

**NORTH DAKOTA RETIREMENT  
AND INVESTMENT OFFICE  
Bismarck, ND**

**FINANCIAL STATEMENTS  
June 30, 2019 and 2018**

North Dakota Retirement and Investment Office

Table of Contents  
June 30, 2019 and 2018

---

	<b>PAGE</b>
<b>INDEPENDENT AUDITORS' REPORT</b> .....	1
<b>REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH <i>GOVERNMENT AUDITING STANDARDS</i></b> .....	4
<b>MANAGEMENT'S DISCUSSION AND ANALYSIS</b> .....	6
<b>FINANCIAL STATEMENTS</b>	
Statement of Net Position – Fiduciary Funds .....	13
Statement of Changes in Net Position – Fiduciary Funds .....	14
Notes to Combined Financial Statements.....	15
<b>REQUIRED SUPPLEMENTARY INFORMATION</b>	
Schedule of Changes in NPL and Related Ratios – ND Teachers' Fund for Retirement.....	56
Schedule of Employer Contributions – ND Teachers' Fund for Retirement.....	57
Schedule of Investment Returns – ND Teachers' Fund for Retirement .....	58
Schedule of Employer's Share of NPL and NOL – ND Public Employees Retirement System.....	59
Schedule of Employer Contributions – ND Public Employees Retirement System .....	60
<b>SUPPLEMENTARY INFORMATION</b>	
Combining Statement of Net Position – Investment Trust Funds – Fiduciary Funds .....	61
Combining Statement of Changes in Net Position – Investment Trust Funds – Fiduciary Funds .....	63
Pension and Investment Trust Funds – Schedule of Administrative Expenses .....	65
Pension and Investment Trust Funds – Schedule of Consultant Expenses.....	66
Pension and Investment Trust Funds – Schedule of Investment Expenses .....	67
Schedule of Appropriations – Budget Basis – Fiduciary Funds.....	68
<b>SPECIAL COMMENTS REQUESTED BY THE LEGISLATIVE AUDIT AND FISCAL REVIEW COMMITTEE YEAR ENDED JUNE 30, 2019</b> .....	69
<b>AUDIT COMMITTEE COMMUNICATIONS</b> .....	70



## INDEPENDENT AUDITORS' REPORT

Governor Doug Burgum  
The Legislative Assembly  
David Hunter, Executive Director/CIO  
State Investment Board  
Teachers' Fund for Retirement Board  
North Dakota Retirement and Investment Office

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

We have audited the accompanying financial statements of the North Dakota Retirement and Investment Office (RIO), a department of the State of North Dakota, which comprise the statement of net position – fiduciary funds as of June 30, 2019 and 2018, and the related statement of changes in net position – fiduciary funds for the years then ended, and the related notes to the financial statements, which collectively comprise RIO's basic financial statements, and the combining and individual fund financial statements as of and for the years ended June 30, 2019 and 2018, as listed in the table of contents.

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

Management 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.

### ***Auditors' 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*, 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 auditors' 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 accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

Governor Doug Burgum  
The Legislative Assembly  
David Hunter, Executive Director/CIO  
State Investment Board  
Teachers' Fund for Retirement Board  
North Dakota Retirement and Investment Office

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

### ***Opinions***

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of RIO as of June 30, 2019 and 2018, and the respective changes in financial position for the years then ended in accordance with accounting principles generally accepted in the United States of America. Also, in our opinion, the combining and individual fund financial statements referred to above present fairly, in all material respects, the financial position of each of the individual funds of RIO as of June 30, 2019 and 2018, and the results of the changes in financial position of such funds for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

### ***Emphasis of Matter***

As discussed in Note 1, the financial statements of RIO are intended to present the financial position and the changes in financial position of only that portion of the State of North Dakota that is attributable to the transactions of RIO. They do not purport to, and do not, present fairly the financial position of the State of North Dakota as of June 30, 2019 and 2018, and the changes in its financial position for the years then ended in conformity with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

### ***Other Matters***

#### ***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and the schedules of changes in NPL and related ratios - ND Teachers' Fund for Retirement and employer contributions - ND Teachers' Fund for Retirement, investment returns - ND Teachers' Fund for Retirement, employer's share of NPL and NOL – ND Public Employees Retirement System and employer contributions – ND Public Employees Retirement System and related notes, as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Governor Doug Burgum  
The Legislative Assembly  
David Hunter, Executive Director/CIO  
State Investment Board  
Teachers' Fund for Retirement Board  
North Dakota Retirement and Investment Office

*Other Information*

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise RIO's basic financial statements and the combining and individual fund financial statements. The schedules of administrative expenses, consultant expenses, investment expenses, and appropriations – budget basis – fiduciary funds, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

These schedules are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

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

In accordance with *Government Audit Standards*, we have also issued our report dated October 30, 2019, on our consideration of RIO's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of RIO's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering RIO's internal control over financial reporting.



**CliftonLarsonAllen LLP**

Baltimore, Maryland  
October 30, 2019



**INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS**

Governor Doug Burgum  
The Legislative Assembly  
David Hunter, Executive Director/CIO  
State Investment Board  
Teachers' Fund for Retirement Board  
North Dakota Retirement and Investment Office

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the basic financial statements of the North Dakota Retirement and Investment Office (RIO), a department of the State of North Dakota, which collectively comprise RIO's basic financial statements, and the combining and individual fund financial statements, as of and for the year ended June 30, 2019, and the related notes to the financial statements, and have issued our report thereon dated October 30, 2019.

**Internal Control over Financial Reporting**

Management of RIO is responsible for establishing and maintaining effective internal control over financial reporting. In planning and performing our audit, we considered RIO's internal control over financial reporting as a basis for designing our auditing procedures for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of RIO's internal control over financial reporting. Accordingly, we do not express an opinion on the effectiveness of RIO's internal control over financial reporting.

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

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Governor Doug Burgum  
The Legislative Assembly  
David Hunter, Executive Director/CIO  
State Investment Board  
Teachers' Fund for Retirement Board  
North Dakota Retirement and Investment Office

### **Compliance and Other Matters**

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

### **Purpose of this Report**

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the result of that testing, and not to provide an opinion on the effectiveness of RIO's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering RIO's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.



**CliftonLarsonAllen LLP**

Baltimore, Maryland  
October 30, 2019

# North Dakota Retirement and Investment Office

## Management's Discussion and Analysis

June 30, 2019 and 2018

---

Our discussion and analysis of the ND Retirement and Investment Office's (RIO) financial performance provides an overview of RIO's financial activities for the fiscal years ended June 30, 2019 and 2018. Please read it in conjunction with the basic financial statements, which follow this discussion.

RIO administers two fiduciary funds, a pension trust fund for the ND Teachers' Fund for Retirement (TFFR) and an investment trust fund for the ND State Investment Board (SIB) consisting of 24 investment clients in two investment pools and four individual investment accounts.

### **Financial Highlights**

Total net position increased from the previous fiscal year in the fiduciary funds by \$885.4 million (6.4%) and \$1.5 billion (11.8%) in FY2019 and FY2018, respectively. Approximately 62% of the FY2019 increase and 61% of the FY2018 increase is due to the growth of the Legacy Fund. The Legacy Fund was created by a constitutional amendment in 2010. The amendment provides that 30% of oil and gas gross production and oil extraction taxes on oil produced after June 30, 2011, be transferred to the Legacy Fund. Transfers into the Legacy Fund totaled \$692.6 million and \$529.9 million, and net investment income exceeded \$309 million and \$361 million in FY2019 and FY2018, respectively.

Total additions in the fiduciary funds for FY2019 and FY2018 decreased by \$60.1 million (3.0%) and \$78.1 million (3.7%), respectively. Net investment income decreased in both years (by \$181.6 million and \$302 million respectively), due to weaker financial markets during those two years. There was an increase in new purchases of units in the investment program in both fiscal years due to strong oil and gas tax collections affecting the Legacy Fund. Total fiduciary fund purchases of units increased \$116.6 million (13.4%) and \$223.2 million (34.4%) in FY2019 and FY2018, respectively.

Deductions in the fiduciary funds increased by \$511.2 million (93.3%) in FY2019 after decreasing the prior year by \$562.8 million (50.7%). The majority of the increase from FY2018 to FY2019 was in redemptions of units, which increased by \$497.8 million (148.1%) due to the constitutionally mandated earnings transfer from the Legacy Fund to the General Fund. The State Constitution requires that all earnings accrued after June 30, 2017, be transferred to the General Fund at the end of each biennium. A transfer of \$455.3 million was made in July, 2019, and accrued as of the end of FY2019. The majority of the decrease in deductions from FY 2017 to FY2018 came from the \$574.5 million decrease in redemptions of units caused by the large drawdown of \$572.5 million in the Budget Stabilization Fund in FY2017 to cover the State's income shortfall during the 2015-17 biennium.

Payments to TFFR members in the form of benefits and refunds increased by \$13.2 million (6.4%) and \$11.5 million (5.8%) in FY2019 and FY2018, respectively. These increases represented a rise in the total number of retirees drawing retirement benefits from the pension fund as well as an increase in the retirement salaries on which the benefits of new retirees are based.

As of June 30, 2019 and 2018, the TFFR pension plan had a Net Pension Liability (NPL) of \$1.38 billion and \$1.33 billion, and Plan Fiduciary Net Position as a percent of Total Pension Liability (TPL) of 65.5% and 65.5%, respectively.

### **Overview of the Financial Statements**

This report consists of four parts – management's discussion and analysis (this section), the basic financial statements, required supplementary information, and additional supplementary information that presents combining statements for the investment trust funds. The basic financial statements include fund financial statements that focus on individual parts of RIO's activities (fiduciary funds).



The financial statements also include notes that explain some of the information in the financial statements and provide more detailed data. The statements are followed by a section of required supplementary information that further explains and supports the information in the financial statements. In addition to these required elements, we have included additional supplementary information, including combining statements that provide details about our investment trust funds, each of which are added together and presented in single columns in the basic financial statements.

### **Fund Financial Statements**

The fund financial statements provide detailed information about RIO's activities. Funds are accounting devices that RIO uses to keep track of specific sources of funding and spending for particular purposes.

RIO uses fiduciary funds as RIO is the trustee, or fiduciary, for TFFR (a pension plan) and SIB (investment trust funds). RIO is responsible for ensuring that the assets reported in these funds are used for their intended purposes. All of RIO's fiduciary activities are reported in a statement of net position and a statement of changes in net position.

### **Financial Analysis**

RIO's fiduciary fund total assets as of June 30, 2019 and 2018, were \$15.2 billion and \$13.8 billion, respectively, and were comprised mainly of investments. Total assets increased by \$1.3 billion (9.7%) and \$1.4 billion (11.5%) from each prior year primarily due to strong financial markets.

Total liabilities as of June 30, 2019 and 2018, were \$511.3 and \$54.7 million. Over 90% of the liabilities (\$455.3 million) as of June 30, 2019, were the Legacy Fund's earnings due to the General Fund at the end of the biennium. Previous year-end liabilities were comprised mainly of the securities lending collateral payable.

RIO's fiduciary fund total net position was \$14.7 billion and \$13.8 billion at the close of fiscal years 2019 and 2018, respectively.

**North Dakota Retirement and Investment Office  
Net Position – Fiduciary Funds  
(In Millions)**

	<b>2019</b>	<b>2018</b>	<b>Total % Change</b>
<b>Assets</b>			
Investments	\$ 15,028.7	\$ 13,696.7	9.7%
Securities Lending Collateral	46.3	48.1	-3.9%
Receivables	87.7	75.2	16.6%
Cash & Other	20.5	20.9	-1.6%
<b>Total Assets</b>	<b>15,183.2</b>	<b>13,840.9</b>	<b>9.7%</b>
<b>Deferred Outflows of Resources</b>			
Deferred outflows related to pensions	1.2	1.4	-12.9%
<b>Liabilities</b>			
Obligations under Securities Lending	46.3	48.1	-3.9%
Accounts Payable & Accrued Expenses	465.0	6.6	6990.3%
<b>Total Liabilities</b>	<b>511.3</b>	<b>54.7</b>	<b>834.8%</b>
<b>Deferred Inflows of Resources</b>			
Deferred inflows related to pensions	0.2	0.1	124.4%
<b>Total Net Position</b>	<b>\$ 14,672.9</b>	<b>\$ 13,787.5</b>	<b>6.4%</b>
	<b>2018</b>	<b>2017</b>	<b>Total % Change</b>
<b>Assets</b>			
Investments	\$ 13,696.7	\$ 12,251.5	11.8%
Securities Lending Collateral	48.1	77.7	-38.0%
Receivables	75.2	69.0	9.1%
Cash & Other	20.9	19.3	8.1%
<b>Total Assets</b>	<b>13,840.9</b>	<b>12,417.5</b>	<b>11.5%</b>
<b>Deferred Outflows of Resources</b>			
Deferred outflows related to pensions	1.4	0.6	113.3%
<b>Liabilities</b>			
Obligations under Securities Lending	48.1	77.7	-38.0%
Accounts Payable & Accrued Expenses	6.6	9.5	-30.9%
<b>Total Liabilities</b>	<b>54.7</b>	<b>87.2</b>	<b>-37.3%</b>
<b>Deferred Inflows of Resources</b>			
Deferred inflows related to pensions	0.1	0.1	-13.0%
<b>Total Net Position</b>	<b>\$ 13,787.5</b>	<b>\$ 12,330.8</b>	<b>11.8%</b>

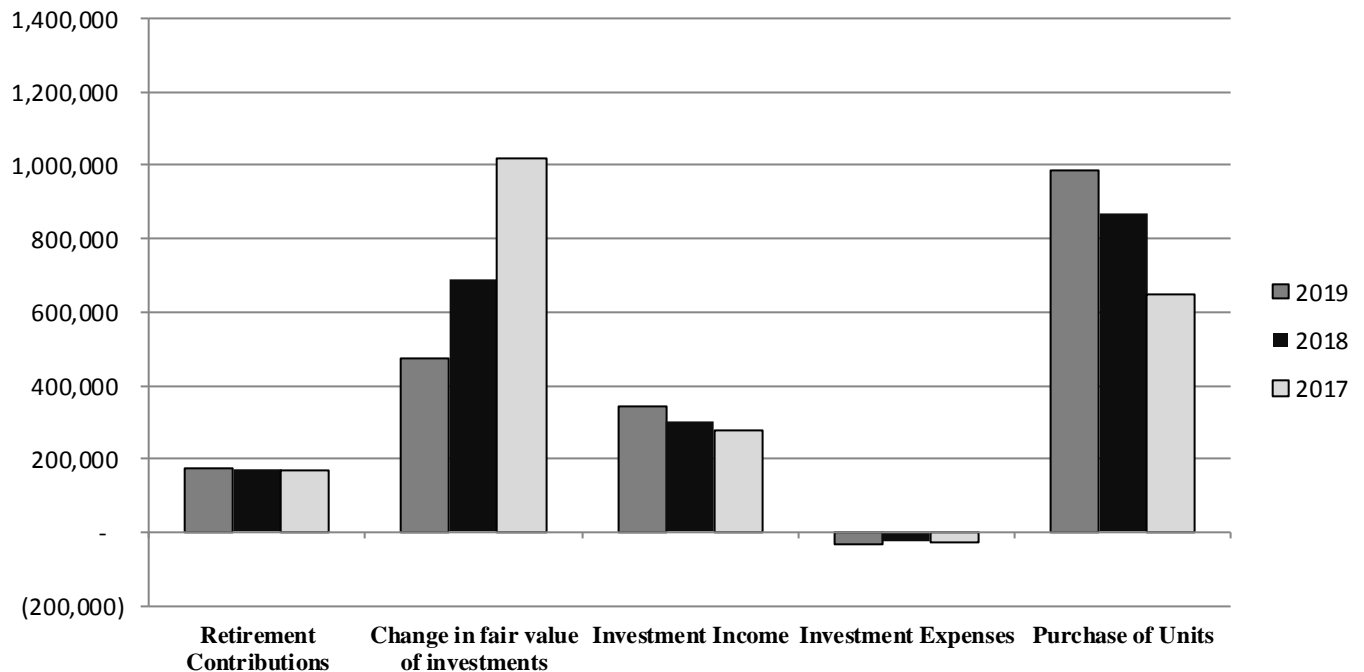
**North Dakota Retirement and Investment Office  
Changes in Net Position – Fiduciary Funds  
(In Millions)**

	<b>2019</b>	<b>2018</b>	<b>Total % Change</b>
<b>Additions:</b>			
Contributions	\$ 173.9	\$ 168.9	3.0%
Net Investment Income	781.6	963.2	-18.9%
Net Securities Lending Income	1.2	1.3	-7.3%
Purchase of Units	987.8	871.3	13.4%
<b>Total Additions</b>	<b>1,944.5</b>	<b>2,004.7</b>	<b>-3.0%</b>
<b>Deductions:</b>			
Payments to TFFR members	221.2	208.0	6.4%
Administrative Expenses	4.0	3.8	6.1%
Redemption of Units	833.9	336.2	148.1%
<b>Total Deductions</b>	<b>1,059.2</b>	<b>548.0</b>	<b>93.3%</b>
<b>Total Change in Net Position</b>	<b>\$ 885.4</b>	<b>\$ 1,456.7</b>	<b>-39.2%</b>
	<b>2018</b>	<b>2017</b>	<b>Total % Change</b>
<b>Additions:</b>			
Contributions	\$ 168.9	\$ 168.1	0.5%
Net Investment Income	963.2	1,265.3	-23.9%
Net Securities Lending Income	1.3	1.2	5.5%
Purchase of Units	871.3	648.1	34.4%
<b>Total Additions</b>	<b>2,004.7</b>	<b>2,082.7</b>	<b>-3.7%</b>
<b>Deductions:</b>			
Payments to TFFR members	208.0	196.5	5.8%
Administrative Expenses	3.8	3.5	9.3%
Redemption of Units	336.2	910.7	-63.1%
<b>Total Deductions</b>	<b>548.0</b>	<b>1,110.7</b>	<b>-50.7%</b>
<b>Total Change in Net Position</b>	<b>\$ 1,456.7</b>	<b>\$ 972.0</b>	<b>49.9%</b>

**Statement of Changes in Net Position – Additions**

Contributions collected by the pension trust fund increased by \$5.0 million (3.0%) and \$0.8 million (0.5%) over the previous fiscal years due to both an increase in the number of active members contributing to the fund and an increase in the average salary of active members. Net investment income (including net securities lending income and net of investment expenses) decreased by \$181.7 million (18.8%) and \$302 million (23.8%) in FY2019 and FY2018, respectively. This was the result of weaker financial markets in both years compared to FY2017. Deposits of funds into the investment trust fund (purchase of units) continue to increase year-over-year, from \$648.1 million in FY2017 to \$987.8 million in FY2019, mainly due to increased deposits to the Legacy Fund.

**Additions to Net Position  
(in thousands)**



**Statement of Changes in Net Position – Deductions**

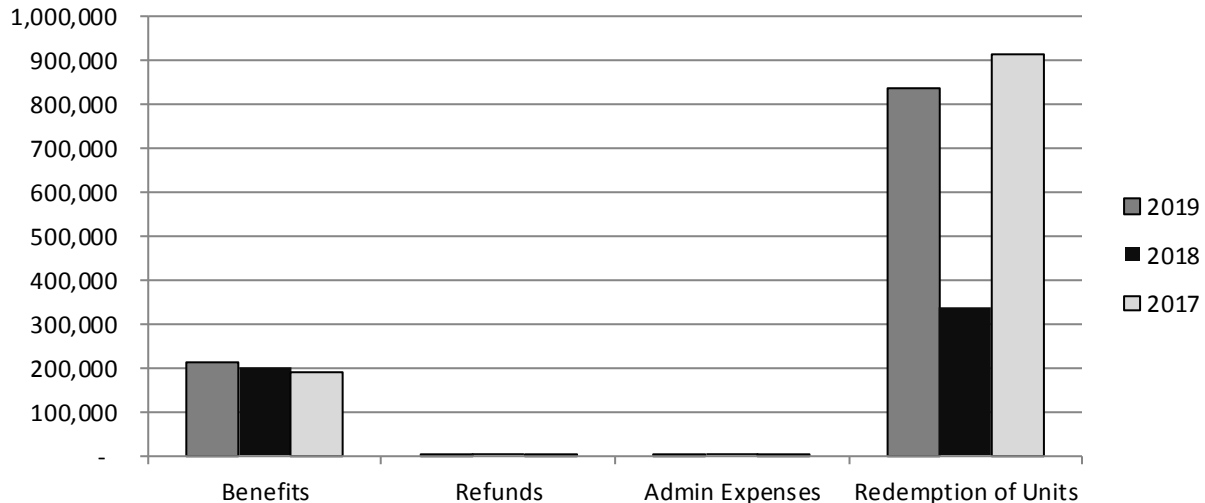
Benefits paid to TFFR plan participants, including partial lump-sum distributions, increased by \$13.2 million (6.4%) and \$11.3 million (5.9%) in FY2019 and FY2018, respectively. The increases are due to an increase in the total number of retirees in the plan as well as an increased retirement salary on which the benefits are based upon. Refunds increased by nearly \$339,000 (6.1%) and \$150,000 (2.8%) in fiscal years 2019 and 2018, respectively.

Administrative expenses increased by nearly \$233,000 in fiscal year 2019 and \$322,000 in fiscal year 2018. This increase was mainly due to an increase in IT contractual services, including the addition of investment risk analysis/monitoring software in the second half of the fiscal year 2017 (a full year in fiscal year 2018), the payment of the biennial retirement administration software maintenance fee in FY2019; and an increase in pension expense each year due to RIO's participation in the NDPERS pension plan.

The redemption of units in the investment trust funds increased by \$497.8 million in FY2019 due to the first biennial earnings transfer from the Legacy Fund. The redemption of units decreased in FY2018 by \$574.5 million

due almost entirely to the FY2017 drawdown of \$572.5 million in the Budget Stabilization Fund to cover the State's income shortfall during the 2015-17 biennium.

**Deductions from Net Position  
(in thousands)**



**Conclusion**

For the fiscal year ended June 30, 2019, the pension investment pool (which includes the TFFR pension plan) and the Legacy Fund generated net time weighted investment returns of 5.5% and 5%, respectively, trailing their respective policy benchmarks. The insurance investment pool achieved a net time weighted return of 6.4% last year. Investment returns for global equities did not meet long-term expectations in fiscal 2019 due to the continued weakness in the international markets and significant return divergence between large and small companies, with larger companies in the United States returning over 10% last year (as referenced by the S&P 500 Index and Russell 1000 Index) while smaller U.S. companies fell over 3.3% in fiscal 2019 (as referenced by the Russell 2000 Index). Overall investment performance was negatively impacted by escalating concerns over the global trade war between the United States and China which significantly heightened volatility. Federal Reserve Board actions in the fourth quarter of 2018, which included a 0.25% rise in the target Federal Funds Rate, also dampened investor sentiment. Equity returns varied widely with U.S. equities in the pension investment pool earning over 8.3% in fiscal 2019 whereas international equities fell by 0.50%. Fixed income results were strong, gaining 7.8% in FY19, while global equities only gained 4.2% last year. Real asset performance was mixed but largely in line with overall benchmarks for the pension investment pool, with real estate up 6%, infrastructure up 5.1%, and timber up 4.1% in the last year. Private equity returns improved within the pension investment pool and rose 8.6% for the 1-year ended June 30, 2019.

For the fiscal year ended June 30, 2018, the pension investment pool and the Legacy Fund generated net time weighted investment returns of 9.1% and 7.5%, respectively, surpassing their respective policy benchmarks. The TFFR pension plan generated a net time weighted return of 9.1%, also exceeding its policy benchmark. The insurance investment pool also performed well and achieved a net time weighted return of 5.2% that year. Investment returns exceeded long-term expectations in fiscal 2018 due to the continued strength of the equity markets particularly in the United States. Investment performance benefited from favorable U.S. income tax policy developments which bolstered revenues, margins and capital spending. Global equities earned over 12.3% within the pension pool with the U.S. equity portfolio (up 16.4%) significantly outpacing international equity returns (up 10.1%). Fixed income results were also strong in the U.S. where investment grade debt earned 1.6% and non-

investment grade debt earned over 5.1% in FY18 within the pension pool, noting that international debt strategies were largely eliminated during the past year. Real asset performance was mixed with generally strong, above benchmark returns posted in real estate and infrastructure (both up over 7%), while our timber portfolio lost 2.5% within the pension pool last year. Private equity returns were also disappointing within the pension pool earning slightly over 5.25% for the 1-year ended June 30, 2018.

While cumulative returns in the post-credit crisis era remained fairly strong, albeit weakening in the past year, investors today face numerous challenges that may limit the potential for future global growth rates to continue and possibly further amplify investment risk. First, one could argue that many asset classes and strategies no longer offer compelling valuations for investors. Second, the ever-growing debt burden from unprecedented monetary policy and muted economic growth in a range of economies makes it less and less likely that authorities will be in a position to provide a cushion in a downturn when it occurs. Finally, the escalating uncertainty of global trade relations and policies between the U.S. and China and the United Kingdom and Europe poses a challenge to certain asset classes and strategies to varying degrees. To meet this challenge, the State Investment Board will continue to research strategies and investment options that mitigate and diversify the sources of risk accepted to address funding issues in the challenging years ahead.

TFFR's funding objective is to meet long-term pension benefit obligations through contributions and investment income. To address TFFR's funding shortfall, the ND State Legislature took action in 2011 and approved legislation to increase contributions (4% member and 4% employer) and modify certain benefits for non-grandfathered members. Increased contribution rates will be in effect until TFFR reaches 100% funding on an actuarial basis. This comprehensive funding recovery plan, along with solid investment performance in the future, is expected to improve TFFR's funding level over the long term. However, the Board is continuing to closely assess plan risks and monitor funding progress.

TFFR's funding level increased from 65.4% to 66.0% on an actuarial basis (and remained the same on a market basis at 65.5%) from July 1, 2018 to July 1, 2019. Once net investment losses over the past 5 years are recognized, the plan's funding level is expected to gradually improve over the long term, if all actuarial assumptions are met in the future, including the 7.75% investment return assumption. An Actuarial Experience Study will be conducted in the upcoming year to evaluate current actuarial assumptions, and changes will be considered if recommended by the actuary.

Protecting the long term solvency of the pension plan is the TFFR Board's fiduciary responsibility. The Board will continue to proactively address TFFR funding issues so the plan will be financially strong and sustainable for past, present, and future ND educators.

### **Contacting RIO Financial Management**

This financial report is designed to provide our Boards, our membership, our clients and the general public with a general overview of RIO's finances and to demonstrate RIO's accountability for the money we receive. If you have any questions about this report or need additional information, contact the North Dakota Retirement and Investment Office, PO Box 7100, Bismarck, ND 58507-7100.

North Dakota Retirement and Investment Office  
Statement of Net Position – Fiduciary Funds  
June 30, 2019 and 2018

	Pension Trust		Investment Trust		Total	
	2019	2018	2019	2018	2019	2018
<b>Assets:</b>						
Investments, at fair value						
Global equities	\$ 1,495,354,621	1,441,132,463	\$ 5,758,237,240	\$ 5,205,817,256	\$ 7,253,591,861	\$ 6,646,949,719
Global fixed income	575,551,625	589,368,951	4,510,779,742	4,099,552,552	5,086,331,367	4,688,921,503
Global real assets	455,163,805	416,937,112	1,889,505,508	1,788,156,119	2,344,669,313	2,205,093,231
Cash equivalents	35,025,659	28,631,157	309,039,173	127,104,537	344,064,832	155,735,694
Total investments	<u>2,561,095,710</u>	<u>2,476,069,683</u>	<u>12,467,561,663</u>	<u>11,220,630,464</u>	<u>15,028,657,373</u>	<u>13,696,700,147</u>
Invested securities lending collateral	8,495,437	7,413,200	37,770,485	40,721,545	46,265,922	48,134,745
<b>Receivables:</b>						
Investment income	12,526,857	9,765,629	50,051,024	38,863,279	62,577,881	48,628,908
Contributions	25,070,538	26,548,463	-	-	25,070,538	26,548,463
Miscellaneous	6,394	8,127	26,379	28,001	32,773	36,128
Total receivables	<u>37,603,789</u>	<u>36,322,219</u>	<u>50,077,403</u>	<u>38,891,280</u>	<u>87,681,192</u>	<u>75,213,499</u>
Due from other state agency	-	174	-	-	-	174
Cash and cash equivalents	20,305,041	20,486,449	257,511	410,261	20,562,552	20,896,710
Equipment & Software (net of depr)	4,949	6,749	-	-	4,949	6,749
Total assets	<u>2,627,504,926</u>	<u>2,540,298,474</u>	<u>12,555,667,062</u>	<u>11,300,653,550</u>	<u>15,183,171,988</u>	<u>13,840,952,024</u>
<b>Deferred outflows of resources</b>						
Related to pensions	709,618	813,903	472,668	544,101	1,182,286	1,358,004
<b>Liabilities:</b>						
Accounts payable	178,293	126,480	253,814	136,431	432,107	262,911
Investment expenses payable	812,385	459,438	4,829,521	2,279,952	5,641,906	2,739,390
Securities lending collateral	8,495,437	7,413,200	37,770,485	40,721,545	46,265,922	48,134,745
Accrued expenses	2,445,348	2,395,362	1,193,588	1,111,661	3,638,936	3,507,023
Miscellaneous payable	-	-	32,115	34,655	32,115	34,655
Due to other state funds	-	-	455,263,216	-	455,263,216	-
Due to other state agencies	7,954	11,967	1,470	2,572	9,424	14,539
Total liabilities	<u>11,939,417</u>	<u>10,406,447</u>	<u>499,344,209</u>	<u>44,286,816</u>	<u>511,283,626</u>	<u>54,693,263</u>
<b>Deferred inflows of resources</b>						
Related to pensions	104,071	48,519	67,473	27,917	171,544	76,436
<b>Fiduciary net position:</b>						
Restricted for pensions	2,616,171,056	2,530,657,411	-	-	2,616,171,056	2,530,657,411
Held in trust for external investment pool participants:						
Pension pool	-	-	3,373,539,596	3,233,154,948	3,373,539,596	3,233,154,948
Insurance pool	-	-	2,318,620,683	2,171,169,377	2,318,620,683	2,171,169,377
Held in trust for individual investment accounts	-	-	6,364,567,769	5,852,558,593	6,364,567,769	5,852,558,593
Total fiduciary net position	<u>\$ 2,616,171,056</u>	<u>\$ 2,530,657,411</u>	<u>\$ 12,056,728,048</u>	<u>\$ 11,256,882,918</u>	<u>\$ 14,672,899,104</u>	<u>\$ 13,787,540,329</u>
Each participant unit is valued at \$1.00						
Participant units outstanding			<u>12,056,728,048</u>	<u>11,256,882,918</u>		

**North Dakota Retirement and Investment Office**  
**Statement of Changes in Net Position – Fiduciary Funds**  
**Years Ending June 30, 2019 and 2018**

	Pension Trust		Investment Trust		Total	
	2019	2018	2019	2018	2019	2018
Additions:						
Contributions:						
Employer contributions	\$ 89,444,881	\$ 86,675,715	\$ -	\$ -	\$ 89,444,881	\$ 86,675,715
Member contributions	82,429,594	79,877,611	-	-	82,429,594	79,877,611
Purchased service credit	1,916,787	2,181,106	-	-	1,916,787	2,181,106
Interest, penalties and other	158,713	194,028	-	-	158,713	194,028
Total contributions	173,949,975	168,928,460	-	-	173,949,975	168,928,460
Investment income:						
Net change in fair value of investments	84,701,380	162,026,369	388,737,303	527,542,620	473,438,683	689,568,989
Interest, dividends and other income	56,434,954	54,486,768	284,507,483	246,166,774	340,942,437	300,653,542
	141,136,334	216,513,137	673,244,786	773,709,394	814,381,120	990,222,531
Less investment expenses	6,272,801	5,352,945	26,513,804	21,653,138	32,786,605	27,006,083
Net investment income	134,863,533	211,160,192	646,730,982	752,056,256	781,594,515	963,216,448
Securities lending activity:						
Securities lending income	224,713	231,448	1,226,258	1,334,400	1,450,971	1,565,848
Less securities lending expenses	(44,927)	(46,271)	(245,058)	(266,663)	(289,985)	(312,934)
Net securities lending income	179,786	185,177	981,200	1,067,737	1,160,986	1,252,914
Purchase of units (\$1 per unit)	-	-	987,842,755	871,266,337	987,842,755	871,266,337
Total additions	308,993,294	380,273,829	1,635,554,937	1,624,390,330	1,944,548,231	2,004,664,159
Deductions:						
Benefits paid to participants	214,091,045	201,648,202	-	-	214,091,045	201,648,202
Partial lump-sum distributions	1,237,129	768,829	-	-	1,237,129	768,829
Refunds	5,900,392	5,561,668	-	-	5,900,392	5,561,668
Administrative expenses	2,251,083	2,128,794	1,779,837	1,669,600	4,030,920	3,798,394
Redemption of units (\$1 per unit)	-	-	833,929,970	336,169,172	833,929,970	336,169,172
Total deductions	223,479,649	210,107,493	835,709,807	337,838,772	1,059,189,456	547,946,265
Change in fiduciary net position	85,513,645	170,166,336	799,845,130	1,286,551,558	885,358,775	1,456,717,894
Fiduciary net position:						
Beginning of year	2,530,657,411	\$ 2,360,491,075	\$ 11,256,882,918	\$ 9,970,331,360	\$ 13,787,540,329	\$ 12,330,822,435
End of Year	\$ 2,616,171,056	\$ 2,530,657,411	\$ 12,056,728,048	\$ 11,256,882,918	\$ 14,672,899,104	\$ 13,787,540,329



---

**Note 1 - Summary of Significant Accounting Policies**

RIO is an agency of the State of North Dakota operating through the legislative authority of North Dakota Century Code (NDCC) Chapter 54-52.5 and is considered part of the State of North Dakota financial reporting entity and included in the State of North Dakota's Comprehensive Annual Financial Report.

For financial reporting purposes, RIO has included all funds, and has considered all potential component units for which RIO is financially accountable, and other organizations for which the nature and significance of their relationship with RIO are such that exclusion would cause RIO's financial statements to be misleading or incomplete. The Governmental Accounting Standards Board has set forth criteria to be considered in determining financial accountability. These criteria include appointing a voting majority of an organization's governing body and (1) the ability of RIO to impose its will on that organization or (2) the potential for the organization to provide specific financial benefits to, or impose specific financial burdens on RIO.

Based upon these criteria, there are no component units to be included within RIO as a reporting entity and RIO is part of the State of North Dakota as a reporting entity.

**Fund Financial Statement**

All activities of RIO are accounted for within the pension and investment trust funds and are shown, by fund, in the fiduciary fund financial statements.

**Measurement Focus, Basis of Accounting and Financial Statement Presentation**

The financial statements of RIO are reported using the economic resources measurement focus and the accrual basis of accounting.

This measurement focus includes all assets and liabilities associated with the operations of the fiduciary funds on the statements of net position. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows.

**New Accounting Standards**

In fiscal year 2018, RIO implemented GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions, ("GASB 75"). The primary objective of this statement is to improve accounting and financial reporting by state and local governments for postemployment benefits other than pensions (other postemployment benefits or OPEB).

**Fiduciary Fund**

A pension trust fund and investment trust funds have been established to account for the assets held by RIO in a trustee capacity for TFFR and as an agent for other governmental units or funds which have placed certain investment assets under the management of SIB. The SIB manages two external investment pools and four individual investment accounts. The two external investment pools consist of a pension pool and insurance pool. SIB manages the investments of the North Dakota Public Employees Retirement System, Bismarck City Employees and Police, City of Grand Forks Employees and City of Grand Forks Park District Employees pension plans in the pension pool. The investments of Workforce Safety & Insurance, State Fire and Tornado, State Bonding, Petroleum Tank Release Compensation Fund, Insurance Regulatory Trust, North Dakota Association of Counties Fund, Risk Management, Risk Management Workers Comp, PERS Group Insurance, City of Bismarck Deferred Sick Leave, City of Fargo FargoDome Permanent Fund, Cultural Endowment Fund, ND State Board of

---

Medicine, Lewis and Clark Interpretive Center Endowment Fund and Budget Stabilization Fund are managed in the insurance pool. The Legacy Fund, Job Service of North Dakota, Tobacco Prevention and Control Fund, and PERS Retiree Health investments are managed by SIB in individual investment accounts; except for a small portion of the Legacy Fund fixed income and cash allocations that will be removed from the pools in July 2019.

RIO has no statutory authority over, nor responsibility for, these investment trust funds other than the investment responsibility provided for by statute or through contracts with the individual agencies. The funds that are required to participate according to statute are: Public Employees Retirement System, Workforce Safety & Insurance, State Fire and Tornado, State Bonding, Petroleum Tank Release Compensation Fund, Insurance Regulatory Trust, Risk Management, Risk Management Workers Comp, Cultural Endowment Fund, Legacy Fund and Budget Stabilization Fund.

RIO follows the pronouncements of the Governmental Accounting Standards Board (GASB), which is the nationally accepted standard setting body for establishing accounting principles generally accepted in the United States of America for governmental entities.

Pension and Investment Trust Funds are accounted for using the accrual basis of accounting. Member contributions are recognized in the period in which they are due. Employer contributions are recognized when due and the employer has made a formal commitment to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the NDCC.

#### **Use of Estimates**

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

RIO utilizes various investment instruments. Investment securities, in general, are exposed to various risks, such as interest rate, credit, and overall market volatility. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the values of investment securities will occur in the near term and that such change could materially affect the amounts reported in the statements of net position.

#### **Budgetary Process**

RIO operates through a biennial appropriation, which represents appropriations recommended by the Governor and presented to the General Assembly (the Assembly) at the beginning of each legislative session. The Assembly enacts RIO's budget through passage of a specific appropriation bill. The State of North Dakota's budget is prepared principally on a modified accrual basis. The Governor has line item veto power over all legislation, subject to legislative override.

Once passed and signed, the appropriation bill becomes RIO's financial plan for the next two years. Changes to the appropriation are limited to Emergency Commission authorization, initiative, or referendum action. The Emergency Commission can authorize receipt of federal or other moneys not appropriated by the Assembly if the Assembly did not indicate intent to reject the money. The Emergency Commission may authorize pass-through federal funds from one state agency to another. The Emergency Commission may authorize the transfer of expenditure authority between appropriated line items, however RIO has specific authority as a special fund to transfer between the contingency line item and other line items. Unexpended appropriations lapse at the end of each biennium, except certain capital expenditures covered under the NDCC section 54-44.1-11.

RIO does not use encumbrance accounting. The legal level of budgetary control is at the agency, appropriation and expenditure line item level. RIO does not formally budget revenues and it does not budget by fund. The statement of revenues, expenditures and changes in fund balances - budget and actual is not prepared because revenues are not budgeted.

**Capital Assets and Depreciation**

Capital asset expenditures greater than \$5,000 are capitalized at cost in accordance with Section 54-27-21 of the NDCC. Depreciation is computed using the straight-line method over the estimated useful lives of the assets. The estimated useful lives are as follows:

	<u>Years</u>
Office equipment	5
Furniture and fixtures	5

**Investments**

NDCC Section 21-10-07 states that the SIB shall apply the prudent investor rule when investing funds under its supervision. The prudent investor rule means that in making investments, the fiduciaries shall exercise the judgment and care, under the circumstances then prevailing, that an institutional investor of ordinary prudence, discretion and intelligence exercises in the management of large investments entrusted to it, not in regard to speculation, but in regard to the permanent disposition of funds, considering probable safety of capital as well as probable income.

The pension fund belonging to TFFR and investment trust funds attributable to the City of Bismarck Employee Pension Plan, the City of Bismarck Police Pension Plan, Job Service of North Dakota, City of Grand Forks Employee Pension Plan, City of Grand Forks Park District Pension Plan and the Public Employees Retirement System (PERS) must be invested exclusively for the benefit of their members. All investments are made in accordance with the respective fund’s long-term investment objectives and performance goals.

**Pooled Investments**

Many funds whose investments are under the supervision of the SIB participate in pooled investments. The agencies transfer money into the investment pools and receive an appropriate percentage ownership of the pooled portfolio based upon fair value. All activities of the investment pools are allocated to the agencies based upon their respective ownership percentages. Each participant unit is valued at \$1.00 per unit.

**Investment Valuation and Income Recognition**

Investments are reported at fair value. Quoted market prices, when available, have been used to value investments. The fair values for securities that have no quoted market price represent estimated fair value. International securities are valued based upon quoted foreign market prices and translated into U.S. dollars at the exchange rate in effect at June 30. In general, corporate debt securities have been valued at quoted market prices or, if not available, values are based on yields currently available on comparable securities of issuers with similar credit ratings. Mortgages have been valued on the basis of their future principal and interest payments discounted at prevailing interest rates for similar instruments. The fair value of real estate investments, including timberland, is based on appraisals plus fiscal year-to-date capital transactions. Publicly traded alternative investments are valued based on quoted market prices. When not readily available, alternative investment securities are valued using current estimates of fair value from the investment manager. Such valuations consider variables such as financial performance of the issuer, comparison of comparable companies’ earnings multiples, cash flow analysis, recent

---

sales prices of investments, withdrawal restrictions, and other pertinent information. Because of the inherent uncertainty of the valuation for these other alternative investments, the estimated fair value may differ from the values that would have been used had a ready market existed.

The net change in fair value of investments consists of the realized gains or losses and the unrealized increase or decrease in fair value of investments during the year. Realized gains and losses on sales of investments are computed based on the difference between the sales price and the original cost of the investment sold. Realized gains and losses on investments that had been held in more than one fiscal year and sold in the current fiscal year were included as a change in the fair value of investments reported in the prior year(s) and the current year.

Unrealized gains and losses are computed based on changes in the fair value of investments between years. Security transactions are accounted for on a trade date basis. Interest income is recognized when earned. Dividend income is recorded on the ex-dividend date.

### **Pensions and Other Postemployment Benefits (OPEB)**

For purposes of measuring the net pension and OPEB liabilities, deferred outflows of resources and deferred inflows of resources related to pensions and OPEB, and pension and OPEB expenses, information about the fiduciary net position of the ND Public Employees Retirement System (NDPERS) defined benefit pension and OPEB plans, and additions to/deductions from NDPERS' fiduciary net position have been determined on the same basis as they are reported by NDPERS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

## **Note 2 - Cash and Cash Equivalents**

### **Custodial Credit Risk**

State law generally requires that all state funds be deposited in the Bank of North Dakota. NDCC 21-04-01 provides that public funds belonging to or in the custody of the state shall be deposited in the Bank of North Dakota. Also, NDCC 6-09-07 states, “[a]ll state funds ... must be deposited in the Bank of North Dakota” or must be deposited in accordance with constitutional and statutory provisions.

### **Pension Trust Fund**

Deposits held by the Pension Trust Fund at June 30, 2019 were deposited in the Bank of North Dakota. At June 30, 2019 and 2018, the carrying amount of TFFR's deposits was \$20,305,041 and \$20,486,449, respectively, and the bank balance was \$20,402,305 and \$20,528,537, respectively. The difference results from checks outstanding or deposits not yet processed by the bank. These deposits are exposed to custodial credit risk as uninsured and uncollateralized. However, these deposits at the Bank of North Dakota are guaranteed by the State of North Dakota through NDCC Section 6-09-10.

### **Investment Trust Funds**

Certificates of deposit, an insurance pool cash account, a pension pool cash account and a Legacy Fund cash account are recorded as investments and have a cost and carrying value of \$276,189,990 and \$88,601,097 at June 30, 2019 and 2018, respectively. In addition, these funds carry cash and cash equivalents totaling \$257,511 and \$410,261 June 30, 2019 and 2018, respectively. These deposits are exposed to custodial credit risk as uninsured and uncollateralized. However, these deposits held at the Bank of North Dakota are guaranteed by the State of North Dakota through NDCC Section 6-09-10.

**Note 3 - Investments**

The investment policy of the SIB is governed by NDCC 21-10. The SIB shall apply the prudent investor rule in investing for funds under its supervision. The “prudent investor rule” means that in making investments, the fiduciaries shall exercise the judgment and care, under the circumstances then prevailing, that an institutional investor of ordinary prudence, discretion, and intelligence exercises in the management of large investments entrusted to it, not in regard to speculation but in regard to the permanent disposition of funds, considering probable safety of capital as well as probable income. The retirement funds belonging to the teachers’ fund for retirement and the public employees’ retirement system must be invested exclusively for the benefit of their members and in accordance with the respective funds’ investment goals and objectives.

**Interest Rate Risk**

Interest rate risk is the risk that changes in interest rates of debt securities will adversely affect the fair value of an investment. The price of a debt security typically moves in the opposite direction of the change in interest rates. The SIB does not have a formal investment policy that limits investment maturities as a means of managing its exposure to potential fair value losses arising from future changes in interest rates.

At June 30, 2019 and 2018, the following tables show the investments by investment type and maturity (expressed in thousands).

2019	Total Fair Value	Less than 1 Year	1-6 Years	6-10 Years	More than 10 Years
Asset Backed Securities	\$ 316,024	\$ 347	\$ 71,850	\$ 69,713	\$ 174,114
Bank Deposits	10,010	10,010	-	-	-
Bank Loans	4,372	-	3,195	1,177	-
Collateralized Bonds	2,716	-	-	250	2,466
Commercial Mortgage-Backed	238,449	898	5,521	3,321	228,709
Commercial Paper	1,596	1,596	-	-	-
Corporate Bonds	1,660,145	50,523	831,926	460,176	317,520
Corporate Convertible Bonds	21,761	721	12,187	2,443	6,410
Government Agencies	75,933	2,699	43,751	20,108	9,375
Government Bonds	603,757	23,646	269,268	102,364	208,479
Gov't Mortgage Backed	662,483	12	7,010	21,930	633,531
Gov't-issued CMB	101,527	16	6,696	34,673	60,142
Index Linked Government Bonds	582,630	12,957	154,761	261,770	153,142
Municipal/Provincial Bonds	35,474	600	13,806	5,942	15,126
Non-Government Backed CMOs	72,142	29	6,677	9,251	56,185
Other Fixed Income	1,003	-	1,003	-	-
Repurchase Agreements	(20,003)	(20,003)	-	-	-
Short Term Bills and Notes	31,986	31,986	-	-	-
Funds/Pooled Investments	1,416,917	-	743,936	452,982	219,999
<b>Total Debt Securities</b>	<b>\$ 5,818,922</b>	<b>\$ 116,037</b>	<b>\$ 2,171,587</b>	<b>\$ 1,446,100</b>	<b>\$ 2,085,198</b>

# North Dakota Retirement and Investment Office

## Notes to Combined Financial Statements

June 30, 2019 and 2018

2018	All values in \$000				
	Total Fair Value	Less than 1 Year	1-6 Years	6-10 Years	More than 10 Years
Asset Backed Securities	\$ 205,023	\$ 470	\$ 44,775	\$ 41,176	\$ 118,602
Bank Deposits	2,736	2,736	-	-	-
Bank Loans	2,636	387	1,085	1,164	-
Collateralized Bonds	2,752	-	-	250	2,502
Commercial Mortgage-Backed	142,460	-	1,777	968	139,715
Commercial Paper	11,886	11,886	-	-	-
Corporate Bonds	1,479,560	31,658	579,400	451,040	417,462
Corporate Convertible Bonds	24,247	-	14,064	5,156	5,027
Government Agencies	105,819	7,183	62,478	18,693	17,465
Government Bonds	585,476	19,918	230,575	122,793	212,190
Gov't Mortgage Backed	580,245	30	5,555	14,467	560,193
Gov't-issued CMB	106,687	9	605	24,048	82,025
Index Linked Government Bonds	4,618	-	696	-	3,922
Municipal/Provincial Bonds	33,218	600	14,331	2,897	15,390
Non-Government Backed CMOs	60,910	43	2,603	1,724	56,540
Other Fixed Income	2,176	1,739	437	-	-
Repurchase Agreements	(18,967)	(18,967)	-	-	-
Short Term Bills and Notes	44,156	44,156	-	-	-
Sukuk	200	200	-	-	-
Funds/Pooled Investments	1,819,095	-	161,997	1,061,786	595,312
Total Debt Securities	<u>\$ 5,194,933</u>	<u>\$ 102,048</u>	<u>\$ 1,120,378</u>	<u>\$ 1,746,162</u>	<u>\$ 2,226,345</u>

In the tables above, the fair values of inflation indexed bonds are reflected in the columns based on their stated maturity dates. The principal balances of these bonds are adjusted every six months based on the inflation index for that period.

Some investments are more sensitive to interest rate changes than others. Variable and floating rate collateralized mortgage obligations (CMOs), asset-backed securities (ABS), interest-only and principal-only securities are examples of investments whose fair values may be highly sensitive to interest rate changes.

Interest-only (IO) and principal-only (PO) strips are transactions which involve the separation of the interest and principal components of a security. They are highly sensitive to prepayments by mortgagors, which may result from a decline in interest rates. The SIB held no POs and held IOs valued at \$18.8 and \$6.7 million at June 30, 2019 and 2018, respectively. The SIB has no policy regarding IO or PO strips.

### Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The State Investment Board maintains a highly diversified portfolio of debt securities encompassing a wide range of credit ratings. Although the SIB has no overall policy regarding credit risk, each debt securities manager is given a specific set of guidelines to invest within based on the mandate for which it was hired. The guidelines specify in which range of credit the manager may invest. These ranges include investment grade and below investment grade categories. The following tables present the SIB's ratings as of June 30, 2019 and 2018, (expressed in thousands).

North Dakota Retirement and Investment Office  
Notes to Combined Financial Statements  
June 30, 2019 and 2018

2019	Total Fair Value	Credit Rating*										
		AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
Asset Backed Securities	\$ 316,024	\$ 217,426	\$ 34,170	\$ 10,085	\$ 5,356	\$ 4,202	\$ 2,391	\$ 4,876	\$ 1,876	\$ -	\$ 1,319	\$ 34,323
Bank Deposits	10,010	-	1,528	8,482	-	-	-	-	-	-	-	-
Bank Loans	4,372	-	-	-	1,077	2,091	694	510	-	-	-	-
Collateralized Bond	2,716	2,716	-	-	-	-	-	-	-	-	-	-
Commercial Mortgage Backed	238,051	209,223	7,294	1,824	2,106	4,418	2,848	306	-	387	257	9,388
Commercial Paper	1,596	-	-	1,596	-	-	-	-	-	-	-	-
Corporate Bonds	1,660,145	13,187	83,331	527,582	752,212	183,056	85,478	9,374	233	-	878	4,814
Corporate Convertible Bonds	21,761	-	-	547	1,349	7,289	1,275	3,452	-	-	-	7,849
Gov't Agencies	61,492	4,969	35,290	6,939	13,673	-	-	621	-	-	-	-
Gov't Bonds	603,757	4,969	479,780	5,775	60,556	15,590	36,281	-	-	-	-	806
Gov't Mortgage Backed	496,512	-	495,487	200	825	-	-	-	-	-	-	-
Gov't Issued CMB	45,306	-	45,306	-	-	-	-	-	-	-	-	-
IndexLinked Government Bonds	582,630	-	582,630	-	-	-	-	-	-	-	-	-
Municipal/Provincial Bonds	35,474	2,282	10,899	13,117	4,018	2,271	2,887	-	-	-	-	-
Non-Gov't Backed CMOs	72,142	26,000	4,758	3,733	1,723	515	2,128	2,830	1,395	-	207	28,853
Other Fixed Income	1,003	-	-	1,003	-	-	-	-	-	-	-	-
Repurchase Agreements	(20,003)	-	(20,003)	-	-	-	-	-	-	-	-	-
Short Term Bills & Notes	31,986	-	2,094	29,892	-	-	-	-	-	-	-	-
Funds/Pooled Investments	1,416,917	303,535	307,910	618,772	109,788	42,433	34,479	-	-	-	-	-
<b>Total Credit Risk of Debt Securities</b>	<b>5,581,891</b>	<b>\$ 784,307</b>	<b>\$2,070,474</b>	<b>\$ 1,229,547</b>	<b>\$ 952,683</b>	<b>\$ 261,865</b>	<b>\$ 168,461</b>	<b>\$ 21,969</b>	<b>\$ 3,504</b>	<b>\$ 387</b>	<b>\$ 2,661</b>	<b>\$ 86,033</b>
US Gov't & Agencies **	237,031											
<b>Total Debt Securities</b>	<b>\$ 5,818,922</b>											

2018	Total Fair Value	Credit Rating*										
		AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
Asset Backed Securities	\$ 204,368	\$ 144,343	\$ 18,759	\$ 11,250	\$ 9,889	\$ 3,163	\$ 1,873	\$ 5,965	\$ 2,976	\$ -	\$ 1,495	\$ 4,655
Bank Deposits	2,736	-	-	2,736	-	-	-	-	-	-	-	-
Bank Loans	2,636	-	-	-	387	887	858	272	-	-	-	232
Collateralized Bond	2,752	2,752	-	-	-	-	-	-	-	-	-	-
Commercial Mortgage Backed	141,995	107,878	6,804	5,158	5,673	6,284	1,140	4,431	520	883	1,232	1,992
Commercial Paper	11,886	-	-	10,810	-	-	-	-	-	-	-	1,076
Corporate Bonds	1,479,560	10,261	52,467	311,750	870,000	170,852	56,483	7,745	-	-	2	-
Corporate Convertible Bonds	24,247	-	-	-	1,742	6,265	7,365	8,875	-	-	-	-
Gov't Agencies	92,701	3,096	61,504	1,594	24,799	1,708	-	-	-	-	-	-
Gov't Bonds	75,958	-	3,763	6,033	43,886	9,699	12,577	-	-	-	-	-
Gov't Mortgage Backed	487,236	-	487,236	-	-	-	-	-	-	-	-	-
Gov't Issued CMB	27,991	-	27,991	-	-	-	-	-	-	-	-	-
IndexLinked Government Bonds	696	-	-	-	-	-	696	-	-	-	-	-
Municipal/Provincial Bonds	33,218	235	8,326	13,277	7,863	574	2,943	-	-	-	-	-
Non-Gov't Backed CMOs	60,910	23,309	2,398	11,858	2,745	728	2,136	3,344	3,806	-	809	9,777
Other Fixed Income	2,176	-	-	1,499	480	-	-	-	-	-	-	197
Repurchase Agreements	(18,967)	-	(18,967)	-	-	-	-	-	-	-	-	-
Short Term Bills & Notes	42,636	-	7,422	35,214	-	-	-	-	-	-	-	-
Sukuk	200	-	-	-	-	200	-	-	-	-	-	-
Funds/Pooled Investments	1,819,095	-	1,279,292	110,643	355,231	19,052	54,877	-	-	-	-	-
<b>Total Credit Risk of Debt Securities</b>	<b>4,494,030</b>	<b>\$ 291,874</b>	<b>\$1,936,995</b>	<b>\$ 521,822</b>	<b>\$ 1,322,695</b>	<b>\$ 219,412</b>	<b>\$ 140,948</b>	<b>\$ 30,632</b>	<b>\$ 7,302</b>	<b>\$ 883</b>	<b>\$ 3,538</b>	<b>\$ 17,929</b>
US Gov't & Agencies **	700,903											
<b>Total Debt Securities</b>	<b>\$ 5,194,933</b>											

- \* Ratings are determined in the following order:
1. S&P rating
  2. Moody's rating
  3. Fitch rating
  4. Manager-determined rating (internal rating)
  5. If no ratings available using steps 1-4, then shown as not rated.
- \*\* US government agency securities explicitly guaranteed by the US government are categorized here. Credit ratings of US government agency securities that are only implicitly guaranteed by the US government are categorized accordingly in the main body of these tables. Implicitly guaranteed agency securities included in the *Asset Backed, Commercial Mortgage-Backed, Gov't Issued Commercial & Gov't Mortgage Backed, Gov't Agencies, Gov't Bonds, Index Linked Gov't Bonds and Short Term Bills and Notes* categories are issued by FNMA, FHLB, FHLMC, FAMC and TVA.

### **Concentration of Credit Risk**

Concentration of credit risk is the risk of loss that may be attributed to the magnitude of an investment in a single issuer. As of June 30, 2019 and 2018, the SIB's portfolio has no single issuer exposure that comprises 5% or more of the overall portfolio, excluding investments issued or explicitly guaranteed by the U.S. government and investments in mutual funds, external investment pools, and other pooled investments. Therefore, there is no concentration of credit risk.

### **Foreign Currency Risk**

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. Although the SIB does not have a formal investment policy governing foreign currency risk, the SIB manages its exposure to fair value loss by requiring their international securities investment managers to maintain diversified portfolios to limit foreign currency and security risk. The SIB's exposure to foreign currency risk is presented in the following tables as of June 30, 2019 and 2018 (expressed in thousands).



North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2019 and 2018

2019

Currency	Short-Term	Debt	Equity	Real Estate	Total
Argentine peso	\$ 82	\$ 1,011	\$ -	\$ -	\$ 1,093
Australian dollar	20,277	(18,935)	83,638	-	84,980
Brazilian real	214	-	7,957	-	8,171
British pound sterling	7,752	(5,981)	236,946	-	238,717
Canadian dollar	3,374	(3,500)	72,112	-	71,986
Chilean peso	53	-	-	-	53
Chinese yuan renminbi	(3)	-	-	-	(3)
Colombian peso	195	-	-	-	195
Czech koruna	-	-	-	-	-
Danish krone	108	-	38,568	-	38,676
Euro	(12,041)	13,867	479,747	5,815	487,388
Hong Kong dollar	792	-	139,204	-	139,996
Hungarian forint	172	520	3,833	-	4,525
Indonesian rupiah	56	-	-	-	56
Japanese yen	16,211	-	252,971	-	269,182
Malaysian ringgit	210	509	-	-	719
Mexican peso	37	74	1,321	-	1,432
New Israeli shekel	118	-	2,219	-	2,337
New Taiwan dollar	25	-	4,570	-	4,595
New Zealand dollar	(40)	-	211	-	171
Norwegian krone	621	495	11,845	-	12,961
Polish zloty	(50)	-	2,648	-	2,598
Singapore dollar	351	-	8,021	-	8,372
South African rand	323	-	7,843	-	8,166
South Korean won	177	-	13,080	-	13,257
Swedish krona	1,268	-	56,585	-	57,853
Swiss franc	960	-	119,456	-	120,416
Thai baht	312	-	6,086	-	6,398
Turkish lira	89	-	1,352	-	1,441
International commingled funds (various currencies)	-	-	995,814	28,930	1,024,744
Total international investment securities	\$ 41,643	\$ (11,940)	\$ 2,546,027	\$ 34,745	\$ 2,610,475

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2019 and 2018

2018

Currency	Short-Term	Debt	Equity	Real Estate	Total
Argentine peso	\$ 63	\$ 3,064	\$ -	\$ -	\$ 3,127
Australian dollar	9,035	(7,424)	86,331	-	87,942
Brazilian real	875	-	3,703	-	4,578
British pound sterling	5,554	(4,870)	224,748	-	225,432
Canadian dollar	3,862	(3,637)	73,146	-	73,371
Chilean peso	55	-	-	-	55
Colombian peso	213	275	-	-	488
Czech koruna	335	-	-	-	335
Danish krone	20	-	22,089	-	22,109
Egyptian pound	308	-	-	-	308
Euro	13,098	(12,059)	444,208	5,312	450,559
Hong Kong dollar	825	-	113,541	-	114,366
Hungarian forint	154	-	3,432	-	3,586
Indonesian rupiah	55	-	-	-	55
Japanese yen	(3,273)	-	235,053	-	231,780
Malaysian ringgit	154	-	1,683	-	1,837
Mexican peso	609	5,671	1,167	-	7,447
New Israeli shekel	246	-	3,755	-	4,001
New Taiwan dollar	142	-	5,441	-	5,583
New Zealand dollar	946	-	468	-	1,414
Norwegian krone	78	-	14,658	-	14,736
Polish zloty	29	-	1,311	-	1,340
Russian ruble	38	-	-	-	38
Singapore dollar	53	-	7,450	-	7,503
South African rand	(1,276)	1,843	6,443	-	7,010
South Korean won	583	-	12,581	-	13,164
Swedish krona	4,746	-	44,887	-	49,633
Swiss franc	1,554	-	82,868	-	84,422
Thai baht	426	-	5,163	-	5,589
Turkish lira	39	-	737	-	776
International commingled funds (various currencies)	-	-	952,235	25,105	977,340
Total international investment securities	\$ 39,546	\$ (17,137)	\$ 2,347,098	\$ 30,417	\$ 2,399,924

Negative amounts represent short positions.

## Derivative Securities

Derivatives are financial arrangements between two parties whose payments are based on, or “derived” from, the performance of some agreed upon benchmark. The investment policies of the SIB’s clients allow the use of derivative securities to hedge or replicate underlying exposures but not for speculation. All derivatives are considered investment derivative instruments. The fair value of all derivative securities is reported in the statement of net position. At June 30, 2019 and 2018, the SIB had four types of derivative securities: futures, options, swaps and currency forwards.

### Futures

Futures represent commitments to purchase (asset) or sell (liability) securities at a future date and at a specific price. Futures contracts are traded on organized exchanges (exchange traded) thereby minimizing the SIB’s counterparty risk. The net change in the futures contracts’ value is settled daily in cash with the exchanges. Net gains or losses resulting from the daily settlements are included in net change in fair value of investments in the statement of changes in net position and totaled \$17.0 and \$100.0 million for fiscal years 2019 and 2018, respectively. At June 30, 2019 and 2018, the SIB investment portfolio had the notional futures balances shown below (expressed in thousands).

<u>Futures</u>	Notional Value	
	<u>June 30, 2019</u>	<u>June 30, 2018</u>
Cash & Cash Equivalent Derivative Futures		
Long	\$ 188,152	\$ 226,320
Short	(657,304)	(962,500)
Equity Derivative Futures		
Long	808,005	647,386
Short	-	-
Fixed Income Derivative Futures		
Long	352,611	378,144
Short	(141,400)	(132,120)
	<u>                    </u>	<u>                    </u>
Total Futures	<u>\$ 550,064</u>	<u>\$ 157,230</u>

### Options

Options represent or give buyers the right, but not the obligation, to buy (call) or sell (put) an asset at a preset price over a specified period. Options are traded on organized exchanges (exchange traded) thereby minimizing the SIB’s counterparty credit risk. The option’s price is usually a small percentage of the underlying asset’s value. As a seller of a financial option, the SIB, through its investment manager, receives a premium at the beginning of the agreement and bears the risk of an unfavorable change in the price of the financial instrument underlying the option. As a buyer of a financial option, the SIB, through its investment manager, pays a premium at the beginning of the agreement and the counterparty bears the risk of an unfavorable change in the price of the financial instrument underlying the option. Gains and losses on options are determined based on fair values and recorded with the net change in fair value of investments in the statement of changes in net position and totaled \$3.3 million and \$(9.1) million for fiscal years 2019 and 2018, respectively. At June 30, 2019 and 2018, the SIB investment portfolio had the following option balances (expressed in thousands).

## North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2019 and 2018

<u>Options</u>	Fair Value	
	June 30, 2019	June 30, 2018
Cash & Other Options		
Call	\$ (10)	\$ (149)
Put	1	(363)
Fixed Income Options		
Call	(38)	-
Put	(241)	(5)
Total Options	\$ (288)	\$ (517)

### Swaps

A swap is a derivative in which counterparties exchange certain benefits of one party's financial instrument for those of the other party's financial instrument. Specifically, the two counterparties agree to exchange one stream of cash flows for another stream. The SIB, through its investment managers, has entered into various swap agreements in an attempt to manage its exposure to interest rate, inflation, credit, currency and total return risk.

Gains and losses on swaps are determined based on fair values and are recorded with the net change in fair value of investments in the statement of changes in net position and totaled \$(18.6) and \$3.6 million for fiscal years 2019 and 2018, respectively. The maximum loss that would be recognized at June 30, 2019 and 2018, if all counterparties failed to perform as contracted is \$3.0 million and \$2.75 million, respectively. Swap fair values are determined by a third party pricing source. At June 30, 2019 and 2018, the SIB's investment portfolio had the swap fair value balances as shown below (expressed in thousands).

# North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2019 and 2018

## Credit Default Swaps

Credit risk represents the exposure to fair value losses arising from a credit event such as default, failure to pay, restructuring or bankruptcy. In a credit default swap (CDS) contract, the protection buyer of the CDS makes a series of payments to the protection seller and, in exchange, receives a payoff if the credit instrument experiences a credit event. CDS contracts are also used to establish exposure to a desired credit instrument.

Counterparty/Moody's Rating	Notional Amount		Expiration Date Range	Fair Value	
	June 30, 2019	June 30, 2018		June 30, 2019	June 30, 2018
Bank of America/Aa2 (2 contracts)	\$ (430)		2021-2025	\$ (32)	
Bank of America/A1 (2 contracts)		(2,700)	2021		13
BNP Paribas/A1 (1 contract)		(400)	2019		(2)
Citibank/A1 (34 contracts)	(2,535)		2019 - 2024	(172)	
Citibank/A1 (23 contracts)		(9,005)	2018 - 2024		(55)
Credit Suisse First Boston/A1 (8 contracts)	(43,200)		2022 - 2024	931	
Credit Suisse First Boston/A1 (2 contracts)		(89,400)	2022 - 2023		1,369
Deutsche Bank/A3 (2 contracts)	2,000		2059	(16)	
Deutsche Bank/Baa2 (2 contracts)		2,000	2059		9
Goldman Sachs/A3 (4 contracts)	(1,900)		2020 - 2024	(28)	
Goldman Sachs/A3 (10 contracts)		(4,890)	2019 - 2063		37
HSBC Bank/Aa3 (2 contracts)	(1,550)		2019	2	
HSBC Bank/A1 (1 contract)		(100)	2023		(1)
JP Morgan Chase/Aa2 (2 contracts)	(400)		2019 - 2024	1	
JP Morgan Chase/Aa3 (1 contract)		(300)	2019		4
Morgan Stanley/A3 (2 contracts)	(245)		2024	2	
<b>Total Credit Default Swaps</b>	<b>\$ (48,260)</b>	<b>\$ (104,795)</b>		<b>\$ 688</b>	<b>\$ 1,374</b>

The notional amount may be positive or negative, depending on whether the position is long or short, respectively.

## Currency Swaps

Currency risk represents the exposure to fair value losses arising from the change in price of one currency against another. A currency swap is a foreign-exchange agreement between two parties to exchange principal and interest in one currency for the same in another currency.

Counterparty/Moody's Rating	Notional Amount		Expiration Date Range	Fair Value	
	June 30, 2019	June 30, 2018		June 30, 2019	June 30, 2018
JP Morgan Chase/Aa3 (1 contract)	\$ -	\$ 106	2020	\$ -	\$ (7)
<b>Total Currency Swaps</b>	<b>\$ -</b>	<b>\$ 106</b>		<b>\$ -</b>	<b>\$ (7)</b>

The notional amount may be positive or negative, depending on whether the position is long or short, respectively.

# North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2019 and 2018

## Interest Rate Swaps

Interest rate risk represents the exposure to fair value losses arising from future changes in prevailing market interest rates. In the most common type of interest rate swap arrangement, one party agrees to pay fixed interest payments on designated dates to a counterparty, who in turn agrees to make return interest payments that float with some reference rate.

Counterparty/Moody's Rating	Notional Amount		Expiration Date Range	Fair Value	
	June 30, 2019	June 30, 2018		June 30, 2019	June 30, 2018
Citigroup Global Markets/A1 (24 contracts)	\$ 84,455		2020 - 2049	\$ (3,427)	
Citigroup Global Markets/A1 (5 contracts)		(28,885)	2019 - 2025		1,018
Credit Suisse First Boston/A1 (39 contracts)	128,462		2019 - 2049	12	
Credit Suisse First Boston/A1 (32 contracts)		94,495	2019 - 2048		2,275
JP Morgan Chase/Aa2 (119 contracts)	447,530		2020 - 2048	(14,715)	
JP Morgan Chase/Aa3 (176 contracts)		(134,106)	2018 - 2048		3,122
<b>Total Interest Rate Swaps</b>	<b>\$ 660,447</b>	<b>\$ (68,496)</b>		<b>\$ (18,130)</b>	<b>\$ 6,415</b>

The notional amount may be positive or negative, depending on whether the position is long (fixed rate payer) or short (floating rate payer), respectively.

## Inflation Swaps

Inflation risk represents the exposure to fair value losses arising from future changes in prevailing market inflation. In an inflation swap, one party pays a fixed rate on a notional principal amount, while the other party pays a floating rate linked to an inflation index, such as the Consumer Price Index (CPI).

Counterparty/Moody's Rating	Notional Amount		Expiration Date Range	Fair Value	
	June 30, 2019	June 30, 2018		June 30, 2019	June 30, 2018
JP Morgan Chase/Aa3 (22 contracts)	\$ -	\$ 5,730	2022 - 2057	\$ -	\$ (25)
<b>Total Inflation Swaps</b>	<b>\$ -</b>	<b>\$ 5,730</b>		<b>\$ -</b>	<b>\$ (25)</b>

The notional amount may be positive or negative, depending on whether the position is long (fixed rate payer) or short (floating rate payer), respectively.

## Total Return Swaps

A total return swap is an agreement in which one party makes payments based on a set rate, either fixed or variable, while the other party makes payments based on the return of an underlying asset (income and capital gains). The underlying asset, or reference asset, is owned by the party receiving the set rate payment.

Counterparty/Moody's Rating	Notional Amount		Expiration Date Range	Fair Value	
	June 30, 2019	June 30, 2018		June 30, 2019	June 30, 2018
Credit Suisse International/A1 (2 contracts)	\$ 4,800	\$ 4,800	2041	\$ (23)	\$ (20)
<b>Total Total Return Swaps</b>	<b>\$ 4,800</b>	<b>\$ 4,800</b>		<b>\$ (23)</b>	<b>\$ (20)</b>

The notional amount may be positive or negative, depending on whether the position is long (fixed rate payer) or short (floating rate payer), respectively.

# North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2019 and 2018

## Currency Forwards

Currency forwards represent forward exchange contracts that are entered into in order to manage the exposure to changes in currency exchange rates on the currency denominated portfolio holdings. A forward exchange contract is a commitment to purchase (positive) or sell (negative) a currency at a future date at a negotiated forward rate. The gain or loss arising from the difference between the original contracts and the closing of such contracts is included in the net change in fair value of investments in the statements of changes in net position and totaled \$1.7 million and \$2.2 million for fiscal years 2019 and 2018, respectively. At June 30, 2019 and 2018, the SIB's investment portfolio included the currency forwards balances shown below (expressed in thousands).

Currency	Cost	Purchases	Sales	Fair Value	
				6/30/2019	6/30/2018
Argentine peso	\$ 15	\$ 15	\$ -	\$ 15	\$ 2
Australian dollar	(1,472)	-	(1,472)	(1,484)	(1,832)
Brazilian real	(18)	-	(18)	(30)	1,207
British pound sterling	(8,241)	15,387	(23,628)	(8,279)	(3,549)
Canadian dollar	(8,460)	9,960	(18,420)	(8,491)	(2,737)
Colombian peso	186	186	-	195	213
Egyptian pound	-	-	-	-	308
Euro	(61,622)	37,046	(98,668)	(62,411)	(17,897)
Japanese yen	(17,609)	13,100	(30,709)	(18,046)	(44,049)
Mexican peso	6	2,818	(2,812)	38	83
Russian ruble	-	-	-	-	38
South African rand	(13)	1,608	(1,621)	-	(1,727)
Swedish krona	-	-	-	-	4,629
United States dollar	97,228	177,348	(80,120)	97,228	67,119
Total forwards subject to currency risk				\$ (1,265)	\$ 1,808

# North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2019 and 2018

## Derivative Interest Rate Risk

Derivative interest rate risk is the risk that changes in interest rates will adversely affect the value of an interest rate-based derivative investment. The SIB does not have a formal investment policy regarding such derivative investments. At June 30, 2019 and 2018, the tables below show the SIB's derivative investments subject to interest rate risk (expressed in thousands).

### 2019

	Total Notional					Greater than
	Value	3 months or less	3 to 6 months	6 to 12 months	1-5 years	5 years
Futures-interest rate contracts	\$ (257,941)	\$ 162,528	\$ (525,813)	\$ 105,344	\$ -	\$ -
Options-margined interest rate contracts	-	-	-	-	-	-
<b>Total</b>	<b>\$ (257,941)</b>	<b>\$ 162,528</b>	<b>\$ (525,813)</b>	<b>\$ 105,344</b>	<b>\$ -</b>	<b>\$ -</b>

	Total Fair Value					Greater than
	Value	3 months or less	3 to 6 months	6 to 12 months	1-5 years	5 years
Options on futures	\$ (279)	\$ (279)	\$ -	\$ -	\$ -	\$ -
Swaps - interest rate contracts	(18,130)	-	5	293	(536)	(17,892)
Swaps - credit contracts	688	(1)	2	5	776	(94)
<b>Total</b>	<b>\$ (17,721)</b>	<b>\$ (280)</b>	<b>\$ 7</b>	<b>\$ 298</b>	<b>\$ 240</b>	<b>\$ (17,986)</b>

### 2018

	Total Notional					Greater than
	Value	3 months or less	3 to 6 months	6 to 12 months	1-5 years	5 years
Futures-interest rate contracts	\$ (490,157)	\$ (442,696)	\$ (160,157)	\$ (50,322)	\$ 163,018	\$ -
Options-margined interest rate contracts	(17)	(17)	-	-	-	-
<b>Total</b>	<b>\$ (490,174)</b>	<b>\$ (442,713)</b>	<b>\$ (160,157)</b>	<b>\$ (50,322)</b>	<b>\$ 163,018</b>	<b>\$ -</b>

	Total Fair Value					Greater than
	Value	3 months or less	3 to 6 months	6 to 12 months	1-5 years	5 years
Options - interest rate contracts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Options on futures	(5)	(5)	-	-	-	-
Swaps - interest rate contracts	6,390	-	251	179	1,229	4,731
Swaps - credit contracts	1,374	-	37	2	1,392	(57)
<b>Total</b>	<b>\$ 7,759</b>	<b>\$ (5)</b>	<b>\$ 288</b>	<b>\$ 181</b>	<b>\$ 2,621</b>	<b>\$ 4,674</b>



### **Fair Value Measurement**

The SIB categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and give the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1 measurements) and the lowest priority to unobservable inputs (level 3 measurements).

Level 1 Unadjusted quoted prices for identical instruments in active markets.

Level 2 Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable.

Level 3 Valuations derived from valuation techniques in which significant inputs are unobservable.

Investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not classified in the fair value hierarchy.

The following tables show the fair value leveling of the SIB's investment portfolio at June 30, 2019 and 2018 (expressed in thousands).

# North Dakota Retirement and Investment Office

## Notes to Combined Financial Statements

June 30, 2019 and 2018

2019	Dollars in \$(000)			
	Fair Value 6/30/19	Fair Value Measures Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by fair value level				
Short Term Securities				
Commercial Paper	\$ 1,596	\$ -	\$ 1,596	\$ -
Short Term Bills and Notes	31,986	-	31,986	-
<b>Short Term Securities</b>	<b>33,582</b>	<b>-</b>	<b>33,582</b>	<b>-</b>
Fixed income investments				
Asset Backed Securities	310,664	-	303,159	7,505
Bank Loans	4,372	-	4,372	-
Collateralized Bonds	2,716	-	2,716	-
Commercial Mortgage-Backed	238,449	-	238,449	-
Corporate Bonds	1,660,145	-	1,656,435	3,710
Corporate Convertible Bonds	21,761	-	20,995	766
Funds - Fixed Income ETF	23,735	23,735	-	-
Government Agencies	73,034	-	73,034	-
Government Bonds	603,757	-	603,757	-
Government Mortgage Backed Securities	662,483	-	662,483	-
Gov't-issued Commercial Mortgage-Backed	101,527	-	101,527	-
Index Linked Government Bonds	582,630	-	582,630	-
Municipal/Provincial Bonds	35,474	-	35,474	-
Non-Government Backed C.M.O.s	63,752	-	57,495	6,257
Other Fixed Income	1,003	-	1,003	-
<b>Total fixed income investments</b>	<b>4,385,502</b>	<b>23,735</b>	<b>4,343,529</b>	<b>18,238</b>
Equity investments				
Common Stock	4,648,105	4,648,050	-	55
Convertible Equity	2,816	-	2,816	-
Funds - Equities ETF	173,072	173,072	-	-
Preferred Stock	4,561	4,561	-	-
Rights/Warrants	776	776	-	-
Stapled Securities	4,520	4,520	-	-
<b>Total equity investments</b>	<b>4,833,850</b>	<b>4,830,979</b>	<b>2,816</b>	<b>55</b>
Derivative investments				
Exchange Cleared Swaps	(17,168)	-	(17,168)	-
Options	(288)	(279)	(9)	-
Swaps	(297)	-	(297)	-
<b>Total derivative investments</b>	<b>(17,753)</b>	<b>(279)</b>	<b>(17,474)</b>	<b>-</b>
<b>Total investments by fair value level</b>	<b>\$ 9,235,181</b>	<b>\$ 4,854,435</b>	<b>\$ 4,362,453</b>	<b>\$ 18,293</b>

North Dakota Retirement and Investment Office  
Notes to Combined Financial Statements  
June 30, 2019 and 2018

Investments measured at the net asset value (NAV)		Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Commingled Funds-Debt	\$ 1,393,182	\$ -	Daily, monthly	1-15 days
Commingled Funds-Equities	1,109,757	-	Daily, monthly	1-15 days
Distressed Debt	235,686	76,921	Quarterly, Not eligible	60 days
Long/Short	223,575	-	Monthly	15 days
Mezzanine Debt	496	8,499	Not eligible	Not eligible
Private Credit	290,157	146,200	Not eligible	Not eligible
Private Equity	229,364	339,869	Not eligible	Not eligible
Real Assets	1,798,987	358,278	Quarterly, Not eligible	30-90 days
<b>Total investments measured at the NAV</b>	<b>\$ 5,281,204</b>	<b>\$ 929,767</b>		
Investments at other than fair value				
Cash and adjustments to cash	\$ 478,322			
Bank Certificates of Deposit	37,300			
Other miscellaneous securities	16,653			
Repurchase Agreements	(20,003)			
<b>Total investments at other than fair value</b>	<b>\$ 512,272</b>			
<b>Total investments</b>	<b>\$ 15,028,657</b>			

North Dakota Retirement and Investment Office  
Notes to Combined Financial Statements  
June 30, 2019 and 2018

2018	Dollars in \$(000)			
	Fair Value Measures Using			
	Fair Value 6/30/18	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by fair value level				
Short Term Securities				
Commercial Paper	\$ 11,886	\$ -	\$ 11,886	\$ -
Short Term Bills and Notes	44,156	-	44,156	-
<b>Short Term Securities</b>	<b>56,042</b>	<b>-</b>	<b>56,042</b>	<b>-</b>
Fixed income investments				
Asset Backed Securities	192,586	-	192,586	-
Bank Loans	2,636	-	2,636	-
Collateralized Bonds	2,752	-	2,752	-
Commercial Mortgage-Backed	140,642	-	137,012	3,630
Corporate Bonds	1,479,560	-	1,479,296	264
Corporate Convertible Bonds	24,247	-	24,247	-
Funds - Fixed Income ETF	28,654	28,654	-	-
Government Agencies	105,819	-	104,115	1,704
Government Bonds	585,476	-	585,476	-
Government Mortgage Backed Securities	580,245	-	580,245	-
Gov't-issued Commercial Mortgage-Backed	106,687	-	106,687	-
Index Linked Government Bonds	4,618	-	4,618	-
Municipal/Provincial Bonds	33,218	-	33,218	-
Non-Government Backed C.M.O.s	55,798	-	53,407	2,391
Other Fixed Income	2,376	-	2,376	-
<b>Total fixed income investments</b>	<b>3,345,314</b>	<b>28,654</b>	<b>3,308,671</b>	<b>7,989</b>
Equity investments				
Common Stock	4,193,715	4,193,668	-	47
Convertible Equity	2,547	-	2,547	-
Funds - Equities ETF	276,921	276,921	-	-
Preferred Stock	2,060	2,049	11	-
Rights/Warrants	167	167	-	-
Stapled Securities	4,865	4,865	-	-
<b>Total equity investments</b>	<b>4,480,275</b>	<b>4,477,670</b>	<b>2,558</b>	<b>47</b>
Derivative investments				
Exchange Cleared Swaps	7,739	-	7,739	-
Options	(517)	(5)	(512)	-
Swaps	(2)	-	(2)	-
<b>Total derivative investments</b>	<b>7,220</b>	<b>(5)</b>	<b>7,225</b>	<b>-</b>
<b>Total investments by fair value level</b>	<b>\$ 7,888,851</b>	<b>\$ 4,506,319</b>	<b>\$ 3,374,496</b>	<b>\$ 8,036</b>

# North Dakota Retirement and Investment Office

## Notes to Combined Financial Statements

June 30, 2019 and 2018

Investments measured at the net asset value (NAV)	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Commingled Funds-Debt	\$ 1,790,441	\$ -	Daily, monthly
Commingled Funds-Equities	1,082,603	-	Daily, monthly
Distressed Debt	310,992	45,971	Quarterly, Not eligible
Long/Short	208,253	-	Monthly
Mezzanine Debt	540	8,505	Not eligible
Private Credit	238,107	177,200	Not eligible
Private Equity	191,437	300,526	Not eligible
Real Assets	1,729,935	265,460	Quarterly, Not eligible
<b>Total investments measured at the NAV</b>	<b>\$ 5,552,308</b>	<b>\$ 797,662</b>	
<hr/>			
Investments at other than fair value			
Cash and adjustments to cash	\$ 196,912		
Bank Certificates of Deposit	58,222		
Other miscellaneous securities	19,374		
Repurchase Agreements	(18,967)		
<b>Total investments at other than fair value</b>	<b>\$ 255,541</b>		
<hr/>			
<b>Total investments</b>	<b>\$ 13,696,700</b>		

Securities classified in Level 1 are valued using quoted prices in active markets for those securities. Securities classified in Level 2 and Level 3 are valued using methodologies such as various bid evaluations, market averages and other matrix pricing techniques as well as values derived from associated traded securities or last trade data. In instances where inputs used to measure fair value fall into different levels, the fair value is categorized based on the lowest level input that is significant to the valuation.

Investments valued at the net asset value (NAV) per share (or its equivalent) have been classified separately in the tables above and include investments considered to be *alternative investments* as defined by the AICPA. The definition includes investments for which a readily determinable fair value does not exist (that is, investments not listed on national exchanges or over-the-counter markets, or for which quoted market prices are not available from sources such as financial publications, the exchanges, or NASDAQ). These types of investments can be held within any of the asset classes used by the SIB based on underlying portfolio holdings and analysis of risk and return relationships. These investments can be structured in different ways, including limited partnerships, limited liability companies, common trusts and mutual funds. Some are closed-ended with a specific life and capital commitment while others are open-ended with opportunity for ad hoc contributions or withdrawals and termination upon proper notice.

**Commingled/Mutual Funds** — These types of funds are open-ended funds and may be utilized in equity or fixed income asset classes. They are funds made up of underlying securities that have readily available fair values (publicly traded stocks or bonds). The SIB owns units of these funds rather than the individual securities. Contributions or withdrawals from these funds can be made as needed, generally with daily or monthly liquidity, with a notice period of one to fifteen days. Because they are liquid funds, there are no unfunded commitments for these types of investments.

**Distressed Debt** — these include investments in the debt instruments of companies which may be publicly traded or privately held that are financially distressed and are either in bankruptcy or likely candidates for bankruptcy. Typical holdings are senior and subordinated debt instruments, mortgages and bank loans. The SIB is including these types of investments in its global fixed income allocations. As of June 30, 2019 and 2018, unfunded commitments in one of its two distressed debt funds totaled \$76.9 million and \$46.0 million,

respectively. This fund is not eligible for redemptions. The other fund is eligible for redemptions with quarterly liquidity and 60 days notice, and has no unfunded commitment.

**Equity Long/Short** — This strategy is a combination of long and short positions, primarily in publicly traded equities. The SIB utilizes this strategy, through a limited partnership structure, within its global equity allocations. This is an open-ended fund with monthly liquidity with a notice period of 15 days. There was no unfunded commitment as of June 30, 2019 and 2018.

**Mezzanine Debt** — This strategy is a hybrid of debt and equity financing. It is essentially debt capital that gives the lender the rights to convert to an ownership or equity interest in the company if the loan is not paid back in time and in full. It is generally subordinated to senior debt. The SIB utilizes this strategy, through a limited partnership structure, in its global fixed income allocation. The two funds in this category are not eligible for redemptions, have remaining lives of 2-5 years, and unfunded commitments of \$8.5 million and \$8.5 million as of June 30, 2019 and 2018, respectively.

**Private Credit** — These investments include loans to private companies, privately placed debt of public companies, or loans backed by real assets. Loan repayment can be derived from either cash flows from an operating company or cash flows generated by a physical or esoteric asset. Private debt is typically secured and has various protections/covenants in place. The debt is customized to the borrower's requirement, thus rendering it illiquid. The SIB includes these strategies within its global fixed income allocation through limited partnership-type structures. Private credit issuers may be investment grade but are typically below-investment grade and similar in some respect to the syndicated bank loan and high yield markets. The SIB employs two senior private credit funds, commonly referred to as direct lenders, which are structured as custom managed accounts that are not eligible for redemptions during remaining investment lives of 2 to 3 years, and the unfunded commitments totaled \$146.2 million and \$177.2 million as of June 30, 2019 and 2018, respectively.

**Private Equity** — Private Equity investments are typically private interests in corporations across different areas of the capital structure and in different stages of the corporations' development via limited partnership vehicles. Private Equity investments are illiquid and long term in nature (10-12 years), typically held until maturity. Private Equity portfolios generally have a "J-Curve Effect" whereby there are low to negative returns in the initial years due to the payment of investment management fees and initial funding of investments made by the General Partner during a period when investments are typically carried at cost and returns have not been realized. To diversify the program, Private Equity investments are made across business cycles, vintage years, and different strategies. The SIB has a dedicated sub-asset class for private equity investments within its global equity allocation in the pension pool. The SIB does not have the option to request redemptions from its private equity funds. The General Partner distributes earnings and proceeds from the sale of the underlying investments as transactions occur. The SIB has \$339.9 million and \$300.5 million in unfunded private equity commitments as of June 30, 2019 and 2018, respectively.

**Venture Capital** — these include investments in companies in a range of stages of development from start-up/seed stage, early stage, and later/expansion stage. Investments are typically made in years one through six and returns typically occur in years four through ten.

**Buyouts** — these include investments in funds that seek out and purchase underperforming or undervalued companies in order to improve them and sell them or take them public many years later. These funds are also often involved in management buyouts, which are buyouts conducted by the management of the company being purchased, and they often play key roles in leveraged buyouts, which are buyouts that are funded with borrowed money.

---

**Real Assets** — These investments are intended to provide allocations to tangible assets that are expected to be inflation protected and provide performance above the inflation rate as indicated by the CPI. Investments are generally structured as limited partnerships or limited liability companies. Investments in Real Assets include:

**Real Estate** — includes investments in private vehicles through limited partnerships or commingled vehicles that have an ownership interest in direct real estate properties. The investment strategies may include “value added” strategies, which derive their return from both income and appreciation, “opportunistic”, which derive their return primarily through appreciation, and “alternative” which invest in less traditional types of property. Both domestic and international real estate funds are utilized. The SIB has a dedicated sub-asset class for these types of investments within global real assets. There are currently 10 different real estate funds in the portfolio. Three of those funds are open-ended vehicles that accept redemption requests quarterly with a 30-90 day notification period. The remaining seven funds are closed-ended limited partnerships that are not eligible for redemptions. Those seven funds have a combined unfunded commitment of \$114.4 million and \$79.2 million as of June 30, 2019 and 2018, respectively.

**Timberland** — includes investments in limited liability companies that have an ownership interest in properties where the value of the property is derived mainly from income-producing timber but also from the “higher and better use” value of the underlying land. The SIB includes these assets within its global real assets allocations. There are three funds in the portfolio and they have no unfunded commitments. The funds are not eligible for redemption other than distributions of income and/or proceeds as determined by the investment manager. The funds have remaining lives of 2-7 years.

**Infrastructure** — includes investments in limited partnerships that have an ownership interest in transportation assets such as toll roads, tunnels and bridges; and regulated assets such as electricity transmission, gas and oil distribution and wastewater collection. Other possible investments would include communication assets and social infrastructure. The SIB includes these assets within its global real assets allocations. The infrastructure investments in the portfolio as of June 30, 2019 and 2018, include both open and closed-ended funds. The open-ended funds have no unfunded commitments and are eligible for redemptions quarterly with 90 days notice. There may be a 3-12 month queue for receiving redemptions. The closed-ended funds have unfunded commitments of \$243.9 million and \$186.3 million at June 30, 2019 and 2018, respectively, and are not eligible for redemptions.

### Securities Lending

State statutes permit and the SIB has authorized the use of securities lending – loans of securities to broker-dealers and other entities for collateral with a simultaneous agreement to return the collateral for the same securities in the future. Northern Trust is the securities lending agent for the SIB. Securities are loaned versus collateral that may include cash, U.S. government securities and irrevocable letters of credit. U.S. securities are loaned versus collateral valued at 102% of the fair value of the securities plus any accrued interest. Non-U.S. securities are loaned versus collateral valued at 105% of the fair value of the securities plus any accrued interest.

Non-cash collateral cannot be pledged or sold unless the borrower defaults. All securities loans can be terminated on demand by either the lender or the borrower, although the average term of SIB loans was approximately 71 and 61 days as of June 30, 2019 and 2018, respectively. Cash open collateral is invested in a short term investment pool, which had an interest sensitivity of 3 days as of June 30, 2019 and 2018. This pool is valued based on amortized cost. There were no violations of legal or contractual provisions, no borrower or lending agent default losses known to the securities lending agent. There are no dividends or coupon payments owing on the securities lent. Securities lending earnings are credited to participating clients on approximately the fifteenth day of the

# North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2019 and 2018

following month.

Indemnification deals with the situation in which a client's securities are not returned due to the insolvency of a borrower and Northern Trust has failed to live up to its contractual responsibilities relating to the lending of those securities. Northern Trust's responsibilities include performing appropriate borrower and collateral investment credit analyses, demanding adequate types and levels of collateral, and complying with applicable Department of Labor and Federal Financial Institutions Examination Council regulations concerning securities lending.

For securities loaned at fiscal year end, the SIB has no credit risk exposure to borrowers because the amounts the SIB owes the borrowers exceeds the amounts the borrowers owe the SIB.

The following represents the balances relating to the securities lending transactions at June 30, 2019 and 2018 (expressed in thousands).

	<b>2019</b>	<b>Securities Lent</b>	<b>Non-Cash Collateral Value</b>	<b>Cash Collateral Investment Value</b>
Lent for cash collateral:				
US agency securities		\$ 528	\$ -	\$ 541
US government securities		4,387	-	4,481
US corporate fixed income securities		20,637	-	21,047
Global agency securities		1,559	-	1,636
Global government securities		100	-	107
Global corporate fixed income securities		1,565	-	1,667
US equities		14,560	-	14,762
Global equities		1,934	-	2,025
Lent for non-cash collateral:				
US agency securities		200	202	-
US government securities		17,679	17,968	-
US corporate fixed income securities		64,979	65,750	-
US equities		211,061	213,840	-
Global equities		17,900	18,960	-
<b>Total</b>		<b>\$ 357,089</b>	<b>\$ 316,720</b>	<b>\$ 46,266</b>



North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2019 and 2018

		<b>Non-Cash Collateral</b>		<b>Cash Collateral Investment</b>
<b>2018</b>	<b>Securities Lent</b>	<b>Value</b>	<b>Value</b>	<b>Value</b>
Lent for cash collateral:				
US agency securities	\$ 27	\$ -	\$ 28	
US government securities	885	-	909	
US corporate fixed income securities	19,599	-	20,129	
Global corporate fixed income securities	942	-	990	
US equities	22,812	-	23,365	
Global equities	2,583	-	2,714	
Lent for non-cash collateral:				
US agency securities	751	772	-	
US government securities	3,894	4,005	-	
US corporate fixed income securities	149,102	153,336	-	
US equities	208,835	214,360	-	
Global equities	41,776	44,399	-	
Total	<u>\$ 451,206</u>	<u>\$ 416,872</u>	<u>\$ 48,135</u>	

**Note 4 - Capital Assets**

	<u>June 30, 2017</u>	<u>Additions</u>	<u>Retirements</u>	<u>June 30, 2018</u>	<u>Additions</u>	<u>Retirements</u>	<u>June 30, 2019</u>
Office equipment	\$16,879	\$ -	\$ -	\$16,879	\$ -	\$ -	\$16,879
Less accumulated depreciation on office equipment	(8,330)	(1,800)	-	(10,130)	(1,800)	-	(11,930)
Software	1,213,500	-	-	1,213,500	-	-	1,213,500
Less accumulated depreciation on software	(1,213,500)	-	-	(1,213,500)	-	-	(1,213,500)
	<u>\$ 8,549</u>	<u>\$ (1,800)</u>	<u>\$ -</u>	<u>\$ 6,749</u>	<u>\$ (1,800)</u>	<u>\$ -</u>	<u>\$ 4,949</u>

**Note 5 - State Agency Transactions**

**Due To/From Other State Agencies and Other State Funds**

Amounts due from/to other state agencies and other state funds are as follows as of June 30, 2019 and 2018:

	2019	2018
Due To Other State Agencies		
Information Technology Department	\$ 7,848	\$ 7,280
Office of Administrative Hearings	-	33
Office of Attorney General	1,288	7,157
Office of Management and Budget	150	69
Rough Rider Industries	137	-
Total due to other state agencies	\$ 9,424	\$ 14,539
Due From Other State Agencies		
Public Employees Retirement System	\$ -	\$ 174
Due To Other State Funds		
General Fund	\$455,263,216	\$ -

Due to/from other state agencies balances are a result of a time lag between the dates that services are provided, the payments are made, and the transactions are entered into the accounting system. Due to other state funds represents the statutorily defined earnings of the Legacy Fund for the 2017-19 biennium that is required by the State Constitution to be transferred to the general fund at the end of the biennium.

**Note 6 - Operating Leases**

RIO leased office space under an operating lease effective July 1, 2017 through June 30, 2023. RIO also incurs rent expense at other locations on a temporary basis to sponsor retirement education for TFFR members. Rent expense totaled \$87,766 annually, for fiscal years 2019 and 2018. Minimum payments under the lease for fiscal 2020 are \$88,365 annually.

**Note 7 - Changes in Noncurrent Liabilities**

Changes in noncurrent liabilities are included in accrued expenses in the statements of changes in net position. The changes for the years ended June 30, 2019 and 2018 are summarized as follows:

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2019 and 2018

	Beginning Balance <u>7/1/2018</u>	<u>Additions</u>	<u>Reductions</u>	Ending Balance <u>6/30/2019</u>	Amounts Due Within <u>One Year</u>
Accrued Leave	<u>\$196,079</u>	<u>\$149,667</u>	<u>(\$151,519)</u>	<u>\$194,227</u>	<u>\$126,078</u>

	Beginning Balance <u>7/1/2017</u>	<u>Additions</u>	<u>Reductions</u>	Ending Balance <u>6/30/2018</u>	Amounts Due Within <u>One Year</u>
Accrued Leave	<u>\$176,864</u>	<u>\$144,638</u>	<u>(\$125,423)</u>	<u>\$196,079</u>	<u>\$117,453</u>

Pension and Investment Trust Funds liquidate the accrued annual leave.

**Note 8 - North Dakota Teachers' Fund for Retirement**

**Administration**

The following brief description of TFFR is provided for general information purposes only. Participants should refer to NDCC Chapter 15-39.1 for more complete information.

TFFR is a cost-sharing multiple-employer defined benefit pension plan covering all North Dakota public teachers and certain other teachers who meet various membership requirements. TFFR provides for pension, death and disability benefits. The cost to administer the TFFR plan is financed by investment income and contributions.

Responsibility for administration of the TFFR benefits program is assigned to a seven-member Board of Trustees (Board). The Board consists of the State Treasurer, the Superintendent of Public Instruction, and five members appointed by the Governor. The appointed members serve five-year terms which end on June 30 of alternate years. The appointed Board members must include two active teachers, one active school administrator, and two retired members. The TFFR Board submits any necessary or desirable changes in statutes relating to the administration of the fund, including benefit terms, to the Legislative Assembly for consideration. The Legislative Assembly has final authority for changes to benefit terms and contribution rates.

**Membership**

As of June 30, 2019 and 2018, the number of participating employer units was 213 and 214, respectively, consisting of the following:

	<u>June 30, 2019</u>	<u>June 30, 2018</u>
Public School Districts	175	176
County Superintendents	6	6
Special Education Units	19	19
Vocational Education Units	4	4
Other	9	9
Total	<u>213</u>	<u>214</u>

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2019 and 2018

TFFR's membership consisted of the following:

	2019	2018
Retirees and beneficiaries currently receiving benefits	8,918	8,743
Terminated employees - vested	1,657	1,623
Terminated employees - nonvested	1,035	971
Total	11,610	11,337
Current employees		
Vested	7,936	7,696
Nonvested	3,239	3,185
Total	11,175	10,881

**Member and Employer Contributions**

Member and employer contributions paid to TFFR are set by NDCC Section 15-39.1-09. Every eligible teacher in the State of North Dakota is required to be a member of TFFR and is assessed at a rate of 11.75% of salary as defined by NDCC Section 15-39.1-04. Every governmental body employing a teacher must also pay into TFFR a sum equal to 12.75% of the teacher's salary. Member and employer contributions will be reduced to 7.75% each when the fund reaches 100% funded ratio on an actuarial basis.

A vested member who terminates covered employment may elect a refund of contributions paid plus 6% interest or defer payment until eligible for pension benefits. A nonvested member who terminates covered employment must claim a refund of contributions paid before age 70½. Refunded members forfeit all service credits under TFFR. These service credits may be repurchased upon return to covered employment under certain circumstances, as defined by the NDCC.

**Pension Benefits**

For purposes of determining pension benefits, members are classified within one of three categories. Tier 1 grandfathered and Tier 1 non-grandfathered members are those with service credit on file as of July 1, 2008. Tier 2 members are those newly employed and returning refunded members on or after July 1, 2008.

***Tier 1 Grandfathered***

A Tier 1 grandfathered member is entitled to receive unreduced benefits when three or more years of credited service as a teacher in North Dakota have accumulated, the member is no longer employed as a teacher and the member has reached age 65, or the sum of age and years of service credit equals or exceeds 85. TFFR permits early retirement from ages 55 to 64, with benefits actuarially reduced by 6% per year for every year the member's retirement age is less than 65 years or the date as of which age plus service equal 85. In either case, benefits may not exceed the maximum benefits specified in Section 415 of the Internal Revenue Code.

Pension benefits paid by TFFR are determined by NDCC Section 15-39.1-10. Monthly benefits under TFFR are equal to the three highest annual salaries earned divided by 36 months and multiplied by 2.00% times the number of service credits earned. Retirees may elect payment of benefits in the form of a single life annuity, 100% or 50% joint and survivor annuity, ten or twenty-year term certain annuity, partial lump-sum option or level income with Social Security benefits. Members may also qualify for benefits calculated under other formulas.

---

***Tier 1 Non-grandfathered***

A Tier 1 non-grandfathered member is entitled to receive unreduced benefits when three or more years of credited service as a teacher in North Dakota have accumulated, the member is no longer employed as a teacher and the member has reached age 65, or has reached age 60 and the sum of age and years of service credit equals or exceeds 90. TFFR permits early retirement from ages 55 to 64, with benefits actuarially reduced by 8% per year from the earlier of age 60/Rule of 90 or age 65. In either case, benefits may not exceed the maximum benefits specified in Section 415 of the Internal Revenue Code.

Pension benefits paid by TFFR are determined by NDCC Section 15-39.1-10. Monthly benefits under TFFR are equal to the three highest annual salaries earned divided by 36 months and multiplied by 2.00% times the number of service credits earned. Retirees may elect payment of benefits in the form of a single life annuity, 100% or 50% joint and survivor annuity, ten or twenty-year term certain annuity, partial lump-sum option or level income with Social Security benefits. Members may also qualify for benefits calculated under other formulas.

***Tier 2***

A Tier 2 member is entitled to receive unreduced benefits when five or more years of credited service as a teacher in North Dakota have accumulated, the member is no longer employed as a teacher and the member has reached age 65, or has reached age 60 and the sum of age and years of service credit equals or exceeds 90. TFFR permits early retirement from ages 55 to 64, with benefits actuarially reduced by 8% per year from the earlier of age 60/Rule of 90 or age 65. In either case, benefits may not exceed the maximum benefits specified in Section 415 of the Internal Revenue Code.

Pension benefits paid by TFFR are determined by NDCC Section 15-39.1-10. Monthly benefits under TFFR are equal to the five highest annual salaries earned divided by 60 months and multiplied by 2.00% times the number of service credits earned. Retirees may elect payment of benefits in the form of a single life annuity, 100% or 50% joint and survivor annuity, ten or twenty-year term certain annuity, partial lump-sum option or level income with Social Security benefits. Members may also qualify for benefits calculated under other formulas.

**Death and Disability Benefits**

Death benefits may be paid to a member's designated beneficiary. If a member's death occurs before retirement, the benefit options available are determined by the member's vesting status prior to death. If a member's death occurs after retirement, the death benefit received by the beneficiary (if any) is based on the retirement plan the member selected at retirement.

An active member is eligible to receive disability benefits when: (a) a total disability lasting 12 months or more does not allow the continuation of teaching, (b) the member has accumulated five years of credited service in North Dakota, and (c) the Board of Trustees of TFFR has determined eligibility based upon medical evidence. The amount of the disability benefit is computed by the retirement formula in NDCC Section 15-39.1-10 without consideration of age and uses the member's actual years of credited service. There is no actuarial reduction for reason of disability retirement.

**Investment Rate of Return**

The annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 5.46% and 9.15% for the years ended June 30, 2019 and 2018, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

**Realized Gains and Losses**

Realized gains and losses on sales of investments are components of net change in fair value of investments and are computed as described in Note 1. For the years ended June 30, 2019 and 2018, TFFR had net realized gains of \$66,548,800 and \$108,984,395, respectively.

**Net Pension Liability**

The components of the net pension liability of TFFR at June 30, 2019 and 2018 (expressed in thousands), were as follows:

	June 30, 2019	June 30, 2018
Total pension liability	\$ 3,993,424	\$ 3,863,515
Plan fiduciary net position	<u>(2,616,171)</u>	<u>(2,530,657)</u>
Net pension liability (NPL)	<u>\$ 1,377,253</u>	<u>\$ 1,332,858</u>
 Plan fiduciary net position as a percentage of the total pension liability	65.5%	65.5%

**Actuarial Assumptions**

The total pension liability was determined by an actuarial valuation as of July 1, 2019 and 2018, using the following actuarial assumptions:

	July 1, 2019	July 1, 2018
Valuation date	July 1, 2019	July 1, 2018
Inflation	2.75%	2.75%
Salary increases	4.25% to 14.50%; varying by service, including inflation and productivity	4.25% to 14.50%; varying by service, including inflation and productivity
Cost of living adjustments	None	None
Investment rate of return	7.75% net of investment expenses, including inflation	7.75% net of investment expenses, including inflation

For active and inactive members, mortality rates were based on the RP-2014 Employee Mortality Table projected generationally using Scale MP-2014. For healthy retirees, mortality rates were based on the RP-2014 Healthy Annuitant Mortality Table set back one year, multiplied by 50% for ages under 75 and grading up to 100% by age 80, projected generationally using Scale MP-2014. For disabled retirees, mortality rates were based on the RP-2014 Disabled Mortality Table set forward four years.

The actuarial assumptions used in the July 1, 2019 and 2018 valuations were based on the results of an actuarial experience study dated April 30, 2015, for the period July 1, 2009 – June 30, 2014. An actuarial experience study is generally conducted every five years.

The TFFR Board is responsible for establishing investment policy for the fund assets under NDCC 15-39.1-05.2. Benefit payments are projected to occur over a long period of time. This allows TFFR to adopt a long-term investment horizon and asset allocation policy for the management of fund assets. Asset allocation policy is critical because it defines the basic risk and return characteristics of the investment portfolio. Asset allocation targets are established using an asset-liability analysis designed to assist the Board in determining an acceptable volatility target for the fund and an optimal asset allocation policy mix. This asset-liability analysis considers both sides of the plan balance sheet, utilizing both quantitative and qualitative inputs, in order to estimate the

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2019 and 2018

potential impact of various asset class mixes on key measures of total plan risk, including the resulting estimated impact of funded status and contribution rates.

The long-term expected rate of return on TFFR investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the TFFR target asset allocation as of July 1, 2019 and 2018 are summarized in the following tables:

2019	Target Allocation	Long-Term Expected Real Rate of Return
Global Equity	58.0%	6.9%
Global Fixed Income	23.0%	2.1%
Global Real Assets	18.0%	5.4%
Cash Equivalents	1.0%	0.0%

2018	Target Allocation	Long-Term Expected Real Rate of Return
Asset Class		
Global Equity	58.0%	6.7%
Global Fixed Income	23.0%	1.5%
Global Real Assets	18.0%	5.1%
Cash Equivalents	1.0%	0.0%

As part of the most recent asset/liability study, the total fund real rate of return was upwardly adjusted by 0.50% to reflect a longer investment time horizon than is assumed in the investment consultant's expected returns and to account for above benchmark returns achieved through active management. In order to estimate the nominal rate of return, the real rate of return was adjusted upward by 2.75% for expected inflation.

**Discount Rate**

The discount rate used to measure the total pension liability was 7.75% as of June 30, 2019 and 2018. The projection of cash flows used to determine the discount rate assumed that member and employer contributions will be made at rates equal to those based on the July 1, 2019 and 2018 Actuarial Valuation Report. For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs of future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, TFFR's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members as of July 1, 2019 and 2018. Therefore, the long-term

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2019 and 2018

expected rate of return on TFFR investments was applied to all periods of projected benefit payments to determine the total pension liability as of June 30, 2019 and 2018.

**Sensitivity of Net Pension Liability**

The following presents the net pension liability of the TFFR employers calculated using the discount rate of 7.75% as of June 30, 2018 and 2017, as well as what the employers' net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate:

	1% Decrease (6.75%)	Current Discount Rate (7.75%)	1% Increase (8.75%)
2019			
Employers' net pension liability	\$ 1,859,994,289	\$ 1,377,253,104	\$ 976,082,834
2018			
Employers' net pension liability	\$ 1,799,744,383	\$ 1,332,858,315	\$ 944,554,161

**Note 9 - ND Public Employees Retirement System (NDPERS)**

Permanent employees of RIO participate in the pension and other post-employment benefit (OPEB) plans of NDPERS, which is also an agency of the State of North Dakota financial reporting entity and is included in the State of North Dakota's Comprehensive Annual Financial Report. The following brief description of NDPERS is provided for general information purposes only. Participants should refer to NDCC Chapter 54-52 for more complete information.

NDPERS pension (Main System) and OPEB plans are cost-sharing multiple-employer defined benefit plans that cover employees/retirees of the State of North Dakota, its agencies and various participating political subdivisions. NDPERS pension plan provides for pension, death and disability benefits. NDPERS OPEB plan provides a credit toward the monthly health insurance premium of members receiving retirement benefits from the PERS, HPRS and Judges retirement under Chapter 27-17 of the North Dakota Century Code. Effective July 1, 2015, the credit is also available to apply towards monthly premiums under the state dental, vision and long-term care plan and any other health insurance plan. The cost to administer the pension plan is financed through the contributions and investment earnings of the plan. The Retiree Health Insurance Credit Fund is advance-funded on an actuarially determined basis.

Responsibility for administration of the NDPERS defined benefit pension and OPEB plans is assigned to a Board comprised of nine members. The Board consists of a Chairman, who is appointed by the Governor, one member appointed by the Attorney General, one member appointed by the State Health Officer, three members elected by the active membership of the NDPERS system, one member elected by the retired public employees and two members of the legislative assembly appointed by the chairman of the legislative management.

**Pension Benefits**

Benefits are set by statute. NDPERS has no provisions or policies with respect to automatic and ad hoc post-retirement benefit increases. Members of the Main System are entitled to unreduced monthly pension benefits beginning when the sum of age and years of credited service equal or exceed 85 (Rule of 85), or at normal



---

retirement age (65). For members hired on or after January 1, 2016 the Rule of 85 is replaced with the Rule of 90 with a minimum age of 60. The monthly pension benefit is equal to 2.00% of their average monthly salary, using the highest 36 months out of the last 180 months of service, for each year of service. The plan permits early retirement at ages 55-64 with three or more years of service.

Members may elect to receive the pension benefits in the form of a single life, joint and survivor, term-certain annuity, or partial lump sum with ongoing annuity. Members may elect to receive the value of their accumulated contributions, plus interest, as a lump sum distribution upon retirement or termination, or they may elect to receive their benefits in the form of an annuity. For each member electing an annuity, total payment will not be less than the members' accumulated contributions plus interest.

### **Death and Disability Benefits**

Death and disability benefits are set by statute. If an active member dies with less than three years of service, a death benefit equal to the value of the member's accumulated contributions, plus interest, is paid to the member's beneficiary. If the member has earned more than three years of credited service, the surviving spouse will be entitled to a single payment refund, life-time monthly payment in an amount equal to 50% of the member's accrued normal retirement benefit, or monthly payments in an amount equal to the member's accrued 100% Joint and Survivor retirement benefit if the member had reached normal retirement age prior to date of death. If the surviving spouse dies before the member's accumulated pension benefits are paid, the balance will be payable to the surviving spouse's beneficiary.

Eligible members, who become totally disabled after a minimum of 180 days of service, receive monthly disability benefits equal to 25% of their final average salary with a minimum benefit of \$100. To qualify under this section, the member has to become disabled during the period of eligible employment and apply for benefits within one year of termination. The definition for disabled is set by the System in the North Dakota Administrative Code.

### **Refunds of Member Contributions**

Upon termination, if a member is not vested (is not 65 or does not have three years of service credited for the NDPERS) they will receive the accumulated member contributions plus interest, or may elect to receive this amount at a later date. If a member has vested, they have the option of applying for a refund or can remain as a terminated vested participant. If a member terminated and withdrew their accumulated member contributions and is subsequently reemployed, they have the option of repurchasing their previous service.

### **Member and Employer Contributions**

Member and employer contributions paid to NDPERS are set by statute and are established as a percent of salaries and wages. Member contribution rates are 7% and employer contribution rates are 7.12% of covered compensation.

The member's account balance includes the vested employer contributions equal to the member's contributions to an eligible deferred compensation plan. The minimum member contribution is \$25 and the maximum may not exceed the following:

- 1 to 12 months of service – Greater of one percent of monthly salary or \$25
- 13 to 24 months of service – Greater of two percent of monthly salary or \$25
- 25 to 36 months of service – Greater of three percent of monthly salary or \$25
- Longer than 36 months of service – Greater of four percent of monthly salary or \$25

---

**OPEB Benefits**

The employer contribution for the PERS, the HPRS and the Defined Contribution Plan is set by statute at 1.14% of covered compensation. The employer contribution for employees of the state board of career and technical education is 2.99% of covered compensation for a period of eight years ending October 1, 2015. Employees participating in the retirement plan as part-time/temporary members are required to contribute 1.14% of their covered compensation to the Retiree Health Insurance Credit Fund. Employees purchasing previous service credit are also required to make an employee contribution to the Fund. The benefit amount applied each year is shown as "prefunded credit applied" on the Statement of Changes in Plan Net Position for the OPEB trust funds.

Retiree health insurance credit benefits and death and disability benefits are set by statute. There are no provisions or policies with respect to automatic and ad hoc post-retirement benefit increases. Employees who are receiving monthly retirement benefits from the PERS, the HPRS, the Defined Contribution Plan, the Chapter 27-17 judges or an employee receiving disability benefits, or the spouse of a deceased annuitant receiving a surviving spouse benefit or if the member selected a joint and survivor option are eligible to receive a credit toward their monthly health insurance premium under the state health plan.

Effective July 1, 2015, the credit is also available to apply towards monthly premiums under the state dental, vision and long-term care plan and any other health insurance plan. The benefits are equal to \$5.00 for each of the employee's, or deceased employee's years of credited service not to exceed the premium in effect for selected coverage. The retiree health insurance credit is also available for early retirement with reduced benefits.

**Pension & OPEB Liabilities, Pension & OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions & OPEB**

At June 30, 2019 and 2018, RIO reported a liability of \$2,704,103 and \$2,629,203, respectively, for its proportionate share of the net pension and OPEB liability. These amounts are included in the accrued liabilities in the statements of net position. The net pension and OPEB liability was measured as of June 30, 2018 and 2017, and the total pension and OPEB liability used to calculate the net pension and OPEB liability was determined by an actuarial valuation as of that date. RIO's proportion of the net pension liability was based on RIO's share of covered payroll in the pension and OPEB plans relative to the covered payroll of all participating NDPERS Main System and OPEB employers. At June 30, 2018, RIO's pension plan proportion was 0.153507 percent and as of June 30, 2017, was 0.156317 percent. RIO's OPEB plan proportion was 0.144121 percent as of June 30, 2018, and 0.147503% as of June 30, 2017.

RIO recognized pension and OPEB expense of \$345,458 and \$405,602 for the years ended June 30, 2019 and 2018, respectively. At June 30, 2019 and 2018, RIO reported deferred outflows of resources and deferred inflows of resources related to pensions and OPEB from the following sources:

North Dakota Retirement and Investment Office  
Notes to Combined Financial Statements  
June 30, 2019 and 2018

	Deferred Outflows of Resources		Deferred Inflows of Resources	
	2019	2018	2019	2018
Differences between expected and actual experience	\$ 10,258	\$ 14,934	\$ 90,482	\$ 15,088
Changes in assumptions	944,466	1,041,506	36,976	56,669
Net differences between projected and actual earnings on plan investments	-	33,791	15,046	4,411
Changes in proportion and differences between employer contributions and proportionate share of contributions	96,731	138,324	29,040	268
Employer contributions subsequent to the measurement date	130,831	129,449	-	-
Total	<u>\$ 1,182,286</u>	<u>\$ 1,358,004</u>	<u>\$ 171,544</u>	<u>\$ 76,436</u>

Deferred outflows of resources related to pensions and OPEB resulting from employer contributions subsequent to the measurement date in the amount of \$130,831 will be recognized as a reduction of the net pension liability in the year ended June 30, 2020.

Other amounts reported as deferred outflows of resources and (deferred inflows of resources) related to pensions and OPEB will be recognized in pension expense as follows:

Year Ended June 30	
2020	\$ 302,482
2021	267,407
2022	198,444
2023	105,306
2024	5,670
Thereafter	602
	<u>\$ 879,911</u>

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2019 and 2018

**Actuarial assumptions**

The total pension and OPEB liabilities in the July 1, 2018 and 2017 actuarial valuation were determined using the following actuarial assumptions, applied to all periods included in the measurement:

**2018 – Pension Plan**

Inflation			2.50%	
Salary increases	Service at Beginning of Year:	0	12.00%	
		1	9.50%	
		2	7.25%	
	Age*	Under 30	7.25%	10.00%
		30 - 39	6.50%	7.50%
		40 - 49	6.25%	6.75%
50 - 59		5.75%	6.50%	
	60+	5.00%	5.25%	

\*Age-based salary increase rates apply for employees with three or more years of service

Investment rate of return			7.75%, net of investment expenses
Cost-of-living adjustments			None

**2017 – Pension Plan**

Inflation			3.50%	
Salary increases	Service at Beginning of Year:	0	15.00%	
		1	10.00%	
		2	8.00%	
	Age*	Under 36	8.00%	8.00%
		36 - 40	7.50%	7.50%
		41 - 49	6.00%	6.00%
50+		5.00%	5.00%	

\*Age-based salary increase rates apply for employees with three or more years of service

Investment rate of return			7.75%, net of investment expenses
Cost-of-living adjustments			None

For active members, inactive members and healthy retirees, mortality rates were based on the RP-2000 Combined Healthy Mortality Table set back two years for males and three years for females, projected generationally using the SSA 2014 Intermediate Cost scale from 2014. For disabled retirees, mortality rates were based on the RP-2000 Disabled Mortality Table set back one year for males (no setback for females) multiplied by 125%.

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2019 and 2018

The actuarial assumptions used were based on the results of an actuarial experience study completed in 2015. They are the same as the assumptions used in the July 1, 2018 and 2017, funding actuarial valuation for NDPERS.

As a result of the 2015 actuarial experience study, the NDPERS Board adopted several changes to the actuarial assumptions effective July 1, 2015. This includes changes to the mortality tables, disability incidence rates, retirement rates, administrative expenses, salary scale, and percent married assumption.

**2018 and 2017 - OPEB Plan**

Inflation	2.50%
Salary increase	Not applicable
Investment Rate of Return	7.50%, net of investment expenses
Cost of Living Adjustment	None

For active members, inactive members and healthy retirees, mortality rates were based on the RP-2000 Combined Healthy Mortality Table set back two years for males and three years for females, projected generationally using the SSA 2014 Intermediate Cost scale from 2014. For disabled retirees, mortality rates were based on the RP-2000 Disabled Mortality Table set back one year for males (no setback for females) multiplied by 125%.

The long-term expected rate of return on pension and OPEB plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the plans' target asset allocations are summarized in the following table:

**2019 - Pension Plan**

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
Global Equity	57%	6.8%
Global Fixed Income	23%	1.5%
Global Real Assets	20%	5.1%

**2018 - Pension Plan**

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
Global Equity	57%	6.7%
Global Fixed Income	22%	1.0%
Global Real Assets	20%	5.2%
Cash Equivalents	1%	0.0%

**2019 - OPEB Plan**

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
Large Cap Domestic Equity	37%	5.8%
Small Cap Domestic Equity	9%	7.1%
International Equity	14%	6.2%
Core-Plus Fixed Income	40%	1.5%

**2018 - OPEB Plan**

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
Large Cap Domestic Equity	37%	5.8%
Small Cap Domestic Equity	9%	7.1%
International Equity	14%	6.2%
Core-Plus Fixed Income	40%	1.6%

**Discount rate**

For pension plans, GASB Statement No. 67 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the System to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The current employer and employee fixed rate contributions are assumed to be made in each future year. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. In years where assets are not projected to be sufficient to meet benefit payments, which is the case for the PERS pension plan as of June 30, 2018 and 2017, the use of a municipal bond rate is required.

The Single Discount Rate (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects (1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits) and (2) a tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of the 2018 valuation, the expected rate of return on pension plan investments is 7.75%, the municipal bond rate is 3.62%, and the resulting Single Discount Rate is 6.32%. For the purpose of the 2017 valuation, the expected rate of return on pension plan investments is 7.75%, the municipal bond rate is 3.56%, and the resulting Single Discount Rate is 6.44%.

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2019 and 2018

The discount rate used to measure the total OPEB liability for both 2018 and 2017 was 7.5%. The projection of cash flows used to determine the discount rate assumed plan member and statutory/Board approved employer contributions will be made at rates equal to those based on the July 1, 2018, 2017 and 2016 OPEB actuarial valuation reports. For this purpose, only employer contributions that are intended to fund benefits of current OPEB members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs of future plan members and their beneficiaries are not included. Based on those assumptions, the OPEB fiduciary net position was projected to be sufficient to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB investments was applied to all periods of projected benefit payments to determine the total OPEB liability for both years.

**Sensitivity of the Employer's proportionate share of the net pension and OPEB liability to changes in the discount rate**

The following presents the RIO's proportionate share of the net pension and OPEB liability calculated using the current discount rate, as well as what the RIO's proportionate share of the net pension and OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate:

<b>2019</b>			
	1% Decrease <u>(5.32%)</u>	Current Discount Rate (6.32%)	1% Increase <u>(7.32%)</u>
RIO's net pension liability	\$ 3,520,141	\$ 2,590,598	\$ 1,814,924
	1% Decrease <u>(6.5%)</u>	Current Discount Rate (7.5%)	1% Increase <u>(8.5%)</u>
RIO's net OPEB liability	143,611	113,505	87,696
<b>2018</b>			
	1% Decrease <u>(5.44%)</u>	Current Discount Rate (6.44%)	1% Increase <u>(7.44%)</u>
RIO's net pension liability	\$ 3,410,833	\$ 2,512,527	\$ 1,765,175
	1% Decrease <u>(6.5%)</u>	Current Discount Rate (7.5%)	1% Increase <u>(8.5%)</u>
RIO's net OPEB liability	146,065	116,676	91,486

**Sensitivity for Healthcare Cost Trend Rates**

The benefit provided by the North Dakota retiree health insurance credit fund is a fixed dollar subsidy and is not affected by the healthcare cost trend. Therefore, a sensitivity analysis was not performed.

**Pension and OPEB plan fiduciary net position**

Detailed information about the pension and OPEB plans' fiduciary net position is available in the separately issued NDPERS Comprehensive Annual Financial Report. This report can be accessed on the NDPERS website at <https://ndpers.nd.gov/about/financial/annual-report-archive/>.

**Note 10 - Related Parties**

As stated in Note 1, RIO is an agency of the State of North Dakota; as such, other agencies of the state are related parties.

**Note 11 - Contingencies/Litigation**

The State Investment Board has been named as a defendant in two cases, arising out of the Tribune and General Motors bankruptcy proceedings, relating to securities that were purchased by external investment managers in one or more portfolios held by the SIB on behalf of its investment client funds. Outside counsel has been retained for both cases, in addition to assistance received from the ND Office of Attorney General. The SIB became a party to a Settlement Agreement dated April 10, 2019, as a Term Lender in the General Motors bankruptcy proceeding. The liability will be borne by other parties, so no liability was accrued by the SIB as of June 30, 2019. On July 15, 2019, in the Tribune proceeding, the Litigation Trustee filed a Notice of Appeal to the Second Circuit, appealing the various judgments of the U.S. District Court that dismissed his claims against defendants in the Action and denying leave to amend his complaint to add a constructive fraudulent transfer claim. It is expected that briefing of all the legal issues before the Second Circuit will occur in late 2019 and early 2020. Accordingly, no liability has been recorded for this case.



**REQUIRED SUPPLEMENTARY INFORMATION**

**Schedule of Changes in Net Pension Liability and Related Ratios**  
**North Dakota Teachers' Fund for Retirement**  
**Last 10 Fiscal Years\***  
**(Dollars in thousands)**

	2019	2018	2017	2016	2015	2014
<b>Total pension liability</b>						
Service cost	\$ 77,756	\$ 78,041	\$ 75,476	\$ 68,239	\$ 60,618	\$ 56,752
Interest	296,876	287,375	276,412	265,440	249,064	237,821
Changes of benefit terms	-	-	-	-	-	-
Differences between expected and actual experience	(23,495)	(27,939)	(10,749)	(8,093)	2,209	9,347
Changes of assumptions	-	-	-	-	171,325	-
Benefit payments, including refunds of member contributions	(221,228)	(207,979)	(196,516)	(185,969)	(172,239)	(162,259)
<b>Net change in total pension liability</b>	<b>129,909</b>	<b>129,498</b>	<b>144,623</b>	<b>139,617</b>	<b>310,977</b>	<b>141,661</b>
<b>Total pension liability - beginning</b>	<b>3,863,515</b>	<b>3,734,017</b>	<b>3,589,394</b>	<b>3,449,777</b>	<b>3,138,800</b>	<b>2,997,139</b>
<b>Total pension liability - ending (a)</b>	<b>\$ 3,993,424</b>	<b>\$ 3,863,515</b>	<b>\$ 3,734,017</b>	<b>\$ 3,589,394</b>	<b>\$ 3,449,777</b>	<b>\$ 3,138,800</b>
<b>Plan fiduciary net position</b>						
Contributions - employer	\$ 89,445	\$ 86,676	\$ 86,059	\$ 82,840	\$ 78,422	\$ 62,355
Contributions - member	82,429	79,878	79,309	76,343	72,268	56,555
Contributions - purchased service credit	1,917	2,181	2,553	2,768	1,601	2,034
Contributions - other	159	194	236	45	172	48
Net investment income	135,043	211,345	266,688	8,239	73,205	294,246
Benefit payments, including refunds of member contributions	(221,228)	(207,979)	(196,516)	(185,969)	(172,239)	(162,259)
Administrative expenses	(2,251)	(2,129)	(2,173)	(1,852)	(1,923)	(1,586)
<b>Net change in plan fiduciary net position</b>	<b>85,514</b>	<b>170,166</b>	<b>236,156</b>	<b>(17,586)</b>	<b>51,506</b>	<b>251,393</b>
<b>Plan fiduciary net position - beginning **</b>	<b>2,530,657</b>	<b>2,360,491</b>	<b>2,124,335</b>	<b>2,141,921</b>	<b>2,090,415</b>	<b>1,839,584</b>
<b>Plan fiduciary net position - ending (b)</b>	<b>\$ 2,616,171</b>	<b>\$ 2,530,657</b>	<b>\$ 2,360,491</b>	<b>\$ 2,124,335</b>	<b>\$ 2,141,921</b>	<b>\$ 2,090,977</b>
<b>Plan's net pension liability - ending (a) - (b)</b>	<b>\$ 1,377,253</b>	<b>\$ 1,332,858</b>	<b>\$ 1,373,526</b>	<b>\$ 1,465,059</b>	<b>\$ 1,307,856</b>	<b>\$ 1,047,823</b>
<b>Plan fiduciary net position as a percentage of the total pension liability</b>	<b>65.5%</b>	<b>65.5%</b>	<b>63.2%</b>	<b>59.2%</b>	<b>62.1%</b>	<b>66.6%</b>
<b>Covered payroll</b>	<b>\$ 701,528</b>	<b>\$ 679,809</b>	<b>\$ 674,971</b>	<b>\$ 649,725</b>	<b>\$ 615,105</b>	<b>\$ 580,053</b>
<b>Plan's net pension liability as a percentage of covered payroll</b>	<b>196.3%</b>	<b>196.1%</b>	<b>203.5%</b>	<b>225.5%</b>	<b>212.6%</b>	<b>180.6%</b>

**Notes to Schedule:**

\* Complete data for this schedule is not available prior to 2014.

\*\* Restated in 2015 due to GASB 68 implementation.

*Changes of assumptions:* In 2015, amounts reported as changes of assumptions resulted primarily from a decrease in the investment return assumption from 8% to 7.75% and an updated mortality improvement scale.

**Schedule of Employer Contributions  
North Dakota Teachers' Fund for Retirement  
Last 10 Fiscal Years  
(Dollars in thousands)**

Fiscal Year	Actuarially determined contribution	Contributions in relation to the actuarially determined contribution	Contribution deficiency (excess)	Covered payroll	Contributions as a percentage of covered payroll
2010	\$ 52,053	\$ 39,837	\$ 12,216	\$ 482,868	8.25%
2011	65,113	44,545	20,568	509,091	8.75%
2012	69,374	46,126	23,248	527,156	8.75%
2013	52,396	59,301	(6,905)	551,656	10.75%
2014	59,513	62,355	(2,842)	580,053	10.75%
2015	71,168	78,422	(7,254)	615,105	12.75%
2016	84,724	82,840	1,884	649,725	12.75%
2017	89,231	86,059	3,172	674,971	12.75%
2018	88,307	86,676	1,631	679,809	12.75%
2019	90,778	89,445	1,333	701,528	12.75%

**Notes to Schedule**

*Valuation Date:* Actuarially determined contributions for each fiscal year are based on the actuarial valuation as of the beginning of the year in which contributions are reported.

*Methods and assumptions used to determine contribution rates:*

Actuarial cost method	Entry age
Amortization method	Level percentage of payroll, closed
Remaining amortization period	24 years
Asset valuation method	5-year smoothed market
Inflation	2.75%; decreased from 3% prior to July 1, 2015.
Salary increases	4.25% - 14.5%, including inflation and productivity; 4.5% - 14.75% prior to July 1, 2015.
Investment rate of return	7.75%, net of investment expenses, including inflation. Rate was decreased from 8% beginning July 1, 2015.
Retirement age	In the 2015 valuation, rates of retirement were changed to better reflect anticipated future experience. In the 2010 valuation, expected retirement ages of plan members were adjusted to more closely reflect actual experience.
Mortality	In the 2015 valuation, assumed life expectancies were adjusted as a result of adopting the RP-2014 mortality tables with generational improvement. In prior years, those assumptions were based on percentages of GRS post termination non-disabled tables and RP-2000 disabled-life tables.

**Schedule of Investment Returns  
North Dakota Teachers' Fund for Retirement  
Last 10 Fiscal Years\***

**ANNUAL MONEY-WEIGHTED RATE OF RETURN, NET OF INVESTMENT EXPENSES**

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
Annual money-weighted rate of return, net of investment expense	5.46%	9.15%	12.81%	0.39%	3.56%	16.35%	13.60%

\***Note:** Annual money-weighted rates of return not available prior to 2013.

**Schedule of Employer's Share of Net Pension and OPEB Liability**  
**ND Public Employees Retirement System**  
**Last 10 Fiscal Years\***  
**(Dollars in thousands)**

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>
RIO's proportion of NDPERS net pension liability (asset)	0.153507%	0.156317%	0.152969%	0.145546%	0.121849%
RIO's proportion of NDPERS net OPEB liability (asset)	<u>0.144121%</u>	<u>0.147503%</u>	_____	_____	_____
RIO's proportionate share of NDPERS net pension liability (asset)	\$ 2,591	\$ 2,513	\$ 1,491	\$ 990	\$ 773
RIO's proportionate share of NDPERS net OPEB liability (asset)	<u>114</u>	<u>117</u>	_____	_____	_____
RIO's covered payroll	<u>\$ 1,567</u>	<u>\$ 1,596</u>	<u>\$ 1,507</u>	<u>\$ 1,377</u>	<u>\$ 1,026</u>
RIO's proportionate share of NDPERS net pension liability (asset) as a percentage of its covered payroll	165.35%	157.46%	98.94%	71.90%	75.34%
RIO's proportionate share of NDPERS net OPEB liability (asset) as a percentage of its covered payroll	<u>7.28%</u>	<u>7.31%</u>	_____	_____	_____
NDPERS Plan fiduciary net position as a percentage of the total pension liability	62.80%	61.98%	70.46%	77.15%	77.70%
NDPERS Plan fiduciary net position as a percentage of the total OPEB liability	<u>61.89%</u>	<u>59.78%</u>	_____	_____	_____

\*Complete data for this schedule is not available prior to 2015 for pension liability and prior to 2018 for OPEB liability. Amounts presented for each fiscal year have a measurement date of the previous fiscal year end.

**Schedule of Employer Pension and OPEB Contributions**  
**ND Public Employees Retirement System**  
**Last 10 Years\***  
**(Dollars in thousands)**

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
RIO's Statutorily required pension contributions	\$ 113	\$ 112	\$ 114	\$ 107	\$ 98	\$ 73
RIO's Statutorily required OPEB contributions	18	18	18			
RIO's pension contributions in relation to the statutory required contribution	113	112	114	107	98	73
RIO's OPEB contributions in relation to the statutory required contribution	<u>18</u>	<u>18</u>	<u>18</u>			
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
RIO's Covered payroll	\$1,584	\$1,567	\$1,596	\$1,507	\$1,377	\$1,026
RIO's pension contributions as a percentage of covered payroll	7.12%	7.12%	7.12%	7.12%	7.12%	7.12%
RIO's OPEB contributions as a percentage of covered payroll	1.14%	1.14%	1.14%			

\*Complete data for this schedule is not available prior to 2014 for pension contributions and 2017 for OPEB contributions.

	Pension Pool Participants					Insurance Pool Participants						
	Public Employees Retirement System	Bismark City Employee Pension Plan	Bismark City Police Pension Plan	City of Grand Forks Employee Pension Plan	City of Grand Forks Park District	Workforce Safety & Insurance	State Fire & Tornado	State Bonding	Petroleum Tank Release Comp. Fund	Insurance Regulatory Trust Fund	Cultural Endowment Fund	Risk Mgmt
<b>Assets:</b>												
<b>Investments</b>												
Global equities	\$ 1,833,445.29	\$ 49,404,652	\$ 2,188,634	\$ 4,189,381	\$ 3,997,403	\$ 461,780,018	\$ 7,954,401	\$ 0	\$ 0	\$ 1,885,842	\$ 261,358	\$ 1,473,923
Global fixed income	709,190,088	34,333,280	1,722,774	15,888,990	1,764,054	123,657,510	12,389,926	1,959,837	2,943,031	2,159,203	175,687	3,416,996
Global real assets	581,869,362	20,136,760	8,047,190	9,823,761	1,376,593	340,272,112	-	-	-	-	23,891	-
Cash equivalents	18,590,413	321,335	78,715	653,416	4,962	16,110,908	2,270,428	1,621,474	2,990,789	2,163,394	4,038	245,073
<b>Total investments</b>	<b>3,143,064,392</b>	<b>104,896,027</b>	<b>41,736,313</b>	<b>68,260,548</b>	<b>7,153,012</b>	<b>2,054,738,148</b>	<b>22,614,755</b>	<b>3,581,311</b>	<b>5,933,820</b>	<b>6,208,439</b>	<b>474,974</b>	<b>4,860,692</b>
Invested sec lending collateral	10,241,786	374,163	139,760	228,950	31,006	6,100,164	70,368	8,340	12,389	13,623	1,436	17,799
Investment income receivable	9,865,697	321,219	126,662	158,753	23,415	10,662,254	146,703	28,111	60,415	10,343	337	48,931
Operating Cash	70,823	-	-	-	-	43,795	1,278	1,563	963	1,261	202	1,168
Miscellaneous receivable	7,037	-	-	-	-	4,647	52	8	13	5	1	11
Due from other state agencies	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total assets</b>	<b>3,163,249,735</b>	<b>104,891,409</b>	<b>42,002,735</b>	<b>68,648,251</b>	<b>7,207,433</b>	<b>2,071,549,008</b>	<b>22,833,156</b>	<b>3,619,333</b>	<b>6,007,600</b>	<b>6,233,671</b>	<b>476,950</b>	<b>4,928,601</b>
<b>Deferred outflows of resources</b>												
Related to pensions	137,835	-	-	-	-	92,624	1,120	165	326	88	21	279
<b>Liabilities:</b>												
Investment expenses payable	1,036,493	46,885	18,660	15,840	2,368	517,008	4,797	741	1,131	740	28	540
Securities lending collateral	10,241,786	374,163	139,760	228,950	31,006	6,100,164	70,368	8,340	12,389	13,623	1,436	17,799
Accounts payable	68,450	-	-	-	-	44,687	505	79	133	48	10	106
Accrued expenses	361,740	-	-	-	-	248,338	3,366	454	923	228	56	778
Miscellaneous payable	-	5,777	2,328	3,572	389	-	-	-	-	-	-	-
Due to other state funds	-	-	-	-	-	-	-	-	-	-	-	-
Due to other state agencies	392	-	-	-	-	259	3	-	1	-	-	1
<b>Total liabilities</b>	<b>11,708,861</b>	<b>426,825</b>	<b>160,748</b>	<b>248,362</b>	<b>33,763</b>	<b>6,910,456</b>	<b>79,039</b>	<b>9,614</b>	<b>14,577</b>	<b>14,639</b>	<b>1,530</b>	<b>19,224</b>
<b>Deferred inflows of resources</b>												
Related to pensions	\$ 19,243	\$ 0	\$ 0	\$ 0	\$ 0	\$ 13,592	\$ 185	\$ 25	\$ 50	\$ 7	\$ 3	\$ 46
<b>Fiduciary net position held in trust for external investment pool participants</b>	<b>\$ 3,151,659,466</b>	<b>\$ 104,464,584</b>	<b>\$ 41,841,987</b>	<b>\$ 68,399,889</b>	<b>\$ 7,173,670</b>	<b>\$ 2,064,717,584</b>	<b>\$ 22,755,052</b>	<b>\$ 3,609,859</b>	<b>\$ 5,993,299</b>	<b>\$ 6,219,113</b>	<b>\$ 475,438</b>	<b>\$ 4,909,610</b>
Each participant unit is valued at \$ 100												
Participant units outstanding	3,151,659,466	104,464,584	41,841,987	68,399,889	7,173,670	2,064,717,584	22,755,052	3,609,859	5,993,299	6,219,113	475,438	4,909,610

North Dakota Retirement and Investment Office  
 Combining Statement of Net Position – Investment Trust Funds – Fiduciary Funds  
 June 30, 2019 (with Comparative Totals for 2018)

Insurance Pool Participants								Individual Investment Accounts					Totals	
Risk Mgmt Workers' Comp	ND Ass'n. of Counties Fund	PERS Group Insurance	Budget Stabilization Fund	City of Bismarck Deferred Sick Leave	City of Fargo Fargo Dome Fund	State Board of Medicine	Lewis & Clark Interpretive Center Endowment	Legacy Fund	Job Service of North Dakota	Tobacco Prevention and Control Fund	PERS Retiree Health Credit Fund	2019	2018	
\$ 19,428	\$ 2,221,513	\$ 0	\$ 0	\$ 233,945	\$ 22,440,882	\$ 498,707	\$ 263,953	\$ 3,203,129,265	\$ 9,094,960	\$ 0	\$ 84,480,446	\$ 5,758,237,240	\$ 5,205,817,256	
3,106,809	3,918,313	28,207,330	115,349,456	505,062	17,458,242	1,809,875	480,083	2,170,475,305	77,780,893	7,972,749	51,472,649	4,510,779,742	4,099,552,552	
-	-	-	-	-	4,420,372	46,881	-	923,488,586	-	-	-	1,889,505,508	1,788,156,119	
155,645	189,899	2,867,344	2,673,336	38,811	447,844	10,907	7,499	255,829,361	409,888	1,324,990	9,404	309,039,173	127,104,537	
5,181,882	6,329,025	31,074,674	118,022,792	777,818	44,767,340	2,366,370	751,535	6,552,922,517	97,285,041	9,297,739	135,962,499	12,467,561,663	11,220,630,464	
9,080	21,896	183,946	757,197	2,607	139,195	12,084	2,625	9,392,771	-	-	-	37,770,485	40,721,545	
5,998	4,028	(7,554)	684,339	1,779	73,292	(3,985)	228	27,837,411	237	2,389	22	50,051,024	38,863,279	
1,147	-	-	21,591	-	-	-	-	113,720	-	-	-	257,511	410,261	
12	-	-	270	-	-	-	-	14,323	-	-	-	26,379	28,001	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5,208,119	6,354,249	31,251,066	119,486,189	782,204	44,979,827	2,374,469	754,388	6,600,280,742	97,285,278	9,300,128	135,962,521	12,555,667,062	11,300,653,550	
275	-	-	5,766	-	-	-	-	234,169	-	-	-	472,668	544,101	
299	1,417	12,076	49,281	201	9,561	782	216	2,917,084	83,874	6,670	102,829	4,829,521	2,279,952	
9,080	21,896	183,946	757,197	2,607	139,195	12,084	2,625	9,392,771	-	-	-	37,770,485	40,721,545	
112	-	-	2,580	-	-	-	-	137,104	-	-	-	253,814	136,431	
739	-	-	31,560	-	-	-	-	545,406	-	-	-	1,193,588	1,111,661	
-	348	1,802	-	250	2,493	250	250	-	5,728	1,614	7,314	32,115	34,655	
-	-	-	-	-	-	-	-	455,263,216	-	-	-	455,263,216	-	
1	-	-	15	-	-	-	-	798	-	-	-	1,470	2,572	
20,231	22,961	197,824	840,633	3,058	151,249	13,116	3,091	478,256,379	89,602	8,284	110,413	499,344,209	44,286,816	
543	\$ 0	\$ 0	\$ 3,618	\$ 0	\$ 0	\$ 0	\$ 0	\$ 30,661	\$ 0	\$ 0	-	67,473	27,917	
\$ 5,188,120	\$ 6,331,288	\$ 31,053,242	\$ 118,647,704	\$ 779,146	\$ 44,828,578	\$ 2,361,353	\$ 751,297	\$ 6,122,227,871	\$ 97,195,676	\$ 9,291,844	\$ 135,852,378	\$ 12,056,728,048	\$ 11,256,882,918	
5,188,120	6,331,288	31,053,242	118,647,704	779,146	44,828,578	2,361,353	751,297	6,122,227,871	97,195,676	9,291,844	135,852,378	12,056,728,048	11,256,882,918	



	Pension Pool Participants					Insurance Pool Participants						
	Public Employees Retirement System	Bismarck City Employee Pension Plan	Bismarck City Police Pension Plan	City of Grand Forks Employee Pension Plan	City of Grand Forks Park District Pension Plan	Workforce Safety & Insurance	State Fire & Tornado	State Bonding	Petroleum Tank Release Comp. Fund	Insurance Regulatory Trust Fund	Cultural Endowment Fund	Risk Mgmt
Additions:												
Investment income:												
Net change in fair value of investments	\$ 103,282,337	\$ 3,701,861	\$ 1,426,526	\$ 2,413,739	\$ 258,536	\$ 86,250,882	\$ 871,338	\$ 121,242	\$ 191,339	\$ 174,407	\$ 16,907	\$ 253,740
Interest, dividends and other income	68,783,166	2,384,963	929,699	1,463,331	167,316	50,611,227	531,919	80,844	140,430	81,816	10,871	106,435
	172,065,503	6,086,824	2,356,225	3,877,070	425,852	136,862,109	1,403,257	202,086	331,769	256,223	27,778	360,175
Less investment expenses	7,736,583	265,103	106,866	160,844	20,402	3,714,157	34,550	2,556	4,014	3,890	900	6,532
Net investment income	164,328,920	5,821,721	2,249,359	3,716,226	405,450	133,147,952	1,368,707	199,530	327,755	252,333	26,878	353,643
Securities lending activity:												
Securities lending income	271,874	8,461	3,430	6,197	635	144,933	2,144	113	179	280	52	371
Less Securities lending expenses	(54,358)	(1,692)	(686)	(12,39)	(127)	(28,932)	(430)	(24)	(36)	(56)	(12)	(73)
Net securities lending income	217,516	6,769	2,744	4,958	508	116,001	1,714	89	143	224	40	298
Purchase of units (\$ 1 per unit)	6,000,000	-	-	7,540,108	386,104	53,500,000	1,000,000	-	-	5,079,100	-	-
Total Additions	170,546,436	5,828,490	2,252,103	11,261,292	792,062	186,763,953	2,370,421	199,619	327,898	5,331,657	26,918	353,941
Deductions:												
Administrative Expenses	519,043	-	-	-	-	304,691	3,608	1,007	1,187	979	670	1,097
Redemption of units (\$ 1 per unit)	419,000,000	500,000	500,000	6,485,051	391,641	44,500,000	2,675,000	-	500,000	4,750,000	-	400,000
Total Deductions	42,419,043	500,000	500,000	6,485,051	391,641	44,804,691	2,678,608	1,007	501,187	4,750,979	670	401,097
Change in fiduciary net position	128,127,393	5,328,490	1,752,103	4,776,241	400,421	141,959,262	(308,187)	198,612	(173,289)	580,678	26,248	(47,156)
Fiduciary net position:												
Beginning of year	3,023,532,073	99,136,094	40,089,884	63,623,648	6,773,249	1,922,758,322	23,063,239	3,411,247	6,166,588	5,638,435	449,190	4,956,766
End of year	\$ 3,151,659,466	\$ 104,464,584	\$ 41,841,987	\$ 68,399,889	\$ 7,173,670	\$ 2,064,717,584	\$ 22,755,052	\$ 3,609,859	\$ 5,993,299	\$ 6,219,113	\$ 475,438	\$ 4,909,610

**North Dakota Retirement and Investment Office**  
**Combining Statement of Changes in Net Position – Investment Trust Funds – Fiduciary Funds**  
**Year Ended June 30, 2019 (with Comparative Totals for 2018)**

Insurance Pool Participants				Individual Investment Accounts										Totals	
Risk Mgmt Workers' Comp	ND Ass'n of Counties Fund	PERS Group Insurance	Budget Stabilization Fund	City of Bismarck Deferred Sick Leave	City of Fargo Fargo Dome Fund	State Board of Medicine	Lewis & Clark Interpretive Center Endowment	Legacy Fund	Job Service of North Dakota	Tobacco Prevention and Control Fund	PERS Retiree Health Credit Fund	2019	2018		
\$ 285,789	\$ 286,310	\$ 603,923	\$ 2,511,852	\$ 33,901	\$ 1,219,139	\$ 60,744	\$ 32,619	\$ 174,927,813	\$ 3,497,989	\$ 1,117,230	\$ 5,197,140	\$ 388,737,303	\$ 527,542,620		
102,266	145,905	917,321	2,762,013	17,687	1,034,503	54,930	17,960	147,634,462	3,043,292	113,765	3,371,362	284,507,483	246,166,774		
388,055	432,215	1,521,244	5,273,865	51,588	2,253,642	115,674	50,579	322,562,275	6,541,281	1,230,995	8,568,502	673,244,786	773,709,394		
6,588	10,924	43,655	165,988	2,152	88,641	4,935	2,240	13,412,391	311,651	16,826	391,416	26,513,804	21,653,138		
381,467	421,291	1,477,589	5,107,877	49,436	2,165,001	110,739	48,339	309,149,884	6,229,630	1,214,169	8,177,086	646,730,982	752,056,256		
394	578	1,979	7,918	68	5,468	205	75	770,904	-	-	-	1,226,258	1,334,400		
(78)	(117)	(395)	(1,580)	(14)	(1,089)	(40)	(14)	(154,066)	-	-	-	(245,058)	(266,663)		
316	461	1,584	6,338	54	4,379	165	61	616,838	-	-	-	981,200	1,067,737		
1,250,000	-	219,199,000	-	-	-	-	-	692,568,943	-	-	1,319,500	987,842,755	871,266,337		
1,631,783	421,752	220,678,173	5,114,215	49,490	2,169,380	110,904	48,400	1,002,335,665	6,229,630	1,214,169	9,496,586	1,635,554,937	1,624,390,330		
1,119	-	-	17,840	-	-	-	-	928,596	-	-	-	1,779,837	1,669,600		
1,800,000	-	221,225,000	-	-	1,965,000	-	-	455,263,216	4,645,062	46,280,000	150,000	833,929,970	336,169,172		
1,801,119	-	221,225,000	17,840	-	1,965,000	-	-	456,191,812	4,645,062	46,280,000	150,000	835,709,807	337,838,772		
(169,336)	421,752	(546,827)	5,096,375	49,490	204,380	110,904	48,400	546,143,853	1,584,568	(45,065,831)	9,346,586	799,845,130	1,286,551,558		
5,357,456	5,909,536	31,600,069	113,551,329	729,656	44,624,198	2,250,449	702,897	5,576,084,018	95,611,108	54,357,675	126,505,792	11,256,882,918	9,970,331,360		
\$ 5,188,120	\$ 6,331,288	\$ 31,053,242	\$ 118,647,704	\$ 779,146	\$ 44,828,578	\$ 2,361,353	\$ 751,297	\$ 6,122,227,871	\$ 97,195,676	\$ 9,291,844	\$ 135,852,378	\$ 12,056,728,048	\$ 11,256,882,918		

North Dakota Retirement and Investment Office  
Pension and Investment Trust Funds – Schedule of Administrative Expenses  
Years Ended June 30, 2019 and 2018

	Pension Trust		Investment Trust	
	2019	2018	2019	2018
Salaries and wages:				
Salaries and wages	\$ 832,908	\$ 792,299	\$ 836,638	\$ 792,288
Fringe benefits	508,007	568,887	409,387	419,698
Total salaries and wages	<u>1,340,915</u>	<u>1,361,186</u>	<u>1,246,025</u>	<u>1,211,986</u>
Operating expenses:				
Travel	24,162	15,062	30,646	35,114
Supplies	3,167	2,266	1,563	932
Postage and Mailing Services	35,178	36,993	14,833	13,593
Printing	12,426	15,606	3,470	4,500
Small Office Equipment and Furniture	14,910	2,908	11,744	1,339
Insurance	398	387	228	223
Rent/Lease of Building Space	55,396	55,396	32,370	32,370
Repairs	917	155	536	75
Information Technology and Communications	74,217	71,000	17,519	17,863
IT Contractual Services	156,553	109,750	447,097	443,184
Professional Development	20,808	8,184	12,693	2,878
Operating Fees and Services	16,807	15,106	20,655	21,014
Professional Fees and Services	10,763	15,629	6,339	22,771
Consultant Services	263,269	198,099	153,516	81,025
Total operating expenses	<u>688,971</u>	<u>546,541</u>	<u>753,209</u>	<u>676,881</u>
Pension trust portion of investment program expenses	219,397	219,267	(219,397)	(219,267)
Depreciation	1,800	1,800	-	-
Total administrative expenses	<u>2,251,083</u>	<u>2,128,794</u>	<u>1,779,837</u>	<u>1,669,600</u>
Less - nonappropriated items:				
Consultant Services	263,269	198,099	153,516	81,025
Other operating fees paid under continuing appropriation	132,871	125,270	498,969	509,663
Depreciation	1,800	1,800	-	-
Accrual adjustments to employee benefits	196,388	255,922	147,218	168,895
Total nonappropriated items	<u>594,328</u>	<u>581,091</u>	<u>799,703</u>	<u>759,583</u>
Total appropriated expenditures	<u>\$ 1,656,755</u>	<u>\$ 1,547,703</u>	<u>\$ 980,134</u>	<u>\$ 910,017</u>

North Dakota Retirement and Investment Office  
Pension and Investment Trust Funds – Schedule of Consultant Expenses  
Years Ended June 30, 2019 and 2018

	Pension Trust		Investment Trust	
	2019	2018	2019	2018
Actuary fees:				
Segal Company	\$ 108,000	\$ 71,499	\$ -	\$ -
Auditing/Accounting fees:				
CliftonLarsonAllen LLP	97,514	82,527	30,587	29,073
Disability consulting fees:				
Sanford Health	350	425	-	-
Legal fees:				
Office of Administrative Hearings	3,383	-	-	-
K&L Gates LLP	12,880	16,541	17,066	21,646
Kasowitz, Benson, Torres & Friedman	239	197	313	309
Jackson Walker LLP	3,105	3,105	54,804	9,316
ND Attorney General	37,798	23,805	50,746	20,681
Total legal fees:	<u>57,405</u>	<u>43,648</u>	<u>122,929</u>	<u>51,952</u>
Total consultant expenses	<u>\$ 263,269</u>	<u>\$ 198,099</u>	<u>\$ 153,516</u>	<u>\$ 81,025</u>

North Dakota Retirement and Investment Office  
Pension and Investment Trust Funds – Schedule of Investment Expenses  
Years Ended June 30, 2019 and 2018

	Pension Trust		Investment Trust	
	2019	2018	2019	2018
Investment managers' fees:				
Global equity managers	\$ 1,367,498	\$ 1,380,401	\$ 1,802,596	\$ 1,794,894
Domestic large cap equity managers	730,141	(368,098)	4,636,321	557,670
Domestic small cap equity managers	429,127	586,340	1,817,606	1,544,538
International equity managers	888,364	954,958	6,526,839	6,229,944
Emerging markets equity managers	607,541	697,607	987,011	1,124,677
Domestic fixed income managers	1,137,802	1,593,550	10,833,676	11,337,399
Below investment grade fixed income managers	2,446,530	1,953,550	3,346,917	2,675,936
Diversified real assets managers	-	-	5,770,890	4,036,212
International fixed income managers	-	270,428	-	311,924
Real estate managers	2,258,800	2,660,866	5,412,650	5,965,804
Infrastructure managers	1,920,619	1,316,541	2,521,180	1,681,789
Timber managers	380,628	395,760	462,600	480,991
Private equity managers	1,667,745	1,513,944	1,953,934	1,773,739
Short term fixed income managers	-	-	194,551	122,965
Cash & equivalents managers	30,119	36,561	175,858	165,053
Balanced account managers	-	-	979,322	965,154
Total investment managers' fees	<u>\$ 13,864,914</u>	<u>\$ 12,992,408</u>	<u>\$ 47,421,951</u>	<u>\$ 40,768,689</u>
Custodian fees	235,778	233,938	1,076,406	927,794
Investment consultant fees	129,878	150,251	482,208	566,574
SIB Service Fees	-	-	81,815	82,764
Total investment expenses	<u>\$ 14,230,570</u>	<u>\$ 13,376,597</u>	<u>\$ 49,062,380</u>	<u>\$ 42,345,821</u>

**Reconciliation of investment expenses to financial statements**

	2019	2018	2019	2018
Investment expenses as reflected in the financial statements	\$ 6,272,801	\$ 5,352,945	\$ 26,513,804	\$ 21,653,138
Plus investment management fees included in investment income				
Domestic large cap equity managers	117,130	94,592	686,854	364,567
Domestic small cap equity managers	-	-	-	-
International equity managers	240,154	273,564	1,664,052	1,603,690
Emerging markets equity managers	607,541	697,608	987,011	1,124,677
Domestic fixed income managers	749,012	1,236,026	6,550,173	7,619,590
Below investment grade fixed income managers	1,986,029	1,541,521	2,782,655	2,133,969
Diversified real assets managers	-	-	3,989,293	2,037,750
Real estate managers	829,250	1,514,375	1,174,455	2,110,333
Infrastructure managers	1,380,280	758,699	1,811,371	974,220
Timber managers	380,628	395,760	462,600	480,991
Private equity managers	1,667,745	1,511,507	1,953,932	1,770,886
Cash equivalents managers	-	-	160,065	140,122
Balanced account managers	-	-	326,115	331,888
Investment expenses per schedule	<u>\$ 14,230,570</u>	<u>\$ 13,376,597</u>	<u>\$ 49,062,380</u>	<u>\$ 42,345,821</u>

North Dakota Retirement and Investment Office  
Schedule of Appropriations – Budget Basis – Fiduciary Funds  
July 1, 2017 to June 30, 2019 Biennium

	Approved 2017-2019 Appropriation	2017-2019 Appropriation Adjustment	Adjusted 2017-2019 Appropriation	Fiscal 2019 Expenses	Fiscal 2018 Expenses	Unexpended Appropriations
All Fund Types:						
Salaries and wages	\$ 4,425,570	\$ -	\$ 4,425,570	\$ 2,243,334	\$ 2,148,355	\$ 33,881
Operating expenses	862,484	-	862,484	393,555	309,365	159,564
Contingency	52,000	-	52,000	-	-	52,000
Total	<u>\$ 5,340,054</u>	<u>\$ -</u>	<u>\$ 5,340,054</u>	<u>\$ 2,636,889</u>	<u>\$ 2,457,720</u>	<u>\$ 245,445</u>

*NOTE: Only those expenses for which there are appropriations are included in this statement.*

Reconciliation of Administrative Expenses to Appropriated Expenditures

	2019	2018
Administrative expenses as reflected in the financial statements	\$ 4,030,920	\$ 3,798,394
Less:		
Consulting Services*	(416,785)	(279,124)
Other operating fees paid under continuing appropriations*	(631,840)	(634,933)
Depreciation expense	(1,800)	(1,800)
Changes in benefit accrual amounts	<u>(343,606)</u>	<u>(424,817)</u>
Total appropriated expenses	<u>\$ 2,636,889</u>	<u>\$ 2,457,720</u>

\* North Dakota Century Code 21-10-06.2 and 15-39.1-05.2 provide authorization for the continuing appropriation.

**Special Comments Requested by the Legislative Audit  
and Fiscal Review Committee  
Year Ended June 30, 2019**

The Legislative Audit and Fiscal Review Committee requires that certain items be addressed by auditors performing audits of state agencies. These items and our responses are as follows:

**Audit Report Communications**

1. What type of opinion was issued on the financial statements?

Unmodified

2. Was there compliance with statutes, laws, rules, regulations under which the agency was created and is functioning?

Yes

3. Was internal control adequate and functioning effectively?

Yes

4. Were there any indications of lack of efficiency in financial operations and management of the agency?

No

5. Has action been taken on findings and recommendations included in prior year reports?

There were no prior year findings or recommendations.

6. Was a management letter issued? If so, provide a summary below, including any recommendations and the management response.

No

## Audit Committee Communications

1. Identify any significant changes in accounting policies, any management conflicts of interest, any contingent liabilities, or any significant unusual transactions.

For the year ended June 30, 2019, no new accounting policies were adopted and the application of existing policies was not changed.

2. Identify any significant accounting estimates, the process used by management to formulate the accounting estimates, and the basis for the auditor's conclusions regarding the reasonableness of those estimates.

The valuation of alternative investments, including private equity and real asset investments, are a management estimate which is primarily based upon net asset values reported by the investment managers and comprise 16% of the total investment portfolio. The values for these investments are reported based upon the most recent financial data available and are adjusted for cash flows through June 30, 2019. Our audit procedures validated this approach through the use of confirmations sent directly to a sample of investment managers and the review of the most recent audited financial statements for these funds. Furthermore, we reviewed management's estimate and found it to be reasonable.

The actuarial valuation was based on the actuarial assumptions and methods adopted by the Board, including an actuarial expected investment rate of return of 7.75% per annum compounded annually. The valuation takes into account all of the promised benefits to which members are entitled as of July 1, 2019 as required by the North Dakota Century Code. The valuation provides certain information required by GASB to be disclosed in the financial statements. Additionally, the valuation is used to determine the adequacy of the current employer contribution rate. Our audit procedures included reviewing the actuarial valuation and related assumptions used therein and we believe the estimate to be reasonable.

3. Identify any significant audit adjustments.

None

4. Identify any disagreements with management, whether or not resolved to the auditor's satisfaction, relating to financial accounting, reporting, or auditing matters that could be significant to the financial statements.

None

5. Identify any significant difficulties encountered in performing the audit.

None

6. Identify any major issues discussed with management prior to retention.

None



7. Identify any management consultations with other accounts about auditing and accounting matters.

None

8. Identify any high-risk information technology systems critical to operations based on the auditor's overall assessment of the importance of the system to the agency and its mission or whether any exceptions identified in the six audit report questions addressed above are directly related to the operations of an information technology system.

Based on the audit procedures performed, the Retirement and Investment Office's critical information technology system is the CPAS system. There were no exceptions identified that were directly related to this application.

This report is intended solely for the information and use of the audit committee, management, the Legislative Audit and Fiscal Review Committee, and other state officials, and is not intended to be and should not be used by anyone other than these specified parties.



**CliftonLarsonAllen LLP**

Baltimore, Maryland  
October 30, 2019