



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

Wisconsin Department  
 of Employee Trust Funds  
 PO Box 7931  
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## *Correspondence Memorandum*

**Date:** February 9, 2021

**To:** Group Insurance Board

**From:** Eileen Mallow, Director  
 Office of Strategic Health Policy

**Subject:** Legislative Audit Bureau Report on Group Health Insurance Program

**This item is informational only. No Board action is required.**

During 2018, the Legislative Audit Bureau (LAB) conducted an audit of Group Health Insurance Program operations for the previous 10 years. The report included 30 recommendations relating to program operations and Board governance. In implementing the recommendations, ETF has worked to improve clarity and timeliness of communications with the Board, document policies where appropriate, and tighten oversight of vendors.


During 2020, the LAB reviewed ETF's progress towards implementing the recommendations in the audit report. Review was primarily conducted through attendance by LAB staff at Board meetings and review of meeting minutes. The LAB review was included with its report on ETF's Comprehensive Annual Financial Report (CAFR) that was released on February 12, 2021. A copy of the report has also been made available to you (Attachment).

In its findings, the LAB acknowledged that ETF and the Board have implemented 24 of the 30 original findings, partially implemented five recommendations and have not begun implementation on one recommendation (related to an audit that was not scheduled until 2021) (Attachment B, pages 45-47). We expect to bring a more complete status report to you at the May meeting.

Staff will be available at the meeting to answer any questions.

Attachment A: ETF's Comprehensive Annual Financial Report  
 Attachment B: Department of Employee Trust Funds Audit, Report 21-3

Reviewed and approved by John Voelker, Deputy Secretary



Electronically Signed 2/12/21

| Board | Mtg Date | Item # |
|-------|----------|--------|
| GIB   | 2.17.21  | 3      |

# COMPREHENSIVE ANNUAL FINANCIAL REPORT 2019

Attachment A

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  
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1-877-533-5020  
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services, or employment. If you are  
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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  
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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, disability, 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)

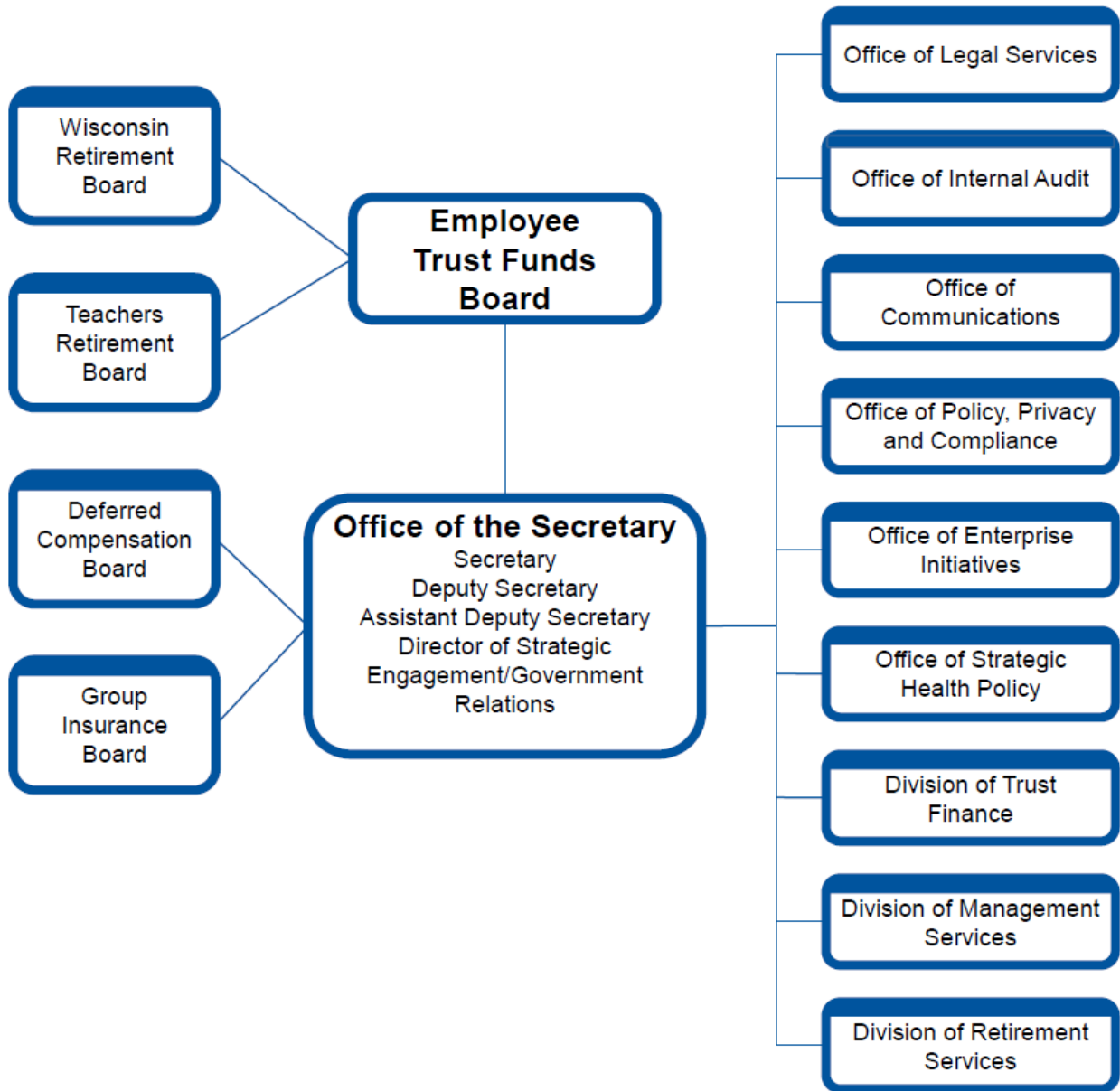
**Jason Rothenberg**

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

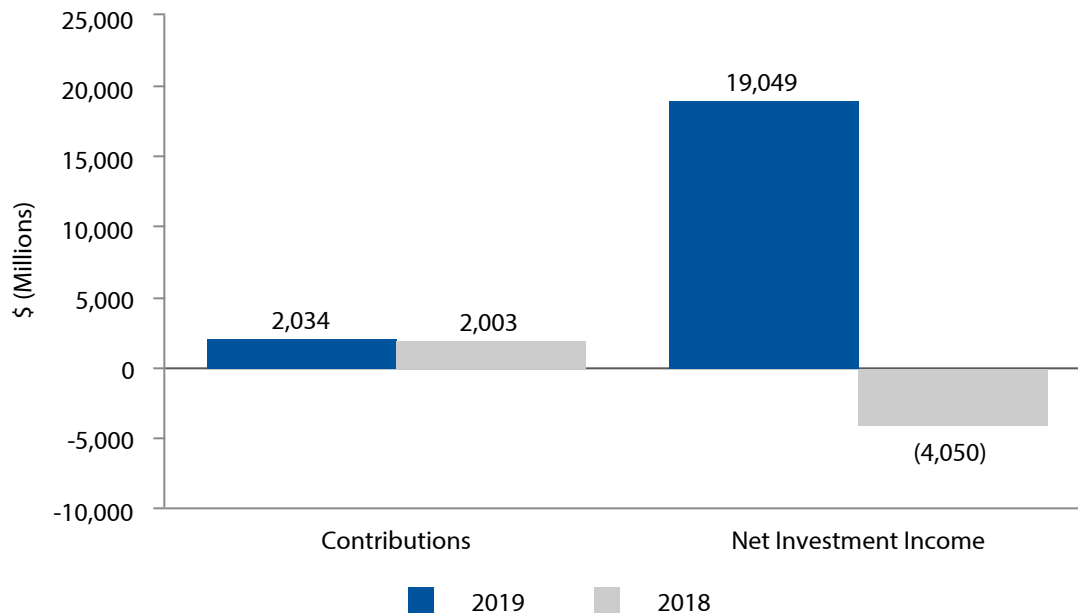
Other Payables increased by \$1.6 billion, or 44.5%, when comparing calendar year-end 2019 to 2018 primarily relating to Short Sell Obligations. Short sale transactions are created when a security not owned by the portfolio is sold in anticipation of purchasing the security at a lower price in the future. 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.



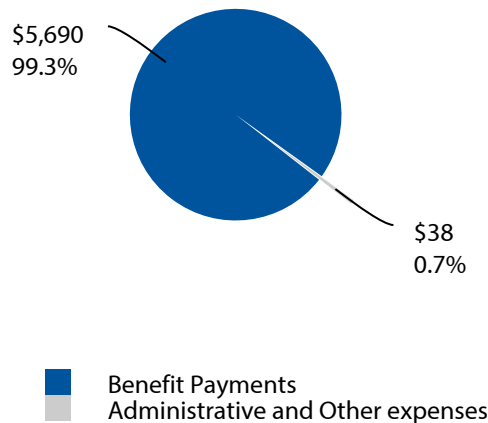
FINANCIAL SECTION

**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.

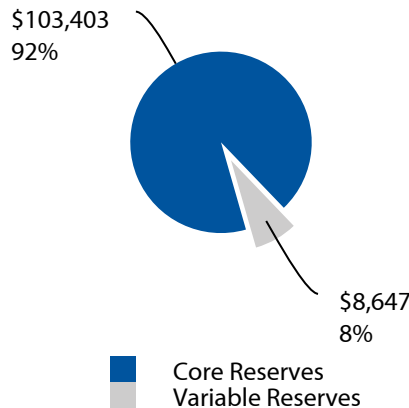
**Expenses as of December 31, 2019  
(In Millions)**



## 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.



## FINANCIAL SECTION

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                           |

Continued from previous page

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



**Wisconsin Department of Employee Trust Funds**  
**Statement of Changes in Fiduciary Net Position**  
**For the Year Ended December 31, 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.

Continued on next page





## FINANCIAL SECTION

**Wisconsin Department of Employee Trust Funds**  
**Statement of Changes in Fiduciary Net Position**  
**For the Year Ended December 31, 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<br>Insurance | Health<br>Insurance | Income<br>Continuation<br>Insurance | Accumulated Sick<br>Leave Conversion<br>Credit | State Retiree<br>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<br>Disability<br>Insurance | Health Insurance  | Income<br>Continuation<br>Insurance | Accumulated Sick<br>Leave Conversion<br>Credit | State Retiree<br>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/<br>CB   | Health<br>Insurance | SRH              | LRH             | Life<br>Insurance | SRL          | LRL          | DDI         | ICI           | ASLCC         | SHICC            | Deferred<br>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.



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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.



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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<br/>Credit Quality Distribution<br/>As of December 31, 2019</b><br>(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</b><br><b>Reverse Repurchase Agreements</b><br><b>Counterparty Credit Exposure</b><br><b>As of December 31, 2019</b><br>(In Thousands) |              |
|--|--------------|
| 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>&lt; 5 Years</u>              | <u>5 - 10 Years</u> | <u>&gt; 10 Years</u> | <u>N/A</u>          | <u>Total</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<br>Frequency             | Redemption<br>Notice Period<br>(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<br/>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<br/>Credit Rating</b> | <b>FX Receivables</b> | <b>Swap<br/>Receivables</b> | <b>To Be<br/>Announced<br/>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<br/>Futures Contracts<br/>As of December 31, 2019<br/>(In Thousands)</b> |                 |                   |                        |                    |
|--|-----------------|-------------------|------------------------|--------------------|
| <b>Futures Contract Description</b>  | <b>Position</b> | <b>Expiration</b> | <b>Notional Amount</b> | <b>Fair Value*</b> |
| Commodity  | Long            | Jan 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  |                 |                   | <u>\$ 8,623,289</u>    | <u>\$ (29,912)</u> |

\* 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<br/>Open Swap Positions<br/>As of December 31, 2019</b><br>(In Thousands) |               |  |                   |                  |                        |
|---|---------------|--|-------------------|------------------|------------------------|
| 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<br/>TBA Contracts<br/>As of December 31, 2019</b><br>(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.





FINANCIAL SECTION

» *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<br/>1/1/2000</b> | <b>Service Between<br/>2000 and 2011</b> | <b>Service After<br/>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.



FINANCIAL SECTION

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.



FINANCIAL SECTION

**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<br>(In Millions) | Percentage<br>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.



FINANCIAL SECTION

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

The following presents the plan’s Net Pension Liability (Asset), calculated using a single discount rate of 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<br/>(6.0%)</b> | <b>Current<br/>Discount Rate<br/>(7.0%)</b> | <b>1% Increase<br/>(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<br/>(6.0%)</b> | <b>Current<br/>Discount Rate<br/>(7.0%)</b> | <b>1% Increase<br/>(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.





FINANCIAL SECTION

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.



FINANCIAL SECTION

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

**Premium Setting:** Premiums 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         |
| <b>Totals</b>          | <b>85,366</b> | <b>123,257</b> | <b>208,623</b> |

\*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<br>Employer Contribution Rates<br>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<br/>Member Contribution Rates<br/>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<br/>Contributions Earned<br/>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:

| State and Local Retiree Life Insurance<br>Asset Allocation Targets and Expected Returns<br>As of December 31, 2019 |                                   |                   |  |
|--|-----------------------------------|-------------------|--|
| 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<br/>Schedule of Investment Returns<br/>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<br/>(1.84%)</b> | <b>Current<br/>Discount Rate<br/>(2.84%)</b> | <b>1% Increase<br/>(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):

|                             | <b>1% Decrease<br/>(1.87%)</b> | <b>Current<br/>Discount Rate<br/>(2.87%)</b> | <b>1% Increase<br/>(3.87%)</b> |
|-----------------------------|--------------------------------|--|--------------------------------|
| 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<br/>(6.00%)</b> | <b>Current<br/>Discount Rate<br/>(7.00%)</b> | <b>1% Increase<br/>(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<br/>(2.20%)</b> | <b>Current<br/>Healthcare Cost Trend<br/>Rate Assumption<br/>(3.20%)</b> | <b>1% Increase<br/>(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                                      | 18,605,966     | 1,965,060       | 20,571,026       |
| <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                                     | 4,319,870      | 378,634         | 4,698,504        |
| Net Increase (Decrease)                              | 14,286,096     | 1,586,426       | 15,872,522       |
| <b>Net Investment Position Held in Trust</b>         |                |                 |                  |
| Beginning of Year                                    | 93,486,370     | 7,099,889       | 100,586,259      |
| End of Year  | \$ 107,772,466 | \$ 8,686,315    | \$ 116,458,781   |

\*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

## FINANCIAL SECTION

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    |
|---|-----------|-----------|-----------|-----------|---------|---------|---------|---------|----------|---------|
| <b>1. Net Earned Required Contributions and Investment Revenues</b>                             | \$ 25.0   | \$ 16.6   | \$ 25.0   | \$ 25.7   | \$ 20.5 | \$ 16.3 | \$ 27.1 | \$ 38.3 | \$ 24.7  | \$ 54.7 |
| <b>2. Unallocated Expense</b>   | 2.0       | 2.3       | 1.9       | 2.0       | 5.7     | 1.8     | 3.0     | 1.8     | 2.7      | 3.0     |
| <b>3. Estimated Incurred Claims and Expenses as of the End of the Policy Year</b>               | 34.3      | 42.4      | 33.4      | 36.0      | 20.5    | 22.8    | 20.7    | 17.7    | 19.2     | 22.6    |
| <b>4. Paid Claims (Cumulative) as of Year-End:</b>  |           |           |           |           |         |         |         |         |          |         |
| 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      |           |           |           |         |         |         |         |          |         |
| <b>5. Re-estimated Incurred Claims and Expenses:</b>  |           |           |           |           |         |         |         |         |          |         |
| 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      |           |           |           |         |         |         |         |          |         |
| <b>6. Increase (Decrease) in Estimated Incurred Claims and Expenses from End of Policy Year</b> | \$ (10.0) | \$ (22.4) | \$ (12.0) | \$ (11.0) | \$ 1.5  | \$ 0.1  | \$ 0.3  | \$ 1.9  | \$ (0.1) | \$ 0.0  |





FINANCIAL SECTION

**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<br/>Year Ending<br/>December 31,</b> | <b>Actuarially<br/>Determined<br/>Contributions</b> | <b>Actual<br/>Contributions</b> | <b>Contribution<br/>Deficiency<br/>(Excess)</b> | <b>Covered<br/>Payroll</b> | <b>Actual<br/>Contributions as<br/>a % of Covered<br/>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<br/>Year Ending<br/>December 31,</b> | <b>Actuarially<br/>Determined<br/>Contributions</b> | <b>Actual<br/>Contributions</b> | <b>Contribution<br/>Deficiency<br/>(Excess)</b> | <b>Covered<br/>Payroll</b> | <b>Actual<br/>Contributions as<br/>a % of Covered<br/>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 |

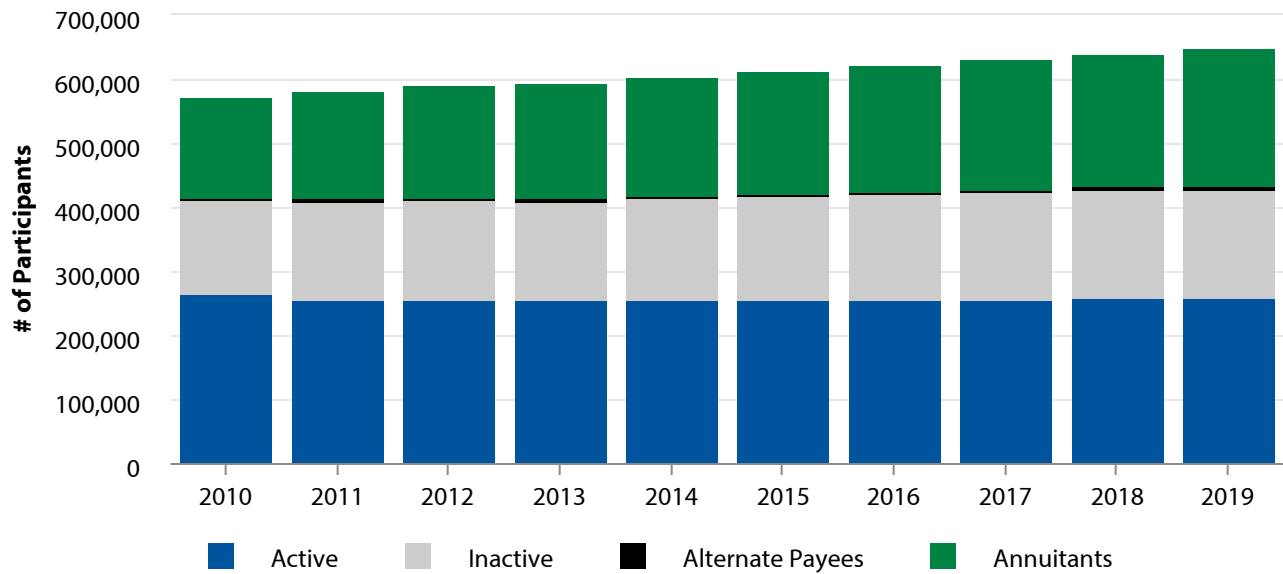


STATISTICAL SECTION

**Total WRS Participants**

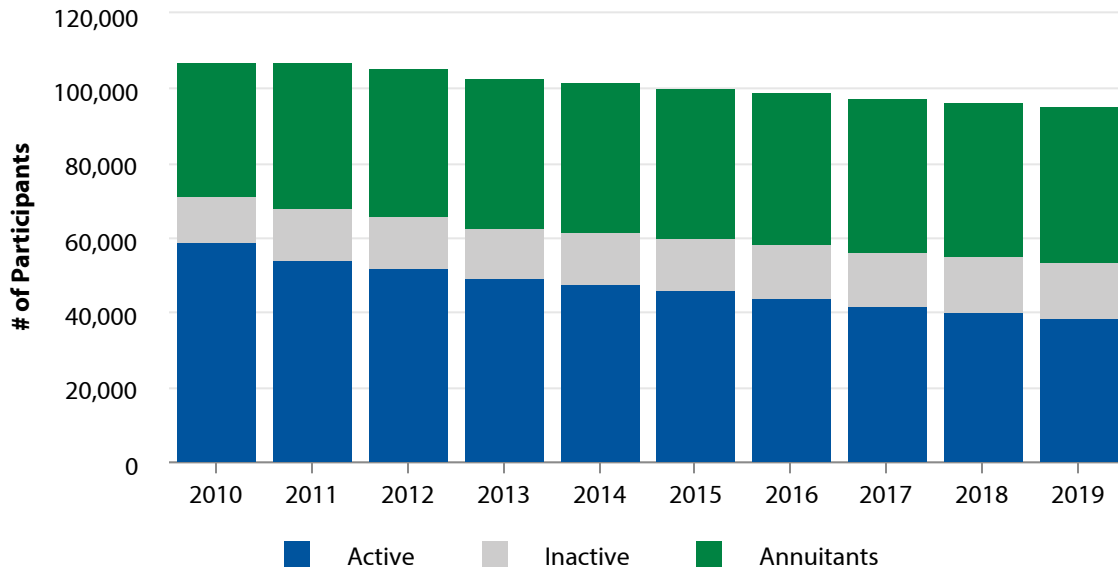
| Year | Active  | Inactive | Alternate Payees | Annuitants | Total Participants |
|------|---------|----------|------------------|------------|--------------------|
| 2010 | 266,629 | 145,803  | 4,012            | 155,775    | 572,219            |
| 2011 | 257,254 | 153,123  | 4,063            | 167,453    | 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**


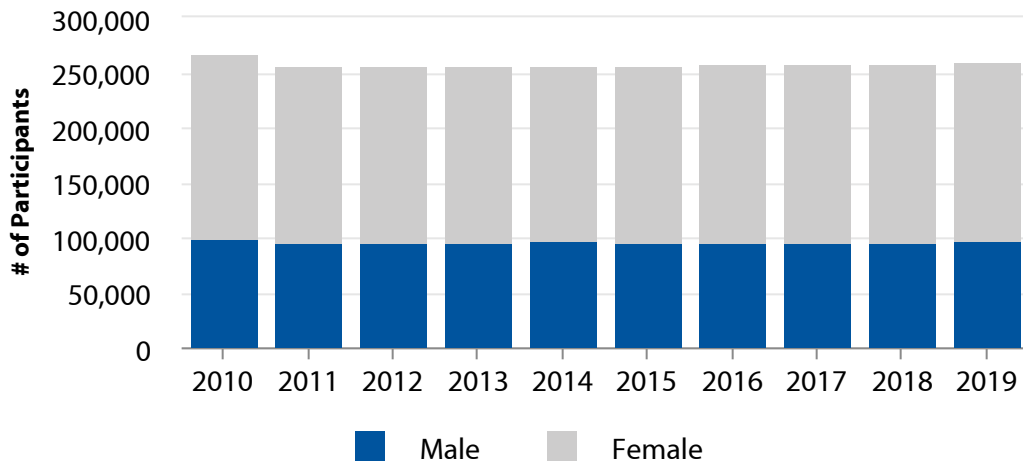


STATISTICAL SECTION

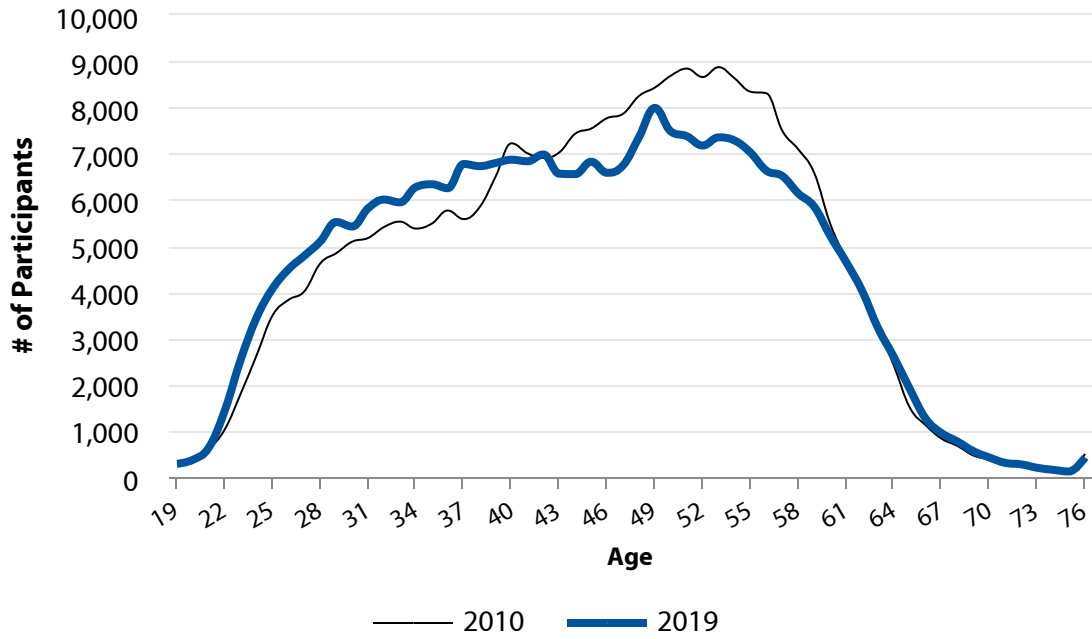
**Active WRS Participants by Gender**

| 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 |

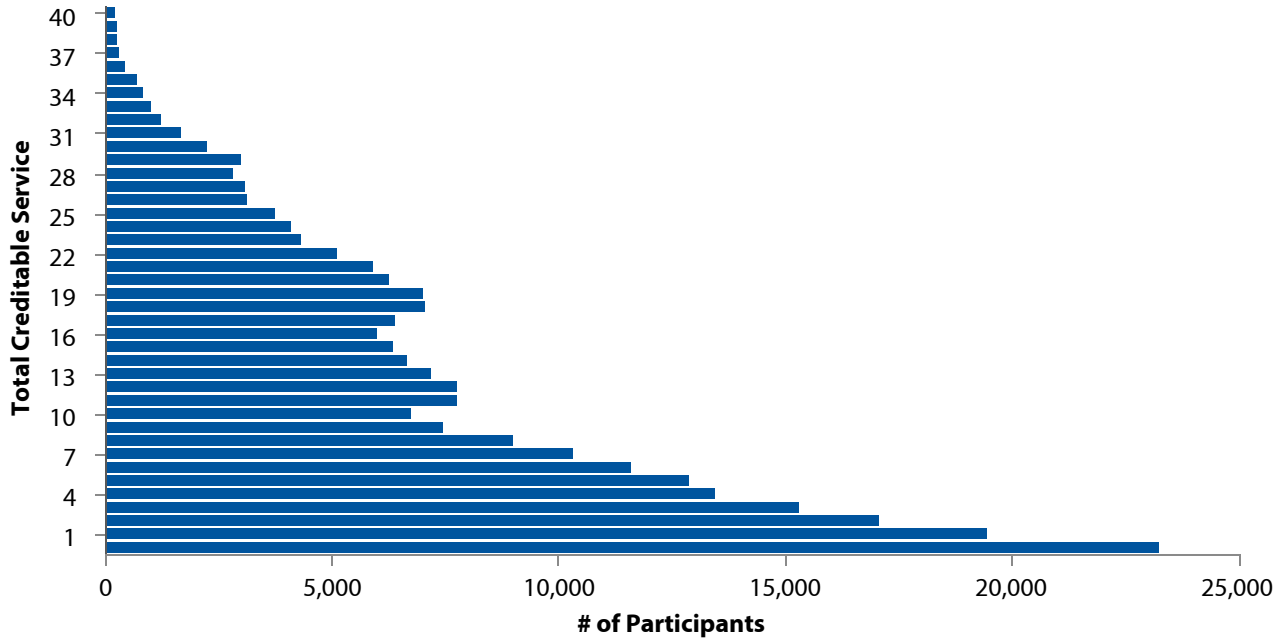
**Active WRS Participants by Gender**



**WRS Active Participants by Age**



**WRS Active Participants by Creditable Service**





STATISTICAL SECTION

**WRS Covered Payroll by Employer Type**

(In Millions)

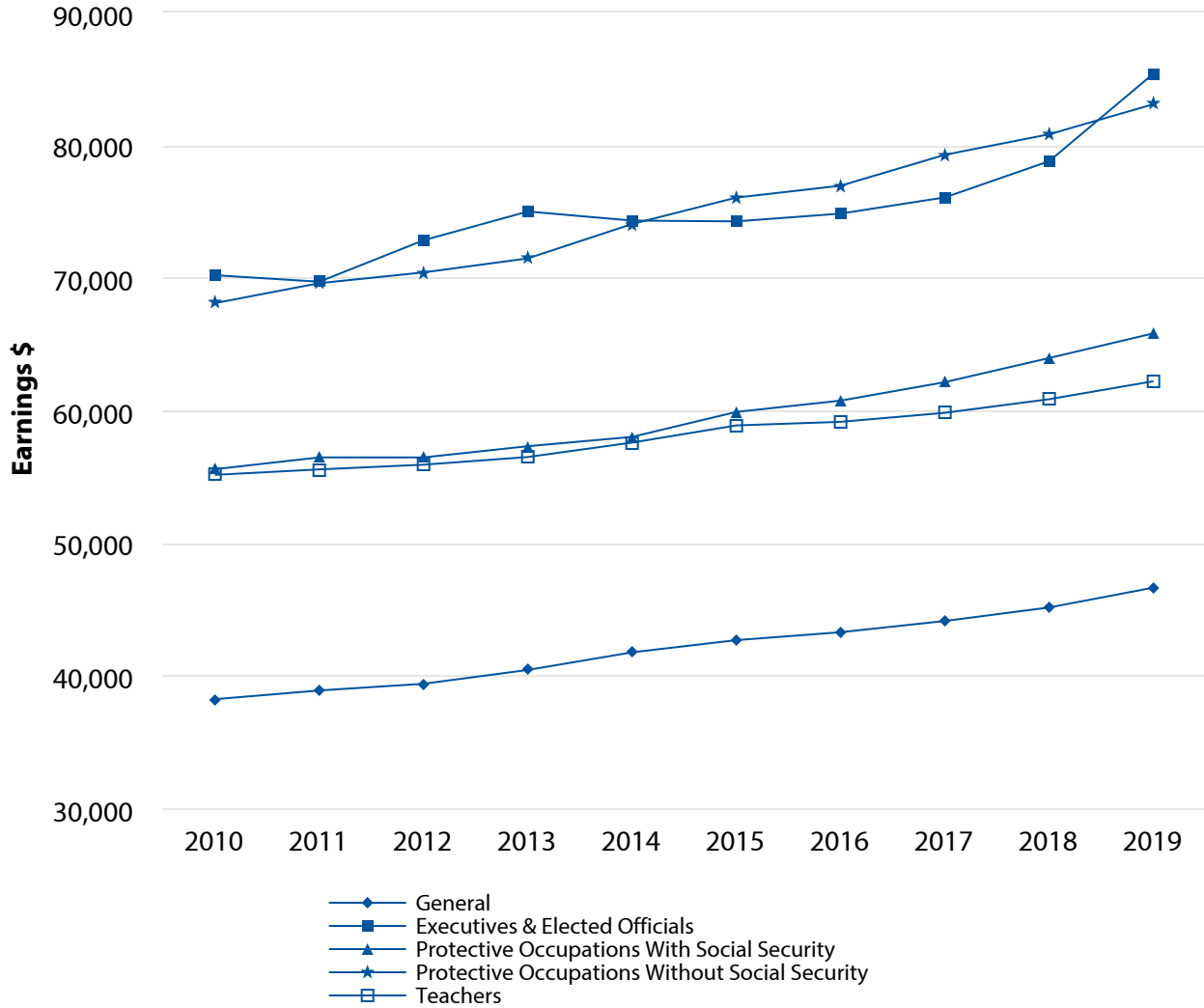
| Local Employers |                  |          |         |                    |          |       |                   |         |
|-----------------|------------------|----------|---------|--------------------|----------|-------|-------------------|---------|
| Year            | School Districts | Counties | 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**

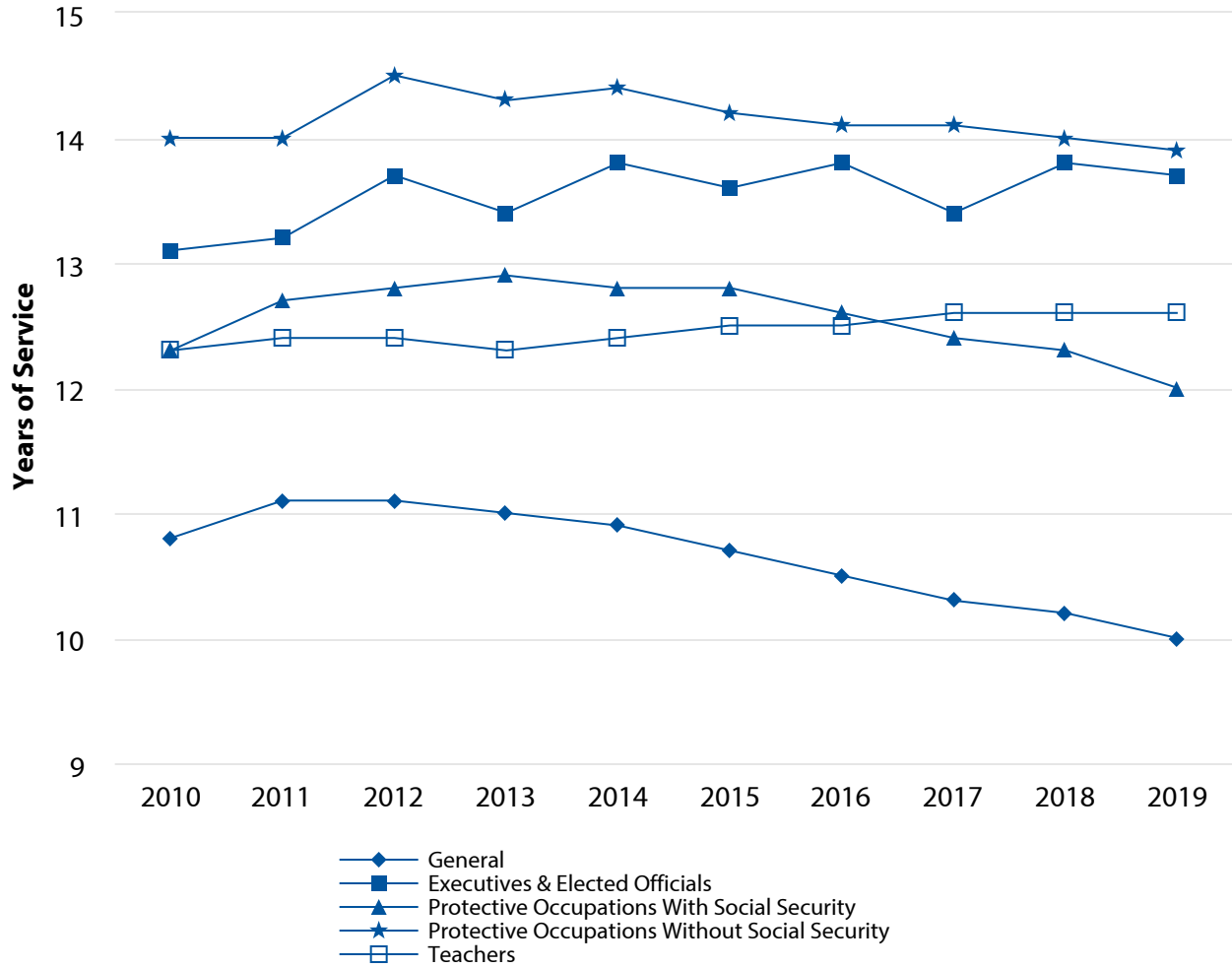
| Year | General  | Teachers | Executives & Elected Officials | Protective Occupations With Social Security | Protective Occupations Without Social Security | Average  |
|------|----------|----------|--------------------------------|---|--|----------|
| 2010 | \$38,216 | \$55,135 | \$70,191                       | \$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   |





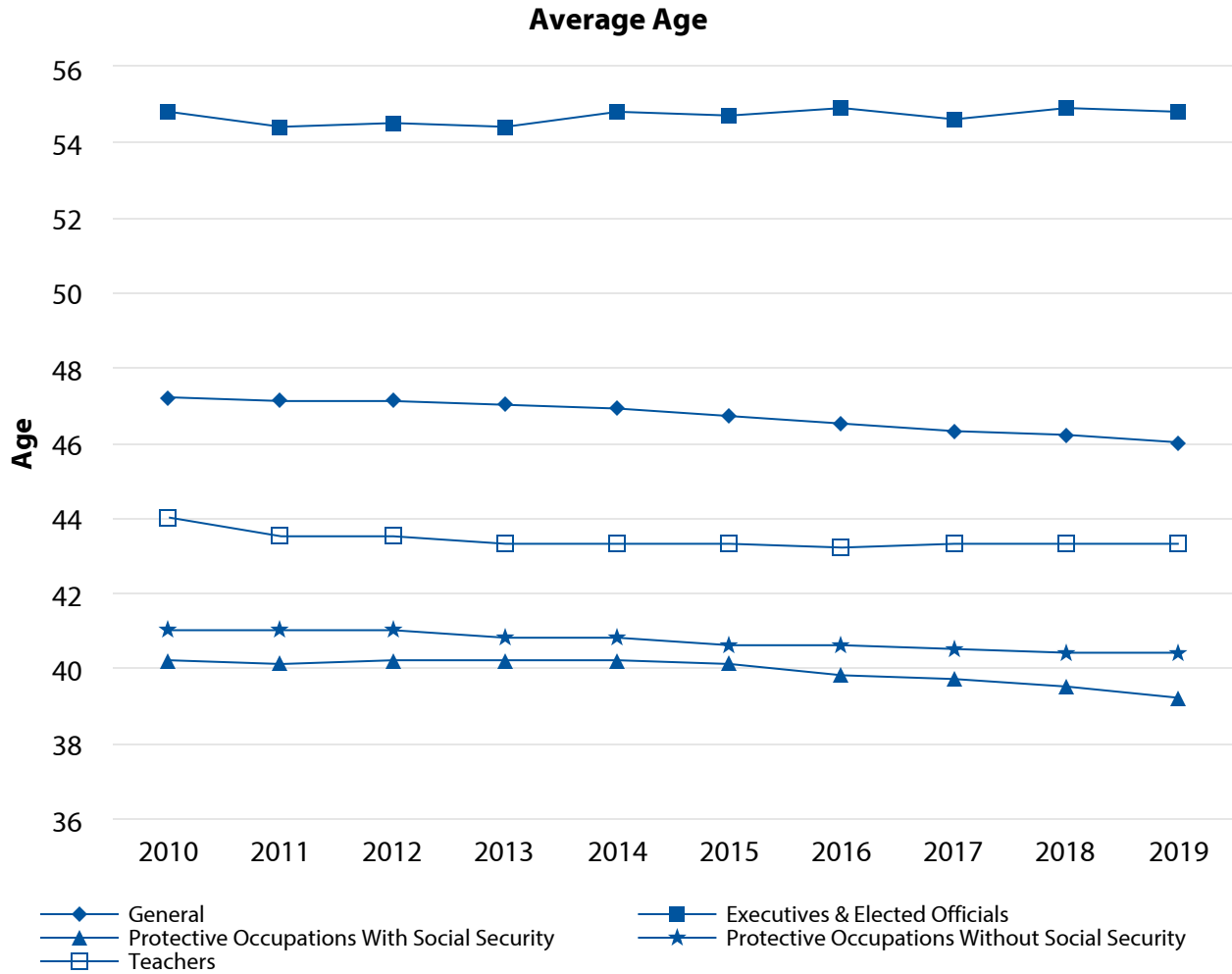
STATISTICAL SECTION

**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**

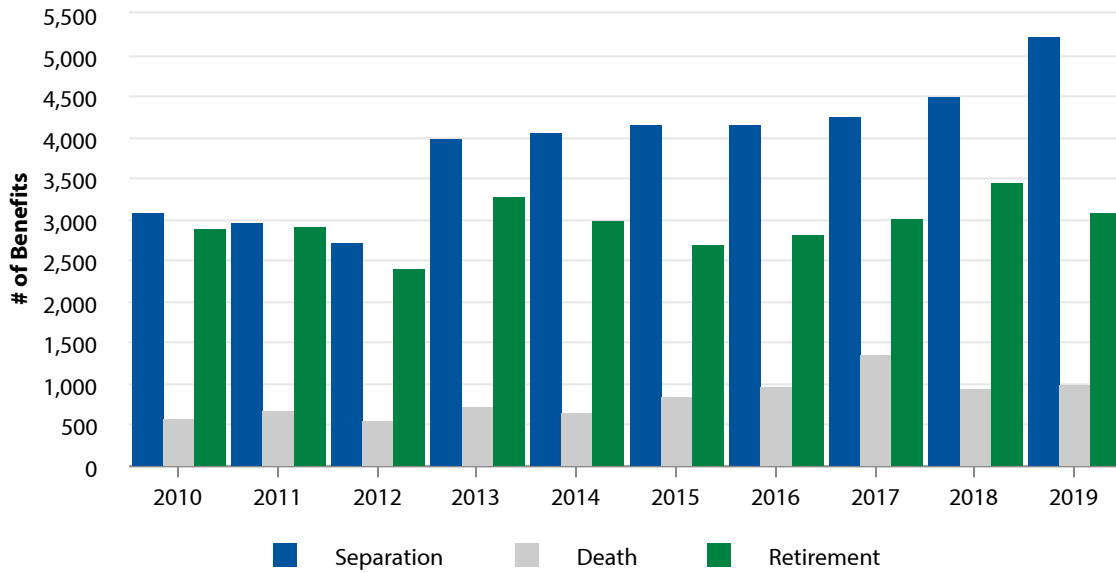
| Year | Local Employers  |          |        |                    |          |       |                   | Totals  |
|------|------------------|----------|--------|--------------------|----------|-------|-------------------|---------|
|      | School Districts | Counties | Cities | Technical Colleges | 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**





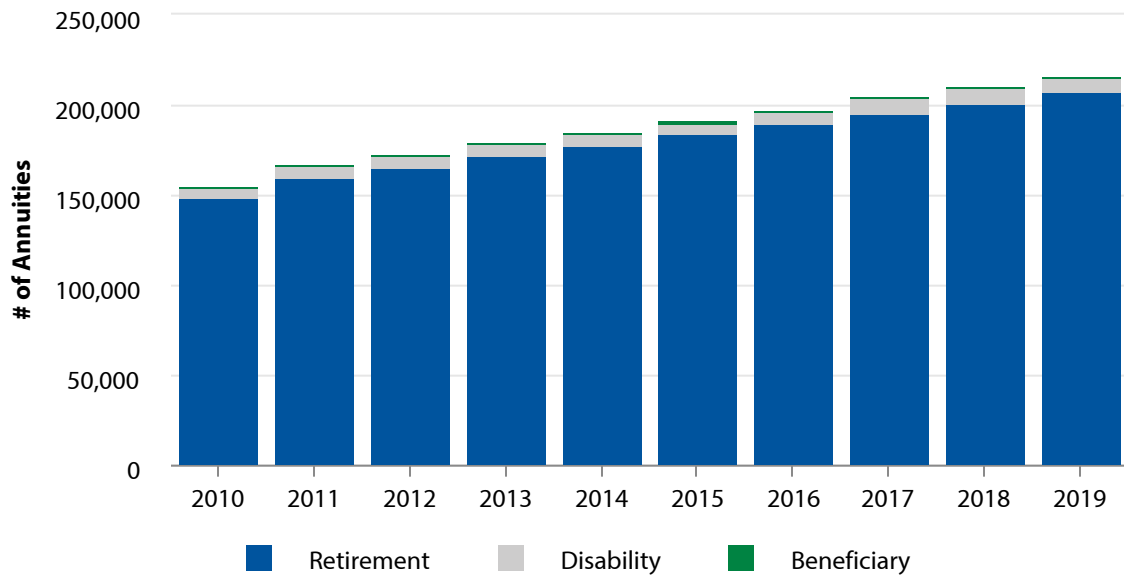
STATISTICAL SECTION

**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.

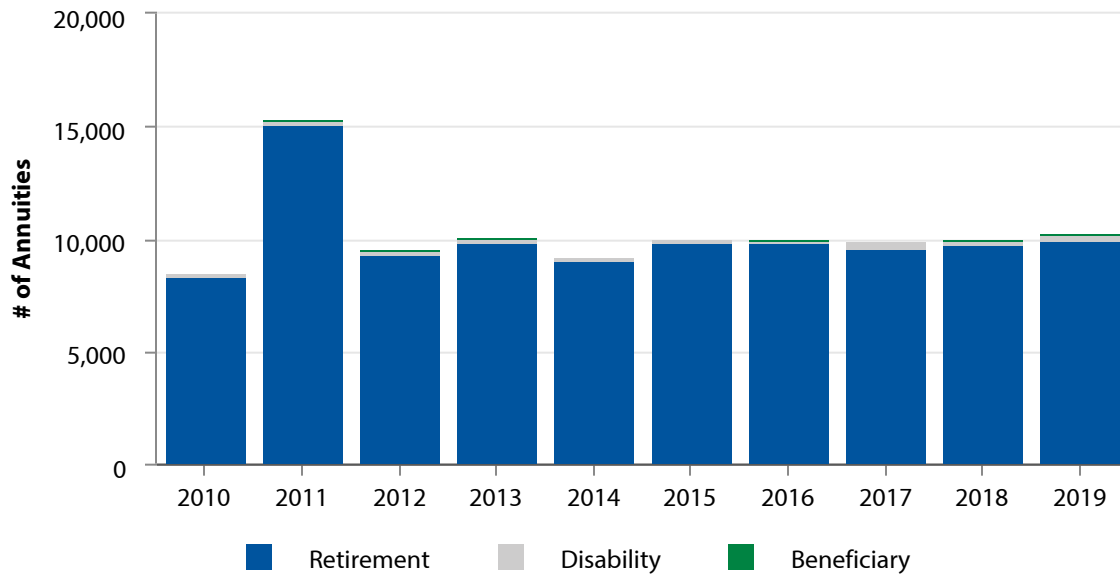
**Annuities in Force**



**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 |

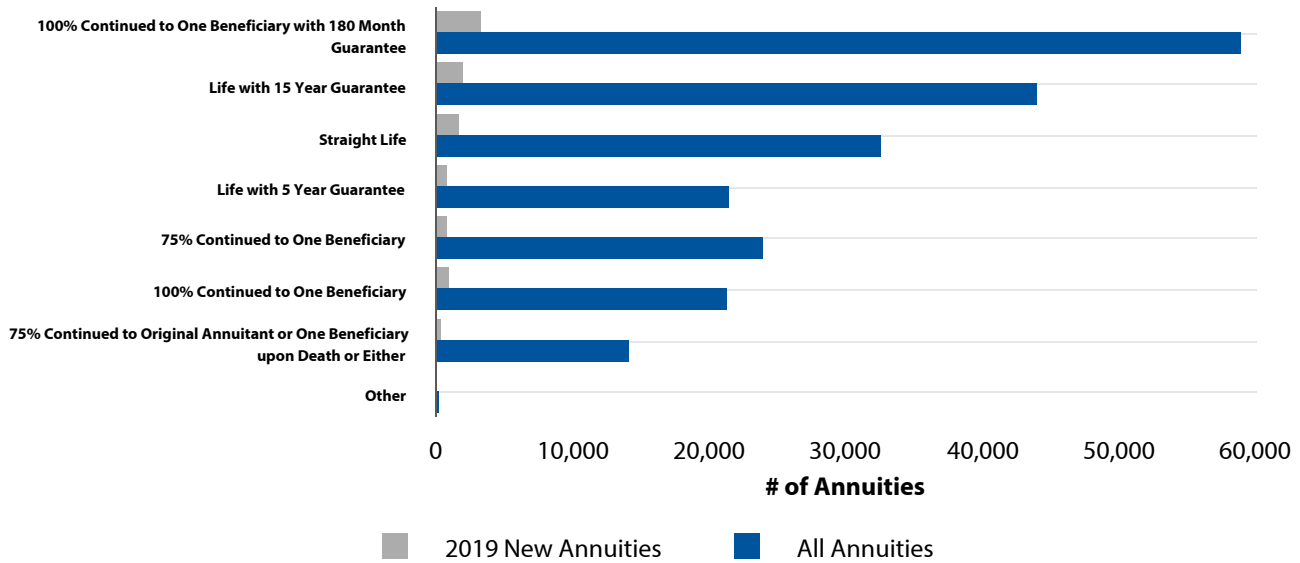
<sup>^</sup> Beginning in 2017, Disability count includes annuities in force for the Long-Term Disability Insurance program.

**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.

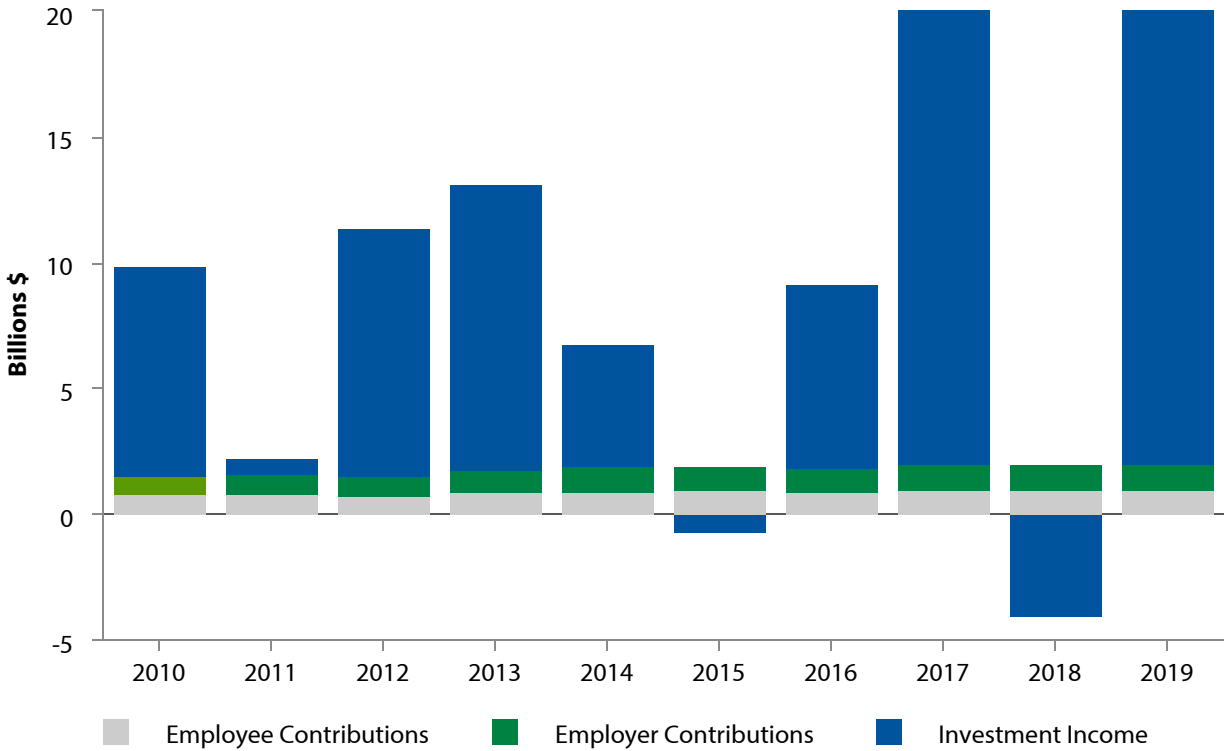
3 Employer contributions include all employer required contributions, including contributions for unfunded actuarial accrued liability.





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%                     |



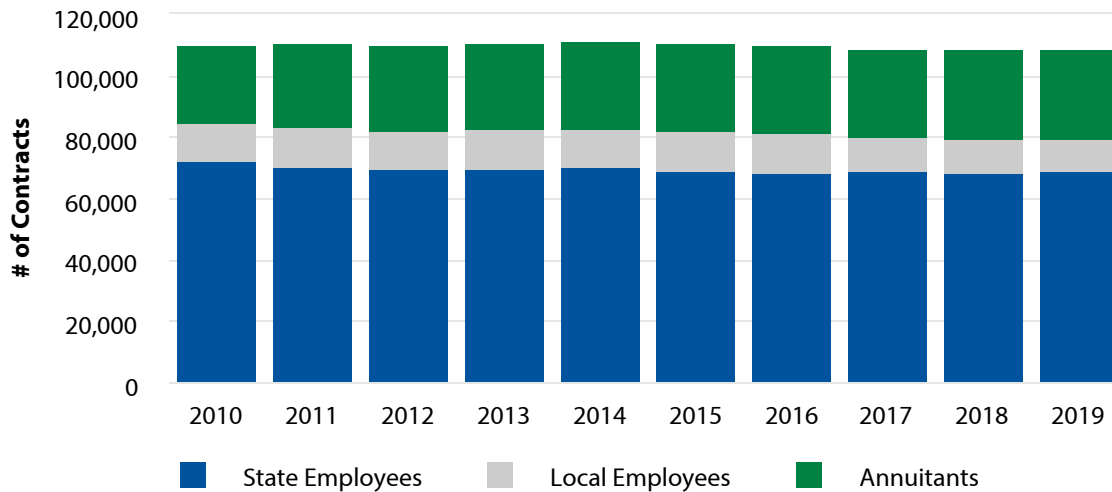
STATISTICAL SECTION

## 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    |



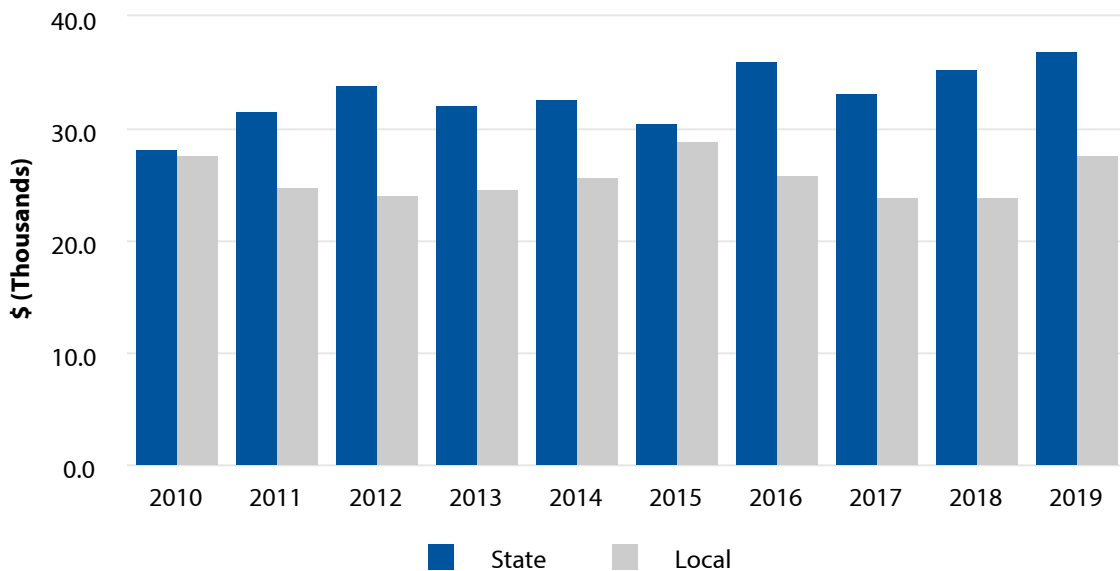
STATISTICAL SECTION

**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**

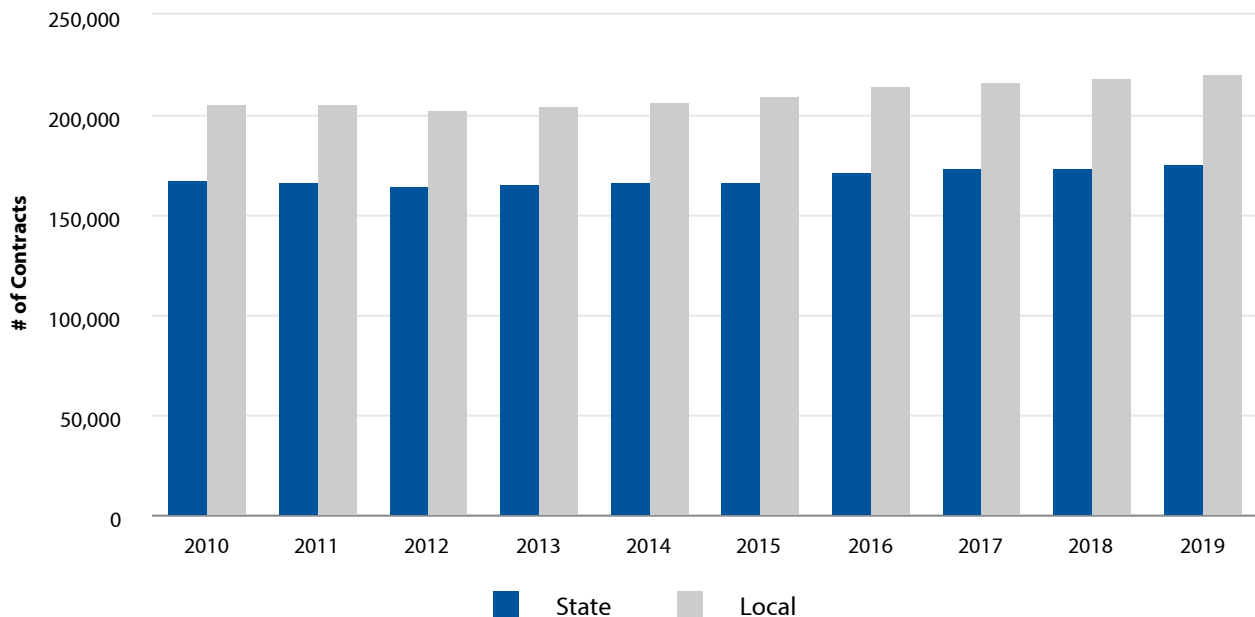




**Group Life Insurance Contracts and Participants**

| 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

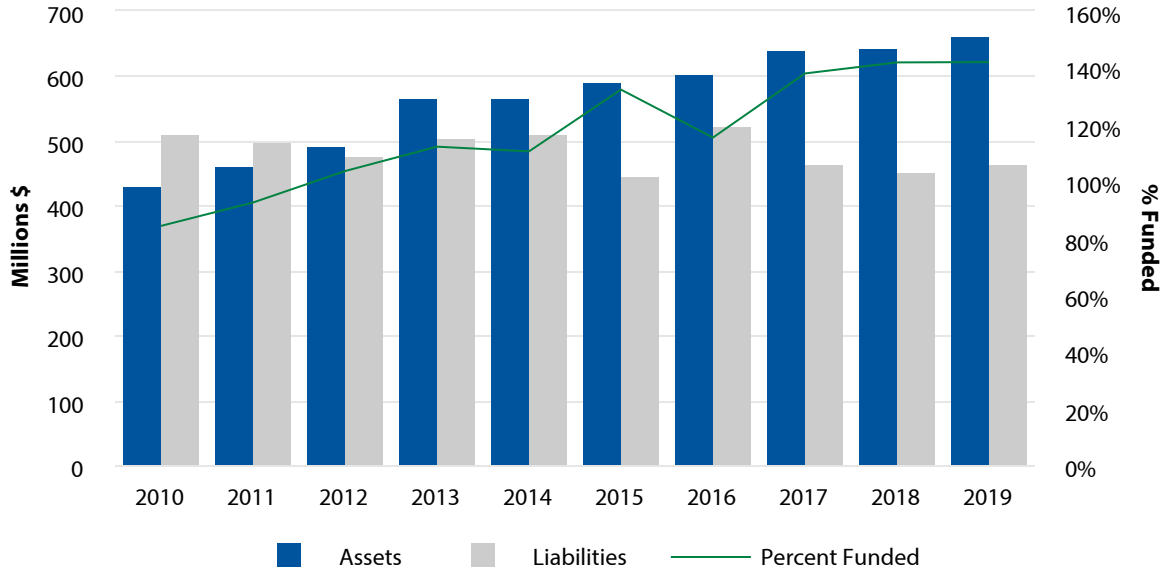
(In Millions)

| 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**

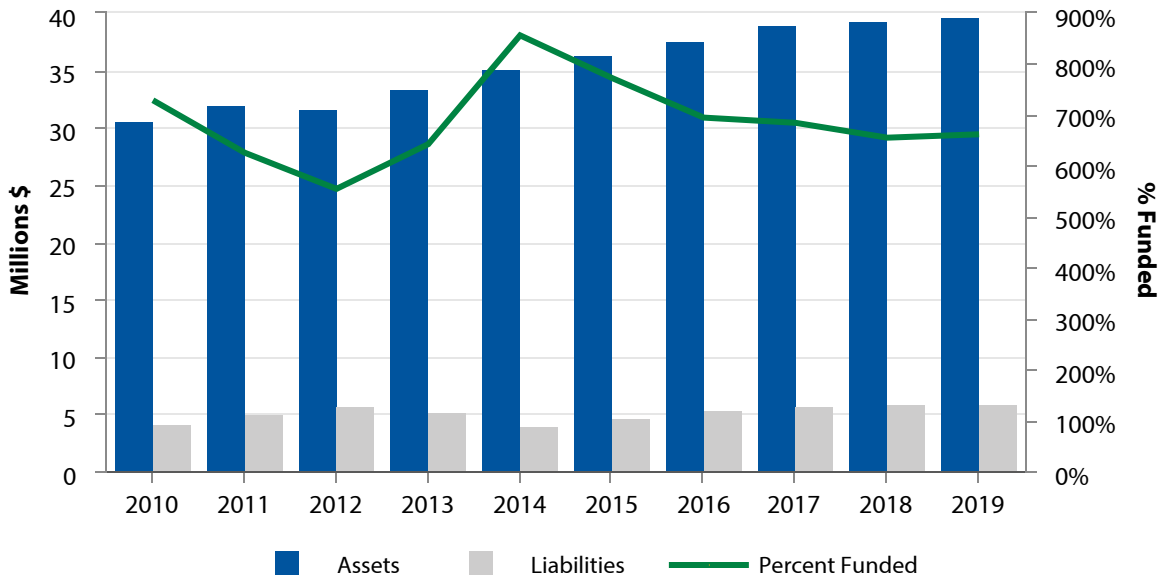
|                              | Years of Service |          |          |          |          |          |          |
|------------------------------|------------------|----------|----------|----------|----------|----------|----------|
|                              | 0 - 5            | 5 - 10   | 10 - 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**



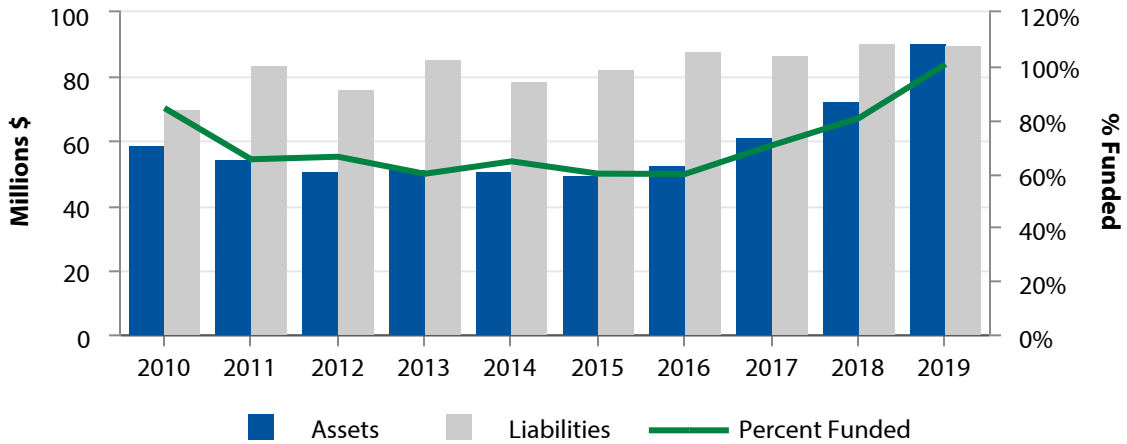


STATISTICAL SECTION

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

| Year  | Members | New Claims | Assets | Liabilities | Unfunded (Overfunded) Liability | Funded Ratio |
|-------|---------|------------|--------|-------------|---------------------------------|--------------|
| State |         |            |        |             |                                 |              |
| 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        |

**State Income Continuation Insurance Funding**

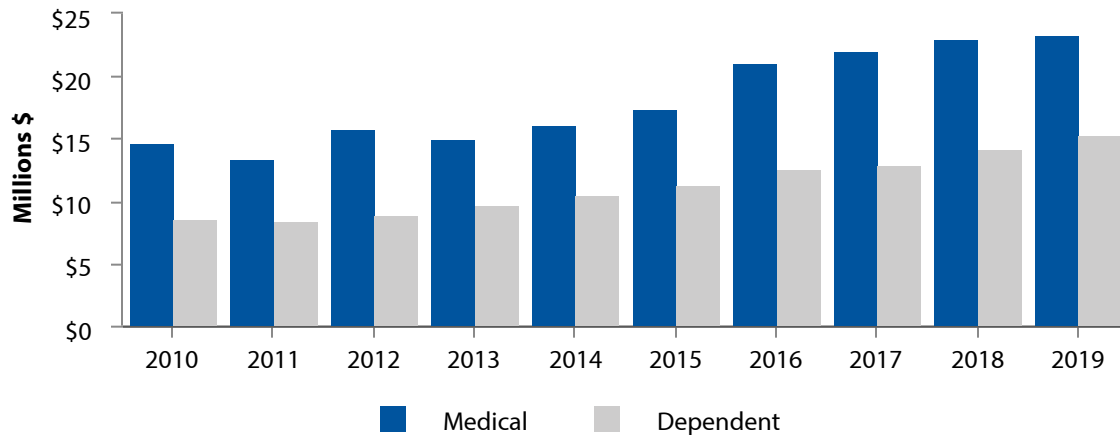


## Employee Reimbursement Accounts Program Statistics

### 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 <sup>^</sup> | 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

<sup>^</sup> Prior to 2017, expense included in Health cost

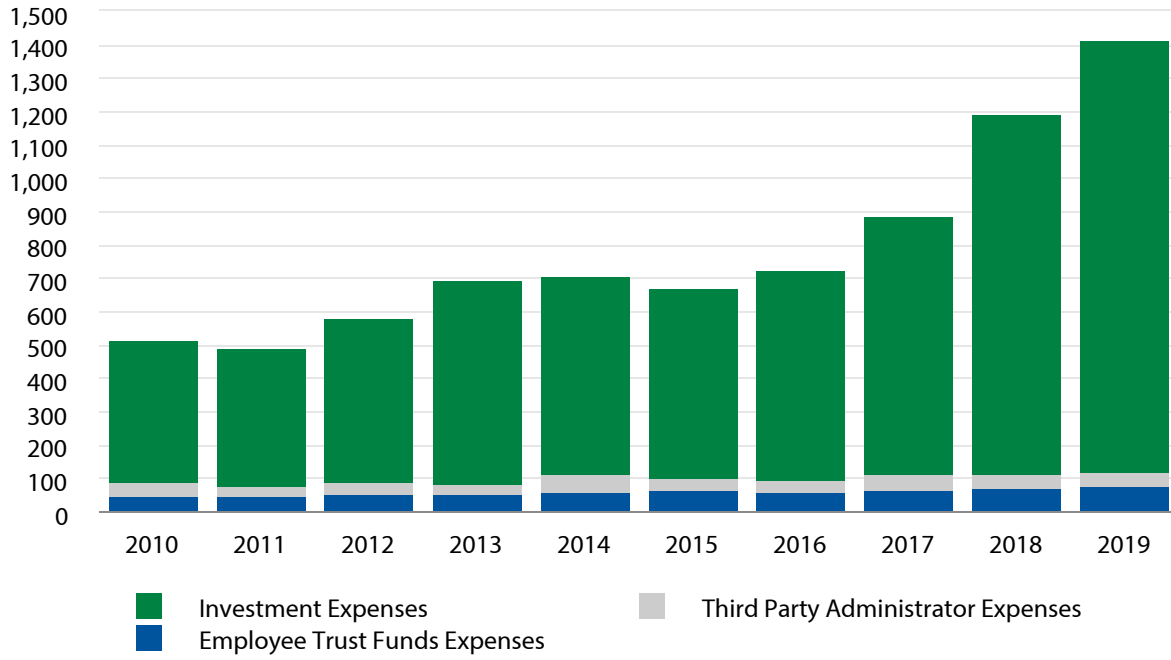
# Beginning in 2017, ETF Expenses include the change in the actuarial accrued liability related to loss adjustment expense for the Duty Disability Insurance program

### 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**

800.521.0498 | P: 248.799.9000 | [www.grsconsulting.com](http://www.grsconsulting.com)

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  
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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<br>(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.<br>- 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.<br>- 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<br>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<br>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<br>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.



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<br/>Return %</b> | <b>5-Year<br/>Return %</b> | <b>10-Year<br/>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<br/>Return %</b> | <b>5-Year<br/>Return %</b> | <b>10-Year<br/>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>  |
| <br>                             |                           |  |   |
| <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>         |

A dark blue diagonal shape that starts from the bottom left and extends towards the top right, covering the bottom right portion of the page.

**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                          |
| OLON 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                          |
| MORAIN 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



STATE OF WISCONSIN  
**Legislative Audit Bureau**  
NONPARTISAN • INDEPENDENT • ACCURATE

Report 21-3  
February 2021

# Department of Employee Trust Funds Calendar Year 2019





**Department of  
Employee Trust Funds**  
Calendar Year 2019



STATE OF WISCONSIN

Legislative Audit Bureau

NONPARTISAN • INDEPENDENT • ACCURATE

Report 21-3  
February 2021

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Reports are submitted to the Joint Legislative Audit Committee and made available to other committees of the Legislature and to the public. The Audit Committee may arrange public hearings on the issues identified in a report and may introduce legislation in response to the audit recommendations. However, the findings, conclusions, and recommendations in the report are those of the Legislative Audit Bureau.

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**Appendices**

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- Appendix 1—Employee Trust Funds Board Membership
- Appendix 2—Group Insurance Board Membership
- Appendix 3—Status of Recommendations Related to  
Group Insurance Programs

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**Response**

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From the Secretary of the Department of Employee Trust Funds

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**OPINIONS PUBLISHED SEPARATELY**

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The financial statements and our opinions on them are included in the Department of Employee Trust Funds' CAFR for the calendar year ended December 31, 2019.



STATE OF WISCONSIN  
**Legislative Audit Bureau**

Joe Chrisman  
State Auditor

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February 12, 2021

Senator Robert Cowles and  
Representative Samantha Kerkman, Co-chairpersons  
Joint Legislative Audit Committee  
State Capitol  
Madison, Wisconsin 53702

Dear Senator Cowles and Representative Kerkman:

As required by s. 13.94 (1) (dd), Wis. Stats., and as requested by the Department of Employee Trust Funds (ETF), we have completed an audit of ETF's financial statements of 12 separate funds used to account for the financial position and activity of various benefit programs available to state and local government employees. ETF's 2019 Comprehensive Annual Financial Report (CAFR), which can be found on its website, includes the financial statements and our unmodified opinions on them.

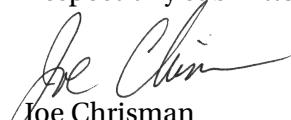
In July 2020, ETF determined that it would separately report the financial information for its sick leave programs. The timing of ETF's decision to alter its financial reporting for calendar year 2019 resulted in ETF separately issuing other reports that included financial statements for certain programs it administers. We audited these financial statements as they were prepared by ETF and provided information about these programs in reports we issued in September 2020 and December 2020. We provide this information again in this report to assist the users of the financial statements now presented in ETF's 2019 CAFR.

The Wisconsin Retirement System (WRS) is the largest program administered by ETF. The WRS fiduciary net position, which represents resources available to pay pension benefits, increased from \$96.7 billion as of December 31, 2018, to \$112.1 billion as of December 31, 2019, or by 15.9 percent. ETF calculated a net pension asset of \$3.2 billion as of December 31, 2019. As we identified in report 20-23, the Legislature could consider creating a statutory requirement for the State of Wisconsin Investment Board (SWIB) related to stress testing for the WRS. In recognition of ETF's responsibility to ensure the solvency and long-term future of the WRS, the Legislature could consider statutorily requiring ETF to work with SWIB on its efforts to perform stress testing.

ETF also administers other postemployment benefits (OPEB) plans for retired individuals. As of December 31, 2019, ETF calculated a net OPEB liability of \$683.1 million for the State Retiree Life Insurance program, a net OPEB liability of \$425.8 million for the Local Retiree Life Insurance program, and a net OPEB asset of \$151.8 million for the Supplemental Health Insurance Conversion Credit program.

We identified a material weakness in internal control over financial reporting related to ETF's liability for the basic Accumulated Sick Leave Conversion Credit program. We also reviewed ETF's efforts to implement recommendations we made in report 19-2 related to the administration and oversight of group insurance programs. As of November 2020, we found ETF had fully implemented 24 of the 30 recommendations and we recommend ETF continue its efforts.

Respectfully submitted,

  
Joe Chrisman  
State Auditor

JC/LK/ss



## Introduction

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***ETF administers employee benefit programs for participating state and local government employees.***

The Department of Employee Trust Funds (ETF) administers employee benefit programs for participating state and local government employees. These programs include the Wisconsin Retirement System (WRS) and health and life insurance programs for active and retired employees of the State and participating local governments. ETF reports the financial activity of programs it administers in financial statements that are included in its Comprehensive Annual Financial Report (CAFR). These financial statements are prepared by ETF using generally accepted accounting principles (GAAP) prescribed by the Governmental Accounting Standards Board (GASB).

ETF administers the eight benefit programs shown in Table 1.

Table 1

**Programs Administered by ETF**

| Program   | Description   |
|---|---|
| <b>Retirement</b>                                     |   |
| WRS   | The WRS provides post-retirement financial benefits to participating employees, as well as disability and death benefits to participants and their beneficiaries. As of December 31, 2019, the WRS had 1,516 participating employers and a total membership of 648,486. Total membership includes 260,251 active participants, 215,070 retired participants or their beneficiaries who were receiving WRS benefits, and 173,165 inactive participants.  |
| Milwaukee Retirement Systems                          | The Milwaukee Retirement Systems invests other retirement systems' funds with the WRS. Currently, funds from two Milwaukee Public Schools supplemental retirement plans are invested in this program.   |
| <b>Disability</b>                                     |   |
| Duty Disability Insurance                             | This program offers special disability benefits to protective occupation members in the WRS, such as police officers, firefighters, and correctional officers. As of December 31, 2019, the State of Wisconsin and 501 local government employers participated in this program, and benefits were being provided to approximately 1,000 disabled members or their beneficiaries.  |
| Income Continuation Insurance                         | This program offers short-term and long-term disability benefits for employees of the State of Wisconsin, including those employed by state agencies and authorities such as the University of Wisconsin (UW) Hospitals and Clinics Authority, and 250 local government employers, as of December 31, 2019. During 2019, benefits were provided to approximately 2,500 participants.  |
| <b>Health and Life</b>                                |   |
| Group Health Insurance <sup>1</sup>                   | This program offers health insurance coverage, including medical, pharmacy, and dental benefits, to active and retired employees of the State of Wisconsin, including those employed by state agencies and authorities such as the UW Hospitals and Clinics Authority, and 363 local government employers, as of December 31, 2019. Approximately 80,000 active employees and 29,000 retired employees were participating in the program as of December 31, 2019.   |
| Group Life Insurance <sup>2</sup>                     | This program offers group life insurance coverage for active and retired employees of the State of Wisconsin, including those employed by state agencies and authorities such as UW Hospitals and Clinics Authority, and 721 local government employers.  |
| <b>Other</b>  |   |
| Sick Leave Programs                                   | The basic Accumulated Sick Leave Conversion Credit (basic ASLCC) program provides for the conversion of the value of unused sick leave at the time of retirement into a balance to be used to pay for postemployment state group health insurance premiums for retired employees of the State of Wisconsin, including those employed by state agencies and authorities such as UW Hospitals and Clinics Authority. The Supplemental Health Insurance Conversion Credit (SHICC) program provides certain eligible employees additional sick leave hours at termination that increases the balance available to pay for health insurance premiums. As of December 31, 2019, approximately 17,500 retired employees and others were using these balances for the payment of health insurance premiums. |
| Employee Reimbursement Accounts/<br>Commuter Benefits | This program offers employees of the State pre-tax payroll deductions that are credited to an account for the reimbursement of qualifying medical costs, dependent care costs, and transportation expenses, such as bus passes, parking, and other transit costs. In 2019, approximately 21,000 employees had a medical account, 3,900 employees had a dependent care account, and 3,000 employees had a commuter benefit account.  |

<sup>1</sup> Includes the Health Insurance, State Retiree Health Insurance, and Local Retiree Health Insurance funds.

<sup>2</sup> Includes the Life Insurance (not presented in the 2019 ETF CAFR), State Retiree Life Insurance, and Local Retiree Life Insurance funds.

## ETF Administration

***The ETF Board is responsible for the overall direction and oversight of ETF.***

The ETF Secretary and the governing boards oversee the administration of the programs reported in ETF's CAFR. The programs are administered by ETF using the services provided by multiple entities, including third-party administrators, actuaries, and the State of Wisconsin Investment Board (SWIB). Under s. 40.03, Wis. Stats., the 13-member ETF Board is responsible for the overall direction and oversight of ETF. Statutes specifically identify that, among other items, the ETF Board is responsible for:

- appointing the Secretary of ETF;
- selecting and retaining an actuary to perform all necessary actuarial services for benefit programs administered by ETF; and
- approving the contribution rates and actuarial assumptions determined by the actuary.

The 2020 ETF Board members are shown in Appendix 1 and include:

- the Governor, or the Governor's designee on the Group Insurance Board (GIB);
- the Administrator of the Division of Personnel Management in the Department of Administration (DOA), or designee;
- four members of the Teachers Retirement Board;
- four members of the Wisconsin Retirement Board;
- one member nominated by the Governor and appointed with the advice and consent of the Senate, as a public representative, who is not a member of the WRS but has at least five years of actuarial, insurance, or employee benefits plan experience;
- one annuitant elected by retired WRS participants; and
- one active WRS participant who must be either a technical college or school district educational support personnel employee, elected by participating employees who meet the same employment criteria.



Although the ETF Board is the overall governing body for ETF, the 13-member Teachers Retirement Board and the 9-member Wisconsin Retirement Board each serve in an advisory role on issues related to the WRS. The members of the Teachers Retirement Board and the Wisconsin Retirement Board represent state and local government employers, employees, annuitants, and the general public.

***The Group Insurance Board oversees the Group Health Insurance, Group Life Insurance, Employee Reimbursement Accounts/Commuter Benefits, and Income Continuation Insurance programs.***

In addition to the ETF Board, the 11-member Group Insurance Board is responsible for setting policies and overseeing administration of the Group Health Insurance, Group Life Insurance, Employee Reimbursement Accounts/Commuter Benefits, and the Income Continuation Insurance programs. In this report, we analyzed ETF's efforts to implement recommendations we made in our audit of the administration and oversight of the group insurance programs (report 19-2). The 2020 Group Insurance Board members are shown in Appendix 2 and include:

- the Governor, or designee;
- the Administrator of the Division of Personnel Management in DOA, or designee;
- the Attorney General, or designee;
- the Secretary of DOA, or designee;
- the Commissioner of Insurance, or designee;
- a member appointed by the Governor;
- an insured participant in the WRS who is a teacher and is appointed by the Governor;
- an insured participant in the WRS who is not a teacher and is appointed by the Governor;
- an insured participant in the WRS who is a retired employee and is appointed by the Governor;
- an insured participant who is an employee of a local unit of government and is appointed by the Governor; and
- the chief executive or member of the governing body of a local unit of government that is a participating employer in the WRS and is appointed by the Governor.

Table 2 shows the programs that ETF administered and the board that had authority over the policies and administration of each program, as of December 31, 2019.

Table 2  
ETF Board and Group Insurance Board Authority, by Program  
As of December 31, 2019

| Program   | ETF Board | Group Insurance Board |
|---|-----------|-----------------------|
| Wisconsin Retirement System                       | ✓         |                       |
| Milwaukee Retirement Systems                      | ✓         |                       |
| Duty Disability Insurance                         | ✓         |                       |
| Income Continuation Insurance                     |           | ✓ <sup>1</sup>        |
| Group Health Insurance <sup>2</sup>               |           | ✓                     |
| Group Life Insurance <sup>3</sup>                 |           | ✓                     |
| Sick Leave Programs <sup>4</sup>                  | ✓         |                       |
| Employee Reimbursement Accounts/Commuter Benefits |           | ✓                     |

<sup>1</sup> At its February 8, 2017 meeting, the Group Insurance Board approved moving the authority of this program to the ETF Board. However, current statutes have not been modified to permit this change.

<sup>2</sup> Includes the Health Insurance, State Retiree Health Insurance, and Local Retiree Health Insurance funds.

<sup>3</sup> Includes the Life Insurance (not presented in the 2019 ETF CAFR), State Retiree Life Insurance, and Local Retiree Life Insurance funds.

<sup>4</sup> Includes the basic ASLCC program and the SHICC program.

***Third-party administrators are used to help administer several of the benefit programs.***

The Secretary of ETF is charged with implementing the policies approved by each of the boards, and with managing the daily operations of ETF. Each program administered by ETF has its own unique requirements related to eligibility, contributions, benefit payment determination, and reporting. As of July 1, 2020, ETF was authorized 274.2 full-time equivalent positions. In addition, ETF uses third-party administrators to perform administrative functions for certain benefit programs, such as determining participant eligibility, processing participant claims, and making benefit payments to participants. For example, ETF uses a third-party administrator to determine eligibility for and pay benefits to participants in the Income Continuation Insurance program.

***ETF uses actuaries to perform actuarial calculations for several benefit programs.***

ETF also uses actuaries to perform actuarial calculations for several benefit programs it administers. Although the role of the actuary for each program varies due to the different program requirements, the duties generally include performing calculations to project future

benefit payments, determining a liability for costs that have been incurred but not reported, and comparing these liabilities against the projected assets that will be available. In addition, the actuaries may recommend changes to contribution rates intended to increase or decrease contribution revenues that provide future assets to fund projected liabilities.

As shown in Table 3, third-party administrators were used for four of the eight benefit programs and actuaries were used for six of the eight programs, as of December 31, 2019.

Table 3

**ETF's Use of Third-Party Administrators and Actuaries, by Program**  
As of December 31, 2019

| Program   | Third-Party Administrator | Actuary |
|---|---------------------------|---------|
| Wisconsin Retirement System                       |                           | ✓       |
| Milwaukee Retirement Systems                      |                           |         |
| Duty Disability Insurance                         |                           | ✓       |
| Income Continuation Insurance                     | ✓                         | ✓       |
| Group Health Insurance <sup>1</sup>               | ✓                         | ✓       |
| Group Life Insurance <sup>2</sup>                 | ✓                         | ✓       |
| Sick Leave Programs <sup>3</sup>                  |                           | ✓       |
| Employee Reimbursement Accounts/Commuter Benefits | ✓                         |         |

<sup>1</sup> Includes the Health Insurance, State Retiree Health Insurance, and Local Retiree Health Insurance funds.

<sup>2</sup> Includes the Life Insurance (not presented in the 2019 ETF CAFR), State Retiree Life Insurance, and Local Retiree Life Insurance funds.

<sup>3</sup> Includes the basic ASLCC program and the SHICC program.

***Except for the assets of the Group Life Insurance program, assets were invested in different funds by SWIB.***

With the exception of group life insurance assets, which were held by the third-party administrator, the assets of the programs were invested by SWIB in one or more of the following funds: Core Retirement Investment Trust Fund (Core Fund), Variable Retirement Investment Trust Fund (Variable Fund), or the State Investment Fund (SIF), as shown in Table 4.

Table 4

**Investments, by Program**  
As of December 31, 2019

| Program   | Core Fund <sup>1</sup> | Variable Fund <sup>1</sup> | State Investment Fund | Third-Party Administrator |
|---|------------------------|----------------------------|-----------------------|---------------------------|
| Wisconsin Retirement System                       | ✓                      | ✓                          |                       |                           |
| Milwaukee Retirement Systems                      | ✓                      | ✓                          |                       |                           |
| Duty Disability Insurance                         | ✓                      |                            |                       |                           |
| Income Continuation Insurance                     | ✓                      |                            |                       |                           |
| Group Health Insurance <sup>2</sup>               | ✓                      |                            |                       |                           |
| Group Life Insurance <sup>3</sup>                 |                        |                            |                       | ✓                         |
| Sick Leave Programs <sup>4</sup>                  | ✓                      |                            |                       |                           |
| Employee Reimbursement Accounts/Commuter Benefits |                        |                            | ✓                     |                           |

<sup>1</sup> Excess cash of the Core Fund and Variable Fund are invested in the State Investment Fund.

<sup>2</sup> Includes the Health Insurance, State Retiree Health Insurance, and Local Retiree Health Insurance funds.

<sup>3</sup> Includes the Life Insurance (not presented in the 2019 ETF CAFR), State Retiree Life Insurance, and Local Retiree Life Insurance funds.

<sup>4</sup> Includes the basic ASLCC program and the SHICC program.

The Core Fund is a fully diversified fund, or balanced fund, which provides less volatile investment returns and is invested for the long term in several types of investments. The Variable Fund is an equity fund, or stock fund, which provides returns that are typically more volatile than the Core Fund. The SIF invests the excess operating funds of the State and local governments with the objective of providing liquidity, safety of principal, and competitive rates of return. In report 20-9, we provided more information about the financial condition of the Core Fund and Variable Fund as of December 31, 2019. In report 20-26, we provided similar information for the SIF as of June 30, 2020. In report 20-23, we evaluated SWIB's investment performance, expenses, and staffing.

***Investment income or loss of the Core Fund and the Variable Fund is allocated to each benefit program invested in these funds.***

For financial reporting, ETF allocates the fair value of the investment income or loss to each program that participates in the Core Fund. Investment income or loss is allocated from the Core Fund to the Milwaukee Retirement Systems on a monthly basis based upon the Milwaukee Retirement Systems' relative share of the Core Fund and the monthly change in the fair value of the Core Fund. Investment income or loss is allocated to the remaining programs in the Core Fund based on each program's average annual balance to the total average annual balance of all participating programs in the Core Fund. ETF calculates the average annual balance using the beginning-of-year net asset

balance and end-of-year net asset balance for each program. Investment income or loss of the Variable Fund is allocated to the Milwaukee Retirement Systems on a monthly basis based upon the Milwaukee Retirement Systems' relative share of the Variable Fund and the monthly change in the fair value of the Variable Fund. Each program's share of the \$17.8 billion investment income in the Core Fund and the \$2.0 billion investment income for the Variable Fund for the year ended December 31, 2019, is shown in Table 5.

Table 5

**Core Fund and Variable Fund Investment Income Allocation, at Fair Value**  
For the Year Ended December 31, 2019  
(in millions)

| Program                             | Core Fund         | Variable Fund    |
|-------------------------------------|-------------------|------------------|
| Wisconsin Retirement System         | \$17,095.8        | \$1,953.0        |
| Milwaukee Retirement Systems        | 30.1              | 4.8              |
| Duty Disability Insurance           | 115.6             | –                |
| Income Continuation Insurance       | 21.4              | –                |
| Group Health Insurance <sup>1</sup> | 41.8              | –                |
| Sick Leave Programs <sup>2</sup>    | 459.8             | –                |
| <b>Total</b>                        | <b>\$17,764.5</b> | <b>\$1,957.8</b> |

<sup>1</sup> Includes the Health Insurance, State Retiree Health Insurance, and Local Retiree Health Insurance funds.

<sup>2</sup> Includes the basic ASLCC program, which was allocated \$279.5 million in investment income, and the SHICC program, which was allocated \$180.3 million.

The Employee Reimbursement Accounts/Commuter Benefits program reported investment income totaling \$168,697 from the SIF for the year ended December 31, 2019.

## Benefits Administration System

***ETF and the vendor hired to develop the Benefits Administration System have been in a contract dispute since March 2018.***

In 2010, ETF completed a business risk-assessment process that highlighted the need to replace its legacy systems and began an initiative to modernize the administration of the benefit programs. One component of this modernization project was the development of the Benefits Administration System (BAS), which began in 2014 and was expected to be implemented in three phases over several years. Although the first phase of the project was implemented in November 2015, work on the remaining phases of the project stopped

in March 2018 due to a contract dispute. ETF and the vendor were unable to resolve the dispute and, in March 2019, ETF filed a complaint in Dane County Circuit Court for damages suffered as a result of the contractor failing to fulfill the contract. The contractor subsequently filed a counterclaim in June 2019. As reported in Note 11 to the financial statements on page 102 of ETF's CAFR, both lawsuits are pending.

The information systems scheduled to be replaced with BAS continue to age and present risks for ETF to manage. ETF will need to continue to maintain these older systems to ensure effective administration of each benefit program. ETF reports annually to the Legislature's Joint Committee on Finance and the Secretary of DOA on the status of its progress in modernizing its business processes and integrating its information technology systems. On June 30, 2020, ETF reported that it had contracted with Naviant, Inc., to develop and replace the existing imaging and workflow system.

## **Sick Leave Programs**

ETF administers two sick leave programs: the basic Accumulated Sick Leave Conversion Credit (basic ASLCC) program and the Supplemental Health Insurance Conversion Credit (SHICC) program. In administering the sick leave programs, ETF is responsible for maintaining balances for eligible participants, collecting required contributions from participating employers, and paying health insurance providers for participants receiving benefits. ETF also uses an actuary to perform actuarial calculations to project future benefit payments and recommend changes to contribution rates that employers pay to fund program benefits. Historically, the financial information of these programs was reported as one program in ETF's CAFR.

For calendar year 2019, ETF implemented GASB Statement Number 84, *Fiduciary Activities*, and reassessed the financial reporting for the sick leave programs. In July 2020, ETF determined that it would separately report the financial information for the basic ASLCC program and for the SHICC program. Because basic ASLCC program benefits are based on sick leave earned during an employee's years of service and are available to the employee during their employment, ETF determined that the liability for this program was a compensated absence and would be calculated under the requirements of GASB Statement Number 16, *Accounting for Compensated Absences*. However, because the SHICC program provides additional benefits that are provided only upon termination and are based on meeting certain requirements at termination, ETF determined that this program was an other postemployment benefits (OPEB) plan.

***We report a material weakness in internal control over financial reporting related to the basic ASLCC program.***

In preparing the financial statements for each separate sick leave program, ETF prepared various adjustments, which are further described in Note 2 to the financial statements on page 46 of ETF's CAFR. In our audit of the basic ASLCC program, we found ETF made material errors in calculating the compensated absence liability. ETF prepared an adjustment to correct the errors we identified. Late planning for implementation of GASB Statement Number 84, particularly related to making a decision for the reporting for the sick leave programs, contributed to ETF's errors for the basic ASLCC program. We report a material weakness in internal control over financial reporting and recommend ETF improve its calculation of the compensated absence liability by revising its policies; ensure that it completes its planning, review, and assessment process before the close of the financial reporting period affected by a change in financial reporting; and work with DOA on areas that affect the State's CAFR.

## **Audit Results**

As required by Wisconsin Statutes, we have completed an audit of the financial statements and related notes of the 12 funds reported in ETF's CAFR as of and for the year ended December 31, 2019. The financial statements presented in ETF's CAFR include information related to the contributions, benefits, and investment income or loss of each program. The contribution and benefit requirements differ among the programs and are established by statute, administrative code, and board decisions. In addition, various tax laws may affect the administration of a program and the amount of contributions that may be collected or the benefits that may be provided.

***We provided unmodified opinions on the financial statements of programs administered by ETF for the year ended December 31, 2019.***

To complete our audit of the financial statements, we reviewed ETF's internal controls over financial reporting, tested financial transactions, and reviewed the financial statements, notes, and required supplementary information that were prepared by ETF management. We provided unmodified opinions on the financial statements and related notes as of and for the year ended December 31, 2019.

We also issued our Independent Auditor's Report on Internal Control over Financial Reporting and on Compliance and Other Matters, which begins on page 51. As discussed in this report, our consideration of internal control was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. However, as discussed, we identified a deficiency in internal control over ETF's calculation of the liability for the basic ASLCC program that we consider to be a material weakness. Because ETF's financial statements are also included in the State of Wisconsin's CAFR for the fiscal year ended June 30, 2020, this material weakness was also included in the Independent Auditor's Report on Internal Control over Financial Reporting and on Compliance and Other Matters related to our audit of the State of Wisconsin's financial statements (report 20-30)

as Finding 2020-005. We also reported a significant deficiency in internal control at SWIB that we identified during our audit of the Retirement Funds Investment Activity (report 20-9). Because the amounts reported by SWIB are included in the WRS financial statements and in the notes to the financial statements, the internal control deficiency is also included in this report.

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## Wisconsin Retirement System

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***The WRS is a cost-sharing,  
multiple-employer,  
defined-benefit pension plan.***

Created in January 1982, the WRS is a cost-sharing, multiple-employer, defined-benefit pension plan that provides post-retirement financial benefits to participating employees, as well as disability and death benefits to participants and their beneficiaries. Further, the WRS is an irrevocable trust and all funds remain in the trust and can only be used to fund pension benefits.

As of December 31, 2019, 648,486 individuals participated in the WRS, including:

- 260,251 (40.1 percent) active participants who were making contributions;
- 215,070 (33.2 percent) retired participants or their beneficiaries who were receiving WRS benefits; and
- 173,165 (26.7 percent) inactive participants, such as former employees, who were not yet receiving benefits and who were not required to make contributions.

The WRS is one of the 10 largest public pension plans in the United States. As of December 31, 2019, the WRS had a fiduciary net position of \$112.1 billion, which represents resources available to pay pension benefits. ETF is responsible for managing the operations of the WRS that interact with employers and participants, including collecting contributions from and paying retirement benefits to WRS participants. ETF also uses an actuary to perform actuarial calculations such as projecting future benefit payments and establishing contribution rates.

***ETF and SWIB work together to manage the WRS.***

SWIB is responsible for managing the WRS investments. ETF and SWIB work closely together to ensure the solvency and long-term future of the WRS.

In September 2020, ETF separately issued reports that included the WRS financial statements, including the related notes, and a Schedule of Employer Allocations and Schedule of Collective Pension Amounts, as of and for the year ended December 31, 2019. We provided unmodified opinions on the financial statements and the employer schedules, which were included in ETF's reports. We further reported on the activity of WRS in report 20-14 and report 20-15, which included our reports on internal control over financial reporting and on compliance and other matters as well as the information in this chapter. We have provided the information again in order to assist the users of the financial statements included in ETF's CAFR. In addition, because it is relevant to ETF and the administration of the WRS, we also identify an issue for legislative consideration related to stress testing, which we included in report 20-23.

## **WRS Participating Employers**

SECTION 40.21, Wis. Stats., allows any Wisconsin public employer to participate in the WRS, but statutes require certain entities to participate, including state agencies and all counties except Milwaukee County, which maintains its own retirement system. In addition:

- second-, third-, and fourth-class cities must allow police officers and paid firefighters to participate if those employees were allowed to participate in Wisconsin's retirement system before March 31, 1978;
- villages with a population of 5,000 or more must allow police officers to participate, and villages with a population of 5,500 or more must also allow paid firefighters to participate, if those employees were allowed to participate in Wisconsin's retirement system before March 31, 1978; and
- school districts must allow employees in teaching positions to participate.

***As of December 31, 2019, 1,516 employers were participating in the WRS.***

As shown in Table 6, most of the 1,516 employers that participated in the WRS as of December 31, 2019, were local governments and school districts.

Table 6

**Types of Employers Participating in the WRS**  
As of December 31, 2019

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

<sup>1</sup> Includes employers such as the Madison Metropolitan Sewerage District, the Oshkosh City Housing Authority, and the South Central Library System.

Under current law, any employee of a participating WRS employer is eligible to participate in the WRS if the expected duration of employment is one year or more and the employee is expected to be employed for at least two-thirds of what is considered full-time. Current statutes require five years of service before such an employee is considered vested.

## WRS Funding

***The WRS is funded through a combination of employer and employee contributions and investment income.***

The WRS is funded through annual employer and employee contributions and investment income. The ETF Board has established a WRS funding policy with three primary goals:

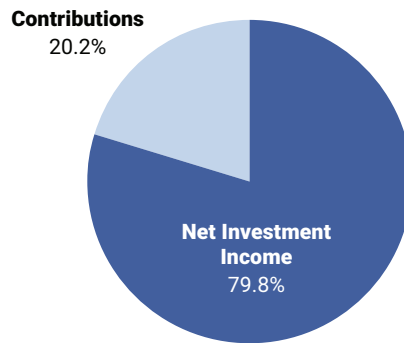
- ensure funds are adequate to pay benefits;
- maintain stable and predictable contribution rates for employers and employees; and
- maintain inter-generational equity to ensure the cost of the benefits is paid for by the generation that receives the benefits.

In 2019, net investment income for the WRS totaled \$19.0 billion and contributions from WRS employers and employees totaled \$2.0 billion. From 2010 through 2019, net investment income represented

79.8 percent of total funding for the WRS. Employer and employee contributions represented 20.2 percent of total funding for the WRS, as shown in Figure 1.

Figure 1

**WRS Funding Sources**  
2010 through 2019



***Net investment income increased from a loss of \$4.1 billion in 2018 to a gain of \$19.0 billion in 2019.***

Net investment income, which is the sum of realized and unrealized gains and losses less SWIB's investment expenses and amounts distributed to other benefit programs, increased by \$23.1 billion, from a loss of \$4.1 billion in 2018 to a gain of \$19.0 billion in 2019. The increase in net investment income reflects the increase in investment returns of the Core Fund and the Variable Fund. The gross investment return (gross of management fees) of the Core Fund increased from a negative 3.3 percent in 2018 to 19.9 percent in 2019, and the gross investment return of the Variable Fund increased from a negative 7.9 percent in 2018 to 28.6 percent in 2019.

***The long-term expected rate-of-return assumption for the WRS is 7.0 percent.***

As noted, WRS assets are invested by SWIB in the Core Fund and the Variable Fund. SWIB has a fiduciary responsibility to prudently invest the pension assets in a diversified manner to meet WRS funding needs while minimizing the risk of large losses. SWIB's investment strategy is to meet the long-term expected rate-of-return assumption. From 2011 through 2018, the return assumption was 7.2 percent. The ETF Board approved a decrease in the long-term expected rate-of-return assumption to 7.0 percent in December 2018. As of December 31, 2019, SWIB's 20-year return for the Core Fund, net of management fees was 6.1 percent, which is less than the long-term expected rate-of-return assumption of 7.0 percent. As of December 31, 2019, SWIB's 30-year return for the Core Fund, net of management fees, was 8.3 percent.

Contribution rates, which include both an employer and an employee share, are actuarially determined as a percentage of an employee’s earnings and are approved annually by the ETF Board. Contributions to the WRS from employers and employees increased by \$31.2 million, or 1.5 percent, to \$2.0 billion in 2019. As shown in Table 7, total contribution rates for general employees, which include teachers and most other employees, have increased from 11.8 percent of wages in 2012 to 13.5 percent in 2021.

Table 7

**Total Contribution Rates for General Employees in the WRS**

| Calendar Year | Total Contribution Rate <sup>1</sup> |
|---------------|--------------------------------------|
| 2012          | 11.8%                                |
| 2013          | 13.3                                 |
| 2014          | 14.0                                 |
| 2015          | 13.6                                 |
| 2016          | 13.2                                 |
| 2017          | 13.6                                 |
| 2018          | 13.4                                 |
| 2019          | 13.1                                 |
| 2020          | 13.5                                 |
| 2021          | 13.5                                 |

<sup>1</sup> Includes both the employer share and the employee share of contributions and benefit adjustment contributions, but does not include prior-service cost rates for specific employers.

***The basic objective of the WRS is to invest contributions so that investment income and the contributions will be sufficient to pay projected future pension benefits.***

The basic objective of the WRS is to invest contributions paid by employers and employees so that the investment income and the contributions will be sufficient to pay projected future pension benefits. Contribution rates are set to fund the benefits earned by employees during the year. In setting these rates, one of the most significant factors considered is investment performance.

In order to maintain steady contribution rates and comply with s. 40.04 (3) (am), Wis. Stats., the consulting actuary for the WRS uses the market recognition account (MRA) to smooth investment income or loss for the Core Fund investment activity over a five-year period. The MRA accumulates the difference between actual investment income or loss and expected investment income calculated at the long-term expected

rate-of-return assumption of 7.0 percent. The difference is then distributed into the calculated plan net assets over a five-year period so that the expected investment income is affected by portions of the amounts included in the MRA in the prior four years. Use of the MRA results in less volatility in net assets and, thus, less volatility in the calculation of the contribution rates for employers and employees.

Investment income or loss used for purposes of determining contribution rates differs from the investment income or loss recognized on the financial statements due to the use of the MRA. For example, the net investment income of the Core Fund for 2019 for financial reporting was \$17.8 billion based upon the fair value of the investments. Through the use of the MRA, the actuary recognized investment income of \$7.1 billion, which was the amount used in determining the actuarial value of the WRS assets as of December 31, 2019, and determining contribution rates for 2021.

## WRS Benefits

*Annuity payments are determined either by a formula based on the participant's service or the value of contributions and investment income.*

The WRS is a defined-benefit plan that provides participants with lifelong monthly retirement annuity payments and, depending upon the annuity type selected, may also provide benefits to a beneficiary after the participant's death. Annuity payments are initially determined by either:

- a formula, which is based on the participant's years of service and final average salary; or
- a money purchase benefit, which is based on the participant's contributions, an employer's matching contributions, and investment income.

The method that yields the largest annuity payment is used to calculate a participant's initial annuity. A defined-benefit plan is in contrast to a defined-contribution plan, such as a 401(k) plan, in which benefits are based on the amounts contributed to a participant's account and investment gains or losses on those funds.

*The average annual annuity paid decreased from \$25,893 in 2018 to \$25,645 in 2019, or by 1.0 percent.*

WRS benefits provided to retired participants or their beneficiaries as annuity payments increased from \$5.5 billion in 2018 to \$5.6 billion in 2019, or by 1.8 percent. The number of retired participants increased from 209,059 as of December 31, 2018, to 215,070 as of December 31, 2019. The average annual annuity payment to retired participants in 2019 was \$25,645, which decreased from the average in 2018 of \$25,893, or by 1.0 percent.

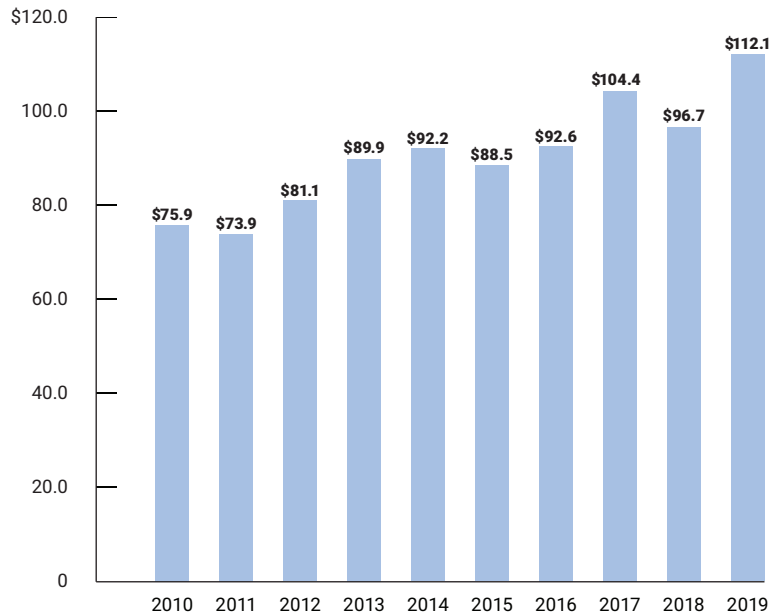
## Financial Condition of the WRS

***As of December 31, 2019,  
the fiduciary net position  
of the WRS was  
\$112.1 billion.***

The Net Position Restricted for Pensions (fiduciary net position) of the WRS represents the value of the plan's assets that are available to meet obligations as they become due. As of December 31, 2019, the WRS had a fiduciary net position of \$112.1 billion, which was a 15.9 percent increase from the prior year. This increase is primarily attributed to an increase in the fair value of investments as of December 31, 2019. From December 31, 2010, through December 31, 2019, the fiduciary net position of the WRS increased by \$36.2 billion, or by 47.7 percent, as shown in Figure 2.

Figure 2

### Wisconsin Retirement System Fiduciary Net Position<sup>1</sup> As of December 31 (in billions)



<sup>1</sup> Shown as Net Position Restricted for Pensions on the financial statements.

## WRS Reserves and Accounts

The fiduciary net position of the WRS primarily consists of three statutorily required reserves: the employer accumulation reserve (employer reserve), the employee accumulation reserve (the employee reserve), and the annuity reserve. The employer reserve consists of all



employer-required contributions, amounts to amortize the employer's share of the unfunded accrued liabilities, and investment earnings. Unlike the employee reserve, the employer reserve is pooled into one account. Contribution rates are set to fund the benefits earned by employees during the year based, in part, on the balances of the employee and the employer reserves.

The employee reserve consists of employee-required contributions, contributions paid by the employer on behalf of the employee, any voluntary additional contributions, and investment earnings. A separate account is maintained in this reserve for each WRS participant. If a participant leaves service with a WRS employer before being eligible to receive a retirement annuity, the participant can receive the balance of the contributions and earnings included in the account.

*The annuity reserve was \$63.7 billion as of December 31, 2019, and represented the largest share of the WRS fiduciary net position.*

The annuity reserve consists of the amounts transferred from the employer and employee reserve, as well as investment earnings, and are used to provide annuity payments to retired participants. As shown in Table 8, the \$63.7 billion annuity reserve represented the largest share (56.8 percent) of the WRS fiduciary net position as of December 31, 2019.

Table 8

**WRS Reserve and Account Balances**  
As of December 31, 2019  
(in millions)

| Reserve/Account                         | Balance            | Percentage of Total |
|---|--------------------|---------------------|
| Employer Accumulation Reserve           | \$ 23,389.5        | 20.9%               |
| Employee Accumulation Reserve           | 19,487.2           | 17.4                |
| Annuity Reserve                         | 63,658.1           | 56.8                |
| Market Recognition Account <sup>1</sup> | 5,516.2            | 4.9                 |
| Other <sup>2</sup>                      | 41.8               | <1                  |
| <b>Total WRS Fiduciary Net Position</b> | <b>\$112,092.8</b> |                     |

<sup>1</sup> The balance in this account will fluctuate based on investment performance. A positive balance represents investment gains that will be allocated in future years.

<sup>2</sup> Includes accounts that hold undistributed amounts for investments that have not yet been allocated and other administrative accounts.

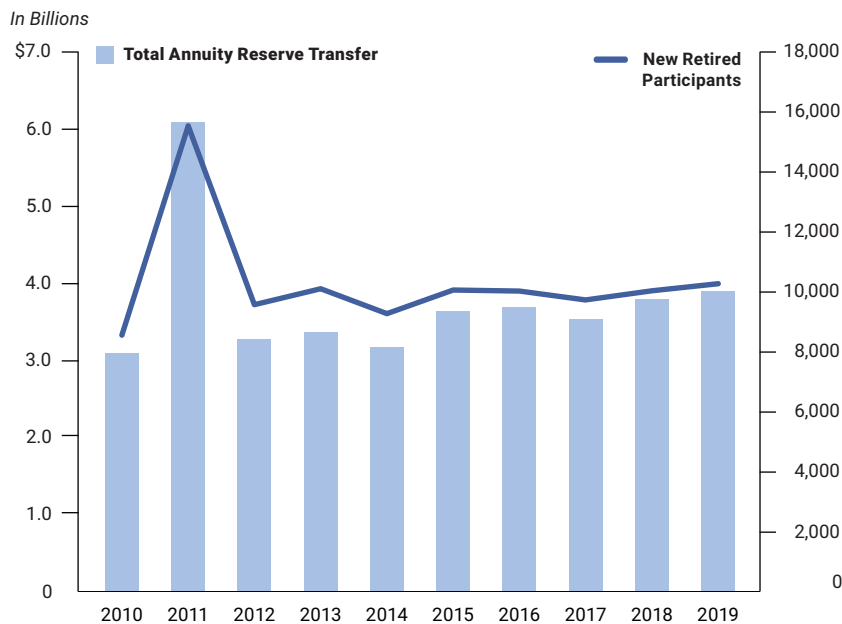
### Transfers to the Annuity Reserve

*Amounts are transferred into the annuity reserve to meet future benefit obligations.*

Upon retirement, an amount is transferred from the employee reserve and the employer reserve to the annuity reserve to meet future benefit obligations. Annually, the actuary determines the amount to transfer to the annuity reserve based upon the participants and their beneficiaries that began to receive annuities in the past year. The total amount transferred into the annuity reserve will increase and decrease each year depending upon the number of participants that began receiving annuities during the year, as shown in Figure 3.

Figure 3

**Wisconsin Retirement System Annuity Transfer Compared to New Retired Participants**  
2010 through 2019



The amount in a participant’s employee reserve is transferred to the annuity reserve upon retirement. The remaining actuarially determined amount, which is based upon the present value of expected future benefit payments, is transferred to the annuity reserve from the employer reserve. Because the amount transferred from the employee reserve is a fixed amount, the remaining amount needed to be transferred must come from the employer reserve. This transfer occurs regardless of the amount that the employer contributed during a participant’s years of service or any investment earnings that accumulated on those contributions.

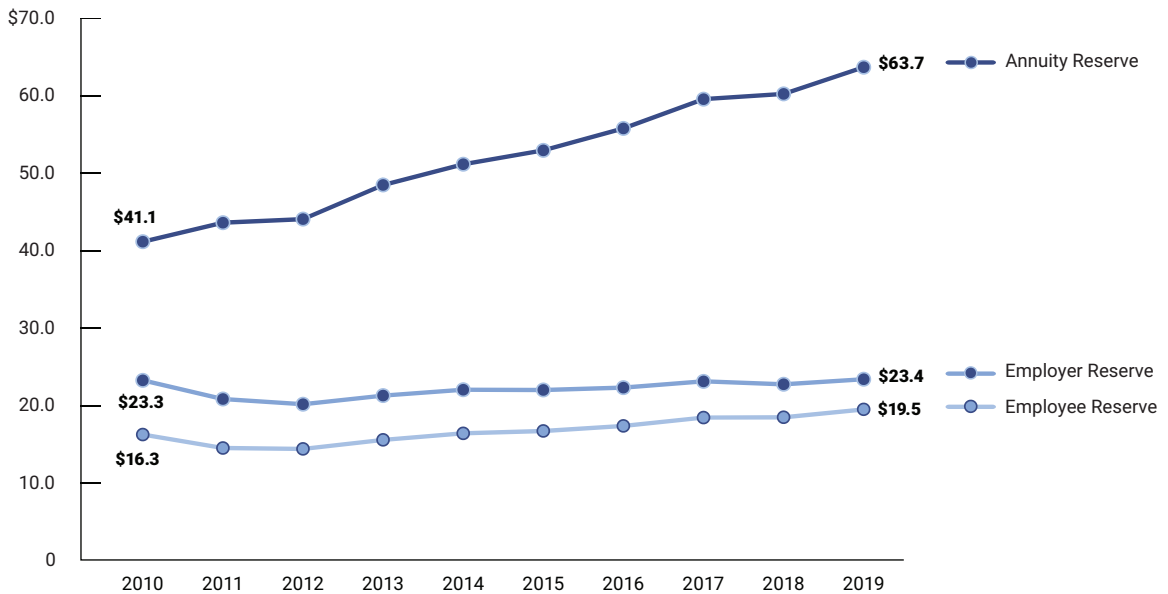
The employer reserve transfer amount may differ from the amounts that may have been accumulated because contribution rates were based upon actuarial estimates of the amounts needed to fund benefits earned by participants, which may differ from actual experience. As a result, the transfers from the employer reserve may be greater or less than the amounts accumulated because the WRS experiences may differ from actuarial estimates. In the long-term, the actuary considers these differences in developing future contribution rates.

***As a result of a 38.1 percent increase in retired participants, the annuity reserve balance increased \$22.6 billion between 2010 and 2019.***

From December 31, 2010, to December 31, 2019, the number of active and inactive participants increased from 416,444 to 433,416, or by 4.1 percent. As shown in Figure 4, both the employer and employee reserve have remained relatively stable since 2010. However, as a result of a 38.1 percent increase in the number of retired participants, the annuity reserve balance increased by \$22.6 billion between 2010 and 2019, or by 55.0 percent.

Figure 4

**Wisconsin Retirement System  
Employer, Employee, and Annuity Reserve Balances  
2010 through 2019  
(in billions)**



## Core Annuity Payments and Adjustments

***The annuity reserve dedicated to Core Fund annuities was \$59.2 billion, or 92.9 percent of the annuity reserve as of December 31, 2019.***

As noted, the annuity reserve is used to fund annuity payments, which include amounts that have been provided in a dividend adjustment to retired participants. The annuity reserve is further separated into amounts for Core Fund and Variable Fund annuities. All retired participants receive a Core Fund annuity payment. However, those retired participants who had elected participation in the Variable Fund and who do not elect to terminate their Variable Fund participation also receive a separate Variable Fund annuity. As of December 31, 2019, \$59.2 billion (92.9 percent) of the annuity reserve was invested in the Core Fund and used to fund Core Fund annuities. The remaining amount of the annuity reserve, or \$4.5 billion, was invested in the Variable Fund and used to fund Variable Fund annuities.

Annuity dividend adjustments are awarded each April. Under Wisconsin Statutes, positive or negative dividend adjustments are provided if the dividend increases or decreases annuities by at least 0.5 percent. The WRS actuary recommends and the ETF Board approves dividend adjustments for Core Fund annuities, which vary depending on:

- the investment income or loss from the prior calendar year;
- the recognized earnings, credited to the annuity reserve, which is referred to as the effective rate; and
- various other factors.

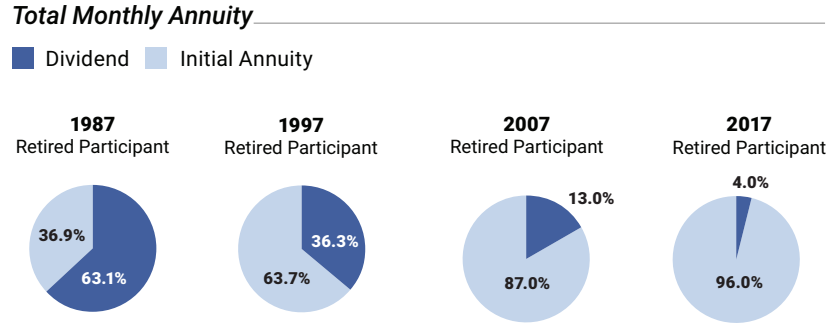
To ensure sufficient assets are available to fund the original annuity amounts, an assumed investment return of 5.0 percent is credited to the annuity reserve before Core Fund dividend adjustments are calculated. As a result, if the effective rate is below 5.0 percent, a negative dividend adjustment may be needed.

***Participants who have been retired for a longer period are receiving a larger portion of their total annuity payment from dividend adjustments.***

The annual Core Fund dividend adjustments are applied and compound each year. This results in dividend adjustments being applied to the total annuity payment, including dividend adjustments from prior years. As a result of positive dividend adjustments in years prior to 2008, participants who have been retired for a longer period are receiving a larger portion of their total annuity payment from dividend adjustments compared to those participants who retire in more recent years, as shown in Figure 5.

Figure 5

**Dividend as a Percentage of Total Core Fund Annuity<sup>1</sup>  
By Retirement Year**



<sup>1</sup> Estimated based on historical dividend adjustments.

***Statutes do not permit negative dividend adjustments to reduce Core Fund annuities below the original amount at retirement.***

Core Fund dividend adjustments differ from the prior year’s investment performance due to the use of the MRA to smooth the investment gains and losses to determine the effective earnings rate, as well as other factors. In addition, there is a statutory limitation on reducing Core Fund annuities below the original amount at retirement, which is referred to as the “floor.” A unique feature of the WRS is that retired participants share in both the investment gains and losses and receive no automatic cost of living increases. Because of this risk-sharing provision, the statutory floor limitation provides a guarantee of a minimum payment for retired participants.

***Participants with a larger accumulation of dividend adjustments are allocated a greater percentage of losses during an economic recession because of Core Fund annuities at the floor.***

The result of the floor is that a Core Fund annuity is reduced when there are negative dividend adjustments, but only to the extent there is a sufficient accumulation of prior years’ positive dividends. Any further reduction is not permitted if applying a negative dividend adjustment would reduce the annuity payment below the original annuity payment calculated at retirement. However, to ensure the annuity reserve maintains sufficient assets to fund the original annuity payments, the WRS actuary further adjusts the dividend percentage to accommodate for those participants whose Core Fund annuities are at the floor. As a result, other participants with more accumulation of dividend adjustments receive a larger percentage reduction. For example, in 2012, a negative dividend adjustment was reduced by an additional 6.6 percent to account for those participants whose Core Fund annuity was at the floor.

***As of December 31, 2019, 31.8 percent of Core Fund annuities had 10 percent or less of their annuity payment from dividend adjustments.***

The number of Core Fund annuities at the floor may increase during economic recessions. In 2008, which was the first year the investment losses of the 2008 recession affected dividend adjustments, 5.5 percent of Core Fund annuities were at the floor. By December 2013, or five years after the 2008 recession, 62.7 percent of Core Fund annuities were at the floor. Due to positive dividend adjustments in recent years, the

percentage of Core Fund annuities at the floor was 9.2 percent as of December 31, 2019. However, when also considering the effect of newly retired participants in recent years, 31.8 percent of Core Fund annuities as of December 31, 2019, had either 10 percent or less of the annuity funded by dividend adjustments or were already at the floor. This further increases the risk of the Core Fund annuities being reduced to the floor if there were to be an economic recession.

***Future negative dividend adjustments could result in certain retired participants reaching their respective floors more quickly.***

From 1986 through 2007, there were no negative dividend adjustments for the Core Fund. As shown in Table 9, from 2008 through 2012, the Core Fund experienced negative dividend adjustments, which were largely caused by the 2008 recession. These adjustments left many of the more recent retired participants with a lower accumulation of dividend adjustments. The number of participants who retired from 2008 through 2019 account for 54.5 percent of the total number of retired participants as of December 31, 2019. Because these retired participants have not had the opportunity to accumulate significant positive dividend adjustments, future negative dividend adjustments could result in these retired participants reaching their respective floors more quickly and also may result in larger reductions to participants that have been retired for longer.

Table 9

**Core Fund Annual Investment Performance and Dividend Adjustments**

| Year | Investment Income (Loss) | Effective Rate | Dividend Adjustment Increase (Decrease) | Effective Year Dividend Applied |
|------|--------------------------|----------------|---|---------------------------------|
| 2019 | 19.9%                    | 7.7%           | 1.7%                                    | 2020                            |
| 2018 | (3.3)                    | 5.0            | 0.0                                     | 2019                            |
| 2017 | 16.2                     | 8.5            | 2.4                                     | 2018                            |
| 2016 | 8.6                      | 7.9            | 2.0                                     | 2017                            |
| 2015 | (0.4)                    | 6.4            | 0.5                                     | 2016                            |
| 2014 | 5.7                      | 8.7            | 2.9                                     | 2015                            |
| 2013 | 13.6                     | 10.9           | 4.7                                     | 2014                            |
| 2012 | 13.7                     | 2.2            | (9.6)                                   | 2013                            |
| 2011 | 1.4                      | 1.5            | (7.0)                                   | 2012                            |
| 2010 | 12.3                     | 4.8            | (1.2)                                   | 2011                            |
| 2009 | 22.4                     | 4.2            | (1.3)                                   | 2010                            |
| 2008 | (26.2)                   | 3.3            | (2.1)                                   | 2009                            |

### Trends in the Core Fund Dividend Reserve

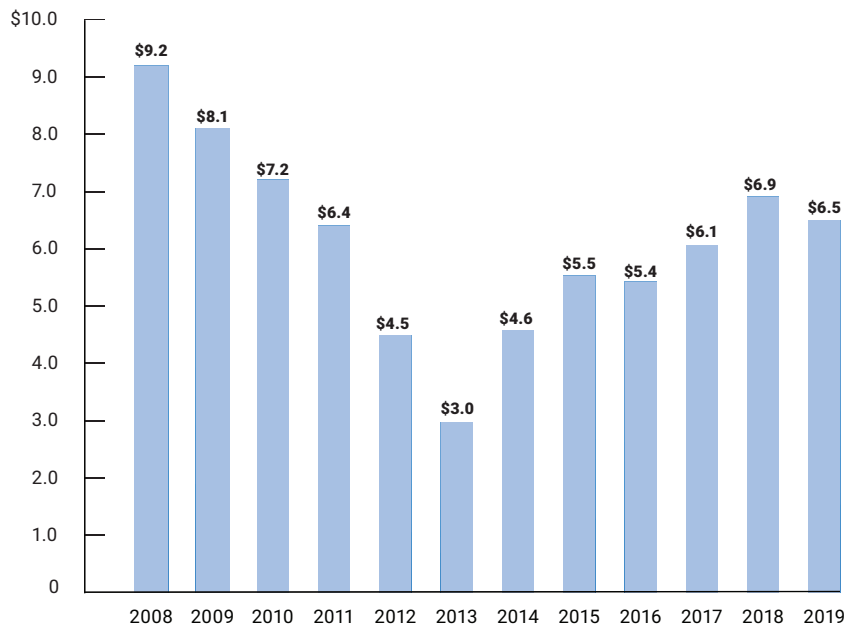
The WRS actuary determines the liability for the dividend adjustments that have been provided to participants in prior years. Assets are accumulated in the annuity reserve to fund this liability, which is referred to as the dividend reserve. Positive dividend adjustments increase the dividend reserve, while negative dividend adjustments reduce the reserve. A dividend reserve of zero would reflect that all retired participants have reached their floor and are receiving their original annuity amount. Current statutes do not address a potential situation where negative dividend adjustments cannot be applied because all retired participants have reached their floor.

***As of December 31, 2019, the Core Fund dividend reserve is \$2.7 billion lower than it was before the 2008 recession.***

As shown in Figure 6, the negative dividend adjustments resulting from the 2008 recession reduced the Core Fund dividend reserve from \$9.2 billion as of December 31, 2008 to \$3.0 billion as of December 31, 2013, or by \$6.2 billion. As of December 31, 2019, the Core Fund dividend reserve reported by the actuary has increased to \$6.5 billion. However, the dividend reserve is lower than the reserve that existed prior to the 2008 recession. This increases the risk that certain market conditions that result in future investment losses could deplete the dividend reserve.

Figure 6

#### Core Fund Dividend Reserve<sup>1</sup> As of December 31 (in billions)



<sup>1</sup> The dividend reserve is part of the WRS annuity reserve.

Among the different scenarios presented during a March 2020 ETF Board meeting, ETF estimated that if an investment loss of 12 percent occurred in 2020 and returns of 7.0 percent occurred in the subsequent three years, zero or negative dividend adjustments could occur in 2021 through 2023. As of December 31, 2020, the preliminary year-to-date Core Fund investment return reported by SWIB was 15.2 percent.

Subsequent to the 2008 recession, ETF and SWIB implemented changes to the Core Fund investment strategy and asset allocation in an effort to reduce investment volatility particularly in large market downturns. These changes are also intended to reduce negative dividend adjustments and the risk of depleting the Core Fund dividend reserve at the rate experienced following 2008.

***ETF worked with the WRS actuary and ETF Board to explore options to address the potential depletion of the Core Fund dividend reserve.***

ETF also worked with the WRS actuary and the ETF Board to explore several options to address the potential for future investment volatility and negative dividend adjustments to deplete the Core Fund dividend reserve. For example, in December 2016, the WRS actuary presented the ETF Board two potential options to change the dividend adjustment process to reduce the risk of depleting the Core Fund dividend reserve. At that time, the actuary reported that based upon a series of simulations under the current dividend adjustment process, there was a 26 percent likelihood of depleting the Core Fund dividend reserve after 10 years, with the likelihood of depletion slowly declining in subsequent years.

Since 2012, and at least annually thereafter, the WRS actuary has provided information on this component of the overall annuity reserve. In March 2020, the WRS actuary reiterated to the ETF Board that should an economic recession occur that is similar to the one in 2008, the Core Fund dividend reserve could be entirely depleted.

***We recommended in report 20-14 that ETF work with the ETF Board to address risks regarding future negative dividend adjustments.***

Although ETF has communicated to the ETF Board the risks that are present if future negative dividend adjustments occur, in report 20-14 published in September 2020, we recommended ETF work with the ETF Board to:

- continue to analyze the risk of depleting the Core Fund dividend reserve, the effect on the annuity reserve, and the effect on dividend adjustments on individual retired participants;
- develop a written plan to address the level of risk identified;
- implement the written plan and seek statutory changes, if necessary; and
- report to the Joint Legislative Audit Committee by February 26, 2021, on its efforts to implement these recommendations.



In its response to report 20-14, ETF reported that the ETF Board has been monitoring and periodically discussing the health of the dividend reserve since 2012 and plans for continued monitoring and discussions with staff and the consulting actuary. ETF reported that they will provide an update to the Joint Legislative Audit Committee as recommended.

## Pension Accounting Standards

Accounting standards for public pension plans establish accounting and financial reporting requirements for measuring the pension liability, as well as requirements for both the notes and required supplementary information to the WRS financial statements, and the GAAP-based financial statements of the employers that participate in the plan. The accounting standards require ETF to calculate the total pension liability and the net pension liability or asset for the WRS. Each of the participating employers in the WRS reports its proportionate share of this net pension liability or asset in its own financial statements if prepared under GAAP.

### Calculating the Total Pension Liability

***The total pension liability is the sum of the amounts needed to pay for the pension benefits earned by each participant.***

The total pension liability for the WRS is the sum of the amounts needed to pay for the pension benefits earned by each participant based on service provided as of the date the actuarial valuation is performed. A total pension liability exists because the employers participating in the WRS have committed to provide benefits to their employees in the future when those employees retire. That commitment is part of employee compensation and constitutes a liability.

The calculation of the total pension liability is complex and includes various actuarial assumptions and calculations, such as:

- a projection of future benefit payments for current and former participants and their beneficiaries based upon the current terms of the WRS;
- a discount of those payments to their present value, or the amount of funds currently needed to provide the projected payments in the future; and
- an allocation of the present value of benefit payments over past, present, and future periods of employee service.

***The total pension liability for the WRS was \$108.9 billion as of December 31, 2019.***

To determine the total pension liability for the WRS as of December 31, 2019, ETF's actuary performed an actuarial valuation as of December 31, 2018, and adjusted for changes in assumptions, interest earned, contributions paid,

benefits paid, and dividend adjustments during 2019. The total pension liability for the WRS was \$108.9 billion as of December 31, 2019.

***The discount rate can have a significant effect on the amount of the total pension liability.***

The discount rate is a critical factor in calculating a pension plan liability, and it can have a significant effect on the amount of the total pension liability. The discount rate, or interest rate, is used to calculate the present value of projected benefit payments and is specifically defined under the accounting standards. ETF used the long-term expected rate-of-return assumption for the WRS, which is 7.0 percent, as the discount rate because current and projected future plan assets are expected to cover the projected benefit payments for the WRS. Increasing or decreasing the discount rate can have a significant effect on the total pension liability. For instance, a one percentage point decrease in the discount rate (6.0 percent) would increase the total pension liability to \$120.4 billion.

### **Calculating a Net Pension Liability or Asset**

To determine the net pension liability or asset, accounting standards require the total pension liability to be subtracted from the pension plan's fiduciary net position. When the total pension liability is greater than the fiduciary net position, the pension plan will disclose a net pension liability in its notes. When the fiduciary net position is greater than the total pension liability, the pension plan will disclose a net pension asset in its notes.

***ETF reported a net pension asset of \$3.2 billion for the WRS as of December 31, 2019.***

As of December 31, 2019, the WRS had a fiduciary net position of \$112.1 billion and a total pension liability of \$108.9 billion, which resulted in a net pension asset of \$3.2 billion. A net pension asset indicates that, as of December 31, 2019, the assets of the WRS were sufficient to cover the projected liability for benefit payments to employees under the financial reporting standards. This represents an improvement from the net pension liability of \$3.6 billion, reported as of December 31, 2018. An increase in the value of the investments of the Core Fund and the Variable Fund from December 31, 2018, to December 31, 2019, was the primary cause of the \$15.4 billion increase in the fiduciary net position and resulted in the reporting of a net pension asset as of December 31, 2019. In report 20-9, we reported on the investment activity of the Core Fund and Variable Fund.

As shown in Table 10, the WRS has reported a net pension asset in two of the past five years. The fluctuation between a net pension liability and a net pension asset is largely associated with the change in fair value of the investments as of the end of each calendar year. Under the accounting standards, pension plan assets are valued at fair value as of the reporting period end date, which is December 31 for the WRS. The use of the fair value of the plan assets in the calculation will cause a large degree of volatility in the reported net pension liability or asset, depending upon investment performance and fluctuations in the investment market.

Table 10

**WRS Net Pension Asset (Liability)**As of December 31  
(in billions)

|                                      | 2015            | 2016            | 2017          | 2018            | 2019          |
|--------------------------------------|-----------------|-----------------|---------------|-----------------|---------------|
| Fiduciary Net Position               | \$88.5          | \$92.6          | \$104.4       | \$ 96.7         | \$112.1       |
| Total Pension Liability              | (90.1)          | (93.4)          | (101.4)       | (100.3)         | (108.9)       |
| <b>Net Pension Asset (Liability)</b> | <b>\$ (1.6)</b> | <b>\$ (0.8)</b> | <b>\$ 3.0</b> | <b>\$ (3.6)</b> | <b>\$ 3.2</b> |

**Employer Reporting**

*Employers participating in the WRS have made a commitment to provide pension benefits and have an obligation to make contributions to fund those benefits.*

As noted, the WRS is a cost-sharing, multiple-employer, defined-benefit pension plan with 1,516 participating employers. In this type of pension plan, the contributions are combined and the benefits are paid out of a common pool of assets. By participating in the WRS, employers have made a commitment to provide pension benefits to employees, and they are obligated to make contributions into the future to ensure that sufficient resources are available to make the benefit payments. Therefore, because the employers participating in the WRS have ultimate responsibility for the resulting pension obligations, each participating employer is required to report its proportionate share of the net pension liability or asset in its GAAP-based financial statements.

*Each employer participating in the WRS must report its proportionate share of the net pension asset in its GAAP-based financial statements.*

To assist employers participating in the WRS in determining the employer's proportionate share of these amounts, ETF has prepared a Schedule of Employer Allocations and a Schedule of Collective Pension Amounts as of and for the year ended December 31, 2019. We audited these schedules and provided unmodified opinions on them in report 20-15. Because the WRS has calculated a net pension asset for the year ended December 31, 2019, each employer participating in the WRS must report its proportionate share of the net pension asset in its GAAP-based financial statements.

The proportionate share of the net pension asset for State of Wisconsin agencies as of December 31, 2019, was \$896.0 million, of which \$430.5 million related to UW System. The net pension asset for the state agencies is included in the State's GAAP-based financial statements, which were published in December 2020, in the State of Wisconsin's CAFR as of and for the year ended June 30, 2020.

## Comparison to Other Pension Plans

*Differences in the structure of pension plans and timing of pension plan reporting will affect the comparability across pension plans.*

Comparability of the pension liability across public pension plans has increased with the use of accounting standards for pension plans that prescribe how the liability is calculated. However, because pension plans have different plan structures, planned asset allocations, and investment strategies, the comparability of pension plans is affected. In addition, because pension plans have varying fiscal-year ends, changes in the condition of investment markets at different points in time during a year will also affect comparability.

We collected information from other cost-sharing, multiple-employer, defined-benefit plans that were part of the WRS peer group defined by an annual study performed by a private firm. At 103.0 percent, the WRS had the highest funded ratio in comparison to these plans, as shown in Table 11.

Table 11

### Comparison of Selected Pension Plans Based on Financial Reporting Methodology<sup>1,2</sup> (in billions)

| Pension Plan   | Total Pension Liability | Fiduciary Net Position | Net Pension Asset | Net Pension Liability | Funded Ratio |
|--|-------------------------|------------------------|-------------------|-----------------------|--------------|
| Wisconsin Retirement System <sup>3</sup>                           | \$108.9                 | \$112.1                | \$3.2             | n/a                   | 103.0%       |
| New York State and Local Employees' Retirement System <sup>4</sup> | 223.9                   | 215.2                  | n/a               | \$8.8                 | 96.1         |
| Iowa Public Employees Retirement System                            | 39.8                    | 34.0                   | n/a               | 5.8                   | 85.5         |
| Ohio Public Employees Retirement System <sup>3</sup>               | 111.4                   | 91.8                   | n/a               | 19.6                  | 82.4         |
| Oregon Public Employees Retirement System                          | 87.5                    | 70.2                   | n/a               | 17.3                  | 80.2         |
| Indiana Public Retirement System—Public Employees Retirement Fund  | 16.6                    | 13.3                   | n/a               | 3.3                   | 80.1         |
| State Teachers Retirement System of Ohio                           | 97.8                    | 75.7                   | n/a               | 22.1                  | 77.4         |
| Virginia Retirement System—Teachers Retirement System              | 49.7                    | 36.5                   | n/a               | 13.2                  | 73.5         |
| Arizona State Retirement System                                    | 54.4                    | 39.8                   | n/a               | 14.6                  | 73.2         |
| California State Teachers' Retirement System                       | 329.2                   | 238.9                  | n/a               | 90.3                  | 72.6         |

<sup>1</sup> Based on information from other cost-sharing, multiple-employer, defined-benefit pension plans that were part of the WRS peer group as defined by an annual study performed by a private firm.

<sup>2</sup> Unless otherwise noted, for the plan year ended June 30, 2019.

<sup>3</sup> For the plan year ended December 31, 2019.

<sup>4</sup> For the plan year ended March 31, 2019.

## WRS Stress Testing

***Analyzing the effects of varied investment performance can provide pension plan managers important information in making decisions.***

The WRS funding policy established by the ETF Board requires ETF to engage the WRS actuary to undertake stress testing or review the results of stress testing performed by SWIB to understand the potential effects of major risks that may affect the WRS. Although adjustments to contribution rates and dividend adjustments to annuitants are determined by ETF, SWIB contracts with the WRS actuary biennially to analyze the effects of varied investment returns on contribution rates and dividend adjustments. Analyzing the effects of varied investment performance can provide pension plan managers important information in making decisions. In May 2018, a research project conducted by Pew Charitable Trusts and published by Harvard University recommended that public pension plans complete “stress testing” to better understand the effect of various market and other conditions.

The most recent stress testing performed by SWIB was presented to SWIB’s Board of Trustees in 2019. ETF also worked with the WRS actuary in 2020 to perform a one-time stress test to analyze the impacts of a potential large market downturn that could have resulted from the public health emergency, including the impact on the dividend reserve. However, ETF indicated that it does not perform recurring stress testing in addition to the analyses biennially performed by SWIB.

***In report 20-23, we found that the results of the stress testing ETF and SWIB perform are not easily accessible.***

A panel convened by Harvard University and the Pew Charitable Trusts recommended in 2019 that risk reporting for public pension plans assist budget officials and legislators in assessing the effect of investment risk on government budgets and pension solvency by including metrics that are accessible to all stakeholders. In report 20-23, we found that the results of the stress testing ETF and SWIB perform are not easily accessible. For example, although the WRS actuary provided a presentation to the ETF Board on its stress testing results in 2020 and a presentation to SWIB’s Board of Trustees on its stress testing results in 2019, it did not submit written reports.

### Legislative Consideration

***The Legislature could create a statutory requirement for ETF to work with SWIB on stress tests of the WRS.***

There is not currently a statutory requirement for the performance of stress testing, generally, or any stress test, specifically, for the WRS. As we noted in report 20-23, the Legislature could consider creating a statutory requirement for SWIB to biennially perform stress tests and include analyses that show the effects of a large sustained market downturn on contribution rates and dividend adjustments over a sustained period, consider statutorily requiring SWIB to submit a written report to the Legislature that clearly reports the results of its stress tests, and consider statutorily requiring SWIB to make its written report easily accessible on its website. In making this consideration, we recognize that ETF has responsibility to ensure the solvency and

long-term future of the WRS and will need to work with SWIB in performing and reporting on results of the stress testing and the Legislature could require ETF to work with SWIB in meeting these requirements. We note that, as of October 2020, the National Conference of State Legislatures indicates that ten states have statutorily required their large public pension plans to conduct stress testing.

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## Other Postemployment Benefits (OPEB) Plans

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OPEB refers to the benefits, other than pensions, that a state or local government employee may receive after they have left employment, generally upon retirement. An OPEB plan can include medical, prescription drug, dental, vision, and other health-related benefits, whether provided separately or through a pension plan, as well as death benefits, life insurance, and long-term care coverage, when provided separately from a pension plan.

Accounting standards for OPEBs establish financial reporting requirements for measuring the OPEB liability for OPEB plans, as well as requirements for both the notes and required supplementary information to the OPEB plan financial statements, and the GAAP-based financial statements for the employers that participate in OPEB plans.

### **Trusted and Non-Trusted OPEB Plans**

One of the primary factors that determines how an OPEB plan is reported is the determination of whether a plan is administered through a trust. To be considered a trusted plan, all of the following requirements must be met:

- contributions from employers and employees and earnings on those contributions must be considered irrevocable;



- plan assets must be dedicated to providing benefits to plan members according to the benefit terms; and
- plan assets must be legally protected from creditors of the employer, employees, and ETF.

If any of these requirements are not met, the OPEB plan is considered a non-trusted plan and the employers participating in the plan are solely responsible for determining the effect of participation in these programs in their GAAP-based financial statements, including the calculation of the OPEB liability.

***ETF administers five OPEB plans for retired individuals.***

ETF administers five separate OPEB plans for retired individuals: the State Retiree Life Insurance program, the Local Retiree Life Insurance program, and the SHICC program, all of which are considered trusted OPEB plans; and the State Retiree Health Insurance program and the Local Retiree Health Insurance program, both of which are considered non-trusted OPEB plans. The assets accumulated for the State Retiree Life Insurance program, the Local Retiree Life Insurance program, and the SHICC program represented by the fiduciary net position, are reported by ETF in the Statement of Fiduciary Net Position for each program. The State Retiree Health Insurance program and the Local Retiree Health Insurance program are considered non-trusted OPEB plans because the programs do not accumulate assets dedicated to providing benefits to plan members. The OPEB liability for the State Retiree Health Insurance program was reported in the State of Wisconsin's CAFR for the year ended June 30, 2020. In report 20-19, we provided information on the calculation of the OPEB liability for the State Retiree Health Insurance program.

In September 2020, ETF separately issued reports for the State Retiree Life Insurance program and for the Local Retiree Life Insurance program that included the financial statements, including the related notes, and that included a Schedule of Employer Allocations and Schedule of Collective OPEB Amounts, as of and for the year ended December 31, 2019. In December 2020, ETF separately issued reports for the SHICC program that included the financial statements, including the related notes, and the Schedule of Employer Allocations and the Schedule of Collective OPEB Amounts, as of and for the year ended December 31, 2019. We provided unmodified opinions on the financial statements and the employer schedules included in ETF's report for each program. We further reported on the activity of the State Retiree Life Insurance and the Local Retiree Life Insurance programs in reports 20-16, 20-17, and 20-18, and on the activity of the SHICC program in reports 20-24 and 20-25. These reports included our reports on internal control over financial reporting and on compliance and other matters as well as the information in this chapter. We have provided the information again in order to assist the users of the financial statements included in ETF's CAFR.

## Retiree Life Insurance

Administered under the provisions of s. 40.70, Wis. Stats., the State Retiree Life Insurance program and the Local Retiree Life Insurance program provide postemployment life insurance coverage to all eligible employees of participating employers. The State of Wisconsin, including state agencies, such as UW System, and state authorities, such as the UW Hospitals and Clinics Authority, participates in the State Retiree Life Insurance program. There were 721 local government employers participating in the Local Retiree Life Insurance program as of December 31, 2019.

The third-party administrator for the State Retiree Life Insurance program and the Local Retiree Life Insurance program is responsible for the premium collection, benefit payment, and investment of assets accumulated for the payment of benefits. Employers pay stated contribution amounts to the program that are based upon the active employee premium amounts.

### Calculating the Total OPEB Liability

The total OPEB liability is the sum of amounts needed to pay for the OPEB benefits earned by each participant as of the date of the actuarial valuation. A liability exists because the employers participating in the OPEB plan have committed to providing the benefit at some point in the future. The calculation of the total OPEB liability is complex and includes various actuarial assumptions and calculations, such as:

- a projection of future benefit payments for active and retired participants and their beneficiaries based upon the current terms of the plan;
- a discount of those payments to their present value, which is the amount of funds needed currently to provide the projected payments in the future; and
- an allocation of the present value of benefit payments over past, present, and future periods of employee service.

***As of December 31, 2019, the total OPEB liability was \$1.0 billion for the State Retiree Life Insurance program and \$682.2 million for the Local Retiree Life Insurance program.***

ETF's actuaries performed actuarial valuations as of January 1, 2019, and adjusted for changes such as interest earned, contributions paid, and benefits paid during 2019 to determine the total OPEB liability for the State Retiree Life Insurance program and for the Local Retiree Life Insurance program as of December 31, 2019. Based on these valuations, the total OPEB liability for the State Retiree Life Insurance program was \$1.0 billion as of December 31, 2019, and the total OPEB liability for the Local Retiree Life Insurance program was \$682.2 million as of December 31, 2019.

The discount rate is a critical factor in calculating the total OPEB liability, and it can have a significant effect on the amount of the total OPEB liability. The discount rate, or interest rate, used to calculate the present value of projected benefit payments is specifically defined under the accounting standards. Because the assets accumulated for the State Retiree Life Insurance program and the Local Retiree Life Insurance program are projected to be insufficient to make all projected future benefit payments of current active and retired eligible employees, ETF was required to use a blended discount rate in calculating the total OPEB liability for each program. The long-term expected rate-of-return of 4.25 percent was blended with the municipal bond rate of 2.74 percent as of December 31, 2019, using the Bond Buyer GO 20-Bond Municipal Bond Index. The blended discount rate for the State Retiree Life Insurance program was 2.84 percent, and the blended discount rate for the Local Retiree Life Insurance program was 2.87 percent. As a result, the OPEB liability calculated for each program is larger than if the long-term expected rate-of-return of 4.25 percent was used.

***The discount rate can have a significant effect on the amount of the total OPEB liability for the retiree life insurance programs.***

Increasing or decreasing the discount rate can have a significant effect on the total OPEB liability. For instance, a one percentage point decrease in the discount rate would increase the total OPEB liability for the State Retiree Life Insurance program to \$1.3 billion and the Local Retiree Life Insurance program to \$844.4 million. A one percentage point increase in the discount rate would decrease the total OPEB liability for the State Retiree Life Insurance program to \$854.8 million and the Local Retiree Life Insurance program to \$558.8 million.

### **Calculating the Net OPEB Liability or Asset**

To determine the net OPEB liability or asset, the accounting standards require the total OPEB liability be subtracted from the OPEB plan's fiduciary net position. When the total OPEB liability is greater than the fiduciary net position, the OPEB plan will disclose a net OPEB liability in its notes. When the fiduciary net position is greater than the total OPEB liability, the OPEB plan will disclose a net OPEB asset in its notes.

***As of December 31, 2019, the net OPEB liability was \$683.1 million for the State Retiree Life Insurance program and \$425.8 million for the Local Retiree Life Insurance program.***

As of December 31, 2019, the State Retiree Life Insurance program and the Local Retiree Life Insurance program each reported a net OPEB liability. The State Retiree Life Insurance program had a fiduciary net position of \$348.0 million and a total OPEB liability of \$1.0 billion, which resulted in a net OPEB liability of \$683.1 million as of December 31, 2019. The Local Retiree Life Insurance program had a fiduciary net position of \$256.4 million and a total OPEB liability of \$682.2 million, which resulted in a net OPEB liability of \$425.8 million as of December 31, 2019. As shown in Table 12, this represents an increase from the net OPEB liability reported as of December 31, 2018, for both programs. This increase can be primarily attributed to a decrease in the discount rate of 1.36 percent and

1.35 percent for the State Retiree Life Insurance program and the Local Retiree Life Insurance program, respectively.

Table 12

**Net OPEB Asset (Liability) for the State Retiree Life Insurance Program  
and the Local Retiree Life Insurance Program**

As of December 31  
(in millions)

|                                   | State Retiree<br>Life Insurance |                  | Local Retiree<br>Life Insurance |                  |
|-----------------------------------|---------------------------------|------------------|---------------------------------|------------------|
|                                   | 2018                            | 2019             | 2018                            | 2019             |
| Fiduciary Net Position            | \$ 344.0                        | \$ 348.0         | \$ 244.9                        | \$ 256.4         |
| Total OPEB Liability              | (775.5)                         | (1,031.1)        | (502.9)                         | (682.2)          |
| <b>Net OPEB Asset (Liability)</b> | <b>\$(431.5)</b>                | <b>\$(683.1)</b> | <b>\$(258.0)</b>                | <b>\$(425.8)</b> |

*A net OPEB liability for the retiree life insurance programs indicates that, at that point in time, the projected liability for benefit payments to employees exceeded the assets of the program.*

A net OPEB liability indicates that, at that point in time, the projected liability for benefit payments to employees exceeded the assets of the program. Based upon the calculation of the total OPEB liability and the fiduciary net position, the State Retiree Life Insurance program had a funded ratio of 33.8 percent and the Local Retiree Life Insurance program had a funded ratio of 37.6 percent as of December 31, 2019. Because GASB did not create the financial reporting methodology to be used for funding purposes, the existence of a net OPEB liability for the State Retiree Life Insurance program and the Local Retiree Life Insurance program should not be used to support a change in contribution rates for the programs. The Group Insurance Board has an approved funding policy for both the State Retiree Life Insurance program and the Local Retiree Life Insurance program and uses this policy, in addition to future liability calculations provided by the third-party administrator, in establishing contribution rates.

### **Supplemental Health Insurance Conversion Credit Program**

The SHICC program, established in 1995, is administered under the provisions of ss. 40.95, and 230.12 (9), Wis. Stats. In July 2020, ETF determined that the SHICC program should be considered an OPEB plan, which resulted in the calculation of a new OPEB liability under accounting standards. The SHICC program provides certain eligible employees additional sick leave hours at the time of termination that increases the balance available to pay for health insurance premiums.

The State of Wisconsin, UW System, and certain state authorities, including the UW Hospital and Clinics Authority, participate in the SHICC program. The SHICC program is funded through annual participating employer contributions and investment earnings. Employer contribution rates are paid as a percentage of payroll determined by the consulting actuary and approved by the ETF Board. For calendar year 2019, the contribution rate for most participating employers was 0.3 percent.

### Calculating the Total OPEB Liability

*As of December 31, 2019,  
the SHICC program total  
OPEB liability was  
\$932.6 million.*

As noted, the total OPEB liability is the sum of amounts needed to pay for the OPEB benefits earned by each participant as of the date of the actuarial valuation. A liability exists because the employers participating in the OPEB plan have committed to providing the benefit at some point in the future. ETF's actuaries performed actuarial valuations as of December 31, 2019, to determine the total OPEB liability for the SHICC program as of December 31, 2019. Based on these valuations, the total OPEB liability for the SHICC program was \$932.6 million as of December 31, 2019, compared to \$949.8 million as of December 31, 2018.

The health care cost trend rate, which measures the rate of change in per capita health costs over time, is also significant in the calculation of the total OPEB liability and was assumed to be 3.2 percent. A one percentage point increase in the health care cost trend rate (4.2 percent) increases the total OPEB liability to \$993.1 million, and a one percentage point decrease in the health care cost trend rate (2.2 percent) decreases the total OPEB liability to \$868.9 million.

The discount rate is also a critical factor in calculating the total OPEB liability, and it can have a significant effect on the amount of the total OPEB liability. Because the assets accumulated for the SHICC program are projected to be sufficient to make all projected future benefit payments of current active and retired eligible employees, ETF used the SHICC long-term expected rate-of-return assumption, which is 7.0 percent as the discount rate for the program. Increasing or decreasing the discount rate can have a significant effect on the total OPEB liability. For instance, a one percentage point decrease in the discount rate (6.0 percent) would increase the total OPEB liability to \$1.0 billion and a one percentage point increase in the discount rate (8.0 percent) would decrease the total OPEB liability to \$853.2 million.

## Calculating the Net OPEB Liability or Asset

***As of December 31, 2019, the net OPEB asset was \$151.8 million for the SHICC program.***

To determine the net OPEB liability or asset, the accounting standards require the total OPEB liability be subtracted from the OPEB plan's fiduciary net position. As shown in Table 13, the SHICC program had a fiduciary net position of \$1.1 billion and a total OPEB liability of \$932.6 million, which resulted in a net OPEB asset of \$151.8 million as of December 31, 2019. A net OPEB asset indicates that, at that point in time, the assets of the program exceeds the projected liability for benefit payments.

Table 13

### Net OPEB Asset (Liability) for the SHICC Program

As of December 31, 2019  
(in millions)

|                                   | Amount          |
|-----------------------------------|-----------------|
| Fiduciary Net Position            | \$1,084.4       |
| Total OPEB Liability              | (932.6)         |
| <b>Net OPEB Asset (Liability)</b> | <b>\$ 151.8</b> |

## Employer Reporting

***Employers have made a commitment to provide postemployment benefits to employees and have an obligation to make contributions to fund these benefits.***

For the State Retiree Life Insurance program, the Local Retiree Life Insurance program, and the SHICC program, contributions from employers are combined, by program, and the benefits are paid out of the common pool of assets established for each program. By participating in these programs, each employer has made a commitment to provide postemployment benefits to employees and is obligated to make contributions into the future to ensure that sufficient resources are available to make the benefit payments. Therefore, because each employer has responsibility for the resulting OPEB obligations, each employer will be required to report its share of the net OPEB liability or asset for each program on its GAAP-based financial statements.

***Each participating employer must report its share of the net OPEB liability or asset in its GAAP-based financial statements.***

Employers participating in the State Retiree Life Insurance program and the SHICC program includes state agencies, such as UW System, and the various authorities that participate in the program, such as the UW Hospitals and Clinics Authority. To assist the State of Wisconsin and those agencies and authorities that are part of the State's financial reporting entity but that prepare separately issued

financial statements, ETF prepared a Schedule of Employer Allocations and a Schedule of Collective OPEB Amounts as of and for the year ended December 31, 2019, for each of these OPEB programs. We audited these schedules and provided unmodified opinions on them in report 20-17 and report 20-25. The net OPEB liability for the State Retiree Life Insurance program and the net OPEB asset for the SHICC program were included in the State's GAAP-based financial statements, which were published in December 2020 in the State of Wisconsin's CAFR for the year ended June 30, 2020.

To assist local employers participating in the Local Retiree Life Insurance program in determining the employer proportionate share of the net OPEB liability, ETF also prepared a Schedule of Employer Allocations and a Schedule of Collective OPEB Amounts as of and for the year ended December 31, 2019, for the Local Retiree Life Insurance program. We audited these schedules and provided unmodified opinions on them in report 20-18. Each local government that participates in the Local Retiree Life Insurance program must report its proportionate share of the net OPEB liability in its GAAP-based financial statements.



# Administration and Oversight of Group Insurance Programs

GIB oversees group insurance programs that ETF administers. In report 19-2, we reviewed the administration and oversight of the following programs: Group Health Insurance, Income Continuation Insurance, Group Life Insurance, and Long-term Disability Insurance, which was closed to new claims in January 2018. In report 19-2, we made 30 recommendations to ETF to improve the administration of group insurance programs in the areas of contract administration, program reserves, and governance. On November 22, 2019, ETF reported to the Joint Legislative Audit Committee on the status of ETF's efforts to implement our recommendations.

## Status of Recommendations

***As of November 2020, we found ETF had fully implemented 24 recommendations, partially implemented 5 recommendations, and had not implemented one recommendation.***

During our current audit, we followed up on the status of the 30 recommendations we made in report 19-2. Our follow-up procedures included reviewing GIB meeting materials, attending GIB meetings, interviewing certain ETF staff, and reviews of other materials provided. As of November 2020, ETF had fully implemented 24 of the 30 recommendations, partially implemented 5 recommendations, and had not implemented one recommendation, as shown in Table 14. Recommendations were considered partially implemented when ETF implemented some aspects of the recommendation or, for certain recommendations, implemented alternative actions. The one recommendation that was not implemented related to providing GIB a summary of the audit for the program administrator for the Income Continuation Insurance program. Because the next audit of the program administrator will not occur until 2021, ETF cannot yet implement this recommendation. We will continue to monitor ETF's implementation of this recommendation in future audit work.



Table 14

**Status of ETF's Efforts to Implement Recommendations in Report 19-2, By Issue<sup>1</sup>**  
As of November 2020

| Issue                                   | Fully Implemented | Partially Implemented | Not Implemented | Total     |
|---|-------------------|-----------------------|-----------------|-----------|
| Expenditures and Staffing               |                   | 1                     |                 | 1         |
| Group Health Insurance Program          | 6                 |                       |                 | 6         |
| Group Health Insurance Program Reserves | 6                 |                       |                 | 6         |
| Disability Insurance Programs           | 2                 |                       | 1               | 3         |
| Group Life Insurance Program            | 2                 | 2                     |                 | 4         |
| Information Technology Security         | 3                 |                       |                 | 3         |
| Governance Issues                       | 5                 | 2                     |                 | 7         |
| <b>Total</b>                            | <b>24</b>         | <b>5</b>              | <b>1</b>        | <b>30</b> |

<sup>1</sup> A complete list of the recommendations and summary information on ETF's actions is included in Appendix 3.

We do not make additional or continued recommendations for three of the five partially implemented recommendations because, as we describe in Appendix 3, ETF took the following alternative actions in response to our recommendations:

- Expenditures and Staffing—We recommended that ETF require staff to track time charged to group insurance programs on an ongoing basis. Instead, ETF updated its process to require quarterly estimates of time spent, but did not require staff to track actual time spent on these programs. We will continue to monitor ETF's estimation in future audit work.
- Group Life Insurance program—We recommended that ETF work with GIB to establish target ranges for program reserves for the state and local components of the Group Life Insurance program, as well as a strategy and timeline for achieving them. ETF presented these target ranges to GIB. However, GIB was not involved in setting the target ranges, such as by review of various options, but did approve the premium rates set using the target ranges presented. As a result, approval of the target range could be implied.

- Governance Issues—We recommended that ETF work with GIB and the ETF Board to determine the maximum duration of contracts with program administrators, actuaries, and auditors. ETF worked with GIB to determine the maximum duration for program administrators. However, contracts that allow for indefinite annual renewals were established for actuaries and auditors under the contracting authority provided to the ETF Secretary by GIB and the ETF Board. We will continue to monitor ETF's contracting practices in future audit work.

***ETF should either continue its efforts or take additional steps to implement our recommendations.***

For the two remaining partially implemented recommendations, which related to recommendations for the Group Life Insurance program and Governance Issues, ETF should either continue its efforts or take additional steps to implement our recommendations.

### **Group Life Insurance Program**

In report 19-2, we reviewed the administration and oversight of the Group Life Insurance program, and found that GIB did not establish target ranges for program reserves. We recommended that ETF work with GIB to establish target ranges for program reserves for the state and local components of the program, and a timeline and strategy for achieving them. We also recommended that ETF work with GIB to establish a policy requiring periodic reviews of the target ranges and provide GIB with the results of these reviews.

***ETF should establish a written policy requiring periodic reviews of target ranges for the Group Life Insurance program reserves.***

In August 2019, ETF included target ranges for all program reserves in its memorandum to GIB and worked with GIB to develop a timeline and strategy for achieving the targeted program reserves. ETF did not work with GIB in establishing the target ranges, such as by presenting various options for GIB's consideration. However, because GIB approved the premium rates that were projected to meet the target ranges within the established timeline, GIB approval of the target ranges could be implied. Unlike the actions taken in November 2020 related to the Group Health Insurance program, ETF has not developed a written policy requiring periodic reviews of the target ranges for the Group Life Insurance program. ETF indicated that the annual review of the reserves includes a review of the target ranges, but this was not included in a written policy. As noted, requiring periodic reviews of the target ranges of reserves in a written policy and providing GIB the results of its reviews allow GIB members to ensure that the target ranges continue to be appropriate and assist GIB in making informed programmatic decisions.

**☑ Recommendation**

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*We recommend the Department of Employee Trust Funds:*

- *work with the Group Insurance Board to establish a written policy requiring periodic reviews of the target ranges for reserves for the Group Life Insurance program, and provide the results of these reviews to the Group Insurance Board; and*
- *report to the Joint Legislative Audit Committee by June 30, 2021, on its efforts to implement this recommendation.*

**Governance Issues**

***ETF should provide GIB with information related to the performance of program auditors.***

In report 19-2, we found that ETF did not consistently provide GIB with information on the performance of program administrators, actuaries, or auditors, including the extent to which these firms achieved key performance measurement goals. We recommended ETF compile additional information about the performance of these firms involved in administering the group insurance programs and provide this information to GIB and the ETF Board. During our current audit, we found that ETF compiled and provided additional performance information to GIB and the ETF Board for program administrators and program actuaries. However, ETF did not do so for the program auditors. Although there would be fewer outcomes to report, ETF should provide information to GIB and the ETF Board on the performance of program auditors.

**☑ Recommendation**

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*We recommend the Department of Employee Trust Funds:*

- *compile additional information about the performance of program auditors and provide this information to the Group Insurance Board and the Employee Trust Fund Board; and*
- *report to the Joint Legislative Audit Committee by June 30, 2021, on its efforts to implement this recommendation.*

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# Auditor's Report

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STATE OF WISCONSIN  
**Legislative Audit Bureau**

**Report 21-3**

Joe Chrisman  
State Auditor

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## **Independent Auditor's Report on Internal Control over Financial Reporting and on Compliance and Other Matters**

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

We have audited the financial statements and related notes of 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 (SHICC), Employee Reimbursement Accounts/Commuter Benefits, State Retiree Life Insurance, Local Retiree Life Insurance, Milwaukee Retirement Systems, and Local Retiree Health Insurance. In addition, we have audited 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. We have issued our report thereon dated February 10, 2021. 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. The financial statements and related auditor's report have been included in ETF's 2019 CAFR.

### **Internal Control over Financial Reporting**

Management of ETF is responsible for establishing and maintaining effective internal control over financial reporting (internal control). In planning and performing our audit of the financial statements, we considered ETF's internal control to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of ETF's internal control. Accordingly, we do not express an opinion on the effectiveness of ETF's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent misstatements, or to detect and correct misstatements on a timely basis. A *material weakness* is a deficiency or a combination of deficiencies in internal control such that there is a reasonable possibility that a material misstatement of ETF's financial statements will not be prevented, or that a material misstatement will not be detected and corrected on a timely basis. A *significant deficiency* is a deficiency or a combination of deficiencies in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies, and therefore, material weaknesses or significant deficiencies may exist that were not identified. However, we identified certain deficiencies in internal control that we consider to be a material weakness or a significant deficiency. We consider the finding related to compiling an estimated liability for the basic Accumulated Sick Leave Conversion Credit (basic ASLCC) program, described in the accompanying Finding and Response Schedule, to be a material weakness. Because ETF's financial statements are also included in the State of Wisconsin's CAFR for the fiscal year ended June 30, 2020, this material weakness was also included in the Independent Auditor's Report on Internal Control over Financial Reporting and on Compliance and Other Matters related to our audit of the State of Wisconsin's financial statements (report 20-30) as Finding 2020-005.

We also identified a deficiency in internal control that we considered to be a significant deficiency related to information provided by the State of Wisconsin Investment Board (SWIB) to support note disclosures for unfunded commitments. These disclosures were provided to ETF for preparation of the financial statements. The note disclosures were corrected. This deficiency was communicated to SWIB in report 20-9. We did not request a response from the management of ETF since SWIB is responsible for corrective action.

### **Compliance and Other Matters**

As part of obtaining reasonable assurance about whether the financial statements are free from material misstatement, we performed tests of compliance with certain provisions of laws, regulations, and contracts, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

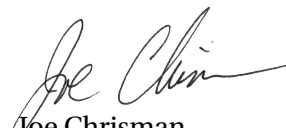
### **ETF Response to Finding**

ETF's written response to the finding identified in our audit is included in the accompanying Finding and Response Schedule. ETF's response was not subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on it.

### **Purpose of This Report**

This 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 and compliance. The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the result of that testing, and not to provide an opinion on the effectiveness of ETF's internal control or on compliance. Accordingly, this report is not suitable for any other purpose.

LEGISLATIVE AUDIT BUREAU

  
Joe Chrisman  
State Auditor

February 10, 2021

## FINDING AND RESPONSE SCHEDULE

### Accumulated Sick Leave Conversion Credit Program Liability

**Background:**

ETF administers employee benefit programs for participating state employees, including two sick leave programs: the basic ASLCC program and the SHICC program. The State of Wisconsin, including the University of Wisconsin (UW) System, and certain state authorities such as the UW Hospital and Clinics Authority, participate in the sick leave programs. In implementing Governmental Accounting Standards Board (GASB) Statement Number 84, *Fiduciary Activities*, ETF, in consultation with the Department of Administration (DOA) State Controller's Office, determined that the sick leave programs would not be reported in ETF's calendar year 2019 financial statements or in the State of Wisconsin's CAFR for fiscal year 2019-20 as a fiduciary activity as they had historically been reported. In July 2020, ETF determined that it would report the financial information for the basic ASLCC program separately from the SHICC program. Historically, these two programs were reported together as one fiduciary fund.

The basic ASLCC program allows eligible employees to convert earned but unused sick leave balances for use in paying postemployment premiums for state group health insurance coverage. Because basic ASLCC benefits are based on sick leave earned during an employee's years of service and are available to the employee during their employment, ETF determined that the activity for this program would be presented in ETF's financial statements as an internal service fund and that the liability for the benefits to be provided would be considered a compensated absence.

**Criteria:**

GASB Statement Number 16, *Accounting for Compensated Absences*, establishes the requirements for calculating a compensated absence liability for activity such as ETF's basic ASLCC program. Under GASB Statement Number 16, a liability should be calculated based on the sick leave accumulated as of the end of the reporting period by those employees who were currently eligible to receive benefits. In addition, a liability should also be calculated for employees who were expected to become eligible in the future based on policies established to estimate the probability that employees will become eligible in the future. Although the liability calculated using the methodology in GASB Statement 16 is an estimate, this estimate should provide a reasonable basis for determining the State's liability.

**Condition:**

ETF calculated a compensated absence liability estimate of \$2.7 billion for the basic ASLCC program. However, in performing this calculation, ETF did not have a reasonable basis for estimating the probability of employees becoming eligible in the future to receive basic ASLCC benefits. In addition, ETF did not adjust the liability balance for deceased participants' accounts or for accounts that were closed.

**Context:**

We reviewed ETF's methodology for calculating the compensated absence liability estimate for the basic ASLCC program. We also interviewed ETF staff about its methodology, the assumptions used to estimate the probability of future benefits, and the calculation of the liability. Finally, we analyzed available data for employees who were determined to be eligible or who may be eligible to receive benefits in the future under the basic ASLCC program.



**Questioned Costs:**

None.

**Effect:**

The financial statements related to the basic ASLCC program were materially misstated. The noncurrent liability account, Noncurrent Portion of Compensated Absences, on the Statement of Net Position, and Benefit Expense on the Statement of Revenues, Expenses, and Changes in Fund Net Position were overstated by \$425.4 million. ETF prepared adjustments to correct the errors we identified.

**Cause:**

ETF's policies were inadequate to provide a reasonable basis for accurately calculating the basic ASLCC compensated absence liability estimate. For example, ETF did not use available data on employees participating in the basic ASLCC program to reasonably estimate the probability that employees who were not currently eligible for the basic ASLCC benefit will become eligible to receive benefits in the future.

Further, ETF's policies were inadequate to provide a reasonable basis for accurately calculating the liability estimate because ETF did not sufficiently plan for its implementation of GASB Statement Number 84, which was issued in January 2017. On October 5, 2018, we wrote to ETF to foreshadow the important effects GASB Statement Number 84 would have on ETF's calendar year 2019 financial report. On February 14, 2019, we met with ETF and DOA to discuss the status of efforts to implement the financial reporting changes resulting from GASB Statement Number 84. On September 27, 2019, we wrote to ETF to reiterate the need for it to work collaboratively with DOA to ensure consistent reporting of the fiduciary activities administered by ETF in differing financial reports, including the State's CAFR for the year ended June 30, 2020. As noted, ETF did not determine that it would separate the financial information for the two sick leave programs until July 2020, which was subsequent to the date on which ETF had planned to provide draft financial statements for the sick leave programs to the Legislative Audit Bureau for audit purposes.

 **Recommendation**

*We recommend the Department of Employee Trust Funds:*

- *improve its calculation of the compensated absence liability estimate for the basic Accumulated Sick Leave Conversion Credit program by revising its policies by April 30, 2021, and implementing them for the 2020 financial statements; and*
- *ensure when implementing changes to financial reporting that it completes its planning, review, and assessment process before the close of the affected financial reporting period, and works with the Department of Administration, State Controller's Office on areas that affect the State's CAFR.*

**Response from the Department of Employee Trust Funds:** The Department of Employee Trust Funds (ETF) agrees that the initial calculation of the basic ASLCC liability resulted in overstating the Noncurrent portion of the liability and agrees with the importance of planning and assessing changes to financial reporting, including working with the Department of Administration, State Controller's Office (SCO). However, ETF respectfully disagrees with the characterization of its efforts undertaken to accurately report the financial activities of the programs, in compliance with accounting standards, and believes the finding lacks important context to the actions it took.

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## Appendices

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## Appendix 1

### Employee Trust Funds Board Membership 2020

| Name                       | Affiliation   | Board Member Since |
|----------------------------|---|--------------------|
| Wayne Koessl, Chair        | Appointed by the Wisconsin Retirement Board   | 1996               |
| John David, Vice Chair     | Appointed by the Wisconsin Retirement Board   | 2008               |
| Robert Niendorf, Secretary | Appointed by the Teachers Retirement Board  | 1992               |
| Stephen Arnold             | Appointee of the Governor, with advice and consent of Senate, representing the public   | 2019               |
| Malika Evanco              | Administrator, Division of Personnel Management, Department of Administration   | 2019               |
| William Ford               | Elected by retired Wisconsin Retirement System (WRS) participants, and is a WRS annuitant   | 2011               |
| Chris Heller               | Appointed by Teachers Retirement Board  | 2019               |
| Michael Langyel            | Appointed by Teachers Retirement Board  | 2009               |
| Katy Lounsbury             | Designee of the Governor  | 2020               |
| Leilani Paul               | Elected by participating employees of either technical college or school district educational support personnel, and is an active WRS participant | 2015               |
| Roberta Rasmus             | Appointed by the Teachers Retirement Board  | 2012               |
| Steven Wilding             | Appointed by the Wisconsin Retirement Board   | 2019               |
| Vacant                     | Appointed by the Wisconsin Retirement Board   |                    |



## Appendix 2

### **Group Insurance Board Membership 2020**

| Name                      | Affiliation   | Board Member Since |
|---------------------------|---|--------------------|
| Herschel Day, Chair       | Appointee of the Governor, insured participant in WRS who is a teacher  | 2013               |
| Nathan Houdek, Vice Chair | Designee of the Commissioner of Insurance   | 2019               |
| Nancy Thompson, Secretary | Appointee of the Governor, chief executive or member of the governing body of a local unit of government that participates in the WRS | 2012               |
| Harper Donahue IV         | Appointee of the Governor, insured participant in WRS who is an employee of a local unit of government                                | 2019               |
| Malika Evanco             | Administrator, Division of Personnel Management, Department of Administration   | 2019               |
| Dan Fields                | Appointee of the Governor, insured participant in WRS who is a retiree  | 2019               |
| Walter Jackson            | Appointee of the Governor, insured participant in WRS who is not a teacher  | 2019               |
| Katy Lounsbury            | Designee of the Governor  | 2020               |
| Brian Pahnke              | Designee of the Secretary, Department of Administration   | 2019               |
| Bob Wimmer                | Designee of the Attorney General  | 2018               |
| Vacant                    | Appointee of the Governor   |                    |



## Appendix 3

### Status of Recommendations Related to Group Insurance Programs<sup>1</sup>

| Recommendation                        | Fully Implemented                   | Partially Implemented               | Not Implemented | Additional Explanation   |
|---------------------------------------|-------------------------------------|-------------------------------------|-----------------|--|
| <b>Expenditures and Staffing</b>      |                                     |                                     |                 |  |
| 1                                     |                                     | <input checked="" type="checkbox"/> |                 | During 2019, the Department of Employee Trust Funds (ETF) estimated the amount of staff time spent completing work for individual group insurance programs on a quarterly basis rather than the annual basis previously used. We consider this recommendation to be partially implemented because ETF updated the frequency of the process. We will continue to monitor ETF's estimation in future audit work. |
| <b>Group Health Insurance Program</b> |                                     |                                     |                 |  |
| 2                                     | <input checked="" type="checkbox"/> |                                     |                 | In November 2019, ETF provided GIB with the results of its written analyses of recommendations from consultants. ETF also created a template to use for future memoranda, which ETF used for a GIB meeting in May 2020.  |
| 3                                     | <input checked="" type="checkbox"/> |                                     |                 | ETF worked with GIB to establish intended outcomes for significant changes to the Group Health Insurance program.  |
| 4                                     | <input checked="" type="checkbox"/> |                                     |                 | ETF assessed progress toward achieving intended outcomes for significant changes to the group insurance programs and provided results of the assessments to GIB.   |
| 5                                     | <input checked="" type="checkbox"/> |                                     |                 | ETF specified how to calculate performance measures in third-party administrator contracts. The contracts for auditors that assess the performance measures of the third-party administrators reference the third-party administrator contracts.   |



| Recommendation   | Fully Implemented | Partially Implemented | Not Implemented | Additional Explanation   |
|--|-------------------|-----------------------|-----------------|--|
| <p><b>Group Health Insurance Program</b><br/>(Continued)</p> |                   |                       |                 |  |
| 6  | ☑                 |                       |                 | ETF created a spreadsheet to track performance of the health insurers and documented its decisions on when to assess penalties, determined whether other firms achieved performance measure goals, and assessed penalties when they did not. |
| 7  | ☑                 |                       |                 | ETF reported to GIB on the financial penalties it assessed in four of the last six meetings since May 2019. In the remaining two meetings, ETF reported that it assessed no financial penalties.   |
| <p><b>Group Health Insurance Program Reserves</b></p>        |                   |                       |                 |  |
| 8  | ☑                 |                       |                 | In August 2019 and August 2020, the program actuary took investment income into account when recommending the amount of reserves to spend.   |
| 9  | ☑                 |                       |                 | In May 2020, the actuary explained why the change in program reserves as of December 2019 differed from the amount GIB had voted to spend.   |
| 10   | ☑                 |                       |                 | In August 2019 and August 2020, the program actuary provided GIB with calendar year information on program reserves.   |
| 11   | ☑                 |                       |                 | In November 2020, ETF worked with GIB to establish a policy for the target ranges for program reserves that requires the target ranges to be reviewed at least every three years.  |
| 12   | ☑                 |                       |                 | In August 2019 and August 2020, ETF provided GIB with memoranda that included the results of analyses of key information from the actuary.   |

| Recommendation   | Fully Implemented                   | Partially Implemented               | Not Implemented | Additional Explanation  |
|--|-------------------------------------|-------------------------------------|-----------------|---|
| <b>Group Health Insurance Program Reserves</b> <i>(continued)</i>  |                                     |                                     |                 |   |
| 13 Indicate in writing to GIB if the actuary makes a recommendation that is inconsistent with a prior GIB decision.  | <input checked="" type="checkbox"/> |                                     |                 | In August 2019, ETF verbally indicated to GIB that the actuary made a recommendation that was inconsistent with GIB's program reserves policy, but ETF did not indicate this in writing. In August 2020, ETF indicated to GIB in writing that the actuary made a recommendation that was inconsistent with GIB's program reserves policy.             |
| <b>Disability Insurance Programs</b>   |                                     |                                     |                 |   |
| 14 Consistently provide GIB with audit reports of the performance of the Income Continuation Insurance program administrator and memoranda that accurately summarize these audit reports.                  |                                     | <input checked="" type="checkbox"/> |                 | ETF contracts for audits of the Income Continuation Insurance program administrator to be performed every three years. The most recent audit was provided to GIB in November 2018. Because ETF signed a memorandum of understanding in April 2019 with an audit firm to perform the next audit in 2021, ETF cannot yet implement this recommendation. |
| 15 Work with GIB to establish target ranges for program reserves for the state and local components of the Income Continuation Insurance program, as well as a strategy and a timeline for achieving them. | <input checked="" type="checkbox"/> |                                     |                 | In November 2019, ETF worked with GIB to establish a policy for the target ranges for program reserves for the state and local components of the Income Continuation Insurance program, and in May 2020, GIB approved premiums and a strategy to reach the target ranges.   |
| 16 Work with GIB to establish a policy requiring periodic reviews of the target ranges for Income Continuation Insurance program reserves and provide the results of these reviews to GIB.                 | <input checked="" type="checkbox"/> |                                     |                 | In November 2019, ETF worked with GIB to establish a policy for the target ranges for program reserves that requires the target ranges to be reviewed at least every three years.   |
| <b>Group Life Insurance Program</b>  |                                     |                                     |                 |   |
| 17 Provide sufficiently detailed information in memoranda to GIB regarding the annual financial reports from the Group Life Insurance program administrator.   | <input checked="" type="checkbox"/> |                                     |                 | In August 2019 and August 2020, ETF provided GIB with memoranda that contained sufficiently detailed information regarding the Group Life Insurance annual financial reports.   |

| Recommendation   | Fully Implemented                   | Partially Implemented               | Not Implemented | Additional Explanation  |
|--|-------------------------------------|-------------------------------------|-----------------|---|
| <b>Group Life Insurance Program</b><br>(continued)   |                                     |                                     |                 |   |
| 18 Work with GIB to establish target ranges for program reserves for the state and local components of the Group Life Insurance program as well as a strategy and timeline for achieving them.       |                                     | <input checked="" type="checkbox"/> |                 | In August 2019 and August 2020, ETF presented information on the target ranges for Group Life Insurance program reserves. However, it did not work with GIB to establish the target ranges. As part of the meetings, ETF worked with GIB to establish a strategy and timeline for achieving the presented target ranges. We consider this recommendation to be partially implemented because ETF did not work with GIB in setting the target ranges, such as by providing GIB options for consideration. However, because the target ranges were used in setting premium rates, which were approved by GIB, we do not make a further recommendation to ETF. |
| 19 Work with GIB to establish a policy requiring periodic reviews of the target ranges for Group Life Insurance program reserves and provide the results of these reviews to GIB.                    |                                     | <input checked="" type="checkbox"/> |                 | ETF indicated that the target ranges for Group Life Insurance program reserves are reviewed annually when life insurance rates are established. However, ETF and GIB did not establish a written policy requiring periodic reviews of the target ranges. As a result, we have included additional recommendations to ETF on page 48.  |
| 20 Assess whether the program administrator or the State of Wisconsin Investment Board (SWIB) should invest Group Life Insurance program reserves and provide the results of this assessment to GIB. | <input checked="" type="checkbox"/> |                                     |                 | In November 2019, ETF provided GIB with a memorandum that summarized its assessment of whether the program administrator or SWIB should invest the Group Life Insurance program reserves and concluded that the program reserves should remain with the program administrator.  |
| <b>Information Technology Security</b>   |                                     |                                     |                 |   |
| 21 Work with GIB to establish sufficient policies pertaining to audits of information technology (IT) controls.  | <input checked="" type="checkbox"/> |                                     |                 | ETF established sufficient policies pertaining to audits of IT controls, however it did not work with GIB. Because the policies pertain to more than just the group insurance programs, ETF's process of working with a cybersecurity firm to develop these policies appears appropriate.   |

| Recommendation | Fully Implemented | Partially Implemented | Not Implemented | Additional Explanation |
|----------------|-------------------|-----------------------|-----------------|------------------------|
|----------------|-------------------|-----------------------|-----------------|------------------------|

**Information Technology Security**  
(continued)

|    |  |                                     |  |   |
|----|--|-------------------------------------|--|---|
| 22 | Collect all contractually required audits of IT controls, review all submitted audits, and provide results of the reviews to GIB.                      | <input checked="" type="checkbox"/> |  | ETF collected and reviewed all contractually required audits of IT controls. However, it did not provide the results of all of its reviews to GIB. In August 2020, ETF provided an overview of the results of its review of health insurers for the Group Health Insurance program to GIB and, in November 2020, met with GIB in closed session to discuss the audits of both health insurers and other program administrators. |
| 23 | Ensure that the security awareness training ETF provides staff adequately addresses appropriate ways to securely communicate confidential information. | <input checked="" type="checkbox"/> |  | ETF provided documentation of training it provided to staff that addresses appropriate ways to securely communicate confidential information.   |

**Governance Issues**

|    |  |                                     |  |  |
|----|--|-------------------------------------|--|--|
| 24 | Consistently provide GIB with programmatic information at least one week before meetings.  | <input checked="" type="checkbox"/> |  | In February, May, and August 2020, all programmatic information provided to GIB was dated at least one week before meetings.   |
| 25 | Post on the ETF website at least one day before a given GIB meeting all nonconfidential information GIB will consider at that meeting.                         | <input checked="" type="checkbox"/> |  | In February, May, and August 2020, all nonconfidential information GIB considered was posted on ETF's website at least one day before the meeting.   |
| 26 | Compile additional information about the performance of program administrators, actuaries, and auditors and provide this information to GIB and the ETF Board. | <input checked="" type="checkbox"/> |  | ETF compiled additional information about the performance of program administrators and program actuaries and provided this information to GIB, but it had not done so for the program auditors. As a result, we have included additional recommendations to ETF on page 48. |

| Recommendation                          | Fully Implemented | Partially Implemented | Not Implemented | Additional Explanation   |
|---|-------------------|-----------------------|-----------------|--|
| <b>Governance Issues</b><br>(continued) |                   |                       |                 |  |
| 27                                      |                   | ☑                     |                 | ETF has worked with GIB to determine the maximum duration of contracts with program administrators. For program actuaries and auditors, ETF has implemented “evergreen contracts,” which allow for indefinite annual renewals until either party gives notice of their intent to cancel the contract. We consider this to be partially implemented because ETF did not establish a maximum duration for these contracts. However, because GIB and the ETF Board has authorized the ETF Secretary to execute contracts with auditors and actuaries, we do not make a further recommendation to ETF. We will continue to monitor ETF’s contracting practices in future audit work. |
| 28                                      | ☑                 |                       |                 | ETF requested and obtained approval from GIB and the ETF Board to delegate authority to the ETF Secretary to execute contract amendments for actuarial services.   |
| 29                                      | ☑                 |                       |                 | ETF established a written plan to periodically contract for actuarial audits for group insurance program actuaries and provided GIB with the audit results.  |
| 30                                      | ☑                 |                       |                 | In November 2019, ETF provided GIB with a strategy to improve oversight of the Group Health Insurance program, and in May 2020, ETF provided GIB with options to improve oversight in response to the public health emergency.   |

<sup>1</sup> Status reported as of November 2020.

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## Response

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**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  
etf.wi.gov

February 10, 2021

JOE CHRISMAN, STATE AUDITOR  
LEGISLATIVE AUDIT BUREAU  
22 E MIFFLIN ST SUITE 500  
MADISON WI 53703

Dear Mr. Chrisman,

Thank you for the opportunity to review and comment on the audit of the Department of Employee Trust Funds (ETF) Comprehensive Annual Financial Report (CAFR) for the year ended December 31, 2019. ETF will follow-up on the recommendations in the report, including providing the Joint Legislative Audit Committee updates on our progress.

The Wisconsin Retirement System (WRS) is often cited as a model governmental defined benefit plan. The continued due diligence of the governing boards and staff administering the program, oversight by policymakers, and sound funding principles contribute to the WRS' ability to pay promised benefits long into the future. The success of the WRS can be measured by its contributions to the Wisconsin economy, its strong financial position, and the effective oversight and administration of the various employee benefit programs.

#### Contributions to the Wisconsin Economy

The WRS not only supports retired and disabled public employees and their families, it also helps boost Wisconsin's economy. The WRS paid more than \$5.6 billion in benefits during 2019 – a large portion of this money gets spent in Wisconsin by the more than 85% of retirees who live here. Approximately 80% of those benefits was derived from investment income.

The WRS is low cost to taxpayers compared to peer retirement systems. Wisconsin state and local government taxpayers spend far less on public pensions as a percentage of total government direct general spending compared to other states. According to the National Association of State Retirement Administrators (NASRA), average state and local government spending on pensions is 4.7% nationally. In Wisconsin, that figure is less than half, at 2.0%.

#### Strong Financial Position

As noted in the report, the WRS continues to be in a strong financial position with a funding ratio of 103 percent, calculated using the methodology prescribed by the



Governmental Accounting Standards Board (GASB). The WRS is one of the few fully funded pension systems in the United States. The funding percentage is a reliable metric indicating the WRS will meet its financial objective, which is to fully fund the long-term cost of benefits provided by statute, through disciplined and timely accumulation of sufficient assets. The median funded level of US public pension plans in 2019 was 72.4%, according to the NASRA. Furthermore, as noted in LAB's report comparing defined-benefit plans, the WRS compares very favorably to the other plans noted by the LAB.

Strong investment performance significantly contributes to the WRS funding level. As noted above, 80% of funding comes from investment earnings. As of December 31, 2020, the WRS Core Fund had 5-, 10-, 20- and 30-year net of external manager fee returns of 10.74%, 8.51%, 6.94% and 8.83%, respectively. The 15.21% net of fee return in 2020 is projected to result in a Core Fund annuity adjustment of nearly 5 percent.

The strong funding position of the WRS can also be attributed to risk sharing features in the plan design, such as the absence of a guaranteed cost of living adjustment and the ability to increase annuities (or decrease annuities up to an amount of previously granted increases) depending on investment performance. As a result, one of the inherent risks in this plan design is all previously granted post-retirement Core Fund adjustments (commonly referred to as dividends) can be revoked if investment losses are significant enough. The Board has been monitoring and periodically discussing the health of the 'dividend reserve', which GRS, the WRS consulting actuary, estimates to increase to around \$10 billion after the 2021 annuity adjustment. This is higher than the \$9.2 billion level that existed prior to the 2008 recession.

Moreover, 1,516 WRS employers and 260,251 active employees benefit from stable and predictable contribution rates, which allow for better management of budgets. Contribution rates are generally split evenly between employers and employees and adjusted annually based on an actuarial valuation, ensuring full funding of future benefits. Investment returns, legislative changes, and changes in mortality assumptions have had the largest impact on contribution rates. According to GRS, contribution rates have been remarkably stable – much more stable than other plans because of the WRS' unique risk sharing structure.

### Effective Oversight and Administration

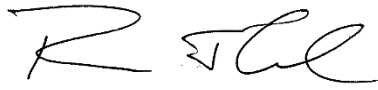
The ETF Board and the SWIB Board of Trustees oversee and monitor the WRS trust fund to ensure the WRS is being managed prudently and meets the goals of the WRS funding policy. GRS conducts annual actuarial valuations to recommend contribution rates and annuity adjustments. Additionally, experience studies are conducted every three years to determine if the actuarial assumptions used in the valuations are reasonable compared to actual plan experience. These reports are presented to the ETF Board. The WRS also undergoes stress testing every two years, as well as additional stress testing as warranted. For example, additional stress testing was performed as a result of the 2008 Great Recession and in 2020 during the COVID-19 pandemic. GRS presents the detailed results and analysis of the stress testing to the SWIB Trustees and ETF Board in a comprehensive PowerPoint format, which is made available to the public via the board meeting materials as well as easily accessible on

SWIB's website. SWIB and ETF find these tests quite valuable in carrying out their fiduciary duties and will continue to conduct them.

Finally, ETF is committed to implementing, maintaining, and monitoring internal controls to safeguard the assets of the trust funds, ensure compliance with applicable laws and regulations, and ensure effective administration of benefit programs. This includes exercising due diligence in applying accounting standards to ensure reliable and transparent financial reporting. While we provided the LAB a lengthy response to the finding related to the implementation of GASB Statement Number 84 as part of the State CAFR audit, we also continue to assess the need for additional resources to ensure we are able to accurately and timely implement any required new standards.

Again, we appreciate the efforts of your staff in conducting the financial audit of the WRS and identifying areas we can make the WRS and our operations even stronger.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Conlin". The signature is fluid and cursive, with a large initial "R" and a distinct "C" at the end.

Robert J. Conlin  
Secretary