NORTH DAKOTA RETIREMENT AND INVESTMENT OFFICE Bismarck, ND

FINANCIAL STATEMENTS June 30, 2021 and 2020

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INDEPENDENT AUDITORS' REPORT

Governor Doug Burgum The Legislative Assembly Janilyn Murtha, Interim Executive Director 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, 2021 and 2020, 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, 2021 and 2020, 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 Janilyn Murtha, Interim Executive Director 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, 2021 and 2020, and the changes in its 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 respective financial position of each of the individual funds of RIO as of June 30, 2021 and 2020, and 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, 2021 and 2020, and the changes in its financial position for the years then ended in conformity with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

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

Governor Doug Burgum The Legislative Assembly Janilyn Murtha, Interim Executive Director State Investment Board Teachers' Fund for Retirement Board North Dakota Retirement and Investment Office

Other Information

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

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

Other Reporting Required by Government Auditing Standards

In accordance with *Government Audit Standards*, we have also issued our report dated November 2, 2021, 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 and compliance.

Clifton Larson Allen LLP

CliftonLarsonAllen LLP

Baltimore, Maryland November 2, 2021



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 Janilyn Murtha, Interim Executive Director 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, 2021, and the related notes to the financial statements, and have issued our report thereon dated November 2, 2021.

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 Janilyn Murtha, Interim Executive Director 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 financial statement. 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.

Clifton Larson Allen LLP

CliftonLarsonAllen LLP

Baltimore, Maryland November 2, 2021 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, 2021 and 2020. 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 \$2.86 billion (17.5%) and \$1.64 billion (11.2%) in FY2021 and FY2020, respectively. Approximately 39% of the FY2021 increase and 53% of the FY2020 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 \$380.6 million and \$596.6 million, and net investment income exceeded \$1.6 billion and \$277 million in FY2021 and FY2020.

Total additions in the fiduciary funds for FY2021 increased by \$2.1 billion (94.2%) and \$307.0 million (15.8%) in FY2020. Net investment income increased in FY2021 by \$2.9 billion due to exceptionally strong financial markets following the pull back that occurred near the end of FY2020 causing a decrease in net investment income in FY2020 of \$158.7 million. Changes in purchases of units each year are highly dependent on Legacy Fund deposits and thus on oil and gas production. There was a decrease in purchases of units in the investment program in FY2021 as oil and gas production activity pulled back due to the global pandemic after increasing in FY2020 due to strong oil and gas tax collections. 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 decreased \$811.4 million (56.1%) in FY2021 and increased by \$458.8 million (46.4%) in FY2020.

Deductions in the fiduciary funds increased in FY2021 by \$901.8 million (147.6%) and decreased by \$448.4 million (42.3%) in FY2020. The vast majority of the changes in deductions are driven by redemptions of units due to the constitutionally mandated earnings transfers from the Legacy Fund to the State's general fund every two years. 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 \$871.7 million was made in July, 2021, and accrued as of the end of FY2021.

Payments to TFFR members in the form of benefits and refunds increased by \$10.3 million (4.5%) and \$9.6 million (4.3%) in FY2021 and FY2020, 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, 2021 and 2020, the TFFR pension plan had a Net Pension Liability (NPL) of \$1.05 and \$1.53 billion, and Plan Fiduciary Net Position as a percent of Total Pension Liability (TPL) of 75.7% and 63.4%, 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, 2021 and 2020, were \$20.15 billion and \$16.4 billion, respectively, and were comprised mainly of investments. Total assets increased by \$3.8 billion (23.0%) and \$1.2 billion (7.9%) from each prior year primarily due to on-going deposits to the Legacy Fund and Budget Stabilization Fund as well as extremely strong financial markets in FY2021.

Total liabilities as of June 30, 2021 and 2020, were \$980.5 million and \$72.6 million. Nearly 89% of the liabilities (\$871.7 million) as of June 30, 2021, were the Legacy Fund's earnings that were due to be transferred to the State's general fund at the end of the biennium. Previous year-end liabilities were comprised mainly of the securities lending collateral payable.

RIO's fiduciary fund total net position was \$ 19.2 billion and \$16.3 billion at the close of fiscal years 2021 and 2020, respectively.

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

	2021	2020	Total % Change
Assets		 	
Investments	\$ 19,948.0	\$ 16,220.7	23.0%
Securities Lending Collateral	88.9	58.8	51.2%
Receivables	89.4	85.3	4.7%
Cash & Other	26.1	 21.4	21.8%
Total Assets	 20,152.4	 16,386.2	23.0%
Deferred Outflows of Resources			
Deferred outflows related to pensions	 2.7	 0.9	201.6%
Liabilities			
Obligations under Securities Lending	88.9	58.8	51.2%
Accounts Payable & Accrued Expenses	891.6	 13.8	6344.4%
Total Liabilities	 980.5	 72.6	1250.1%
Deferred Inflows of Resources			
Deferred inflows related to pensions	 0.8	 0.9	-18.2%
Total Net Position	\$ 19,173.8	\$ 16,313.6	17.5%
			Total %
	 2020	 2019	Total % Change
Assets	 	 	Change
Investments	\$ 16,220.7	\$ 15,028.7	<u>Change</u> 7.9%
Investments Securities Lending Collateral	\$ 16,220.7 58.8	\$ 15,028.7 46.3	<u>Change</u> 7.9% 27.1%
Investments Securities Lending Collateral Receivables	\$ 16,220.7 58.8 85.3	\$ 15,028.7 46.3 87.7	Change 7.9% 27.1% -2.7%
Investments Securities Lending Collateral Receivables Cash & Other	\$ 16,220.7 58.8 85.3 21.4	\$ 15,028.7 46.3 87.7 20.5	Change 7.9% 27.1% -2.7% 4.1%
Investments Securities Lending Collateral Receivables	\$ 16,220.7 58.8 85.3	\$ 15,028.7 46.3 87.7	Change 7.9% 27.1% -2.7%
Investments Securities Lending Collateral Receivables Cash & Other	\$ 16,220.7 58.8 85.3 21.4	\$ 15,028.7 46.3 87.7 20.5	Change 7.9% 27.1% -2.7% 4.1%
Investments Securities Lending Collateral Receivables Cash & Other Total Assets	\$ 16,220.7 58.8 85.3 21.4	\$ 15,028.7 46.3 87.7 20.5	Change 7.9% 27.1% -2.7% 4.1%
Investments Securities Lending Collateral Receivables Cash & Other Total Assets Deferred Outflows of Resources	\$ 16,220.7 58.8 85.3 21.4 16,386.2	\$ 15,028.7 46.3 87.7 20.5 15,183.2	Change 7.9% 27.1% -2.7% 4.1% 7.9%
Investments Securities Lending Collateral Receivables Cash & Other Total Assets Deferred Outflows of Resources Deferred outflows related to pensions Liabilities	\$ 16,220.7 58.8 85.3 21.4 16,386.2	\$ 15,028.7 46.3 87.7 20.5 15,183.2	Change 7.9% 27.1% -2.7% 4.1% 7.9%
Investments Securities Lending Collateral Receivables Cash & Other Total Assets Deferred Outflows of Resources Deferred outflows related to pensions Liabilities Obligations under Securities Lending	 16,220.7 58.8 85.3 21.4 16,386.2 0.9 58.8	\$ 15,028.7 46.3 87.7 20.5 15,183.2 1.2	Change 7.9% 27.1% -2.7% 4.1% 7.9% -23.7%
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Investments Securities Lending Collateral Receivables Cash & Other Total Assets Deferred Outflows of Resources Deferred outflows related to pensions Liabilities Obligations under Securities Lending Accounts Payable & Accrued Expenses	 16,220.7 58.8 85.3 21.4 16,386.2 0.9 58.8 13.8	\$ 15,028.7 46.3 87.7 20.5 15,183.2 1.2 46.3 465.0	Change 7.9% 27.1% -2.7% 4.1% 7.9% -23.7% 27.1% -97.0%
Investments Securities Lending Collateral Receivables Cash & Other Total Assets Deferred Outflows of Resources Deferred outflows related to pensions Liabilities Obligations under Securities Lending Accounts Payable & Accrued Expenses Total Liabilities	 16,220.7 58.8 85.3 21.4 16,386.2 0.9 58.8 13.8	\$ 15,028.7 46.3 87.7 20.5 15,183.2 1.2 46.3 465.0	Change 7.9% 27.1% -2.7% 4.1% 7.9% -23.7% 27.1% -97.0%

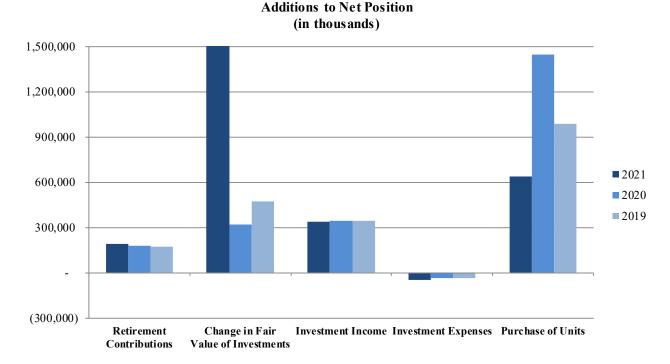
North Dakota Retirement and Investment Office Changes in Net Position – Fiduciary Funds (In Millions)

	2021		 2020	Total % Change
Additions				
Contributions	\$	191.5	\$ 181.1	5.7%
Net Investment Income		3,545.0	622.9	469.2%
Net Securities Lending Income		1.0	0.9	5.9%
Purchase of Units		635.2	1,446.6	-56.1%
Total Additions		4,372.7	 2,251.5	94.2%
Deductions				
Payments to TFFR members		241.1	230.8	4.5%
Administrative Expenses		4.8	3.9	24.8%
Redemption of Units		1,266.6	376.1	236.8%
Total Deductions		1,512.5	 610.8	147.6%
Total Change in Net Position	\$	2,860.2	\$ 1,640.7	74.3%

	2020		2019	Total % Change
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	1,446.6		987.8	46.4%
Total Additions	 2,251.5		1,944.5	15.8%
Deductions				
Payments to TFFR members	230.8		221.2	4.3%
Administrative Expenses	3.9		4.0	-3.8%
Redemption of Units	376.1		833.9	-54.9%
Total Deductions	 610.8		1,059.2	-42.3%
Total Change in Net Position	\$ 1,640.7	\$	885.4	85.3%

Statement of Changes in Net Position – Additions

Contributions collected by the pension trust fund increased by \$10.4 million (5.7%) in FY2021 and \$7.2 million (4.1%) in FY2020 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) increased by \$2.9 billion (468.4%) in FY2021 and decreased by \$158.9 million (20.3%) in FY2020. Financial markets pulled back in FY2020 in comparison to the previous year but recovered substantially in FY2021. Deposits of funds into the investment trust fund (purchase of units) increased from FY2019 to FY2020 by \$458.8 million but decreased by \$811.4 million in FY2021, mainly due to changes in amounts available for deposits to the Legacy Fund and Budget Stabilization Fund.



Statement of Changes in Net Position – Deductions

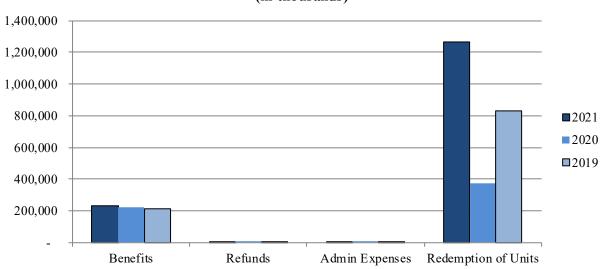
Benefits paid to TFFR plan participants, including partial lump-sum distributions, increased by \$10.8 million (4.8%) and \$9.0 million (4.2%) in FY2021 and FY2020, respectively. The increases are due to an increase in the total number of retirees in the plan as well as an increased retirement salary on which the benefits are based. Refunds decreased by \$566,000 (8.7%) in FY2021 after increasing by \$589,000 (10.0%) FY2020.

Administrative expenses increased by \$960,000 in fiscal year 2021 after decreasing in fiscal year 2020 by nearly \$154,000. Approximately half of the increase in FY2021 was due mainly to an increase in the agency's portion of the pension expense from the ND Public Employees Retirement System pension plan for the State of ND. That increase was driven by a change in actuarial assumptions, specifically a decrease in the discount rate.

An additional portion of that increase relates to the Pension Administration System (PAS) modernization project that began at the end of FY20 and ramped up during FY21. A project management consultant was hired and a Request for Proposals (RFP) was issued during the fiscal year. The total budget for this multi-year project is \$9.3 million, with approximately \$331,000 expended through June 30, 2021. The remaining appropriation authority for this project will be carried forward into the next biennium to complete the project.

The decrease in FY20 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 redemption of units in the investment trust funds increased by \$890.5 million in FY2021 after decreasing by \$457.9 million in FY2020. Biennial swings will continue in this line item due to the biennial earnings transfers from the Legacy Fund required under the State Constitution.



Deductions from Net Position (in thousands)

Conclusion

For the fiscal year ended June 30, 2021, the pension investment pool (which includes the TFFR pension plan), the Legacy Fund and the insurance investment pool generated net time weighted investment returns of 26.74%, 22.68% and 9.74%, respectively, outperforming their corresponding policy benchmarks. Investment returns for global equities exceeded long-term expectations in fiscal year 2021 driven by the economic and financial asset recovery that followed global lockdowns. The MSCI World Index, S&P 500 Index and Russell 2000 index were up 39.04%, 40.79% and 62.02% for fiscal year 2021. Positive performance in equity markets were driven by positive news on vaccine progress as well as a deluge of fiscal and monetary stimulus. In the second and third fiscal quarters, nearly \$3 trillion in COVID-relief funds were infused into the economy. Not surprisingly, equity returns for the pension pool, Legacy Fund and insurance pool were all strong. The pension pool's public equity allocation was up 41.79%, while the Legacy Fund and insurance pool's public equity allocations were up 42.35% and 43.06%, respectively. Fixed income returns across the pension pool, Legacy Fund and insurance pool were all positive despite rising interest rates in the U.S. The pension pool's fixed income allocation was up 4.92%, while the Legacy Fund and insurance pool's public fixed income allocations were up 3.29% and 2.88%, respectively. Real asset performance was solid, driven by strong returns from infrastructure assets. The pension pool's real asset allocation was up 9.98%, while the Legacy Fund and insurance pool's real asset portfolios were up 9.04% and 6.47%, respectively. Lastly, private equity in the pension pool returned 48.81% for the fiscal year.

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 for that 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 U.S. 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 U.S. 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 U.S. 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.

While the post-lockdown recovery has been strong and global economic growth projections remain favorable (the international monetary fund (IMF) expects global economic growth to be 6% for 2021 and 4.9% for 2022), there remain a number of concerns surrounding markets. Notable concerns include:

- Although global COVID-19 case counts have begun to recede following the delta surge, additional market impact from COVID remains a very real possibility.
- Supply chain issues and associated inflation concerns are headwinds for the economy.
- Apprehension over China's ongoing economic deceleration, which was further exacerbated by Evergrande's recent woes continue to weigh on the global economy.
- Rising uncertainty over fed policy as it relates to inflation, as well as questions on whether Fed Chairman Jerome Powell will remain for a second term continue to add volatility to the markets.

While there is a strong case for continued economic growth, there exist notable headwinds and navigating the markets will continue to be challenging. The State Investment Board will continue to evaluate the ever-evolving markets and research investment strategies to prudently manage its investment portfolios.

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

TFFR's funding level increased from 65.7% to 68.6% on an actuarial basis (and on a market basis from 63.4% to 75.7%) from July 1, 2020 to July 1, 2021. As net investment gains over the past 5 years are recognized, the plan's funding level is expected to improve, 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, 2021 and 2020

		Pension T	rust	Investmen	nt Trust	Tot	al
	_	2021	2020	2021	2020	2021	2020
Assets:							
Investments, at fair value							
Global equities	\$	1,843,851,776 \$	1,500,306,819 \$	7,923,977,037 \$	6,047,922,687		
Global fixed income		859,935,213	609,737,594	6,287,302,991	5,437,603,865	7,147,238,204	6,047,341,459
Global real assets		480,647,867	466,252,190	2,261,103,560	1,989,786,268	2,741,751,427	2,456,038,458
Cash equivalents		38,081,928	23,710,131	253,103,896	145,396,714	291,185,824	169,106,845
Total investments		3,222,516,784	2,600,006,734	16,725,487,484	13,620,709,534	19,948,004,268	16,220,716,268
Invested securities lending							
collateral		13,508,350	7,594,167	75,402,097	51,197,270	88,910,447	58,791,437
Receivables:							
Investment income		11,296,690	12,709,777	50,014,693	51,681,680	61,311,383	64,391,457
Contributions		28,014,669	20,919,360	-	-	28,014,669	20,919,360
Miscellaneous		5,566	5,683	24,181	24,662	29,747	30,345
Total receivables		39,316,925	33,634,820	50,038,874	51,706,342	89,355,799	85,341,162
Due from other state agency		-	-	-	-	-	-
Cash and cash equivalents		25,620,714	21,060,210	463,338	353,025	26,084,052	21,413,235
Equipment & Software (net of depr)		1,349	3,149			1,349	3,149
Total assets	_	3,300,964,122	2,662,299,080	16,851,391,793	13,723,966,171	20,152,355,915	16,386,265,251
Deferred outflows of resources							
Related to pensions	_	1,547,047	549,008	1,172,782	352,915	2,719,829	901,923
Liabilities:							
Accounts payable		151,625	165,186	269,770	261,446	421,395	426,632
Investment expenses payable		2,537,244	2,038,386	11,428,225	8,513,217	13,965,469	10,551,603
Securities lending collateral		13,508,350	7,594,167	75,402,097	51,197,270	88,910,447	58,791,437
Accrued expenses		3,455,406	1,973,137	2,061,222	843,730	5,516,628	2,816,867
Miscellaneous payable		-	-	28,999	29,597	28,999	29,597
Due to other state funds		-	-	871,687,384	-	871,687,384	-
Due to other state agencies		10,974	7,961	3,917	3,218	14,891	11,179
Total liabilities		19,663,599	11,778,837	960,881,614	60,848,478	980,545,213	72,627,315
Deferred inflows of resources							
Related to pensions	_	442,740	536,950	326,334	403,422	769,074	940,372
Fiduciary net position:							
Restricted for pensions		3,282,404,830	2,650,532,301	-	-	3,282,404,830	2,650,532,301
Held in trust for investment pool							
participants:							
Pension pool		-	-	4,293,189,642	3,433,370,472	4,293,189,642	3,433,370,472
Insurance pool		-	-	3,206,265,290	2,987,425,838	3,206,265,290	2,987,425,838
Held in trust for individual investment							
accounts				8,391,901,695	7,242,270,876	8,391,901,695	7,242,270,876
Total fiduciary net position	\$	3,282,404,830 \$	2,650,532,301 \$	15,891,356,627 \$	13,663,067,186	\$ 19,173,761,457 \$	16,313,599,487
Each participant unit is valued at \$1.00 Participant units outstanding				15,891,356,627	13,663,067,186		

The accompanying notes are an integral part of the financial statements. 13

North Dakota Retirement and Investment Office Statement of Changes in Net Position – Fiduciary Funds Years Ending June 30, 2021 and 2020

	Pensi	on Trust	Investmen	it Trust	Tot	al
	2021	2020	2021	2020	2021	2020
Additions:						
Contributions:						
Employer contributions	\$ 98,264,202		- \$	- \$, . , . , .	93,032,453
Member contributions	90,557,210	85,735,134	-	-	90,557,210	85,735,134
Purchased service credit	2,559,121	2,175,497	-	-	2,559,121	2,175,497
Interest, penalties and other	126,112	158,683		-	126,112	158,683
Total contributions	191,506,645	181,101,767	-	-	191,506,645	181,101,767
Investment income:						
Net change in fair						
value of investments	640,469,814	37,928,921	2,618,257,668	278,642,657	3,258,727,482	316,571,578
Interest, dividends and other incom	e 51,912,318	54,664,894	282,043,704	286,561,726	333,956,022	341,226,620
	692,382,132	92,593,815	2,900,301,372	565,204,383	3,592,683,504	657,798,198
Less investment expenses	8,388,601	6,523,407	39,305,773	28,437,549	47,694,374	34,960,956
Net investment income	683,993,531	86,070,408	2,860,995,599	536,766,834	3,544,989,130	622,837,242
Securities lending activity:						
Securities lending income	223,739	169,620	1,002,370	988,246	1,226,109	1,157,866
Less securities lending expenses	(44,740)	(33,911)	(200,426)	(197,478)	(245,166)	(231,389)
Net securities lending income	178,999	135,709	801,944	790,768	980,943	926,477
Purchase of units (\$1 per unit)			635,230,202	1,446,622,465	635,230,202	1,446,622,465
Total additions	875,679,175	267,307,884	3,497,027,745	1,984,180,067	4,372,706,920	2,251,487,951
Deductions:						
Benefits paid to participants	234,211,585	223,936,233	-	-	234,211,585	223,936,233
Partial lump-sum distributions	993,499	425,297	-	-	993,499	425,297
Refunds	5,923,187	6,489,704	-	-	5,923,187	6,489,704
Administrative expenses	2,678,375	2,095,405	2,158,611	1,781,619	4,836,986	3,877,024
Redemption of units (\$1 per unit)	-	-	1,266,579,693	376,059,310	1,266,579,693	376,059,310
Total deductions	243,806,646	232,946,639	1,268,738,304	377,840,929	1,512,544,950	610,787,568
Change in fiduciary						
net position	631,872,529	34,361,245	2,228,289,441	1,606,339,138	2,860,161,970	1,640,700,383
1	051,072,529	57,501,245	2,220,207,741	1,000,557,150	2,000,101,270	1,040,700,303
Fiduciary net position: Beginning of year	\$_2,650,532,301	\$_2,616,171,056_\$	13,663,067,186 \$	12,056,728,048 \$	16,313,599,487 \$	14,672,899,104
End of Year	\$ 3 282 404 830	\$ 2,650,532,301 \$	15,891,356,627 \$	13,663,067,186 \$	19,173,761,457 \$	16,313,599,487

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 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:

	Years
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, 2021 were deposited in the Bank of North Dakota. At June 30, 2021 and 2020, the carrying amount of TFFR's deposits was \$25,620,714 and \$21,060,210, respectively, and the bank balance was \$25,635,028 and \$21,073,623, 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 \$88,921,637 and \$136,809,065 at June 30, 2021 and 2020, respectively. In addition, these funds carry cash and cash equivalents totaling \$463,338 and \$353,025 at June 30, 2021 and 2020, respectively. These deposits are exposed to custodial credit risk as uninsured and uncollateralized. However, these deposits held at the Bank of North Dakota are guaranteed by the State of North Dakota through NDCC Section 6-09-10.

Note 3 - Investments

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

Interest Rate Risk

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

At June 30, 2021 and 2020, the following tables show the investments by investment type and maturity (expressed in thousands).

2021		Total Fair Value		Less than 1 Year		1-6 Years		-10 Years	More than 10 Years		
	¢	166,600	¢	507	¢	111.077	¢	122.450	¢	222 577	
Asset Backed Securities	\$	466,600	\$	507	\$	111,066	\$	132,450	\$	222,577	
Bank Loans		16,123		-		13,652		2,471		-	
Collateralized Bonds		2,930		-		-		2,930			
Commercial Mortgage-Backed		328,792		5		8,119		3,573		317,095	
Commercial Paper		12,998		12,998		-		-		-	
Corporate Bonds		2,426,220		83,417		1,237,811		584,494		520,498	
Corporate Convertible Bonds		17,733		-		11,058		159		6,516	
Government Agencies		41,889	1,30		24,488		6,734			9,361	
Government Bonds		858,389		44,235		182,055		224,661		407,438	
Gov't Mortgage Backed		599,911		3		5,230		26,101		568,577	
Gov't-issued CMB		30,923		16		5,421		21,953		3,533	
Index Linked Government Bonds		683,160		77,720		283,042		120,897		201,501	
Municipal/Provincial Bonds		39,237		3,380		7,538		6,055		22,264	
Non-Government Backed CMOs		159,803		10,844		9,798		21,006		118,155	
Repurchase Agreements		25,300		25,300		-		-		-	
Short Term Bills and Notes		73,606		73,606		-		-		-	
Sukuk		2,787		-		1,442		1,345		-	
Funds/Pooled Investments		1,726,778		28,585		928,703		414,962		354,528	
Total Debt Securities	\$	7,513,179	\$	361,922	\$	2,829,423	\$	1,569,791	\$	2,752,043	

North Dakota Retirement and Investment Office Notes to Financial Statements June 30, 2021 and 2020

								June	50	, 2021 allu		
		Fotal Fair	L	ess than					M	ore than 10		
2020		Value		1 Year		1-6 Years	6	-10 Years		Years		
Asset Backed Securities	\$	459,221	\$	104	\$	122,916	\$	95,116	\$	241,085		
Bank Loans	φ	4 <i>39</i> ,221 898	φ	104	φ	898	φ	95,110	φ	241,005		
Collateralized Bonds				-		090		-		-		
		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		10,197			-		4,534		1,825		3,838
Government Agencies	38,491		38,491			1,918		16,412		14,179		5,982
Government Bonds	540,28		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		

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 POs valued at \$6.5 million and \$0.0 million and IOs valued at \$26.4 million and \$24.4 million at June 30, 2021 and 2020, 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, 2021 and 2020, (expressed in thousands).

North Dakota Retirement and Investment Office Notes to Financial Statements June 30, 2021 and 2020

2021	Total Fair Value	AAA	AA	А	BBB	BB	В	CCC	CC	С	D	NR	
Asset Backed Securities	\$ 466,600	\$ 239,151	\$ 52,850	\$ 56,092	\$ 45,809	\$ 3,515	\$ 2,927	\$ 3,872	\$ 1,909	\$ -	\$ 889	\$ 59,586	
Bank Loans	16,123	-	-	-	296	4,237	9,990	1,002	-	-	-	598	
Collateralized Bond	2,930	2,930	-	-	-	-	-	-	-	-	-	-	
Commercial Mortgage Backed	328,792	245,667	10,311	14,175	7,286	5,090	4,316	1,885	160	27	-	39,875	
Commercial Paper	12,998	-	-	-	-	-	-	-	-	-	-	12,998	
Corporate Bonds	2,426,220	13,056	54,478	495,678	1,412,446	299,862	103,885	35,737	97	-	-	10,981	
Corporate Convertible Bonds	17,733	-	-	-	2,608	4,515	1,712	3,139	-	-	-	5,759	
Gov't Agencies	40,129	3,867	8,797	10,239	13,697	1,712	-	422	-	-	-	1,395	
Gov't Bonds	110,973	-	9,351	4,605	47,664	33,811	9,234	2,026	-	-	-	4,282	
Gov't Mortgage Backed	535,414	-	516,452	-	4,390	7,821	6,394	-	-	-	-	357	
Gov't Issued CMB	30,698	1,813	27,945	-	940	-	-	-	-	-	-	-	
Index Linked Government Bonds	19,224	19,224	-	-	-	-	-	-	-	-	-	-	
Municipal/Provincial Bonds	39,237	2,412	20,081	9,321	4,366	1,583	-	-	218	-	800	456	
Non-Gov't Backed CMOs	159,803	37,221	12,681	17,201	20,972	7,293	2,034	798	1,116	-	47	60,440	
Repurchase Agreements	25,300	-	25,300	-	-	-	-	-	-	-	-	-	
Short Term Bills & Notes	10,817	-	9,339	1,478	-	-	-	-	-	-	-	-	
Sukuk	2,787	-	-	-	2,787	-	-	-	-	-	-	-	
Funds/Pooled Investments	1,726,778	504,809	300,285	613,389	214,815	12,949	41,080	-	-	-	-	39,451	
Total Credit Risk of Debt Securities	5,972,556	\$ 1,070,150	\$ 1,047,870	\$ 1,222,178	\$ 1,778,076	\$ 382,388	\$ 181,572	\$ 48,881	\$ 3,500	\$ 27	\$ 1,736	\$ 236,178	

US Gov't & Agencies **

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1,540,623
$ 7,513,179
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Total Debt Securities

		Credit Rating*										
2020	Total Fair Value	AAA	AA	А	BBB	BB	В	CCC	CC	С	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	-	-	-	-	-	-	-	-	-
Index Linked 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 ** Total Debt Securities

1,232,635 \$ 6,843,321

- * Ratings are determined in the following order:
 - 1. S&P rating
 - 2. Moody's rating
 - 3. Fitch rating

 - Manager-determined rating (internal rating)
 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, 2021 and 2020, 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, 2021 and 2020 (expressed in thousands).

2021					10 5 0, 2021 unu 1
Currency	Short-Term	Debt	Equity	Real Estate	Total
Argentine peso	\$ 65	\$ 364	\$ -	\$ -	\$ 429
Australian dollar	1,305	133	85,215	-	86,653
Brazilian real	(10,006)	13,514	4,080	-	7,588
British pound sterling	(45,730)	47,308	262,384	-	263,962
Canadian dollar	(624)	561	36,173	-	36,110
Chinese yuan renminbi	427	-	23,707	-	24,134
Chilean peso	822	-	-	-	822
Colombian peso	(508)	-	-	-	(508)
Danish krone	575	-	87,460	-	88,035
Euro	(35,762)	37,980	609,331	651	612,200
Hong Kong dollar	816	-	155,260	-	156,076
Hungarian forint	(335)	-	2,875	-	2,540
Indian rupee	-	427	-	-	427
Japanese yen	1,604	-	294,524	-	296,128
Mexican peso	(825)	952	1,440	-	1,567
New Israeli shekel	(492)	491	3,605	-	3,604
New Taiwan dollar	334	-	7,660	-	7,994
New Zealand dollar	(245)	-	8,445	-	8,200
Norwegian krone	232	-	23,304	-	23,536
Peruvian nuevo sol	(2,183)	2,065	-	-	(118)
Polish zloty	(224)	-	-	-	(224)
Russian ruble	7	-	-	-	7
Singapore dollar	303	-	10,712	-	11,015
South African rand	638	-	1,168	-	1,806
South Korean won	-	-	12,253	-	12,253
Swedish krona	237	-	105,046	-	105,283
Swiss franc	4	-	179,514	-	179,518
Thai baht	-	-	3,296	-	3,296
Turkish lira	-	-	1,321	-	1,321
International commingled					
funds (various currencies)			1,353,624	34,534	1,388,158
Total international					
investment securities	\$ (89,565)	\$ 103,795	\$ 3,272,397	\$ 35,185	\$ 3,321,812

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

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, 2021 and 2020, 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 \$232.5 and \$65.4 million for fiscal years 2021 and 2020, respectively. At June 30, 2021 and 2020, the SIB investment portfolio had the notional futures balances shown below (expressed in thousands).

Futures		Notiona	al Valu	ie
	Jur	ne 30, 2021	Jur	ne 30, 2020
Cash & Cash Equivalent Derivative Futures				
Long	\$	172,043	\$	-
Short		(653,875)		(258,482)
Commodity Derivative Futures				
Long		-		-
Short		(31,463)		-
Equity Derivative Futures				
Long		662,160		1,064,665
Short		-		-
Fixed Income Derivative Futures				
Long		771,100		262,374
Short		(1,213,556)		(1,703,654)
Total Futures	\$	(293,591)	\$	(635,097)

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 \$0.6 million

and \$5.3 million for fiscal years 2021 and 2020, respectively. At June 30, 2021 and 2020, the SIB investment portfolio had the following option balances (expressed in thousands).

<u>Options</u>		Fair V	/alue	
	June 3	0, 2021	June	30, 2020
Cash & Other Options				
Call	\$	99	\$	201
Put		767		537
Fixed Income Options				
Call		(220)		(146)
Put		(170)		(70)
Total Options	\$	476	\$	522

Swaps

A swap is a derivative in which counterparties exchange certain benefits of one party's financial instrument for those of the other party's financial instrument. Specifically, the two counterparties agree to exchange one stream of cash flows for another stream. The SIB, through its investment managers, has entered into various swap agreements in an attempt to manage its exposure to interest rate, inflation, credit 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 \$(3.0) and \$(22.5) million for fiscal years 2021 and 2020, respectively. The maximum loss that would be recognized at June 30, 2021 and 2020, if all counterparties failed to perform as contracted is \$2.3 million and \$3.0 million, respectively. Swap fair values are determined by a third party pricing source. At June 30, 2021 and 2020, the SIB's investment portfolio had the swap fair value balances as shown below (expressed in thousands).

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.

North Dakota Retirement and Investment Office

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						Juli	$e_{50}, 202$.020
		Notional	Amou	int			Fair V	/alue	
Counterparty/Moody's Rating	Jun	e 30, 2021	June 30, 2020		Expiration Date Range	June 30, 2021		June	30, 2020
Bank of America/Aa2 (3 contracts)	\$	(3,400)	\$	-	2021	\$	10	\$	-
Bank of America/Aa2 (5 contracts)				(3,730)	2021 - 2025				(71)
Citibank/Aa3 (27 contracts)		(3,000)			2023 - 2024		(12)		. ,
Citibank/Aa3 (33 contracts)				3,715	2020 - 2024				(262)
Citigroup Global Markets/A1 (5 contracts)		(6,804)			2024 - 2026		623		. ,
Citigroup Global Markets/A1 (2 contracts)				(400)	2024				(9)
Credit Suisse First Boston/A1 (12 contracts)		(18,361)		. ,	2022 - 2026		1,505		
Credit Suisse First Boston/A1 (9 contracts)				(3,675)	2020 - 2024				(114)
Deutsche Bank/A3 (2 contracts)				2,000	2059				(15)
Goldman Sachs/A2 (4 contracts)		(1,700)			2023 - 2024		8		
Goldman Sachs/A3 (4 contracts)				(1,700)	2023 - 2024				(55)
JP Morgan Chase/Aa2 (1 contract)		26,110			2026		(667)		
JP Morgan Chase/Aa2 (4 contracts)				(25,515)	2025 - 2029				852
Morgan Stanley/A1 (1 contract)		(100)			2024		1		
Morgan Stanley/A3 (5 contracts)				2,555	2024 - 2025				(35)
Total Credit Default Swaps	\$	(7,255)	\$	(26,750)		\$	1,468	\$	291

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.

		Notional	Amo	unt			Fair V	/alue	
Counterparty/Moody's Rating	Jun	e 30, 2021	Jun	e 30, 2020	Expiration Date Range	June	30, 2021	June	30, 2020
Citigroup Global Markets/A1 (17 contracts)	\$	55,438	\$	-	2022 - 2051	\$	(41)	\$	-
Citigroup Global Markets/A1 (16 contracts)				112,251	2020 - 2050				443
Credit Suisse First Boston/A1 (13 contracts)		132,778			2023 - 2051		1,145		
Credit Suisse First Boston/A1 (22 contracts)				185,220	2020 - 2050				714
JP Morgan Chase/Aa2 (129 contracts)		160,807			2023 - 2035		(4,026)		
JP Morgan Chase/Aa2 (100 contracts)				367,049	2020 - 2045				4,871
Total Interest Rate Swaps	\$	349,023	\$	664,520		\$	(2,922)	\$	6,028

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

Inflation Swaps

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

North Dakota Retirement and Investment Office Notes to Financial Statements June 30, 2021 and 2020

		Notional	Amoui	nt			Fair V	/alue	
Counterparty/Moody's Rating	June	e 30, 2021	June	30, 2020	Expiration Date Range	June	30, 2021	June	30, 2020
Citigroup Global Markets/A1 (4 contracts) JP Morgan Chase/Aa2 (21 contracts)	\$	13,240 17,220	\$	-	2026 2026 - 2031	\$	(402) (369)	\$	-
Total Inflation Swaps	\$	30,460	\$	-		\$	(771)	\$	-

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

Total Return Swaps

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

		Notional	Amoui	nt			Fair V	/alue	
Counterparty/Moody's Rating	June	30, 2021	June	30, 2020	Expiration Date Range	June 3	0, 2021	June 3	0, 2020
Credit Suisse International/Aa3 (2 contracts) Credit Suisse International/A1 (2 contracts)	\$	2,764	\$	- 2,764	2041 2041	\$	7	\$	- 2
Total Total Return Swaps	\$	2,764	\$	2,764		\$	7	\$	2

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 \$(3.2) million and \$2.4 million for fiscal years 2021 and 2020, respectively. At June 30, 2021 and 2020, the SIB's investment portfolio included the currency forwards balances shown below (expressed in thousands).

				Fair	Value
Currency	Cost	Purchases	Sales	6/30/2021	6/30/2020
Australian dollar	\$ (131)	\$ -	\$ (131)	\$ (128)	\$ (737)
Brazilian real	(8,393)	6,733	(15,126)	(9,541)	(2)
British pound sterling	(66,012)	24,676	(90,688)	(64,811)	(39,408)
Canadian dollar	(399)	-	(399)	(404)	(579)
Chilean peso	1,733	1,733	-	1,702	-
Colombian peso	-	-	-	-	167
Euro	(135,085)	89,223	(224,308)	(131,704)	(60,502)
Japanese yen	(521)	-	(521)	(516)	-
New Israeli shekel	(1,953)	-	(1,953)	(1,970)	-
Peruvian nuevo sol	(2,236)	-	(2,236)	(2,183)	-
Russian ruble	6	6	-	7	(52)
South African rand	(1,032)	-	(1,032)	(986)	-
United States dollar	214,023	336,394	(122,371)	214,023	99,701
Total forwards subject to	o currency risk			\$ 3,489	\$ (1,412)

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, 2021 and 2020, the tables below show the SIB's derivative investments subject to interest rate risk (expressed in thousands).

2021	Ν	Fotal otional Value	3 moi	nths or less	3 to	o 6 months	6 to 2	12 months	1-5	years	5-10) years		er than /ears
Futures-interest rate contracts	\$	(924,288)	\$	(675,150)	\$	(403,466)	\$	(17,715)	\$ 1	72,043	\$	-	\$	-
Margined Options-interest rate contracts		-		-		-		-		-		-		-
Total	\$	(924,288)	\$	(675,150)	\$	(403,466)	\$	(17,715)	\$ 1	72,043	\$	-	\$	-
		tal Fair Value		nths or less		o 6 months	6 to	12 months	1-5	years	-) years	10	er than /ears
Options - interest rate contracts	\$	818	\$	(20)	\$	-	\$	-	\$	-	\$	-	\$	838
Options on futures		(342)		(371)		_		29		-		-		-
Options on lutures		(342)		(371)				2)						
Swaps - interest rate contracts		(3,693)		-		-		-		(760)		(3,095)		162
1		· /		· · · ·		- 10				(760) 1,458		(3,095)		162 -

2020	Total												
	Notional											Great	er than
	Value	3 mo	onths 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)	\$ (1	72,405)	\$	-	\$	-
Margined Options-interest rate contracts	(3)	(3)		-		-		-		-		-
Total	\$(1,699,765) \$	(265,957)	\$ (1,	,175,326)	\$	(86,077)	\$ (1	72,405)	\$	-	\$	-
	Total Fair Value	<u>3 ma</u>	onths or less	3 to 6	months	6 to .	12 months	1-5	years	5-10	years		er than years
Options - interest rate contracts		<u>3 ma</u>	onths or less (7)	<u>3 to 6</u> \$	months	<u>6 to</u>	12 months	<u>1-5</u> \$	years	<u>5-10</u> \$	years		
Options - interest rate contracts Options on futures	Value	\$					12 months - -	<u>1-5</u> \$	2	<u>5-10</u> \$	years - -	10	years
1	Value \$ 731	\$	(7)				<u>12 months</u> - - 472	<u>1-5</u> \$	2	<u>5-10</u> \$	<u>years</u> - - 250	10	years
Options on futures	Value \$ 731 (209	\$	(7) (209)		-		-	<u>1-5</u> \$	-	<u>5-10</u> \$		10	738 -

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, 2021 and 2020 (expressed in thousands).

North Dakota Retirement and Investment Office Notes to Financial Statements

June 30, 2021 and 2020

	Dollars in (000)								
		Fair Value Measures Using							
2021	Fair Value 6/30/21		Quoted Prices in Active Markets for Indentical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)				
Investments by Fair Value Level									
Short Term Securities									
Commercial Paper			\$ -	\$ 12,998	\$ -				
Short Term Bills and Notes		606	-	73,606	-				
Total Short Term Securities	86,	504	-	86,604	-				
Fixed Income Investments									
Asset Backed Securities	464	720	-	464,720	-				
Bank Loans	16	123	-	16,123	-				
Collateralized Bonds	2	930	-	2,930	-				
Commercial Mortgage-Backed	328	792	-	328,792	-				
Corporate Bonds	2,425	355	-	2,424,932	423				
Corporate Convertible Bonds	17	733	-	17,733	-				
Funds - Fixed Income ETF	18	501	18,501	-	-				
Government Agencies	36	772	-	36,772	-				
Government Bonds	858		-	858,389	-				
Government Mortgage Backed Securities	599	911	-	599,911	-				
Gov't-issued Commercial Mortgage-Backed	30	923	-	30,923	-				
Index Linked Government Bonds	683	160	-	683,160	-				
Municipal/Provincial Bonds	39	237	-	34,000	5,237				
Non-Government Backed C.M.O.s	157	823	-	156,720	1,103				
Sukuk	2	787	-	2,787	-				
Total Fixed Income Investments	5,683,	.56	18,501	5,657,892	6,763				
Equity Investments									
Common Stock	6,297	043	6,296,895	148	-				
Convertible Equity	11	586	11,586	-	-				
Funds - Equities ETF	107	225	107,225	-	-				
Preferred Stock	3	900	2,001	1,899	-				
Rights/Warrants		87	87	-	-				
Stapled Securities	3	360	3,360	-	-				
Total Equity Investments	6,423,	201	6,421,154	2,047	-				
Derivative Investments									
Exchange Cleared Swaps	(1	441)	-	(1,441)	-				
Options		476	(341)	817	-				
Swaps		777)	-	(777)	-				
Total Derivative Investments	(1,	742)	(341)	(1,401)	-				
Total Investments by Fair Value Level	\$ 12,191,	219	\$ 6,439,314	\$ 5,745,142	\$ 6,763				

North Dakota Retirement and Investment Office Notes to Financial Statements June 30, 2021 and 2020

	Dollars in (000)					
Investments Measured at the Net Asset Value (NAV)			Unfunded Commitments		Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Commingled Funds-Debt	\$	1,708,277	\$	-	Daily, monthly	1-15 days
Commingled Funds-Equities		1,491,014		-	Daily, monthly	1-15 days
Distressed Debt		225,536		75,000	Quarterly, Not eligible	60 days
Long/Short		365,032		-	Monthly	15 days
Mezzanine Debt		205		8,499	Not eligible	Not eligible
Private Credit		476,410		181,200	Not eligible	Not eligible
Private Equity		551,014		861,976	Not eligible	Not eligible
Real Assets		2,036,389		430,427	Quarterly, Not eligible	30-90 days
Total Investments Measured at the NAV	\$	6,853,877	\$	1,557,102		
Investments at Other Than Fair Value						
Cash and adjustments to cash	\$	824,404				
Bank Certificates of Deposit		42,900				
Other miscellaneous securities		10,304				
Repurchase Agreements		25,300				
Total Investments at Other Than Fair Value	\$	902,908				
Total Investments	\$	19,948,004				

North Dakota Retirement and Investment Office Notes to Financial Statements

June 30, 2021 and 2020

	Dollars in (000)							
	Fair Value Measures Using							
2020		Fair Value 6/30/20		oted Prices in ve Markets for entical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)		
Investments by Fair Value Level				<u> </u>	· · · · · · · · · · · · · · · · · · ·			
Short Term Securities								
Commercial Paper	\$	33,978	\$	-	\$ 33,978	\$ -		
Short Term Bills and Notes		58,648		-	58,648	-		
Total Short Term Securities		92,626		-	92,626	-		
Fixed Income Investments								
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		
Equity Investments								
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	-	-		
Derivative Investments								
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	\$ 1	0,160,562	\$	4,821,031	\$ 5,334,020	\$ 5,511		

	Dollars in (000)			n (000)		
				Unfunded	Redemption Frequency	Redemption
Investments Measured at the Net Asset Value (NAV)				Commitments	(If Currently Eligible)	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
RealAssets		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				

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, 2021 and 2020, unfunded commitments in one of its two distressed debt funds totaled \$75.0 million and \$90.6 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, 2021 and 2020.

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 1-2 years, and unfunded commitments of \$8.5 million as of June 30, 2021 and 2020.

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 participates in two senior private credit funds, commonly referred to as direct lenders, which are structured as custom managed accounts and are not eligible for redemptions during their investment lives. Due to the perpetual nature of the funds, the remaining investment lives fluctuate based on timing of new commitments, and the unfunded commitments totaled \$181.2 million and \$191.2 million as of June 30, 2021 and 2020, 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 \$862.0 million and \$333.3 million in unfunded private equity commitments as of June 30, 2021 and 2020, respectively.

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

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

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

Real Estate — includes investments in private vehicles through limited partnerships or commingled vehicles that have an ownership interest in direct real estate properties. The investment strategies may include "value added" strategies, which derive their return from both income and appreciation, "opportunistic", which derive their return primarily through appreciation, and "alternative" which invest in less traditional types of property. Both domestic and international real estate funds are utilized. The SIB has a dedicated sub-asset class for these types of investments within global real assets. There are currently 10 different real estate funds in the portfolio. Four of those funds are open-ended vehicles that accept redemption requests quarterly with a 30-90 day notification period. There were no unfunded commitments totaling \$45 million as of June 30, 2021; and two of the four open-ended funds had unfunded commitments totaling \$45 million as of June 30, 2020. The remaining five funds are closed-ended limited partnerships that are not eligible for redemptions. Those five funds have a combined unfunded commitment of \$263.3 million and \$85.1 million as of June 30, 2021 and 2020, 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 1-5 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, 2021 and 2020, 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 \$167.1 million and \$116.3 million at June 30, 2021 and 2020, 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 130 and 232 days as of June 30, 2021 and 2020, respectively. Cash open collateral is invested in a short term investment pool, which had an interest sensitivity of 1 day as of both June 30, 2021 and 2020. This pool is valued based on amortized cost. There were no violations of legal or contractual provisions, no borrower or lending agent default losses known to the securities lending agent. There are no dividends or coupon payments owing on the securities

lent. Securities lending earnings are credited to participating clients on approximately the fifteenth day of the 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, 2021 and 2020 (expressed in thousands).

2021	Securities Lent		Non-Cash Collateral Value		iteral Investm	
Lent for cash collateral:						
US agency securities	\$	937	\$	-	\$	957
US government securities		1,483		-		1,540
US corporate fixed income securities		32,989		-		33,846
Global government securities		1,137		-		1,207
Global corporate fixed income securities	3,551		-			3,781
US equities	29,346		-			30,361
Global equities		16,043		-		17,218
Lent for non-cash collateral:						
US agency securities		1,160		1,198		-
US government securities		2,186		2,242		-
US corporate fixed income securities		38,039		39,396		-
US equities		153,604	158,573		-	
Global equities		14,377		15,433		-
Total	\$	294,852	\$	216,842	\$	88,910

North Dakota Retirement and Investment Office Notes to Financial Statements

June 30, 2021 and 2020

2020	Securities Lent		Non-Cash Collateral 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		89,262		-
Global equities		12,630		13,519		-
Total	\$	175,489	\$	121,679	\$	58,791

Note 4 - Capital Assets

	June 30, 2019	Additions	Retirements	June 30, 2020	Additions	Retirements	June 30, 2021
Office equipment Less accumulated	\$16,879	\$-	\$-	\$16,879	\$-	\$ -	\$16,879
depreciation on office equipment	(11,930)	(1,800)	-	(13,730)	(1,800)	-	(15,530)
Software	1,213,500	-	-	1,213,500	\$0	-	1,213,500
Less accumulated depreciation on software	(1,213,500)	-	-	(1,213,500)	-	-	(1,213,500)
	\$ 4,949	\$ (1,800)	\$ -	\$ 3,149	\$ (1,800)	\$ -	\$ 1,349

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, 2021 and 2020:

	 2021	2020		
Due To Other State Agencies				
Information Technology Department	\$ 10,976	\$	7,831	
Office of Attorney General	3,884		3,011	
Office of Management and Budget	31		337	
Total due to other state agencies	\$ 14,891	\$	11,179	
Due To Other State Funds				
General Fund	\$ 871,687,384	\$	-	

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 2019-21 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 \$88,365 and \$89,924 for fiscal years 2021 and 2020, respectively. Minimum payments under the lease for fiscal 2022 are \$90,872.

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, 2021 and 2020 are summarized as follows:

	Beginning Balance 7/1/2020	Additions	Reductions	Ending Balance 6/30/2021	Amounts Due Within One Year
Accrued Leave	\$205,830	\$160,655	(\$155,082)	\$211,403	\$141,891
	Beginning Balance 7/1/2019	Additions	Reductions	Ending Balance 6/30/2020	Amounts Due Within One Year
Accrued Leave	\$194,227	\$149,970	(\$138,367)	\$205,830	\$135,440

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, 2021 and 2020, the number of participating employer units was 212 and 213, respectively, consisting of the following:

	June 30, 2021	June 30, 2020
Public School Districts	173	174
County Superintendents	6	6
Special Education Units	20	20
Vocational Education Units	4	4
Other	9	9
Total	212	213

TFFR's membership consisted of the following:

	2021	2020
Retirees and beneficiaries currently receiving benefits	9,262	9,036
Terminated employees - vested	1,754	1,715
Terminated employees - nonvested	1,213	1,132
Total	12,229	11,883
Current employees		
Vested	8,306	8,216
Nonvested	3,321	3,131
Total	11,627	11,347

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 26.36% and 3.37% for the years ended June 30, 2021 and 2020, 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, 2021 and 2020, TFFR had net realized gains of \$236,376,522 and \$50,611,877, respectively.

Net Pension Liability

The components of the net pension liability of TFFR at June 30, 2021 and 2020 (expressed in thousands), were as follows:

Notes to Financial Statements June 30, 2021 and 2020 June 30, 2021 June 30, 2020 Total pension liability \$ 4,336,060 \$ 4,181,036 (3,282,405) Plan fiduciary net position (2,650,532)1,053,655 1,530,504 Net pension liability (NPL) \$ \$ Plan fiduciary net position as a percentage of the total pension liability 75.7% 63.4%

North Dakota Retirement and Investment Office

Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of July 1, 2021 and 2020, using the following actuarial assumptions:

Valuation date	July 1, 2021	July 1, 2020
Inflation	2.30%	2.30%
Salary increases	3.80% to 14.80%; varying by service,	3.80% to 14.80%; varying by service,
	including inflation and productivity	including inflation and productivity
Cost of living adjustments	None	None
Investment rate of return	7.25% net of investment expenses, including	7.25% net of investment expenses, including
	inflation	inflation

For the July 1, 2021 and 2020, valuations, 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.

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 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

2021	Long-Term				
		Expected			
	Target	Real Rate of			
	Allocation	Return			
Global Equity	55.0%	6.9%			
Global Fixed Income	26.0%	0.7%			
Global Real Assets	18.0%	4.8%			
Cash Equivalents	1.0%	-1.0%			
2020		Long-Term			
2020		Long-Term Expected			
2020	Target	e e			
2020	Target Allocation	Expected			
2020	e	Expected Real Rate of			
2020 Global Equity	e	Expected Real Rate of			
	Allocation	Expected Real Rate of Return			
Global Equity	Allocation 58.0%	Expected Real Rate of Return 6.9%			

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, 2021 and 2020 are summarized in the following tables:

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 2.0% for expected inflation.

Discount Rate

The discount rate used to measure the total pension liability was 7.25% as of June 30, 2021 and 2020. 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, 2021 and 2020 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, 2021 and 2020. 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, 2021 and 2020.

Sensitivity of Net Pension Liability

The following presents the net pension liability of the TFFR employers calculated using the discount rate of 7.25% as of June 30, 2021 and 2020, 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:

2021			
	1% Decrease	Current Discount	1% Increase
	(6.25%)	Rate (7.25%)	(8.25%)
Employers' net pension liability	\$ 1,582,102,595	\$ 1,053,655,311	\$ 614,833,478
2020			
	1% Decrease	Current Discount	1% Increase
	(6.25%)	Rate (7.25%)	(8.25%)
Employers' net pension liability	\$ 2,038,548,355	\$ 1,530,503,462	\$ 1,108,292,065

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 postretirement benefit increases. Members of the Main System are entitled to unreduced monthly pension benefits beginning when the sum of age and years of credited service equal or exceed 85 (Rule of 85), or at normal retirement age (65). For members hired on or after January 1, 2016 the Rule of 85 is replaced with the Rule of 90 with a minimum age of 60. The monthly pension benefit is equal to 2.00% of their average monthly salary, using the highest 36 months out of the last 180 months of service, for each year of service. The plan permits early retirement at ages 55-64 with three or more years of service.

Members may elect to receive the pension benefits in the form of a single life, joint and survivor, term-certain annuity, or partial lump sum with ongoing annuity. Members may elect to receive the value of their accumulated

contributions, plus interest, as a lump sum distribution upon retirement or termination, or they may elect to receive their benefits in the form of an annuity. For each member electing an annuity, total payment will not be less than the members' accumulated contributions plus interest.

Death and Disability Benefits

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

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

Refunds of Member Contributions

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

Member and Employer Contributions

Member 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%

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, 2021 and 2020, RIO reported a liability of \$4,531,009 and \$1,889,405, 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, 2020 and 2019, 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, 2020, RIO's pension plan proportion was 0.140747 percent and as of June 30, 2019, was 0.151523 percent. RIO's OPEB plan proportion was 0.122537 percent as of June 30, 2020 and was 0.141245 percent as of June 30, 2019.

RIO recognized pension and OPEB expense of \$652,402 and \$234,757 for the years ended June 30, 2021 and 2020, respectively. At June 30, 2021 and 2020, RIO reported deferred outflows of resources and deferred inflows of resources related to pensions and OPEB from the following sources:

	Deferred Outflows of Resources			Deferred Inflows of Resources				
		2021		2020		2021		2020
Differences between expected and actual								
experience	\$	19,519	\$	3,853	\$	226,838	\$	325,848
Changes in assumptions		2,387,471		677,150		392,423		569,784
Net differences between projected and actual								
earnings on plan investments		146,456		31,068		-		-
Changes in proportion and differences								
between employer contributions and								
proportionate share of contributions		14,114		55,138		149,812		44,740
Employer contributions subsequent to the								
measurement date		152,268		134,714		-		-
Total	\$	2,719,828	\$	901,923	\$	769,073	\$	940,372

Deferred outflows of resources related to pensions and OPEB resulting from employer contributions subsequent to the measurement date in the amount of \$152,268 will be recognized as a reduction of the net pension liability in the year ended June 30, 2022.

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	
2022	545,435
2023	459,175
2024	367,933
2025	426,276
2026	(394)
2027	 62
	\$ 1,798,487

Actuarial assumptions

The total pension and OPEB liabilities in the July 1, 2020 and 2019 actuarial valuation were determined using the following actuarial assumptions, applied to all periods included in the measurement:

2020 – Pension Plan

Inflation	2.25%
Salary Increase (Payroll Growth)	3.5% to 17.75%, including inflation
Investment Rate of Return	7.00%, net of investment expense, including inflation
Cost-of-living Adjustments	None
Mortality Rates	Sex-distinct Pub-2010 tables for General Employees, with scaling based on actual experience. Respective corresponding tables were used for healthy retirees, disabled retirees, and active members. Mortality rates are projected from 2010 using the MP-2019 scale.
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
Mortality Rates	Mortality rates for active members, inactive members and healthy retirees 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, 2020 and 2019, 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.

2020 – OPEB Plan	
Inflation	2.25%
Salary Increase (Payroll Growth)	Not applicable.
Investment Rate of Return	6.50%, net of investment expense, including inflation
Mortality Rates	Pub-2010 Healthy Retiree Mortality table (for General Employees), sex- distinct, with rates multiplied by 103% for males and 101% for females. Pub-2010 Disabled Retiree Mortality table (for General Employees), sex-distinct, with rates multiplied by 117% for males and 112% for females. Pub-2010 Employee Mortality table (for General Employees), sex-distinct, with rates multiplied by 92% for both males and females. Mortality rates are projected from 2010 using the MP-2019 scale.
2019 – OPEB Plan	
Inflation	2.50%
Salary Increase (Payroll Growth)	Not applicable.
Investment Rate of Return	7.25%, net of investment expense, including inflation
Mortality Rates	Mortality rates for active members, inactive members and healthy retirees were based on the RP-2000 Combined Healthy Mortality Table, set back two years for males and three years for females, projected

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There were no benefit changes during 2019. Beginning January 1, 2020, members first enrolled in the NDPERS Main System and the Defined Contribution Plan on our after that date are no longer eligible to participate in the OPEB Plan. Therefore, the OPEB Plan is, for the most part, a closed plan. There were no other benefit changes during 2020. 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, and further to 6.50% beginning with the actuarial valuation as of July 1, 2020. 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 buildingblock 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									
		Long-Term							
		Expected							
	Target	Real Rate of							
Asset Class	Allocation	Return							
Global Equity	57%	6.9%							
Global Fixed Income	23%	1.3%							
Global Real Assets	20%	5.0%							

2019 - Pension Plan

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

2020 - OPEB Plan

		Long-Term Expected
	Target	Real Rate of
Asset Class	Allocation	Return
Large Cap Domestic Equity	37%	6.1%
Small Cap Domestic Equity	9%	7.0%
International Equity	14%	6.5%
Core-Plus Fixed Income	40%	1.2%

2019 - OPEB Plan

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

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.

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 2020, the expected rate of return on pension plan investments is 7.00%; the municipal bond rate is 2.45% (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 4.64%.

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%.

The discount rate used to measure the total OPEB liability for 2020 was 6.50% and for 2019 was 7.25%. 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, 2020 and 2019 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 benefits of 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:

2021			
	1% Decrease	Current Discount	1% Increase
	(3.64%)	Rate (4.64%)	(5.64%)
RIO's net pension liability	\$ 5,744,908	\$ 4,427,931	\$ 3,350,323
	1% Decrease	Current Discount	1% Increase
	(5.50%)	Rate (6.50%)	(7.50%)
RIO's net OPEB liability	135,189	103,078	75,924
2020			
	1% Decrease	Current Discount	1% Increase
	(6.5%)	Rate (7.5%)	(8.5%)
RIO's net pension liability	\$ 2,546,343	\$ 1,775,959	\$ 1,128,702
	1% Decrease	Current Discount	1% Increase
	(6.25%)	Rate (7.25%)	(8.25%)
RIO's net OPEB liability	144,799	113,446	86,608

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 on August 20, 2021, upheld the dismissal. The Litigation Trustee has now filed a petition for an *en banc* rehearing by the full Second Circuit of the Court's August 20, 2021, decision. 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)

		2021	2020		2019		2018		2017		2016		2015		2014
Total pension liability															
Service cost	\$	87,088	\$ 80,591	\$	77,756	\$	78,041	\$	75,476	\$	68,239	\$	60,618	\$	56,752
Interest		300,698	306,791		296,876		287,375		276,412		265,440		249,064		237,821
Changes of benefit terms		-	-		-		-		-		-		-		-
Differences between expected and actual experience		8,366	(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		(241,128)	(230,851)		(221,228)	((207,979)	((196,516)	((185,969)		(172,239)		(162,259)
Net change in total pension liability		155,024	187,612		129,909		129,498		144,623		139,617		310,977		141,661
Total pension liability - beginning		4,181,036	3,993,424	-	3,863,515		,734,017		,589,394	_	,449,777		3,138,800		2,997,139
Total pension liability - ending (a)	\$	4,336,060	\$ 4,181,036	\$3	3,993,424	\$3,	,863,515	\$3	,734,017	\$3	,589,394	\$ 3	3,449,777	\$3	3,138,800
Plan fiduciary net position															
Contributions - employer	\$	98,264	\$ 93,032	\$	89,445	\$	86,676	\$	86,059	\$	82,840	\$	78,422	\$	62,355
Contributions - member		90,557	85,735		82,429		79,878		79,309		76,343		72,268		56,555
Contributions - purchased service credit		2,559	2,175		1,917		2,181		2,553		2,768		1,601		2,034
Contributions - other		126	159		159		194		236		45		172		48
Net investment income		684,173	86,206		135,043		211,345		266,688		8,239		73,205		294,246
Benefit payments, including refunds of member contributions		(241,128)	(230,851)		(221,228)	((207,979)	((196,516)	((185,969)		(172,239)		(162,259)
Administrative expenses	-	(2,678)	(2,095)		(2,251)		(2,129)		(2,173)		(1,852)		(1,923)		(1,586)
Net change in plan fiduciary net position		631,873	34,361		85,514		170,166		236,156		(17,586)		51,506		251,393
Plan fiduciary net position - beginning **		2,650,532	2,616,171	2	2,530,657	2,	,360,491	2	,124,335	2	,141,921	2	2,090,415	1	1,839,584
Plan fiduciary net position - ending (b)	\$	3,282,405	\$ 2,650,532	\$2	2,616,171	\$2,	,530,657	\$2	,360,491	\$2	,124,335	\$2	2,141,921	\$ 2	2,090,977
Plan's net pension liability - ending (a) - (b)	\$	1,053,655	\$ 1,530,504	\$1	1,377,253	\$1,	,332,858	\$1	,373,526	\$1	,465,059	\$ 1	1,307,856	\$ 1	1,047,823
Plan fiduciary net position as a percentage of the total pension															
liability		75.7%	63.4%		65.5%		65.5%		63.2%		59.2%		62.1%		66.6%
Covered payroll		770,700	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		136.7%	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.

Fiscal Year	Actuarially determined al Year contribution		in ro the a det	tributions elation to actuarially termined atribution	de	ntribution ficiency excess)	-	Covered payroll	Contributions as a percentage of covered payroll		
2012 2013 2014	\$	69,374 52,396 59,513	\$	46,126 59,301 62,355	\$	23,248 (6,905) (2,842)	\$	527,156 551,656 580,053	8.75% 10.75% 10.75%		
2015 2016 2017		71,168 84,724 89,231		78,422 82,840 86,059		(7,254) 1,884 3,172		615,105 649,725 674,971	12.75% 12.75% 12.75%		
2018 2019 2020		88,307 90,778 93,688		86,676 89,445 93,032		1,631 1,333 656		679,809 701,528 729,661	12.75% 12.75% 12.75%		
2021		101,655		98,264		3,391		770,700	12.75%		

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

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	22 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

2021	2020	2019	2018	2017	2016	2015	2014	2013
26.36%	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)

	2021	2020	2019	2018	2017	2016	2015
RIO's proportion of NDPERS net pension liability (asset)	0.140747%	0.151523%	0.153507%	0.156317%	0.152969%	0.145546%	0.121849%
RIO's proportion of NDPERS net OPEB liability (asset)	0.122537%	0.141245%	0.144121%	0.147503%			
RIO's proportionate share of NDPERS net pension liability (asset)	\$ 4,428	\$ 1,776	\$ 2,591	\$ 2,513	\$ 1,491	\$ 990	\$ 773
RIO's proportionate share of NDPERS net OPEB liability (asset)	103	113	114	117			
RIO's covered payroll	\$ 1,631	\$ 1,584	\$ 1,567	\$ 1,596	\$ 1,507	\$ 1,377	\$ 1,026
RIO's proportionate share of NDPERS net pension liability (asset) as a percentage of its covered payroll	271.49%	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	6.32%	7.16%	7.28%	7.31%			
NDPERS Plan fiduciary net position as a percentage of the total pension liability	48.91%	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	63.38%	63.13%	61.89%	59.78%			

*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)

	2021	2020	2019	2018	2017	2016	2015	2014
RIO's Statutorily required pension contributions RIO's Statutorily required OPEB contributions	\$ 131 21	\$ 116 19	\$ 113 18	\$ 112 18	\$ 114 18	\$ 107	\$98	\$ 73
RIO's pension contributions in relation to the statutory required contribution	131	116	113	112	114	107	98	73
RIO's OPEB contributions in relation to the statutory required contribution	21	19	18	18	18			
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
RIO's Covered payroll	\$1,843	\$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%	7.12%
RIO's OPEB contributions as a percentage of covered payroll	1.14%	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 Partici	pants				Insurance Pool Partie	cipants						
	Public	Bismarck	Bismarck	City of					Petroleum	Insurance			Risk
	Employees	City	City	Grand Forks	City of	Workforce	State		Tank	Regulatory	Cultural		Mgmt
	Retirement	Employee	Police	Employee	Grand Forks	Safety &	Fire &	State	Release	Trust	Endowment	Risk	Workers'
-	System	Pension Plan	Pension Plan	Pension Plan	Park District	Insurance	Tornado	Bonding	Comp. Fund	Fund	Fund	Mgmt	Comp
Assets:													
Investments													
Global equities	\$2,424,172,969	\$58,861,823	\$26,401,619	\$48,915,617	\$5,096,810	\$505,201,987	\$7,912,132	\$0	\$0	\$2,132,232	\$334,423	\$1,305,529	\$1,582,034
Global fixed income	942,697,964	43,235,697	14,891,626	19,500,252	2,340,869	1,382,432,323	12,488,610	2,095,802	3,083,841	2,497,096	227,656	2,817,289	2,594,679
Global real assets Cash equivalents	625,531,022 24,697,250	25,626,804 457,590	10,380,626 154,976	12,483,780 769,713	1,855,228 64,966	394,427,942 19,387,668	2,283,236	- 1,731,443	3,130,695	2,500,660	31,764 18,428	- 218,479	129,437
Casil equivalents	24,037,230	437,330	134,370	103,113	04,900	19,507,000	2,203,230	1,731,443	3,130,035	2,300,000	10,420	210,473	123,437
Total investments	4,017,099,205	128,181,914	51,828,847	81,669,362	9,357,873	2,301,449,920	22,683,978	3,827,245	6,214,536	7,129,988	612,271	4,341,297	4,306,150
Invested sec lending collateral	16,290,433	481,137	189,188	350,781	49,530	6,288,417	74,012	5,979	8,723	17,872	2,263	13,898	14,512
Investment income receivable	8,413,419	266,659	103,286	113,353	17,262	9,867,720	135,086	23,097	51,254	6,444	237	48,006	4,140
Operating Cash	93,147	-	-	-	-	57,502	1,306	1,192	1,333	866	204	1,224	1,169
Miscellaneous receivable	5,995	-	-	-	-	3,551	36	6	10	4	1	7	7
Due from other state agencies	-	-	-	-	-	-	-	-	-	-	-	-	-
Total assets	4,041,902,199	128,929,710	52,121,321	82,133,496	9,424,665	2,317,667,110	22,894,418	3,857,519	6,275,856	7,155,174	614,976	4,404,432	4,325,978
Deferred outflows of resources													
Related to pensions	310,503			-		191,178	2,113	328	591	214	48	456	441
Liabilities:													
Investment expenses payable	3,322,281	97,928	40,252	65,771	8,419	1,411,107		1,116		4,061	590	3,463	3,768
Securities lending collateral	16,290,433 66,918	481,137	189,188	350,781	49,530	6,288,417 38,337	74,012 393	5,979 65	8,723 106	17,872 45	2,263 10	13,898 73	14,512 71
Accounts payable Accrued expenses	573,944	-			-	363,621	4,502	640	1,220	45 389	89	73 970	907
Miscellaneous payable		5,563	2.247	3.416	404	505,021	4,502	040	1,220	505		5/0	307
Due to other state funds	-	-		-	-	-	-		-	-	-	-	-
Due to other state agencies	971	-	-	-	-	575	6	1	2	1		1	1
Total liabilities	20,254,547	584,628	231,687	419,968	58,353	8,102,057	96,073	7,801	11,688	22,368	2,952	18,405	19,259
- Deferred inflows of resources													
Related to pensions	\$83,069	\$0	\$0	\$0	\$0	\$58,806	\$657	\$111	\$192	\$40	\$12	\$143	\$153
•••••••													
Fiduciary net position held in trust for external investment pool participants	\$ 4,021,875,086	\$ 128,345,082	\$ 51,889,634	¢ 81 713 500	¢ 0.366.242	\$ 2,309,697,425	\$22,799,801	\$3,849,935	\$ 6,264,567	\$ 7,132,980	\$ 612,060	\$ 4,386,340	\$ 4,307,007
exema investment poor participante	ψ 4,021,070,000	ψ 120,340,00Z	ψ 01,009,034	ψ 01,/13,526	y 9,300,312	ψ 2,309,091,425	Ψ <u>2</u> 2,199,001	ψJ,049,930	ψ 0,204,307	ψ 1, 132,960	ψ 012,000	φ +,300,340	φ 4 ,307,007
Each participant unit is valued at \$1.00	4.021.875.086	128.345.082	51.889.634	81.713.528	9.366.312	2.309.697.425	22.799.801	3,849,935	6.264.567	7.132.980	612,060	4,386,340	4.307.007
Participant units outstanding	4,021,070,000	120,343,002	51,009,034	01,713,526	9,300,312	2,309,091,425	22,199,001	3,049,935	0,204,007	1,132,960	012,000	4,300,340	4,307,007

North Dakota Retirement and Investment Office Combining Statement of Net Position – Investment Trust Funds – Fiduciary Funds June 30, 2021 (with Summarized Comparative Totals for 2020)

D Veterans'	ND			City of	City of		Lewis & Clark	Attorney		Job		PERS		
Cemetery	Ass'n. of	PERS	Budget	Bismarck	Fargo	State	Interpretive	General		Service	Tobacco	Retiree		
Trust	Counties	Group	Stabilization	Deferred	FargoDome	Board of	Center	Settlement	Legacy	of North	Prevention and	Health	Tota	als
Fund	Fund	Insurance	Fund	Sick Leave	Fund	Medicine	Endowment	Fund	Fund	Dakota	Control Fund	Credit Fund	2021	2020
\$188,850	\$2,693,298	\$0	\$0	\$251,307	\$24,723,747	\$744,347	\$318,354	\$0	\$4,675,750,227	\$19,108,158	\$0	\$118,281,574	\$ 7,923,977,037	\$ 6,047,922,6
133,121	4,818,947	32,716,340	740,906,543	550,570	19,498,111	1,856,854	587,859	915,009	2,916,006,936	77,129,210	-	61,279,787	6,287,302,991	5,437,603,8
57,633	-	-	-	-	4,986,475	172,485	-	-	1,185,549,801	-	-	-	2,261,103,560	1,989,786,2
1,264	232,454	1,719,117	5,479,123	42,134	499,547	7,294	9,249	9,400	188,441,320	435,556	1,000	681,897	253,103,896	145,396,7
380,868	7,744,699	34,435,457	746,385,666	844,011	49,707,880	2,780,980	915,462	924,409	8,965,748,284	96,672,924	1,000	180,243,258	16,725,487,484	13,620,709,5
(850)	25,756	447,692	10,138,395	2,788	199,292	9,142	3,247	12,475	40,777,415	-	-	-	75,402,097	51,197,2
183	2,156	123,140	3,251,861	1,518	47,825	575	47	661	27,536,721	6	-	37	50,014,693	51,681,6
-			36,463	-	-	-		-	268,932	-	-	-	463,338	353,0
-	-	-	1,193	-	-	-	-	-	13,371	-	-	-	24,181	24,6
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
380,201	7,772,611	35,006,289	759,813,578	848,317	49,954,997	2,790,697	918,756	937,545	9,034,344,723	96,672,930	1,000	180,243,295	16,851,391,793	13,723,966
	_	-	41,228	-	_	_	_	_	625,682	_	_		1,172,782	352,9
,			TI,EEO						020,002				1,172,702	002,0
318	6,150	10,153	231,086	613	44,139	1,909	723	284	5,949,800	77,308	592	127,597	11,428,225	8,513,
(850)	25,756	447,692	10,138,395	2,788	199,292	9,142	3,247	12,475	40,777,415	-	-	-	75,402,097	51,197,
-	-	-	12,862		-	-	-	-	150,890	-	-	-	269,770	261,4
-	-	-	77,846		-	-	-	-	1,037,094	-	-	-	2,061,222	843,7
136	332	1,487	-	250	2,200	250	250	250	-	4,348	250	7,616	28,999	29,5
-	-	-	-		-	-	-	-	871,687,384	-	-	-	871,687,384	
	<u> </u>		193			-			2,166	-			3,917	3,2
(396)	32,238	459,332	10,460,382	3,651	245,631	11,301	4,220	13,009	919,604,749	81,656	842	135,213	960,881,614	60,848,4
\$0	\$0	\$0	\$19,676	\$0	\$0	\$0	\$0	\$0	\$163,475	\$0	\$0	\$0	326,334	403,4

380,597 7,740,373 34,546,957 749,374,748 844,666 49,709,366 2,779,396 914,536 924,536 8,115,202,181 96,591,274 158 180,108,082 15,891,356,627 13,663,067,186

	Pension Pool Part	icipants				Insurance Pool Pa	rticipants						
	Public	Bismarck	Bismarck	City of	City of				Petroleum	Insurance			Risk
	Employees	City	City	Grand Forks	Grand Forks	Workforce	State		Tank	Regulatory	Cultural		Mgmt
	Retirement	Employee	Police	Employee	Park District	Safety &	Fire &	State	Release	Trust	Endowment	Risk	Workers'
	System	Pension Plan	Pension Plan	Pension Plan	Pension Plan	Insurance	Tornado	Bonding	Comp. Fund	Fund	Fund	Mgmt	Comp
Additions:													
Investment income:													
Net change in fair value of investments	\$ 811,750,964	1 1- 1		\$ 16,531,382					\$ 36,887	\$ 332,380	\$ 111,108		\$ 626,878
Interest, dividends and other income	64,016,475 875,767,439	2,243,633 23,588,576	870,634 10,268,981	1,285,751 17,817,133	182,972 1,987,643	45,087,703 247,507,520	396,853 3,487,572	45,069 67,017	<u>69,214</u> 106,101	40,881 373,261	9,979 121,087	73,266 586,199	75,948 702,826
Less investment expenses	10.702.104	345.797	141.287	215.357	28,509	4.839.847	48.016	3.215	4,726	6.177	1.617	8.629	9,372
Net investment income	865,065,335	23.242.779	10.127.694	17.601.776	1,959,134	242.667.673	3,439,556	63.802	101.375	367.084	119,470	577,570	693,454
Net investment income	800,000,330	23,242,779	10,127,694	17,001,770	1,959,134	242,007,073	3,439,550	03,602	101,375	367,064	119,470	577,570	693,454
Securities lending activity:													
Securities lending income	277,552	8,398	3,352	5,534	630	88,961	1,209	32	48	139	37	161	192
Less Securities lending expenses	(55,502)	(1,679)	(670)	(1,106)	(126)	(17,785)	(241)	(6)	(12)	(27)	(7)	(33)	(37)
Net securities lending income	222,050	6,719	2,682	4,428	504	71,176	968	26	36	112	30	128	155
Purchase of units (\$1 per unit)				3,812,824	467,262		3,994,740	-	-	5,886,156		-	
Total Additions	865,287,385	23,249,498	10,130,376	21,419,028	2,426,900	242,738,849	7,435,264	63,828	101,411	6,253,352	119,500	577,698	693,609
Deductions:													
Administrative Expenses	552,926	-	-	-	-	324,531	3,446	997	1,159	985	807	1,027	1,021
Redemption of units (\$1 per unit)	52,075,000	1,750,000	750,000	7,106,610	459,481	57,500,000	7,444,698			4,833,187		750,000	1,500,000
Total Deductions	52,627,926	1,750,000	750,000	7,106,610	459,481	57,824,531	7,448,144	997	1,159	4,834,172	807	751,027	1,501,021
Change in fiduciary net position	812,659,459	21,499,498	9,380,376	14,312,418	1,967,419	184,914,318	(12,880)	62,831	100,252	1,419,180	118,693	(173,329)	(807,412)
Fiduciary net position:													
Beginning 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
End of year	\$ 4,021,875,086	\$ 128,345,082	\$ 51,889,634	\$ 81,713,528	\$ 9,366,312	\$ 2,309,697,425	\$22,799,801	\$3,849,935	\$ 6,264,567	\$ 7,132,980	\$ 612,060	\$ 4,386,340	\$ 4,307,007

North Dakota Retirement and Investment Office Combining Statement of Changes in Net Position – Investment Trust Funds – Fiduciary Funds Year Ended June 30, 2021 (with Summarized Comparative Totals for 2020)

Insu	rance Pool	Participants								Individual Investme	nt Accounts				
ND V	Veterans'	ND			City of	City of		Lewis & Clark	Attorney				PERS		
Ce	emetery	Ass'n of	PERS	Budget	Bismarck	Fargo	State	Interpretive	General		Job Service	Tobacco	Retiree		
	Trust	Counties	Group	Stabilization	Deferred	FargoDome	Board of	Center	Settlement	Legacy	of North	Prevention and	Health	Tot	als
	Fund	Fund	Insurance	Fund	Sick Leave	Fund	Medicine	Endowment	Fund	Fund	Dakota	Control Fund	Credit Fund	2021	2020
\$	63.161	\$ 934.566	\$ 472,325	\$ 10.641.810	\$ 92,267	\$ 8,520,648	\$ 263,359	\$ 108,123	\$ 15.221	\$ 1,490,459,152	\$ 4.541.813	\$ 8.071	\$ 34.154.175	\$ 2,618,257,668	\$ 278,642,657
+	6.348	133,195	843.264	18,793,591	14.904	847.933	53.710	16.218	25.331	142.241.067	1.805.626	51	2.864.088	282.043.704	286.561.726
	69,509	1,067,761	1,315,589	29,435,401	107,171	9,368,581	317,069	124,341	40,552	1,632,700,219	6,347,439	8,122	37,018,263	2,900,301,372	565,204,383
	1,476	17,242	45,970	924,418	2,683	134,854	7,067	2,967	2,184	20,990,995	322,167	3,704	495,393	39,305,773	28,437,549
	68,033	1,050,519	1,269,619	28,510,983	104,488	9,233,727	310,002	121,374	38,368	1,611,709,224	6,025,272	4,418	36,522,870	2,860,995,599	536,766,834
	27 (5)	393 (80)	600 (119)	13,439 (2,686)	39 (9)	3,144 (628)	127 (25)	50 (12)	18 (2)	598,288 (119,629)	-	-	-	1,002,370 (200,426)	988,246 (197,478)
	22	313	481	10,753	30	2,516	102	38	16	478,659	-			801,944	790,768
	5		235,722,245		-					380,557,970	-		4,789,000	635,230,202	1,446,622,465
	68,060	1,050,832	236,992,345	28,521,736	104,518	9,236,243	310,104	121,412	38,384	1,992,745,853	6,025,272	4,418	41,311,870	3,497,027,745	1,984,180,067
	-	-	-	106,354	-	-	-	-	-	1,165,358	-	-	-	2,158,611	1,781,619
	-		233,925,000	5,944,245	30,000	3,050,000			170,236	871,687,384	4,683,097	7,590,755	5,330,000	1,266,579,693	376,059,310
	-		233,925,000	6,050,599	30,000	3,050,000			170,236	872,852,742	4,683,097	7,590,755	5,330,000	1,268,738,304	377,840,929
	68,060	1,050,832	3,067,345	22,471,137	74,518	6,186,243	310,104	121,412	(131,852)	1,119,893,111	1,342,175	(7,586,337)	35,981,870	2,228,289,441	1,606,339,138
	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
\$	380,597	\$7,740,373	\$ 34,546,957	\$ 749,374,748	\$ 844,666	\$49,709,366	\$ 2,779,396	\$ 914,536	\$ 924,536	\$ 8,115,202,181	\$ 96,591,274	\$ 158	\$180,108,082	\$ 15,891,356,627	\$ 13,663,067,186

		Years E	nded June 30, 2	021 and 2020
	Pensio	n Trust	Investme	ent Trust
	2021	2020	2021	2020
Salaries and wages:				
Salaries and wages	\$ 853,912	\$ 835,872	\$ 1,039,581	\$ 872,424
Fringe benefits	705,235	441,279	619,462	419,286
Total salaries and wages	1,559,147	1,277,151	1,659,043	1,291,710
Operating expenses:				
Travel	2,096	21,478	4,096	25,641
Supplies	1,542	2,799	1,146	1,465
Postage and Mailing Services	28,162	36,604	17,341	15,868
Printing	7,633	13,676	3,201	4,097
Small Office Equipment and Furniture	9,853	3,360	7,356	1,898
Insurance	523	546	371	373
Rent/Lease of Building Space	52,129	53,354	36,236	36,570
Repairs	167	1,266	118	898
Information Technology and Communications	96,712	73,166	23,356	22,959
IT Contractual Services	142,172	99,205	521,165	466,295
Professional Development	10,294	13,528	5,219	5,673
Operating Fees and Services	16,260	18,969	21,904	22,508
Professional Fees and Services	8,498	9,737	13,042	13,982
Consultant Services	500,192	253,576	86,212	86,872
Total operating expenses	876,233	601,264	740,763	705,099
Pension trust portion of investment program expenses	241,195	215,190	(241,195)	(215,190)
Depreciation	1,800	1,800		
Total administrative expenses	2,678,375	2,095,405	2,158,611	1,781,619
Less - nonappropriated items:				
Consultant Services	203,496	253,576	86,212	86,872
Other operating fees paid under continuing appropriation	113,534	110,071	563,229	522,515
Depreciation	1,800	1,800	-	-
Accrual adjustments to employee benefits	365,693	117,513	292,285	128,847
Total nonappropriated items	684,523	482,960	941,726	738,234
Total appropriated administrative expenses	\$ 1,993,852	\$ 1,612,445	\$ 1,216,885	\$ 1,043,385

North Dakota Retirement and Investment Office Pension and Investment Trust Funds – Schedule of Administrative Expenses Years Ended June 30, 2021 and 2020

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, 2021 and 2020

	Pensio	n Trust	Investm	ent Trust
	2021	2020	2021	2020
Actuary fees:				
Segal Consulting	\$ 93,241	\$ 152,873	\$ -	\$ -
Auditing/Accounting fees: CliftonLarsonAllen LLP	77,659	71,986	13,855	49,494
Project management fees: Segal Consulting	292,258	-	-	-
Disability consulting fees: Sanford Health	-	150	-	-
Legal fees:				
Office of Administrative Hearings	-	2,100	-	-
K&L Gates LLP	13,246	10,363	18,013	13,841
Kasowitz, Benson, Torres & Friedman	-	125	-	163
Jackson Walker LLP	7,099	3,594	37,641	10,781
ND Attorney General	16,689	12,385	16,703	12,593
Total legal fees:	37,034	28,567	72,357	37,378
Total consultant expenses	\$ 500,192	\$ 253,576	\$ 86,212	\$ 86,872

North Dakota Retirement and Investment Office Pension and Investment Trust Funds – Schedule of Investment Expenses

	Pension Trust		Investm	ent Trust
	2021	2020	2021	2020
Investment managers' fees:				
Global equity managers	\$ 1,474,059	\$ 1,373,171	\$ 1,909,859	\$ 1,848,580
Domestic large cap equity managers	1,485,841	717,445	8,783,440	4,078,287
Domestic small cap equity managers	894,545	602,625	5,898,203	3,091,577
International equity managers	944,488	865,295	8,403,141	6,910,433
Emerging markets equity managers	883,349	769,333	1,453,717	1,290,364
Domestic fixed income managers	1,981,147	1,091,995	17,676,932	10,733,934
Below investment grade fixed income managers	4,089,829	2,064,617	5,641,515	2,999,775
Diversified real assets managers	-	-	15,015,782	5,413,236
Real estate managers	4,038,160	2,034,014	7,851,454	4,859,416
Infrastructure managers	5,179,679	1,852,956	6,891,614	2,414,217
Timber managers	334,301	358,278	406,296	435,437
Private equity managers	7,231,329	2,585,827	8,838,471	3,011,436
Short term fixed income managers	-	-	880,375	743,318
Cash & equivalents managers	25,059	28,516	177,118	131,914
Balanced account managers	-	-	1,129,687	1,022,362
Total investment managers' fees	\$28,561,786	\$ 14,344,072	\$90,957,604	\$ 48,984,286
Custodian fees	249,724	231,579	1,419,325	1,202,295
Investment consultant fees	169,820	108,804	725,789	487,468
SIB Service Fees	-	-	78,284	73,461
Total investment expenses	\$28,981,330	\$ 14,684,455	\$93,181,002	\$ 50,747,510
	,			
Reconciliation of investment expenses to financial stat	2021	2020	2021	2020
Investment expenses as reflected in the financial statements		\$ 6,523,407	\$39,305,773	\$ 28,437,549
Plus investment management fees included in investment inc	ome			
Domestic large cap equity managers	527,679	256,402	2,018,196	1,144,803
Domestic small cap equity managers	527,077	-	2,010,190	1,1++,005
International equity managers	191,418	207,075	2,044,266	1,777,070
Emerging markets equity managers	178,302	417,764	2,044,200	701,047
Domestic fixed income managers	1,253,598	680,670	11,860,842	5,765,868
Below investment grade fixed income managers	3,692,447	1,681,382	5,171,706	2,544,213
Diversified real assets managers	5,072,777	1,001,502	12,818,627	3,813,479
Real estate managers	2,622,180	594,427	3,834,000	866,687
Infrastructure managers	4,561,475	1,379,223	6,071,866	1,798,221
Timber managers	4,301,473 334,301	358,278	406,296	435,437
Private equity managers	7,231,329	2,585,827	8,838,471	3,011,435
Cash equivalents managers	7,231,329	2,303,027	152,877	119,383
Balanced account managers	-	-	363,611	332,318
Investment expenses per schedule	\$28,981,330	\$ 14,684,455	\$93,181,002	\$ 50,747,510
myesunent expenses per senedule	\$20,901,550	\$ 1 1 ,00 1 ,133	\$95,101,00Z	\$ 50,747,510

	Approved 2019-2021 Appropriation	2019-2021 Appropriation Adjustment	Adjusted 2019-2021 Appropriation	Fiscal 2021 Expenses	Fiscal 2020 Expenses	Unexpended Appropriations
All Fund Types:		J		1	1	
Salaries and wages	\$ 4,978,230	\$ -	\$ 4,978,230	\$2,560,213	\$2,322,501	\$ 95,516
Operating expenses	3,538,934	-	3,538,934	650,524	333,329	2,555,081
Capital Assets	6,300,000	-	6,300,000	-	-	6,300,000
Contingency	52,000		52,000	-		52,000
Total	\$ 14,869,164	\$-	\$ 14,869,164	\$3,210,737	\$2,655,830	\$ 9,002,597

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

Reconciliation of Administrative Expenses to Appropriated Expenditures

	2021	2020
Administrative expenses as reflected in the financial statements	\$4,836,986	\$3,877,024
Less expenses paid under continuing appropriation:		
Consulting Services*	(289,708)	(340,448)
Other operating fees paid under continuing appropriations*	(676,763)	(632,586)
Depreciation expense	(1,800)	(1,800)
Changes in benefit accrual amounts	(657,978)	(246,360)
Total appropriated expenses	\$3,210,737	\$2,655,830

* 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, 2021

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, 2021, 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, 2021. 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, 2021 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.

Clifton Larson Allen LLP

Baltimore, Maryland November 2, 2021