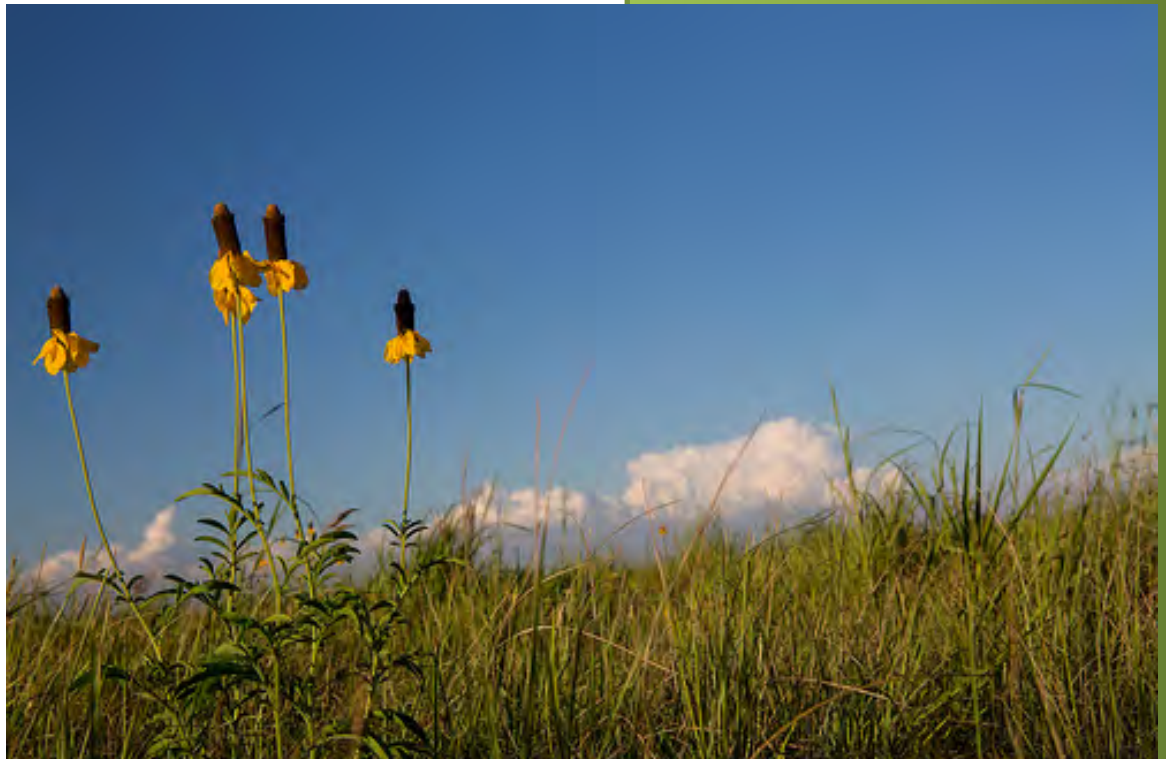


*A Pension Trust Fund of the State of Minnesota*

**2013**

Comprehensive Annual  
Financial Report



Teachers  
Retirement  
Association

for fiscal year ended June 30, 2013



Teachers Retirement Association of Minnesota  
A Pension Trust Fund of the State of Minnesota

# Comprehensive Annual Financial Report

*for the fiscal year ended June 30, 2013*

Retirement Systems of Minnesota Building

60 Empire Drive

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Saint Paul, MN 55103-4000

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[www.minnesotatra.org](http://www.minnesotatra.org)

**Laurie Fiori Hacking**  
**Executive Director**

Report Prepared by the TRA Administration Division

Cover photo  U. S. Fish and Wildlife Service – Midwest Region (Long headed cone flower in bloom at Glacial Ridge NWR, Polk County, Minnesota. Photo courtesy of John Gregor/ColdSnap Photography).



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Government Finance Officers Association

Certificate of  
Achievement  
for Excellence  
in Financial  
Reporting

Presented to

**Minnesota Teachers  
Retirement Association**

For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended

**June 30, 2012**

Executive Director/CEO



Public Pension Coordinating Council

**Recognition Award for Administration  
2013**

Presented to

***Minnesota Teachers Retirement Association***

In recognition of meeting professional standards for  
plan administration as  
set forth in the Public Pension Standards.

*Presented by the Public Pension Coordinating Council, a confederation of*

National Association of State Retirement Administrators (NASRA)  
National Conference on Public Employee Retirement Systems (NCPERS)  
National Council on Teacher Retirement (NCTR)

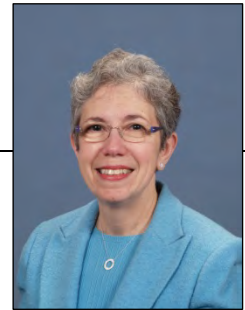
A handwritten signature in cursive script that reads "Alan H. Winkle".

Alan H. Winkle  
Program Administrator





## Letter of Transmittal



Laurie Fiori Hacking  
Executive Director

December 19, 2013

Members of the Board of Trustees  
Teachers Retirement Association  
60 Empire Drive, Suite 400  
Saint Paul, MN 55103-4000

Dear Trustee:

We are pleased to present this Comprehensive Annual Financial Report (CAFR) of the Teachers Retirement Association (TRA) for the fiscal year ended June 30, 2013, our 82<sup>nd</sup> year of service.

TRA management has implemented a system of internal controls to monitor and safeguard assets, ensure transactions are carried out in accordance with Minnesota statutes, and promote efficient operations. Internal controls are designed to provide reasonable, but not absolute assurance regarding the safeguarding of assets against loss. The concept of reasonable assurance recognizes that a cost-benefit analysis requires estimates and judgments by management. All internal control evaluations occur within this framework.

The independent Office of the Legislative Auditor has issued an unqualified (clean) opinion on TRA's financial statements for the year ended June 30, 2013. The independent auditor's report is located at the front of the Financial section of this report. Management believes that the accompanying statements, schedules, and tables are fairly presented. We are solely responsible for the content of the report, including its financial statements, which should be useful in understanding information about TRA and comparing our operating results with those of other teacher retirement systems.

Readers are encouraged to refer to the Management Discussion and Analysis on pages 14-17 for an overview of additions to and deductions from the TRA Fund and additional financial reporting detail for the fiscal year.

### TRA Profile

As of June 30, 2013, TRA had 591 reporting units, 76,765 active members and a total of 57,168 retirees, survivors, beneficiaries, and disabilitants who were receiving monthly benefits.

Although the TRA Board of Trustees has a broad scope of authority in the operations and management of TRA, the pension fund is also governed by federal laws and state statutes. For financial reporting purposes, TRA is considered a pension trust fund of the State of Minnesota, and TRA financial results are incorporated into the Comprehensive Annual Financial Report of the State of Minnesota.

TRA follows the provisions of statements promulgated by the Governmental Accounting Standards Board (GASB) including GASB Statement No. 25, Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans. TRA's Comprehensive Annual Financial Report also complies with Minnesota Statutes, Section 356.20. Transactions are reported on the accrual basis of accounting. Contributions from employers and members are recognized as revenue when earned. Expenses are recorded when corresponding liabilities are incurred, regardless of when payment is made.

We contract for actuarial services from the firm Cavanaugh Macdonald Consulting of Bellevue, Nebraska to prepare the annual actuarial valuation report. The Minnesota Office of the Attorney General provides legal counsel to the Board of Trustees. Most financial transactions, including disbursements from the pension fund, are processed through the centralized controls of the Statewide Integrated Financial Tools (SWIFT) system, under the statutory authority of the Department of Minnesota Management and Budget and the Department of Administration.

## **Economic Condition**

All TRA assets are invested under the authority and direction of the State Board of Investment (SBI). A listing of the pooled investments in the TRA Fund can be found on page 52. The SBI has developed strategic asset allocation and other investment policies to represent the long-term funding needs of our members and benefit recipients. The SBI, along with its Investment Advisory Council (IAC), continually reviews policies to ensure sufficient assets are available to finance benefits determined under statute. The executive directors of the three statewide retirement systems serve on the seventeen-member IAC and represent their members in advising the SBI on investment-related matters.

## **Economic Conditions and Outlook (from Minnesota Management and Budget (MMB))**

Minnesota's economy continues to make solid gains. The Bureau of Economic Analysis (BEA) reports the state's real GDP rose 3.5 percent in calendar 2012, ranking among the six fastest-growing state economies during that year. Minnesota ended fiscal year 2013 with a seasonally adjusted unemployment rate of 5.2 percent, 2.2 percentage points below the national rate. Minnesota's unemployment rate fell to 4.8 percent in October, the lowest level since the recession began in December 2007. First time claims for jobless benefits have fallen to levels not observed in more than a decade. Leading indicators, such as temporary help employment, average hours worked, job vacancies, and the number of unemployed remain strong. Preliminary income tax withholding collections suggest that Minnesota's wage and salary income grew 4.4 percent during fiscal 2013, outperforming both previous expectations and the national growth rate of 3.2 percent.

Non-farm employment payrolls have increased by an average of 3,800 jobs each month during the first four months of fiscal 2014, about the same modest pace as the last two years. Gains are occurring across every major industry, with the exception of manufacturing and federal government employment. That diverse economic revival has helped Minnesota recover from recession faster than the nation. As of August 2013, the state has now recovered all of the approximately 150,000 jobs lost during the Great Recession that began in December 2007. Nationally, about 82 percent of the 8 million jobs lost during the recession have been recovered.

Employment and income growth are expected to grow modestly in fiscal 2014, reflecting stronger consumer and business fundamentals in the broader U.S. economy, rising demand for new home construction, and improving global growth.

Minnesota total non-farm employment rose 1.4 percent in fiscal 2013, after a 1.5 percent increase in 2012. Employment growth is forecast to accelerate to 1.7 percent growth in fiscal 2014 and maintain that same pace in 2015.

Minnesota personal income grew 2.2 percent in fiscal 2013, following growth of 4.6 percent in 2012. Income growth is expected to pick up to 4.5 percent in fiscal 2014 and maintain a similar pace of 4.6 percent in 2015.

## **Investment Results**

The U.S. stock market, as measured by the Russell 3000 index, returned 21.5 percent for the fiscal year ended June 30, 2013. Within the Russell 3000 index, smaller companies outpaced larger companies.

International markets returned 13.6 percent for the fiscal year as measured by the Morgan Stanley Capital International (MSCI) All Country World Index excluding the United States net taxes on dividends (ACWI ex U.S.), which represents the developed and emerging markets outside the United States. The returns in developed markets were stronger than in the emerging markets.

The U.S. fixed income (bond) market, as measured by the Barclays Capital Aggregate Bond Index, returned -0.7 percent for the fiscal year ended June 30, 2013. Within the bond market, commercial mortgage-backed securities and corporate bonds were the best performing sectors.

Within this investment environment, TRA retirement assets under SBI investment management as part of the Combined Funds (see page 45), produced an investment return of 14.2 percent for the fiscal year ended June 30, 2013. Over the latest ten-year period, the funds have experienced an annualized investment return of 8.2 percent. For the ten-year period, the Combined Funds exceeded the composite investment performance by 0.3 percent annualized.

## Legislation

Pension legislation in 2013 requires the boards and the 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) on January 6, 2014.

The report will include detailed actuarial analysis in a manner that assures TRA assets are protected and the merging funds are fully funded. The report will also contain implementation plans, timeframes, and education and communication plans. We expect that the report will have prominent legislative attention during early 2014 with input from a broad array of participants and stakeholders.

Legislation in 2013 also provided for adoption of revised early retirement reduction factors for TRA members. Beginning on July 1, 2015, TRA benefits under the Level Formula will be calculated using a set of revised factors approved by the Legislature. The factors would primarily affect members who were first hired July 1, 1989 or later. The changes would not affect those members who retire under the “Rule of 90” step formula method. Under the Level Formula, members who retire prior to Normal Retirement Age (age 66 for members hired July 1, 1989 or later) are assessed a reduction in their monthly pension amounts upon retirement. The younger the retiring member, the greater the reduction amount.

The revised factors also provide for a set of revised reduction factors for those members who reach age 62 with 30 years of service. As an example, a member age 62 with 30 years of service would have a reduction of about 14 percent of the full retirement benefit at age 66. For those members age 62 without 30 years of service, the reduction factor is about 19 percent of the full age 66 benefit. The implementation of these factors will occur over a 5-year period ending June 30, 2020. The TRA website benefit calculator is updated for members to review the impact upon their projected retirement benefits from these new reduction factors.

## Actuarial Funding Status/Investment Report

The SBI reported a strong investment gain of 14.2 percent for the fiscal year ended June 30, 2013. With the investment return assumption of 8.0 percent, investment gains were earned from an actuarial perspective for fiscal year 2013. As part of the five-year smoothing of assets formula for actuarial purposes, TRA recognized the final portion of the deep investment loss sustained during the fiscal year ended June 30, 2009. The 2009 loss recognition was largely responsible for the decline in the TRA funded status for fiscal year 2013, as compared to fiscal year 2012.

The SBI invests TRA assets with a long-term horizon. Since the benefit payments are not all immediately payable, SBI can maintain a longer-term investment strategy during short-term fluctuations. The SBI intends to stay with its investment strategy since past evidence indicates that long-term diversified investors can weather up and down cycles and thereby fully participate when markets rebound and performance improves.

The actuarial value of TRA assets declined as of June 30, 2013, due to the final recognition of the investment loss sustained during fiscal year 2009. For actuarial purposes, investments gains and losses are recognized by using a statutory five-year smoothing of investment gains and losses. On June 30, 2013, the actuarial value of TRA assets was \$16.77 billion, a

decline from \$16.81 billion on June 30, 2012. The five-year smoothing of investment gains and losses resulted in a substantial deferred investment gain of \$1.24 billion as of June 30, 2013.

TRA's unfunded actuarial liability – the amount for which current assets are not available to pay statutory benefits earned to date – increased from \$6.22 billion to a \$6.64 billion deficiency, as of June 30, 2013, when measured on an actuarial smoothed basis. The recognition of the existing deferred investment losses from the 2008-09 investment market swoon was the primary reason for the higher unfunded liability. Under statute, the unfunded liability must be paid by June 30, 2037.

Another key measure to assess TRA funding health is the adequacy of employee and employer contributions. As of July 1, 2013, the TRA contribution rate deficiency was 4.74 percent of active member covered payroll. This deficiency does not fully reflect the 1.00 percent total increase to employee and employer contribution rates scheduled in current law to occur on July 1, 2014. TRA employee and employer contribution rates are currently 7.00 percent each, for fiscal year 2014. Beginning July 1, 2014, the employee and employer contribution rates will be 7.50 percent each. On a fair value basis, which incorporates the \$1.24 billion in deferred investment gains, the July 1, 2013, contribution rate deficiency was 2.73 percent. After incorporating the scheduled rate increases and recognizing existing deferred investment gains, a contribution deficiency 1.73 percent (market value basis) is still present. If future investment markets remain strong, future investment earnings would help mitigate some of this deficiency. If investment markets do not perform in accordance with the investment earnings assumption or if the investment assumption is lowered, the Board may be required to recommend additional contribution and/or plan changes for legislative consideration. The TRA Board of Trustees and its management will continue to remain vigilant and monitor all key actuarial measures and report funding and plan sustainability issues to the membership, employers and the legislature.

## Major Initiatives

TRA employees, in a team environment, continually work on strategic initiatives to administer and process customer service demands for retirement planning and benefit payment services. Major projects for fiscal year 2014 include continuing the development of new technology-driven methods to deliver benefit counseling and information to TRA members and employers. The primary project underway is called the “.NET Project,” a comprehensive assessment of current business processes with rewriting existing applications in a more powerful and structured computer language.

Another initiative for 2014 includes finishing a business continuation/disaster recovery plan for TRA operations. The TRA Member Services Division is experimenting with new technology that will facilitate pre-retirement member counseling to remote locations including employer units and members' homes. TRA recently introduced Facebook and Twitter sites to communicate timely information and increase interest and awareness of retirement issues. Internally, TRA staff has implemented succession planning activities to mitigate the business risks of losing organization knowledge held by key employees.

## Awards and Recognition

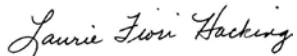
The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Teachers Retirement Association for its Comprehensive Annual Financial Report for the fiscal year ended June 30, 2012. This was the fifteenth consecutive year that the Association has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a governmental unit must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of only one year. We believe that our current comprehensive annual financial report continues to meet the Certificate of Achievement Program requirements, and we are submitting it to the GFOA to determine its eligibility for another certificate.

TRA was also awarded the Public Pension Coordinating Council's Recognition Award for Administration in 2013. This award recognizes TRA's meeting of professional standards in plan administration in categories such as benefits, actuarial valuations, financial reporting and communications to members.

The preparation of this report is possible only through the combined efforts of our employees, employer units and professional consultants. It is intended to provide a complete and reliable portrayal of the financial status of the pension fund as a basis for making management decisions and determining responsible stewardship over the assets held in trust for the members of the Association. We have notified members, employer unit officials and other interested persons about the availability of the report on the TRA website. A summary that highlights key aspects of the report will be provided to all members in the *TRIB*, TRA's periodic newsletter.

Our sincere appreciation is extended to all who assisted in and contributed toward the completion of this publication.

Respectfully submitted,



Laurie Fiori Hacking  
Executive Director



John Wicklund  
Assistant Executive Director,  
Administration

# Board of Trustees

---

As of December 31, 2013

## President



**Martha Lee (Marti) Zins**  
Retiree Representative  
Minnetonka, MN

## Vice President



**Mary L. Broderick**  
Elected Member  
St. Cloud, MN



**Mary B. Supple**  
Elected Member  
Richfield, MN



**Robert J. Gardner**  
Elected Member  
Crystal, MN

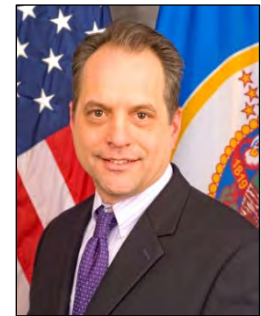
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**Leighton Fritz**  
Elected Member  
Winona, MN



**Bob Lowe**  
Minnesota School Boards  
Association Representative



**Brenda Cassellius**  
Commissioner of Education

**James Schowalter**  
Commissioner of Minnesota  
Management & Budget

# Administrative Staff

---



**Laurie Fiori Hacking**  
Executive Director



**Tim Maurer**  
Assistant Executive Director  
of Operations



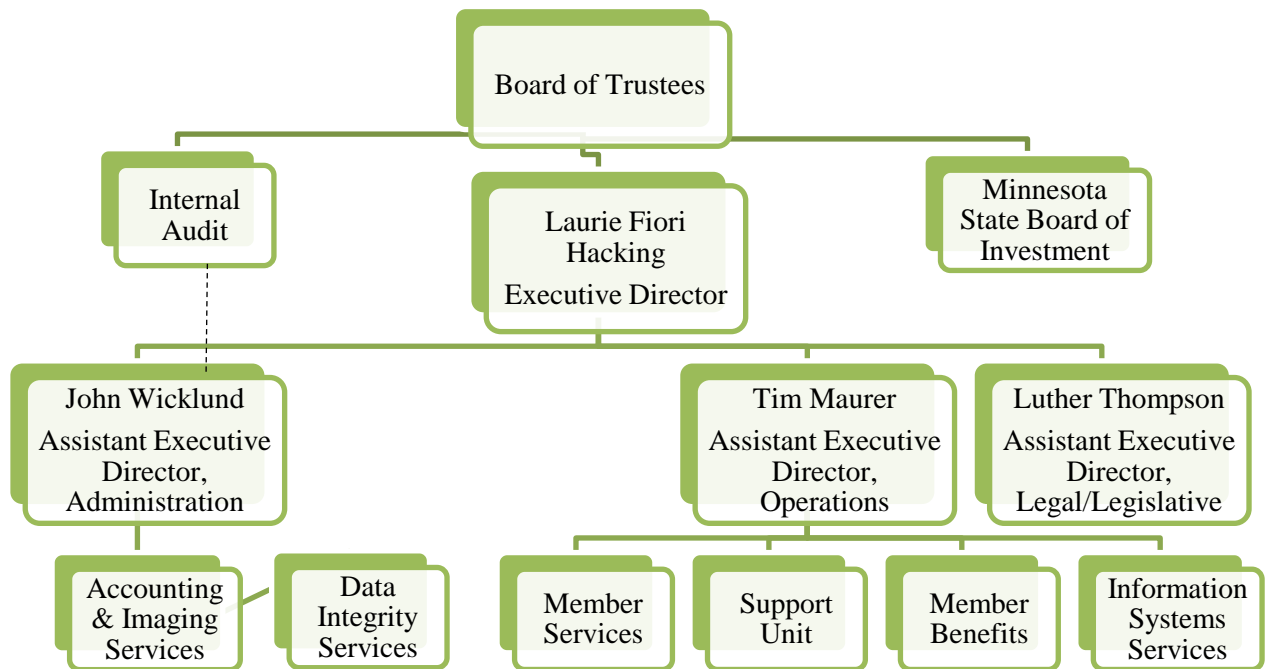
**Luther Thompson**  
Assistant Executive Director  
of Legal and Legislative  
Services



**John Wicklund**  
Assistant Executive Director  
of Administration

# Administrative Organization

As of December 2013



## Consulting Services

### Actuary

Cavanaugh Macdonald Consulting, LLC  
Bellevue, Nebraska

### Auditor

Office of the Legislative Auditor  
Saint Paul, Minnesota

### Investment

Minnesota State Board of Investment  
Saint Paul, Minnesota

### Legal Counsel

Office of the Attorney General  
Saint Paul, Minnesota

### Medical Advisor

Minnesota Department of Health  
St. Paul, Minnesota

# Our Mission Statement

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TRA provides retirement, disability and survivor benefits to Minnesota’s public educators assisting them in achieving future income security.

TRA strives to provide benefits that attract and retain competent teachers who serve communities throughout the state, building a stronger education system.

TRA is committed to safeguarding the financial integrity of the fund and takes pride in providing exceptional, innovative services.

## Our Vision

To be an outstanding retirement system pursuing benefits and services that **exceed members’ expectations.**

## Goals

**Members and Stakeholders** – Be responsive to the needs of TRA members and stakeholders by providing them with innovative, timely and relevant services and education, and adequate benefits that are properly funded.

**Organizational Effectiveness** – Be a proactive, flexible efficient organization by measuring performance and continuously improving work processes.

**Staff Development** – Make TRA an “employer of choice” for both existing and potential staff by providing a supportive and challenging environment that encourages teamwork and creativity, fosters professional growth and development, and values employee input.

**Finance and Resources** – Safeguard the financial integrity of the fund by ensuring adequate funding, legal compliance and responsibly managing fiscal resources.

**Technology** – Maintain the internal capacity to utilize cutting-edge technologies that continuously improve work processes and enhance service delivery and communication with our members and stakeholders.





# Investments

Investments

Investments

Investments

Investments

Investments

Investments

# State Board of Investment Letter

## MINNESOTA STATE BOARD OF INVESTMENT



### Board Members:

Governor  
Mark Dayton

State Auditor  
Rebecca Otto

Secretary of State  
Mark Ritchie

Attorney General  
Lori Swanson

### Executive Director:

Mansco Perry

60 Empire Drive  
Suite 355  
St. Paul, MN 55103  
(651) 296-3328  
FAX (651) 296-9572  
E-mail:  
[minn.sbi@state.mn.us](mailto:minn.sbi@state.mn.us)  
[www.sbi.state.mn.us](http://www.sbi.state.mn.us)

*An Equal Opportunity  
Employer*

## INVESTMENT AUTHORITY

The assets of the Minnesota Teachers Retirement Association (TRA) are invested along with the assets of the Minnesota Public Employees Retirement Association and the Minnesota State Retirement System under the direction and authority of the State Board of Investment (SBI) in accordance with Minnesota Statutes, Chapters 11A and 356A. The SBI includes Minnesota's governor, auditor, secretary of state and attorney general. The Legislature has established a 17-member Investment Advisory Council (IAC) to advise the SBI and its staff on investment related matters. TRA's executive director is a member of the IAC.

## INVESTMENT POLICY

Investment policy states that the SBI will operate within standard investment practices of the prudent person. The SBI is to "exercise that degree of judgment and care, under circumstances then prevailing, which persons of prudence, discretion, and intelligence exercise in the management of their own affairs, not for speculation, but for investment, considering the probable safety of their capital as well as the probable income to be derived therefrom." (See M.S., section 11A.09.) The SBI is authorized to own government obligations, corporate obligations, various short-term obligations, corporate stocks, venture capital interests, resource investments, and real estate interests subject to specific constraints. (See M.S., section 11A.24.) In particular, pension fund assets are to be invested for the exclusive benefit of the members of the fund.

## INVESTMENT OBJECTIVES AND PERFORMANCE

TRA's pension contributions from employees and employers are invested in the Combined Funds. The Combined Funds include the assets of active and retired public employees who participate in the defined benefit plans administered by TRA, the Minnesota State Retirement System, and the Public Employees Retirement Association. TRA does not own any underlying assets, but instead owns a participation in the pooled Combined Funds. Because these assets normally accumulate for thirty to forty years, SBI's objective is to take advantage of the long investment time horizon offered by equities and alternative assets in order to meet its actuarial return target and ensure that sufficient funds are available to finance promised benefits at the time of retirement. The 2012 legislature lowered the actuarial return assumption from 8.5 percent to 8.0 percent annually for the period July 1, 2012 through June 30, 2017.

The long term objectives of the Combined Funds are:

- Provide returns that are 3-5 percentage points greater than inflation over the latest 20-year period; and
- Outperform a composite market index weighted in a manner that reflects the actual asset mix of the Combined Funds over the latest 10-year period.

Consistent with these objectives, the SBI maintains a long-term asset allocation for the Combined Funds as follows:

- |                        |     |
|------------------------|-----|
| • Domestic Equity      | 45% |
| • International Equity | 15% |
| • Alternatives         | 20% |
| • Fixed Income         | 18% |
| • Cash                 | 2%  |

Based on values on June 30, 2013, the Combined Funds returned 5.8 percentage points above the CPI over the last 20 years and returned 0.3 percentage point above the composite index over the past 10 years. Investment returns ranked in the 21<sup>st</sup> percentile over the past five years and in the 23<sup>rd</sup> percentile over the past 10 years, compared to similar funds in the Trust Universe Comparison Service.

#### INVESTMENT PRESENTATION

Investment returns were prepared using time-weighted rate of return methodology based upon fair market value, net of investment expenses.

Respectfully submitted,



Mansco Perry III  
Executive Director  
Minnesota State Board of Investment

November 13, 2013

# Investment Summary

Prepared by TRA management with data obtained from the State Board of Investment's Fiscal Year 2013 Quarterly Investment Reports

The assets of the Minnesota Teachers Retirement Association (TRA) are invested under the direction and authority of the State Board of Investment (SBI). The investment portfolio of TRA had a fair value of approximately \$18.00 billion as of June 30, 2013.

The four-member SBI Board consists of Governor Mark Dayton (Chair), Attorney General Lori Swanson, Secretary of State Mark Ritchie, and State Auditor Rebecca Otto.

During fiscal year 2013, Howard Bicker was the Executive Director. Mr. Bicker retired in October 2013 after 32 years as Executive Director. Effective October 21, 2013, Mansco Perry III was appointed as Executive Director.

The Legislature has established a 17-member Investment Advisory Council (IAC) to advise the SBI and its staff on investment-related matters.

- The mission statement of the Investment Advisory Council is: The IAC fulfills its statutory duty to the SBI by providing advice and independent due diligence review of the investment policy and

implementation recommendations that guide the SBI's investment of assets.

- SBI appoints ten members experienced in finance and investment. These members traditionally have come from the Minneapolis and Saint Paul corporate investment community.
- The Commissioner of Minnesota Management and Budget (MMB) and the executive directors of TRA, the Minnesota State Retirement System and the Public Employees Retirement Association are permanent members of the Council.
- Two active employee representatives and one retiree representative are appointed to the Council by the Governor.
- All proposed investment policies are reviewed by the full Council before they are presented to SBI for action.

## Investment Advisory Council

As of December 2013

**Jeffery Bailey, Chair**  
Director, Benefits Finance  
Target Corporation

**Malcolm W. McDonald,  
Vice Chair**  
Director and Corporate Secretary  
(Retired)  
Space Center, Inc.

**Denise Anderson**  
Governor's Appointee  
Active Employee Representative

**David Bergstrom**  
Executive Director  
MN State Retirement System

**John E. Bohan**  
Vice Pres., Pension Investments  
(Retired)  
Grand Metropolitan-Pillsbury

**Kerry Brick**  
Manager, Pension Investments  
Cargill, Inc.

**Dennis Duerst**  
Director, Benefit Funds Investment  
3M Company

**Kim Faust**  
Director, Treasury & Financial  
Reporting  
Allina Health

**Douglas Gorence**  
Chief Investment Officer  
U of M Foundation Investment  
Advisors

**Laurie Fiori Hacking**  
Executive Director  
Teachers Retirement Association

**P. Jay Kiedrowski**  
Senior Fellow  
Humphrey Institute  
University of Minnesota

**Gary Martin**  
Vice President, Pension Investments  
SUPERVALU, Inc.

**James D. Schowalter**  
Commissioner  
Minnesota Management & Budget

**Mary Vanek**  
Executive Director  
Public Employees Retirement  
Association

**Elaine Voss**  
Governor's Appointee  
Retiree Representative

**Two Positions Vacant**

Callan Associates, Inc., of Chicago are general consultants to the SBI. Pension Consulting Alliance of Studio City, California, serves as a special project consultant. Investment performance methodology is reported in compliance with the mandatory requirements of the Chartered Financial Analyst (CFA) Institute. All investments made by SBI are governed by the prudent person rule and other standards codified in Minnesota Statutes, Chapters 11A and 356.

## Combined Retirement Funds

### Investment Objectives

All TRA assets are accounted for within the Combined Funds managed by the Minnesota State Board of Investment (SBI). The Combined Funds consist not only of the TRA Fund, but also the assets of the Public Employees Retirement Association (PERA) and the Minnesota State Retirement System (MSRS). The SBI has one primary responsibility with respect to its management of the Combined Funds: to ensure that sufficient funds are available to finance pension benefits at the time of retirement. All assets in the Combined Funds, including TRA, are managed externally by outside money management firms retained by contract.

The Combined Funds include the pension contributions of most Minnesota public employees, including TRA members, during their working years. Employee and employer contribution rates are specified in state law as a percentage of an employee's salary. The rates are set so that contributions plus expected investment earnings cover the projected cost of promised pension benefits. In order to meet these projected pension costs, the Combined Funds need to generate investment returns of at least 8.0 percent for fiscal years 2013 through 2017.

While an active member is working, employee and employer contributions are placed into the TRA Fund. The pre-funding of future pension benefits provides the SBI with a long investment time horizon to take advantage of long run return opportunities offered by equities and other investments, in order to meet its actuarial return target.

SBI measures the performance of the Combined Funds relative to a composite of market indices that is weighted in a manner that reflects their long-term asset allocation policy. The Combined Funds are expected to match or exceed the composite index over a ten-year period. The Combined Funds are also expected to generate returns 3 to 5 percent greater than inflation over the latest 20-year period. Investment returns are prepared using a time-weighted rate of return methodology, based upon fair values, net of investment expenses. Performance is measured net of all fees and costs to assure that SBI's focus is on the Combined Funds' true net return.

### Asset Allocation

The allocation of assets among equities, fixed income (bonds) and alternative investments can have a dramatic impact on investment results. In fact, asset allocation decisions overwhelm the impact of individual security selection within a total portfolio. Consequently, SBI focuses considerable attention on the selection of an appropriate long-term asset allocation policy for the Combined Funds. The asset allocation policy in place as of June 30, 2013, was:

<b>Combined Funds Asset Mix</b>		
June 30, 2013		
	<b>Policy Mix</b>	<b>Actual Mix</b>
Domestic Equity	45.0%	45.1%
International Equity	15.0%	14.9%
Fixed Income (Bonds)	18.0%	23.0%
Alternative Assets*	20.0%	14.5%
Unallocated Cash	<u>2.0%</u>	<u>2.5%</u>
Total	<u>100.0%</u>	<u>100.0%</u>

\*Any uninvested allocation is held in bonds.

### Total Return Vehicles

SBI invested the majority of the Combined Funds' assets in common stocks (both domestic and international equities). A large allocation is consistent with the investment time horizon of the Combined Funds and the advantageous long-term risk-return characteristics of common stocks. Including international equities in the asset mix allowed SBI to diversify its holdings across world markets, offered the opportunity to enhance returns and reduced the risk/volatility of the total portfolio. The rationale underlying the inclusion of private equity alternative assets (e.g., venture capital) is similar.

SBI recognized that this sizable policy allocation to common stock and private equity likely produced more volatile portfolio returns than a more conservative policy focused on fixed income securities. It is understood that this policy may result in quarters or even years of disappointing results. Nevertheless, the long run return benefits of this policy are expected to compensate for the additional volatility.

## Diversification Vehicles

Other asset classes are included in the Combined Funds both to provide some insulation against highly inflationary or deflationary environments and to diversify the portfolio sufficiently to avoid excessive return volatility.

Real estate and resource (oil and gas) investments provide an inflation hedge that other financial assets do not offer. Under more normal financial conditions, such as low to moderate inflation, the returns on these assets were not highly correlated with common stocks. As a result, their inclusion in the Combined Funds served to dampen return volatility.

Yield oriented alternative investments provided the opportunity for higher long-term returns than those typically available from bonds yet still generated sufficient current income. Typically, these investments, including subordinated debt, mezzanine or resource income investments such as income-producing properties, are structured more like fixed income securities with the opportunity to participate in the appreciation of the underlying assets. While these investments may have an equity component, they display a return pattern more like a bond. As such, they helped reduce the volatility of the total portfolio, while generating higher returns relative to more traditional bond investments.

The allocation to fixed income (bonds) acts as a hedge against a deflationary economic environment. In the event of a major deflation, high-quality fixed income assets, particularly long-term bonds, are expected to protect principal and generate significant capital gains. And, like real estate and resource funds, under normal financial conditions, bonds help diversify the Combined Funds and thereby control return volatility.

## Rate of Return Results

The Combined Funds produced a total rate of return for fiscal year 2013 of 14.2 percent. Over the last five years, the Combined Funds generated an annualized return of 6.2 percent.

As stated earlier, the Combined Funds are expected to exceed the return of a composite of market indices over a ten-year period. Performance relative to this standard measured two effects:

- The ability of the investment managers selected by SBI, in aggregate, to add value to the returns available from the broad capital markets.
- The impact of SBI's rebalancing activity. (SBI rebalances the total fund when market movements take the stock or bond segments measurably above or below their long-term asset allocation targets. The policy imposes a low risk, buy low sell high discipline among asset classes on a total fund basis.)

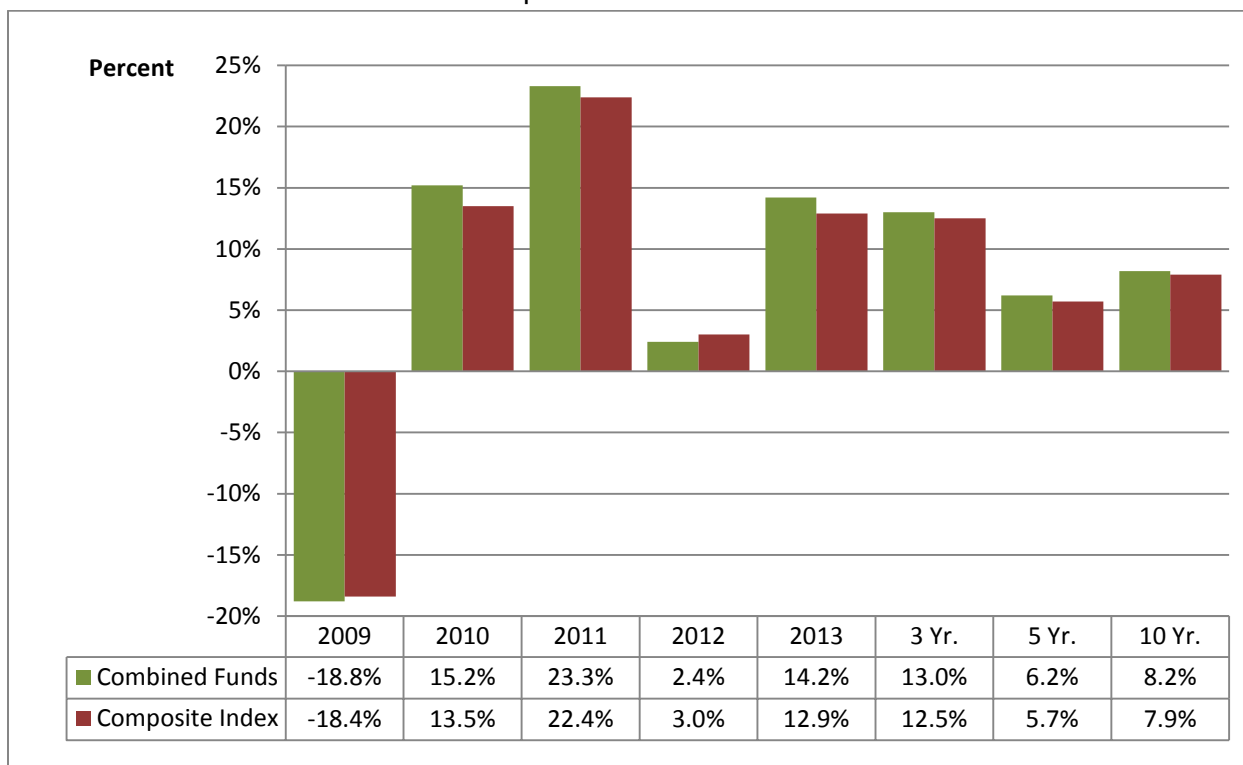
## Combined Funds Performance vs. Composite Index

For the ten-year period ending June 30, 2013, the Combined Funds exceeded the composite index investment performance by 0.3 percent annualized. The Funds exceeded the composite index over the last five years by 0.5 percent annualized, and exceeded the index over the most recent fiscal year by 1.3 percentage points. Actual returns relative to the total fund composite index over the last five years are shown in the graph on the following page.

# Combined Funds

## Investment Performance

### Combined Funds Performance vs. Composite Index FY 2009 – 2013



## Combined Funds

### Performance of Asset Pools (Net of Fees)

June 30, 2013 — Combined Funds

	Rates of Return (Annualized)			
	FY 2013	3-Year	5-Year	10-Year
<b>Domestic Equity Pool</b> .....	<b>21.9%</b>	<b>18.7%</b>	<b>7.2%</b>	<b>7.7%</b>
Asset Class Target .....	21.5%	18.6%	7.2%	7.8%
(Russell 3000 – effective 10-1-03)				
<b>Fixed Income (Bond) Pool</b> .....	<b>0.8%</b>	<b>4.7%</b>	<b>6.1%</b>	<b>4.9%</b>
Asset Class Target .....	-0.7%	3.5%	5.2%	4.5%
(Barclays Capital Aggregate Bond Index)				
<b>International Equity Pool</b> .....	<b>16.1%</b>	<b>8.7%</b>	<b>-0.2%</b>	<b>8.9%</b>
Asset Class Target .....	13.7%	8.0%	-0.8%	8.7%
(Morgan Stanley Capital International All-Country World Index – since 10-1-03)				
<b>Alternative Assets</b> .....	<b>11.3%</b>	<b>13.1%</b>	<b>6.4%</b>	<b>15.3%</b>
(Real Estate, Private Equity, Resource Pool and Yield Oriented Pool)				
CPI-U Inflation (No Established Index for Alternative Assets)	1.8%	2.3%	1.3%	2.4%

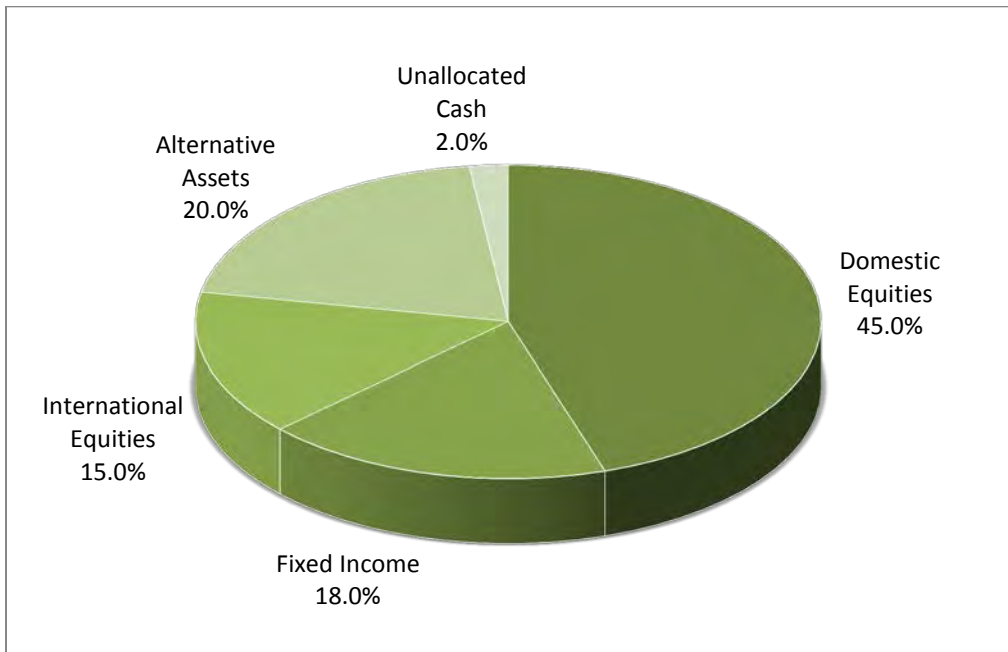
All investment performance methodology is reported in compliance with the mandatory requirements of the Chartered Financial Analyst (CFA) Institute.

## Combined Funds

### Portfolio Distribution: Policy Asset Mix

---

As of June 30, 2013

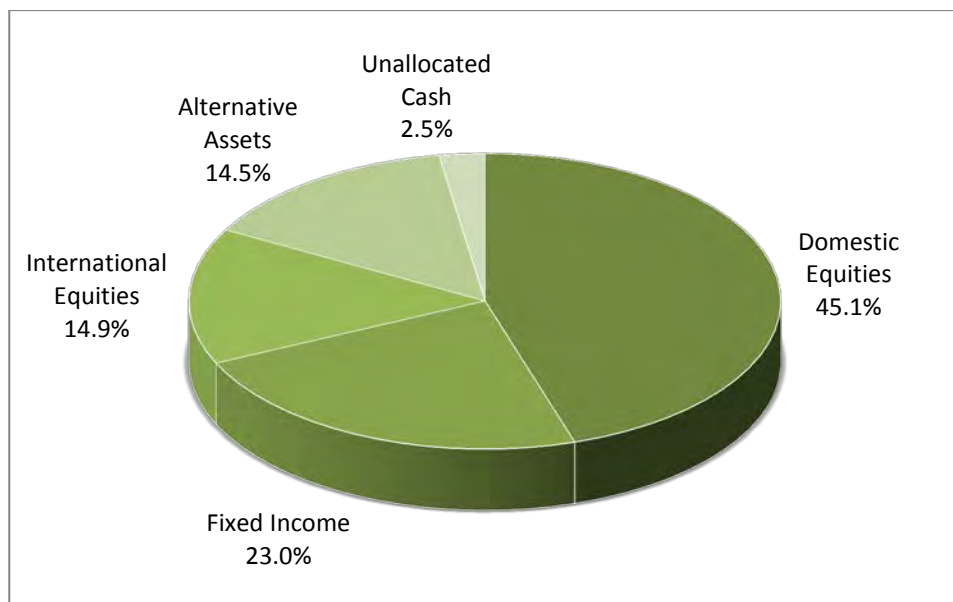


## Combined Funds

### Portfolio Distribution: Actual Asset Mix

---

As of June 30, 2013



TRA Fund fair value of investment assets equals approximately \$18.0 billion.



# Teachers Retirement Fund

## List of Largest Assets Held

June 30, 2013

### Composite Holdings of Top Ten Equities By Fair Value

Security	\$ Fair Value (Millions)	% of Portfolio
EXXON MOBIL CORP	\$161.0	0.89%
APPLE INC	\$146.6	0.81%
GOOGLE INC CL A	\$118.2	0.65%
CHEVRON CORP	\$103.4	0.57%
MICROSOFT CORP	\$97.7	0.54%
JOHNSON & JOHNSON	\$95.1	0.53%
JPMORGAN CHASE & CO	\$93.4	0.52%
WELLS FARGO & CO	\$91.6	0.51%
AT&T INC	\$85.4	0.47%
INTL BUSINESS MACHINES CORP	\$83.6	0.46%

### Composite Holdings of Top Ten Bond Holdings By Fair Value

Security	% Coupon	\$ Fair Value (Millions)	% of Portfolio
FNMA TBA 30YR SINGLE FAMILY	3.500	\$123.4	0.68%
US TREASURY	0.250	\$65.0	0.36%
US TREASURY	1.000	\$64.1	0.36%
FNMA TBA	3.000	\$59.0	0.33%
US TREASURY	0.250	\$58.8	0.33%
US TREASURY	0.500	\$51.1	0.29%
US TREASURY	1.375	\$48.4	0.27%
US TREASURY	1.250	\$48.0	0.27%
FNMA TBA JUL 15YR	2.500	\$47.2	0.26%
US TREASURY	1.375	\$39.1	0.22%

TRA's assets are commingled in various pooled investment accounts administered by the State Board of Investment (SBI). TRA does not own specific values of the underlying assets. The percentages and fair value shown are those attributable to the TRA Fund based on TRA's participation in the SBI's Combined Funds. Information on investment activity, a listing of specific investments owned by the pooled accounts and a schedule of fees and commissions can be obtained from SBI.

# Teachers Retirement Fund

## Schedule of Investment Management Fees

---

For the Fiscal Year Ended June 30, 2013

### Domestic Activity Equity Pool Managers

Barrow, Hanley .....	\$ 374,550
Earnest Partners .....	194,193
Goldman Equity .....	516,417
Hotchkis and Wiley .....	676,231
Intech Investment .....	440,539
Jacobs Levy Equity .....	436,000
Knelman Asset Mgmt .....	130,399
LSV Asset .....	410,976
Martingale .....	293,101
Mckinley Cap .....	442,827
New Amsterdam .....	(83,460)
Next Century Growth .....	778,032
Peregrine Capital .....	665,288
Sands Capital .....	622,221
Systematic Fin .....	351,401
Turner Inv .....	566,415
UBS Global Asset .....	134,505
Winslow Capital .....	236,324
Zevenbergen Capital .....	<u>485,605</u>
Total Domestic Activity Equity Pool Managers	<u>\$ 7,671,564</u>

### Passive Domestic Equity Pool Managers

Blackrock .....	<u>\$ 279,972</u>
Total Passive Domestic Equity Pool Managers.....	<u>\$ 279,972</u>

### Semi Passive Equity Pool Managers

Blackrock .....	\$ 960,674
Intech .....	667,459
JP Morgan .....	1,031,674
Mellon Capital .....	<u>649,146</u>
Total Semi Passive Equity Pool Managers .....	<u>\$ 3,308,953</u>

### Domestic Bonds Pool Managers

Aberdeen Asset Management .....	\$ 498,788
Blackrock Financial Mgmt .....	338,990
Columbia Invest .....	349,206
Dodge & Cox .....	436,202
Goldman .....	486,629
Neuberger .....	211,424
PIMCO .....	984,818
Western Asset Management .....	<u>457,981</u>
Total Domestic Bonds Pool Managers .....	<u>\$ 3,764,038</u>

Page Subtotal .....

	<u>\$ 15,024,527</u>
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# Teachers Retirement Fund

## Schedule of Investment Management Fees (cont.)

---

For the Fiscal Year Ended June 30, 2013

Subtotal from Previous Page ..... \$ 15,024,527

### Global Equity Pool Managers

Acadian Asset .....	\$ 441,983
AQR Capital Mgmt .....	518,854
Capital Intern .....	1,809,742
Columbia Investments .....	327,111
Invesco Global Assets .....	199,575
JP Morgan Fleming .....	393,033
Marathon Asset .....	669,399
Mckinley Capital Management .....	377,863
Morgan Stanley Dean .....	2,021,389
Pyramis Global Advisors (Trust).....	483,113
Pyramis Global Advisors .....	294,772
State Street .....	178,383
State Street Alpha .....	408,308
State Street Emerging .....	<u>75,941</u>
Total Global Equity Pool Managers .....	\$ <u>8,199,466</u>

### Other Investment Management Fees

Financial Control Systems.....	\$ 148,399
Callan Associates, Inc. ....	128,756
Pension Consulting Alliance .....	12,528
QED .....	86,641
State Board of Investment .....	<u>1,101,432</u>
Total Other Investment Management Fees .....	\$ <u>1,477,756</u>

Total Investment Management Fees \$ 24,701,749

# Teachers Retirement Fund

## Summary of Investments

As of June 30, 2013

	<b>Cost Value</b>	<b>Fair Value</b>	<b>% of Investments at Fair Value</b>
<b>Fixed Income Investments</b>			
Fixed Income Pool	\$ <u>3,968,696,931</u>	\$ <u>4,134,001,350</u>	23.0%
<b>Equity Investments</b>			
External Indexed Equity Pool	\$ 1,983,866,822	\$ 2,600,723,192	14.5%
Global Equity Pool	2,305,614,031	2,676,467,190	14.9%
External Domestic Equity Pool	<u>3,795,242,801</u>	<u>5,504,430,979</u>	<u>30.5%</u>
Total Equity Investments	\$ <u>8,084,723,654</u>	\$ <u>10,781,621,361</u>	59.8%
<b>Alternative Investments</b>			
Alternative Investment Pool	\$ <u>2,184,095,082</u>	\$ <u>2,610,107,142</u>	14.5%
<b>Short Term Investments</b>			
CD Repo Pool	\$ 31,864,709	\$ 31,868,002	0.2%
TRA Minneapolis Pool	144,956	45,318	0.0%
Short Term Cash Equivalents	<u>437,730,663</u>	<u>437,804,119</u>	<u>2.4%</u>
Total Short Term Investments	\$ <u>469,740,328</u>	\$ <u>469,717,439</u>	<u>2.6%</u>
Total Investments	\$ <u>14,707,255,995</u>	\$ <u>17,995,447,292</u>	<u>100.0%</u>

### General Information Regarding Investment of Funds

TRA's investments are made by SBI and external managers as prescribed by law, and are made only in such securities as are duly authorized legal investments in accordance with Minnesota Statutes, section 11A.24. State Street Bank and Trust of Boston acts as custodian of securities for the Combined Funds. Wells Fargo, Saint Paul, Minnesota, is the current custodian of short term investments of SBI. Examination and verification of securities held by the custodians is performed periodically by the Minnesota Office of the Legislative Auditor. Investment returns are prepared using a time-weighted rate of return methodology, based upon fair values, net of investment expenses.



# Actuarial

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# Actuary's Certification Letter



**Cavanaugh Macdonald**  
CONSULTING, LLC  
*The experience and dedication you deserve*

December 10, 2013

Board of Trustees  
Teachers Retirement Association of Minnesota  
60 Empire Drive, Suite 400  
St. Paul, MN 55103

Dear Board Members:

At your request, we have prepared the actuarial valuation of the Teachers Retirement Association of Minnesota (TRA or System) as of July 1, 2013 for the plan year ending June 30, 2014. Such valuations are required to be performed annually under state law. To the best of our knowledge and belief, the valuation was performed in accordance with the requirements of Minnesota Statutes, Section 356.215, and the requirements of the Standards for Actuarial Work established by the State of Minnesota Legislative Commission on Pensions and Retirement (LCPR). These valuation results reflect the benefit provisions in place on July 1, 2013. There was no change to the actuarial methods or assumptions from the prior valuation. However, the 2013 Omnibus Retirement Bill, which was passed by the 2013 legislature and signed into law by the Governor on May 23, 2013 and changed the early retirement factors applicable to plan members is reflected. The new factors will be phased-in over a five year period beginning July 1, 2015.

As described in the valuation report, the results of the valuation indicate that the System is 71.6% funded and the current statutory contribution rates are deficient by 4.74% of payroll to meet the target of full funding by 2037. The deficiency does not reflect the member and employer contribution increases that will be effective on July 1, 2014. After the contribution increases are completed, the statutory contributions will be 1.00% of payroll higher than the contribution rates for FY 2014. This report was prepared exclusively for TRA and the LCPR to determine the annual required contribution rate and to present accounting results required under GASB No. 25, as amended by GASB 50.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by TRA staff. This information includes, but is not limited to, statutory provisions, member data and financial information. We found this information to be reasonable and comparable to information used in last year's valuation. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete, our results may be different and our calculations may need to be revised.

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Offices in Englewood, CO • Kennesaw, GA • Bellevue, NE • Hilton Head Island, SC



The actuary prepared the following supporting schedules in the Actuarial Section of the Comprehensive Annual Financial Report:

- Reconciliation of Member Data
- Statement of Fiduciary Net Position
- Statement of Changes in Fiduciary Net Position
- Actuarial Asset Value
- Actuarial Valuation Balance Sheet
- Determination of Unfunded Actuarial Accrued Liability and Supplemental Contribution Rate
- Changes in the Unfunded Actuarial Accrued Liability
- Determination of Contribution Sufficiency/(Deficiency) – Total
- Solvency Test
- Schedule of Active Member Valuation Data

In addition, we also prepared the *Schedule of Funding Progress* and the *Schedule of Contributions from Employers and Other Entities* in the Financial Section of the Comprehensive Annual Financial Report:

The actuarial contribution rates are developed using the Entry Age Normal (EAN) cost method. An asset smoothing method, which is defined in statute, is used for actuarial valuation purposes. Gains and losses are reflected in the unfunded actuarial accrued liability and are amortized as a level percent of payroll over a closed period set in state statutes. Actuarial assumptions, including discount rates, mortality tables and others identified in the valuation report are prescribed by Minnesota Statutes Section 356.215, the Legislative Commission on Pensions and Retirement (LCPR), and the Trustees. These parties are responsible for selecting the plan's funding policy, actuarial valuation methods, asset valuation method, and actuarial assumptions. The policies, methods and assumptions used in this valuation are those that have been so prescribed and are described in Appendix C of the valuation report. The assumptions and methods used for funding purposes meet the parameters set for the disclosures presented in the financial section by GASB Statement No. 25.

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

The calculations presented in the valuation report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and on a basis consistent with our understanding of the plan provisions described in Appendix B of the valuation report, and of GASB Statement No. 25. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement System. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein. Also, we meet the requirements of "approved actuary" under Minnesota Statutes, Section 356.215, Subdivision 1, Paragraph (c).

Respectfully submitted,

A handwritten signature in blue ink that reads 'Patrice Beckham'.

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

A handwritten signature in blue ink that reads 'Brent A. Banister'.

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



# Summary of Actuarial Assumptions and Methods

## Summary of Actuarial Assumptions

The following assumptions were used in valuing the liabilities and benefits under the plan.

The Allowance for Combined Service Annuity was based on the recommendation of a prior actuary. We are unable to judge the reasonableness of this assumption without performing a substantial amount of additional work beyond the scope of this assignment.

All assumptions are prescribed by Statute, the Legislative Commission on Pensions and Retirement (LCPR), or the Board of Trustees. The LCPR last enacted changes to TRA's demographic actuarial assumptions on July 8, 2010.

<b>Investment return</b>	Pre-retirement: 8.38% compounded annually to reflect an 8.0% assumption for four (4) years and 8.5% thereafter. Post-retirement: 6.38% compounded annually. Change effective: July 1, 2012			
<b>Benefit increases after retirement</b>	Payment of 2.0% annual benefit increases after retirement are accounted for by using a 6.38% post-retirement assumption, as directed by the LCPR actuary. Change effective: July 1, 2012			
<b>Salary increases</b>	Reported salary for prior fiscal year, with new hires annualized, increased according to the salary increase table shown in the rate table to current fiscal year and annually for each future year. See table of sample rates.			
<b>Payroll growth</b>	3.75% per year			
<b>Future service</b>	Members are assumed to earn future service at a full-time rate.			
<b>Mortality: Pre-retirement</b>	RP 2000 non-annuitant generational mortality, white collar adjustment, male rates set back 5 years and female rates set back 7 years.			
<b>Post-retirement</b>	RP 2000 annuitant generational mortality, white collar adjustment, male rates set back 2 years and female rates set back 3 years.			
<b>Post-disability</b>	RP 2000 disabled retiree mortality, without adjustment.			
<b>Disability</b>	Age-related rates based on experience; see table of sample rates (page 60).			
<b>Withdrawal</b>	Select and ultimate rates based on actual plan experience. Ultimate rates after the third year are shown in the rate table. Select rates are as follows:			
		<b>First Year</b>	<b>Second Year</b>	<b>Third Year</b>
	Male	45%	12%	6%
	Female	40%	10%	8%
<b>Expenses</b>	Prior year administrative expenses expressed as percentage of prior year payroll.			
<b>Retirement age</b>	Graded rates beginning at age 55 as shown in rate table. Members who have attained the highest assumed retirement age will retire in one year.			
<b>Percentage married</b>	85% of male members and 65% of female members are assumed to be married. Members are assumed to have no children.			
<b>Age difference – married</b>	Females 2 years younger than males.			

<b>Allowance for Combined Service Annuity</b>	Liabilities for active members are increased by 1.40% and liabilities for former members are increased by 4.00% to account for the effect of some Participants being eligible for a Combined Service Annuity.																
<b>Refund of contributions</b>	All employees withdrawing after becoming eligible for a deferred benefit are assumed to take the larger of their contributions accumulated with interest or the value of their deferred benefit.																
<b>Interest on member contributions</b>	Members and former members who are eligible for the money purchase annuity are assumed to receive interest credits equal to the pre-retirement interest rate. All other members and former members receive the interest crediting rate as specified in statutes.																
<b>Commencement of deferred benefits</b>	Members receiving deferred annuities (including current terminated deferred members) are assumed to begin receiving benefits at unreduced retirement age.																
<b>Form of payment</b>	<p>Married members are assumed to elect subsidized joint and survivor (J&amp;S) form of annuity as follows:</p> <p>Males:                   10% elect 50% J&amp;S option                                    15% elect 75% J&amp;S option                                    70% elect 100% J&amp;S option</p> <p>Females:                 20% elect 50% J&amp;S option                                    10% elect 75% J&amp;S option                                    50% elect 100% J&amp;S option</p> <p>Members eligible for deferred annuities (including current terminated deferred members) and future disability benefits are assumed to elect a life annuity.</p>																
<b>Missing data for members</b>	<p>Membership data was supplied by TRA as of the valuation date. This information has not been audited by CMC. We have reviewed the information for internal consistency and we have no reason to doubt its substantial accuracy. In the small number of cases where submitted data was missing or incomplete and could not be recovered from prior years, the following assumptions were applied if needed:</p> <p>Data for active members:</p> <table> <tr> <td>Salary, service, and date of birth</td> <td>Based on current active demographics</td> </tr> <tr> <td>Gender</td> <td>Female</td> </tr> </table> <p>Data for terminated members:</p> <table> <tr> <td>Date of birth</td> <td>July 1, 1964</td> </tr> <tr> <td>Average salary</td> <td>\$29,000</td> </tr> <tr> <td>Date of termination</td> <td>Derived from date of birth, original entry age, and service</td> </tr> </table> <p>Data for in-pay members:</p> <table> <tr> <td>Beneficiary date of birth</td> <td>Wife two years younger than husband</td> </tr> <tr> <td>Gender</td> <td>Based on first name</td> </tr> <tr> <td>Form of payment</td> <td>Life annuity for retirees and beneficiaries, 100% J&amp;S option for disabled retirees.</td> </tr> </table>	Salary, service, and date of birth	Based on current active demographics	Gender	Female	Date of birth	July 1, 1964	Average salary	\$29,000	Date of termination	Derived from date of birth, original entry age, and service	Beneficiary date of birth	Wife two years younger than husband	Gender	Based on first name	Form of payment	Life annuity for retirees and beneficiaries, 100% J&S option for disabled retirees.
Salary, service, and date of birth	Based on current active demographics																
Gender	Female																
Date of birth	July 1, 1964																
Average salary	\$29,000																
Date of termination	Derived from date of birth, original entry age, and service																
Beneficiary date of birth	Wife two years younger than husband																
Gender	Based on first name																
Form of payment	Life annuity for retirees and beneficiaries, 100% J&S option for disabled retirees.																
<b>Changes in actuarial assumptions since the previous valuation</b>	None.																

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<b>Future post-retirement adjustments</b>	<p>Once the funded ratio reaches 90% on a fair value basis, the COLA is scheduled by statute to revert back from 2.0% to 2.5%. Future assets and liabilities were projected using the 2013 valuation results as a starting point and assuming all actuarial assumptions are met in future years. These assumptions include a rate of return on assets of 8.0% for the next four years and 8.5% thereafter. The projections also assume the COLA remains at 2.0% and that future statutory contribution rates are not increased beyond the increase currently provided for in the statutes. In particular, there is no assumption that the stabilizer provisions will be utilized by the Board. Based on these projections, the funded status is not expected to reach 90% for over 30 years. At this time, there has not been any guidance provided by the Legislative Commission on Pensions and Retirement (LCPR) regarding how or when to reflect the future COLA change. Absent guidance and given the funded ratio is not expected to exceed 90% for many years in the future, we have not reflected any change in the COLA assumption from the current 2.0%.</p>
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## Summary of Actuarial Assumptions *(continued)*

### Sample Rates at Select Ages

Age	Mortality Rates (%)					
	Pre-Retirement *		Post-Retirement**		Post-Disability	
	Male	Female	Male	Female	Male	Female
20	0.0269	0.0155	0.0316	0.0184	2.2571	0.7450
25	0.0345	0.0188	0.0373	0.0194	2.2571	0.7450
30	0.0376	0.0197	0.0393	0.0223	2.2571	0.7450
35	0.0353	0.0235	0.0481	0.0363	2.2571	0.7450
40	0.0591	0.0401	0.0766	0.0527	2.2571	0.7450
45	0.0890	0.0562	0.1124	0.0763	2.2571	0.7450
50	0.1342	0.0837	0.1711	0.1229	2.8975	1.1535
55	0.1978	0.1344	0.5716	0.2681	3.5442	1.6544
60	0.2747	0.2015	0.5688	0.4253	4.2042	2.1839
65	0.4263	0.3107	0.9232	0.6736	5.0174	2.8026
70	0.6725	0.4979	1.5834	1.1211	6.2583	3.7635
75	0.9823	0.7591	2.6710	1.8784	8.2067	5.2230

\* Rates shown are RP 2000 non-annuitant mortality (base), white collar adjustment, set back 5 years for males and 7 years for females.

\*\* Rates shown are RP 2000 annuitant mortality (base), white collar adjustment, set back 2 years for males and 3 years for females.

Age	Rates (%)				Coordinated Retirement Rates (%)		
	Ultimate Withdrawal		Disability		Age	Rule of 90	Retirement
	Male	Female	Male	Female		Eligible	Other
20	3.70	4.50	0.00	0.00	55 and Under	50	7
25	3.20	4.50	0.00	0.00	56	55	7
30	2.70	4.50	0.00	0.00	57	45	7
35	2.50	3.90	0.01	0.01	58	45	8
40	2.35	2.75	0.03	0.03	59	45	10
45	2.10	2.10	0.05	0.05	60	40	12
50	1.85	1.85	0.10	0.10	61	45	16
55	0.00	0.00	0.16	0.16	62	45	20
60	0.00	0.00	0.25	0.25	63	40	18
65	0.00	0.00	0.00	0.00	64	45	20
70	0.00	0.00	0.00	0.00	65	40	40
75	0.00	0.00	0.00	0.00	66	35	35
					67	30	30
					68	30	30
					69	30	30
					70	35	35
					71 & Over	100	100

Salary Scale	
Service (Yrs)	Salary Increase
1	12.00%
2	9.00%
3	8.00%
5	7.25%
10	6.40%
15	5.25%
20	4.00%
25 or more	3.50%

# Valuation Report Highlights

## Summary of Key Valuation Results

	Actuarial Valuation as of	
	July 1, 2013	July 1, 2012
<b>Participant Data</b>		
Active members		
Number	76,765	76,649
Projected annual earnings for fiscal year (000s)	\$ 4,205,399	\$ 4,146,325
Average projected annual earnings for fiscal year 2014	\$ 54,783	\$ 54,095
Average age	43.5	43.5
Average service	12.1	12.0
Service retirements	52,331	50,780
Survivors	4,269	4,054
Disability retirements	568	591
Deferred retirements	12,614	12,201
Terminated other non-vested	28,881	27,591
<b>Total</b>	<b>175,428</b>	<b>171,866</b>
<b>Liabilities and Funding Ratios (dollars in thousands)</b>		
Accrued Benefit Funding Ratio		
Current assets (AVA)	\$ 16,774,626	\$ 16,805,077
Current benefit obligations	22,390,700	21,098,767
Funding ratio	74.92%	76.70%
Accrued Liability Funding Ratio		
Current assets (AVA)	\$ 16,774,626	\$ 16,805,077
Fair value of assets (MVA)	18,015,194	16,686,105
Actuarial accrued liability	23,418,629	23,024,505
Unfunded actuarial accrued liability	6,644,003	6,219,428
Funding ratio (AVA)	71.63%	72.99%
Funding ratio (MVA)	76.93%	72.47%
Projected Benefit Funding Ratio		
Current and expected future assets	\$ 24,199,106	\$ 24,130,838
Current and expected future benefit obligations	26,546,074	26,142,509
Funding ratio	91.16%	92.30%
<b>Contributions (% of payroll)</b>		
Normal Cost Rate	8.40%	8.53%
UAAL Amortization Payment	10.78%	9.98%
Expenses	0.23%	0.24%
Total Required Contribution (Chapter 356)	19.41%	18.75%
Statutory Contribution (Chapter 354)	14.67%	13.71%
Contribution (Deficiency)/Sufficiency	(4.74%)	(5.04%)

# Actuary's Selected Commentary

The Teachers Retirement Association of Minnesota (TRA) provides retirement, disability, and death benefits to Minnesota public school teachers, administrators, and college faculty. This report presents the results of the July 1, 2013, actuarial valuation. The primary purposes of performing the actuarial valuation are to:

- determine the Required Contribution Rate as set forth in Chapter 356 of the Minnesota statutes;
- determine the sufficiency of the Statutory Contribution Rate as set forth in Chapter 354 of the Minnesota statutes;
- determine the experience of the fund since the last valuation date;
- disclose asset and liability measures as of the valuation date; and
- analyze and report on trends in contributions, assets, and liabilities over the past several years.

There was no change in the actuarial methods or assumptions from the prior valuation. However, the 2013 Omnibus Pension Retirement Bill, which was passed by the Legislature and signed into law by the Governor on May 23, 2013, changed the early retirement factors applicable to plan members. The impact of this change was a decrease in the unfunded actuarial accrued liability of \$77.5 million, a decrease in the normal cost rate of 0.12% of payroll (from 8.52% to 8.40%), and a decrease in the Required Contribution Rate of 0.25% of payroll.

The actuarial valuation results provide a “snapshot” view of TRA’s financial condition on July 1, 2013. The results reflect net unfavorable experience for the past plan year as demonstrated by an unfunded actuarial accrued liability (UAAL) that was higher than expected. The UAAL on July 1, 2013, is \$6.644 billion as compared to an expected UAAL of \$6.436 billion. The unfavorable experience was the combination of an experience loss of \$363 million on the actuarial value of assets and a net experience gain of about \$155 million on liabilities. Despite a return of 14.2% on the fair value of assets, there was an experience loss on the actuarial value of assets largely due to recognition of the remaining deferred investment loss from FY 2009. There is now a deferred investment gain of \$1.241 billion.

A summary of the key results from the July 1, 2013, actuarial valuation is shown below. Further detail on the valuation results can be found in the following sections of this Commentary. The contribution deficiency does not reflect the member and employer contribution increase scheduled to occur on July 1, 2014. After the scheduled contribution increase is recognized, the statutory contribution rate will be 1.0 percent of payroll higher than the total contribution rate for the current fiscal year.

	Actuarial Valuation as of	
	July 1, 2013	July 1, 2012
Total Required Contribution Rate (Chapter 356)	19.41%	18.75%
Statutory Contribution Rate (Chapter 354)	14.67%	13.71%
Sufficiency/(Deficiency)	(4.74%)	(5.04%)
Unfunded Actuarial Accrued Liability (\$M)	\$6,644	\$6,219
Funded Ratio (Actuarial Assets)	71.63%	72.99%

The contribution deficiency decreased from 5.04 percent of payroll in last year’s valuation to 4.74 percent in the 2013 valuation. The decrease in the deficiency was due to the change in early retirement factors and the increase in member and employer contribution rates of 0.50 percent each, which was partially offset by the impact of a net actuarial loss due to overall experience that was not as favorable as expected based on the actuarial assumptions.

## Experience for the Last Plan Year

Numerous factors contributed to the change in assets, liabilities and actuarial contribution rate between July 1, 2012, and July 1, 2013. The components are examined in the following discussion.

## Assets

As of June 30, 2013, TRA had net assets of \$18.0 billion, when measured on a fair value basis. This was an increase of more than \$1.3 billion from the prior year.

The fair value of assets is not used directly in the calculation of the unfunded actuarial accrued liability (UAAL) and the required contribution rate (actuarial contribution rate). An asset valuation method, which smoothes the effect of market fluctuations, is used to determine the value of assets used in the valuation. The resulting amount is called the “actuarial value of assets.” In this year’s valuation, the actuarial value of assets as of June 30, 2013, was \$16.8 billion, a decrease of \$30 million from the value in the prior year. The components of change in the asset values are shown in the following table.

(dollars in millions)

	Fair Value	Actuarial Value
<b>Net Assets, June 30, 2012</b>	<b>\$16,686</b>	<b>\$16,805</b>
Employer & Member Contributions	+ \$556	+ \$556
Benefit Payments and Administrative Expenses	- \$1,541	- \$1,541
Investment Income	+ \$2,314	+ \$955
<b>Net Assets, June 30, 2013</b>	<b>\$18,015</b>	<b>\$16,775</b>

On a fair value basis, the rate of return was 14.2 percent as reported by the State Board of Investment (SBI). Despite the strong return on the fair value of assets, there was an experience loss on the actuarial value of assets largely due to recognition of the remaining deferred investment loss from FY 2009. The rate of return, net of investment expenses, measured on the actuarial value of assets was approximately 5.7 percent. Because the rate of return was less than the assumption of 8.0%, there was an actuarial loss of \$363 million.

## Liabilities

The actuarial liability is that portion of the present value of future benefits that will not be paid by future normal costs. The difference between this liability and the actuarial value of assets at the same date is called the unfunded actuarial accrued liability (UAAL). The dollar amount of unfunded actuarial accrued liability is reduced if the contributions exceed the normal cost for the year plus interest on the prior year’s UAAL.

The unfunded actuarial accrued liability is shown as of June 30, 2013, in the following table.

(dollars in millions)

	Fair Value of Assets	Actuarial Value of Assets
Actuarial Accrued Liability	\$23,419	\$23,419
Value of Assets	\$18,015	\$16,775
Unfunded Actuarial Accrued Liability	\$ 5,404	\$ 6,644
Funded Ratio	76.93%	71.63%

Changes in the UAAL occur for various reasons. The net change in the UAAL from July 1, 2012, to July 1, 2013, was an increase of \$425 million. The components of this net change are shown in the following table.

(dollars in millions)

<b>Unfunded Actuarial Accrued Liability, July 1, 2012</b>	<b>\$ 6,219</b>
Expected increase from amortization method	67
Expected increase from contributions below required rate	217
Investment experience	363
Liability experience	(155)
Other experience	10
Change in early retirement factors	\$ (77)
Subtotal	\$ 425
<b>Unfunded Actuarial Accrued Liability, July 1, 2013</b>	<b>\$ 6,644</b>

As shown in the previous table, various components impacted the UAAL.

Actuarial gains (losses), which result from actual experience that is more (less) favorable than anticipated based on the actuarial assumptions, are reflected in the UAAL and are measured as the difference between the expected unfunded actuarial accrued liability and the actual unfunded actuarial accrued liability, taking into account any changes due to actuarial assumptions and methods or benefit provision changes. Overall, TRA experienced a net actuarial loss of \$207 million. The net actuarial loss may be explained by considering the separate experience of assets and liabilities. As noted earlier, there was a \$363 million loss, measured on the actuarial value of assets. Offsetting this somewhat, there was a liability gain of \$155 million which arose from overall demographic experience in FY 2013 more favorable than anticipated by the actuarial assumptions. The liability gain was the result of various components of actuarial gains and losses, the largest of which was a gain from salary increases that were lower than expected.

An evaluation of the unfunded actuarial accrued liability on a pure dollar basis may not provide a complete analysis since only the difference between the assets and liabilities (which are both very large numbers) is reflected. Another way to evaluate the unfunded actuarial accrued liability and the progress made in its funding is to track the funded ratio, the ratio of the actuarial value of assets to the actuarial accrued liability. The funded status information is shown below (dollars in millions).

	7/1/09	7/1/10	7/1/11	7/1/12	7/1/13
<b>Funded Ratio</b>	77.4%	78.5%	77.3%	73.0%	71.6%
<b>Unfunded Actuarial Accrued Liability (\$M)</b>	\$5,232	\$4,758	\$5,039	\$6,219	\$6,644

## Contribution Rate

Under the Entry Age Normal cost method, the actuarial contribution rate consists of two components:

- a "normal cost" for the portion of projected liabilities allocated by the actuarial cost method to service of members during the year following the valuation date, and
- an "unfunded actuarial accrued liability contribution" for the excess of the portion of projected liabilities allocated to service to date over the actuarial value of assets.

Contribution Rates	July 1, 2013	July 1, 2012
Statutory Contribution Rate	14.67%	13.71%
Normal Cost Rate	8.40%	8.53%
UAAL Contribution Rate	10.78%	9.98%
Expenses	0.23%	0.24%
Total Required Contribution	19.41%	18.75%
Deficiency	(4.74%)	(5.04%)

As discussed earlier, there was one change reflected in this valuation. The early retirement factors, which are applied to reduce the benefit amount for members retiring prior to full normal retirement age, were changed with the 2013 Omnibus Retirement Bill. The new sets of factors, which include lesser reductions for members retiring at age 62 or older with at least 30 years of service, will be phased-in over a five-year period beginning July 1, 2015. The net impact on the valuation results, using the actuarial value of assets, is summarized in the table following.



<i>(dollars in billions)</i>	Assumption Changes		
	Before	After	Impact
Projected Benefit Funding Ratio	90.6%	91.2%	0.6%
Actuarial Accrued Liability Funding Ratio (AVA)	71.4%	71.6%	0.2%
Actuarial Value of Assets (AVA)	\$16.77	\$16.77	\$0.00
Unfunded Actuarial Accrued Liability (UAAL)	\$ 6.72	\$ 6.64	(\$0.08)
Normal Cost Rate (percent of pay)	8.52%	8.40%	(0.12%)
Amortization of UAAL (percent of pay)	10.91%	10.78%	(0.13%)
Administrative Expenses (percent of pay)	0.23%	0.23%	0.00%
<b>Total Required Contribution (percent of pay)</b>	<b>19.66%</b>	<b>19.41%</b>	<b>(0.25%)</b>
Contribution Deficiency (percent of pay)	(4.99%)	(4.74%)	0.25%

The decrease in the Total Required Contribution Rate due to the change in the early retirement factors is 0.25 percent of pay.

When the Statutory Contribution Rate is less than the Required Contribution Rate, the contribution deficiency creates an increase in the unfunded actuarial accrued liability. For the plan year ending June 30, 2013, the contribution deficiency increased the UAAL by \$218 million.

The actuarial contribution rate (Required Contribution Rate) is determined based on the snapshot of the fund taken on the valuation date, July 1, 2013. The actuarial

contribution rate in future years will change each year as the deferred actuarial investment experience is recognized and other experience (both investment and demographic) impacts the fund. The contribution rates will increase a total of 1.0 percent (0.5 percent employee and 0.5 percent employer) on July 1, 2014 from the current rate. Even when these increases are considered, a contribution deficiency still exists, indicating the UAAL will not be amortized by 2037 if all actuarial assumptions are met. It should be noted, however, that the Board will have the option to increase contribution rates further (the “stabilizer” provisions of the 2010 law), and that if rates are changed, the UAAL may then be amortized by 2037.

## Summary

The investment return on the fair value of assets for FY 2013 was 14.2 percent as reported by SBI. However, due to the deferred investment gains and losses from past years, the return on the actuarial value of assets was 5.7 percent. This valuation reflects the final step in recognizing the significant investment loss that occurred in FY 2009. For many years in the recent past, the actuarial value of assets has been higher than the market value of assets, indicating deferred investment losses exist. In the 2013 valuation, the actuarial value of assets is now lower than the fair value of assets reflecting deferred investment gains. With the lower return on the actuarial value of assets, the funded ratio decreased from 72.99 percent in last year's valuation to 71.63 percent this year.

As mentioned earlier, TRA uses an asset smoothing method in the valuation process. While this is a common procedure for public retirement systems, it is important to identify the potential impact of the deferred investment experience. The asset smoothing method impacts only the timing of when the actual market experience is recognized in the valuation process. The deferred investment experience gain of \$1.2 billion represents about 7.0 percent of the fair value of assets, providing some margin to absorb future investment experience that is less than the assumed rate of return.

The key valuation results from the July 1, 2013, actuarial valuation are shown below, using both actuarial and fair value of assets.

(dollars in billions)

	Actuarial Value	Fair Value
<b>Statutory Rate</b>	14.67%	14.67%
<b>Required Contribution</b>		
Normal Cost	8.40%	8.40%
UAAL Contribution	10.78%	8.77%
Expenses	<u>0.23%</u>	<u>0.23%</u>
Total Required Contribution	<u>19.41%</u>	<u>17.40%</u>
Deficiency	(4.74%)	(2.73%)
UAAL (billions)	\$6.64	\$5.40
Funded Ratio	71.63%	76.93%

The long-term financial health of TRA, like all retirement systems, is heavily dependent on two key items: (1) future investment returns and (2) contributions. Changes were made by the 2010 Legislature to strengthen the funding of TRA and enhance its long-term sustainability.

Contributions were increased by a total of 4.0 percent, to be phased in over four years beginning July 1, 2011, and benefit reductions were implemented. These changes, along with strong investment performance in three of the last four fiscal years, have significantly improved the projected long term funding. However, a contribution deficiency still exists even when future scheduled contribution increases are considered. Given the current funded status, the deferred investment experience and scheduled increases in the Statutory Contribution Rate, TRA's funded ratio is expected to increase slowly if all actuarial assumptions are met, but remain below 100 percent funded for the foreseeable future. In order for the funded ratio to reach 100 percent by June 30, 2037, contributions would have to increase beyond the scheduled rates, benefits would have to be lowered or favorable experience would have to occur.

The complete *Actuarial Valuation Report* is available on the TRA website at <http://www.commissions.leg.state.mn.us/lcpr/documents/valuations/2013/2013valuation.tra.pdf>

# Reconciliation of Member Data\*

Fiscal Year Ended June 30, 2013

	Active** Members	Former*** Members	Benefit Recipients****			Total
			Service Retirements	Disability Retirements	Survivors	
Members on July 1, 2012	76,649	39,792	50,780	591	4,054	171,866
New hires	4,916	–	–	–	–	4,916
Return from inactive	1,610	(1,610)	–	–	–	0
Return from zero balance	357	–	–	–	–	357
Transfer to inactive	(4,430)	4,430	–	–	–	0
Refunded	(246)	(668)	–	–	–	(914)
Restored writeoff	–	111	–	–	–	111
Repay refunds	–	29	–	–	–	29
Transfer from non-status	–	15	–	–	–	15
Retirements	(1,986)	(568)	2,635	(59)	–	22
Benefits began	–	–	–	61	444	505
Benefits ended	–	–	–	(1)	(63)	(64)
Deaths	(42)	(71)	(1,081)	(23)	(157)	(1,374)
Adjustments for disabilitants	(20)	(9)	–	–	–	(29)
Adjustments (other)	(43)	44	(3)	(1)	(9)	(12)
Net changes	<u>116</u>	<u>1,703</u>	<u>1,551</u>	<u>(23)</u>	<u>215</u>	<u>3,562</u>
<b>Members on June 30, 2013</b>	<b><u>76,765</u></b>	<b><u>41,495</u></b>	<b><u>52,331</u></b>	<b><u>568</u></b>	<b><u>4,269</u></b>	<b><u>175,428</u></b>

\* All figures in this chart were provided by the Teachers Retirement Association. Recipient counts include all pensions in force, including double counting of multiple benefit types. Service Retirements include Supplemental and Variable optional joint annuitants. We found these results to be reasonable.

\*\* Active members include 15 Basic and 76,750 Coordinated members.

\*\*\* Former members include 30 Basic and 41,465 Coordinated members.

\*\*\*\* Benefit recipients include 4,707 Basic members and 52,461 Coordinated members.

Former Member Statistics	Vested	Non-Vested	Total
Number	12,614	28,881	41,495
Average Age	47.6	49.0	48.6
Average Service (years)	7.6	1.0	3.0
Average annual benefits, with augmentation to Normal Retirement Date and 4 percent Combined Service Annuity load	\$9,928	N/A	N/A
Average refund value, with 4 percent Combined Service Annuity load	\$29,688	\$2,472	\$10,746

# Statement of Fiduciary Net Position

Fiscal Year Ended June 30, 2013

(dollars in thousands)

Assets	Fair Value
Cash and short term investments	
Cash .....	\$ 8,475
Building account cash .....	67
Short-term investments .....	<u>469,717</u>
Total cash and short-term investments .....	\$ 478,259
Receivables .....	18,908
Investments (at fair value)	
Fixed income pool .....	\$ 4,134,002
Minneapolis pool .....	0
Alternative investments pool .....	2,610,107
Indexed equity pool .....	2,600,723
Domestic equity pool .....	5,504,431
Global equity pool .....	<u>2,676,467</u>
Total investments .....	\$ 17,525,730
Securities lending collateral .....	1,755,793
Building	
Land .....	\$ 171
Building and equipment – net of depreciation .....	7,563
Deferred bond charge – net of depreciation .....	<u>84</u>
Total building .....	\$ 7,818
Capital assets net of accumulated depreciation .....	<u>\$ 6,026</u>
<b>Total Assets .....</b>	<b><u>\$ 19,792,534</u></b>

# Statement of Fiduciary Net Position (continued)

Fiscal Year Ended June 30, 2013

(dollars in thousands)

<b>Liabilities</b>	<b>Fair Value</b>
Current	
Accounts payable .....	\$ 8,687
Accrued compensated absences .....	67
Accrued expenses - building .....	90
Bonds payable .....	576
Bonds interest payable .....	15
Securities lending collateral .....	<u>1,755,793</u>
Total current liabilities .....	\$ 1,765,228
Long term	
Accrued compensated absences .....	\$ 604
Accrued other postemployment benefits (OPEB) liability.....	0
Bonds payable .....	<u>7,383</u>
Total long-term liabilities .....	<u>\$ 7,987</u>
<b>Total Liabilities</b> .....	<b>\$ 1,773,215</b>
<b>Net Position Restricted for Pension Benefits</b> .....	<b>\$ 18,019,319</b>
Earnings Limitation Savings Account (ELSA) accounts payable* .....	<u>(4,125)</u>
<b>Net Position Restricted, after adjustment for ELSA accounts</b> .....	<b><u>\$ 18,015,194</u></b>

\* Not calculated by Cavanaugh Macdonald, TRA determined.

# Reconciliation of Plan Assets

Fiscal Year Ended June 30, 2013

The following exhibit shows the revenue, expenses and resulting assets of the Fund as reported by the Teachers Retirement Association for the Plan's fiscal year July 1, 2012 to June 30, 2013.

(dollars in thousands)

Change in Assets	Fair Value
<b>1. Net position at fair value at July 1, 2012</b> .....	<b>\$ 16,686,105</b>
2. Contributions	
a. Member.....	\$ 265,809
b. Employer.....	270,708
c. Direct aid (state/city/county).....	19,954
d. Earnings Limitation Savings Account (ELSA).....	<u>1,792</u>
e. Total contributions.....	\$ 558,263
3. Investment income	
a. Investment income/(loss).....	\$ 2,334,997
b. Investment expenses.....	<u>(24,702)</u>
c. Total investment income/(loss).....	\$ 2,310,295
4. Other .....	<u>3,683</u>
<b>5. Total income (2.e + 3.c + 4.)</b> .....	<b>\$ 2,872,241</b>
6. Benefits Paid	
a. Annuity benefits.....	\$ (1,521,477)
b. Refunds.....	<u>(10,463)</u>
c. Total benefits paid .....	\$ (1,531,940)
7. Administrative Expenses.....	<u>(9,131)</u>
<b>8. Total disbursements (6.c. + 7)</b> .....	<b>\$ (1,541,071)</b>
9. Increase in ELSA account value .....	<u>(2,081)</u>
<b>10. Net position at fair value at June 30, 2013</b> .....	<b><u>\$ 18,015,194</u></b>

# Actuarial Asset Value

Fiscal Year Ended June 30, 2013

(dollars in thousands)

<b>1. Fair value of assets available for benefits</b> .....				<b>\$ 18,015,194</b>
2. Determination of average balance				
a. Assets available at July 1, 2012*			\$	16,689,941
b. Assets available at June 30, 2013*				18,019,319
c. Net investment income for fiscal year ending June 30, 2013				2,310,295
d. Average balance $[a. + b. - c.] / 2$			\$	16,199,483
3. Expected return $[8.0 \text{ percent} * 2.d.]$				1,295,959
4. Actual return				2,310,295
5. Current year unrecognized asset return				1,014,336
6. Unrecognized asset returns				
		<b>Original</b>	<b>% Not</b>	
		<b>Amount</b>	<b>Recognized</b>	
a. Year ended June 30, 2013	\$	1,014,336	80%	\$ 811,469
b. Year ended June 30, 2012		(1,045,252)	60%	(627,151)
v. Year ended June 30, 2011		2,163,878	40%	865,551
f. Year ended June 30, 2010		953,497	20%	<u>190,699</u>
e. Total return not yet recognized				<u>\$ 1,240,568</u>
<b>7. Actuarial value at June 30, 2013 (1. - 6.e.)</b>				<b><u>\$ 16,774,626</u></b>

\* Before recognition of ELSA accounts payable.

# Actuarial Valuation Balance Sheet

Fiscal Year Ended June 30, 2013

The actuarial balance sheet is based on the fundamental equation that, at any given time, the present value of benefits to be paid in the future must be equal to the assets on hand plus the present value of future contributions to be received. The total rate of contribution is determined as that amount which will make the total present and potential assets balance with the total present value of future benefits.

The contributions made in excess of amounts required for current benefit payments are accumulated as a reserve to help meet benefit payments in later years. This reserve system enables the establishment of a level rate of contribution each year.

(dollars in thousands)

A. Actuarial Value of Assets .....				\$ 16,774,626
B. Expected Future Assets				
1. Present value of expected future statutory supplemental contributions* .....			\$ 4,297,035	
2. Present value of expected future normal cost contributions .....			<u>3,127,445</u>	
3. Total expected future assets (1. + 2.).....			\$ 7,424,480	
C. Total Current and Expected Future Assets** .....				\$ 24,199,106
D. Current Benefit Obligations				
		<u>Non-Vested</u>	<u>Vested</u>	<u>Total</u>
1. Benefit recipients				
a. Service retirements	\$ 0	\$ 14,114,206		\$ 14,114,206
b. Disability	0	143,117		143,117
c. Survivors	0	887,916		887,916
2. Deferred retirements with augmentation to Normal Retirement Date	0	515,556		515,556
3. Former members without vested rights***	70,110	0		70,110
4. Active members	<u>43,354</u>	<u>6,616,441</u>		<u>6,659,795</u>
5. Total current benefit obligations	\$ 113,464	\$ 22,277,236		\$ 22,390,700
E. Expected Future Benefit Obligations				\$ 4,155,374
F. Total Current and Expected Future Benefit Obligations				\$ 26,546,074
G. Unfunded Current Benefit Obligations (D.5 – A)				\$ 5,616,074
H. Unfunded Current and Future Benefit Obligations (F. – C.)				\$ 2,346,968

\* Under LCPR guidelines, this amount does not include supplemental payments which could occur after the expiration of the remaining 24-year amortization period. Reflects contribution rate increases scheduled in statute.

\*\* Does not reflect deferred investment experience in the asset smoothing method. Total expected future assets on a fair value basis are \$25,439,674.

\*\*\* Former members with insufficient service to vest who have not collected a refund of member contributions as of the valuation date.



# Determination of Unfunded Actuarial Accrued Liability (UAAL) and Supplemental Contribution Rate

July 1, 2013

<i>(dollars in thousands)</i>	<b>Actuarial Present Value of Projected Benefits</b>	<b>Actuarial Present Value of Future Normal Costs</b>	<b>Actuarial Accrued Liability</b>
<b>A. Determination of Actuarial Accrued Liability (AAL)</b>			
1. Active Members			
a. Retirement annuities .....	\$ 9,805,198	\$ (2,361,845)	\$ 7,443,353
b. Disability benefits .....	192,479	(75,866)	116,613
c. Survivor benefits .....	89,312	(31,914)	57,398
d. Deferred retirements .....	720,043	(546,648)	173,395
e. Refunds .....	8,137	(111,172)	(103,035)
f. Total .....	<u>\$ 10,815,169</u>	<u>\$ (3,127,445)</u>	<u>\$ 7,687,724</u>
2. Deferred retirements with future augmentation to Normal Retirement Age .....	515,556	0	515,556
3. Former members without vested rights .....	70,110	0	70,110
4. Benefit recipients .....	<u>15,145,239</u>	<u>0</u>	<u>15,145,239</u>
5. Total .....	<u>\$ 26,546,074</u>	<u>\$ (3,127,445)</u>	<u>\$ 23,418,629</u>
<b>B. Determination of Unfunded Actuarial Accrued Liability (UAAL)*</b>			
1. Actuarial accrued liability .....			\$ 23,418,629
2. Actuarial value of assets (page 71, line 7) .....			<u>16,774,626</u>
3. Unfunded actuarial accrued liability .....			<u>\$ 6,644,003</u>
<b>C. Determination of Supplemental Contribution Rate*</b>			
1. Present value of future payrolls through the amortization date of June 30, 2037 .....			\$ 61,612,234
2. Supplemental contribution rate (A.3/B.1)** .....			10.78%

\* On a fair value of assets basis, the unfunded actuarial accrued liability is \$5,403,435 and the supplemental contribution rate is 8.77 percent of payroll.

\*\* The amortization factor as of July 1, 2013 is 14.6507.

# Changes in Unfunded Actuarial Accrued Liability

Fiscal Year Ended June 30, 2013

<i>(dollars in thousands)</i>	<b>Amount</b>
A. Unfunded actuarial accrued liability at beginning of year .....	\$ 6,219,428
B. Changes due to interest requirements and current rate of funding*	
1. Normal cost and actual administrative expenses .....	\$ 362,927
2. Contributions .....	(558,263)
3. Interest on A., B.1 and B.2. ....	<u>489,891</u>
4. Total (B.1. + B.2. + B.3.).....	\$ 294,555
C. Expected unfunded actuarial accrued liability at end of year (A. + B.4.).....	\$ 6,513,983
D. Increase (decrease) due to actuarial losses (gains) because of experience deviations from expected	
1. Salary increases .....	\$ (280,884)
2. Investment return (AVA).....	362,982
3. Mortality of active members .....	2,593
4. Mortality of benefit recipients .....	14,126
5. Retirement from active service .....	45,664
6. Other items .....	<u>63,031</u>
7. Total.....	<u>\$ 207,512</u>
E. Unfunded actuarial accrued liability at end of year before plan amendments and changes in actuarial assumptions (C. + D.7.) .....	\$ 6,721,495
F. Change in unfunded actuarial accrued liability due to changes in plan provisions** ..	<u>(77,492)</u>
G. Unfunded actuarial accrued liability at end of year (E. + F.).....	<u>\$ 6,644,003</u>

\* The amortization of the unfunded actuarial accrued liability (UAAL) using the current amortization method results in initial payments less than the “interest only” payment on the UAAL. Payments less than the interest only amount will result in the UAAL increasing in the absence of actuarial gains.

\*\* The effect of new early retirement factors that will be phased in over five years beginning July 1, 2015.

# Determination of Contribution Sufficiency/(Deficiency) — Total

July 1, 2013

The annual required contribution (ARC) is the sum of the normal cost, a supplemental contribution to amortize the UAAL, and an allowance for expenses. The statutory contribution rates do not reflect the scheduled increase for July 1, 2014.

<i>(dollars in thousands)</i>	<b>Percent of Payroll</b>	<b>Dollar Amount</b>
<b>A. Statutory Contributions - Chapter 354</b>		
1. Employee contributions .....	7.00%	\$ 294,416
2. Employer contributions* .....	7.19%	302,454
3. Supplemental contributions**		
a. 1993 Legislation .....	0.12%	5,000
b. 1996 Legislation .....	0.05%	2,000
c. 1997 Legislation .....	<u>0.31%</u>	<u>12,954</u>
4. Total .....	14.67%	\$ 616,824
<b>B. Required Contributions - Chapter 356</b>		
1. Normal Cost		
a. Retirement benefits .....	6.51%	\$ 273,833
b. Disability benefits .....	0.19%	7,994
c. Survivor .....	0.09%	3,789
d. Deferred retirement benefits .....	1.31%	55,100
e. Refunds .....	<u>0.30%</u>	<u>12,619</u>
f. Total .....	8.40%	\$ 353,335
2. Supplemental contribution amortization by July 1, 2037 of Unfunded Actuarial Accrued Liability .....	10.78%	\$ 453,342
3. Allowance for expenses .....	<u>0.23%</u>	<u>9,672</u>
4. Total annual contribution for fiscal year ending June 30, 2014*** .....	<u>19.41%</u>	<u>\$ 816,349</u>
C. Contribution Sufficiency/(Deficiency) (A.4 - B.4)*** .....	<u>(4.74%)</u>	<u>\$ (199,525)</u>
Note: Projected annual payroll for fiscal year beginning on the valuation date .....		\$ 4,205,399

\* Employer contribution rate is blended to reflect rates of 14.14 percent of pay for Basic members, 6.50 percent for pay for Coordinated members not employed by Special School District #1, and 10.14 percent of pay for Coordinated members who are employed by Special School District #1.

\*\* Includes contributions from Special School District #1, the City of Minneapolis and matching state contributions.

\*\*\* On a fair value of assets basis, the total required contribution is 17.40 percent of payroll and the contribution deficiency is 2.73 percent of payroll.

# Solvency Test

(dollars in thousands)

Valuation as of June 30	Aggregate Accrued Liabilities			Valuation Assets	Portion of Actuarial Accrued Liabilities Covered by Reported Assets		
	(1) Member Contributions	(2) Retirees and Beneficiaries	(3) Members (Employer Financed Portion)		(1)	(2)	(3)
2004	\$ 1,632,995	\$ 10,092,955	\$ 5,792,834	\$ 17,519,909	100%	100%	100.0%
2005	\$ 1,704,913	\$ 10,438,051	\$ 5,878,446	\$ 17,752,917	100%	100%	95.4%
2006	\$ 1,765,117	\$ 12,526,588	\$ 6,387,406	\$ 19,035,612	100%	100%	74.3%
2007	\$ 1,799,910	\$ 13,112,891	\$ 6,557,513	\$ 18,794,389	100%	100%	59.2%
2008	\$ 1,883,371	\$ 13,567,065	\$ 6,780,405	\$ 18,226,985	100%	100%	40.9%
2009	\$ 2,038,749	\$ 14,203,926	\$ 6,872,127	\$ 17,882,408	100%	100%	23.9%
2010	\$ 2,128,600	\$ 13,650,631	\$ 6,302,403	\$ 17,323,146	100%	100%	24.5%
2011	\$ 2,308,427	\$ 13,964,552	\$ 5,898,514	\$ 17,132,383	100%	100%	14.6%
2012	\$ 2,407,626	\$ 14,664,333	\$ 5,952,546	\$ 16,805,077	100%	98.2%	0.0%
2013	\$ 2,482,123	\$ 15,145,239	\$ 5,791,267	\$ 16,774,626	100%	94.4%	0.0%

## Schedule of Active Member Valuation Data

Year Ended June 30	Active Members	(\$ in thousands) Annual Covered Payroll	% Increase in Covered Payroll	Average Annual Member Salary
2004	72,008	\$3,032,483	2.7%	\$42,113
2005	74,552	\$3,121,571	2.9%	\$41,871
2006	79,164	\$3,430,645	9.9%	\$43,336
2007	77,694	\$3,532,159	3.0%	\$45,462
2008	76,515	\$3,645,230	3.2%	\$47,641
2009	77,162	\$3,761,484	3.2%	\$48,748
2010	77,356	\$3,787,757	0.7%	\$48,965
2011	76,755	\$3,838,111	1.3%	\$50,005
2012	76,649	\$3,871,809	0.9%	\$50,514
2013	76,765	\$3,917,310	1.2%	\$51,030

# Schedule of Retirees and Beneficiaries Added To and Removed From Retirement Rolls

Through June 1, 2013 – End of Budget Year for Benefit Payments – Prepared by TRA

Fiscal Year	Added To Rolls		Removed From Rolls		June 1 Payment		Avg. Annual Allowances
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances	
2013							
Retirement	2,719	\$ 73,367,192	1,079	\$ 33,267,557	51,830	\$ 1,393,126,889	\$ 26,879
Disability	54	\$ 1,049,388	80	\$ 1,799,928	571	\$ 11,051,118	\$ 19,354
Beneficiaries	449	\$ 11,519,816	237	\$ 6,491,835	4,525	\$ 116,204,127	\$ 25,680
2012							
Retirement	2,770	\$ 77,169,833	1,040	\$ 30,234,280	50,193	\$ 1,342,791,637	\$ 26,753
Disability	72	\$ 1,481,314	80	\$ 1,816,246	597	\$ 11,565,197	\$ 19,372
Beneficiaries	402	\$ 11,820,962	213	\$ 3,969,446	4,310	\$ 110,302,448	\$ 25,592
2011							
Retirement	2,573	\$ 71,896,835	1,012	\$ 30,381,621	48,463	\$ 1,320,885,728	\$ 27,256
Disability	59	\$ 1,365,130	72	\$ 1,841,934	605	\$ 11,896,607	\$ 19,664
Beneficiaries	400	\$ 9,199,307	224	\$ 4,179,950	4,121	\$ 104,083,869	\$ 25,257
2010							
Retirement	2,034	\$ 57,221,454	922	\$ 28,024,798	46,902	\$ 1,296,882,008	\$ 27,651
Disability	51	\$ 1,283,512	67	\$ 1,578,194	618	\$ 12,400,315	\$ 20,065
Beneficiaries	391	\$ 9,945,588	193	\$ 4,237,320	3,945	\$ 100,367,532	\$ 25,442
2009							
Retirement	2,282	\$ 65,082,777	874	\$ 25,678,679	45,790	\$ 1,271,277,327	\$ 27,763
Disability	48	\$ 959,551	26	\$ 507,524	634	\$ 12,364,085	\$ 19,502
Beneficiaries	343	\$ 7,938,855	213	\$ 2,997,929	3,747	\$ 94,308,262	\$ 25,169
2008*							
Retirement	7,757	\$267,146,737	1,580	\$ 95,109,782	44,382	\$ 1,231,768,186	\$ 27,754
Disability	105	\$ 2,596,324	93	\$ 2,408,229	612	\$ 11,635,841	\$ 19,011
Beneficiaries	585	\$ 24,054,314	398	\$ 10,168,388	3,617	\$ 93,067,932	\$ 25,730
2007							
Retirement	2,222	\$ 62,734,162	767	\$ 20,372,241	38,205	\$ 1,059,731,231	\$ 27,738
Disability	59	\$ 998,126	63	\$ 1,347,548	600	\$ 11,447,746	\$ 19,080
Beneficiaries	355	\$ 8,269,118	141	\$ 2,933,302	3,430	\$ 79,182,006	\$ 23,085
2006							
Retirement	2,300	\$ 62,956,636	670	\$ 18,431,998	36,750	\$ 1,016,543,840	\$ 27,661
Disability	83	\$ 1,363,524	66	\$ 1,427,682	604	\$ 11,586,536	\$ 19,183
Beneficiaries	337	\$ 7,296,282	149	\$ 2,867,820	3,216	\$ 72,667,165	\$ 22,596
2005							
Retirement	2,106	\$ 57,668,914	661	\$ 16,831,656	35,120	\$ 971,477,075	\$ 27,661
Disability	58	\$ 1,011,616	59	\$ 1,288,335	587	\$ 11,409,732	\$ 19,437
Beneficiaries	297	\$ 6,475,987	154	\$ 3,016,273	3,028	\$ 67,280,901	\$ 22,219
2004							
Retirement	1,726	\$ 48,266,626	689	\$ 17,942,943	33,675	\$ 933,150,918	\$ 27,710
Disability	74	\$ 1,431,398	45	\$ 943,335	588	\$ 11,462,253	\$ 19,494
Beneficiaries	299	\$ 6,196,059	137	\$ 2,506,367	2,885	\$ 62,690,339	\$ 21,730

\* 2008 data reflects higher additions, removals and fiscal year 2009 data adjustments associated with the conversion of former MTRFA benefit recipient rolls into TRA benefit payment systems.

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# Financial

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**OFFICE OF THE LEGISLATIVE AUDITOR**  
STATE OF MINNESOTA • James Nobles, Legislative Auditor

## **Independent Auditor's Report**

Members of the Board of Trustees  
Minnesota Teachers Retirement Association

Ms. Laurie Fiori Hacking, Executive Director  
Minnesota Teachers Retirement Association

### **Report on the Financial Statements**

We have audited the accompanying basic financial statements of the Minnesota Teachers Retirement Association (TRA) as of and for the fiscal year ended June 30, 2013, and the related notes to the financial statements, as listed in the Table of Contents.

### **Management's Responsibility for the Financial Statements**

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### **Auditor's Responsibility**

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Association's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion of the effectiveness of the Association's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### **Opinion**

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Teachers Retirement Association as of June 30, 2013, and the changes in financial position for the period then ended in conformity with accounting principles generally accepted in the United States of America.

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### **Required Supplementary Information**

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

### **Other Information Included With the Financial Statements**

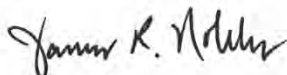
Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Association's basic financial statements. The supporting schedules in the Financial Section and the Introductory, Investment, Actuarial, and Statistical Sections, as listed in the Table of Contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

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

The Introductory, Investment, Actuarial, and Statistical Sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

### **Other Reporting Required by Government Auditing Standards**

In accordance with *Government Auditing Standards*, we will issue our report on our consideration of the Teachers Retirement Association's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* and should be considered in assessing the results of our audit.



James R. Nobles  
Legislative Auditor

December 13, 2013



Cecile M. Ferkul, CPA, CISA  
Deputy Legislative Auditor

# Management Discussion and Analysis

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June 30, 2013

This discussion and analysis of the Teachers Retirement Association (TRA) of Minnesota provides an overview of TRA financial activities for the fiscal year ended June 30, 2013. We encourage you to consider the information presented here in conjunction with the transmittal letter beginning on page 3 and the additional information presented in the financial statements and required supplementary information.

## Financial Highlights

Financial highlights of fiscal year 2013 include:

- The Net Position Restricted for Pension Benefits increased in value by about \$1.33 billion during fiscal year 2013 for a total of about \$18.02 billion. Plan contributions and investment income totaled about \$2.87 billion during the fiscal year. Plan benefits and other expenses totaled about \$1.54 billion during the fiscal year.
- Investment returns for the 2013 fiscal year were 14.2 percent, resulting in investment income of about \$2.31 billion.
- Contributions paid by members and employers during fiscal year 2013 totaled about \$556.47 million, an increase of \$49.97 million from the fiscal year 2012 total of \$506.50 million.
- Pension benefits paid to retirees and beneficiaries during fiscal year 2013 was \$1.52 billion. The fiscal year 2012 total was \$1.49 billion, representing an increase of about \$36.88 million during the year.
- Refunds of member contributions plus interest during fiscal year 2013 were \$10.46 million. The fiscal year 2012 total was \$11.84 million.
- Administrative expenses of the fund during fiscal year 2013 were \$9.13 million. The fiscal year 2012 total was \$10.02 million, representing a decrease of \$0.89 million during the fiscal year.

## Actuarial Highlights

The Association's funding objective is to meet long-term benefit obligations through the accumulation of contributions and investment income. This funding is structured so that the burden of paying retirement costs is shared equitably by present and future generations of members and taxpayers.

As of June 30, 2013, the accrued liability funding ratio for TRA was 71.63 percent, a decrease from the comparable funding ratio of 72.99 percent as of June 30, 2012. TRA's unfunded actuarial accrued liability on June 30, 2012, was \$6.22 billion. The June 30, 2013 unfunded actuarial liability increased to \$6.64 billion, an increase of \$0.42 billion from the previous year. The final recognition of investment losses from fiscal year 2009 in the asset smoothing formula was the primary reason for the increase in the unfunded actuarial liability and decrease in the funding ratio. TRA's unfunded liability, by state law, must be fully paid by June 30, 2037. Key actuarial funding ratios can be seen on page 61.

## Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to the financial report of TRA. The financial report consists of:

- the basic financial statements, comprised of the Statement of Fiduciary Net Position and the Statement of Changes in Fiduciary Net Position;
- the notes to the basic financial statements; and
- required and other supplementary information.

The Statement of Fiduciary Net Position (page 18) presents information on the assets and liabilities of TRA, with the difference between the two reported as net position. The net position of the Association reflect the resources available to pay benefits to members when due. Over time, increases and decreases in net position measure whether the Association's financial position is improving or deteriorating. It can be thought of as a snapshot of the financial position of TRA at that specific point in time.

The Statement of Changes in Fiduciary Net Position (page 19) presents information detailing the changes in net position that occurred during the current fiscal year. All

changes in net assets are reported on an accrual basis. This means that the revenue or expense is recognized as soon as the underlying event giving rise to the change occurs, regardless of when the actual cash is received or paid. Thus, revenues and expenses are reported in this statement for some items that will not result in cash flows until future fiscal periods. For example, contributions due from a school district, even though not yet paid by fiscal year end, are reflected as revenue. Earned benefits or refund accruals are reflected as an expense, even though they may not have been paid to the member until after fiscal year end.

The notes to the financial statements (pages 20-35) provide additional information that is essential to a full understanding of the data provided in the financial statements.

The report also contains required supplementary information in addition to the basic financial statements themselves. The Schedule of Funding Progress (page 36) includes historical trend information about the TRA plan from a long-term, ongoing perspective and the progress made in accumulating assets to pay benefits when due. The Schedule of Employer Contributions (page 36) presents historical trend information about the annual required contributions of employers and the actual contributions made by employers.

Two supporting schedules are also presented. The Schedule of TRA Administrative Expenses (page 38) presents the overall cost of administering the Association. The Schedule of Professional Consultant Expenses (page 39) further details this category of administrative expense.

## Financial Analysis of the TRA Fund

### Plan Assets

Total plan assets of the TRA Fund as of June 30, 2013, were \$19.79 billion and were mostly comprised of cash, investments and contributions due from employers. Total plan assets increased \$1.57 billion (8.61 percent) from the June 30, 2012, total of \$18.22 billion. The primary reason for the increase was the higher investment returns in fiscal year 2013 than fiscal year 2012.

### Plan Liabilities

Total liabilities as of June 30, 2013, were \$1.77 billion, an increase of 15.62 percent from the June 30, 2012, liability amount of \$1.53 billion. The primary reason for the

increase was the higher value of liabilities within the securities lending program. In both years, the liability amounts were mostly comprised of obligations under security lending arrangements and long-term bonds payable for the building co-owned by the Association.

### Net Position

Association assets exceeded liabilities on June 30, 2013, by \$18.02 billion. The amount is greater than the June 30, 2012, amount of \$16.69 billion by \$1.33 billion. The increase in the fair value of investments is primarily attributable to favorable market conditions experienced during fiscal year 2013, as evidenced by the overall fund investment return of approximately 14.2 percent. As a mature public pension plan, TRA relies heavily on investment earnings to help pay benefits and expenses since annual employee and employer contributions are currently less than one-third of the amount needed to fund current cash outflows. As result of its annual expenses, the TRA Fund requires strong investment performance each year to experience an increase in its level of net position.

### Revenues — Additions to Fiduciary Net Position

Total additions to the TRA Fund during fiscal year 2013 were \$2.87 billion, a \$1.97 billion increase from \$0.90 billion in fiscal year 2012. The increase is due to the higher than assumed investment return of 14.2 percent as compared to the 2.4 percent return in fiscal year 2012. TRA assets were assumed to earn 8.0 percent for fiscal year 2013.

Total retirement contributions for fiscal year 2013 increased about \$49.97 million from the previous fiscal year for a combined fiscal year 2013 total of about \$556.47 million. The increase is attributable to higher contribution rates for active members and employers reported for fiscal year 2013. Retirement contributions during fiscal year 2013 were calculated at 6.5 percent employee and 6.5 percent employer for Coordinated members of TRA.

Net investment income of \$2.31 billion was recorded for fiscal year 2013. This amount increased by \$1.93 billion from the fiscal year 2012 of \$383.19 million. The increase is attributable to higher investment returns in fiscal year 2013 than fiscal year 2012. Investment returns were 2.4 percent for fiscal year 2012.

## Fiduciary Net Position

*Dollar Amounts in Thousands*

	<u>2013</u>	<u>2012</u>	<u>Change</u>
Cash and Investments	\$ 19,759,782	\$ 18,195,935	\$ 1,563,847
Receivables	18,908	14,854	4,054
Other	<u>13,844</u>	<u>12,781</u>	<u>1,063</u>
Total Assets	19,792,534	18,223,570	1,568,964
Total Liabilities	<u>1,773,215</u>	<u>1,533,629</u>	<u>(239,586)</u>
<b>Fiduciary Net Position</b>	<u>\$ 18,019,319</u>	<u>\$ 16,689,941</u>	<u>\$ 1,329,378</u>

## Changes in Fiduciary Net Position

*Dollar Amounts in Thousands*

<b>Additions</b>	<u>2013</u>	<u>2012</u>	<u>Change</u>
Member Contributions	\$ 265,809	\$ 239,834	\$ 25,975
Employer Contributions	290,662	266,661	24,001
Net Investment Income/(Loss)	2,310,295	383,187	1,927,108
Other	<u>5,475</u>	<u>4,929</u>	<u>546</u>
<b>Total Additions</b>	<u>\$ 2,872,241</u>	<u>\$ 894,611</u>	<u>\$ 1,977,630</u>
<b>Deductions</b>	<u>2013</u>	<u>2012</u>	<u>Change</u>
Monthly Benefits	\$ 1,523,269	\$ 1,486,387	\$ 36,882
Refunds of Contributions	10,463	11,836	(1,373)
Administrative Expenses	<u>9,131</u>	<u>10,023</u>	<u>(892)</u>
<b>Total Deductions</b>	<u>1,542,863</u>	<u>\$ 1,508,246</u>	<u>\$ 34,617</u>
<b>Change in Fiduciary Net Position</b>	<u>\$ 1,329,378</u>	<u>\$ (613,635)</u>	<u>\$ 1,943,013</u>

### Expenses — Deductions From Fiduciary Net Position

The primary expenses of TRA include the payment of pension benefits to members and beneficiaries, refunds of contributions to former members, and the cost of administering the system. Retirement benefit expense increased by about \$36.88 million due to a net increase in the number of benefit recipients during the year. A 2.0 percent benefit adjustment was paid to benefit recipients on January 1, 2013, according to Minnesota Statute.

Member refunds of \$10.46 million decreased by about \$1.38 million during fiscal year 2013 from the fiscal year 2012 total of \$11.84 million. The decrease is due to fewer refunds of Earnings Limitation Savings Accounts (ELSA).

Administrative expenses decreased by 8.9 percent during the fiscal year – from \$10.02 million in fiscal year 2012 to about \$9.13 million for fiscal year 2013. Overall, fund expenses increased about \$34.62 million during fiscal year 2013.

### Actuarial Highlights

The financial health of a public pension plan is not exclusively assessed by analyzing the basic financial statements. These financial statements should also be reviewed in conjunction with the Schedule of Funding Progress (page 36) and the Schedule of Contributions from the Employer and Other Contributing Entities (page 36) to determine if TRA is becoming stronger or weaker over time.

As a result of recognizing the final portion of investment losses associated with fiscal year 2009, the actuarial value of assets fell slightly from \$16.81 billion on June 30, 2012, to \$16.77 billion as of June 30, 2013. The actuarial value of assets smoothes investment gains and losses over a five-year period to minimize the volatility associated with any one year of investment performance. On fair value basis, TRA assets were about \$18.02 billion on June 30, 2013.

TRA's actuarial liabilities increased during the year from \$23.02 billion on June 30, 2012 to \$23.42 billion as of June 30, 2013. With the plan provisions enacted by the legislature in 2010, TRA has been able to contain the growth of actuarial liabilities. On July 1, 2009, actuarial liabilities were \$23.11 billion. As of July 1, 2013, the liabilities were \$23.42 billion, an increase of 1.34 % over four years. A major feature of the benefit reduction package was a two-year suspension of the annual January benefit recipient adjustment. On January 1, 2013, members received a 2.0 percent benefit adjustment. The 2010 legislation also included increases to employee and employer contribution rates.

TRA's funding objective is to meet long-term benefit obligations through the accumulation of contributions and investment income. This funding is structured so that the burden of retirement costs is shared equitably by present and future generations of members and taxpayers. As of June 30, 2013, the accrued liability funding ratio for TRA was 71.63 percent, a decrease from the comparable funding ratio of 72.99 percent as of June 30, 2012. The funding decrease is primarily driven by recognition of the final portion of investment losses deferred from fiscal year 2009 under the five-year actuarial asset smoothing method.

TRA's unfunded actuarial liability on June 30, 2012 was \$6.22 billion. The June 30, 2013, unfunded actuarial liability increased to \$6.64 billion, representing an increase of about \$0.42 billion. By law, the unfunded liability must be recovered in full by June 30, 2037.

TRA's statutory contribution rate of 14.67 percent of member covered payroll is currently trailing the required contribution rate calculated by TRA's actuarial consultant. The required contribution rate to fund normal pension costs, amortizing the unfunded actuarial liability, plus TRA administrative costs was calculated as 19.41 percent. The resulting contribution deficiency is 4.74 percent of employee covered payroll. As a result of 2010 legislation, employee and employer contribution rates will increase next year by a combined total of 1.00 percent. Employee and employer contribution rates are reviewed and set into law by the Minnesota legislature.

## Summary

Due to the long-term nature of defined benefit plans, one must review the financial performance of TRA over a period of years and not at any one point in time. The funding ratio of the TRA Fund declined from 72.99 percent to 71.63 percent for fiscal year 2013, primarily due to the five-year investment performance not meeting the expected investment earnings assumption.

The long-term financial health of TRA, like all retirement systems, is heavily dependent on two key items: (1) future investment returns and (2) contributions. Changes were made by the 2010 legislature to strengthen the funding of TRA and enhance its long-term sustainability.

Contributions were increased by a total of 4 percent, to be phased in over four years beginning July 1, 2011, and benefit reductions were implemented. These changes, along with strong investment performance in three of the last four fiscal years, have significantly improved the projected long-term funding of TRA. However, a contribution deficiency still exists even when future scheduled contribution increases are considered. Given the current funded status, the deferred investment experience and scheduled increase in the statutory contribution rate, the funded ratio is expected to increase slowly if all actuarial assumptions are met, but remain below 100 percent funded for the foreseeable future. In order for the funded ratio to reach 100 percent by June 30, 2037, contributions would have to increase beyond the scheduled rates, benefits would have to be lowered, or favorable experience would have to occur.

### Request for Information

The financial report is designed to provide the Board of Trustees, members and other users of this financial report a general overview of the Association's finances and to demonstrate its accountability with the money it holds in trust. If you have questions about this report, or require additional financial or actuarial information, please contact

Teachers Retirement Association  
60 Empire Drive, Suite 400  
Saint Paul, Minnesota 55103

Telephone toll-free, 800-657-3669

Email: [info@MinnesotaTRA.org](mailto:info@MinnesotaTRA.org)

# Teachers Retirement Fund

## Statement of Fiduciary Net Position

As of June 30, 2013

### Assets

Cash and Short-Term Investments	
Cash .....	\$ 8,474,729
Building Account Cash .....	67,382
Short-term investments .....	<u>469,717,439</u>
<b>Total Cash and Short-Term Investments .....</b>	<b>\$ 478,259,550</b>
Accounts Receivable .....	\$ 18,908,230
Investments (at fair value)	
Fixed Income Pool .....	\$ 4,134,001,350
Alternative Investments Pool .....	2,610,107,142
Indexed Equity Pool .....	2,600,723,192
Domestic Equity Pool .....	5,504,430,979
Global Equity Pool .....	<u>2,676,467,190</u>
<b>Total Investments .....</b>	<b>\$ 17,525,729,853</b>
Securities Lending Collateral .....	\$ 1,755,792,713
Building	
Land .....	\$ 171,166
Building & Equipment Net of Depreciation .....	7,562,864
Deferred Bond Charge Net of Amortization .....	<u>83,713</u>
<b>Total Building .....</b>	<b>\$ 7,817,743</b>
Capital Assets Net of Depreciation .....	<u>\$ 6,026,159</u>
<b>Total Assets .....</b>	<b><u>\$ 19,792,534,248</u></b>

### Liabilities

Current	
Accounts Payable .....	\$ 8,687,024
Accrued Compensated Absences .....	67,431
Accrued Expenses - Building .....	89,563
Bonds Payable .....	576,190
Bond Interest Payable .....	15,282
Securities Lending Collateral .....	<u>1,755,792,713</u>
<b>Total Current Liabilities .....</b>	<b>\$ 1,765,228,203</b>
Long Term	
Accrued Compensated Absences .....	\$ 603,738
Bonds Payable .....	<u>7,383,406</u>
<b>Total Long Term Liabilities .....</b>	<b>\$ 7,987,144</b>
<b>Total Liabilities .....</b>	<b><u>\$ 1,773,215,347</u></b>
<b>Net Position Restricted for Pensions .....</b>	<b><u>\$ 18,019,318,901</u></b>

The accompanying notes are an integral part of this statement.

# Teachers Retirement Fund

## Statement of Changes in Fiduciary Net Position

For the Fiscal Year Ended June 30, 2013

### Additions

#### Contributions

Employee .....	\$ 265,808,686
Employer .....	270,708,108
Direct Aid (State/City/District) .....	19,954,000
Earnings Limitation Savings Account (ELSA) .....	<u>1,792,150</u>
Total Contributions .....	\$ 558,262,944

#### Investment Income

Net Appreciation in Fair Value of Investments .....	\$ 2,326,918,279
Less Investment Expense .....	<u>(24,701,749)</u>
Net Investment Income .....	\$ 2,302,216,530

#### Securities Lending Activities

Securities Lending income .....	\$ 13,229,614
Securities Lending expenses .....	
Borrower rebates .....	(757,119)
Management fees .....	<u>(4,393,618)</u>
Total Securities Lending Expenses .....	<u>(5,150,737)</u>
Net income from Securities Lending .....	<u>8,078,877</u>
Total Net Investment Income .....	\$ 2,310,295,407

Other Income .....	\$ 3,682,696
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Total Additions .....	\$ <u>2,872,241,047</u>
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### Deductions

Retirement Benefits Paid .....	\$ 1,521,476,853
Earnings Limitation Savings Account .....	1,792,150
Refunds of Contributions to Members .....	10,462,932
Administrative Expenses .....	<u>9,130,840</u>
Total Deductions .....	\$ <u>1,542,862,775</u>

Net Increase (decrease) .....	\$ 1,329,378,272
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#### Net Position Restricted for Pensions

Beginning of Year .....	\$ <u>16,689,940,629</u>
End of Year .....	\$ <u>18,019,318,901</u>

The accompanying notes are an integral part of this statement.

# Notes to the Financial Statements

For the Fiscal Year Ended June 30, 2013

## I. Summary of Significant Accounting Policies

### A. Organization

The Teachers Retirement Association (TRA) is an administrator of a multiple employer, cost-sharing retirement fund. TRA administers a Basic Plan (without Social Security coverage) and a Coordinated Plan (coordinated with Social Security coverage) in accordance with Minnesota Statutes, Chapters 354 and 356. Assets of the fund may be used to pay benefits to both Basic and Coordinated members without legal restriction.

### B. Participating Members and Employers

Teachers employed in Minnesota's public elementary and secondary schools, charter schools, and certain educational institutions maintained by the state (except those teachers employed by the cities of Duluth and St. Paul, and by the University of Minnesota system) are required to be TRA members.

State university, community college, and technical college teachers first employed by the Minnesota State College and Universities (MnSCU) may elect TRA coverage within one year of eligible employment. Alternatively, these teachers may elect coverage through the Defined Contribution Retirement Plan (DCR) administered by MnSCU. A teacher employed by MnSCU and electing coverage by DCR is not a member of TRA except for purposes of Social Security coverage.

A schedule of employer units and membership is presented in *Figure 1*.

*Figure 1*

<b>Employer Units</b>	
June 30, 2013	
Independent school districts	347
Joint powers units	35
Colleges and universities	39
State agencies	4
Charter schools	160
Professional organizations	<u>6</u>
Total Employer Units	<u>591</u>
<b>Membership</b>	
June 30, 2013	
Retirees, disabilitants and beneficiaries receiving benefits	57,168
Terminated employees with deferred vested benefits	<u>12,614</u>
Total	<u>69,782</u>
Current employees	
Vested	61,398
Non-vested	<u>15,367</u>
Total	<u>76,765</u>

### C. Benefit Provisions

TRA provides retirement benefits, as well as disability benefits to members and benefits to survivors upon the death of eligible members. All benefits vest after three years of eligible service credit. The defined retirement benefits are based on a member's highest average salary for any consecutive 60 months of allowable service, age and years of formula service credit at termination of service. TRA members belong to either the Basic or Coordinated Plan.

Two methods are used to compute benefits for TRA's Coordinated and Basic Plan members. Members first employed **before July 1, 1989**, receive the greater of the Tier I or Tier II benefits as described:



Tier I	Step Rate Formula	Percentage
Basic	1st ten years of service	2.2 percent per year
	All years after	2.7 percent per year
Coordinated	1st ten years if service years are prior to July 1, 2006	1.2 percent per year
	1st ten years if service years are July 1, 2006 or after	1.4 percent per year
	All other years of service if service years are prior to July 1, 2006	1.7 percent per year
	All other years of service if service years are July 1, 2006 or after	1.9 percent per year

With these provisions:

- (a) Normal retirement age is 65 with less than 30 years of allowable service and age 62 with 30 or more years of allowable service.
- (b) 3 percent per year early retirement reduction factors for all years under normal retirement age.
- (c) Unreduced benefits for early retirement under a Rule-of-90 (age plus allowable service equals 90 or more).

or

### Tier II Benefits

For years of service prior to July 1, 2006, a level formula of 1.7 percent per year for coordinated members and 2.7 percent per year for basic members. For years of service July 1, 2006 and after, a level formula of 1.9 percent per year for Coordinated members and 2.7 for Basic members applies. Actuarially equivalent early retirement reduction factors with augmentation are used for early retirement before the normal age of 65. These reduction factors average approximately 4.0 to 5.5 percent per year.

Members first employed **after June 30, 1989**, receive only the Tier II benefit calculation with a normal retirement age that is their retirement age for full Social Security retirement benefits, but not to exceed age 66.

Former Minneapolis Teachers Retirement Fund Association (MTRFA) members with Basic Program eligibility retain the plan provisions of the Basic Program as defined in the MTRFA Articles of Incorporation and Bylaws as they existed at merger on June 30, 2006. Thirty seven former MTRFA active and inactive members retain Basic Program coverage.

The benefit provisions stated in the preceding paragraphs of this section are current provisions and apply to active plan participants. Vested, terminated members who are entitled to benefits, but are not yet receiving them, are bound by the provisions in effect at the time they last terminated their public service. Pension benefits are funded from member and employer contributions and income from investment of fund assets.

## D. Reporting Entity

TRA functions as a statutory entity created by the Laws of 1931, Chapter 406. The Association maintains rights to sue or be sued in its own name and to hold property in its own name. For financial reporting purposes, TRA is considered a pension trust fund of the State of Minnesota and is included in the State's Comprehensive Annual Financial Report with its fiduciary funds.

The State of Minnesota acts as a fiduciary and trustee of TRA's funds. The Board of Trustees has significant independence in the operations and management of the Association, though the State Legislature actually determines the contribution rates for members and employers. The Board of Trustees is responsible for TRA's administration, but the State Board of Investment (SBI) is responsible for investing plan assets.

## E. Basis of Accounting

TRA financial statements for its defined benefit fund are prepared using the accrual basis of accounting. Employee and employer contributions are recognized as revenue in the year in which they are due pursuant to Minnesota Statute. Expenses including benefit payments and refunds are recorded when the liability is due and payable according to Minnesota Statute.

The Governmental Accounting Standards Board (GASB) is the independent, not-for-profit organization that establishes accounting and financial reporting standards or GAAP for governmental entities. For the fiscal year ended June 30, 2013, TRA implemented GASB *Statement No. 63, Financial Reporting of deferred Outflows of Resources, Deferred Inflows of Resources, and Net Position*. This statement provides financial reporting guidance for deferred outflows and inflows of resources where none previously existed, and standardizes the presentation of these items and their effect on a governmental entity's net position. This statement also amends the net asset reporting requirements of GASB Statement No. 34 and other pronouncements by incorporating deferred outflows and inflows of resources into the definition of the required components of the residual measure and by renaming that measure as net position, rather than net assets. The requirements of this Statement were effective for the financial statements for periods beginning after December 15, 2011.

The GASB issued *Statement No. 65, Items Previously Reported as Assets and Liabilities*, in March 2012. This Statement establishes accounting and financial reporting standards that reclassify certain items previously reported as assets and liabilities as deferred outflows of resources or deferred inflows of resources. The Statement also improves financial reporting by clarifying the appropriate use of deferred outflows of resources and deferred inflows of resources to ensure consistency in financial reporting. TRA is required to implement this Statement for the fiscal year ending June 30, 2014.

The GASB issued *Statement No. 67, Financial Reporting for Pension Plans* in June 2012. This Statement establishes new standards for state and local governmental plans. Concurrently, the GASB issued *Statement No. 68, Accounting and Financial Reporting for Pensions*, which establishes standards for governmental entities that contribute to state and local pension plans.

TRA anticipates implementing the provisions of Statement No. 67 for the fiscal year ending June 30, 2014. Statement No. 68 is expected to be implemented for the fiscal year ending June 30, 2015. TRA staff has already begun planning with its actuarial consultant, investment custodians, and employer unit entities to coordinate the implementation of both GASB statements. Further information on GASB-related implementation planning can be found on the TRA website at: [www.MinnesotaTRA.org](http://www.MinnesotaTRA.org).

## F. Investment Policies and Valuation Methodology

1. Pursuant to Minnesota Statutes, Chapter 11A, the state's retirement fund assets are commingled in various pooled investment accounts, administered by the State Board of Investment (SBI). As of June 30, 2013, the TRA Fund's share of the Combined Funds administered by SBI at fair value was approximately 34.6 percent (\$18.00 billion – TRA and \$52.09 billion – total). *Figure 2* provides specific totals of TRA investments by category.
2. Minnesota Statutes, section 11A.24, broadly restricts retirement fund investments to obligations and stocks of United States and Canadian governments, their agencies and their registered corporations; short-term obligations of specified high quality; restricted participation as a limited partner in venture capital, real estate or resource equity investments; restricted participation in registered mutual funds; and some qualified foreign instruments.
3. Information about the primary government's (State of Minnesota) investments, including credit risk classification, can be obtained from the Department of Minnesota Management & Budget, 400 Centennial Office Building, 658 Cedar Street, Saint Paul, Minnesota 55155. Information on investment activity, investment management fees and a listing of specific investments owned by the pooled asset accounts can be obtained from SBI, Suite 355, 60 Empire Drive, Saint Paul, Minnesota 55103.

4. Investments in the pooled accounts are reported at fair value. The pooled accounts have not been rated for credit quality. *Figure 2* provides a summary of the cost and fair values of the investments as of June 30, 2013, as reported on the Statement of Fiduciary Net Position. Securities traded on a national or international exchange are valued using the last reported trade price. The fair value of real estate investments is based on independent yearly appraisals. Investments that do not have an established market are reported at estimated fair value.

*Figure 2*

<b>TRA Investment Portfolio</b>		
<b>June 30, 2013</b>		
<b>TRA Fund</b>	<b>Cost</b>	<b>Fair Value</b>
<b>Pooled Accounts</b>		
Fixed Income	\$ 3,968,696,931	\$ 4,134,001,350
Domestic Equity	3,795,242,801	5,504,430,979
Indexed Equity	1,983,866,822	2,600,723,192
Global Equity	2,305,614,031	2,676,467,190
Alternative Investment	<u>2,184,095,082</u>	<u>2,610,107,142</u>
<b>Total</b>	<b><u>\$ 14,237,515,667</u></b>	<b><u>\$17,525,729,853</u></b>
<b>Short-Term Cash Equivalents</b>		
Money Market	\$ 437,730,663	\$ 437,804,119
Minneapolis Pool	144,956	45,318
CD Repo Pool	<u>31,864,709</u>	<u>31,868,002</u>
<b>Total</b>	<b><u>\$ 469,740,328</u></b>	<b><u>\$ 469,717,439</u></b>
<b>Total Invested</b>	<b><u>\$ 14,707,255,995</u></b>	<b><u>\$17,995,447,292</u></b>

Included in the short-term investment category is a program managed by the SBI in which it purchases certificates of deposits (CD) in Minnesota financial institutions. The SBI receives a market rate of return on these investments. The CD investments are insured by the Federal Deposit Insurance Corporate.

The TRA Minneapolis Pool Account was created in 2006 to account for the settlement of investment activity related to the external money managers of the former Minneapolis Teachers Retirement Fund Association

(MTRFA). Upon completion of the post-merger investment settlement with the former MTRFA money managers, proceeds will be transferred to other pooled investments in accordance with SBI policies.

Investment income is recognized as earned. Accrued investment income of the pooled investment accounts is included in participation in the accounts. Gains or losses on sales or exchanges are recognized on the transaction date.

Net investment income is summarized on the Statement of Changes in Fiduciary Net Position. The summarized amounts show net investment income of \$2,310,295,407 for fiscal year 2013.

The cost of security transactions is included in the transaction price. Administrative expenses of SBI and investment management fees of the external money managers and the state's master custodian for pension fund assets are allocated to the funds participating in the pooled investment accounts (page 52). TRA's share of these expenses totaled \$24,701,749 (pages 50-51).

A detailed schedule of fees and commissions by brokerage firm, along with the number of shares traded, total commissions, and commissions per share may be obtained by writing:

Minnesota State Board of Investment  
60 Empire Drive, Suite 355  
St. Paul, MN 55103-3555

## G. Securities Lending

Governmental Accounting Standards Board (GASB) Statement 28 Disclosures

TRA does not own specific securities, but instead owns shares in pooled funds invested by SBI. The SBI is authorized to use securities lending transactions in accordance with Minnesota Statutes, section 356A.06, subdivision 7, and has, pursuant to a Custodial Trust Agreement, authorized State Street Bank and Trust Company, Boston, Massachusetts, to act as agent in lending securities to approved borrowers.

During the fiscal year, State Street lent, at the direction of the SBI, certain securities held by State Street as custodian and received cash (United States and foreign currency) or other collateral including securities issued or guaranteed by the United States government. State Street did not have the ability to pledge or sell collateral securities absent a borrower default. Under Minnesota Statutes, section 11A.24, borrowers were required to deliver collateral for each loan in amounts at least equal to the market value of the loaned securities.

SBI did not impose any restrictions during the fiscal year on the amount of the loans that State Street made on its behalf. There were no failures by any borrowers to return loaned securities or pay distributions thereon during the fiscal year. Moreover, there were no losses during the fiscal year resulting from a default of the borrowers or State Street.

During the fiscal year, SBI and the borrowers maintained the right to terminate all securities lending transactions on demand. The cash collateral received on each loan was invested in a separate investment pool. As of June 30, 2013, such investment pool had an average duration of 13.73 days and an average weighted maturity of 32.84 days. Because the loans were terminable at will, their duration did not generally match the duration of the investments made with cash collateral. On June 30, 2013, SBI had no credit risk exposure to borrowers. TRA's portion of the

market value of the collateral held and the fair value of securities on loan from SBI as of June 30, 2013, were \$3,100,831,358 and \$2,971,247,452, respectively. Cash collateral is reported on the Statement of Fiduciary Net Position as an asset. Liabilities resulting from these securities lending transactions are also reported on the Statement of Fiduciary Net Position.

## H. Investment Risk

Governmental Accounting Standards Board (GASB) Statement 40 Disclosures

The Minnesota State Board of Investment (SBI) is responsible for the investing of TRA assets under the authority of Minnesota Statutes, section 11A.24. The following disclosures apply to TRA investments. Cash deposit disclosures are included in Note M.

Credit risk is the risk that an issuer or counterparty to an investment will be unable to fulfill its obligations. The State Board of Investment (SBI) has policies designed to minimize credit risk. They may invest funds in governmental obligations provided the issue is backed by the full faith and credit of the issuer or the issue is rated among the top four quality rating categories by a nationally recognized rating agency. They may invest funds in corporate obligations provided the issue is rated among the top four quality categories by a nationally recognized rating agency. They may also invest in unrated corporate obligations or in corporate obligations that are not rated among the top four quality categories provided that:

- The aggregate value of these obligations may not exceed 5 percent of the fund for which the state board is investing;
- Participation is limited to 50 percent of a single offering; and
- Participation is limited to 25 percent of an issuer's obligations.

SBI may also invest in bankers acceptances, deposit notes of U.S. banks, certificates of deposit, mortgage securities, and asset backed securities rated in the top four quality categories by a

nationally recognized rating agency. Commercial paper must be rated in the top two categories.

TRA's share of the SBI's exposure to credit risk, based on the lower of S & P's or Moody's Quality Ratings, is shown in *Figure 3*.

*Figure 3*

<b>Credit Risk Exposure</b>	
<b>Quality Rating</b>	<b>Fair Value (in thousands)</b>
AA or Better	\$2,741,760
BBB to A	\$1,048,078
BB or Lower	197,274
Not Rated	1,182,996

Concentration of credit risk is the risk of loss that may be attributed to the magnitude of a government's investment in a single issuer. SBI determined concentration of credit risk based on security identification number. TRA's defined benefit plan does not have a concentration of credit risk.

Interest rate risk is the risk that changes in interest rates of debt instruments could adversely affect the fair value of an investment. The State Board of Investment controls interest rate risk through guidelines developed for each portfolio. TRA's share of the debt securities are held in external investment pools and have the weighted average maturities as shown in *Figure 4*.

*Figure 4*

<b>Interest Rate Risk</b>	
<b>Security Type</b>	<b>Weighted Average Maturity (in Years)</b>
Cash Equivalent	0.23
Commercial Mortgage Backed Securities	1.08
Asset Backed	2.83
Collateralized Mortgage Obligation	4.59
U. S. Agency	5.16
Mortgage Pass Through	5.18
Consumer Discretionary	5.83
Foreign Country Bonds	6.05
Yankee	6.97
U.S. Treasuries	8.02
Corporate Debt	8.28
Municipal	18.80
Health Care	29.75

Foreign currency risk is the risk that changes in exchange rates between the U.S. dollar and foreign currencies could adversely affect the fair value of an investment. Under SBI manager guidelines, approved by the Investment Advisory Committee (IAC) and SBI, each money manager may hedge foreign currency transactions at their own option. Government obligations, including guaranteed or insured issues of the International Bank for Reconstruction and Development, the Inter-American Development Bank, the Asian Development Bank, and the African Development Bank, must pay interest and principal in U.S. dollars. The principal and interest of obligations of corporations, including those corporations incorporated or organized under the laws of the Dominion of Canada or any province thereof, must also be paid in U.S. dollars. TRA's share of investments as of June 30, 2013, was distributed among the currencies as shown in *Figure 5*.

## I. Derivative Financial Instruments

Governmental Accounting Standards Board (GASB) Statement 53 Disclosures

On behalf of TRA, SBI invests in various types of derivative financial instruments. Derivatives are defined as any financial arrangement between two parties that has value based on or derived from future price fluctuations. The derivative financial instruments that SBI enters into include futures, options, stock warrants and rights, and currency forwards.

Minnesota Statutes, section 11A.24, provides that any agreement for put and call options and futures contracts may only be entered into with a fully offsetting amount of cash or securities. This applies to foreign currency forward contracts used to offset the currency risk of a security. All other derivatives are exchange-traded. The purpose of the SBI's derivative activity is to equitize cash in the portfolio, to adjust the duration of the portfolio, or to offset current futures positions.

Explanations of each derivative instrument type are presented below. The fair value balances and notational amounts (or face value) at June 30,

2013, classified by derivative instrument type (e.g., futures, options, currency forwards, and stock warrants and rights), and the changes in fair value for fiscal year 2013 are shown in *Figure 6*.

- **Futures** are contract commitments to purchase (asset) or sell (liability) at a future date. The net change in the values of futures contracts is settled on a regular basis and gains and losses are included in investment income.
- **Options** are contracts that give buyers or sellers the right to buy (calls) or sell (puts) a security at a predetermined price on a future date. Gains and losses result from variances in the market value of the security that is the subject of the contract that occur prior to or on the contract specified date. The gains and losses are included in investment income.
- **Currency Forward Contracts** are used to manage portfolio foreign currency risk. The provisions of the contract vary based on what is negotiated between the two parties.
- **Stock Warrants and Rights**, similar to options, are the right to purchase shares of a stock at a certain price by a certain date. They usually have a longer term before expiration, e.g., five years or more. When exercised, new shares are issued by the company. Rights are the same but are issued to current stock owners to enable them to retain their relative ownership share. Gains and losses from the sale or exercise of stock warrants and rights are included in investment income.

SBI is exposed to credit risk through multiple counterparties in foreign currency forward contracts that are used to offset the currency risk of a security. TRA's proportionate share of the maximum loss that SBI would have recognized as of June 30, 2013, if all counter parties failed to perform as contracted is \$1,008,690. These counter parties have S&P ratings of A or better. There is no collateral held or any liabilities included in netting arrangements with those counterparties that would have reduced SBI's exposure to credit risk.

## J. Accrued Compensated Absences

Employees of TRA accrue vacation leave, sick leave, and compensatory leave at various rates within limits specified in collective bargaining agreements. Accumulated amounts for compensated absences are accrued when incurred. Such leave is liquidated in cash primarily at the time of termination of employment. The total liability at June 30, 2013, is \$671,169. Of this, \$67,431 is considered a short-term liability and \$603,738 is shown as a long-term liability on the Statement of Fiduciary Net Position. The total decreased by \$98,859 during fiscal year 2013.

## K. Capital Assets

Capital assets are capitalized at the time of acquisition at cost. Assets with a cost in excess of \$2,000 and internally generated software development costs in excess of \$1,000,000 are capitalized. In fiscal year 2013, software development costs of \$1,894,313 were capitalized. Additional development costs are anticipated over the next three years.

Depreciation is computed on a straight-line method over the useful life of the related assets. The estimated useful lives by major category are: computer equipment (3 years), general office equipment (5 years), modular office furniture (10 years) and internally generated software (10 years).

Capital assets are presented on the June 30, 2013, Statement of Fiduciary Net Position. The year-end balance plus changes during the year are shown in *Figure 7*.

Figure 5

<b>Schedule of Foreign Currency Risk</b>				
<b>Currency</b>	<b>Cash</b>	<b>Debt</b>	<b>Equity</b>	<b>Total</b>
Australian Dollar	\$ 1,639,107	\$ 0	\$ 131,166,068	\$ 132,805,175
Brazilian Real	69,248	0	34,760,905	34,830,153
Canadian Dollar	1,814,885	4,225,432	171,324,608	177,364,925
Chilean Peso	6,948	0	6,112,504	6,119,452
Colombian Peso	21,675	0	4,691,104	4,712,779
Czech Koruna	3,073	0	226,979	230,052
Danish Krone	26,851	0	27,754,539	27,781,390
Egyptian Pound	5,442	0	195,945	201,387
Euro Currency	6,452,263	10,257,087	550,780,758	567,490,108
Hong Kong Dollar	1,265,018	0	163,361,558	164,626,576
Hungarian Forint	1,407	0	2,355,135	2,356,542
Indian Rupee	95,242	0	50,955,361	51,050,603
Indonesian Rupiah	40,815	0	19,021,764	19,062,579
Israeli Shekel	113,846	0	4,005,348	4,119,194
Japanese Yen	5,486,781	0	444,196,992	449,683,773
Malaysian Ringgit	24,050	0	21,847,439	21,871,489
Mexican Peso	29,863	0	20,155,528	20,185,391
Moroccan Dirham	5,250	0	77,959	83,209
New Romanian Leu	50	0	0	50
New Taiwan Dollar	53,742	0	32,972,305	33,026,047
New Turkish Lira	3,264	0	3,416,210	3,419,474
New Zealand Dollar	6,808	0	2,063,337	2,070,145
Norwegian Krone	68,610	0	18,820,213	18,888,823
Philippine Peso	11,022	0	14,363,623	14,374,645
Polish Zloty	3,395	0	10,085,791	10,089,186
Pound Sterling	3,546,753	6,731,817	425,614,860	435,893,430
Singapore Dollar	481,973	0	29,496,422	29,978,395
South African Rand	44,592	0	19,597,968	19,642,560
South Korean Won	81,063	0	71,289,748	71,370,811
Swedish Krona	583,927	0	54,877,643	55,461,570
Swiss Franc	70,074	0	172,077,681	172,147,755
Thailand Baht	56,323	0	25,727,925	25,784,248
Turkish Lira	0	0	8,145,619	8,145,619
<b>Total</b>	<b>\$ 22,113,360</b>	<b>\$ 21,214,336</b>	<b>\$ 2,541,539,839</b>	<b>\$ 2,584,867,535</b>

Figure 6

<b>Schedule of Derivative Financial Instruments</b> (in thousands)			
<b>Derivative Investment Type</b>	<b>Changes in Fair Value During FY 2013</b>	<b>Fair Value at June 30, 2013</b>	<b>Notional Amount</b>
<b>Futures</b>			
Index Futures – Long	\$ 18,900	\$ 0	\$ 615
Index Futures – Short	\$ (1,738)	\$ 0	\$ (17)
Fixed Income Futures – Long	\$ (2,488)	\$ 0	\$ 260,459
Fixed Income Futures – Short	\$ 6,697	\$ 0	\$ (160,025)
<b>Options</b>			
Futures Options Bought	\$ (109)	\$ 121	\$ 1,526
Futures Options Written	\$ 532	\$ (475)	\$ (2,935)
Fixed Income Options Written	\$ 26	\$ 0	\$ 0
<b>Currency Forwards</b>			
Foreign Currency Forwards	\$ 1,472	\$ (219)	\$ 127,219
<b>Stock Warrants and Rights</b>			
Stock Warrants	\$ 2	\$ 1	\$ 82
Stock Rights	\$ (16)	\$ 138	\$ 249

Figure 7

<b>Schedule of Capital Assets</b>				
<b>Description</b>	<b>Balance 7/01/2012</b>	<b>Additions</b>	<b>Deletions</b>	<b>Balance 6/30/2013</b>
Furniture and Equipment	\$ 3,211,294	\$ 184,437	\$ (809,991)	\$ 2,585,740
Internally Developed Software	3,491,253	1,894,313	0	5,385,566
Reserve for Depreciation	<u>(2,352,122)</u>	<u>(394,960)</u>	<u>801,935</u>	<u>(1,945,147)</u>
Net Capital Assets	<u>\$ 4,350,425</u>	<u>\$ 1,683,790</u>	<u>\$ (8,056)</u>	<u>\$ 6,026,159</u>



## L. Administrative Expenses and Budget

The annual budget of TRA operations is developed by TRA management and approved by the Board of Trustees. The budget is also sent to the Department of Minnesota Management & Budget for policy analysis and is included in the Governor's Biennial Budget presentation to the legislature. The legislature adopts appropriation and expenditure amounts resulting in an approved budget for the Association.

TRA administrative costs are not financed by any specific type of contribution or other income of the Fund. Administrative costs are budgeted in the annual determination of the actuarial required contribution rate (page 75, line B3).

## M. Cash

Cash on deposit consists of year-end receipts not processed as of the investment cutoff on June 30. TRA cash funds are held in the state treasury where they are commingled with other state funds. Minnesota Statutes, section 9.031, requires that deposits be secured by depository insurance and collateral shall be in amounts sufficient to ensure that deposits do not exceed 90 percent of the sum of the insured amount and the market value of the collateral. Throughout fiscal year 2013, the combined depository insurance and collateral was sufficient to meet legal requirements and secure all TRA deposits.

## N. Accounts Receivable

Amounts classified as accounts receivable consist primarily of member, employer contributions, and employer direct aid payments received after the fiscal year end on salaries earned prior to June 30, 2013. Under Minnesota Statutes, section 354.52, subdivision 4, TRA employers must remit contributions within 14 days after the member is paid.

If contributions are not remitted in a timely manner, interest at a rate of 8.50 percent, compounded annually, is assessed. If contributions are not received within 60 days of notification by TRA, the Commissioner of Minnesota Management & Budget is authorized to

deduct the balance due TRA from state aids or appropriations due to that employer unit. A Schedule of Accounts Receivable as of June 30, 2013, is presented in *Figure 8*.

*Figure 8*

Schedule of Accounts Receivable June 30, 2013	
Description	Amount
Member Contributions	\$ 8,642,513
Employer Contributions	8,989,256
Direct Aid (State/City/School)	1,125,000
Management Fees	29,568
Interest on Investments	76,749
Shared staff reimbursement	37,576
Bond Interest	<u>7,568</u>
Total Receivables	<u>\$ 18,908,230</u>

## O. Earnings Limitation Savings Account (ELSA)

Teachers under their Social Security normal retirement age who resume teaching service for a TRA-covered employer after retirement are subject to a \$46,000 annual earnings limitation. If a member earns more than the limitation, the annuity payable during the following calendar year will be offset one dollar for each two dollars earned in excess of the limitation.

The pension offset amounts are redirected to a separate individual savings account, called the Earnings Limitation Savings Account (ELSA), and later distributed to the retiree. Six percent interest compounded annually accrued on ELSA accounts up through December 31, 2010. Effective January 1, 2011, ELSA accounts no longer accrue interest. A member may apply for a lump-sum payment of their ELSA, plus interest, as long as it has been at least one year after the last deferred amount was redirected to the ELSA account. Alternatively, the retiree may also choose a rollover of their ELSA account balance into an eligible retirement plan or individual retirement account (IRA) as specified by Section 402(c) of the Internal Revenue Code.

As of June 30, 2013, TRA had 341 retirees with an ELSA account established. The total of all ELSA account balances was \$4.12 million. The dollar amount of pension benefits withheld due to excess

earnings during fiscal year 2013 was \$1,792,150. ELSA assets are invested in the TRA Fund until distribution. Distributions of ELSA accounts for 160 retirees occurred during fiscal year 2013 and totaled \$1.50 million and are included as a deduction in the Statement of Changes in Fiduciary Net Position as a component of Refund of Contributions to Members.

## P. Participating Pension Plan

All 83 employees of the Teachers Retirement Association are covered by the defined benefit plan administered by TRA. All TRA employees participate in the Coordinated Plan. TRA employees are eligible for the plan provisions described in Note 1, C.

Minnesota Statutes section 354.42 sets the rates for the employee and employer contributions. These statutes are established and amended by the state legislature. During fiscal year 2013, Coordinated members were required to contribute 6.5 percent of their annual covered salary. Employers contributed 6.5 percent of their annual covered salary for Coordinated members. The total covered payroll salaries for all TRA employees during fiscal year 2013 was approximately \$4.4 million or 0.12 percent of total membership-covered salaries. The total covered payroll salaries for the entire membership of TRA for fiscal year 2013 was approximately \$3.92 billion. TRA paid 100 percent of its required employer contributions of \$280,541.

Expenses related to employer pension contributions for TRA employees are set by state statute. The contributions are described in *Figure 9*.

*Figure 9*

<b>Schedule of TRA Employer Pension Contributions For TRA Employees For the Fiscal Year Ended June 30</b>		
<b>2013</b>	<b>2012</b>	<b>2011</b>
\$280,541	\$285,373	\$239,869

## Q. Ownership of Office Building

The 1999 Legislature enacted authorization permitting TRA, the Public Employees Retirement Association (PERA), and the Minnesota State Retirement System (MSRS) to purchase land and construct a 130,000 square foot office building to house the administrative offices of these three state entities. Ownership of the facility is prorated based on the amount of square footage each retirement system occupies in the building.

The building is located on 4.3 acres of land at 60 Empire Drive in Saint Paul. TRA has occupied the 4th Floor of the building since September 2001.

In June 2000, the State of Minnesota, under the authority of the Commissioner of Minnesota Management and Budget, issued 30-year revenue bonds totaling \$29 million to pay for the construction of the facility. Each owner (retirement system) is responsible for principal and interest payments based on its ownership percentage.

In August, 2012, the bonds were refunded with the proceeds of a new, lower-interest rate bond issue. The 2013 series \$21,880,000 Retirement System Revenue Refunding bonds are secured by the value of the total assets of the retirement systems, excluding any fund related to or dedicated to defined contribution plans administered by the retirement systems. The goal of the 2012 refunding bonds was not only to attempt to approximate the debt service payments that had existed under the 2000 revenue bonds, but to also shorten the repayment period by five years.

Through the issuance of the refunding bonds, which received a AAA rating from both Standard & Poor's and Fitch, the bond term has been reduced by five years and the present value of the savings to the retirement systems is \$9.58 million. The bonds mature on June 1, 2025. TRA's share of the present value savings is approximately \$3.51 million.

Effective July 1, 2013, TRA's ownership interest decreased from 37.80 percent to 36.70 percent.

At fiscal year end, TRA's share of the bonds payable is \$7,964,622, which includes bond principal of \$7,422,575 and bond premium of \$542,047. Interest expected to be paid over the remaining term of the bonds is \$797,320. TRA's share of the long-term bond repayment schedule including interest is summarized in *Figure 10*,

TRA is depreciating its share of the facility over 40 years. The depreciation schedule, shown in *Figure 11* summarizes the asset valuation of the office building, building equipment and deferred bond charges.

**Figure 10**

<b>Schedule of Building Debt Service Payments</b> (TRA Share @ 36.7%) Effective: August 9, 2012				
<b>Fiscal Year</b>	<b>Principal</b>	<b>Interest</b>	<b>Premium</b>	<b>Total</b>
2014	\$ 576,190	\$ 123,069	\$ 60,321	\$ 759,580
2015	590,870	113,516	58,350	762,736
2016	603,715	103,719	56,330	763,764
2017	614,725	93,709	54,265	762,699
2018	627,570	83,517	52,163	763,250
2019	645,920	73,112	50,017	769,049
2020	655,095	62,402	47,808	765,305
2021	673,445	51,540	45,568	770,553
2022	688,125	40,374	43,265	771,764
2023	702,805	28,965	40,912	772,682
2024	677,115	17,312	24,453	718,880
2025	367,000	6,085	8,595	381,680
<b>Totals</b>	<b><u>\$7,422,575</u></b>	<b><u>\$ 797,320</u></b>	<b><u>\$ 542,047</u></b>	<b><u>\$8,761,942</u></b>

**Figure 11**

<b>Schedule of Office Building and Equipment</b> (TRA Share @ 36.7%) June 30, 2013				
<b>Description</b>	<b>Balance 7/01/2012</b>	<b>Additions</b>	<b>Deletions</b>	<b>Balance 6/30/2013</b>
Land	\$ 171,166	\$ 0	\$ 0	\$ 171,166
Building	\$ 11,168,913	\$ 0	\$ (325,022)	\$ 10,843,891
Reserve for Building Depreciation	(3,070,250)	(271,131)	0	(3,341,381)
Net Building	<u>\$ 8,098,663</u>	<u>\$ (271,131)</u>	<u>\$ (325,022)</u>	<u>\$ 7,502,510</u>
Building Equipment	\$ 110,176	\$ 0	\$ (70)	\$ 110,106
Reserve for Building Equipment Depreciation	(40,024)	(9,728)	0	(49,752)
Net Building Equipment	<u>\$ 70,152</u>	<u>\$ (9,728)</u>	<u>\$ (70)</u>	<u>\$ 60,354</u>
Deferred Bond Charge	\$ 145,857	\$ 0	\$ 0	\$ 145,857
Reserve for Amortization	(55,325)	(6,819)	0	(62,144)
Net Deferred Bond Charge	<u>\$ 90,532</u>	<u>\$ (6,819)</u>	<u>\$ 0</u>	<u>\$ 83,713</u>

## R. Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions

Nearly all TRA employees are covered by the State Employees Group Insurance Plan (SEGIP) administered by the Department of Minnesota Management and Budget. At present, this plan subsidizes the cost of retiree insurance by charging a single premium rate for active employees and retirees, regardless of underwriting experience. As of June 30, 2013, the SEGIP had an unfunded net obligation of \$193,983,000 to be funded on a pay-as-you-go basis. TRA's allocated portion of this liability is \$39,000.

## II. Contributions Required and Made

Minnesota Statutes, Chapter 354 sets the rates (page 75, Line A4) for employee and employer contributions. These rates, expressed as level percentages of annual covered payroll, are determined to accumulate sufficient assets for paying benefits. Level percentage of payroll contribution rates are calculated using the entry age normal actuarial funding method. TRA also uses the level percentage of payroll method to amortize the fund's unfunded liability over a closed period ending June 30, 2037.

Contributions totaling \$556,470,794 (\$265,808,686 employee and \$290,662,108 employer and employer direct aid) were received in accordance with the statutory contribution rates and amounts. On page 75, Line C, statutory contributions are projected as insufficient to meet the actuarially determined required contributions. The deficiency is 4.74 percent of covered payroll. This translates into a contribution deficiency of about \$199.5 million projected for fiscal year 2014. Under current statute, TRA employee and employer contribution rates are scheduled to increase by a total of 1.00 percent by July 1, 2014. The Minnesota Legislative Commission on Pensions and Retirement (LCPR) annually reviews the adequacy of TRA's statutory contributions.

## III. Funded Status: TRA Plan

### A. Results of Most Recent Valuation

The funded status of the TRA plan as of July 1, 2013, the most recent actuarial valuation date is as follows:

*(Dollars in thousands)*

Actuarial Accrued Liabilities (AAL)	\$ 23,418,629
Actuarial Value of Assets	\$ 16,774,626
Unfunded Actuarial Accrued Liability (UAAL)	\$ 6,644,003
Ratio of Assets to AAL	71.63%
Active Member Payroll	\$ 3,917,310
UAAL as a Percentage of Active Member Payroll	169.61%

An actuarial valuation of a pension plan involves estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, levels of pay, and mortality. Actuarially determined amounts are subject to continual review or modification as actual results are compared with past assumptions and new estimates are made about the future.

### B. Description of Schedule of Funding Progress (Page 36)

The funding percentage of the actuarial accrued liability funded ratio is a measure intended to help users assess the plan's funding status using a multi-year trend analysis to gauge progress being made in accumulating sufficient assets to pay benefits when due.

The laws governing TRA require that actuarial liabilities be amortized over a closed amortization date ending June 30, 2037. If actual financial experiences are less favorable than assumed financial experiences, the difference will be added to the unfunded actuarial accrued liability.

In an inflationary economy, the value of the dollar is decreasing. This environment results in

employee pay increasing in dollar amount, with a corresponding increase in unfunded actuarial accrued liabilities. Reviewing the dollar amounts of unfunded liabilities in isolation can be misleading. The ratio of unfunded actuarial accrued liabilities divided by active employee covered salaries (covered payroll) provides an index that adjusts for the effects of inflation. A stronger system will have a smaller ratio of unfunded actuarial accrued liabilities to active member payroll. Observation of this relative index over a period of years will give an indication of whether the system is becoming financially stronger or weaker.

For the past nine years, TRA has had a funding ratio of less than the fully funded status of 100 percent. The actuarial value of TRA assets has fallen for the past seven years due to the actuarial recognition of investment losses sustained, particularly from those occurring during the deep market declines from mid-2007 through March 2009. Investment gains experienced during fiscal years 2011 and 2013 have slowed the decline in the actuarial value of assets. As of June 30, 2013, TRA had approximately \$1.24 billion (page 71, Line 6e) in deferred investment gains produced by the five-year smoothing of investment gains and losses.

The value of TRA actuarial accrued liabilities for June 30, 2013 (\$23.42 billion) is only slightly higher than the actuarial accrued liabilities for June 30, 2009 (\$23.11 billion), four years earlier. The primary reasons for slow growth of the liabilities are plan provision changes and revised actuarial assumptions enacted by the 2010 Minnesota legislature.

In summary, TRA's actuarial funding ratio of 71.63% for June 30, 2013, is lower than the July 1, 2012, funding ratio of 72.99%, primarily due to the decline in the actuarial value of assets generated by the five-year smoothing method. On June 30, 2013, the value of TRA's unfunded actuarial liabilities was about \$6.64 billion.

On a fair value basis, TRA was 76.93 percent funded as of June 30, 2013, with an unfunded liability of \$5.40 billion (page 61 and 65).

## C. Description of the Schedule of Contributions from Employers and Other Contributing Entities (Page 36)

The amount of required employer contributions and actual percentage contributed are presented in the schedule. Employer contribution rates for TRA are set by Minnesota Statute. Minnesota Statute also specifies direct contribution amounts contributed by the State of Minnesota, the City of Minneapolis and the Minneapolis School District.

## D. Actuarial Assumptions and Methods

### Actuarial Cost Method

Liabilities and contributions in this report are computed using the Individual Entry Age Normal Cost Method. This method is prescribed by Minnesota Statutes. The actuarial assumptions used to determine liabilities have been set by the Minnesota legislature.

A fundamental principle in financing the liabilities of a retirement plan is that the cost of its benefits should be related to the period in which benefits are earned, rather than to the period of benefit distribution. An actuarial cost method is a mathematical technique that allocates present value of future benefits into annual costs. In order to perform this allocation, a funding method is necessary to "breakdown" the present value of future benefits into two components:

- That which is attributable to the past and
- That which is attributable to the future.

Under the Entry Age Normal cost method, the actuarial present value of each member's projected benefits allocates on a level basis over the member's compensation between the entry age of the member and the assumed exit ages. The portion of the actuarial present value allocated to the valuation year is called the normal cost. The actuarial present value of benefits allocated to prior years of service is called the actuarial accrued liability. The unfunded actuarial accrued liability (UAAL) represents the difference

between the actuarial accrued liability and the actuarial value of assets as of the valuation date.

The unfunded actuarial accrued liability is calculated each year and reflects plan experience of gains and losses. The UAAL is amortized over a closed period set in Minnesota Statute (June 30, 2037). Required contributions to fund the UAAL are determined as a level percentage of payroll assuming payroll increases of 3.75 percent annually.

#### Asset Valuation Method

The assets are valued based on a five-year moving average of expected and market values (five-year average actuarial value) determined as follows:

- At the end of each plan year, an average asset value is calculated as the average of the market asset value at the beginning and end of the fiscal year net of investment income for the fiscal year;
- The investment gain or (loss) is taken as the excess of actual investment income over the expected investment income based on the average asset value as calculated above;
- The investment gain or (loss) so determined is recognized over five years at 20 percent per year;
- The asset value is the sum of the market value plus the scheduled recognition of investment gains of (losses) during the current and preceding four fiscal years.

TRA participated in the Minnesota Post Retirement Investment Fund (MPRIF), which was dissolved on June 30, 2009. For the purposes of determining the actuarial value of assets, the MPRIF asset loss for the fiscal year ending June 30, 2009, is recognized incrementally over five years at 20 percent per year, similar to the smoothing described above. Prior to June 30, 2009, MPRIF asset gains and losses were not smoothed.

#### Decrement Timing

One actuarial assumption is to specify the timing of when a member status change occurs – for example, a member who may terminate teaching

service during the year. Decrement timing is a fundamental part of the actuarial consultant's computer programming underlying actuarial calculations. The computer systems used by Cavanaugh Macdonald Consulting specify the "mid-year" method of decrement timing, the preferred method specified by the Legislative Commission on Pensions and Retirements, "Standards for Actuarial Work."

#### Funding Objective

The fundamental financing objective of the fund is to establish contribution rates that, when expressed as a percentage of active member payroll, will remain approximately level from generation to generation and meet the required deadline for full funding.

#### Significant Actuarial Assumptions

Assumptions used by the actuary for funding purpose are set by Minnesota Statute. They include:

- Inflation Rate – 3.0 percent
- Investment Return
  - Pre-retirement: 8.38 percent compounded annually to reflect an 8.0 percent assumption for four (4) years and 8.5 percent thereafter
  - Post-retirement: 6.38 percent compounded annually
- Salary Scale – The active member payroll growth was assumed to increase 3.75 percent annually. Individual salary increases were based on a service years-based table, with rates ranging from 3.5 to 12.0 percent, annually.
- Benefit Payments – Annual benefit increases are established in statute by the Minnesota Legislature. Currently, benefit increases of 2.0 percent are paid annually on January 1.
- Amortization Method – The unfunded liability is amortized as a level percentage of covered active member payroll each year to the closed statutory amortization date of June 30, 2037, assuming payroll increases of 3.75 percent per year. If the UAAL is negative, the surplus amount is amortized over 30 years as a level

percentage of payroll. If there is an increase in the unfunded accrued liability due to a change in the actuarial assumptions, plan provisions, or actuarial cost method, a new amortization period is determined. This new amortization period is determined by blending the period needed to amortize the prior unfunded actuarial accrued liability over the prior amortization period and the increase in unfunded actuarial accrued liability amortized over 30 years. If there is a decrease in the unfunded accrued liability, no change is made to the amortization period.

- Remaining Amortization Period – closed period ending June 30, 2037 (24 years remaining).

## E. Projection of Benefits

Projections of benefits for financial reporting purposes are based on the plan provisions contained in Minnesota Statutes. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in the actuarial value of assets for TRA assets. The preparation of the actuarial valuation report is also defined by the Standards for Actuarial Reporting promulgated by the Legislative Commission on Pensions and Retirement (LCPR).

# Required Supplementary Information

## Schedule of Funding Progress (Unaudited)

Dollar Amounts in Thousands

Actuarial Valuation Date	Actuarial Value of Assets (A)	Actuarial Accrued Liability (AAL) (B)	Unfunded AAL (UAAL) (B - A)	Funded Ratio (A / B)	Actual Covered Payroll (Previous FY) (C)	UAAL as Percentage of Covered Payroll (B - A) / (C)
7/01/04	\$17,519,909	\$17,518,784	\$ (1,126)	100.01%	\$3,032,483	-0.04%
7/01/05	\$17,752,917	\$18,021,410	\$ 268,493	98.51%	\$3,121,571	8.60%
7/01/06	\$19,035,612	\$20,679,111	\$ 1,643,499	92.05%	\$3,430,645	47.91%
7/01/07	\$18,794,389	\$21,470,314	\$ 2,675,925	87.54%	\$3,532,159	75.76%
7/01/08	\$18,226,985	\$22,230,841	\$ 4,003,856	81.99%	\$3,645,230	109.84%
7/01/09	\$17,882,408	\$23,114,802	\$ 5,232,394	77.36%	\$3,761,484	139.10%
7/01/10	\$17,323,146	\$22,081,634	\$ 4,758,488	78.45%	\$3,787,757	125.63%
7/01/11	\$17,132,383	\$22,171,493	\$ 5,039,110	77.27%	\$3,838,111	131.29%
7/01/12	\$16,805,077	\$23,024,505	\$ 6,219,428	72.99%	\$3,871,809	160.63%
7/01/13	\$16,774,626	\$23,418,629	\$ 6,644,003	71.63%	\$3,917,310	169.61%

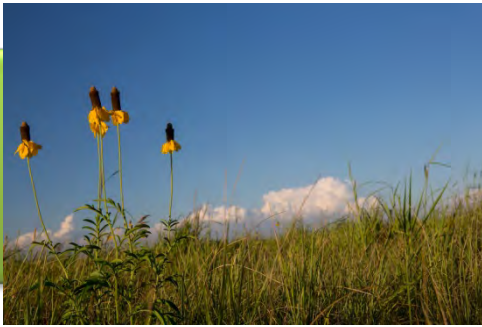
## Schedule of Contributions From the Employer and Other Contributing Entities (Unaudited)

Dollar Amounts in Thousands

Year End June 30	Actuarially* Required Contribution Rate (a)	Actual Covered Payroll (b)	Actual Member Contributions (c)	ARC Annual Required Contributions [(a) x (b)] - (c)	Actual Employer Contribution	Percentage Contributed
2004	8.37%	\$3,032,483	\$159,140	\$ 94,679	\$151,029	159.52%
2005	8.46%	\$3,121,571	\$160,982	\$ 103,103	\$157,693	152.95%
2006	9.05%	\$3,430,645	\$177,085	\$ 133,389	\$200,286	150.15%
2007	12.16%	\$3,532,159	\$199,869	\$ 229,642	\$209,219	91.11%
2008	13.44%	\$3,645,230	\$209,592	\$ 280,327	\$231,562	82.60%
2009	15.08%	\$3,761,484	\$212,043	\$ 355,189	\$240,718	67.72%
2010	16.81%	\$3,787,757	\$214,909	\$ 421,813	\$242,088	57.39%
2011	15.71%	\$3,838,111	\$218,024	\$ 384,943	\$244,233	63.45%
2012	16.57%	\$3,871,809	\$239,834	\$ 401,725	\$266,661	66.38%
2013	18.75%	\$3,917,310	\$270,708	\$ 463,788	\$290,662	62.67%
2014	19.41%					

\*Actuarially Required Contributions calculated according to parameters of GASB 25.





Supporting Schedules  
to Financial Section

# Teachers Retirement Fund

## Administrative Expenses

For the Fiscal Year Ended June 30, 2013

### Personnel Services

Salaries .....	\$	4,375,742
Employer Contributions to Teachers Retirement Association .....		280,541
Employer Contributions to Social Security .....		328,332
Insurance Contributions .....		824,883
Employee Training .....		55,114
Workers' Compensation .....		4,100
<b>Subtotal</b> .....	<b>\$</b>	<b>5,868,712</b>

### Communication

Duplicating and Printing Expense .....	\$	64,644
Postage .....		274,059
Telephone .....		65,458
<b>Subtotal</b> .....	<b>\$</b>	<b>404,161</b>

### Office Building Maintenance

Lease of Office and Storage Space .....	\$	32,826
Building Operating Expenses .....		550,243
Rental of Office Machines/Furnishings .....		67,250
Repairs and Maintenance .....		106,980
Building Equipment Depreciation .....		9,728
Building Depreciation .....		271,132
Deferred Bond Charge Amortization .....		96,972
Bond Interest Expense .....		203,840
<b>Subtotal</b> .....	<b>\$</b>	<b>1,338,971</b>

### Professional Services

Actuarial Services .....	\$	167,336
Audit Fees .....		78,790
Computer Support Services .....		304,244
Legal Fees .....		3,998
Management Consultant Services .....		156,792
Medical Services .....		40,500
<b>Subtotal</b> .....	<b>\$</b>	<b>751,660</b>

### Other Operating Expenses

Department Head Expenses .....	\$	1,500
Depreciation of Office Furniture and Equipment .....		400,223
Dues and Subscriptions .....		19,279
Insurance Expense .....		6,326
Miscellaneous Administrative Expenses .....		16,015
State Indirect Costs .....		108,592
Stationery and Office Supplies .....		138,939
Travel-Director and Staff .....		49,953
Travel-Trustees .....		21,850
Board Substitute Teachers .....		1,772
Loss on Disposal of Equipment .....		2,887
<b>Subtotal</b> .....	<b>\$</b>	<b>767,336</b>

**Total Administrative Expenses** ..... **\$** 9,130,840

# Teachers Retirement Fund

## Schedule of Professional Consultant Expenses

For the Fiscal Year Ended June 30, 2013

### Investment Pool Managers

Investment Board .....	\$	1,101,432
Callan Investment .....		128,756
Financial Control Systems .....		148,399
Pension Consultants .....		12,528
QED .....		86,641
Domestic Equity Pool Managers .....		7,671,564
Global Equity Pool Managers .....		8,199,466
Domestic Bond Pool Managers .....		3,764,038
Semi-Passive Equity Pool Managers .....		3,308,953
Passive Equity Pool Managers .....		<u>279,972</u>
Total Investment Pool Managers .....	\$	<u>24,701,749</u>

### Actuarial

Cavanaugh Macdonald Consulting .....	\$	165,518
Milliman .....		<u>1,818</u>
Total Actuarial Expenses .....	\$	<u>167,336</u>

### Audit

Berwyn Group .....	\$	7,720
Legislative Auditor .....		70,892
MN Dept of Health .....		<u>178</u>
Total Audit Expenses .....	\$	<u>78,790</u>

### Computer Support Services

Fulcrum Consulting .....	\$	806,335
McCaa Webster .....		106,040
Works Computing .....		<u>3,583</u>
Total Computer Support Service Expenses .....	\$	<u>915,958</u>

### Legal

Attorney General .....	\$	<u>3,998</u>
Total Legal Expenses .....	\$	<u>3,998</u>

### Management Consulting

Aeritae .....	\$	116,440
McLagan .....	\$	2,000
Total Security Concepts .....	\$	400
VR Election Services .....		<u>37,952</u>
Total Management Consulting Expenses .....	\$	<u>156,792</u>

### Medical

MN Dept of Health .....	\$	<u>40,500</u>
Total Medical Expenses .....	\$	<u>40,500</u>

**Total Consultant Expenditures .....** **\$ 26,065,123**

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Teachers Retirement Association of Minnesota  
A Pension Trust Fund of the State of Minnesota



Statistical

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# Statistical Summary

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TRA complies with GASB Statement No. 44, Economic Condition Reporting: The Statistical Section, issued in May 2004. The pronouncement establishes and modifies requirements related to the supplementary information presented in this section of the report. This section of the report provides detailed information about TRA as a context for understanding what the information in the financial statement note disclosures and required supplementary information indicates about the Association's overall financial condition.

The schedules and graphs beginning on page 81 show trend information about the growth of TRA assets over the past 10 years. These schedules, and others, provide detailed information about the trends of key sources of additions and deductions to plan assets.

The Contribution Rate chart on page 81 provides historical information on the total member and employer contribution rates.

The schedule of Pension Assets Compared to Pension Liabilities, found on pages 82-83, show the funding progress of the plan for the past 10 years on accumulating assets to cover projected pension liabilities which will ultimately be due at retirement.

The schedules on pages 84-89 and 95-97 include detailed information regarding the number and type of benefit recipients, and information as to the benefit amount.

The chart on page 90 provides a profile of TRA active members on June 30, 2013, by age and service credit totals.

The chart on page 91 contains information on the total number of members by type.

The schedules on pages 92-94 detail the largest TRA employer units by covered employees and by types of employer.

All data is derived from TRA internal sources and the actuarial consultant.

The projected benefit payments (page 98) for the next 25 years have been supplied by TRA's actuarial advisor, Cavanaugh Macdonald Consulting.

## 10-Year History of Fiduciary Net Position

<b>June 30 Fiscal Year End</b>	<b>Fiduciary Net Position</b>	<b>% Change From Prior Year</b>
2004	\$15,095,803,651	15.6%
2005	\$15,928,603,867	5.5%
2006	\$17,764,526,441	11.5%
2007	\$19,938,881,872	12.2%
2008	\$18,106,965,760	-9.2%
2009	\$13,833,825,733	-23.6%
2010	\$14,939,539,780	8.0%
2011	\$17,303,575,561	15.8%
2012	\$16,689,940,629	-3.6%
2013	\$18,019,318,901	8.0%

## 10-Year History of Contribution Rates

<b>Fiscal Year</b>	<b>Basic Program Employee Contribution Rate</b>	<b>Basic Program Employer Contribution Rate</b>	<b>Basic Program Total Contribution Rate</b>	<b>Coordinated Employee Contribution Rate</b>	<b>Coordinated Employer Contribution Rate</b>	<b>Coordinated Total Contribution Rate</b>
2004	9.00%	9.00%	18.00%	5.00%	5.00%	10.00%
2005	9.00%	9.00%	18.00%	5.00%	5.00%	10.00%
2006	9.00%	9.00%	18.00%	5.00%	5.00%	10.00%
2007	9.00%	9.00%	18.00%	5.50%	5.00%	10.50%
2008	9.00%	9.50%	18.50%	5.50%	5.50%	11.00%
2009	9.00%	9.50%	18.50%	5.50%	5.50%	11.00%
2010	9.00%	9.50%	18.50%	5.50%	5.50%	11.00%
2011	9.00%	9.50%	18.50%	5.50%	5.50%	11.00%
2012	9.50%	10.00%	19.50%	6.00%	6.00%	12.00%
2013	10.00%	10.50%	20.50%	6.50%	6.50%	13.00%

# Teachers Retirement Association

## 10-Year History of Changes in Fiduciary Net Position

Fiscal Year	2004	2005	2006*	2007
<b>Additions</b>				
Member Contributions	\$ 159,139,548	\$ 160,982,004	\$ 177,084,906	\$ 199,868,969
Employer Contributions	151,028,911	157,693,090	200,285,886	209,219,130
Net Income (Loss) From Investing Activity	2,204,787,495	1,575,519,541	1,951,778,366	3,056,492,094
Other Income, Net	<u>7,266,004</u>	<u>6,295,759</u>	<u>11,412,062</u>	<u>7,901,279</u>
Total Additions to Fiduciary Net Position	<u>\$ 2,522,221,958</u>	<u>\$ 1,900,490,394</u>	<u>\$ 2,340,561,220</u>	<u>\$ 3,473,481,472</u>
<b>Deductions</b>				
Pension Benefits	\$ 1,008,410,471	\$ 1,048,440,525	\$ 1,224,212,024	\$ 1,273,093,384
Refunds	6,861,708	6,744,116	11,872,504	12,088,193
Administrative Expenses	12,179,212	10,883,151	11,912,701	10,635,365
Other	<u>573,379</u>	<u>1,622,386</u>	<u>1,856,275</u>	<u>3,309,099</u>
Total Deductions from Fiduciary Net Position	<u>\$ 1,028,024,770</u>	<u>\$ 1,067,690,178</u>	<u>\$ 1,249,853,504</u>	<u>\$ 1,299,126,041</u>
Net Increase (Decrease)	<u>\$ 1,494,197,188</u>	<u>\$ 832,800,216</u>	<u>\$ 1,090,707,716</u>	<u>\$ 2,174,355,431</u>
Net Position Held in Trust, Beginning of Year	<u>\$ 13,601,606,463</u>	<u>\$ 15,095,803,651</u>	<u>\$ 16,673,818,725</u>	<u>\$ 17,764,526,441</u>
<b>Net Position Held in Trust, End of Year</b>	<u>\$ 15,095,803,651</u>	<u>\$ 15,928,603,867</u>	<u>\$ 17,764,526,441</u>	<u>\$ 19,938,881,872</u>

\*"Net position held in trust, beginning of year" were restated to reflect \$745,214,858 of assets assumed as a result of merger with MTRFA.

## 10-Year History of Pension Assets vs. Pension Liabilities

Fiscal Year	2004	2005	2006	2007
Pension Assets (Actuarial Value)	\$ 17,519,909,000	\$ 17,752,917,000	\$ 19,035,612,000	\$ 18,794,389,076
Accrued Liabilities	<u>\$ 17,518,784,000</u>	<u>\$ 18,021,410,000</u>	<u>\$ 20,679,111,000</u>	<u>\$ 21,470,314,497</u>
Unfunded Liabilities (Sufficiency)	<u>\$ (1,125,000)</u>	<u>\$ 268,493,000</u>	<u>\$ 1,643,499,000</u>	<u>\$ 2,675,925,421</u>
Funded Ratio	100.00	98.5%	92.0%	87.5%



2008	2009	2010	2011	2012	2013
\$ 209,592,461	\$ 212,042,535	\$ 214,908,960	\$ 218,023,736	\$ 239,833,920	\$ 265,808,686
231,561,322	240,718,200	242,087,985	244,232,711	266,661,085	290,662,108
(926,044,140)	(3,318,368,290)	2,087,639,841	3,390,130,615	383,187,159	2,310,295,407
<u>7,529,753</u>	<u>6,526,400</u>	<u>4,850,206</u>	<u>5,562,374</u>	<u>4,929,201</u>	<u>5,474,846</u>
<u>\$ (477,360,604)</u>	<u>\$ (2,859,081,155)</u>	<u>\$ 2,549,486,992</u>	<u>\$ 3,857,949,436</u>	<u>\$ 894,611,365</u>	<u>\$ 2,872,241,047</u>
\$ 1,330,836,947	\$ 1,383,667,466	\$ 1,422,578,335	\$ 1,460,836,392	\$ 1,486,386,832	\$ 1,523,269,003
11,770,086	14,429,351	11,607,086	23,812,985	11,835,977	10,462,932
10,261,139	10,608,003	9,587,524	9,264,278	10,023,488	9,130,840
<u>1,687,335</u>	<u>5,354,052</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>\$ 1,354,555,508</u>	<u>\$ 1,414,058,872</u>	<u>\$ 1,443,772,945</u>	<u>\$ 1,493,913,655</u>	<u>\$ 1,508,246,297</u>	<u>\$ 1,542,862,775</u>
<u>\$ (1,831,916,112)</u>	<u>\$ (4,273,140,027)</u>	<u>\$ 1,105,714,047</u>	<u>\$ 2,364,035,781</u>	<u>\$ (613,634,932)</u>	<u>\$ 1,329,378,272</u>
<u>\$ 19,938,881,872</u>	<u>\$ 18,106,965,760</u>	<u>\$ 13,833,825,733</u>	<u>\$ 14,939,539,780</u>	<u>\$ 17,303,575,561</u>	<u>\$ 16,689,940,629</u>
<u>\$ 18,106,965,760</u>	<u>\$ 13,833,825,733</u>	<u>\$ 14,939,539,780</u>	<u>\$ 17,303,575,561</u>	<u>\$ 16,689,940,629</u>	<u>\$ 18,019,318,901</u>

2008	2009	2010	2011	2012	2013
\$ 18,226,985,000	\$ 17,882,408,000	\$ 17,323,146,000	\$ 17,132,383,000	\$ 16,805,077,000	\$ 16,774,626,000
<u>\$ 22,230,841,000</u>	<u>\$ 23,114,802,000</u>	<u>\$ 22,081,634,000</u>	<u>\$ 22,171,493,000</u>	<u>\$ 23,024,505,000</u>	<u>\$ 23,418,629,000</u>
<u>\$ (4,003,856,000)</u>	<u>\$ (5,232,394,000)</u>	<u>\$ (4,758,488,000)</u>	<u>\$ (5,039,110,000)</u>	<u>\$ (6,219,428,000)</u>	<u>\$ (6,644,003,000)</u>
82.0%	77.4%	78.5%	77.3%	73.0%	71.6%

## 10-Year History of Benefits and Refunds by Type

Fiscal Year Pension Benefits	2004	2005	2006	2007
Annuities	\$ 979,108,590	\$ 1,019,776,085	\$ 1,190,295,077	\$ 1,241,862,723
Disabilities	11,734,673	11,810,137	13,118,722	11,923,494
Survivor Benefits	<u>14,201,212</u>	<u>13,869,225</u>	<u>17,616,002</u>	<u>15,774,162</u>
Total Pension Benefits	<u>\$ 1,005,044,475</u>	<u>\$ 1,045,455,447</u>	<u>\$ 1,221,029,801</u>	<u>\$ 1,269,560,379</u>
Annuities Redirected to Earnings Limitation Savings Account (ELSA)	<u>\$ 3,365,997</u>	<u>\$ 2,985,078</u>	<u>\$ 3,182,223</u>	<u>\$ 3,533,005</u>
Member Refunds	6,628,150	6,468,919	9,766,474	10,217,919
ELSA Refunds	64,263	98,867	2,014,275	1,431,902
Employer Refunds	<u>169,294</u>	<u>176,330</u>	<u>91,755</u>	<u>438,372</u>
Total Refunds	<u>\$ 6,861,707</u>	<u>\$ 6,744,116</u>	<u>\$ 11,872,504</u>	<u>\$ 12,088,193</u>
Total Benefits and Refunds	<u>\$ 1,015,272,179</u>	<u>\$ 1,055,184,641</u>	<u>\$ 1,236,084,528</u>	<u>\$ 1,285,181,577</u>

## 10-Year History of Benefit Recipients by Category

As of June 30, 2013

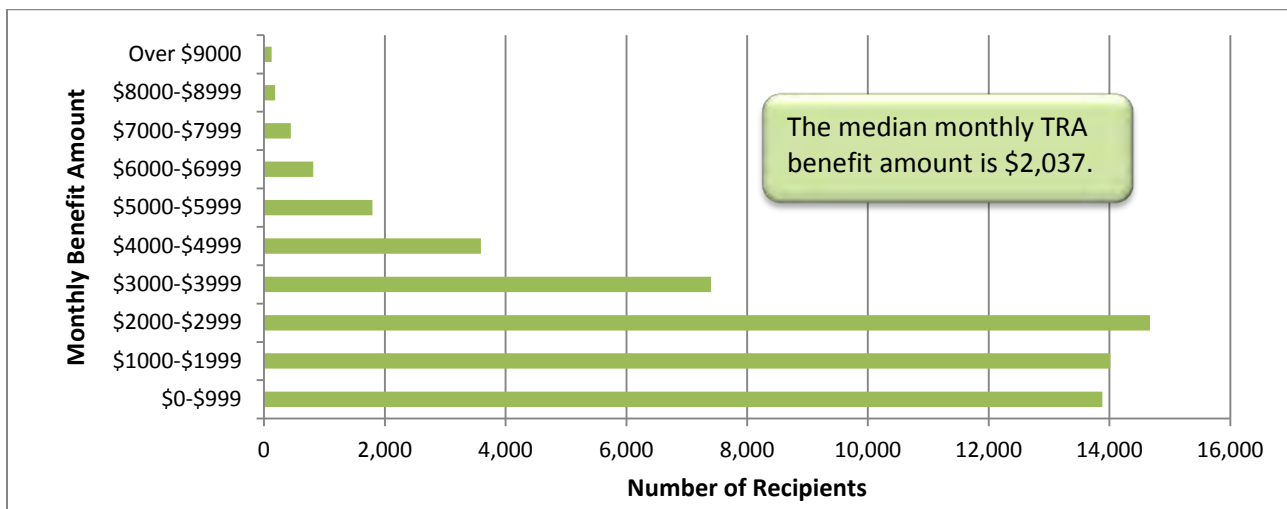
Year	Annuitants	Disabilitants	Survivors	Total
2004	34,581	589	2,479	37,649
2005	35,779	581	2,597	38,957
2006	40,973	630	3,080	44,683
2007	42,679	636	3,223	46,538
2008	43,041	641	3,299	46,981
2009	46,009	624	3,575	50,208
2010	47,556	615	3,682	51,853
2011	49,079	602	3,856	53,537
2012	50,780	591	4,054	55,425
2013	52,331	568	4,269	57,168

2008	2009	2010	2011	2012	2013
\$ 1,297,772,858	\$ 1,352,741,935	\$ 1,391,181,476	\$ 1,429,842,960	\$ 1,456,295,613	\$ 1,492,612,137
12,049,579	12,076,621	13,075,898	12,468,933	12,302,612	11,774,758
<u>17,460,466</u>	<u>16,547,705</u>	<u>17,124,339</u>	<u>17,237,783</u>	<u>16,929,195</u>	<u>17,089,958</u>
<u>\$ 1,327,282,903</u>	<u>\$ 1,381,366,261</u>	<u>\$ 1,421,381,713</u>	<u>\$ 1,459,549,676</u>	<u>\$ 1,485,527,420</u>	<u>\$ 1,521,476,853</u>
\$ 3,554,045	\$ 2,301,205	\$ 1,196,622	\$ 1,286,716	\$ 859,412	\$ 1,792,150
9,563,184	10,599,298	8,081,962	8,659,225	8,764,802	8,788,895
1,860,826	3,550,729	3,341,302	14,947,274	2,864,780	1,366,885
<u>346,076</u>	<u>279,324</u>	<u>183,822</u>	<u>206,486</u>	<u>206,395</u>	<u>307,152</u>
<u>\$ 11,770,086</u>	<u>\$ 14,429,351</u>	<u>\$ 11,607,086</u>	<u>\$ 23,812,985</u>	<u>\$ 11,835,977</u>	<u>\$ 10,462,932</u>
<u>\$ 1,342,607,034</u>	<u>\$ 1,398,096,817</u>	<u>\$ 1,434,185,421</u>	<u>\$ 1,484,649,377</u>	<u>\$ 1,498,222,809</u>	<u>\$ 1,533,731,935</u>

# Schedule of Benefit Amounts Paid

For Month of June 2013 – Payment Made June 1, 2013

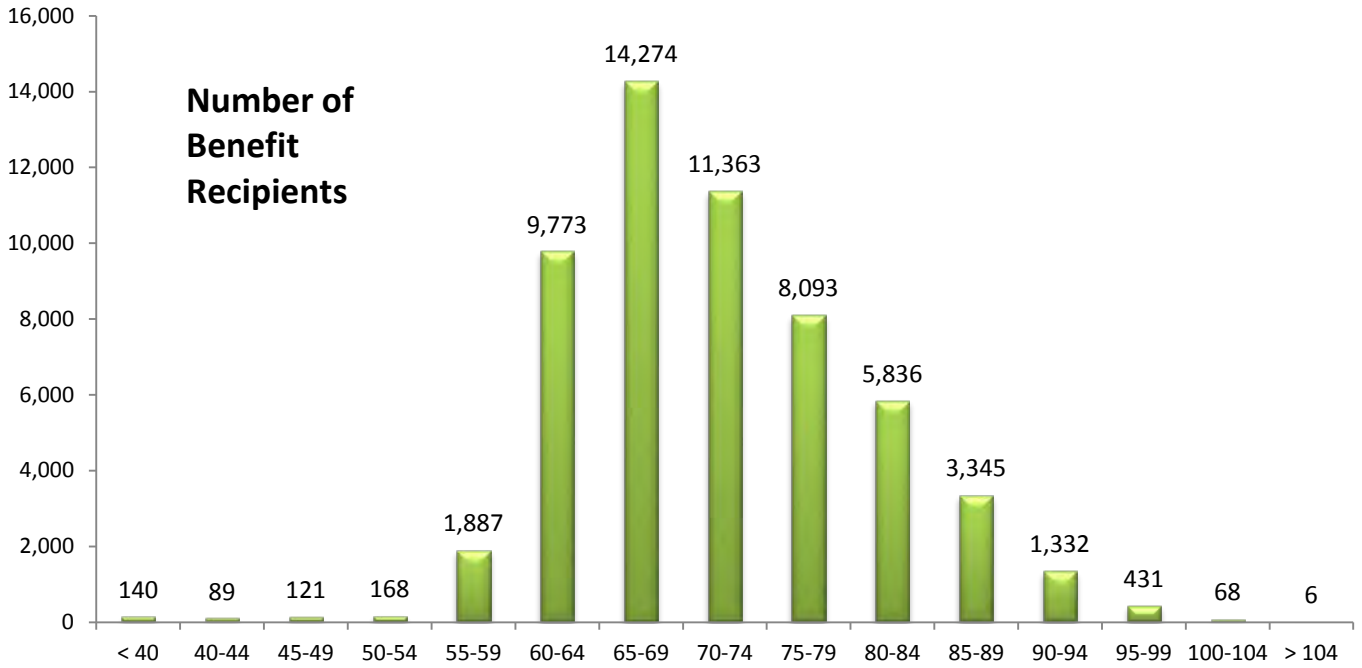
Monthly Benefit Amount	Number of Recipients	Cumulative Total	Percent	Cumulative Percent
\$ 0 – 499	7,851	7,851	13.79%	13.79%
\$ 500 – 999	6,033	13,884	10.60%	24.39%
\$ 1,000 – 1,499	6,160	20,044	10.82%	35.21%
\$ 1,500 – 1,999	7,852	27,896	13.79%	49.00%
\$ 2,000 – 2,499	8,061	35,957	14.16%	63.16%
\$ 2,500 – 2,999	6,611	42,568	11.61%	74.77%
\$ 3,000 – 3,499	4,433	47,001	7.79%	82.56%
\$ 3,500 – 3,999	2,969	49,970	5.22%	87.78%
\$ 4,000 – 4,499	2,074	52,044	3.64%	91.42%
\$ 4,500 – 4,999	1,518	53,562	2.67%	94.09%
\$ 5,000 – 5,499	1,075	54,637	1.89%	95.98%
\$ 5,500 – 5,999	720	55,357	1.26%	97.24%
\$ 6,000 – 6,499	484	55,841	0.85%	98.09%
\$ 6,500 – 6,999	332	56,173	0.58%	98.67%
\$ 7,000 – 7,499	266	56,439	0.47%	99.14%
\$ 7,500 – 7,999	176	56,615	0.31%	99.45%
\$ 8,000 – 8,499	125	56,740	0.22%	99.67%
\$ 8,500 – 8,999	61	56,801	0.11%	99.78%
\$ 9,000 – 9,499	36	56,837	0.06%	99.84%
\$ 9,500 – 9,999	29	56,866	0.05%	99.89%
\$ 10,000 – 10,499	19	56,885	0.03%	99.92%
\$ 10,500 – 10,999	13	56,898	0.02%	99.94%
\$ 11,000 – 11,499	10	56,908	0.02%	99.96%
\$ 11,500 – 11,999	8	56,916	0.01%	99.97%
\$ 12,000 – 12,499	4	56,920	0.01%	99.98%
\$ 12,500 and over	6	56,926	0.01%	99.99%



# Schedule of Benefit Recipients by Current Age

For Month of June 2013 – Payment Made June 1, 2013

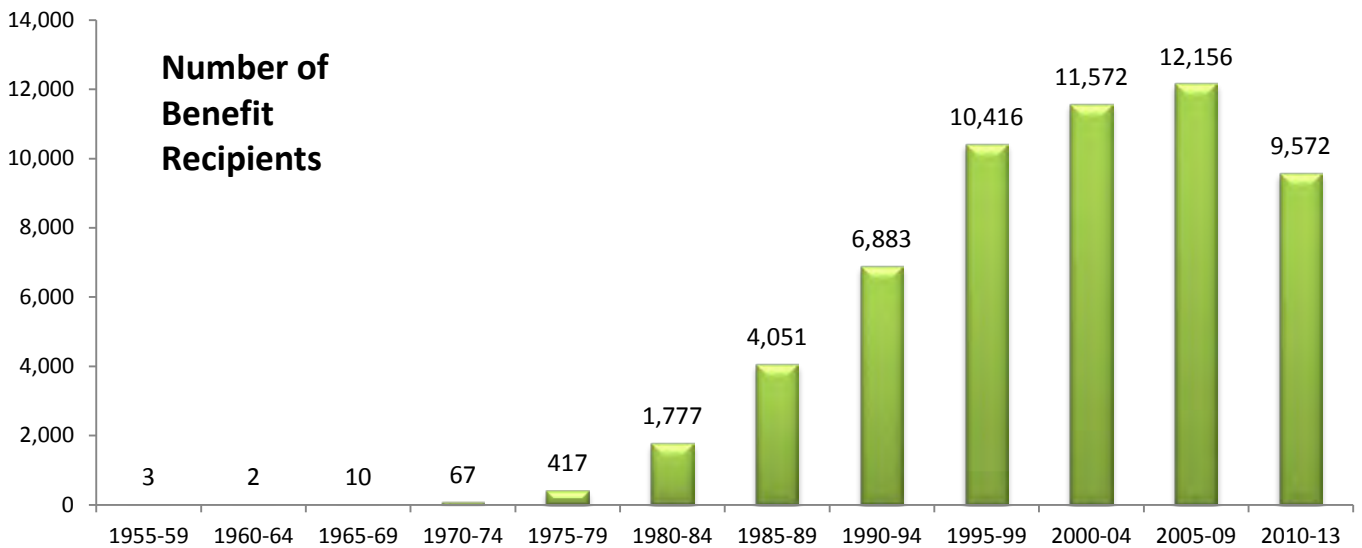
Total Recipients: 56,926



# Benefit Recipients by Effective Date of Retirement

For Month of June 2013 – Payment Made June 1, 2013

Total Recipients: 56,926



# Schedule of New Retirees and Initial Benefit Paid

For the Ten Fiscal Years Ending June 30, 2013

Fiscal Year	Years of Formula Service						>35	Total
	<10	10-15	16-20	21-25	26-30	>30 (FY 2000-2008) 31-35 (FY 2009)		
<b>2004</b>								
Avg. Monthly Benefit	\$260	\$738	\$1,155	\$1,832	\$2,393	\$3,227		\$2,324
Number of Retirees	258	162	119	158	157	1,102		1,956
<b>2005</b>								
Avg. Monthly Benefit	\$267	\$768	\$1,235	\$1,688	\$2,515	\$3,224		\$2,424
Final Average Salary	\$28,747	\$35,240	\$44,812	\$52,867	\$58,063	\$60,069		\$53,257
Number of Retirees	204	110	118	132	169	1,055		1,788
<b>2006</b>								
Avg. Monthly Benefit	\$239	\$843	\$1,349	\$1,820	\$2,523	\$3,320		\$2,422
Final Average Salary	\$21,194	\$37,339	\$50,455	\$36,045	\$58,519	\$62,537		\$54,018
Number of Retirees	230	144	170	151	207	1,094		1,996
<b>2007</b>								
Avg. Monthly Benefit	\$257	\$781	\$1,455	\$1,932	\$2,608	\$3,548		\$2,465
Final Average Salary	\$22,846	\$38,717	\$50,770	\$58,606	\$61,332	\$63,080		\$55,098
Number of Retirees	256	162	183	181	190	1,238		2,210
<b>2008</b>								
Avg. Monthly Benefit	\$284	\$917	\$1,471	\$1,943	\$2,663	\$3,474		\$2,524
Final Average Salary	\$23,542	\$42,298	\$52,288	\$58,998	\$62,353	\$65,360		\$56,822
Number of Retirees	252	147	150	216	237	1,107		2,109
<b>2009</b>								
Avg. Monthly Benefit	\$295	\$885	\$1,319	\$1,975	\$2,670	\$3,463	\$3,859	\$2,507
Final Average Salary	\$25,301	\$39,270	\$50,616	\$59,550	\$63,268	\$66,179	\$69,949	\$56,972
Number of Retirees	285	139	160	180	223	793	257	2,037
<b>2010</b>								
Avg. Monthly Benefit	\$299	\$919	\$1,497	\$1,911	\$2,636	\$3,447	\$3,884	\$2,441
Final Average Salary	\$24,488	\$43,105	\$54,513	\$60,302	\$64,611	\$67,443	\$70,941	\$57,729
Number of Retirees	326	162	205	224	276	733	323	2,249
<b>2011</b>								
Avg. Monthly Benefit	\$318	\$883	\$1,458	\$2,076	\$2,777	\$3,576	\$3,941	\$2,410
Final Average Salary	\$24,106	\$43,245	\$56,574	\$63,832	\$68,358	\$71,541	\$73,031	\$58,957
Number of Retirees	431	212	240	270	278	685	428	2,544
<b>2012</b>								
Avg. Monthly Benefit	\$388	\$935	\$1,485	\$2,011	\$2,747	\$3,592	\$4,004	\$2,301
Final Average Salary	\$28,337	\$44,368	\$55,772	\$63,085	\$68,043	\$70,400	\$74,259	\$58,233
Number of Retirees	518	254	253	337	345	668	371	2,746
<b>2013</b>								
Avg. Monthly Benefit	\$349	\$921	\$1,431	\$1,995	\$2,772	\$3,591	\$4,063	\$2,318
Final Average Salary	\$26,267	\$44,588	\$55,793	\$62,310	\$69,357	\$70,648	\$73,864	\$58,305
Number of Retirees	458	231	272	344	338	605	387	2,635

Note: Final Average Salary by years of service is unavailable for years prior to fiscal year 2005.

# Schedule of Benefit Recipients by Type

For Month of June 2013 – Payment Made June 1, 2013

Monthly Benefit Amount	Number of Recipients	Type of Retirement		
		Regular	Disability	Beneficiary
\$ 0 – 1,000	13,902	12,505	184	1,213
\$ 1,001 – 2,000	14,013	12,531	206	1,276
\$ 2,001 – 3,000	14,680	13,561	130	989
\$ 3,001 – 4,000	7,394	6,866	39	489
\$ 4,001 – 5,000	3,579	3,303	6	270
\$ 5,001 – 6,000	1,791	1,638	3	150
\$ 6,001 – 7,000	815	741	3	71
\$ 7,001 – 8,000	441	409	0	32
\$ 8,001 – 9,000	186	164	0	22
\$ 9,001 – 10,000	66	59	0	7
\$ 10,001 – 11,000	31	28	0	3
\$ 11,001 – 12,000	19	17	0	2
\$ 12,001 – 13,000	7	6	0	1
\$ 13,001 – 14,000	0	0	0	0
\$ 14,001 – 15,000	1	1	0	0
\$ 15,001 – 16,000	1	1	0	0
\$ 16,001 and over	0	0	0	0
Totals:	56,926	51,830	571	4,525

# Membership Data

June 30, 2013

Distribution of Active Members\*

Average Earnings in Dollars

Age	Years of Service as of June 30, 2013**										Total	
	<3**	3-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 +		
<b>&lt;25</b>	2,329	26										2,355
<b>Avg. Earnings</b>	\$ 23,240	\$ 39,627										\$ 23,421
<b>25-29</b>	4,464	2,392	1,644									8,500
<b>Avg. Earnings</b>	\$ 27,377	\$ 39,923	\$ 45,317									\$ 34,377
<b>30-34</b>	2,093	1,327	5,651	1,376								10,447
<b>Avg. Earnings</b>	\$ 24,953	\$ 38,433	\$ 48,343	\$ 58,557								\$ 43,743
<b>35-39</b>	1,404	693	2,466	4,657	1,095							10,315
<b>Avg. Earnings</b>	\$ 22,840	\$ 37,509	\$ 48,798	\$ 61,078	\$ 68,040							\$ 52,093
<b>40-44</b>	1,389	587	1,628	2,534	4,051	857						11,046
<b>Avg. Earnings</b>	\$ 21,267	\$ 37,326	\$ 46,461	\$ 59,570	\$ 67,831	\$ 72,516						\$ 55,673
<b>45-49</b>	1,118	442	1,230	1,530	2,164	2,810	581					9,875
<b>Avg. Earnings</b>	\$ 18,493	\$ 33,255	\$ 45,392	\$ 58,138	\$ 66,569	\$ 72,119	\$ 74,191					\$ 57,719
<b>50-54</b>	892	415	1,065	1,384	1,393	1,768	2,253	490				9,660
<b>Avg. Earnings</b>	\$ 17,326	\$ 31,364	\$ 44,000	\$ 56,590	\$ 63,530	\$ 70,135	\$ 72,783	\$ 72,125				\$ 58,537
<b>55-59</b>	703	285	691	924	1,260	1,294	1,374	1,605	382			8,518
<b>Avg. Earnings</b>	\$ 14,270	\$ 25,826	\$ 40,468	\$ 54,528	\$ 62,642	\$ 67,701	\$ 71,970	\$ 72,846	\$ 75,702			\$ 59,521
<b>60-64</b>	536	165	437	575	685	795	684	378	433	108		4,796
<b>Avg. Earnings</b>	\$ 7,713	\$ 20,900	\$ 37,078	\$ 53,076	\$ 60,468	\$ 67,538	\$ 72,715	\$ 77,348	\$ 78,902	\$ 74,755		\$ 56,428
<b>65-69</b>	293	58	100	89	106	108	77	60	36	52		979
<b>Avg. Earnings</b>	\$ 6,137	\$ 12,892	\$ 24,631	\$ 47,527	\$ 60,919	\$ 67,580	\$ 74,138	\$ 80,494	\$ 80,895	\$ 79,032		\$ 41,425
<b>70 +</b>	146	27	21	19	8	8	10	13	5	17		274
<b>Avg. Earnings</b>	\$ 5,119	\$ 12,876	\$ 20,217	\$ 53,297	\$ 56,407	\$ 72,530	\$ 75,736	\$ 68,835	\$ 75,421	\$ 87,038		\$ 25,813
<b>Total</b>	15,367	6,417	14,933	13,088	10,762	7,640	4,979	2,546	856	177		76,765
<b>Avg. Earnings</b>	\$ 22,321	\$ 36,629	\$ 46,435	\$ 58,785	\$ 65,889	\$ 70,416	\$ 72,740	\$ 73,535	\$ 77,538	\$ 77,191		\$ 51,030

\* Active members include 15 Basic and 76,750 Coordinated members.

\*\* This exhibit does not reflect service earned in Combined Service Annuity benefits. It should not be relied upon as an indicator of non-vested status.

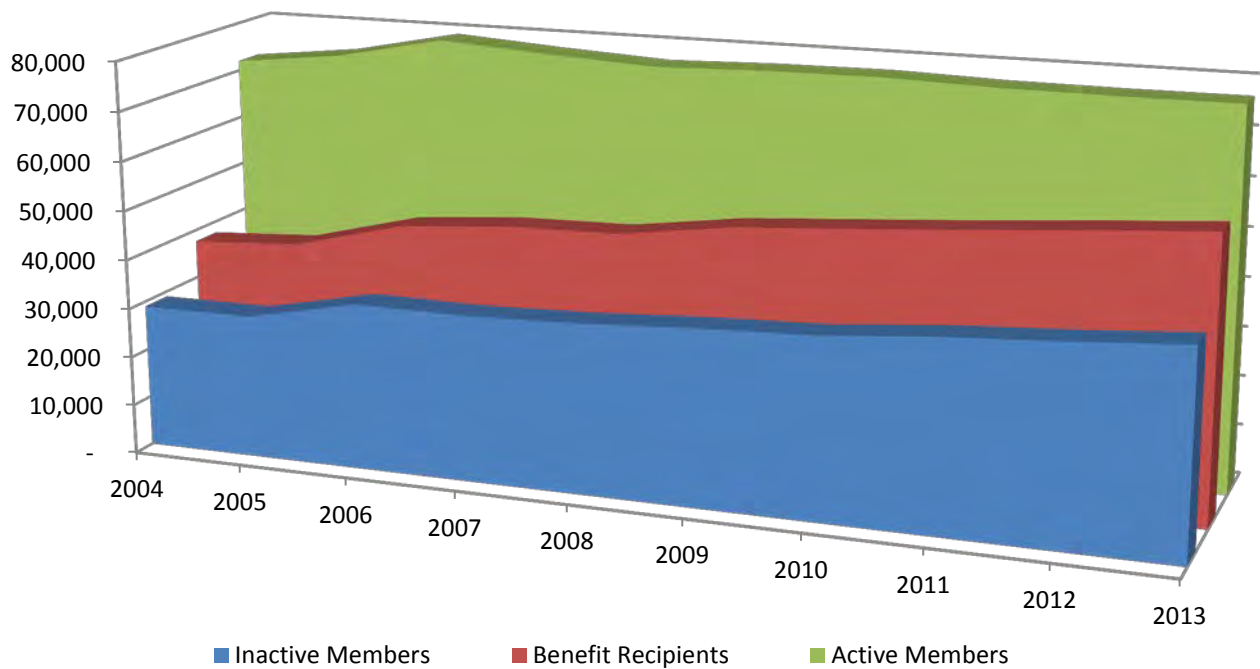
In each cell, the top number is the count of active members for the age/service combination and the bottom number is the amount of average annual earnings. Earnings shown in this exhibit are actual salaries earned during the fiscal year ending June 30, 2013, as reported by the Teachers Retirement Association of Minnesota.



# 10-Year Summary of Membership

Year Ended June 30	Active Members	Inactive Members	Benefit Recipients
2004	72,008	28,990	37,649
2005	74,552	29,031	38,957
2006	79,164	33,729	44,683
2007	77,694	35,550	46,538
2008	76,515	34,283	46,981
2009	77,162	35,563	50,208
2010	77,356	36,407	51,853
2011	76,755	38,433	53,537
2012	76,649	39,792	55,425
2013	76,765	41,495	57,168

# 10-Year Summary of Membership



# Principal Participating Employers

As of June 30, 2013

Employer Unit Name	2013			2012			2011			2010		
	Covered Employees	Rank	% of Active Membership	Covered Employees	Rank	% of Active Membership	Covered Employees	Rank	% of Active Membership	Covered Employees	Rank	% of Active Membership
Minneapolis - Special School District #1	3,861	1	5.04	4,088	1	5.29	3,757	1	4.89	3,772	1	4.87
Anoka-Hennepin - ISD #11	3,074	2	4.01	3,082	2	3.98	3,158	2	4.11	3,309	2	4.28
MnSCU (MN State Colleges & Universities)	2,720	3	3.55	2,708	3	3.50	2,757	3	3.59	2,876	3	3.72
Rosemount-Apple Valley-Eagan - ISD #196	2,444	4	3.19	2,472	4	3.20	2,554	4	3.33	2,711	4	3.50
Osseo - ISD #279	1,665	5	2.17	1,755	5	2.27	1,743	5	2.27	1,724	5	2.23
South Washington County - ISD #833	1,620	6	2.11	1,597	6	2.06	1,559	6	2.03	1,532	6	1.98
Rochester - ISD #535	1,462	7	1.91	1,446	7	1.87	1,434	7	1.87	1,435	7	1.86
Robbinsdale - ISD #281	1,072	8	1.40	1,095	8	1.42	1,057	8	1.38	1,101	8	1.42
Bloomington - ISD #271	1,039	9	1.36	1,025	9	1.32	1,041	9	1.36	1,030	9	1.33
St. Cloud - ISD #742	980	10	1.28	973	10	1.26	1,021	10	1.33	NA	NA	NA
Burnsville - ISD #191	NA	NA	NA	NA	NA	NA	NA	NA	NA	973	10	1.26
Lakeville - ISD #194	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
All Other	<u>56,681</u>	NA	<u>73.98</u>	<u>57,099</u>		<u>73.83</u>	<u>56,674</u>		<u>73.84</u>	<u>56,893</u>		<u>73.55</u>
<b>Total</b>	<u>76,618</u>		<u>100.00</u>	<u>77,340</u>		<u>100.00</u>	<u>76,755</u>		<u>100.00</u>	<u>77,356</u>		<u>100.00</u>

\*Information not available prior to 2007.

2009			2008			2007			Employer Unit Name
Covered Employees	Rank	% of Membership	Covered Employees	Rank	% of Active Membership	Covered Employees	Rank	% of Active Membership	
3,473	1	4.50	3,406	2	4.45	4,217	1	5.43	Minneapolis - Special School District #1
3,466	2	4.49	3,487	1	4.56	3,506	2	4.51	Anoka-Hennepin - ISD #11
3,019	3	3.91	3,146	3	4.11	3,253	3	4.19	MnSCU (MN State Colleges & Universities)
2,741	4	3.55	2,679	4	3.50	2,685	4	3.46	Rosemount-Apple Valley-Eagan - ISD #196
1,745	5	2.26	1,923	5	2.52	1,973	5	2.54	Osseo - ISD #279
1,476	7	1.91	1,461	6	1.91	1,454	6	1.87	South Washington County - ISD #833
1,483	6	1.92	1,457	7	1.91	1,412	7	1.81	Rochester - ISD #535
1,086	8	1.41	1,181	8	1.54	1,245	8	1.60	Robbinsdale - ISD #281
1,033	9	1.34	1,020	9	1.33	994	10	1.28	Bloomington - ISD #271
NA	NA	NA	967	10	1.26	NA	NA	NA	Burnsville - ISD #191
976	10	1.26	NA	NA	NA	NA	NA	NA	St. Cloud - ISD #742
NA	NA	NA	NA	NA	NA	1,078	9	1.39	Lakeville - ISD #194
<u>56,664</u>		<u>73.45</u>	<u>55,788</u>		<u>72.91</u>	<u>55,877</u>		<u>71.92</u>	All Other
<u>77,162</u>		<u>100.00</u>	<u>76,515</u>		<u>100.00</u>	<u>77,694</u>		<u>100.00</u>	<b>Total</b>

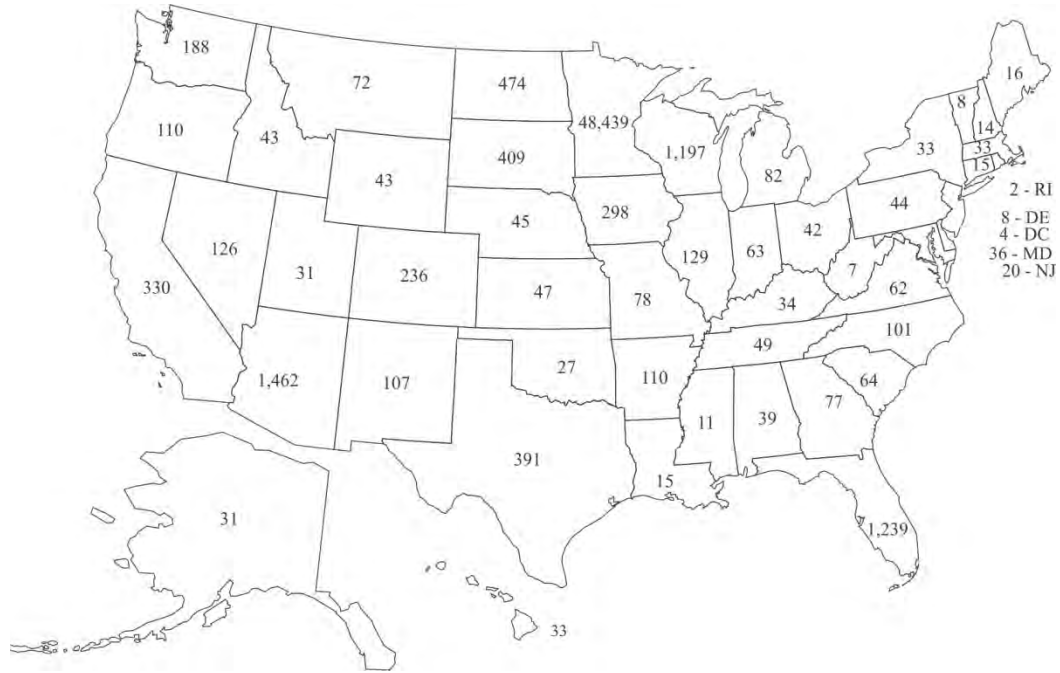
# Number of Employer Units

As of June 30, 2013

<b>Year</b>	<b>Independent School Districts</b>	<b>Joint Power Units</b>	<b>MN State Colleges and Universities (MnSCU)</b>	<b>Charter Schools</b>	<b>State Agencies</b>	<b>Others</b>	<b>Total</b>
2003	340	38	40	88	8	1	515
2004	345	37	39	110	6	1	538
2005	345	38	39	136	6	1	565
2006	348	37	39	142	6	1	573
2007	343	37	39	139	7	1	566
2008	344	33	39	157	5	2	580
2009	347	34	39	156	5	2	583
2010	342	37	39	154	4	2	578
2011	342	37	39	155	4	2	579
2012	344	34	39	158	4	6	585
2013	347	35	39	160	4	6	591

# Distribution of TRA Benefits Mailing Address of Benefit Recipient

February 1, 2013

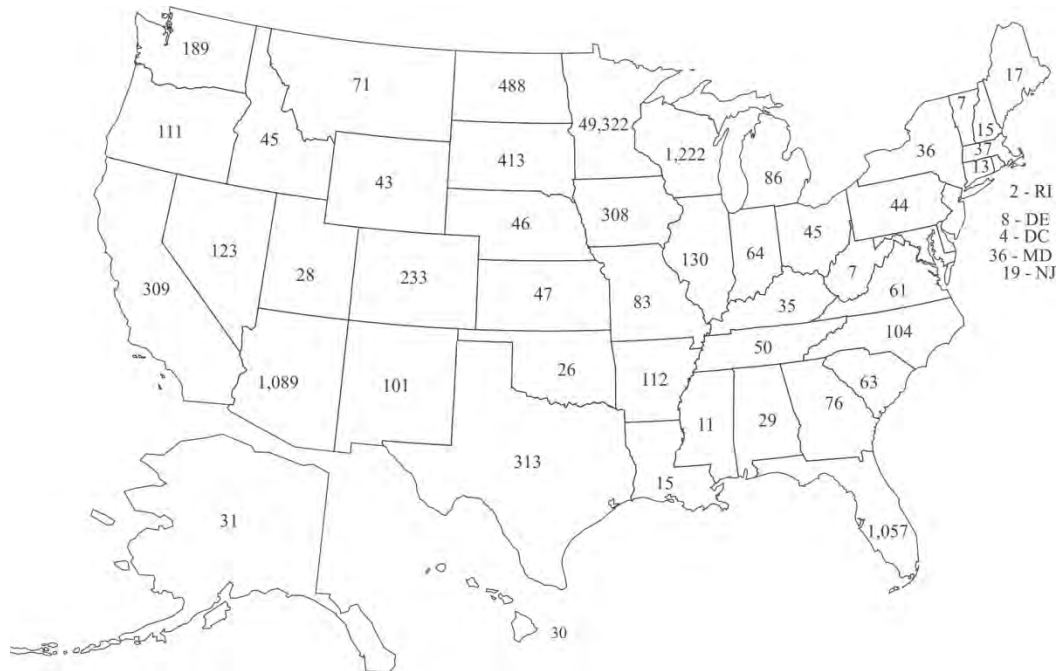


Total Recipients: 56,643

Note: 69 recipients reside outside the United States

Minnesota Recipients = 85.52 percent

June 1, 2013

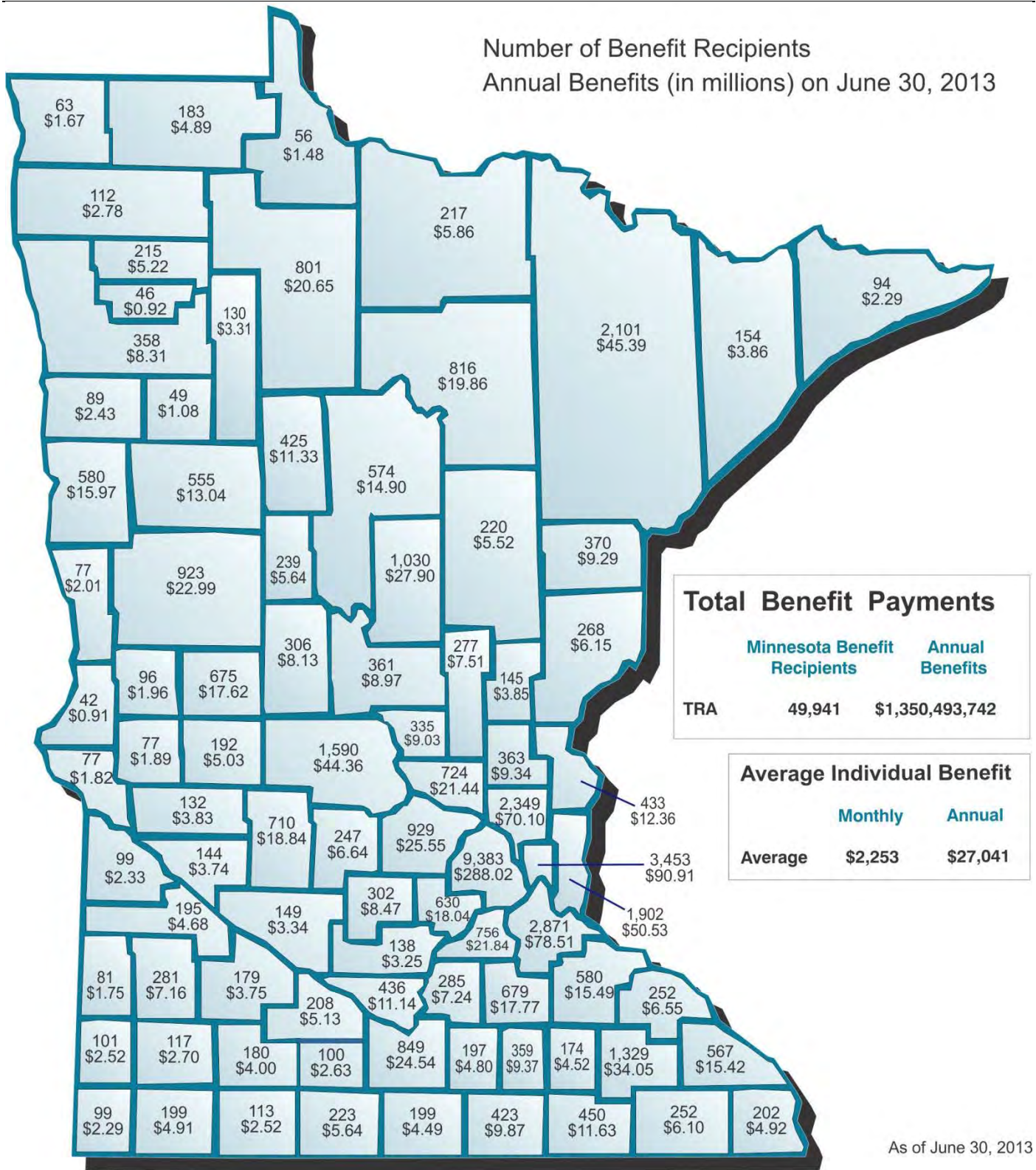


Total Recipients: 56,926

Note: 72 recipients reside outside the United States

Minnesota Recipients = 86.64 percent

# Annual Benefits for Minnesota Benefit Recipients by County



## Annual Benefits and Recipients by County for the Teachers Retirement Association (TRA)

As of June 30, 2013

County	Members	Annual Benefit	County	Members	Annual Benefit
Aitkin	220	\$ 5,520,481	Martin	223	\$ 5,639,174
Anoka	2,349	\$ 70,099,407	McLeod	302	\$ 8,468,979
Becker	555	\$ 13,040,900	Meeker	247	\$ 6,640,233
Beltrami	801	\$ 20,652,736	Mille Lacs	277	\$ 7,514,968
Benton	335	\$ 9,033,695	Morrison	361	\$ 8,965,409
Big Stone	77	\$ 1,820,483	Mower	450	\$ 11,626,517
Blue Earth	849	\$ 24,540,753	Murray	117	\$ 2,695,826
Brown	208	\$ 5,129,968	Nicollet	436	\$ 11,144,606
Carlton	370	\$ 9,285,619	Nobles	199	\$ 4,910,041
Carver	630	\$ 18,039,873	Norman	89	\$ 2,433,806
Cass	574	\$ 14,900,667	Olmsted	1,329	\$ 34,053,293
Chippewa	144	\$ 3,744,197	Otter Tail	923	\$ 22,991,176
Chisago	433	\$ 12,362,874	Pennington	215	\$ 5,219,880
Clay	580	\$ 15,970,498	Pine	268	\$ 6,146,675
Clearwater	130	\$ 3,306,632	Pipestone	101	\$ 2,523,552
Cook	94	\$ 2,286,217	Polk	358	\$ 8,314,981
Cottonwood	180	\$ 4,001,438	Pope	192	\$ 5,031,710
Crow Wing	1,030	\$ 27,901,407	Ramsey	3,453	\$ 90,910,454
Dakota	2,871	\$ 78,505,675	Red Lake	46	\$ 924,083
Dodge	174	\$ 4,516,484	Redwood	179	\$ 3,754,022
Douglas	675	\$ 17,615,567	Renville	149	\$ 3,342,836
Faribault	199	\$ 4,488,077	Rice	679	\$ 17,768,010
Fillmore	252	\$ 6,104,229	Rock	99	\$ 2,289,727
Freeborn	423	\$ 9,866,601	Roseau	183	\$ 4,885,110
Goodhue	580	\$ 15,486,879	Saint Louis	2,101	\$ 45,394,019
Grant	96	\$ 1,955,235	Scott	756	\$ 21,840,080
Hennepin	9,383	\$ 288,017,949	Sherburne	724	\$ 21,440,882
Houston	202	\$ 4,917,298	Sibley	138	\$ 3,245,453
Hubbard	425	\$ 11,328,448	Stearns	1,590	\$ 44,357,824
Isanti	363	\$ 9,340,372	Steele	359	\$ 9,370,212
Itasca	816	\$ 19,856,011	Stevens	77	\$ 1,887,703
Jackson	113	\$ 2,519,606	Swift	132	\$ 3,829,021
Kanabec	145	\$ 3,852,962	Todd	306	\$ 8,130,971
Kandiyohi	710	\$ 18,841,397	Traverse	42	\$ 905,655
Kittson	63	\$ 1,669,296	Wabasha	252	\$ 6,554,829
Koochiching	217	\$ 5,861,644	Wadena	239	\$ 5,637,397
Lac Qui Parle	99	\$ 2,330,403	Waseca	197	\$ 4,804,269
Lake	154	\$ 3,862,889	Washington	1,902	\$ 50,534,995
Lake of the Woods	56	\$ 1,477,184	Watsonwan	100	\$ 2,634,957
Le Sueur	285	\$ 7,241,407	Wilkin	77	\$ 2,012,114
Lincoln	81	\$ 1,745,303	Winona	567	\$ 15,422,807
Lyon	281	\$ 7,158,222	Wright	929	\$ 25,550,640
Mahnomen	49	\$ 1,082,934	Yellow Medicine	195	\$ 4,683,138
Marshall	112	\$ 2,781,793	<b>Grand Total</b>	<b>49,941</b>	<b>\$ 1,350,493,744</b>

# Projected Benefit Payments

Fiscal Year Ended June 30, 2013

The table below shows estimated benefits expected to be paid over the next 25 years, based on the assumptions used in the valuation. The “Actives” column shows benefits expected to be paid to members currently active on July 1, 2013. The “Retirees” column shows benefits expected to be paid to all other members. This includes those who, as of July 1, 2013, are receiving benefit payments or who terminated employment and are entitled to a deferred benefit.

(dollars in thousands)

Year Ending June 30	Active	Retirees	Total
2014	\$ 110,613	\$ 1,521,173	\$ 1,631,786
2015	173,919	1,507,478	1,681,397
2016	237,488	1,492,841	1,730,329
2017	301,383	1,479,782	1,781,165
2018	367,207	1,467,870	1,835,077
2019	434,986	1,455,912	1,890,898
2020	503,001	1,442,695	1,945,696
2021	570,284	1,426,645	1,996,929
2022	636,880	1,409,428	2,046,308
2023	700,846	1,389,882	2,090,728
2024	763,739	1,368,278	2,132,017
2025	828,656	1,343,541	2,172,197
2026	898,067	1,316,213	2,214,280
2027	972,643	1,285,842	2,258,485
2028	1,053,405	1,253,310	2,306,715
2029	1,140,647	1,218,267	2,358,914
2030	1,234,998	1,180,793	2,415,791
2031	1,336,362	1,140,409	2,476,771
2032	1,444,460	1,097,484	2,541,944
2033	1,558,661	1,052,342	2,611,003
2034	1,679,666	1,006,155	2,685,821
2035	1,805,611	957,638	2,763,249
2036	1,936,606	907,651	2,844,257
2037	2,067,994	855,734	2,923,728
2038	2,196,656	801,645	2,998,301





# Plan Statement

# Plan Statement

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June 30, 2013

## Purpose

The Minnesota Teachers Retirement Association (TRA) was established on July 1, 1931, by the state legislature. Its purpose is to improve educational service and better compensate teachers in order to make the occupation of teaching in Minnesota more attractive to qualified persons by providing a retirement benefit schedule that rewards faithful and continued service.

## Administration

TRA is managed by eight trustees – three are statutorily appointed and five are elected. The statutory trustees are the Commissioner of Education, the Commissioner of the Minnesota Department of Management and Budget (MMB) and a representative of the Minnesota School Boards Association. Four of the five elected trustees are active members and one is a retiree. Administrative management of the fund is vested in an Executive Director who is appointed by the Board of Trustees. The Board also contracts with an actuary and uses legal counsel provided by the office of the Attorney General.

## Membership

All teachers employed in public elementary and secondary schools, joint powers, charter schools and all other educational institutions maintained by the State of Minnesota (except those teachers employed by the cities of St. Paul and Duluth, or by the University of Minnesota) are required to be members of TRA.

Teachers employed by Minnesota State Colleges and Universities (MnSCU) may elect TRA coverage within one year of their eligible employment. Newly-tenured MnSCU members also have a one-year period to elect TRA coverage. If electing TRA, the individual must pay for the past service covered by TRA, and the cost of past service is based on full actuarial cost. No Minnesota state college or university teacher is a member except for purposes of Social Security coverage if that teacher has coverage by the Defined Contribution Retirement Plan administered by the MnSCU Board.

## Retirement Service Credit

Service credit earned for benefit determination is based on a teacher's earned salary relative to an annual base salary established for an employer unit. Minnesota statute defines the base salary for each employer as the lowest salary paid to a full-time Bachelor of Arts (BA) base contract in the previous fiscal year. For example, a school district's annual base salary is determined to be \$40,000. A teacher with an earned salary of \$30,000 for that year will earn 0.75 year of service credit.

Service credit for MnSCU members is based on a full-time equivalence method.

No more than one year of service credit may be earned by any member during a fiscal year.

## Financing

Benefits are financed by employee contributions, employer contributions, investment earnings and turnover gains. Turnover gains are employer contributions retained by the fund when members take refunds of their employee contributions.

## Vesting

In a pension plan, vesting means a member has earned sufficient service credit to be eligible for a monthly benefit.

TRA members who have performed covered service after May 15, 1989, are vested after three years of teaching service. TRA members who last worked prior to May 16, 1989, require five years or, in some cases, ten years of service credit earned in order to be eligible for a monthly annuity benefit.

## Employee Contributions

TRA members pay a percentage of their gross annual salary as determined by their membership plan. Basic Plan members (without Social Security coverage) contribute 10.0 percent of their annual salary, while Coordinated Plan members (coordinated with Social Security coverage) contribute 6.5 percent of their annual salary.

On July 1, 2013, the employee contribution will be raised annually by 0.50 percent for two years. On July 1, 2014, the employee contribution rate for Coordinated members will be 7.5 percent.

Percent Contribution Rate on July 1		
Member Type	2013	2014
<b>Basic</b> (without Social Security coverage)	10.5	11.0
<b>Coordinated</b> (with Social Security coverage)	7.0	7.5

## Employer Contributions

Local school districts and other TRA-covered employer units provide contributions of 10.5 percent of total salary for members in the Basic Plan and 6.5 percent of total salary for members in the Coordinated Plan. For Coordinated Plan members the employer unit also makes the required matching contribution to the Social Security Administration.

Beginning July 1, 2013, the employer contribution will be raised annually by 0.50 percent for two years. On July 1, 2014, the employer contribution rate for Coordinated members will be 7.5 percent.

Percent Contribution Rate on July 1		
Member Type	2013	2014
<b>Basic</b> (without Social Security coverage)	11.0	11.5
<b>Coordinated</b> (with Social Security coverage)	7.0	7.5

Minneapolis Special School District #1 pays an employer additional contribution of 3.64 percent of annual salary for TRA members employed by that school district.

TRA also receives approximately \$20.5 million annually in state and local direct aid. The aid payments are designed to offset unfunded liabilities assumed with the 2006 merger of the Minnesota Teachers Retirement Fund Association (MTRFA).

## Retirement Benefit

The retirement benefit is determined by a formula based on the average of the member's highest five successive annual salaries, an accumulated percentage factor based on the

total years of service credit, and the member's age at retirement. The retirement benefits for members who were first hired before July 1, 1989, are different from the retirement benefits for members who were first hired after June 30, 1989.

### Coordinated Members First Hired *Before* July 1, 1989

For members first hired before July 1, 1989, the retirement benefits (with average salary defined as the average of the highest five successive annual salaries) are the greater of:

The sum of:

- 1.20 percent of average salary for the first 10 years of allowable service;
- 1.70 percent of average salary for each subsequent year prior to July 1, 2006; and
- 1.90 percent of average salary for each year of allowable service July 1, 2006 and after.
- No actuarial reduction if age plus years of service totals 90. Otherwise, reduction of 0.25 percent for each month the member is under age 65 (or age 62 if 30 years of allowable service) at the time of retirement.

or

The sum of:

- 1.70 percent of average salary for each year of allowable service prior to July 1, 2006; and
- 1.90 percent of average salary for each year of allowable service beginning July 1, 2006.
- Actuarial reduction (averaging 4.0 percent to 5.5 percent per year) applies if the member is under full Social Security benefit retirement age, but not to exceed age 65.

or

- For certain eligible members first hired prior to July 1, 1969, a money purchase annuity equal to the actuarial equivalent of 220.00 percent of the member's accumulated deductions plus interest thereon.

### Coordinated Members First Hired *After* June 30, 1989

For members first hired after June 30, 1989, the retirement benefits (with average salary defined as the average of the highest five successive annual salaries) are the sum of:

- 1.70 percent of average salary for each year of allowable service prior to July 1, 2006; and

- 1.90 percent of average salary for each year of allowable service beginning July 1, 2006.

Actuarial reduction (averaging 4.0 percent to 5.5 percent per year) applies if the member is under full Social Security benefit retirement age, but not to exceed age 66.

### Basic Members (Former MTRFA)

TRA has 37 active and inactive Basic members from the former Minneapolis Teachers Retirement Fund Association (MTRFA) who were transferred to TRA effective June 30, 2006. Under the merger legislation, this group of former MTRFA members retains eligibility for the benefit provisions as provided by the MTRFA Articles of Incorporation and by-laws as they existed on June 30, 2006.

The retirement benefits for these members (with average salary defined as the average of the highest five successive annual salaries) are:

- 2.50 percent of average salary for each year of teaching service.
- No actuarial reduction applies if the retiring member is age 60 or any age with 30 years of teaching service.

If the member is age 55 with less than 30 years of teaching service, the retirement benefit is the greater of:

- 2.25 percent of average salary for each year of teaching service with reduction of 0.25 percent for each month the member is under the age first eligible for a normal retirement benefit.

or

- 2.50 percent of average salary for each year of teaching service assuming augmentation to the age first eligible for a normal retirement benefit at 3.00 percent per year, and actuarial reduction for each month the member is under the age first eligible for a normal retirement benefit.

An alternative benefit is available to members who are at least age 50 and have seven years of teaching service. The benefit is based on the accumulation of the 6.50 percent "city deposits" to the Retirement Fund. Other benefits are also provided under this alternative benefit, depending on the member's age and teaching service.

### Basic Members (Non-MTRFA)

As of June 30, 2013, TRA had eight inactive members who retain eligibility for the Basic Plan and who do not have eligibility for the provisions for former MTRFA Basic

members. The retirement benefits (with average salary defined as the average of the highest five successive annual salaries) are the greater of:

- 2.20 percent of average salary for each of the first ten years of allowable service and 2.70 percent of average salary for each subsequent year with reduction of 0.25 percent for each month the member is under age 65 at time of retirement, or under age 62 if 30 years of allowable service. No reduction if age plus years of allowable service totals 90.
- 2.70 percent of average salary for each year of allowable service assuming augmentation to age 65 at 3.00 percent per year, and actuarial reduction for each month the member is under age 65.

or

- For eligible members, a money purchase annuity equal to the actuarial equivalent of 220.00 percent of the member's accumulated deductions plus interest thereon

All members in this group have reached normal retirement age and are no longer subject to early retirement penalties.

### Deferred Retirement

Members with three or more years of allowable service (ten or more years of allowable service if termination of teaching service occurs before July 1, 1987, and five or more years of allowable service if termination of teaching service occurs after June 30, 1987, but before May 16, 1989) who terminate teaching service in schools covered by the association may have their retirement benefit deferred until they attain age 55 or older.

Members who defer their benefits will receive a deferral increase as follows:

Members hired prior to July 1, 2006	Prior to July 1, 2012: 3.0 percent annually through December 31 of the year in which the member would have reached 55 and 5.0 percent annually thereafter each year the benefit is deferred After July 1, 2012: 2.0 percent
Members hired on or after July 1, 2006	Prior to July 1, 2012: 2.5 percent After July 1, 2012: 2.0 percent

The deferral period must be at least three months. If on a leave of absence, the member is not eligible for the deferral increase on a deferred annuity for any portion of time on leave.

## Annuity Plan Options

Six different annuity plan options are available to TRA members that provide monthly benefit payments for as long as the annuitant lives. The No Refund Plan provides the highest possible monthly benefit, but terminates upon the member's death. A member may choose to provide survivor benefits to a designated beneficiary(ies) by selecting one of the five plans that have survivorship features.

A married member must choose one of the three survivorship plans (plans 4 through 6) listed below at retirement, unless the member's spouse waives the right to this type of annuity.

1. No Refund, For Life of Member
2. Guaranteed Refund
3. 15-Years Guaranteed
4. 100% Survivorship with Bounceback
5. 50% Survivorship with Bounceback
6. 75% Survivorship with Bounceback

## Annual Post-Retirement Increases

Once retired, each January, if specified by law, a post-retirement increase may be made to a member's monthly benefit.

Under current Minnesota statute, the annual post-retirement increases is 2.0 percent. Once the TRA Fund reaches a market value funding ratio of 90 percent, the annual post-retirement increase would be restored to 2.5 percent.

When an increase is granted, members who have been receiving a benefit for at least 18 months will receive the full increase. Members who have been receiving a benefit for at least 6 months, but less than 18 months, will receive a prorated increase.

## Combined Service Annuity

Any vested member having combined service credit with any two or more Minnesota public retirement funds that participates in the combined service annuity program, may elect to receive a combined service annuity upon compliance with eligibility requirements for retirement.

## Refunds

Upon termination of teaching service and application, TRA will issue a refund of a member's accumulated contributions plus 5 percent interest compounded annually if termination occurred before May 16, 1989, and 6 percent interest compounded annually if termination occurred on or after May 16, 1989. Since July 1, 2011, all account balances accrue interest at a rate of 4 percent annually, regardless of date of termination.

A refund will be issued only if the member has officially resigned from employment and the official refund application form is submitted no sooner than 30 days after termination of teaching service.

## Repayment of Refunds

Members who return to teaching service after previously withdrawing their contributions may repay these contributions upon completing two years of allowable service. The repayment must include interest of 8.5 percent, compounded annually from the date of the refund. If a member has more than two years of refunded service, they may repay a minimum portion, which is at least 1/3 of the total service credit period for all refunds previously taken.

## Disability Benefits

An active member who becomes disabled after at least three years of allowable service is eligible to apply for a total and permanent disability benefit provided at least two of the required three years of allowable service are performed after last becoming a member. State statute defines total and permanent disability as the inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to be of a long, continued and indefinite duration. An indefinite duration is a period of at least one year.

## Survivor Benefits of Members Prior to Retirement

Certain benefits are available to the survivor(s) of members who die before officially retiring with TRA. Beneficiary designation options vary for single members and married members.

## Single Members

### Non-Vested

- A lump-sum death benefit equal to a member's accumulated deductions plus interest to the date of death is payable to either the designated beneficiary or estate, whichever is applicable. Interest is compounded annually at 4 percent. Contributions made by the employer are not included in this benefit. A member may designate any person(s), trust, or organization(s) as a beneficiary.

### Vested

- For a member without a surviving spouse at the time of death, survivor benefits will *automatically* be paid for a period certain to all dependent children under the age of 20, *unless* the member has chosen the lifetime monthly benefit option explained in the next paragraph. These payments are made from the date of death to the date each dependent child attains age 20 if the child is under age 15 on the date of death. If the dependent child is 15 years or older on the date of death, payments will be made for five years. Payments for children under the age of 18 would be made to a custodial parent or court-appointed guardian. A dependent child is a biological or adopted child who is under 20 years of age and who is dependent on the member for more than one-half of his or her financial support.
- A member may designate payment of lifetime monthly benefits for *either* former spouse(s), *or* dependent and non-dependent, biological or adopted child(ren), *instead* of the above described surviving dependent child(ren) benefits being paid.
- For a member without a former spouse or dependent child(ren) at the time of death, either the designated beneficiary or estate, whichever is applicable, is entitled to a lump-sum death benefit equal to accumulated deductions plus interest to the date of death. Interest on account balances is compounded annually at 4 percent. Contributions made by the employer are not included in this benefit. A member may designate any person(s), trust, or organization(s) as a beneficiary.

## Married Members

A surviving spouse has precedence over any designated beneficiary.

### Non-Vested

- A member's spouse is entitled to a lump-sum death benefit equal to the accumulated deductions plus interest to the date of death. Interest on account balances is compounded annually at 4 percent. Contributions made by the employer are not included in this benefit.

### Vested

- A member's surviving spouse may elect to receive a lifetime annuity in lieu of a lump-sum benefit. The lifetime annuity is payable on a monthly basis for the lifetime of the spouse. Payments terminate upon the death of the spouse with no benefits remaining for other beneficiaries.
- Instead of a lifetime annuity, a member's spouse may elect to receive actuarially equivalent payments for a term certain annuity of 5, 10, 15 or 20 years. The amount of the annuity is based upon a formula, the member's age at the time of death and the age of the spouse when benefits begin to accrue, although monthly benefit payments cannot exceed 75 percent of the member's average High-5 monthly salary.
- A member and their spouse may *jointly* make a specification to waive the spouse's benefits so that designated beneficiary(ies) will receive a lifetime survivor annuity benefit. The designated beneficiary may be *either* the member's former spouse(s) *or* the member's biological or adopted child(ren). Under a joint specification, a designated beneficiary cannot elect a term certain annuity of 5, 10, 15 or 20 years. If a joint specification is not on file, the annuity is payable only to the surviving spouse.

### Non-Vested or Vested

- A member and their spouse may *jointly* make a specification to waive the spouse's benefits so that any person, trust or organization will receive a lump-sum death benefit equal to the accumulated deductions plus interest to the date of death.

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