITY, VILLAGE OF	138,907	9,182	9,015	18,197	0
BAYSIDE, VILLAGE OF	2,847,732	222,963	185,871	408,834	0
BELGIUM, VILLAGE OF	326,704	21,399	21,399	42,798	0
BELLEVILLE, VILLAGE OF	1,038,050	82,794	67,992	150,786	0
BELLEVUE, VILLAGE OF (BROWN)	2,013,604	157,416	131,911	289,327	0
BELMONT, VILLAGE OF	407,373	30,852	26,683	57,535	0
BENTON, VILLAGE OF	278,157	19,998	18,219	38,217	0
BIG BEND, VILLAGE OF	425,652	37,997	27,880	65,877	0
BIRCHWOOD, VILLAGE OF	200,059	15,547	13,087	28,634	0
BIRNAMWOOD, VILLAGE OF	82,402	5,397	5,397	10,795	0
BIRON, VILLAGE OF	255,299	16,722	16,722	33,444	0
BLACK CREEK, VILLAGE OF	374,529	26,917	24,532	51,449	0
BLACK EARTH, VILLAGE OF	325,174	21,299	21,299	42,598	0
BLANCHARDVILLE, VILLAGE OF	200,355	13,817	13,123	26,940	0
BLOOMFIELD, VILLAGE OF	1,079,285	97,832	67,034	164,865	0
BLUE MOUNDS, VILLAGE OF	226,000	17,417	14,803	32,220	0
BLUE RIVER, VILLAGE OF	119,421	7,822	7,822	15,644	0



## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
BOYCEVILLE, VILLAGE OF	\$ 383,274	\$ 29,299	\$ 25,105	\$ 54,404	\$ 0
BOYD, VILLAGE OF	223,107	16,028	14,614	30,641	0
BRANDON, VILLAGE OF	292,394	20,573	19,152	39,725	0
BRISTOL, VILLAGE OF	881,731	61,257	57,753	119,010	321,347
BROOKLYN, VILLAGE OF	402,464	31,117	26,361	57,478	0
BROWN DEER, VILLAGE OF	5,214,755	447,409	341,565	788,974	0
BROWNSVILLE, VILLAGE OF	166,628	10,914	10,914	21,828	0
BROWNTOWN, VILLAGE OF	72,435	4,871	4,618	9,489	0
BRUCE, VILLAGE OF	170,378	11,160	11,160	22,320	0
BUTLER, VILLAGE OF	1,026,912	93,256	67,263	160,519	0
CADOTT, VILLAGE OF	571,233	50,455	30,366	80,820	0
CALEDONIA, VILLAGE OF (RACINE)	10,302,301	1,000,553	674,801	1,675,355	0
CAMBRIA, VILLAGE OF	222,441	14,570	14,570	29,140	0
CAMBRIDGE, VILLAGE OF	408,436	26,753	26,752	53,505	0
CAMERON, VILLAGE OF	514,435	40,341	33,695	74,036	0
CAMP DOUGLAS, VILLAGE OF	139,360	9,128	9,128	18,256	0
CAMPBELLSPORT, VILLAGE OF	476,219	33,274	31,192	64,466	0
CASCADE, VILLAGE OF	121,613	7,966	7,966	15,931	0
CASCO, VILLAGE OF	61,975	4,059	4,059	8,119	0
CASHTON, VILLAGE OF	519,954	36,765	34,025	70,790	0
CEDAR GROVE, VILLAGE OF	359,152	23,543	23,506	47,049	0
CENTURIA, VILLAGE OF	351,673	37,684	24,912	62,596	110,905
CHASEBURG, VILLAGE OF	72,579	4,754	4,754	9,508	0
CHENEQUA, VILLAGE OF	885,187	86,495	57,980	144,475	0
CLAYTON, VILLAGE OF	165,720	12,325	10,855	23,179	0
CLEAR LAKE, VILLAGE OF	499,965	40,135	32,748	72,882	0
CLEVELAND, VILLAGE OF	432,112	33,428	28,303	61,731	0
CLINTON, VILLAGE OF	779,388	67,600	51,037	118,638	0
CLYMAN, VILLAGE OF	114,708	7,513	7,513	15,027	1,793
COBB, VILLAGE OF	89,076	5,834	5,835	11,669	0
COCHRANE, VILLAGE OF	116,447	7,627	7,627	15,255	0
COLEMAN, VILLAGE OF	243,436	17,886	15,945	33,831	0
COLFAX, VILLAGE OF	567,047	40,774	37,142	77,915	0
COLOMA, VILLAGE OF	219,172	15,423	14,356	29,778	0
COMBINED LOCKS, VILLAGE OF	462,885	30,319	30,319	60,638	0
COON VALLEY, VILLAGE OF	223,191	16,350	14,619	30,969	0
COTTAGE GROVE, VILLAGE OF	1,839,443	152,347	120,483	272,831	0
CRIVITZ, VILLAGE OF	296,854	22,674	19,444	42,118	0
CROSS PLAINS, VILLAGE OF	1,291,060	99,628	84,565	184,192	42,843
DALLAS, VILLAGE OF	34,482	2,264	2,253	4,517	0
DANE, VILLAGE OF	167,079	10,944	10,943	21,887	0
DARIEN, VILLAGE OF	400,971	26,264	26,264	52,527	0
DE SOTO, VILLAGE OF	70,469	4,616	4,616	9,231	0
DEERFIELD, VILLAGE OF	496,432	32,516	32,516	65,033	0
DEFORREST, VILLAGE OF	3,528,495	297,113	231,117	528,229	0
DENMARK, VILLAGE OF	365,321	23,929	23,929	47,857	0
DICKEYVILLE, VILLAGE OF	263,610	19,783	17,267	37,050	0
DOUSMAN, VILLAGE OF	223,410	14,633	14,633	29,267	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
DRESSER, VILLAGE OF	\$ 269,513	\$ 23,782	\$ 13,908	\$ 37,690	\$ 0
EAGLE, VILLAGE OF	374,823	37,491	24,551	62,042	0
EAST TROY, VILLAGE OF	1,539,651	129,547	100,848	230,395	0
EASTMAN, VILLAGE OF	75,360	4,936	4,936	9,872	0
EDGAR, VILLAGE OF	316,069	22,630	20,703	43,333	0
EGG HARBOR, VILLAGE OF	467,268	30,606	30,606	61,212	0
ELEVA, VILLAGE OF	187,673	14,385	12,293	26,678	0
ELK MOUND, VILLAGE OF	372,439	27,414	24,395	51,808	0
ELKHART LAKE, VILLAGE OF	657,783	52,638	43,085	95,723	0
ELLSWORTH, VILLAGE OF	988,407	95,525	48,422	143,947	0
ELM GROVE, VILLAGE OF	3,364,714	290,738	220,389	511,128	0
ELMWOOD, VILLAGE OF	162,397	11,336	10,635	21,971	0
EPHRAIM, VILLAGE OF	330,639	21,657	21,657	43,314	0
ETTRICK, VILLAGE OF	166,377	10,898	10,898	21,795	0
FAIRWATER, VILLAGE OF	56,979	3,732	3,732	7,464	0
FALL CREEK, VILLAGE OF	376,581	29,598	24,666	54,264	0
FALL RIVER, VILLAGE OF	290,005	22,692	18,995	41,687	0
FERRYVILLE, VILLAGE OF	20,210	1,324	1,324	2,648	0
FONTANA ON GNVA LK, VILLAGE OF	1,427,983	114,736	93,533	208,269	0
FOX CROSSING, VILLAGE OF	5,506,676	470,133	360,687	830,819	0
FOX POINT, VILLAGE OF	3,403,013	287,179	222,898	510,077	0
FREDERIC, VILLAGE OF	335,848	23,392	21,998	45,390	0
FREMONT, VILLAGE OF	148,801	12,158	9,747	21,906	0
FRIENDSHIP, VILLAGE OF	208,390	13,649	13,650	27,299	0
GAYS MILLS, VILLAGE OF	152,563	9,993	9,993	19,986	0
GENOA CITY, VILLAGE OF	1,058,590	86,670	69,338	156,007	0
GERMANTOWN, VILLAGE OF	8,083,394	682,537	529,463	1,211,999	0
GILMAN, VILLAGE OF	191,787	14,810	12,561	27,371	0
GRAFTON, VILLAGE OF	5,193,145	428,272	340,151	768,423	0
GRANTON, VILLAGE OF	153,483	10,053	10,053	20,106	0
GRANTSBURG, VILLAGE OF	551,309	44,220	35,253	79,474	0
GREENDALE, VILLAGE OF	7,159,638	785,939	468,956	1,254,896	0
GRESHAM, VILLAGE OF	449,619	29,700	29,526	59,226	0
HALES CORNERS, VILLAGE OF	2,670,711	243,148	176,280	419,428	0
HAMMOND, VILLAGE OF	559,894	43,729	36,673	80,402	0
HARRISON, VILLAGE OF	1,051,708	68,887	68,887	137,774	0
HARTLAND, VILLAGE OF	3,593,499	308,238	235,375	543,613	0
HAUGEN, VILLAGE OF	35,567	2,348	2,311	4,659	0
HAWKINS, VILLAGE OF	89,661	5,873	5,873	11,746	2,485
HAZEL GREEN, VILLAGE OF	490,690	36,604	32,140	68,745	0
HIGHLAND, VILLAGE OF	215,609	15,918	14,122	30,041	0
HILBERT, VILLAGE OF	279,802	18,327	18,327	36,654	0
HIXTON, VILLAGE OF	49,598	3,249	3,249	6,497	9,913
HOBART, VILLAGE OF	1,308,652	114,374	85,717	200,091	0
HOLLANDALE, VILLAGE OF	41,030	2,688	2,687	5,375	0
HOLMEN, VILLAGE OF	2,256,599	184,008	147,807	331,815	0
HORTONVILLE, VILLAGE OF	1,065,443	84,438	69,786	154,224	0
HOWARD, VILLAGE OF	3,138,658	218,628	204,152	422,780	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
HOWARDS GROVE, VILLAGE OF	\$ 352,215	\$ 23,070	\$ 23,070	\$ 46,140	\$ 0
HUSTISFORD, VILLAGE OF	622,335	40,763	40,763	81,526	63,892
IOLA, VILLAGE OF	534,161	43,076	34,988	78,064	0
IRON RIDGE, VILLAGE OF	145,712	11,621	9,544	21,166	0
JACKSON, VILLAGE OF	2,541,523	215,108	166,470	381,578	0
JOHNSON CREEK, VILLAGE OF	841,583	62,592	55,124	117,716	0
JUNCTION CITY, VILLAGE OF	81,735	5,367	5,341	10,707	0
KENDALL, VILLAGE OF	158,991	10,414	10,414	20,828	0
KEWASKUM, VILLAGE OF	1,268,427	108,459	83,082	191,541	0
KIMBERLY, VILLAGE OF	1,505,638	98,619	98,619	197,239	0
KOHLER, VILLAGE OF	1,131,012	97,891	74,051	171,942	0
KRONENWETTER, VILLAGE OF	1,379,694	113,996	90,370	204,366	0
LA FARGE, VILLAGE OF	412,473	28,655	27,017	55,672	0
LA VALLE, VILLAGE OF	62,764	4,111	4,111	8,222	0
LAC LA BELLE, VILLAGE OF	66,898	42,075	4,382	46,457	0
LAKE DELTON, VILLAGE OF	3,048,465	282,006	199,674	481,681	0
LAKE HALLIE, VILLAGE OF	920,161	88,387	55,900	144,286	0
LAKE NEBAGAMON, VILLAGE OF	231,287	19,394	15,130	34,525	0
LANNON, VILLAGE OF	113,848	9,549	7,457	17,006	0
LENA, VILLAGE OF	244,896	18,120	16,041	34,161	0
LINDEN, VILLAGE OF	143,731	9,900	9,415	19,315	0
LITTLE CHUTE, VILLAGE OF	4,305,854	358,916	282,033	640,949	0
LOGANVILLE, VILLAGE OF	44,023	2,884	2,883	5,767	0
LOMIRA, VILLAGE OF	573,881	45,948	37,576	83,523	0
LUCK, VILLAGE OF	551,414	41,801	36,118	77,919	22,495
LUXEMBURG, VILLAGE OF	266,753	19,508	17,472	36,981	0
MAPLE BLUFF, VILLAGE OF	1,160,915	110,623	76,040	186,663	0
MARATHON CITY, VILLAGE OF	538,798	45,107	31,435	76,541	0
MARSHALL, VILLAGE OF	1,112,082	95,270	72,841	168,111	0
MATTOON, VILLAGE OF	59,211	3,878	3,878	7,757	0
MAZOMANIE, VILLAGE OF	396,025	26,111	25,769	51,879	0
MCFARLAND, VILLAGE OF	3,570,057	306,729	233,839	540,568	0
MENOMONEE FALLS, VILLAGE OF	14,753,401	1,526,314	738,849	2,265,163	0
MILLTOWN, VILLAGE OF	354,894	27,958	23,245	51,204	0
MINONG, VILLAGE OF	267,049	21,515	17,491	39,007	0
MISHICOT, VILLAGE OF	370,686	31,509	24,280	55,789	0
MONTFORT, VILLAGE OF	154,451	10,117	10,116	20,233	0
MONTICELLO, VILLAGE OF	364,488	28,585	23,841	52,426	0
MOUNT HOREB, VILLAGE OF	3,208,578	251,097	210,162	461,259	0
MT PLEASANT, VILLAGE OF(RACINE	12,494,117	1,264,381	820,543	2,084,923	0
MUKWONAGO, VILLAGE OF	3,877,945	322,787	254,779	577,566	0
MUSCODA, VILLAGE OF	600,708	46,091	39,347	85,438	0
NECEDAH, VILLAGE OF	331,908	23,310	21,740	45,050	0
NESHKORO, VILLAGE OF	78,159	5,119	5,119	10,239	99,301
NEW GLARUS, VILLAGE OF	1,019,547	77,518	66,780	144,298	0
NEWBURG, VILLAGE OF	181,440	13,424	11,514	24,938	0
NICHOLS, VILLAGE OF	46,828	3,067	3,067	6,135	0
NORTH FOND DU LAC, VILLAGE OF	2,402,170	204,866	156,988	361,854	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
NORTH FREEDOM, VILLAGE OF	\$ 107,655	\$ 7,051	\$ 7,051	\$ 14,103	\$ 0
NORTH HUDSON, VILLAGE OF	577,824	47,869	37,848	85,717	0
OCONOMOWOC LAKE, VILLAGE OF	645,311	64,900	42,250	107,149	0
ONTARIO, VILLAGE OF	163,576	11,934	10,714	22,649	0
OOSTBURG, VILLAGE OF	427,603	28,008	28,008	56,016	0
OREGON, VILLAGE OF	3,511,412	285,133	229,997	515,130	0
ORFORDVILLE, VILLAGE OF	478,823	36,857	31,333	68,189	0
OSCEOLA, VILLAGE OF	940,612	85,156	51,694	136,850	0
OXFORD, VILLAGE OF (MARQUETTE)	127,775	8,972	8,369	17,342	0
PADDOCK LAKE, VILLAGE OF	403,943	26,458	26,458	52,916	0
PARDEEVILLE, VILLAGE OF	538,517	35,273	35,273	70,546	0
PEPIN, VILLAGE OF	260,119	32,484	3,772	36,256	0
PEWAUKEE, VILLAGE OF	3,104,615	266,526	203,352	469,878	0
PLAIN, VILLAGE OF	229,948	15,062	15,062	30,123	0
PLAINFIELD, VILLAGE OF	196,696	14,792	12,884	27,675	0
PLEASANT PRAIRIE, VILLAGE OF	14,618,869	1,171,217	957,536	2,128,753	0
PLOVER, VILLAGE OF	4,437,454	372,267	290,653	662,920	0
PORT EDWARDS, VILLAGE OF	713,715	53,615	46,748	100,364	0
POUND, VILLAGE OF	93,865	6,148	6,148	12,296	0
POYNETTE, VILLAGE OF	858,165	67,309	56,210	123,519	0
PRAIRIE DU SAC, VILLAGE OF	1,200,032	78,699	78,505	157,204	0
PRAIRIE FARM, VILLAGE OF	735,496	47,993	47,993	95,987	0
PULASKI, VILLAGE OF	1,097,191	91,609	71,866	163,475	0
RANDOLPH, VILLAGE OF	493,349	37,163	32,314	69,477	66,073
RANDOM LAKE, VILLAGE OF	347,704	23,895	22,644	46,538	0
RIB LAKE, VILLAGE OF	176,041	12,280	11,531	23,811	0
RIO, VILLAGE OF	317,519	25,114	20,797	45,911	0
RIVER HILLS, VILLAGE OF	1,590,649	140,767	102,211	242,978	0
ROBERTS, VILLAGE OF	653,377	57,128	38,147	95,275	0
ROCHESTER, VILLAGE OF	264,383	17,317	17,317	34,634	0
ROCK SPRINGS, VILLAGE OF	66,676	4,367	4,367	8,735	0
ROCKLAND, VILLAGE OF	126,908	8,312	8,312	16,625	0
ROSENDALE, VILLAGE OF	212,584	16,586	13,924	30,511	0
ROSHOLT, VILLAGE OF	75,136	4,922	4,921	9,843	0
ROTHSCHILD, VILLAGE OF	1,778,586	151,893	116,497	268,390	0
SALEM LAKES, VILLAGE OF	1,745,090	138,149	114,442	252,591	0
SAUK CITY, VILLAGE OF	1,039,277	68,073	68,073	136,145	0
SAUKVILLE, VILLAGE OF	1,919,040	160,984	125,698	286,682	0
SHARON, VILLAGE OF	556,254	46,409	36,435	82,844	0
SHERWOOD, VILLAGE OF	405,859	26,584	26,584	53,168	0
SHIOCTON, VILLAGE OF	288,382	21,606	18,889	40,495	0
SHOREWOOD HILLS, VILLAGE OF	1,248,019	101,168	81,745	182,914	0
SHOREWOOD, VILLAGE OF	4,897,480	405,558	320,785	726,343	0
SIREN, VILLAGE OF	407,314	33,361	26,679	60,039	0
SISTER BAY, VILLAGE OF	812,915	53,246	53,246	106,492	0
SLINGER, VILLAGE OF	2,044,105	168,135	133,889	302,023	0
SOLDIERS GROVE, VILLAGE OF	138,733	9,087	9,087	18,174	158,007
SOLO SPRINGS, VILLAGE OF	134,359	8,801	8,800	17,601	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
SOMERS, VILLAGE OF	\$ 1,902,152	\$ 163,923	\$ 121,277	\$ 285,199	\$ 0
SOMERSET, VILLAGE OF	1,156,285	95,166	75,737	170,902	0
SOUTH WAYNE, VILLAGE OF	86,360	5,656	5,657	11,313	0
SPENCER, VILLAGE OF	666,275	59,275	38,264	97,539	0
SPRING GREEN, VILLAGE OF	492,767	36,938	32,276	69,214	0
SPRING VALLEY, VILLAGE OF	325,802	23,992	21,340	45,332	0
ST NAZIANZ, VILLAGE OF	193,029	12,644	12,643	25,287	0
STAR PRAIRIE, VILLAGE OF	112,894	7,822	7,395	15,216	0
STOCKBRIDGE, VILLAGE OF	32,585	2,139	2,130	4,269	0
STODDARD, VILLAGE OF	174,424	11,425	11,425	22,850	0
STRATFORD, VILLAGE OF	543,639	41,448	35,608	77,057	0
STRUM, VILLAGE OF	320,252	25,828	20,801	46,629	12,617
SUAMICO, VILLAGE OF	1,280,921	86,493	83,900	170,394	0
SULLIVAN, VILLAGE OF	113,124	7,409	7,410	14,819	0
SUMMIT, VILLAGE OF (WAUKESHA)	1,283,918	130,811	84,097	214,908	0
SURING, VILLAGE OF	218,684	16,492	14,324	30,816	0
SUSSEX, VILLAGE OF	3,013,407	215,775	197,378	413,153	0
THIENSVILLE, VILLAGE OF	1,217,689	104,687	79,759	184,446	0
TREMPEALEAU, VILLAGE OF	779,646	58,508	51,045	109,553	0
TURTLE LAKE, VILLAGE OF	671,745	63,722	35,383	99,105	0
TWIN LAKES, VILLAGE OF	2,355,087	197,580	139,325	336,905	0
UNION CENTER, VILLAGE OF	115,080	9,280	6,334	15,614	0
UNION GROVE, VILLAGE OF	902,454	59,111	59,110	118,221	0
VALDERS, VILLAGE OF	446,236	29,229	29,228	58,457	0
WALWORTH, VILLAGE OF	914,305	78,852	59,658	138,510	0
WARRENS, VILLAGE OF	156,236	10,487	9,980	20,467	0
WATERFORD, VILLAGE OF	1,201,729	84,157	80,128	164,285	0
WAUNAKEE, VILLAGE OF	4,487,358	359,495	293,923	653,417	0
WAUSAUKEE, VILLAGE OF	159,925	10,475	10,475	20,950	0
WAUZEKA, VILLAGE OF	105,275	6,895	6,896	13,791	0
WEBSTER, VILLAGE OF	98,139	10,530	6,418	16,949	0
WEST BARABOO, VILLAGE OF	220,463	14,440	14,440	28,881	0
WEST MILWAUKEE, VILLAGE OF	2,802,765	254,061	183,581	437,643	1,050,258
WEST SALEM, VILLAGE OF	1,013,552	84,711	66,388	151,098	0
WESTFIELD, VILLAGE OF	311,741	23,538	20,419	43,957	0
WESTON, VILLAGE OF (MARATHON)	2,218,703	143,333	147,317	290,650	0
WHITE LAKE, VILLAGE OF	132,750	8,695	8,695	17,390	0
WHITEFISH BAY, VILLAGE OF	4,506,695	380,416	293,502	673,918	0
WHITELAW, VILLAGE OF	96,689	6,333	6,333	12,666	0
WHITING, VILLAGE OF	259,429	16,993	16,993	33,985	0
WILD ROSE, VILLAGE OF	275,961	24,395	15,878	40,273	0
WILLIAMS BAY, VILLAGE OF	1,358,753	113,264	90,886	204,151	60,714
WILSON, VILLAGE OF	47,187	3,091	3,091	6,181	4,842
WIND POINT, VILLAGE OF	250,261	16,158	17,648	33,806	0
WINDSOR, VILLAGE OF	1,054,689	69,082	69,082	138,164	0
WINNECONNE, VILLAGE OF	895,201	70,958	58,636	129,593	0
WITHEE, VILLAGE OF	102,911	6,741	6,741	13,481	0
WONEWOC, VILLAGE OF	322,225	26,172	18,244	44,416	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
WOODVILLE, VILLAGE OF	\$ 592,166	\$ 48,326	\$ 38,787	\$ 87,113	\$ 0
WRIGHTSTOWN, VILLAGE OF	863,665	67,070	56,570	123,640	0
WYOCENA, VILLAGE OF	141,751	9,285	9,285	18,569	0
YORKVILLE, VILLAGE OF	111,737	7,319	7,319	14,638	0
Total Villages (274)	\$ 292,508,794	\$ 24,702,392	\$ 18,819,090	\$ 43,521,482	\$ 2,027,486
<b>Special Districts</b>					
ADRC OF THE NORTHWOODS	\$ 403,063	\$ 26,928	\$ 25,873	\$ 52,801	\$ 0
ALBANY HOUSING AUTHORITY	42,599	2,790	2,790	5,580	0
ALGOMA CITY HOUSING AUTH	27,193	1,781	1,781	3,562	0
ALGOMA SANITARY DIST	507,458	33,239	33,239	66,477	0
ALLENTON SANITARY DIST	13,398	878	878	1,755	0
ANTIGO CITY HOUSING AUTH	344,254	22,548	22,549	45,097	0
APPLETON CITY HOUSING AUTH	886,787	58,084	58,085	116,169	0
ASHLAND CITY HOUSING AUTH	324,505	21,255	21,255	42,510	9,302
ASHLAND COUNTY HOUSING AUTH	652,086	42,712	42,711	85,423	0
BARABOO DISTRICT AMBULANCE	1,790,680	187,777	117,288	305,065	0
BARRON CO HOUSING AUTHORITY	193,584	12,699	12,660	25,360	0
BAY AREA RURAL TRANSIT COMMISS	413,262	27,069	27,069	54,137	0
BAYFIELD COUNTY HOUSING AUTH	118,291	7,748	7,748	15,496	0
BAY-LAKE REGIONAL PLAN COMM	491,874	32,218	32,218	64,436	0
BIG CEDAR LAKE PROT/REHAB DIST	63,087	4,549	4,132	8,682	0
BROCKWAY SANITARY DISTRICT #1	82,027	5,373	5,373	10,746	0
BRUCE VILLAGE HOUSING AUTH	104,907	6,871	6,872	13,743	0
BURLINGTON CITY HOUSING AUTH	55,885	3,660	3,660	7,321	0
CAMBRIDGE FIRE & EMS COMM	308,362	33,056	20,198	53,254	0
CAMBRIDGE-OAKLAND WSTEWTR COMM	131,557	8,617	8,617	17,234	0
CAPITAL AREA REG PLAN COMM	574,183	37,609	37,609	75,218	0
CENTRAL BROWN CTY WATER AUTH	107,885	7,066	7,066	14,133	0
CHILTON CITY HOUSING AUTH	56,338	3,690	3,690	7,380	0
CHIPPEWA CO HOUSING AUTH	505,976	33,142	33,141	66,283	0
CHIPPEWA FIRE DISTRICT	935,306	98,643	61,262	159,906	0
CITY-COUNTY DATA CENTER COMM	2,071,502	135,686	135,681	271,367	0
CLINTONVILLE CITY HOUS AUTH	108,394	7,100	7,100	14,200	0
COLBY/ABBOTSFORD JT POLICE COM	505,007	61,322	24,385	85,707	0
CONSOL KOSHKONONG SANITARY DIS	343,616	22,507	22,507	45,014	0
COUNTRY ESTATES SAN DIST	31,849	2,086	2,086	4,172	0
CROSS PLAINS AREA EMS	79,506	9,163	4,568	13,731	0
CUMBERLAND MUNICIPAL UTILITY	774,283	50,716	50,715	101,431	0
DANE COUNTY DIST #1 EMS	66,665	7,146	4,367	11,513	0
DANE COUNTY HOUSING AUTHORITY	581,487	38,087	38,087	76,175	461,495
DANE-IOWA WASTEWATER COMM	173,368	11,356	11,356	22,711	0
DARBOY JOINT SANITARY DIST #1	330,373	21,640	21,639	43,279	0
DEER-GROVE EMS DIST	547,208	58,660	35,842	94,503	0
DEFORREST WINDSOR FIRE & EMS	524,132	54,881	33,945	88,826	0
DELAFIELD-HARTL WATER POL CNTL	544,682	35,676	35,677	71,353	0
DELAVAN LAKE SANITARY DISTRICT	543,962	35,630	35,629	71,259	0
DELLS-DELTON EMS COMM	1,308,990	139,707	85,414	225,121	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
DELTON FIRE & AMBULANCE COMM	\$ 143,594	\$ 15,641	\$ 13,074	\$ 28,715	\$ 0
DODGE COUNTY HOUSING AUTHORITY	148,369	9,718	9,718	19,436	0
DOOR CTY TOURISM ZONE COMM	57,050	3,737	3,737	7,474	0
EAGLE RIVER UNION AIRPORT	116,160	7,608	7,609	15,217	0
EAST CENTRAL WIS REG PLAN COMM	1,186,317	77,704	77,704	155,407	0
EASTERN COLUMBIA CTY JM COURT	59,546	3,900	3,900	7,801	0
EAU CLAIRE CITY HOUSING AUTH	547,940	35,890	35,890	71,780	0
EAU CLAIRE COUNTY HOUSING AUTH	120,946	7,922	7,922	15,844	0
EAUCLAIRE CITY-CO HEALTH DPT	3,381,755	221,505	221,505	443,010	0
EDGERTON CITY HOUSING AUTH	138,617	9,079	9,079	18,159	0
EDGERTON FIRE PROT DIST	351,563	37,725	22,990	60,715	0
EVEREST METRO POLICE COMM	2,214,898	229,604	145,076	374,679	0
FISH CREEK SANITARY DIST #1	237,217	15,538	15,538	31,075	0
FITCH-RONA EMS DISTRICT	1,408,058	150,947	92,224	243,172	0
FOND DU LAC CITY HOUSING AUTH	719,703	47,140	47,141	94,281	0
FONTANA/WALWORTH WTR POL CN CM	349,543	22,895	22,895	45,790	0
FOX LAKE INL LAKE PROT & REHAB	41,581	2,724	2,724	5,447	0
FOX LAKE WASTEWATER CONTR COMM	13,455	881	881	1,763	0
FOX WEST REGIONAL SEWER COMM	351,451	23,020	23,020	46,040	0
FREEDOM SANITARY DISTRICT #1	169,433	11,098	11,098	22,196	0
GB/BROWN CO PRO FTBLL STAD DIS	45,412	2,974	2,974	5,949	0
GOODMAN SANITARY DISTRICT NO 1	61,339	5,119	2,916	8,035	0
GREEN BAY METRO SEWERAGE DIST	7,711,718	505,117	505,118	1,010,235	0
GREEN LAKE SANITARY DISTRICT	217,274	14,231	14,231	28,463	0
HA OF THE CITY OF S MILWAUKEE	180,441	11,819	11,819	23,638	0
HARMONY GROVE-OKEE JT SEW COMM	150,846	9,880	9,880	19,761	0
HEART OF THE VALLEY MET SEW DS	756,451	49,548	49,547	99,095	0
HOLMEN AREA FIRE DEPT	314,426	33,707	20,595	54,301	0
HUDSON CITY HOUSING AUTHORITY	58,000	3,799	3,799	7,598	0
HUM SRV CTR ONIDA VILAS FORST	2,278,578	149,246	149,247	298,494	0
HURLEY HOUSING AUTHORITY	54,958	3,600	3,600	7,199	0
INDIANHEAD FED LIBRARY SYSTEM	751,416	49,218	49,217	98,436	0
IRON RIVER SANITARY DIST #1	91,314	5,981	5,981	11,962	0
JEFFERSON CITY HOUSING AUTH	100,255	6,567	6,567	13,133	0
KAUKAUNA CITY HOUSING AUTH	145,125	9,506	9,506	19,011	0
KEGONSA SANITARY DISTRICT	102,598	6,720	6,720	13,440	0
KELLY LAKE SANITARY DIST #1	38,621	2,530	2,530	5,059	0
KENOSHA JOINT SERVICES	4,287,589	280,836	280,838	561,674	0
LA CROSSE CITY HOUSING AUTH	1,020,850	66,865	66,866	133,731	0
LADYSMITH HOUSING AUTH	114,039	7,470	7,470	14,939	0
LAKE COMO SANITARY DIST #1	314,764	20,617	20,617	41,234	21,115
LAKE COUNTRY FIRE & RESCUE	1,237,317	130,063	81,042	211,105	0
LAKE MILLS CITY HOUSING AUTH	104,434	6,840	6,840	13,681	0
LAKE RIPLEY MGT DISTRICT	54,240	3,553	3,553	7,105	0
LAKELAND SANITARY DISTRICT #1	320,902	21,019	21,019	42,038	0
LAKESHORES LIBRARY SYSTEM	377,928	24,754	24,754	49,509	0
LAONA SANITARY DISTRICT #1	86,861	5,689	5,689	11,379	0
LEAGUE OF WISC MUNICIPALITIES	823,823	53,960	53,960	107,921	0

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
LINCOLN COUNTY HOUSING AUTH	\$ 106,615	\$ 6,983	\$ 6,983	\$ 13,967	\$ 0
LODI COMMUNITY AMBULANCE SERV	196,161	21,028	12,849	33,877	0
LYONS SANITARY DISTRICT #2	93,340	6,114	6,114	12,228	0
MADLINE SANITARY DISTRICT	62,018	4,062	4,062	8,124	0
MADISON METRO SEWERAGE DIST	8,684,032	568,798	568,811	1,137,608	0
MANITOWOC CITY HOUSING AUTH	125,277	8,206	8,206	16,411	0
MANITOWOC-CALUMET LIB SYS	105,901	6,936	6,937	13,873	0
MARINETTE CITY HOUSING AUTH	210,970	13,819	13,818	27,637	0
MARSHALL AREA EMS DIST #14	152,792	15,718	9,984	25,702	0
MARSHFIELD CDA	303,571	19,884	19,884	39,768	0
MARSHFIELD ELECTRIC & WATER	3,303,103	216,353	216,353	432,707	0
MENASHA ELECTRIC & WATER	2,982,962	195,384	195,384	390,768	0
MENOMONIE CITY HOUSING AUTH	210,741	13,803	13,804	27,607	0
MEQUON - THIENSVILLE LIBRARY	513,156	33,612	33,612	67,223	0
MERCER SANITARY DISTRICT #1	146,752	9,612	9,612	19,225	0
MERRILL CITY HOUSING AUTHORITY	439,392	28,780	28,780	57,560	0
MIDDLETON FIRE DISTRICT	437,184	57,531	28,636	86,167	0
MID-MORAINES MUNICIPAL COURT	361,988	23,710	23,710	47,420	0
MILWAUKEE CO FED LIB SYS	374,595	24,536	24,536	49,072	0
MISSISSIPPI RIVER REG PLAN COM	220,122	14,418	14,418	28,836	0
MONARCH LIBRARY SYSTEM	474,553	31,083	31,083	62,166	0
MONROE CITY HOUSING AUTHORITY	164,255	10,759	10,759	21,517	0
MOSINEE FIRE DIST	144,603	15,502	9,471	24,973	0
MT HOREB AREA FIRE DEPT	385,760	58,327	25,267	83,594	0
MUNI COURT W WAUKESHA COUNTY	164,512	10,775	10,776	21,551	0
NEW GLARUS EMS	94,024	16,238	0	16,238	0
NEW LONDON CITY HOUSING AUTH	90,824	5,949	5,949	11,898	0
NEW RICHMOND AMBULANCE	443,862	29,073	29,073	58,146	0
NICOLET FEDERATED LIBRARY SYS	246,116	16,121	16,120	32,241	0
NORTH CENTRAL HEALTH CARE FAC	31,154,942	2,042,188	2,039,110	4,081,297	0
NORTH CENTRAL WIS REG PLAN COM	361,794	23,698	23,697	47,395	0
NORTH SHORE FIRE DEPT	8,814,958	1,671,971	578,620	2,250,591	0
NORTH SHORE WATER COMMISSION	487,612	31,939	31,939	63,877	0
NORTHERN MORAINES UTILITY COMM	142,529	9,336	9,336	18,671	0
NORTHERN WATERS LIBRARY SERV	300,645	19,692	19,692	39,384	0
NORTHWEST REGIONAL PLAN COMM	873,734	57,230	57,229	114,459	0
NORWAY SANITARY DISTRICT #1	294,763	19,307	19,307	38,614	0
OCONTO CITY HOUSING AUTHORITY	128,871	8,441	8,441	16,882	0
ONEIDA-VILAS TRANSIT COMM	274,437	17,976	17,976	35,951	0
OREGON AREA FIRE - EMS DIST	677,033	72,578	44,346	116,924	0
ORFORDVILLE VOL FIRE PROT DIST	89,450	9,589	5,859	15,448	0
OSHKOSH CITY HOUSING AUTHORITY	1,578,308	103,379	103,379	206,758	0
OUTAGAMIE COUNTY HOUSING AUTH	977,276	64,012	64,012	128,023	0
OUTAGAMIE WAUPC CO FED LIBR SY	510,050	33,408	33,409	66,817	0
PHELPS SANITARY DISTRICT #1	51,390	3,366	3,366	6,732	0
PLEASANT SPRINGS SAN DIS #1	112,240	7,352	7,352	14,703	0
PLYMOUTH CITY HOUSING AUTH	43,598	2,474	2,455	4,928	0



## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
PORTAGE COUNTY HOUSING AUTH	\$ 179,177	\$ 12,935	\$ 10,537	\$ 23,472	\$ 0
PRAIRIE DU SAC JT SEWER COMM	77,095	5,050	5,050	10,099	0
RACINE COUNTY HOUSING AUTH	520,698	34,106	34,105	68,211	0
REEDSBURG AREA AMBULANCE SVCES	464,438	49,788	30,421	80,208	0
REEDSVILLE VIL HOUSING AUTH	33,945	2,223	2,223	4,447	0
RHINELANDER CITY HOUSING AUTH	140,183	9,182	9,182	18,364	0
RIB MOUNTAIN METRO SEW DIST	576,429	37,756	37,756	75,512	0
RICE LAKE CITY HOUSING AUTH	218,149	14,289	14,288	28,577	(532)
RICHLAND CENTER CITY HOUS AUTH	106,374	6,968	6,968	13,935	0
RICHLAND FIRE DEPARTMENT	16,630	1,783	1,089	2,872	0
RIPON AREA FIRE DISTRICT	69,350	7,434	4,542	11,977	0
RIVER FALLS CITY HOUSING AUTH	363,699	23,822	23,822	47,644	8,327
SAUK CITY HOUSING AUTHORITY	41,351	2,709	2,709	5,417	0
SAUK COUNTY HOUSING AUTHORITY	256,804	16,821	16,821	33,641	0
SAUK PRAIRIE AMBULANCE ASSOC	97,779	10,482	6,405	16,887	0
SAUK PRAIRIE POLICE COMMISSION	1,071,522	131,225	50,086	181,311	0
SAUK PRAIRIE RECREATION COMM	113,793	7,453	7,454	14,907	0
SAWYER COUNTY HOUSING AUTH	147,518	9,662	9,663	19,325	0
SHAWANO CITY HOUSING AUTHORITY	210,183	14,222	13,312	27,534	0
SHAWANO COUNTY HOUSING AUTH	242,988	16,092	15,739	31,831	0
SHAWANO LAKE SANITARY DIST #1	715,301	46,852	46,852	93,704	0
SHAWANO MUNICIPAL UTILITIES	1,162,446	76,140	76,140	152,280	0
SHEBOYGAN CITY HOUSING AUTH	392,110	25,721	25,646	51,366	0
SHELL LAKE CITY HOUS AUTH	52,893	3,465	3,465	6,929	0
SILVER LAKE SAN. DIST.	282,444	18,500	18,500	37,000	0
SLINGER VILLAGE HOUSING AUTH	38,361	2,513	2,513	5,025	0
SOUTH AREA FIRE & EMS DIST	1,312,918	140,969	85,772	226,741	0
SOUTH CENTRAL LIBRARY SYSTEM	2,711,587	177,609	177,609	355,218	0
SOUTHEASTERN WIS REG PLAN COMM	4,241,089	277,792	277,791	555,583	0
SOUTHWEST WIS LIBRARY SYSTEM	201,034	13,167	13,168	26,335	0
SOUTHWESTERN WIS REG PLAN COMM	400,358	26,224	26,223	52,447	0
SPOONER FIRE DISTRICT	63,750	6,834	4,176	11,010	0
ST JOSEPH SANITARY DISTRICT #1	28,434	1,862	1,862	3,725	0
STEVENS POINT CITY HOUS AUTH	550,123	36,033	36,033	72,066	0
SUPERIOR CITY HOUSING AUTH	1,182,483	77,453	77,453	154,905	0
TAYLOR COUNTY HOUSING AUTH	42,680	2,796	2,796	5,591	0
THORP CITY HOUSING AUTHORITY	127,160	8,329	8,329	16,658	0
THREE LAKES SANITARY DIST #1	73,895	4,840	4,840	9,680	0
TREMPEALEAU COUNTY HOUS AUTH	307,558	20,145	20,145	40,290	22,123
UNIFIED COMMUNITY SERVICES	1,814,391	118,842	118,844	237,685	0
VALLEY RIDGE CLEAN WATER COMM	47,391	3,104	3,104	6,208	0
VANGUARD ELECTRIC UTIL COMM	481,150	30,659	32,372	63,031	0
VIROQUA CITY HOUSING AUTHORITY	198,110	12,976	12,976	25,952	0
WABENO SANITARY DISTRICT #1	43,604	2,856	2,856	5,712	0
WALES/GENESEE JOINT FIRE BD	132,249	14,177	8,662	22,839	0
WALTER E OLSON MEMORIAL LIB	110,049	7,208	7,208	14,416	0
WALWORTH COUNTY METRO SEW DIST	1,218,896	79,838	79,838	159,675	92,491
WASHBURN CITY HOUSING AUTH	119,679	7,839	7,839	15,678	0

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
WATERTOWN CITY HOUSING AUTH	\$ 131,350	\$ 8,603	\$ 8,604	\$ 17,207	\$ 8,575
WAUKESHA CITY HOUSING AUTH	734,413	48,104	48,104	96,208	0
WAUNAKEE AREA EMS	272,518	29,214	17,850	47,064	0
WAUNAKEE AREA FIRE DIST	61,144	4,005	4,005	8,010	0
WAUNAKEE WATER & LIGHT	1,385,961	90,781	90,780	181,561	0
WAUPACA CHAIN O'LAKES SAN DIST	63,000	4,126	4,127	8,253	0
WAUSAUKEE VILLAGE HOUS AUTH	107,483	7,040	7,040	14,080	0
WEST BEND CITY HOUSING AUTH	271,451	17,780	17,780	35,560	0
WEST CENTRAL WI BISOLIDS COMM	166,772	10,924	10,923	21,847	0
WEST CENTRAL WIS REG PLAN COMM	792,439	51,905	51,905	103,810	0
WESTERN LAKES FIRE DIST	1,669,665	177,836	109,363	287,199	0
WESTERN RACINE CO SEWERAGE DIS	116,003	7,598	7,598	15,196	0
WINDING RIVERS LIBRARY SYS	477,535	31,314	31,243	62,557	0
WINNEFOX LIBRARY SYSTEM	755,275	49,470	49,471	98,941	0
WIS DELLS-LAKE DELTON SEW COMM	247,393	16,204	16,204	32,409	0
WISCONSIN COUNTIES ASSOCIATION	2,253,487	147,604	147,603	295,207	0
WISCONSIN MUNIC MUTAL INS CO	765,461	60,914	39,362	100,275	0
WISCONSIN RAPIDS CITY HS AUTH	401,094	26,271	26,272	52,543	0
WISCONSIN TOWNS ASSOCIATION	590,967	38,708	38,708	77,417	0
WISCONSIN VALLEY LIBRARY SRV	383,934	25,148	25,147	50,295	0
WPPI ENERGY	10,653,423	697,814	697,801	1,395,614	0
Total Special Districts (206)	\$ 166,053,752	\$ 12,820,491	\$ 10,829,433	\$ 23,649,924	\$ 622,896

**Towns**

ADDISON, TOWN OF(WASHINGTON)	\$ 154,001	\$ 10,087	\$ 10,087	\$ 20,174	\$ 0
ALBAN, TOWN OF (PORTAGE)	82,658	6,199	4,630	10,828	0
ALBION, TOWN OF (DANE)	157,970	10,347	10,347	20,694	0
ALBION, TOWN OF (JACKSON)	48,920	3,261	3,148	6,409	0
ALGOMA, TOWN OF (WINNEBAGO)	143,970	9,430	9,430	18,860	0
ANSON, TOWN OF (CHIPPEWA)	62,033	4,063	4,063	8,126	66,799
ARBOR VITAE, TOWN OF (VILAS)	207,128	13,567	13,567	27,134	9,297
ASHIPPUN, TOWN OF (DODGE CO)	129,713	8,496	8,496	16,992	0
ASHLAND, TOWN OF (ASHLAND)	83,814	5,490	5,490	10,980	0
ATHELSTANE, TOWN OF(MARINETTE)	107,262	7,026	7,026	14,051	0
AZTALAN, TOWN OF(JEFFERSON)	67,153	4,398	4,399	8,797	0
BAILEYS HARBOR, TOWN OF (DOOR)	401,356	18,904	18,625	37,528	0
BALSAM LAKE, TOWN OF (POLK)	56,511	3,713	3,690	7,403	0
BARABOO, TOWN OF (SAUK)	71,050	4,654	4,654	9,308	0
BARKSDALE, TOWN OF (BAYFIELD)	68,507	4,487	4,487	8,974	0
BARRON, TOWN OF (BARRON)	60,016	3,931	3,931	7,862	0
BAYVIEW, TOWN OF (BAYFIELD)	58,277	3,903	3,731	7,634	0
BEAR CREEK, TOWN OF (SAUK)	80,000	5,240	5,240	10,480	0
BELOIT, TOWN OF (ROCK)	2,767,176	294,087	181,250	475,337	0
BENNETT, TOWN OF (DOUGLAS)	93,754	6,141	6,141	12,282	0
BERGEN, TOWN OF (VERNON)	52,896	3,722	3,207	6,929	0
BERRY, TOWN OF (DANE)	86,022	5,634	5,635	11,269	0
BLOOMING GROVE, TOWN OF(DANE)	181,695	11,901	11,901	23,802	0
BLUE MOUNDS, TOWN OF (DANE)	55,006	3,603	3,603	7,206	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
BOULDER JUNCTION, TOWN (VILAS)	\$ 218,751	\$ 14,328	\$ 14,328	\$ 28,656	\$ 0
BRIGHAM, TOWN OF (IOWA)	131,827	8,635	8,635	17,269	0
BRISTOL, TOWN OF (DANE)	108,420	7,101	7,102	14,203	0
BROCKWAY, TOWN OF (JACKSON)	134,371	8,801	8,801	17,603	0
BROOKFIELD, TOWN OF (WAUKESHA)	3,180,771	291,825	208,340	500,166	0
BROOKLYN, TOWN OF (GREEN)	79,888	5,233	5,233	10,465	0
BROTHERTOWN, TOWN OF (CALUMET)	50,390	3,301	3,301	6,601	0
BUCHANAN, TOWN OF (OUTAGAMIE)	169,001	11,070	11,070	22,139	0
BURKE, TOWN OF (DANE)	211,164	13,831	13,832	27,662	0
BURLINGTON, TOWN OF (RACINE)	390,195	30,227	24,496	54,724	0
CABLE, TOWN OF (BAYFIELD)	225,715	14,919	14,914	29,833	0
CAMPBELL, TOWN OF (LA CROSSE)	624,154	55,097	40,882	95,980	0
CAREY, TOWN OF (IRON)	55,361	3,626	3,626	7,252	0
CASSIAN, TOWN OF (ONEIDA)	107,534	7,465	6,622	14,087	0
CEDAR LAKE, TOWN OF (BARRON)	65,094	4,606	3,921	8,527	0
CEDARBURG, TOWN OF (OZAUKEE)	613,431	40,180	40,180	80,360	0
CHETEK, TOWN OF (BARRON)	83,001	5,437	5,437	10,873	0
CHRISTIANA, TOWN OF (DANE)	152,215	9,970	9,970	19,940	0
CLAYTON, TOWN OF (POLK)	49,140	3,219	3,219	6,437	0
CLAYTON, TOWN OF (WINNEBAGO)	558,826	40,902	36,603	77,505	0
CLEAR LAKE, TOWN OF (POLK)	45,605	2,987	2,987	5,974	0
CLIFTON, TOWN OF (MONROE)	49,906	3,269	3,269	6,538	0
CLINTON, TOWN OF (BARRON)	58,076	3,804	3,804	7,608	0
CLINTON, TOWN OF (ROCK)	33,384	2,187	2,187	4,373	0
CLOVER, TOWN OF (BAYFIELD)	112,622	7,395	7,359	14,753	0
CLOVERLAND, TOWN OF (VILAS)	18,308	1,199	1,199	2,398	0
COLBY, TOWN OF (CLARK)	48,900	3,203	3,203	6,406	0
COLFAX, TOWN OF (DUNN)	36,917	2,418	2,418	4,836	0
CORNING, TOWN OF (LINCOLN)	40,528	2,655	2,655	5,309	0
COTTAGE GROVE, TOWN OF (DANE)	281,897	18,464	18,464	36,929	0
CRESCENT, TOWN OF (ONEIDA)	146,160	9,573	9,574	19,147	0
CROSS PLAINS, TOWN OF (DANE)	88,011	5,765	5,765	11,530	0
DAIRYLAND, TOWN OF (DOUGLAS)	69,364	4,543	4,543	9,087	0
DARIEN, TOWN OF (WALWORTH)	97,297	6,373	6,373	12,746	0
DELAVAN, TOWN OF (WALWORTH)	1,431,969	173,753	55,881	229,634	0
DELTA, TOWN OF (BAYFIELD)	108,007	7,074	7,075	14,149	0
DELTON, TOWN OF (SAUK)	178,427	11,687	11,687	23,374	0
DOVER, TOWN OF (RACINE)	78,347	5,132	5,132	10,263	0
DOVRE, TOWN OF (BARRON)	46,168	3,024	3,024	6,048	0
DRAPER, TOWN OF (SAWYER)	52,418	3,434	3,433	6,867	0
DRUMMOND, TOWN OF (BAYFIELD)	234,496	15,359	15,359	30,719	0
DUNBAR, TOWN OF (MARINETTE)	41,039	2,734	2,642	5,376	0
DUNKIRK, TOWN OF (DANE)	128,009	8,385	8,385	16,769	0
DUNN, TOWN OF (DANE)	507,215	33,223	33,222	66,445	0
EAGLE POINT, TOWN OF (CHIPPEWA)	92,801	6,093	6,064	12,157	0
EAGLE, TOWN OF (WAUKESHA)	310,874	33,957	20,499	54,456	0
EAST TROY, TOWN OF (WALWORTH)	741,085	66,685	47,527	114,212	0
EASTON, TOWN OF (MARATHON)	102,528	6,716	6,716	13,431	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
EAU GALLE, TOWN OF (DUNN)	\$ 58,339	\$ 3,821	\$ 3,821	\$ 7,642	\$ 0
EGG HARBOR, TOWN OF (DOOR)	47,027	3,080	3,080	6,161	0
ELK MOUND, TOWN OF (DUNN)	46,997	3,078	3,078	6,157	0
ERIN, TOWN OF (WASHINGTON)	165,449	10,837	10,837	21,674	0
EUREKA, TOWN OF (POLK)	60,772	3,981	3,981	7,961	0
EXETER, TOWN OF (GREEN)	81,793	5,357	5,357	10,715	0
FARMINGTON, TOWN OF (LACROSSE)	83,714	6,284	6,276	12,560	0
FARMINGTON, TOWN OF (WAUPACA)	35,806	2,345	2,345	4,691	0
FLAMBEAU, TOWN OF (RUSK)	31,385	2,056	2,056	4,111	22,740
FLORENCE, TOWN OF (FLORENCE)	1,003,027	65,698	65,698	131,397	0
FRANKLIN, TOWN OF (MANITOWOC)	69,165	4,530	4,530	9,061	0
FREEDOM, TOWN OF (OUTAGAMIE)	362,830	29,211	23,054	52,265	0
FREEDOM, TOWN OF (SAUK)	65,466	4,288	4,288	8,576	0
FULTON, TOWN OF (ROCK)	55,914	3,662	3,662	7,325	0
GENEVA, TOWN OF (WALWORTH)	872,213	78,743	57,130	135,873	0
GEORGETOWN, TOWN OF (POLK)	45,759	2,997	2,997	5,994	182,861
GERMANTOWN, TOWN (JUNEAU)	130,870	8,572	8,572	17,144	0
GIBRALTAR, TOWN OF (DOOR)	381,468	29,052	24,986	54,038	0
GILMAN, TOWN OF (PIERCE)	62,507	4,094	4,094	8,188	0
GOODMAN, TOWN OF (MARINETTE)	91,172	6,002	5,942	11,944	0
GRAND CHUTE, TOWN OF (OUTAGAME)	7,408,058	668,045	485,228	1,153,273	0
GRAND RAPIDS, TOWN OF (WOOD)	777,191	70,478	50,906	121,384	0
GRANT, TOWN OF (PORTAGE)	46,512	3,047	3,047	6,093	0
GRATIOT, TOWN OF (LAFAYETTE)	78,956	5,172	5,172	10,343	0
GREEN LAKE, TOWN OF (GRN LAKE)	47,941	3,140	3,140	6,280	0
GREENFIELD, TOWN OF (LACROSSE)	81,888	5,364	5,364	10,727	0
GREENVILLE, TOWN OF (OUTAGAMIE)	1,936,001	140,070	126,808	266,878	0
GREENWOOD, TOWN OF (VERNON)	27,199	1,782	1,782	3,563	0
HAMBURG, TOWN OF (VERNON)	77,447	5,073	5,073	10,146	0
HARRISON, TOWN OF (GRANT)	45,086	2,953	2,953	5,906	0
HAY RIVER, TOWN OF (DUNN)	53,835	3,526	3,526	7,052	0
HAYWARD, TOWN OF (SAWYER)	239,539	19,034	14,664	33,697	0
HAZELHURST, TOWN OF (ONEIDA)	166,388	10,898	10,898	21,797	0
HIGHLAND, TOWN OF (IOWA)	96,053	6,291	6,291	12,583	0
HUGHES, TOWN OF (BAYFIELD)	67,061	4,393	4,392	8,785	0
HULL, TOWN OF (PORTAGE)	307,025	20,110	20,110	40,220	0
IRON RIVER, TOWN OF (BAYFIELD)	382,147	32,727	25,030	57,758	0
ITHACA, TOWN OF (RICHLAND)	51,427	3,368	3,368	6,737	0
IXONIA, TOWN OF (JEFFERSON)	356,704	23,364	23,364	46,728	0
JACKSON, TOWN OF (WASHINGTON)	240,042	15,723	15,723	31,445	0
JEFFERSON, TOWN OF (JEFFERSON)	49,245	3,226	3,225	6,451	0
KIMBALL, TOWN OF (IRON)	102,837	13,472	0	13,472	61,874
KNIGHT, TOWN OF (IRON)	66,476	4,354	4,354	8,708	0
KNOWLTON, TOWN OF (MARATHON)	41,680	2,730	2,730	5,460	0
KOMENSKY, TOWN OF (JACKSON)	51,658	6,767	0	6,767	0
KOSHKONONG, TOWN OF (JEFFERSON)	92,565	6,063	6,063	12,126	0
LA POINTE, TOWN OF (ASHLAND)	835,286	63,018	54,711	117,730	0
LA VALLE, TOWN OF (SAUK)	192,261	14,583	12,593	27,176	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
LAC DU FLAMBEAU, TOWN (VILAS)	\$ 299,789	\$ 19,636	\$ 19,636	\$ 39,272	\$ 211,187
LAFAYETTE, TOWN OF (CHIPPEWA)	199,724	13,081	13,082	26,164	0
LAFAYETTE, TOWN OF (WALWORTH)	109,263	7,157	7,157	14,313	0
LAKE HOLCOMBE, TOWN (CHIPPEWA)	56,945	3,894	3,566	7,460	0
LAKE, TOWN OF (MARINETTE)	54,545	3,573	3,573	7,145	0
LAKETOWN, TOWN OF (POLK)	62,318	4,082	4,082	8,164	0
LANARK, TOWN OF (PORTAGE)	44,253	2,899	2,899	5,797	0
LAND O LAKES, TOWN OF (VILAS)	297,378	19,478	19,478	38,957	0
LAONA, TOWN OF (FOREST)	193,241	14,346	12,657	27,003	0
LAWRENCE, TOWN OF (BROWN CO)	518,607	33,969	33,969	67,938	0
LEBANON, TOWN OF (DODGE)	112,657	7,379	7,379	14,758	0
LEDGEVIEW, TOWN OF (BROWN)	662,712	43,380	43,381	86,762	0
LINCOLN, TOWN OF (TREMPEALEAU)	49,066	3,214	3,214	6,428	0
LINCOLN, TOWN OF (VILAS)	48,000	3,144	3,144	6,288	0
LINN, TOWN OF (WALWORTH)	762,249	71,817	49,442	121,259	0
LINWOOD, TOWN OF (PORTAGE)	49,360	3,233	3,233	6,466	0
LISBON, TOWN OF (WAUKESHA)	1,034,057	87,363	62,225	149,588	0
LODI, TOWN OF (COLUMBIA)	92,353	6,049	6,049	12,098	0
LUCAS, TOWN OF (DUNN)	50,535	3,310	3,310	6,620	0
LUDINGTON, TOWN OF (EAU CLAIRE)	48,135	3,452	2,853	6,306	0
LYONS, TOWN OF (WALWORTH)	194,810	12,760	12,760	25,520	0
MADISON, TOWN OF (DANE)	2,419,617	239,847	157,343	397,190	0
MANITOWOC RAPIDS, TOWN (MANITWC)	87,721	5,746	5,746	11,491	0
MAPLE, TOWN OF (DOUGLAS)	78,837	5,164	5,164	10,328	0
MARENGO, TOWN OF (ASHLAND)	83,121	5,444	5,444	10,889	0
MARION, TOWN OF (WAUSHARA)	27,129	1,777	1,777	3,554	0
MARTELL, TOWN OF (PIERCE)	62,690	4,106	4,106	8,212	0
MAZOMANIE, TOWN OF (DANE)	95,219	6,237	6,237	12,474	0
MEDFORD, TOWN OF (TAYLOR)	54,560	3,574	3,574	7,147	0
MEDINA, TOWN OF (DANE)	132,361	8,670	8,670	17,339	0
MERCER, TOWN OF (IRON)	371,893	25,080	23,638	48,718	0
MERTON, TOWN OF (WAUKESHA)	749,894	49,118	49,118	98,236	0
MIDDLETON, TOWN OF (DANE)	456,022	29,879	29,860	59,739	0
MILLTOWN, TOWN OF (POLK)	126,903	8,312	8,312	16,624	49,227
MINOCQUA, TOWN OF (ONEIDA)	1,632,298	137,356	106,766	244,123	370,201
MINONG, TOWN OF (WASHBURN)	208,867	13,681	13,681	27,362	0
MISHICOT, TOWN OF (MANITOWOC)	56,645	3,710	3,710	7,420	0
MONTROSE, TOWN OF (DANE)	67,321	4,410	4,410	8,819	0
MUKWONAGO, TOWN (WAUKESHA)	868,309	77,075	56,874	133,949	0
NAMAKAGON, TOWN OF (BAYFIELD)	124,380	8,147	8,147	16,294	0
NEENAH, TOWN OF (WINNEBAGO)	47,521	3,113	3,113	6,225	0
NEW GLARUS, TOWN OF (GREEN)	103,206	6,760	6,760	13,520	0
NEW HAVEN, TOWN OF (DUNN)	60,256	3,947	3,947	7,894	0
NEWBOLD, TOWN OF (ONEIDA)	319,107	20,904	20,899	41,803	0
NORWAY, TOWN OF (RACINE)	521,259	36,881	34,143	71,023	0
OAK GROVE, TOWN OF (BARRON)	66,233	4,338	4,338	8,677	0
OAKDALE, TOWN OF (MONROE)	72,519	4,750	4,750	9,500	0
OAKLAND, TOWN OF (JEFFERSON)	177,666	11,637	11,637	23,274	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
OCONOMOWOC, TOWN OF (WAUKESHA)	\$ 1,632,732	\$ 146,791	\$ 106,944	\$ 253,735	\$ 0
OMA, TOWN OF (IRON)	117,769	7,714	7,714	15,428	0
ONALASKA, TOWN OF (LA CROSSE)	225,701	14,783	14,783	29,567	0
OREGON, TOWN OF (DANE)	211,031	13,823	13,823	27,645	0
ORIENTA, TOWN OF (BAYFIELD)	43,930	2,877	2,877	5,755	0
OSCEOLA, TOWN OF (POLK)	64,558	4,229	4,229	8,457	0
OTTAWA, TOWN OF (WAUKESHA)	96,637	6,330	6,330	12,659	0
PARKLAND, TOWN OF (DOUGLAS)	108,750	7,123	7,123	14,246	1,562
PELICAN, TOWN OF (ONEIDA)	104,109	6,819	6,819	13,638	0
PEWAUKEE, CITY OF	5,544,374	471,821	363,156	834,977	0
PHELPS, TOWN OF (VILAS)	217,829	14,268	14,268	28,536	0
PINE LAKE, TOWN OF (ONEIDA)	124,034	8,124	8,124	16,248	0
PLEASANT SPRINGS, TOWN(DANE)	209,216	13,704	13,704	27,407	0
PLEASANT VALLEY, TOWN(EAUCCLR)	144,122	9,440	9,440	18,880	0
PLOVER, TOWN OF (PORTAGE)	22,361	1,465	1,465	2,929	0
PORT WASHINGTON, TOWN(OZAUKEE)	42,250	2,767	2,767	5,535	0
PORT WING, TOWN OF (BAYFIELD)	117,600	7,703	7,703	15,406	0
PRAIRIE LAKE, TOWN OF (BARRON)	118,175	7,740	7,740	15,481	0
PRENTICE, TOWN OF (PRICE)	21,069	1,627	1,133	2,760	0
PRESQUE ISLE, TOWN OF(VILAS)	280,650	18,383	18,382	36,765	0
PRESTON, TOWN OF (ADAMS)	72,495	4,748	4,748	9,497	0
PRIMROSE, TOWN OF (DANE)	50,849	3,331	3,331	6,661	0
QUINCY, TOWN OF (ADAMS)	105,467	6,908	6,908	13,816	0
RAYMOND, TOWN OF (RACINE)	253,657	18,251	14,978	33,229	0
RIB MOUNTAIN, TOWN (MARATHON)	722,230	47,306	47,306	94,612	0
RICE LAKE, TOWN OF (BARRON)	124,326	8,143	8,143	16,287	0
RICHFIELD, VILLAGE OF(WASHING)	648,094	42,450	42,450	84,900	0
RICHMOND, TOWN OF (WALWORTH)	70,426	4,646	4,580	9,226	0
RIPON, TOWN OF(FOND DU LAC)	97,048	8,779	6,357	15,136	0
RIVER FALLS, TOWN OF (PIERCE)	139,362	9,305	8,952	18,256	0
ROME, TOWN OF (ADAMS)	1,260,326	111,181	73,555	184,736	0
RUDOLPH, TOWN OF (WOOD)	45,668	3,037	2,946	5,982	0
RUTLAND, TOWN OF (DANE)	136,660	8,957	8,945	17,902	0
SANBORN, TOWN OF (ASHLAND)	113,837	7,456	7,456	14,913	0
SCOTT, TOWN OF (BROWN)	228,188	14,946	14,946	29,893	0
SCOTT, TOWN OF (SHEBOYGAN)	71,480	4,682	4,682	9,364	0
SEVASTOPOL, TOWN OF (DOOR)	52,015	3,407	3,407	6,814	0
SHARON, TOWN OF (PORTAGE)	118,326	7,750	7,750	15,501	0
SHARON, TOWN OF (WALWORTH)	39,265	2,572	2,572	5,144	0
SHEBOYGAN, TOWN OF (SHEBOYGAN)	476,315	31,212	31,185	62,397	0
SHELBY, TOWN OF (LA CROSSE)	640,207	48,733	40,147	88,880	0
SOMERSET, TOWN OF (ST CROIX)	183,418	12,014	12,014	24,028	0
SOUTH LANCASTER, TOWN (GRANT)	50,408	3,302	3,302	6,603	0
SPARTA, TOWN OF (MONROE)	94,552	6,193	6,193	12,386	0
SPIRIT, TOWN OF (PRICE)	38,007	2,489	2,489	4,979	0
SPRING GREEN, TOWN OF (SAUK)	54,452	3,567	3,567	7,133	0
SPRING LAKE, TOWN OF (PIERCE)	60,046	3,933	3,933	7,866	0
SPRINGDALE, TOWN OF (DANE)	96,259	6,305	6,305	12,610	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
SPRINGFIELD, TOWN OF (DANE)	\$ 154,830	\$ 10,141	\$ 10,141	\$ 20,283	\$ 0
SPRINGFIELD, TOWN OF (JACKSON)	57,663	3,777	3,777	7,554	63,454
ST CROIX FALLS, TOWN OF (POLK)	83,271	5,454	5,454	10,909	0
ST GERMAIN, TOWN OF (VILAS)	324,655	21,388	21,142	42,530	0
STANTON, TOWN OF (DUNN)	81,270	5,323	5,323	10,646	0
STETTIN, TOWN OF (MARATHON)	182,090	11,927	11,927	23,854	0
STOCKTON, TOWN OF (PORTAGE)	177,868	11,650	11,650	23,301	0
STRONGS PRAIRIE, TOWN OF (ADMS)	46,844	3,068	3,068	6,137	0
SUGAR CREEK, TOWN OF (WALWORTH)	120,545	7,896	7,896	15,791	0
SULLIVAN, TOWN OF (JEFFERSON)	88,510	5,797	5,797	11,595	0
SUMMIT, TOWN OF (DOUGLAS)	131,416	8,608	8,608	17,215	0
SUMMIT, TOWN OF (JUNEAU)	47,374	3,103	3,103	6,206	0
SUMNER, TOWN OF (BARRON)	58,226	3,814	3,814	7,628	0
SUPERIOR, TOWN OF (DOUGLAS)	119,561	7,831	7,831	15,662	0
TAINTER, TOWN OF (DUNN)	143,390	9,392	9,392	18,784	0
THERESA, TOWN OF (DODGE)	77,081	5,049	5,049	10,098	0
THREE LAKES, TOWN OF (ONEIDA)	738,157	60,370	48,214	108,584	0
TIFFANY, TOWN OF (DUNN)	51,597	3,380	3,380	6,759	0
TRADE LAKE, TOWN OF (BURNETT)	55,595	3,641	3,641	7,283	0
TREMPELEAU, TOWN (TREMPELEAU)	115,960	7,595	7,595	15,191	0
TRENTON, TOWN OF (WASHINGTON)	265,071	18,105	17,362	35,467	0
TRIPP, TOWN OF (BAYFIELD)	56,435	3,696	3,696	7,393	0
TROY, TOWN OF (WALWORTH)	134,923	8,837	8,837	17,675	75
TURTLE LAKE, TOWN OF (BARRON)	55,824	3,656	3,656	7,313	0
UNION, TOWN OF (ROCK)	58,164	3,839	3,781	7,619	0
UNITY, TOWN OF (CLARK)	34,698	2,273	2,273	4,545	0
VERMONT, TOWN OF (DANE)	57,224	3,748	3,748	7,496	0
VERNON, TOWN OF (WAUKESHA)	480,139	35,581	31,325	66,906	0
VERONA, TOWN OF (DANE)	236,592	15,560	15,434	30,994	0
VIENNA, TOWN OF (DANE)	183,524	12,021	12,021	24,042	0
VIROQUA, TOWN OF (VERNON)	158,160	10,360	10,359	20,719	0
WABENO, TOWN OF (FOREST)	93,575	6,129	6,129	12,258	0
WALWORTH, TOWN OF (WALWORTH)	113,439	7,430	7,430	14,861	0
WARREN, TOWN OF (ST CROIX)	41,400	3,674	2,712	6,385	0
WASCOTT, TOWN OF (DOUGLAS)	248,712	16,894	16,291	33,185	0
WASHINGTON, TOWN OF (DOOR)	455,818	34,466	29,856	64,322	0
WASHINGTON, TOWN OF (LACROSSE)	58,338	3,821	3,821	7,642	0
WASHINGTON, TOWN OF (VILAS)	133,752	8,761	8,761	17,521	0
WASHINGTON, TOWN OF (EAUCLAIRE)	363,071	23,781	23,781	47,562	0
WATERFORD, TOWN OF (RACINE)	1,121,204	103,488	73,396	176,884	0
WAUKESHA, TOWN OF (WAUKESHA)	382,230	31,854	25,036	56,890	0
WAYNE, TOWN OF (LAFAYETTE)	58,413	3,826	3,826	7,652	0
WESCOTT, TOWN OF (SHAWANO)	294,165	19,268	19,268	38,536	0
WEST BEND, TOWN OF (WASHINGTON)	170,418	11,163	11,162	22,325	0
WEST POINT, TOWN (COLUMBIA)	24,610	1,612	1,612	3,224	0
WEST SWEDEN, TOWN OF (POLK)	53,269	3,489	3,489	6,978	0
WESTFIELD, TOWN OF (SAUK CO)	45,599	2,987	2,987	5,973	0
WESTPORT, TOWN OF (DANE)	534,285	49,862	20,129	69,991	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
WHEATLAND, TOWN OF (VERNON)	\$ 51,664	\$ 3,384	\$ 3,384	\$ 6,768	\$ 0
WHEATON, TOWN OF (CHIPPEWA)	107,445	7,038	7,038	14,075	0
WILSON, TOWN OF (SHEBOYGAN)	184,451	12,242	12,082	24,323	0
WILTON, TOWN OF (MONROE)	53,862	3,528	3,528	7,056	0
WINTER, TOWN OF (SAWYER)	219,120	14,352	14,352	28,705	0
WIOTA, TOWN OF (LAFAYETTE)	75,386	4,938	4,938	9,876	0
WOOD RIVER, TOWN OF (BURNETT)	49,747	3,258	3,258	6,517	0
WOODRUFF, TOWN OF (ONEIDA)	602,331	53,795	39,453	93,248	0
Total Towns (272)	\$ 74,951,461	\$ 5,971,538	\$ 4,811,973	\$ 10,783,511	\$ 1,039,275
<b>Counties</b>					
ADAMS COUNTY	\$ 12,655,499	\$ 915,592	\$ 832,894	\$ 1,748,486	\$ 0
ASHLAND COUNTY	7,836,670	622,769	464,205	1,086,974	0
BARRON COUNTY	18,231,955	1,280,163	1,194,194	2,474,357	0
BAYFIELD COUNTY	8,622,241	673,157	520,010	1,193,167	0
BROWN COUNTY	81,458,828	5,948,137	5,334,368	11,282,506	0
BUFFALO COUNTY	5,688,188	426,059	347,901	773,960	0
BURNETT COUNTY	7,310,347	518,288	478,828	997,116	0
CALUMET COUNTY	15,252,852	1,079,858	999,063	2,078,921	0
CHIPPEWA COUNTY	20,415,872	1,442,839	1,337,241	2,780,079	0
CLARK COUNTY	23,048,313	1,587,178	1,508,273	3,095,451	0
COLUMBIA COUNTY	26,151,359	1,991,177	1,581,494	3,572,671	0
CRAWFORD COUNTY	7,212,722	593,129	417,381	1,010,509	0
DANE COUNTY	173,398,843	13,274,624	11,357,482	24,632,105	0
DODGE COUNTY	42,520,816	2,976,009	2,753,571	5,729,580	0
DOOR COUNTY	19,153,331	1,520,767	1,233,763	2,754,530	0
DOUGLAS COUNTY	15,044,643	1,100,005	987,523	2,087,528	0
DUNN COUNTY	22,686,310	1,661,983	1,423,751	3,085,734	0
EAU CLAIRE COUNTY	31,606,970	2,246,169	2,070,523	4,316,692	0
FLORENCE COUNTY	3,541,654	271,184	231,978	503,162	0
FOND DU LAC COUNTY	41,198,385	3,004,181	2,576,461	5,580,642	0
FOREST COUNTY	5,205,668	408,817	340,972	749,789	0
GRANT COUNTY	17,587,086	1,233,046	1,151,956	2,385,002	0
GREEN COUNTY	18,089,858	1,295,848	1,184,887	2,480,734	0
GREEN LAKE COUNTY	10,365,075	744,664	669,301	1,413,965	0
IOWA COUNTY	10,776,440	791,332	705,856	1,497,188	0
IRON COUNTY	4,699,712	336,446	307,451	643,897	0
JACKSON COUNTY	9,716,031	704,181	637,747	1,341,928	0
JEFFERSON COUNTY	29,797,143	2,263,770	1,951,967	4,215,738	0
JUNEAU COUNTY	12,873,778	972,405	843,775	1,816,179	0
KENOSHA COUNTY	59,306,426	4,724,862	3,461,551	8,186,413	0
KEWAUNEE COUNTY	8,434,588	618,740	552,465	1,171,204	0
LA CROSSE COUNTY	51,767,334	3,511,552	3,390,174	6,901,726	0
LAFAYETTE COUNTY	15,645,403	1,098,591	1,023,448	2,122,039	0
LANGLADE COUNTY	8,523,529	633,403	536,337	1,169,740	0
LINCOLN COUNTY	18,491,319	1,301,921	1,212,206	2,514,127	0
MANITOWOC COUNTY	25,714,438	2,073,145	1,495,242	3,568,387	0
MARATHON COUNTY	45,347,102	3,246,560	2,972,935	6,219,495	0



## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
MARINETTE COUNTY	\$ 18,447,781	\$ 1,314,050	\$ 1,209,007	\$ 2,523,057	\$ 0
MARQUETTE COUNTY	9,547,602	725,789	625,367	1,351,156	0
MENOMINEE COUNTY	3,271,642	233,496	214,292	447,788	0
MONROE COUNTY	17,779,273	1,232,692	1,164,542	2,397,233	0
OCONTO COUNTY	14,686,857	1,057,586	961,762	2,019,348	0
ONEIDA COUNTY	14,343,618	1,054,172	939,514	1,993,686	0
OUTAGAMIE COUNTY	60,964,144	4,260,727	3,994,048	8,254,775	0
OZAUKEE COUNTY	31,908,103	2,267,070	2,089,269	4,356,339	0
PEPIN COUNTY	4,468,159	352,310	275,343	627,654	0
PIERCE COUNTY	16,026,062	1,273,830	952,109	2,225,939	0
POLK COUNTY	20,866,322	1,553,983	1,272,324	2,826,307	0
PORTAGE COUNTY	28,353,943	2,160,898	1,697,247	3,858,145	0
PRICE COUNTY	6,670,891	487,423	437,886	925,309	0
RACINE COUNTY	43,221,424	3,859,565	2,830,355	6,689,921	0
RICHLAND COUNTY	11,396,615	791,238	746,106	1,537,343	0
ROCK COUNTY	65,711,336	5,006,435	4,120,748	9,127,183	0
RUSK COUNTY	7,557,658	574,337	490,589	1,064,926	0
SAUK COUNTY	33,049,779	2,452,667	2,164,764	4,617,430	0
SAWYER COUNTY	9,782,517	709,657	640,664	1,350,321	0
SHAWANO COUNTY	17,637,618	1,328,591	1,154,778	2,483,369	0
SHEBOYGAN COUNTY	42,469,129	3,003,845	2,781,731	5,785,575	0
ST CROIX COUNTY	32,517,475	2,381,099	2,129,823	4,510,922	0
TAYLOR COUNTY	9,312,411	665,155	609,964	1,275,119	0
TREMPEALEAU COUNTY	23,344,525	1,661,225	1,468,377	3,129,602	0
VERNON COUNTY	12,612,830	946,775	763,598	1,710,373	0
VILAS COUNTY	9,806,169	746,170	643,453	1,389,623	0
WALWORTH COUNTY	47,256,114	3,761,694	2,776,726	6,538,420	0
WASHBURN COUNTY	8,982,520	634,023	588,423	1,222,446	0
WASHINGTON COUNTY	36,232,258	2,633,243	2,373,213	5,006,456	0
WAUKESHA COUNTY	93,907,003	6,723,789	6,150,928	12,874,717	0
WAUPACA COUNTY	21,597,636	1,551,848	1,415,532	2,967,380	0
WAUSHARA COUNTY	13,533,923	1,013,246	886,474	1,899,720	0
WINNEBAGO COUNTY	57,592,945	4,441,490	3,542,351	7,983,841	0
WOOD COUNTY	29,598,125	2,176,736	1,827,726	4,004,462	0
Total Counties (71)	\$ 1,809,831,135	\$ 134,129,403	\$ 116,028,207	\$ 250,157,610	\$ 0
<b>School Districts</b>					
ABBOTSFORD SCHOOL DISTRICT	\$ 4,026,139	\$ 263,712	\$ 263,712	\$ 527,424	\$ 0
ADAMS-FRIENDSHIP AREA SCH DIST	9,792,420	641,402	641,405	1,282,807	0
ALBANY SCHOOL DISTRICT	2,614,443	171,246	171,246	342,492	0
ALGOMA SCHOOL DISTRICT	4,390,284	287,565	287,563	575,127	0
ALMA CENTER-HUMBRD-MERIL SCH D	3,975,031	260,364	260,365	520,729	0
ALMA SCHOOL DISTRICT	1,802,094	118,037	118,037	236,074	0
ALMOND-BANCROFT SCHOOL DIST	2,615,183	173,447	173,404	346,850	0
ALTOONA SCHOOL DISTRICT	9,986,589	654,122	654,121	1,308,243	0
AMERY SCHOOL DISTRICT	11,246,551	739,270	734,029	1,473,298	0
ANTIGO UNIFIED SCHOOL DISTRICT	13,708,994	897,936	897,942	1,795,878	0
APPLETON AREA SCHOOL DISTRICT	98,543,403	6,449,805	6,449,362	12,899,167	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
ARBOR VITAE-WOODRUFF JSD #1	\$ 3,634,528	\$ 238,062	\$ 238,062	\$ 476,123	\$ 0
ARCADIA SCHOOL DISTRICT	8,691,195	569,273	569,273	1,138,547	0
ARGYLE SCHOOL DISTRICT	1,972,195	129,179	129,179	258,358	0
ARROWHEAD UNION HIGH SCH DIST	13,808,821	906,492	902,464	1,808,956	0
ASHLAND SCHOOL DISTRICT	12,499,603	818,738	818,710	1,637,448	0
ASHWAUBENON SCHOOL DISTRICT	20,155,182	1,320,164	1,320,165	2,640,329	0
ATHENS SCHOOL DISTRICT	2,467,071	161,593	161,593	323,186	0
AUBURNDALE SCHOOL DISTRICT	4,608,109	301,831	301,831	603,662	0
AUGUSTA SCHOOL DISTRICT	4,766,791	312,225	312,225	624,450	0
BALDWIN-WOODVILLE AREA SCH DIS	11,110,953	727,764	727,771	1,455,535	0
BANGOR SCHOOL DISTRICT	3,695,250	243,273	241,447	484,721	0
BARABOO SCHOOL DISTRICT	19,648,451	1,286,971	1,286,976	2,573,947	0
BARNEVELD SCHOOL DISTRICT	2,592,859	171,505	168,159	339,665	0
BARRON AREA SCHOOL DISTRICT	8,878,677	581,553	581,554	1,163,107	0
BAYFIELD SCHOOL DISTRICT	4,683,346	306,758	306,760	613,518	0
BEAVER DAM UNIFIED SCHOOL DIST	21,629,946	1,416,995	1,416,758	2,833,753	0
BEECHER DUNBAR PEMBINE SCH DIS	1,891,432	123,889	123,889	247,778	0
BELLEVILLE SCHOOL DISTRICT	5,982,739	391,869	391,870	783,739	0
BELMONT COMMUNITY SCHOOL DIST	2,449,987	160,474	160,474	320,948	0
BELOIT SCHOOL DISTRICT	42,244,613	2,763,974	2,763,160	5,527,133	0
BELOIT TURNER SCHOOL DISTRICT	9,594,129	628,415	628,416	1,256,831	0
BENTON SCHOOL DISTRICT	1,406,217	92,107	92,107	184,214	0
BERLIN AREA SCHOOL DISTRICT	9,796,230	641,856	641,354	1,283,209	0
BIG FOOT UHS SCH DIST	3,259,211	213,853	213,837	427,690	0
BIRCHWOOD SCHOOL DISTRICT	1,955,075	128,058	128,057	256,115	0
BLACK HAWK SCHOOL DISTRICT	2,827,529	185,203	185,203	370,406	0
BLACK RIVER FALLS SCH DIST	11,255,925	737,265	737,261	1,474,526	0
BLAIR-TAYLOR SCHOOL DISTRICT	3,951,648	258,832	258,834	517,666	0
BLOOMER SCHOOL DISTRICT	6,954,657	455,531	455,529	911,060	0
BONDUEL SCHOOL DISTRICT	4,576,264	299,745	299,746	599,491	0
BOSCOBEL SCHOOL DISTRICT	5,609,738	367,437	367,438	734,876	0
BOWLER SCHOOL DISTRICT	2,630,290	172,284	172,284	344,568	0
BOYCEVILLE COMMUNITY SCH DIST	4,479,405	293,401	293,401	586,802	0
BRIGHTON SCH DIST #1	914,258	59,884	59,884	119,768	0
BRILLION PUBLIC SCHOOL DIST	5,536,761	362,659	362,657	725,316	0
BRISTOL, TOWN, SCH DIST #1	4,504,514	295,045	295,046	590,091	0
BRODHEAD SCHOOL DISTRICT	6,848,597	448,582	448,584	897,166	0
BROWN DEER SCHOOL DISTRICT	12,097,827	792,407	792,409	1,584,815	0
BRUCE SCHOOL DISTRICT	3,200,732	209,648	209,648	419,296	0
BURLINGTON AREA SCHOOL DIST	21,448,589	1,415,090	1,414,799	2,829,889	0
BUTTERNUT SCHOOL DISTRICT	1,684,736	110,350	110,350	220,700	0
CADOTT COMM SCHOOL DISTRICT	5,752,047	376,758	376,760	753,518	0
CAMBRIA-FRIESLAND SCHOOL DIST	3,085,007	202,068	202,068	404,136	0
CAMBRIDGE SCHOOL DISTRICT	6,202,469	406,264	406,262	812,526	0
CAMERON SCHOOL DISTRICT	6,716,692	439,944	439,943	879,887	0
CAMPBELLSPORT SCHOOL DISTRICT	8,442,440	552,978	552,982	1,105,960	0
CASHTON SCHOOL DISTRICT	3,883,384	254,362	254,361	508,723	0
CASSVILLE SCHOOL DISTRICT	1,625,456	106,468	106,467	212,935	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
CEDAR GROVE-BELGIUM SCH DIST	\$ 5,884,433	\$ 385,430	\$ 385,431	\$ 770,861	\$ 0
CEDARBURG SCHOOL DISTRICT	19,228,868	1,259,489	1,259,493	2,518,982	0
CHEQUAMEGON SCHOOL DISTRICT	5,453,833	357,225	357,227	714,452	0
CHETEK-WEYERHAEUSER AREA SD	6,691,691	438,306	438,306	876,612	0
CHILTON SCHOOL DISTRICT	7,339,787	480,725	480,726	961,451	0
CHIPPEWA FALLS AREA UNIF SCH	30,342,874	1,989,089	1,987,461	3,976,550	0
CLAYTON SCHOOL DISTRICT	2,556,934	167,478	167,480	334,958	0
CLEAR LAKE SCHOOL DISTRICT	3,841,250	251,602	251,602	503,204	0
CLINTON COMMUNITY SCHOOL DIST	7,139,077	467,025	466,959	933,984	0
CLINTONVILLE PUBLIC SCH DIST	9,648,734	631,992	631,992	1,263,984	0
COCHRANE-FOUNTAIN CITY SCH DIS	3,768,276	248,229	248,213	496,442	0
COLBY SCHOOL DISTRICT	4,253,507	278,787	278,422	557,209	0
COLEMAN SCHOOL DISTRICT	3,740,352	244,993	244,993	489,986	0
COLFAX SCHOOL DISTRICT	5,132,751	336,195	336,195	672,390	0
COLUMBUS SCHOOL DISTRICT	7,857,894	516,204	512,955	1,029,159	0
CORNELL SCHOOL DISTICT	2,425,616	158,878	158,878	317,756	0
CRANDON SCHOOL DISTRICT	6,089,246	399,247	396,949	796,195	0
CRIVITZ SCHOOL DISTRICT	4,015,302	270,479	263,002	533,481	0
CUBA CITY SCHOOL DISTRICT	4,916,638	323,139	321,878	645,017	0
CUDAHY SCHOOL DISTRICT	18,523,401	1,213,282	1,213,284	2,426,566	0
CUMBERLAND SCHOOL DISTRICT	6,177,452	404,623	404,623	809,246	0
DARLINGTON COMM SCHOOL DIST	5,206,013	340,994	340,994	681,988	0
DC EVEREST AREA SCHOOL DIST	39,227,990	2,569,452	2,569,437	5,138,889	0
DEERFIELD COMM SCHOOL DISTRICT	5,157,148	337,793	337,793	675,586	0
DEFOREST AREA SCHOOL DISTRICT	23,797,589	1,576,879	1,560,596	3,137,476	0
DELAVAN-DARIEN SCHOOL DISTRICT	13,092,629	857,782	857,507	1,715,289	0
DENMARK SCHOOL DISTRICT	9,160,495	600,012	600,013	1,200,025	0
DEPERE UNIFIED SCHOOL DISTRICT	24,631,178	1,613,340	1,613,345	3,226,684	0
DESOTO AREA SCHOOL DISTRICT	3,389,023	222,233	221,729	443,962	0
DODGELAND SCHOOL DISTRICT	5,806,083	380,302	380,295	760,597	0
DODGEVILLE SCHOOL DISTRICT	8,531,008	558,781	558,781	1,117,562	0
DRUMMOND SCHOOL DISTRICT	2,411,628	158,078	157,962	316,040	0
DURAND-ARKANSAW SCHOOL DIST	5,217,082	341,719	341,718	683,438	0
EAST TROY COMMUNITY SCH DIST	10,766,452	705,203	705,202	1,410,405	0
EAU CLAIRE AREA SCHOOL DIST	68,237,011	4,470,147	4,468,774	8,938,922	0
EDGAR SCHOOL DISTRICT	3,232,576	211,734	211,734	423,467	0
EDGERTON SCHOOL DISTRICT	12,516,564	819,898	819,898	1,639,796	0
ELCHO SCHOOL DISTRICT	2,540,977	170,172	166,434	336,606	0
ELEVA-STRUM SCHOOL DISTRICT	3,954,819	259,040	259,041	518,081	0
ELK MOUND AREA SCHOOL DISTRICT	6,816,430	446,476	446,477	892,952	0
ELKHART LAKE-GLENBEULAH SCH DS	3,281,287	214,923	214,925	429,849	0
ELKHORN AREA SCHOOL DISTRICT	20,841,824	1,365,131	1,365,148	2,730,279	0
ELLSWORTH COMM SCH DIST	10,369,105	681,215	677,139	1,358,354	0
ELMBROOK SCHOOL DISTRICT	51,408,411	3,366,348	3,368,240	6,734,588	0
ELMWOOD SCHOOL DISTRICT	2,560,036	167,682	167,682	335,365	0
ERIN SCH DIST #2	1,691,717	110,807	110,808	221,615	0
EVANSVILLE COMM SCH DIST	11,679,819	765,120	765,108	1,530,228	0
FALL CREEK SCHOOL DISTRICT	4,773,136	312,644	312,637	625,281	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
FALL RIVER SCHOOL DISTRICT	\$ 3,192,812	\$ 209,129	\$ 209,130	\$ 418,258	\$ 0
FENNIMORE COMMUNITY SCH DIST	5,777,588	378,431	378,433	756,864	0
FLAMBEAU SCHOOL DISTRICT	3,947,141	265,390	262,758	528,148	0
FLORENCE COUNTY SCH DIST	3,423,585	224,453	224,430	448,883	0
FOND DU LAC SCHOOL DISTRICT	46,314,048	3,033,566	3,033,574	6,067,140	0
FONTANA JT SCH DIST #8 ETAL	1,611,055	73,682	63,774	137,456	0
FORT ATKINSON SCHOOL DISTRICT	20,585,687	1,375,510	1,338,279	2,713,789	0
FOX POINT JT SCH DIST # 2 ETAL	7,184,924	470,613	470,612	941,225	0
FRANKLIN PUBLIC SCHOOL DIST	30,945,057	2,026,988	2,026,664	4,053,653	0
FREDERIC SCHOOL DISTRICT	3,470,447	227,313	227,315	454,629	0
FREEDOM AREA SCHOOL DISTRICT	9,638,055	631,291	631,295	1,262,585	0
GALESVILLE SCHOOL DISTRICT ETAL	9,366,405	613,699	613,698	1,227,397	0
GENEVA JT SCH DIST #4 ETAL	1,205,967	78,991	78,991	157,982	0
GENOA CITY JT SCH DIST #2 ETAL	3,514,367	230,190	230,192	460,382	0
GERMANTOWN SCHOOL DISTRICT	27,288,045	1,789,697	1,785,130	3,574,827	0
GIBRALTAR AREA SCHOOL DISTRICT	6,002,873	393,188	393,188	786,376	0
GILLETT SCHOOL DISTRICT	3,699,644	242,327	242,327	484,653	0
GILMAN SCHOOL DISTRICT	2,335,283	152,912	152,911	305,823	0
GILMANTON SCHOOL DISTRICT	800,311	52,420	52,421	104,841	0
GLENDALE-RIVER HILLS SCH DIST	8,024,697	525,617	525,618	1,051,235	0
GLENWOOD CITY SCHOOL DISTRICT	4,292,883	281,183	281,184	562,368	0
GOODMAN-ARMSTRONG SCHOOL DIST	1,057,820	69,287	69,287	138,574	0
GRAFTON SCHOOL DISTRICT	13,569,187	888,782	888,781	1,777,564	0
GRANTON AREA SCHOOL DISTRICT	1,836,746	120,306	120,307	240,614	0
GRANTSBURG SCHOOL DISTRICT	6,668,995	443,489	443,434	886,923	0
GREEN BAY AREA PUBLIC SCHOOLS	152,495,981	9,989,693	9,989,621	19,979,314	0
GREEN LAKE SCHOOL DISTRICT	2,223,764	156,210	145,315	301,525	0
GREENDALE SCHOOL DISTRICT	19,696,773	1,290,155	1,290,159	2,580,314	0
GREENFIELD SCHOOL DISTRICT	23,223,702	1,521,066	1,521,068	3,042,134	0
GREENWOOD SCHOOL DISTRICT	2,777,816	181,947	181,947	363,894	0
GRESHAM SCHOOL DIST	2,045,661	133,990	133,992	267,982	0
HAMILTON SCHOOL DISTRICT	30,018,210	1,966,195	1,966,190	3,932,385	0
HARTFORD JT SCH DIST #1 ETAL	10,391,267	683,901	677,355	1,361,256	0
HARTFORD UNION HIGH SCH DIST	9,476,562	620,739	620,716	1,241,455	0
HARTLAND JT SCH DIST #3 ETAL	7,746,153	507,199	507,374	1,014,573	0
HAYWARD COMMUNITY SCHOOL DIST	11,171,266	731,716	731,720	1,463,436	0
HERMAN-NEOSHO-RUBICAN SD	2,313,519	151,535	151,536	303,071	0
HIGHLAND SCHOOL DISTRICT	1,517,471	99,393	99,395	198,789	0
HILBERT SCHOOL DISTRICT	2,829,443	186,442	185,329	371,771	0
HILLSBORO SCHOOL DISTRICT	3,874,276	253,732	253,734	507,466	0
HOLMEN SCHOOL DISTRICT	27,243,060	1,785,530	1,784,686	3,570,216	0
HOLY HILL AREA SCHOOL DIST	2,670,903	174,406	174,369	348,774	0
HORICON SCHOOL DISTRICT	4,716,268	308,917	308,915	617,831	0
HORTONVILLE AREA SCHOOL DIST	22,025,653	1,443,123	1,443,103	2,886,226	0
HOWARDS GROVE SCHOOL DISTRICT	5,787,409	386,311	379,075	765,386	0
HOWARD-SUAMICO SCHOOL DISTRICT	35,040,516	2,297,851	2,294,523	4,592,374	0
HUDSON SCHOOL DISTRICT	39,415,108	2,581,523	2,581,394	5,162,917	0
HURLEY SCHOOL DISTRICT	3,666,278	240,077	240,138	480,215	0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
HUSTISFORD SCHOOL DISTRICT	\$ 3,042,355	\$ 199,373	\$ 199,275	\$ 398,648	\$ 0
INDEPENDENCE SCHOOL DISTRICT	2,624,715	171,918	171,920	343,838	0
IOLA-SCANDINAVIA SCHOOL DIST	4,247,401	278,950	278,949	557,899	0
IOWA-GRANT SCHOOL DISTRICT	5,696,824	373,141	373,143	746,284	0
ITHACA SCHOOL DISTRICT	2,779,876	182,082	182,082	364,164	0
JANESVILLE SCHOOL DISTRICT	70,257,875	4,601,898	4,601,920	9,203,818	0
JEFFERSON SCHOOL DISTRICT	13,024,492	853,245	852,963	1,706,208	0
JOHNSON CREEK SCHOOL DISTRICT	4,339,523	284,239	284,238	568,478	0
JUDA SCHOOL DISTRICT	1,692,731	110,897	110,850	221,748	0
KANSASVILLE DOVER DIST #1	653,315	42,792	42,792	85,584	0
KAUKAUNA AREA SCHOOL DISTRICT	22,975,837	1,504,915	1,504,920	3,009,835	0
KENOSHA UNIFIED SCH DIST #1	154,669,147	10,143,519	10,136,085	20,279,604	0
KETTLE MORAINES SCHOOL DISTRICT	25,086,701	1,643,179	1,643,179	3,286,358	0
KEWASKUM SCHOOL DISTRICT	11,118,574	729,018	727,516	1,456,533	0
KEWAUNEE SCHOOL DISTRICT	5,568,591	364,741	364,744	729,485	0
KICKAPOO AREA SCHOOL DISTRICT	3,197,814	209,457	209,457	418,914	0
KIEL AREA SCHOOL DISTRICT	7,473,868	489,539	489,538	979,077	0
KIMBERLY AREA SCHOOL DISTRICT	28,289,386	1,852,959	1,852,951	3,705,910	0
KOHLER SCHOOL DISTRICT	4,154,780	273,394	270,883	544,276	0
LA CROSSE SCHOOL DISTRICT	56,240,559	3,683,760	3,683,753	7,367,513	0
LAC DU FLAMBEAU SCH DIST #1	7,049,273	461,727	461,728	923,455	0
LADYSMITH-HAWKINS SCH DIST	5,550,600	364,808	362,333	727,141	0
LAFARGE SCHOOL DISTRICT	1,835,469	120,223	120,223	240,446	0
LAKE COUNTRY SCH DIST	3,153,136	208,997	204,064	413,061	0
LAKE GENEVA JT SCH DIS #1 ETAL	11,966,822	783,826	783,828	1,567,654	0
LAKE GENEVA SCHOOL DISTRICT	10,824,304	708,991	708,993	1,417,984	0
LAKE HOLCOMBE SCHOOL DISTRICT	2,265,488	148,389	148,390	296,779	0
LAKE MILLS AREA SCHOOL DIST	9,307,783	609,658	609,661	1,219,320	0
LAKELAND UNION HIGH SCH DIST	6,906,336	452,404	452,326	904,730	0
LANCASTER COMM SCH DIST	6,503,307	425,965	425,968	851,933	0
LAONA SCHOOL DISTRICT	1,799,273	117,853	117,852	235,705	0
LENA PUBLIC SCHOOL DISTRICT	2,400,703	157,246	157,246	314,492	0
LINN JT SCH DIST #4 ETAL	965,501	63,273	63,208	126,481	0
LINN JT SCH DIST #6 ETAL	812,240	53,201	53,202	106,403	0
LITTLE CHUTE AREA SCHOOL DIST	9,469,109	620,227	620,226	1,240,453	0
LODI SCHOOL DISTRICT	10,468,473	685,684	685,685	1,371,370	0
LOMIRA SCHOOL DISTRICT	6,693,214	438,471	438,340	876,811	0
LOYAL SCHOOL DISTRICT	3,009,982	197,610	196,698	394,308	0
LUCK SCHOOL DISTRICT	3,344,689	219,077	219,077	438,154	0
LUXEMBURG-CASCO SCHOOL DIST	10,068,892	659,511	659,514	1,319,025	0
MADISON METRO SCHOOL DISTRICT	235,058,745	15,407,260	15,398,652	30,805,912	0
MANAWA SCHOOL DISTRICT	3,974,014	260,297	260,299	520,596	0
MANITOWOC PUBLIC SCHOOL DIST	34,383,231	2,252,098	2,252,106	4,504,203	0
MAPLE DALE-INDIAN HILL SCH DIS	4,051,479	265,371	265,372	530,744	0
MAPLE SCHOOL DISTRICT	7,828,467	512,765	512,764	1,025,529	0
MARATHON CITY SCHOOL DISTRICT	3,738,639	244,986	244,776	489,762	0
MARINETTE SCHOOL DISTRICT	11,477,490	753,348	750,203	1,503,551	0
MARION SCHOOL DISTRICT	2,028,424	132,861	132,862	265,724	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
MARKESAN SCHOOL DISTRICT	\$ 4,820,256	\$ 315,726	\$ 315,727	\$ 631,454	\$ 0
MARSHALL JT SCH DIST #2 ETAL	7,463,449	488,855	488,857	977,712	0
MARSHFIELD UNIFIED SCHOOL DIST	24,147,644	1,582,293	1,581,670	3,163,963	0
MAUSTON SCHOOL DISTRICT	9,094,254	595,881	595,445	1,191,326	0
MAYVILLE SCHOOL DISTRICT	7,517,392	492,389	492,390	984,778	0
MCFARLAND SCHOOL DISTRICT	17,679,634	1,158,015	1,158,018	2,316,032	0
MEDFORD AREA PUBLIC SCHL DIST	15,470,066	1,013,292	1,013,287	2,026,579	0
MELLEN SCHOOL DISTRICT	1,781,119	116,665	116,662	233,327	0
MELROSE-MINDORO SCHOOL DIST	4,745,633	310,665	310,664	621,329	0
MENASHA JOINT SCHOOL DISTRICT	23,662,868	1,549,917	1,549,919	3,099,836	0
MENOMINEE INDIAN SCHOOL DIST	8,749,220	573,073	573,075	1,146,148	0
MENOMONEE FALLS SCHOOL DISTRICT	27,891,049	1,838,640	1,826,864	3,665,504	0
MENOMONIE AREA SCHOOL DISTRICT	19,578,729	1,282,456	1,282,451	2,564,908	0
MEQUON-THIENSVILLE SCHOOL DIST	23,880,286	1,564,158	1,564,160	3,128,317	0
MERCER SCHOOL DISTRICT	1,395,589	91,411	91,411	182,822	0
MERRILL AREA COMMON PUB SCH	18,575,013	1,216,663	1,216,664	2,433,327	0
MERTON COMMUNITY SCHOOL DIST	4,922,267	323,550	322,408	645,959	0
MIDDLETON-CROSS PLNS SCH DIST	53,329,212	3,496,059	3,493,274	6,989,333	0
MILTON SCHOOL DISTRICT	21,583,970	1,413,959	1,413,731	2,827,690	0
MILWAUKEE TEACHERS RETIREM SYS	356,237,426	23,342,762	23,340,236	46,682,998	0
MINERAL POINT UNIF SCH DIST	4,507,507	295,241	295,243	590,483	0
MINOCQUA JT SCH DIST #1 M-H-LT	4,297,123	281,461	281,462	562,923	0
MISHICOT SCHOOL DISTRICT	5,315,253	348,149	348,149	696,298	0
MONDOVI SCHOOL DISTRICT	6,219,288	407,363	407,364	814,727	0
MONONA GROVE SCHOOL DISTRICT	23,223,050	1,521,109	1,521,111	3,042,220	0
MONROE SCHOOL DISTRICT	17,282,182	1,131,983	1,131,983	2,263,966	0
MONTELLO SCHOOL DISTRICT	4,830,711	316,405	316,406	632,811	0
MONTICELLO SCHOOL DISTRICT	2,691,483	176,292	176,292	352,584	0
MOSINEE SCHOOL DISTRICT	13,167,812	862,488	862,495	1,724,983	0
MOUNT HOREB AREA SCHOOL DIST	16,226,365	1,062,826	1,062,828	2,125,654	0
MUKWONAGO SCHOOL DISTRICT	28,546,336	1,869,782	1,869,788	3,739,570	0
MUSKEGO-NORWAY SCHOOL DISTRICT	30,853,430	2,024,353	2,020,902	4,045,254	0
NECEDAH AREA SCHOOL DISTRICT	4,700,371	307,874	307,875	615,749	0
NEENAH JOINT SCHOOL DISTRICT	39,173,107	2,565,838	2,565,839	5,131,677	0
NEILLSVILLE SCHOOL DISTRICT	5,155,827	338,052	337,706	675,759	0
NEKOOSA SCHOOL DISTRICT	6,369,068	417,173	417,174	834,348	0
NEW AUBURN SCHOOL DISTRICT	2,227,187	145,881	145,881	291,762	0
NEW BERLIN SCHOOL DISTRICT	26,311,995	1,723,436	1,723,436	3,446,871	0
NEW GLARUS SCHOOL DISTRICT	6,380,274	417,907	417,908	835,816	0
NEW HOLSTEIN SCHOOL DISTRICT	6,096,056	399,291	399,293	798,583	0
NEW LISBON SCHOOL DISTRICT	4,057,853	265,789	265,790	531,579	0
NEW LONDON SCHOOL DISTRICT	12,850,315	841,697	841,695	1,683,391	0
NEW RICHMOND SCHOOL DISTRICT	20,147,796	1,319,659	1,319,660	2,639,320	0
NIAGARA SCHOOL DISTRICT	2,938,647	192,481	192,482	384,963	0
NICOLET HIGH SCHOOL DISTRICT	11,190,302	733,062	732,867	1,465,930	0
NORRIS SCHOOL DISTRICT	1,313,484	86,033	86,033	172,066	0
NORTH CAPE CONSOLIDATED S D	1,384,325	90,674	90,673	181,347	0
NORTH CRAWFORD SCHOOL DISTRICT	3,309,439	216,919	216,617	433,537	0



## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
NORTH FOND DU LAC SCH DIST	\$ 8,866,533	\$ 580,758	\$ 580,758	\$ 1,161,516	\$ 0
NORTH LAKE SCHOOL DISTRICT	1,606,321	105,214	105,214	210,428	0
NORTH LAKELAND SCHOOL DISTRICT	1,645,934	107,809	107,809	215,617	0
NORTHERN OZAUKEE SCHOOL DIST	5,034,837	329,781	329,783	659,564	0
NORTHLAND PINES SCHOOL DIST	10,230,254	670,300	670,282	1,340,582	0
NORTHWOOD SCHOOL DISTRICT	2,635,762	172,642	172,643	345,285	0
NORWALK-ONTARIO SCHOOL DIST	4,693,668	307,435	307,435	614,870	0
NORWAY-RAYMOND JT#7 SD	587,356	38,472	38,472	76,944	60,865
OAK CREEK-FRANKLIN JT SCH DIST	40,891,781	2,680,049	2,676,774	5,356,823	0
OAKFIELD SCHOOL DISTRICT	3,778,637	248,492	246,509	495,001	0
OCONOMOWOC AREA SCHOOL DIST	31,292,288	2,049,645	2,049,645	4,099,290	0
OCONTO FALLS PUBLIC SCH DIST	10,993,997	720,574	718,387	1,438,961	0
OCONTO UNIFIED SCHOOL DISTRICT	6,368,240	417,118	417,121	834,239	0
OMRO SCHOOL DISTRICT	7,356,977	482,391	482,349	964,740	0
ONALASKA SCHOOL DISTRICT	20,687,391	1,355,024	1,355,024	2,710,048	0
OOSTBURG SCHOOL DISTRICT	5,964,142	390,652	390,651	781,303	0
OREGON SCHOOL DISTRICT	28,686,015	1,879,009	1,878,914	3,757,922	0
OSCEOLA SCHOOL DISTRICT	11,068,413	724,982	724,980	1,449,962	0
OSHKOSH AREA SCHOOL DISTRICT	65,452,916	4,287,390	4,287,380	8,574,770	0
OSSEO-FAIRCHILD SCHOOL DIST	5,538,808	362,793	362,791	725,584	0
OWEN-WITHEE SCHOOL DISTRICT	3,004,278	196,780	196,780	393,560	0
PALMYRA-EAGLE AREA SCHOOL DIST	5,035,079	329,798	329,798	659,595	0
PARDEEVILLE AREA SCHOOL DIST	5,230,173	342,576	342,577	685,153	470,197
PARIS JT SCH DIST #1 ETAL	1,343,926	88,027	88,027	176,054	0
PARKVIEW SCHOOL DISTRICT	5,564,318	364,462	364,464	728,926	0
PECATONICA AREA SCHOOL DIST	3,296,853	215,945	215,943	431,888	0
PEPIN AREA SCHOOL DISTRICT	1,972,132	129,175	129,175	258,349	0
PESHTIGO SCHOOL DISTRICT	6,636,596	434,697	434,697	869,394	0
PEWAUKEE SCHOOL DISTRICT	18,161,605	1,192,137	1,187,033	2,379,170	0
PHELPS SCHOOL DISTRICT	1,355,859	88,809	88,809	177,618	0
PHILLIPS SCHOOL DISTRICT	5,115,070	335,036	335,038	670,074	0
PITTSVILLE SCHOOL DISTRICT	3,743,707	245,213	245,213	490,426	0
PLATTEVILLE SCHOOL DISTRICT	9,290,184	608,507	608,507	1,217,014	0
PLUM CITY SCHOOL DISTRICT	1,631,931	106,891	106,892	213,783	0
PLYMOUTH JOINT SCHOOL DISTRICT	14,840,339	972,043	972,041	1,944,084	0
PORT EDWARDS SCHOOL DISTICT	2,885,959	189,134	188,927	378,061	0
PORT WASHINGTON-SAUKVILLE SCH	18,086,588	1,184,924	1,184,915	2,369,839	0
PORTAGE COMMUNITY SCHOOL DIST	14,914,925	976,702	976,707	1,953,408	0
POTOSI SCHOOL DISTRICT	2,487,484	162,930	162,930	325,860	0
POYNETTE SCHOOL DISTRICT	6,633,291	434,480	434,481	868,961	0
PRAIRIE DU CHIEN AREA SCH DIST	8,315,218	544,646	544,647	1,089,294	0
PRAIRIE FARM PUBLIC SCH DIST	2,354,936	154,249	154,248	308,497	0
PRENTICE SCHOOL DISTRICT	2,566,776	168,123	168,124	336,248	0
PRESCOTT SCHOOL DISTRICT	8,320,537	544,995	544,995	1,089,990	0
PRINCETON SCHOOL DISTRICT	2,240,580	147,335	146,050	293,385	0
PULASKI COMMUNITY SCHOOL DIST	24,726,508	1,620,330	1,620,311	3,240,641	0
RACINE UNIFIED SCHOOL DISTRICT	141,347,768	9,263,076	9,263,613	18,526,689	0
RANDALL JT SCH DIST #1 ETAL	4,424,796	289,824	289,824	579,648	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
RANDOLPH SCHOOL DISTRICT	\$ 3,525,443	\$ 231,571	\$ 230,262	\$ 461,833	\$ 0
RANDOM LAKE SCHOOL DISTRICT	5,165,649	338,350	338,350	676,700	0
RAYMOND SCH DIST #14	2,451,079	160,546	160,545	321,091	0
REEDSBURG SCHOOL DISTRICT	18,911,714	1,238,713	1,238,721	2,477,434	0
REEDSVILLE SCHOOL DISTRICT	3,827,691	250,714	250,714	501,428	0
RHINELANDER SCHOOL DISTRICT	15,256,915	999,326	999,330	1,998,656	0
RIB LAKE SCHOOL DISTRICT	2,857,212	187,147	187,147	374,295	0
RICE LAKE AREA SCHOOL DISTRICT	15,787,084	1,034,505	1,033,603	2,068,108	0
RICHLAND SCHOOL DISTRICT	8,294,027	543,260	543,258	1,086,518	0
RICHMOND SCHOOL DISTRICT	2,245,178	147,059	147,059	294,118	0
RIO COMMUNITY SCHOOL DISTRICT	2,997,204	197,687	196,317	394,005	0
RIPON AREA SCHOOL DISTRICT	10,008,813	655,584	655,571	1,311,155	0
RIVER FALLS SCHOOL DISTRICT	20,186,130	1,322,193	1,322,190	2,644,383	0
RIVER RIDGE SCHOOL DISTRICT	3,712,760	243,187	243,185	486,372	0
RIVER VALLEY SCHOOL DISTRICT	8,047,521	527,112	527,113	1,054,225	0
RIVERDALE SCHOOL DISTRICT	3,748,130	245,503	245,353	490,856	0
ROSENDALE-BRANDON SCHOOL DIST	6,000,765	393,050	393,050	786,100	0
ROSHOLT SCHOOL DISTRICT	3,247,402	216,878	216,600	433,479	0
ROYALL SCHOOL DISTRICT	3,777,827	247,777	247,770	495,547	0
SALEM SCHOOL DISTRICT	6,711,595	439,609	439,610	879,219	359,757
SAUK PRAIRIE SCHOOL DISTRICT	18,062,838	1,183,114	1,183,118	2,366,232	0
SENECA SCHOOL DISTRICT	1,769,694	115,915	115,915	231,830	0
SEVASTOPOL SCHOOL DISTRICT	4,789,639	313,723	313,724	627,447	0
SEYMOUR COMMUNITY SCHOOL DIST	13,476,406	882,703	882,706	1,765,409	0
SHARON JT SCH DIST # 11 ETAL	1,603,487	105,153	104,904	210,057	0
SHAWANO SCHOOL DIST	14,754,859	966,442	966,445	1,932,887	0
SHEBOYGAN AREA SCHOOL DISTRICT	67,783,841	4,439,838	4,439,845	8,879,683	0
SHEBOYGAN FALLS SCHOOL DIST	10,796,811	707,191	707,191	1,414,382	0
SHELL LAKE SCHOOL DISTRICT	4,467,851	293,511	293,485	586,996	0
SHIOCTON SCHOOL DISTRICT	4,932,704	323,092	323,092	646,184	0
SHOREWOOD SCHOOL DISTRICT	17,122,530	1,121,654	1,121,515	2,243,169	0
SHULLSBURG SCHOOL DISTRICT	2,440,521	159,854	159,854	319,708	51,167
SILVER LAKE JT SCH DIS #1 ETAL	2,521,496	165,158	165,158	330,316	0
SIREN SCHOOL DISTRICT	3,600,815	235,853	235,853	471,707	0
SLINGER SCHOOL DISTRICT	17,527,303	1,148,037	1,148,039	2,296,077	0
SOLON SPRINGS SCHOOL DISTRICT	2,132,356	139,669	139,670	279,339	0
SOMERSET SCHOOL DISTRICT	10,265,754	672,406	672,407	1,344,814	0
SOUTH MILWAUKEE SCHOOL DIST	21,846,435	1,440,910	1,440,658	2,881,569	0
SOUTH SHORE SCHOOL DISTRICT	1,565,882	102,565	102,565	205,131	0
SOUTHERN DOOR COUNTY SCH DIST	7,251,034	474,943	474,943	949,885	0
SOUTHWESTERN WISC COMM SCH DIS	2,729,553	178,785	178,786	357,572	0
SPARTA AREA SCHOOL DISTRICT	18,637,290	1,220,901	1,220,584	2,441,485	0
SPENCER SCHOOL DISTRICT	3,518,043	230,432	230,431	460,864	0
SPOONER AREA SCHOOL DISTRICT	7,744,713	507,279	507,278	1,014,557	0
SPRING VALLEY SCHOOL DISTRICT	4,785,517	315,648	313,452	629,099	0
ST CROIX CENTRAL SCH DIST	10,667,408	698,715	698,716	1,397,431	0
ST CROIX FALLS SCHOOL DISTRICT	7,611,079	498,525	498,526	997,051	0
ST FRANCIS SCHOOL DISTRICT #6	6,998,393	458,394	458,395	916,790	0



## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
STANLEY-BOYD AREA SCHOOL DIST	\$ 6,366,817	\$ 417,027	\$ 417,026	\$ 834,053	\$ 0
STEVENS POINT AREA PUB SCH DIS	46,154,699	3,023,965	3,022,490	6,046,456	0
STOCKBRIDGE SCH DIST	1,330,236	87,130	87,130	174,261	0
STONE BANK SCHOOL DISTRICT	2,418,989	157,312	159,576	316,888	0
STOUGHTON AREA SCHOOL DISTRICT	21,452,657	1,405,156	1,405,160	2,810,316	0
STRATFORD SCHOOL DISTRICT	5,044,826	330,435	330,437	660,872	0
STURGEON BAY SCHOOL DISTRICT	8,782,307	575,303	575,241	1,150,543	0
SUN PRAIRIE AREA SCH DIS	59,095,196	3,870,731	3,870,739	7,741,471	0
SUPERIOR SCHOOL DISTRICT	32,269,037	2,184,228	2,082,845	4,267,073	0
SURING PUBLIC SCHOOL DISTRICT	2,535,132	166,051	166,051	332,102	0
SWALLOW SCHOOL DISTRICT	2,775,964	181,826	181,825	363,651	0
THORP SCHOOL DISTRICT	3,819,646	250,319	250,187	500,506	0
THREE LAKES SCHOOL DISTRICT	4,903,966	321,210	321,210	642,420	0
TIGERTON SCHOOL DISTRICT	1,425,684	93,382	93,383	186,765	0
TOMAH AREA SCHOOL DISTRICT	19,888,456	1,302,695	1,302,693	2,605,388	0
TOMAHAWK SCHOOL DISTRICT	8,371,757	549,644	549,582	1,099,227	0
TOMORROW RIVER SCHOOL DISTRICT	6,882,963	450,835	450,833	901,668	0
TREVOR-WILMOT CONS GR S.D.	3,676,869	240,818	239,638	480,455	0
TRI-COUNTY AREA SCH DIST-PLNFD	4,247,857	278,235	278,234	556,469	0
TURTLE LAKE SCHOOL DISTRICT	2,817,562	184,549	184,552	369,101	0
TWIN LAKES SCH DIST #4	2,530,911	171,899	166,650	338,550	0
TWO RIVERS PUBLIC SCHOOL DIST	11,117,641	728,204	728,207	1,456,411	0
UNION GROVE JT SCH DIS #1 ETAL	5,266,053	344,927	344,926	689,853	0
UNION GROVE UNION HIGH SCH DIS	5,696,879	373,151	373,140	746,291	0
UNITY SCHOOL DISTRICT	6,440,792	421,996	421,747	843,744	0
VALDERS AREA SCHOOL DISTRICT	6,406,234	419,608	419,609	839,217	0
VERONA AREA SCHOOL DISTRICT	39,829,301	2,608,907	2,608,854	5,217,761	0
VIROQUA AREA SCHOOL DISTRICT	7,202,062	471,733	471,737	943,470	0
WABENO AREA SCHOOL DISTRICT	3,565,685	233,551	233,553	467,105	0
WALWORTH JT SCH DIST # 1 ETAL	2,476,724	162,227	162,224	324,451	0
WASHBURN SCHOOL DISTRICT	4,105,428	270,090	270,080	540,170	0
WASHINGTON SCHOOL DISTRICT	598,143	39,227	39,129	78,357	71,213
WASHINGTON-CALDWELL SCH DIST	1,068,052	69,957	69,958	139,915	0
WATERFORD UNION HIGH SCH DIST	8,181,809	536,310	535,507	1,071,817	0
WATERFORD VIL JT SCH DIST #1	8,954,109	586,494	586,494	1,172,988	0
WATERLOO SCHOOL DISTRICT	5,047,581	330,615	330,618	661,233	0
WATERTOWN UNIFIED SCHOOL DIST	23,979,985	1,570,688	1,570,690	3,141,378	0
WAUKESHA SCHOOL DISTRICT	85,711,953	5,614,229	5,614,177	11,228,406	0
WAUNAKEE COMMUNITY SCHOOL DIST	29,182,832	1,911,484	1,911,487	3,822,971	0
WAUPACA SCHOOL DISTRICT	14,705,587	963,214	963,218	1,926,432	0
WAUPUN AREA SCHOOL DISTRICT	12,142,804	795,352	795,355	1,590,707	0
WAUSAU SCHOOL DISTRICT	59,187,191	3,876,757	3,876,765	7,753,522	0
WAUSAUKEE SCHOOL DISTRICT	2,891,563	189,402	189,398	378,800	0
WAUTOMA AREA SCHOOL DISTRICT	8,806,685	576,837	576,839	1,153,676	0
WAUWATOSA SCHOOL DISTRICT	44,744,929	2,930,790	2,930,796	5,861,586	0
WAUZEKA JT SCH DIST ETAL	2,073,715	135,828	135,828	271,657	0
WEBSTER SCHOOL DISTRICT	4,629,394	303,219	303,219	606,438	0
WEST ALLIS-WEST MILW SCH DIST	51,738,875	3,389,163	3,389,137	6,778,299	0



Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
WEST BEND JT SCH DIST #1	\$ 41,593,855	\$ 2,724,514	\$ 2,724,281	\$ 5,448,795	\$ 0
WEST DEPERE SCHOOL DISTRICT	19,089,121	1,250,337	1,250,338	2,500,675	0
WEST SALEM SCHOOL DISTRICT	11,831,851	788,311	787,427	1,575,738	0
WESTBY AREA SCHOOL DISTRICT	6,602,176	432,442	432,443	864,885	0
WESTFIELD SCHOOL DISTRICT	6,306,956	413,105	413,106	826,211	0
WESTON SCHOOL DISTRICT	2,046,698	134,115	134,003	268,117	0
WESTOSHA CENTRAL HIGH SCH DIST	7,316,932	479,371	479,182	958,554	0
WEYAUWEGA-FREMONT SCHOOL DIST	5,134,837	337,248	335,480	672,728	0
WHEATLAND JT SCH DIST #1 ETAL	3,726,979	244,117	244,117	488,234	0
WHITE LAKE SCHOOL DISTRICT	1,138,689	74,584	74,584	149,168	0
WHITEFISH BAY SCHOOL DISTRICT	19,099,489	1,251,016	1,251,017	2,502,033	0
WHITEHALL SCHOOL DISTRICT	4,779,821	313,079	313,078	626,157	0
WHITEWATER UNIFIED SCHOOL DIST	12,805,419	841,204	840,121	1,681,324	0
WHITNALL SCHOOL DISTRICT	16,805,701	1,100,773	1,100,774	2,201,547	0
WILD ROSE SCHOOL DISTRICT	3,416,956	223,811	223,810	447,621	0
WILLIAMS BAY SCHOOL DISTRICT	4,206,919	277,835	274,239	552,074	0
WILMOT UNION HIGH SCHOOL DIST	8,707,069	578,254	570,314	1,148,567	0
WINNECONNE COMM SCHOOL DIST	9,724,307	636,942	636,942	1,273,884	0
WINTER SCHOOL DISTRICT	2,103,412	137,774	137,773	275,547	0
WISCONSIN DELLS SCHOOL DIST	11,007,142	720,967	720,968	1,441,936	0
WISCONSIN HEIGHTS SCHOOL DIST	5,477,528	358,780	358,776	717,556	0
WISCONSIN RAPIDS SCHOOL DIST	33,267,434	2,179,015	2,179,019	4,358,034	0
WITTENBERG-BIRNAMWOOD SCH DIST	7,075,729	463,458	463,462	926,921	0
WONEWOC & UNION CENTER SCH DIS	2,070,296	135,604	135,604	271,209	0
WRIGHTSTOWN COMMUNITY SCH DIST	7,363,175	482,287	482,289	964,576	0
YORKVILLE JT SCH DIST #2 ETAL	2,644,479	173,213	173,214	346,427	0
Total School Districts (421)	\$ 5,496,119,019	\$ 360,287,615	\$ 359,943,917	\$ 720,231,532	\$ 1,013,199
<b>Technical Colleges</b>					
BLACKHAWK TECHNICAL COLLEGE	\$ 14,821,564	\$ 993,041	\$ 993,049	\$ 1,986,090	\$ 0
CHIPPEWA VALLEY TECH COLLEGE	33,039,627	2,213,645	2,213,665	4,427,310	0
FOX VALLEY TECHNICAL COLLEGE	64,604,732	4,328,504	4,328,530	8,657,034	0
GATEWAY TECH COLLEGE	47,548,247	3,185,722	3,185,743	6,371,465	0
LAKESHORE TECHNICAL COLLEGE	18,788,429	1,258,820	1,258,830	2,517,650	0
MADISON AREA TECH COLLEGE	97,563,128	6,536,729	6,536,730	13,073,459	0
MID-STATE TECHNICAL COLLEGE	15,813,238	1,059,483	1,059,491	2,118,974	0
MILWAUKEE AREA TECH COLLEGE	111,634,556	7,479,482	7,479,548	14,959,031	0
MORAINES PARK TECHNICAL COLLEGE	27,183,686	1,821,300	1,821,314	3,642,614	0
NICOLET AREA TECHNICAL COLLEGE	11,724,134	785,513	785,521	1,571,034	0
NORTH CENTRAL TECH COLLEGE	26,334,881	1,764,430	1,764,444	3,528,874	0
NORTHEAST WISC TECH COLLEGE	55,894,579	3,744,924	3,744,950	7,489,874	0
SOUTHWEST WISC TECH COLLEGE	11,883,774	796,209	796,216	1,592,426	0
WAUKESHA CO TECHNICAL COLLEGE	40,370,063	2,704,785	2,704,804	5,409,588	0
WESTERN TECH COLLEGE	28,095,740	1,882,414	1,882,415	3,764,829	0
WISCONSIN INDIANHEAD TECH COLL	25,646,897	1,718,334	1,718,350	3,436,684	0
Total Technical Colleges (16)	\$ 642,362,561	\$ 42,140,506	\$ 42,097,937	\$ 84,238,443	\$ 0

## CONTRIBUTIONS PAID AND UAAL

Name	Contributions				Unfunded Liability Balance
	Covered Payroll	Employer Paid*	Employee Paid	Total	
<b>CESAs</b>					
CESA #1	\$ 5,272,692	\$ 345,361	\$ 345,361	\$ 690,723	\$ 0
CESA #2	6,854,889	448,995	448,996	897,990	0
CESA #3, FENNIMORE	1,721,509	112,758	112,759	225,518	0
CESA #4, LACROSSE	2,363,004	154,776	154,777	309,554	0
CESA #5, PORTAGE	11,007,310	720,978	720,979	1,441,958	0
CESA #6, OSHKOSH	8,091,189	529,973	529,973	1,059,946	0
CESA #7, GREEN BAY	7,089,824	464,384	464,382	928,767	0
CESA #8, GILLETT	4,847,479	317,509	317,511	635,020	0
CESA #9, TOMAHAWK	2,280,080	149,345	149,345	298,690	0
CESA #10, CHIPPEWA FALLS	8,359,885	547,572	547,573	1,095,145	0
CESA #11	7,195,681	471,360	471,317	942,677	0
CESA #12, ASHLAND	2,062,191	135,073	135,074	270,147	0
Total CESAs (12)	\$ 67,145,733	\$ 4,398,086	\$ 4,398,048	\$ 8,796,134	\$ 0
<b>Total WRS (1516)</b>	<b>\$ 14,832,491,877</b>	<b>\$ 1,111,685,759</b>	<b>\$ 965,578,542</b>	<b>\$ 2,077,264,301</b>	<b>\$ 10,850,498</b>

\* Includes contributions for WRS, Accumulated Sick Leave Conversion and Duty Disability