Report 15-11
August 2015

Wisconsin Retirement System
Calendar Year 2014

State of Wisconsin

Legislative Audit Bureau

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Joint Legislative Audit Committee Members

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STATE OF WISCONSIN
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Joe Chrisman
State Auditor

August 18, 2015

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., we have completed an audit of the 2014 financial statements of the Wisconsin Retirement System (WRS), which is administered by the Department of Employee Trust Funds (ETF). As of December 31, 2014, the WRS had almost 1,500 participating employers and approximately 604,000 active, retired, and inactive participants.

We have provided an unmodified opinion on the financial statements and related notes of the WRS for calendar year 2014. The fiduciary net position of the WRS increased from $89.9 billion as of December 31, 2013, to $92.2 billion as of December 31, 2014, or by 2.5 percent.

The Governmental Accounting Standards Board (GASB) has issued new pension accounting standards, which ETF adopted for its 2014 WRS financial statements, that require certain calculations to be performed. Because the $92.2 billion fiduciary net position, which represents resources available to pay pension benefits, was greater than the total pension liability of $89.7 billion, ETF calculated a net pension asset for the WRS of $2.5 billion as of December 31, 2014. Under the new pension accounting standards, each participating employer in the WRS is required to report its proportionate share of this net pension asset on its financial statements if prepared on the basis of generally accepted accounting principles. We describe this allocation to each participating WRS employer in greater detail in report 15-12, which we also published today.

Because several errors were made by ETF in preparing the financial statements and related notes, we report a significant deficiency in internal control over financial reporting. We recommend ETF take steps to assess its current process for financial reporting and implement additional or changed processes that would prevent, or detect in a timely manner, errors in the financial statements and notes.

A response from ETF follows our report.

Respectfully submitted,

Joe Chrisman
State Auditor

JC/CS/ss

Introduction ■

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

Created in January 1982, the Wisconsin Retirement System (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.

Approximately 604,000 individuals participated in the WRS on December 31, 2014, including:

- 257,300 (42.6 percent) active participants who were making contributions;
- 185,600 (30.7 percent) retired participants who were receiving WRS benefits; and
- 161,100 (26.7 percent) inactive participants, such as former employees, who were not yet receiving benefits and who were not required to make contributions.

ETF and SWIB work together to manage the WRS.

The WRS is the ninth-largest public pension plan in the United States. As of December 31, 2014, the WRS had a fiduciary net position of $92.2 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, and the State of Wisconsin Investment Board (SWIB) is responsible for managing WRS investments. ETF and SWIB work closely together to ensure the solvency and long-term future of the WRS.

Organizational Structure

ETF was created to manage employee benefit programs for participating state and local government employees, including managing the WRS. Under s. 40.03, Wis. Stats., the 13-member ETF Board is responsible for the overall direction and supervision of ETF. Statutes specifically identify that, among other items, this 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.

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 ETF Board members include:

- the Governor, or the Governor's designee on the Group Insurance Board;
- the Administrator of the Division of Personnel Management in the Department of Administration (formerly the Director of the Office of State Employment Relations), 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 that must be either a technical college or school district educational support personnel employee, elected by participating employees who meet the same employment criteria.

The members of the Teachers Retirement Board and the Wisconsin Retirement Board represent a mix of state and local government employers and employees, annuitants, and the general public. The ETF Secretary is charged with implementing the policies approved by the Board, and with managing the daily operations of ETF, including managing the WRS.

WRS Participating Employers

Section 40.21(1), 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.

There were 1,482 employers participating in the WRS as of December 31, 2014.

Table 1 shows the number and type of public employers that participated in the WRS as of December 31, 2014. Most of the 1,482 employers that participated in the WRS were local governments and school districts. The City of Milwaukee does not participate because it maintains its own retirement system.

Table 1

Types of Employers Participating in the WRS
As of December 31, 2014

Type	Number
School Districts	424
Villages	261
Towns	246
Special Districts[1]	207
Cities	152
Counties	71
State Agencies, UW System, and Public Authorities	57
Fourth-Class Cities[2]	36
Wisconsin Technical College System Districts	16
Cooperative Educational Service Agencies	12
Total Employers	**1,482**

[1] Includes employers such as the Madison Metropolitan Sewerage District, the Oshkosh City Housing Authority, and the South Central Library System.

[2] Defined as cities with populations of less than 10,000.

Statutes require employers participating in the WRS to enroll all eligible employees. Under current law, an employee initially hired by a WRS employer after July 1, 2011, would be eligible to participate in the WRS if the expected duration of employment was one year or more and they were 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 earnings.

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

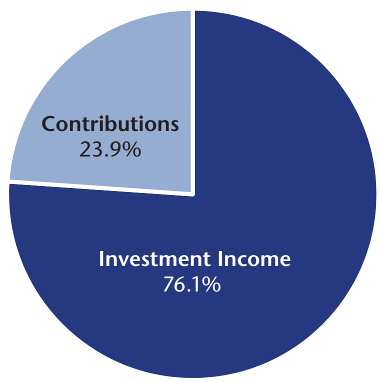
- ensure funds are adequate to pay benefits;
- maintain stable and predictable contribution rates for employers and employees; and

- maintain inter-generational equity to ensure the cost of the benefits is paid for by the generation that receives the benefits.

From 2005 through 2014, investment income represented 76.1 percent of total funding for the WRS and employer and employee contributions represented 23.9 percent of total funding for the WRS, as shown in Figure 1.

Figure 1

WRS Funding Sources
2005 through 2014



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. As shown in Table 2, total contribution rates for "general employees," which includes teachers and most other employees, ranged from a low of 10.4 percent for calendar year 2009 to a high of 14.0 percent for calendar year 2014.

Table 2

Total Contribution Rates for General Employees in the WRS

Calendar Year	Total Contribution Rate[1]
2007	10.6%
2008	10.6
2009	10.4
2010	11.0
2011	11.6
2012	11.8
2013	13.3
2014	14.0
2015	13.6
2016	13.2

[1] Includes employer and employee share of contributions and benefit adjustment contributions, but does not include employer specific prior service cost rates.

The assets of the WRS are invested by SWIB in two funds. The Core Retirement Investment Trust Fund (Core Fund) is a fully diversified or balanced fund, which provides less volatile investment returns and is invested for the long term in several types of investments. The Variable Retirement Investment Trust Fund (Variable Fund) is an equity fund, or stock fund, which provides returns that are typically more volatile than the Core Fund. Additional information about the retirement funds investment activity as of December 31, 2014, is available in report 15-6.

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.

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, which is 7.2 percent. 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.

WRS Benefits

The WRS is a defined-benefit plan that provides participants with lifelong monthly retirement benefits and, depending upon the annuity type selected, may also provide benefits to a beneficiary after the participant's death. These benefits 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 benefit payment is used to calculate a participant's initial benefit. This initial benefit may be adjusted based on changes in the market value of retirement fund assets, but would generally not be adjusted below the initial benefit amount. 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.

Financial Condition of the WRS

As required by statutes, we have completed an audit of the financial statements and related notes of the WRS as of and for the year ended December 31, 2014. Our audit of the financial statements and related notes of the other employee benefit programs administered by ETF is ongoing. The financial statements of the WRS and of the other employee benefit programs will be presented in ETF's Comprehensive Annual Financial Report (CAFR), which is anticipated to be published by ETF in fall 2015, as well as in the State's CAFR, which is anticipated to be published by the Department of Administration in December 2015.

The WRS financial statements were prepared by ETF using generally accepted accounting principles (GAAP) prescribed by the Governmental Accounting Standards Board (GASB). To complete our audit of the financial statements of the WRS, we evaluated ETF's implementation of new pension accounting standards, 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 an unmodified opinion on the financial statements of the WRS for the year ended December 31, 2014.

In addition to providing an unmodified opinion on the financial statements and related notes of the WRS for the year ended December 31, 2014, we have issued our Independent Auditor's Report on Internal Control over Financial Reporting and on Compliance and Other Matters, which is on page 81. In that report, we describe a significant deficiency in internal control related to

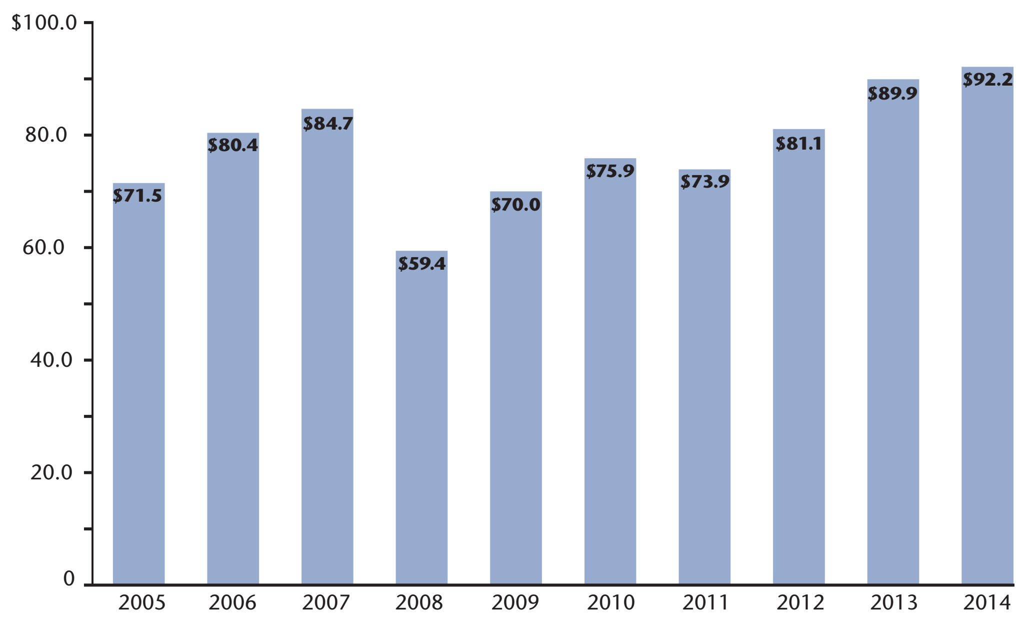
ETF's financial reporting process. In completing our audit of the WRS financial statements, we found ETF made several errors in the financial statements and notes that required adjustment. We recommend ETF take steps to assess its current process for financial reporting and implement additional or changed processes that would prevent, or detect in a timely manner, errors in the financial statements and notes.

The fiduciary net position of the WRS as of December 31, 2014, was $92.2 billion.

The Net Position Restricted for Pensions (fiduciary net position) of the WRS represents the value of the plan's assets that are currently available to make benefit payments. As of December 31, 2014, the WRS had a fiduciary net position of $92.2 billion, which was a 2.5 percent increase over the prior year. From December 31, 2005, through December 31, 2014, the fiduciary net position of the WRS increased by $20.7 billion (28.9 percent), as shown in Figure 2. The decline in fiduciary net position in 2008 reflects the effect of the economic recession that began in December 2007.

Figure 2

Wisconsin Retirement System
Fiduciary Net Position[1]
As of December 31
(in billions)



[1] Shown as Net Position Restricted for Pensions on the financial statements.

Net investment income declined from $11.3 billion in 2013 to $4.9 billion in 2014 due to declines in the investment returns of the Core and Variable Funds.

Contributions to the WRS from employers and employees increased from $1.8 billion in 2013 to $1.9 billion in 2014, or by 8.0 percent. Net investment income, which is the sum of realized and unrealized gains and losses less SWIB's investment expenses, declined from $11.3 billion in 2013 to $4.9 billion in 2014, or by 56.9 percent. The decrease in net investment income reflects the declines in investment returns realized by the Core and Variable Funds. As discussed in report 15-6, the investment return of the Core Fund declined from 13.6 percent in 2013 to 5.7 percent in 2014, and the investment return of the Variable Fund declined from 29.0 percent in 2013 to 7.3 percent in 2014.

Total WRS benefit payments provided to retired participants or their beneficiaries increased from $4.2 billion in 2013 to $4.5 billion in 2014, or by 6.5 percent. The number of retired participants increased from 180,100 as of December 31, 2013, to 185,600 as of December 31, 2014. The average annual annuity paid increased from $22,911 in 2013 to $24,185 in 2014, or by 5.6 percent.

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New Pension Accounting Standards ■

The Governmental Accounting Standards Board (GASB) issued new standards for accounting and financial reporting for public pension plans and for the financial statements of participating employers. These new pension accounting standards first became effective for financial reporting for the WRS for calendar year 2014, and for participating WRS employers during calendar year 2015. The new pension accounting standards require ETF to calculate the total pension liability and the net pension liability or asset for the WRS, and disclose them in the notes and in the required supplementary information to the WRS financial statements. Under these new pension standards, ETF calculated a net pension asset of $2.5 billion for the WRS as of December 31, 2014. In addition, the new pension accounting standards require each participating employer in the WRS to report its proportionate share of this net pension asset, as well as pension expense and other amounts, in its own financial statements if prepared under generally accepted accounting principles (GAAP).

Adopting New Pension Accounting Standards

ETF implemented new pension accounting standards for the 2014 WRS financial statements.

In 2012, the GASB issued new accounting standards for public pension plans and participating employers. Specifically:

- GASB Statement Number 67, *Financial Reporting for Pension Plans—an amendment of GASB Statement No. 25*; and

- GASB Statement Number 68, *Accounting and Financial Reporting for Pensions—an amendment of GASB Statement No. 27*.

These new GASB standards 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 almost 1,500 employers that participate in the plan. The GASB's overall goals with the issuance of new pension accounting standards were to enhance the transparency of pension-related information in financial reports of governmental employers, and improve the comparability across public pension plans.

Under the new pension accounting standards, a pension liability is established based on the current value of projected pension benefits for service already provided.

Under prior accounting standards, financial reporting was based on the pension plan's funding principles, and a pension liability was reported only when a government did not make its annual required contributions to the pension plan for current or prior service costs, which represent the present value of projected retirement benefits earned by employees in the current year or prior years. Under the new pension accounting standards, a pension liability is established based on the current value of projected pension benefits that have not yet been funded for service already provided, and a pension expense is recorded during the period in which the employee earned the pension benefit.

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 $89.7 billion as of December 31, 2014.

To determine the total pension liability for the WRS as of December 31, 2014, ETF's actuary performed an actuarial valuation as of December 31, 2013, and adjusted for changes such as interest earned, contributions paid, benefits paid, and dividend adjustments during calendar year 2014. Based on this valuation and the adjustments, the total pension liability for the WRS was $89.7 billion as of December 31, 2014.

The discount rate is the interest rate that will be used to calculate the present value of projected benefit payments.

The discount rate, or interest rate, used to calculate the present value of projected benefit payments, which is used to determine the total pension liability, is specifically defined under the new pension accounting standards. ETF was able to use the long-term expected rate of return for the WRS, which is 7.2 percent, as the discount rate because current and projected future plan assets are expected to cover the projected benefit payments for the WRS. If the current and projected future plan assets of the WRS had not been sufficient to cover the projected benefit payments, the new pension accounting standards would have required ETF to blend the index rate for 20-year municipal bonds (3.56 percent as of December 31, 2014) with its long-term expected rate of return (7.2 percent as of December 31, 2014). In such circumstances, the blended discount rate would have been lower and resulted in a larger total pension liability.

The discount rate used 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 impact on the amount of the total pension liability. Under the new pension accounting standards, ETF is required to calculate the sensitivity of the total pension liability to a one percentage point decrease or increase in the discount rate. At 7.2 percent, the total pension liability for the WRS was $89.7 billion as of December 31, 2014. However, a one-percent decrease in the discount rate (6.2 percent) increases the total pension liability to $99.1 billion and a one-percent increase in the discount rate (8.2 percent) decreases the total pension liability to $82.3 billion. Note 6 to the financial statements on page 68 summarizes this sensitivity analysis.

Calculating a Net Pension Asset

To determine the net pension liability or asset, the new pension 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 $2.5 billion for the WRS as of December 31, 2014.

As of December 31, 2014, the WRS had a fiduciary net position of $92.2 billion. As shown in Table 3, when the total pension liability of the WRS is subtracted from the fiduciary net position of the WRS, a net pension asset of $2.5 billion results as of December 31, 2014.

Table 3

WRS Net Pension Asset
December 31, 2014
(in billions)

	Amount
Fiduciary Net Position	$92.2
Total Pension Liability	(89.7)
Net Pension Asset	**$ 2.5**

Calculating Other Collective Amounts

In addition to the calculation of the total pension liability and the calculation of the net pension liability or asset, the new pension accounting standards require public pension plans to calculate pension expense, as well as amounts that are considered deferred for the plan. Pension expense is the net increase or decrease in the net pension liability or asset, with certain adjustments. Reporting of pension expense under the new pension accounting standards more closely aligns the pension expense with the periods during which the pension benefits are earned by the employees. For the year ended December 31, 2014, pension expense for the WRS was $963.9 million, and deferred outflow of resources, which primarily represents the difference between projected and actual investment earnings, was $1.6 billion.

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 almost 1,500 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 will be required to report its proportionate share of the net pension liability or asset, as well as other collective amounts including pension expense, on its GAAP-based financial statements.

For the year ended December 31, 2014, each WRS participating employer was allocated its proportionate share of the net pension asset.

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 Pension Amounts by Employer for the year ended December 31, 2014. We audited and provided an unmodified opinion on these schedules in report 15-12. Because the WRS has calculated a net pension asset for the year ended December 31, 2014, each employer participating in the WRS must report its proportionate share of this net pension asset on its GAAP-based financial statements. A net pension asset indicates that, at that point in time, the assets of the WRS exceeded the projected liability for benefit payments to employees.

As shown in Table 4, the ten largest WRS participating employers were allocated a total of $1.0 billion, or 40.9 percent of the $2.5 billion net pension asset. The proportionate share of the net pension asset for State of Wisconsin agencies was $686.9 million, of which $330.2 million related to the University of Wisconsin (UW) System. The net pension asset for the state agencies will be included in the State's GAAP-based financial statements, which will be published in the State's Comprehensive Annual Financial Report for the year ended June 30, 2015.

Table 4

Net Pension Asset by Employer[1]
December 31, 2014

Participating Employers	Proportionate Share	Net Pension Asset
State Agencies, excluding the UW System	14.5%	$ 356,706,794
UW System	13.4	330,166,674
University Hospitals and Clinics	3.1	76,075,835
Milwaukee Teachers Retirement System	2.7	67,124,330
City of Madison	1.6	38,965,978
Madison Metropolitan School District	1.5	37,330,073
Dane County	1.1	27,677,075
Kenosha Unified School District	1.0	24,739,006
Green Bay Area Public Schools	1.0	23,569,378
Racine Unified School District	1.0	23,529,492
Subtotal	40.9	1,005,884,635
Total for Other Participating Employers	59.1	1,450,388,949
Total	**100.0%**	**$2,456,273,584**

[1] For complete information on the net pension asset of each employer in the WRS, please see report 15-12.

Funding and GASB Financial Reporting Methodologies ▪

ETF uses a funding methodology to establish required contribution rates for employers and employees and to measure the plan's unfunded liabilities. ETF is required to use the new Governmental Accounting Standards Board (GASB) pension accounting standards for financial reporting purposes. GASB did not intend for the financial reporting methodology to be used for funding purposes. Instead, GASB intended the financial reporting methodology to enhance transparency of pension-related information in financial reports and to be a tool to allow for comparisons across public pension systems. Each methodology results in a different measure of the funded status of the WRS. Under the funding methodology, the WRS is nearly 100.0 percent funded as of December 31, 2014, and under the GASB financial reporting methodology, the WRS is 102.7 percent funded.

Comparing Methodologies

ETF uses a funding methodology to determine contribution rates.

Most pension plans use an actuarial funding methodology to establish required contribution rates for employers and employees and to measure the plan's unfunded liabilities. The precise funding methodology selected will vary depending upon the policies established for each pension plan by its governing board. In contrast, under the new pension accounting standards, public pension plans are required to use the same GASB financial reporting methodology to measure the total pension liability for purposes of financial reporting. As noted, the new pension accounting standards also require each participating employer in a cost-sharing pension plan to report its proportionate share of the net pension liability or asset on its GAAP-based financial statements.

There are similarities in the actuarial assumptions used in calculating the projected future benefit payments under the funding methodology and under the financial reporting methodology, including assumptions related to mortality rates, salary increases, and disability rates. However, there are several differences in how the liability is calculated under each methodology, which may create a differing determination of the financial status of the pension plan. The key differences in the calculations under each methodology are in the actuarial method used, the treatment of experience gains or losses in the calculations, and the consideration of investment income or losses.

Funding Methodology

Under the funding methodology, the unfunded liability is determined at the time an employer enters the plan.

To calculate the accrued actuarial liability under the funding methodology, ETF's actuary uses the "frozen entry age" actuarial method, which determines the unfunded accrued actuarial liability at the time an employer enters the plan. This becomes a liability for that employer. The total unfunded liability for all employers varies only when new employers enter the plan, amortization payments are made by employers, or when changes in benefit provisions increase the liability related to past service.

Under the funding methodology, the WRS is nearly 100.0 percent funded as of December 31, 2014.

As of December 31, 2014, the remaining unfunded liability for all employers calculated under the funding methodology and reported by the ETF actuary for the WRS was $33.2 million. To fund this liability, a calculation is performed to amortize each employer's liability into that employer's contribution rate over a set period of years. Experience gains or losses, such as pay increases that are higher than the assumed rate, do not affect the unfunded liability and instead are amortized over a defined period not to exceed 30 years. The amortized amount is used to adjust the annual contribution rates, allowing for increased stability in the established rates. Over time, many WRS employers have paid down or eliminated their portions of the total unfunded liability, which improves the funded status of the WRS. The funded status of the WRS, using this methodology, has been above 99.0 percent since at least 2004 and, after rounding, reached 100.0 percent in 2014.

Under the funding methodology, ETF's actuary also uses a smoothing mechanism for investment income or loss, known as the market recognition account (MRA) for the Core Fund investment activity. This account accumulates the difference between actual investment income or loss and expected investment income calculated at the long-term expected rate of return of 7.2 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 previous five years' amounts included in the MRA to determine the plan net assets. This results in less volatility in the plan net assets under the funding methodology, and thus, less volatility in the calculation of the contribution rates for employers and employees.

GASB Financial Reporting Methodology

Under the GASB financial reporting methodology, the WRS had a funded ratio of 102.7 percent as of December 31, 2014.

To calculate the total pension liability under the GASB financial reporting methodology, ETF is required to use the "entry age" actuarial method, which includes the experience gains and losses in the calculation of the total pension liability each year. Further, under this methodology, pension plan assets must be valued at fair value as of the reporting period end date, which is December 31 each year for the WRS. For the WRS, this results in a fiduciary net position of $92.2 billion as of December 31, 2014. After subtracting the total pension liability from the fiduciary net position, ETF calculated a net pension asset of $2.5 billion as of December 31, 2014, and a financial reporting funded ratio of 102.7 percent for the WRS.

Under the GASB financial reporting methodology, WRS investments are valued at fair value, which will result in volatility in the calculation of the net pension liability or asset.

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. In the case of the WRS, the changes in the fair value of investments could result in the reporting of a net pension asset in one year and a net pension liability in other years, depending on the volatility in the investment markets and its condition on December 31 each year.

Relationship to Contribution Rates

ETF seeks to set contribution rates that allow employers to better plan and meet contribution requirements.

ETF's funding policy for the WRS has the goal of establishing steady contribution rates that allow employers to better plan and meet contribution requirements. Contribution rates are set to provide for the benefits earned by employees during the year. In setting these rates, one of the most significant factors considered is investment performance. However, while the investment performance of the Core and Variable Funds affects the setting of contribution rates, the full effect of a particular year's investment gain or loss is smoothed through the use of the MRA, so that contribution rates are gradually increased or decreased over time.

The fact that the WRS is reporting a net pension asset as of December 31, 2014, is not an indication that current contribution rates should be reduced. Under the new pension accounting standards, GASB separated the funding and financial reporting methodologies. If ETF were to adjust contribution rates based on the financial reporting methodology, more pronounced fluctuations in the rates could result, primarily because the fair value of investments at a point in time would be used. For example, if the net pension asset of $2.5 billion as of December 31, 2014, was considered in adjusting the rates, we would anticipate that the contribution rates would be reduced. However, if in the following year, the investment markets were down and the fiduciary net position of the WRS declined by 20 percent, ETF would report a net pension liability, which could result in a more significant increase in the contribution rates. The volatility of using the fair value of investments to adjust contribution rates could be difficult for employers and employees to manage.

WRS assets can only be used to fund pension benefits.

The net pension asset is an indication of the financial health of the WRS as of December 31, 2014. The net pension asset indicates that the fair value of assets is sufficient to meet projected future obligations to participants. Because the WRS is an irrevocable trust, all funds remain in the trust and can only be used to fund pension benefits.

Comparison to Other Pension Plans

GASB anticipates that the new pension accounting standards will allow for comparability across public pension plans.

GASB anticipates that the new pension accounting standards will allow for comparability across public pension plans since plans will be required to use the same GASB financial reporting methodology and are required to value plan investments at fair value when calculating the net pension liability or net pension asset. Although pension plans will follow the same accounting standards in reporting the pension liability, differences such as plan structures, planned asset allocations, and investment strategies will make comparisons across pension plans imperfect. 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 affect comparability.

We collected readily available information from other cost-sharing, multiple-employer, defined-benefit plans that had already implemented the new GASB financial reporting methodology at the time of our audit. In comparison to these plans, the WRS was second with a funded ratio of 102.7 percent, as shown in Table 5.

Table 5

Comparison of Selected Pension Plans Based on Financial Reporting Methodology[1, 2]
(in billions)

Pension Plan	Total Pension Liability	Fiduciary Net Position	Net Pension Asset	Net Pension Liability	Funded Ratio
South Dakota Retirement System	$ 9.9	$ 10.6	$0.7	n/a	107.3%
Wisconsin Retirement System (WRS)[3]	**89.7**	**92.2**	**2.5**	**n/a**	**102.7**
Tennessee Teacher Legacy Pension Plan for Local Education Agencies	21.2	21.2	0.1	n/a	100.3
California Public Employees Retirement Fund—school employers, nonteaching positions	68.3	57.0	n/a	$11.3	83.5
Teacher Retirement System of Texas[4]	159.5	132.8	n/a	26.7	83.3
Minnesota Teachers Retirement Association	24.9	20.3	n/a	4.6	81.5
General Employees Retirement Fund of Minnesota	22.1	17.4	n/a	4.7	78.7
North Dakota Public Employees Retirement	2.9	2.3	n/a	0.6	78.2
California State Teachers' Retirement System	248.9	190.5	n/a	58.4	76.5
Teachers Retirement System of Alabama[5]	31.3	22.3	n/a	9.1	71.0

[1] Based on readily available information from other cost-sharing, multiple-employer, defined-benefit pension plans that had already implemented the GASB financial reporting methodology at the time of our audit.

[2] For the plan year ended June 30, 2014, unless otherwise noted.

[3] For the plan year ended December 31, 2014.

[4] For the plan year ended August 31, 2014.

[5] For the plan year ended September 30, 2014.

One of the main reasons the WRS had a funded ratio above 100.0 percent is that WRS employers are required to make the annual actuarially determined contributions, which helps to ensure adequate assets are available to fund benefits. In addition, the fair value of WRS investments increased from $90.3 billion as of December 31, 2013, to $93.6 billion as of December 31, 2014, or by $3.3 billion. Information on the WRS asset allocation and investment strategies employed by SWIB is described in report 14-9.

■ ■ ■ ■

Audit Opinion ■

STATE OF WISCONSIN
Legislative Audit Bureau
Celebrating 50 Years of Service 1966-2016
22 East Mifflin Street, Suite 500 ▪ Madison, WI 53703 ▪ (608) 266-2818 ▪ Hotline: 1-877-FRAUD-17 ▪ www.legis.wisconsin.gov/lab
Joe Chrisman
State Auditor

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 financial statements and the related notes for the Wisconsin Retirement System as of and for the year ended December 31, 2014, as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management of the Department of Employee Trust Funds 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 an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, 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 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 opinion on these financial statements.

Opinion

In our opinion, the financial statements referred to in the first paragraph present fairly, in all material respects, the financial position of the Wisconsin Retirement System as of December 31, 2014, and the respective changes in its financial position 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 Wisconsin Retirement System and do not purport to, and do not, present fairly the financial position of the State of Wisconsin as of December 31, 2014, 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 to the financial statements, the Department implemented Governmental Accounting Standards Board Statement Number 67, *Financial Reporting for Pension Plans—an amendment of GASB Statement No. 25*, which changed presentation and disclosure requirements for pension plans.

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. 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 opinion was not modified with respect to these matters.

Other Matter

Accounting principles generally accepted in the United States of America require that the Wisconsin Retirement Systems' Schedule of Changes in Net Pension Liability (Asset) and Related Ratios, Schedule of Employer Contributions, and Schedule of Investment Returns, which include the related note, on pages 74 through 77 be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board, 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 do so.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued a report dated August 13, 2015, on our consideration of the Department'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 to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the 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 the Department's internal control over financial reporting and compliance.

LEGISLATIVE AUDIT BUREAU

Joe Chrisman
State Auditor

August 13, 2015

Financial Statements ■

Statement of Fiduciary Net Position
December 31, 2014

	December 31, 2014
ASSETS	
Cash and Cash Equivalents	$ 3,346,728,456
Securities Lending Collateral	833,500,806
Prepaid Expenses	27,576,549
Receivables:	
Contributions Receivable	164,906,976
Prior Service Contributions Receivable	33,238,603
Benefit Overpayments Receivable	2,526,818
Due From Other Benefit Programs	10,525,541
Miscellaneous Receivables	3,558,074
Interest and Dividends Receivable	233,038,119
Investment Sales Receivable	527,889,398
Total Receivables	975,683,529
Investments at Fair Value:	
Stocks	50,725,324,156
Fixed Income Investments	27,139,271,349
Limited Partnerships	10,554,584,793
Multi-Asset Investments	3,906,834,492
Real Estate	1,017,432,558
Preferred Securities	221,384,763
Convertible Securities	3,779,266
Foreign Currency Contracts	(10,916,098)
Options	(1,616,395)
Financial Futures Contracts	(325,625)
Swaps	(27,829)
Total Investments	93,555,725,430
Capital Assets	2,411,051
TOTAL ASSETS	**98,741,625,821**
LIABILITIES	
Core Investment Due to Other Benefit Programs	3,660,577,098
Variable Investment Due to Other Benefit Programs	21,058,395
Obligations Under Reverse Repurchase Agreements	820,516,323
Short Sell Obligations	473,538,971
Securities Lending Collateral Liability	833,500,806
Benefits Payable	314,965,439
Unearned Revenue	114,673
Due to Other Benefit Programs	43,285,927
Miscellaneous Payables	118,187,628
Investment Payables	309,109,014
TOTAL LIABILITIES	**6,594,854,274**
NET POSITION RESTRICTED FOR PENSIONS	**$ 92,146,771,547**

The accompanying notes are an integral part of this statement.

Statement of Changes in Fiduciary Net Position for the Year Ended December 31, 2014

	Year Ended December 31, 2014
ADDITIONS	
Contributions:	
Employer Contributions	$ 1,023,196,702
Employee Contributions	906,499,398
Total Contributions	1,929,696,100
Investment Income:	
Net Appreciation (Depreciation) in Fair Value of Investments	3,167,373,305
Interest	665,877,768
Dividends	1,354,764,689
Securities Lending Income	28,452,550
Other	221,680,441
Less:	
Investment Income Distributed to Other Benefit Programs	190,689,693
Investment Expense	356,811,182
Securities Lending Rebates and Fees	2,407,291
Net Investment Income	4,888,240,587
Interest on Prior Service Receivable	2,132,584
Miscellaneous Income	641,657
TOTAL ADDITIONS	**6,820,710,928**
DEDUCTIONS	
Retirement, Disability, and Beneficiary Benefits	4,497,944,907
Separation Benefits	34,401,181
Other Benefit Expenses	42,302,967
Administrative Expenses	24,036,951
TOTAL DEDUCTIONS	**4,598,686,006**
Net Increase (Decrease)	**2,222,024,922**
Net Position—Beginning of the Year	89,924,746,625
Net Position—End of the Year	$ 92,146,771,547

The accompanying notes are an integral part of this statement.

Notes to the Financial Statements ■

1. Summary of Significant Accounting Policies

The Wisconsin Retirement System (WRS) is a cost-sharing, multiple-employer, defined-benefit public employee retirement system established and administered by the State of Wisconsin to provide pension benefits for state and local government employees. The system is administered in accordance with ch. 40, Wis. Stats. The Department of Employee Trust Funds (ETF) is responsible for administration of the WRS, including collecting contributions from employers and paying retirement benefits to WRS participants, and the State of Wisconsin Investment Board (SWIB) is responsible for managing WRS investments.

A. Presentation Basis

The financial statements of the WRS have been prepared by ETF in conformity with generally accepted accounting principles (GAAP) for government units as prescribed by the Governmental Accounting Standards Board (GASB). The WRS is not a general-purpose government and does not present government-wide statements. The WRS is included in the State of Wisconsin financial reporting entity and is presented in the State's Comprehensive Annual Financial Report in a "Pension and Other Employee Benefit Trust" and is reported as a separate fund in ETF's separately issued Comprehensive Annual Financial Report.

Department-wide administrative expenses, capital assets, and general fund activities are most closely associated with the WRS fund and have been blended with the WRS for presentation. All material intrafund transactions have been eliminated from the WRS fund financial statements.

B. Measurement Focus and Basis of Accounting

The financial statements of the WRS have been prepared in accordance with GAAP. The WRS fund is 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 the WRS. 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.

C. Investments

The assets of the WRS 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. 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 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.

SWIB manages the Retirement Funds with oversight by the SWIB Board of Trustees, as authorized in s. 25.17, Wis. Stats. SWIB is not registered with the U.S. Securities and Exchange Commission as an investment company.

D. Administrative Expenses

The administrative costs of all programs administered by ETF are financed by a separate appropriation and are allocated to each benefit plan in accordance with s. 40.04, Wis. Stats. 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 $34.5 million, of which $24.0 million was allocated to the WRS.

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

E. Capital Assets

Capital assets consist of office furniture and equipment and computer software (purchased or externally acquired and internally generated software). ETF capitalizes all 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 $1,000,000. 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, 2014, the total value of capital assets was $4,939,077, less accumulated depreciation of $2,528,026, for a net capital asset value of $2,411,051. The net capital asset value includes $2,199,723 in internally generated software, and $67,895 in purchased software.

F. Due to/from Other Benefit Programs

In addition to the WRS, ETF administers other employee benefit programs for public employees. Amounts due to or from the WRS to other benefit programs administered by ETF, as of December 31, 2014, consist of the following:

Due to/from Other Benefit Programs
As of December 31, 2014
(in thousands)

Wisconsin Retirement System	Due from Other Benefit Programs	Due to Other Benefit Programs
Employee Reimbursement Accounts	$ 599	$ –
Commuter Benefits	28	–
Long-Term Disability Insurance	6,350	42,475
Health Insurance	1,611	126
State Retiree Health Insurance	490	15
Local Retiree Health Insurance	36	18
Duty Disability	428	–
Income Continuation Insurance	228	1
Sick Leave	755	651
Total	$10,525	$43,286

These amounts are primarily the result of administrative expense reimbursement to the WRS. The outstanding balances between funds result from the time lag between the dates that services are provided or reimbursable expenditures occur and when payments between funds are made. The amount due from Long-Term Disability Insurance (LTDI) is for additional contributions made by LTDI to the WRS. The amount due to LTDI is for insurance premiums for LTDI coverage for WRS participants. All liabilities are expected to be paid within one year of the balance sheet date.

G. 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

The WRS adopted GASB Statement Number 67, *Financial Reporting for Pension Plans—an amendment of GASB Statement No. 25*, during the year ended December 31, 2014. GASB Statement Number 67 addresses accounting and financial reporting requirements for pension plans. Significant requirements include an actuarial calculation of total pension liability and net pension liability (asset). It also includes comprehensive footnote disclosure regarding the pension liability (asset), the sensitivity of the net pension liability (asset) to the discount rate, and increased investment activity disclosures.

3. DEPOSITS, INVESTMENTS AND SECURITIES LENDING TRANSACTIONS

A. 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 s. 25.17(14), Wis. Stats. Unrealized gains and losses are reflected in the Statement of Changes in Fiduciary Net Position as "Net Appreciation (Depreciation) in Fair Value of Investments."

The fair value of Retirement Fund assets are 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 "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. 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 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.

Privately held debt, which is included in "Fixed Income Investments" on the Statement of Fiduciary Net Position, is priced using a multi-tiered approach that prices each holding based on the best available information using the following hierarchy of pricing sources:

- custodian-supplied prices for assets that are in the Barclays Capital U.S. Aggregate Bond Index;
- prices provided by a third party with expertise in the bond market; and
- modeled prices where interest rate spreads are supplied by a third party.

In a few instances, privately held debt cannot be priced by one of the above three sources. In these circumstances, the investment is priced using an alternative bond index price or, if no independent quotation exists, the investment may be valued at cost.

For alternative 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 recently available quarterly reporting period is adjusted for subsequent cash flows to derive the fair value. Annually, the financial statements of the limited partnerships and real estate pooled funds are audited by independent auditors.

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.

Monthly, SWIB values hedge funds based on statements received from each of the hedge fund's administrators. Essentially, a hedge fund administrator serves as an independent third party that protects the interests of investors. The main function of a third-party administrator is to independently 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. 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. The nature and use of derivative instruments is discussed later in these notes.

A limited number of securities are carried at cost. Certain non-public or closely held stocks are not reported at fair value, but are carried at cost since no independent quotation is available to estimate fair value for these securities.

B. 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 derivatives is discussed later in these notes.

The table *Retirement Funds 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, 2014. Included in this table are fixed income securities, including certain short-term securities, classified as "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 securities custodian (additional information relating to the securities lending program is discussed later in these notes). The table also includes SWIB's investment in commingled fixed income funds, which are not assigned ratings. 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. The table *Retirement Funds Credit Quality Breakdown of Commingled Fixed Income Funds* presents the aggregated credit ratings for the underlying investments held by commingled fixed income investments within the Retirement Funds.

Retirement Funds Credit Quality Distribution
As of December 31, 2014
(in thousands)

Rating	Fair Value	Percentage of Total
P-1/A-1	$ 523,018	2%
P-2/A-2	341,452	1
AAA/Aaa	522,299	2
AA/Aa	12,487,930	41
A	2,551,816	8
BBB/Baa	2,768,461	9
BB/Ba	579,923	2
B	559,934	2
CCC/Caa	171,795	1
CC/Ca	88	–
C	–	–
D	–	–
Commingled Fixed Income Funds	8,816,196	29
Not Rated	865,207	3
Total	$30,188,119	100%

Retirement Funds Credit Quality Breakdown of Commingled Fixed Income Funds
As of December 31, 2014
(in thousands)

Rating[1]	Fair Value	Percentage of Total
P-1/A-1	$1,122,451	13%
AAA/Aaa	2,478,416	28
AA/Aa	831,060	9
A	1,804,313	20
BBB/Baa	2,107,882	24
BB/Ba	151,766	2
B	173,721	2
CCC/Caa	59,667	1
CC/Ca	2,455	–
C	–	–
D	4,459	–
Not Rated	80,006	1
Total Commingled Fixed Income Funds	$8,816,196	100%

[1] Reflects aggregated ratings of underlying investments as reported by commingled fixed income fund managers.

C. Reverse Repurchase Agreements

SWIB held $820.5 million in reverse repurchase agreements as of December 31, 2014. 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 obligations 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.

During calendar year 2014, SWIB began entering into reverse repurchase agreements under a new master repurchase agreement with an agent who retains full control of the underlying securities, effectively eliminating the possibility of re-hypothecation of the securities. Under this new arrangement, credit risk exposure is limited to $200.0 million per reverse repurchase agreement counterparty. The counterparty credit exposure is monitored daily and managed through the transfer of margin, in the form of cash or securities between SWIB and the counterparty. As of December 31, 2014, approximately half of the reverse repurchase agreements were entered into under this arrangement. The Retirement Funds counterparty credit exposure for reverse repurchase agreements as of December 31, 2014, is summarized in the table *Retirement Funds Reverse Repurchase Agreements Counterparty Credit Exposure*.

Retirement Funds
Reverse Repurchase Agreements
Counterparty Credit Exposure
As of December 31, 2014
(in thousands)

Fair Value of Collateral and Margin Held by Counterparty/Agent		$ 838,237
Less:		
Cash Due to Counterparty	$ 820,516	
Collateral and Interest Due to Counterparty	728	
Total Due to Counterparty		821,244
Net Counterparty Credit Exposure		$ 16,993

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 0.15 percent and 0.30 percent as of December 31, 2014. The reverse repurchase agreements had open maturities, whereby a maturity date is not established upon entering into the agreement. However, interest rates on the agreements are negotiated daily. The agreements can be terminated at the will of either SWIB or the counterparty.

The cash due to counterparties resulting from reverse repurchase agreements is reported as "Obligations 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.

D. Custodial Credit Risk

(a) 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. Bank deposits as of December 31, 2014, were $1.0 billion. Of the total deposits, $732.5 million were collateralized by securities borrowed. Additionally, a portion of the total deposits were uninsured and uncollateralized representing balances held in foreign currencies in SWIB's custodian's nominee name and cash posted as collateral for derivatives transactions as well as cash collateral posted exceeding the fair value of securities held by SWIB related to SWIB's shorting program. The sum of uninsured and uncollateralized deposits amounted to $247.9 million as of December 31, 2014. The remaining deposits were covered by depository insurance at year end. The Retirement Funds also held time deposits with foreign financial institutions with a fair value of $17.9 million as of December 31, 2014, which were uncollateralized and uninsured. In addition, as of December 31, 2014, the Retirement Funds held certificates of deposit, which were covered by depository insurance with a fair value of $56.7 million.

(b) Investments

Custodial credit risk for investments is the risk that, in the event of the 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 repurchase agreements held by the Retirement Funds were 13 agreements totaling $151.5 million as of December 31, 2014. All of these repurchase agreements were tri-party agreements held in short-term cash management portfolios managed by SWIB's custodian. The underlying securities for these repurchase agreements were held by the tri-party's agent, not in SWIB's name.

Although SWIB has not adopted a formal deposit or investment policy specifically related to custodial credit risk, SWIB investment staff monitor the creditworthiness of SWIB's custodian as a counterparty, depository financial institution and as an agent for certain reverse repurchase agreements and securities lending activity. Concerns and issues are discussed with SWIB's credit task force for further action. Additionally, SWIB's custodian reviews each sub-custodian's operations, local market activity, financial strength, regulatory compliance, and overall service performance throughout the year.

E. 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 percent 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 percent or more of the WRS's fiduciary net position as of December 31, 2014.

F. 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 0.01 percent and 15.95 percent as of December 31, 2014. 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.

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 pooled 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.

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 *Retirement Funds Interest Rate Sensitivity by Investment Type* presents the aggregated interest rate exposure for the Retirement Fund assets. 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.

Retirement Funds
Interest Rate Sensitivity by Investment Type
As of December 31, 2014
(in thousands)

Investment Type	Fair Value	Duration (years)	Weighted Average Maturity (days)
Asset Backed Securities	$ 49,368	1.61	–
Commercial Paper	870,435	0.17	–
Corporate Bonds and Private Placements	4,992,052	5.74	–
Foreign Government/Agency Bonds	3,752,326	7.73	–
Futures Contracts[1]	3,690,696	4.94	–
Municipal Bonds	117,639	10.73	–
Repurchase Agreements	151,526	–	3
U.S. Government Agencies	633,802	1.78	–
U.S. Treasury Inflation Protected Securities	6,878,808	7.87	–
U.S. Treasury Securities	3,925,967	4.78	–
Commingled Funds:			
Short-Term Cash Management	1,462,719	–	117
Emerging Market Fixed Income	526,942	7.15	–
Global Fixed Income	500,984	4.66	–
Domestic Fixed Income	6,325,551	6.23	–
Total	$33,878,815		

[1] Notional amount presented for fair value.

G. 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, or currencies in which a portfolio has taken on an active position, will decline 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's 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 derivatives is discussed later in these notes.

The table *Retirement Funds Currency Exposures by Investment Type* presents the funds' investments which were exposed to foreign currency risk as of December 31, 2014.

Retirement Funds Currency Exposures by Investment Type[1, 3]

As of December 31, 2014
(stated in U.S. dollars)

Currency	Cash and Cash Equivalents	Stocks	Fixed Income	Limited Partnerships	Multi Asset	Real Estate	Preferred Securities	Convertible Securities	Options	Futures Contracts	Swaps	Short Sell Obligations[2]	Total
Australian Dollar	$ 9,817,564	$ 978,265,727	$ 55,218,308	$ –	$ –	$ –	$ –	$ –	$ –	$ 987,504	$ –	$ –	$ 1,044,289,103
Brazilian Real	2,866,308	91,190,340	21,715,188	–	–	–	71,963,752	–	–	–	–	–	187,735,588
Canadian Dollar	14,415,688	1,372,518,045	54,009,564	–	–	–	–	–	–	1,296,774	–	(3,000,147)	1,439,239,925
Colombian Peso	–	–	1,857,845	–	–	–	–	–	–	–	–	–	1,857,845
Czech Koruna	–	731,731	–	–	–	–	–	–	–	–	–	–	731,731
Danish Krone	–	224,418,528	26,054,463	–	–	–	–	–	–	–	–	–	250,472,991
Egyptian Pound	3,383	–	–	–	–	–	–	–	–	–	–	–	3,383
Euro Currency Unit	23,738,165	4,866,077,416	1,640,002,260	703,357,776	–	–	94,220,799	–	(567,281)	1,401,235	–	(88,197,274)	7,240,033,095
Hong Kong Dollar	3,256,209	702,509,433	–	–	–	–	–	–	–	–	–	–	705,765,642
Hungarian Forint	2	–	7,274,464	–	–	–	–	–	–	–	–	–	7,274,466
Indian Rupee	1,602,240	154,347,868	–	–	–	–	–	–	–	–	–	–	155,950,108
Indonesian Rupiah	148,137	8,517,006	15,413,194	–	–	–	–	–	–	–	–	–	24,078,337
Israeli New Shekel	1,206,799	46,912,359	–	–	–	–	–	–	–	–	–	(53,895)	48,065,263
Japanese Yen	14,976,595	3,238,088,068	969,330,525	–	–	–	–	–	–	(2,589,841)	–	(78,159,329)	4,141,646,017
Malaysian Ringgit	1,703,411	47,849,624	37,461,420	–	–	–	–	–	–	–	–	–	87,014,455
Mexican New Peso	38,115,609	34,206,552	82,795,107	–	–	–	–	–	–	–	–	–	155,117,267
Moroccan Dirham	13,314	–	–	–	–	–	–	–	–	–	–	–	13,314
New Taiwan Dollar	14,138	197,708,830	–	–	–	–	–	–	–	–	–	–	197,722,968
New Turkish Lira	5,445	69,893,922	–	–	–	–	–	–	–	–	–	–	69,899,367
New Zealand Dollar	598,088	31,898,379	7,408,148	–	–	–	–	–	–	–	–	–	39,904,615
Norwegian Krone	1,105,395	113,961,411	7,806,298	–	–	–	–	–	–	–	–	–	122,873,104
Peruvian Nuevo Sol	(4)	–	697,789	–	–	–	–	–	–	–	–	–	697,785
Philippine Peso	13,141	4,397,509	–	–	–	–	–	–	–	–	–	–	4,410,649
Polish Zloty	1,160,906	26,358,218	33,005,727	–	–	–	–	–	–	–	–	–	60,524,851
Pound Sterling	19,554,989	3,610,557,749	366,386,962	77,406,506	–	–	–	–	–	1,854,814	–	–	4,075,761,020
Russian Ruble	–	–	4,269,615	–	–	–	–	–	–	–	–	–	4,269,615
South African Rand	2,498,087	72,628,040	32,835,482	–	–	–	–	–	–	–	–	–	107,961,608
Singapore Dollar	2,278,310	187,008,074	502,739	–	–	–	–	–	–	–	–	(4,635,161)	185,153,962
South Korean Won	404,693	280,380,649	8,769,702	–	–	–	–	–	–	–	–	–	289,555,044
Swedish Krona	3,125,761	436,064,908	11,508,925	20,885,593	–	–	–	–	–	–	–	(15,526,502)	456,058,684
Swiss Franc	32	1,492,807,097	–	–	–	–	–	–	–	–	–	(15,903,185)	1,476,903,945
Thailand Baht	2,525	77,266,246	–	–	–	–	–	–	–	–	–	–	77,268,771
United States Dollar	3,178,513,015	32,358,760,426	23,749,739,531	9,752,934,919	3,906,834,492	1,017,432,558	55,200,212	3,779,266	(1,049,114)	(3,276,110)	(27,829)	(268,063,479)	73,750,777,887
Uruguayan Peso	–	–	5,208,094	–	–	–	–	–	–	–	–	–	5,208,094
Total	$3,321,137,945	$50,725,324,156	$27,139,271,349	$10,554,584,793	$3,906,834,492	$1,017,432,558	$221,384,763	$3,779,266	$(1,616,395)	$ (325,625)	$(27,829)	$(473,538,971)	$96,414,240,502

[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] Values may not add due to rounding.

H. Securities Lending Transactions

State statutes and SWIB Board of Trustees 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 is 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 equal to at least 102 percent of the loaned securities' fair value, including interest accrued, as of the delivery date with the lending agent, 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 totaling at least 105 percent of the loaned securities' fair value, including interest accrued, as of the delivery date with the lending agent. Collateral is marked to market daily and adjusted as needed to maintain the required minimum level. Pledging or selling noncash collateral securities cannot be done without a borrower default.

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 earns a comparable overnight repurchase agreement market rate of return for the duration of the posting. Additional information relating to short sales is discussed later in these notes.

As of December 31, 2014, the Retirement Funds had minimal credit risk exposure to borrowers because the amounts owed to the borrowers exceeded the amounts the borrowers owed the Retirement Funds.
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 low because the majority of investments made with cash collateral mature in one to two business days. The average maturities of the loans and the average maturities of the assets held in the collateral reinvestment pools did not materially differ as of December 31, 2014.

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 Appreciation (Depreciation) in Fair Value of Investments."

I. Derivatives

A derivative instrument, as defined by GASB Statement Number 53, is a financial instrument or other contract that has all of the following characteristics:

(a) 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.

(b) 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.

(c) 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.

Derivatives 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 that have been approved by the SWIB Board of Trustees. Where derivatives are permitted, guidelines stipulate allowable instruments and the manner and degree to which they are to be used.

A derivative can take the form of a contract negotiated between the Retirement Funds and a specific counterparty. This is referred to as an over-the-counter (OTC) contract, such as a forward contract. Alternatively, standardized derivative instruments, such as futures contracts, may be traded on an organized exchange and are referred to as "exchange-traded."

Inherent in the use of OTC derivatives, the Retirement Funds may be exposed to counterparty credit risk on OTC positions. Counterparty credit risk is the risk that a derivative 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 close out 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. Cash collateral on deposit with OTC counterparties was $18.7 million as of December 31, 2014. No securities were pledged relating to OTC positions.

The Retirement Funds OTC positions included foreign currency contracts, OTC options and a total return swap. The table *Retirement Funds OTC Derivative Investments Subject to Counterparty Credit Risk* summarizes, by credit rating, the Retirement Funds' exposure to OTC derivative instruments' counterparty credit risk as of December 31, 2014, without respect to any collateral or netting arrangement.

Retirement Funds
OTC Derivative Investments Subject to
Counterparty Credit Risk
As of December 31, 2014
(in thousands)

Counterparty Credit Rating	Payable	Receivable	Fair Value
AA	$ (227,113)	$ 228,808	$ 1,695
A	(2,063,478)	2,051,559	(11,919)
BBB	(1,716,512)	1,715,793	(720)
Total	$(4,007,103)	$3,996,160	$(10,944)

The aggregate fair value of receivables relating to OTC derivative contracts was $4.0 billion as of December 31, 2014. This represents the maximum loss that would be recognized at the reporting date if all counterparties failed to perform as contracted. The number of OTC counterparties with credit exposure was 16. This maximum exposure is reduced to $196.4 million as of December 31, 2014, when counterparty collateral and master netting arrangements are taken into account.

Conversely, counterparty credit risk is mitigated by an intermediary for exchange-traded derivatives. For this type of derivative investment, the clearinghouse interposes itself as counterparty to all trades and extends a guarantee that trades will be settled as originally intended. To ensure performance, the exchange establishes, and the clearinghouse monitors, margin requirements to cover nearly all expected price changes for a given product within a specified time period based on market risk. Margin payments are settled daily based upon the price movements of the contracts, thereby significantly reducing counterparty credit risk. The Retirement Funds posted $98.0 million in cash and $68.7 million in securities as collateral with exchange clearing brokers as of December 31, 2014.

Gains and losses for all derivative instruments are reported in the Statement of Changes in Fiduciary Net Position as "Net Appreciation (Depreciation) 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.

J. Foreign Currency Spot and Forward Contracts

Foreign Currency Spot and Forward contracts are OTC agreements between two counterparties 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. Amounts due are paid or received on the contracted settle date.

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 to transfer out of an exposed currency and into a benchmark currency is permitted. In some 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 percent of the market value of the portfolio. SWIB may employ discretionary currency overlay 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 Appreciation (Depreciation) 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 *Retirement Funds 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, 2014.

Retirement Funds
Foreign Currency Spot and Forward Contracts
As of December 31, 2014
(in thousands)

Currency	Notional (local currency)	Fair Value ($US)	Unrealized Gain/(Loss) ($US)
Foreign Currency Contract Receivables:			
Australian Dollar	$ 294,008	$ 240,248	$ (3,611)
Brazilian Real	54,475	20,291	(53)
British Pound Sterling	138,317	215,643	(4,601)
Canadian Dollar	431,270	372,181	(2,108)
Chilean Peso	5,563,000	9,109	21
Colombian Peso	2,630,645	1,107	4
Danish Krone	98,967	16,086	(331)
Euro Currency Unit	364,423	441,036	(11,087)
Hong Kong Dollar	552,944	71,302	(2)
Indian Rupee	3,004,637	47,169	(151)
Israeli New Shekel	39,279	10,094	188
Japanese Yen	51,562,580	430,130	(15,807)
Malaysian Ringgit	2,000	570	(40)
Mexican New Peso	795,472	53,873	(1,174)
New Zealand Dollar	6,473	5,059	33
Norwegian Krone	177,273	23,632	(1,167)
Singapore Dollar	82,506	62,241	(963)
Swedish Krona	832,355	106,329	(4,009)
Swiss Franc	93,010	93,616	(1,947)
United States Dollar	1,766,466	1,766,466	–
Total		$3,986,182	$(46,805)

Continued

Retirement Funds
Foreign Currency Spot and Forward Contracts
As of December 31, 2014
(in thousands)

Currency	Notional (local currency)	Fair Value ($US)	Unrealized Gain/(Loss) ($US)
Foreign Currency Contract Payables:			
Australian Dollar	$ (81,808)	$ (66,917)	$ 1,989
Brazilian Real	(29,504)	(10,988)	164
British Pound Sterling	(357,699)	(557,642)	3,888
Canadian Dollar	(267,778)	(231,065)	5,438
Colombian Peso	(5,261,289)	(2,213)	34
Danish Krone	(274,879)	(44,670)	869
Euro Currency Unit	(442,646)	(535,736)	12,885
Hong Kong Dollar	(531,020)	(68,476)	3
Indonesian Rupiah	(7,175,223)	(573)	8
Israeli New Shekel	(16,869)	(4,335)	(92)
Japanese Yen	(17,912,001)	(149,432)	1,707
Malaysian Ringgit	(48,000)	(13,678)	611
Mexican New Peso	(553,570)	(37,425)	1,589
New Zealand Dollar	(9,010)	(7,034)	185
Norwegian Krone	(199,958)	(26,668)	1,710
Peruvian Nuevo Sol	(1,978)	(658)	11
Polish Zloty	(32,155)	(9,040)	519
Singapore Dollar	(23,392)	(17,652)	140
South African Rand	(100,882)	(8,691)	141
South Korean Won	(9,160,000)	(8,372)	88
Swedish Krona	(559,285)	(71,446)	2,277
Swiss Franc	(111,660)	(112,410)	1,725
United States Dollar	(2,011,977)	(2,011,977)	–
Total		$(3,997,098)	$ 35,889
Net Unrealized Gain (Loss) on Foreign Currency Spot and Forward Contracts		$ (10,916)	$(10,916)

K. 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 time in the future.

The fair value of futures contracts represents the unrealized gain/(loss) on the contract, since inception, and is included in "Financial Futures Contracts" account 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 Appreciation (Depreciation) in Fair Value of Investments" account 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 broker. Losses may arise from future changes in the value of the underlying instrument.

Futures contracts may be entered into to efficiently gain or adjust market exposures for purposes that include trust fund rebalancing, sector, interest rate, or duration types of exposure adjustments; and the securitization of cash or as a substitute for cash market transactions. The table *Retirement Funds Futures Contracts* presents the Retirement Funds' investments in futures contracts as of December 31, 2014.

Retirement Funds Futures Contracts
As of December 31, 2014
(in thousands)

Description	Expiration	Notional Amount	Unrealized Appreciation (Depreciation)[1]
Long Fixed Income Futures	Mar 15	$4,197,590	$ 30,167
Short Fixed Income Futures	Mar 15	(506,895)	(4,417)
Long Equity Index Futures	Mar 15	897,669	19,319
Short Equity Index Futures	Mar 15–May 15	(15,481)	(358)
Long Commodity Futures	Jan 15–Mar 15	792,416	(45,037)
Short Commodity Futures	–	–	–
Total		$5,365,299	$ (326)

[1] Unrealized appreciation/(depreciation) includes foreign currency gains/(losses).

L. 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 of the option 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 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 exchange-traded call option contracts cover these positions either by collateral deposits in the form of cash or securities or by pledging, in escrow, the actual securities that would be transferred to the option purchaser in the event the option contract were exercised.

The fair value of option contracts is based upon the closing market price of the contract and is reflected as “Options” on the Statement of Fiduciary Net Position. Gains and losses as a result of investments in option contracts are included in the “Net Appreciation (Depreciation) in Fair Value of Investments” on the Statement of Changes in Fiduciary Net Position. The table *Retirement Funds Option Contracts* presents the fair value of option contracts as of December 31, 2014.

Retirement Funds Option Contracts
As of December 31, 2014
(in thousands)

Description	Expiration	Notional	Unrealized Gain (Loss)	Fair Value
Options Sold				
Exchange-Traded:				
Equity-Call	Jan 15–Jul 15	$ (34,029)	$ (10)	$ (875)
Equity-Put	Jan 15–Apr 15	(250,029)	1,140	(1,140)
Commodity-Put	Jan 15–Mar 15	(4,673)	(489)	(601)
Over-the-Counter:				
Equity-Call	Jan 15–Jul 15	(660)	5	(10)
Equity-Put	Jan 15–Feb 15	(163,176)	(67)	(557)
		(452,567)	579	(3,183)
Options Purchased				
Exchange-Traded:				
Equity-Call	Jan 15–Jul 15	31,746	124	1,543
Equity-Put	Jan 15–Jul 15	3,482	(169)	24
		35,228	(45)	1,567
Total		$(417,339)	$ 534	$(1,616)

M. Swaps

Swaps are negotiated contractual agreements between two counterparties. The Retirement Funds entered into a total return swap in 2013 with a termination date of December 1, 2014, and entered into a similar agreement in 2014 with a termination date of November 18, 2015. Under the terms of the swap, the funds receive the total return of an equity index while paying the counterparty a variable rate of return based on the three-month London Interbank Offering Rate (LIBOR). Each of these swaps has a notional value of $10 million. Fair value is determined based on quoted market prices of the underlying equity index less the accrued interest owed to the counterparty. Gains and losses resulting from investments in swap contracts are included in the "Net Appreciation (Depreciation) in Fair Value of Investments" on the Statement of Changes in Fiduciary Net Position. The fair value of swaps is reported as "Swaps" on the Statement of Fiduciary Net Position in a loss position of $27,829 as of December 31, 2014.

As is specified in SWIB's investment guidelines, OTC derivatives, including 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.

N. 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 within the "Net Appreciation (Depreciation) in Fair Value of Investments" account. 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. Such expenses 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 because there is no upward limit on the price a shorted security could attain. Certain portfolio guidelines permit short sales and, to mitigate risks, the total value of short sales in any portfolio may not exceed 50 percent of a portfolio's value. In addition, portfolios which engage in short sales have long only benchmarks established by the SWIB Board of Trustees. 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 securities from other retirement fund portfolios, including interfund borrowings.

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 percent for in-currency loans and 105 percent for cross-currency loans. The Retirement Funds posted $765.2 million in collateral to security lenders representing $32.8 million in excess of the fair value of the securities borrowed as of December 31, 2014. 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.

O. Multi-Asset

SWIB employs portfolio strategies which involve investment across multiple asset classes. The "Multi-Asset Investments" account on the Statement of Fiduciary Net Position consists of risk parity and hedge funds multi-asset strategies. Risk parity and hedge fund investments are either in the form of a commingled fund, with ownership through fund shares, or a limited partnership.

The risk parity portfolios seek to equally weight asset allocation risk across multiple assets and geographies. Exposures are expected to deliver improved risk and return trade-offs, versus conventional portfolios comprised of stocks and bonds. The risk parity portfolios also intend to provide more diversified exposure over various economic environments.

The Retirement Funds invest in a diversified set of hedge fund strategies, invested across multiple asset classes. In general, a hedge fund is a private investment fund that seeks to produce absolute returns using a broad range of strategies with low to moderate levels of volatility, typically employing both long and short positions. An allocation to a diversified hedge fund portfolio is intended to have low correlation to traditional publicly traded equities.

Hedge funds can be illiquid, either by virtue of the illiquidity of underlying assets, or due to lock-up terms. However, SWIB has taken steps to minimize this risk by investing in hedge funds with more liquid asset classes and by structuring its investments to stagger lock-up periods. Hedge funds also use leverage to varying degrees, and while it is possible that a hedge fund can lose a significant portion of its capital, SWIB has limited the amount it invests in hedge funds in total and with any individual hedge fund manager.

As of December 31, 2014, the majority of SWIB's risk parity and hedge fund investments are reflected within the "Multi-Asset Investments" account on the Statement of Fiduciary Net Position. Hedge fund portfolios with a long only equity strategy are included within the "Stocks" account on the Statement of Fiduciary Net Position.

P. Long-Term Receivables

Included in the "Investment Sales Receivable" account on the Statement of Fiduciary Net Position is $73.0 million in receivables as of December 31, 2014, which are due on or before January 2017. These receivables represent amounts due from third parties related to the sale of private equity limited partnership interests.

Q. Investment Policy and Asset Allocation

SWIB's Board of Trustees has established investment guidelines pursuant to a comprehensive and ongoing evaluation of the appropriate risk and return standards for each fund under management. Trustees have a fiduciary responsibility, with respect to the Retirement Funds, to act solely in the interest of the WRS. The SWIB Board of Trustees consists of nine members meeting specific requirements as follows:

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

Board-approved guidelines are intended to assist in development of a diversified portfolio of investments, tailored to accomplish the purpose of each fund within acceptable risk parameters. They represent a delegation of standing authority to the Executive Director and investment managers within the organization to make prudent investments within the investment guidelines, pursuant to ss. 15.02(4) and 25.16(1), Wis. Stats., and s. IB 2.02, Wis. Adm. Code.

Additionally, the Investment Committee was created to provide oversight of SWIB investments within the parameters established by the SWIB Board of Trustees. Oversight includes analysis of risk and return of the portfolio, asset class, and the Retirement Funds. The Investment Committee is responsible for proposing to the SWIB Board of Trustees changes to investment guidelines for internally managed portfolios, for approving investment guidelines for externally managed portfolios, and for approving individual strategies within the multi-asset portfolios.

The WRS asset allocation policy is recommended by the Investment Committee and adopted by the SWIB Board of Trustees. SWIB undertakes a 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 Retirement Funds. 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 the "off year" of the two-year cycle, structural asset allocation adjustments and other funding initiatives are considered.

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 SWIB Board of Trustee's program of risk allocation that involves reduced equity exposure coupled with leveraged low-volatility assets, such as "fixed income" securities. This investment strategy results in Core Fund strategic targets that exceed 100 percent of invested assets. Currently the Core Fund has adopted an asset allocation target of 6 percent leverage, however over time it is anticipated that SWIB will move toward an asset allocation that includes 20 percent leveraging of low volatility assets. As SWIB increases the degree of leverage as it moves toward the destination target asset allocation, the SWIB Board of Trustees will be informed of the nature and method used for each incremental step. Before implementing leverage beyond 10 percent, the SWIB Board of Trustees' asset allocation consultants and staff will engage in additional focused asset allocation discussion. The table *Retirement Funds Asset Allocation Targets* presents the policy targets as well as the destination targets for the Retirement Funds.

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.

Retirement Funds Asset Allocation Targets

	December 31, 2014 Target Asset Allocation	Destination Target Asset Allocation
Core Fund Asset Class:		
U.S. Equities	26%	21%
International Equities	24	23
Fixed Income	27	36
Inflation Sensitive Assets	9	20
Real Estate	7	7
Private Equity/Debt	7	7
Multi-Asset	6	6
Total	106%	120%
Variable Fund Asset Class:		
U.S. Equities	70%	70%
International Equities	30	30
Total	100%	100%

R. Unfunded Capital Commitments

SWIB entered into a number of agreements that commit the Core Fund to make investment purchases up to predetermined amounts over certain investment time periods. The unfunded capital commitments for private equity, real estate, and multi-asset investments not reported on the Statement of Fiduciary Net Position totaled $6.2 billion as of December 31, 2014.

S. 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, 2014, the money-weighted rate of return for the Core Fund was 5.44 percent and 7.24 percent for the Variable Fund.

4. DESCRIPTION OF WISCONSIN RETIREMENT SYSTEM

WRS benefits and other plan provisions are established by ch. 40, Wis. Stats. Benefit terms may only be modified by the Legislature. ETF, under the direction of the ETF Board, is responsible for the administration of the WRS.

A. 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 Board's 13 members include:

- the Governor or the Governor's designee on the Group Insurance Board;
- the director of the Office of State Employment Relations or the director's designee;
- four members appointed by the Teachers Retirement Board (an advisory board to the ETF Board);
- four members appointed by the Wisconsin Retirement Board (an advisory board to the ETF Board);
- a public member who is not a participant in or beneficiary of the WRS, with at least five 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.

B. 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, 2014, the number of participating employers was:

State Agencies, UW System, and Public Authorities	57
Cities	152
Counties	71
Fourth-Class Cities	36
Villages	261
Towns	246
School Districts	424
Cooperative Educational Service Agencies	12
Wisconsin Technical College System Districts	16
Special Districts	207
Total Employers	1,482

C. WRS Membership

Any employee of a participating employer who is 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, 2014, the WRS membership consisted of:

Current Employees:	
General	133,882
Teachers	99,618
Elected / Executive / Judges	1,409
Protective with Social Security	19,603
Protective without Social Security	2,743
Total Current Employees	257,255
Inactive Participants:	
Terminated Participants	157,072
Alternate Payees	4,051
Total Inactive Participants	161,123
Retirees and Beneficiaries Currently Receiving Benefits:	
Retirement Annuities	177,959
Disability Annuities	6,363
Death Beneficiary Annuities	1,283
Total Annuitants	185,605
Total Participants	603,983

D. 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.
- 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) are entitled to a retirement benefit based on a formula factor, their final average earnings, and creditable service. Formula factors are shown in the table below.

Employment Category	Service before 1/1/2000	Service between 2000 and 2011	Service after 2011
General and Teachers	1.765%	1.6%	1.6%
Executive and Elected	2.165	2.0[1]	1.6[1]
Protective with Social Security	2.165	2.0	2.0
Protective without Social Security	2.665	2.5	2.5

[1] 2011 Wisconsin Act 10 changed the executive and elected formula factor from 2.0 percent to 1.6 percent. The effective date of the change varies among different employee categories, and generally applies to the services 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 employee'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 employee-required contributions plus interest as a separation benefit or leave contributions on deposit and defer application until eligible to receive a retirement benefit.

E. Post-Retirement Adjustments

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

The Core and Variable Fund annuity adjustments granted during recent years are as follows:

Year	Core Fund Adjustment	Variable Fund Adjustment
2005	2.6%	7.0%
2006	0.8	3.0
2007	3.0	10.0
2008	6.6	0.0
2009	(2.1)	(42.0)
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

The negative Core Fund annuity adjustments from 2009 to 2013 were primarily due to the Fund's $21.0 billion investment decline in 2008, caused by the economic recession. Core Fund gains and losses are recognized over a five-year period. Therefore, 2013 was the fifth and final year that the 2008 investment experience would result in a negative Core Fund annuity adjustment.

F. Long-term Receivables

The "Prior Service Contributions Receivable" on the Statement of Fiduciary Net Position represents the WRS unfunded actuarial accrued liability (UAAL), which is determined under the plan's "frozen entry age" actuarial 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, 2014, the receivable balance was $33.2 million.

G. 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, 2014, there were 61,476 active and inactive members and 40,402 annuitants participating in the Variable Fund.

H. 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 WRS. This included approximately 2,000 members. As of December 31, 2014, approximately 125 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, 2014, was $3.5 million.

I. Annuity Supplement—General Fund

As authorized under 1985 s. 40.27(1), Wis. Stats., 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. The Department serves as a clearing agent for its payment. Total supplemental annuity benefits paid were $0.3 million in 2014.

5. CONTRIBUTIONS REQUIRED AND MADE

A. Required Contributions

Contribution rates are determined by the "frozen entry age" actuarial method. This is a "level contribution" actuarial method intended to keep employer and employee 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 employees 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 2014 contribution requirements were determined by the December 31, 2012, actuarial valuation.

Employee contributions are deducted from the employee's salary and remitted to ETF by the participating employer. Employers generally may not pay the employee required contribution. The employee required contribution is one-half of the actuarially determined contribution rate for general category employees, which includes teachers, and employees in the executive group and elected officials category. Required contributions for protective occupation category employees are the same rate as general category employees. Employers are required to contribute the remainder of the actuarially determined contribution rate.

Contribution Rates in Effect During 2014 by Employment Category

	Employer Current	Employer Prior[1]	Employee	Total
General and Teachers	7.0%	0.0%	7.0%	14.0%
Elected Officials, State Executive Retirement Plan	7.75	0.0	7.75	15.5
Protective Occupation with Social Security	10.1	0.0	7.0	17.1
Protective Occupation without Social Security	13.7	0.3	7.0	21.0

[1]The employer prior service contribution rate is a weighted average of individual employer rates.

	Contributions Required and Made	
	Contributions ($ in millions)	Percentage of Payroll
Employer Current Service	$977.1	7.39%
Employer Prior Service[1]	5.9	0.04
Employee Required	927.3	7.01

[1]"Employer prior service" contributions are recorded on the Statement of Fiduciary Net Position as a reduction in the "Prior Service Contributions Receivable." Contributions made includes both mandatory and voluntary payments received from participating employers. Some prior service contributions received after year end are included in contributions made, 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 $1.0 million in reimbursement for benefits paid under the s. 62.13, Wis. Stats., Police and Firefighters Pension Program.

B. Employee 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

A. Components of the Net Pension Liability (Asset)

The components of the net pension liability (asset) of the participating employers as of December 31, 2014, were as follows:

	($ in millions)
Total Pension Liability	$89,691.1
Plan Fiduciary Net Position	92,147.4[1]
Participating Employers' Net Pension Liability (Asset)	$(2,456.3)
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	102.74%

[1] 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, 2013
Measurement Date of Net Pension Liability (Asset)	December 31, 2014
Actuarial Cost Method	Entry Age
Asset Valuation Method	Fair Value
Long-Term Expected Rate of Return	7.2%
Discount Rate	7.2%
Salary Increases:	
Inflation	3.2%
Seniority/Merit	0.2%–5.8%
Mortality	Wisconsin 2012 Mortality Table
Post-retirement Adjustments[1]	2.1%

[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.

Actuarial assumptions are based upon an experience study conducted in 2012 using experience from 2009–2011. The total pension liability as of December 31, 2014, is based upon a roll-forward of the liability calculated from the December 31, 2013 actuarial valuation. 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.

B. 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 7.2 percent, 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:

	1% Decrease (6.2%) ($ in millions)	Current Discount Rate (7.2%) ($ in millions)	1% Increase (8.2%) ($ in millions)
Total Pension Liability	$99,077.0	$89,691.1	$82,278.6
Plan Fiduciary Net Position	92,147.4	92,147.4	92,147.4
Net Pension Liability/(Asset)	$ 6,929.6	$ (2,456.3)	$ (9,868.8)

For the WRS, the determination of liabilities also depends on the assumed dividend, which is linked to the interest rate used in the liability calculation. Therefore, we have shown an alternative sensitivity analysis that varies the assumed dividend in conjunction with the change in the discount rate. For the liabilities shown below, the assumed dividend was 1.1 percent for the 6.2 percent discount rate, 2.1 percent for the 7.2 percent discount rate, and 3.0 percent for the 8.2 percent discount rate. The liabilities are as follows:

	1% Decrease (6.2%) ($ in millions)	Current Discount Rate (7.2%) ($ in millions)	1% Increase (8.2%) ($ in millions)
Total Pension Liability	$90,957.9	$89,691.1	$88,560.5
Plan Fiduciary Net Position	92,147.4	92,147.4	92,147.4
Net Pension Liability/(Asset)	$ (1,189.5)	$ (2,456.3)	$ (3,586.9)

C. Long-term Expected Real Rate of Return

The long-term expected real rate of return on pension plan investments was determined using a building block method in which best-estimate ranges of expected future real rates of return (expected returns, net of 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. Best estimates of geometric real rates of return for each major asset class included in the pension plan's target asset allocation as of December 31, 2014, are summarized in the following table:

	Core Fund		Variable Fund	
Asset Class	Long-Term Real Rate of Return	Target Allocation	Long-Term Real Rate of Return	Target Allocation
U.S. Equities	5.3%	21%	5.3%	70%
International Equities	5.7	23	5.7	30
Fixed Income	1.7	36	n/a	–
Inflation Sensitive Assets	2.3	20	n/a	–
Real Estate	4.2	7	n/a	–
Private Equity/Debt	6.9	7	n/a	–
Multi-Asset	3.9	6	n/a	–
Cash	0.9	(20)	n/a	–

7. STATUTORY RESERVES

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

A. Employee Accumulation Reserve

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

Employee Accumulation Reserve Balances as of December 31, 2014

	Core Fund ($ in millions)	Variable Fund ($ in millions)	Total ($ in millions)
Employee Required	$14,750.4	$1,492.4	$16,242.8
Employee Additional	144.6	14.7	159.3
Total	$14,895.0	$1,507.1	$16,402.1

B. Employer Accumulation Reserve

As authorized by s. 40.04(5), Wis. Stats., 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 99.9 percent funded.

Employer Accumulation Reserve Balances as of December 31, 2014

	Core Fund ($ in millions)	Variable Fund ($ in millions)	Police and Firefighters ($ in millions)	Total ($ in millions)
Employer Accumulation	$20,541.2	$1,492.5	$0.0	$22,033.7
Less: Unfunded Actuarial Accrued Liability	0.0	0.0	(3.5)	(3.5)
Net Employer Accumulation	$20,541.2	$1,492.5	$(3.5)	$22,030.2

C. Annuity Reserve

As authorized by s. 40.04(6), Wis. Stats., this reserve includes the present value of all annuities. The present value of new annuities is transferred from the employee accumulation reserve and the employer accumulation reserve to the annuity reserve. This reserve may only be used for the payment of annuities and death benefits to annuitants. All legal restrictions on use of this reserve were met during the year. The annuity reserve is fully funded.

Annuity Reserve Balances as of December 31, 2014

	Core Fund ($ in millions)	Variable Fund ($ in millions)	Police and Firefighters ($ in millions)	Total ($ in millions)
Annuity Reserve	$47,125.9	$3,998.1	$9.2	$51,133.2

D. Market Recognition Account

As authorized by s. 40.04(3), Wis. Stats., 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.

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

As of:	MRA ($ in millions)
December 31, 2010	$(5,067)
December 31, 2011	(5,340)
December 31, 2012	2,451
December 31, 2013	4,721
December 31, 2014	2,540

8. CONTINGENCIES, UNUSUAL EVENTS, AND SUBSEQUENT EVENTS

A. Loss Contingency

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, would be liable for those taxes, plus penalties and interest. Transferee liability is limited to the amount actually received by the putative transferee, plus interest. As a result, SWIB's potential liability, as a putative transferee of SCC assets, is estimated to be $48.3 million as of December 31, 2014. These estimates include taxes, interest, and potential penalties.

SWIB is aggressively contesting the IRS' assertions of SWIB's tax liability. Furthermore, SWIB believes that the loss, if any, resulting from the claim is not probable and therefore will not have a material impact on SWIB's net investment position or net investment income in future years. As such, SWIB has not recognized a loss relating to this matter in the current year, nor does it appear as a contingent liability in the Statement of Fiduciary Net Position.

Required Supplementary Information ■

Wisconsin Retirement System

Schedule of Changes in Net Pension Liability (Asset) and Related Ratios[1]
Calendar Year Ended December 31, 2014

Total Pension Liability	
Service Cost	$ 1,757,020,910
Interest on the Total Pension Liability	6,089,287,273
Difference between Expected and Actual Experience	437,265,852
Benefit Payments	(4,574,649,055)
Net Change in Total Pension Liability	**(3,708,924,980)**
Total Pension Liability—Beginning	**(85,982,248,424)**
Total Pension Liability—Ending (a)	**$(89,691,173,404)**
Plan Fiduciary Net Position	
Employer Contributions	$ 1,023,196,702
Employee Contributions	906,499,398
Pension Plan Net Investment Income	4,891,690,269
Benefit Payments	(4,574,649,055)
Pension Plan Administrative Expense	(24,036,951)
Net Change in Plan Fiduciary Net Position	**2,222,700,363**
Plan Fiduciary Net Position—Beginning	89,924,746,625
Plan Fiduciary Net Position—Ending (b)	**$92,147,446,988**
Net Pension Liability/(Asset)—Ending (a) - (b)	**$ (2,456,273,584)**
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	**102.74%**
Covered Employee Payroll[2]	$13,219,500,000
Net Pension Liability as a Percentage of Covered Employee Payroll	**(18.58%)**

[1] Immaterial differences may exist between the amounts in this schedule and those reported in the Statement of Fiduciary Net Position and the Statement of Changes in Fiduciary Net Position due to the timing of the actuarial valuation.

[2] Covered Employee Payroll is not available so Pensionable Payroll is presented in its place. The difference is believed to be immaterial.

Wisconsin Retirement System

Schedule of Employer Contributions
Calendar Year Ended December 31, 2014
(Dollar amounts in millions)

Actuarially Determined Contributions	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll (1)	Actual Contribution as a Percentage of Covered Payroll
$977.1	$977.1	$0	$13,219.5	7.39%

[1] Covered Employee Payroll is not available so Pensionable Payroll is presented in its place. The difference is believed to be immaterial.

Wisconsin Retirement System

Schedule of Investment Returns
Last Ten Calendar Years

Annual Money-Weighted Rate of Return (IRR), Net of Investment Expenses

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Core Fund	5.44%	13.18%	13.40%	1.25%	11.92%	21.76%	(26.31%)	8.52%	15.48%	8.31%
Variable Fund	7.24%	28.78%	16.94%	(3.02%)	15.23%	33.06%	(38.96%)	5.57%	17.51%	8.01%

■ ■ ■ ■

Note to Required Supplementary Information ■

1. Significant Methods and Assumptions

Significant methods and assumptions used in calculating the Actuarially Determined Contribution:

Valuation Date	December 31, 2012
Actuarial Cost Method	Frozen Entry Age
Amortization Method	Level Percent—Closed Amortization Period
Amortization Period	30-Year Closed from Date of Participation in the WRS
Asset Valuation Method	5-Year Smoothed Market (closed)
Actuarial Assumptions	
Net Investment Rate of Return	7.2%
Discount Rate:	
Pre-retirement	7.2%
Post-retirement	5.0%
Salary Increases:	
Inflation	3.2%
Seniority/Merit	0.1%–5.6%
Post-retirement Benefit Adjustments[1]	2.1%

[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.

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Auditor's Report ■

STATE OF WISCONSIN
Legislative Audit Bureau
Celebrating 50 Years of Service 1966-2016
22 East Mifflin Street, Suite 500 ▪ Madison, WI 53703 ▪ (608) 266-2818 ▪ Hotline: 1-877-FRAUD-17 ▪ www.legis.wisconsin.gov/lab
Joe Chrisman
State Auditor

Report 15-11

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 Wisconsin Retirement System as of and for the year ended December 31, 2014, and have issued our report thereon dated August 13, 2015. 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.

Internal Control over Financial Reporting

Management of the Department of Employee Trust Funds is responsible for establishing and maintaining effective internal control over financial reporting (internal control). In planning and performing our audit of the Wisconsin Retirement System financial statements, we considered the Department's internal control to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Department's internal control. Accordingly, we do not express an opinion on the effectiveness of the Department'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 the Wisconsin Retirement System'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. Given these limitations, we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified. We did identify a deficiency in internal control, described below, that we consider to be a significant deficiency.

The Department has implemented procedures for preparing the financial statements, including oversight and review by management. However, as part of our audit of the 2014 Wisconsin Retirement System financial statements and related notes, we identified several errors that required adjustment to the financial statements and notes. For example:

- The Cash and Cash Equivalents account and the Core Investment Due to Other Benefit Programs account on the Statement of Fiduciary Net Position were overstated by $201.3 million due to errors in posting two adjusting journal entries. For instance, one entry was posted incorrectly, resulting in the Cash and Cash Equivalents account being increased by $52.4 million when it should have been decreased.

- Net Investment Income was understated by $25.9 million on the Statement of Changes in Fiduciary Net Position due to numerous errors made in the calculations used to allocate earnings from the Core Retirement Investment Trust Fund (Core Fund). For instance, amounts were added to a certain calculation rather than being subtracted, amounts in the calculation were from the incorrect year, and all relevant items were not included in the amounts used in the calculations.

- Net Investment Income was overstated by $8.3 million on the Statement of Changes in Fiduciary Net Position due to errors in the allocation of the change in the Market Recognition Account, which is the account that accumulates the difference between actual and expected earnings of the Core Fund. These errors resulted from the errors in allocating Core Fund earnings noted above.

In addition, in the notes provided to the auditors, the Department did not include all notes required under GASB Statement Number 67, *Financial Reporting for Pension Plans—an amendment of GASB Statement No. 25*. For example, some required notes related to the discount rate used in the calculation of the total pension liability were not included. In addition, we identified errors in the statutory reserve balances note. For example, the balance initially reported for the employee accumulation reserve was understated by $926.6 million.

After we brought these concerns to its attention, the Department corrected the financial statements and notes for all identified errors. We recommend the Department take steps to assess its current process for financial reporting and implement additional or changed processes that would prevent, or detect in a timely manner, errors in the financial statements and notes.

***Department of Employee Trust Funds Response*:**

The Department notes that this year's financial reporting process was especially challenging due to the implementation of a new accounting system, new GASB requirements, and an accelerated timeframe for completion of the reports. The Department indicates it hired several new staff in the accounting area and implemented new procedures to improve the accuracy of its reports. The Department agrees with the recommendation and will take steps to further assess its current processes for financial reporting. Based upon that assessment, the Department will put in place additional or revised processes that will prevent or detect, in a timely manner, errors in the financial statements and notes. The Department plans to utilize the resources of an outside consultant to work together with staff to identify gaps in existing controls, and necessary process changes. Additional modifications will include:

- enhancing the oversight of financial statement preparation by incorporating project management techniques throughout the process;
- providing additional training for staff taking on new assignments in financial reporting; and
- improving the documentation of financial reporting procedures.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Wisconsin Retirement System's 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*.

Department of Employee Trust Funds Response to Findings

The Department's written response to the finding identified in our audit is described in the preceding paragraphs. The Department'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 the Department'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 the Department's internal control or on compliance. Accordingly, this report is not suitable for any other purpose.

LEGISLATIVE AUDIT BUREAU

Joe Chrisman
State Auditor

August 13, 2015

Response ■

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

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August 17, 2015

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

Re: Audit of the 2014 Financial Statements of the Wisconsin Retirement System

Dear Mr. Chrisman:

Thank you for the opportunity to review and comment on the audit of the 2014 financial statements of the Wisconsin Retirement System (WRS). These are the first financial statements for the WRS prepared according to the new accounting standards established by the Governmental Accounting Standards Board (GASB). Your report demonstrates and reaffirms that the WRS continues to be a well-funded retirement system with a funding ratio under the new standards of 102.7%.

Although the new GASB standards will lead to more fluctuations in the WRS' funded status for accounting purposes, the funding methodology used by the WRS to finance the system will help ensure that WRS contribution rates remain relatively stable over time and that sufficient assets will be available to pay promised benefits.

Again, thank you for the opportunity to comment on the audit. We appreciate the professionalism and diligence of your staff in conducting the audit.

Sincerely,

Robert J. Conlin
Secretary