

Retirement Funds **ANNUAL REPORT** 2015

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Introduction

Message from the

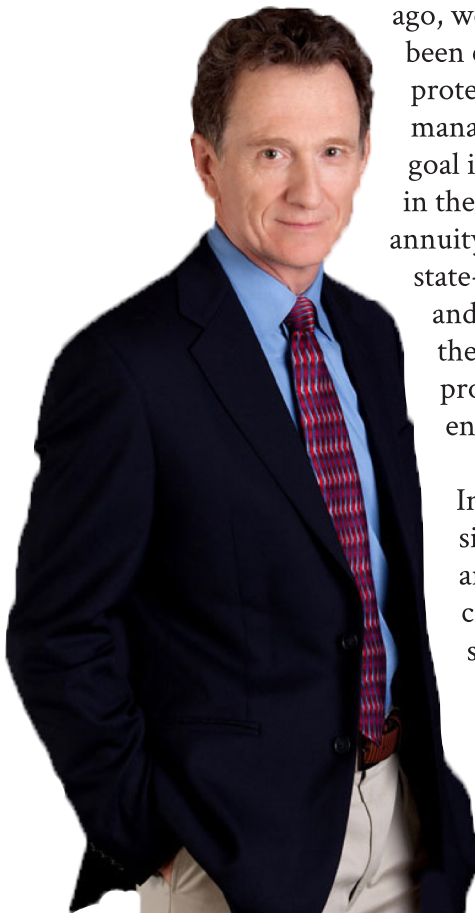
Executive Director

The State of Wisconsin Investment Board (SWIB) is viewed as a leader in the investment world as well as a unique asset and a valuable partner for the public employees and employers of our State. We bring a disciplined, prudent and innovative approach to market opportunities. Because of the strategies and initiatives we have implemented over the years, SWIB has been able to not only generate respectable returns but we have helped fuel the Wisconsin Retirement System (WRS) and make it one of the best funded pension funds in the U.S. More than 600,000 WRS participants and 1,400 employers count on us to help build a more confident financial future. It is critical that we remain an innovative, agile, integrated investment organization that optimizes investment returns while managing risk and cost over the long-term.

Extremely volatile market conditions made 2015 very challenging. In a year when U.S. stocks had their worst annual performance since 2008, the Core Fund, the primary trust fund for the WRS, ended the year flat. Many economists believe we have entered a “low return environment” meaning it will not be impossible but very difficult to generate positive returns over the next few years. To help ensure the trust funds we oversee remain fully funded and able to meet their long-term objectives during this challenging

time, we continue to build on our strong foundation of success. Two years ago, we embarked on a strategic planning process. The results have been centered on implementing investment strategies designed to help protect the trust funds from volatility while adding value and keeping management costs low. Through our long-term investment strategy, our goal is to stabilize the effects of returns on the WRS during downturns in the stock markets, minimize severe swings in contribution rates and annuity adjustments, and earn 7.2% over time. We continue to integrate state-of-the-art technology that provides staff with access to high quality and timely data. This gives us a competitive advantage in managing the trust funds. And we continue to examine our people, our business processes, our management systems and how we are organized to ensure optimal alignment of resources with our strategic direction.

In this challenging financial market, we realize it is not enough to simply rely on past success. We must bring a disciplined, prudent and innovative approach to market opportunities because we are committed to being a steady economic pillar for the people – and the state – we serve.



A handwritten signature in black ink that reads "Michael T. Haining".

Agency Overview

The State of Wisconsin Investment Board (SWIB) is the state agency responsible for investing the assets of the Wisconsin Retirement System (WRS), the State Investment Fund (SIF) and five smaller trust funds established by the State. Investments are made according to the purpose and risk profile of each trust. The WRS -- the 9th largest U.S. public pension fund and the 24th largest pension fund in the world -- includes the Core Retirement Investment Trust Fund (Core Fund) and the Variable Retirement Investment Trust Fund (Variable Fund).

SWIB was created under section 15.76 of the state statutes and its duties as manager of these trust funds are provided in Chapter 25 of the statutes. SWIB staff and Trustees are fiduciaries of the pension funds and are governed by the “prudent investor” standard, which requires them to use the diligence, skill and care that a prudent person acting in a similar capacity and with the same resources would use in managing a large public pension fund. The law also requires SWIB to make investment decisions and conduct every aspect of its operations in the best financial interest of the trust funds.

Strong Governance

SWIB is directed by a nine-person, independent Board of Trustees. The Board of Trustees appoints the executive director of the Investment Board and sets the overall policy for SWIB. The executive director oversees the staff, develops and recommends agency and investment policies for Board adoption, and ensures adherence to state law and policies. The chief investment officer (CIO) serves as chair of the Investment Committee. The Committee provides oversight to

the agency’s investments and reports to and makes recommendations to the Trustees.

Experienced Staff

SWIB’s investments are managed by its own professional staff and by outside money management firms. With support from the Governor and Legislature, SWIB has the flexibility to build a stronger internal management program. SWIB employs a staff of approximately 159 people, including portfolio managers, analysts and traders who are responsible for daily investment decisions made within the parameters of the investment policy, as well as well-trained professionals with legal, technical, accounting and administrative expertise. SWIB adheres to Chartered Financial Analyst (CFA) ethical standards. About 70 percent of SWIB staff holds advanced degrees or professional certifications and 61 percent hold multiple degrees or certifications.

Internal Management

Having a strong internal management program provides a significant financial benefit to the WRS. SWIB’s Board of Trustees has committed to this concept, growing the number of internal staff positions over the years, and enabling SWIB to increase the share of WRS assets managed internally from 21% in 2007 to 65% in 2015. Further increases in internal management are under consideration. As an added benefit, SWIB’s dedication to internal management has also resulted in new investment jobs being created in Wisconsin. Independent reports from Callan Associates, Inc. and CEM Benchmarking, Inc. found that SWIB, when compared to its peers, continues to be a low-cost pension fund manager that produces favorable results.

Board of Trustees

The Board of Trustees is responsible for setting long-term investment policies, asset allocation, benchmarks, fund level risk and monitoring investment performance. The Board is comprised of the following:

- Six public members appointed by the governor and confirmed by the state Senate including four with at least 10 years investment experience, and one with at least 10 years financial experience and who works for a local government in the Local Government Investment Pool.
- Educator participant in the Wisconsin Retirement System (WRS) appointed by the Teachers Retirement Board.
- Non-educator participant in the WRS appointed by the Wisconsin Retirement Board.
- Secretary of the Department of Administration or designee.

Public Members*

1. Lon Roberts, Board Chair, Attorney at Ruder Ware, Wausau**
2. David Stein, Board Vice Chair, Executive Vice President and Head of Retail Banking, Associated Banc-Corp., Madison
3. Mark Doll, Retired Executive Vice President and Chief Investment Officer, Northwestern Mutual Life Insurance Co., Milwaukee
4. Norman Cummings, Director of Administration, Waukesha County
5. Barbara Nick, President and Chief Executive Officer, Dairyland Power Cooperative, La Crosse
6. Paul Stewart, Co-Founder, PS Capital Partners, Milwaukee

WRS Participant Members*

1. Sandra Claflin-Chalton, Educator, Retired Teacher, Menomonie
2. Robert Conlin, Non-educator, Secretary of the Department of Employee Trust Funds

Department of Administration

1. Scott Neitzel, Department Secretary

*Appointed Board members serve six-year terms.

**Lon Roberts stepped down from the Board in February 2016 after being appointed secretary of the State Department of Financial Institutions. David Stein was appointed Board Chair and Norman Cummings was appointed Board Vice Chair. Timothy Sheehy was appointed to the Board in March 2016.



Lon Roberts



David Stein



Mark Doll



Norman Cummings



Barbara Nick



Paul Stewart



Sandra Claflin-Chalton

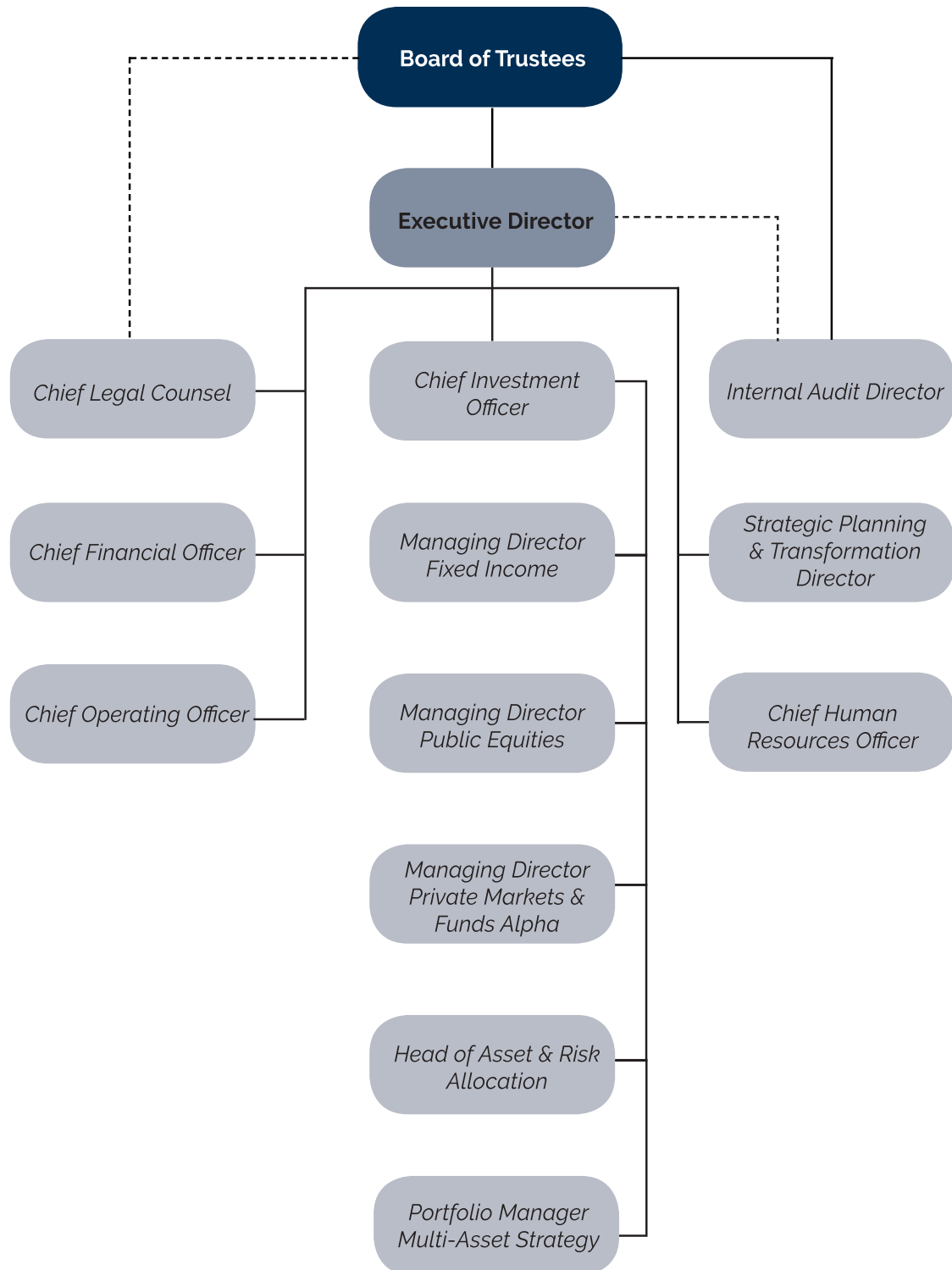


Robert Conlin



Scott Neitzel

Agency Management



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Financial Section





STATE OF WISCONSIN

Legislative Audit Bureau

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Service

1966-2016

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

Mr. Michael Williamson, Executive Director and
Members of the Audit Committee of the Board of Trustees
State of Wisconsin Investment Board

Report on the Financial Statements

We have audited the accompanying financial statements and the related notes of the Core Retirement Investment Trust Fund and the Variable Retirement Investment Trust Fund (Retirement Funds) of the State of Wisconsin as of and for the year ended December 31, 2015, as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

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

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes

evaluating the appropriateness of the accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinions

In our opinion, the financial statements referred to in the first paragraph present fairly, in all material respects, the financial position of the Retirement Funds as of December 31, 2015, and the respective changes in financial position thereof 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 investment activity of the Retirement Funds attributable to SWIB and do not purport to, and do not, present fairly the financial activity of the Retirement Funds attributable to the Department of Employee Trust Funds. Further, they do not purport to, and do not, present fairly the financial position of SWIB or of the State of Wisconsin as of December 31, 2015, or the changes in financial position for the year then ended, in accordance with accounting principles generally accepted in the United States of America.

As discussed in Note 2c to the financial statements, the financial statements include investments that do not have readily ascertainable market prices and are valued based on a variety of third-party pricing methods. However, because of the inherent uncertainty of valuation, those estimated values may differ from the values that would have been used had a ready market for the investments existed.

Our opinions are not modified with respect to these matters.

Other Matters

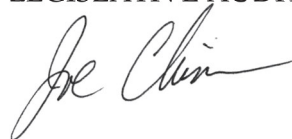
Required Supplementary Information—Accounting principles generally accepted in the United States of America require that the Management Discussion and Analysis, which precedes the financial statements, be presented to supplement the financial statements. Such information, although not a part of the financial 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.

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

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued a report dated December 1, 2016, on our consideration of SWIB'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 SWIB's internal control over financial reporting and compliance.

LEGISLATIVE AUDIT BUREAU



Joe Chrisman
State Auditor

December 1, 2016

Retirement Funds

Management Discussion & Analysis

The Retirement Funds' discussion and analysis of the financial activities for the calendar year ended December 31, 2015, is presented by management as an introduction to the financial statements. It is meant to assist the reader in understanding the financial statements by providing an overall review of the financial activities during the year as well as to provide a comparison of the prior year's activity and results.

Overview of Basic Financial Statements

The State of Wisconsin Investment Board (SWIB) is responsible for managing the assets of the Wisconsin Retirement System (WRS). The Core Retirement Investment Trust Fund (Core Fund) and Variable Retirement Investment Trust Fund (Variable Fund), collectively (Retirement Funds), represent the assets of the WRS. Following this section are the financial statements and footnotes which reflect only the investment activity of the Retirement Funds. Retirement reserves, contribution revenue and benefit expense are specifically excluded from presentation in these statements although contribution revenue and benefit expenses are reflected in "Net Disbursements" in the Statement of Changes in Net Investment Position. The Wisconsin Department of Employee Trust Funds (ETF) prepares a Comprehensive Annual Financial Report for the WRS, and it can be found on their website: www.etf.wi.gov

The **Statement of Net Investment Position** provides information on the financial position of the Retirement Funds at December 31, 2015. It reflects the investment assets available for payment of future benefits and any liabilities related to the investments. The **Statement of Changes in Net**

Investment Position presents the results of the investing activities for the twelve months ending December 31, 2015.

The **Notes to the Financial Statements** provide additional information that is essential to a full understanding of the data presented in the financial statements. The notes provide more detail about accounting policies, significant account balances and activities, material risks, obligations, contingencies and subsequent events, if any.

The financial statements and related notes are prepared in accordance with Governmental Accounting Standards Board (GASB) Pronouncements.

Retirement Funds

Approximately 614,000 people participate in the WRS, including current and former employees of Wisconsin's state agencies, most local governments and school districts in Wisconsin. Contributions made to the WRS by these employees, and their employers, are invested by SWIB to finance retirement and other benefits. The Retirement Funds had a combined Net Investment Position of \$92.1 billion as of December 31, 2015.

Time Weighted Annualized Returns As of December 31, 2015

	1-Year Return %	5-Year Return %	10-Year Return %	20-Year Return %
Core Fund	-0.4	6.7	5.8	7.5
Benchmark	-0.3	6.2	5.6	7.0
Variable Fund	-1.2	9.2	6.1	7.5
Benchmark	-1.3	8.9	6.0	7.0

Retirement Funds

Management Discussion and Analysis

Core Retirement Investment Trust Fund

The larger of the two trust funds comprising the WRS is the Core Fund with a Net Investment Position of \$85.4 billion at December 31, 2015. All WRS members have at least half, if not all, of their pension contributions invested in the Core Fund. It is a diversified, balanced fund invested for the long-term needs of the WRS. Diversification helps to stabilize the effects of market changes. The investment objective of this trust fund is to meet or exceed an average 7.2% annual nominal return over the long-term, which consists of a real rate of return of 4.0% above an estimated 3.2% growth in wages. This objective is based on market rate of return and actuarial assumptions needed to meet obligations of the WRS.

The financial statements reflect the investment activity of the Core Fund as well as changes in cash balances due to net disbursements related to ETF. Net disbursements include, but are not limited to, benefit payments, contribution receipts, transfers to/from the Variable Fund and administrative expenses.

Condensed Core Fund financial information for the calendar years ending December 31, 2015 and December 31, 2014 is included in the table entitled **Core Fund Condensed Financial Information.**

Cash and Cash Equivalents increased by \$560.9 million when comparing calendar year-end 2015 to 2014. The increase in cash balances can be

Core Fund Condensed Financial Information (In thousands)			
	2015	2014	% Change
Cash and Cash Equivalents	\$3,803,601	\$ 3,242,707	17
Receivables	1,250,794	732,695	71
Invested Securities Lending Collateral	1,117,936	739,162	51
Prepaid Expenses	27,766	26,088	6
Investments	81,658,146	86,346,589	(5)
Total Investment Assets	87,858,243	91,087,241	(4)
Payables and Other Liabilities	341,102	287,935	18
Securities Lending Collateral Liability	1,117,936	739,162	51
Short Sales	171,289	465,586	(63)
Obligations Under Reverse Repurchase Agreements	809,678	820,516	(1)
Total Investment Liabilities	2,440,005	2,313,199	5
Net Investment Position Held in Trust	\$85,418,238	\$ 88,774,042	(4)
Investment Income (loss)	\$(276,135)	\$ 4,930,356	(106)
Investment Expense	(342,478)	(348,735)	(2)
Net Investment Income (loss)	(618,613)	4,581,621	(114)
Net Disbursements - Department of			
Employee Trust Funds	(2,737,191)	(2,310,920)	18
Net Increase (Decrease) in Net Investment Position Held in Trust	\$(3,355,804)	\$ 2,270,701	(248)

explained by a greater use of derivative instruments in 2015. SWIB's derivative strategies incorporate cash to varying degrees in order to adjust leverage and scale risk to desired levels. In 2015, the following derivative investment initiatives contributed to the overall increase in cash balances:

- Synthetic strategies were used to replicate passive market positions, effectively providing the same exposures and economics as owning the physical securities. Synthetic strategies offer increased liquidity, reduced trading costs, reduced market impact, ability to lock in attractive spreads, greater flexibility and increased maneuverability within the marketplace as compared to transacting in physical securities. During calendar year 2015, SWIB began deploying synthetic passive equity and treasury strategies used in conjunction with specific active strategies. (Unlike passive positions, active strategies rely on a manager's ability to select investments expected to outperform the general market.) In such cases, SWIB used both cash and hedge fund investments to back the synthetic passive positions. The combined effect of leveraging passive management with specific active positions serves to concentrate active risk more efficiently than using active strategies alone, while at the same time providing the broad diversified market exposures defined by our asset allocation process.
- Futures and option contracts were used to increase SWIB's exposure to commodities markets in line with our increased policy allocation. As is the case with synthetic positions, SWIB requires certain levels of cash on-hand to implement commodity strategies and moderate exposures.
- To a lesser degree, SWIB utilized derivatives to implement tactical investment positions. As in other instances, derivatives used for these strategies require defined levels of cash to conservatively provide for adequate levels of margin and to scale risk to desired levels.

Receivables increased by 71% when comparing calendar year-end 2015 to 2014. The largest contributor to the change was an increase in the balance for investment sales receivable, which is dependent upon the timing and settlement of pending sale transactions. In this particular instance, the increase was due to outstanding 2015 year-end redemptions in certain commingled funds. The redemptions were reallocated to different strategies, within the same asset class, in early 2016.

Invested Securities Lending Collateral and Securities Lending Collateral Liability increased by 51% as of December 31, 2015, as compared to December 31, 2014. The collateral balances represent cash collateral held for securities lending transactions in separately managed accounts. The majority of the change is due to an increase in lending corporate fixed income securities driven by attractive lending income rates.

Short Sales decreased by 63% when comparing calendar year end 2015 to 2014. A short sale transaction is created when a security not owned by the portfolio is sold, in anticipation of purchasing the security at a lower price in the future. SWIB investment managers will enter into short sale transactions when there are opportunities to benefit from mispriced securities. SWIB managers took advantage of many such opportunities at the end of 2014. As the prices of these stocks began to decrease in 2015 and the opportunities for profitable short sales became less available, SWIB managers reversed their short positions. In addition, portfolio investment parameters were modified in calendar year 2015 which defined tighter limits for short positions. Some short positions were reversed in 2015 in order to meet the new requirements and reduce tracking error to portfolio benchmarks. Tracking error is a measure of how closely a portfolio follows the benchmark against which it is measured.

Retirement Funds

Management Discussion and Analysis

Calendar year 2015 Investment Income decreased by \$5.2 billion, when compared to calendar year 2014. This change is due to a total Core Fund investment return of -0.4% in 2015, compared to a return of 5.7% for the previous calendar year. Several asset classes held by the Core Fund were impacted by weaker market conditions in calendar year 2015, as compared to the higher returns experienced in 2014. Asset class returns for calendar year 2015 and 2014 are presented in the table entitled **Core Fund Time Weighted Annualized Asset Class Returns**.

SWIB's investment strategy for the Core Fund is a long-term strategy, designed to reduce the risk of investing in the stock markets and minimize the impacts of market downturns. The strategy was developed and implemented over several years to address the significant risk exposure to volatile stock markets and includes diverse strategies to lessen that risk. In addition, over the course of 2015, SWIB began implementing a comprehensive risk management solution to enhance and optimize risk, performance and cost management across all portfolios, asset classes and investment strategies. SWIB's investment strategy and initiatives support the Core Fund's goal of earning a 7.2% annualized return over the long-term, while seeking to decrease variability of returns using cost effective approaches. As of December 31, 2015, the Core Fund's 20-year annualized return was 7.46%, outperforming the benchmark return of 7.01%.

Variable Retirement Investment Trust Fund

The Variable Fund allows active employees participating in the WRS to put half of their pension fund contributions into this global stock fund. Approximately 16% of WRS members participate in the Variable Fund, with a Net Investment Position of \$6.7 billion at December 31, 2015. By law, the Variable Fund invests in stocks and provides participants the potential for higher returns in exchange for higher risk. Employees who choose this fund therefore accept a higher degree of market risk and greater volatility in investment

Core Fund Time Weighted Annualized Asset Class Returns		
	2015	2014
	Return %	Return %
Public Equities	-2.4	3.6
Fixed Income	-1.0	4.6
Inflation Sensitive Assets	-6.6	2.1
Real Estate	16.1	14.0
Private Equity	10.4	15.5
Multi Asset	-1.2	7.0

returns. The investment objective of the Variable Fund is to meet or exceed broad equity market indices over a full market cycle.

Condensed Variable Fund financial information for the calendar years ended December 31, 2015 and December 31, 2014 is included in the table entitled **Variable Fund Condensed Financial Information**.

The balance in Cash and Cash Equivalents increased by \$62.3 million, when comparing calendar year 2015 to the prior year-end. This change can be explained by an increase in securitized cash positions within certain passive portfolios. Securitized cash is invested in derivative instruments which provide SWIB similar returns as if the physical securities were held. Unlike physical securities, however, securitized cash positions provide a much higher degree of liquidity. Increased cash balances at December 2015 were also held in anticipation of meeting known cash needs for benefit payments and Variable Fund opt-outs in early 2016.

Receivables decreased by 35% and Payables & Other Liabilities decreased by 32% between calendar years primarily due to a reduction in pending investment sales and purchases at year-end. The decreases were due to normal trading activity, which can fluctuate from month-to-month and year-to-year, depending upon market conditions and trade opportunities.

Retirement Funds

Management Discussion and Analysis

Invested Securities Lending Collateral and Securities Lending Collateral Liability decreased by 37% at December 31, 2015, when compared to December 31, 2014. The collateral balances represent the cash collateral held for securities lending transactions in separately managed accounts. In accordance with GASB Statement No. 28, *Accounting and Financial Reporting for Securities Lending Transactions*, non-cash collateral posted to SWIB is not presented within the Retirement Funds financial statements as SWIB cannot pledge or sell the securities without a borrower default. While the cash collateral posted by borrowers decreased (as evidenced by the 37% decrease in collateral balances), the Variable Fund saw a corresponding increase in the amount of non-cash collateral posted by borrowers.

Short sales decreased by 69% when comparing calendar year end 2015 to 2014. As with the Core Fund, the Variable Fund saw a reduction in short sales due to fewer opportunities to benefit from mispriced securities and the introduction of new self-imposed risk parameters which limit short positions and reduce tracking error with portfolio benchmarks.

Calendar year 2015 Investment Income decreased by \$580.5 million, when compared with the prior calendar year. The decrease in income was the result of a total fund investment return of -1.2%, as

compared to 7.3% in 2014. The Variable Fund has an asset allocation target of 70% domestic and 30% international equities, to satisfy its stock market mandate. Its performance is therefore largely dependent upon the equity market movements for the year. In 2015, a year when U.S. stocks had their worst annual performance since 2008, the Variable Fund outperformed its one-year benchmark of -1.3%. As with the Core Fund, SWIB has implemented a long-term approach to investing Variable Fund assets. As of December 31, 2015, the Variable Fund's 20-year annualized return was 7.54%, outperforming the benchmark return of 7.02%.

Variable Fund Condensed Financial Information (In thousands)			
	2015	2014	% Change
Cash and Cash Equivalents	\$ 140,740	\$ 78,431	79
Receivables	20,437	31,551	(35)
Invested Securities Lending Collateral	59,833	94,339	(37)
Prepaid Expenses	1,407	1,487	(5)
Investments	6,588,017	7,229,017	(9)
Total Investment Assets	6,810,434	7,434,825	(8)
Payables and Other Liabilities	14,417	21,175	(32)
Securities Lending Collateral Liability	59,833	94,339	(37)
Short Sales	8,578	27,833	(69)
Total Investment Liabilities	82,828	143,347	(42)
Net Investment Position Held in Trust	\$6,727,606	\$ 7,291,478	(8)
Investment Income (loss)	\$ (72,096)	\$ 508,469	(114)
Investment Expense	(10,425)	(10,484)	(1)
Net Investment Income (loss)	(82,521)	497,985	(117)
Net Disbursements - Department of Employee Trust Funds	(481,351)	(386,558)	25
Net Increase (Decrease) in Net Investment Position Held in Trust	\$(563,872)	\$ 111,427	(606)

Retirement Funds

Financial Statements

Statement of Net Investment Position As of December 31, 2015 (In thousands)			
	Core Retirement Investment Trust Fund	Variable Retirement Investment Trust Fund	
Investment Assets			
Cash and Cash Equivalents	\$ 3,803,601	\$ 140,740	
Receivables:			
Interest & Dividends	216,454	10,455	
Securities Lending Income	2,461	447	
Investment Sales	1,031,879	9,535	
Invested Securities Lending Collateral	1,117,936	59,833	
Prepaid Expenses	27,766	1,407	
Investments (at fair value):			
Stocks	40,621,653	6,577,307	
Fixed Income	24,955,170	-	
Limited Partnerships	10,679,849	-	
Multi Asset	4,102,892	-	
Real Estate	1,119,024	-	
Preferred Securities	168,901	9,765	
Foreign Currency Contracts	2,871	403	
Option Contracts	(1,116)	(63)	
Futures Contracts	(852)	605	
Swaps	9,754	-	
Total Investment Assets	87,858,243	6,810,434	
Investment Liabilities			
Payable for Investments Purchased	270,515	13,254	
Obligations Under Reverse Repurchase Agreements	809,678	-	
Short Sales	171,289	8,578	
Collateral Due to Counterparty	21,870	-	
Accounts Payable	46,266	1,095	
Other Liabilities	2,451	68	
Securities Lending Collateral Liability	1,117,936	59,833	
Total Investment Liabilities	2,440,005	82,828	
Net Investment Position Held in Trust	\$ 85,418,238	\$ 6,727,606	
The accompanying notes are an integral part of this statement.			

**Statement of Changes in Net Investment Position
For the Calendar Year Ended December 31, 2015
(In thousands)**

	Core Retirement Investment Trust Fund	Variable Retirement Investment Trust Fund
Additions		
Investment Income:		
Net Increase (Decrease) in the Fair Value of Investments	\$ (2,098,167)	\$ (230,035)
Interest	549,949	105
Dividends	1,053,831	152,480
Securities Lending Income	17,524	3,941
Securities Lending Rebates	12,191	1,413
Limited Partnership Income	131,856	-
Income from Real Estate	56,681	-
Less		
Investment Expense	340,039	9,997
Securities Lending Fees	2,439	428
Net Investment Income (Loss)	(618,613)	(82,521)
Deductions		
Net Disbursements - Department of Employee Trust Funds	(2,737,191)	(481,351)
Net Increase (Decrease) in Net Investment Position Held in Trust	(3,355,804)	(563,872)
Net Investment Position Held in Trust:		
Beginning of the Year	88,774,042	7,291,478
End of the Year	\$ 85,418,238	\$ 6,727,606
The accompanying notes are an integral part of this statement.		

Retirement Funds

Notes to Financial Statements

1. Description of Funds

The Wisconsin Legislature created the State of Wisconsin Investment Board (SWIB) for the sole purpose of providing professional investment management for the funds entrusted to it, including the assets of the Core Retirement Investment Trust Fund (Core Fund) and the Variable Retirement Investment Trust Fund (Variable Fund). The Board of Trustees for the State of Wisconsin Investment Board (SWIB) is responsible for the overall professional investment management of the assets of the Wisconsin Retirement System (WRS). The Core Fund and the Variable Fund, collectively (Retirement Funds), represent the investment assets of the WRS.

The statements presented here reflect only the investment activity of these funds. Excluded from presentation in the statements are, for example, retirement reserves, contribution revenue, and benefit expense. The statements are not intended to present the financial activity for the State of Wisconsin as a whole.

All of the Retirement Funds' administrative expenses are funded through employer and employee contributions and investment earnings. Administrative expenses, in addition to various other expenses such as external management fees, legal fees, custodial bank fees and investment consulting fees, are included in "Investment Expense" in the Statement of Changes in Net Investment Position.

A. Core Retirement Investment Trust Fund

The Core Fund is managed by SWIB with oversight by a Board of Trustees as authorized in section 25.15 and 25.17 of the Wisconsin Statutes. The Core Fund and SWIB are not registered with

the Securities and Exchange Commission as an investment company. The investments of the Core Fund consist of a diversified portfolio of securities. SWIB is required to make investment management decisions for the Retirement Funds solely for the benefit of the members of the WRS. Section 25.182 of the Wisconsin Statutes authorizes SWIB to manage the Core Fund in accordance with the "prudent investor" standard of responsibility. This standard is described in section 25.15(2) of the Wisconsin Statutes, which requires that SWIB manage the Retirement Funds with the diligence, skill and care that a prudent person acting in a similar capacity and with the same resources would use in managing a large public pension fund.

The Core Fund consists primarily of assets invested for the WRS which is administered by the Department of Employee Trust Funds (ETF) in accordance with Chapter 40 of the Wisconsin Statutes. All WRS contributions are invested in this trust fund unless participants have elected to have one-half of their contributions invested in the Variable Fund. In addition to the retirement contributions, the assets of various other benefit programs are invested in the Core Fund. Information regarding the other programs invested in the Core Fund can be found in the Comprehensive Annual Report of the Wisconsin Department of Employee Trust Funds (ETF) and located online at www.etf.wi.gov.

B. Variable Retirement Investment Trust Fund

The Variable Fund is managed by SWIB with oversight by a Board of Trustees as authorized by section 25.15 and 25.17 of the Wisconsin Statutes. The Variable Fund and SWIB are not registered with the Securities and Exchange

Commission as an investment company. Section 25.17(5) of the Wisconsin Statutes states assets of the Variable Fund shall be invested primarily in equity securities which shall include common stocks, real estate or other recognized forms of equities whether or not subject to indebtedness, including securities convertible into common stocks and securities of corporations in the venture capital stage. Subject to that requirement, SWIB may invest the Variable Fund in any manner consistent with the “prudent investor” standard of responsibility in section 25.15(2) of the Wisconsin Statutes, which requires that SWIB manage the trust funds with the diligence, skill and care that a prudent person acting in a similar capacity and with the same resources would use in managing a large public pension fund.

The Variable Fund consists primarily of the assets invested for the WRS. In addition, the Milwaukee Board of School Directors Supplemental Retirement/Benefit plans invest in the Variable Fund. Additional information regarding the Variable Fund can also be found in the Comprehensive Annual Financial Report of the Wisconsin Department of Employee Trust funds.

Participation in the Variable Fund is at the option of the employee. Participants have elected to invest one-half of their retirement contributions and matching amounts of employer contributions to this fund, and have the remainder invested in the Core Fund. Individual participants in the Variable Fund have a one-time option to terminate their Variable Fund participation and transfer their account to the Core Fund.

2. Significant Accounting Policies

A. Basis of Presentation

The accompanying financial statements were prepared in conformity with generally accepted accounting principles (GAAP) for governments as prescribed by the Governmental Accounting Standards Board (GASB).

B. Measurement Focus and Basis of Accounting

The financial statements are prepared based upon the flow of economic resources measurement focus and the full accrual basis of accounting. Under the accrual basis of accounting, revenues are recognized in the accounting period in which they are earned and become measurable, and expenses are recognized in the period incurred, if measurable. 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. Valuation of Securities

The investments of the Retirement Funds are reported in the Statement of Net Investment Position at fair value as prescribed by GASB and per section 25.17(14) of the Wisconsin Statutes. Unrealized gains and losses are reflected in the Statement of Changes in Net Investment Position as “Net Increase (Decrease) in the Fair Value of Investments.”

The fair value of the Retirement Funds’ 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 category reported on the Statement of Net Investment 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

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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 Net Investment Position, is priced using a multi-tiered approach that values each holding based on the best available information using the following hierarchy of pricing sources:

1. Custodian supplied prices for assets that are in the Barclays Capital U.S. Aggregate Bond Index
2. Prices provided by a third party with expertise in the bond market
3. 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 recent available quarterly reporting period is adjusted for subsequent cash flows to derive fair value. The financial statements of the limited partnerships and real estate pooled funds are audited by independent auditors annually.

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

SWIB values hedge funds based on monthly statements or estimated returns received from each of the hedge fund’s administrators. A third-party administrator’s responsibility is to independently account for the hedge fund’s activity and calculate the net asset value of the fund. Generally, hedge fund administrators price financial instruments traded in active markets based on quoted market prices or binding dealer quotations. For certain over-the-counter instruments, fair value is determined based on valuation models used by the administrator. 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 in Note 5.

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.

D. 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.

3. Deposit and Investment Risk

A. 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 found in Note 5.

The table entitled **Credit Quality Distribution** displays the lowest credit rating assigned by nationally recognized statistical rating organizations on debt securities held by the Retirement Funds as of December 31, 2015. Included in this table are fixed income securities, including certain short term securities, classified as cash equivalents on the Statement of Net Investment Position. Also included are interest rate sensitive investments held in the Retirement Funds' securities lending collateral reinvestment pools, which are managed by SWIB's custodian. See Note 4 for additional information regarding the securities lending program.

The table also includes SWIB's investment in commingled fixed income funds which are not rated. Although the funds themselves are not assigned ratings, external management investment guidelines govern minimum credit quality standards for the investments within each portfolio. These standards are determined based on the investment objectives and risk parameters of each fund. The table entitled **Credit Quality Breakdown of Commingled Fixed Income Funds** presents the aggregated credit ratings for the underlying investments held by these funds.

SWIB held \$809.7 million in reverse repurchase agreements at December 31, 2015. Investment guidelines permit certain portfolios to enter into reverse repurchase agreements, which are a sale of securities with a simultaneous agreement to repurchase the securities in the future at the same price plus a stated rate of interest. The market value of the securities underlying reverse repurchase agreements exceeds the cash received, providing the counterparty a margin against a decline in market value of the securities. If the counterparty defaults on their obligation to sell these securities back to SWIB or provide cash of

equal value, SWIB could suffer an economic loss equal to the difference between the market value of the underlying securities plus accrued interest and the agreement obligation, including accrued interest.

Credit Quality Distribution As of December 31, 2015 (In thousands)		
Rating	Fair Value	% of Total
AAA/Aaa	\$ 493,057	2
AA/Aa	12,112,153	41
A	2,430,390	8
P-2 or A-2	303,392	1
BBB/Baa	2,529,722	9
BB/Ba	690,431	2
B	562,239	2
CCC/Caa or below	179,955	1
Commingled Fixed Income Funds	8,489,061	29
Not Rated	1,447,716	5
Total	<u>\$ 29,238,116</u>	<u>100%</u>

Credit Quality Breakdown of Commingled Fixed Income Funds As of December 31, 2015 (In thousands)		
Rating*	Fair Value	% of Total
P-1 or A-1	\$ 2,361,534	28
AAA/Aaa	1,049,069	12
AA/Aa	703,399	8
A	1,528,266	18
BBB/Baa	2,296,809	28
BB/Ba	208,358	2
B	163,866	2
CCC/Caa or below	92,359	1
Not Rated	85,401	1
Total Commingled Fixed Income Funds	<u>\$ 8,489,061</u>	<u>100%</u>
*Reflects aggregated ratings of underlying investments as reported by commingled fixed income fund managers.		

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SWIB enters into reverse repurchase agreements with various counterparties and such transactions are governed by Master Repurchase Agreements (MRA). MRAs are negotiated contracts and contain terms in which SWIB seeks to minimize counterparty credit risk. SWIB also controls credit exposures by limiting trades with any one counterparty to stipulated amounts. In addition, in the case of one MRA, SWIB's agent retains full control of the underlying securities, effectively eliminating the possibility of rehypothecation of the securities. 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. The Retirement Funds' counterparty credit exposure for reverse repurchase agreements at December 31, 2015 is summarized in the table entitled **Reverse Repurchase Agreements, Counterparty Credit Exposure**.

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 0.41% and 0.75% at December 31, 2015. 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 "Other Liabilities" on the Statement of Net Investment Position. The underlying assets, as well as the reinvested proceeds, are reported in the "Investments" section on the Statement of Net Investment Position.

B. Custodial Credit Risk

Deposits — Custodial credit risk related to deposits is the risk that, in the event of the failure of a depository financial institution, SWIB will not be able to recover deposits that are in possession of an outside party. Cash deposits totaled \$834.8 million as of December 31, 2015. Of the total cash deposits, \$358.9 million was collateralized by securities borrowed. Additionally, a portion of the total deposits were uninsured and uncollateralized. These represented balances held in foreign currencies in SWIB's custodian's nominee name, cash posted as collateral for derivatives transactions and cash collateral posted in excess of the market value of securities borrowed by SWIB for short sales. The sum of uninsured and

uncollateralized deposits amounted to \$431.3 million as of December 31, 2015. The remaining deposits were covered by depository insurance at year end. The Retirement Funds also held certificates of deposit which were covered by depository insurance with a fair value of \$39.2 million as of December 31, 2015.

Investments — Custodial credit risk for investments is the risk that, in the event of failure of the counterparty to a transaction, SWIB will not be able

Reverse Repurchase Agreements Counterparty Credit Exposure As of December 31, 2015 (In thousands)

Fair Value of Collateral and Margin Held by Counterparty/Agent	\$822,244
Less:	
Cash due to Counterparty	\$809,678
Collateral and Interest due to Counterparty	524
Total due to Counterparty	810,202
Net Counterparty Credit Exposure	\$ 12,042

to recover the value of investments that are in the possession of an outside party. The Retirement Funds held nine repurchase agreements totaling \$804.9 million as of December 31, 2015. 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.

SWIB's custodial credit risk policy addresses the primary risks associated with safekeeping and custody. It requires that SWIB's custodial institution be selected through a competitive bid process and that the institution be designated a "Systemically Important Financial Institution" by the U.S. Federal Reserve. The policy also requires that SWIB be reflected as beneficial owner on all securities entrusted to the custodian and that SWIB have access to safekeeping and custody accounts. The custodian is also required to be insured for errors and omissions and must provide SWIB with an annual report on internal controls, prepared in accordance with the Statement on Standards for Attestation Engagements (SSAE) no. 16. Furthermore, SWIB management has established a system of controls for the oversight of services and related processes of the custodian. SWIB's current custodial bank was selected in accordance with these guidelines and meets all requirements stipulated in the custodial credit risk policy.

C. Concentration of Credit Risk

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

investments issued or explicitly guaranteed by the U.S. government, representing 5% or more of the Retirement Funds' value at December 31, 2015.

D. Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. SWIB uses a number of different methods to manage interest rate risk. Fixed income instruments held by the Retirement Funds include investments with variable rate securities, stepped rate securities, securities with no coupon, such as discount notes, and coupons that range between 0.001% and 13.625% at December 31, 2015.

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

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

SWIB's investment guidelines related to interest rate risk vary by portfolio. Some fixed income portfolios are required to be managed within a

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range of a targeted duration, while others are required to maintain a weighted average maturity at or below a specified number of days or years.

The table entitled **Interest Rate Sensitivity by Investment Type** presents the aggregated interest rate exposure for the Retirement Funds' assets at December 31, 2015. Weighted average maturity, where reset dates are assumed to be the effective maturity date for the security, is presented for repurchase agreements and short term pooled investments. Longer term instruments held by the

Retirement Funds are presented using modified duration, as this measure more accurately states the interest rate sensitivity of these investments. The duration statistic is calculated utilizing reset dates for some floating rate instruments, such as term loans. Information about the interest rate sensitivity of derivatives contracts can be found in Note 5.

E. 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

Interest Rate Sensitivity by Investment Type* As of December 31, 2015 (In thousands)			
Investment Type	Fair Value	Weighted Average Duration (years)	Weighted Average Maturity (days)
Asset Backed Securities	\$ 47,953	1.8	
Commercial Paper	322,524	<1	
Corporate Bonds & Private Placements	4,787,821	5.7	
Foreign Government/Agency Bonds	3,524,207	8.1	
Municipal Bonds	118,633	9.7	
Repurchase Agreements	804,872		1
U.S. Government Agencies	284,393	3.8	
U.S. Treasury Inflation Protected Securities	6,704,433	7.7	
U.S. Treasury Securities	4,154,219	5.0	
Commingled Funds			
Domestic Fixed Income	4,726,939	6.3	
Emerging Market Fixed Income	527,538	5.9	
Exchange Traded Funds	1,006	4.0	
Exchange Traded Funds - Short Positions	(1,017)	4.4	
Global Fixed Income	470,329	4.5	
Short Term Cash Management	2,764,266		57
Total	<u>\$29,238,116</u>		
* Excludes derivatives. See note 5 for information about the interest rate sensitivity of derivative instruments.			

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Currency Exposures by Investment Type As of December 31, 2015 Stated in U.S. Dollars (In thousands)

Currency	Cash & Cash Equivalents	Stocks	Fixed Income	Limited Partnerships	Preferred Securities	Options	Futures Contracts	Short Sales	Total
Australian Dollar	\$ 6,788	\$ 1,028,173	\$ 52,242	\$ -	\$ -	\$ -	\$ 1,603	\$ (1,258)	\$ 1,087,548
Brazilian Real	1,302	46,772	17,459	-	15,850	-	-	-	81,383
British Pound Sterling	28,178	3,313,896	335,706	71,370	-	-	2,179	(750)	3,750,579
Canadian Dollar	14,737	1,247,670	55,204	-	-	-	337	-	1,317,948
Chilean Peso	-	65	-	-	-	-	-	-	65
Colombian Peso	-	-	1,590	-	-	-	-	-	1,590
Czech Koruna	-	-	-	-	-	-	-	-	-
Danish Krone	2,870	300,674	24,806	-	-	-	-	-	328,350
Deutsche Mark	-	-	715	-	-	-	-	-	715
Euro Currency Unit	43,780	5,002,865	1,547,096	626,704	90,937	(47)	796	(27,229)	7,284,902
Hong Kong Dollar	6,336	676,932	-	-	-	-	-	-	683,268
Hungarian Forint	-	-	7,630	-	-	-	-	-	7,630
Indian Rupee	48	111,681	-	-	-	-	-	-	111,729
Indonesian Rupiah	260	14,274	15,147	-	-	-	-	-	29,681
Israeli New Shekel	908	80,017	-	-	-	-	-	-	80,925
Japanese Yen	171,034	3,798,346	920,008	-	-	-	(1,136)	(15,842)	4,872,410
Malaysian Ringgit	573	35,144	22,498	-	-	-	-	-	58,215
Mexican New Peso	1,723	18,300	79,742	-	-	-	-	-	99,765
Moroccan Dirham	12	-	-	-	-	-	-	-	12
New Zealand Dollar	312	37,845	11,237	-	-	-	-	-	49,394
Norwegian Krone	904	106,059	1,503	-	-	-	-	-	108,466
Peruvian Nuevo Sol	-	-	5,711	-	-	-	-	-	5,711
Philippine Peso	83	4,116	-	-	-	-	-	-	4,199
Polish Zloty	-	27,360	29,874	-	-	-	-	-	57,234
Russian Ruble	-	-	5,700	-	-	-	-	-	5,700
Singapore Dollar	2,047	187,021	12,979	-	-	-	-	(122)	201,925
South African Rand	558	38,633	20,921	-	-	-	-	-	60,112
South Korean Won	53	197,171	-	-	-	-	-	-	197,224
Swedish Krona	4,681	385,759	16,406	15,469	-	-	-	(104)	422,211
Swiss Franc	2,169	1,515,523	-	-	-	72	-	(4,454)	1,513,310
Taiwan New Dollar	3	110,921	-	-	-	-	-	-	110,924
Thailand Baht	10	58,877	-	-	-	-	-	-	58,887
Turkish Lira	2	35,189	-	-	-	-	-	-	35,191
U.S. Dollar	3,654,970	28,819,677	21,765,504	9,966,306	71,879	(1,204)	(4,026)	(130,108)	64,142,998
Uruguayan Peso	-	-	5,492	-	-	-	-	-	5,492
Total	\$3,944,341	\$47,198,960	\$24,955,170	\$10,679,849	\$178,666	\$ (1,179)	\$ (247)	\$ (179,867)	\$ 86,775,693

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 Sales are reported as liabilities on the Statement of Net Investment Position. They are included in the above table because they have exposure to foreign currency risk.

3) Investment types holding instruments denominated only in U.S. dollars are not included in the above table. At calendar year-end, these include: Multi-Asset, Real Estate, Swaps and obligations under Reverse Repurchase Agreements.

4) Values may not add due to rounding.

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to each individual portfolio. These guidelines address the foreign currency management activities permitted for each portfolio based on the portfolios 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 in Note 5.

The table entitled **Currency Exposures by Investment Type** presents the Retirement Fund investments which were exposed to foreign currency risk at December 31, 2015.

4. Securities Lending Transactions

State statutes and Board policies permit SWIB to use investments of the Retirement Funds to enter into securities lending transactions. These transactions involve the lending of securities to broker-dealers and other entities in exchange for collateral, in the form of cash or securities, with the simultaneous agreement to return the collateral for identical securities in the future. SWIB's custodian 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% 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% 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 non-cash collateral securities cannot be done without a borrower default. On December 31, 2015, the fair value of the securities on loan was approximately \$13.4 billion.

Cash collateral is reinvested by the lending agent in two separate pools, a U.S. dollar cash collateral pool and a pool denominated in Euros. These pools are administered in accordance with contractual investment guidelines which are designed to minimize the risk of principal loss and provide a modest rate of return. Investment guidelines limit credit and liquidity risk by restricting new investments to overnight repurchase agreements collateralized with high quality U.S. government, U.S. government agencies, and sovereign debt securities. To further reduce credit risk, SWIB's custodian provides indemnification to SWIB against counterparty default. The earnings generated from the collateral investments, plus or minus the rebates received from or paid to the dealers and less fees paid to agents, results in the net earnings from lending activities, which are then split on a percentage basis with the lending agent. Cash from the U.S. dollar pool may be posted as collateral relating to short sale transactions and earns the U.S. Federal Funds rate plus 10 basis points. See Note 6 for additional information relating to short sales.

At December 31, 2015, 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 at December 31, 2015.

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 Net Investment Position as “Net Increase (Decrease) in the Fair Value of Investments.”

5. Derivatives

A derivative instrument, as defined by GASB Statement No. 53, is a financial instrument or other contract that has all of the following characteristics:

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

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

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

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

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

Cleared OTC contracts offer additional protections to trade participants. These types of transactions employ the use of an intermediary between counterparties. The intermediary, known as a clearinghouse, serves to facilitate trading and

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mitigate risks. While not completely standardized, these contracts involve a high degree of standardization. Once cleared, the clearinghouse steps in as the counterparty to all trades. Regulatory bodies govern the tools and procedures for risk mitigation (such as margin requirements and daily mark-to-market).

In addition to trading OTC, derivative contracts can also be transacted on established exchanges. These types of contracts are called “exchange-traded” and are completely standardized. Like cleared OTC contracts, the clearinghouse is an intermediary to the trade, reducing risks and standardizing the exchange of margin. The table entitled **Derivative Contract Types** summarizes the differences between OTC and exchange-traded contracts.

A. Uncleared OTC Derivatives

Inherent in the use of uncleared OTC derivatives, the Retirement Funds may be exposed to counterparty credit risk. 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 closeout and netting of transactions with the same counterparty upon the occurrence of certain events, such as payment default, rating downgrade, bankruptcy, illegality or force majeure. Agreements may also require daily collateral postings to further mitigate credit risk. Cash collateral posted by SWIB for uncleared OTC positions was \$0 at December 31, 2015. In addition, no securities were pledged as collateral relating to uncleared OTC positions.

The Retirement Funds uncleared OTC positions included foreign currency contracts, options and total return swaps. The table entitled **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, 2015, without respect to any collateral or netting arrangement.

The aggregate fair value of receivables relating to uncleared OTC derivative contracts was \$2.8 billion at December 31, 2015. These amounts represent the maximum loss that

Derivative Contract Types		
Uncleared (OTC)	Cleared (OTC)	Exchange-traded
Trades negotiated over-the-counter	Trades negotiated over-the-counter	Trades executed on organized exchanges
Customized contracts are agreed upon by counterparties	Trades limited to standardized contracts	Trades limited to standardized contracts
Traded between counterparties	All Trades are booked with clearinghouse, which is counterparty to all trades	All Trades are booked with exchange's clearinghouse, which is counterparty to all trades
Margin (collateral) often exchanged but subject to negotiation between counterparties.	Mandatory margin requirements	Mandatory margin requirements
Common example: Forward Contracts	Common example: Credit Default Swaps	Common example: Futures Contracts

would be recognized at the reporting date if all counterparties failed to perform as contracted. This maximum exposure is reduced to \$0 at December 31, 2015 when counterparty collateral and master netting arrangements are taken into account. The number of uncleared OTC counterparties with credit exposure at year-end was 10.

B. Cleared OTC and Exchange-Traded Derivatives

Counterparty credit risk is mitigated by an intermediary for cleared OTC and exchange-traded derivative contracts. For these types of derivative investments, a clearinghouse interposes itself as counterparty to all trades and extends a guarantee that trades will be settled as originally intended. To ensure performance, margin requirements are imposed. The requirements are established with the intent to cover nearly all expected price changes based on market risk. Margin payments are settled daily based upon the price movements of the contracts, thereby significantly reducing counterparty credit risk. The Retirement Funds posted \$138.2 million in cash and \$263.9 million in securities as collateral with clearing brokers as of December 31, 2015.

C. Foreign Currency Spot and Forward Contracts

Foreign Currency Spot and Forward contracts are uncleared 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. Depending upon market movements, forward contracts may require collateral postings either to SWIB or to counterparties. Spot contracts are exempt from collateralization. For deliverable contracts, amounts due are paid or received on the contracted settle date. In other instances (most often in emerging markets), contracts are established as non-deliverable forwards (NDFs). Unlike deliverable contracts, NDFs are only settled in U.S. dollars.

Currency exposure management is permitted through the use of currency derivative instruments. Direct hedging of currency exposure back to the U.S. dollar is permitted when consistent with the strategy of the portfolio. Cross-currency exposure management 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% 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 Increase (Decrease) in Fair Value of Investments" on the Statement of Changes in Net Investment Position. The net receivable or payable for spot and forward contracts is reflected as "Foreign Currency Contracts"

**OTC Derivative Investments Subject to Counterparty Credit Risk
As of December 31, 2015
(In Thousands)**

Counterparty Credit Rating	Payable	Receivable	Fair Value
AA	\$ (59,563)	\$ 58,677	\$ (886)
A	(1,157,759)	1,160,342	2,583
BBB	(1,542,875)	1,554,127	11,252
Total	\$ (2,760,197)	\$ 2,773,146	\$ 12,949

Retirement Funds

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Foreign Currency Spot and Forward Contracts As of December 31, 2015 (In thousands)			
Currency	Notional (local currency)	Fair Value (\$US)	Unrealized Gain/ (Loss) (\$US)
Foreign Currency Contract Receivables			
Australian Dollar	159,326	\$ 115,883	\$ (153)
British Pound Sterling	62,307	91,837	(2,063)
Canadian Dollar	168,625	121,395	(3,634)
Chilean Peso	5,563,000	7,807	(129)
Danish Krone	197,980	28,822	399
Euro Currency Unit	249,290	270,832	2,439
Hong Kong Dollar	242,441	31,283	(1)
Indian Rupee	2,688,504	40,371	384
Indonesian Rupiah	58,075,000	4,113	66
Israeli New Shekel	27,486	7,064	(20)
Japanese Yen	35,378,125	294,146	4,010
Malaysian Ringgit	2,000	464	2
Mexican New Peso	236,158	13,631	(180)
New Zealand Dollar	4,839	3,312	100
Norwegian Krone	284,658	32,158	(1,074)
Russian Ruble	356,350	4,820	(180)
Singapore Dollar	33,324	23,488	(108)
South African Rand	6,000	386	(7)
Swedish Krona	1,066,510	126,518	2,812
Swiss Franc	62,757	62,702	1,089
U.S. Dollar	982,996	982,996	-
		2,264,028	3,752
Foreign Currency Contract Payables			
Australian Dollar	(35,815)	\$ (26,053)	\$ 27
Brazilian Real	(40,438)	(10,064)	287
British Pound Sterling	(152,016)	(224,060)	4,673
Canadian Dollar	(52,670)	(37,916)	273
Colombian Peso	(4,763,460)	(1,499)	(70)
Danish Krone	(342,989)	(49,932)	(1,076)
Euro Currency Unit	(290,803)	(315,950)	(3,494)
Hong Kong Dollar	(246,811)	(31,847)	1
Indian Rupee	(801,750)	(12,112)	(50)
Indonesian Rupiah	(93,520,173)	(6,671)	(65)
Israeli New Shekel	(28,749)	(7,389)	22
Japanese Yen	(14,716,905)	(122,349)	(1,001)
Mexican New Peso	(259,316)	(15,002)	265
New Zealand Dollar	(10,104)	(6,907)	(122)
Norwegian Krone	(181,341)	(20,487)	493
Peruvian Nuevo Sol	(20,168)	(5,865)	69
Polish Zloty	(21,915)	(5,549)	(23)
Russian Ruble	(47,766)	(645)	65
Singapore Dollar	(31,041)	(21,878)	110
South African Rand	(22,600)	(1,456)	114
Swedish Krona	(309,314)	(36,693)	(737)
Swiss Franc	(24,952)	(24,929)	(238)
U.S. Dollar	(1,275,501)	(1,275,501)	-
		(2,260,754)	(477)
Total		\$ 3,274	\$ 3,275

on the Statement of Net Investment Position. The table entitled **Foreign Currency Spot and Forward Contracts** presents the fair value of foreign currency spot and forward contract assets and liabilities held by the Retirement Funds as of December 31, 2015.

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

Futures contracts involve, to varying degrees, risk of loss in excess of the margin deposited with the clearinghouse. Losses may arise from future changes in the value of the underlying instrument.

Futures contracts may be entered into for purposes such as the following:

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

The table entitled **Futures Contracts** presents the Retirement Funds investments in futures contracts as of December 31, 2015.

The table entitled **Futures Contracts with Interest Rate Sensitivity** presents the interest rate sensitivity of fixed income futures contracts as of December 31, 2015. Duration, which is stated in years, is the measure of price sensitivity of a fixed income security to an interest rate change of 100 basis points. Duration statistics presented in this table are weighted by the notional value of each position to compute an average duration for the contract types held.

E. 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 certain portfolio investment guidelines permit the use of exchange-traded and uncleared OTC options. Investment Guidelines allow options to be used

Futures Contracts As of December 31, 2015 (In thousands)				
Futures Contract Description	Position	Expiration	Notional Amount	Fair Value*
Commodity	Long	Jan 16 - Mar 16	\$ 1,766,129	\$ (5,690)
Currency	Long	Mar 16	11,849	20
Equity	Long	Mar 16	3,021,505	13,318
Equity	Short	Mar 16	(10,686)	(122)
Fixed Income	Long	Mar 16	6,106,131	(7,765)
Fixed Income	Short	Mar 16	(1,587)	(8)
Total			<u>\$ 10,893,341</u>	<u>\$ (247)</u>
*Fair Value includes foreign currency gains/(losses).				

Retirement Funds

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Futures Contracts with Interest Rate Sensitivity As of December 31, 2015 (In thousands)				
Contract Type	Position	Notional Amount	Fair Value	Weighted Average Duration (Years)
U.S. Treasury Notes	Long	\$ 5,041,559	\$ (9,966)	3.5
U.S. Treasury Bonds	Long	969,398	1,874	16.1
U.S. Treasury Bonds	Short	(1,587)	(8)	16.4
International Government Bonds	Long	95,174	326	7.2
Total		\$ 6,104,544	\$ (7,774)	

to improve market exposure efficiency, enhance expected returns, or provide market exposure hedges. Exchange rules require that the seller of short exchange-traded option contracts cover these positions either by collateral deposits in the form of cash or by pledging, in escrow, the actual securities that would be transferred to the 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 “Option Contracts” on the Statement of Net Investment Position. Gains and losses as a result of investments in option contracts are included in the “Net Increase (Decrease) in the Fair Value of Investments” on the Statement of Changes in Net Investment Position. The table entitled **Option Contracts** presents the fair value of option contracts as of December 31, 2015.

F. Swaps

Swaps are negotiated contractual agreements between two counterparties which can be cleared or uncleared OTC investments. Throughout the calendar year, the Retirement Funds held positions in Total Return Swaps (TRS), Interest Rate Swaps (IRS) and Credit Default Swaps (CDS).

As is specified in SWIB’s investment guidelines, swaps may be used as an alternative to physical securities when it is deemed advantageous for

portfolio construction. In addition, swaps may be used to adjust asset class exposures for the Retirement Funds. Guideline limits and soft risk parameters for each portfolio are applied to the aggregate exposures which includes both physical and synthetic securities. A synthetic security is created by combining securities to mirror the properties of another security.

The table entitled “**Open Swap Positions**” lists the open swap contracts held at December 31, 2015. As noted in the table, certain swap terms are based on the 3-month London Interbank Offering Rate (LIBOR).

IRS positions represent cleared OTC contracts where fair value is determined using the closing price as reported by the applicable clearinghouse. TRS positions represent uncleared OTC contracts where fair value is determined based on the change in quoted market price of the underlying equity index. The fair value of swaps represents the unrealized gain/(loss) on the contracts, since trade inception, and is reflected as “Swaps” on the Statement of Net Investment Position. Any interest owed but not yet paid relating to TRS contracts is reported within the category “Other Liabilities” on the Statement of Net Investment Position.

Gains and losses resulting from investments in all swap contracts are included in the “Net Increase (Decrease) in the Fair Value of Investments” on the

Option Contracts As of December 31, 2015 (In thousands)							
Description	Contract Type	Position	Exchange-Traded (EXCH) vs. OTC	Expiration	Notional	Fair Value	Unrealized Gain (loss)
Commodity	Call	Long	EXCH	Apr 16	\$ 1,722	\$ 6	\$(125)
	Call	Short	EXCH	Apr 16	(861)	(54)	(22)
	Put	Short	EXCH	Jan 16	(41)	-	-
Currency	Call	Short	EXCH	Jan 16	(55,858)	(56)	180
	Put	Short	EXCH	Jan 16	(44,820)	(295)	(81)
Equity	Call	Long	EXCH	Jan 16 - Jan 17	33,222	423	(1,034)
	Call	Long	OTC	Mar 16	3,960	173	(6)
	Call	Short	EXCH	Jan 16	(22,549)	(301)	378
	Call	Short	OTC	Mar 16	(2,547)	(29)	10
	Put	Short	EXCH	Jan 16 - Mar 16	(148,790)	(927)	581
	Put	Short	OTC	Jan 16 - Mar 16	(145,184)	(119)	700
Total					\$ (381,746)	\$ (1,179)	\$581

Statement of Changes in Net Investment Position. Interest expense relating to TRS contracts is reported as “Investment Expense” on the Statement of Changes in Net Investment Position.

6. Short Sales

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 Sales” on the Statement of Net Investment Position. The liability presented on the Statement of Net Investment Position represents the fair value of the shorted securities necessary for delivery to the purchaser and is marked-to-market

Open Swap Positions As of December 31, 2015 (In thousands)					
Description	Date Initiated	Maturity Date	Reference Rates	Notional Amount	Fair Value
Total Return Swaps	Sep-15	Sep-16	Pay 3-month LIBOR, Receive Equity Index Return	\$ 499,350	\$ 9,597
Interest Rate Swaps*	Jan-15	Jan-25	Pay Fixed 2.08, Receive 3-month LIBOR	1,128	7
Interest Rate Swaps*	Jan-15	Jan-25	Pay Fixed 2.14, Receive 3-month LIBOR	2,512	2
Interest Rate Swaps*	Feb-15	Feb-45	Pay Fixed 2.34, Receive 3-month LIBOR	2,200	148
Total				\$ 505,190	\$ 9,754

*Denotes instrument that is highly sensitive to interest rate changes.

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daily. Realized and unrealized gains and losses associated with short sales are recorded on the Statement of Changes in Net Investment Position and within in the “Net Increase (Decrease) in Fair Value of Investments” category. Prior to executing a short sale, SWIB will borrow the security from a party currently holding it. While the transaction is open, the Retirement Funds incur expenses for securities borrowing costs. In addition, as a security borrower, the Retirement Funds may incur dividend and interest expense as such payments must be remitted to the security lender during the course of the loan. During the duration of the borrow, there may be corporate action elections requiring the borrower to deliver items such as cash or securities to the lender. Expenses resulting from short sales are included in “Investment Expense” on the Statement of Changes in Net Investment 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 Sales” in the Statement of Net Investment 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 mitigate risks in various ways, such as: limiting the total value of short sales as a percentage of portfolio value, establishing portfolio vs. benchmark tracking error limits and monitoring other statistical and economic risk measures of the portfolio. Investment performance and risk associated with each portfolio is measured against benchmarks and monitored by management.

When a short sale occurs, the shorting portfolio must borrow the security and deliver it to the buyer. If the shorted security is owned by another Retirement Fund portfolio, investment policies

allow the borrowing of the shorted securities from other Retirement Fund portfolios, including inter-fund borrowings. In addition to borrowing securities from existing Retirement Fund portfolios, SWIB may borrow securities from external sources. These borrowings are facilitated by SWIB’s custodian.

Except in the case of borrowings within the same trust fund, the Retirement Funds are required to post collateral to the lender, at the required rate of 102% for in-currency loans and 105% for cross-currency loans. The Retirement Funds posted \$375.7 million in cash collateral to security lenders representing \$13.9 million in excess of the fair market value of the securities borrowed as of December 31, 2015. 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.

7. Multi Asset

SWIB employs portfolio strategies which involve investments across multiple asset classes. The “Multi Asset” category on the Statement of Net Investment Position consists primarily of risk parity and hedge fund 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 tradeoffs versus conventional portfolios comprised primarily 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, 2015, the majority of SWIB's risk parity and hedge fund investments are reflected within the "Multi Asset" category on the Statement of Net Investment Position.

8. Long-Term Receivables

Included in the Core Fund's Investment Sales Receivable balance on the Statement of Net Investment Position is \$115.5 million in receivables as of December 31, 2015 which are due on or before July 2017. These receivables represent amounts due from third parties related to the sale of private equity limited partnership interests and do not include unrealized gains/losses due to foreign exchange fluctuations.

9. 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 Core Fund and the Variable Fund, to act solely in the interest of the WRS. The Board of Trustees consists of nine members meeting specific requirements as follows:

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

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 sections 15.02(4) and 25.16(1) of the Wisconsin Statutes and section IB 2.02 of the Wisconsin Administrative Code.

Additionally the Investment Committee (IC) was created to provide oversight of SWIB investments within the parameters established by the Board of Trustees. Oversight includes analysis of risk and return of the portfolio, asset class, and Core and Variable Funds. The IC is responsible for proposing to the Board of Trustees changes to investment guidelines for internally managed portfolios, for approving investment guidelines or strategies for externally managed portfolios, approving the general strategies for each asset class, and for approving individual strategies within the Multi Asset portfolios.

The Board adopts the Retirement Funds' asset allocation policy, based on recommendations by the IC and asset allocation consultant. SWIB

Retirement Funds

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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 Core and Variable Fund. 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 Board’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 which exceed 100% of invested assets. Currently the Core Fund has adopted an asset allocation target of 7% leverage, however over time it is anticipated that SWIB will move toward an asset allocation that includes 20% leveraging of low volatility assets. As SWIB increases the degree of leverage and moves toward the destination target asset allocation, the Board will be informed of the nature and method used for each incremental step. Before implementing leverage beyond 10%, the Board, SWIB’s asset allocation consultant and staff will engage in additional focused asset allocation discussion.

SWIB’s asset allocation review process also includes assumptions regarding expected rates of return. Long-term (e.g. 30-year) expected real rates of return on pension plan investments are determined using a building block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan

investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected real rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The table entitled **Asset Allocation Targets and Expected Returns** presents the current policy asset allocation targets, the destination asset allocation targets and the best estimates of expected geometric rates of return for each major asset class as of December 31, 2015.

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.

10. 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 Core Fund’s Statement of Net Investment Position totaled \$6.4 billion as of December 31, 2015.

11. 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,

Asset Allocation Targets and Expected Returns As of December 31, 2015				
Core Fund Asset Class	Current Asset Allocation %	Destination Target Asset Allocation %	Long-Term Expected Nominal Rate of Return %	Long-Term Expected Real Rate of Return %
U.S. Equities	27	23	7.6	4.7
International Equities	24.5	22	8.5	5.6
Fixed Income	27.5	37	4.4	1.6
Inflation Sensitive Assets	10	20	4.2	1.4
Real Estate	7	7	6.5	3.6
Private Equity/Debt	7	7	9.4	6.5
Multi Asset	4	4	6.7	3.8
Total Core Fund	107	120	7.4	4.5
Variable Fund Asset Class				
U.S. Equities	70	70	7.6	4.7
International Equities	30	30	8.5	5.6
Total Variable Fund	100	100	7.9	5.0
New England Pension Consultants Long Term US CPI (Inflation) Forecast: 2.75%				
Asset Allocations are managed within established ranges, target percentages may differ from actual monthly allocations				

including SWIB, are liable for SCC's unpaid taxes, penalties and interest.

SWIB has filed a petition in the United States Tax Court contesting the proposed IRS assessment. In April 2014, SWIB and the IRS agreed to stay the Tax Court proceeding pending the resolution of the tax case initiated by the principal shareholders of SCC challenging the IRS' characterization of the SCC sale. In 2015, the Tax Court found that the principal shareholders of SCC were liable as putative transferees for the tax, penalties and interest owed by SCC related to its sale. Although SWIB plans to continue to aggressively contest the IRS' assertions of SWIB's tax liability, and SWIB has separate and distinct arguments from the

principal shareholders of SCC, SWIB now believes it is prudent to accrue a potential loss from the SCC transaction based on the Tax Court's adverse opinion. SWIB's potential liability, as a putative transferee of SCC assets, is reasonably estimated to be between \$16.6 million and \$49.8 million as of December 31, 2015. Although results may differ, this estimated range of loss is based on a possible settlement strategy with the IRS and the maximum potential liability to the IRS for the taxes, interest and potential penalties of SCC based on the Tax Court's decision against the principal shareholders. Accordingly, SWIB has accrued a loss of \$16.6 million, which represents the estimated minimum amount of the possible loss to which SWIB believes it may be exposed.



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