A Report on

The Audit of the Teacher Retirement System's Fiscal Year 2004 Financial Statements

January 2005

Report No. 05-022

State Auditor's Office

John Keel, CPA
State Auditor

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Overall Conclusion

In our audit report dated November 9, 2004, we concluded that the Teacher Retirement System's (System) basic financial statements for fiscal year 2004 were materially correct and presented in accordance with accounting principles generally accepted in the United States of America.

> **Background Information**
>
> Serving almost 1.1 million members, the Teacher Retirement System (System):
>
> - Administers the retirement plan by collecting member, state, and other contributions; maintaining records of member accounts; paying benefits to members and beneficiaries; and investing the pension trust fund.
> - Administers health care plans for retirees, active public school employees, and their dependents.
> - Disburses state supplemental compensation funds to certain public education entities.
> - Provides guidelines for the certification of companies offering investment options under Internal Revenue Code Section 403(b) to school employees.

We also issued a report on compliance and internal control over financial reporting as required by auditing standards. Our procedures were not intended to provide an opinion on compliance with laws and regulations or to provide assurance on internal control over financial reporting. However, our procedures did not identify any noncompliance with laws or regulations that materially affected the financial statements or any material weaknesses in internal control over financial reporting.

The major internal controls that we tested in the process of forming our opinion on the financial statements were generally operating effectively. In a separate letter to System management, we recommended changes to address several less significant issues affecting System operations.

Actuarial Status of the System's Pension Plan

Conducting our audit of the System's financial statements enabled us to obtain information on the pension plan's actuarial funding status, which has declined for the fourth consecutive year. In fiscal year 2004, the deficit of the plan's actuarial assets compared with its actuarial liabilities—its unfunded actuarial accrued liability—grew by more than $2.7 billion to $8.0 billion. The actuary calculated that the current total annual contribution rate of 12.4 percent of employee pay is not sufficient to ever pay off, or amortize, the existing unfunded liability. As a result, System management stated in the Letter of Transmittal for its fiscal year 2004 *Comprehensive Annual Financial Report* that "absent significant investment gains, long-term changes will have to be made to the funding structure and/or benefit designs." (See the "Actuarial Soundness" portion of the System's transmittal letter in Appendix 2 of this report.)

For example, the actuary concluded that increasing the employer portion of the contribution rate from 6.0 to 7.31 percent starting in fiscal year 2005 would position the plan to amortize this unfunded liability over the next 30 years. According to the System's

State Auditor's Office
John Keel, CPA
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This audit was conducted in accordance with Texas Government Code, Section 321.0131.

For more information regarding this report, please contact Carol A. Smith, CPA, Audit Manager, or John Keel, CPA, State Auditor, at (512) 936-9500.

estimates, this increase would cost the State an additional $634 million ($606 million from the General Revenue Fund and $28 million from Educational and General funds of higher education institutions) and school districts an additional $63 million if implemented for the 2006-2007 biennium.

Summary of Information Technology Review

Overall, the System's information systems that we tested appeared to be working properly and enabled the System to properly report financial results. Results of our tests of reconciliations and the financial transactions that the System's information systems processed indicated that the System reported materially correct amounts in its financial statements. In addition, access to the System's General Ledger Accounting System and the Annuity Payroll Application generally appeared to be limited to the appropriate personnel. Overall, the risk that information technology problems could lead to significant errors in the financial statements was minimal.

As part of obtaining an understanding of internal controls relevant to the audit of the fiscal year 2004 basic financial statements, we performed the following information technology–related procedures:

- Reviewed selected computer security controls
- Reviewed the investment accounting system's edit controls, processing integrity, and output controls
- Compared the list of current users authorized to update the General Ledger Accounting System with the list of current employees during fiscal year 2004 to determine whether only active employees had access to the system
- Examined and relied on reviews of information systems conducted by other parties, such as the System's Internal Audit Department
- Identified key information systems that the System used in financial reporting

Detailed Results

Chapter 1

Actuarial Status of the System's Pension Plan

Conducting our audit of the Teacher Retirement System's (System) financial statements enabled us to obtain the following information on the actuarial status of the System's pension plan (plan).

The plan's investments earned a reported 11.9 percent during fiscal year 2004, which is 3.9 percentage points above the 8 percent assumed long-term rate of investment return used for actuarial valuation purposes. Nevertheless, the plan's actuarial funding status continued its four-year decline. Its unfunded actuarial accrued liability (the deficit of actuarial assets compared with actuarial liabilities) grew by more than $2.7 billion to $8.0 billion during fiscal year 2004, causing the funded ratio to decrease from 94.5 percent as of August 31, 2003 to 91.8 percent as of August 31, 2004. (The funded ratio is the actuarial value of assets expressed as a percentage of the actuarial accrued liability. A funded ratio of 100 percent indicates that a plan's actuarial assets equal its actuarial liabilities; a ratio of more than 100 percent means the actuarial assets exceed actuarial liabilities.)

Recent declines in funded ratios were common for most of the large pension plans for which we obtained data (see Table 1). However, written statements by System management and the actuary suggest that the size of the current unfunded actuarial accrued liability, when considered in conjunction with the present level of annual contributions to the plan, creates concern about the plan's long-term ability to support the existing benefit structure (see Appendix 2).

Table 1 – Recent declines in funded ratios and funded ratios of less than 100 percent are not uncommon among large statewide pension plans.

Comparison of the System's Pension Plan Funded Ratio with Five Other Large Pension Plans[1]

State	Pension Plan	Funded Ratio	Actuarial Value of Assets	Actuarial Valuation Date
Texas	Employees Retirement System Pension Plan	97.3%	$20.0 billion	August 31, 2004
		97.6%	$19.5 billion	August 31, 2003
		102.5%	$18.9 billion	August 31, 2002
Texas	Teacher Retirement System	91.8%	$88.8 billion	August 31, 2004
		94.5%	$89.0 billion	August 31, 2003
		96.3%	$86.0 billion	August 31, 2002
Ohio	Public Employees Retirement System of Ohio	85.3%	$46.7 billion	December 31, 2003
		85.9%	$43.7 billion	December 31, 2002
		102.6%	$48.7 billion	December 31, 2001

Comparison of the System's Pension Plan Funded Ratio with Five Other Large Pension Plans[1]				
State	Pension Plan	Funded Ratio	Actuarial Value of Assets	Actuarial Valuation Date
Missouri	Public School Retirement System of Missouri	82.0%	$21.5 billion	June 30, 2004
		81.1%	$20.0 billion	June 30, 2003
		95.3%	$22.2 billion	June 30, 2002
New Mexico	Educational Retirement Board of New Mexico	75.4%	$7.5 billion	June 30, 2004
		81.1%	$7.5 billion	June 30, 2003
		86.8%	$7.6 billion	June 30, 2002
Oklahoma	Teachers' Retirement System of Oklahoma	47.3%	$6.7 billion	June 30, 2004
		54.0%	$6.4 billion	June 30, 2003
		51.4%	$6.3 billion	June 30, 2002

[1] The information for the various pension plans presented above is not entirely comparable because of the varying dates used to measure each plan's funded ratio and actuarial value of assets.

Sources: Gabriel, Roeder, Smith & Company, Consultants & Actuaries; Employees Retirement System of Texas comprehensive annual financial reports for fiscal years 2003 and 2004

The actuary calculated that the current total annual contribution rate of 12.4 percent of pay (6.0 percent from the State and 6.4 percent from active plan members) is not sufficient to ever pay off, or amortize, the existing $8 billion unfunded liability. Therefore, the plan's "amortization period" is infinite, as it has been since the fiscal year 2002 valuation. (See Figure 1 on the following page.) The actuary concluded that raising the State's contribution rate to 7.31 percent of pay starting in fiscal year 2005 would position the plan to amortize this unfunded liability over the subsequent 30 years. A 30-year amortization period is important because state law prohibits making certain changes to the plan, such as increasing benefits, if (1) the amortization period is already 31 or more years or if (2) the changes would increase the amortization period to 31 or more years (Government Code, Section 821.006). Amortizing the unfunded liability over the next 30 years would also enable the plan to fall within the maximum amortization periods called for by government accounting standards and the Texas Pension Review Board.

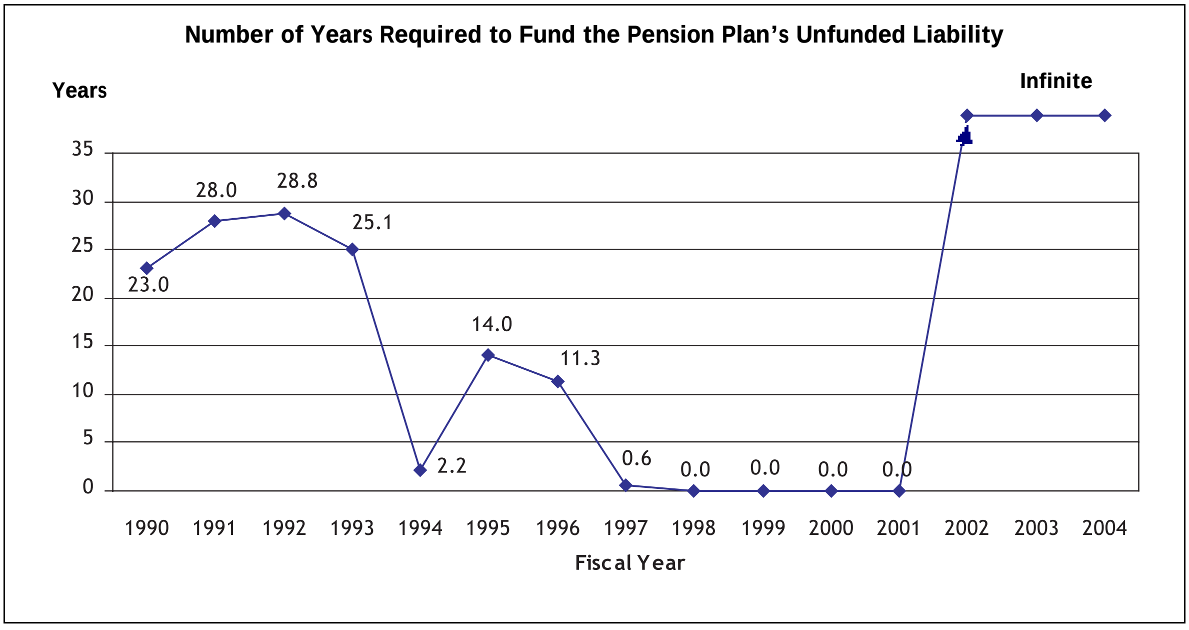
The plan's actuarial funding status continued to decline, despite the fact that the plan's investment returns in fiscal years 2004 and 2003 exceeded the actuarial return assumption of 8 percent by 3.9 and 3.3 percentage points, respectively. The decline primarily resulted from the plan's annual recognition of one-fifth of investment return deficits (the amounts by which actual investment returns were below the 8-percent actuarial assumption for rate of return) that occurred in fiscal years 2002 and 2001, which is consistent with the actuary's five-year "smoothing" process. The actual return for fiscal year 2002 was negative 7.8 percent (15.8 percentage points below the 8-percent assumption), while the actual return for fiscal year 2001 was negative 10.6 percent (18.6 percentage points below the 8-percent assumption).

The System's actuary uses a five-year smoothing process to minimize the effects on the actuarial valuation of large year-to-year swings in investment returns, a common actuarial practice. Under this method, the actuarial valuation counts only one-fifth of each year's excess (actuarial gain) or deficit (actuarial loss) in the year it occurs. The valuations for the following four years recognize the remaining four-fifths in equal annual amounts. As a result, actuarial losses recognized in the fiscal year 2004 valuation exceeded actuarial gains, contributing to the declining funding status. It should be noted that, as of August 31, 2004, a $4.6 billion net deficit (the excess of unrecognized losses over unrecognized gains) remains to be recognized over the next four fiscal years. The valuations for fiscal years 2005 and 2006 will continue to be negatively affected by the remaining losses from fiscal years 2001 and 2002.

The actuary has concluded that it is unlikely that near-term investment gains (returns above the 8 percent assumption rate) or other actuarial gains will be sufficient to eliminate the remaining deferred investment losses and reduce the existing $8 billion unfunded liability enough so that the liability can be amortized. (Other actuarial gains occur if actual results compare favorably to assumptions such as those about longevity, rates of salary increases, and age at retirement.) Therefore, the actuary cautions against any benefit increases over the next several legislative sessions without adequate funding.

In a letter that the System included in the Actuarial Section of its fiscal year 2004 *Comprehensive Annual Financial Report*, the actuary states that "in the absence of significant actuarial gains over the near term, an increase in the State contribution rate will be necessary to maintain the actuarial soundness of the System" and that "the [System's] Board should begin laying the groundwork with the Legislature for an increase in the contribution rate." In reference to the relationship of the plan's funding level to its benefit structure, System management reports in its Letter of Transmittal for its fiscal year 2004 *Comprehensive Annual Financial Report* that "absent significant investment gains, long-term changes will have to be made to the funding structure and/or benefit designs." (Both letters are included in Appendix 2.)

Figure 1 – The time required to fund the pension plan's unfunded liability has fluctuated significantly since fiscal year 1990.



Source: Actuarial valuation presentations by Gabriel, Roeder, Smith & Company to the System's Board of Trustees.

Key Fiscal Year 2004 Financial Results from Audited and Unaudited Sections of the System's Comprehensive Annual Financial Report

Pension Plan

- At August 31, 2004, the value of the pension plan's net assets increased 8.5 percent to $84.2 billion compared with the prior year-end balance. Benefit and refund payments increased 15.6 percent to $5.7 billion during fiscal year 2004.
- At August 31, 2004, total membership in the System of 1,085,423 members remained almost unchanged from the prior year-end's total. The number of retirees increased by 23,150 (10.6 percent) to 240,627, while the number of active members declined by 18,495 (2.1 percent) to 844,796. (New school district employees hired in August 2004 were not counted as active members of the System at August 31, 2004, based on legislation enacted by the 78th Legislature requiring a 90-day waiting period for membership.)
- As discussed in Chapter 1, the System's reported 11.9 percent return on investments for the year ending August 31, 2004, exceeded its actuarial assumed rate of return of 8 percent. However, despite this actuarial gain, the actuarial funding status declined for the fourth consecutive year.

Retiree Health Care Program (TRS-Care)

- At August 31, 2004, the value of the retiree health care program's net assets increased to $238.3 million, a $321.3 million increase over last year's $83.0 million deficit.
- Contributions from the State, active members, and school districts and premiums from program participants increased to $882.1 million during fiscal year 2004, an 84.9 percent increase over the prior fiscal year's total of $477.1 million. The 78th Legislature provided a supplemental appropriation and enacted legislation that doubled state and active member contribution rates and required public schools to begin contributing to the program. The System increased fiscal year 2004 retiree premiums.
- Claims, claims processing, and administrative costs during fiscal year 2004 increased 2.4 percent to $607.7 million compared with the prior fiscal year's total. Claims costs alone were $581.4 million during fiscal year 2004.
- At August 31, 2004, there were 177,454 program participants, an 11.0 percent increase over the prior year-end number.

Active Member Health Care Program (TRS-ActiveCare)

- At August 31, 2004, the value of the active member health care program's net assets increased to $240.4 million, a 76.2 percent increase over last year's balance of $136.4 million. The program began operations in fiscal year 2003.
- Premium revenues during fiscal year 2004 increased 29.7 percent to $758.1 million, compared with the prior year's total of $584.6 million. The revenue

increase was due to an increase in the number of program participants as well as premium increases.

- Claims, claims processing, HMO premium payments, and administrative expenses during fiscal year 2004 increased 18.9 percent to $615.7 million compared with the prior fiscal year's total of $517.6 million. Claims expenses and HMO premium payments alone during fiscal year 2004 were $561.2 million.
- At August 31, 2004, there were 246,914 program participants, a 16.3 percent increase over the prior year-end number.

Management's Comments

The Teacher Retirement System is proud of the fact that the System provides accurate and timely financial information while maintaining strong internal controls over financial reporting. We express thanks to the State Auditor's Office for the professional manner in which the audit was conducted.

The System will continue to work with the Governor and the Legislative leadership to help address long-term funding needs for the pension fund and the retiree health care program.

Appendices

Appendix 1

Objective, Scope, and Methodology

Objective

Our objective was to express an opinion on the Teacher Retirement System's (System) basic financial statements for the fiscal year ended August 31, 2004.

Scope

The scope of this audit included expressing an opinion on the System's basic financial statements in accordance with auditing standards generally accepted in the United States of America and standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States.

Methodology

We gained an understanding of the System's overall control environment and internal controls to the extent necessary to plan the audit. We tested internal controls and significant accounts as deemed necessary to support our opinion.

Tests of accounts primarily included tests of detailed supporting transactions, confirmations of investments, and analytical review. In addition, we tested compliance with laws and regulations—primarily related to investments, pension fund reserve account balances, and benefit payments—noncompliance with which could have a direct and material effect on amounts reported in the financial statements. We also conducted interviews, administered questionnaires, reviewed documents, and recalculated amounts.

Project Information

We conducted fieldwork from August to December 2004. The following members of the State Auditor's staff conducted this audit:

- Roger Ferris, CPA (Project Manager)
- Hugh Ohn, CFA, CPA, CIA (Assistant Project Manager)
- Michael Clayton, CPA
- Angela Roberts, CPA
- Jacqueline Shelby
- Jim Timberlake
- Beth Wright
- Michael Yokie, CISA
- Ron Zinsitz, CPA, CIDA
- Chuck Dunlap, CPA (Quality Control Reviewer)
- Carol A. Smith, CPA, CIA (Audit Manager)

Supplemental Information from the System's Fiscal Year 2004 Comprehensive Annual Financial Report

LETTER OF TRANSMITTAL

Teacher Retirement System of Texas

1000 Red River Street
Austin, Texas 78701-2698
(512) 542-6400 1-800-223-8778

November 9, 2004

The Honorable Rick Perry
The Honorable David Dewhurst
The Honorable Tom Craddick
The Board of Trustees and Members of the Teacher Retirement System

Dear Governor Perry, Lieutenant Governor Dewhurst, Speaker Craddick, TRS Board of Trustees and Members of the Teacher Retirement System:

On behalf of the board of trustees, I am pleased to present this *Comprehensive Annual Financial Report* (CAFR) of the Teacher Retirement System of Texas (TRS) for the fiscal year ended August 31, 2004, the system's 67th year of operation. During the past year, the system experienced a slight decrease in the number of active members due to the legislatively mandated 90-day waiting period for new members. TRS experienced a 10.6 percent net increase in retirees and annuitants. At year-end, system participation included 1,358 reporting employers and 1,085,423 members and annuitants.

Benefit payments continued to grow with the increase in new retirees. For the year, $5.7 billion in benefit payments and member refunds were distributed. We were pleased with the positive investment climate, which resulted in a market return of 11.9 percent for the year. As of August 31, 2004, net assets of the plan were $84.2 billion as compared to $77.6 billion at the close of fiscal year 2003.

Structure of the Report

The *Comprehensive Annual Financial Report* for fiscal year 2004 is designed to provide TRS stakeholders with a complete picture of the system's operations for the past year. This report consists of management's representations concerning TRS finances. Management assumes full responsibility for the completeness and reliability of all information presented in this report. To provide a reasonable basis for making these representations, management has established a comprehensive internal control framework that is designed both to protect the assets from loss, theft, or misuse and to compile sufficient, reliable information for the preparation of TRS financial statements in conformity with generally accepted accounting principles. The internal control framework has been designed to provide reasonable rather than absolute assurance that the financial statements will be free from material misstatement. As management, we assert that, to the best of our knowledge and belief, this financial report is complete and reliable in all material respects. This report includes the following sections:

- The **Introductory Section** describes the system's management, highlights the year's activities, and provides membership and communications information.
- The **Financial Section** contains the report of the Texas State Auditor, financial statements of the system and required supplemental information. This section also contains Management's Discussion and Analysis (MD&A), required by generally accepted accounting principles, which includes a narrative introduction, overview, and analysis to accompany the basic financial statements. This transmittal letter is designed to complement the MD&A and should be read in conjunction with it.
- The **Investment Section** includes a summary of investments and performance information.
- The **Actuarial Section** contains the independent actuary's certification and selected information from the annual actuarial valuation for the fiscal year ended August 31, 2004.
- The **Benefits Section** includes changes in TRS law, summary of retirement and death benefits available to retirees and beneficiaries, and health care benefits available to members and their families.
- The **Statistical Section** presents six-year financial and non-financial trend information about the pension trust fund, the *Texas Public School Retired Employees Group Insurance Program* and the *Texas Active School Employees Uniform Group Benefits Program.*

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Certificate of Achievement for Excellence in Financial Reporting

The Government Finance Officers Association of the United States and Canada (GFOA) awarded TRS the Certificate of Achievement for Excellence in Financial Reporting for its *Comprehensive Annual Financial Report* for the fiscal year ended August 31, 2003. To be awarded the certificate, a report must meet or exceed program standards and must satisfy both generally accepted accounting principles and applicable legal requirements. TRS has received a Certificate of Achievement for the last 14 years. We believe that the current report continues to meet program requirements, and it is being submitted to the GFOA for consideration again this year.

TRS – The Reporting Entity

The Teacher Retirement System of Texas was established by amendment to the Texas Constitution in 1936 and enactment of statutes in 1937 to provide a retirement program for public education employees in professional and business administration, supervision, and instruction. Benefits were later expanded to include disability, death and survivor benefits. In 1949, membership was expanded to include other employees of public education.

The *Texas Public School Retired Employees Group Insurance Program* was enacted in 1985 to provide health care benefits for retirees. At year-end, over 182,000 retirees and dependents participated in the program.

In 2001, the 77th Texas Legislature enacted the *Texas Active School Employees Uniform Group Benefits Act,* establishing a statewide health coverage program for public school employees. Coverage began in September 2002. Participation in the program has grown rapidly with 1,030 employers and almost 247,000 employees and dependents participating as of September 1, 2004. All public school entities are now allowed to select TRS-ActiveCare for their employees' health coverage needs.

Investment Performance

For the fiscal year, the total portfolio returned 11.9 percent, with investment income totaling $9.1 billion in fiscal year 2004. Long-term performance continues to be above inflation and the board of trustees' investment return expectation. For the past 10 years, the time-weighted compound annual return has been 9.5 percent.

Investment risks are diversified over a very broad range of market sectors and securities. This strategy reduces portfolio risk to adverse developments in sectors and issuers experiencing unusual difficulties and offers opportunity to benefit from future markets.

Pension Benefits

TRS members and retirees are now realizing significant benefit enhancements provided for in legislation passed since the early 1990s. These include *ad hoc* annuity increases for retirees and increases in the retirement benefit formula multiplier. Actuarial liabilities grew by approximately $15 billion attributable to enhancements passed since 1990. For fiscal year 2004, benefit payments and refunds to withdrawing members totaled $5.7 billion, reflecting the financial impact of benefit enhancements and the continued growth in membership and annuitants.

Retiree Health Care Program

In addition to delivering pension benefits, TRS administers TRS-Care, a health care program for retirees that was established in 1985. TRS-Care is the source of retirement health care coverage upon which almost all public school retirees rely.

Funding is provided by premium payments from retiree participants and contributions from the state, school districts, and active employees. Double-digit program cost increases, driven by membership growth, utilization and medical trends, have resulted in the need for TRS to obtain additional funding. For the upcoming fiscal year, the state, school districts and other employers, and active school employees will contribute hundreds of millions of dollars into the program to help offset the rapidly rising cost of retiree health care. While the retiree portion of cost sharing through premium payments is rising, access to health care would be virtually impossible to provide without such assistance from the state and others.

TRS trustees remain focused on the need to balance revenues and expenses in a fiscally responsible manner, and to offer a program that best suits all participants' needs given available resources.

Active Member Health Care Program

Through their participation, public school employers and their employees have endorsed the value of health coverage options offered through TRS-ActiveCare. This program, initiated in 2002, is self-funded and offers options ranging from catastrophic coverage with reduced premiums to a comprehensive plan with near first-dollar coverage at higher premiums.

As a self-funded plan, TRS-ActiveCare offers hospital, physician and pharmacy services to school employees. These services have been procured competitively through

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TRS with no profit to the system. Thus, participants are assured that virtually all of their payments will go directly for their care at prices that are substantially discounted as compared to those that are generally charged by providers. Employers benefit by significantly reducing their administrative effort to arrange and administer coverage locally.

Actuarial Soundness

Adverse market performance in 2001 and 2002 coupled with increased benefit enhancements resulted in the actuarial value of member benefit liabilities exceeding the value of actuarial assets. At year-end, the ratio of actuarial assets to actuarial liabilities was 91.8 percent. At August 31, 2004, the system's unfunded actuarial accrued liability was $7.95 billion.

The current contribution rates from the state and from members are not sufficient to amortize the unfunded actuarial accrued liability within the statutory 31-year funding period. Although the system has sufficient funds to pay benefits for current retirees as well as for new retirees well into the future, absent significant investment gains, long-term changes will have to be made to the funding structure and/or benefit designs. In spite of the adverse market conditions in 2001 and 2002, TRS investments have provided favorable returns of 9.5% over the last ten years, which is above the long-term actuarial assumed 8% rate of return.

Acknowledgments

We wish to express our appreciation for the support of the Governor's, Lieutenant Governor's and Speaker's Offices, as well as members of the legislature, in maintaining a strong retirement system, which provides valuable benefits for public education employees and retirees. TRS trustees and staff are keenly focused on prudent pension trust fund portfolio management and efficient, service-oriented delivery of valuable retirement and related benefits for public education employees and retirees. We are pleased to report on operational results for the year and to acknowledge the substantial support of state leadership, trustees, members, interested associations, and TRS staff.

Respectfully submitted,

Ronnie G. Jung

Ronnie G. Jung, C.P.A.
Executive Director

GABRIEL, ROEDER, SMITH & COMPANY
Consultants & Actuaries

5605 N. MacArthur Blvd. • Suite 870 • Irving, Texas 75038-2631 • 469-524-0000 • fax 469-524-0003

November 8 , 2004

BOARD OF TRUSTEES
Teacher Retirement System of Texas
1000 Red River Street
Austin, TX 78701-2698

Subject: Actuary's Certification of the Actuarial Valuation as of August 31, 2004

We certify that the information included herein and contained in the 2004 Actuarial Valuation Report is accurate and fairly presents the actuarial position of the Teacher Retirement System of Texas (TRS) as of August 31, 2004.

All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, the results presented comply with the requirements of the Texas statutes and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board. The undersigned are independent actuaries. Mr. Carter and Mr. Newton are members of the American Academy of Actuaries, and are also Enrolled Actuaries. All are experienced in performing valuations for large public retirement systems.

Actuarial Valuations

The primary purpose of the valuation report is to determine the adequacy of the current State contribution rate through measuring the resulting funding period, to describe the current financial condition of the System, and to analyze changes in the System's condition. In addition, the report provides information required by the System in connection with Governmental Accounting Standards Board Statement No. 25 (GASB No. 25), and it provides various summaries of the data.

Valuations are prepared annually, as of August 31 of each year, the last day of the System's plan and fiscal year.

Financing Objective of the Plan

Contribution rates are established by Law that, over time, are intended to remain level as a percent of payroll. The employee and State contribution rates have been set by Law and are intended to provide for the normal cost plus the level percentage of payroll required to amortize the unfunded actuarial accrued liability over a period not in excess of 31 years.

Progress Toward Realization of Financing Objective

The actuarial accrued liability, the unfunded actuarial accrued liability (UAAL), and the calculation of the resulting funding period illustrate the progress toward the realization of financing objectives. Based on this actuarial valuation as of August 31, 2004, the System's underfunded status has increased because of the continued recognition of the investment results during the poor investment markets of fiscal years 2001 & 2002, and the UAAL is now $7.953 billion.

This valuation shows a normal cost equal to 11.72% of pay. Since the State contribution rate of 6.00% of pay plus the member contribution rate of 6.40% of pay total 12.40% of pay, there is 0.68% of pay available to amortize the UAAL. However, the contributions provided by this portion of the contribution rate are not sufficient to amortize the unfunded actuarial accrued liabilities of the System. Therefore the funding period corresponding to the 6.00% State contribution rate is "never" or infinite, which is greater than the statutory limit of 31 years.

The actuarial valuation report as of August 31, 2004 reveals that while the System has an unfunded liability, it still has a funded ratio (the ratio of actuarial assets to actuarial accrued liability) of 91.8%. However, the System is still deferring $4.6 billion in prior asset losses that will be recognized over the next two valuations. Even though the System earned an 11.9% return on a market value of assets basis for the plan year ending August 31, 2004, the System experienced a $4.7 billion loss on the actuarial value of assets due to the recognition of prior investment losses.

In the absence of significant actuarial gains over the near term, the contribution rate to the System will need to increase to produce a funding period that does not exceed 31 years. The System would need to earn an average rate of return of 11.5% on a market value basis over the next three years to offset the deferred asset losses that are scheduled to be recognized over the next two valuations. Even if these losses were somehow offset, the current unfunded liability of $8.0 billion would still require an increase in the contribution rate in order to be amortized. Using GASB Statement No. 25 as a guide, the State contribution rate would need to increase from 6.00% of pay to 7.31% of pay. This rate would fund the normal cost and amortize the UAAL as of August 31, 2004 over the 30-year period called for by GASB Statement No. 25.

It seems unlikely that the System will be able to generate the necessary gains in the short-term (either asset or liability gains) to offset these deferred asset losses and reduce the UAAL to a level that can be amortized by the current contribution rate. In fact, if the System earns 8% on a market value basis for the 2004/05 plan year, the System can expect to recognize a $4.8 billion loss on the actuarial value of assets at the next valuation. Therefore, we believe the Board should begin laying the groundwork with the Legislature for an increase in the contribution rate.

Any increase in the State contribution rate, however, should be put in historical perspective. Except for non-actuarial issues (related to Texas budget reasons), the TRS State contribution rate has either decreased or not increased since 1979. At 7.31%, the State contribution rate would be the same rate that was contributed by the State prior to the last reduction in the State contribution rate in 1995.

Caution is warranted over the next few years. There should be no benefit increases passed by the Legislature over the next several Legislative Sessions without adequate funding, and the funded status should be carefully monitored. As noted above, in the absence of significant actuarial gains over the near term, an increase in the State contribution rate will be necessary to maintain the actuarial soundness of the System.

Plan Provisions

The plan provisions used in the actuarial valuation are described in Table 20 of the valuation report. This valuation reflects the changes to plan provisions as enacted by the 78th Texas Legislature.

Disclosure of Pension Information

Effective for the fiscal year ending August 31, 1996, the Board of Trustees has adopted compliance with the requirements of Governmental Accounting Standards Board (GASB) Statement No. 25.

Actuarial Methods and Assumptions

The actuarial methods and assumptions have been selected by the Board of Trustees of the Teacher Retirement System of Texas based upon our analysis and recommendations. These assumptions and methods are detailed in Table 21 of the valuation report. The Board of Trustees has sole authority to determine the actuarial assumptions used for the plan. The actuarial methods and assumptions are based on a study of actual experience for the four year period ending August 31, 2003 and were adopted on May 21, 2004.

In our opinion, the actuarial assumptions used are appropriate for purposes of the valuation and are internally consistent and reasonably related to the experience of the System and to reasonable expectations.

Data

In preparing the August 31, 2004 actuarial valuation, we have relied upon member and asset data provided by the Teacher Retirement System of Texas. We have not subjected this data to any auditing procedures, but have examined the data for reasonableness and for consistency with prior years' data.

The schedules shown in the actuarial section and the trend data schedules in the financial section of the TRS financial report include selected actuarial information prepared by TRS staff. Six year historical information included in these schedules was based upon our work. For further information please see the full actuarial valuation report.

Respectfully submitted,
Gabriel, Roeder, Smith & Company

W. Michael Carter
Lewis Ward
Joe Newton

W. Michael Carter, FSA, EA, MAAA *Senior Consultant*	Lewis Ward *Consultant*	Joe Newton, ASA *Consultant*

GABRIEL, ROEDER, SMITH & COMPANY

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