St. Paul Teachers' Retirement Fund Association

Serving the retirement needs of St. Paul Teachers since 1909



ANNUAL REPORT FYE **2023**

Democracy depends on Education Education depends on Teachers

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ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION

/

Annual Report

for the fiscal year ended June 30, 2023

St. Paul Teachers' Retirement Fund Association 2550 University Ave W 312N St. Paul, MN 55114-1005

Phone 651-642-2550 Fax 651-642-2553 www.sptrfa.org

Phill Tencick Executive Director / CIO

David Andrews *Controller*

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Mission

Provide our members and their beneficiaries with retirement, survivor, and disability benefits as specified in law and the Association Articles and Bylaws.

Assist our members in planning a secure retirement by providing friendly, high quality, consumer oriented service, pre-retirement education and information in a professional and cost effective manner.

Invest the assets of the fund to provide the optimum return while preserving principal by controlling portfolio risk. SPTRFA Board of Trustees as of June 30, 2023

Mike McCollor Lori Borgeson Thomas Koreltz Michael McKay W. Matt Bogenschultz Zuki Ellis John Horton Karen A. Odegard Stephanie Pignato Margaret Schiller President Vice President Secretary Treasurer Trustee Ex-Officio Trustee Trustee Trustee Trustee Trustee Trustee

SPTRFA Staff as of June 30, 2023

Phillip Tencick Christine MacDonald Cynthia Foster Nancy Langer Rachel Pastick Janet Williams Tamera Zielinski Executive Director / CIO Deputy Director / CFO Fund Accountant Member Services Leader Communications and Member Services Chief Operating Officer Administrative Assistant

St. Paul Teachers' Retirement Fund Association

W. Matthew Bogenschultz Karen Odegard Zuki Ellis John Horton

Stephanie Pignato Maggi Schiller

TRUSTEES & OFFICERS

Mike McCollor President Lori Borgeson Vice-President Thomas Koreltz Secretary Mike McKay..... Treasurer Phillip T. Tencick Executive Director 2550 University Avenue W, Suite 312N Saint Paul, MN 55114-1005 Phone (651) 642-2550 Fax (651) 642-2553 Online: www.sptrfa.org

Letter of Transmittal

Members of the Association:

The trustees and staff of the St. Paul Teachers' Retirement Fund Association (SPTRFA) present the Annual Financial Report for the fiscal year ended June 30, 2023, in accordance with the provisions of Minnesota Statutes § 356.20.

This report is intended to provide readers with sufficient information to make informed assessments about the organization's financial condition, fiscal activities, actuarial status, investment performance, and compliance with laws, regulations, bylaws, and policies.

This is the complete Annual Report of the Association. This report is also available on the Fund's website at, www.sptrfa.org, or by request from the SPTRFA office.

Major sections included in this report and their content are as follows:

Introduction

Mission Statement, Board of Trustees, professional service relationships, and organizational structure.

Benefits

Summary information regarding Plan benefit options, calculation methods, and a history of annual retirements.

Investments

Fund investment returns and Fund investment advisors under contract with the Association.

Actuarial Valuation

Actuary's Certification Letter and various actuarial valuation sections that assess the Plan's long- term funded status and adequacy of revenues and describe relevant actuarial methods and assumptions.

Appendix A – State Auditor's Report

The Office of the State Auditor (OSA) audits the financial statements of the SPTRFA. The report for the most recent fiscal year is publicly available on the website of the Minnesota Office of the State Auditor, https://www.osa.state.mn.us.

The SPTRFA Board and staff are responsible for the safekeeping of the Association's assets, the prudent investment of those assets, and for ensuring that benefits are calculated properly and paid timely.

Administrative costs are budgeted at a level sufficient to serve the needs of our members. We strive to be service providers of the first order and our administrative costs remain extremely efficient.

The Board and staff of the SPTRFA serve as fiduciaries on behalf of our members and their survivors and beneficiaries. We manage the assets entrusted to our care in concert with the Prudent Person Standard in Minn. Stat. § 356A.04, subd. 2, and as specified under Minn. Stat. § 356A.06, subd. 7.

With over 114 years of service to our members, the SPTRFA Board and staff remain committed to administering the affairs of the Association with the highest degree of diligence and efficiency.

Respectfully submitted,

Phill Tencick Executive Director / CIO

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Mike McCollor President

Lori Borgeson

Vice President

Thomas Koreltz Secretary

Mik Mila

Mike McKay Treasurer

Independent Professional Service Providers as of June 30, 2023

> Actuary Gabriel Roeder Smith & Company

Auditor Minnesota Office of the State Auditor

Investment Managers

ABS Investment Management, LLC Barrow, Hanley, Mewhinney & Strauss, LLC BlackRock Institutional Trust Co. Brandywine Global Investment Management, LLC Dimensional Fund Advisors, LP **Dune Real Estate Partners** EnTrust Global Franklin Park Guggenheim Partners Investment Management, LLC JPMorgan Investment Management, Inc. Kimmeridge Energy Engagement Partners II, LP Morgan Stanley Investment Management, Inc. Newton Investment Management North Sky Capital Parametric Portfolio Associates, LLC Payden & Rygel Principal Asset Management Minnesota State Board of Investment TCW Asset Management Co. UBS Realty Investors, LLC Venture Investment Associates Wellington Management Company, LLP

> Investment Custodian U.S. Bank

Investment Performance Consultant

Asset Consulting Group

IT Services

Sagitec Corporate Technologies

Legal Counsel Fox Rothschild, LLC Rice

Medical Advisors

Dr. Ronald Vessey M.D. Dr. David Johnson M.D.

Organizational Chart as of June 30, 2023



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BENEFITS

Pre-Retirement Topics

Membership	SPTRFA membership is mandatory upon employment in any position requiring a license issued by the MN Professional Educator Licensing and Standards Board for employment with Saint Paul Public Schools (SPPS), St. Paul College (SPC) – if you were first employed prior to July 1, 1995, or St. Paul Charter Schools – from July 1, 1995 through June 30, 2002. Hereinafter collectively referred to as "Saint Paul Schools."
Allowable Retirement Service Credit	A full year of retirement service credit is earned after 170 days are worked during each fiscal year. Partial years are calculated based on the ratio of days worked to 170 days. No more than one year of retirement service credit is allowable during any fiscal year.
Definition of Salary	Minnesota Statutes Chapter 354A and the Association Articles and Bylaws define salary as the entire compensation upon which member contributions are required and made.
Refund of Contributions	Coordinated and Basic members who resign from St. Paul Schools may apply for a refund of employee contributions, plus applicable interest. Basic Plan members must be either under Age 55 or ineligible for a pension to receive a refund of contributions.
Repaying a Refund of Contributions	A member who received a refund may reinstate previous retirement service credit by repaying the amount refunded plus applicable interest. Such repayments may only be made after the member has accumulated at least two years of allowable retirement service credit since the last refund was taken.
Leaves of Absence	Subject to certain requirements, members may purchase retirement service credit for the following Saint Paul Schools approved leaves of absence: Sabbatical, Military, Parental, Mobility, Medical, and Family Medical.
Service Payments	Members may repay refunds or purchase SPTRFA retirement service credit by using personal savings or by transferring money from their Roth IRA or tax-sheltered retirement accounts, such as 403(b), 457, 401(k), IRAs, or from another plan qualified under 401(a).
Beneficiary	A beneficiary is the person or persons designated to receive a refund of employee contributions, plus applicable interest, upon the death of the member if no survivor or family benefit is payable. If no valid beneficiary designation form is on file for a member, a refund of contributions plus applicable interest will be paid to the member's estate.
Marriage Dissolution	Minnesota Statutes Chapter 518 covers marriage dissolutions and requires that SPTRFA receive a copy of the petition and summons, including a copy of the affidavit of service, before any information may be released. In the event that a court order requires a division of pension benefits, a certified judge signed copy of a decree or domestic relations order is required. All inquiries are kept confidential.
Disability Benefit	Subject to certain requirements, a disability benefit is available to vested members who become totally and permanently disabled.

Retirement Topics

Basic Plan Retirement Options		Basic Plan members receive a formula benefit payable for life. An automatic spousal survivor benefit is also provided. This survivor benefit coverage does not cause a reduction in the member's benefit but does terminate at any dissolution of marriage.					
	ated Plan ent Options	At the time of retirement, Coordinated Plan members select one of the five benefit annuity options below:					
C1	Member Life Only	Monthly benefit payable for life to the member, with nothing payable after the member's death.					
C2	Guaranteed Refund	Reduced monthly benefit payable for life to the member. In exchange for the member's benefit reduction, after the member's death, SPTRFA pays a refund to a designated beneficiary. The refund is equal to the difference between SPTRFA pre- retirement member contributions less cumulative SPTRFA post-retirement benefits paid to the member prior to death.					
C3	15-Year Certain	Reduced monthly benefit payable for life to the member. In exchange for the member's benefit reduction, SPTRFA continues monthly payments to a beneficiary if the member's death occurs within 15 years after retirement. Beneficiary payments end after the balance of the 15 years of SPTRFA benefit payments (member and beneficiary combined) is fulfilled.					
C4	100% Joint & Survivor	Reduced monthly benefit payable for life to the member. In exchange for the member's benefit reduction, after the member's death, the member's spouse receives the same monthly benefit for life. If the spouse predeceases the member, the member's benefit would bounceback to the full, unreduced benefit amount payable under the C1 option.					
C5	50% Joint & Survivor	Reduced monthly benefit payable for life to the member. In exchange for the member's benefit reduction, after the member's death, the member's spouse receives 50% of the member's benefit as a monthly benefit for life. If the spouse predeceases the member, the member's benefit would bounceback to the full, unreduced benefit amount payable under the C1 option.					

Post-Retirement Topics

Post-Retirement SPPS Reemployment*	If a retired member is reemployed by SPPS prior to Social Security Normal Retirement Age, their SPTRFA monthly benefits will be reduced if the retired member earns more than \$46,000 from SPPS in any calendar year. The following year's pension will be reduced by one dollar for every three dollars in SPPS earnings over \$46,000, with the amount of the reduction forfeited to SPTRFA. After Social Security Normal Retirement Age, retired members have no SPPS re-employment earnings limitation. Retired members can work for any other employer without a reduction in their SPTRFA pension benefits.
90 Day Period of Separation	Newly retired members must have a complete and continuous 90-day separation from Saint Paul Schools employment in any form. Importantly, "employment" for this purpose includes "any service provided to Saint Paul Schools directly, as an independent contractor, or as an employee of an independent contractor."
Post-Retirement Adjustment	Post-retirement adjustments are determined annually under Minnesota statutes, which may be amended from time to time. Post-retirement adjustments for members in retirement for at least a full year are currently 1.0% The postretirement benefit increase applies to each eligible member on January 1 of each year. Members in retirement payment status for at least one full year will receive the full increase noted above. Members in retirement payment status after January 1st but on or before July 1st of the preceding year will receive one-half of the full increase.

* The \$46,000 earnings limitation is suspended temporarily and does not apply to retired educators' SPPS earnings in calendar years 2022, 2023, and 2024 that would otherwise affect annuity payments in CY 2023, 2024, and 2025.

Basic Plan - Summary of Benefits¹

Vested members of the Basic Plan are eligible to receive a lifetime monthly pension based on the member's Final Average Salary (**FAS**), Years of Service (**YOS**) and a Percentage Multiplier.

The following chart provides an overview of the Tier 1 and Tier 2 retirement benefits in effect for eligible Basic Plan members during FY2023.

Normal	Minimum		
Benefit	Age Service		Computation of Annual Benefit

Tier 1

Unreduced	Rule of 90 60 65	25 5	$ FAS \times YOS \times 2.0\% $
Reduced	55	5	Reduced for early retirement by 0.25% for each month a member's age is under 65.
	55	25	Reduced for early retirement by 0.25% for each month a member's age is under 60.

Tier 2

Unreduced	65	5	FAS x YOS x 2.5%
Reduced	55	5	Formula reduced for early retirement by the use of actuarial tables.

Deferred Retirement

	55	5	Annual Benefit (see above) with augmentation.*	
*Augmented by 3% thereafter, if first h	1 2	0	nation to January 1 after reaching Age 55, then 5% per year	
Augmented by 2.5% for all years if first hired on or after July 1, 2006. Augmentation for all members, regardless of hire date, changed to 2% as of July 1, 2012 for the portion of benefit deferral occurring after June 30, 2012. Augmentation was eliminated as of July 1, 2019, for the portion of benefit deferral occurring after June 30, 2019.				

1. Please note that as of July 1, 2020, there are no remaining Basic Plan members in active status.

Vested members of the Coordinated Plan are eligible to receive a lifetime monthly pension based on the member's Final Average Salary (**FAS**), Years of Service (**YOS**) and a Percentage Multiplier. Members first hired after June 30, 1989 are only eligible for Tier 2 benefits.

The following chart provides an overview of the Tier 1 and Tier 2 retirement benefits in effect for eligible Coordinated Plan members during FY2023.

Normal	Minin	num			
Benefit	Age	Service	Computation of Annual Benefit		
Tier 1					
Unreduced	Rule of 90 62 65	30 3	(FAS x First 10 YOS x Multiplier*) + (FAS x YOS greater than 10 x Multiplier*)		
Reduced	55	3	Reduced for early retirement by 0.25% for each month a member's age is under 65.		
	Any Age	30	Reduced for early retirement by 0.25% for each month a member's age is under 62.		
			*Tier 1 MultipliersFirst 10 YOSOver 10 YOSService Prior to July 1, 20151.2%1.7%Service Effective July 1, 20151.4%1.9%		
Tier 2					
Unreduced	62	30	FAS x YOS x Multiplier*		
	If first employ	ved before J	uly 1, 1989:		
	65	3	FAS x YOS x Multiplier*		
	If first employ	ved on or af	ter July 1, 1989:		
	66	3	FAS x YOS x Multiplier*		
Reduced	55	3	Reduced for early retirement using actuarial tables.		
Deferred Ret	irement		*Tier 2 MultipliersService Prior to July 1, 20151.7%Service Effective July 1, 20151.9%		
	55	3	Annual Benefit (see above) with augmentation.*		
	Any Age	30			
• Augmented by 3% per year from date of resignation to January 1 after reaching Age 55, then 5% per year thereafter, if first hired prior to July 1, 2006.					
Augmented by 2.5% for all years if first hired on or after July 1, 2006.					
Augmentation for all members, regardless of hire date, changed to 2% as of July 1, 2012 for the portion of benefit deferral occurring after June 30, 2012, until June 30, 2019.					
No augmer	No augmentation after June 30, 2019.				

Retirement History Record

Fiscal Year Ending	Pensions Granted	Persons On Payroll	Benefits Paid (\$)	Fiscal Year Ending	Pensions Granted	Persons On Payroll	Benefits Paid (\$)
L	15	10	¢ 4.970	Da com h or 1077	(2	010	E 0E0 E07
June 1910	15	13 125	\$ 4,860 69,024	December 1977	63 48	919 046	5,050,507 5 522 548
June 1931	8	125		December 1978		946 046	5,523,548
June 1932	8	130 126	72,961	December 1979	40	946 062	6,240,309
June 1933	2	126 127	74,190 74,120	December 1980 December 1981	47 47	963 981	6,623,804 7,139,037
June 1934	6 9	127	74,120 74,001	December 1981 December 1982	47 61	981 996	
June 1935 June 1936		131		December 1982 December 1983	72		7,725,617 8,555,099
June 1938	14 19	155	75,864 80,747	December 1985	64	1,042 1,061	8,555,099 9,466,664
June 1938	17	160	89,709	January 1985 to	04	1,001	9,400,004
				•	59	1,103	5,324,727
June 1939	11	161	93,184	June 1985	66	1,103	11,267,144
June 1939 to December 1939	0	158	23,870	June 1986	117		12,478,180
December 1939	0 71	158 222	23,870 170,685	June 1987 June 1988	70	1,191 1,210	12,478,180
December 1940	35	222	210,257	June 1989	70 67	1,210	15,506,957
December 1941 December 1942	27	240 266	234,217	June 1999	67	1,230	15,300,937
December 1942 December 1943	38	200 286	253,031	June 1990	80	1,270	17,382,410 18,811,677
December 1945	34	311	233,031	June 1992	83	1,309	20,509,335
December 1944 December 1945	56	350	308,113	June 1992	120	1,337	20,509,555 22,763,806
December 1945	50	378	308,113	June 1993	92	1,420 1,469	25,044,494
December 1940	28	378	360,571	June 1994	113	1,409	25,044,494 26,792,534
December 1947	42	413	375,912	June 1995	113	1,595	20,7 <i>92,</i> 334 29,446,215
December 1948	42	413 441	419,618	June 1990	119	1,595 1,720	29,440,213 32,056,967
December 1949	42 30	461	419,018	June 1998	179	1,720	37,852,099
December 1950	27	401	472,670	June 1999	114	1,861	41,724,751
December 1951	28	470 486	508,923	June 2000	114	1,964	47,121,179
December 1952	32	480 487	508,925 525,959	June 2000	144	2,050	53,851,893
December 1955	10	482	529,429	June 2002	130	2,030	58,738,724
December 1954	38	402 509	666,994	June 2002	127	2,130	63,357,052
December 1956	46	529	750,146	June 2004	120	2,361	67,941.921
December 1950	59	560	840,883	June 2005	192	2,505	72,448,201
December 1958	41	579	1,019,502	June 2006	192	2,624	78,420,222
December 1959	30	585	1,084,506	June 2007	138	2,744	82,809,201
December 1960	38	600	1,144,380	June 2008	122	2,851	88,273,233
December 1960	39	611	1,230,715	June 2009	114	2,933	92,137,480
December 1962	49	624	1,352,779	June 2010	166	3,044	95,299,300
December 1963	42	647	1,467,461	June 2011	233	3,212	97,264,937
December 1964	33	653	1,545,252	June 2012	141	3,292	101,989,143
December 1965	40	668	1,631,554	June 2013	166	3,404	103,237,869
December 1966	43	676	1,770,083	June 2014	177	3,529	105,742,221
December 1967	36	682	1,862,249	June 2015	178	3,633	108,877,858
December 1968	45	695	1,969,760	June 2016	159	3,723	111,223,711
December 1969	53	726	2,319,186	June 2017	190	3,851	112,750,820
December 1970	31	719	2,385,868	June 2018	138	3,914	115,315,754
December 1971	47	731	2,522,350	June 2019	154	4,007	116,389,114
December 1972	51	745	2,742,660	June 2020	175	4,102	117,305,464
December 1972	36	744	3,039,253	June 2021	156	4,172	118,664,956
December 1974	46	754	3,372,453	June 2022	154	4,253	122,745,494
December 1975	52	778	3,765,322	June 2023	160	4,310	123,858,409
December 1976	77	883	4,393,513	,		-,0	-,,

*Pensions Granted - Does not include survivors or beneficiaries.

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INVESTMENTS

Investment Returns for Fiscal Year End June 30, 2023

	Assets Under Management <u>(Market Value)</u>	Fiscal Year Investment <u>Performance</u>
Domestic Equity	<u></u>	
Barrow, Hanley, Mewhinney & Strauss, Inc.	82,183,098	12.04%
BlackRock S&P 500	14,541,379	19.60%
Dimensional Fund Advisors, Inc.	52,209,372	16.90%
Newton Investment Management	5,950	11.24%
State Board of Investments - Domestic Equity	314,563,304	19.02%
Wellington Management Company, LLP	51,475,463	21.69%
0 0 1 1	514,978,566	
International Equity		
State Board of Investments - Int'l Equity	99,091,585 99,091,585	14.33%
Clobal Fauity	,,	
Global Equity ABS	40,000,000	
BlackRock iShares ETF	17,790,120	2.99%
JP Morgan Focus	85,250	2.7770
Morgan Stanley Global Franchise	85,552,048	14.41%
	143,427,418	
Fixed Income		
Brandywine Global Opportunistic Fixed	29,106,553	1.54%
Guggenheim Core Plus	104,554,105	-0.76%
Payden & Rygel Core Bond	41,876,253	0.1070
Vanguard Short Term Bond Index	4	
	175,536,915	
Real Assets		
Kimmeridge Energy II	9,164,014	
Principal	40,444,295	
Private Real Estate - Dune III and Dune IV	7,320,707	7.44%
UBS Trumbull Fund	23,358,610	-14.81%
	80,287,626	
Private Equity		
Go Secure Edgewave (GSEW)	85,527	
Franklin Park	142,325,575	
North Sky	469,390	
TCW LLC VIA Partners	2,921,771	
VIA I altitels	3,613,950 149,416,213	2.70%
	149,410,213	2.7078
Opportunistic		
Entrust Parametric Defensive Equity	7,557,684 29,129,547	14.74% 14.99%
Tarametric Defensive Equity	36,687,231	14.99 /0
	50,007,251	
Cash	2 000 007	2 000/
Cash - US Bank Custody Parametric Cash Overlay	2,980,097 4,465,190	2.90% 15.30%
I arametric Cash Overlay	7,445,287	15.50 %
	.,	
Total Fund (net of fees)	1,206,870,841	9.43%
Total Fund Benchmark	1,200,070,091	9.43 % 8.00%
		0.00 /0
Cash - US Bank Checking	9,691,843	
Total Investable Assets	1,216,562,684	

ACTUARIAL SECTION



October 23, 2023

Mr. Phillip Tencick, Executive Director St. Paul Teachers' Retirement Fund Association 2550 University Avenue W, Suite 312N St. Paul, Minnesota 55114

Dear Mr. Tencick:

We are pleased to present the report of the actuarial valuation of the St. Paul Teachers' Retirement Fund Association ("Fund") as of July 1, 2023. This report provides, among other things, the required annual contribution rate of the Fund for the Plan Year commencing July 1, 2023 and ending on June 30, 2024, according to prescribed assumptions. Note that the impact of GASB Statements No. 67 and No. 68 is provided in a separate report.

The valuation was based upon data and information through June 30, 2023 furnished by the Fund staff, concerning Retirement Fund benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. Their efforts in furnishing the materials needed are gratefully acknowledged. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the Fund.

The report has been prepared at the request of the Fund's Board of Trustees in accordance with Section 356.215 of the Minnesota Statutes as well as the Standards for Actuarial Work established by the State of Minnesota Legislative Commission on Pensions and Retirement. To the best of our knowledge, this report is complete and accurate, and has been prepared in accordance with prescribed assumptions and generally accepted actuarial principles and practices. This report is intended for use by the Fund and those determined or approved by the Fund's Board of Trustees. This report may be provided to parties other than the Fund only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The contribution rate in this report is determined using the actuarial assumptions and methods disclosed in Section 4 of this report. This report includes risk metrics beginning on page 9, but does not include a robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

The contribution rate in this report is determined using the actuarial assumptions and methods disclosed in Section 4 of this report. This report includes risk metrics on page 10, but does not include a robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

Mr. Phillip Tencick St. Paul Teachers' Retirement Fund Association October 23, 2023 Page 2

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of such future measurements.

This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation, and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

This report should not be relied on for any purpose other than the purpose described in this report. Determinations of financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

Actuarial assumptions, including discount rates, mortality tables and others identified in this report, are prescribed by Minnesota Statutes Section 356.215, the Legislative Commission on Pensions and Retirement (LCPR), and the Board of Trustees. These parties are responsible for selecting the plan's funding policy, actuarial valuation methods, asset valuation methods, and assumptions. The combined effect of the assumptions, excluding prescribed assumptions or methods set by law, is expected to have no significant bias (i.e. not significantly optimistic or pessimistic). All actuarial assumptions and methods used in the valuation follow the guidance in the applicable Actuarial Standards of Practice. The policies, methods and assumptions used in this valuation are those that have been so prescribed and are described in the Actuarial Basis of this report. The Fund is solely responsible for communicating to GRS any changes required thereto.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. Bonita J. Wurst and Sheryl L. Christensen are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

We will be pleased to review this report with you at your convenience. Respectfully

submitted, Gabriel, Roeder, Smith & Company

Bonita J. Wurst

Bonita J. Wurst, ASA, EA, FCA, MAAA

They Christensen

Sheryl L. Christensen, FSA, EA, FCA, MAAA

Summary of Valuation Results

(Dollars in Thousands)

		July 1, 2022 Valuation		Ju N		
A.	CONTRIBUTIONS % OF PAYROLL (Table 11)				aluation	
	1. Statutory Contributions - Chapter 354A		25.13%		30.86%	**
	2. Required Contributions - Chapter 356		19.96%		24.50%	
	3. Sufficiency / (Deficiency)		5.17%		6.36%	
В.	FUNDING RATIOS					
	1. Accrued Liability Funding Ratio					
	a Current Assets (Table 1)	\$	1,203,096	\$	1,234,225	
	b. Actuarial Accrued Liability (Table 9)		1,750,421		1,891,617	
	c. Funding Ratio		68.73%		65.25%	
	2. Projected Benefit Funding Ratio (Table 8)					
	a. Current and Expected Future Assets	\$	2,183,758	\$	2,259,768	
	b. Current and Expected Future Benefit Obligations		1,971,549		2,155,864	
	c. Funding Ratio		110.76%		104.82%	
C.	PLAN PARTICIPANTS					
	1. Active Members					
	a. Number (Table 3)		3,400		3,360	
	b. Projected Annual Earnings*	\$	313,824	\$	305,719	
	c. Average Annual Earnings (Projected dollars)*	\$	87,941	\$	88,019	
	d. Average Age		44.6		45.1	
	e. Average Service		12.9		13.2	
	f. Members on Leave of Absence		128		96	
	2. Others					
	a. Service Retirements (Table 4)		3,856		3,905	
	b. Disability Retirements (Table 5)		22		24	
	c. Survivors (Table 6)		375		381	
	d. Deferred Retirements (Table 7)		2,514		2,611	
	e. Terminated Other Non-Vested (Table 7)		2,915		3,007	
	f. Total – Others		9,682		9,928	
	3. Grand Total (1.a + 1.f + 2.f)		13,210		13,384	

* Projected Annual Earnings includes expected payroll for teachers hired after the valuation date to replace retirements in May and June prior to the valuation date; Average Annual Earnings excludes this new teacher payroll.

** Statutory contribution includes one-time state aid (25.71% without one-time state aid).

Accounting Balance Sheet as of June 30, 2023 (Dollars in Thousands)

A. ASSETS			Marl	ket Value
 A. ASSETS 1. Cash, Equivalents, Short-Term Securities 2. Investments 			\$	9,692
a. Fixed Income				169,178
b. Equity				714,327
c. Real Assets				79,692
d. Alternative				187,133
e. Cash and Cash Equivalents				56,541
3. Other Assets				7,051
B. TOTAL ASSETS			-	L,223,614
C. AMOUNTS CURRENTLY PAYABLE			\$	6,861
D. ASSETS AVAILABLE FOR BENEFITS				
1. Member Reserves			\$	252,145
 Employer Reserves Total Assets Available for Benefits 			\$ 1	964,608
E. TOTAL AMOUNTS CURRENTLY PAYABLE AND			<u>د د</u>	,216,753
ASSETS AVAILABLE FOR BENEFITS			\$ 1	L,223,614
				<u> </u>
 F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS 1. Market Value of Assets Available for Benefits (D.3) 			\$ 1	L,216,753
2. Unrecognized Asset Returns (UAR)			Υ <u>-</u>	1,210,733
a. June 30, 2023	\$	25,514		
b. June 30, 2022		(191,444)		
c. June 30, 2021		229,203		
d. June 30, 2020		(73 <i>,</i> 490)		
3. UAR Adjustment: .80 * 2(a) + .60 * 2(b) + .40 * 2(c) + .20 * 2(d)			<u> </u>	(17,472)
4. Actuarial Value of Assets: (F.1 - F.3)			<u>\$ 1</u>	.,234,225
DERIVATION OF OTHER ASSETS * — — Accounts Receivable	Mar	ket Value		
Employer Contribution		\$ 438		
Employee Contribution		229		
Service Purchases Receivable		55		
Pensions Receivable State Contributions		37 838		
Real Estate Income Receivable		60		
Commission Recapture Receivable		1,196		
Interest Receivable Dividend Receivable		202 0		
Misc. Receivable		0		
Sale of Securities		3,996		
Total Accounts Receivable		\$ 7,051		
Fixed Assets Total Other Assets		<u>0</u> \$ 7,051		
		<u> </u>		

*Numbers may not add due to rounding.

Changes in Assets Available for Benefits as of June 30, 2023 (Dollars in Thousands)

			Ma	rket Value
A.	ASS	ETS AVAILABLE AT BEGINNING OF PERIOD	\$	1,154,427
	_			
В.	OPI	ERATING REVENUES		
	1.	Member Contributions	\$	22,420
	2.	Employer Contributions		38,586
	3.	Supplemental Contributions		15,665
	4.	Reemployed Annuitant Employer Contributions		437
	5.	Investment Income		15,599
	6.	Investment Expenses		(4,523)
	7.	Net Realized Gain / (Loss)		6,796
	8.	Other		0
	9.	Net Change in Unrealized Gain / (Loss)		92,425
	10.	Total Operating Revenue	\$	187,405
C.	OPI	ERATING EXPENSES		
	1.	Service Retirements	\$	109,272
	2.	Disability Benefits		470
	3.	Survivor Benefits		12,577
	4. 5.	Refunds Benefit Payment Adjustment		1,539 28
	5. 6.	Administrative Expenses		1,193
	7.	Total Operating Expenses	\$	125,079
	7.		<u> </u>	123,073
D.	OTI	HER CHANGES IN RESERVES	\$	0
Ε.	ASS	ETS AVAILABLE AT END OF PERIOD	\$	1,216,753
F.	DET	ERMINATION OF CURRENT YEAR UNRECOGNIZED ASSET	RETUF	RN
	1.	Average Balance		
		(a) Assets available at BOY	\$	1,154,427
		(b) Assets available at EOY		1,216,753
		(c) Average balance {[(a) + (b) - Net Investment Income] / 2}	1,130,442
		{Net investment income: B.5+B.6+B.7+B.9}		
	2.	Expected Return: .075 * F.1		84,783
	3.	Actual Return		110,297
	4.	Current Year Gross Asset Gain/(Loss): F.3 - F.2	\$	25,514

Actuarial Balance Sheet as of July 1, 2023 (Dollars in Thousands)

Α.	CURRENT ASSETS (TABLE 1; Line F.4)	\$ 1,234,225
В.	EXPECTED FUTURE ASSETS	
	1. Present Value of Expected Future Statutory Supplemental Contributions*	\$ 761,296
	2. Present Value of Future Normal Costs	 264,247
	3. Total Expected Future Assets	\$ 1,025,543
C.	TOTAL CURRENT AND EXPECTED FUTURE ASSETS	\$ 2,259,768
D.	TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS	\$ 2,155,864
E.	CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (D - C)	\$ (103,904)

* Includes the effect of scheduled employee and employer contribution increases and supplemental state contributions.

Determination of Unfunded Actuarial Accrued Liability (UAAL) and Supplemental Contribution Rate as of July 1, 2023 (Dollars in Thousands)

			Actuarial Present Value of Projected Benefits		Actuarial resent Value of Future Iormal Costs		Actuarial Accrued Liability
Α.	DETERMINATION OF ACTUARIAL						
	ACCRUED LIABILITY (AAL)						
	1. Active Members*						
	a. Retirement Benefits	\$	793,507	-	184,633	-	608,874
	b. Disability Benefits	\$	11,915	-	4,112	-	7,803
	c. Surviving Spouse and Child Benefits	\$	6,181		1,876	-	4,305
	d. Vested Withdrawals	\$	37,304		52,429		(15,125)
	e. Refund Liability Due to Death or Withdrawal	<u>\$</u>	2,120		21,197		(19,077)
	f. Total	<u>\$</u>	851,027	-	264,247		586,780
	2. Deferred Retirements	\$	125,048	-	0	\$	125,048
	 Former Members without Vested Rights Annuitants 	\$ \$	3,252			\$ \$	3,252
		-	1,173,727		0	•	1,173,727
	5. One-Time Non-Compounding Benefit Increase	<u>\$</u>	2,810		0	<u>\$</u>	2 ,810
	6. Total	\$	2,155,864	\$	264,247	\$	1,891,617
В.	DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL) 1. Actuarial Accrued Liability (A.5) 2. Current Assets (Table 1; Line F.4) 3. Unfunded Actuarial Accrued Liability (B.1 - B.2)					\$ <u>\$</u> \$	1,891,617 1,234,225 657,392
C. RA	DETERMINATION OF SUPPLEMENTAL CONTRIBUTION TE**						
	1. Present Value of Future Payrolls Through the					4	
	Amortization Date of June 30, 2048***					\$	4,613,907
	2. Supplemental Contribution Rate (B.3 / C.1)						14.25%

* Includes members on leave of absence.

** The amortization of the unfunded actuarial accrued liability (UAAL) using the current amortization method would result in initial payments less than the "interest only" payment on the UAAL; however, expected contributions to the plan are projected to reduce the UAAL due to the current contribution sufficiency. Payments less than the interest only amount would result in the UAAL increasing for an initial period of time.

*** Calculated using 7.0% annual investment return rate.

Changes in Unfunded Actuarial Accrued Liability (UAAL) as of July 1, 2023 (Dollars in Thousands)

	Year Ending June 30, 2023				
	Actu	uarial Accrued	Current	Un	funded Actuarial
		Liability	Assets	Α	ccrued Liability
A. UAAL AT BEGINNING OF YEAR	\$	1,750,421	\$ 1,203,096	\$	547,325
B. CHANGE DUE TO INTEREST REQUIREMENTS AN	D				
CURRENT RATE OF FUNDING		27.266			27.200
1. Normal Cost and Expenses		27,366	0		27,366
2. Benefit Payments		(123,886)	(123,886))	0
3. Contributions		0	77,108		(77,108)
4. Interest on A., B.1., B.2. and B.3.		127,662	88,478		39,184
5. Total (B.1. + B.2. + B.3. + B.4.)	\$	31,142	\$ 41,700	\$	(10,558)
C. EXPECTED VALUES AT END OF YEAR (A + B.5	5)\$	1,781,563	\$ 1,244,796	\$	536,767
D. INCREASE / (DECREASE) DUE TO ACTUARIAL LOSSES / (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED					
1. Age and Service Retirements				\$	1,692
2. Disability Retirements					(354)
3. Death-in-Service Benefits					111
4. Withdrawals					(4,653)
5. Salary Increases					(8,405)
6. Investment Income					10,571
7. Mortality of Annuitants					105
8. Other Items					(5,297)
9. Total				\$	(6,230)
E. UAAL AT END OF YEAR BEFORE PLAN AMEI ACTUARIAL ASSUMPTIONS (C + D.9)	NDME	NTS AND CHAN	IGES IN	\$	530,537
F. CHANGE IN UAAL DUE TO PLAN AMENDME	INTS				42,650
G. CHANGE IN UAAL DUE TO CHANGES IN ACTI	JARIA	L ASSUMPTION	S		84,205
H. UAAL AT END OF YEAR (E + F + G)				\$	657,392

Determination of Contribution Sufficiency as of July 1, 2023 (Dollars in Thousands)

	Percent-of- Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A		
1. Employee Contributions	7.75%	\$ 23,693
2. Employee Contributions	9.00%	27,515
a. Regular	5.0070	27,010
b. Additional	3.84%	11,740
3. Supplemental Contribution		
a. 1996 Legislation	0.27%	838
b. 1997 Legislation	0.92%	2,827
c. 2014 Legislation	2.29%	7,000
d. 2018 Legislation	1.64%	5,000
e. One-Time, Direct State Aid	<u>5.15%</u>	
4. Total	30.86%	<u>\$ 94,360</u>
 B. REQUIRED CONTRIBUTIONS - CHAPTER 356 1. Normal Cost a. Retirement Benefits b. Disability Benefits c. Surviving Spouse and Child Benefits d. Vested Withdrawals e. Refund Liability Due to Death or Withdraft. Total 2. Supplemental Contribution Amortization 3. Allowance for Administrative Expenses 4. Total 	7.03% 0.15% 0.07% 1.86% 0.76% 9.87% 14.25% 0.38% 24.50%	459 214 5,686 <u>2,323</u> \$ 30,174 43,565 <u>1,162</u>
C. CONTRIBUTION SUFFICIENCY / (DEFICIENCY) (A.	4 - B.4)* 6.36%	19,459
Projected Annual Payroll for Fiscal Year Beginning of Date (determined by increasing reported pay for ea full year of assumed pay increase, according to th scale, as prescribed by the LCPR Standards for Act replacement payroll (described in the Actuarial Met Assumptions.)	ch member by one e actuarial salary uarial Work), plus	\$ 305,719

• Contribution sufficiency without one-time direct state aid is 1.21%.

I. ACTUARIAL COST METHOD

An Actuarial Cost Method is a set of techniques used by the actuary to develop contribution levels under a retirement plan. The Actuarial Cost Method used in this valuation for all purposes is the Entry Age Actuarial Cost Method. Under this Method, a Normal Cost is developed by amortizing the actuarial value of benefits expected to be received by each active participant (as a level percentage of pay) over the total working lifetime of that participant, from hire to termination. Years of Service for valuation purposes was provided by the Retirement Fund. Age as of the valuation date was calculated based on the dates of birth provided by the Retirement Fund. Entry Age for valuation purposes was calculated as the age on the valuation date minus the years of service on the valuation date.

To the extent that current assets and future Normal Costs do not support participants' expected future benefits, an Unfunded Actuarial Accrued liability ("UAAL") develops. The UAAL is amortized over the closed statutory amortization period ending June 30, 2048 using level percent-of-payroll assuming total payroll increases 2.50% per annum. The total contribution developed under this method is the sum of the Normal Cost and the payment toward the UAAL.

II. CURRENT ACTUARIAL ASSUMPTIONS

Assumptions are based on an experience study for the five-year period of July 1, 2016 to June 30, 2021, as well as a legislated change to the investment return assumption effective July 1, 2023. Note that significant plan changes effective July 1, 2023 and July 1, 2025 may ultimately result in behavior changes not anticipated in the actuarial assumptions.

A. Demographic Assumptions

Mortality:

- 1. Healthy and Disabled Annuitant Mortality:
 - a. Male: Pub-2010 Male Healthy Teacher Retiree Mortality Table, adjusted for mortality improvements using projection scale MP-2021 from 2010. Rates are multiplied by a factor of 1.03.
 - b. Female: Pub-2010 Female Healthy Teacher Retiree Mortality Table, adjusted for mortality improvements using projection scale MP-2021 from 2010. Rates are multiplied by a factor of 1.03.
- 2. Employee Mortality:
 - a. Male: Pub-2010 Male Healthy Teacher Employee Mortality Table, adjusted for mortality improvements using projection scale MP-2021 from 2010.
 - b. Female: Pub-2010 Female Healthy Teacher Employee Mortality Table, adjusted for mortality improvements using projection scale MP-2021 from 2010.

Age in	Post-Retirement Mortality				
<u>2023</u>	Male	Female			
55	22	20			
56	24	22			
57	27	24			
58	30	26			
59	34	28			
60	38	31			
61	42	33			
62	46	35			
63	51	38			
64	56	41			
65	61	44			
66	67	47			
67	74	51			
68	82	56			
69	91	62			
70	102	69			
71	114	78			
72	128	88			
73	144	100			
74	163	115			
75	185	131			
76	210	151			
77	239	174			
78	272	200			
79	310	230			
80	353	264			
81	402	303			
82	458	347			
83	523	398			
84	597	455			
85	681	520			
86	775	594			
87	881	676			
88	999	769			
89	1,130	873			
90	1,274	989			
91	1,432	1,120			
92	1,600	1,263			
93	1,778	1,420			
94	1,963	1,587			

Age in	Pre-Retirement Mortality			
<u>2022</u>	Male	Female		
25	2	1		
26	2	1		
27	2	1		
28	3	1		
29	3	2		
30	3	2		
31	3	2		
32	4	2		
33	4	2		
34	4	3		
35	5	3		
36	5	3		
37	5	3		
38	5	3		
39	6	4		
40 41 42 43 44	6 6 7 7	4 4 4 4 4		
45 46 47 48 49	7 8 8 9 10	5 5 6 6		
50	10	7		
51	11	7		
52	12	8		
53	14	9		
54	15	10		
55	16	11		
56	18	12		
57	20	13		
58	22	14		
59	24	15		
60	27	17		
61	30	18		
62	33	20		
63	36	22		
64	40	24		

Rates of Disability:

Disability Expressed as the Number of Occurrences per 10,000:

Age	Disability	Age	Disability
20	1	45	4
21	1	46	4
22	1	47	4
23	1	48	4
24	1	49	4
25	1	50	6
26	1	51	6
27	1	52	6
28	1	53	6
29	1	54	6
30	2	55	12
31	2	56	12
32	2	57	12
33	2	58	12
34	2	59	12
35	2	60	20
36	2	61	20
37	2	62	20
38	2	63	20
39	2	64	20
40	2		
41	2		
42	2		
43	2		
44	2		

	Number of Terminations		
	per 1,000 A	per 1,000 Active Members	
Year	Male	Female	
1	450	450	
2	235	200	
3	160	120	
4	75	95	
5	65	75	
6	55	70	
7	40	60	
8	35	50	
9	30	50	
10	30	50	
11	30	40	
12	30	30	
13	30	25	
14	25	20	
15	25	20	
16	25	20	
17	20	20	
18	10	18	
19	10	15	
20 Over	10	10	

Rates of Retirement:

Assumed Retirements Expressed as the Number of Occurrences per 10,000

Age	Male Coordinated Members Eligible for Unreduced Early Retirement	Female Coordinated Members Eligible for Unreduced Early Retirement	Male Coordinated Members Not Eligible for Unreduced Early Retirement	Female Coordinated Members Not Eligible for Unreduced Early Retirement
55	2,500	3,500	500	500
56	3,500	3,000	500	500
57	3,000	2,000	500	500
58	2,500	2,500	700	500
59	2,500	3,000	700	700
60	2,500	3,000	1,200	900
61	3,000	3,000	800	1,000
62	5,000	3,500	2,000	1,800
63	3,000	3,000	2,500	2,100
64	2,500	2,500	2,500	2,100
65	10,000	10,000	3,000*	4,500*
66	10,000	10,000	3,500	5,000
67	10,000	10,000	4,000	4,500
68	10,000	10,000	3,500	3,000
69	10,000	10,000	3,500	2,500
70 & Over	10,000	10,000	10,000	10,000

* 2,800 for male members and 3,200 for female members hired after June 30, 1989 with a Normal Retirement Age equal to 66.

Note: Members reaching age 62 with 30 years of service prior to age 65 are assumed to retire at the same rate as Rule of 90 retirements.

B. Economic Assumptions

Investment Return Rate:	7.00%
Price Inflation:	2.50% per year
Payroll Growth (Wage Inflation):	3.00% per year
Future Salary Increases:	Service-based rates shown below:

Year	Ultimate Rate of Annual Salary	Year	Ultimate Rate of Annual Salary
1	8.00%	21	2.70%
2	6.75%	22	2.50%
3	6.50%	23 & Over	2.50%
4	6.25%		
5	6.00%		
6	5.75%		
7	5.50%		
8	5.25%		
9	5.00%		
10	4.75%		
11	4.50%		
12	4.25%		
13	4.00%		
14	3.75%		
15	3.50%		
16	3.40%		
17	3.30%		
18	3.20%		
19	3.10%		
20	2.90%		

Annual Salary Increases

Asset Value: The assets are valued based on a five-year moving average of expected and market values (five-year average actuarial value). At the end of each plan year, an average asset value is calculated as the average of the market asset value at the beginning and end of the fiscal year net of investment income for the fiscal year. The investment gain or (loss) is taken as the excess of actual investment income over the expected investment income based on the average asset value as calculated above. The investment gain or (loss) is recognized over five years at 20% per year. The asset value is the sum of the market asset value plus the scheduled recognition of investment gains or (losses) during the current and the preceding four fiscal years.

C. Other Assumptions

Marital Status:	It is assumed that 75% of male members and 60% of female members have an eligible spouse. The male spouse is assumed to be two years older than the female spouse. Married members are assumed to have two dependent children.
Deferred Benefit Commencement:	Basic Plan members who terminate vested are assumed to commence benefits at age 61. Coordinated Plan members are assumed to commence benefits at age 63. If the member is already past the assumed deferral age, the member is assumed to commence benefits one year from the valuation date.
Administrative Expenses:	Prior year administrative expenses (excluding investment expenses) are expressed as a percentage-of-payroll and then applied to current projected payroll.
Refund of Contributions:	All employees withdrawing after becoming eligible for a deferred benefit take the larger of their contributions accumulated with interest or the value of their deferred benefit. Account balances for deferred members accumulate interest until the assumed benefit commencement date and are discounted back to the valuation date.
Allowance for Combined	20.0% load on liabilities for former, vested members.
Service Annuity:	9.0% load on liabilities for former, non-vested members.
Missing Salary and Salary Minimums:	Active members with reported salaries of \$100 or less were assumed to have the average non-zero active salary. Active members with salaries less than those reported at the prior valuation date are valued using their prior salary amount. Active members who have been hired within one year of the valuation date have had their pay annualized by dividing by months of service credited, not to exceed the average non-zero active salary. For members on leave of absence at valuation date who were not on leave at the prior valuation date, the prior year's valuation pay was used.
Missing Data for Deferred Vested Members:	Deferred vested members without a reported benefit and without salary information were assumed to have a final average salary of \$40,000.
Decrement Timing:	Retirement and Termination: end of valuation year – consistent with retirements and terminations occurring at the end of the school year. Death and Disability: middle of valuation year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Service Credit Accruals:	It is assumed that members accrue one year of service credit per year. Exact fractional service is used to determine the amount of benefit payable.

Supplemental Contributions:	1996 legislation provides for a variable amortization aid contribution paid annually on July 15. We assumed the annual amortization aid contribution will equal \$838,000, which was the actual contribution for the most recent fiscal year. Additionally, annual supplemental contributions equal to \$14,827,000 are scheduled to be paid each October 1.
	The contributions described herein will continue until the plan is 100% funded or until June 30, 2048, whichever occurs earlier.
Projected Annual Payroll Calculation:	The census data as of July 1, 2023 reflects retirements and terminations occurring during the months of May and June; however, it does not necessarily reflect the replacements hired to fill their positions who may have hire dates in August and September. We assumed that May and June retirements are replaced by members coming in at the B.A. entry salary level of \$49,181; the Projected Annual Payroll for the fiscal year ending June 30, 2024 includes this replacement salary amount.
Changes in Actuarial Methods and Assumptions	The statutory investment return rate was changed from 7.5% to 7.0%.
Since the Prior Valuation:	The assumed wage inflation assumption was changed from 3.0% to 2.5%.
	Additional demographic assumption changes, as recommended in the most recent experience study, dated December 8, 2022:
	 The base mortality table was changed from RP-2014 mortality table with adjustments to Pub-2010 for Teachers, with adjustments, and future improvement projected using MP-2021.
	 Revised rates of retirement which generally result in more expected normal retirements and fewer early retirements.
	 Revised rates of termination are generally lower, especially after the first year of employment for males and females.
	Reduced rates of disability.
	 Retirement age assumption for Coordinated deferred members was changed from age 62 to age 63.
	 Revised merit and seniority salary increase rates are 19 basis points lower in total. When combined with the change in wage inflation, gross salary increase rates are 69 basis points lower in total.
	Members reaching age 62 with 30 years of service prior to age 65 are assumed to retire at the same rate as Rule of 90 retirements.

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APPENDIX – State Auditor's Report

STATE OF MINNESOTA Office of the State Auditor



Julie Blaha State Auditor

The Office of the State Auditor (OSA) audits the financial statements of the SPTRFA, and has issued an unmodified opinion on the accuracy and reliability of the information provided by the statements contained in this Report. An unmodified opinion is the most favorable level of opinion that can be rendered by the OSA. This report is made publicly available on the website of the Minnesota Office of the State Auditor, <u>https://www.osa.state.mn.us.</u>

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION ST. PAUL, MINNESOTA

FOR THE YEAR ENDED JUNE 30, 2023

St. Paul Teachers' Retirement Fund Association 2550 UNIVERSITY AVE W 312N ST. PAUL, MN 55114-1005