

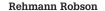
Years Ended June 30, 2019 and 2018

Financial Statements



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2330 East Paris Ave. SE Grand Rapids, MI 49546 Ph: 616.975.4100 Fx: 616.975.4400 rehmann.com

INDEPENDENT AUDITORS' REPORT

November 14, 2019

Board of Trustees City of Grand Rapids General Retirement System Grand Rapids, Michigan

Report on the Financial Statements

We have audited the financial statements of the *City of Grand Rapids General Retirement System* (the "System", a pension trust fund of the City of Grand Rapids, Michigan), as of and for the years ended June 30, 2019 and 2018, which collectively comprise the System's basic financial statements 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.

Independent Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits 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.

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the City of Grand Rapids General Retirement System as of June 30, 2019 and 2018, and the change in fiduciary net position thereof for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Reporting Entity

As discussed in Note 1, the financial statements present only the City of Grand Rapids General Retirement System and do not purport to, and do not, present fairly the financial position of the City of Grand Rapids, Michigan as of June 30, 2019 and 2018 or the change 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.

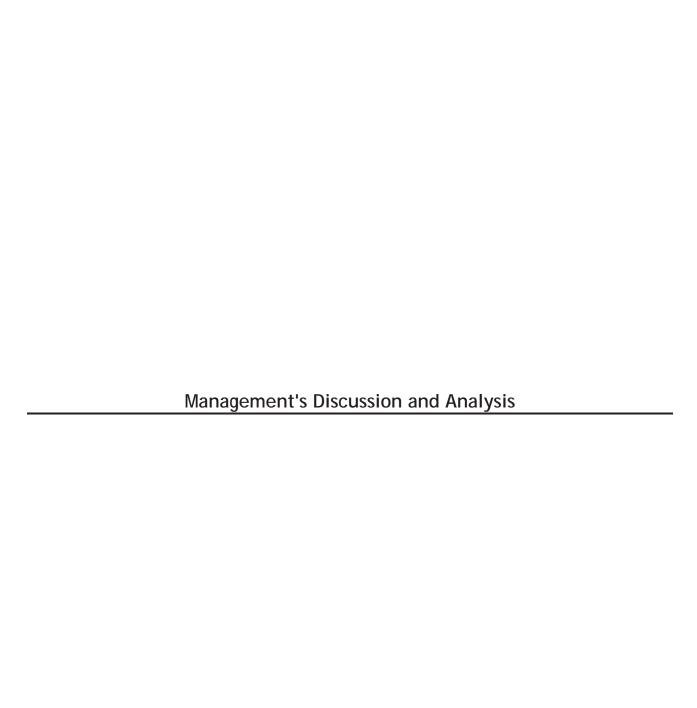
Required Supplementary Information

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

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated November 14, 2019 on our consideration of the System'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 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 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 the System's internal control over financial reporting and compliance.

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City of Grand Rapids General Retirement System Management's Discussion and Analysis For the Year Ended June 30, 2019

This section of the City of Grand Rapids General Retirement System's (the System) annual financial statements presents a discussion and analysis of the financial performance of the System for the fiscal year ended June 30, 2019. This discussion has been prepared by management and should be read in conjunction with the financial statements. This discussion and analysis is designed to focus on current activities, resulting changes and current known facts. The financial statements and this discussion are the responsibility of management.

Overall Fund Structure and Objectives

The System exists to pay benefits to its retirees and beneficiaries. Active members earn service credit that entitles them to receive benefits in the future. Generally speaking, benefits paid out in any given year are significantly greater than the contributions received. The excess of benefits over contributions must be funded through investment income. The employer contribution rate was 32.85% from July 1, 2017 through June 30, 2018 and 32.25% from July 1, 2018 through June 30, 2019, and will be 34.74% from July 1, 2019 through June 30, 2020.

Asset Allocation

The System has established asset allocation policies, which are expected to deliver sufficient investment income over a very long period of time to satisfy the obligations to pay the benefits promised to its members. The following is a summary of the System's asset allocation policy as of June 30, 2019 and 2018:

	2019	2018
U.S. equity	17.75%	22.50%
Fixed income	24.50	25.00
Non-U.S. equity	10.25	15.00
American Depository Receipts (ADRs)	7.50	7.50
Real estate securities	5.00	5.00
Master Limited Partnerships	5.00	5.00
Treasury Inflation Protected Securities	5.00	10.00
Private equity	5.00	5.00
Commodities	5.00	5.00
Private Credit	5.00	0.00
Global Low Volatility	10.00	0.00

Investment Results

The System's performance consultant, Wilshire Associates, reported a market rate of return of 5.33% and 7.22% on retirement system assets for the years ended June 30, 2019 and 2018, respectively. Had the assets all been invested passively, the return would have been 6.02% and 6.47%, which means that the System's assets underperformed their benchmark by 0.69% for the year ended June 30, 2019 and outperformed their benchmark by 0.75% for the year ended June 30, 2018.

Management believes the financial position of the System remains stable and should improve over a period of time due to a prudent investment program, cost controls and strategic planning.

Using the Financial Statements

The System's financial report includes two financial statements: the Statements of Fiduciary Net Position and the Statements of Changes in Fiduciary Net Position. These statements include all assets and liabilities using the economic resources measurement focus and the accrual basis of accounting. Under the accrual basis of accounting, all revenues and expenses are taken into account regardless of when cash is received or paid.

The Statements of Fiduciary Net Position present all of the System's assets and liabilities, with the difference between the two reported as net position. Over time, increases and decreases in net position measure whether the System's financial position is improving or deteriorating. The Statements of Changes in Fiduciary Net Position present how the System's net position changed during the most recent fiscal year. These two financial statements should be reviewed along with the Required Supplementary Information to determine whether the System is becoming financially stronger or weaker, and to understand changes over time in the funded status of the System.

Statements of Fiduciary Net Position

The following table shows, in a condensed format, the current year's fiduciary net position compared to the prior two years:

				Change From Pr	ior Year
	2017	2018	2019	In Dollars	As %
Assets					
Cash and money market funds	\$ 4,133,132	\$ 3,031,862	\$ 8,663,699	\$ 5,631,837	185.8%
Stocks, equity mutual funds and partnerships	258,571,314	253,245,257	207,130,070	(46,115,187)	-18.2%
Fixed Income	97,540,292	102,022,592	131,927,054	29,904,462	29.3%
Real estate	19,240,626	20,226,797	21,050,928	824,131	4.1%
Private equity partnerships	13,247,350	17,141,079	21,983,865	4,842,786	28.3%
Private credit partnerships	-	-	10,497,285	10,497,285	100.0%
Commodities	14,371,330	18,505,628	17,619,387	(886,241)	-4.8%
Securities lending collateral	15,606,539	15,000,228	20,754,055	5,753,827	38.4%
Total cash and investments	422,710,583	429,173,443	439,626,343	10,452,900	2.4%
Receivables	3,068,585	3,695,608	2,883,036	(812,572)	-22.0%
Total Assets	425,779,168	432,869,051	442,509,379	9,640,328	2.2%
Liabilities					
Administrative expenses and					
investment management fees payable	336,473	341,226	361,880	20,654	6.1%
Pending trades - purchases	667,352	627,686	2,178,392	1,550,706	247.1%
Amounts due broker under					
securities lending agreement	15,606,539	15,000,228	20,754,055	5,753,827	38.4%
Total Liabilities	16,610,364	15,969,140	23,294,327	7,325,187	45.9%
Net Position Restricted for Pension Benefits	\$ 409,168,804	\$ 416,899,911	\$ 419,215,052	\$ 2,315,141	0.6%

Cash and money market funds decreased slightly in 2018 and increased substantially in 2019. The changes are, for the most part, attributable to timing of cash flows. Stocks, equity mutual funds and partnerships decreased in 2018 primarily due to rebalancing and in 2019 due to a reclassification of the System's TIPS investment from stock to fixed income. The substantial increase in fixed income from 2018 to 2019 was due to the same reclassification. The large increases in private equity for both years were due to an increase in capital calls of previously committed funds. Commodities increased significantly in 2018 due to a combination of strong returns and rebalancing. The difference from one year to the next in receivables is simply a timing issue related to when funds are received, as well as pending securities sales.

The System participates in a securities lending program. The Northern Trust Company is the exclusive agent of the System. The agent fully indemnifies the System against borrower default in compliance with state statutes. At year-end, the market value of securities on loan was approximately \$20.3 million.

When a security is placed on loan, the System receives cash collateral in an amount not less than 102% of the market value of the security loaned. Loans are marked-to-market daily. Cash collateral is invested by the agent in a separately managed account. Borrowers receive a daily interest rebate on the cash collateral provided to the agent. Earnings from securities lending represent the difference, or spread, between the earnings on the cash collateral and the interest rebate paid to the borrower. Securities lending income is used to offset the System's custody and benefit payment expenses.

The market value of the collateral invested is carried as an asset, and the amount of collateral repayable to the borrower upon return of the securities from loan is carried as a liability in the financial statements. The increase in assets caused by securities lending always will be offset by a corresponding liability of the same amount, so that the two amounts cancel each other out.

Because the number of securities out on loan under the System's lending program can fluctuate greatly depending on demand and available securities, the assets and liabilities can be expected to vary widely from one year to the next, or not much at all, depending on how many securities are out on loan on June 30 of each year.

Statements of Changes in Fiduciary Net Position

The following table shows, in a condensed format, the changes in fiduciary net position compared to the prior two years:

				Change From Pri	or Year
	2017	2018	2019	In Dollars	As %
Additions					
Contributions	\$ 13,250,010	\$ 13,505,513	\$ 15,598,225	\$ 2,092,712	15.5%
Net investment income	38,183,387	29,084,168	21,292,586	(7,791,582)	-26.8%
Securities lending	112,728	93,143	78,911	(14,232)	-15.3%
Total Additions	51,546,125	42,682,824	36,969,722	(5,713,102)	-13.4%
Deductions					
Benefits	32,009,058	34,395,575	34,058,491	(337,084)	-1.0%
Administrative expense	558,024	556,142	596,090	39,948	7.2%
Total Deductions	32,567,082	34,951,717	34,654,581	(297,136)	-0.9%
Net Increase (Decrease)	18,979,043	7,731,107	2,315,141	(5,415,966)	-70.1%
Net Position Restricted for Pension Benefits,					
beginning of year	390,189,761	409,168,804	416,899,911	7,731,107	1.9%
Net Position Restricted for Pension Benefits,					
end of year	\$ 409,168,804	\$ 416,899,911	\$ 419,215,052	\$ 2,315,141	0.6%

The changes in net investment income were primarily due to a very strong investment environment in 2017 and a weaker investment environment in 2018 and 2019. The increase in benefit payments from 2017 to 2018 was due to a combination of an increase in the number of retirees receiving benefits and the issuance of a 13th check. There was no 13th check issued in 2019.

Other Important Matters

The System approved an allocation to private credit in August 2018, reducing the treasury inflation protection securities allocation to fund the accounts. The System also added an allocation to global low volatility equities, which was funded in late May, slightly reducing allocations to U.S. equity, Non-U.S. equity and fixed income to fund the account.

Contacting System Financial Management

This financial report is designed to provide the Board of Trustees, our membership, taxpayers and creditors with a general overview of the System's finances and to demonstrate the System's accountability for the money it receives. If you have any questions about this report or need additional financial information, contact the Retirement Systems office, 233 E. Fulton, Suite 216, Grand Rapids, Michigan, 49503.

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Statements of Fiduciary Net Position

June 30,	2019	2018
Assets		
Receivables		
Plan member contributions	\$ 188,897	\$ 214,365
Employer contributions	734,609	774,678
Interest and dividends	458,659	486,249
Pending trades - sales	1,500,871	2,220,316
Total Receivables	2,883,036	3,695,608
Investments		
Cash and money market funds	8,663,699	3,031,862
Government obligations	56,772,458	24,802,992
State and municipal bonds	386,404	665,239
Corporate bonds and fixed income commingled funds	69,887,453	71,020,298
Common and preferred stocks and equity mutual funds	207,130,070	253,245,257
Real estate securities	21,050,928	20,226,797
Asset-backed securities	4,880,739	5,534,063
Commodities	17,619,387	18,505,628
Private equity partnerships	21,983,865	17,141,079
Private credit partnerships	10,497,285	-
Investments held as collateral for securities lending	20,754,055	15,000,228
Total Investments	439,626,343	429,173,443
Total Assets	442,509,379	432,869,051
Liabilities		
Administrative expenses payable	104,728	77,962
Investment management fees payable	257,152	•
Pending trades - purchases	2,178,392	•
Amounts due broker under securities lending agreement	20,754,055	•
Total Liabilities	23,294,327	15,969,140
Net Position Restricted for Pension Benefits	\$ 419,215,052	\$ 416,899,911

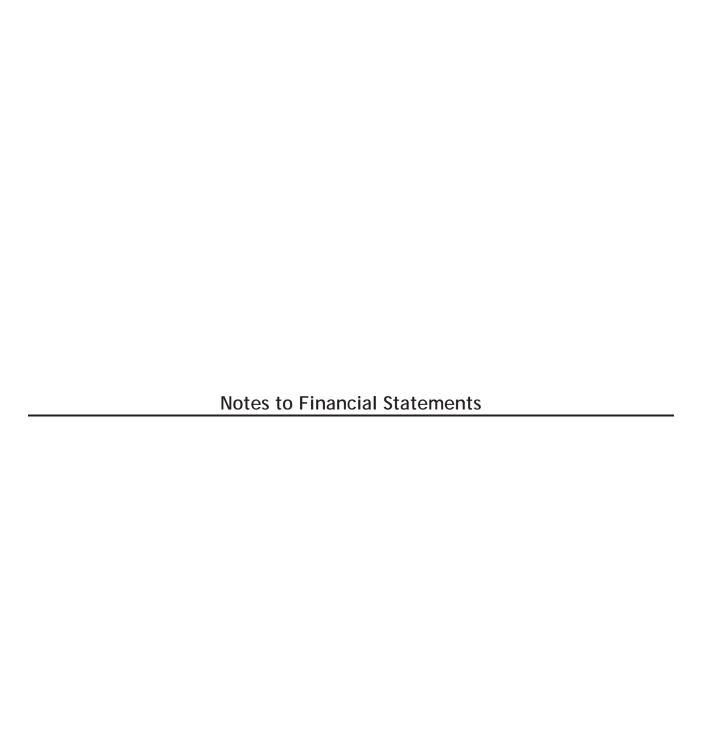
The accompanying notes are an integral part of these financial statements.

Statements of Changes in Fiduciary Net Position

Year Ended June 30,	2019	2018
Additions		
Contributions:		
Plan members	\$ 2,677,960	\$ 2,832,479
Employer	12,920,265	10,673,034
Total Contributions	15,598,225	13,505,513
Investment Income:		
Interest and dividends	5,046,678	6,397,360
Net appreciation in fair value of investments	17,272,627	23,732,615
Securities lending income	78,911	93,143
Net investment income	22,398,216	30,223,118
Less investment expense	(1,026,719)	(1,045,807)
Net investment income, less investment expense	21,371,497	29,177,311
Total Additions	36,969,722	42,682,824
Deductions		
Benefits	34,058,491	34,395,575
Administrative expenses	596,090	556,142
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Total Deductions	34,654,581	34,951,717
Net Increase in Net Position	2,315,141	7,731,107
Net Position Restricted for Pension Benefits,		
Beginning of year	416,899,911	409,168,804
Net Position Restricted for Pension Benefits,		
End of year	\$ 419,215,052	\$ 416,899,911

The accompanying notes are an integral part of these financial statements.

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Notes to Financial Statements

1. Summary of Significant Accounting Policies

Reporting Entity

The City of Grand Rapids (the City) sponsors the City of Grand Rapids General Retirement System (the System), which is a contributory single-employer retirement plan. The System, which is administered by the System's Board of Trustees, is a defined benefit plan. The System provides retirement, disability and survivor benefits to plan members and beneficiaries.

The System is an independent trust qualified under applicable provisions of the Internal Revenue Code (IRC) and is an independent entity (separate and distinct from the employer/plan sponsor) as required by: (1) state law and (2) IRC provisions setting forth qualified plan status. The Trustees of the plan have fiduciary obligations and legal liability for any violations of fiduciary duties as independent Trustees. There are seven Trustees: three elected by plan members, one member of the City Commission to be appointed by the City Commission, and three persons appointed by the mayor, subject to the approval of the City Commission.

The financial statements of the System are included in the basic financial statements of the City of Grand Rapids as a Pension Trust Fund. The assets of the Pension Trust Fund include no securities or loans to the City or any other related party.

Basis of Accounting

The System's financial statements are prepared using the accrual basis of accounting. Employer contributions are recognized when due according to the formal commitment made by the City to provide the contributions. Plan member contributions are recognized when due. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

Methods Used to Value Investments

Investments are reported at estimated fair value. Short-term investments are reported at cost, which approximates fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. For private equity partnerships, private credit partnerships, commodities funds, real estate funds, and fixed income commingled funds, values are based on net asset values provided by underlying investment managers and/or their administrators.

Use of Estimates

The preparation of the System's financial statements in conformity with generally accepted accounting principles requires management to make significant estimates and assumptions that affect the reported amounts of net position available for benefits at the date of the financial statements. Significant estimates are made for investments, the actuarial present value of accumulated plan benefits as of the benefit information date, the changes in net position available for benefits during the reporting period and, when applicable, the disclosures of contingent assets and liabilities at the date of the financial statements. Actual results could differ from those estimates.

Notes to Financial Statements

Risks and Uncertainties

System contributions and the actuarial present value of accumulated plan benefits are calculated based on certain assumptions pertaining to interest rates, inflation rates and employee demographics, all of which are subject to change. Investments are exposed to various risks, such as interest rate, market and credit risks. Due to uncertainties inherent in the estimations and assumptions process and the level of uncertainty related to changes in the value of investments, it is possible that changes in these estimates, assumptions and risks in the near term would be material to the financial statements.

Investment Income

Investment income is comprised of interest and dividends, net appreciation or depreciation in fair value of investments, securities lending income, and is net of investment expenses paid. Certain investment fees are deducted directly from the investment portfolios and net with preceding income items. The investment fees deducted directly from the investment portfolios amounted to \$714,518 and \$1,030,751 for the fiscal years ending June 30, 2019 and June 30, 2018, respectively.

Reclassifications

Treasury inflation protected securities (TIPS) investments have been reclassified from common and preferred stocks and equity mutual funds to government obligations in the June 30, 2019 financial statements. Prior years have not been reclassified.

2. Plan Description and Contribution Information

Plan Description

The System is a single-employer, defined benefit pension plan, which provides retirement and disability benefits to plan members and beneficiaries. Benefits are established or amended via collective bargaining between the City and System members. Benefit provisions are outlined in the City's ordinance and administered by Trustees. Eligible members consist of persons regularly employed by the City, including the 61st District Court and Grand Rapids Public Library, but excluding uniformed police and fire employees. New hires are not eligible for the plan. The actual closing date differs by bargaining unit. Benefit provisions are established and amended by City ordinance and provide for either a 13th check or an annual escalator increase to each member's retirement allowance subsequent to his/her retirement date. The adjustment is a 1% noncompounding escalator. The specified waiting period is four years for members of the APAGR (Association of Public Administrators of Grand Rapids), APAGR 61st District Court, GREIU (Grand Rapids Employees Independent Union), GREIU 61st District Court, GREIU Public Library Rank & File and Supervisory Units. The specified waiting period is six years for members of the Crime Scene Technicians/Latent Print Examiners and Emergency Communication Supervisors units. The specified waiting period for members in the Non-Represented group is seven years. Members of the Emergency Communication Operators (ECO) I, II, and III groups are not eligible for the escalator program; they are eligible for the plan's 13th check program. Eligibility for the escalator depends upon the member's bargaining unit and termination date. Annual post-retirement benefit increases are paid to eligible groups as described below:

Notes to Financial Statements

Covered Group	Termination Date
APAGR and APAGR 61st District Court	On or after October 21, 2008
GREIU, GREIU 61st District Court	On or after March 24, 2009
Crime Scene Technicians/Latent Print Examiners	On or after May 12, 2009
GREIU Public Library Rank & File and Supervisory Units	On or after July 9, 2009
Emergency Communication Supervisors	On or after September 13, 2011
Non-Represented Members	On or after July 1, 2014

For members not eligible for automatic post-retirement increases, one-half of net investment income over 8% which is attributable to retired life assets is distributed annually (in January) to retired members and beneficiaries who have been on the retirement rolls for 5 years in the form of a 13th check. Net investment income is based on a market value rate of return averaged over the preceding 5 plan years. The distribution is in proportion to points. An individual's points are determined by multiplying (i) the number of full years of retirement, to a maximum of 15, by (ii) the number of years, and fractions thereof, of service at retirement.

Eligibility

An eligible employee becomes a participant in the System as of his or her date of permanent employment. The System provides for 100% vesting in System benefits with eight years of credited service. Employees may elect to retire after attaining age 62 and completing eight years of credited service, or after completing 30 years of service regardless of age. The yearly allowance, payable monthly for life to the retired member, equals the applicable benefit multiplier selected by the member multiplied by the member's final average compensation, multiplied by the years and months of credited service. For members of the Crime Scene Technicians/Latent Print Examiners group, final average compensation shall be increased by 10.6% for the period July 1, 2018 to June 30, 2019 and 11.5% for the period July 1, 2017 to June 30, 2018. For members of the ECO I, II, and III group, final average compensation shall be increased by 60.0% for the period July 1, 2018 to June 30, 2019 and 56.9% for the period July 1, 2017 to June 30, 2018. For purposes of benefit calculations, the final average compensation is based on the member's three highest compensated calendar years of credited service, before the year-end of the calendar year in which the employee attains 40 years of credited service or reaches his or her credited service cap. All plan members are eligible to apply for non-duty disability benefits after completing ten or more years of credited service and before attaining minimum service retirement age. All plan members are eligible to apply for duty disability retirement benefits prior to attaining minimum service retirement age. Disability retirement benefits are determined in the same manner as retirement benefits and are not subject to an actuarial reduction. Duty disability allowances shall not be less than 50% of the member's final average salary; if the member is a part of the Crime Scene Technicians/Latent Print Examiners or ECO I, II, and III group, the allowance shall not be less than 62% of the member's final average salary. Death benefits are available if a member dies while in employer service, before retiring, but after becoming eligible to retire with an immediate allowance.

At June 30, 2019 and 2018, the System's membership consisted of the following:

June 30,	2019	2018
Retirees and beneficiaries receiving pension benefits Terminated plan members entitled to but not receiving benefits Active plan members	1,186 106 446	1,189 108 479
Total	1,738	1,776

Notes to Financial Statements

Contributions

The City is required by City ordinance to contribute at an actuarially determined rate, calculated to be 32.25% and 32.85% of covered payroll for the years ended June 30, 2019 and June 30, 2018 respectively.

Plan member contributions, which are required by ordinance, are based on compensation. Contributions currently range from 3.00% to 11.54% of regular compensation paid by the City, depending on the bargaining unit and individual benefit multiplier selection. These contributions are 100% vested. Plan members retain the right upon termination to withdraw their contributions plus regular interest, as defined by City Code, in lieu of any pension rights they may have.

Legally Required Reserves

The System maintains a member deposit fund, which is used to accumulate contributions made by plan members and related accrued interest. As detailed in City ordinance, the fund is legally required to distribute individual employee contributions and related interest upon request by a terminated plan member. The balance in the member deposit fund at June 30, 2019 and 2018 was \$35,026,607 and \$34,061,398, respectively.

3. Deposits and Investments

The investments of the System are designed to comply with requirements of the State of Michigan, which has numerous investment limitations depending on the type of investment. The investment policy adopted by the Board is in accordance with state law and has authorized investments according to Michigan Public Act 314 of 1965, as amended. The most significant requirements as they impact the System are as follows:

- 1. Investments in stock and global securities (securities traded outside of the United States) are limited to 70.0% of the System's assets; investments in the stock of any one corporation are limited to 5.0% of the System's assets. Per the investment policy, the total plan target weight for domestic equity is 17.75% and the total plan target weight for the non-U.S. equity is 17.75%. The style factor breakdown is as follows: Active Core 4.45%; Passive/Index 11.35%; and Enhanced Indexing 1.95%. The size factor breakdown is as follows: large stocks 13.30% and small stocks 4.45%.
- 2. Investments in real estate are limited to 10.0% of the System's assets. Per the investment policy, the total plan target weight for global real estate investments is 5.0%.
- 3. Investments in state and local government obligations are limited to 5.0% of the System's assets.

Notes to Financial Statements

The following was the Board's adopted asset allocation policy as of June 30, 2019 and 2018:

	Target Allo	ocation
Asset Class	2019	2018
U.S. equity	17.75%	22.50%
Fixed income	24.50	25.00
Non-U.S. equity	10.25	15.00
American depository receipts	7.50	7.50
Real estate	5.00	5.00
Master limited partnerships	5.00	5.00
Treasury inflation protected securities	5.00	10.00
Private equity	5.00	5.00
Commodities	5.00	5.00
Private Credit	5.00	0.00
Global Low Volatility	10.00	0.00

The Board of Trustees voted at the Joint Board meeting on August 15, 2018 to allocate 5.0% of the assets (roughly \$21.0 million) to a new investment account in private credit with 50 South Capital Advisors and Grosvenor Capital Management. The Board of Trustees voted at the Joint Board meeting on November 14, 2018 to allocate roughly 10.0% (roughly \$38.0 million) to a new investment account in global low volatility with BlackRock.

For years ended June 30, 2019 and 2018, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 5.41% and 7.51% respectively. The money-weighted rate of return expresses investment performance net of investment expense, adjusted for the changing amounts actually invested.

The System's cash and investments are subject to several types of risk, which are examined in more detail below.

Custodial Credit Risk

Custodial credit risk for investments is the risk that in the event of the failure of the counterparty to a transaction, the System will not be able to recover the value of investment or collateral securities that are in the possession of an outside party. This portfolio will minimize custodial credit risk by limiting investments to those permitted by Michigan Public Act 314 of 1965, as amended, which include: (a) United States Treasury and Agency; (b) Mortgages (Collateral and CMOs); (c) Corporate Bonds (industrial, finance, asset-backed, utilities, telephone and Yankee); (d) Derivatives (futures, swaps, option contracts on the S&P 500 Index and U.S. Interest Rates, and futures and option contracts on U.S. Treasury and Agency securities); (e) American Depository Receipts; (f) Non-Dollar Bonds; (g) Emerging Market Debt; (h) Cash equivalent investments (including repurchase agreements); (i) Short-term investment funds; (j) International Depository Receipts; (k) Global Depository Receipts; (l) Convertible Bonds; (m) Open and Closed-End country funds; and (n) Warrants.

In addition, the System will conduct business only with investment management firms that will: comply with all relevant provisions contained in Michigan Public Act 314 of 1965, as amended; support the overall investment policies of the System; understand and accept their designated "role" within the System's investment structure; construct a portfolio of securities that reflect the execution of their assigned investment strategy; and adhere to the guidelines of this document and/or any additional written instructions that amend the Investment Policy Statement. As of June 30, 2019 and 2018, no deposits or investments were exposed to custodial credit risk.

Notes to Financial Statements

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. This portfolio structures its fixed income allocation to be approximately neutral in duration and interest rate risk to that of the benchmark (Barclays Aggregate Index). This should mitigate the relative over- or under-performance of the fixed income composite as a result of changing interest rates.

As of June 30, 2019, the System had the following investments and maturities.

		Less Than			More Than	
	Fair Value	1 Year	1-6 Years	6-10 Years	10 Years	No Maturity
<u>Equities</u>						
Common and preferred stocks and						
equity mutual funds	\$ 207,130,070	\$ - \$	- \$	- \$	- \$	207,130,070
Private equity partnerships	21,983,865	-	-	-	-	21,983,865
Private credit partnerships	10,497,285	-	-	-	-	10,497,285
Total	239,611,220	-	-	-	-	239,611,220
Fixed Income						
Government obligations	56,772,458	-	8,073,254	33,656,285	15,042,919	-
State and municipal bonds	386,404	-	45,638	274,630	66,136	-
Corporate bonds and fixed income						
commingled funds	69,887,453	900,279	7,722,443	55,641,527	5,623,204	-
Asset-backed securities	4,880,739	9,735	421,962	-	4,449,042	<u>-</u>
Total	131,927,054	910,014	16,263,297	89,572,442	25,181,301	-
<u>Other</u>						
Cash and money market funds	8,663,699	8,663,699	-	-	-	-
Real estate	21,050,928	-	-	-	-	21,050,928
Commodities	17,619,387	-	-	-	-	17,619,387
Investments held as collateral for						
securities lending	20,754,055	20,754,055	-	-	-	
Total	68,088,069	29,417,754	-	-	-	38,670,315
Grand Total	\$ 439,626,343	\$ 30,327,768 \$	16,263,297 \$	89,572,442 \$	25,181,301 \$	278,281,535

As of June 30, 2018, the System had the following investments and maturities.

		Less Than			More Than	
	Fair Value	1 Year	1-6 Years	6-10 Years	10 Years	No Maturity
<u>Equities</u>						
Common and preferred stocks and						
equity mutual funds	\$ 253,245,257 \$	- \$	- \$	- \$	- \$	253,245,257
Private equity partnerships	17,141,079	-	-	-	-	17,141,079
Total	270,386,336	-	-	-	-	270,386,336
Fixed Income						
Government obligations	24,802,992	1,134	5,935,540	4,087,470	14,778,848	-
State and municipal bonds	665,239	-	45,782	254,457	365,000	-
Corporate bonds and fixed income						
commingled funds	71,020,298	2,277,749	8,958,371	54,559,149	5,225,029	-
Asset-backed securities	5,534,063	4,867	1,186,058	197,303	4,145,835	-
Total	102,022,592	2,283,750	16,125,751	59,098,379	24,514,712	-
<u>Other</u>						
Cash and money market funds	3,031,862	3,031,862	-	-	-	-
Real estate	20,226,797	-	-	-	-	20,226,797
Commodities	18,505,628	-	-	-	-	18,505,628
Investments held as collateral for						
securities lending	15,000,228	15,000,228	-	-	-	<u>-</u>
Total	56,764,515	18,032,090	-	-	-	38,732,425
Grand Total	\$ 429,173,443 \$	20,315,840 \$	16,125,751 \$	59,098,379 \$	24,514,712 \$	309,118,761

Notes to Financial Statements

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The fixed income portfolio invests in both investment grade bonds and high yield bonds. However, the overall credit rating for the composite is not to be below an "A" rating. At June 30, 2019 and 2018, the System held debt investments with the following credit ratings.

	June 30,			
		2019		2018
S&P AAA	\$	1,691,675	\$	1,980,804
S&P AA		2,620,979		3,243,729
S&P A		58,855,416		59,785,956
S&P BBB		8,750,005		8,162,129
S&P BB		131,535		121,928
S&P B		-		222,154
S&P CC		304,145		344,939
S&P D		8,741		16,196
Not subject to credit risk		54,294,647		24,340,174
Unrated		5,269,911		3,804,583
Total	\$	131,927,054	\$	102,022,592

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of the System's investment in a single issuer. It is the System's policy that no single holding will represent more than 5% of the total fund. As of June 30, 2019 and 2018, no single holding within this portfolio represented more than 5% of the total fund.

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. In general, the foreign currency exposure resulting from international investments is not hedged. This exposes the portfolio to foreign currency risk, which is not expected to harm or help the performance of the fund in a significant way over the long-term.

Notes to Financial Statements

As of June 30, 2019, and 2018, the System had the following foreign investments:

June 30, 2019	Amount (currency in U.S. dollar)
Common and preferred stocks and equity mutual funds	\$ 111,460,115
Private equity partnerships	9,763,777
Private credit partnerships	8,687,113
Government obligations	307,365
Corporate bonds and fixed income commingled funds	6,943,433
Total	\$ 137,161,803
June 30, 2018	Amount (currency in U.S. dollar)
Common and preferred stocks and equity mutual funds	\$ 89,973,579
Private equity partnerships	7,180,915
Government obligations	290,125
Corporate bonds and fixed income commingled funds	8,768,897
Total	\$ 106,213,516

Securities Lending Risk

As of June 30, 2019, the System had the following investment types on loan for securities lending purposes, and received the following cash collateral for those loans:

Fair Value of Loaned Securities			
		ed Securities ollateralized	
		by Cash	Cash
Investment Type		Collateral	Collateral
U.S. corporate fixed U.S. equities U.S. government fixed	\$	1,742,899 10,799,573 7,784,415	\$ 1,781,271 11,037,471 7,935,313
Total	\$	20,326,887	\$ 20,754,055

Notes to Financial Statements

As of June 30, 2018, the System had the following investment types on loan for securities lending purposes, and received the following cash collateral for those loans:

	Loane	Fair Value of ed Securities ollateralized	
		by Cash	Cash
Investment Type		Collateral	Collateral
U.S. corporate fixed U.S. equities U.S. government fixed	\$	2,957,423 7,573,924 4,144,512	\$ 3,022,450 7,748,153 4,229,625
Total	\$	14,675,859	\$ 15,000,228

Michigan Public Act 314 of 1965, as amended, permits, and Trustees have implemented, a securities lending program whereby the System, through The Northern Trust Company, lends its securities to broker-dealers and other entities with a simultaneous agreement to return the collateral for the same securities in the future. The System has authorized The Northern Trust Company to utilize the Core U.S.A. Collateral Section in which all collateral is in U.S. dollars only and available to participating lenders who are domiciled or reside in the U.S.A. The System only receives cash collateral. Initial collateral levels will not be less than 102% of the market value of the borrowed securities, or not less than 105% if the borrowed securities and the collateral are denominated in different currencies.

The Northern Trust Company will indemnify the System if it is unable to recover borrowed securities and distributions made during the term of the loan or loans with respect to those securities as a result of The Northern Trust Company's failure to: (1) make a reasonable determination of the creditworthiness of a borrower, (2) demand adequate and appropriate collateral on a prompt and timely basis, perfect a security interest, obtain equivalent rights in the collateral or maintain control of the collateral, or (3) otherwise perform its duties and responsibilities under its agreement with the System or applicable law.

All securities loans can be terminated on demand by either the System or The Northern Trust Company and are subject to the performance by both parties of any of their respective obligations that remain outstanding at the time of termination. Upon termination of this program by either party, The Northern Trust Company shall terminate all outstanding loans of the System's securities and shall make no further loans. There are no restrictions on the amount of the loans that can be made. Cash collateral may also be invested separately in "term loans," in which case the investments match the loan term. These loans can be terminated on demand either by lender or borrower.

Fair Value Measurements

The System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities. Level 2 inputs are inputs - other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. Finally, Level 3 inputs are unobservable and are based on estimates and assumptions. These levels are determined by the System's investment consultant. These are determined at the fund level based on a review of the investment's class, structure, and what kind of securities are held in the funds. The investment consultant will request the information from the fund manager if necessary.

Notes to Financial Statements

The System had the following fair value measurements as of June 30, 2019 and 2018:

Investments Measured at Fair Value

June 30, 2019	Le	vel 1		Level 2	Le	evel 3	Total
Government obligations State and municipal bonds	\$ 56,772	2,458 5,404	\$	-	\$	-	\$ 56,772,458 386,404
Corporate bonds and fixed income commingled funds	17,427		52,4	- 59,688		-	69,887,453
Common and preferred stocks and equity mutual funds	54,801	,570		28,500		-	207,130,070
Real estate Asset-backed securities	4,880	-) 739	21,0	50,928		-	21,050,928 4,880,739
Commodities	1,000	-	17,6	19,387		-	17,619,387
Private equity partnerships		-		-	21,983,8		21,983,865
Private credit partnerships Investments held as collateral for		-		-	10,497,2	285	10,497,285
securities lending	20,754		2.42.4	-	22 404 4	-	20,754,055
Investments measured at amortized cost -	\$ 155,022	,991	243,4	58,503	32,481,1	50	430,962,644
Cash and money market funds							8,663,699
Total Investments							439,626,343
Investments Measured at Fair Value							
June 30, 2018	Le	vel 1		Level 2	Le	evel 3	Total
Government obligations	\$ 24,802,	992	\$	_	\$	_	\$ 24,802,992
State and municipal bonds	665,	239		-		-	665,239
Corporate bonds and fixed income commingled funds Common and preferred stocks and equity	19,246,	078	51,77	4,220		-	71,020,298
mutual funds	111,505,	377	141,73	9,880		-	253,245,257
Real estate		-	20,22	6,797		-	20,226,797
Asset-backed securities	5,534,	063		-		-	5,534,063
Commodities		-	18,50	5,628		-	18,505,628
Private equity partnerships Investments held as collateral for		-		-	17,141	,079	17,141,079
securities lending	15,000,	228		-		-	15,000,228
-	\$ 176,753,	977	\$ 232,24	6,525	\$ 17,141	,079	426,141,581
Investments measured at amortized cost -							
Cash and money market funds							3,031,862
Total Investments							\$ 429,173,443

Notes to Financial Statements

Fund Investments - Mutual Funds & Separately Managed Accounts (SMAs)

An open-ended mutual fund, a registered investment company, produces a daily net asset value (NAV) that is validated with a sufficient level of observable activity (i.e., purchases and sales at NAV) to support classification of the fair value measurement as Level 1 in the fair value hierarchy. In this case, the NAV represents the exit value of the security at the measurement date. The primary rationale to support the classification of Mutual Funds as Level 1 in the fair value hierarchy are: (1) the investments in the funds are required to be measured at fair value (SEC regulated), (2) the NAV is unadjusted and is in all cases the transaction price for purchases and sales (the NAV represents the exit value of the security at the measurement date), (3) there are no restrictions on redemptions and (4) the NAV is made publicly available daily. The System's investment consultant also typically views SMAs as being reasonably considered Level 1 in the fair value hierarchy. The Fund Investment provides look-through capability to the underlying holdings, which can then be valued at fair market prices with strong liquidity.

Fund Investments - Commingled Funds & Trusts

Commingled Funds and Common Trust Funds do not all meet these criteria listed above for mutual funds. A fund administrator typically does not have the transparency into valuation methodology and valuation frequency of each of these pooled investment vehicles to make an accurate appraisal of whether the NAV does represent the exit value of the fund at each measurement date. For this reason, the System's investment consultant takes a conservative approach with the default position being to consider these investments as Level 2 in the fair value hierarchy.

The NAV of an open-ended fund, whether a registered investment company fund, such as a mutual fund, or certain alternative investment funds, such as a hedge fund, serves as the basis for subscription and redemption transactions for investors in such funds. For investments in funds for which the underlying assets and liabilities are required to be measured at fair value, and where NAV is available, the NAV is generally the most appropriate starting point when determining the fair value measurement for an interest in such fund. However, when valuing such an investment, the holder must estimate the fair value of the interest held, which at times may be different from a value based solely on the NAV of the fund. The holder should also consider various factors including, but not limited to, the attributes of the interest held, including any restrictions or illiquidity on the disposition of the interest, and the holders' requirements to understand and accept the valuations provided by the fund (or modify them if appropriate), to determine the fair value of the interest itself. Depending on the facts and circumstances, the NAV may need to be adjusted depending upon the rights and obligations of the ownership interest and/or other factors. Furthermore, any adjustments to NAV based on unobservable inputs may result in the fair value measurement being categorized as a Level 3 measurement, if those inputs are significant to the overall fair value measurement.

Private Equity

The valuation of nonpublic private equity investments requires significant management judgment due to the absence of quoted market prices, inherent lack of liquidity and the long-term nature of such assets. As such, private equity investments are often valued initially based upon cost. Each quarter, valuations are reviewed utilizing available market data to determine if the carrying value of these investments should be adjusted. Such market data primarily includes observations of the trading multiples of public companies considered comparable to the private companies being valued. Valuations are adjusted to account for company-specific issues, the lack of liquidity inherent in a nonpublic investment and the fact that comparable public companies are not identical to the companies being valued. Such valuation adjustments are necessary because in the absence of a committed buyer and completion of due diligence similar to that performed in an actual negotiated

Notes to Financial Statements

sale process, there may be company-specific issues that are not fully known that may affect value. In addition, a variety of additional factors are reviewed by management, including, but not limited to, financing and sales transactions with third parties, current operating performance and future expectations of the particular investment, changes in market outlook and the third-party financing environment. As a result of these characteristics, the System's investment consultant believes private equity investments should be included in Level 3 of the fair value hierarchy.

The Adams Street Partners agreement provides that the term of each partnership fund will begin on the initial closing date of the applicable partnership fund for a 12 - 15-year commitment. Generally, investors may not withdraw from the Global Fund, the feeder vehicles or a fund, except under very limited circumstances.

The Aberdeen Asset Management agreement provides for a 12 - 15-year commitment from the initial capital call. Limited partners may not withdraw from the fund, nor may they sell, transfer or assign their interests except with the consent of the General Partner.

Private Credit

Much like for private equity, the valuation of private credit investments requires significant judgement due to the absence of quoted market prices, inherent lack of liquidity, and the long-term nature of the assets. Factors that influence valuation include duration, credit score, time until maturity, whether the bond is callable, covenants, among others. Each quarter, valuations are reviewed utilizing available public and private market data to determine if the carrying value of these investments should be adjusted. Valuations are adjusted to account for company-specific issues, the lack of liquidity inherent in a nonpublic investment and the fact that comparable public companies are not identical to the companies being valued. Such valuation adjustments are necessary because in the absence of a committed buyer and completion of due diligence similar to that performed in an actual negotiated sale process, there may be company-specific issues that are not fully known that may affect value. As a result of these characteristics, the System's investment consultant believes private credit investments should be included in Level 3 of the fair value hierarchy.

4. Capital Funding Commitment

At June 30, 2019 and 2018, the System had the following approximate amounts (in millions) outstanding on initial private equity commitments of \$22.5 million with Adams Street Partners and \$5.0 million with Aberdeen Asset Management.

		2019		2018
Adam Street Partners (2010)	\$	0.6	\$	0.6
Aberdeen Asset Management	7	0.1	7	0.2
Adams Street Partners (2013)		0.9		1.5
Adams Street Partners (2015)		2.3		3.5
Adams Street Partners (2017)		3.6		5.3

Notes to Financial Statements

At June 30, 2019 and 2018, the System had the following approximate amounts (in millions) outstanding on initial private credit commitments of \$14.0 million with Grosvenor Capital Management and \$7.0 million with 50 South Capital Advisors.

	2019	2018
Grosvenor Capital Management 50 South Capital Advisors	\$ 5.5 5.1	\$ 0.0

5. Net Pension Liability

Net Pension Liability

The components of the net pension liability at June 30, 2019 and 2018, were as follows:

June 30	2019	2018
Total pension liability	\$539,265,786	\$526,954,073
Plan fiduciary net position	419,215,052	416,899,911
		_
Net Pension Liability	\$120,050,734	\$110,054,162
Plan Fiduciary Net Position as a Percentage of the		
Total Pension Liability	77.74%	79.12%

Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of June 30, 2019 and 2018, using the following actuarial assumptions, applied to all periods included in the measurement:

	2019	2018
Inflation	2.50% - approximate	2.50% - approximate
	no explicit price inflation	no explicit price inflation
Salary increases	3.25% - 7.70% including inflation	3.50% - 7.70% including inflation
Investment rate of return	7.00%	7.15%

RP-2014 Healthy Annuitant Mortality Table projected to 2019 using the MP-2014 Mortality Improvement Scale.

The actuarial assumptions used in the June 30, 2019 valuation were based on the results of a 5-year actuarial experience study ending June 30, 2014, approved by the board in November 2015. Note that the investment return assumption was updated for the June 30, 2018 valuation. All assumptions are expectations of future experience, not market measures.

Notes to Financial Statements

Long-Term Expected Rate of Return

Based on information provided by the System's investment advisor, the long-term expected returns as of January 2019, are summarized in the following table:

Asset Class	Target Allocation	Long- Term Expected Return 10-Year	Long- Term Expected Return 20-Year	Long-Term Expected Return 30-Year
U.S. equity	17.75%	7.00%	7.53%	7.70%
Non-U.S. equity and American depository receipts	17.75%	7.75%	8.00%	8.08%
Core fixed income	24.50%	3.85%	4.58%	4.82%
Treasury inflation protected securities	5.00%	3.00%	4.15%	4.53%
Real estate	5.00%	5.85%	6.63%	6.88%
Private equity	5.00%	10.05%	10.48%	10.62%
Commodities	5.00%	4.35%	5.05%	5.28%
Master limited partnerships	5.00%	8.40%	9.33%	9.63%
Private credit	5.00%	9.01%	8.76%	8.68%
Global low volatility	10.00%	7.39%	7.82%	7.96%
Cash	0.00%	0.00%	0.00%	0.00%
Total	100.00%	6.85%	7.39%	7.57%
Inflation		1.70%	2.23%	2.10%

Discount Rate

A single discount rate of 7.00% was used to measure the total pension liability (7.15% for the year ending June 30, 2018). This single discount rate was based on the expected rate of return on System investments of 7.00%. The projection of cash flows used to determine this single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the System's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Notes to Financial Statements

Regarding the sensitivity of the net pension liability to changes in the single discount rate, the following presents the net pension liability, calculated using a single discount rate of 7.00% (7.15% for the year ending June 30, 2018) as well as what the plan's net pension liability would be if it were calculated using a single discount rate that is 100 basis points lower or 100 basis points higher:

Sensitivity of Net Pension Liability to the Single Discount Rate Assumption - June 30, 2019

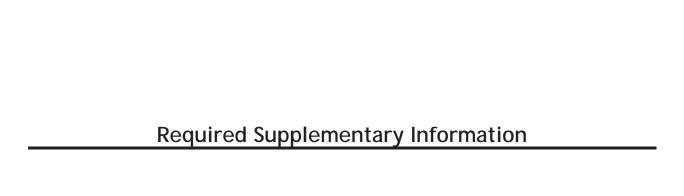
Current Single Discount

•	100 Basis Point	3	100 Basis Point	
	Decrease	Rate Assumption	Increase	
	6.00%	7.00%	8.00%	
Total Pension Liability	\$597,733,916	\$539,265,786	\$491,921,622	
Plan Net Position	419,215,052	419,215,052	419,215,052	
Net Pension Liability	\$178,518,864	\$120,050,734	\$72,706,570	

Sensitivity of Net Pension Liability to the Single Discount Rate Assumption - June 30, 2018

Current Single Discount

	Cui	Terre biligie biscouri	L	
1	100 Basis Point		100 Basis Point	
	Decrease	Rate Assumption	Increase	
	6.15%	7.15%	8.15%	
Total Pension Liability	\$584,234,459	\$526,954,073	\$478,473,102	
Plan Net Position	416,899,911	416,899,911	416,899,911	
Net Pension Liability	\$167,334,548	\$110,054,162	\$ 61,573,191	



Required Supplementary Information Schedule of Changes in the Employer's Net Pension Liability and Related Ratios

Year ended June 30,	2019 20	18
Total Pension Liability Service cost Interest on the total pension liability Changes in benefit terms Difference between expected and actual experience Assumption changes Benefit payments Refunds	\$ 4,657,970 \$ 5,016,826 36,626,148 36,420,065 - (2,877,132) (2,335,969) 7,963,218 5,213,623 (34,016,875) (34,286,124) (41,616) (109,451)	; , ,
Net Change in Total Pension Liability	\$ 12,311,713 \$ 9,918,970)
Total Pension Liability, beginning	\$ 526,954,073 \$517,035,103	}
Total Pension Liability, ending (a)	\$ 539,265,786 \$526,954,073	}
Plan Fiduciary Net Position Contributions - employer Contributions - member Pension plan net investment income (loss) Benefit payments Refunds Pension plan administrative expense	\$ 12,920,265 \$ 10,673,034 2,677,960 2,832,479 21,371,497 29,177,311 (34,016,875) (34,286,124 (41,616) (109,451 (596,090) (556,142	1) 1)
Net Change in Plan Fiduciary Net Position	2,315,141 7,731,107	,
Plan Fiduciary Net Position, beginning	416,899,911 409,168,804	
Plan Fiduciary Net Position, ending (b)	\$419,215,052 \$416,899,911	
Net Pension Liability - Ending (a) - (b)	\$120,050,734 \$110,054,162	<u>}</u>
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	77.74% 79.12%	
Covered Payroll	\$ 29,695,997 \$ 30,949,968	ı
Net Pension Liability as a Percentage of Covered Payroll	404.27% 355.59%	

Required Supplementary Information Schedule of Changes in the Employer's Net Pension Liability and Related Ratios

Year ended June 30,	2017	2016
Total Pension Liability Service cost Interest on the total pension liability Changes in benefit terms	\$ 5,161,510 \$ 36,025,286	35,127,721
Difference between expected and actual experience Assumption changes Benefit payments Refunds	(971,718) (1,495,183) (31,894,361) (114,697)	6,361,928 - (36,708,882) (208,843)
Net Change in Total Pension Liability	\$ 6,710,837	\$ 10,118,312
Total Pension Liability, beginning	\$ 510,324,266	\$ 500,205,954
Total Pension Liability, ending (a)	\$ 517,035,103	\$ 510,324,266
Plan Fiduciary Net Position Contributions - employer Contributions - member Pension plan net investment income (loss) Benefit payments Refunds Pension plan administrative expense	\$ 10,237,538 3,012,472 38,296,115 (31,894,361) (114,697) (558,024)	\$ 9,295,104 3,428,169 289,104 (36,708,882) (208,843) (568,895)
Net Change in Plan Fiduciary Net Position	18,979,043	(24,474,244)
Plan Fiduciary Net Position, beginning	390,189,761	414,664,005
Plan Fiduciary Net Position, ending (b)	\$ 409,168,804 \$	\$ 390,189,761
Net Pension Liability - Ending (a) - (b)	\$ 107,866,299	\$120,134,505
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	79.14%	76.46%
Covered Payroll	\$ 33,647,390 \$	\$ 35,760,078
Net Pension Liability as a Percentage of Covered Payroll	320.58%	335.95%

Required Supplementary Information Schedule of Changes in the Employer's Net Pension Liability and Related Ratios

Year ended June 30,	 2015	2014	2013
Total Pension Liability Service cost Interest on the total pension liability Changes in benefit terms Difference between expected and actual experience Assumption changes Benefit payments Refunds	\$ 33,287,484 20,882	(7,420,169)	7,294,537 32,920,147 - (6,012,166) - (27,037,516) (114,916)
Net Change in Total Pension Liability	\$ 39,620,153\$	4,671,478 \$	7,050,086
Total Pension Liability, beginning	\$ 460,585,801\$	455,914,323\$	448,864,237
Total Pension Liability, ending (a)	\$ 500,205,954\$	460,585,801\$	455,914,323
Plan Fiduciary Net Position Contributions - employer Contributions - member Pension plan net investment income (loss) Benefit payments Refunds Pension plan administrative expense	11,327,704\$ 3,473,382 11,478,680 (39,570,343) (283,087) (567,869)	65,316,255	8,135,843 3,933,341 44,042,945 (27,037,516) (114,916) (476,059)
Net Change in Plan Fiduciary Net Position	(14,141,533)	49,093,503	28,483,638
Plan Fiduciary Net Position, beginning	 428,805,538	379,712,035	351,228,397
Plan Fiduciary Net Position, ending (b)	\$ 414,664,005\$	428,805,538\$	379,712,035
Net Pension Liability - Ending (a) - (b)	\$ 85,541,949 \$	31,780,263 \$	76,202,288
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	82.90%	93.10%	83.29%
Covered Payroll	\$ 38,492,586 \$	40,510,955 \$	43,783,450
Net Pension Liability as a Percentage of Covered Payroll	 222.23%	78.45%	174.04%

GASB 67 was implemented for the plan year ending June 30, 2013; this schedule is being built prospectively. Ultimately, 10 years of data will be presented.

Required Supplementary Information Schedule of Employer Contributions

FY Ending June 30,	Actuarially Determined Contribution	Actual <u>Contribution</u>	Contribution Deficiency (Excess)	Covered <u>Payroll</u>	Actual Contribution as a % of Covered Payroll
2010	\$4,708,020	\$4,708,020	\$0	\$49,336,606	9.54%
2011	\$6,162,363	\$6,162,363	\$0	\$49,040,518	12.57%
2012	\$8,949,239	\$8,949,239	\$0	\$46,167,958	19.38%
2013	\$8,135,843	\$8,135,843	\$0	\$43,783,450	18.58%
2014	\$8,771,032	\$8,771,032	\$0	\$40,510,955	21.65%
2015	\$11,327,704	\$11,327,704	\$0	\$38,492,586	29.43%
2016	\$9,295,104	\$9,295,104	\$0	\$35,760,078	25.99%
2017	\$10,237,538	\$10,237,538	\$0	\$33,647,390	30.43%
2018	\$10,673,034	\$10,673,034	\$0	\$30,949,968	34.48%
2019	\$9,920,265	\$12,920,265	\$3,000,000	\$29,695,997	43.51%

Methods and Assumptions Used to Determine Contribution Rates

Valuation Date	Actuarially determined contribution rates are calculated as of June 30, two years prior to the end of the fiscal year in which contributions are reported.
Actuarial Cost Method	Individual Entry Age
Amortization Method	Level dollar, closed for plan years ending 06/30/13 through present (was level percent closed for plan years ending 06/30/09 - 06/30/12)
Remaining Amortization Period	28 - 30 years per City Commission (was 29 years for the plan year ending 06/30/09; 28 years for the plan year ending 06/30/10); 27 years for the plan year ending 06/30/11; 26 years for the plan year ending 06/30/12; 25 years for the plan year ending 06/30/13; 24 years for the plan year ending 06/30/14; 30 years for the plan year ending 06/30/16; 28 - 30 years for the plan year ending 06/30/17; 29 - 30 years for the plan year ending 06/30/18).
Asset Valuation Method	5-Year Smoothed Market for plan years ending 06/30/09 to present
Inflation	2.50% approximate; no explicit price inflation assumption (wage inflation was at 0.00% for the plan year ending 06/30/13; 3.5% for the plan years ending 06/30/09 - 06/30/12 and 06/30/14 - 06/30/16).
Salary Increases	3.25% to 7.70% including inflation (was 4.0% to 8.0% for the plan years ending 06/30/09 - 06/30/13; 3.5% to 7.7% including inflation for plan years 06/30/14 - 06/30/16; 3.25% to 7.45% for the plan year ending 06/30/17; 3.50% to 7.70% for the plan

year ending 06/30/18).

Required Supplementary Information Schedule of Employer Contributions

Investment	Rate of	Return

7.00% (was 7.15% for the plan year ending 06/30/18; was 7.25% for plan years 06/30/15 to 06/30/17; was 7.50% for the plan year ending 06/30/09; was blended rate of 7.34% for the plan year ending 06/30/10; a blended rate of 7.38% for the plan years ending 06/30/11 - 06/30/13; a blended rate of 7.39% for the plan year ending 06/30/14)

Cost-of-Living Adjustments

Ad hoc "13th check" tied to plan investments for benefit recipients who do not have an automatic benefit increase.

- 1.0% simple escalator for GREIU and GREIU 61st District Court members retired on or after March 24, 2009 with commencement delayed 4 years after retirement.
- 1.0% simple escalator for GREIU Public Library Rank and File and Supervisory Unit members retired on or after July 9, 2009 with commencement delayed 4 years after retirement.
- 1.0% simple escalator for Crime Scene Technicians/Latent Print Examiners retired on or after May 12, 2009 with commencement delayed 6 years after retirement.
- 1.0% simple escalator for APAGR and APAGR 61st District Court members retired on or after October 21, 2008 with commencement delayed 4 years after retirement.
- 1.0% simple escalator for Emergency Communication Supervisors retired on or after September 13, 2011 with commencement delayed 6 years after retirement.
- 1.0% simple escalator for Non-Represented members retired on or after July 1, 2014 with commencement delayed 7 years after retirement.

Retirement Age

Experience-based table of rates that are specific to the type of eligibility condition.

Mortality

RP-2014 Healthy Annuitant Mortality Table projected to 2019 using the MP-2014 Mortality Improvement Scale as of June 30, 2015. Prior to that, the 1983 Group Annuity Male and Female Mortality Tables set back 3 years for males and 2 years for females was used.

Required Supplementary Information Schedule of Investment Returns Annual Money-Weighted Rate of Return, Net of Investment Expense Last Ten Years

2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
5.41%	7.51%	10.23%	0.22%	2.80%	17.75%	12.99%	2.19%	26.17%	0.16%

Required Supplementary Information Schedule of the Employer's Net Pension Liability

FY Ending June 30,	Total Pension <u>Liability</u>	Plan Fiduciary Net Position	Net Pension <u>Liability</u>	Plan Fiduciary Net Position as a % of Total Pension Liability	Covered <u>Payroll</u>	Net Pension Liability as a % of <u>Covered Payroll</u>
2013	\$455,914,323	\$379,712,035	\$76,202,288	83.29%	\$43,783,450	174.04%
2014	\$460,585,801	\$428,805,538	\$31,780,263	93.10%	\$40,510,955	78.45%
2015	\$500,205,954	\$414,664,005	\$85,541,949	82.90%	\$38,492,586	222.23%
2016	\$510,324,266	\$390,189,761	\$120,134,505	76.46%	\$35,760,078	335.95%
2017	\$517,035,103	\$409,168,804	\$107,866,299	79.14%	\$33,647,390	320.58%
2018	\$526,954,073	\$416,899,911	\$110,054,162	79.12%	\$30,949,968	355.59%
2019	\$539,265,786	\$419,215,052	\$120,050,734	77.74%	\$29,695,997	404.27%

GASB 67 was implemented for the plan year ending June 30, 2013; this schedule is being built prospectively. Ultimately, 10 years of data will be presented.



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Rehmann Robson



2330 East Paris Ave. SE Grand Rapids, MI 49546 Ph: 616.975.4100 Fx: 616.975.4400 rehmann.com

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

November 14, 2019

Board of Trustees City of Grand Rapids General Retirement System Grand Rapids, Michigan

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 financial statements of the *City of Grand Rapids General Retirement System* (the "System", a pension trust fund of the City of Grand Rapids, Michigan), as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise the System's basic financial statements, and have issued our report thereon dated November 14, 2019.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the System's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, we do not express an opinion on the effectiveness of the System's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, 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 over financial reporting 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.

Compliance and Other Matters

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

Purpose of this Report

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

Rehmann Lobson LLC