December 23, 2013

Minnesota Teacher Fund Consolidation Study

Duluth Teachers Retirement Fund Association
St. Paul Teachers Retirement Fund Association
Teachers Retirement Association of Minnesota

THIS PAGE INTENTIONALLY LEFT BLANK

Table of Contents

Executive Summary

Study Mandate

This report fulfills a mandate of legislation enacted in 2013 (Chapter 111, Article 13, Section 22) that required the boards and executive directors of the Duluth Teachers Retirement Fund Association (DTRFA), the St. Paul Teachers Retirement Fund Association (SPTRFA) and the Teachers Retirement Association (TRA) to jointly study and develop a report for the Legislative Commission on Pensions and Retirement (LCPR) on the feasibility and requirements necessary for consolidation of DTRFA and SPTRFA into TRA. This report includes detailed actuarial analysis, proposed cost allocations, implementation plans, asset investment management considerations, and education/communication plans.

Financial Impact and Actuarial Analysis

The statutory language mandating this report requires it to include detailed actuarial analysis that defines the financial requirements for consolidating DTRFA and SPTRFA into TRA in a manner that assures that TRA's assets are protected and that the merging funds are fully funded. The actuarial estimates indicate that it will require $14.7 million in additional annual assistance to bring DTRFA into TRA on a fully funded basis and $46.4 million annually to bring in SPTRFA on a fully funded basis. These annual funding amounts need to be paid throughout TRA's existing statutory 24-year amortization period.

Financial Status

TRA has a higher funded ratio than DTRFA and SPTRFA. For FY2013, TRA has a market value funded ratio of 77 percent. For FY2013, SPTRFA is approximately 64 percent funded on a market value basis. For FY2013, DTRFA is about 58 percent funded on a market value basis. DTRFA faces special financial challenges due to adverse demographic trends. Duluth's student population has been declining along with the number of active teachers contributing to its fund, making it difficult for DTRFA to recover from its financial challenges without additional revenue sources.

Financial History Summary

By 1998, both DTRFA and TRA had attained a reasonably well-funded status with funded ratios over 90 percent and, for several years, over 100 percent. Those two funds maintained that healthy status until the mid-2000s when adverse investment experience and, for Duluth, adverse demographic experience, took a financial toll on the funds. In contrast, SPTRFA briefly attained a funded ratio slightly above 80 percent, but mostly remained in the 65 percent to 75 percent range throughout the past two decades due to historically inadequate funding.

Comparisons of Benefits and Contributions

The three teacher funds have substantially similar benefit structures with the exception of post-retirement increases. SPTRFA and DTRFA provide a one percent post-retirement increase annually while TRA currently provides a 2 percent increase annually. Contribution rates among the three funds are also similar, with the exception that SPTRFA employer rates will increase to 10.34 percent by July 1, 2017, in contrast to TRA's and DTRFA's employer rates, which will be 7.5 percent by July 1, 2014.

Investment-Related Issues
The State Board of Investment (SBI) has reviewed the portfolios of the DTRFA and SPTRFA and believe that the majority of assets of the two funds could be transferred to SBI without difficulty given the liquid nature and ready availability of pricing and valuations for these assets. There may be some assets, such as DTRFA's direct ownership of real estate (its office building), that may be problematic. SBI would review these holdings on a case-by-case basis and handle in an appropriate and prudent manner.

Consolidation Options
The consolidation options considered for the purposes of this report included:

- Full consolidation of assets and liabilities of the merging fund(s), including benefits administration, asset investment management and membership into TRA/SBI.
- Transferring asset investment management of the merging fund(s) to SBI.
- Segregated account approach that would transfer benefits administration and asset investment management to TRA/SBI but the assets and liabilities of the transferring fund(s) would be maintained in a separate account that would be the financial responsibility of the employer (school district) and/or state rather than the financial responsibility of TRA.
- Separate fund option in which the fund remains separate and apart from TRA.

Report Findings – Board Recommendations
The DTRFA Board recommends full consolidation with TRA beginning immediately after enactment of the enabling legislation and fully implemented no later than June 30, 2015. In light of the adverse demographic trends that it faces, DTRFA believes that merger with TRA is in the best interests of its active and retired members.

The SPTRFA Board recommends remaining as a separate fund. SPTRFA made and continues to make plan changes to strengthen its financial status. With the inclusion and continuation of the recent increase in supplemental state aid ($7 million annually), together with major adjustments to employer and employee contributions, SPTRFA is on track to fully meet its obligations in a more cost-effective manner than merging with TRA.

The TRA Board is willing to accept the financial and administrative responsibilities of merging DTRFA and SPTRFA into TRA with the condition that financial assistance is provided to TRA through ongoing annual payments that are sufficient to fully fund any merging entity. This requires redirecting to TRA all of the existing annual state aid currently provided to the merging fund plus additional annual assistance. In the case of DTRFA, the additional annual assistance required is $14.7 million. With SPTRFA, required additional annual assistance would be $46.4 million.

As fiduciaries, the TRA Board is requesting a level of financial aid sufficient to achieve 100 percent funding in order to protect TRA assets and assure that TRA is not subsidizing the merging fund. This is consistent with past practice and precedent established in 2006 when the Minneapolis Teachers Retirement Fund Association (MTRFA) was consolidated into TRA. This 100 percent funding level is also necessary to mitigate the substantial risks TRA incurs for subsequent adverse events. Those risks include:

- The risk that the amount of financial aid pledged upon consolidation is subsequently interrupted, not continued, or re-calculated in a manner that lowers the amount.
- The risk of future adverse investment performance or adverse experience with other actuarial assumptions, making consolidation more costly than originally estimated.
- The possibility that the current actuarial interest assumption is lowered in the future, an action that would substantially increase the cost of consolidation.

If TRA does not receive aid sufficient to bring any merging fund(s) in at a 100 percent funding level, then it will require that merging fund(s) be set up in separate accounts (similar to MERF) in which the assets and liabilities of the merging fund(s) are placed in a separate account and the financial responsibility for funding any merging fund(s) would remain with the employer and the state, not with TRA.

Implementation Plans/Timeframes

TRA and DTRFA worked jointly to develop an implementation plan to achieve full consolidation over a period of approximately one year. The implementation plan describes the administrative and financial reporting/accounting tasks and duties that need to be accomplished including the transfer of member data/records, continuity of monthly benefit payments, staff training, staff transition, member communication and outreach, and work with the Duluth School District on payroll reporting changes.

Study Mandate and Process

Pension legislation enacted in 2013 (Chapter 111, Article 13, Section 22) requires the boards and executive directors of the Duluth Teachers Retirement Fund Association (DTRFA), the St. Paul Teachers Retirement Fund Association (SPTRFA) and the Teachers Retirement Association (TRA) to jointly study and develop a report on the feasibility and requirements necessary for consolidation of DTRFA and SPTRFA into TRA. The report is due to the Legislative Commission on Pensions and Retirement (LCPR) by Jan. 6, 2014. According to the legislation the report is to include:

- Detailed actuarial analysis that defines the financial requirements for consolidation in a manner that assures TRA assets are protected and the merging funds are fully funded.
- Implementation plans.
- Proposed allocation of costs between the state and interested parties.
- Timeframes sufficient for an orderly transition.
- Necessary management and administrative changes including protection for merging fund employees who are to be treated in a manner comparable to the employees of the former Minneapolis Teachers Retirement Fund Association (MTRFA).
- Asset investment-related considerations, including investment management transition to be evaluated in consultation with the State Board of Investment.
- Education and communication plans to inform the executive branch, legislative branch and all system stakeholders of financial requirements.

The legislation is reprinted here for reference.

Laws 2013, Chapter 111, Article 13, Section 22. CONSOLIDATION STUDY.

The boards and executive directors of the Duluth Teachers Retirement Fund Association, the St. Paul Teachers Retirement Fund Association, and the Teachers Retirement Association shall jointly study and develop a report on the feasibility and requirements necessary for the consolidation of the Duluth Teachers Retirement Fund Association and the St. Paul Teachers Retirement Fund Association into the Teachers Retirement Association. The report shall include detailed actuarial analysis that will define the financial requirements for consolidating with the Teachers Retirement Association in a manner, consistent with past practice, that assures that the assets of the Teachers Retirement Association are protected, that the merging funds are fully funded, and that the Teachers Retirement Association is not subsidizing the merged funds. The report shall include implementation plans, proposed allocation of costs between the state and all interested parties, time frames sufficient for an orderly transition, necessary management and administrative changes, asset investment related considerations, and education and communication plans to fully inform the executive branch, the legislative branch, and all system stakeholders of financial requirements. The report shall include plans to treat the employees of the Duluth Teachers Retirement Fund Association and the St. Paul Teachers Retirement Fund Association in a manner comparable to that provided to the former employees of the former Minneapolis Teachers Retirement Fund Association upon consolidation into the Teachers Retirement Fund Association. The boards and executive directors shall consult with the executive director of the State Board of Investment on investment management transition issues. The report must be submitted to the Legislative Commission on Pensions and Retirement by January 6, 2014.

Process Used to Develop Report and Recommendations

This report was jointly developed by the boards and staff of DTRFA, SPTRFA, and TRA. The pension fund directors and staff met regularly to develop the elements of the draft report which was subsequently reviewed, refined and approved by the pension fund boards. As part of this process, the boards and staff consulted with the funds' actuaries regarding financial and actuarial considerations, and with the director of the State Board of Investment regarding asset transfer/management considerations.

The DTRFA and SPTRFA Boards reviewed various consolidation options and took positions on whether/how to consolidate. Based on the decisions of the DTRFA and SPTRFA Boards, the TRA Board developed its recommendations for the proposed financing arrangements, which were subsequently reviewed by the Duluth and St. Paul Boards. The staffs of the pension funds worked jointly to develop administrative implementation plans.

At the beginning of the study, the three fund directors developed a work plan for completion of the study and developed an outline for the consolidation study report. In July 2013, the three executive directors presented this information, along with an update on the progress of the study, to staff in the Governor's Office, leadership in the House and Senate, LCPR staff and staff at the State Board of Investment. The work plan was also presented at a meeting of the LCPR in September 2013. Additionally, throughout the study process, the three systems met with representatives of their respective stakeholder groups (representing actives, retirees and employers) to review the direction and progress of the study.

Below is a timeline reflecting meetings and activities related to development of this report.

Timeline of Report Development

Date	Activity
May 24	Fund directors met to develop a study work plan and timeline
June 4	Directors, staff, and actuaries of the three teacher funds met/had conference call to discuss actuarial portion of study and to give direction to actuaries about the data and the information that needed to be developed.
Early June	DTRFA/SPTRFA actuaries (Segal and Gabriel Roeder Smith) transmitted actuarial data to Cavanaugh Macdonald.
June - July	TRA actuaries received data from DTRFA and SPTRFA and replicated valuation data and developed financial analysis of various merger options.
June 11-19	TRA, DTRFA, SPTRFA Boards held separate meetings and received a draft report work plan, process, timeline and outline. Board questions/input were solicited.
June 24	Directors met to review feedback from boards, review draft outline of report and begin developing details around consolidation options.
July 2	Directors met with State Board of Investment staff to review investment portfolios of DTRFA and SPTRFA and discuss options for SBI management of assets.
July 15 & 30	Directors met to work on draft text of report and develop options.
Late July	Directors met with staff in the Governor's Office, leadership in the House and Senate, and LCPR staff to update them about the study

	plan and process.
August – 1st week	Directors and fund actuaries developed and reviewed preliminary actuarial analysis.
Aug. 23	TRA staff met with stakeholder groups to describe TRA financial status and status of consolidation study.
Sept. 5	Directors met to review preliminary actuarial estimates and draft report.
Sept. 11	Provided LCPR with a presentation on study process, timeline and report outline.
Sept. 18	DTRFA and SPTRFA Boards met to consider consolidation options and transmit positions/recommendations to TRA.
Sept.19	Fund directors met to review draft report and board positions.
Oct.15	Funds met to review draft report and participate in a conference call with fund actuaries regarding draft estimates for the cost of consolidation. Revisions made in preliminary estimates.
Oct.21	Fund directors met with SBI staff regarding asset investment transition issues.
Nov.1	Fund directors met to review and refine draft report and board positions.
November/December	Continued outreach to stakeholder groups, legislators, governor, LCPR.
November/December	Worked on developing draft legislation.
Nov. 13-20	TRA/DTRFA/SPTRFA Boards reviewed first draft of report.
Dec.11-18	Finalized report. TRA, DTRFA, SPTRFA boards adopted and prepared to transmit to LCPR.

Education and Communication Efforts

Throughout the process of developing the report and its recommendations, the three teacher funds provided information to policymakers (LCPR, Governor's Office, legislative leadership) and stakeholder groups (representing retirees, active employees and employers) about the study, the timeline and report contents. These education and communication efforts are referenced in the timeline above.

In addition to reaching out to policymakers and stakeholder groups, the three teacher funds communicated directly about the study with their members through various communication devices, including articles in their newsletters and information postings on their websites. The board meetings during which consolidation options were discussed and voted upon were open to the public and public comments were invited.

With completion of the report, the three funds will continue their communication and outreach efforts with policymakers, stakeholder groups and memberships. If consolidation is approved by the legislature, it will be especially important to communicate with consolidating members and retirees about their benefits. If consolidation is approved, the involved funds plan to provide sufficient education and outreach to the consolidating members and retirees to explain the benefits transition and explain how future benefits under TRA may differ. If consolidation legislation is approved by the legislature, the merging teacher fund(s) will likely call a special meeting of its members to vote to determine the disposition of its board and non-profit corporation.

Financial Status, Actuarial Assumptions, Demographic Data

Tables 1 through 2 on the following pages summarize the financial status of the DTRFA, SPTRFA and TRA for the past two fiscal years, FY 2012 and FY 2013. The information for FY 2013 was recently completed by the fund actuaries and incorporates the benefit, contribution, and state aid changes made by the 2013 Omnibus Pension Bill. A comparison of key actuarial assumptions is included in Table 4. Plan demographics are described in Table 5.

Table 1. Duluth Teachers Retirement Fund Association
Financial Status, FY 2012 – FY 2013

	FY 2012	FY 2013
Actuarial Accrued Liabilities	$ 326,243,873	$352,143,396
Assets (actuarial value)	$ 206,833,425	$190,116,720
Assets (market value)	$ 194,552,931	$205,300,543
Unfunded Actuarial Accrued Liability (actuarial value)	$ 119,410,448	$162,026,676
Unfunded Actuarial Accrued Liability (market value)	$ 131,690,942	$146,842,853
Funded Ratio (actuarial value)	**63.4%**	**54.0%**
Funded Ratio (market value)	**59.6%**	**58.3%**
Actuarial Required Contributions (actuarial value)	23.01%	30.54%
Actuarial Required Contributions (market value)	24.59%	28.51%
Statutory Contributions	14.52%	27.66%
Deficiency (actuarial value) before scheduled contribution increases	**8.49%**	**2.88%**
Deficiency (market value) before scheduled contribution increases	**10.07%**	**0.85%**

The actuarial estimates above show deficiencies before scheduled increases in employer and employee contribution rates. Employee rates are scheduled to increase in a phased manner from 6.5 percent in 2012 to 7.5 percent by July 1, 2014. Employer rates will increase in a phased manner from 6.79 percent in 2012 to 7.5 percent by July 1, 2014. These contribution rate increases will reduce the contribution deficiency by 1.71 percent of pay.

Additionally, legislation enacted in 2013 provides two payments of $6 million in direct state aid to DTRFA. The first payment of $6 million is scheduled for October 2013 and the second payment is scheduled for October 2014.

Table 2. St. Paul Teachers Retirement Fund Association
Financial Status, FY 2012 – FY 2013

	FY 2012	FY 2013
Actuarial Accrued Liabilities	$ 1,471,216,000	$1,467,350,000
Assets (actuarial value)	$ 911,930,000	$ 886,296,000
Assets (market value)	$ 881,900,000	$ 933,082,000
Unfunded Actuarial Accrued Liability (actuarial value)	$ 559,286,000	$ 581,054,000
Unfunded Actuarial Accrued Liability (market value)	$ 589,316,000	$ 534,200,000
Funded Ratio (actuarial value)	**62%**	**60.4%**
Funded Ratio (market value)	**60%**	**63.6%**
Actuarial Required Contributions (actuarial value)	22.87%	22.13%
Actuarial Required Contributions (market value)	23.63%	21.00%
Statutory Contributions	16.47%	19.33%
Deficiency (actuarial value) before scheduled contribution increases	**5.20%**	**2.80%**
Deficiency (market value) before scheduled contribution increases	**5.96%**	**1.67%**
Deficiency (actuarial value) after scheduled contribution increases and after actuarial assumption changes	**2.20% ***	**2.89%**
Deficiency (market value) after scheduled contribution increases and after actuarial assumption changes	**2.96% ***	**1.76%**

The actuarial estimates above show deficiencies before and after scheduled increases in employer and employee contribution rates. Employee rates are scheduled to increase in a phased manner from 6.0 percent in 2012 to 7.5 percent by 2016. Employer rates will increase in a phased manner from 8.84 percent in 2012 to 10.34 percent by 2017.

*These actuarial estimates incorporate updated salary growth assumptions, which were approved by LCPR in 2013 and included in the 2013 pension law, and a revised method for crediting salary/ contributions that was recommended in 2013 by the LCPR's actuary, Milliman.

Table 3. Teachers Retirement Fund Association
Financial Status, FY 2012 – FY 2013

	FY 2012	FY 2013
Actuarial Accrued Liabilities	$23,024,505,000	$23,419,000,000
Assets (actuarial value)	$16,805,077,000	$16,775,000,000
Assets (market value)	$16,686,105,000	$18,015,000,000
Unfunded Actuarial Accrued Liability (actuarial value)	$6,219,428,000	$6,644,000.000
Unfunded Actuarial Accrued Liability (market value)	$6,338,400,000	$5,403,000,000
Funded Ratio (actuarial value)	**73%**	**71.6%**
Funded Ratio (market value)	**72.5%**	**76.9%**
Actuarial Required Contributions (actuarial value)	18.75%	19.41%
Actuarial Required Contributions (market value)	18.94%	17.40%
Statutory Contributions	13.71%	14.67%
Deficiency (actuarial value) before scheduled contribution increases	**5.04%**	**4.74%**
Deficiency (market value) before scheduled contribution increases	**5.23%**	**2.73%**
Deficiency (actuarial value) after scheduled contribution increases	**3.04%**	**3.74%**
Deficiency (market value) after scheduled contribution increases	**3.23%**	**1.73%**

Note: The actuarial estimates above show deficiencies before and after scheduled increases in employer and employee contribution rates. Employee and employer rates are scheduled to increase from 6.5 percent in 2012 to 7.5 percent by 2014.

Table 4. MN Teacher Funds: Key Actuarial Methods, Measures and Assumptions

	DTRFA	SPTRFA	TRA
Actuarial Cost Method	Entry age normal	Entry age normal	Entry age normal
Demographic Assumptions			
Mortality Assumptions	RP 2000 tables with setbacks based on experience; projects mortality improvements into future	RP 2000 tables with setbacks based on experience; projects mortality improvement to 2020	RP 2000 tables with setbacks based on experience; projects mortality improvements into future
Termination/Withdrawal Rates	Select & ultimate based on experience	Select & ultimate based on experience	Select & ultimate based on experience
Economic Assumptions			
Investment Return	8.0% thru 6/30/2017 8.5% thereafter	8.0% thru 6/30/2017 8.5% thereafter	8.0% thru 6/30/2017 8.5% thereafter
Projected Annual Salary Increases	3.25% to 6% based on age and service	5% to 9.9% based on age and service	3.5% to 9% based on age and service
Projected Annual Payroll Growth	3.5% per year	4.0% per year	3.75% per year
Amortization Period	Fixed period: 6/30/2039 Level % of payroll	25-year rolling period Level % of payroll	Fixed period: 6/30/2037 Level % of payroll
FY2013 projected payroll base	$49,019,534	$270,395,000	$4,204,151,000

Table 5. MN Teacher Funds: Demographic Data, FY 1993, 2003, 2013

	DTRFA			SPTRFA			TRA		
	1993	2003	2013	1993	2003	2013	1993	2003	2013
Active members	1,453	1,373	873	3,562	4,331	4,061	65,268	71,916	77,319
Vested terminated members	94	187	268	89	858	1,788	4,030	9,304	12,605
Non-vested terminated members	554	826	757	889	1,966	1,435	15,994	19,256	28,890
Retirees	770	1,019	1,311	1,244	1,988	3,047	19,343	33,290	52,331
Disabilitants	8	14	19	36	21	30	328	558	563
Beneficiaries	44	74	115	154	239	327	1,113	2,351	3,421
Total Recipients	822	1,107	1,445	1,434	2,248	3,404	20,810	36,199	56,315
Ratio of Actives to Recipients	1.77	1.24	0.60	2.47	1.93	1.19	3.14	1.99	1.37
School Enrollment	14,282	11,473	9,005	38,286	42,510	37,912	785,072	852,321	853,074

Comparison of Contribution Rates and Benefit Provisions

This table summarizes key benefit provisions and contribution rates for the three Minnesota teacher funds.

Comparisons are shown for the Coordinated Plan only, because the systems have very few active Basic (non-Social Security) members. As of FY 2013, St. Paul had only 65 active Basics and TRA had 39.

Benefit provisions are described for both pre- and post-1989 hires, however, note that approximately three-fourths of the active members of the teacher funds were hired after June 30, 1989.

Table 6. Key Benefit Provisions and Contribution Rates of MN Teacher Funds

	DTRFA	SPTRFA	TRA
Employee Contribution Rates	6.5% (before 7/1/2012) 7.0% (effective 7/1/2013) 7.5% (effective 7/1/2014)	6.0% (effective 7/1/2012) 6.25% (effective 7/1/2013) 6.5% (effective 7/1/2014) 7.0% (effective 7/1/2015) 7.5% (effective 7/1/2016)	6.5% (effective 7/1/2012) 7.0% (effective 7/1/2013) 7.5% (effective 7/1/2014)
Employer Contribution Rates	6.79% (effective 7/1/2012) 7.29% (effective 7/1/2013) 7.5% (effective 7/1/2014)	<u>Regular</u> + <u>Add'tl</u> = <u>Total Rate</u> 5.0% + 3.84% = 8.84% (eff 7/1/2012) 5.25% + 3.84% = 9.09% (eff 7/1/2013) 5.5% + 3.84% = 9.34% (eff 7/1/2014) 6.0% + 3.84% = 9.84% (eff 7/1/2015) 6.25% + 3.84% =10.09% (eff 7/1/2016) 6.5% + 3.84% = 10.34% (eff 7/1/2017)	6.5% (effective 7/1/2012) 7.0% (effective 7/1/2013) 7.5% (effective 7/1/2014)
Vesting	3 years for members hired prior to 7/1/10 5 years for members hired after 6/30/10	3 years (Coordinated Plan) 5 years (Basic Plan – pre 1978)	3 years

	DTRFA	SPTRFA	TRA
Benefit Formula	Same as TRA except the higher formula multipliers of 1.4% and 1.9% are effective for years of service after 6/30/13 Old Plan members hired prior to 7/1/1981: Formula multiplier – 1.45% Normal retirement age: 60 Early retirement reduction: 3%/yr (As of 2013, there were 33 active Old Plan members.)	Same as TRA except higher formulas of 1.4% and 1.9% are effective for years of service after 6/30/15	**First hired before 7/1/89**: Greater of step or level formula: Level Formula Yrs up to 6/30/06 – 1.7%/yr Yrs after 6/30/06 – 1.9%/yr Step Formula 1st 10 yrs up to 6/30/06 – 1.2%/yr 1st 10 yrs after 6/30/06 – 1.4%/yr Yrs 11+ up to 6/30/06 – 1.7%/yr Yrs 11+ after 6/30/06 – 1.9%/yr **First hired after 6/30/89**: Level Formula Yrs up to 6/30/06 – 1.7%/yr Yrs after 6/30/06 – 1.9%/yr
Normal retirement age	Same as TRA, except age 60 for Old Plan members hired prior to 7/1/1981	Same as TRA	**First hired before 7/1/89**: (a) Age 65 with at least 3 yrs service (b) Age 62 with 30 yrs service **First hired after 6/30/89**: (a) Social security full benefit age but not to exceed age 66 with at least 3 yrs service
Early retirement age	Same as TRA	Same as TRA	**First hired before 7/1/89**: (a) Age 55 with at least 3 yrs service (b) Any age 62 with 30 yrs service (c) Rule of 90 **First hired after 6/30/89**: (a) Age 55 with at least 3 yrs service

	DTRFA	SPTRFA	TRA
Early retirement reduction factors	Similar to TRA except the level formula reduction factors incorporate augmentation of 2.5% per year (instead of 3 % per year) and are effective 7/1/13	Similar to TRA except the level formula reduction factors incorporate augmentation of 2.5% per year (instead of 3 % per year) and are effective 7/1/13	**First hired before 7/1/89**: Step Formula: No reduction if Rule of 90, otherwise reduction = 3% per year under age 65, or 3% per year under age 62 with 30 yrs service Level Formula: Prior to 7/1/2015, reduction factors are actuarially based incorporating augmentation of 3% per year to normal retirement age (or 2.5% per year for members hired after 7/30/2006). Between 7/1/2015 and 7/1/2020, reduction factors are phased in gradually over 60 months using a blended rate of pre-7/1/2015 reduction rates and post 7/1/2020 rates (described below). Beginning 7/1/2020, if age 62 with at least 30 yrs service, reduction from normal retirement age = 6% per year (incorporating 2.5%/3% augmentation) or if not age 62 and less than 30 yrs service, reduction from normal retirement age = 4% per year for ages 55-59 and 7% per year thereafter (incorporating 2.5%/3% augmentation into factors) **First hired after 6/30/89**: Level Formula: Same as described under level formula above.

	DTRFA	SPTRFA	TRA
Disability benefits	Must be vested, otherwise same as TRA	Same as TRA except member must have 60 or fewer sick days to attain eligibility	Provide benefits if totally and permanently disabled. Must have at least 3 yrs service, be active or on official leave of absence to be eligible. Benefit based on yrs of service and average salary at time of disability with no reduction for receipt of benefits before normal retirement age Benefits cease if disability ceases and may be reduced if partially employed.
Survivor benefits – active member deaths	Same as TRA	Same as TRA	If not vested, lump-sum of accumulated contributions plus interest paid to beneficiary or estate. If vested, benefits paid to surviving spouse and/or dependent children (up to age 20). Benefit equal to 100 joint and survivor benefit or actuarial equivalent term certain annuity. If benefit commences before age 65, benefit is reduced by half the applicable reduction factor from age 55 to actual commencement age.

	DTRFA	SPTRFA	TRA
Deferred retirement benefits	Same as TRA	Same as TRA	Member must be vested. **<u>First hired before 7/1/06</u>** Benefit computed under law in effect at termination and increased by the following percentages compounded annually: (a) 3% per year to age 55 or to 6/30/12, whichever is earlier (b) 5% per year if age 55+ or to 6/30/12 whichever is earlier (c) 2% after 6/30/12 **<u>First hired after 6/30/06</u>** Benefit computed under law in effect at termination and increased by the following percentages compounded annually: (a) 2.5% per year until 6/30/12 (b) 2.0% per year after 6/30/12 Amounts paid are subject to early retirement reduction factors.

	DTRFA	SPTRFA	TRA
Payment Options (for survivors/ beneficiaries)	Actuarial equivalent options include: (a) Single life, no survivor payments (b) 50% or 100% joint and survivor with bounce back/pop up to single life if beneficiary predeceases member (c) 5 year, 10 year, 15 year and 20 year term certain guaranteed	Same as DTRFA	Actuarial equivalent options include: (a) Single life, no survivor payments with option of refund of contributions plus interest to a beneficiary (b) 50%, 75%, or 100% joint and survivor with bounce back/pop up to single life if beneficiary predeceases member (c) 15 year term certain guaranteed (d) Guaranteed refund
Post-retirement increases	Annual increases are compounded at 1%. When fund becomes 90% funded (actuarial value), annual increases become a match of CPI up to 5%	Annual increases are compounded and paid as follows based on actuarial value funded ratio: If <80% funded = 1% If 80%-90% funded = 2% If >90% = CPI up to 5%	Annual increases are compounded and paid as follows based on market value funded ratio: If <90% funded = 2% If >90% funded = 2.5%
Refund of contributions	Same as TRA	Same as TRA	Upon termination, member contributions plus interest are refunded. Interest paid is compounded at 6% per year through 6/30/11 and 4% per year after 6/30/11.

	DTRFA	SPTRFA	TRA
Service credit definition	Service is calculated on an annual basis using member's actual hours worked relative to a full-time teacher based on a 190-day year. Regardless of hours worked, service credit cannot exceed one year for any 12 month period. Service credit for part-time teachers is determined as follows: • Full time to 0.625 = 1 yr credit • 0.5 to 0.625 = 0.8 credit	Same as DTRFA except service is based on a 170-day year for full time or full time equivalent, 200 day year for part time. Regardless of salary earned in a year, service credit cannot exceed one year.	Service is calculated on a monthly basis using the member's salary relative to an "annual base salary" which is defined as the lowest BA salary level for a full-time teacher base contract salary in the member's school district. Regardless of salary level earned in a month, credited service credit cannot exceed one month (0.111 per month). Similarly, regardless of salary earned in a year, service credit cannot exceed one year.
Salary definition	Same as TRA	Same as TRA	Periodic compensation excluding lump sum annual, sick, or severance payments, and excluding payments made in lieu of employer paid fringe benefits. Employer contributions to deferred compensation are also excluded from salary.
Salary period for benefit calculation	Same as TRA	Same as TRA	High five successive years (60 consecutive months)
Repayment of refunds	Same as TRA	Same as TRA	Repayment of refund is permitted after accumulating 2 yrs of service credit with TRA. Repayment includes 8.5% interest compounded annually from date of refund to date of repayment. Partial payments are permitted if member has more than 2 yrs of refunded service, but must purchase a minimum of one-third of the total service credit period.

	DTRFA	SPTRFA	TRA
Leaves of absence	Same as TRA	Same as TRA	Certain leaves authorized by employer are eligible for service credit with maximum limits. Sabbatical, medical, parental, family, legislative, extended and military leaves are eligible for purchase of service credit under certain conditions. (See also part-time teacher program.)
Part-time teacher program or qualified part-time leave	Same as TRA	Same as TRA	Teachers working part-time may be eligible to purchase full-time credit up to 10 years. Participants must: • Have at least 3 yrs of TRA-covered service • Have an agreement with their employer • Be compensated between 30% and 80% of a full-time teacher salary • Pay contributions based on full-time salary
Acceleration or benefit leveling	Same as TRA, except accelerated is allowed only to age 62 (not age 65 or Social Security NRA)	Same as TRA, except accelerated benefit is allowed only to age 65	At retirement, a member may elect to receive an accelerated (greater) benefit amount until age 62, 65 or social security normal retirement age. Once the accelerated period ends, the member receives a lower annuity for the rest of the retirement period. The two annuity periods produce a stream benefits that is actuarially equivalent to payment of a regular level monthly annuity.

	DTRFA	SPTRFA	TRA
Return to work after retirement – earnings limit	If member is under Social Security NRA and is reemployed by Duluth Public schools, earnings limit is $46,000. Benefits reduced by $1 for every $3 earnings over limit. For members retired prior to 7/1/2013, these excess benefits are held in an Earnings Limitation Savings Acct (ELSA) which can be refunded to member one year after the withholding period. For members retired after 6/30/2013, these excess benefits are forfeited to DTRFA. If re-employed annuitant is over Social Security NRA, no earnings limit applies.	Same as DTRFA	If member is under Social Security normal retirement age, earnings limit is $46,000. Benefits are reduced by $1 for every $2 of earnings over the limit and these excess benefits are held in an Earnings Limitation Savings Acct (ELSA) which can be refunded to member one year after member ceases working. If member is over Social Security normal retirement age, no earnings limitation applies.

History of Financing

This chapter focuses on the financial history of the three teacher funds, including contributions, funded ratios, state aid and other financial-related information. A more detailed timeline of the funds' histories, including benefit changes, is provided in the Appendix to this report.

History of the DTRFA

The DTRFA was established in 1910. This was during a time when the importance of financing retirement benefits in accordance with actuarial science was not generally recognized. In 1921, because the pension plan was only about 10 percent funded, the plan was reorganized. Under the new plan, benefits were reduced by 25 percent, and contribution rates were established based on sound actuarial principles. This was the beginning, for the trustees, of administering the plan with a focus on reducing and eventually eliminating the unfunded liability. The actuary calculated a normal cost of 3.39 percent of pay. But the contribution rates actually paid by the teachers were higher than the actuarial requirement. In those years, the rate paid by a teacher depended on the age of the teacher when first hired. A 25-year-old teacher was required to contribute 4.45 percent of pay to the fund. That was 1 percent more than normal cost.

In addition to the employee contribution, the City of Duluth was permitted to levy property taxes in order to pay down the unfunded liability. The actuary calculated that it would take 6.53 percent of pay to amortize the unfunded liability over 30 years. The city of Duluth however, paid over 7 percent to the fund. The 1922 actuarial valuation report contains this conclusion:

> *"The valuation shows that the fund is in good financial condition and if continued in its present basis will be able to meet fully all of its liabilities. Duluth is one of the very few cities of this country which is operating a sound retirement plan for its teachers."*

Early on, the DTRFA was in very good actuarial condition as a result of being responsible and having higher employee and employer contribution rates than the rates recommended by the actuary, along with positive investment experience. During the decades of the 1930s, 40s, and 50s, employee and employer contribution rates were gradually increased as liabilities grew due to higher salaries and mortality improvements. The fund first achieved 100 percent funded status and had a surplus in 1965.

In subsequent years, the DTRFA continued with its practice of taking responsible action to address any unfunded liability. From 1958 to 1978, there was a continuation of an "employer additional" contribution. The regular employer contribution rate was set at 4.0 percent, and there was an additional 1 percent added to the employer rate to go towards the small unfunded liability (the plan was about 80 percent funded at that time). For 21 years the employer was paying an additional 1 percent into the fund. Then, in 1979, because the unfunded liability was beginning to grow as a result of poorly performing investment markets during the 1970s, the employer additional rate was increased from 1.0 percent to 1.29 percent. For the next 32 years, the employer paid an additional 1.29 percent into the fund. In total, that is 53 years of having an employer additional contribution rate. This is one of the primary reasons why the DTRFA has always had a relatively high funding ratio compared to the other teacher funds in Minnesota, and in the nation.

The trustees of the plan were not only diligent about addressing the unfunded liability, and prudent for having an additional employer contribution rate, they were also careful to control benefits. The DTRFA never had a Basic Plan (not coordinated with Social Security) like the St. Paul and Minneapolis teachers funds. Those plans provided much higher benefits than the Duluth plan. The retirement benefits in the DTRFA were always conservative – for example, the Duluth plan never had a 30-and-out benefit, as other funds had. And, although some ad hoc COLAs were approved in the 1960s and 1970s, there was no regular cost of living adjustment or 13th check in the DTRFA until 1985.

The actuarial funded ratio of the DTRFA was 90 percent or more during 1962-1969, 1973, 1990, 1992-1994, and 1998-2004. Sometimes the funded ratio exceeded 100 percent.

The DTRFA was able to accomplish all of these results with very little state aid. In the 103-year history of the pension plan, the DTRFA has received direct state aid in only 10 years. There was no direct state aid before 1998. During fiscal years 1998-2002 the state aid paid to DTRFA was $486,000 per year for five years. It was then discontinued. In the five years from fiscal year 2009 to 2013, the DTRFA received state aid of $533,000 per year, on average. Legislation passed in 2013 appropriates an additional $6 million to the DTRFA in each of fiscal years 2014 and 2015.

<u>So what happened? The DTRFA has been financially strong for decades.</u>
A number of significant events occurred during the last two decades that were outside the control of the DTRFA:

1. The most significant factor: Investment market downturns. Two remarkable events in the investment markets:
    a. The market crash of 2000-2001, which resulted in three consecutive years of investment returns below the 8.5 percent actuarial assumed return.
    b. The global economic crisis of 2008-2009, which caused significant losses in all investment portfolios statewide, including the DTRFA.
2. There were also legislative changes that had an impact on the DTRFA:
    a. In 1996, legislation was passed removing new teaching faculty (today approximately 100 members) of Lake Superior College from the membership ranks of the DTRFA and moving them to the TRA/IRAP plans;
    b. In 2002, legislation was passed that immediately removed all charter school teachers in Duluth from the membership ranks of the DTRFA and transferred them to the TRA (today approximately 150).
3. Finally, the demographics of the DTRFA have caused a dramatic change over the last two to three decades. The number of active, contributing members has diminished to 900, while the number of benefit recipients has grown to 1,400. The causes of this development include:
    a. Enrollment in ISD #709 (Duluth) has steadily fallen for the last 20 years from over 14,000 students in 1995 to under 9,000 students today;
    b. Budgetary pressures on ISD #709 have caused the school district to downsize the teaching staff over the last several years, which reduces the active contributing membership of the DTRFA.

In a short period of time, as a result of the factors outlined above, the pension plan has dropped from being 96 percent funded on a market value basis in 2007, to 58 percent funded in 2013.

Special Direct State Aid – Minnesota Statutes 354A.12, subdivision 3a

- **1997 - 2002**. Legislation was passed in 1997 that created a "special direct state aid" payment to the DTRFA. *(Laws of MN 1997, chapter 233, article 3, section 4.)* State aid of $486,000 was paid directly to DTRFA from the State of Minnesota on October 1 each year during fiscal years 1998 to 2002. The payment to DTRFA ended after FY2002 because a provision in the law was triggered. The trigger required that the state aid payment to DTRFA be ended if the funded ratio of DTRFA exceeded the funded ratio of TRA. In that event, the state aid payment amount would be redirected proportionately to the other teacher retirement funds – TRA, Minneapolis Teachers Retirement Fund Association, and SPTRFA.
- **2008**. Legislation passed in 2008 restored the special direct state aid to DTRFA, but in the reduced amount of $346,000. *(Laws of MN 2008, chapter 349, Article 8, section 1.)* The payment is due to DTRFA from the state each year by Oct. 1.
- **2013**. Legislation passed in 2013 provided for payments of $6 million in additional state aid to DTRFA in October 2013 and October 2014. The initial legislation was for the $6 million to continue for 27 years, to meet the actuarially required date for full funding in 2039. However, the final legislation provided for only a two-year commitment, and required that a study be completed to determine the costs and implications of merging the three teacher pension funds.

Amortization State Aid – Minnesota Statutes 423A.02, subdivision 3

Legislation was passed in 2009 that redirected a portion of "amortization state aid" to DTRFA. *(Laws 2009, chapter 169, article 8, section 3.)* The amount is determined by the Minnesota Department of Revenue and is variable from year to year. Once the total is determined, it is split 50 percent to TRA, 40 percent to SPTRFA, and 10 percent to DTRFA. The amount was payable June 30 in fiscal years 2009-2012. Legislation passed in 2013 changed the payment date to July 15. (Laws 2013, chapter 111, article 5, section 73) The following amounts have been paid:

June 30, 2009 = $94,003.00
June 30, 2010 = $320,361.00
June 30, 2011 = $312,535.00
June 30, 2012 = $207,710.00
June 30, 2013 = $0, payment date was changed to July 15
July 15, 2013 = $209,401.71

Table 7. DTRFA History of State Aid Payments

Fiscal Year	Special Direct State Aid			Amortization State Aid	Total State Aid
	1997 Legislation	2008 Legislation	2013 Legislation		
1998	$486,000	- -	- -	- -	$486,000
1999	$486,000	- -	- -	- -	$486,000
2000	$486,000	- -	- -	- -	$486,000
2001	$486,000	- -	- -	- -	$486,000
2002	$486,000	- -	- -	- -	$486,000
2003	- -	- -	- -	- -	- -
2004	- -	- -	- -	- -	- -
2005	- -	- -	- -	- -	- -
2006	- -	- -	- -	- -	- -
2007	- -	- -	- -	- -	- -
2008	- -	- -	- -	- -	- -
2009	- -	$346,000	- -	$94,003	$440,003
2010	- -	$346,000	- -	$320,361	$666,361
2011	- -	$346,000	- -	$312,535	$658,535
2012	- -	$346,000	- -	$207,710	$553,710
2013	- -	$346,000	- -	$0	$346,000
2014	- -	$346,000	$6,000,000	$209,401.71	$6,555,401.71
2015	- -	$346,000	$6,000,000	?	?

Table 8. DTRFA History of Contribution Rates, State Aid, Sufficiencies/Deficiencies and Funded Ratios

Year	Employer	Employer Add'tl	Total Employer	Employee	State Aid	Total Cont'b	Sufficiency (Deficiency)	Funded Ratio Actuarial
1955							(2.14%)	96.8%
1959	4.00	1.00	5.00	4.00	0.00	**9.00**		
1960	4.00	1.00	5.00	4.00	0.00	**9.00**		
1961	4.00	1.00	5.00	4.00	0.00	**9.00**		
1962	4.00	1.00	5.00	4.00	0.00	**9.00**		
1963	4.00	1.00	5.00	4.00	0.00	**9.00**		
1964	4.00	1.00	5.00	4.00	0.00	**9.00**		
1965	4.00	1.00	5.00	4.00	0.00	**9.00**		
1966	4.00	1.00	5.00	4.00	0.00	**9.00**		
1967	4.00	1.00	5.00	4.00	0.00	**9.00**		
1968	4.00	1.00	5.00	4.00	0.00	**9.00**		
1969	4.00	1.00	5.00	4.00	0.00	**9.00**	(2.14%)	96.8%
1970	4.00	1.00	5.00	4.00	0.00	**9.00**		
1971	4.00	1.00	5.00	4.00	0.00	**9.00**	(7.01%)	76.1%
1972	4.00	1.00	5.00	4.00	0.00	**9.00**	(6.89%)	77.7%
1973	4.00	1.00	5.00	4.00	0.00	**9.00**	0.03%	92.3%
1974	4.00	1.00	5.00	4.00	0.00	**9.00**	(0.50%)	88.7%
1975	4.50	1.00	5.50	4.00	0.00	**9.50**	(1.18%)	81.0%
1976	4.50	1.50	6.00	4.00	0.00	**10.00**	(0.01%)	80.8%
1977	4.50	2.00	6.50	4.00	0.00	**10.50**	(0.14%)	81.2%
1978	4.50	2.00	6.50	4.00	0.00	**10.50**	(1.53%)	79.7%
1979	4.50	1.29	5.79	4.00	0.00	**9.79**	(0.29%)	79.7%
1980	4.50	1.29	5.79	4.00	0.00	**9.79**	(0.76%)	77.3%
1981	4.50	1.29	5.79	4.50	0.00	**10.29**	(0.80%)	77.2%
1982	4.50	1.29	5.79	4.50	0.00	**10.29**	(3.20%)	66.6%
1983	4.50	1.29	5.79	4.50	0.00	**10.29**	(3.53%)	67.4%
1984	4.50	1.29	5.79	4.50	0.00	**10.29**	(2.97%)	65.4%
1985	4.50	1.29	5.79	4.50	0.00	**10.29**	(1.26%)	75.7%
1986	4.50	1.29	5.79	4.50	0.00	**10.29**	(0.73%)	82.9%
1987	4.50	1.29	5.79	4.50	0.00	**10.29**	(0.10%)	87.9%
1988	4.50	1.29	5.79	4.50	0.00	**10.29**	(0.89%)	84.0%
1989	4.50	1.29	5.79	4.50	0.00	**10.29**	(0.87%)	86.6%
1990	4.50	1.29	5.79	4.50	0.00	**10.29**	(0.41%)	93.6%
1991	4.50	1.29	5.79	4.50	0.00	**10.29**	(0.80%)	89.4%
1992	4.50	1.29	5.79	4.50	0.00	**10.29**	(1.13%)	93.8%
1993	4.50	1.29	5.79	4.50	0.00	**10.29**	0.08%	98.6%
1994	4.50	1.29	5.79	4.50	0.00	**10.29**	(0.07%)	97.5%
1995	4.50	1.29	5.79	5.50	0.00	**11.29**	(1.94%)	82.2%
1996	4.50	1.29	5.79	5.50	0.00	**11.29**	(2.31%)	82.8%
1997	4.50	1.29	5.79	5.50	0.00	**11.29**	(0.57%)	86.0%
1998	4.50	1.29	5.79	5.50	1.01 *a*	**12.30**	2.06%	95.1%

Year	Employer	Employer Add'tl	Total Employer	Employee	State Aid	Total Cont'b		Sufficiency (Deficiency)	Funded Ratio Actuarial
1999	4.50	1.29	5.79	5.50	1.01 *a*	**12.30**		3.04%	99.2%
2000	4.50	1.29	5.79	5.50	0.91 *a*	**12.20**		3.70%	103.8%
2001	4.50	1.29	5.79	5.50	0.92 *a*	**12.21**		4.71%	107.6%
2002	4.50	1.29	5.79	5.50	0.91 *a*	**12.20**		1.44%	100.4%
2003	4.50	1.29	5.79	5.50	0.00	**11.29**		0.02%	95.7%
2004	4.50	1.29	5.79	5.50	0.00	**11.29**		(0.83%)	91.8%
2005	4.50	1.29	5.79	5.50	0.00	**11.29**		(2.87%)	86.3%
2006	4.50	1.29	5.79	5.50	0.00	**11.29**		(3.90%)	84.1%
2007	4.50	1.29	5.79	5.50	0.00	**11.29**		(3.24%)	86.8%
2008	4.50	1.29	5.79	5.50	0.00	**11.29**		(3.99%)	82.1%
2009	4.50	1.29	5.79	5.50	0.58 *b*	**11.87**		(5.90%)	76.6%
2010	4.50	1.29	5.79	5.50	0.63 *b*	**11.92**		(0.74%)	81.7%
2011	6.29	0.00	6.29	6.00	1.19 *b*	**13.48**		(3.73%)	73.2%
2012	6.79	0.00	6.79	6.50	1.21 *b*	**14.50**		(8.49%)	63.4%
2013	6.79	0.00	6.79	6.50	1.23 *b*	**14.52**		(2.88%)	54.0%
2014	7.29	0.00	7.29	7.00	13.00 *c,d*	**27.29**			
2015	7.50	0.00	7.50	7.50	13.00 *c,d*	**28.00**			

a. $486,000 direct state aid

b. $346,000 direct state aid, plus additional amortization state aid (variable amount)

c. $345,000 direct state aid, plus additional amortization state aid (variable amount), plus $6 million in direct state aid.

d. Estimated

SPTRFA Financial History

SPTRFA was founded in 1909 as a basic retirement plan in which members were not eligible to join Social Security. Funding was on a “pay as you go” basis. Teachers and the employer of record, the City of St. Paul, each contributed enough to pay retired teacher benefits.

By 1954, the Association had a reserve fund of $300,000, equivalent to about three months of benefit payments. At that point the Legislature mandated that sufficient employee and employer contributions be instituted to put SPTRFA on the road to full actuarial funding. Contributions consisted of employee and employer “normal” contributions of 8 percent of payroll by each. In addition, the employer was mandated to contribute an additional 4.63 percent of payroll as a “supplemental contribution” to cover the past underfunding. This was a major step to put SPTRFA on the road to financial stability.

In 1966, with the creation of ISD #625, the City of St. Paul was replaced by St. Paul Schools as employer. That status continued until 1974 when the State of Minnesota enacted tax reform legislation and assumed responsibility for funding schools including employer pension contributions. During both of these employer-of-record changes, the required normal and supplemental contributions were made.

In 1978, the Legislature mandated that all new St. Paul teachers join a new Coordinated (with Social Security) Retirement Plan in which members contributed 4 percent of pay matched by a 4 percent employer contribution made by the State of Minnesota. The Basic Plan was closed to new members. However, at that time, the state mandated that the critical employer supplemental contribution, 4.63 percent, was not required for the new Coordinated Plan members. As a result, each year after 1978, SPTRFA saw its funding ratio drop. During the period from 1978 to the mid-1990s the state saved millions of dollars by not making the employer supplemental contribution for SPTRFA Coordinated Plan members even though they were making an employer supplemental contribution for other Minnesota Coordinated Plans.

In 1986, the employer contribution requirement returned to the school districts in Minnesota. This move made it more difficult for SPTRFA to obtain the employer supplemental contribution because now the school district benefited from the employer contribution windfall that occurred each time a Basic Plan member retired. That is, when a Basic Plan member retired, the employer supplemental contribution was eliminated and they did not have to make a supplemental contribution on behalf of the Coordinated Plan member who replaced the Basic Plan member.

Gradually, by 1992 the Legislature recognized this funding gap needed to be addressed and authorized an employer supplemental contribution of 1 percent for Coordinated Plan members. This was increased to 3.64 percent over several years but never to the pre-1978 level.

In 1994, SPTRFA began receiving an annual direct aid payment from the state of $500,000 to address the past underfunding. Today that is increased to approximately $2.8 million annually. With the impact of the “Great Recession” market downturn being recognized, starting July 1, 2011, the SPTRFA employee contribution rates for both Basic and Coordinated Plan members were raised to 6.5 percent, phased in to be completed by 2014. In 2013, limited (two-year) supplemental state aid of $7 million per year was approved. Now, after many years of underfunding by the City of St Paul, ISD #625 and the State of Minnesota, SPTRFA’s actuary has determined that by incorporating recent plan modifications, contribution increases and increased state aid, the plan is on course to address its long-term liabilities.

SPTRFA State Aid Payments
Minnesota Statute 354.12, Subdivision 3 (a) and 423A.02 Direct State Aid

Commencing in **1994**, the state provided a modest "supplemental" payment in support of the SPTRFA pension plan. Originally, it was to continue until the SPTRFA achieved a funded status equal to TRA. At the same time, an employer supplemental payment was re-established for SPTRFA Coordinated Plan accounts (at 0.5 percent). This employer payment had been eliminated by the State when the newly created Coordinated Plan commenced in 1978 and the original Basic Plan, which included a supplemental employer contribution of approximately 4 percent, was closed. This direct aid amount (initially $500,000) was a further effort to start to offset nearly 20 years of state directed reductions in funding support to the Plan. The amount was to increase in future years by a defined reference rate.

In **1997,** legislation revised the earlier payment plan and called for an expanded direct state aid package. In the first year (FY 1998), the payment to SPTRFA was set at $4,827,000 with subsequent years at $2,827,000 based on a shared formula with the other Minnesota teacher retirement systems (TRA, Minneapolis, Duluth). More recent changes to the law now call for the funding to continue until the SPTRFA achieves 100 percent funding or 2037, whichever occurs earlier.

Omnibus Pension Bill of 2013
The bill, among other features, provided for a "supplemental" payment of $7 million per year to SPTRFA (and $6 million to Duluth) for FY 2014 (October 2013) and FY 2015 (October 2014). An initial request sought annual "supplemental" payments to continue for 27 years (2039), a projected schedule which, if other assumptions and investment targets were achieved, would allow the fund to achieve fully-funded status. However, the request was limited to two years and called for the fund to participate with other Minnesota teacher funds in this study and report to the Legislature in January 2014 on the costs and implications of merging the three teacher pension plans.

Minnesota Statute, 423A.02 Amortization State Aid (1996)
This legislation provided, beginning in 1996, an additional state aid amount to SPTRFA (as well as to MTRFA, TRA and DTRFA). It was funded out of existing appropriations, approximately $5 million, which were originally earmarked for various police and fire associations that had become closed systems around 1980. The state payment was to cover the ongoing liabilities once employee contributions ceased. These were eventually folded into Minnesota PERA. The excess funding from this account was reassigned to the state's teacher systems by a percentage formula, with the annual amounts varying depending on the net balance from the police and fire association payments. This was referred to as "amortization aid." This aid was to be suspended when any system achieved full funding. This is now paid annually, according to the 2013 Omnibus Pension Law, on July 15 of each year.

Table 9. SPTRFA History of State Aid Payments

YEAR	State Aid
1993	
1994	$ 500,000
1995	$ 500,000
1996	$ 973,653
1997	$ 1,023,327
1998	$ 5,508,853
1999	$ 3,551,225
2000	$ 3,572,726
2001	$ 3,572,726
2002	$ 3,257,761
2003	$ 3,383,761
2004	$ 3,392,761
2005	$ 3,397,761
2006	$ 3,399,761
2007	$ 3,651,216
2008	$ 3,509,320
2009	$ 3,343,013
2010	$ 4,108,442
2011	$ 4,077,140
2012	$ 3,657,839
2013	$ 2,728,000
2014	$ 10,664,606

Table 10. SPTRFA History of Contribution Rates, Sufficiencies/Deficiencies, Funded Ratios

Fiscal Year	Contribution Rates				Sufficiency (Deficiency)	Funded Ratio (Actuarial)
	Employee		Employer			
	Basic	Coordinated	Basic	Coordinated		
1971	7.0%		11.00%		(10.66%)	37.9%
1972	7.0%		11.00%		(10.65%)	46.2%
1973	7.0%		12.00%		(2.62%)	52.6%
1974	7.0%		12.00%		(2.67%)	61.3%
1975	8.0%		13.50%		(5.40%)	63.8%
1976	8.0%		13.50%		(6.04%)	64.0%
1977	8.0%		13.50%		(9.53%)	62.3%
1978	8.0%	4.0%	13.50%	4.50%	(10.40%)	60.5%
1979	8.0%	4.0%	12.63%	4.50%	(7.15%)	58.0%
1980	8.0%	4.5%	12.63%	4.50%	(7.30%)	60.1%
1981	8.0%	4.5%	12.63%	4.50%	(7.51%)	45.2%
1982	8.0%	4.5%	12.63%	4.50%	(7.53%)	46.0%
1983	8.0%	4.5%	12.63%	4.50%	(8.51%)	46.3%
1984	8.0%	4.5%	12.63%	4.50%	(3.93%)	55.2%
1985	8.0%	4.5%	12.63%	4.50%	(5.76%)	52.0%
1986	8.0%	4.5%	12.63%	4.50%	(3.59%)	57.1%
1987	8.0%	4.5%	12.63%	4.50%	(3.65%)	61.3%
1988	8.0%	4.5%	12.63%	4.50%	(4.50%)	60.2%
1989	8.0%	4.5%	12.63%	4.50%	(3.77%)	59.9%
1990	8.0%	4.5%	12.63%	4.50%	(3.22%)	63.7%
1991	8.0%	4.5%	12.63%	4.50%	(3.43%)	65.8%
1992	8.0%	4.5%	12.63%	4.50%	(4.65%)	66.7%
1993	8.0%	4.5%	12.63%	4.50%	(3.31%)	68.8%
1994	8.0%	4.6%	12.63%	5.00%	(3.18%)	68.3%
1995	8.0%	4.57%	12.63%	6.00%	(2.09%)	70.4%
1996	8.0%	4.57%	11.64%	8.14%	(1.06%)	74.5%
1997	8.0%	4.56%	11.64%	8.34%	0.79%	73.4%
1998	8.0%	5.55%	11.64%	8.34%	(1.23%)	72.5%
1999	8.0%	5.5028%	11.64%	8.34%	(0.57%)	75.0%
2000	8.0%	5.5%	11.64%	8.34%	0.72%	80.3%
2001	8.0%	5.5%	11.64%	8.34%	1.26%	81.9%
2002	8.0%	5.5%	11.64%	8.34%	(1.50%)	78.8%
2003	8.0%	5.5%	11.64%	8.34%	(3.45%)	75.6%
2004	8.0%	5.5%	11.64%	8.34%	(4.97%)	71.8%
2005	8.0%	5.5%	11.64%	8.34%	(7.29%)	69.6%
2006	8.0%	5.5%	11.64%	8.34%	(8.70%)	69.1%
2007	8.0%	5.5%	11.64%	8.34%	(8.03%)	73.0%
2008	8.0%	5.5%	11.64%	8.34%	(1.90%)	75.1%
2009	8.0%	5.5%	11.64%	8.34%	(2.76%)	72.2%
2010	8.0%	5.5%	11.64%	8.34%	(4.24%)	68.0%
2011	8.0%	5.5%	11.64%	8.34%	(2.27%)	70.0%
2012	8.25%	5.75%	11.89%	8.59%	(6.40%)	62.0%
2013	8.5%	6.0%	12.14%	8.84%	(2.80%)	60.4%
2014	8.75%	6.25%	12.39%	9.09%		
2015	9.0%	6.5%	12.64%	9.34%		

TRA Financial History

TRA was poorly funded during its early years with funding ratios below 60 percent and large deficiencies. In response to its underfunded condition, legislation was enacted in the 1980s to increase employer (school district) contribution rates. Employer contribution rates remained elevated (between 8 percent and 9 percent) for over a decade until the late-1990s. During that period, the higher employer contributions were offset by increases in funding through the state's school aid formula.

In 1998, due to prior higher employer contributions and excellent investment returns, TRA attained full funding. As a result, the extra employer contributions ceased and both employer and employee contribution rates dropped to 5 percent for Coordinated Plan members. In recognition of lower employer contributions, state funding for the school aid formula was also cut. Some of the residual savings from the school aid formula were redirected to the First Class City Teacher Funds.

From 1998 through 2006, TRA maintained funded ratios between 90 percent and 100 percent. A combination of factors, however, began to weaken TRA's financial status. Investment returns were low for three years (2001-2003) while TRA's liabilities were driven up by large post-retirement increases granted in the late 1990s under an investment-driven adjustment mechanism. Fortunately, investment markets improved in the mid-2000s, temporarily stabilizing the fund. In 2008, legislation was enacted that eliminated the post-retirement adjustment mechanism and dissolved the separate Post Retirement Investment Fund. Post Fund liabilities were assumed by the Active TRA Fund, causing a decline in the Active Fund's funded ratio.

Investment returns during the 2008-2009 period plummeted, causing TRA's market value funded ratio to decline to just below 60 percent and its market value deficiency to escalate to over 11 percent of payroll by 2009. In response to this financial challenge, a package of contribution rate increases and benefit reductions was enacted in 2010. In total, the 2010 law cut TRA benefit liabilities by $1.75 billion and employer/employee contribution rates were increased from 5.5 percent to 7.5 percent over four years (FY2011-14).

By July 1, 2013, as a result of the 2010 package and high investment returns, TRA's market value funded ratio improved to 77 percent. Despite this considerable improvement, TRA still has a market value deficiency of 1.7 percent of payroll. TRA is monitoring its financial status closely and, if necessary, will offer proposals to address this deficiency in order to get the fund back on track to attain a 100 percent funded status.

The table on the next page displays TRA's historical contribution rates, sufficiencies/deficiencies and funded ratios.

Table 11. TRA History of Contribution Rates, Sufficiencies/Deficiencies and Funded Ratios

Fiscal Year	Contribution Rates				Sufficiency/ (Deficiency) (Actuarial)	Funded Ratio (Actuarial)
	Employee		Employer			
	Basic	Coordinated	Basic	Coordinated		
1931-1953	5.0%					
1953-1957	6.0%					
1958-1959	6.0%		4.00%			
1960-1969	6.0%	3.0%	7.00%	4.50%		
1970-1973	7.0%	3.5%	9.00%	5.50%		
1974	8.0%	4.0%	10.50%	6.50%	(4.69%)	50.0%
1975	8.0%	4.0%	10.50%	6.50%	(4.24%)	51.8%
1976	8.0%	4.0%	10.50%	6.50%	(3.70%)	51.5%
1977	8.0%	4.0%	10.50%	6.50%	(3.40%)	56.2%
1978	8.0%	4.0%	11.00%	7.00%	(3.01%)	54.3%
1979	8.0%	4.0%	11.00%	7.00%	(4.34%)	51.2%
1980	8.5%	4.5%	11.55%	7.55%	(4.62%)	52.2%
1981	8.5%	4.5%	11.55%	7.55%	(4.88%)	54.4%
1982	8.5%	4.5%	11.55%	7.55%	(5.40%)	55.0%
7-1-82 / 12-31-82	8.5%	4.5%	11.55%	7.55%	(5.40%)	57.1%
1-1-83 / 6-30-83	10.5%	6.5%	7.55%	3.55%	(5.98%)	57.1%
1984	8.5%	4.5%	11.55%	7.55%	(1.25%)	59.6%
1985	8.5%	4.5%	12.98%	8.98%	(0.20%)	62.1%
1986	8.5%	4.5%	12.98%	8.98%	(0.05%)	66.3%
1987	8.5%	4.5%	12.98%	8.98%	0.35%	70.4%
1988	8.5%	4.5%	12.98%	8.98%	0.40%	71.2%
1989	8.5%	4.5%	12.98%	8.98%	1.14%	73.1%
1990	8.5%	4.5%	12.98%	8.98%	(0.31%)	77.6%
1991	8.5%	4.5%	12.14%	8.14%	(0.28%)	77.8%
1992	8.5%	4.5%	12.14%	8.14%	(0.41%)	82.5%
1993	8.5%	4.5%	12.14%	8.14%	(0.07%)	85.2%
1994	8.5%	4.5%	12.14%	8.14%	(0.07%)	83.5%
1995	10.5%	6.5%	12.14%	8.14%	0.36%	85.9%
1996	10.5%	6.5%	12.14%	8.14%	1.88%	92.0%
1997	10.5%	6.5%	12.14%	8.14%	1.79%	101.3%
7-1-97 / 3-31-98	9.0%	5.0%	10.64%	6.64%	0.18%	101.3%
4-1-98 / 6-30-98	9.0%	5.0%	9.00%	5.00%	0.18%	101.3%
1998	9.0%	5.0%	9.00%	5.00%	0.18%	105.7%
1999	9.0%	5.0%	9.00%	5.00%	0.14%	105.7%
2000	9.0%	5.0%	9.00%	5.00%	2.08%	105.2%
2001	9.0%	5.0%	9.00%	5.00%	2.15%	105.8%
2002	9.0%	5.0%	9.00%	5.00%	2.43%	105.3%
2003	9.0%	5.0%	9.00%	5.00%	1.63%	103.1%
2004	9.0%	5.0%	9.00%	5.00%	1.54%	100.0%
2005	9.0%	5.0%	9.00%	5.00%	0.95%	98.5%
2006	9.0%	5.0%	9.00%	5.00%	(0.80%)	92.0%
2007	9.0%	5.5%	9.00%	5.00%	(1.65%)	87.5%
2008	9.0%	5.5%	9.50%	5.50%	(3.20%)	82.0%
2009	9.0%	5.5%	9.50%	5.50%	(5.12%)	77.4%
2010	9.0%	5.5%	9.50%	5.50%	(0.00%)*	78.5%
2011	9.0%	5.5%	9.50%	5.50%	(0.88%)*	77.3%
2012	9.5%	6.0%	10.00%	6.00%	(3.04%)*	73.0%
2013	10.0%	6.5%	10.50%	6.50%	(3.23%)*	71.3%
2014	10.5%	7.0%	11.0%	7.00%	(3.74%)*	71.6%
2015	11.0%	7.5%	11.5%	7.50%		

*Incorporates financial effects of future additional employer/employee contribution increases scheduled 2011 through 2014.

Options for Consolidation

Outlined in this chapter of the report are consolidation options that were developed for consideration by the Minnesota teacher retirement system boards. While many other options exist, the retirement system boards focused on what they considered the primary approaches to consolidation. The LCPR staff has written very comprehensive memoranda on the legislative history of past consolidation efforts and the various consolidation models that have been studied and utilized over the years. (For more information, see the LCPR website, specifically:
http://www.commissions.leg.state.mn.us/lcpr/documents/mtgmaterials/2013/2013_Teacher_Consol_Study_1st_Consid.pdf)

Consolidation components and factors for consideration are also described in this chapter of the report.

Consolidation Options

A. Full consolidation – transfer of investment and benefits administration functions (MTRFA model)

Under this option, full consolidation of investment management, benefits administration and membership would occur on a specified date. Full consolidation could be broken into two stages. In Stage 1, the investment management function of the merging fund could be transferred to the State Board of Investment (SBI) soon after legislation is enacted. In Stage 2, the legal transfer to TRA of assets and liabilities of the merging fund would occur at a later date along with the transfer of the benefits administration and membership to TRA.

MTRFA Model – In 2006, the legislature took an approach of full consolidation on a single date when the former Minneapolis Teachers Retirement Fund Association (MTRFA) was consolidated into TRA. Under that legislation (2006 Session Laws, Chapter 377, Article 3), MTRFA's investment management, benefits administration and membership were transferred to TRA as of July 1, 2006.

When MTRFA was consolidated, it had only $712 million in assets, but it had liabilities of approximately $1.8 billion, leaving unfunded liabilities of $1.1 billion. These unfunded liabilities were not eliminated or paid off all at once upon the date of consolidation. Instead, a variety of ongoing revenue sources and annual aid payments were pledged to TRA to enable it to pay off MTRFA's estimated unfunded liabilities over a 30-year amortization period (July 1, 2007 through July 1, 2037). In this manner, MTRFA was brought into TRA at what was projected to be a fully funded level achieved through providing TRA with annual aid payments and a variety of ongoing revenue sources.

To meet the costs of consolidation, TRA is provided $21 million in ongoing annual aid payments from the State of Minnesota, Minneapolis School District, and the City of Minneapolis. In addition to these direct aid payments, TRA is receiving $28.55 million annually from other sources of revenue for the consolidation such as extra payroll contributions (3.64 percent of pay) made by the Minneapolis School District and extra payroll contributions (0.5 percent) made by all school districts statewide. In addition to these aid and revenue amounts, the contribution sufficiency that TRA had in 2006 was partly tapped to help cover some of MTRFA's unfunded obligations. The TRA sufficiency that was tapped for this purpose was equal to 0.43 percent of pay which, in 2006, was equal to $15.6 million annually. Based on TRA's current payroll, this is now equivalent to $17.2 million annually.

The total additional annual revenue projected for TRA to cover the costs of the MTRFA consolidation is approximately $66.75 million annually. The amounts and sources of revenue are outlined in the following table.

Table 12. TRA Revenue Sources for MTRFA Consolidation

Amount of Revenue (FY2013)	**Source of Revenue**
$ 16.50 million per year	State - ongoing statutory aid required by M.S.354.435 and 354.436
$ 2.25 million per year	Minneapolis School District - annual payments required under M.S. 354.435
$ 2.25 million per year	City of Minneapolis - annual payments required under M.S. 354.435
$7.85 million per year	Minneapolis School District - 3.64 percent extra contribution for each active teacher required under M.S. 354.42 Subd. 3
$20.7 million per year	TRA employer contribution rate increase from 5.0 percent to 5.5 percent enacted in 2006. These costs were offset by the state through an increase in the school aid formula. (This rate increase generated $18 million annually in 2007 and today it generates approximately $20.7 million annually.)
$17.2 million per year	TRA's sufficiency of 0.43 percent of pay which was equivalent to $15.6 million per year in 2006 and would be equivalent to $17.2 million annually today.
$66.75 million per year	**Total**

In addition to MTRFA consolidation, the 2006 legislation also increased the benefit formula multiplier for TRA members (including former MTRFA members). The formula increased from 1.7 percent to 1.9 percent, but applied prospectively for years of service after July 1, 2006. This formula improvement was financed partly by an increase in the employee contribution rate from 5.0 percent to 5.5 percent and partly by tapping a portion (0.55 percent of pay) of TRA's sufficiency.

B. Transfer of investment management function to SBI

Some or all of the investment management function of the transferring fund could be shifted to SBI on a specific date and the benefits administration and membership could remain with the separate, existing board. This could be accomplished by the passage of legislation that would allow the transferring fund to become a permanent part of SBI's Combined Fund (pension) investment pool. It could also be accomplished by the transferring fund electing to use existing statutory authority, allowing it to have its assets managed on a non-permanent basis as part of SBI's Supplemental Investment Fund (SIF).

Transferring assets into the SBI's Combined Fund or Supplemental Investment Fund would provide advantages of economies of scale and lower investment fees. These advantages are described in detail in a subsequent chapter, "Investment-Related Issues."

C. Segregated account (MERF Model)

The benefits administration, membership and investment management of the merging fund could be transferred to TRA and SBI on a specific date; however, the assets and liabilities of the merging fund could remain in a separate account within TRA to be merged at a later date. Under this option, the financial responsibility for funding the consolidating fund would remain with the employer and the state, not with TRA.

This approach is similar to legislation passed in 2010 for consolidation of the Minneapolis Employees Retirement Fund (MERF) into the Public Employees Retirement Association (PERA). This MERF legislation is thoroughly described in a LCPR memo found on the Commission's website at:
http://www.commissions.leg.state.mn.us/lcpr/documents/sessionsummaries/2010sessionsummary.pdf

D. Separate fund – Under this option, DTRFA and/or SPTRFA would remain separate, free-standing teacher retirement systems open to new members and would continue to be responsible for managing both the investment and benefits administration functions. Under this separate fund option, the transferring fund could elect to use existing statutory authority which allows it to have its assets managed on a non-permanent basis as part of SBI's Supplemental Investment Fund (SIF).

Consolidation Components Under Full Consolidation Option

If full consolidation of the investment and/or benefits administration functions into TRA is desired by a fund, legislation would be required to effect such a merger. The legislation could be introduced in the 2014 session and would need to specify at least the following (for reference, see 2006 Session Laws, Chapter 377, Article 3 re MTRFA consolidation):

A. **Benefits and Benefits Administration**

1. **Membership transfer** – when and how members are transferred to TRA and become TRA members.
2. **Service credit and liability transfer --** when and how service credit and salary credit are transferred, including specification about how past and future service is credited to consolidating members.
3. **Benefit calculations** – specification of how benefits of consolidating members earned before, and subsequent to, the date of consolidation will be calculated and paid.
4. **Post-retirement benefit increases** – specification of how future post-retirement benefit increases will be calculated after the consolidation date.
5. **Liabilities --** when liabilities of the consolidating fund are transferred to TRA.
6. **Impairment** – statement that consolidation does not impair or diminish benefits of consolidating fund members in existence at the time of consolidation with the exception of future post-retirement increases.
7. **Records transfer** – when and how records and documents of the consolidating fund will be transferred.

Policy Considerations for Benefits and Benefits Administration

Benefits. When MTRFA was consolidated into TRA in 2006, benefits and service credit earned up to the date of consolidation by former MTRFA members were transferred to TRA. System staff believe that as a general rule the benefits of consolidating members earned before the date of consolidation should be calculated and paid under the consolidating fund's laws and administrative practices in effect prior to consolidation and that future post-consolidation benefit calculations be governed by TRA laws and administrative practices. However, with respect to DTRFA members whose benefits are calculated under the Old Plan (see page 15 for description), those members should continue to have their benefits calculated by TRA as specified in the DTRFA Bylaws.

Benefits Administration. Care needs to be taken to ensure that any transfer of the benefits administration function is done in an orderly, planned manner to allow a smooth transition that will not disrupt services to members and will permit accurate, timely benefit calculations for consolidating members. TRA's benefit and service credit calculation systems are highly automated and depend heavily on computerized member data and imaged member records. Sufficient time will be needed for TRA to carefully integrate member data and records from the consolidating fund into TRA's benefit calculation and imaging systems. Time will also be needed to program TRA's computer systems with any special benefit provisions of the consolidating system. In addition, the employing school district of the merging fund will need time to accommodate its information technology systems to be able to accurately report membership and payroll data to TRA. Retirement fund staff members believe that a full year is needed to accomplish a phased transfer of benefits administration functions. This phased approach is described in detail the implementation plan chapter of this report.

Member Communication and Outreach. It will be important to assure consolidating members and retirees that the benefits earned and calculated up to the date of consolidation will remain intact and that future benefits will be determined under TRA's governing statutes. There will need to be sufficient education and outreach to the consolidating members and retirees to explain the benefits transition and explain how future benefits under TRA may differ. In addition, it will be important to explain any provisions relating to future post-retirement adjustments.

B. **Asset Transfer, Asset Management and Related Financial Considerations**

1. **Date of consolidation** – the official date upon which the assets and liabilities of the merging fund are transferred to TRA.
2. **Assets --** when and how assets will be transferred including questions of legal title to assets, accounts receivables and when assets would be available for investment. Authority needs to be granted to SBI to pay investment-related liabilities and obligations resulting from transferred assets.
3. **Investment management transfer** – the official date when asset management is transferred to the SBI.

Asset Transfer. Issues relating to the transfer of assets are described in more detail in a later chapter of this report, "Investment-Related Issues."

C. **State Aid and Contributions**

1. **State aid** – specify aid amounts that are to be directed or re-directed to TRA to compensate for the liabilities of the consolidating fund(s) that TRA assumes.
2. **Contributions** – specify the contribution rates to be paid by employees, the consolidating school district and any other employers that have been contributing to the consolidating fund.

State Aid and Contributions. The next chapter of this report, "Financial Impact and Actuarial Analysis," identifies in detail the amount of state aid needed to facilitate consolidation in a manner that assures TRA assets are protected and that TRA is not subsidizing the merged fund(s).

D. **Protections for Employees of Consolidating Fund**

1. **Consolidating fund employees** – specify terms of transfer of consolidating fund employees into TRA/state service.

Employee Protections. The draft legislation should specify that upon termination of the consolidating fund, the employees of the consolidating fund shall become employees of TRA. Minnesota Management and Budget (MMB) shall place the consolidating employees into proper state service classifications and the employees shall be compensated at no less than their current hourly rate. Provisions should be made to allow transfer of unused vacation and sick leave balances and for crediting prior service with the consolidating fund for future vacation accruals. Transferred employees should be enrolled in the state employees' group health and dental insurance programs with no limits on pre-existing conditions.

E. **Other Transition Issues**

1. **Successor in interest** – specification of successor in interest with inclusions and exclusions relating to potential liability from claims.
2. **Indemnification** – specification of indemnification of former fiduciaries of consolidating fund.
3. **Conforming changes** – make conforming changes to provisions of 11A, 354A and 356, 356A to accommodate consolidating fund.
4. **Consolidating Fund's Articles of Incorporation and Bylaws --** disposition of bylaws and articles of incorporation of the consolidating fund.

Financial Impact and Actuarial Analysis

The actuarial analysis in this chapter was prepared by TRA's actuary, Cavanaugh Macdonald, based on data provided by the DTRFA actuary, The Segal Company, and by the SPTRFA actuary, Gabriel Roeder Smith and Company. TRA's actuary was asked to analyze how consolidation of DTRFA and SPTRFA into TRA would affect TRA's financial status.

The actuary calculated additional financial aid amounts that TRA would need to bring in the consolidating funds. As detailed in the following letter, the actuarial estimates indicate that it will require **$14.7 million** in additional annual assistance to bring in DTRFA on a fully-funded basis and **$46.4 million** to bring in SPTRFA on a fully-funded basis. These annual funding amounts would need to be paid throughout TRA's existing 24-year amortization period.

Actuarial letter follows.

Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

December 13, 2013

Ms. Laurie Hacking
Executive Director
Teacher Retirement Association of Minnesota
60 Empire Drive, Suite 400
St. Paul, MN 55103

Re: Duluth and St. Paul Consolidation Study

Dear Laurie:

The 2013 Omnibus Pension Bill included a provision which required that a study be completed and a report prepared regarding the consolidation of the Duluth Teachers Retirement Fund Association (DTRFA) and the St. Paul Teachers Retirement Fund Association (SPTRFA) into the Teachers Retirement Association (TRA). The statutory language mandating this consolidation report requires the report to include:

> "… detailed actuarial analysis that will define the financial requirements for consolidating with the Teachers Retirement Association in a manner, consistent with past practice that assures that the assets of the Teachers Retirement Association are protected, that the merging funds are fully funded, and that the Teachers Retirement Association is not subsidizing the merged funds."

As the retained actuary for TRA, Cavanaugh Macdonald Consulting (CMC) was asked to assist TRA with the evaluation of the actuarial impact of the consolidation of DTRFA and SPTRFA into TRA. This letter has been prepared to provide documentation on the actuarial assumptions, methods, and calculations prepared for the consolidation study.

Background

DTRFA, SPTRFA and TRA are all defined benefit plans with benefit structures based on final average salary and years of service. While the specific provisions of each of the plans are somewhat different, they are fairly similar, particularly after the legislative changes enacted in the 2013 session. A short summary of the key benefit provisions for Coordinated Members (who are covered by Social Security) of each plan is provided in Appendix A. (There are fewer than 100 active employees in any of the plans who are not Coordinated Members.)

One key difference between the TRA benefit structure and the DTRFA and SPTRFA plan designs is the cost of living adjustment (COLA). TRA currently has a 2% COLA which is scheduled to increase to 2.5% when the Fund reaches a funded ratio of at least 90%. The TRA actuarial valuation uses a 2% assumption for future COLAs.

The 2013 Omnibus Retirement Bill reinstated a 1% COLA for DTRFA retirees beginning January 1, 2014. Under prior law, DTRFA provided for a cost of living adjustment equal to the change in the CPI-U (as reported by the Bureau of Labor and Statistics) up to 5% when the funded ratio equaled or exceeded 90%. Until the 90% threshold was met, the cost of living adjustment operated under a transition schedule which provided for a cost of living adjustment of 2% when the funded ratio, using the market value of assets, was greater than 90%, 1% when greater than 80%, and 0% otherwise. Neither threshold was expected to be met, so the July 1, 2012 valuation results prepared by the DTRFA actuary reflected an assumption of 0% for future COLAs.

The COLA for the SPTRFA also varies based on the funded ratio. If the funded ratio, using the actuarial value of assets, is less than 80%, the COLA is 1%; if the funded ratio is at least 80% but less than 90%, the COLA is 2%; and if the funded ratio is at least 90%, the COLA is equal to the increase in the CPI-U, up to 5%. The retained actuary for the SPTRFA used an assumption of 1% for future COLAs in the July 1, 2012 valuation.

It was assumed that a single set of plan provisions would apply to all TRA members if a consolidation occurred. Therefore, our analysis was performed using a 2% COLA for all three groups: TRA, DTRFA and SPTRFA. As a result, the unfunded actuarial accrued liability for DTRFA and SPTRFA in the consolidation study is higher than the amount shown in each system's actuarial valuation report.

Actuarial Methodology

Currently, separate actuarial valuations are prepared for DTRFA and SPTRFA by actuarial firms other than Cavanaugh Macdonald Consulting (CMC). These valuations reflect the different benefit structures for each fund (discussed earlier) as well as some actuarial assumptions and methods used by DTRFA and SPTRFA which differ from those used by TRA. In order to consider consolidation options, it was decided that the same set of actuarial assumptions and methods should be used for all three plans. If consolidation occurs, it is anticipated that the TRA assumptions will be used for all groups. Therefore, the TRA assumptions and methods were chosen as the actuarial basis for the cost analysis to be prepared for the consolidation study. As mentioned earlier a 2% COLA was used in developing the liabilities and costs for both SPTRFA and DTRFA to standardize the benefits expected to be provided.

The actuarial analysis for the consolidation study, which is discussed in more detail below, included the following steps:

(1) Replicate the July 1, 2012 actuarial valuations for DTRFA and SPTRFA (to quantify any differences due to the actuarial valuation software used by different actuarial firms).
(2) Revise the replication valuations to reflect the 2013 legislative changes to plan provisions.
(3) Revise the SPTRFA results for the assumption change to be made in the 2013 valuation.
(4) Revise the DTRFA and SPTRFA results to reflect the TRA COLA provision of 2%.
(5) Revise the DTRFA and SPTRFA results using the TRA assumptions and methods.

When this project began in July, the most recent actuarial valuations available for the plans were those prepared as of July 1, 2012. Therefore, CMC received the processed member data and the full set of actuarial assumptions used to prepare the DTRFA and SPTRFA valuations from their respective actuarial firms. Using that data and independently programming CMC's valuation software, we replicated the July 1, 2012 valuations to ensure that any variance between our results and the retained actuary for the System were not significant and to provide a benchmark for the cost analysis to be prepared for the consolidation study. DTRFA uses a non-standard application of the Entry Age Normal cost method which would not be used in our analysis beyond the initial replication valuation. In order to expedite the replication process, it was decided to use the July 1, 2012 replication valuation results as reported by Milliman, Inc., the retained actuary for the Legislative Commission on Pensions and Retirement (LCPR), for comparative purposes rather than the July 1, 2012 valuation report prepared by the DTRFA actuary.

A summary of the key July 1, 2012 valuation measurements in our replication are shown in the following table ($thousands):

	DTRFA			**SPTRFA**		
	Milliman*	CMC	% Diff	GRS	CMC	% Diff
Present Value of Future Benefits	350,009	352,674	0.8%	1,677,829	1,704,082	1.6%
Actuarial Accrued Liability	326,244	324,523	(0.5%)	1,471,216	1,492,636	1.5%
Normal Cost Rate	7.60%	7.93%	4.3%	8.39%	8.61%	2.6%

*From the Milliman report entitled "Replication of the Actuarial Valuation of the Duluth Teachers' Retirement Fund Association as of July 1, 2012", dated January 24, 2013.

Once the 2012 valuations were replicated and key results were within a reasonable threshold, we modified our software programs to reflect the benefit changes made by the 2013 Minnesota Legislature as these changes will be reflected in the July 1, 2013 valuations, the measurement date for the financial results of our consolidation study. The major legislative changes reflected are the increase in the benefit multiplier from 1.7% to 1.9% for future years of service, increases in the employee and employer contribution rates, and the reinstatement of a 1% COLA for DTRFA retirees.

The Legislative Commission on Pensions and Retirement approved a change in the salary increase assumption for SPTRFA which will also be reflected in the 2013 valuation. Again, since we are using projected valuation results as of July 1, 2013 for the consolidation study, we also revised the SPTRFA results to reflect the new set of actuarial assumptions expected to be used in the 2013 valuation.

The final step was to reflect a 2% COLA for DTRFA and SPTRFA along with the actuarial assumptions and methods used by TRA. After all of these steps were completed, the results provided a consistent actuarial basis for proceeding with the cost analysis for the consolidation study. The July 1, 2012 actuarial valuation results were then projected forward to July 1, 2013 using standard actuarial methodology. The resulting liabilities and normal cost rates, along with the July 1, 2013 market value of assets, for each group were then used in the calculations and results described below. Appendix B contains details on the actuarial assumptions and methods used.

Consolidation Study Methodology

One of the key points of the legislation is that financial requirements for consolidating with the Teachers Retirement Association be consistent with past practice that assures that the assets of the Teachers Retirement Association are protected, that the merging funds are fully funded, and that the Teachers Retirement Association is not subsidizing the merged funds. To protect the TRA members and employers from being adversely affected as a result of a merger, the TRA Board believes that the system to be merged into TRA should be fully funded, i.e. assets equal to its actuarial accrued liability. This is equivalent to requiring that the consolidation not increase the TRA unfunded actuarial accrued liability (UAAL). It should be noted that even under this condition, future events including adverse experience, assumption changes, or benefit changes could result in greater increases in the UAAL for a merged system than would have been experienced by TRA alone.

The assets needed to prevent an increase in the UAAL of TRA can come from different sources. In addition to the market value of assets currently held by DTRFA and SPTRFA, there are contribution sources beyond the regular member and employer contributions. As shown below, both DTRFA and SPTRFA currently receive State aid to fund their plans:

	DTRFA	SPTRFA
Amortization State Aid	$200,000	$775,000*
Special Direct State Aid	$346,000	$2,827,000
Total	$546,000	$3,602,000

*Actual amounts vary each year. Annual assumed amount for consolidation study.

In addition, part of the 2013 Omnibus Pension Bill provided for additional State aid of $6 million for DTRFA and $7 million for SPTRFA for fiscal years 2014 and 2015 only. The present values of the two years of additional State aid were also taken into account in determining the UAAL. We did not assume that these additional amounts would continue beyond the two years specified. Therefore, our calculations reflect the incremental, new State aid necessary to consolidate with a 100% funded ratio, given the payments are expected to be received for 24 years, the remaining TRA amortization period as of July 1, 2013.

In addition, for SPTRFA the total employer contribution rate is scheduled to increase and will ultimately reach 10.34% on July 1, 2017. This rate is higher than the employer contribution rate of 7.50% that applies to participating TRA employers (except the Minneapolis School District which will contribute 11.14%, effective July 1, 2014). As a result, the difference in the SPTRFA employer contribution rate of 10.34% and the TRA employer contribution rate of 7.50% was projected to continue over the remaining amortization period and the resulting present value was also treated as a receivable asset for SPTRFA.

DTRFA Demographic Trends

There are serious demographic challenges facing DTRFA which have had a negative impact on the actuarial funding of the system in recent years. The number of actively contributing members in DTRFA has declined steadily over the last several years, with a decline in covered payroll. This trend is expected to continue into the future. In addition, the Executive Director has indicated that a significant number of staff members are expected to retire in the near term, further exacerbating the ratio of retired members to actives and further reducing the amount of covered payroll. Since the required contribution rate is developed as a level percent of pay assuming future growth in covered payroll, there are some serious concerns about the actual contributions to DTRFA being sufficient to pay off the UAAL. Should DTRFA be consolidated with TRA, however, the impact would be negligible due to the size of the membership and the corresponding liabilities. Further, by calculating the necessary additional state aid on a level dollar amount (rather than a level percentage of DTRFA covered payroll), TRA is protected from the impact of declining covered payroll and UAAL contributions that are less than expected.

SPTRFA Amortization Method

SPTRFA currently amortizes its UAAL using a methodology known as a rolling 25-year method. Under this approach, the amortization period is reset to 25 years in each actuarial valuation in the future. As a result, the payment of the UAAL is effectively spread over an indefinite time period and the end of the amortization period is continually being extended.

In contrast, both TRA and DTRFA have a fixed or closed amortization period, meaning that the remaining years to amortize the UAAL declines by one year in each future valuation. While these different approaches affect how the actuarial contribution rate is determined, they do not impact the calculation of the dollar amount of the UAAL. Since the purpose of this study is to determine how a merger of SPTRFA into TRA would affect the TRA financial status, the SPTRFA amortization method is not a consideration.

Consolidation Study Calculation Details and Results

Exhibit 1 shows the results of our calculations under a consolidation scenario where the UAAL of TRA does not increase. Estimated July 1, 2013 valuation results, are shown in columns (1), (2) and (5) for each of the three plans (TRA, DTRFA and SPTRFA) using their own assumptions, methods, and benefit provisions. Columns (3) and (6) reflect the July 1, 2013 valuation results using the common TRA assumptions, methods, and benefit provisions, including the 2% COLA. Column (4) shows the estimated results should DTRFA be consolidated into TRA (and SPTRFA remain separate), while column (7) shows the estimated results of consolidating both DTRFA and SPTRFA into TRA. It is our understanding that a consolidation of SPTRFA into TRA without DTRFA is not contemplated as a possible outcome. Therefore, estimated results on that basis have not been provided.

Section 1 of Exhibit 1 summarizes the membership counts used in the actuarial calculations for each of the three systems as well as the total following possible consolidation scenarios. These membership counts are as of July 1, 2012 since that is the data upon which this study was based.

Subsection (a) of Section 2 shows estimated valuation results as of July 1, 2013, using the market value of assets rather than the actuarial value and ignoring the value of any future State aid contributions. This is similar to the reporting that occurs in the annual valuation report. The actuarial accrued liability is estimated using the methods described earlier in this letter, while the market values of assets in Exhibit 1 are preliminary estimates that were provided by each system. The present value of future State aid contributions to DTRFA and SPTRFA for the remainder of the amortization period (24 years) are calculated and reported in subsection (b). The unfunded actuarial accrued liability (UAAL) shown in subsection (c) of Section 2 reflects the present value of future State aid amounts and additional employer contributions above 7.50% from St. Paul as a receivable asset.

Subsection (c) develops the preliminary UAAL for each System and the corresponding funded ratio. On that basis, a determination is made of the additional amount of state aid that would be required to prevent the UAAL for TRA from increasing as a result of the consolidation. The lump sum amounts, along with the equivalent annual amounts, determined as a level dollar payment over the remaining 24 years in TRA's amortization period, are shown in the following table:

Required Amounts to Prevent an Increase in TRA UAAL
($ thousands)

	DTRFA	SPTRFA
Total Present Value (Lump sum amount)	$161,168	$509,054
Annual Level Dollar Payment (24 Years)	14,701	46,434

Section 3 of Exhibit 1 includes the required contribution rate (subsection (a)) of TRA as well as the results under the two consolidated system scenarios (columns (4) and (7)). Statutory contribution rates at July 1, 2013 are also shown. Subsection (c) of Section 3 indicates the current contribution deficiency reflecting any contribution increases scheduled to be implemented in the future for TRA along with the resulting deficiency under the two consolidation scenarios, columns (4) and (7).

We are available to answer any questions on the material contained in this study or to provide explanations or further details upon request. We, Patrice A. Beckham and Brent A. Banister, are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. We also meet the requirements of "approved actuary" under Minnesota Statutes, Section 356.215, Subdivision 1, Paragraph (c).

Sincerely,

Patrice Beckham

Brent A. Banister

Patrice A. Beckham, FSA, EA, FCA, MAAA
Principal and Consulting Actuary

Brent A. Banister, PhD, FSA, EA, FCA, MAAA
Chief Pension Actuary

cc: John Wicklund
Luther Thompson

EXHIBIT 1

REQUIRING DULUTH AND ST PAUL TO MERGE WITH SUFFICIENT RESOURCES TO BE 100.00% FUNDED

Assumed Return: 8% Select & 8.5% Ultimate

Summary of Actuarial Results of the Consolidation Study
Calculations are Estimated Results as of July 1, 2013. Amortization Period: 24 Years
(Dollar amounts in thousands)

	(1) Estimated TRA Results	(2) DTRFA with own assumptions and benefits	(3) DTRFA using TRA benefits and actuarial assumptions	(4) TRA and DTRFA (1) + (3)	(5) SPTRFA with own assumptions and benefits	(6) SPTRFA using TRA benefits and actuarial assumptions	(7) TRA, DTRFA, and SPTRFA Combined Results
1. Membership (July 1, 2012)							
a. Active members	76,649	919		77,568	3,880		81,448
b. Service Retirees	50,780	1,254		52,034	2,912		54,946
c. Disabilitants	591	19		610	29		639
d. Survivors	4,054	113		4,167	351		4,518
e. Deferred Retirees	12,201	284		12,485	1,833		14,318
f. Nonvested Former	27,591	766		28,357	1,427		29,784
g. TOTAL	171,866	3,355		175,221	10,432		185,653
2. Estimated July 1, 2013 Results							
a. Pre-merger Funded Status							
(1) Actuarial Accrued Liability (AAL)	$23,490,472	$354,532	$384,413	$23,874,885	$1,509,208	$1,604,269	$25,479,154
(2) Market Value of Assets	17,997,000	206,000	206,000	18,203,000	933,000	933,000	19,136,000
b. Present Value of Current State Aid:							
(1) 2013 Pension Bill (FY 14 and 15 contributions)		11,335	11,335	11,335	13,225	13,225	24,560
(2) Current Special Direct State Aid*		2,193	2,193	2,193	8,496	8,496	10,689
(3) Current Amortization State Aid**		3,717	3,717	3,717	30,367	30,367	34,083
(4) Present value of Employer Contr > 7.50%						110,128	110,128
c. Adjusted July 1, 2013 Results							
(1) Preliminary Unfunded AAL	$5,493,472		$161,168	$5,654,640		$509,054	$6,163,694
(2) Preliminary Funded Ratio	76.61%		58.07%	76.32%		68.27%	75.81%
(3) Target Funded Ratio			100.00%	100.00%		100.00%	100.00%
(4) Lump sum value of New State Aid			$161,168	$161,168		$509,054	$670,222
(5) Unfunded AAL after merger	$5,493,472		$0	$5,493,472		$0	$5,493,472
(6) Funded Ratio after merger	76.61%		100.00%	76.99%		100.00%	78.44%
(7) Years to Contribute New State Aid			24	24		24	24
(8) Annual New State Aid - paid 7/1 - level $			14,701	14,701		46,434	61,135
3. Financing Requirements							
a. 2013 Required Contribution Rate:							
(1) Covered Payroll	$4,269,690	$53,224	$53,224	$4,322,914	$268,539	$268,539	$4,591,453
(2) Normal Cost Rate	8.53%			8.42%			8.52%
(3) Administrative Expense	0.24%			0.24%			0.24%
(4) Amortization Payment	8.78%			8.67%			8.17%
(5) Total	17.55%			17.34%			16.93%
b. 2013 Statutory Contribution Rate:							
(1) Employee Contributions	7.00%			7.00%			7.00%
(2) Employer Contributions	7.00%			7.00%			7.00%
(3) Employer Additional Contributions	0.70%			0.69%			0.65%
(4) Total Contributions	14.70%			14.69%			14.65%
c. Sufficiency/(Deficiency)							
(1) Total Requirements	17.55%			17.34%			16.93%
(2) Total Contributions (including future increases)	15.70%			15.69%			15.65%
(3) Sufficiency/(Deficiency)	(1.85)%			(1.65)%			(1.28)%

* Annual amounts: DTRFA: $200,000, SPTRFA: $775,000
** Annual amounts: DTRFA: $346,000, SPTRFA: $2,827,000

Appendix A

Summary of Major Plan Provisions

	DTRFA	SPTRFA	TRA
Tier 1			
• **Tier coverage**	Hired before 7/1/89. Note: If tier 2 benefit is greater than tier 1 benefit, that benefit will apply	Hired before 7/1/89. Note: If tier 2 benefit is greater than tier 1 benefit, that benefit will apply	Hired before 7/1/89. Note: If tier 2 benefit is greater than tier 1 benefit, that benefit will apply
• **Final Average Salary**	Highest 5 years	Highest 5 years	Highest 5 years
• **Benefit multiplier**	1.2% for service up to 10 years, 1.7% thereafter through 6/30/2013, 1.9% thereafter effective 7/1/2013	1.2% for service up to 10 years, 1.7% thereafter through 6/30/2015, 1.9% thereafter effective 7/1/2015	1.2% for service up to 10 years, 1.7% thereafter through 6/30/2006, 1.9% thereafter since 7/1/2006
• **Normal Retirement Age**	Age 65 or age 62 with 30 years, no reduction after 90 points	Age 65, no reduction after 90 points	Age 65 with 3 years or age 62 with 30 years, no reduction after 90 points
• **Form of payment**	Life annuity	Life annuity	Life annuity
• **Cost of living adjustment**	1% effective 1/1/2014. Previously 0% until 80% funded, 1% until 90% funded, 2% thereafter	0% until 80% funded, 1% until 90% funded, 2% thereafter	2% until the fund is 90% funded, 2.5% thereafter
Tier 2			
• **Tier coverage**	Hired after 6/30/89.	Hired after 6/30/89.	Hired after 6/30/89.
• **Final Average Salary**	Highest 5 years	Highest 5 years	Highest 5 years
• **Benefit multiplier**	1.7% through 6/30/2013, 1.9% thereafter	1.7% through 6/30/2015, 1.9% thereafter	1.7% through 6/30/2006, 1.9% thereafter
• **Normal Retirement Age**	Social Security Normal Retirement Age, but not greater than 66	Social Security Normal Retirement Age, but not greater than 66	Social Security Normal Retirement Age, but not greater than 66 with 3 years
• **Form of payment**	Life annuity	Life annuity	Life annuity
• **Cost of living adjustment**	0% until 80% funded, 1% until 90% funded, 2% thereafter	0% until 80% funded, 1% until 90% funded, 2% thereafter	2% until the fund is 90% funded, 2.5% thereafter

Appendix A
(continued)

Summary of Major Plan Provisions

	DTRFA	SPTRFA	TRA
Funding Mechanism			
• **Member contributions**	7.0% effective 7/1/2013 increasing to 7.5%, effective 7/1/2014	6.25% effective 7/1/2013 increasing to 7.5%, effective 7/1/2016	7.0% effective 7/1/2013 increasing to 7.5% effective 7/1/2014
• **Employer contributions**	7.29% effective 7/1/2013 increasing to 7.5%, effective 7/1/2014	9.09% effective 7/1/2013 increasing to 10.34% effective 7/1/2017	7.0% effective 7/1/2013 increasing to 7.5% effective 7/1/2014. The Minneapolis School District contributes and additional 3.64% of pay
• **State appropriations**	Special Direct State Aid (*MN Statutes 354A.12, subd.3a*) is $346,000. The Omnibus Pension Bill in the 2013 session provided for additional State aid of $6 million for DTRFA for fiscal years 2014 and 2015.	SPTRFA receives a variable contribution from the State, $837,606 for fiscal year 2013-14 (1996 legislation) and $2,827,000 paid annually (1997 legislation). The Omnibus Pension Bill in the 2013 session provided for additional State aid of $7 million for SPTRFA for fiscal years 2014 and 2015.	1993 legislation provides $5 million, 1996 legislation provides $2 million, and 1997 legislation provides $12.95 million. Amounts may change annually.

In addition, each of the three plans has a unique funding policy that has resulted in different funded ratios as of the last valuation date and different actuarial and statutory contribution rates. A short summary follows:

DTRFA: The contribution rate is determined using a non-standard variant of the Entry Age Normal cost method and amortizing the UAAL as a level percentage of payroll through June 30, 2039.

SPTRFA: The contribution rate is determined using the Entry Age Normal cost method and amortizing the UAAL as a level percentage of payroll on a rolling 25-year basis.

TRA: The contribution rate is determined using the Entry Age Normal cost method and amortizing the UAAL as a level percentage of payroll through June 30, 2037.

Appendix B

Actuarial Assumptions and Methods

All calculations related to merging the plans utilized the TRA methods and assumptions as shown in the July 1, 2013 actuarial valuation. As noted in the report, in some cases DTRFA and SPTRFA utilize slightly different assumptions for their actuarial analysis. The specific assumptions they use are disclosed in their valuation reports as well. Highlights of the TRA assumptions include:

Interest Rate: 8.0 % for five years beginning with the July 1, 2012 valuation, 8.5% thereafter. All three systems utilize this assumption. The financial results presented in this letter use a July 1, 2013 valuation date. As of that date, there were only four years remaining in the select period, so the resulting single effective interest rate is 8.38%.

Payroll Growth: 3.75%. DTRFA and SPTRA use 3.25% and 4.0% respectively.

Salary Increases: A service based table is used. DTRFA and SPTRA use age based tables with select and ultimate factors.

Post-retirement Mortality: Based on the RP-2000 tables with generational improvement reflected. Specific age and collar adjustments vary between the plans.

Withdrawal: Age based rates with select and ultimate factors. DTRFA has a similar approach but different rates. SPTRFA uses a service based table.

Disability and Pre-retirement Mortality: Age based tables. Rates vary by plan.

Retirement: Rates vary by age and eligibility Rule of 90 (unreduced benefits). Rates vary by plan.

Investment-Related Issues

The potential transfer of DTRFA or SPTRFA assets to the State Board of Investment (SBI) for investment management is an important consideration within the broader discussion of merger. A transfer of assets to SBI presents an opportunity for DTRFA and SPTRFA to realize important cost savings and operational efficiencies. These are advantages that could be achieved without full administrative and membership consolidation into TRA.

Overview

The SBI is an important investment resource and is generally available as an investment manager to many retirement plans in Minnesota. A transfer of assets to the SBI could involve moving all or part of a plan's assets.

There are three potential asset transfer approaches which are described briefly here and in more detail later in this chapter. The approaches are:

1) SBI's Combined Fund with Alternatives – The asset transfer from DTRFA/SPTRFA could be made on a permanent basis, by transferring assets to SBI's "Combined Fund."
2) SBI's Combined Fund without Alternatives – The asset transfer could be made on a non-permanent basis to the Combined Fund. Because this would be a non-permanent transfer, the transferring fund would not be able to participate in the Combined Fund's Alternatives investments (i.e. real estate, private equity, venture capital, etc.) since money invested in these types of private market assets cannot be subsequently withdrawn. A transfer to the Combined Fund would require special legislative authority.
3) SBI's Supplemental Investment Funds (SIF) – The asset transfer could be on a non-permanent basis by participating in SBI's "Supplemental Investment Funds" (SIF).

Any transfer of assets to the SBI would require advance planning and coordination. It is generally desired that a transfer of assets to the SBI, where a full consolidation into TRA is involved, should occur as soon as practical following passage of merger legislation. It is important to keep assets of the merging plan fully invested and properly positioned in accord with prior approved investment policy. Furthermore, the sooner the assets transfer to the SBI, the less chance of potential complications or concerns about adverse changes in asset values. Where the merger potential is less clear, delayed or even unlikely, there may still be important advantages for a plan to consider the transfer of assets to SBI.

Asset Investment Options

The SPTRFA and DTRFA, in their deliberations, considered the following options related to a possible transfer of their respective plan assets, in part or in total, to the SBI:

SBI's Combined Fund with Alternatives

The Combined Fund is the primary investment vehicle of SBI. All of the investment assets of the state's three statewide plans, MSRS, PERA and TRA, are in the Combined Fund. Access to the Combined Fund requires special legislative authorization. The Combined Fund consists of five (5) separate fund "sleeves": (1) domestic equity, (2) non-US equity, (3) fixed income, (4) alternatives/private market investments, and (5) cash. Allocation of assets among these separate asset classes is a decision by SBI. The current asset allocation policy among these asset classes is indicated at the end of this chapter.

During the year leading up to official merger of a fund into TRA, the assets of a merging fund could be transferred to the SBI on a total and permanent management basis. The value of the assets transferred to SBI would be determined at the time of transfer and its percentage of the total Combined Fund would be fixed and subsequently reflect SBI Combined Fund returns. Once a complete merger occurs involving all operational and membership elements and the transfer of benefit liabilities to the TRA, the merged plan's assets would then be permanently blended into the existing pool of TRA assets within SBI's Combined Fund. Prior to that period, the merging fund would be a component of the Combined Fund but reside in a segregated account.

SBI's Combined Fund without Alternatives

Another option available to the Duluth and St. Paul Plans involves employing SBI's Combined Fund, but on a non-permanent basis. Because the asset transfer would be non-permanent, there would be no access to SBI's "Alternatives" assets sleeve (i.e. real estate, private equity, venture capital, etc.) since the money invested in these alternative assets cannot be subsequently withdrawn. Assets committed to the Combined Fund under this option would be invested over the four remaining asset areas, exclusive of Alternatives.

While this investment option would be on a non-permanent basis, it does remove most responsibility for asset allocation, performance measurement reporting requirements, and major investment policy elements from the transferring plan's board. The transferring plan would benefit from dramatically lower investment management costs for traditional outside money managers. Additionally, the transferring plan's portfolio returns for each separate asset class would be identical to SBI's asset class returns. This option would be attractive to a plan that is likely to eventually become part of TRA and that no longer desires to make many of the policy and investment related decisions required with asset management. Cost savings are probably greater under this option than the Supplemental Investment Fund option described below.

SBI's Supplemental Investment Funds (SIF)

This group of investment funds represents a separate set of asset offerings, some of which are directly managed by SBI (namely the fixed income assets and index funds) and others (domestic and non-US equities) that are managed by outside investment firms chosen by and under the direction of SBI. The SIF option is available to all Minnesota plans [see *MN Statute, 356A.06 Subd. 7(i)*] and provides a non-permanent alternative to the plan hiring traditional outside money managers.

A major benefit of using the SIF is the operational savings associated with the greatly lower asset management fees. However, other costs related to the oversight of the plan assets, such as retaining an investment consultant(s), a custodian, maintaining an investment policy, and conducting performance measurement, are still responsibilities of the transferring plan. These responsibilities would entail slightly greater costs than employing the non-permanent Combined Fund option mentioned above.

A primary distinction of the SIF is that the transferring plan retains full control of, and responsibility for, its assets. In addition, any pre-existing non-publically traded assets (private equity and debt, natural resource partnerships, venture capital, real estate, etc.) owned by the plan remain with the plan. The transferring board would remain responsible for all aspects of this alternative/non-public traded asset class.

This option differs from the "Combined Funds without Alternatives" option, primarily due to the greater flexibility offered by SBI managed SIF funds (seven options). There is no choice in assets when using the Combined Fund. As a result, the use of the SIF option will result in performance results that would vary from those provided by the SBI's Combined Fund. Under SIF, the performance returns are credited net of fees. The participating funds, however, are responsible for their pro-rata share of SBI's annual operational costs which are exclusive of money management.

The SIF option is less appropriate for a plan expecting to merge, but it is very appropriate for a plan wanting to achieve lower investment management costs, simplify its portfolio oversight function and realize historically competitive returns. In essence, it could serve as a convenient vehicle to facilitate a potential but less certain merger while, in the interim, allowing the plan to realize important economies.

SBI Review

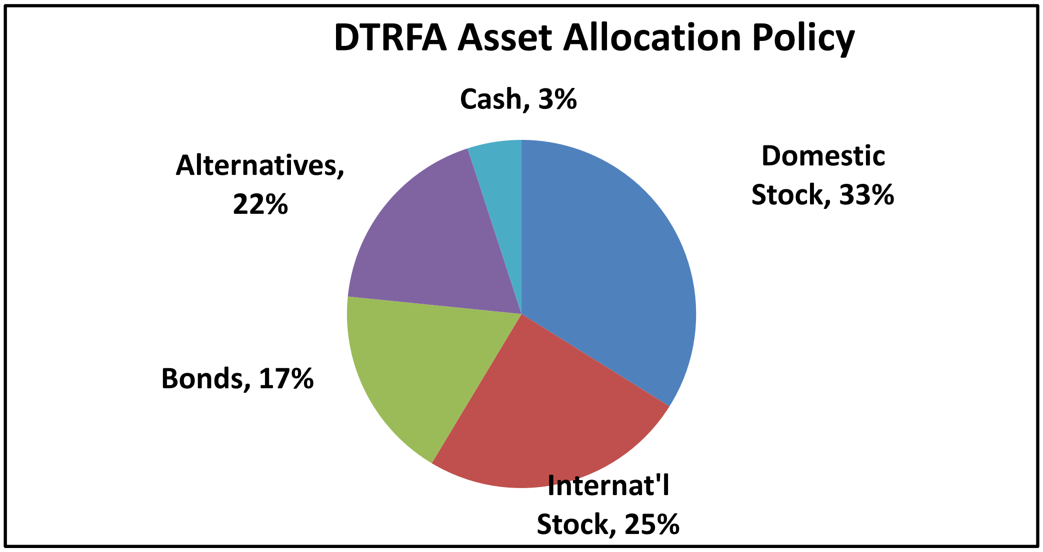
In a letter included in the Appendix to this report, SBI indicates that it has reviewed the DTRFA and SPTRFA portfolios and believes that the assets can easily be accommodated within the existing SBI portfolio following the authorizing legislation. The SBI letter, in summary, states:

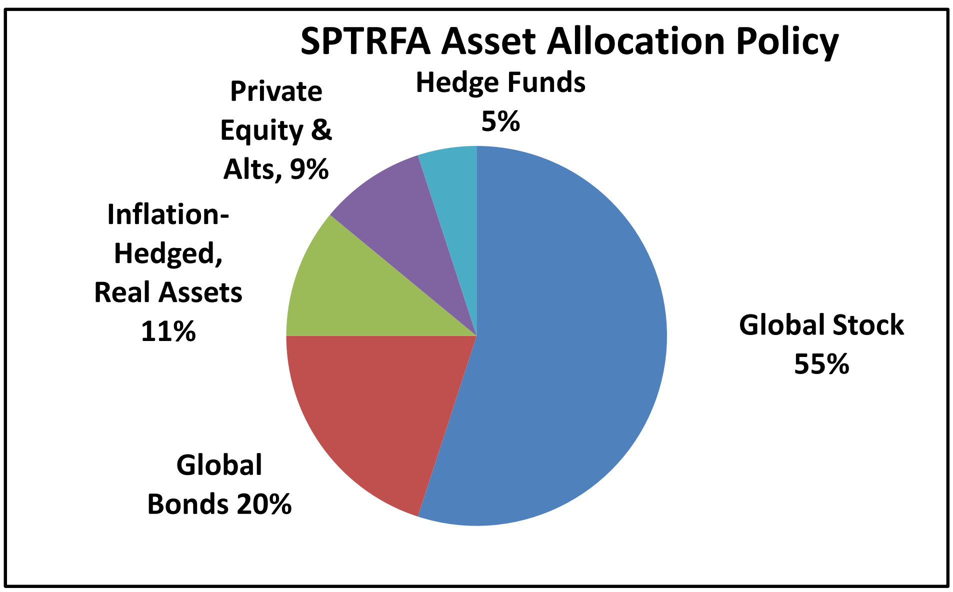
> The majority of assets in each plan are public equities and fixed income. Given the liquid nature and the ready availability of pricing and valuation for these assets, SBI should be able to accept most of these assets either in kind or their liquidated cash proceeds for investment within the Combined Funds or the Supplemental Funds.

There may be some assets, such as DTRFA's direct ownership of real estate (its office building), that may be problematic. In addition, SPTRFA has some investments in hedge funds which SBI would seek to liquidate since SBI does not hold hedge fund investments. SBI would review these holdings on a case-by-case basis and handle in an appropriate and prudent manner.

Asset Allocation Policies

Asset allocation and historical investment performance of TRA, DTRFA, and SPTRFA are shown on the following pages.


DTRFA Asset Allocation Policy
Cash, 3%
Domestic Stock, 33%
Alternatives, 22%
Bonds, 17%
Internat'l Stock, 25%


SPTRFA Asset Allocation Policy
Private Equity & Alts, 9%
Hedge Funds 5%
Inflation-Hedged, Real Assets 11%
Global Stock 55%
Global Bonds 20%

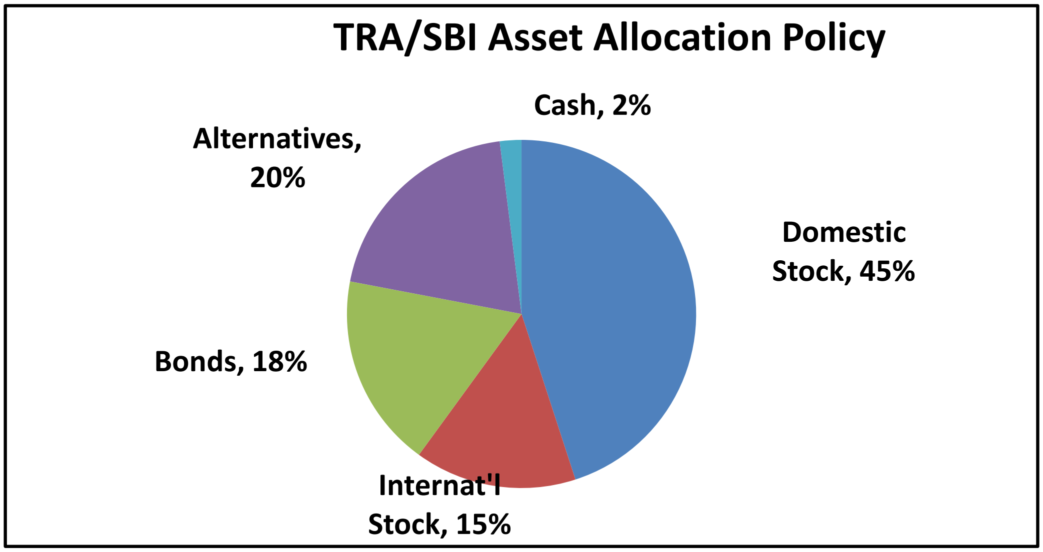


Table 13. DTRFA and SPTRFA Returns, Annualized, Net of Fees
Periods ending 6/30/2013

	1 Yr	3 Yr	5 Yr	10 Yr	20 Yr
DTRFA	16.7%	12.8%	4.1%	6.4%	7.5%
SPTRFA	13.6%	12.6%	5.3%	8.3%	8.4%
TRA (SBI)	14.2%	13.0%	6.2%	8.2%	8.2%

Recommendations of Teacher Fund Boards

DTRFA Board Recommendations

To determine its position on the matter of merger of the DTRFA with the TRA, the DTRFA Board of Trustees considered the following factors:

1. The DTRFA, as of June 30, 2012, had actuarial value of assets of $206,833,425 and actuarial accrued liabilities of $326,243,873 and therefore an unfunded actuarial accrued liability of $119,410,448;
2. The DTRFA, as of June 30, 2012, had a statutory contribution rate of 14.52 percent and an actuarially required contribution rate of 23.01 percent;
3. As of June 30, 2012, the DTRFA funding ratio was 63.4 percent and the contribution deficiency was 8.49 percent, caused in large part to the great recession of 2008-2009;
4. As of June 30, 2012, the DTRFA is facing a significant demographic challenge with only 919 active contributing members and 1,386 retired members and beneficiaries, and the expectation is that this demographic situation will not reverse in any significant fashion and may actually deteriorate;
5. Payroll and salary growth rates actually experienced by the members of the DTRFA for the previous several years have been lower than the assumed growth rates set by the Legislature; therefore, the actuarially required contribution rate has been artificially low for several years.
6. The unfunded actuarial accrued liability of $119,410,448 combined with the contribution deficiency of 8.49 percent and the demographic challenge of a dwindling number of active contributing members and a growing number of retirees and beneficiaries makes the long-term sustainability of the pension plan an unlikely proposition;
7. During the 2013 legislative session, the biennial budget approved for the State of Minnesota appropriates additional support to the DTRFA from the State of Minnesota. However, the support was only for a two-year period of time (fiscal years 2014 and 2015) which is insufficient to resolve the funding shortage of the DTRFA. Given the demographic and actuarial condition of the DTRFA and the long-standing policy of the State of Minnesota to merge public pension funds, Governor Dayton and other key policymakers of the State want to review and possibly implement a consolidation proposal for the DTRFA;
8. Legislation passed in 2013 requires that the DTRFA Board of Trustees and executive director, along with the boards and executive directors of the Teachers Retirement Association (TRA) and the St. Paul Teachers' Retirement Fund Association (SPTRFA), study and prepare a report on the feasibility and requirements necessary to consolidate the teacher retirement funds;
9. The DTRFA Board of Trustees has an obligation consistent with its fiduciary responsibility to ensure that there are sufficient assets so that benefits promised and accrued to the active and retired members of the DTRFA will be payable for the life of the members in order to help provide a secure retirement to those members.

The DTRFA Board of Trustees concluded that:

1. It is in the best interest of the active and retired members of the DTRFA to pursue a full consolidation of the DTRFA with the TRA;
2. That the DTRFA should work with TRA to develop actuarial work, a timeline, and a work plan, agreeable to the Boards of Trustees of the DTRFA and the TRA, to transition the asset management, benefit administration, and membership of the DTRFA to the TRA in a prudent and timely manner;
3. The DTRFA Board of Trustees supports a consolidation of the DTRFA with the TRA if the consolidation is consistent with the DTRFA board's long-standing policy on consolidation.

The DTRFA Board of Trustees recommends the following elements for consolidation:

Benefits and Benefits Administration

1. **Membership transfer** – All active, inactive and retired DTRFA members should be transferred to TRA and become TRA members on June 30, 2015. Newly-hired Duluth teachers after June 30, 2015, should be members of TRA.
2. **Service and salary credit** – DTRFA members' service and salary credit should be transferred to TRA on June 30, 2015, with full recognition of past service and salary credit as recorded by the DTRFA on the date of consolidation. Service and salary credit as of July 1, 2015, will be earned under TRA's service credit laws and administrative practices.
3. **Benefits and benefit calculations** – In a consolidation of the DTRFA with TRA, all rights and benefits earned by DTRFA active, inactive, and retired members before July 1, 2015, should be administered, calculated, and paid by the TRA under the DTRFA laws, bylaws, and administrative practices. Rights and benefits earned after June 30, 2015, should be governed by TRA laws and administrative practices. Specifically with respect to DTRFA members who have rights and benefits under the DTRFA Old Plan or are receiving DTRFA Old Plan benefits (see page 15 for description), those rights and benefits should be protected and administered by the TRA.
4. **Post-retirement benefit adjustments** – Post-retirement benefit adjustments paid after June 30, 2015 to all former members of the DTRFA shall be governed by TRA laws.
5. **Liabilities** – DTRFA liabilities should be transferred to TRA on June 30, 2015. All liabilities, duties, and obligations of the DTRFA that are in law or in contract as of that date shall become the obligation of the TRA.
6. **Impairment** – Legislation should include a statement that consolidation does not impair or diminish benefits of DTRFA consolidating members in existence at the time of consolidation with the exception of future post-retirement adjustments.
7. **Records transfer** – DTRFA records and documents relating to the members and retirees, the pension fund, and the benefit plans of DTRFA should be transferred to TRA no later than June 30, 2015.
8. **Leaves**: Members on an Old Plan leave of absence on the effective date of a consolidation will retain their payment rights under the DTRFA Bylaws.

Investment Transfer, Asset Management and Related Financial Considerations

1. **Date of investment transfer/ legal title** – DTRFA investments should be transferred to SBI for investment in the Combined Funds no later than Dec. 31, 2014. TRA shall have legal title to all DTRFA investments as of June 30, 2015. All commitments of the DTRFA regarding the investment of the DTRFA shall become the obligations of the TRA. Authority should be granted to SBI to pay investment-related liabilities and obligations resulting from transferred assets.

Other Issues

1. **Protection of DTRFA employees** – Immediately following the consolidation of the DTRFA with the TRA, DTRFA employees (except for the executive director) should become employees of TRA. Minnesota Management and Budget (MMB) should place the consolidating employees into proper state service classifications and former DTRFA employees shall be compensated at no less than the hourly rate paid to them immediately prior to consolidation. Unused vacation and sick leave balances should carry forward following consolidation and crediting of prior DTRFA service should count toward future vacation and sick leave accruals. Transferred employees should be enrolled in the state employees' group health and dental insurance programs with no limits on pre-existing conditions.
2. **Maintenance of DTRFA Duluth Office** – Upon consolidation, DTRFA recommends that TRA maintain an office in Duluth to serve Duluth teachers and other TRA-covered teachers in the regional area.
3. **Consolidating Fund's Articles of Incorporation and Bylaws** – A special meeting of DTRFA will be held for the purpose of dissolving the association.
4. **Indemnification** – The TRA should permanently indemnify all past fiduciaries of the DTRFA. Minnesota Statute 356A.11 allows governing boards to indemnify fiduciaries of the plan and hold them harmless from costs or expenses as a result of any actual or threatened litigation or other proceedings. The DTRFA, by Board action and in Bylaws, has indemnified the fiduciaries of the DTRFA to the full extent permitted in law, except to the extent resulting from any willful misconduct, gross negligence, or lack of good faith. Indemnification of DTRFA fiduciaries should be permanent and should survive a consolidation of the DTRFA and the TRA.

SPTRFA Board Recommendations

The SPTRFA Board examined the merits of various options related to a possible merger with TRA. SPTRFA provides a Defined Benefit Retirement Plan for the active and retired educators of St. Paul Public Schools and the St. Paul College. Subsequent to its assessment of the pros and cons of each option, the Board of Trustees agreed that its preference, given what is known at this time, was to not seek to merge with the TRA and to continue as a separate Retirement System.

The Board, in its deliberations, considered four options: 1) full consolidation; 2) a transfer of investment management; 3) a segregated account approach; and, 4) maintaining the "status quo" by remaining a separately operating pension plan. It considered these options in light of its fiduciary relationship with the three entities to whom, by Statute, it is answerable: a) the members of its System, the active and retired public school educators in St. Paul; b) its employer, the St. Paul Public School District #ISD 625; and c) the taxpayers of the State of Minnesota. Based on consideration of currently known variables and factors including operational, governance, financial, demographic, member responsiveness, and functionality, the Board was unanimous in its decision.

The Board, however, also indicated its desire to review and reconsider this question, should events unfold and circumstances become clearer regarding the State's willingness to both fund existing plan shortfalls and refrain from shifting costs to the System's members, the School District or the City of St. Paul. The Board was also concerned that any merged system would enjoy the full rights and benefits of current members and beneficiaries of TRA. If, in time, these questions are answered in the affirmative, the Board would be prepared to reconsider its decision.

As outlined in SPTRFA's consolidation resolution, the Board has met every challenge over its past 104 years. In some cases, it has done so against considerable odds. Its original "pay as you go" approach was a factor behind the Plan's current underfunded status. Later, attempts to build sufficient reserve assets were short-circuited by State action removing important supplemental funds from its employer contribution formula between 1978 and 1994. This gap in funding proved even more critical as investment markets recorded generally very strong returns during this period. Although some efforts have been made to partially address those past shortfalls, there was no way to fully make up for the investment opportunity loss experienced. Today's unfunded actuarial liability of $550 million results directly from those extended periods of underfunding.

SPTRFA has made and continues to make important Plan changes aimed at strengthening its financial status. If the inclusion of this past year's "temporary" State supplemental appropriation were to be extended, together with major long term adjustments to employer and employee contributions and various operational cost savings, the SPTRFA would be on track to fully meet all obligations. This offers a more cost effective approach than merging with the TRA, according to actuarial forecasts. The savings to the State by remaining a separate plan is one of the compelling factors in the Board's decision. The State's $7 million supplemental payment for the next 24 years is a critical element in achieving the Plan's full funding. As an element to this continuing State supplemental payment, the Plan is prepared to statutorily convert from its rolling 25-year amortization schedule to a fixed-date structure.

Our actuary prefers a 25-year period from the time when currently approved contribution increases are fully in effect in 2017. This would establish the fixed amortization date as 2042. From the Board's perspective of meeting its fiduciary obligations to all entities (i.e., members, employer and State), this approach offers the most fiscally efficient and effective strategy.

The Board's Consolidation Resolution included important references to its history of effective stewardship of the Plan investment assets and its continuing assessment of operational details and implementation of adjustments with resultant savings. The Resolution further spoke to the ongoing efforts in working with the State Legislature and the Governor to build a level of trust and respect that has led to a mutual resolution of major policy and financing issues.

Among the specific findings and considerations that led to the unanimous Board vote were the following:
1) The Board's preference is to maintain its 1 percent COLA, as a more prudent approach until the Plan attains an 80 percent funded level as current Statutory provisions allow;

2) Actuarial work indicates that SPTRFA can achieve a funding sufficiency under present assumptions including statutory rate increases provided the System continues to receive the current supplemental State payment of $7 million/year for approximately the next 25 years. This combination of effort provides a less costly approach compared to a fully State funded merger with TRA;

3) Statutory provisions currently grant to SPTRFA a 25-year rolling amortization schedule, based on both the continuing role that education provides for a municipality and to avoid the circumstance where one generation of employees is asked to make up for several generations of underfunding. However, the Board would be prepared to adopt a fixed date of 2042, as indicated above, to establish an achievable target to meet all obligations;

4) SPTRFA has recently invested in a new, highly automated operating system with expectations to achieve major improvements in servicing efficiencies, data storage and systems recovery, the benefits of which would be largely nullified and resultant cost savings lost through a merger;

5) SPTRFA policy makers are all current or former educators maximizing the impact of representation by educators in policy formulation;

6) SPTRFA offers a small, adaptable, responsive and conveniently accessible servicing capability for its membership;

7) Employer school district, based on recent trends, appears to be rebounding from past steady declines in student enrollment. In fact, in 2013, not only did student enrollment level off but SPTRFA's dollar growth in Plan contributions, for the first time, outpaced the dollar increase in benefit payroll. This is a financially favorable development which is expected to continue for the foreseeable future, impacted by the declining number of Basic Plan annuitants;

8) SPTRFA's Plan currently enjoys a "sole employer" status which presents considerable advantages administratively over a more complex, multi-employer Plan, such as TRA. This is important when considering ease of making needed changes to policies, operational programs, accounting and reporting procedures;

9) Currently, it is unclear as to the potential financial impact upon both employees and the school district of a merger with TRA. At some point, TRA will likely be faced with requesting contribution increases, state aid and/or benefit adjustments to address its unfunded liability. It would not be desirable to merge and then, once part of TRA, have SPTRFA's stakeholders hit with potentially further plan contribution increases needed to address TRA's deficiency. This situation would appear to be avoidable by remaining as a separate Plan.

10) Finally, a major unknown exists, separate from the fundamental choice to merge or not merge with TRA, faced by the SPTRFA Board of Trustees. Assuming the Board of TRA requires any merging entity to be fully funded, how will such a substantial financial requirement be met? Will the Legislature agree to underwrite such an expense? Will it require a further commitment from the School District of St. Paul or its educators in the form of even greater contributions? (The St. Paul School District already contributes one of the highest percentages of salary of any school district in the State.) It is this uncertainty more than any other consideration that led the Board to not hastily move into a merger with the TRA at this time.

The SPTRFA is not in a funding emergency. It has a prospective plan that will allow it to achieve full funding of its obligations, conditioned on its ability to meet realistic target assumptions. It is willing to establish a fixed amortization date. It plans to request the Legislature to extend the annual "supplemental payment," authorized by the 2013 legislation, until 2042. These are key elements to the Board's ability to establish a funding "sufficiency." Should this be achieved, as a separately operating entity, the Board will be in a position to meet all its obligations in a more cost effective and operationally efficient manner than would result through a merger of the system into TRA.

TRA Board Recommendations

Financial Considerations

The TRA Board is willing to accept the fiduciary, financial and administrative responsibilities of consolidating DTRFA and/or SPTRFA into TRA with the condition that sufficient financial assistance is provided to TRA to assure that TRA assets are protected, that TRA is not subsidizing the merging fund(s), and that the consolidating fund(s) are merged into TRA at a fully-funded level.

Specifically, with respect to the proposed consolidation of DTRFA, TRA requires the following financial assistance:

1) All annual state aid payments currently pledged and committed to DTRFA under state statute will be redirected to TRA as of the consolidation date and continued into the future at least through TRA's existing 24-year amortization period. These annual state aid payments include:
    a. Special direct state aid of $346,000 per year provided under MN Statutes 354A.12, subd. 3a.
    b. Amortization state aid provided under MN Statutes 423A.02, subd. 3 ($209,402 in FY 2014).

2) In addition to the state aid payments described above, TRA requires that additional financial assistance be provided through ongoing annual payments that are sufficient to cover 100 percent of the DTRFA liabilities that TRA would assume upon consolidation. (These amounts are described in an earlier chapter of this report, "Financial Impact and Actuarial Analysis," including the methodology used to calculate them.) This additional financial assistance should continue at least through TRA's 24-year amortization period. The additional amounts are:

a. Continuation/extension of the $6,000,000 per year in supplemental state aid provided to DTRFA under Laws of MN 2013, chapter 111, Article 14, section 23.
b. An additional amount estimated to be $8,701,000 per year.

The additional aid amounts described above should continue to be made until two conditions are met:

1) a contribution decrease is triggered under TRA's contribution stabilizer (Minnesota Statutes 354.42 Subd. 4c) and

2) TRA attains a 100 percent funding level. Sustaining the additional aid is required because adverse experience with investment returns or other factors could cause TRA subsequently to drop below 100 percent and experience a deficiency.

As fiduciaries, the TRA Board is obligated to request a level of additional financial assistance to achieve a 100 percent funding level for the consolidating fund in order to protect TRA assets and assure that TRA is not subsidizing the merging fund, which is a mandate of the statutory language authorizing this study. Requesting a level of financial assistance that brings any merging fund into TRA at a fully funded level will achieve this mandate and furthermore is consistent with past practice and precedent established in 2006 when the Minneapolis Teachers Retirement Fund Association (MTRFA) was consolidated into TRA. The financial framework for consolidation of MTRFA is described in detail in the "Options for Consolidation" chapter of this report.

With any merger, TRA incurs risks of subsequent adverse events or subsequent adverse actuarial experience. These risks include:

- The risk that the amount of financial assistance pledged upon consolidation is subsequently interrupted, not continued, or re-calculated in a manner that lowers the amount. This is a substantial risk for TRA because the additional financial assistance TRA is requesting is subject to the state's annual appropriation process and statutorily-driven formulae. For example, the $209,401 in state amortization aid received by DTRFA in the most recent year is down by $112,651 (35 percent) from the $322,052 level it was in 2010.
- The risk that future investment performance or adverse experience with other actuarial assumptions (mortality, payroll growth, salary growth, withdrawal rates) deviates from expectations in a manner that makes the costs of consolidation much higher than what is estimated at the time of consolidation.
- The possibility that the current select and ultimate interest assumption of 8 percent/8.5 percent is lowered in the future, a legislative action that would increase liabilities substantially and thereby increase the amount of financial assistance needed to cover the cost of consolidation.

If TRA does not receive aid sufficient to bring any merging fund(s) in at a 100 percent funding level, then it will require that merging fund(s) be set up in separate accounts (similar to MERF) in which the assets and liabilities of the merging fund(s) are placed in a separate account and the financial responsibility for funding any merging fund(s) would remain with the employer and the state, not with TRA.

TRA's Funding Needs

For FY2013, on a market value basis, TRA is 77 percent funded and has a 1.7 percent of pay deficiency. The TRA Board has been monitoring the fund's financial status carefully and, as it did in 2009-2010, will recommend any measures it considers necessary to assure that TRA stays on a path to attain a fully-funded status by its target amortization date.

Administrative Considerations

With respect to non-financial, administrative consolidation issues, the TRA Board recommends that the final effective date of consolidation be set a full year after the effective date of enabling legislation.

Care needs to be taken to ensure that any transfer of the benefits administration function is done in an orderly, planned manner to allow a smooth transition that will not disrupt services to members and will permit accurate, timely benefit calculations for consolidating members. TRA's benefit and service credit calculation systems are highly automated and depend heavily on computerized member data and imaged member records. Sufficient time will be needed for TRA to carefully integrate member data and records from the consolidating fund into TRA's benefit calculation and imaging systems. Time will also be needed to program TRA's computer systems with any special benefit provisions of the consolidating system. The TRA Board believes that a full year is needed to accomplish a phased and carefully planned transfer of benefits administration functions. This phased approach is described in the next chapter, "Implementation Plans."

When MTRFA was consolidated in 2006, it was done very abruptly with little more than a month to plan for and execute a transition. The legislation was enacted on May 26, 2006, and consolidation occurred on July 1, 2006. As a result, TRA could not provide the former MTRFA members with optimum service levels nor accurate benefit estimates and information during the first year of consolidation due to the inability to assimilate reliable data and records into its administrative systems. This necessitated subsequent costly rework of benefit calculations, estimates and payments.

With respect to the DTRFA office in Duluth, TRA plans to utilize the office space currently occupied by DTRFA as a satellite office. Having a satellite office in Duluth will allow TRA to serve not only Duluth teachers but also improve the services provided to the many other teachers in the northeastern area of the state. TRA already has three satellite offices (Detroit Lakes, Saint Cloud and Mankato), which are heavily used by teachers and retirees to access services more proximate to where they live.

Implementation Plans/Timeframes

This chapter describes the numerous administrative and financial reporting/accounting tasks and duties that need to be accomplished in order to permit a smooth consolidation of the DTRFA into TRA. As stated earlier in this report, sufficient time is needed to ensure that consolidation is achieved in an orderly, planned manner so that services to TRA and DTRFA members are not disrupted and so that accurate, timely benefit and service calculations can be made. Given the considerations described in this chapter of the report, the TRA and DTRFA boards believe that a full year is needed to accomplish a phased transfer of benefits administration and financial reporting/accounting functions.

Member Data/Records

TRA's computerized benefit and service credit calculation systems are highly automated and depend heavily on electronic member data and imaged member records. Adequate time is needed to integrate member data and records from the consolidating fund into TRA's benefit calculation and imaging systems and to program TRA's computer systems to accommodate DTRFA's members and special benefit provisions. Some of the data transfer can be electronic (computer system to computer system) but it is anticipated that some of it may require manual data entry. Time will also be needed to test any assimilation of data and records to ensure accuracy.

The consolidation requires the migration of both current and historical data for DTRFA's 3,343 active members, inactive members and benefit recipients from the current DTRFA pension system to TRA's database. The paper files associated with all of those members will also need to be scanned into TRA's electronic imaging system and indexed with new accounts created and associated with the appropriate member files. We estimate that over 85,000 pages of DTRFA member records will need to be imaged and indexed into TRA's system.

Work with Duluth School District on Payroll Data Submission

DTRFA and TRA staff will need to meet with the Duluth school district payroll personnel to describe TRA's data needs and assist them with altering their payroll reporting systems so that TRA can receive the information it needs to set up and maintain member accounts and calculate service credit. The school district is likely to need time to change or re-program its payroll systems to accommodate TRA's data reporting requirements which are substantially different from those of DTRFA.

Monthly Payments to Benefit Recipients

DTRFA's current financial relationships with the bank it uses to process monthly payments to benefits recipients will need to be evaluated and assessed to determine when accounts can be transitioned to TRA. The accounting method to transfer funds between accounts will also need to be determined. Eventually the monthly payment mechanism used to pay benefit recipients will be transferred to TRA but only after thorough testing.

Staff Training

TRA staff will need to be trained on DTRFA's benefit provisions and systems to allow them to gain an understanding of DTRFA's historical data and records. Similarly, DTRFA's staff will need to be trained on TRA's benefit provisions and computerized systems so that going forward they will be able to serve not only DTRFA members but also TRA members in the northeastern part of the state.

Staff Transition

Other considerations include the transition of three DTRFA staff (other than the executive director) to become TRA/State of Minnesota employees. These staff members will need to be assimilated into TRA and into the state's personnel system. Minnesota Management and Budget (MMB) will evaluate their job descriptions and responsibilities and place them into proper state service classifications.

Member Outreach and Communication

If consolidation of DTRFA is approved, substantial efforts will be made to educate DTRFA and TRA members about the merger. This would be a joint effort by DTRFA and TRA, conducted in the Duluth area. It will entail a welcome letter sent to DTRFA members, group meetings for DTRFA members and retirees, as well as one-on-one counseling, particularly for DTRFA members nearing retirement. In addition, both TRA and DTRFA will use existing communication channels (newsletters, website) to communicate information to their memberships about the status of consolidation and any financial implications.

The table below identifies the main tasks required to consolidate DTRFA into TRA and also lists the sub-tasks associated with each main task. The goal of the table is to provide a high level inventory of the systems, processes, and requirements that would be part of a consolidation along with timeframes. The timetable below assumes that the consolidation effort begins with enactment of authorizing legislation in the spring of 2014 and is fully implemented by June 30, 2015.

Information Systems/Computer Infrastructure
Timeframe: July – September 2014

System Network Infrastructure	• assess DTRFA network infrastructure • evaluate/modify existing service contracts and maintenance agreements • evaluate vendor relationships • assess web site management • evaluate email server, Internet Service Provider • assess phone service and determine how best to integrate with TRA • evaluate desktop administration • migrate and integrate above functions into TRA network servers, virtualization of DTRFA workstations • training of DTRFA staff on new tools
DTRFA IT/benefit system	• evaluate maintenance, support agreements • assess future support • training • conversion to TRA servers
System Integration	• prepare TRA systems to accept conversion and integration of DTRFA's benefit system into TRA database

Employer Reporting Relationship
Timeframe: July – September 2014

Employer Reporting	Meet with Duluth School District staff to assess current payroll data transmissions and discuss TRA data requirements. Assess: • payroll system • payroll vendor • current payroll submissions • contribution rate changes • leave reporting • demographic files • service credit information (payroll dates, BA salary, contract dates) • staff training needed on TRA systems

Member Data and Record Transfer/Assimilation
Timeframe: October 2014 – March 2015

Active Members	• member demographics (address, gender, date of birth) • hire date (pre/post 89) • Service credit • overlapping service with other systems • payroll/salary history • account ledgers for historical data • employer deductions and employee deductions • employee post tax contributions (FIC) • refund information: refund balance, refunded service, refund repayments, partial refund repayments • historical service purchase records • annual benefit statements • member payments, 1099s • active leaves, historical leaves • identify shared members (avoid duplicate accounts) • combined service information • testing for accuracy of above data elements
In-Active Members	• member demographics (address, gender, date of birth) • hire date (pre/post 89) • termination date • Service credit • overlapping service with other systems • payroll/salary history • account ledgers for historical data • employer deductions and employee deductions • employee post tax contributions (FIC) • refund information: refund balance, refunded service, refund repayments, partial refund repayments

	• historical service purchase records • annual benefit statements • member payments, 1099s • active leaves, historical leaves • identify shared members (avoid duplicate accounts) • combined service information • testing for accuracy of above data elements
Benefit Recipients	• demographics (address, gender, date of birth) • payment information (amount, tax withholding, post-tax contributions, acceleration, bounce back) • payee type (retiree, disability, OJA, dependent child, non-member) • payee account (check, direct deposit) • benefit payment history • 1099s • joint and survivor plan election • term certain payment • history of adjustments • payroll ledgers for historical data • earnings Limitation Savings Acct balances, return to work agreements • testing for accuracy of above data elements
File imaging	• scanning equipment – obtain, determine location • Identify documents / types • staff training to image • determine priority file scanning • file storage • retention schedule • testing of imaged files

Administration
Timeframe: January – March 2015

Administration	• staff training (both TRA and DTRFA) on new benefit systems • work responsibilities assessment • integrate into TRA workflow management system • transition from DTRFA to State of MN employees • position classifications (work with MMB) • DTRFA satellite office

Finance and Accounting
Timeframe: January – June 2015

Finance & Accounting	• Evaluate banking relationships • EFT capabilities • fund transfers

	• benefit payments (payments made from the DTRFA system after consolidation) • administrative expenses (integrate DTRFA spending into TRA budgeting) • inventory of physical assets • actuarial survey/ valuation – prepare to transfer assets/liabilities • investment/asset transfers • CAFR integration • closing audit

Member Communication and Outreach
Timeframe: July 2014 – June 2015

Member Outreach	• welcome letter for DTRFA members • communicate any plan changes or differences • describe contribution rate changes (if any) • update forms and publications • provide contact center information (phone numbers, web site, self-service website) • COLA changes • Group presentations • One-on-one counseling • Publicize availability of Duluth satellite office to TRA members

Appendices

Memorandum from State Board of Investment re: Asset Transfers

DATE: October 31, 2013

TO: Laurie Hacking

FROM: Mansco Perry III

SUBJECT: Asset Transfers from the Duluth Teachers and Saint Paul Teachers Plans.

The SBI has reviewed the assets of the Duluth Teachers and the Saint Paul Teachers Plan. The majority of the assets in each plan are public equities and fixed income. Given the liquid nature and the ready availability of pricing and valuations for these assets, the SBI should be able to accept most of these assets either in kind or their liquidated cash proceeds for investment in the Combined Funds or the Supplemental Funds. Equity and fixed income assets invested with the SBI may be available to be withdrawn from the SBI in the event an anticipated merger does not occur.

The plans also have investments in other asset classes which the SBI will have to review on a case by case basis. In general, if the assets are of a type that the SBI currently invests in, then most of those investments should be acceptable to the SBI. Generally, these would be limited partnership vehicles (including fund of funds) investing in private equity, real estate or resources. While these assets can be absorbed by the SBI, the SBI has sole authority with regard to pricing or valuation of these assets at the time of transfer. In most cases, the transfer will be based on the audited net asset value. It must be noted that for these assets, the transferring system needs to have taken the appropriate legal steps to facilitate the transfer of these assets. These assets can only be transferred into the Combined Funds. Any transfer of these types of assets into the Combined Funds is considered permanent and cannot be transferred back to the transferring plan if a merger does not take place.

Some illiquid assets may be of a type that the SBI does not hold. In those cases, the SBI will not accept the assets. Duluth Teachers owns two buildings. The SBI cannot have direct ownership in real estate and will not be able to accept Duluth's buildings. Saint Paul Teachers may have investments in hedge funds. If the hedge funds cannot be liquidated, it is unlikely that the SBI would be able to accept a transfer in most cases.

In general, the SBI believes that it can accommodate the transfer of most of the assets held by Duluth Teachers and Saint Paul Teachers. However, there may be some assets which are problematic and deemed to be unacceptable. The SBI would review these on a case by case basis and handle in an appropriate and prudent manner. The SBI does not believe that any transfer in of assets should take a significant length of time to execute.

Teacher Fund Chronology and History

DTRFA Chronology and History

The Duluth Teachers Retirement Fund Association (DTRFA) was authorized in law in 1909, and was incorporated in 1910. The plan currently covers licensed educators employed by Duluth public schools, some faculty members at the Lake Superior College, and staff of the DTRFA.

- **1919**: The plan began operating on an actuarial reserve basis, one of the first teacher pension funds in the nation to do so. An initial retirement annuity formula was established in bylaws with a benefit accrual rate of 1.42 percent per year of allowable service, multiplied by the highest 10 years' average salary, and normal retirement at age 55. Normal retirement age was increased from age 55 to age 60 on a phased-in basis between 1948 and 1953.

- **1957**: The DTRFA coordinated with Social Security for all members. Additionally, the retirement annuity formula in the bylaws was revised with the benefit accrual rate set at 0.71 percent per year of allowable service, multiplied by the highest ten years' average salary. The plan was also modified to permit additional member contributions to produce a larger pension benefit.

- **1966-1981 – Annual Post-retirement Adjustments**: The plan granted several ad hoc post-retirement adjustments, with a 10 percent adjustment in 1966, a 9 percent adjustment in 1968, a 4 percent adjustment in 1969, a 5 percent adjustment in 1971, a 9.5 percent adjustment in 1975, a 3 percent adjustment in 1976, and an 8.7 percent adjustment in 1981.

- **1971**: The retirement annuity formula in the bylaws was revised, with the benefit accrual rate set at 1.15 percent per year of allowable service, multiplied by the highest five years' average salary.

- **1978**: Pension coverage of the DTRFA was extended to part-time and hourly educators of Duluth public schools.

- **1981**: The retirement annuity formula in the bylaw plan was revised, with the benefit accrual rate set at 1.25 percent per year of allowable service, multiplied by the highest five years' average salary. The member contribution rate was increased to 4.5 percent of salary. A new benefit tier (Tier I) was created in state law for members hired after June 30, 1981 with a benefit accrual rate of 1.0 percent for each of the first 10 years, and 1.5 percent thereafter, a high-five average salary, and normal retirement at age 65 or rule of 90.

- **1985**: A 13th check post-retirement adjustment mechanism was established based on investment returns in excess of the post-retirement actuarial interest rate assumption rate and allocated as a particular dollar amount (unit value) per number of years of service credit plus the number of years on retirement.

- **1989**: A second tier benefit plan (Tier II) was created in state law for members hired after June 30, 1989, and for those hired before that date if the second tier of benefits provided a higher benefit. The formula accrual rate was 1.5 percent per year of service, a high-five average salary. Normal retirement is either age 65 or Social Security normal retirement age, whichever is greater.

- **1995**: The 13th check provision was discontinued. Beginning Jan. 1, 1995, annuity payments were increased by 2 percent annually plus an additional investment-related post-retirement adjustment if the five-year annualized return exceeded 8.5 percent, with a reduction for any contribution deficiency.

- **1995**: The benefit accrual rates were increased by 0.13 percent, so that the bylaw plan accrual rate was 1.38 percent per year, the Tier I plan accrual rates were 1.13 percent for each of the first 10 years and 1.63 percent thereafter, and the Tier II plan accrual rate was 1.63 percent per year. The member contribution rate was increased from 4.5 percent of covered salary to 5.5 percent. The employer contribution rate remained unchanged at 5.79 percent.

- **1995**: Membership in the DTRFA was closed to faculty at Lake Superior College hired after June 30, 1995.

- **1997**: The benefit accrual rates were increased by 0.07 percent, so that the bylaw plan accrual rate was 1.45 percent per year, the Tier I plan accrual rates were 1.20 percent for each of the first 10 years and 1.70 percent thereafter, and the Tier II plan accrual rate was 1.70 percent per year.

- **1997-2002**: Direct annual state aid of $486,000 was established. This aid was discontinued in 2002 when the DTRFA funding ratio exceeded the funding ratio of TRA.

- **2002**: Pension coverage for teachers in Duluth charter schools was changed from DTRFA to TRA.

- **2008**: Direct state aid of $346,000 per year was reestablished.

- **2009-2013**: Amortization state aid was redirected so that a portion is allocated to the DTRFA. Amount is variable, but has averaged around $200,000 over five years.

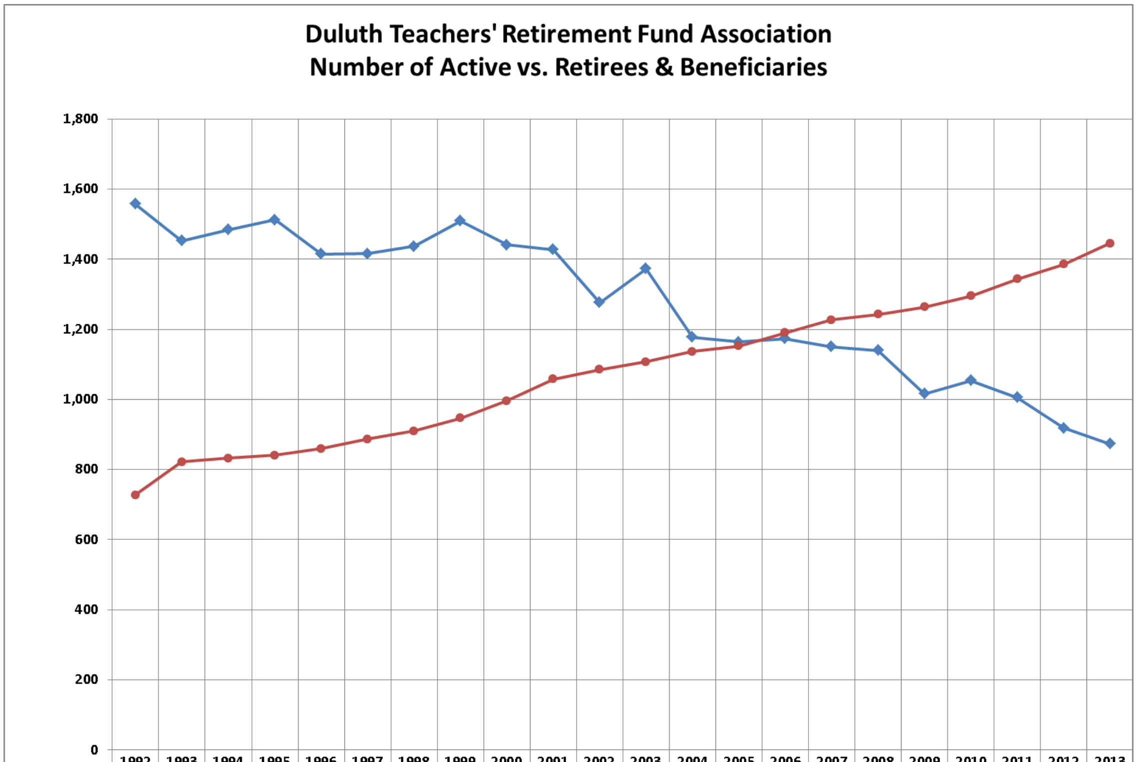
- **2011**: The post-retirement adjustment procedure was revised with a procedure consisting of a transitional method and a permanent method. Under the transitional method the adjustment was determined based on the funding ratio of the plan using market value of assets. The method provided that no increase is payable if the funding ratio of the plan is less than 80 percent; a 1 percent increase if the funding ratio of the plan is between 80 percent and 90 percent, and a 2 percent increase if the funding ratio is greater than 90 percent. The permanent method would become effective when the funding ratio of the plan using actuarial asset value is at least 90 percent. This method would provide a match of inflation up to 5 percent. If the funding ratio based on actuarial value falls below 80 percent, no increase will be paid.

- **2011**: The employee contribution rate increased from 5.5 percent to 6.0 percent and the employer contribution rate was increased from 5.79 percent to 6.29 percent. Vesting increased from three years to five years, interest payable on refunds was reduced from 6 percent to 4 percent, the rate of augmentation for deferred accounts was reduced to 2 percent, and interest on reemployed annuitant savings accounts was eliminated.

- **2012**: The employee contribution rate increased from 6.0 percent to 6.5 percent and the employer contribution rate was increased from 6.29 percent to 6.79 percent.

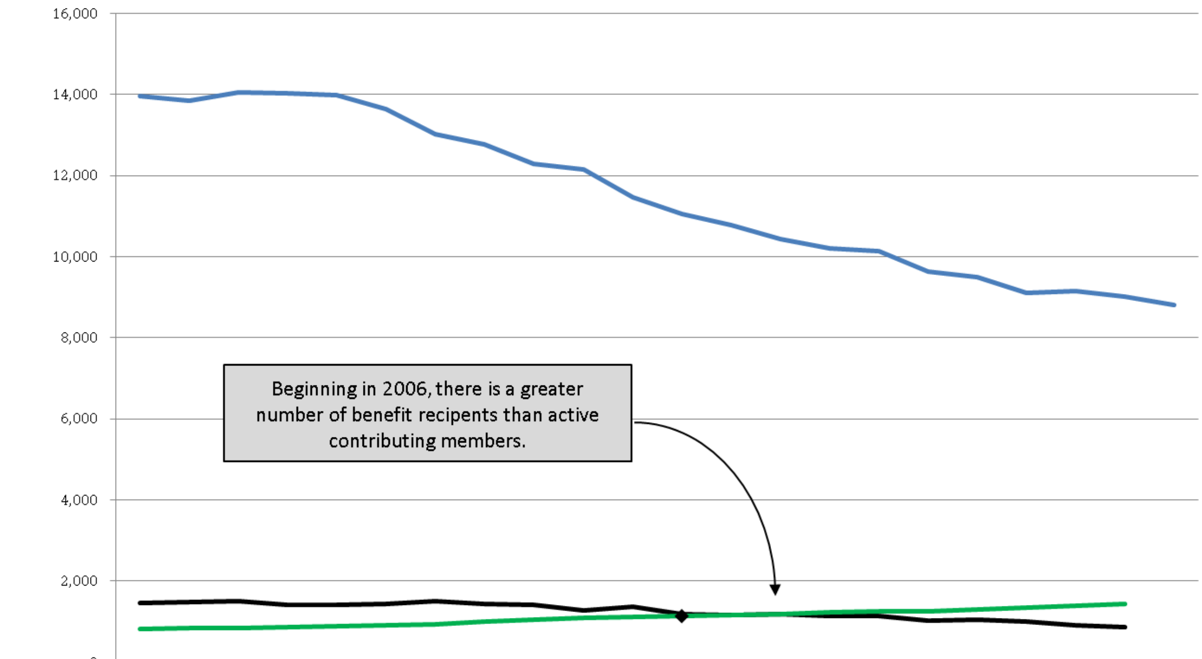
- **2013-2014**: In July 2013, the employee contribution rate increased from 6.5 percent to 7.0 percent and the employer contribution rate increased from 6.79 percent to 7.29 percent. In 2014, the final step of the contribution rate increase will take effect. Employee and employer contribution rate will each increase to 7.5 percent.

- **2013**: The benefit accrual rates were increased by 0.20 percent in the Tier I and Tier II plans. Currently the Tier I plan accrual rate is 1.40 percent for each of the first 10 years and 1.90 percent thereafter, and the Tier II plan accrual rate is 1.90 percent per year. The transitional post-retirement adjustment method initiated in 2011 was replaced with a 1 percent adjustment. The Duluth School District is required to make full employer contributions on the salaries paid to reemployed DTRFA annuitants. The reemployed annuitant savings accounts are eliminated and penalty amounts are forfeited. The early retirement reduction factors were changed. An additional $6 million in direct state aid was appropriated to the DTRFA for fiscal years 2014 and 2015.



	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Active	1,558	1,453	1,484	1,512	1,415	1,416	1,437	1,509	1,441	1,427	1,276	1,373	1,178	1,164	1,174	1,150	1,140	1,016	1,054	1,006	919	873
Retired	728	822	832	841	860	887	910	947	996	1058	1085	1,107	1,137	1,153	1,190	1,227	1,243	1,264	1,295	1,344	1,386	1,445

Duluth Public School Enrollment vs DTRFA Membership



	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Students	13,966	13,836	14,056	14,017	13,970	13,631	13,023	12,758	12,284	12,154	11,473	11,050	10,772	10,431	10,210	10,143	9,631	9,501	9,114	9,143	9,005	8,800
Active	1,453	1,484	1,512	1,415	1,416	1,437	1,509	1,441	1,420	1,276	1,373	1,178	1,164	1,174	1,150	1,140	1,016	1,054	1,006	919	873	
Retired	822	832	841	860	879	910	939	996	1,058	1,085	1,107	1,137	1,153	1,190	1,227	1,243	1,264	1,295	1,344	1,386	1,445	

SPTRFA Chronology and History

- **1909 – 1965**. SPTRFA was founded in 1909 as a "Basic" defined benefit retirement plan, meaning members were ineligible to join Social Security. Funding was "pay as you go." Teachers and the City of St. Paul each contributed enough to merely pay the currently owed retired teacher benefits. By 1954, SPTRFA's reserve totaled about three months of benefit payments when the Legislature mandated that employee/employer contributions be instituted to put SPTRFA on the road to full funding. These employee/employer "Normal Cost" contributions were 8 percent of payroll, from each source. In addition, an extra "supplemental" payment of 4.63 percent from the employer was mandated and earmarked for past underfunding.

- **1966 – 1977**. In 1966, with the creation of ISD #625, the City of St. Paul was replaced by ISD #625 St. Paul Schools as the "employer of record." Minnesota enacted tax reform legislation in 1974, commonly known as the "Minnesota Miracle." Under that program, the state assumed the primary responsibility for funding schools, including employer pension contributions. During both of these "employer of record" changes, the required normal and supplemental contributions were made. Progress toward full funding continued, rising from 5 percent to 55 percent funded by 1984.

- **1978 – 1985**. The Legislature, in 1978, mandated that, prospectively, all teachers join the newly designed “Coordinated Retirement Plan” (which included Social Security coverage). Members contributed 4 percent to SPTRFA, matched by a 4 percent employer contribution, made by the state. The SPTRFA’s original “Basic Plan” was “closed” to new members as of July 1, 1978. Normally, this step would not have impacted SPTRFA’s solvency except that the legislation neglected to extend the critical employer’s 4.63 percent supplemental contribution to Coordinated members, which was necessary to achieve any hope at full funding of the entire system. Therefore, after 1978, SPTRFA’s funded ratio began to retreat, saved only by strong performance from its investment portfolio. By 1986, the funded level stood at 55 percent. From 1978 until 1994, the state had saved millions of dollars by not mandating the employer “supplemental contribution” for the SPTRFA’s Coordinated members. It made an employer supplemental contribution for every other teacher covered by a MN Coordinated Plan during this time.

- **1986 – 1995**. In 1986, the Legislature mandated that employer contributions be made by school districts. This made it even more difficult for SPTRFA to obtain that much needed “supplemental contribution.” This was due to the school district (rather than the state) now benefitting from the financial windfall that occurred each time a Basic member retired and no further 4.63 percent of salary “supplemental contribution” was required for his/her replacement Coordinated Plan member. During the 1990s the Legislature recognized that this “supplemental” payment for Coordinated members was essential to an improved funding status. In 1992, the Legislature finally re-authorized an employer supplemental contribution, but for just 1 percent of salary for Coordinated members. It was, however, at least a beginning. By 1993, the employer supplemental contribution was raised to 1.5 percent. Finally, in 1994, both Coordinated and Basic members had the employer supplemental contribution equalized at a reset 3.64 percent. This was an increase for the Coordinated but a decrease of over 1 percent for the Basic members. At the same time, however, the state began a schedule of annual payments of $500,000. This was the beginning of direct state involvement in helping to address the SPTRFA’s past underfunding.

- **1996 – 2007**. In 1996, SPTRFA received an additional annual contribution of $200,000 from the St. Paul School District and that contribution was increased to $800,000 by 2001. That annual $800,000 payment from the employer continues today. In 1997, Coordinated members saw their contributions rise from 4.5 percent to 5.5 percent. Although the base employer contribution remained at 4.5 percent, the employer’s “supplemental” payment increased from 3.64 percent to 3.84 percent. Additionally, the annual state aid, previously $500,000 per year, jumped to $4,827,000 for one year, after which it was set annually at $2,827,000.

- **2008 – present**. The 2008-2009 global economic crisis and resulting market downturn required the SPTRFA employee contributions, for both Basic and Coordinated Plans, to rise to from 5.5 percent to 7.5 percent in phases until 2016. In a similar manner, the employer’s base contribution rate was increased to 6.5 percent. Together with the “supplemental payment,” the employer will pay 10.34 percent of salary when fully in effect in 2017. Now, after many years of underfunding by the City of St Paul, ISD #625 and the State of Minnesota, our actuary has determined that with recent contribution increases coupled with operational savings and continued aid of $7 million annually from the state, the fund would be on track to full funding.

TRA History and Chronology

- **1931 – 1968**. During its early years, TRA was a defined contribution plan with low contributions (5 percent to 6 percent) made solely by employees. Neither the state nor school districts made direct TRA contributions. The state made matching annuity payments once teachers retired. In 1957, TRA participation became mandatory and the state partially matched (up to 4 percent) employee contributions of 6 percent. In 1960, the state began making additional contributions of 1.5 percent for Coordinated members and 1.0 percent for Basic members. Members hired after 1959 automatically became members of the Coordinated Plan with Social Security coverage.

- **1969 – 1987.** In 1969, TRA become a mandatory program with a defined benefit plan that used a modified career average formula and an optional Variable Annuity Fund (VAF) defined contribution plan. The VAF was deemed to be inadequate and closed off to new members beginning in 1974. In 1973, the high-five average salary program was enacted. In 1984, a temporary 30-month Rule of 85 window was enacted.

  Employee/employer (state) contribution rates were increased in 1969 to 3.5 percent for Coordinated members and 7 percent for Basic members. The state also paid extra contributions of 2 percent per member to amortize unfunded liabilities. In 1973, employer/ employee contributions rose to 4 percent for Coordinated members and 8 percent for Basic members. The state's additional employer contribution also rose to 2.5 percent in 1974, 3 percent in 1977, 3.55 percent in 1980, and 4.48 percent by 1984. During this period, the state, not school districts, directly paid TRA contributions. Due to the extra contributions, TRA's funded ratio rose from 50 percent in 1974 to 70 percent by 1987 and its deficiency, which had been almost 6 percent, was eliminated. This improvement in TRA's financial status was due in part to increased contributions made by employees, employers and the state, and in part to strong investment returns.

- **1987 – 1998.** In 1987-88, the Legislature enacted a new school aid formula under which the state ceased making direct contributions to TRA and instead school districts started making all TRA contributions. The state funded school aid at a higher level to recognize this new school district obligation. The extra employer contributions continued at 4.48 percent from 1985 to 1991 when it declined to 3.64 percent, due to TRA's improving finances.

  In 1989, a comprehensive package of benefit changes was enacted. The main provisions of this law included: improvements in the benefit formula, adoption of a Rule of 90 provision that was eliminated for those hired after 1989, a higher normal retirement age of 68 for those hired after 1989, lower three-year vesting period, and a permanent increase for pre-1973 retirees whose benefits lagged behind inflation. In 1992, a new law modified the Post Retirement Investment Fund mechanism for determining annual increases in retiree benefits. In 1994, TRA's formula multipliers were increased by 0.13 percent, and in 1997 future annual post-retirement increases were decreased by 1 percent with the resulting savings used to improve the formula multiplier by 0.07 percent. Also in 1997, the normal retirement age was capped at age 66.

In 1998, TRA attained full funding because of the extra contributions and strong investment returns. TRA's funded ratio improved from 70 percent in 1987 to 100 percent by 1998. As a result, the employer additional contribution of 3.64 percent was eliminated and employer/employee contributions dropped to 5 percent for Coordinated members and 9 percent for Basic members. In 1998, state funding through the school aid formula decreased because of declining contributions to TRA. At that time, the state redirected approximately $16 million of the savings to the first-class city teacher funds. DTRFA received $486,000 annually; SPTRFA received $2.8 million annually; and the former Minneapolis Teacher Retirement Fund Association (MTRFA) received $12.9 million annually.

- **1999 – 2009.** TRA was over 90 percent funded throughout most of this decade. Contributions remained at 5 percent for employers/employees. A combination of factors, however, began to weaken TRA. Investment returns were low for three years (2001-2003) while TRA's liabilities were driven up by large post-retirement increases granted in the late 1990s under an unsound, investment-driven adjustment mechanism. Fortunately, investment returns improved in the mid-2000s, temporarily stabilizing the fund.

  In 2006, employer/employee contributions were increased by 1 percent from 5 percent to 5.5 percent to fund a modest benefit improvement. Additionally, the 2006 legislation merged the MTRFA into TRA, which assumed approximately $1 billion in new unfunded liabilities. Revenues to cover TRA's new liabilities were pledged from extra Minneapolis employer contributions, direct state and local aid payments, and use of some of TRA's existing sufficiency.

  In 2008, as investment markets dropped sharply, legislation was enacted that eventually eliminated the post-retirement adjustment mechanism and dissolved the separate Post Retirement Fund. Post Fund liabilities were assumed by the Active TRA Fund and by 2009, TRA's funded ratio, which had been 100 percent just five years before, dropped to 77 percent.

- **2010 – present**. Investment returns during the 2008-2009 period plummeted causing TRA's assets to decline by $3.2 billion in two years. TRA's market value funded ratio declined to just below 60 percent and its deficiency escalated to over 11 percent of payroll by 2009. In response to this financial challenge, a package of revenue increases and benefit reductions was enacted in 2010. Phased increases in employer/employee rates were scheduled, increasing from 5.5 percent to 7.5 percent between 2011 and 2014. Annual post-retirement increases were suspended for two years and lowered from 2.5 percent to 2.0 percent. The increases will remain at 2.0 percent until TRA regains a 90 percent market value funded ratio. Additional benefit reductions were made for deferred and active members and for re-employed retirees. In total, liabilities were cut by $1.75 billion.

  As a result of the 2010 package and high investment returns, TRA's market value funded ratio improved to 77 percent by 2011. In 2012, lower returns and a decrease in the investment assumption caused the funded ratio to drop back to 73 percent. An investment return of 14.24 percent for 2013 is expected to restore TRA's funded ratio to approximately 77 percent, but still leave a deficiency of 1.7 percent of payroll.