## 2010

## Comprehensive Annual Financial Report



Teachers
Retirement Association

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, 2010

Retirement Systems of Minnesota Building
60 Empire Drive
Suite 400
Saint Paul, MN 55103-4000
651.296.2409
800.657.3669

TTY 800.627.3529
www.tra.state.mn.us

Laurie Fiori Hacking
Executive Director

## Content

Introduction
GFOA Certificate of Achievement Award ..... 1
Letter of Transmittal ..... 2
Board of Trustees and Administrative Staff ..... 7
Administrative Organization .....  8
Mission Statement and Our Values .....  .9
Financial Section
Auditor's Report ..... 12
Management Discussion and Analysis ..... 14
Basic Financial Statements
Statement of Plan Net Assets ..... 18
Statement of Changes in Plan Net Assets. ..... 19
Notes to the Financial Statements
(an integral part of the financial statements) ..... 20
Required Supplementary Information
Required Supplemental Schedule
Schedule of Funding Progress ..... 34
Required Supplemental Schedule
Schedule of Contributions from the Employer and Other Contributing Entities ..... 34
Supporting Schedules
Schedule of Investment Management Expenses ..... 36
Administrative Expenses ..... 38
Schedule of Professional Consultant Expenses ..... 39
Investments Section
State Board of Investment Letter ..... 42
Investment Summary ..... 44
Investment Performance ..... 47
Performance of Asset Pools - Combined Funds ..... 47
Portfolio Distribution ..... 48
List of Largest Assets Held ..... 49
Summary of Investments ..... 50
Actuarial Section
Actuary's Certification Letter ..... 52
Summary of Actuarial Assumptions and Methods ..... 55
Valuation Report Highlights ..... 59
Actuary's Commentary ..... 60
Selected Tables from Actuarial Valuation. ..... 64
Solvency Test ..... 73
Schedule of Active Member Valuation Data ..... 73
Schedule of Retirees and Beneficiaries Added To and Removed From Retirement Rolls. ..... 74
Statistical Section
Statistical Summary ..... 76
10-Year History of Plan Net Assets ..... 77
10-Year History of Contribution Rates ..... 77
10-Year History of Changes in Plan Net Assets ..... 78
10-Year History of Pension Assets vs. Pension Liabilities ..... 78
10-Year History of Benefit Recipients by Category ..... 80
Schedule of Benefit Amounts Paid ..... 81
10-Year History of Benefits and Refunds by Type ..... 82
Schedule of Benefit Recipients by Current Age ..... 84
Benefit Recipients by Effective Date of Retirement ..... 84
Schedule of New Retirees and Initial Benefit Paid ..... 85
Distribution of TRA Benefits, Mailing Address of Benefit Recipient ..... 86
Schedule of Benefit Recipients by Type ..... 89
Membership Data
(with Average Annual Salary) ..... 90
10-Year Summary of Membership ..... 91
Principal Participating Employers ..... 92
Number of Employer Units ..... 92
Plan Statement
Plan Statement ..... 94

# Certificate of Achievement for Excellence in Financial Reporting 

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## Retirement Association

For its Comprehensive Annual<br>Financial Report<br>for the Fiscal Year Ended

June 30, 2009
A Certificate of Achievement for Excellence in Financial Reporting is presented by the Government Finance Officers Association of the United States and Canada to government units and public employee retirement systems whose comprehensive annual financial reports (CAFRs) achieve the highest standards in government accounting and financial reporting.


Executive Director

Teachers Retirement Association

## Letter of Transmittal

January 3, 2011


Laurie Fiori Hacking Executive Director

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, 2010, our $79^{\text {th }}$ 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, 2010. 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

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.

As of June 30, 2010, TRA had 578 reporting units, 77,356 active members and a total of 51,853 retirees, survivors, beneficiaries, and disabilitants who were receiving monthly benefits. 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 Mercer Consulting of Minneapolis, Minnesota 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 Minnesota Accounting and Procurement 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 50 . 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 seventeenmember IAC and represent their members in advising the SBI on investment-related matters.

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

Minnesota's economy is in much better shape than it was this time last year. Wage and salary disbursements during the first nine months of 2010 are up an estimated 3.2 percent over the same period a year earlier and 54,600 private sector jobs have been created since the beginning of the year. The state has regained one-third of the 162,200 jobs lost at the lowest point of the recession. Minnesota's labor market appears to be firmly on a path toward recovery.

Despite improvements, Minnesota's economy has not reached a point where it is immune from a sluggish national economic outlook for slower growth than forecast last February. Without noticeable improvement in the national employment picture, it is unlikely the state will be able to sustain the current pace of job creation moving into 2011.

With wage inflation forecast to remain weak over the forecast horizon, the key for labor income going forward will be employment growth. In 2011, nominal wages are
forecast to grow 3.9 percent and increase by 4.4 and 4.7 percent respectively in 2012 and 2013. MMB continues to estimate that total wages paid in Minnesota will not return to pre-recession highs until mid-2011.

Minnesota's population continues to increase at a steady and moderate rate of about 0.73 percent per year. Aging of the population will affect many areas of economic growth, federal and state government revenues, and expenditures. Retirements will increase sharply over the next four years and beyond. The number of people turning 65 in the year 2011 will exceed the number in 2010 by about 30 percent. Between 2010 and 2020, Minnesota will add 250,000 people 65 years and older. At the same time, the number of high school graduates, which peaked with the class of 2008, will decline through the middle of the decade.

With more retirees and fewer young people to enter the workforce, labor force growth will slow throughout the decade. Total hours worked will slow even more, as a larger share of the workforce will become older, part-time workers. Slower growth in the overall labor force will put downward pressure on economic growth and government revenues and reduce the number of new jobs needed to cover natural growth in the labor force.

The demographic shifts occurring in Minnesota have a direct impact on Minnesota's economy and budget. Over the long-term, the aging of the population puts upward pressure on health care and long-term care costs. The correlation between Minnesota's demographics and the state's economy and budget cannot be understated.

## Investment Results

The U.S. stock market, as measured by the Russell 3000 index, returned 15.7 percent for the fiscal year ended June 30, 2010. The strong rally that began in the equity markets from the March 2009 low began to reverse in the final quarter of fiscal year 2010 (April through June 2010). Just as investors seemed to be embracing the budding economic recovery, macroeconomic fears returned to give investors pause. The potential for a sovereign debt crisis in Europe, fear of a continued economic slowdown in China, continued high unemployment in the U.S., the environmental disaster in the Gulf of Mexico and increasing regulation out of Washington, D.C., combined to weaken the confidence of investors as fiscal year 2010 drew to a close.

The Morgan Stanley Capital International (MSCI) World excluding the United States index, which represents 23 markets located in Europe, Australasia, Far East, and Canada, achieved a 7.0 percent return for the fiscal year ended June 30, 2010. Emerging markets (as measured by the MSCI Emerging Markets Free index) provided a return of 23.5 percent for the fiscal year. The Emerging Markets Free (EMF) index is compiled by MSCI and measures performance of 21 stock markets in Latin America, Asia, Africa, and Eastern Europe.

The U.S. fixed income market, as measured by the Barclays Capital Aggregate Index, returned 9.5 percent for the fiscal year ended June 30, 2010. The sovereign debt crisis in Europe, the BP Gulf of Mexico oil spill, and uncertainty around financial regulation also had a negative effect on bond markets.

Within this investment environment, TRA retirement assets under SBI investment management as part of the Combined Funds, produced an investment return of 15.2 percent for the fiscal year ended June 30, 2010. Over the latest ten-year period, the funds have experienced an annualized investment return of 2.9 percent. For the tenyear period, the Combined Funds exceeded the composite investment performance of 0.1 percent annualized.

## Legislation

During 2009, the TRA Board of Trustees devoted substantial time and attention to reviewing actuarial projections and evaluating the implications of the severe investment losses sustained during the 2008-2009 market downturn. In December 2009, the TRA Board recommended a financial stability and sustainability package to the 2010 legislature consisting of contribution rate increases and plan provision modifications to reduce future expenses. TRA's Publication Division informed members and employers of the proposed modifications. TRA management presented elements of the proposal to legislative committees and to key stakeholder groups representing members and employers with bipartisan support. The legislature enacted these reforms to the plan design for TRA members and employers. We encourage readers to review the key plan provision changes (page 60-63) passed by the Legislature and signed into law by Governor Tim Pawlenty on May 15, 2010.

Note $S$ on page 30 also includes important information on litigation filed against TRA in response to a portion of the law enacted, specifically to changes to annual benefit adjustments provided to benefit recipients.

## Actuarial Funding Status/Investment Report

From late 2007 through early March 2009, global investment markets experienced unprecedented adverse events. The events included an expanded global credit crisis and liquidity constraints. By the end of the downturn, TRA investments had sustained an investment loss of approximately 30 percent based on fair value. The results severely impaired TRA's funding condition as reported as of June 30, 2009. However, during the fiscal year ended June 30, 2010, TRA investments achieved a 15.2 percent return. The SBI invests TRA assets with a long-term horizon. Since the benefit payments set in law to TRA benefit recipients 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 longterm diversified investors can weather up and down cycles and thereby fully participate when the market rebounds and performance improves. This strategy, at least during fiscal year 2010, was sound as all segments of the investment market produced above-average performance.

Despite the strong investment markets during fiscal year 2010, the actuarial value of TRA assets declined as of June 30, 2010 due to the further recognition of investment losses sustained during the prior investment market declines. For actuarial purposes, the large investment losses from fiscal year 2009 are recognized by using a statutory five-year smoothing in recognizing investment gains and losses. On June 30, 2010, the actuarial value of TRA assets was $\$ 17.32$ billion, a decline from $\$ 17.88$ billion on June 30, 2009. TRA has approximately $\$ 2.40$ billion of deferred investment losses as of June 30, 2010 from the market downturn yet to recognize, spread over the next three actuarial valuations. Unless investment markets produce strong returns during fiscal years 2011 and 2012, further declines in the actuarial value of assets are expected until the deferred investment losses are fully recognized.

TRA's unfunded actuarial liability - the amount for which current assets are not available for statutory benefits earned to date - improved from a $\$ 5.23$ billion deficiency to a $\$ 4.76$ billion deficiency. The financial sustainability reforms enacted by the 2010 legislature are the primary reason for the improvement in the deficit, as the revised plan provisions lower the actuarial liability of future benefit payments. Under statute, the unfunded liability must be paid by June 30, 2037. The combined effect of the 2010 financial sustainability reforms and assumption changes decreased TRA's accrued liability by $\$ 1.75$ billion and decreased required contributions by 3.20 percent of payroll.

Another key measure to assess TRA funding health is the adequacy of employee and employer contributions. As of July 1, 2010, the TRA contribution rate deficiency was 4.00 percent of active member covered payroll. This deficiency does not reflect the 2010 legislative increases to employee and employer contribution rates, which are scheduled to rise by 4.0 percent by 2014. Beginning July 1, 2011, TRA employee and employer contribution rates, currently 5.50 percent each, are set to rise 0.50 percent each for four consecutive years. Beginning July 1, 2014, the employee and employer contribution rates will be 7.50 percent each. On a market value basis, which incorporates the $\$ 2.4$ billion in deferred investment losses, the July 1, 2010 contribution rate deficiency was 7.59 percent. After incorporating the scheduled rate increases and recognizing existing deferred investment losses, a contribution deficiency of 3.59 percent is still present. Should investment markets remain strong, investment earnings would help mitigate some of this deficiency. If investment markets do not perform in accordance with the earnings assumption of 8.5 percent annually, the Board may be required to recommend additional 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

The retirement planning of the "Baby Boom Generation" has been underway for many years. Members are able to generate retirement estimates on the secure TRA website, using their stored individual account data. Pre-retirement counselors saw nearly 6,000 members in one-on-one counseling sessions, group and ad hoc talks, and at benefit fairs in over 35 locations during fiscal year 2010.

TRA actively works on strategic initiatives that are continually reviewed and prioritized. Internal teams develop initial ideas into goals, strategies and schedules. The primary project underway is called the .NET initiative, which includes a comprehensive assessment of current processes and rewriting existing applications in a more powerful computer language and development tool.
Major projects for the current fiscal year include offering new technology-driven methods to deliver benefit counseling and information to TRA members and employers. TRA is also replacing an antiquated telephone system during 2011 as part of a project to enable more dynamic communication with members. The 2010 Legislature also required the three statewide retirement systems to perform a study of defined benefit, defined contribution and alternative plan design considerations by June 1, 2011.

## 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, 2009. This was the twelfth 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.

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 highlighting key elements of the report will be provided to all members in the TRIB, TRA's periodic newsletter. Copies will be provided upon request.

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

Respectfully submitted,


## Board of Trustees

As of December 30, 2010


Robert J. Gardner Elected Member Crystal, MN

Vice President


Mary L. Broderick Elected Member St. Cloud, MN


Bob Lowe
Minnesota School Boards Association Representative


Richard Gendreau Elected Member Bemidji, MN


Leslie Hinz
Representing Alice Seagren,
Commissioner of Education


Mary B. Supple Elected Member Richfield, MN


Steve Sviggum
Commissioner of Minnesota Management and Budget

## Administrative Staff



Laurie Fiori Hacking Executive Director


John Wicklund
Assistant Executive Director of Administration


Karen Williamson Assistant Executive Director of Operations


Luther Thompson Assistant Executive Director of Legal and Legislative Services

## Administrative Organization

As of December 2010


## Consulting Services

## Actuary

Mercer Consulting
Minneapolis, Minnesota

## 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
Minneapolis, Minnesota

## Our Mission Statement

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.

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Members of the Board of Trustees<br>Teachers Retirement Association of Minnesota<br>Ms. Laurie Fiori Hacking, Executive Director<br>Teachers Retirement Association of Minnesota

Independent Auditor's Report

We have audited the accompanying basic financial statements of the Teachers Retirement Association of Minnesota as of and for the year ended June 30, 2010, as listed in the Table of Contents. These financial statements are the responsibility of the Teachers Retirement Association's management. 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 includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our 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, 2010, and the changes in financial position for the year then ended in conformity with accounting principles generally accepted in the United States of America.

As disclosed in Note I to the basic financial statements, for the year ended June 30, 2010, the Teachers Retirement Association adopted Governmental Accounting Standards Board Statement No. 53, Accounting and Financial Reporting for Derivative Instruments.

In accordance with Government Auditing Standards, we have also issued our report on our consideration of the Teachers Retirement Association's internal control over financial reporting; on our tests of its compliance with certain provisions of laws, regulations, and contracts; and on 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.

Room 140 Centennial Building, 658 Cedar Street, St. Paul, Minnesota 55155-1603 • Tel: 651-296-4708 • Fax: 651-296-4712 E-mail: auditor@state.mn.us - Web Site: www.auditor.leg.state.mn.us • Through Minnesota Relay: 1-s00-627-3529 or 7-1-1

## Members of the Board of Trustees

Ms. Laurie Fiori Hacking, Executive Director
Page 2

Management's Discussion and Analysis and the other required supplementary information, as listed in the Table of Contents, are not a required part of the Teachers Retirement Association's basic financial statements, but are supplementary information required by accounting principles generally accepted in the United States of America. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the required supplementary information. However, we did not audit the information and express no opinion on it.

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Teachers Retirement Association's basic financial statements. 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 in the Financial section have been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, are fairly stated in all material respects in relation to the basic financial statements taken 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 express no opinion on them.


James R. Nobles
Legislative Auditor


Cecile M. Ferkul, CPA
Deputy Legislative Auditor

December 20, 2010

## Management Discussion and Analysis

June 30, 2010

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, 2010. We encourage you to consider the information presented here in conjunction with the transmittal letter beginning on page 2 and the additional information presented in the financial statements and required supplementary information.

## Financial Highlights

- The Net Assets Held in Trust for Pension Benefits increased in value by about $\$ 1.11$ billion during fiscal year 2010 for a total of about $\$ 14.94$ billion. Plan contributions and investment income totaled about $\$ 2.55$ billion during the fiscal year. Plan benefits and other expenses totaled about $\$ 1.44$ billion during the fiscal year.
- Investment returns for the 2010 fiscal year were 15.2 percent, resulting in investment income of about $\$ 2.09$ billion.
- Contributions paid by members and employers during fiscal year 2010 totaled about $\$ 457.0$ million. The fiscal year 2009 total was $\$ 452.8$ million.
- Pension benefits paid to retirees and beneficiaries during fiscal year 2010 was $\$ 1.42$ billion. The fiscal year 2009 total was $\$ 1.38$ billion, representing an increase of about $\$ 39$ million during the year.
- Refunds of member contributions plus interest during fiscal year 2010 were $\$ 11.61$ million. The fiscal year 2009 total was $\$ 14.43$ million.
- Administrative expenses of the fund during fiscal year 2010 were $\$ 9.59$ million. The fiscal year 2009 total was $\$ 10.61$ million, representing a decrease of $\$ 1.02$ 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, 2010 the accrued liability funding ratio for TRA was 78.45 percent, an increase from the comparable funding ratio of 77.36 percent as of June 30, 2009. TRA's unfunded actuarial accrued liability on June 30, 2009 was $\$ 5.23$ billion. The June 30, 2010 unfunded actuarial liability decreased to $\$ 4.76$ billion, a decrease of $\$ 0.47$ billion from the previous year. Three primary forces helped increase the funding ratio and decrease the unfunded liability: 1) the increase in the fair market value of investments during fiscal year 2010; 2) plan provision changes enacted by the 2010 Legislature, and 3) actuarial assumption changes approved by the legislature. TRA's unfunded liability, by state law, must be fully paid by June 30, 2037. Key actuarial funding ratios can be seen on page 59 .

## 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 Plan Net Assets and the Statement of Changes in Plan Net Assets;
- the notes to the basic financial statements; and
- required and other supplementary information.

The Statement of Plan Net Assets (page 18) presents information on the assets and liabilities of TRA, with the difference between the two reported as net assets. The net assets of the Association reflect the resources available to pay benefits to members when due. Over time, increases and decreases in net assets 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 Plan Net Assets (page 19) presents information detailing the changes in net assets 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 20-34) 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 34) 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 34) presents historical trend information about the annual required contributions of employers and the actual contributions made by employers.

Other supporting schedules are also presented. The Schedule of Investment Management Expenses (page 3637) provides information of professional investment money management expenses. These expenses are shown as a reduction of investment income on the Statement of Changes in Plan Net Assets. 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, 2010, were $\$ 16.31$ billion and were mostly comprised of cash, investments and contributions due from employers. Total plan assets increased $\$ 175.97$ million (1.1 percent) from
the June 30, 2009, total of $\$ 16.13$ billion. The primary reason for the increase was the positive investment performance during fiscal year 2010.

## Plan Liabilities

Total liabilities as of June 30, 2010, were $\$ 1.37$ billion, a decrease of 40.5 percent from the June 30, 2009, liability amount of $\$ 2.30$ billion. The primary reason for the decrease was a lower 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 Assets

Association assets exceeded liabilities on June 30, 2010, by $\$ 14.94$ billion. The amount is higher than the June 30, 2009, amount of $\$ 13.83$ billion by $\$ 1.11$ billion. The increase in the fair value of investments is primarily attributable to the favorable market conditions experienced during fiscal year 2010, as evidenced by the overall fund investment return of approximately 15.2 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 assets.

## Revenues - Additions to Plan Net Assets

Total additions to the TRA Fund during fiscal year 2010 were $\$ 2.55$ billion, a $\$ 5.41$ billion increase from the negative $\$ 2.86$ billion in fiscal year 2009. The sharp contrast is due to the investment return of 15.2 percent and resulting increase in the fair market value of investments in 2010, as compared to the severe investment losses experienced in fiscal year 2009.

Total retirement contributions for fiscal year 2010 increased about $\$ 4.2$ million from the previous fiscal year for a combined fiscal year 2010 total of about $\$ 457.0$ million. Retirement contributions during fiscal year 2010 were calculated at 5.5 percent employee and 5.5 percent employer for Coordinated members of TRA.

| Plan Net Assets <br> Dollar Amounts in Thousands | 2010 |  | 2009 |  | Change |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Cash and Investments | \$ 16,280,919 |  | \$ | 16,106,583 | \$ | 174,336 |
| Receivables | 13,960 |  | 13,039 |  | 921 |  |
| Other | 10,343 |  | 9,635 |  |  | 708 |
| Total Assets | 16,305,222 |  | 16,129,257 |  | 175,965 |  |
| Total Liabilities | 1,365,682 |  | 2,295,431 |  | $(929,749)$ |  |
| Plan Net Assets | \$ | 14,939,540 | \$ | 13,833,826 | \$ | 1,105,714 |
| Changes in Plan Net Assets |  |  |  |  |  |  |
| Dollar Amounts in Thousands |  |  |  |  |  |  |
|  | 2010 |  | 2009 |  | Change |  |
| Additions |  |  |  |  |  |  |
| Member Contributions | \$ | 214,909 | \$ | 212,043 | \$ | 2,866 |
| Employer Contributions |  | 242,088 |  | 240,718 |  | 1,370 |
| Net Investment Income/(Loss) |  | 2,087,640 |  | $(3,318,368)$ |  | 5,406,008 |
| Other |  | 4,850 |  | 6,526 |  | $(1,676)$ |
| Total Additions | \$ | 2,549,487 | \$ | $(2,859,081)$ |  | \$ 5,408,568 |
| Deductions |  |  |  |  |  |  |
| Monthly Benefits | \$ | 1,422,578 | \$ | 1,383,668 | \$ | 38,910 |
| Refunds of Contributions |  | 11,607 |  | 14,429 |  | \$ $(2,822)$ |
| Administrative Expenses |  | 9,588 |  | 10,608 |  | $(1,020)$ |
| Other |  | 0 |  | 5,354 |  | $(5,354)$ |
| Total Deductions | \$ | 1,443,773 | \$ | 1,414,059 | \$ | 29,714 |
| Change in Plan Net Assets | \$ | 1,105,714 | \$ | $(4,273,140)$ | \$ | 5,378,854 |

Net Investment Income of $\$ 2.09$ billion was recorded for fiscal year 2010. This amount increased by $\$ 5.41$ billion from fiscal year 2009 when net investment loss of negative $\$ 3.32$ billion occurred. The increase is attributable to higher investment returns for fiscal year 2010. Investment returns were 15.2 percent for fiscal year 2010. During fiscal year 2009, the comparable investment returns were negative 18.8 percent.

## Expenses - Deductions From Plan Net Assets

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 benefits expenses increased by about $\$ 38.9$ million due to new retirements and a cost-of-living adjustment of 2.50 percent on January 1, 2010 for most TRA benefit recipients. Member refunds of $\$ 11.6$ million decreased by about $\$ 2.8$ million during fiscal
year 2010 from the fiscal year 2009 total of $\$ 14.4$ million. Administrative expenses decreased by 9.6 percent during the fiscal year - from $\$ 10.6$ million in fiscal year 2009 to about $\$ 9.6$ million for fiscal year 2010. The decrease in administrative expenses is mostly due to software development costs incurred and capitalized in fiscal year 2010, as described in Footnote K. Overall, fund expenses increased nearly \$29.7 million during fiscal year 2010.

## 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 34) and the Schedule of Contributions from the Employer and Other Contributing Entities (page 34) to determine if TRA is becoming stronger or weaker over time.

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 , 2010, the accrued liability funding ratio for TRA was 78.45 percent, an increase from the comparable funding ratio of 77.36 percent as of June 30, 2009. The funding increase is the result of positive investment returns during fiscal year 2010, plan provision changes to TRA's benefit structure and actuarial assumption changes approved by the legislature. The latter two factors have lowered the actuarial cost of TRA's benefit structure.

TRA's unfunded actuarial liability on June 30, 2009 was $\$ 5.23$ billion. The June 30, 2010 unfunded actuarial liability decreased to $\$ 4.76$ billion, representing an improvement of $\$ 0.47$ billion. By law, the unfunded liability must be recovered in full by June 30, 2037.

TRA's statutory contribution rate of 11.71 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 15.71 percent. The resulting contribution deficiency is 4.00 percent of employee covered payroll. Recognition of deferred investment losses (pages 31 and 68) over the next three years will strain TRA's ability to improve its contribution rate deficiency during this time. Employee and employer contribution rates are reviewed and set into law by the Minnesota legislature.

The 2010 legislature also enacted into law several plan provision changes and actuarial assumptions (pages 60-63). The changes included employee and employer contribution rate increases, no annual benefit adjustments for benefit recipients in 2011 and 2012, a lower annual benefit adjustment for recipients ( 2.0 percent) beginning January 1, 2013, a lower interest rate for members requesting a refund of their contributions, and reductions in deferred benefit augmentation rates for vested inactive members. The TRA actuarial consultant estimates that the plan provision changes and actuarial assumption changes enacted by the Legislature lowered TRA's actuarial accrued liability by $\$ 1.75$ billion and decreased the required contribution by 3.20 percent of active member payroll.

## 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 improved from 77.36 percent to 78.45 percent for fiscal year 2010 due to investment performance above actuarial expectations and lowered plan expenses enacted into law by the 2010 legislature.

The current contribution rate deficiency is expected to continue unless investment market conditions substantially exceed the expected rate of return of 8.50 percent annually. The TRA Board of Trustees and management will continue to monitor actuarial and investment results with the goal of supporting TRA's long-term financial sustainability.

The benefit recipient adjustment portion of the 2010 legislative plan provision changes has been legally challenged as unconstitutional. Please refer to Note S on page 30 for further information.

## 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 any questions about this report, or require additional financial or actuarial information, please contact the Teachers Retirement Association, 60 Empire Drive, Suite 400, Saint Paul, Minnesota 55103 or by telephone toll-free, 800-657-3669.

## Teachers Retirement Fund

## Statement of Plan Net Assets



The accompanying notes are an integral part of this statement.

## Teachers Retirement Fund Statement of Changes in Plan Net Assets

## For the Fiscal Year Ended June 30, 2010

Additions
Contributions
Employee ..... \$ 214,908,960
Employer ..... 220,538,486
Direct Aid (State/City/School) ..... 21,549,499
Earnings Limitation Savings Account (ELSA) ..... 1,256,969
Total Contributions \$ 458,253,914
Investment Income
Net Appreciation in Fair Value of Investments ..... \$ 2,100,982,870
Less Investment Expenses ..... $(21,716,083)$
Net Investment Income ..... \$ 2,079,266,787
From Securities Lending Activities
Securities Lending Income ..... \$ 12,064,738
Securities Lending Expenses
Borrower Rebates ..... $(2,214,033)$
Management Fees ..... $(1,477,651)$
Total Securities Lending Expenses ..... $(3,691,684)$
Net Income from Securities Lending ..... 8,373,054
Total Net Investment Income ..... \$ 2,087,639,841
Other Income ..... \$ 3,593,237
Total Additions ..... \$ 2,549,486,992
Deductions
Retirement Benefits Paid ..... \$ 1,421,381,713
Earnings Limitation Savings Account (ELSA) ..... 1,196,622
Refunds of Contributions to Members ..... 11,607,086
Administrative Expenses ..... 9,587,524
Total Deductions ..... \$ 1,443,772,945
Net Increase (decrease) ..... \$ 1,105,714,047
Net Assets Held in Trust for Pension Benefits
Beginning of Year ..... \$ 13,833,825,733
End of Year ..... \$ 14,939,539,780The accompanying notes are an integral part of this statement.

## I. Summary of Significant Accounting Policies

## A. Organization

The Teachers Retirement Association (TRA) is an administrator of a multi-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 90 days of first 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

| Employer Units June 30, 2010 |  |
| :---: | :---: |
| Independent school districts | 342 |
| Joint powers units | 37 |
| Colleges and universities | 39 |
| State agencies | 4 |
| Charter schools | 154 |
| Professional organizations | 2 |
| Total Employer Units | 578 |
| Membership <br> June 30, 2010 |  |
| Retirees, disabilitants and beneficiaries receiving benefits | 51,853 |
| Terminated employees with deferred vested benefits | $\underline{12,756}$ |
| Total | 64,609 |
| Current employees |  |
| Vested | 62,122 |
| Non-vested | 15,234 |
| Total | $\underline{\underline{77,356}}$ |

## 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. Coordinated members are covered by Social Security, while Basic members are not.

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 |  |  | Coordinated | All years after | 1st ten years if service percent |  |
| :--- | :--- | :--- |
|  | years are prior to year <br> July 1, 2006 | 1.2 percent |
|  | per year |  |
|  | 1st ten years if service <br> years are July 1, 2006 <br> or after | 1.4 percent |
|  | All year |  |
|  | service if years of service years <br> are prior to July 1, 2006 | 1.7 percent year |
|  | All other years of <br> service if service years <br> are July 1, 2006 or after | 1.9 percent year |
|  | per yer |  |

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 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. Approximately 80 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.

## 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, 2010, the TRA Fund's share of the Combined Funds administered by SBI at fair value was approximately 36.8 percent ( $\$ 14.93$ billion TRA and $\$ 40.60$ 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. Figure 2 provides a summary of the cost and fair values of the investments as of June 30, 2010, as reported on the Statement of Plan Net Assets. Short-term investments are reported at cost, which approximates fair value. 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.

The TRA Minneapolis Equity 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 postmerger investment settlement with the former MTRFA money managers, proceeds will be transferred to other pooled investments in accordance with SBI policies.

Figure 2

| TRA Investment Portfolio June 30, 2010 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| TRA Fund |  | Cost |  | Fair Value |
| Pooled Accounts |  |  |  |  |
| Domestic Equity | \$ | 3,291,879,621 | \$ | 3,914,537,213 |
| Fixed Income |  | 3,298,952,956 |  | 3,670,822,117 |
| Indexed Equity |  | 2,356,342,899 |  | 2,383,657,966 |
| Alternative Investments |  | 2,237,558,006 |  | 2,327,655,009 |
| Global Equity |  | 2,070,104,545 |  | 2,301,525,855 |
| TRA Minneapolis Equity |  | 144,956 |  | 153,241 |
| Total |  | 13,254,982,983 |  | 14,598,351,401 |
| Short-Term |  |  |  |  |
| Pooled Cash |  | 334,911,845 |  | 334,911,845 |
| Total Invested |  | 13,589,894,828 |  | 14,933,263,246 |

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 Net Plan Assets. The summarized amounts show net investment income of $\$ 2,079,266,787$ for fiscal year 2010. 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 50). TRA's share of these expenses totaled \$21,716,083
(pages 36-37).
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, 2010, such investment pool had an average duration of 8 days and an average weighted maturity of 43 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, 2010, SBI had no credit risk exposure to borrowers. TRA's portion of the cash collateral held and the fair value of securities on loan from SBI as of June 30, 2010, were $\$ 1,343,468,257$ and $\$ 1,299,466,442$, respectively. Cash collateral is reported on the Statement of Plan Net Assets as an asset. Liabilities resulting from these securities lending transactions are also reported on the Statement of Plan Net Assets.

## 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 S \& P Quality Ratings, is shown in Figure 3.

Figure 3

| Credit Risk Exposure |  |
| :--- | :---: |
| Quality Rating | Fair Value <br> (in thousands) |
| BBB or Better | $\$ 4,021,792$ |
| BB or Lower | 263,069 |
| Not Rated | 183,352 |

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

| Interest Rate Risk <br> Weighted Average <br> Maturity (in Years) |  |
| :--- | :---: |
| Security | 0.26 |
| External Cash Equivalent Pools | 3.95 |
| U.S. Agencies | 5.89 |
| Corporate Debt | 9.17 |
| Asset-Backed Securities | 10.39 |
| U.S. Treasuries | 16.44 |
| Municipal Bonds | 24.91 |
| Mortgage-Backed Securities |  |

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, 2010, was distributed among the currencies as shown in Figure 5.

## I. Derivative Financial Instruments

## Governmental Accounting Standards Board (GASB) Statement 53 Disclosures

For fiscal year 2010, TRA implemented GASB Statement 53, Accounting and Financial Reporting for Derivative Instruments. 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 provision 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 Minnesota State Board of Investment's (SBI) derivative activity is to equitize cash in the portfolio, to adjust the duration of the portfolio, or to offset current futures positions.

Figure 5

| Assessment of Currency Risk <br> International Investment Securities at Fair Value |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Currency |  | Cash |  | Debt |  | Equity |  | Total |
| Australian Dollar | \$ | 616,012 |  |  | \$ | 115,013,681 | \$ | 115,629,693 |
| Brazilian Real |  | 71,589 |  |  |  | 34,510,883 |  | 34,582,472 |
| Canadian Dollar |  | 666,986 | \$ | 817,334 |  | 162,207,308 |  | 163,691,628 |
| Chilean Peso |  | 18,637 |  |  |  | 2,609,017 |  | 2,627,654 |
| Czech Koruna |  |  |  |  |  | 4,204,812 |  | 4,204,812 |
| Danish Krone |  | 62,205 |  |  |  | 21,203,570 |  | 21,265,775 |
| Egyptian Pound |  | 19,529 |  |  |  | 5,466,098 |  | 5,485,627 |
| Euro |  | 1,981,775 |  |  |  | 467,101,040 |  | 469,082,815 |
| Hong Kong Dollar |  | 688,935 |  |  |  | 140,025,017 |  | 140,713,952 |
| Hungarian Forint |  | 121 |  |  |  | 4,007,353 |  | 4,007,474 |
| Indian Rupee |  | 221,571 |  |  |  | 57,035,703 |  | 57,257,274 |
| Indonesian Rupiah |  | 14,673 |  |  |  | 21,174,463 |  | 21,189,136 |
| Israeli Shekel |  | 173,639 |  |  |  | 7,283,983 |  | 7,457,622 |
| Japanese Yen |  | 3,168,760 |  |  |  | 375,853,758 |  | 379,022,518 |
| Malaysian Ringgit |  |  |  |  |  | 11,919,322 |  | 11,919,322 |
| Mexican Peso |  | 26,352 |  |  |  | 10,174,184 |  | 10,200,536 |
| Moroccan Dirham |  | 12,014 |  |  |  |  |  | 12,014 |
| New Romanian Leu |  | 51 |  |  |  |  |  | 51 |
| New Taiwan Dollar |  | 713,262 |  |  |  | 36,177,823 |  | 36,891,085 |
| New Turkish Lira |  | 15,924 |  |  |  |  |  | 15,924 |
| New Zealand Dollar |  | 49,073 |  |  |  | 1,090,588 |  | 1,139,661 |
| Norwegian Krone |  | 160,056 |  |  |  | 9,447,918 |  | 9,607,974 |
| Pakistani Rupee |  | 2,412 |  |  |  |  |  | 2,412 |
| Philippine Peso |  |  |  |  |  | 6,307,718 |  | 6,307,718 |
| Polish Zloty |  | 27,804 |  |  |  | 9,456,141 |  | 9,483,945 |
| Pound Sterling (British) |  | 2,322,419 |  | 6,686,098 |  | 326,229,356 |  | 335,237,873 |
| Singapore Dollar |  | 248,694 |  |  |  | 30,066,632 |  | 30,315,326 |
| South African Rand |  | 45,318 |  |  |  | 26,594,137 |  | 26,639,455 |
| South Korean Won |  | 68,526 |  |  |  | 61,807,422 |  | 61,875,948 |
| Swedish Krona |  | 294,954 |  |  |  | 38,182,732 |  | 38,477,686 |
| Swiss Franc |  | 190,231 |  |  |  | 125,522,458 |  | 125,712,689 |
| Thai Baht |  | 3,351 |  |  |  | 11,663,188 |  | 11,666,539 |
| Turkish Lira |  |  |  |  |  | 12,754,391 |  | 12,754,391 |
| Total | \$ | 11,884,873 | \$ | 7,503,432 | \$ | 2,135,090,696 | \$ | 2,154,479,001 |

Explanations of each derivative instrument type are presented on pages $25-26$. The fair value balances and notional amounts (or face value) on June 30, 2010, 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 2010 are shown in Figure 6.

- Futures - Futures are contract commitments to purchase (asset) or sell (liability) at a certain future date for a specific price. 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 - 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 occurs prior to or on the contract specified date. The gains and losses are included in investment income.

Figure 6

| Schedule of Derivative Financial Instruments |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Derivative Investment Type | Changes in Fair Value During FY 2010 |  | Fair Value at June 30, 2010 |  | Notional Amount |  |
| Futures |  |  |  |  |  |  |
| Equity Futures - Long | \$ | 7,084,442 | \$ | 0 | \$ | 64,639 |
| Equity Futures - Short | \$ | $(840,034)$ | \$ | 0 | \$ | $(122,096)$ |
| Fixed Income Futures - Long | \$ | 5,927,670 | \$ | 0 | \$ | 54,222,927 |
| Fixed Income Futures - Short | \$ | $(6,993,029)$ | \$ | 0 | \$ | $(66,927,202)$ |
| Options |  |  |  |  |  |  |
| Equity Options - Puts | \$ | 1,376,575 | \$ | $(876,712)$ | \$ | $(1,563,437)$ |
| Equity Options - Calls | \$ | $(1,847)$ | \$ | 151,286 | \$ | 59,106 |
| To-Be-Announced (TBA) Mortgage-Backed Securities |  |  |  |  |  |  |
| TBA - Long | \$ | 20,037,183 | \$ | 2,682,186 | \$ | 334,167,485 |
| TBA - Short | \$ | 198,958 | \$ | $(39,584)$ | \$ | $(7,316,221)$ |
| Currency Forwards |  |  |  |  |  |  |
| Currency Hedge | \$ | 1,669,527 | \$ | 230,930 | \$ | 0 |
| Stock Warrants and Options |  |  |  |  |  |  |
| Stock Warrants | \$ | 251,347 | \$ | 685,881 | \$ | 503,706 |
| Stock Options | \$ | 603,519 | \$ | 123,706 | \$ | 438,001 |

- To-Be-Announced (TBA) MortgageBacked Securities - These instruments are open trades for a TBA package of mortgagebacked securities.
- Currency Forwards - Currency forwards are contracts entered into in order to hedge against future fluctuations in foreign currency exchange rates on the foreign investments held in foreign currencies. Forward foreign currency contracts commit the buyer or seller to purchase or sell a specific foreign currency on a future date at a specified price. Gains or losses can result from the market rate variance from the contract rate. The gains and losses are included in investment income.
- Stock Warrants and Rights - Stock warrants, 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 warrants are 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.


## Credit Risk

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. All counterparties hold a credit rating of AA- or better, based on Standard \& Poor's Quality Ratings. TRA’s proportionate share of the maximum loss that SBI would have recognized as of June 30, 2010, if all counterparties failed to perform as contracted, is presented in Figure 7. 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.

Figure 7

| Derivative Credit Risk Exposure |  |  |
| :--- | ---: | ---: |
| Quality Rating | Forwards |  |
| AA- | $\$$ | 9,657 |
| A+ | $\$$ | 818,597 |
| Total | $\$$ | 828,254 |

## Interest Rate Risk

SBI controls interest rate risk through a comprehensive set of guidelines developed for each portfolio. Derivative instruments may be used by the managers to manage the interest rate risk within the guidelines set for their portfolio.

## Foreign Currency Risk

SBI controls the exposure associated with currency forwards through a comprehensive set of guidelines developed for each portfolio. Currency forwards may be used to adjust effective non-US currency exposure of the portfolio. The total non-US currency exposure of all securities and currency forwards may not exceed the total market value of the portfolio.

## 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, 2010 is $\$ 769,026$. Of this, $\$ 61,835$ is considered a short-term liability and $\$ 707,191$ is shown as a long-term liability on the Statement of Plan Net Assets. The total increased by \$70,125 during fiscal year 2010.

## K. Capital Assets

Capital assets are capitalized at the time of acquisition at cost. For fiscal year 2010, TRA implemented GASB Statement 51, Accounting and Financial Reporting for Intangible Assets. 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 2010, software development costs of \$997,411 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, 2010, Statement of Plan Net Assets. The year-end balance plus changes during the year are shown in Figure 8.
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 72, 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

## Figure 8

| Schedule of Capital Assets |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Description | $\begin{gathered} \text { Balance } \\ \text { 07/01/2009 } \end{gathered}$ | Additions |  | Deletions |  | $\begin{gathered} \text { Balance } \\ \text { 6/30/2010 } \end{gathered}$ |  |
| Furniture and Equipment | \$ 2,155,969 | \$ | 218,013 | \$ | $(11,572)$ | \$ | 2,362,410 |
| Internally Developed Software | \$ 0 | \$ | 997,411 | \$ | 0 | \$ | 997,411 |
| Reserve for Depreciation | \$ (1,820,528) | \$ | $(227,259)$ |  | 11,572 |  | $(2,036,215)$ |
| Net Capital Assets | \$ 335,441 | \$ | 988,165 | \$ | 0 |  | 1,323,606 |

collateral. Throughout fiscal year 2010, 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, 2010. 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, 2010 is presented in Figure 9.

## Figure 9

| Schedule of Accounts Receivable <br> June 30, 2010 |  |
| :--- | ---: |
| Description | Amount |
| Member Contributions | $\$ 5,675,466$ |
| Employer Contributions | $5,675,372$ |
| Direct Aid (State/City/School) | $2,230,215$ |
| Management Fees | 229,907 |
| Interest on Investments | 145,631 |
| Bond Interest | 3,670 |
| Total Receivables | $\underline{\mathbf{1 3}, 960,261}$ |

## O. Earnings Limitation Savings

 Account (ELSA)Teachers under age 65 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 accrues on ELSA accounts up through December 31, 2010. Effective January 1, 2011, ELSA accounts will 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, 2010, TRA had 1,229 retirees with an ELSA account established. The total dollar value of ELSA accounts totaled $\$ 22.32$ million. The total dollar amount of pension benefits withheld due to excess earnings during fiscal year 2010 was $\$ 1.26$ million. ELSA assets are invested in the TRA Fund until distribution. Distributions of ELSA accounts for 166 retirees occurred during fiscal year 2010 and totaled $\$ 2.44$ million and are included as a deduction in the Statement of Changes in Plan Net Assets as a component of Refund of Contributions to Members.

## P. Participating Pension Plan

All 85 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 2010, Coordinated members were required to contribute 5.5 percent of their annual covered salary. Employers contributed 5.5 percent of their annual covered salary for Coordinated members. The total covered payroll salaries for all TRA employees during fiscal year 2010 was approximately $\$ 4.7$ million. The total covered payroll salaries for the entire membership of TRA for fiscal year 2010 was approximately $\$ 3.79$ billion.

Employer pension contributions for TRA employees for the years ending June 30, 2010, 2009 and 2008 were \$263,169, \$267,444 and $\$ 270,920$, respectively, equal to the required contributions for each year as set by state statute.

## 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. These bonds are backed by the assets of the three retirement systems. At fiscal year end, TRA's share of the bonds payable is $\$ 9,175,950$. The bond payable decreased by $\$ 236,250$ during the fiscal year. Interest expected to be paid over the remaining term of the bonds is $\$ 6,711,188$. In Figure 10, TRA's share of the long-term bond repayment schedule including interest is summarized.

TRA's share of bond issuance costs are shown on the Statement of Plan Net Assets as Deferred Bond Charges and will be amortized over the 30 -year life of the bonds.

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.

| Schedule of Building Debt Service Payments <br> (TRA Share @ 37.8\%) <br> June 30, 2010 |  |  |  |
| :---: | :---: | :---: | :---: |
| Fiscal |  |  |  |
| Year | Principal | Interest | Total <br> Principal <br> and <br> Interest |
| 2011 | 255,150 | 533,958 | 789,108 |
| 2012 | 264,600 | 520,180 | 784,780 |
| 2013 | 283,500 | 505,759 | 789,259 |
| 2014 | 292,950 | 490,167 | 783,117 |
| 2015 | 311,850 | 473,908 | 785,758 |
| 2016 | 330,750 | 456,444 | 787,194 |
| 2017 | 349,650 | 437,757 | 787,407 |
| 2018 | 368,550 | 417,827 | 786,377 |
| 2019 | 396,900 | 396,635 | 793,535 |
| 2020 | 415,800 | 373,814 | 789,614 |
| 2021 | 444,150 | 349,697 | 793,847 |
| 2022 | 472,500 | 323,603 | 796,103 |
| 2023 | 500,850 | 295,844 | 796,694 |
| 2024 | 529,200 | 266,419 | 795,619 |
| 2025 | 567,000 | 235,329 | 802,329 |
| 2026 | 595,350 | 202,017 | 797,367 |
| 2027 | 633,150 | 167,041 | 800,191 |
| 2028 | 680,400 | 129,843 | 810,243 |
| 2029 | 718,200 | 89,019 | 807,219 |
| 2030 | 765,450 | 45,927 | 811,377 |
|  | $\underline{\$ 9,175,950}$ | $\underline{\$ 6,711,188}$ | $\underline{\$ 15,887,138}$ |
|  |  |  |  |

## 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, 2010, the SEGIP had an unfunded net obligation of $\$ 112,447,000$ to be funded on a pay-as-you-go basis. TRA's allocated portion of this liability is $\$ 43,000$.

| Schedule of Office Building and Equipment Depreciation (TRA Share @ 37.8\%) June 30, 2010 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Description | $\begin{gathered} \text { Balance } \\ \text { 07/01/2009 } \end{gathered}$ |  | Additions |  | Deletions |  | $\begin{aligned} & \text { Balance } \\ & \text { 6/30/2010 } \end{aligned}$ |  |
| Land | \$ | 171,166 | \$ | 0 | \$ | 0 |  | 171,166 |
| Building |  | 11,168,913 |  | 0 | \$ | 0 | \$ | 168,913 |
| Reserve for Building Depreciation |  | $(2,232,602)$ |  | (29,216) |  | 0 |  | ,511,818) |
| Net Building |  | 8,936,311 |  | 79,216) | \$ | 0 | \$ | 657,095 |
| Building Equipment | \$ | 97,352 | \$ | 12,824 | \$ | 0 | \$ | 110,176 |
| Reserve for Building Equipment Depreciation |  | $(10,846)$ |  | $(9,708)$ |  | 0 |  | $(20,554)$ |
| Net Building Equipment |  | 86,506 |  | 3,116 | \$ | 0 | \$ | 89,622 |
| Deferred Bond Charge |  | 145,857 | \$ | 0 | \$ | 0 | \$ | 145,857 |
| Reserve for Amortization |  | $(40,236)$ |  | $(5,030)$ |  | 0 |  | $(45,266)$ |
| Net Deferred Bond Charge |  | 105,621 |  | $(5,030)$ | \$ | 0 | \$ | 100,591 |

S. Litigation: Swanson, et al. v. State of Minnesota, et. al. (Ramsey County District Court File No. 62-CV-10-5285)

On May 17, 2010, plaintiffs filed a class action lawsuit challenging the 2009 and 2010 legislative amendments to the formula for post-retirement annual cost-of-living adjustments (COLAs). Plaintiffs assert that the changes to the COLAs are unconstitutional and that they are entitled to continue to receive the COLA in place on the date of their retirement. TRA is a named defendant, as are Board President, Martha Lee Zins, and Executive Director, Laurie Fiori Hacking, in their official capacities. TRA moved for summary judgment on September 15, 2010. The judge delayed ruling on the motion and granted plaintiffs' request for additional time to conduct discovery. The judge will hear both parties’ motions for summary judgment in March 2011.

In management's opinion, the lawsuit will not have a material impact on the financial statements presented for the fiscal year ended June 30, 2010. However, should the State and TRA not prevail in this lawsuit, the resulting effects of higher actuarial accrued liabilities and a lower funding ratio would be material to TRA pension fund financial and actuarial reporting in future years.

## II. Contributions Required and Made

Minnesota Statutes, Chapter 354 sets the rates (page 72, 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 \$456,996,945 (\$214,908,960 employee and $\$ 242,087,985$ employer and employer direct aid) were received in accordance with the statutory contribution rates and amounts. On page 72, Line C, statutory contributions are projected as insufficient to meet the actuarially determined required contributions. The deficiency is 4.00 percent of covered payroll. This translates into a contribution deficiency of about $\$ 161.9$ million projected for fiscal year 2011. 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, 2010, the most recent actuarial valuation date is as follows:
(Dollars in thousands)
Actuarial Accrued
Liabilities (AAL) \$ 22,081,634
Actuarial Value of Assets \$ 17,323,146
Unfunded Actuarial
Accrued Liability (UAAL) \$ 4,758,488
Ratio of Assets to AAL 78.45\%
Active Member Payroll \$ 3,787,757
UAAL as a Percentage of Active Member Payroll 125.63\%

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 34)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 fixed 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 six 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 four years due to the recognition of deferred investment losses sustained during the deep market declines from mid-2007 through March 2009. As of June 30, 2010, TRA had approximately $\$ 2.4$ billion (page 68, Line 6e) in deferred investment losses produced by the five-year smoothing of investment gains and losses. Unless very strong investment returns are achieved in fiscal year 2011 and 2012, recognition of the deferred investment losses is likely to continue to produce a decline in the actuarial value of TRA assets. TRA actuarial accrued liabilities declined for the July 1, 2010 actuarial valuation due to plan provision changes and revised actuarial assumptions enacted by the 2010 Minnesota Legislature. In summary, TRA’s actuarial funding ratio improved for fiscal year 2010, as the reduction in liabilities due to the plan provision changes offset the decline in the actuarial value of assets generated by the five-year smoothing method. TRA's funded status improved from 77.36 percent on July 1, 2009 to 78.45 percent on July 1, 2010.

## C. Description of the Schedule of Contributions from Employers and Other Contributing Entities (Page 34)

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 objective under this method is to fund each member's benefits under the Plan as payments that are level as a percentage of salary, starting at original participation date (or employment date), and continuing until the assumed date of retirement termination, disability or death. For valuation purposes, entry age for each member is determined as the age at valuation minus years of service as of the valuation date.

At any given date, a liability is calculated equal to the contributions that would have been accumulated if this method of funding had always been used, the current plan provisions had always been in place, and all assumptions had been precisely accurate. The difference between this liability and the assets (if any) that are held in the fund is the unfunded liability. The unfunded liability is typically funded over a chosen period in accordance with the amortization schedule.

A detailed description of the calculation follows:
The normal cost for each active member under the assumed retirement age is determined by applying to earnings the level percentage of salary which, if contributed each year from the date of entry into the Plan until the assumed retirement (termination,
disability or death) date, is sufficient to provide the full value of the benefits expected to be payable:

- The present value of future normal costs is the total of the discounted values of all active members' normal cost, assuming these to be paid in each case from the valuation date until retirement (termination, disability or death) date.
- The present value of projected benefits is calculated as the value of all benefit payments expected to be paid to the Plan's current members, including active and retired members, beneficiaries, and terminated members with vested rights.
- The accrued liability is the excess of the present value of projected benefits over the present value of future normal costs.
- The unfunded liability is the excess of the accrued liability over the assets of the fund, and represents that part of the accrued liability that has not been funded by accumulated past contributions.


## 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.

The Minnesota Post Retirement Investment Fund (MPRIF) 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. All decrements are assumed to occur on the anniversary of the valuation date, beginning on the valuation date. Decrement timing is a fundamental part of the computer programming underlying actuarial calculations. Mercer's valuation system uses beginning of year decrements, a generally accepted actuarial practice. The Minnesota Legislative Commission on Pensions and Retirement (LCPR) approved this modification to the Standards for Actuarial Work prior to the preparation of this report in order to ensure consistency and comparability.

## 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 - 8.5 percent compounded annually post-retirement for first 2 years; 6.5 percent compounded annually postretirement thereafter (beginning with July 1, 2012 valuation); 8.5 percent compounded annually pre-retirement.
- Salary Scale - The active member payroll growth was assumed to increase 4.5 percent annually. Individual salary increases were based on select and ultimate rates by age, with ultimate rates of 4.5 percent -5.5 percent.
- Benefit Payments - Annual benefit increases are established in statute by the Minnesota Legislature. No annual increases will be paid to TRA benefit recipients on January 1, 2011 and January 1, 2012. Beginning January 1, 2013, an annual increase of 2.0 percent will be paid.
- Amortization Method - The unfunded liability is amortized as a level percentage of covered active member payroll each year to the statutory amortization date of July 1, 2037, assuming payroll increases of 4.5 percent per year. If the unfunded Actuarial Accrued Liability 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. Alternative actuarial results have been prepared assuming payroll increases of 3.75 percent per year.
- Remaining Amortization Period - 27 years


## 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 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) | $\begin{gathered} \text { Unfunded } \\ \text { AAL (UAAL) } \\ (B-A) \\ \hline \end{gathered}$ |  | Funded Ratio $(\mathbf{A} / \mathrm{B})$ | Actual Covered Payroll (Previous FY) (C) | UAAL as Percentage of Covered Payroll (B-A) / (C) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 07/01/01 | \$16,834,024 | \$15,903,984 | \$ | $(930,040)$ | 105.85\% | \$2,812,000 | -33.07\% |
| 07/01/02 | \$17,378,994 | \$16,503,099 | \$ | $(875,895)$ | 105.31\% | \$2,873,771 | -30.48\% |
| 07/01/03 | \$17,384,179 | \$16,856,379 | \$ | $(527,800)$ | 103.13\% | \$2,952,887 | -17.87\% |
| 07/01/04 | \$17,519,909 | \$17,518,784 | \$ | $(1,126)$ | 100.01\% | \$3,032,483 | -0.04\% |
| 07/01/05 | \$17,752,917 | \$18,021,410 | \$ | 268,493 | 98.51\% | \$3,121,571 | 8.60\% |
| 07/01/06 | \$19,035,612 | \$20,679,111 | \$ | 1,643,499 | 92.05\% | \$3,430,645 | 47.91\% |
| 07/01/07 | \$18,794,389 | \$21,470,314 | \$ | 2,675,925 | 87.54\% | \$3,532,159 | 75.76\% |
| 07/01/08 | \$18,226,985 | \$22,230,841 | \$ | 4,003,856 | 81.99\% | \$3,645,230 | 109.84\% |
| 07/01/09 | \$17,882,408 | \$23,114,802 | \$ | 5,232,394 | 77.36\% | \$3,761,484 | 139.10\% |
| 07/01/10 | \$17,323,146 | \$22,081,634 | \$ | 4,758,488 | 78.45\% | \$3,787,757 | 125.63\% |

Schedule of Contributions From the Employer and Other Contributing Entities (Unaudited)
Dollar Amounts in Thousands

| Year <br> End <br> June 30 | Actuarially* Required Contribution Rate <br> (a) | Actual Covered Payroll (b) | Actual <br> Member Contributions <br> (c) | ARC <br> Annual <br> Required Contributions [(a) $\times(b)]$ - (c) | Actual Employer Contribution | Percentage Contributed |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2001 | 7.92\% | \$2,812,000 | \$145,075 | \$ 77,635 | \$139,799 | 180.07\% |
| 2002 | 7.85\% | \$2,873,771 | \$152,331 | \$ 73,260 | \$142,222 | 194.13\% |
| 2003 | 7.57\% | \$2,952,887 | \$155,577 | \$ 67,957 | \$149,481 | 219.96\% |
| 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\% |  |  |  |  |  |

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

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


## Teachers Retirement Fund Schedule of Investment Management Fees

## For the Fiscal Year Ended June 30, 2010

## Global Pool Managers

Acadian Asset ..... \$ ..... 468,705
Alliance Capital ..... 417,773
AQR Capital ..... 464,186
Capital Guardian ..... 1,779,884
Columbia (Riversource) ..... 275,102
Invesco Global ..... 313,579
J.P. Morgan ..... 350,806
Marathon Asset ..... 572,125
McKinley Capital ..... 338,148
Morgan Stanley ..... 1,909,410
Pyramis MSCI World ..... 312,672
Pyramis Select Int'l ..... 331,174
State Street ALP ..... 395,114
State Street Passive ..... 158,503
Total Global Pool Managers ..... \$ 8,087,181
Passive Equity Pool Managers
BZW Passive ..... \$ 298,045
Total Passive Equity Pool Managers ..... \$ 298,045
Fixed Income Pool Managers
Aberdeen Asset. ..... \$ 541,916
Blackrock Financial ..... 337,409
Columbia (Riversource) ..... 313,700
Dodge \& Cox ..... 372,726
Goldman Sachs ..... 431,351
Lehman Brothers ..... 199,229
PIMCO ..... 744,140
Western Asset ..... 466,744
Total Fixed Income Pool Managers ..... $\$ \quad 3,407,215$
Page Subtotal ..... \$ 11,792,441

## Teachers Retirement Fund

## Schedule of Investment Management Fees (cont.)

## For the Fiscal Year Ended June 30, 2010

Subtotal from Previous Page ..... \$ 11,792,441
Domestic Equity Pool Managers\$ 90,745
Barrow, Hanley ..... 277,818
BZW Barclays ..... 1,023,886
Earnest Partners ..... 162,098
Franklin Portfolio ..... 411,170
Goldman Equity ..... 347,221
Hotchkis \& Wiley ..... 280,225
INTECH Investment ..... 340,095
INTECH Mgmt ..... 102,075
J.P. Morgan ..... 917,874
Jacobs Levy Equity ..... 315,465
Lazard Asset Mgmt ..... 108,507
Lord Abbett \& Co ..... 232,025
LSV Asset Mgmt ..... 326,666
Martingale Asset Mgmt ..... 191,751
McKinley Capital ..... 308,802
New Amsterdam Partners ..... 69,759
Next Century Growth ..... 643,135
Peregrine Capital ..... 412,559
Riversource Investments ..... 1,756
Sands Capital ..... 274,506
Systematic Financial Mgmt ..... 306,213
Turner Investment Partners. ..... 490,096
UBS Asset Mgmt ..... 215,608
Winslow Capital ..... 187,502
Zevenbergen Capital ..... 505,895
Total Domestic Equity Pool Managers ..... \$ 8,543,452
Total Investment Pool Management Fees ..... \$ 20,335,893
Other Investment Management Fees
Financial Control Systems ..... 158,667
Nuveen Investments ..... 137,664
Pension Consultants ..... 13,766
State Board of Investment ..... \$ 1,070,093
Total Other Investment Management Fees \$ 1,380,190
Total Investment Management Fees ..... \$ 21,716,083

## Teachers Retirement Fund <br> Administrative Expenses

## For the Fiscal Year Ended June 30, 2010

## Personal Services

Salaries ..... \$ 4,740,736
Employer Contributions to Teachers Retirement Association ..... 263,169
Employer Contributions to Social Security ..... 340,177
Insurance Contributions ..... 934,952
Employee Training ..... 51,479
Workers' Compensation ..... 3,191
Subtotal ..... \$ 6,333,704
Communication
Duplicating and Printing Expense ..... \$ 68,505
Postage ..... 229,432
Telephone ..... 76,200
Subtotal ..... \$ 374,137
Office Building Maintenance
Lease of Office and Storage Space ..... \$ 31,727
Building and Operating Expenses ..... 479,517
Rental of Office Machines/Furnishings ..... 28,181
Repairs and Maintenance ..... 149,054
Building Depreciation ..... 288,924
Deferred Bond Charge Amortization ..... 5,030
Bond Interest Expense ..... 545,805
Subtotal ..... \$ 1,528,238
Professional Services
Actuarial Services ..... \$ 210,525
Audit Fees ..... 129,735
Computer Support Services ..... 373,516
Legal Fees ..... 45,217
Management Consultant Services ..... 6,755
Medical Services ..... 59,813
Subtotal ..... 825,561
Other Operating Expenses
Board of Substitute Teachers ..... 1,123
Department Head Expenses ..... 1,361
Depreciation of Office Furniture and Equipment ..... 227,258
Dues and Subscriptions ..... 19,721
Insurance Expense ..... 4,658
Miscellaneous Administrative Expenses ..... 16,370
State Indirect Costs ..... 110,054
Stationery and Office Supplies ..... 74,200
Travel - Director and Staff ..... 35,427
Travel - Trustees ..... 35,712
Subtotal .....  525,884
Total Administrative Expenses ..... \$ 9,587,524

## Teachers Retirement Fund Schedule of Professional Consultant Expenses

## For the Fiscal Year Ended June 30, 2010

Investment Pool Managers
Domestic Equity Pool Managers ..... \$ 8,543,452
Financial Control Systems ..... 158,667
Fixed Income Pool Managers ..... 3,407,215
Global Pool Managers ..... 8,087,181
Investment Board ..... 1,070,093
Nuveen Investment Solutions, Inc. ..... 137,664
Passive Equity Pool Managers ..... 298,045
Pension Consulting. ..... 13,766
Total Investment Pool Managers ..... \$ 21,716,083
Actuarial
Mercer HR Consulting ..... \$ 210,525
Total Actuarial Expenses ..... \$ 210,525
Audit
Berwyn Group ..... \$ 4,348
Legislative Auditor. ..... 125,209
Minnesota Department of Health ..... 178
Total Audit Expenses ..... \$ 129,735
Computer Support Services
Fulcrum Consulting ..... \$ 525,229
Keystone ..... 247,004
Total Computer Support Services Expenses ..... \$ 772,233
Legal
Attorney General ..... \$ 39,745
Office of Administrative Hearings ..... 5,472
Total Legal Expenses ..... \$ 45,217
Management Consulting
Minnesota Department of Administration (Management Analysis) ..... \$ 6,755
Total Management Consulting ..... \$ 6,755
Medical
Medical Evaluations, Inc ..... \$ 9,065
Minnesota Department of Health ..... 50,100
Stubbe \& Associates ..... 648
Total Medical Expenses ..... $\$ \quad 59,813$
Total Consultant Expenses ..... \$ 22,940,361

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Investments

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## State Board of Investment Letter

MINNESOTA
STATE
BOARD OF INVESTMENT


Board Members:
Governor
Tim Pawlenty
State Auditor
Rebecca Otto
Secretary of State Mark Ritchie

Attorney General Lori Swanson

## Executive Director:

Howard J. Bicker

## 60 Empire Drive

 Suite 355St. Paul, MN 55103
(651) 296-3328

FAX (651) 296-9572
E-mail:
minn.sbi@state.mn.us
www.sbi.state.mn.us

## An Equal Opportunity <br> Employer

## INVESTMENT AUTHORITY

The assets of the Teachers Retirement Association (TRA) are invested along with the assets of the 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 to advise the SBI and its staff on investment related matters. TRA's executive director is a member of the Council.

## 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 \& 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 of 8.5 percent per year and ensure that sufficient funds are available to finance promised benefits at the time of retirement. (The separate investment of retiree assets and active member assets ended when the Post Fund and Basic Funds were merged as of June 30, 2009.)

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, 2010, the Combined Funds returned 5.4\% percentage points above the CPI over the last 20 years and returned 0.1 percentage point above the composite index over the past 10 years. Investment returns ranked in the $34^{\text {th }}$ percentile over the past five years and in the $65^{\text {th }}$ 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,

Howard Bicker
Executive Director
State Board of Investment

## Investment Summary

## Prepared by TRA management with data obtained from the State Board of Investment's Fiscal Year 2010 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 $\$ 14.93$ billion as of June 30, 2010.

The four-member SBI Board consists of Governor Tim Pawlenty (Chair), Attorney General Lori Swanson, Secretary of State Mark Ritchie, and State Auditor, Rebecca Otto. Howard Bicker serves as SBI's 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

## Jeffery Bailey, Chair

Director, Benefits Finance
Target Corporation
Malcolm W. McDonald,
Vice Chair
Director and Corporate Secretary (Retired)
Space Center, Inc.
Frank Ahrens, II
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.

As of December 2010

## Dennis Duerst

Director, Benefit Funds Investment
3M Company
Douglas Gorence
Chief Investment Officer
U of M Foundation Investment Advisors
Laurie Fiori Hacking
Executive Director
Teachers Retirement Association
Heather Johnston
Governor's Appointee
Active Employee Representative

## P. Jay Kiedrowski

Senior Fellow
Humphrey Institute University of Minnesota

## LeRoy Koppendrayer

Governor’s Appointee Retiree Representative

## Judith W. Mares

Chief Investment Officer
Alliant Techsystems, Inc.
Gary Martin
Vice President, Pension
Investments
SUPERVALU, Inc.
Gary R. Norstrem
Treasurer (Retired)
City of Saint Paul
Steve Sviggum
Commissioner
MN Management \& Budget
Mary Vanek
Executive Director
Public Employees Retirement Association

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## 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 8.5 percent on an annualized basis over time.

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. 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, 2010 was:

| Combined Funds Asset Mix <br> June 30, 2010 |  |  |
| :--- | :---: | :---: |
|  | Policy Mix | Actual Mix |
| Domestic Equity | $45.0 \%$ | $42.3 \%$ |
| International Equity | $15.0 \%$ | $15.5 \%$ |
| Fixed Income (Bonds) | $18.0 \%$ | $24.9 \%$ |
| Alternative Assets | $20.0 \%$ | $15.3 \%$ |
| Unallocated Cash | $\underline{2.0 \%}$ | $\underline{2.0 \%}$ |
| Total | $\underline{\underline{100.0 \%}}$ | $\underline{\underline{100.0 \%}}$ |

## 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 allows SBI to diversify its holdings across world markets, offers the opportunity to enhance returns and reduces the risk/volatility of the total portfolio. The rationale underlying the inclusion of private equity alternative assets (e.g., venture capital) is similar.

SBI recognizes that this sizable policy allocation to common stock and private equity likely would produce 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. In periods of rapidly rising prices, these "hard" assets have appreciated in value at a rate at least equal to the inflation rate. Further, even 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 serves to dampen return volatility.

Yield oriented alternative investments provide the opportunity for higher long-term returns than those typically available from bonds yet still generate sufficient current income. Typically, these investments (e.g., subordinated debt, mezzanine or resource income investments such as 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 help 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 2010 of 15.2 percent. Over the last five years, the Combined Funds generated an annualized return of 3.4 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 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 above or below their long-term asset allocation targets. The policy imposes a low risk discipline of buy low-sell high among asset classes on a total fund basis.)


## Combined Funds Performance vs. Composite Index

For the ten-year period ending June 30, 2010, the Combined Funds exceeded the composite index investment performance of 0.1 percent annualized. The Funds also outperformed the composite index by 0.1 percentage point over the last five years, and outperformed the index over the most recent fiscal year by 1.7 percentage point. 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 2006-2010


## Combined Funds

## Performance of Asset Pools (Net of Fees)

June 30, 2010 - Combined Funds

|  | Rates of Return (Annualized) |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | FY 2010 | 3-Year | 5-Year | 10-Year |
| Domestic Equity Pool ................................................. | 15.8\% | -9.7\% | -0.8\% | -1.3\% |
| Asset Class Target .................................................. | 15.7\% | -9.5\% | -0.5\% | -1.1\% |
| Fixed Income (Bond) Pool ........................................... | 14.5\% | 7.0\% | 5.4\% | 6.6\% |
| Asset Class Target .................................................... | 9.5\% | 7.5\% | 5.5\% | 6.5\% |
| International Equity Pool ........................................... | 11.7\% | -10.4\% | 3.8\% | 2.1\% |
| Asset Class Target .................................................. | 10.4\% | -10.6\% | 3.4\% | 1.8\% |
| Alternative Assets (Real Estate, Private Equity, $\qquad$ Resource Pool and Yield Oriented Pool) | 15.0\% | 2.3\% | 14.1\% | 11.7\% |
| CPI-W Inflation (No Established Index for Alternative Assets).. | 1.1\% | 1.5\% | 2.2\% | 2.3\% |

All investment performance methodology is reported in compliance with the mandatory requirements of the Chartered Financial
Analysts (CFA) Institute, as described on page 45.

## Combined Funds

Portfolio Distribution: Policy Asset Mix
As of June 30, 2010


## Combined Funds <br> Portfolio Distribution: Actual Asset Mix

As of June 30, 2010


## Teachers Retirement Fund <br> List of Largest Assets Held

June 30, 2010

## Composite Holdings of Top Ten Equities

By Fair Value

## Security

|  | \$ Fair Value <br> (Millions) | \% of <br> Portfolio |
| :--- | :---: | ---: |
| EXXON MOBIL CORP | $\$ 148.0$ | $0.99 \%$ |
| APPLE INC | $\$ 129.1$ | $0.86 \%$ |
| MICROSOFT CORP | $\$ 103.3$ | $0.69 \%$ |
| INTL BUSINESS MACHINES CORP | $\$ 87.1$ | $0.58 \%$ |
| UBS TRUMBULL PROPERTY | $\$ 83.5$ | $0.56 \%$ |
| PROCTER \& GAMBLE CO/THE | $\$ 83.0$ | $0.56 \%$ |
| JPMORGAN CHASE \& CO | $\$ 82.7$ | $0.55 \%$ |
| AT\&T INC | $\$ 80.5$ | $0.54 \%$ |
| JOHNSON \& JOHNSON | $\$ 76.6$ | $0.51 \%$ |
| CVI GLOBAL VALUE A L.P | $\$ 76.0$ | $0.51 \%$ |

## Composite Holdings of Top Ten Bond Holdings

By Fair Value

## Security

|  | Coupon | \$ Fair Value <br> (Millions) | $\%$ of <br> Portfolio |
| :--- | ---: | :---: | ---: |
| US TREASURY N/B | $4.63 \%$ | $\$ 58.5$ | $0.39 \%$ |
| FNMA TBA AUG 30 SINGLE FAM | $4.50 \%$ | $\$ 57.7$ | $0.39 \%$ |
| WI TREASURY SEC | $1.88 \%$ | $\$ 51.1$ | $0.34 \%$ |
| US TREASURY N/B | $3.13 \%$ | $\$ 42.4$ | $0.28 \%$ |
| US TREASURY N/B | $0.75 \%$ | $\$ 37.2$ | $0.25 \%$ |
| UNITED STATES TREAS BDS | $4.38 \%$ | $\$ 32.2$ | $0.22 \%$ |
| GNMA II TBA JUL 30 JUMTBAXXX | $5.00 \%$ | $\$ 30.4$ | $0.20 \%$ |
| US TREASURY N/B | $4.38 \%$ | $\$ 27.9$ | $0.19 \%$ |
| FNMA TBA JUL 30 SINGLE FAM | $4.50 \%$ | $\$ 26.4$ | $0.18 \%$ |
| WI TREASURY SEC | $1.38 \%$ | $\$ 26.2$ | $0.18 \%$ |

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

## Summary of Investments

As of June 30, 2010

|  | Cost Value |  |  | Fair <br> Value | \% of Investments at Fair Value |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Fixed Income Investments |  |  |  |  |  |
| Fixed Income Pool | \$ | 3,298,952,956 | \$ | 3,670,822,117 | 24.6\% |
| Equity Investments |  |  |  |  |  |
| TRA Minneapolis Pool | \$ | 144,956 | \$ | 153,241 | 0.0\% |
| External Indexed Equity Pool |  | 2,356,342,899 |  | 2,383,657,966 | 16.0\% |
| Global Equity Pool |  | 2,070,104,545 |  | 2,301,525,855 | 15.4\% |
| External Domestic Equity Pool |  | 3,291,879,621 |  | 3,914,537,213 | 26.2\% |
| Total Equity Investments | \$ | 7,718,472,021 | \$ | 8,599,874,275 | 57.6\% |
| Alternative Investments |  |  |  |  |  |
| Alternative Investment Pool | \$ | 2,237,558,006 | \$ | 2,327,655,009 | 15.6\% |
| Short Term Investment |  |  |  |  |  |
| Short Term Cash Equivalents | \$ | 334,911,845 | \$ | 334,911,845 | 2.2\% |
| Total Investments |  | 13,589,894,828 |  | 14,933,263,246 | 100.0\% |

## 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

Actuarial

Actuarial

Actuarial

Actuarial

Actuarial

## Actuary's Certification Letter

## MERCER

333 South 7th Street, Suite 1600
Minneapolis, MN 55402-2427 6126428600 Fax 6126428686 www.mercer.com

Board of Trustees
Teachers Retirement Association Fund
60 Empire Drive, Suite 400
St. Paul, MN 55103-2088
December 13, 2010
Members of the Board:
We have prepared and presented to you our annual actuarial valuation of the Minnesota Teachers Retirement Association Fund as of July 1, 2010.

In the Comprehensive Annual Financial Report (CAFR) for which this letter was prepared, the supporting schedules in the Actuarial Section and the Schedule of Funding Progress and the Schedule of Contributions from the Employer and Other Contributing Entities in the Financial Section have been prepared by TRA based on the information included in Mercer's reports on the annual actuarial valuation. The annual actuarial valuation reports are available on TRA's website.

## Valuation Results

As described in the report, the results of the valuation indicate that the fund is $78.5 \%$ funded and that the statutory contribution rates are deficient by $4.00 \%$ 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 phased in over four years beginning on July 1, 2011. After the contribution increases are fully phased in, the statutory contributions will be $4.00 \%$ of payroll higher than they are today.

Because the valuation smoothes asset returns over five years, these percentages do not reflect $60 \%$ of the large asset loss that occurred during the 2009 fiscal year. If all of the prior years' asset returns had been reflected, the deficiency would be $7.59 \%$ of payroll. A contribution deficiency means that over the long run, without further changes or favorable actuarial experience, the contributions scheduled to be made to the fund will not provide enough money to pay all the benefit promises.

## Changes in Plan Provisions

The following changes in plan provisions were recognized this year:

- Post-retirement benefit increases are suspended for 2011 and 2012 and will resume in 2013 at $2.0 \%$. The benefit increase will return to $2.5 \%$ if the accrued liability funding ratio of the plan reaches $90 \%$ (on a Market Value of Assets basis).


## MERCER

Page 2
December 13, 2010
Board of Trustees
Teachers Retirement Association Fund

- The requirement for benefit recipients to receive a full increase in benefits changed from 12 full months receiving as of December 31 to 18 full months and the requirement to receive a partial increase in benefits changed from 0 months receiving as of December 31 to 6 months.
- The interest rate credited on member contributions changes from $6.0 \%$ to $4.0 \%$ as of July 1, 2011.
- The increase on deferred benefits changes to 2.0\% after July 1, 2012.


## Changes in Actuarial Assumptions

The following changes in actuarial assumptions were recognized this year:

- To reflect the suspension in post-retirement benefit increase in 2011 and 2012, and the change from $2.5 \%$ to $2.0 \%$ after 2012, the post-retirement investment return assumption was changed from $6.0 \%$ to $6.5 \%$ for years after 2012, and to $8.5 \%$ for 2011 and 2012.
- The pre-retirement mortality assumption was changed from 1983 Group Annuity Mortality, male rates set back 12 years and female rates set back 10 years, to RP 2000 non-annuitant generational mortality, white collar adjustment, male rates set back 5 years and female rates set back 7 years.
- The post-retirement mortality assumption was changed from 1983 Group Annuity Mortality, male rates set back 6 years and female rates set back 3 years, to RP 2000 annuitant generational mortality, white collar adjustment, male rates set back 2 years and female rates set back 3 years.
- The post-disability mortality assumption was changed from a table based on the 1965 Railroad Retirement Board (RRB) rates to RP 2000 disabled retiree mortality, without any adjustments.
- Assumed disability rates were adjusted to better reflect actual experience.
- The assumed difference in ages between spouses was changed from females three years younger to females two years younger.
- The form of annuity election assumption for males was changed from $15 \%$ to $10 \%$ electing the $50 \% \mathrm{~J} \& S$ form, from $25 \%$ to $15 \%$ electing the $75 \% \mathrm{~J} \& S$ form, and from $55 \%$ to $70 \%$ electing the $100 \% \mathrm{~J} \& S$ form. The form of annuity election assumption for females was changed from $30 \%$ to $50 \%$ electing the $100 \% \mathrm{~J} \& S$ form.
- Assumed retirement rates for Coordinated members were adjusted to better reflect actual experience.


## MERCER

Page 3
December 13, 2010
Board of Trustees
Teachers Retirement Association Fund

Neither the July 1, 2010 valuation reports nor the information extracted from those reports for this CAFR may be relied upon for any other purpose or by any party other than the Board of Trustees, the LCPR or TRA's auditors solely for the purpose of completing an audit related to the matters described. Mercer is not responsible for the consequences of any unauthorized use.

To the best of our knowledge and belief, the valuations were performed in accordance with generally accepted actuarial principles and procedures, the requirements of Minnesota Statutes, Section 356.215, and the requirements of the Standards for Actuarial Work established by the LCPR, including one modification regarding decrement timing. The LCPR approved this modification prior to the preparation of this report in order to ensure consistency and comparability. For more information about the decrement timing methodology, please refer to the valuation reports. In our opinion, the valuation report reflects the actuarial position of the plan on an ongoing basis under the prescribed assumptions, methods, and procedure.

Important Notices about the valuations are shown in the Actuarial Section.
The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report. In addition, Mr. Verlautz meets the requirements of "approved actuary" under Minnesota Statutes, Section 356.215, Subdivision 1, Paragraph (c). We are not aware of any direct or material indirect financial interest or relationship, including investments or other services that could create a conflict of interest, that would impair the objectivity of our work.

Respectfully submitted,



Bonita J. Wurst, ASA, EA, MAAA

The information contained in this document (including any attachments) is not intended by Mercer to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.
g:Itralactuary certification letter 2010. doc

## Summary of Actuarial Assumptions and Methods

## Summary of Actuarial Assumptions

The following assumptions were used in valuing the liabilities and benefits under the plan. All assumptions are prescribed by Statute, the Legislative Commission on Pensions and Retirement (LCPR), or the Board of Trustees. The LCPR enacted actuarial assumption changes on July 8, 2010, effective for the July 1, 2010 valuation report.


| Commencement of deferred benefits | Members receiving deferred annuities (including current terminated deferred members) are assumed to begin receiving benefits at age 65 . |
| :---: | :---: |
| Form of payment | Married members are assumed to elect subsidized joint and survivor form of annuity as follows: <br> Members eligible for deferred annuities (including current terminated deferred members) are assumed to elect a life annuity. |
| Unknown data for members | We used membership data as supplied by the plan sponsor as of July 1, 2010. Customarily, this information would not be verified by a plan's actuary. 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, the following assumptions were applied: <br> Data for active members: <br> Salary $\$ 49,000$ <br> Data for terminated members: |
| Changes in actuarial assumptions since the previous valuation | The post-retirement investment return changed from $6.00 \%$ to $6.50 \%$ to reflect the change in post-retirement benefit increase from $2.50 \%$ to $2.00 \%$. <br> Pre-retirement mortality was changed in 1983 Group Annuity Mortality, male rates set back 12 years and female rates set back 10 years, to RP 2000 non-annuitant generational mortality, white collar adjustment, male rates set back 5 years and female rates set back 7 years. <br> Post-retirement mortality was changed from 1983 Group Annuity Mortality, male rates set back 6 years and female rates set back 3 years, to RP 2000 annuitant generational mortality, white collar adjustment, male rates set back 2 years and female rates set back 3 years. <br> Post-disability mortality was changed from the 1965 Railroad Retirement board (RRB) rates through age 54, graded rates between 1965 RRB and the healthy post-retirement rates for age 55 to 64 and the healthy post-retirement table for ages 65 and later to RP 2000 disabled retiree mortality, without any adjustments. <br> Disability rates were changed to better reflect actual experience. <br> Beneficiary age difference was changed from females 3 years younger to females 2 years younger. <br> The form of annuity election assumption for males was changed from $15 \%$ to $10 \%$ electing the $50 \% \mathrm{~J} \& \mathrm{~S}$ form, from $25 \%$ to $15 \%$ electing the $75 \% \mathrm{~J} \& \mathrm{~S}$ form, and from $55 \%$ to $70 \%$ electing the $100 \% \mathrm{~J} \& S$ form. The form of annuity election assumption for females was changed from $30 \%$ to $50 \%$ electing the $100 \% \mathrm{~J} \& \mathrm{~S}$ form. <br> Retirement rates for Coordinated members were changed to better reflect actual experience. |

## Summary of Actuarial Assumptions (continued)

|  | Mortality Rates (\%) |  |  |  |  |  |
| :---: | :---: | ---: | :---: | :---: | :---: | :---: |
|  | Pre-Retirement * |  | Post-Retirement** |  | Post-Disability |  |
| Age | Male | Female | Male | Female | Male | Female |
| 20 | 0.0177 | 0.0156 | 0.0207 | 0.0172 | 2.2571 | 0.7450 |
| 25 | 0.0226 | 0.0176 | 0.0255 | 0.0176 | 2.2571 | 0.7450 |
| 30 | 0.0270 | 0.0180 | 0.0297 | 0.0212 | 2.2571 | 0.7450 |
| 35 | 0.0336 | 0.0224 | 0.0457 | 0.0335 | 2.2571 | 0.7450 |
| 40 | 0.0562 | 0.0366 | 0.0722 | 0.0463 | 2.2571 | 0.7450 |
| 45 | 0.0821 | 0.0488 | 0.1006 | 0.0656 | 2.2571 | 0.7450 |
| 50 | 0.1178 | 0.0719 | 0.1456 | 0.1025 | 2.8975 | 1.1535 |
| 55 | 0.1649 | 0.1120 | 0.4671 | 0.2329 | 3.5442 | 1.6544 |
| 60 | 0.2268 | 0.1786 | 0.4841 | 0.4045 | 4.2042 | 2.1839 |
| 65 | 0.3628 | 0.2955 | 0.8018 | 0.6406 | 5.0174 | 2.8026 |
| 70 | 0.5841 | 0.4735 | 1.3752 | 1.0663 | 6.2583 | 3.7635 |
| 75 | 0.8445 | 0.7220 | 2.2964 | 1.7687 | 8.2067 | 5.2330 |

[^1]|  | Rates (\%) |  |  |  | Coordinated Retirement Rates (\%) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Ultima | thdrawal | Dis | ity** |  | Rule of 90 | Retirement | Salary |
| Age | Male | Female | Male | Female | Age | Eligible | Other | Increases |
| 20 | 3.70 | 4.50 | 0.00 | 0.00 | 20 | 50.00 | 7.00 | 5.50\% |
| 25 | 3.20 | 4.50 | 0.00 | 0.00 | 25 | 50.00 | 7.00 | 5.50 |
| 30 | 2.70 | 4.50 | 0.00 | 0.00 | 30 | 50.00 | 7.00 | 5.50 |
| 35 | 2.50 | 3.90 | 0.01 | 0.01 | 35 | 50.00 | 7.00 | 5.50 |
| 40 | 2.35 | 2.75 | 0.03 | 0.03 | 40 | 50.00 | 7.00 | 5.20 |
| 45 | 2.10 | 2.10 | 0.05 | 0.05 | 45 | 50.00 | 7.00 | 4.70 |
| 50 | 1.85 | 1.85 | 0.10 | 0.10 | 50 | 50.00 | 7.00 | 4.50 |
| 55 | 0.00 | 0.00 | 0.16 | 0.16 | 55 | 50.00 | 7.00 | 4.50 |
| 60 | 0.00 | 0.00 | 0.25 | 0.25 | 60 | 40.00 | 12.00 | 4.80 |
| 65 | 0.00 | 0.00 | 0.00 | 0.00 | 65 | 40.00 | 40.00 | 5.20 |
| 70 | 0.00 | 0.00 | 0.00 | 0.00 | 70 | 35.00 | 35.00 | 5.20 |
| 75 | 0.00 | 0.00 | 0.00 | 0.00 | 71 | 100.00 | 100.00 | 5.20 |

## Important Notices

Decisions about benefit changes, granting new benefits, investment policy, funding policy, benefit security and/or benefit-related issues should not be made on the basis of the valuation reports, but only after careful consideration of alternative economic, financial, demographic and societal factors, including financial scenarios that assume future sustained investment losses.

A valuation report is only a snapshot of a Plan's estimated financial condition at a particular point in time; it does not predict the Plan's future financial condition or its ability to pay benefits in the future and does not provide any guarantee of future financial soundness of the Plan. Over time, a plan's total cost will depend on a number of factors, including the amount of benefits the plan pays, the number of people paid benefits, the period of time over which benefits are paid, plan expenses and the amount earned on any assets invested to pay benefits. These amounts and other variables are uncertain and unknowable at the valuation date.

Because modeling all aspects of a situation is not possible or practical, we may use summary information, estimates, or simplifications of calculations to facilitate the modeling of future events in an efficient and cost-effective manner. We may also exclude factors or data that are immaterial in our judgment. Use of such simplifying techniques does not, in our judgment, affect the reasonableness of valuation results for the plan.

To prepare the valuation reports, actuarial assumptions, as described in the reports, are used in a forward looking financial and demographic model to present a single scenario from a wide range of possibilities; the results based on that single scenario are included in the valuation. The future is uncertain and the plan's actual experience will differ from those assumptions; these differences may be significant or material because these results are very sensitive to the assumptions made and, in some cases, to the interaction between the assumptions.
Different assumptions or scenarios within the range of possibilities may also be reasonable and results based on those assumptions would be different. As a result of the uncertainty inherent in a forward looking projection over a very long period of time, no one projection is uniquely "correct" and many alterative projections of the future
could also be regarded as reasonable. Two different actuaries could, quite reasonably, arrive at different results based on the same data and different views of the future. A "sensitivity analysis" shows the degree to which results would be different if you substitute alternative assumptions within the range of possibilities or those utilized in the reports. Other than the alternative calculations shown in the valuation report, we have not been engaged to perform such a sensitivity analysis and thus the results of such an analysis are not included in this report. At TRA's request, Mercer is available to perform such a sensitivity analysis. Actuarial assumptions, including discount rates, mortality tables and others identified in the reports, are prescribed by Minnesota Statutes Section 356.215, the LCPR, and the Board of Trustees. These parties are responsible for selecting the funding policy, actuarial valuation methods, asset valuation methods, and assumptions. The policies, methods and assumptions are those that have been so prescribed and are described in the reports. TRA is solely responsible for communicating to Mercer any changes required thereto.

Mercer has used and relied on financial data and participant data supplied by TRA and summarized in the valuation reports. TRA is responsible for ensuring that such participant data provides an accurate description of all persons who are participants under the terms of the plan or otherwise entitled to benefits as of the valuation date that is sufficiently comprehensive and accurate for the purposes of this report. Although Mercer has reviewed the data in accordance with Actuarial Standards of Practice No. 23, Mercer has not verified or audited any of the data or information provided.
Mercer has also used and relied on the summary of plan provisions, including amendments, and interpretations of plan provisions, supplied by TRA as summarized in the valuation reports and on plan provisions stipulated by statute. The Trustees are solely responsible for the validity, accuracy and comprehensiveness of this information. If any data or plan provisions supplied are not accurate and complete, the valuation results may differ significantly from the results that would be obtained with accurate and complete information; this may require a later revision of these reports. Moreover, plan documents may be susceptible to different interpretations, each of which could be reasonable, and that the different interpretations could lead to different valuation results.

## Valuation Report Highlights

## Summary of Key Valuation Results

|  | Actuarial V | tio | as of |
| :---: | :---: | :---: | :---: |
|  | July 1, 2010 |  | July 1, 2009 |
| Contributions (\% of payroll) |  |  |  |
| Statutory - Chapter 354 ....................................................... | 11.71\% |  | 11.69\% |
| Required - Chapter 356 ...................................................... | 15.71\% |  | 16.81\% |
| Sufficiency/(Deficiency) | (4.00\%) |  | (5.12\%) |
| Funded Ratios (dollars in thousands) |  |  |  |
| Accrued Benefit Funding Ratio |  |  |  |
| Current assets (AVA)........................................................... \$ | \$ 17,323,146 | \$ | 17,882,408 |
| Current benefit obligations .................................................... \$ | \$ 21,159,773 | \$ | 22,193,284 |
| Funding ratio............... | 81.87\% |  | 80.58\% |
| Accrued Liability Funding Ratio |  |  |  |
| Current assets (AVA)............................................................ \$ | \$ 17,323,146 | \$ | 17,882,408 |
| Market value of assets (MVA)................................................ \$ | \$ 14,917,240 | \$ | 13,813,826 |
| Actuarial accrued liability..................................................... \$ | \$ 22,081,634 | \$ | 23,114,802 |
| Funding ratio (AVA) ............................................................ | 78.45\% |  | 77.36\% |
| Funding ratio (MVA)............................................................ | 67.55\% |  | 59.76\% |
| Projected Benefit Funding Ratio |  |  |  |
| Current and expected future assets ............................................. \$ | \$ 22,305,013 | \$ | 22,605,285 |
| Current and expected future benefit obligations .......................... \$ | \$ 24,981,006 | \$ | 26,107,302 |
| Funding ratio...................................................................... | 89.29\% |  | 86.59\% |
| Participant Data |  |  |  |
| Active members |  |  |  |
| Number ............................................................................ | 77,356 |  | 77,162 |
| Projected annual earnings (000s)............................................. \$ | \$ 4,047,547 | \$ | 4,049,217 |
| Average annual earnings (projected)........................................ \$ | \$ 52,324 |  | 52,450 |
| Average age | 43.5 |  | 43.4* |
| Average service.................................................................. | 11.9 |  | 11.8 |
| Service retirements .................................................................... | 47,517 |  | 46,009 |
| Survivors................................................................................. | 3,682 |  | 3,575 |
| Disability retirements ................................................................. | 654 |  | 624 |
| Deferred retirements ................................................................... | 12,756 |  | 12,490 |
| Terminated other non-vested ....................................................... | 23,651 |  | 23,073 |
| Total..................................................................................... | 165,616 |  | 162,933 |

*Revised from last year's presentation.

## Actuary's Commentary

## Highlights

The Teachers Retirement Association Fund experienced many changes during the past year. Plan changes passed during the 2010 legislative session include future increases in member and employer contribution rates, as well as a suspension of the annual benefit increases paid to retirees and beneficiaries for two years, followed by annual postretirement benefit increases of 2.0 percent (instead of 2.5 percent) thereafter. Also, a number of assumption changes were adopted by the Legislative Commission on Pensions and Retirement as an outcome of the 2004-2008 experience study. A summary of all changes, as well as their impact, can be found in the Effects of Change section. The following table summarizes important contribution information as described on pages 59 and 72.

|  | Actuarial Valuation as of |  |
| :--- | :---: | :---: |
| Contributions (Actuarial <br> Value of Assets) | July 1, 2010 July 1, 2009 |  |
| Statutory Contributions - <br> Chapter 354 <br> (\% of payroll) <br> $11.71 \%$ | $11.69 \%$ |  |
| Required Contributions - <br> Chapter 356 <br> (\% of payroll) | $15.71 \%$ | $16.81 \%$ |
| Sufficiency/ (Deficiency) | $(4.00 \%)$ | $(5.12 \%)$ |

The contribution deficiency decreased from 5.12 percent of payroll to 4.00 percent of payroll. The primary reasons for the reduction in contribution deficiency are the changes in plan provisions. However, a significant contribution deficiency remains. The contribution deficiency means that over the long run, without further changes or favorable actuarial experience, the contributions scheduled to be made to the fund will not provide enough money to pay all the benefit promises.

The deficiency does not reflect the member and employer contribution increases that will be phased in over four years beginning on July 1, 2011. After the contribution increases are fully phased in, the statutory contributions will be 4.00 percent of payroll higher than they are today.

The effect on this year's valuation results of having received contributions in the preceding year that were less than actuarially required was approximately a $\$ 194$ million increase in unfunded liability and 0.29 percent of payroll increase in this year's required contributions.

Pages 65-69 provide detail on the plan assets used for the valuation including a development of the actuarial value of assets (AVA). The market value of assets (MVA) earned an estimated 15.7 percent for the plan year ending June 30, 2010. The AVA earned 2.1 percent for the plan year ending June 30, 2010, as compared to the assumed rate of 8.5 percent mandated by Minnesota Statutes. Due to the asset smoothing method used, the AVA used to determine the contributions in this valuation exceeds the MVA by 16 percent. Absent future investment gains to offset the investment losses being smoothed, future required contributions will increase as past investment losses become recognized.

If asset smoothing methods were not used for this valuation, the required contribution rate, based on the market value of assets, would have been 19.30 percent of payroll instead of 15.71 percent of payroll, as shown below:

Actuarial Valuation as of

## Contributions <br> (Market Value of Assets)

July 1, 2010 July 1, 2009
Statutory Contributions - $11.71 \% \quad 11.69 \%$
Chapter 354
(\% of payroll)
Required Contributions - 19.30\% 22.76\%
Chapter 356
(\% of payroll)
Sufficiency/ (Deficiency) (7.59\%)

## Effects of Changes

The following changes in plan provisions and methods were recognized as of July 1, 2010.

- Post-retirement benefit increases are suspended for 2011 and 2012 and will resume in 2013 at 2 percent. The benefit increase will return to 2.5 percent if the accrued liability funding ratio of the plan reaches 90 percent (on a Market Value of Assets basis). To reflect the change in postretirement benefit increase from 2.5 percent to 2.0 percent after 2012, the post-retirement investment return assumption was changed from 6.0 percent to 6.5 percent for years after 2012, and to 8.5 percent for 2011 and 2012.
- The interest rate credited on accumulated employee contributions changes from 6.0 percent to 4.0 percent beginning July 1, 2011.
- Future increases to deferred vested benefits (augmentation) change to 2.0 percent per year annually beginning July 1, 2012.
- The requirement for benefit recipients to receive a full post-retirement benefit adjustment changed from 12 full months receiving as of December 31 to 18 full months.
- The pre-retirement mortality assumption was changed from 1983 Group Annuity Mortality, male rates set back 12 years and female rates set back 10 years, to RP 2000 non-annuitant generational mortality, white collar adjustment, male rates set back 5 years and female rates set back 7 years.
- The post-retirement mortality assumption was changed from 1983 Group Annuity Mortality, male rates set back 6 years and female rates set back 3 years, to RP 2000 annuitant generational mortality, white collar adjustment, male rates set back 2 years and female rates set back 3 years.
- The post-disability mortality assumption was changed from a table based on the 1965 Railroad Retirement Board (RRB) rates to RP 2000 disabled retiree mortality, without any adjustments.
- Assumed disability rates were adjusted to better reflect actual experience.
- The assumed difference in ages between spouses was changed from females three years younger to females two years younger.
- The form of annuity election assumption for males was changed to 15 percent to 10 percent electing the 50 percent J\&S form, from 25 percent to 15 percent electing the 75 percent $\mathrm{J} \& S$ form, and from 55 percent to 70 percent electing the 100 percent $\mathrm{J} \& \mathrm{~S}$ form. The form of annuity election assumption for females was changed from 30 percent to 50 percent electing the 100 percent J\&S form.
- Assumed retirement rates for Coordinated members were adjusted to better reflect actual experience.
An additional change that was not recognized was the increase in future employee and employer contribution rates by 0.5 percent per year beginning July 1, 2011 through July 1, 2014.


## Effects of Changes

The combined effect of the plan and assumption changes described on the prior page was to decrease the accrued liability by $\$ 1.75$ billion and decrease the required contribution by 3.20 percent of payroll as follows:

|  | Before Plan and <br> Assumption <br> Changes | Reflecting Plan <br> Changes* | Reflecting Plan <br> and Assumption <br> Changes* |
| :--- | :---: | :---: | :---: |
| Accrued Liability Funding Ratio (AVA) | $72.7 \%$ | $78.2 \%$ | $78.5 \%$ |
| Projected Benefit Funding Ratio | $82.1 \%$ | $89.3 \%$ | $89.3 \%$ |
| Unfunded Accrued Liability (in billions) | $\$ 6.51$ | $\$ 4.82$ | $\$ 4.76$ |
| Normal Cost Rate (\% of pay) | $8.94 \%$ | $8.28 \%$ | $8.36 \%$ |
| Amortization of Unfunded Accrued Liability | $9.73 \%$ | $7.21 \%$ | $7.11 \%$ |
| $\quad$ (\% of pay) (AVA) | $0.24 \%$ | $0.24 \%$ | $0.24 \%$ |
| Expenses (\% of pay) | $18.91 \%$ | $15.73 \%$ | $15.71 \%$ |
| Total Required Contribution (\% of pay) (AVA) | $(7.20 \%)$ | $(4.02 \%)$ | $(4.00 \%)$ |
| Contribution Deficiency (\% of pay) (AVA) |  |  |  |

* The effect of the change in the post-retirement investment return assumption was included in the post-retirement benefit increases in the "Reflecting Plan Changes" column.


## Alternative Actuarial Assumptions

Payroll growth and salary scale assumptions are set by Statute for the 2010 valuation, but will change effective with the July 1, 2011 valuation to the assumptions described as "Alternative Assumptions" in the Actuarial Basis section of this report. Had these alternative assumptions been reflected in the 2010 valuation, the results would be as follows:

|  | $\mathbf{2 0 1 0}$ Valuation Results <br> Reflecting Alternative <br> Payroll Growth and Salary <br> Scale Assumptions |  |
| :--- | :---: | :---: |
| Accrued Liability Funding Ratio | $\mathbf{2 0 1 0}$ Valuation Results | $78.5 \%$ |
| Projected Benefit Funding Ratio | $89.3 \%$ | $79.6 \%$ |
| Unfunded Accrued Liability (in billions) | $\$ 4.76$ | $90.3 \%$ |
| Normal Cost Rate (\% of pay) | $8.36 \%$ | $\$ 4.44$ |
| Amortization of Unfunded Accrued Liability | $7.11 \%$ | $8.15 \%$ |
| (\% of pay) (AVA) | $0.24 \%$ | $7.16 \%$ |
| Expenses (\% of pay) | $15.71 \%$ | $0.24 \%$ |
| Total Required Contribution (\% of pay) | $(4.00 \%)$ | $15.55 \%$ |
| Contribution Deficiency (\% of pay) (AVA) |  | $(3.84 \%)$ |

## Effects of Changes

## Valuation of Annual Benefit Increases

A very important assumption affecting the valuation results is the expectation of annual increases in the benefits being paid to retirees and beneficiaries. The plan's accrued liability funding ratio (on a market value of assets basis and assuming no increases in 2011 and 2012 and 2 percent post-retirement benefit increases in all future years) is currently 67.6 percent. If the plan reaches a funding ratio of 90 percent (on a market value of assets basis) in the future, post-retirement increases will revert to the 2.5 percent level.

We performed a projection of liabilities and assets, using the 2010 valuation results as a baseline and assuming future experience follows the valuation assumptions. The projection indicates that, without contribution increases (other than those effective beginning July 1, 2011 through July 1, 2014), changes in benefits or assumptions, or favorable experience, the funded status of this plan is expected to decline from the current level of 67.6 percent (on a market value basis).

The liabilities in this report are calculated using the reduced 2.0 percent annual increases for all future years. This approach was prescribed by TRA based on their interpretation of applicable Minnesota Statutes (and their consultation with the LCPR). If we had used annual increases of 2.5 percent instead of 2.0 percent after 2012, the liability would have been $\$ 1.5$ billion higher ( $\$ 23.6$ billion instead of $\$ 22.1$ billion), resulting in a funded ratio of 63.2 percent (on a market value basis).

## Rec onciliation of Member Data*

Fiscal Year Ended June 30, 2010

|  | Active** <br> Members | Former*** <br> Members | Service <br> Retirements | Disability <br> Retirements | Survivors | Total |
| :--- | :---: | ---: | :---: | ---: | ---: | ---: | ---: |
| Members on July 1, 2009 | 77,786 | 35,563 | 46,108 | 624 | 3,476 | 163,557 |
| New hires | 4,397 | 0 | 0 | 0 | 0 | 4,397 |
| Return from inactive | 1,415 | $(1,415)$ | 0 | 0 | 0 | 0 |
| Return from zero balance | 475 | 0 | 0 | 0 | 0 | 475 |
| Transfer to inactive | $(3,922)$ | 3,922 | 0 | 0 | 0 | 0 |
| Refunded | $(258)$ | $(1,379)$ | 0 | 0 | 0 | $(1,637)$ |
| Restored writeoff | 0 | 128 | 0 | 0 | 0 | 128 |
| Repay refunds | 0 | 47 | 0 | 0 | 0 | 47 |
| Transfer from non-status | 0 | 30 | 0 | 0 | 0 | 30 |
| Retirements | $(1,771)$ | $(583)$ | 2,366 | $(41)$ | 0 | $(29)$ |
| Benefits began | 0 | 0 | 0 | 59 | 378 | 437 |
| Benefits ended | 0 | 0 | 0 | $(5)$ | $(59)$ | $(64)$ |
| Deaths | $(57)$ | $(31)$ | $(914)$ | $(19)$ | $(113)$ | $(1,134)$ |
| Adjustments | $(146)$ | 125 | $(4)$ | $(3)$ | 0 | $(28)$ |
| Net changes | 133 | 844 | 1,448 | $(9)$ | 206 | 2,622 |

* All figures in this chart were provided by the Teachers Retirement Association. Active member double counts certain disabled members. Recipient counts include all pensions in force, including double counting of multiple benefit types. Service Retirements include Supplemental and Variable optional joint annuitants.
** Active members include 41 Basic and 77,315 Coordinated members.
*** Former members include 39 Basic members and 36,368 Coordinated members.
**** Benefit recipients include 5,377 Basic members and 46,476 Coordinated members.

| Former Member Statistics | Vested | Non-Vested | Total |
| :--- | ---: | ---: | ---: |
| Number | 12,756 | 23,651 | 36,407 |
| Average Age | 48.4 years | 42.8 years | 44.8 years |
| Average Service | 7.4 years | 0.9 years | 3.2 years |
| Average annual benefits, with augmentation to Normal Retirement <br> $\quad$ Date and 4 percent Combined Service Annuity load | $\$ 8,946$ | N/A | N/A |
| Average refund value, with 4 percent Combined Service <br> Annuity load | $\$ 25,874$ | $\$ 1,854$ | $\$ 10,271$ |

## Statement of Plan Net Assets

## Fiscal Year Ended June 30, 2010

## (Dollars in Thousands)

| Assets | Market Value |
| :---: | :---: |
| Cash and short term investments |  |
| Cash .................................................................................... | \$ 4,185 |
| Building account cash.................................................................. | 2 |
| Short-term investments | 334,912 |
| Total cash and short-term investments ................................................. | \$ 339,099 |
| Receivables ..................................................................................... | 13,961 |
| Investments (at fair value) |  |
| Fixed income pool.................................................................... | \$ 3,670,822 |
| Minneapolis pool ......................................................................... | 153 |
| Alternative investments pool ........................................................ | 2,327,655 |
| Indexed equity pool..................................................................... | 2,383,658 |
| Domestic equity pool .................................................................... | 3,914,537 |
| Global equity pool. | 2,301,526 |
| Total investments........................................................................... | \$ 14,598,351 |
| Securities lending collateral............................................................. | \$ 1,343,468 |
| Building |  |
| Land ......................................................................................... | \$ 171 |
| Building and equipment............................................................... | 11,279 |
| Reserve for building depreciation ............................................ | $(2,532)$ |
| Deferred bond charge.................................................................. | 146 |
| Reserve for deferred bond charge amortization ......................... | (45) |
| Total building.............................................................................. | \$ 9,019 |
| Fixed assets net of accumulated depreciation......................................... | \$ 1,324 |
| Total Assets..... | \$ 16,305,222 |

## Statement of Plan Net Assets

## Fiscal Year Ended June 30, 2010

## (Dollars in Thousands)

| Liabilities | Market Value |
| :---: | :---: |
| Current |  |
| Accounts payable....................................................................... | \$ 12,180 |
| Accrued compensated absences ..................................................... | 62 |
| Accrued expenses - building......................................................... | - 1 |
| Bonds payable............................................................................. | 255 |
| Bonds interest payable .................................................................. | 45 |
| Securities lending collateral. | 1,343,468 |
| Total current liabilities. | \$ 1,356,011 |
| Long term |  |
| Accrued compensated absences ...................................................... | \$ 707 |
| Accrued other postemployment benefits (OPEB) liability ................. | . 43 |
| Bonds payable.............................................................................. | 8,921 |
| Total long-term liabilities .................................................................... | \$ 9,671 |
| Total Liabilities ................................................................................ | \$ 1,365,682 |
| Net assets held in trust for pension benefits ........................................ | \$ 14,939,540 |
| Earnings Limitation Savings Account (ELSA) accounts payable ........ | $(22,300) *$ |
| Net assets held in trust, after adjustment for ELSA accounts .............. | \$ 14,917,240 |

* Not calculated by Mercer, TRA determined.


## Reconciliation of Plan Assets

## Fiscal Year Ended June 30, 2010

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, 2009 to June 30, 2010.
(Dollars in Thousands)MarketChange in AssetsValue

1. Fund balance at market value at July $\mathbf{1 , 2 0 0 9}$ ..... \$ 13,813,826
2. Contributions
a. Member .....  \$ 214,909
b. Employer ..... 220,538
c. Direct aid (state/city/county) ..... 21,550
d. Earnings Limitation Savings Account (ELSA) ..... 1,257
e. Total contributions ..... \$ 458,254
3. Investment income
a. Investment income/(loss) ..... \$ 2,109,356
b. Investment expenses ..... $(21,716)$
c. Total investment income/(loss) ..... \$ 2,087,640
4. Other ..... 3,593
5. Total income (2.e + 3.c + 4.) ..... \$ 2,549,487
6. Benefits Paid
a. Annuity benefits ..... \$ $(1,421,382)$
b. Refunds ..... $(12,804)$
c. Total benefits paid ..... \$ $(1,434,186)$
7. Administrative Expenses ..... $(9,587)$
8. Total disbursements (6.c. +7 ) ..... \$ (1,443,773)
9. Increase in ELSA account value ..... $(2,300)$
10. Fund balance at market value at July $\mathbf{1 , 2 0 1 0}$ ..... \$ 14,917,240

## Actuarial Asset Value

Fiscal Year Ended June 30, 2010
(Dollars in Thousands)
June 30, 2010

1. Market value of assets available for benefits*
\$ 14,917,240
2. Determination of average balance
a. Assets available at July 1, 2009* $\qquad$ 13,833,826
b. Assets available at June 30, 2010* $\qquad$ 14,939,540
c. Net investment income for fiscal year ending June 30, 2010 ..................................... 2,087,640
d. Average balance [a. + b. - c.] / 2
\$ 13,342,863
3. Expected return [8.5 percent * 2.d.]............................................................................... $1,134,143$
4. Actual return.................................................................................................................. 2,087,640
5. Current year unrecognized asset return 953,497
6. Unrecognized asset returns**
a. Year ended June 30, 2010

Original
Amount
b. Year ended June 30, 2009
c. Year ended June 30, 2008
d. Year ended June 30, 2007
e. Total return not yet recognized
\$
953,497
$(4,812,478)$
$(1,066,002)$
725,920
7. Actuarial value at June 30, 2010 (1. - 6.e.)

| \% Not <br> Recognized |  |  |
| :---: | :---: | ---: |
| $80 \%$ | $\$$ | 762,798 <br> $60 \%$ |
| $40 \%$ |  | $(2,887,487)$ |
| $20 \%$ |  | $1426,401)$ |
|  | $\$$ | $(2,405,906)$ |
|  | $\$$ | $\mathbf{1 7 , 3 2 3 , 1 4 6}$ |

[^2]
## Actuarial Valuation Balance Sheet

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 members' rate of contribution is fixed at the current schedule of compensation. The employer's rate of contribution is the balance required to cover the total rate of contribution.

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) <br> June 30, 2010

A. Actuarial Value of Assets
\$ 17,323,146
B. Expected Future Assets

1. Present value of expected future statutory supplemental contributions* ...................... \$ 2,082,495
2. Present value of expected future normal cost contributions........................................ 2,899,372
3. Total expected future assets (1. + 2.)....................................................................... \$ 4,981,867
C. Total Current and Expected Future Assets** ................................................................. \$ 22,305,013
D. Current Benefit Obligations Non-Vested Vested Total
4. Benefit recipients

| a. | Service retirements | $\$$ | 0 | $\$ 12,725,677$ |
| :--- | :--- | :--- | ---: | ---: |
| b. | Disability |  | 0 | 159,513 |
| c. | Survivors |  | 0 | 765,441 |

2. Deferred retirements with augmentation
to Normal Retirement Date
3. Former members without vested rights***
4. Active members
5. Total current benefit obligations
E. Expected Future Benefit Obligations
F. Total Current and Expected Future Benefit Obligations

| 0 | 500,185 | 500,185 |
| :---: | :---: | :---: |
| 43,842 | 0 | 43,842 |
| 36,814 | 6,928,301 | 6,965,115 |
| \$ 80,656 | 21,079,117 | 21,159,7 |

\$ 24,981,006
G. Unfunded Current Benefit Obligations (D.5-A)
\$ 3,836,627
H. Unfunded Current and Future Benefit Obligations (F. - C.)
\$ 2,675,993

* Under LCPR guidelines, this amount does not include supplemental payments which could occur after the expiration of the remaining 27 year amortization period.
** Does not reflect deferred investment losses in the asset smoothing method. Total expected future assets on a market value basis are \$19,899,107.
*** Former members with less than three years of service that 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, 2010
(Dollars in Thousands)
Actuarial
Present Value
of Projected
Benefits

| Actuarial |  |
| :---: | :---: |
| Present Value |  |
| of Future | Actuarial |
| Normal Costs | Accrued |
| Liability |  |

A. Determination of Actuarial Accrued Liability (AAL)

1. Active Members
a. Retirement annuities ............................. \$ 9,894,546 \$ 2,318,878 \$ 7,575,668
b. Disability benefits ................................ 160,555 63,642 96,913
c. Survivor benefits.................................. 74,448 28,458 45,990
d. Deferred retirements ............................. 363,329 183,566 179,763
e. Refunds...................................................... 293,470 304,828 (11,358)
f. Total
\$ 10,786,348 \$ 2,899,372 \$ 7,886,976
2. Deferred retirements with future augmentation to Normal Retirement Age $\qquad$

| 500,185 | 0 | 500,185 |  |  |
| ---: | ---: | ---: | ---: | ---: |
| 43,842 | 0 | 43,842 |  |  |
|  | $13,650,631$ | 0 | $13,650,631$ |  |
| $\$$ | $24,981,006$ | $\$$ | $2,899,372$ | $\$$ |

B. Determination of Unfunded Actuarial Accrued Liability (UAAL)*

1. Actuarial accrued liability \$ 22,081,634
2. Actuarial value of assets .................................................................................... $17,323,146$
3. Unfunded actuarial accrued liability.
$\$ \quad 4,758,488$
C. Determination of Supplemental Contribution Rate*
4. Present value of future payrolls through the amortization date of June 30, 2037...... \$ 66,961,252
5. Supplemental contribution rate (B.3 / C.1)**...................................................... $7.11 \%$

* On a market value of assets basis, the unfunded actuarial accrued liability is $\$ 7,164,394$ and the supplemental contribution rate is 10.70 percent of payroll.
** The amortization factor as of July 1, 2010 is 16.5437.


## Changes in Unfunded Actuarial Accrued Liability

## Fiscal Year Ended June 30, 2010

## (Dollars in Thousands)

Year Ending
June 30, 2010
A. Unfunded actuarial accrued liability at beginning of year

$\qquad$ ..... \$
B. Changes due to interest requirements and current rate of funding*1. Normal cost and actual administrative expenses
$\qquad$\$369,166
2. Contributions ..... $(458,254)$
3. Interest on A., B. 1 and B. 2 ..... 440,967
4. Total (B.1. + B.2. + B.3.) ..... \$ ..... 351,879
C. Expected unfunded actuarial accrued liability at end of year (A. + B.4.) ..... \$ ..... 5,584,273
D. Increase (decrease) due to actuarial losses (gains) because of experiencedeviations from expected

1. Salary increases. ..... \$$(297,584)$
2. Investment return (AVA) ..... 1,061,858
3. Mortality of benefit recipients ..... 44,520
4. Other items ..... 119,882
5. Total ..... \$ ..... 928,676
E. Unfunded actuarial accrued liability at end of year before plan amendmentsand changes in actuarial assumptions (C. + D.5.)\$6,512,949
F. Change in unfunded actuarial accrued liability due to changes in plan provisions ..... \$ ..... $(1,692,109)$G. Change in unfunded actuarial accrued liability due to changes in actuarialassumptions**.\$$(62,352)$
H. Changes in unfunded actuarial accrued liability due to changes in actuarial asset method $\qquad$\$0
I. Unfunded actuarial accrued liability at end of year (E. $+F .+G+H.) \ldots \ldots . . . . . . . . . . . . . . \quad \$ \quad 4,758,488$
[^3]
## Determination of Contribution Sufficiency/(Deficiency) - Total

July 1, 2010

The annual required contribution (ARC) is the sum of the normal cost, a supplemental contribution to amortize the UAAL, and an allowance for expenses.

## (Dollars in Thousands)

A. Statutory Contributions - Chapter 354*

1. Employee contributions
5.50\%
\$
5.68\%
2. Supplemental contributions***
a. 1993 Legislation.......................................................................... 0.12\%
b. 1996 Legislation.......................................................................... 0.09\%
c. 1997 Legislation.......................................................................... 0.32\% $11.71 \%$ \$ 474,085
3. Total
B. Required Contributions - Chapter 356
4. Normal Cost
a. Retirement benefits ........................................................................ 6.83\% \$ 276,561
b. Disability benefits ...................................................................... 0.17\% 6,937
c. Survivor..................................................................................... 0.08\% 3,246
d. Deferred retirement benefits ........................................................ 0.56\% 22,692
e. Refunds ...................................................................................... 0.72\% 29,038
f. Total........................................................................................... 8.36\% \$ 338,474
5. Supplemental contribution amortization by July 1, 2037 of
Unfunded Actuarial Accrued Liability ............................................... 7.11\% \$ 287,781
6. Allowance for expenses.................................................................... 0.24\% 9,714
7. Total annual contribution for fiscal year ending June 30, 2010****....... $15.71 \%$ \$ 635,969
C. Contribution Sufficiency/(Deficiency) (A.4-B.4)**** .............................. (4.00\%) \$ $(161,884)$

Note: Projected annual payroll for fiscal year beginning on the valuation date $\qquad$ \$ 4,047,547

* The rates shown do not reflect the statutory contribution increases that will be phased in beginning July 1, 2011.
** Employer contribution rate is blended to reflect rates of 13.14 percent of pay for 41 Basic members, 5.50 percent for pay for 74,515 Coordinated members not employed by Special School District \#1, and 9.14 percent of pay for 2,800 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 market value of assets basis, the total required contribution is 19.30 percent of payroll and the contribution deficiency is (7.59 percent) of payroll.


## Solvency Test

(Dollars in Thousands)

Aggregate Accrued Liabilities

Portion of Actuarial Accrued Liabilities Covered by Reported Assets
(3)
(2) Members

| Valuation as of | (1) <br> Member | Retirees and |
| :---: | :---: | :---: |
| June 30 | Contributions | Beneficiaries |

2001 \$ 1,403,755 \$ 9,106,198

2002 \$ 1,483,243 \$ 9,555,364
2003 \$ 1,561,048 \$ 9,713,507

| 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 | $\$ 2,128,600$ | $\$ 13,650,631$ | $\$ 6,302,403$ | $\$ 17,323,146$ | $100 \%$ | $100 \%$ | $24.5 \%$ |

## Schedule of Active Member Valuation Data

| Year <br> Ended <br> June 30 | Active <br> Members | (\$ in thousands) <br> Annual <br> Covered Payroll | $\%$ <br> Increase in <br> Covered Payroll | $\$$ <br> Annual <br> Average <br> 2000$\quad 70,508$ |
| :---: | :---: | :---: | :---: | :---: |
| 2001 | 71,097 | $\$ 2,704,575$ | $3.0 \%$ | $\$ 38,858$ |
| 2002 | 71,690 | $\$ 2,812,000$ | $4.0 \%$ | $\$ 39,552$ |
| 2003 | 71,916 | $\$ 2,873,771$ | $2.2 \%$ | $\$ 40,086$ |
| 2004 | 72,008 | $\$ 2,952,887$ | $2.8 \%$ | $\$ 41,060$ |
| 2005 | 74,552 | $\$ 3,032,483$ | $2.7 \%$ | $\$ 42,113$ |
| 2006 | 79,164 | $\$ 3,121,571$ | $2.9 \%$ | $\$ 41,871$ |
| 2007 | 77,694 | $\$ 3,430,645$ | $9.9 \%$ | $\$ 43,336$ |
| 2008 | 76,515 | $\$ 3,532,159$ | $3.0 \%$ | $\$ 45,462$ |
| 2009 | 77,162 | $\$ 3,645,230$ | $3.2 \%$ | $\$ 47,641$ |
| 2010 | 77,356 | $\$ 3,761,484$ | $3.2 \%$ | $\$ 48,748$ |

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

Through June 1, 2010 - End of Budget Year for Benefit Payments - Prepared by TRA

|  | Added To Rolls |  | Removed From Rolls |  |  | June 1, 20XX Payment |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fiscal Year | Number | Annual Allowances | Number |  | Annual Allowances | Number |  | Annual Allowances | Average <br> Annual <br> Allowances |  |
| 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 |
| 2003 |  |  |  |  |  |  |  |  |  |  |
| Retirement | 1,752 | \$ 45,213,170 | 681 | \$ | 16,595,867 | 32,638 | \$ | 905,702,949 | \$ | 27,751 |
| Disability | 60 | \$ 838,012 | 54 | \$ | 1,199,063 | 559 | \$ | 10,839,002 | \$ | 19,355 |
| Beneficiaries | 278 | \$ 6,006,648 | 136 | \$ | 2,022,035 | 2,723 | \$ | 58,540,855 | \$ | 21,499 |
| 2002 - Total Benefit Recipients |  |  |  |  | 34,974 |  | \$ | 946,344,333 |  |  |
| 2001 - Total Ben | Recipients |  |  |  | 33,757 |  | \$ | 861,787,476 |  |  |

* 2008 data reflects higher additions, removals and FY 2009 data adjustments associated with the conversion of former MTRFA benefit recipient rolls into TRA benefit payment systems.
Note: Detailed data on retirees and beneficiaries added to and removed from rolls is not available prior to fiscal year 2003.


Statistical

Statistical

Statistical
Statistical
Statistical

Statistical

## Statistical Summary

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 77 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 77 provides historical information on the total member and employer contribution rates.

The schedule of Pension Assets Compared to Pension Liabilities, found on pages 78-79, 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 80-89 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, 2010, by age and service credit totals.

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

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

All non-accounting data is derived from TRA internal sources.

## 10-Year History of Plan Net Assets

| June 30 <br> Fiscal Year End | Plan Net Assets | \% Change <br> From Prior Year |
| :---: | :---: | :---: |
| 2001 | $\$ 15,902,335,962$ | $-10.4 \%$ |
| 2002 | $\$ 13,997,762,175$ | $-12.0 \%$ |
| 2003 | $\$ 13,061,606,463$ | $-6.7 \%$ |
| 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 | $\$ 14,939,539,780$ | $8.0 \%$ |

## 10-Year History of Contribution Rates

|  | Basic Program <br> Employee <br> Contribution <br> Rate | Basic Program <br> Employer <br> Yontribution <br> Rate | Basic Program <br> Total <br> Contribution <br> Rate | Coordinated <br> Employee <br> Contribution <br> Rate | Coordinated <br> Employer <br> Contribution <br> Rate | Coordinated <br> Total <br> Contribution <br> Rate |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 2001 | $9.00 \%$ | $9.00 \%$ | $18.00 \%$ | $5.0 \%$ | $5.0 \%$ | $10.00 \%$ |
| 2002 | $9.00 \%$ | $9.00 \%$ | $18.00 \%$ | $5.0 \%$ | $5.0 \%$ | $10.00 \%$ |
| 2003 | $9.00 \%$ | $9.00 \%$ | $18.00 \%$ | $5.0 \%$ | $5.0 \%$ | $10.00 \%$ |
| 2004 | $9.00 \%$ | $9.00 \%$ | $18.00 \%$ | $5.0 \%$ | $5.0 \%$ | $10.00 \%$ |
| 2005 | $9.00 \%$ | $9.00 \%$ | $18.00 \%$ | $5.0 \%$ | $5.0 \%$ | $10.00 \%$ |
| 2006 | $9.00 \%$ | $9.00 \%$ | $18.00 \%$ | $5.0 \%$ | $5.0 \%$ | $10.00 \%$ |
| 2007 | $9.00 \%$ | $9.00 \%$ | $18.00 \%$ | $5.5 \%$ | $5.0 \%$ | $10.50 \%$ |
| 2008 | $9.00 \%$ | $9.50 \%$ | $18.50 \%$ | $5.5 \%$ | $5.5 \%$ | $11.00 \%$ |
| 2009 | $9.00 \%$ | $9.50 \%$ | $18.50 \%$ | $5.5 \%$ | $5.5 \%$ | $11.00 \%$ |
| 2010 | $9.00 \%$ | $9.50 \%$ | $18.50 \%$ | $5.5 \%$ | $5.5 \%$ | $11.00 \%$ |

## Teachers Retirement Association 10-Year History of Changes in Plan Net Assets

|  |  | 2001 |  | 2002 |  | 2003 |  | 2004 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Additions |  |  |  |  |  |  |  |  |
| Member Contributions | \$ | 145,075,285 | \$ | 152,331,067 | \$ | 155,577,148 | \$ | 159,139,548 |
| Employer Contributions |  | 139,799,408 |  | 142,221,589 |  | 149,480,510 |  | 151,028,911 |
| Net Income (Loss) From Investing Activity |  | (1,244,340,580) |  | (1,236,187,539) |  | 293,085,074 |  | 2,204,787,495 |
| Other Income, Net |  | 3,156,294 |  | 4,488,404 |  | 4,416,909 |  | 7,266,004 |
| Total Additions to Plan Net Assets | \$ | (956,309,593) | \$ | (937,146,479) | \$ | 602,559,641 |  | 2,522,221,958 |

Deductions

| Pension Benefits | \$ | 861,767,476 | \$ | 946,344,333 | \$ | 978,466,617 | \$ | 1,008,410,471 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Refunds |  | 7,608,839 |  | 7,353,363 |  | 6,656,191 |  | 6,861,708 |
| Administrative Expenses |  | 13,077,718 |  | 12,911,651 |  | 13,158,348 |  | 12,179,212 |
| Other |  | 8,460,781 |  | 817,961 |  | 434,197 |  | 573,379 |
| Total Deductions from Plan Net Assets | \$ | 890,914,814 | \$ | 967,427,308 | \$ | 998,715,353 |  | 1,028,024,770 |
| Net Increase (Decrease) |  | $(1,847,224,407)$ |  | (1,904,573,787) | \$ | (396,155,712) |  | 1,494,197,188 |
| Net Assets Held in Trust, Beginning of Year |  | 17,749,580,369 |  | 15,902,335,962 |  | 13,997,762,175 |  | 13,601,606,463 |
| Net Assets Held in Trust, End of Year |  | 15,902,355,962 |  | 13,997,762,175 |  | 3,601,606,463 |  | 15,095,803,651 |

*"Net assets 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

|  | 2001 | 2002 | $\mathbf{2 0 0 3}$ | 2004 |
| :--- | ---: | ---: | ---: | ---: |
| Pension Assets (Actuarial Value) | $\$ 16,834,024,000$ | $\$ 17,378,994,000$ | $\$ 17,384,179,000$ | $\$ 17,519,909,000$ |
| Accrued Liabilities | $\underline{\$ 15,903,099,000}$ | $\underline{\$ 16,503,099,000}$ | $\underline{\$ 16,856,379,00}$ | $\underline{\$ 17,518,784,000}$ |
| Unfunded Liabilities (Sufficiency) | $\underline{\$(930,925,000})$ | $\underline{\$(875,895,000})$ | $\underline{\underline{\$(527,800,000})}$ | $\underline{\underline{\$(1,125,000})}$ |
| Funded Ratio | $105.9 \%$ | $105.3 \%$ | $103.1 \%$ | $100.0 \%$ |


|  | 2005 |  | 2006* |  | 2007 |  | 2008 |  | 2009 |  | 2010 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$ | 160,982,004 | \$ | 177,084,906 | \$ | 199,868,969 | \$ | 209,592,461 | \$ | 212,042,535 | \$ | 214,908,960 |
|  | 157,693,090 |  | 200,285,886 |  | 209,219,130 |  | 231,561,322 |  | 240,718,200 |  | 242,087,985 |
|  | 1,575,519,541 |  | 1,951,778,366 |  | 3,056,492,094 |  | $(926,044,140)$ |  | (3,318,368,290) |  | 2,087,639,841 |
|  | 6,295,759 |  | 11,412,062 |  | 7,901,279 |  | 7,529,753 |  | 6,526,400 |  | 4,850,206 |
| \$ | 1,900,490,394 | \$ | 2,340,561,220 | \$ | 3,473,481,472 | \$ | $(477,360,604)$ |  | $(2,859,081,155)$ | \$ | 2,549,486,992 |
| \$ | 1,048,440,525 | \$ | 1,224,212,024 | \$ | 1,273,093,384 | \$ | 1,330,836,947 | \$ | 1,383,667,466 | \$ | 1,422,578,335 |
|  | 6,744,116 |  | 11,872,504 |  | 12,088,193 |  | 11,770,086 |  | 14,429,351 |  | 11,607,086 |
|  | 10,883,151 |  | 11,912,701 |  | 10,635,365 |  | 10,261,139 |  | 10,608,003 |  | 9,587,524 |
|  | 1,622,386 |  | 1,856,275 |  | 3,309,099 |  | 1,687,335 |  | 5,354,052 |  | 0 |
| \$ | 1,067,690,178 | \$ | 1,249,853,504 | \$ | 1,299,126,041 | \$ | 1,354,555,508 | \$ | 1,414,058,872 | \$ | 1,443,772,945 |
| \$ | 832,800,216 | \$ | 1,090,707,716 | \$ | 2,174,355,431 |  | $(1,831,916,112)$ | \$ | $(4,273,140,027)$ | \$ | 1,105,714,047 |
| \$ 15,095,803,651 |  |  | 16,673,818,725 |  | 17,764,526,441 |  | 19,938,881,872 |  | 18,106,965,760 | \$ | 13,833,825,733 |
| \$ 15,928,603,867 |  |  | 17,764,526,441 |  | 19,938,881,872 |  | 18,106,965,760 |  | 13,833,825,733 | \$ | 14,939,539,780 |


| 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| \$ 17,752,917,000 | \$ 19,035,612,000 | \$ 18,794,389,076 | \$ 18,226,985,000 | \$ 17,882,408,000 | \$ 17,323,146,000 |
| \$ 18,021,410,000 | \$ 20,679,111,000 | \$ 21,470,314,497 | \$ 22,230,841,000 | \$ 23,114,802,000 | \$ 22,081,634,000 |
| \$ 268,493,000 | \$ 1,643,499,000 | \$ 2,675,925,421 | \$ (4,003, 856,000 ) | \$ (5,232,394,000) | \$ (4,758,488,000) |
| 98.5\% | 92.0\% | 87.5\% | 82.0\% | $77.4 \%$ | $78.5 \%$ |

## 10-Year History of Benefit Recipients by Category

As of June 30, 20XX

| Year | Annuitants | Disabilitants | Survivors | Total |
| :---: | :---: | :---: | :---: | :---: |
| 2001 | 31,169 | 518 | 2,070 | 33,757 |
| 2002 | 32,231 | 551 | 2,192 | 34,974 |
| 2003 | 33,290 | 558 | 2,351 | 36,199 |
| 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 |

## Schedule of Benefit Amounts Paid

For Month of June 2010 - Payment Made June 1, 2010
\(\left.$$
\begin{array}{lcccc}\begin{array}{c}\text { Monthly } \\
\text { Benefit Amount }\end{array} & \begin{array}{c}\text { Number of } \\
\text { Recipients }\end{array} & \begin{array}{c}\text { Cumulative } \\
\text { Total }\end{array}
$$ \& Percent \& Cumulative <br>

Percent\end{array}\right]\)|  |
| :--- |
| Under $\$ 100-499$ |
| $500-$ |
| $\$ 1,000-1,499$ |

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

| Pension Benefits | 2001 |  | 2002 |  | 2003 | 2004 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Annuities | \$ 838,646,379 | \$ | 919,648,266 | \$ | 952,017,588 | \$ | 979,108,590 |
| Disabilities | 10,530,210 |  | 11,477,973 |  | 11,346,039 |  | 11,734,673 |
| Survivor Benefits | 12,222,381 |  | 14,096,110 |  | 13,613,284 |  | 14,201,212 |
| Total Pension Benefits | \$ 861,398,970 |  | 945,222,349 | \$ | 976,976,911 |  | 1,005,044,475 |
| Annuities Redirected to Earnings Limitation Savings Account (ELSA) | \$ 388,508 | \$ | 1,121,984 | \$ | 1,489,708 | \$ | 3,365,997 |
| Refunds | \$ 7,608,838 | \$ | 7,353,363 | \$ | 6,656,191 | \$ | 6,861,707 |
| Total Benefits and Refunds | \$ 869,396,316 |  | 953,697,696 |  | 985,122,810 |  | 1,015,272,179 |


| 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| \$ 1,019,776,085 | \$ 1,190,295,077 | \$ 1,241,862,723 | \$ 1,297,772,858 | \$ 1,352,741,935 | \$ 1,391,181,476 |
| 11,810,137 | 13,118,722 | 11,923,494 | 12,049,579 | 12,076,621 | 13,075,898 |
| 13,869,225 | 17,616,002 | 15,774,162 | 17,460,466 | 16,547,705 | 17,124,339 |
| \$ 1,045,455,447 | \$ 1,221,029,801 | \$ 1,269,560,379 | \$ 1,327,282,903 | \$ 1,381,366,261 | \$ 1,421,381,713 |
| \$ 2,985,078 | \$ 3,182,223 | \$ 3,533,005 | \$ 3,554,045 | \$ 2,301,205 | \$ 1,196,622 |
| \$ 6,744,116 | \$ 11,872,504 | \$ 12,088,193 | \$ 11,770,086 | \$ 14,429,351 | \$ 11,607,086 |
| \$ 1,055,184,641 | \$ 1,236,084,528 | \$ 1,285,181,577 | \$ 1,342,607,034 | \$ 1,398,096,817 | \$ 1,434,185,421 |

## Schedule of Benefit Recipients by Current Age

For Month of June 2010 - Payment Made June 1, 2010


## Benefit Recipients by Effective Date of Retirement

For Month of June 2010 - Payment Made June 1, 2010
Total Recipients: 51,465


## Schedule of New Retirees and Initial Benefit Paid

For the Ten Fiscal Years Ending June 30, 2010

## Years of Formula Service

$>30$

| Fiscal Year | $<10$ | 10-15 | 16-20 | 21-25 | (FY 2000-2008) |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 26-30 | $\begin{gathered} 31-35 \\ \text { (FY 2009) } \\ \hline \end{gathered}$ | >35 |  |
| 2001 |  |  |  |  |  |  |  |  |
| Avg. Monthly Benefit | \$213 | \$740 | \$1,114 | \$1,743 | \$2,523 | \$3,262 |  | \$2,312 |
| Number of Retirees | 236 | 191 | 175 | 245 | 362 | 1,125 |  | 2,334 |
| 2002 |  |  |  |  |  |  |  |  |
| Avg. Monthly Benefit | \$242 | \$777 | \$1,247 | \$1,638 | \$2,298 | \$3,137 |  | \$2,089 |
| Number of Retirees | 249 | 172 | 138 | 203 | 201 | 813 |  | 1,776 |
| 2003 |  |  |  |  |  |  |  |  |
| Avg. Monthly Benefit | \$249 | \$7,589 | \$1,242 | \$1,605 | \$2,451 | \$3,204 |  | \$2,266 |
| Number of Retirees | 213 | 147 | 129 | 162 | 191 | 911 |  | 1,753 |
| 2004 |  |  |  |  |  |  |  |  |
| 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 |
| 2005 |  |  |  |  |  |  |  |  |
| 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 |
| 2006 |  |  |  |  |  |  |  |  |
| 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 |
| 2007 |  |  |  |  |  |  |  |  |
| 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 |
| 2008 |  |  |  |  |  |  |  |  |
| 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 |
| 2009 |  |  |  |  |  |  |  |  |
| 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 |
| 2010 |  |  |  |  |  |  |  |  |
| 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 |

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

## Distribution of TRA Benefits Mailing Address of Benefit Recipient



## Distribution of TRA Benefits <br> Mailing Address of Benefit Recipient


$20.0000631 / 3$
Total Recipients: 51,465
Note: 58 recipients reside outside the United States
Minnesota Recipients $=86.80$ 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, 2010

| County | No. of Members | Annual Benefit |
| :---: | :---: | :---: |
| Aitkin | 186 | \$5,070,679.35 |
| Anoka | 2,144 | \$64,157,046.97 |
| Becker | 507 | \$13,451,866.86 |
| Beltrami | 752 | \$20,447,943.96 |
| Benton | 286 | \$8,126,137.26 |
| Big Stone | 77 | \$2,009,224.29 |
| Blue Earth | 757 | \$22,638,773.69 |
| Brown | 200 | \$4,715,030.60 |
| Carlton | 351 | \$8,984,963.51 |
| Carver | 524 | \$15,440,332.05 |
| Cass | 529 | \$14,273,954.32 |
| Chippewa | 123 | \$3,472,010.85 |
| Chisago | 379 | \$10,855,465.19 |
| Clay | 564 | \$15,812,755.25 |
| Clearwater | 122 | \$3,113,410.12 |
| Cook | 119 | \$1,922,213.48 |
| Cottonwood | 145 | \$3,814,469.80 |
| Crow Wing | 914 | \$26,455,345.47 |
| Dakota | 2467 | \$66,821,823.71 |
| Dodge | 154 | \$4,220,594.87 |
| Douglas | 585 | \$15,424,362.85 |
| Faribault | 189 | \$4,570,082.11 |
| Fillmore | 246 | \$6,297,661.81 |
| Freeborn | 352 | \$9,341,527.91 |
| Goodhue | 550 | \$15,400,892.81 |
| Grant | 93 | \$2,169,760.74 |
| Hennepin | 9383 | \$269,732,358.24 |
| Houston | 173 | \$4,364,760.34 |
| Hubbard | 401 | \$11,759,723.12 |
| Isanti | 310 | \$8,200,842.72 |
| Itasca | 767 | \$20,729,602.01 |
| Jackson | 117 | \$2,588,113.14 |
| Kanabec | 124 | \$3,395,653.98 |
| Kandiyohi | 648 | \$17,326,860.45 |
| Kittson | 51 | \$1,237,997.68 |
| Koochiching | 200 | \$5,660,856.08 |
| Lac Qui Parle | 85 | \$2,040,564.72 |
| Lake | 159 | \$3,888,832.34 |
| Lake of the Woods | 58 | \$1,645,823.94 |
| Le Sueur | 237 | \$6,539,953.22 |
| Lincoln | 75 | \$1,695,774.33 |
| Lyon | 257 | \$6,873,514.54 |
| Mahnomen | 43 | \$903,809.65 |
| Marshall | 87 | \$2,515,940.84 |


| County | No. of Members | Annual Benefit |
| :---: | :---: | :---: |
| Martin | 202 | \$4,949,731.24 |
| McLeod | 271 | \$7,560,985.00 |
| Meeker | 228 | \$6,856,757.10 |
| Mille Lacs | 254 | \$7,297,330.22 |
| Morrison | 340 | \$9,054,316.03 |
| Mower | 414 | \$11,177,119.06 |
| Murray | 101 | \$2,741,749.29 |
| Nicollet | 395 | \$10,793,763.49 |
| Nobles | 173 | \$4,947,718.72 |
| Norman | 77 | \$2,332,317.44 |
| Olmsted | 1239 | \$32,781,624.90 |
| Otter Tail | 848 | \$22,067,894.23 |
| Pennington | 208 | \$4,964,962.05 |
| Pine | 225 | \$5,604,376.02 |
| Pipestone | 107 | \$2,718,548.25 |
| Polk | 337 | \$8,285,352.67 |
| Pope | 182 | \$5,009,578.23 |
| Ramsey | 3334 | \$85,577,201.52 |
| Red Lake | 43 | \$930,908.21 |
| Redwood | 156 | \$3,754,649.23 |
| Renville | 143 | \$3,416,388.34 |
| Rice | 616 | \$16,338,099.72 |
| Rock | 86 | \$2,034,502.61 |
| Roseau | 159 | \$4,587,600.75 |
| Saint Louis | 1976 | \$44,806,774.18 |
| Scott | 642 | \$18,145,997.00 |
| Sherburne | 655 | \$19,566,699.86 |
| Sibley | 123 | \$3,138,866.21 |
| Stearns | 1414 | \$40,804,637.28 |
| Steele | 340 | \$9,527,492.43 |
| Stevens | 72 | \$1,915,926.58 |
| Swift | 127 | \$3,555,361.36 |
| Todd | 270 | \$7,239,386.31 |
| Traverse | 40 | \$1,007,248.23 |
| Wabasha | 232 | \$6,373,437.74 |
| Wadena | 233 | \$5,972,993.61 |
| Waseca | 185 | \$4,917,461.61 |
| Washington | 1738 | \$46,874,019.98 |
| Watonwan | 95 | \$2,728,973.43 |
| Wilkin | 73 | \$2,132,899.73 |
| Winona | 514 | \$14,003,566.24 |
| Wright | 798 | \$22,794,421.66 |
| Yellow Medicine | 177 | \$4,344,960.64 |
| Grand Total | 46,332 | \$1,265,743,909.57 |

## Schedule of Benefit Recipients by Type

For Month of June 2010 - Payment Made June 1, 2010


June 30, 2010
Distribution of Active Members*

Years of Service as of June 30, 2010**

| Age | <3 | 3-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| <25 | 2,297 | 18 | 1 | - | - | - | - | - | - | - | 2,316 |
| AE*** | 18,912 | 42,208 | 40,401 |  |  |  |  |  |  |  | 19,102 |
| 25-29 | 4,347 | 3,081 | 1,830 | 1 | - | - | - | - | - | - | 9,259 |
| AE*** | 23,909 | 38,510 | 44,726 | 34,678 |  |  |  |  |  |  | 32,883 |
| 30-34 | 1,868 | 1,567 | 5,198 | 1,543 | - | - | - | - | - | - | 10,176 |
| AE*** | 22,493 | 38,772 | 47,486 | 57,609 |  |  |  |  |  |  | 43,091 |
| 35-39 | 1,399 | 817 | 2,364 | 4,675 | 884 | - | - | - | - | - | 10,139 |
| AE*** | 19,744 | 37,511 | 47,094 | 59,295 | 65,672 |  |  |  |  |  | 49,794 |
| 40-44 | 1,414 | 659 | 1,685 | 2,628 | 3,491 | 646 | - | - | - | - | 10,523 |
| AE*** | 16,498 | 36,185 | 44,542 | 58,018 | 66,298 | 68,651 |  |  |  |  | 52,314 |
| 45-49 | 1,233 | 568 | 1,345 | 1,617 | 1,975 | 2,443 | 634 | 1 | - | - | 9,816 |
| AE*** | 15,186 | 32,550 | 45,542 | 56,655 | 64,552 | 68,813 | 69,906 | 47,568 |  |  | 53,998 |
| 50-54 | 1,024 | 467 | 1,083 | 1,408 | 1,464 | 1,654 | 1,851 | 918 | 1 | - | 9,870 |
| AE*** | 14,203 | 30,113 | 43,446 | 56,894 | 63,463 | 67,949 | 69,735 | 69,653 | 49,593 |  | 56,143 |
| 55-59 | 781 | 323 | 830 | 1,163 | 1,371 | 1,418 | 1,302 | 2,064 | 510 | 1 | 9,763 |
| AE*** | 11,259 | 30,358 | 41,732 | 54,267 | 61,605 | 67,320 | 70,169 | 72,442 | 72,436 | 87,383 | 58,812 |
| 60-64 | 504 | 163 | 402 | 526 | 694 | 680 | 567 | 407 | 453 | 82 | 4,478 |
| AE*** | 7,925 | 17,675 | 35,902 | 51,448 | 61,343 | 68,484 | 71,724 | 76,713 | 75,426 | 73,438 | 55,737 |
| 65-69 | 248 | 53 | 78 | 85 | 72 | 84 | 59 | 47 | 30 | 43 | 799 |
| AE*** | 4,874 | 13,516 | 23,414 | 48,011 | 62,549 | 68,485 | 76,316 | 82,847 | 94,094 | 79,561 | 40,963 |
| 70+ | 119 | 23 | 25 | 10 | 9 | 8 | 5 | 3 | 5 | 10 | 217 |
| AE*** | 3,926 | 6,473 | 23,876 | 254,379 | 61,421 | 58,529 | 85,270 | 86,966 | 103,721 | 89,974 | 21,168 |
| Total | 15,234 | 7,739 | 14,841 | 13,656 | 9,960 | 6,933 | 4,418 | 3,440 | 999 | 136 | 77,356 |
| AE*** | 18,910 | 36,279 | 45,475 | 57,472 | 64,457 | 68,238 | 70,248 | 72,351 | 74,576 | 76,692 | 48,966 |

* Unlike the exhibit on page 64, the counts in this exhibit do not include disabled members. Active members include 41 Basic and 77,315 coordinated members..
** This exhibit does not reflect service earned in Combined Service Annuity benefits. It should not be relied upon as an indicator of nonvested status.
*** $A E=$ Average earnings (in dollars)
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, 2010, as reported by the Teachers Retirement Association of Minnesota.


## 10-Year Summary of Membership

| Year Ended <br> June 30 | Active <br> Members | Inactive <br> Members | Benefit <br> Recipients |
| :---: | :---: | :---: | :---: |
| 2001 | 71,097 | 27,256 | 33,757 |
| 2002 | 71,690 | 27,702 | 34,974 |
| 2003 | 71,916 | 28,560 | 36,199 |
| 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 |

## 10-Year Summary of Membership


$\square$ Inactive Members $\square$ Benefit Recipients $\square$ Active Members

## Principal Participating Employers

As of June 30， 2010

| Employer Unit Name | 2010 |  |  | 2009 |  |  | 2008 |  |  | 2007 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & \text { 免 } \\ & \text { تِ } \end{aligned}$ |  |  |  |  |  | $\begin{aligned} & \text { 花 } \\ & \text { تِ } \end{aligned}$ |  |  | 第 |  |
| Minneapolis－Special School District \＃1 | 3，772 | 1 | 4.87 | 3，473 | 1 | 4.50 | 3，406 | 2 | 4.45 | 4，217 | 1 | 5.43 |
| Anoka－Hennepin－ISD \＃11 | 3，309 | 2 | 4.28 | 3，466 | 2 | 4.49 | 3，487 | 1 | 4.56 | 3，506 | 2 | 4.51 |
| MnSCU（MN State Colleges \＆Universities） | 2，876 | 3 | 3.72 | 3，019 | 3 | 3.91 | 3，146 | 3 | 4.11 | 3，253 | 3 | 4.19 |
| Rosemount－Apple <br> Valley－Eagan－ISD \＃196 | 2，711 | 4 | 3.50 | 2，741 | 4 | 3.55 | 2，679 | 4 | 3.50 | 2，685 | 4 | 3.46 |
| Osseo－ISD \＃279 | 1，724 | 5 | 2.23 | 1，745 | 5 | 2.26 | 1，923 | 5 | 2.52 | 1，973 | 5 | 2.54 |
| South Washington County－ISD \＃833 | 1，532 | 6 | 1.98 | 1，476 | 7 | 1.91 | 1，461 | 6 | 1.91 | 1，454 | 6 | 1.87 |
| Rochester－ISD \＃535 | 1，435 | 7 | 1.86 | 1，483 | 6 | 1.92 | 1，457 | 7 | 1.91 | 1，412 | 7 | 1.81 |
| Robbinsdale－ISD \＃281 | 1，101 | 8 | 1.42 | 1，086 | 8 | 1.41 | 1，181 | 8 | 1.54 | 1，245 | 8 | 1.60 |
| Bloomington－ISD \＃271 | 1，030 | 9 | 1.33 | 1，033 | 9 | 1.34 | 1，020 | 9 | 1.33 | 994 | 10 | 1.28 |
| Burnsville－ISD \＃191 | 973 | 10 | 1.26 | 976 | 10 | 1.26 | NA | NA | NA | NA | NA | NA |
| St．Cloud－ISD \＃742 | NA | NA | NA | NA | NA | NA | 967 | 10 | 1.26 | NA | NA | NA |
| Lakeville－ISD \＃194 | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1，078 | 9 | 1.39 |
| All Other | 56，893 |  | 73.55 | 56，664 |  | $\underline{73.45}$ | 55，788 |  | 72.91 | 55，877 |  | 71.92 |
| Total | $\underline{\underline{77,356}}$ |  | $\underline{100.00}$ | 77，162 |  | $\underline{\underline{100.00}}$ | 76，515 |  | $\underline{\underline{100.00}}$ | 77，694 |  | $\underline{\underline{100.00}}$ |

＊Information not available prior to 2007.

## Number of Employer Units

As of June 30， 2010

| Year | Independent School Districts | Joint Power Units | MN State Colleges and Universities （MnSCU） | Charter <br> Schools | State Agencies | Others | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2001 | 340 | 40 | 40 | 28 | 14 | 1 | 463 |
| 2002 | 340 | 39 | 40 | 32 | 11 | 1 | 463 |
| 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 |

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


Plan Statement

## Plan Statement

## June 30, 2010

## 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 hire date. 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 for benefits is earned from teaching service performed on a full-time, part-time or substitute basis up to a maximum of 170 full days per fiscal year (July 1 June 30). Service credit may also be obtained by using paid accumulated sick leave or by purchasing service for a qualified leave of absence. If a teacher teaches less than 170 full days, fractional service credit is given as the ratio of the number of full days taught to 170 . If a teacher teaches only a fractional part of a day, the service credit earned is the actual hours taught divided by a five-hour standard for the day. Even though a teacher may teach more than five hours per day, not more than one day of service credit can be earned on any day. Service credit for MnSCU members is based on a full-time equivalence method. No more than one year of service credit may be earned during any 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 9.0 percent of their annual salary, while Coordinated Plan members (coordinated with Social Security coverage) contribute 5.5 percent of their annual salary.

Beginning July 1, 2011, the employee contribution will be raised annually by 0.50 percent for four years. On July 1, 2014, the employee contribution rate for Coordinated members will be 7.5 percent.

## Employer Contributions

Local school districts and other TRA-covered employer units provide contributions of 9.5 percent of total salary for members in the Basic Plan and 5.5 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, 2011, the employer contribution will be raised annually by 0.50 percent for four years. On July 1, 2014, the employer contribution rate for Coordinated members will be 7.5 percent.

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 $\$ 21.5$ million annually in state and local direct aid. The aid payments are designed to offset unfunded liabilities associated 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;
- $\quad 1.70$ percent of average salary for each subsequent year prior to July 1, 2006; and
- $\quad 1.90$ 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:
- $\quad 1.70$ 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:

- $\quad 1.70$ 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 approximately 80 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:
a. 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
b. 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, 2010, TRA had fewer than ten 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:
a. 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 .
b. 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
c. 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 <br> to July 1, 2006 | Prior to July 1, 2012: 3.0 percent <br> annually through December 31 of <br> the year in which the member <br> would have reached 55 and <br> 5.0 percent annually thereafter <br> each year the benefit is deferred <br> After July 1, 2012: 2.0 percent |
| :--- | :--- |
| Members hired on <br> or after July 1, 2006 | Prior to July 1, 2012: 2.5 percent <br> 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 postretirement increase may be made to a member's monthly benefit.

Currently, a two-year suspension of annual post-retirement increases for benefit recipients is in effect for calendar years 2011 and 2012. Beginning January 1, 2013, annual post-retirement increases will be 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. Beginning July 1, 2011, account balances will accrue interest at a rate of 4 percent annually.

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 6 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 is compounded annually at 6 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 is compounded annually at 6 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.


[^0]:    Nuveen Investment Solutions, 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.

[^1]:    * Rates shown are RP 2000 non-annuitant mortality, projected to 2010, white collar adjustment, set back 5 years for males and 7 years for females.
    ** Rates shown are RP 2000 annuitant mortality, projected to 2010, white collar adjustment, set back 2 years for males and 3 years for females.

[^2]:    * Before recognition of ELSA accounts payable.
    ** Prior to the year ending June 30, 2009, unrecognized asset returns do not include MPRIF gains or losses (pages 32-33).

[^3]:    * 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 the change in the post-retirement investment return assumption benefit is included in Item F.

