

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

**FINANCIAL STATEMENTS
June 30, 2020 and 2019**

North Dakota Retirement and Investment Office

Table of Contents
June 30, 2020 and 2019

	PAGE
INDEPENDENT AUDITORS' REPORT	1
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>	4
MANAGEMENT'S DISCUSSION AND ANALYSIS	6
FINANCIAL STATEMENTS	
Statement of Net Position – Fiduciary Funds	13
Statement of Changes in Net Position – Fiduciary Funds	14
Notes to Combined Financial Statements.....	15
REQUIRED SUPPLEMENTARY INFORMATION	
Schedule of Changes in NPL and Related Ratios – ND Teachers' Fund for Retirement.....	55
Schedule of Employer Contributions – ND Teachers' Fund for Retirement.....	56
Schedule of Investment Returns – ND Teachers' Fund for Retirement	57
Schedule of Employer's Share of NPL and NOL – ND Public Employees Retirement System.....	58
Schedule of Employer Contributions – ND Public Employees Retirement System	59
SUPPLEMENTARY INFORMATION	
Combining Statement of Net Position – Investment Trust Funds – Fiduciary Funds	60
Combining Statement of Changes in Net Position – Investment Trust Funds – Fiduciary Funds	62
Pension and Investment Trust Funds – Schedule of Administrative Expenses	64
Pension and Investment Trust Funds – Schedule of Consultant Expenses.....	65
Pension and Investment Trust Funds – Schedule of Investment Expenses	66
Schedule of Appropriations – Budget Basis – Fiduciary Funds.....	67
SPECIAL COMMENTS REQUESTED BY THE LEGISLATIVE AUDIT AND FISCAL REVIEW COMMITTEE YEAR ENDED JUNE 30, 2019	68
AUDIT COMMITTEE COMMUNICATIONS	69



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, 2020 and 2019, 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, 2020 and 2019, 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 audits. 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, 2020 and 2019, 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, 2020 and 2019, 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, 2020 and 2019, 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.

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.

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

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 November 9, 2020, 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
November 9, 2020



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, 2020, and the related notes to the financial statements, and have issued our report thereon dated November 9, 2020.

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 results 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.

A handwritten signature in black ink that reads "CliftonLarsonAllen LLP". The signature is written in a cursive, flowing style.

CliftonLarsonAllen LLP

Baltimore, Maryland
November 9, 2020

North Dakota Retirement and Investment Office

Management's Discussion and Analysis

June 30, 2020 and 2019

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, 2020 and 2019. 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 26 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 \$1.6 billion (11.2%) and \$885.4 million (6.4%) in FY2020 and FY2019, respectively. Approximately 53% of the FY2020 increase and 62% of the FY2019 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 \$596.6 million and \$692.6 million, and net investment income exceeded \$277 million and \$309 million in FY2020 and FY2019, respectively.

Total additions in the fiduciary funds for FY2020 increased by \$307.0 million (15.8%) and decreased by \$60.1 million (3.0%) in FY2019. Net investment income decreased in both years (by \$158.7 million and \$181.6 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 (although the effects of the global pandemic began to reduce those collections in the last quarter of FY2020). The increase in FY2020 was also due to deposits into the Budget Stabilization Fund that brought that fund back to statutory limits. Total fiduciary fund purchases of units increased \$458.8 million (46.4%) and \$116.6 million (13.4%) in FY2020 and FY2019, respectively.

Deductions in the fiduciary funds decreased by \$448.4 million (42.3%) in FY2020 after increasing by \$511.2 million (93.3%) in FY2019. The majority of the decrease from FY2019 to FY2020 was in redemptions of units, which decreased by \$457.9 million (54.9%) due to the constitutionally mandated earnings transfer from the Legacy Fund to the General Fund in FY2019. 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.

Payments to TFFR members in the form of benefits and refunds increased by \$9.6 million (4.3%) and \$13.2 million (6.4%) in FY2020 and FY2019, 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, 2020 and 2019, the TFFR pension plan had a Net Pension Liability (NPL) of \$1.53 billion and \$1.38 billion, and Plan Fiduciary Net Position as a percent of Total Pension Liability (TPL) of 63.4% 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, 2020 and 2019, were \$16.4 billion and \$15.2 billion, respectively, and were comprised mainly of investments. Total assets increased by \$1.2 billion (7.9%) and \$1.3 billion (9.7%) from each prior year primarily due to on-going deposits to the Legacy Fund and Budget Stabilization Fund.

Total liabilities as of June 30, 2020 and 2019, were \$72.6 million and \$511.3 million. Over 90% of the liabilities (\$455.3 million) as of June 30, 2019, were the Legacy Fund's earnings that were due to be transferred to the General Fund at the end of the biennium. Current year-end liabilities were comprised mainly of the securities lending collateral payable.

RIO's fiduciary fund total net position was \$ 16.3 billion and \$14.7 billion at the close of fiscal years 2020 and 2019, respectively.

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

	2020	2019	Total % Change
Assets			
Investments	\$ 16,220.7	\$ 15,028.7	7.9%
Securities Lending Collateral	58.8	46.3	27.1%
Receivables	85.3	87.7	-2.7%
Cash & Other	21.4	20.5	4.1%
Total Assets	16,386.2	15,183.2	7.9%
Deferred Outflows of Resources			
Deferred outflows related to pensions	0.9	1.2	-23.7%
Liabilities			
Obligations under Securities Lending	58.8	46.3	27.1%
Accounts Payable & Accrued Expenses	13.8	465.0	-97.0%
Total Liabilities	72.6	511.3	-85.8%
Deferred Inflows of Resources			
Deferred inflows related to pensions	0.9	0.2	448.2%
Total Net Position	\$ 16,313.6	\$ 14,672.9	11.2%
	2019	2018	Total % Change
Assets			
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%
Total Assets	15,183.2	13,840.9	9.7%
Deferred Outflows of Resources			
Deferred outflows related to pensions	1.2	1.4	-12.9%
Liabilities			
Obligations under Securities Lending	46.3	48.1	-3.9%
Accounts Payable & Accrued Expenses	465.0	6.6	6990.3%
Total Liabilities	511.3	54.7	834.8%
Deferred Inflows of Resources			
Deferred inflows related to pensions	0.2	0.1	124.4%
Total Net Position	\$ 14,672.9	\$ 13,787.5	6.4%

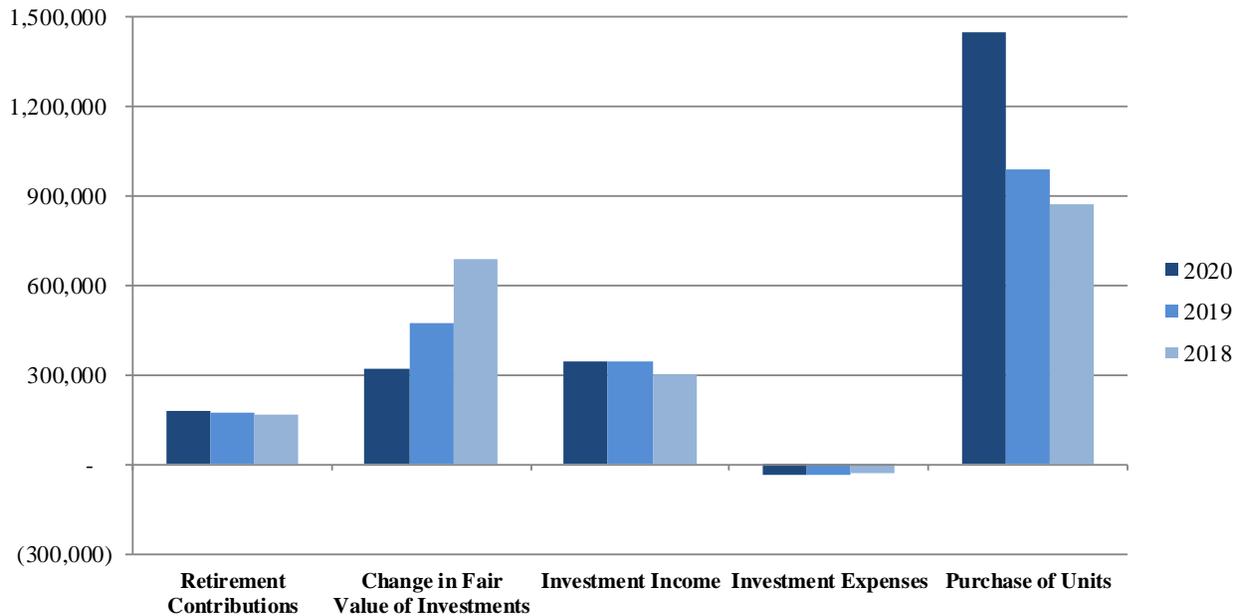
**North Dakota Retirement and Investment Office
Changes in Net Position – Fiduciary Funds
(In Millions)**

	<u>2020</u>	<u>2019</u>	<u>Total % Change</u>
Additions			
Contributions	\$ 181.1	\$ 173.9	4.1%
Net Investment Income	622.9	781.6	-20.3%
Net Securities Lending Income	0.9	1.2	-20.2%
Purchase of Units	<u>1,446.6</u>	<u>987.8</u>	46.4%
Total Additions	<u>2,251.5</u>	<u>1,944.5</u>	15.8%
Deductions			
Payments to TFFR members	230.8	221.2	4.3%
Administrative Expenses	3.9	4.0	-3.8%
Redemption of Units	<u>376.1</u>	<u>833.9</u>	-54.9%
Total Deductions	<u>610.8</u>	<u>1,059.2</u>	-42.3%
Total Change in Net Position	<u>\$ 1,640.7</u>	<u>\$ 885.4</u>	85.3%
	<u>2019</u>	<u>2018</u>	<u>Total % Change</u>
Additions			
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	<u>987.8</u>	<u>871.3</u>	13.4%
Total Additions	<u>1,944.5</u>	<u>2,004.7</u>	-3.0%
Deductions			
Payments to TFFR members	221.2	208.0	6.4%
Administrative Expenses	4.0	3.8	6.1%
Redemption of Units	<u>833.9</u>	<u>336.2</u>	148.1%
Total Deductions	<u>1,059.2</u>	<u>548.0</u>	93.3%
Total Change in Net Position	<u>\$ 885.4</u>	<u>\$ 1,456.7</u>	-39.2%

Statement of Changes in Net Position – Additions

Contributions collected by the pension trust fund increased by \$7.2 million (4.1%) in FY2020 and \$5.0 million (3.0%) in FY2019 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 \$158.9 million (20.3%) and \$181.7 million (18.9%) in FY2020 and FY2019, respectively. This was the result of weaker financial markets in both years compared to FY2018. Deposits of funds into the investment trust fund (purchase of units) continue to increase year-over-year, from \$871.3 million in FY2018 to \$1.4 billion in FY2020, mainly due to increased deposits to the Legacy Fund and Budget Stabilization Fund.

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



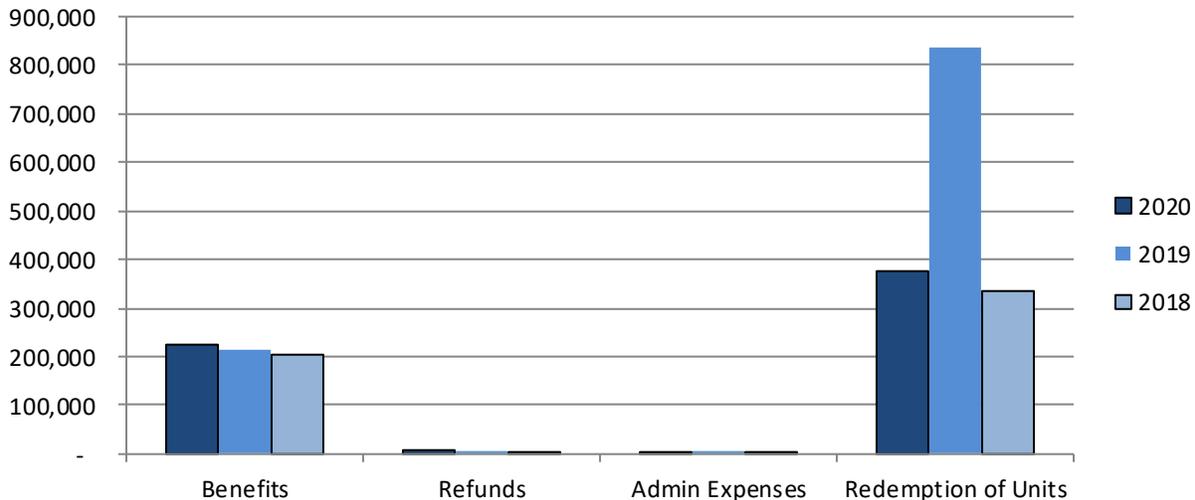
Statement of Changes in Net Position – Deductions

Benefits paid to TFFR plan participants, including partial lump-sum distributions, increased by \$9.0 million (4.2%) and \$13.2 million (6.4%) in FY2020 and FY2019, 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. Refunds increased by over \$589,000 (10.0%) and nearly \$339,000 (6.1%) in fiscal years 2020 and 2019, respectively.

Administrative expenses decreased in fiscal year 2020 by nearly \$154,000 after increasing by nearly \$233,000 in fiscal year 2019. Much of the decrease in FY2020 was related to the global pandemic that caused a halt in travel for staff and board member education and due diligence on-site visits, which were replaced with virtual on-line conferences and manager meetings. The increase in FY2019 was mainly due to an increase in IT contractual services, including the payment of the biennial retirement administration software maintenance fee as well as an increase in pension expense due to RIO's participation in the NDPERS pension plan.

The redemption of units in the investment trust funds decreased by \$457.9 million in FY2020 after increasing by \$497.8 million in FY2019 due mainly to the first biennial earnings transfer from the Legacy Fund that occurred at the end of FY2019.

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



Conclusion

For the fiscal year ended June 30, 2020, the pension investment pool and the TFFR pension plan generated net time weighted returns of over 3.4%, exceeding their respective policy benchmarks. The Legacy Fund and insurance investment pool achieved higher absolute returns of 4.2% and 5%, respectively, but trailed policy benchmarks this past year. Investment returns were below long-term expectations in fiscal 2020 largely due to the impact of the global pandemic in the first quarter. Investment performance in the first half of fiscal 2020 benefited from continuing favorable US income tax policy which bolstered revenues, margins and capital spending. Despite a very sharp and severe market decline in the first calendar quarter of 2020, the markets materially recovered in the second quarter to push returns into positive territory for the fiscal year ended June 30, 2020. Public equity returns were mixed as US equities earned over 8%, while international equities were flat and global equities were down over 7% within the pension pool. Fixed income results were strong, but mixed, as US investment grade debt earned over 9%, while non-investment grade debt earned less than 1% in FY20 within the pension pool. Real asset performance was also mixed with above benchmark returns for timber (up 6%) and infrastructure (up 4%), while real estate posted a 2.2% return, which trailed policy benchmarks within the pension pool last year. Private equity returns were disappointing within the pension pool earning slightly over 3% for the 1-year ended June 30, 2020, largely due to poor results in liquidating strategies, but trending favorably in recent years with our two long-term strategic partners.

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 US 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 US 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.

While cumulative returns in the post-credit crisis era remained fairly strong, albeit weakening in the past year primarily due to the impact of the global pandemic, 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 particularly as the world continues to battle the immediate and potential long-term impact of the global pandemic on most sectors and industries. Second, the ever-growing debt burden from unprecedented monetary and fiscal policy intervention will likely serve to dampen future long-term economic growth potential in nearly all economies. Finally, the evolving uncertainty of global trade relations and policies between the US 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 decreased from 66.0% to 65.7% on an actuarial basis (and on a market basis from 65.5% to 63.4%) from July 1, 2019 to July 1, 2020. 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 7.25% investment return assumption.

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, 2020 and 2019

	Pension Trust		Investment Trust		Total	
	2020	2019	2020	2019	2020	2019
Assets:						
Investments, at fair value						
Global equities	\$ 1,500,306,819	1,495,354,621	\$ 6,047,922,687	\$ 5,758,237,240	\$ 7,548,229,506	\$ 7,253,591,861
Global fixed income	609,737,594	575,551,625	5,437,603,865	4,510,779,742	6,047,341,459	5,086,331,367
Global real assets	466,252,190	455,163,805	1,989,786,268	1,889,505,508	2,456,038,458	2,344,669,313
Cash equivalents	23,710,131	35,025,659	145,396,714	309,039,173	169,106,845	344,064,832
Total investments	<u>2,600,006,734</u>	<u>2,561,095,710</u>	<u>13,620,709,534</u>	<u>12,467,561,663</u>	<u>16,220,716,268</u>	<u>15,028,657,373</u>
Invested securities lending collateral	7,594,167	8,495,437	51,197,270	37,770,485	58,791,437	46,265,922
Receivables:						
Investment income	12,709,777	12,526,857	51,681,680	50,051,024	64,391,457	62,577,881
Contributions	20,919,360	25,070,538	-	-	20,919,360	25,070,538
Miscellaneous	5,683	6,394	24,662	26,379	30,345	32,773
Total receivables	<u>33,634,820</u>	<u>37,603,789</u>	<u>51,706,342</u>	<u>50,077,403</u>	<u>85,341,162</u>	<u>87,681,192</u>
Due from other state agency	-	-	-	-	-	-
Cash and cash equivalents	21,060,210	20,305,041	353,025	257,511	21,413,235	20,562,552
Equipment & Software (net of depr)	3,149	4,949	-	-	3,149	4,949
Total assets	<u>2,662,299,080</u>	<u>2,627,504,926</u>	<u>13,723,966,171</u>	<u>12,555,667,062</u>	<u>16,386,265,251</u>	<u>15,183,171,988</u>
Deferred outflows of resources						
Related to pensions	<u>549,008</u>	<u>709,618</u>	<u>352,915</u>	<u>472,668</u>	<u>901,923</u>	<u>1,182,286</u>
Liabilities:						
Accounts payable	165,186	178,293	261,446	253,814	426,632	432,107
Investment expenses payable	2,038,386	812,385	8,513,217	4,829,521	10,551,603	5,641,906
Securities lending collateral	7,594,167	8,495,437	51,197,270	37,770,485	58,791,437	46,265,922
Accrued expenses	1,973,137	2,445,348	843,730	1,193,588	2,816,867	3,638,936
Miscellaneous payable	-	-	29,597	32,115	29,597	32,115
Due to other state funds	-	-	-	455,263,216	-	455,263,216
Due to other state agencies	7,961	7,954	3,218	1,470	11,179	9,424
Total liabilities	<u>11,778,837</u>	<u>11,939,417</u>	<u>60,848,478</u>	<u>499,344,209</u>	<u>72,627,315</u>	<u>511,283,626</u>
Deferred inflows of resources						
Related to pensions	<u>536,950</u>	<u>104,071</u>	<u>403,422</u>	<u>67,473</u>	<u>940,372</u>	<u>171,544</u>
Fiduciary net position:						
Restricted for pensions	2,650,532,301	2,616,171,056	-	-	2,650,532,301	2,616,171,056
Held in trust for external investment pool participants:						
Pension pool	-	-	3,433,370,472	3,373,539,596	3,433,370,472	3,373,539,596
Insurance pool	-	-	2,987,425,838	2,318,620,683	2,987,425,838	2,318,620,683
Held in trust for individual investment accounts	-	-	7,242,270,876	6,364,567,769	7,242,270,876	6,364,567,769
Total fiduciary net position	<u>\$ 2,650,532,301</u>	<u>\$ 2,616,171,056</u>	<u>\$ 13,663,067,186</u>	<u>\$ 12,056,728,048</u>	<u>\$ 16,313,599,487</u>	<u>\$ 14,672,899,104</u>
Each participant unit is valued at \$1.00						
Participant units outstanding			<u>13,663,067,186</u>	<u>12,056,728,048</u>		

This information is an integral part of the accompanying financial statements.

North Dakota Retirement and Investment Office
Statement of Changes in Net Position – Fiduciary Funds
Years Ending June 30, 2020 and 2019

	Pension Trust		Investment Trust		Total	
	2020	2019	2020	2019	2020	2019
Additions:						
Contributions:						
Employer contributions	\$ 93,032,453	\$ 89,444,881	\$ -	\$ -	\$ 93,032,453	\$ 89,444,881
Member contributions	85,735,134	82,429,594	-	-	85,735,134	82,429,594
Purchased service credit	2,175,497	1,916,787	-	-	2,175,497	1,916,787
Interest, penalties and other	158,683	158,713	-	-	158,683	158,713
Total contributions	<u>181,101,767</u>	<u>173,949,975</u>	<u>-</u>	<u>-</u>	<u>181,101,767</u>	<u>173,949,975</u>
Investment income:						
Net change in fair value of investments						
	37,928,921	84,701,380	278,642,657	388,737,303	316,571,578	473,438,683
Interest, dividends and other income	54,664,894	56,434,954	286,561,726	284,507,483	341,226,620	340,942,437
	<u>92,593,815</u>	<u>141,136,334</u>	<u>565,204,383</u>	<u>673,244,786</u>	<u>657,798,198</u>	<u>814,381,120</u>
Less investment expenses	6,523,407	6,272,801	28,437,549	26,513,804	34,960,956	32,786,605
Net investment income	<u>86,070,408</u>	<u>134,863,533</u>	<u>536,766,834</u>	<u>646,730,982</u>	<u>622,837,242</u>	<u>781,594,515</u>
Securities lending activity:						
Securities lending income	169,620	224,713	988,246	1,226,258	1,157,866	1,450,971
Less securities lending expenses	(33,911)	(44,927)	(197,478)	(245,058)	(231,389)	(289,985)
Net securities lending income	<u>135,709</u>	<u>179,786</u>	<u>790,768</u>	<u>981,200</u>	<u>926,477</u>	<u>1,160,986</u>
Purchase of units (\$1 per unit)	-	-	1,446,622,465	987,842,755	1,446,622,465	987,842,755
Total additions	<u>267,307,884</u>	<u>308,993,294</u>	<u>1,984,180,067</u>	<u>1,635,554,937</u>	<u>2,251,487,951</u>	<u>1,944,548,231</u>
Deductions:						
Benefits paid to participants	223,936,233	214,091,045	-	-	223,936,233	214,091,045
Partial lump-sum distributions	425,297	1,237,129	-	-	425,297	1,237,129
Refunds	6,489,704	5,900,392	-	-	6,489,704	5,900,392
Administrative expenses	2,095,405	2,251,083	1,781,619	1,779,837	3,877,024	4,030,920
Redemption of units (\$1 per unit)	-	-	376,059,310	833,929,970	376,059,310	833,929,970
Total deductions	<u>232,946,639</u>	<u>223,479,649</u>	<u>377,840,929</u>	<u>835,709,807</u>	<u>610,787,568</u>	<u>1,059,189,456</u>
Change in fiduciary net position	34,361,245	85,513,645	1,606,339,138	799,845,130	1,640,700,383	885,358,775
Fiduciary net position:						
Beginning of year	<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>
End of Year	<u>\$ 2,650,532,301</u>	<u>\$ 2,616,171,056</u>	<u>\$ 13,663,067,186</u>	<u>\$ 12,056,728,048</u>	<u>\$ 16,313,599,487</u>	<u>\$ 14,672,899,104</u>

This information is an integral part of the accompanying financial statements.

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.

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 the 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. The 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, Attorney General Settlement Fund, Veterans' Cemetery Trust 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 the SIB in individual investment accounts.

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 US 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, 2020 were deposited in the Bank of North Dakota. At June 30, 2020 and 2019, the carrying amount of TFFR's deposits was \$21,060,210 and \$20,305,041, respectively, and the bank balance was \$21,073,623 and \$20,402,305, 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 \$136,809,065 and \$276,189,990 at June 30, 2020 and 2019, respectively. In addition, these funds carry cash and cash equivalents totaling \$353,025 and \$257,511 at June 30, 2020 and 2019, 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.

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2020 and 2019

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, 2020 and 2019, the following tables show the investments by investment type and maturity (expressed in thousands).

2020	Total Fair Value	Less than 1 Year	1-6 Years	6-10 Years	More than 10 Years
Asset Backed Securities	\$ 459,221	\$ 104	\$ 122,916	\$ 95,116	\$ 241,085
Bank Loans	898	-	898	-	-
Collateralized Bonds	2,633	-	-	217	2,416
Commercial Mortgage-Backed	294,632	2,588	913	1,965	289,166
Commercial Paper	33,978	33,978	-	-	-
Corporate Bonds	2,230,382	77,375	1,142,807	519,710	490,490
Corporate Convertible Bonds	10,197	-	4,534	1,825	3,838
Government Agencies	38,491	1,918	16,412	14,179	5,982
Government Bonds	540,285	5,049	225,629	60,235	249,372
Gov't Mortgage Backed	882,440	6	6,682	40,851	834,901
Gov't-issued CMB	62,317	-	7,526	36,243	18,548
Index Linked Government Bonds	585,354	-	268,167	84,069	233,118
Municipal/Provincial Bonds	46,452	3,299	11,713	5,448	25,992
Non-Government Backed CMOs	115,408	-	2,745	7,555	105,108
Short Term Bills and Notes	58,648	58,648	-	-	-
Funds/Pooled Investments	1,481,985	27,098	1,018,852	184,510	251,525
Total Debt Securities	\$ 6,843,321	\$ 210,063	\$ 2,829,794	\$ 1,051,923	\$ 2,751,541

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2020 and 2019

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
Total Debt Securities	\$ 5,818,922	\$ 116,037	\$ 2,171,587	\$ 1,446,100	\$ 2,085,198

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 \$24.4 and \$18.8 million at June 30, 2020 and 2019, 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, 2020 and 2019, (expressed in thousands).

North Dakota Retirement and Investment Office
Notes to Combined Financial Statements
June 30, 2020 and 2019

2020	Total Fair Value	Credit Rating*										
		AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
Asset Backed Securities	\$ 459,221	\$ 239,274	\$ 57,836	\$ 41,573	\$ 48,308	\$ 6,957	\$ 1,424	\$ 3,669	\$ 1,707	\$ -	\$ 1,102	\$ 57,371
Bank Loans	898	-	-	-	-	-	130	316	-	-	-	452
Collateralized Bond	2,633	2,633	-	-	-	-	-	-	-	-	-	-
Commercial Mortgage Backed	294,632	222,765	7,606	9,032	5,452	3,243	4,082	1,685	-	-	-	40,767
Commercial Paper	33,978	-	-	-	-	-	-	-	-	-	-	33,978
Corporate Bonds	2,230,382	14,432	102,599	654,018	1,130,019	217,674	74,429	26,995	286	1,105	485	8,340
Corporate Convertible Bonds	10,197	-	-	-	915	2,635	923	2,639	-	-	20	3,065
Gov't Agencies	35,950	9,347	4,653	6,926	13,607	-	-	1,417	-	-	-	-
Gov't Bonds	122,856	2,479	9,698	1,725	56,336	34,417	10,249	-	3,286	-	921	3,745
Gov't Mortgage Backed	723,348	-	710,210	1,023	3,399	-	7,941	-	-	-	-	775
Gov't Issued CMB	46,648	2,044	44,604	-	-	-	-	-	-	-	-	-
IndexLinked Government Bonds	-	-	-	-	-	-	-	-	-	-	-	-
Municipal/Provincial Bonds	46,452	2,522	21,104	14,331	4,206	1,866	-	-	481	-	634	1,308
Non-Gov't Backed CMOs	115,408	37,218	4,281	7,884	14,053	1,128	1,446	902	1,168	-	152	47,176
Short Term Bills & Notes	6,098	-	6,098	-	-	-	-	-	-	-	-	-
Funds/Pooled Investments	1,481,985	380,142	247,276	656,131	116,280	18,038	26,709	-	-	-	-	37,409
Total Credit Risk of Debt Securities	5,610,686	\$ 912,856	\$ 1,215,965	\$ 1,392,643	\$ 1,392,575	\$ 285,958	\$ 127,333	\$ 37,623	\$ 6,928	\$ 1,105	\$ 3,314	\$ 234,386
US Gov't & Agencies **	1,232,635											
Total Debt Securities	<u>\$ 6,843,321</u>											

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	-	-	-	-	-
Total Credit Risk of Debt Securities	5,581,891	\$ 784,307	\$ 2,070,474	\$ 1,229,547	\$ 952,683	\$ 261,865	\$ 168,461	\$ 21,969	\$ 3,504	\$ 387	\$ 2,661	\$ 86,033
US Gov't & Agencies **	237,031											
Total Debt Securities	<u>\$ 5,818,922</u>											

- * 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, and SLMA.

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, 2020 and 2019, 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 US 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, 2020 and 2019 (expressed in thousands).

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2020 and 2019

2020

Currency	Short-Term	Debt	Equity	Real Estate	Total
Argentine peso	\$ 205	\$ 416	\$ -	\$ -	\$ 621
Australian dollar	(453)	704	63,821	-	64,072
Brazilian real	458	-	3,903	-	4,361
British pound sterling	(25,312)	26,067	237,714	-	238,469
Canadian dollar	(690)	369	37,124	-	36,803
Chinese yuan renminbi	278	-	-	-	278
Colombian peso	452	-	-	-	452
Danish krone	64	-	72,330	-	72,394
Euro	(30,138)	32,755	459,666	613	462,896
Hong Kong dollar	1,038	-	142,692	-	143,730
Hungarian forint	243	-	2,169	-	2,412
Indonesian rupiah	55	-	-	-	55
Japanese yen	2,616	-	288,982	-	291,598
Malaysian ringgit	203	-	-	-	203
Mexican peso	(24)	-	1,189	-	1,165
New Israeli shekel	-	-	3,463	-	3,463
New Taiwan dollar	23	-	8,138	-	8,161
New Zealand dollar	101	-	17	-	118
Norwegian krone	133	-	8,613	-	8,746
Polish zloty	(47)	-	-	-	(47)
Russian ruble	(52)	-	-	-	(52)
Singapore dollar	276	-	8,120	-	8,396
South African rand	1,098	-	480	-	1,578
South Korean won	-	-	11,816	-	11,816
Swedish krona	37	-	72,201	-	72,238
Swiss franc	1,618	-	148,008	-	149,626
Thai baht	-	-	3,088	-	3,088
International commingled funds (various currencies)	-	-	980,048	35,004	1,015,052
Total international investment securities	\$ (47,818)	\$ 60,311	\$ 2,553,582	\$ 35,617	\$ 2,601,692

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2020 and 2019

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
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

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, 2020 and 2019, 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 \$65.4 and \$17.0 million for fiscal years 2020 and 2019, respectively. At June 30, 2020 and 2019, the SIB investment portfolio had the notional futures balances shown below (expressed in thousands).

<u>Futures</u>	Notional Value	
	<u>June 30, 2020</u>	<u>June 30, 2019</u>
Cash & Cash Equivalent Derivative Futures		
Long	\$ -	\$ 188,152
Short	(258,482)	(657,304)
Equity Derivative Futures		
Long	1,064,665	808,005
Short	-	-
Fixed Income Derivative Futures		
Long	262,374	352,611
Short	(1,703,654)	(141,400)
	<u> </u>	<u> </u>
Total Futures	<u>\$ (635,097)</u>	<u>\$ 550,064</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 \$5.3 million and \$3.3 million for fiscal years 2020 and 2019, respectively. At June 30, 2020 and 2019, 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, 2020 and 2019

Options	Fair Value	
	June 30, 2020	June 30, 2019
Cash & Other Options		
Call	\$ 201	\$ (10)
Put	537	1
Fixed Income Options		
Call	(146)	(38)
Put	(70)	(241)
Total Options	\$ 522	\$ (288)

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, credit 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 \$(22.5) and \$(18.6) million for fiscal years 2020 and 2019, respectively. The maximum loss that would be recognized at June 30, 2020 and 2019, if all counterparties failed to perform as contracted is \$3.0 million and \$3.0 million, respectively. Swap fair values are determined by a third party pricing source. At June 30, 2020 and 2019, 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, 2020 and 2019

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, 2020	June 30, 2019		June 30, 2020	June 30, 2019
Bank of America/Aa2 (2 contracts)	\$ -	\$ (430)	2021 - 2025	\$ -	\$ (32)
Bank of America/Aa2 (5 contracts)	(3,730)		2021 - 2025	(71)	
Citibank/A1 (34 contracts)		(2,535)	2019 - 2024		(172)
Citibank/Aa3 (33 contracts)	3,715		2020 - 2024	(262)	
Citigroup Global Markets/A1 (2 contracts)	(400)		2024	(9)	
Credit Suisse First Boston/A1 (8 contracts)		(43,200)	2022 - 2024		931
Credit Suisse First Boston/A1 (9 contracts)	(3,675)		2020 - 2024	(114)	
Deutsche Bank/A3 (2 contracts)		2,000	2059		(16)
Deutsche Bank/A3 (2 contracts)	2,000		2059	(15)	
Goldman Sachs/A3 (4 contracts)		(1,900)	2020 - 2024		(28)
Goldman Sachs/A3 (4 contracts)	(1,700)		2023 - 2024	(55)	
HSBC Bank/Aa3 (2 contracts)		(1,550)	2019		2
JP Morgan Chase/Aa2 (2 contracts)		(400)	2019 - 2024		1
JP Morgan Chase/Aa2 (4 contracts)	(25,515)		2025 - 2029	852	
Morgan Stanley/A3 (2 contracts)		(245)	2024		2
Morgan Stanley/A3 (5 contracts)	2,555		2024 - 2025	(35)	
Total Credit Default Swaps	\$ (26,750)	\$ (48,260)		\$ 291	\$ 688

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

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, 2020	June 30, 2019		June 30, 2020	June 30, 2019
Citigroup Global Markets/A1 (24 contracts)	\$ -	\$ 84,455	2020 - 2049	\$ -	\$ (3,427)
Citigroup Global Markets/A1 (16 contracts)	112,251		2020 - 2050	443	
Credit Suisse First Boston/A1 (39 contracts)		128,462	2019 - 2049		12
Credit Suisse First Boston/A1 (22 contracts)	185,220		2020 - 2050	714	
JP Morgan Chase/Aa2 (119 contracts)		447,530	2020 - 2048		(14,715)
JP Morgan Chase/Aa2 (100 contracts)	367,049		2020 - 2045	4,871	
Total Interest Rate Swaps	\$ 664,520	\$ 660,447		\$ 6,028	\$ (18,130)

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, 2020 and 2019

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, 2020	June 30, 2019		June 30, 2020	June 30, 2019
Credit Suisse International/A1 (2 contracts)	\$ -	\$ 4,800	2041	\$ -	\$ (23)
Credit Suisse International/A1 (2 contracts)	2,764		2041	2	
Total Total Return Swaps	\$ 2,764	\$ 4,800		\$ 2	\$ (23)

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

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 \$2.4 million and \$1.7 million for fiscal years 2020 and 2019, respectively. At June 30, 2020 and 2019, the SIB's investment portfolio included the currency forwards balances shown below (expressed in thousands).

Currency	Cost	Purchases	Sales	Fair Value	
				6/30/2020	6/30/2019
Argentine peso	\$ -	\$ -	\$ -	\$ -	\$ 15
Australian dollar	(722)	-	(722)	(737)	(1,484)
Brazilian real	2	20	(18)	(2)	(30)
British pound sterling	(39,156)	4,970	(44,126)	(39,408)	(8,279)
Canadian dollar	(569)	-	(569)	(579)	(8,491)
Colombian peso	174	174	-	167	195
Euro	(59,294)	41,056	(100,350)	(60,502)	(62,411)
Japanese yen	-	-	-	-	(18,046)
Mexican peso	-	-	-	-	38
Russian ruble	(136)	1,216	(1,352)	(52)	-
United States dollar	99,701	147,137	(47,436)	99,701	97,228
Total forwards subject to currency risk				\$ (1,412)	\$ (1,265)

North Dakota Retirement and Investment Office
Notes to Combined Financial Statements
June 30, 2020 and 2019

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, 2020 and 2019, the tables below show the SIB's derivative investments subject to interest rate risk (expressed in thousands).

2020

	Total Notional						Greater than
	Value	3 months or less	3 to 6 months	6 to 12 months	1-5 years	5-10 years	10 years
Futures-interest rate contracts	\$ (1,699,762)	\$ (265,954)	\$ (1,175,326)	\$ (86,077)	\$ (172,405)	\$ -	\$ -
Margined Options-interest rate contracts	(3)	(3)	-	-	-	-	-
Total	\$ (1,699,765)	\$ (265,957)	\$ (1,175,326)	\$ (86,077)	\$ (172,405)	\$ -	\$ -

	Total Fair						Greater than
	Value	3 months or less	3 to 6 months	6 to 12 months	1-5 years	5-10 years	10 years
Options - interest rate contracts	\$ 731	\$ (7)	\$ -	\$ -	\$ -	\$ -	\$ 738
Options on futures	(209)	(209)	-	-	-	-	-
Swaps - interest rate contracts	6,028	7	(2)	472	5,826	250	(525)
Swaps - credit contracts	291	-	(3)	-	396	(87)	(15)
Total	\$ 6,841	\$ (209)	\$ (5)	\$ 472	\$ 6,222	\$ 163	\$ 198

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	\$ -	\$ -
Margined Options-interest rate contracts	-	-	-	-	-	-
Total	\$ (257,941)	\$ 162,528	\$ (525,813)	\$ 105,344	\$ -	\$ -

	Total Fair					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)
Total	\$ (17,721)	\$ (280)	\$ 7	\$ 298	\$ 240	\$ (17,986)

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, 2020 and 2019 (expressed in thousands).

North Dakota Retirement and Investment Office
Notes to Combined Financial Statements
June 30, 2020 and 2019

2020	Dollars in (000)			
	Fair Value 6/30/20	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				
<i>Short Term Securities</i>				
Commercial Paper	\$ 33,978	\$ -	\$ 33,978	\$ -
Short Term Bills and Notes	58,648	-	58,648	-
Total Short Term Securities	92,626	-	92,626	-
<i>Fixed Income Investments</i>				
Asset Backed Securities	458,001	-	458,001	-
Bank Loans	898	-	898	-
Collateralized Bonds	2,633	-	2,633	-
Commercial Mortgage-Backed	294,632	-	294,632	-
Corporate Bonds	2,228,985	-	2,226,656	2,329
Corporate Convertible Bonds	10,197	-	10,197	-
Funds - Fixed Income ETF	24,430	24,430	-	-
Government Agencies	38,491	-	35,309	3,182
Government Bonds	540,285	-	540,285	-
Government Mortgage Backed Securities	866,696	-	866,696	-
Gov't-issued Commercial Mortgage-Backed	62,317	-	62,317	-
Index Linked Government Bonds	585,354	-	585,354	-
Municipal/Provincial Bonds	41,223	-	41,223	-
Non-Government Backed C.M.O.s	110,132	-	110,132	-
Other Fixed Income	76	67	9	-
Total Fixed Income Investments	5,264,350	24,497	5,234,342	5,511
<i>Equity Investments</i>				
Common Stock	4,689,513	4,689,513	-	-
Convertible Equity	15,417	15,417	-	-
Funds - Equities ETF	86,628	86,628	-	-
Preferred Stock	2,262	2,262	-	-
Rights/Warrants	257	257	-	-
Stapled Securities	2,666	2,666	-	-
Total Equity Investments	4,796,743	4,796,743	-	-
<i>Derivative Investments</i>				
Exchange Cleared Swaps	6,806	-	6,806	-
Options	522	(209)	731	-
Swaps	(485)	-	(485)	-
Total Derivative Investments	6,843	(209)	7,052	-
Total Investments by Fair Value Level	\$ 10,160,562	\$ 4,821,031	\$ 5,334,020	\$ 5,511

North Dakota Retirement and Investment Office
Notes to Combined Financial Statements
June 30, 2020 and 2019

		Dollars in (000)			
Investments Measured at the Net Asset Value (NAV)			Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Commingled Funds-Debt	\$ 1,457,557	\$	-	Daily, monthly	1-15 days
Commingled Funds-Equities	1,086,970		-	Daily, monthly	1-15 days
Distressed Debt	245,445		90,604	Quarterly, Not eligible	60 days
Long/Short	263,941		-	Monthly	15 days
Mezzanine Debt	229		8,499	Not eligible	Not eligible
Private Credit	413,775		191,200	Not eligible	Not eligible
Private Equity	290,360		332,373	Not eligible	Not eligible
Real Assets	1,886,206		246,371	Quarterly, Not eligible	30-90 days
Total Investments Measured at the NAV	\$ 5,644,483	\$	869,047		
Investments at Other Than Fair Value					
Cash and adjustments to cash	\$ 298,319				
Bank Certificates of Deposit	88,433				
Other miscellaneous securities	28,919				
Total Investments at Other Than Fair Value	\$ 415,671				
Total Investments	\$ 16,220,716				

North Dakota Retirement and Investment Office
Notes to Combined Financial Statements
June 30, 2020 and 2019

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				
<i>Short Term Securities</i>				
Commercial Paper	\$ 1,596	\$ -	\$ 1,596	\$ -
Short Term Bills and Notes	31,986	-	31,986	-
Total Short Term Securities	33,582	-	33,582	-
<i>Fixed income investments</i>				
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	-
Total Fixed Income Investments	4,385,502	23,735	4,343,529	18,238
<i>Equity investments</i>				
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	-	-
Total equity investments	4,833,850	4,830,979	2,816	55
<i>Derivative investments</i>				
Exchange Cleared Swaps	(17,168)	-	(17,168)	-
Options	(288)	(279)	(9)	-
Swaps	(297)	-	(297)	-
Total Derivative Investments	(17,753)	(279)	(17,474)	-
Total Investments by Fair Value Level	\$ 9,235,181	\$ 4,854,435	\$ 4,362,453	\$ 18,293

North Dakota Retirement and Investment Office
Notes to Combined Financial Statements
June 30, 2020 and 2019

	Dollars in (000)				
			Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Investments Measured at the Net Asset Value (NAV)					
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
Total Investments Measured at the NAV	\$ 5,281,204	\$ 929,767			
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)				
Total Investments at Other Than Fair Value	\$ 512,272				
Total Investments	\$ 15,028,657				

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, 2020 and 2019, unfunded commitments in one of its two distressed debt funds totaled \$90.6 million and \$76.9 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, 2020 and 2019.

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 1-4 years, and unfunded commitments of \$8.5 million as of June 30, 2020 and 2019.

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 1 to 2 years, and the unfunded commitments totaled \$191.2 million and \$146.2 million as of June 30, 2020 and 2019, 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 \$333.3 million and \$339.9 million in unfunded private equity commitments as of June 30, 2020 and 2019, 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 nine different real estate funds in the portfolio. Four of those funds are open-ended vehicles that accept redemption requests quarterly with a 30-90 day notification period. Two of the four open-ended funds had unfunded commitments totaling \$45 million as of June 30, 2020; and there were no unfunded commitments in the open-ended funds as of June 30, 2019. The remaining five funds are closed-ended limited partnerships that are not eligible for redemptions. Those five funds have a combined unfunded commitment of \$85.1 million and \$114.4 million as of June 30, 2020 and 2019, 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 1-6 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, 2020 and 2019, 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 \$116.3 million and \$243.9 million at June 30, 2020 and 2019, 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, US government securities and irrevocable letters of credit. US securities are loaned versus collateral valued at 102% of the fair value of the securities plus any accrued interest. Non-US 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 232 and 71 days as of June 30, 2020 and 2019, respectively. Cash open collateral is invested in a short term investment pool, which had an interest sensitivity of 1 day and 3 days as of June 30, 2020 and 2019, respectively. 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

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2020 and 2019

owing on the securities lent. Securities lending earnings are credited to participating clients on approximately the fifteenth day of the 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, 2020 and 2019 (expressed in thousands).

	2020	Securities Lent	Non-Cash Collateral Value		Cash Collateral Investment Value
Lent for cash collateral:					
US agency securities		\$ 634	\$ -	\$	646
US government securities		1,471	-		1,487
US corporate fixed income securities		16,468	-		16,744
Global government securities		827	-		875
Global corporate fixed income securities		205	-		214
US equities		7,717	-		7,815
Global equities		29,051	-		31,010
Lent for non-cash collateral:					
US government securities		1,316	1,343		-
US corporate fixed income securities		17,204	17,555		-
US equities		87,966	89,262		-
Global equities		12,630	13,519		-
Total		<u>\$ 175,489</u>	<u>\$ 121,679</u>	<u>\$</u>	<u>58,791</u>

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2020 and 2019

2019	<u>Securities Lent</u>	<u>Non-Cash Collateral Value</u>	<u>Cash Collateral Investment Value</u>
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	-
Total	<u>\$ 357,089</u>	<u>\$ 316,720</u>	<u>\$ 46,266</u>

Note 4 - Capital Assets

	June 30, 2018	Additions	Retirements	June 30, 2019	Additions	Retirements	June 30, 2020
Office equipment	\$16,879	\$ -	\$ -	\$16,879	\$ -	\$ -	\$16,879
Less accumulated depreciation on office equipment	(10,130)	(1,800)	-	(11,930)	(1,800)	-	(13,730)
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>\$ 6,749</u>	<u>\$ (1,800)</u>	<u>\$ -</u>	<u>\$ 4,949</u>	<u>\$ (1,800)</u>	<u>\$ -</u>	<u>\$ 3,149</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, 2020 and 2019:

	<u>2020</u>	<u>2019</u>
Due To Other State Agencies		
Information Technology Department	\$ 7,831	\$ 7,848
Office of Attorney General	3,011	1,288
Office of Management and Budget	337	150
Rough Rider Industries	-	137
Total due to other state agencies	<u>\$ 11,179</u>	<u>\$ 9,424</u>
Due To Other State Funds		
General Fund	<u>\$ -</u>	<u>\$ 455,263,216</u>

Due to 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 \$89,924 and \$87,766 for fiscal years 2020 and 2019, respectively. Minimum payments under the lease for fiscal 2021 are \$88,365.

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, 2020 and 2019 are summarized as follows:

	<u>Beginning Balance 7/1/2019</u>	<u>Additions</u>	<u>Reductions</u>	<u>Ending Balance 6/30/2020</u>	<u>Amounts Due Within One Year</u>
Accrued Leave	<u>\$194,227</u>	<u>\$149,970</u>	<u>(\$138,367)</u>	<u>\$205,830</u>	<u>\$135,440</u>
	<u>Beginning Balance 7/1/2018</u>	<u>Additions</u>	<u>Reductions</u>	<u>Ending Balance 6/30/2019</u>	<u>Amounts Due Within 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>

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, 2020 and 2019, the number of participating employer units was 213, consisting of the following:

	June 30, 2020	June 30, 2019
Public School Districts	174	175
County Superintendents	6	6
Special Education Units	20	19
Vocational Education Units	4	4
Other	9	9
Total	213	213

TFFR's membership consisted of the following:

	2020	2019
Retirees and beneficiaries currently receiving benefits	9,036	8,918
Terminated employees - vested	1,715	1,657
Terminated employees - nonvested	1,132	1,035
Total	11,883	11,610
Current employees		
Vested	8,216	7,936
Nonvested	3,131	3,239
Total	11,347	11,175

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 non-vested 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 3.37% and 5.46% for the years ended June 30, 2020 and 2019, 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, 2020 and 2019, TFFR had net realized gains of \$50,611,877 and \$66,548,800, respectively.

Net Pension Liability

The components of the net pension liability of TFFR at June 30, 2020 and 2019 (expressed in thousands), were as follows:

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2020 and 2019

	June 30, 2020	June 30, 2019
Total pension liability	\$ 4,181,036	\$ 3,993,424
Plan fiduciary net position	<u>(2,650,532)</u>	<u>(2,616,171)</u>
Net pension liability (NPL)	<u>\$ 1,530,504</u>	<u>\$ 1,377,253</u>
Plan fiduciary net position as a percentage of the total pension liability	63.4%	65.5%

Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of July 1, 2020 and 2019, using the following actuarial assumptions:

Valuation date	July 1, 2020	July 1, 2019
Inflation	2.30%	2.75%
Salary increases	3.80% to 14.80%; 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	7.25% net of investment expenses, including inflation	7.75% net of investment expenses, including inflation

For the July 1, 2020, valuation, the post-retirement healthy mortality table was updated to 104% of the PubT-2010 Retiree table for retirees and to 95% of the PubT-2010 Contingent Survivor table for beneficiaries, both projected with generational improvement using Scale MP-2019. The disabled mortality was updated to the PubNS-2010 Non-Safety Disabled Mortality table projected with generational improvement using Scale MP-2019.

The pre-retirement mortality table was updated to the Pub T-2010 Employee table projected with generational improvement using Scale MP-2019. The actuarial assumptions used were based on the results of an experience study dated March 19, 2020.

For the July 1, 2019, valuation, 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, valuation 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 potential impact

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2020 and 2019

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, 2020 and 2019 are summarized in the following tables:

2020	Target Allocation	Long-Term Expected Real Rate of Return
Global Equity	58.0%	6.9%
Global Fixed Income	23.0%	1.3%
Global Real Assets	18.0%	5.0%
Cash Equivalents	1.0%	0.0%
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%

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 7.25% and 7.75% as of June 30, 2020 and 2019, respectively. 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, 2020 and 2019 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, 2020 and 2019. Therefore, the long-term 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, 2020 and 2019.

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, 2020 and 2019, 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:

2020			
	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
Employers' net pension liability	\$ 2,038,548,355	\$ 1,530,503,462	\$ 1,108,292,065

2019			
	1% Decrease (6.75%)	Current Discount Rate (7.75%)	1% Increase (8.75%)
Employers' net pension liability	\$ 1,859,994,289	\$ 1,377,253,104	\$ 976,082,834

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. Effective August 1, 2019, the credit is expanded to also include any dental, vision, and long-term care 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

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2020 and 2019

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 contributions are set by statute. During the 1983-1985 biennium the State of North Dakota implemented the employer pickup provision of the IRS code whereby a portion or all of the required member contributions are made by the employer. RIO, as the employer, is paying 4% of the member contribution. Employer contributions are set by statute.

Contribution rates are established as a percent of covered compensation as follows:

	Member	Employer
Members first enrolled prior to January 1, 2020	7.00%	7.12%
Members first enrolled after January 1, 2020	7.00%	8.26%
Members returning to the DB Plan as a result of Senate Bill 2015	9.00%	7.12%

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2020 and 2019

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 is set by statute at 1.14% of covered compensation. 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, 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.

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, 2020 and 2019, RIO reported a liability of \$1,889,405 and \$2,704,103, 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, 2019 and 2018, 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, 2019, RIO's pension plan proportion was 0.151523 percent and as of June 30, 2018, was 0.153507 percent. RIO's OPEB plan proportion was 0.141245 percent as of June 30, 2019 and was 0.144121 percent as of June 30, 2018.

RIO recognized pension and OPEB expense of \$234,757 and \$345,458 for the years ended June 30, 2020 and 2019, respectively. At June 30, 2020 and 2019, 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, 2020 and 2019

	Deferred Outflows of Resources		Deferred Inflows of Resources	
	2020	2019	2020	2019
Differences between expected and actual experience	\$ 3,853	\$ 10,258	\$ 325,848	\$ 90,482
Changes in assumptions	677,150	944,466	569,784	36,976
Net differences between projected and actual earnings on plan investments	31,068	-	-	15,046
Changes in proportion and differences between employer contributions and proportionate share of contributions	55,138	96,731	44,740	29,040
Employer contributions subsequent to the measurement date	134,714	130,831	-	-
Total	\$ 901,923	\$ 1,182,286	\$ 940,372	\$ 171,544

Deferred outflows of resources related to pensions and OPEB resulting from employer contributions subsequent to the measurement date in the amount of \$134,714 will be recognized as a reduction of the net pension liability in the year ended June 30, 2021.

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	
2021	91,327
2022	22,877
2023	(69,189)
2024	(167,521)
2025	(51,149)
Thereafter	492
	\$ (173,163)

Actuarial assumptions

The total pension and OPEB liabilities in the July 1, 2019 and 2018 actuarial valuation were determined using the following actuarial assumptions, applied to all periods included in the measurement:

2019 – Pension Plan

Inflation	2.50%
Salary Increase (Payroll Growth)	4.00% to 20%, including inflation
Investment Rate of Return	7.50%, net of investment expense, including inflation
Cost-of-living Adjustments	None

2018 – Pension Plan

Inflation	2.50%		
Salary Increases	Service at Beginning of Year:	State Employee	Non-State Employee
	0	12.00%	15.00%
	1	9.50%	10.00%
	2	7.25%	8.00%
	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

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 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, 2019 and 2018, 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.

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2020 and 2019

2019 - OPEB Plan

Inflation	2.50%
Salary increase	Not applicable
Investment Rate of Return	7.25%, net of investment expenses, including inflation
Cost of Living Adjustment	None

2018 - 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%.

There were no benefit changes during the year. Beginning January 1, 2020, members first enrolled in the NDPERS Main System and the Defined Contribution Plan on our after that date will not be eligible to participate in the OPEB Plan. Therefore, the OPEB Plan will become for the most part a closed plan. There were no other benefit changes during the year. The economic assumptions (excluding salary increases) and the asset smoothing method were updated beginning with the actuarial valuation as of July 1, 2017, based on a review performed by the actuary. The investment return assumption was decreased from 7.5% to 7.25% beginning with the actuarial valuation as of July 1, 2019. All other actuarial assumptions were adopted by the PERS Board based on an experience study covering the period July 1, 2009, through June 30, 2014. The employer rate to the System is the statutory contribution rate of 1.14% of payroll.

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:

2020 - Pension Plan

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
Global Equity	57%	7.0%
Global Fixed Income	23%	2.1%
Global Real Assets	20%	5.4%

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2020 and 2019

2019 - Pension Plan

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

2020 - OPEB Plan

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Large Cap Domestic Equity	37%	6.0%
Small Cap Domestic Equity	9%	7.3%
International Equity	14%	7.0%
Core-Plus Fixed Income	40%	2.1%

2019 - OPEB Plan

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
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%

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.

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2020 and 2019

Projected benefit payments are required to be discounted to their actuarial present values using a Single Discount Rate (SDR) that 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 2019, the expected return on pension plan investments is 7.50%; the municipal bond rate is 3.13% (based on the most recent date available on or before the measurement date of the “20-year Municipal Go Index” from Fidelity); and the resulting Single Discount Rate is 7.50%.

For 2018, the expected return on pension plan investments is 7.75%; the municipal bond rate is 3.62% (based on the most recent date available on or before the measurement date of the “20-year Municipal Go Index” from Fidelity); and the resulting Single Discount Rate is 6.32%.

The discount rate used to measure the total OPEB liability for 2019 was 7.25% and for 2018 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, 2019 and 2018 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 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:

2020	1% Decrease (6.5%)	Current Discount Rate (7.5%)	1% Increase (8.5%)
RIO's net pension liability	\$ 2,546,343	\$ 1,775,959	\$ 1,128,702
	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
RIO's net OPEB liability	144,799	113,446	86,608

North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2020 and 2019

2019	1% Decrease (5.32%)	Current Discount Rate (6.32%)	1% Increase (7.32%)
RIO's net pension liability	\$ 3,520,141	\$ 2,590,598	\$ 1,814,924
2019	1% Decrease (6.5%)	Current Discount Rate (7.5%)	1% Increase (8.5%)
RIO's net OPEB liability	143,611	113,505	87,696

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 a case arising out of the Tribune 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, in addition to assistance received from the ND Office of Attorney General. On July 15, 2019, the Litigation Trustee filed a Notice of Appeal to the Second Circuit, appealing the various judgments of the US 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. The Second Circuit held oral argument on August 24, 2020, and took the matter under advisement. 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)

	2020	2019	2018	2017	2016	2015	2014
Total pension liability							
Service cost	\$ 80,591	\$ 77,756	\$ 78,041	\$ 75,476	\$ 68,239	\$ 60,618	\$ 56,752
Interest	306,791	296,876	287,375	276,412	265,440	249,064	237,821
Changes of benefit terms	-	-	-	-	-	-	-
Differences between expected and actual experience	(20,732)	(23,495)	(27,939)	(10,749)	(8,093)	2,209	9,347
Changes of assumptions	51,813	-	-	-	-	171,325	-
Benefit payments, including refunds of member contributions	(230,851)	(221,228)	(207,979)	(196,516)	(185,969)	(172,239)	(162,259)
Net change in total pension liability	187,612	129,909	129,498	144,623	139,617	310,977	141,661
Total pension liability - beginning	3,993,424	3,863,515	3,734,017	3,589,394	3,449,777	3,138,800	2,997,139
Total pension liability - ending (a)	\$ 4,181,036	\$ 3,993,424	\$3,863,515	\$3,734,017	\$3,589,394	\$3,449,777	\$ 3,138,800
Plan fiduciary net position							
Contributions - employer	\$ 93,032	\$ 89,445	\$ 86,676	\$ 86,059	\$ 82,840	\$ 78,422	\$ 62,355
Contributions - member	85,735	82,429	79,878	79,309	76,343	72,268	56,555
Contributions - purchased service credit	2,175	1,917	2,181	2,553	2,768	1,601	2,034
Contributions - other	159	159	194	236	45	172	48
Net investment income	86,206	135,043	211,345	266,688	8,239	73,205	294,246
Benefit payments, including refunds of member contributions	(230,851)	(221,228)	(207,979)	(196,516)	(185,969)	(172,239)	(162,259)
Administrative expenses	(2,095)	(2,251)	(2,129)	(2,173)	(1,852)	(1,923)	(1,586)
Net change in plan fiduciary net position	34,361	85,514	170,166	236,156	(17,586)	51,506	251,393
Plan fiduciary net position - beginning **	2,616,171	2,530,657	2,360,491	2,124,335	2,141,921	2,090,415	1,839,584
Plan fiduciary net position - ending (b)	\$ 2,650,532	\$ 2,616,171	\$2,530,657	\$2,360,491	\$2,124,335	\$2,141,921	\$ 2,090,977
Plan's net pension liability - ending (a) - (b)	\$ 1,530,504	\$ 1,377,253	\$1,332,858	\$1,373,526	\$1,465,059	\$1,307,856	\$ 1,047,823
Plan fiduciary net position as a percentage of the total pension liability	63.4%	65.5%	65.5%	63.2%	59.2%	62.1%	66.6%
Covered payroll	729,661	701,528	679,809	674,971	649,725	615,105	580,053
Plan's net pension liability as a percentage of covered payroll	209.8%	196.3%	196.1%	203.5%	225.5%	212.6%	180.6%

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 2020, amounts reported as changes of assumptions resulted primarily from a decrease in the investment return assumption from 7.75% to 7.25%, the inflation assumption lowered from 2.75% to 2.30%, lower individual salary increases, and an updated mortality improvement scale.

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
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%
2020	93,688	93,032	656	729,661	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	23 years
Asset valuation method	5-year smoothed market
Inflation	2.30%; decreased from 2.75% prior to 7/1/2020 and from 3% prior to 7/1/2015.
Salary increases	3.80% - 14.80% including inflation and productivity; 4.25% - 14.5% prior to 7/1/2020; 4.5% - 14.75% prior to 7/1/2015.
Investment rate of return	7.25%, net of investment expenses, including inflation; rate was decreased from 7.75% beginning 7/1/2020 and decreased from 8% beginning 7/1/2015.
Retirement age	In the 2020 and 2015 valuations, rates of retirement were changed to better reflect anticipated future experience.
Mortality	In the 2020 valuation, the PubT-2010 pre-retirement, retiree and contingent survivor tables were adopted and for disabled members, PubNS-2010 tables were adopted; all with generational improvement. 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>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
3.37%	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>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>
RIO's proportion of NDPERS net pension liability (asset)	0.151523%	0.153507%	0.156317%	0.152969%	0.145546%	0.121849%
RIO's proportion of NDPERS net OPEB liability (asset)	<u>0.141245%</u>	<u>0.144121%</u>	<u>0.147503%</u>	<u> </u>	<u> </u>	<u> </u>
RIO's proportionate share of NDPERS net pension liability (asset)	\$ 1,776	\$ 2,591	\$ 2,513	\$ 1,491	\$ 990	\$ 773
RIO's proportionate share of NDPERS net OPEB liability (asset)	<u>113</u>	<u>114</u>	<u>117</u>	<u> </u>	<u> </u>	<u> </u>
RIO's covered payroll	<u>\$ 1,584</u>	<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	112.12%	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>7.16%</u>	<u>7.28%</u>	<u>7.31%</u>	<u> </u>	<u> </u>	<u> </u>
NDPERS Plan fiduciary net position as a percentage of the total pension liability	71.66%	62.80%	61.98%	70.46%	77.15%	77.70%
NDPERS Plan fiduciary net position as a percentage of the total OPEB liability	<u>63.13%</u>	<u>61.89%</u>	<u>59.78%</u>	<u> </u>	<u> </u>	<u> </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>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
RIO's Statutorily required pension contributions	\$ 116	\$ 113	\$ 112	\$ 114	\$ 107	\$ 98	\$ 73
RIO's Statutorily required OPEB contributions	19	18	18	18			
RIO's pension contributions in relation to the statutory required contribution	116	113	112	114	107	98	73
RIO's OPEB contributions in relation to the statutory required contribution	<u>19</u>	<u>18</u>	<u>18</u>	<u>18</u>			
Contribution deficiency (excess)	<u>\$ -</u>						
RIO's Covered payroll	\$1,631	\$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%	7.12%
RIO's OPEB contributions as a percentage of covered payroll	1.14%	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	Bismarck	Bismarck	City of					Petroleum	Insurance			Risk
	Employees	City	City	Grand Forks	City of	Workforce	State	State	Tank	Regulatory	Cultural		Mgmt
	Retirement System	Employee Pension Plan	Police Pension Plan	Employee Pension Plan	Grand Forks Park District	Safety & Insurance	Fire & Tornado	Bonding	Release Comp. Fund	Trust Fund	Endowment Fund	Risk Mgmt	Workers' Comp
Assets:													
Investments													
Global equities	\$ 1,845,599,025	\$ 48,982,380	\$ 21,615,244	\$ 40,309,634	\$ 4,019,784	\$ 463,600,269	\$ 7,934,558	\$ 0	\$ 0	\$ 1,714,400	\$ 270,860	\$ 1,358,949	\$ 1,880,916
Global fixed income	735,144,204	36,634,135	12,436,455	16,314,757	1,890,302	1,277,855,340	12,482,646	2,064,721	3,040,316	1,998,953	183,900	2,927,255	3,077,201
Global real assets	602,436,549	20,433,096	8,130,001	9,898,398	1,423,026	346,432,420	-	-	-	-	23,407	-	-
Cash equivalents	18,725,420	582,442	247,426	785,212	50,237	27,443,101	2,272,830	1,699,313	3,073,254	1,994,988	15,111	226,433	153,312
Total investments	3,201,905,198	106,632,053	42,429,126	67,308,001	7,383,349	2,115,331,130	22,690,034	3,764,034	6,113,570	5,708,341	493,278	4,512,637	5,111,429
Invested sec lending collateral	9,188,775	281,059	112,117	197,228	20,619	6,492,798	74,266	5,807	8,466	15,700	1,404	8,382	8,956
Investment income receivable	10,208,300	314,814	122,878	150,579	22,865	10,550,093	135,522	23,492	5,185	6,279	123	48,537	4,789
Operating Cash	74,910	-	-	-	-	60,673	1,238	110	1,366	1,270	246	1,165	1,121
Miscellaneous receivable	6,088	-	-	-	-	4,150	43	8	13	3	1	9	10
Due from other state agencies	-	-	-	-	-	-	-	-	-	-	-	-	-
Total assets	3,221,383,271	107,227,926	42,664,121	67,655,808	7,426,833	2,132,438,844	22,901,103	3,794,451	6,175,270	5,731,593	495,052	4,570,730	5,126,305
Deferred outflows of resources													
Related to pensions	107,188	-	-	-	-	72,043	898	128	265	68	17	233	226
Liabilities:													
Investment expenses payable	2,644,373	95,672	40,511	54,149	6,948	933,458	11,112	1,112	1,654	1,900	230	2,013	2,286
Securities lending collateral	9,188,775	281,059	112,117	197,228	20,619	6,492,798	74,266	5,807	8,466	15,700	1,404	8,382	8,956
Accounts payable	66,754	-	-	-	-	42,746	447	79	132	35	9	90	100
Accrued expenses	271,956	-	-	-	-	188,111	2,716	346	743	171	43	644	595
Miscellaneous payable	-	5,611	2,235	3,321	373	-	-	-	-	-	-	-	-
Due to other state funds	-	-	-	-	-	-	-	-	-	-	-	-	-
Due to other state agencies	794	-	-	-	-	541	6	1	2	1	1	1	1
Total liabilities	12,172,652	382,342	154,863	254,698	27,940	7,657,654	88,547	7,345	10,997	17,807	1,687	11,130	11,938
Deferred inflows of resources													
Related to pensions	\$ 102,180	\$ 0	\$ 0	\$ 0	\$ 0	\$ 70,126	\$ 773	\$ 130	\$ 223	\$ 54	\$ 15	\$ 164	\$ 174
Fiduciary net position held in trust for external investment pool participants	\$ 3,209,215,627	\$ 106,845,584	\$ 42,509,258	\$ 67,401,110	\$ 7,398,893	\$ 2,124,783,107	\$ 22,812,681	\$ 3,787,104	\$ 6,164,315	\$ 5,713,800	\$ 493,367	\$ 4,559,669	\$ 5,114,419
Each participant unit is valued at \$100													
Participant units outstanding	3,209,215,627	106,845,584	42,509,258	67,401,110	7,398,893	2,124,783,107	22,812,681	3,787,104	6,164,315	5,713,800	493,367	4,559,669	5,114,419

North Dakota Retirement and Investment Office
 Combining Statement of Net Position – Investment Trust Funds – Fiduciary Funds
 June 30, 2020 (with Comparative Totals for 2019)

Insurance Pool Participants													Individual Investment Accounts			Totals	
ND Veterans' Cemetery Trust Fund	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	Attorney General Settlement Fund	Legacy Fund	Job Service of North Dakota	Tobacco Prevention and Control Fund	PERS Retiree Health Credit Fund	2020	2019			
\$ 156,425	\$ 2,333,077	\$ 0	\$ 0	\$ 229,639	\$ 21,684,203	\$ 666,547	\$ 276,926	\$ 0	\$ 3,478,368,132	\$ 18,153,248	\$ 0	\$ 88,768,471	\$ 6,047,922,687	\$ 5,758,237,240			
100,074	4,158,311	28,651,685	716,197,767	501,419	17,059,331	1,658,416	509,180	1,045,858	2,423,741,193	76,766,803	6,477,228	54,676,415	5,437,603,865	4,510,779,742			
44,456	-	-	-	-	4,308,452	19,082	-	-	996,517,381	-	-	-	1,989,786,268	1,889,505,508			
1,777	199,407	2,727,932	7,984,000	38,182	437,170	6,774	7,640	10,809	74,391,282	418,439	1,112,039	792,184	145,396,714	309,039,173			
312,732	6,690,795	31,379,617	724,181,767	769,240	43,489,156	2,470,819	793,746	1,056,667	6,973,017,988	95,338,490	7,589,267	144,237,070	13,620,709,534	12,467,561,663			
(820)	23,481	109,309	2,731,116	2,706	160,247	9,440	3,255	3,973	31,738,986	-	-	-	51,197,270	37,770,485			
50	2,397	116,370	3,093,297	1,553	61,712	(30)	62	481	26,765,280	43	87	252	51,681,680	50,051,024			
-	-	-	31,367	-	-	-	-	-	178,559	-	-	-	353,025	257,511			
-	-	-	1,458	-	-	-	-	-	12,879	-	-	-	24,662	26,379			
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
311,962	6,716,673	31,605,296	730,039,005	773,499	43,711,115	2,480,229	797,063	1,061,121	7,031,713,692	95,338,533	7,589,354	144,237,322	13,723,966,171	12,555,667,062			
-	-	-	1,347	-	-	-	-	-	170,502	-	-	-	352,915	472,668			
140	3,311	14,671	347,719	395	25,549	1,247	434	510	4,133,132	84,088	2,438	104,165	8,513,217	4,829,521			
(820)	23,481	109,309	2,731,116	2,706	160,247	9,440	3,255	3,973	31,738,986	-	-	-	51,197,270	37,770,485			
-	-	-	14,973	-	-	-	-	-	136,081	-	-	-	261,446	253,814			
-	-	-	19,263	-	-	-	-	-	359,142	-	-	-	843,730	1,193,588			
105	340	1,704	-	250	2,196	250	250	250	-	5,346	421	6,945	29,597	32,115			
-	-	-	-	-	-	-	-	-	-	-	-	-	-	455,263,216			
-	-	-	190	-	-	-	-	-	1,680	-	-	-	3,218	1,470			
(575)	27,132	125,684	3,113,261	3,351	187,992	10,937	3,939	4,733	36,369,021	89,434	2,859	111,110	60,848,478	499,344,209			
\$ 0	\$ 0	\$ 0	\$ 23,480	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 206,103	\$ 0	\$ 0	-	403,422	67,473			
\$ 312,537	\$ 6,689,541	\$ 31,479,612	\$ 726,903,611	\$ 770,148	\$ 43,523,123	\$ 2,469,292	\$ 793,124	\$ 1,056,388	\$ 6,995,309,070	\$ 95,249,099	\$ 7,586,495	\$ 144,126,212	\$ 13,663,067,186	\$ 12,056,728,048			
312,537	6,689,541	31,479,612	726,903,611	770,148	43,523,123	2,469,292	793,124	1,056,388	6,995,309,070	95,249,099	7,586,495	144,126,212	13,663,067,186	12,056,728,048			

	Pension Pool Participants					Insurance Pool Participants							Risk Mgmt Workers' Comp
	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	\$ 44,741,951	\$ 1,826,538	\$ 637,666	\$ 1,027,301	\$ 107,635	\$ 77,621,108	\$ 624,250	\$ 114,953	\$ 170,176	\$ 225,107	\$ 9,624	\$ 172,210	\$ 190,845
Interest, dividends and other income	67,495,427	2,335,114	893,700	1,368,354	178,522	47,479,431	444,343	66,240	106,406	60,326	9,929	85,016	93,400
	112,237,378	4,161,652	1,531,366	2,395,655	286,157	125,100,539	1,068,593	181,193	276,582	285,433	19,553	257,226	284,245
Less investment expenses	8,227,685	286,083	116,264	169,943	22,064	3,843,479	36,334	3,018	4,497	3,572	956	6,437	7,259
Net investment income	104,009,693	3,875,569	1,415,102	2,225,712	264,093	121,257,060	1,032,259	178,175	272,085	281,861	18,597	250,789	276,986
Securities lending activity:													
Securities lending income	207,980	6,787	2,712	4,768	536	128,225	1,811	96	142	234	54	389	482
Less Securities lending expenses	(41,579)	(1,356)	(543)	(953)	(108)	(25,602)	(361)	(21)	(28)	(45)	(12)	(78)	(96)
Net securities lending income	166,401	5,431	2,169	3,815	428	102,623	1,450	75	114	189	42	311	386
Purchase of units (\$1 per unit)	-	-	-	3,799,733	423,980	2,000,000	4,327,187	-	-	5,201,869	-	250,000	1,000,000
Total Additions	104,176,094	3,881,000	1,417,271	6,029,260	688,501	123,359,683	5,360,896	178,250	272,199	5,483,949	18,639	501,100	1,277,372
Deductions:													
Administrative Expenses	469,933	-	-	-	-	294,160	3,267	1,005	1,183	1,001	710	1,041	1,073
Redemption of units (\$1 per unit)	46,150,000	1,500,000	750,000	7,028,039	463,278	63,000,000	5,300,000	-	100,000	5,988,231	-	850,000	1,350,000
Total Deductions	46,619,933	1,500,000	750,000	7,028,039	463,278	63,294,160	5,303,267	1,005	1,1183	5,989,232	710	851,041	1,351,073
Change in fiduciary net position	57,556,161	2,381,000	667,271	(998,779)	225,223	60,065,523	57,629	177,245	171,016	(505,313)	17,929	(349,941)	(73,701)
Fiduciary net position:													
Beginning 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	5,188,120
End of year	\$ 3,209,215,627	\$ 106,845,584	\$ 42,509,258	\$ 67,401,110	\$ 7,398,893	\$ 2,124,783,107	\$ 22,812,681	\$ 3,787,104	\$ 6,164,315	\$ 5,713,800	\$ 493,367	\$ 4,559,669	\$ 5,114,419

North Dakota Retirement and Investment Office
Combining Statement of Changes in Net Position – Investment Trust Funds – Fiduciary Funds
Year Ended June 30, 2020 (with Comparative Totals for 2019)

Insurance Pool Participants				Individual Investment Accounts										Totals	
ND Veterans' Cemetery Trust Fund	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	Attorney General Settlement Fund	Legacy Fund	Job Service of North Dakota	Tobacco Prevention and Control Fund	PERS Retiree Health Credit Fund	2020	2019	
\$ 31,431	\$ 235,639	\$ (218,883)	\$ (4,511,372)	\$ 27,520	\$ 673,479	\$ 57,481	\$ 27,707	\$ (10,306)	\$ 150,636,769	\$ 149,250	\$ 282,644	\$ 3,791,934	\$ 278,642,657	\$ 388,737,303	
1,484	134,353	946,534	17,188,196	15,694	908,396	55,665	16,467	23,305	140,318,920	2,792,754	16,454	3,527,296	286,561,726	284,507,483	
32,915	369,992	727,651	12,676,824	43,214	1,581,875	113,146	44,174	12,999	290,955,689	2,942,004	299,098	7,319,230	565,204,383	673,244,786	
383	12,175	30,879	787,627	2,258	90,931	5,331	2,398	1,952	14,033,044	320,937	4,447	417,596	28,437,549	26,513,804	
32,532	357,817	696,772	11,889,197	40,956	1,490,944	107,815	41,776	11,047	276,922,645	2,621,067	294,651	6,901,634	536,766,834	646,730,982	
6	545	871	13,945	59	4,498	156	64	18	613,868	-	-	-	988,246	1,226,258	
(1)	(109)	(173)	(2,783)	(13)	(897)	(32)	(13)	(2)	(122,673)	-	-	-	(197,478)	(245,058)	
5	436	698	11,162	46	3,601	124	51	16	491,195	-	-	-	790,768	981,200	
280,000	-	231,645,900	596,442,112	-	-	-	-	1,130,443	596,589,041	-	-	3,532,200	1,446,622,465	987,842,755	
312,537	358,253	232,343,370	608,342,471	41,002	1,494,545	107,939	41,827	1,141,506	874,002,881	2,621,067	294,651	10,433,834	1,984,180,067	1,635,554,937	
-	-	-	86,564	-	-	-	-	-	921,682	-	-	-	1,781,619	1,779,837	
-	-	231,917,000	-	50,000	2,800,000	-	-	85,118	-	4,567,644	2,000,000	2,160,000	376,059,310	833,929,970	
-	-	231,917,000	86,564	50,000	2,800,000	-	-	85,118	921,682	4,567,644	2,000,000	2,160,000	377,840,929	835,709,807	
312,537	358,253	426,370	608,255,907	(8,998)	(1,305,455)	107,939	41,827	1,056,388	873,081,199	(1,946,577)	(1,705,349)	8,273,834	1,606,339,138	799,845,130	
-	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	
\$ 312,537	\$ 6,689,541	\$ 31,479,612	\$ 726,903,611	\$ 770,148	\$ 43,523,123	\$ 2,469,292	\$ 793,124	\$ 1,056,388	\$ 6,995,309,070	\$ 95,249,099	\$ 7,586,495	\$ 144,126,212	\$ 13,663,067,186	\$ 12,056,728,048	

North Dakota Retirement and Investment Office
Pension and Investment Trust Funds – Schedule of Administrative Expenses
Years Ended June 30, 2020 and 2019

	Pension Trust		Investment Trust	
	2020	2019	2020	2019
Salaries and wages:				
Salaries and wages	\$ 835,872	\$ 832,908	\$ 872,424	\$ 836,638
Fringe benefits	441,279	508,007	419,286	409,387
Total salaries and wages	<u>1,277,151</u>	<u>1,340,915</u>	<u>1,291,710</u>	<u>1,246,025</u>
Operating expenses:				
Travel	21,478	24,162	25,641	30,646
Supplies	2,799	3,167	1,465	1,563
Postage and Mailing Services	36,604	35,178	15,868	14,833
Printing	13,676	12,426	4,097	3,470
Small Office Equipment and Furniture	3,360	14,910	1,898	11,744
Insurance	546	398	373	228
Rent/Lease of Building Space	53,354	55,396	36,570	32,370
Repairs	1,266	917	898	536
Information Technology and Communications	73,166	74,217	22,959	17,519
IT Contractual Services	99,205	156,553	466,295	447,097
Professional Development	13,528	20,808	5,673	12,693
Operating Fees and Services	18,969	16,807	22,508	20,655
Professional Fees and Services	9,737	10,763	13,982	6,339
Consultant Services	253,576	263,269	86,872	153,516
Total operating expenses	<u>601,264</u>	<u>688,971</u>	<u>705,099</u>	<u>753,209</u>
Pension trust portion of investment program expenses	215,190	219,397	(215,190)	(219,397)
Depreciation	1,800	1,800	-	-
Total administrative expenses	<u>2,095,405</u>	<u>2,251,083</u>	<u>1,781,619</u>	<u>1,779,837</u>
Less - nonappropriated items:				
Consultant Services	253,576	263,269	86,872	153,516
Other operating fees paid under continuing appropriation	110,071	132,871	522,515	498,969
Depreciation	1,800	1,800	-	-
Accrual adjustments to employee benefits	117,513	196,388	128,847	147,218
Total nonappropriated items	<u>482,960</u>	<u>594,328</u>	<u>738,234</u>	<u>799,703</u>
Total appropriated administrative expenses	<u>\$ 1,612,445</u>	<u>\$ 1,656,755</u>	<u>\$ 1,043,385</u>	<u>\$ 980,134</u>

The accompanying notes are an integral part of these statements.

North Dakota Retirement and Investment Office
Pension and Investment Trust Funds – Schedule of Consultant Expenses
Years Ended June 30, 2020 and 2019

	Pension Trust		Investment Trust	
	2020	2019	2020	2019
Actuary fees:				
Segal Consulting	\$ 152,873	\$ 108,000	\$ -	\$ -
Auditing/Accounting fees:				
CliftonLarsonAllen LLP	71,986	97,514	49,494	30,587
Disability consulting fees:				
Sanford Health	150	350	-	-
Legal fees:				
Office of Administrative Hearings	2,100	3,383	-	-
K&L Gates LLP	10,363	12,880	13,841	17,066
Kasowitz, Benson, Torres & Friedman	125	239	163	313
Jackson Walker LLP	3,594	3,105	10,781	54,804
ND Attorney General	12,385	37,798	12,593	50,746
Total legal fees:	<u>28,567</u>	<u>57,405</u>	<u>37,378</u>	<u>122,929</u>
Total consultant expenses	<u>\$ 253,576</u>	<u>\$ 263,269</u>	<u>\$ 86,872</u>	<u>\$ 153,516</u>

North Dakota Retirement and Investment Office
Pension and Investment Trust Funds – Schedule of Investment Expenses
Years Ended June 30, 2020 and 2019

	Pension Trust		Investment Trust	
	2020	2019	2020	2019
Investment managers' fees:				
Global equity managers	\$ 1,373,171	\$ 1,367,498	\$ 1,848,580	\$ 1,802,596
Domestic large cap equity managers	717,445	626,227	4,078,287	4,181,083
Domestic small cap equity managers	602,625	445,360	3,091,577	1,465,370
International equity managers	865,295	888,364	6,910,433	6,526,839
Emerging markets equity managers	769,333	607,541	1,290,364	987,011
Domestic fixed income managers	1,091,995	1,137,802	10,733,934	10,833,676
Below investment grade fixed income managers	2,064,617	2,446,530	2,999,775	3,346,917
Diversified real assets managers	-	-	5,413,236	5,770,890
International fixed income managers	-	-	-	-
Real estate managers	2,034,014	2,258,800	4,859,416	5,412,650
Infrastructure managers	1,852,956	1,920,619	2,414,217	2,521,180
Timber managers	358,278	380,628	435,437	462,600
Private equity managers	2,585,827	1,667,745	3,011,436	1,953,934
Short term fixed income managers	-	-	743,318	194,551
Cash & equivalents managers	28,516	30,119	131,914	175,858
Balanced account managers	-	-	1,022,362	979,322
Total investment managers' fees	\$ 14,344,072	\$ 13,777,233	\$ 48,984,286	\$ 46,614,477
Custodian fees	231,579	235,778	1,202,295	1,076,406
Investment consultant fees	108,804	129,878	487,468	482,208
SIB Service Fees	-	-	73,461	81,815
Total investment expenses	\$ 14,684,455	\$ 14,142,889	\$ 50,747,510	\$ 48,254,906

Reconciliation of investment expenses to financial statements

	2020	2019	2020	2019
Investment expenses as reflected in the financial statements	\$ 6,523,407	\$ 6,272,801	\$ 28,437,549	\$ 26,513,804
Plus investment management fees included in investment income				
Domestic large cap equity managers	256,402	13,216	1,144,803	231,616
Domestic small cap equity managers	-	16,233	-	(352,236)
International equity managers	207,075	240,154	1,777,070	1,664,052
Emerging markets equity managers	417,764	607,541	701,047	987,011
Domestic fixed income managers	680,670	749,012	5,765,868	6,550,173
Below investment grade fixed income managers	1,681,382	1,986,029	2,544,213	2,782,655
Diversified real assets managers	-	-	3,813,479	3,989,293
Real estate managers	594,427	829,250	866,687	1,174,455
Infrastructure managers	1,379,223	1,380,280	1,798,221	1,811,371
Timber managers	358,278	380,628	435,437	462,600
Private equity managers	2,585,827	1,667,745	3,011,435	1,953,932
Cash equivalents managers	-	-	119,383	160,065
Balanced account managers	-	-	332,318	326,115
Investment expenses per schedule	\$ 14,684,455	\$ 14,142,889	\$ 50,747,510	\$ 48,254,906

North Dakota Retirement and Investment Office
 Schedule of Appropriations – Budget Basis – Fiduciary Funds
 July 1, 2019 to June 30, 2021 Biennium

	Approved 2019-2021 Appropriation	2019-2021 Appropriation Adjustment	Adjusted 2019-2021 Appropriation	Fiscal 2020 Expenses	Unexpended Appropriations
All Fund Types:					
Salaries and wages	\$ 4,978,230	\$ -	\$ 4,978,230	\$ 2,322,501	\$ 2,655,729
Operating expenses	3,538,934	-	3,538,934	333,329	3,205,605
Capital Assets	6,300,000	-	6,300,000	-	6,300,000
Contingency	52,000	-	52,000	-	52,000
Total	<u>\$ 14,869,164</u>	<u>\$ -</u>	<u>\$ 14,869,164</u>	<u>\$ 2,655,830</u>	<u>\$ 12,213,334</u>

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

Reconciliation of Administrative Expenses to Appropriated Expenditures

	<u>2020</u>
Administrative expenses as reflected in the financial statements	\$ 3,877,024
Less:	
Consulting Services*	(340,448)
Other operating fees paid under continuing appropriations*	(632,586)
Depreciation expense	(1,800)
Changes in benefit accrual amounts	<u>(246,360)</u>
Total appropriated expenses	<u>\$ 2,655,830</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, 2020**

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, 2020, 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, 2020. 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 7.25% per annum compounded annually. The valuation takes into account all of the promised benefits to which members are entitled as of July 1, 2020 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
November 9, 2020