An Audit of

The Basic Financial Statements of the Teacher Retirement System for the Fiscal Year Ended August 31, 2002

January 2003

Report No. 03-014

State Auditor's Office

Lawrence F. Alwin, CPA
State Auditor

An Audit of

The Basic Financial Statements of the Teacher Retirement System for the Fiscal Year Ended August 31, 2002

SAO Report No. 03-014
January 2003

Overall Conclusion

In our audit report dated November 8, 2002, we concluded that the basic financial statements of the Teacher Retirement System (System) for the fiscal year ended August 31, 2002, were materially correct in accordance with accounting principles generally accepted in the United States of America. For the fifth consecutive year, we found no instances of significant noncompliance or material weaknesses in internal control.

Although we noted no problems with the System's basic financial statements, compliance, or internal control, we want to inform the Legislature of serious issues that could negatively affect the System's pension and retiree health insurance plans:

- On August 31, 2002, the System had an unfunded actuarial accrued liability of $3.3 billion. Even if pension plan benefits remain the same, additional funding (above the current contribution rates) of more than $260 million per year would be needed to amortize the unfunded liability over a 30-year period.
- Unless the pension plan's contribution rate increases or investment returns are significantly greater than expected, it might not be possible to provide pension benefit increases during the 78th legislative session and possibly within most of the current decade. According to the System's actuary, if there is no significant market recovery over the near term, an increase in the contribution rate will be necessary to maintain the actuarial soundness of the System.
- The pension plan's actuarial valuation does not include net investment losses of $16.2 billion. These losses will be recognized during the next four years in accordance with the System actuary's use of a smoothing process to translate annual market returns to actuarial returns. To offset these losses, the System's actuary estimates that the pension plan would need to average a 12.4 percent return on investments during the next four years (or a 21.2 percent return on investments during the next three years) to achieve its 8 percent actuarial expected investment rate of return.

Background Information

Serving more than 1 million members, the Teacher Retirement System (System):

- Pays benefits to members and beneficiaries.
- Collects member contributions and maintains records of member accounts.
- Collects state contributions.
- Invests the pension trust fund.
- Administers the retirement plan.
- Administers health care plans.
- Provides guidelines for the certification of companies offering investment options under Internal Revenue Code section 403(b) to school employees.

As of August 31, 2002, the System's pension plan had $71.7 billion in net assets. It paid $4.5 billion in benefits during fiscal year 2002.

As of August 31, 2002, the System's retiree health insurance plan had $71.9 million in net assets. It paid $451.7 million in benefits during fiscal year 2002.

Texas Government Code, Section 825.214, requires the System to obtain a financial audit. Our audit opinion is included in the financial section of the System's *Comprehensive Annual Financial Report*, which the System released on November 20, 2002. We also provided the System with a management letter and a report on compliance and internal control.

- The retiree health insurance plan's net assets grew during fiscal year 2002, but only because of $285.5 million in supplemental state appropriations. Excluding the supplemental state appropriations, the plan's expenditures exceeded the plan's contributions by $177.6 million in fiscal year 2002. Significant changes will have to be made to keep the plan solvent.
- Under the current funding arrangement and benefit structure, the retiree health insurance plan is projected to need an additional $720 million above the amounts appropriated for the 2002–2003 biennium to pay claims incurred through August 31, 2005. The System's management has been closely monitoring the funding status of the retiree health insurance plan and has been reporting information regarding the plan's funding status to state leaders on a monthly basis for the last three years.

We anticipate that, to varying degrees, all state retirement systems will experience problems similar to those the System is experiencing.

Summary of Information Technology Review

Overall, the System's information systems appeared to be working properly and enable the System to report financial results accurately. However, the System's Internal Audit Department has previously noted weaknesses in the documentation of information security roles, policies, procedures, and standards. The System is aware of these issues and has taken corrective action by hiring an Information Security Officer and developing an information security manual. The information security manual, which is scheduled to be completed by January 2003, will include guidelines, standards, and procedures in the key areas of network security, access control, physical security, and data classification.

Results of our tests of reconciliations and financial transactions processed by the System's information systems indicated that accurate amounts were reported in the financial statements. In addition, access to selected financial systems was limited to authorized personnel. Therefore, the risk that information technology problems could lead to errors in the financial statements was minimized.

As part of obtaining an understanding of internal control relevant to the audit of the fiscal year 2002 financial statements, we performed the following information technology-related procedures:

- Analyzed member and benefit payment data to identify higher risk transactions for detailed, transaction-level testing
- Recalculated and compared the amount of benefit payments for selected retirees
- Compared the list of current authorized users of the annuity payroll and general ledger systems with the list of terminated employees during fiscal year 2002 to determine whether the System had properly deactivated access for the terminated employees
- Reviewed and relied upon reviews of information systems conducted by other parties, such as the Department of Information Resources and the System's Internal Audit Department
- Identified key information systems for financial reporting purposes

Detailed Results

Chapter 1

Key Issues Regarding the Teacher Retirement System's Pension Fund

As of August 31, 2002, the Teacher Retirement System (System) had an unfunded actuarial accrued liability of $3.3 billion. Even if pension plan benefits remain the same, additional funding (above the current contribution rates) of more than $260 million per year would be needed to amortize the unfunded liability over a 30-year period.[1]

According to the System's actuary, current employer and employee contribution rates are not sufficient to amortize projected funding shortfalls. The pension plan's normal cost rate (the actuarial cost of benefits for newly hired participants) of 12.67 percent of pay continues to exceed the combined employer and employee contribution rate of 12.40 percent. Coupled with the fact that the pension plan is now underfunded, this means that there are no excess contributions available to amortize future funding shortfalls.

> **Several Factors Affect the Soundness of the Pension Plan**
>
> Even small changes in any of the following can have a significant, long-term impact on the soundness of the pension fund:
>
> - Investment gains and losses
> - Number of participants the plan serves
> - The level of benefits participants receive
> - The number of teachers across the state
> - Teacher salaries across the state
> - Actuarial assumptions, including investment rates of return, projected salary increases, and inflation rate
> - Legislative benefit enhancements such as benefit multiplier increases or ad hoc increases

According to the actuary's report, the employer contribution rate would need to increase from 6.0 percent of pay to 7.15 percent of pay to (1) cover the normal cost rate and (2) amortize the unfunded actuarial accrued liability (as of August 31, 2002) over the 30-year maximum amortization period specified in Governmental Accounting Standards Board Statement No. 25. Based on actual fiscal year 2002 contributions, the 1.15 percent increase in the employer contribution rate translates into approximately $230.2 million in additional state contributions and $30.2 million in additional school district contributions. Section 67(b)(3), Article 16, of the Texas Constitution restricts the state contribution rate to between 6 percent and 10 percent. From fiscal year 1980 through fiscal year 1995, the state contribution rate ranged from 7.10 percent to 8.50 percent of pay. Since fiscal year 1996, the state contribution rate has been 6.0 percent of pay.

---

[1] The System's actuary performs this calculation for a 30-year amortization period in accordance with General Accounting Standards Board (GASB) Statement No. 25.

Unless the System pension plan's contribution rate increases or investment returns are significantly greater than expected, it might not be possible to provide pension benefit increases during the 78th legislative session and possibly within most of the current decade. According to the System's actuary, if there is no significant market recovery over the near term, an increase in the contribution rate will be necessary to maintain the actuarial soundness of the System.

The pension plan was fully funded during fiscal years 1998–2001; however, during fiscal year 2002 its status changed to underfunded. Based on the System's methodology for recognizing investment gains and losses over a five-year period, we anticipated this deterioration in the funded status in our 2001 audit report (*An Audit of the Financial Statements of the Teacher Retirement System for the Fiscal Year Ended August 31, 2001*, SAO Report No. 02-015, December 2001).

According to the actuary's report, the change in the funded status occurred primarily because of declining stock market conditions during the past two years. Because the time required to fund the pension plan's unfunded actuarial liability now exceeds 31 years—in fact, it is now infinite—future improvements in pension benefits would not be permitted by statute without an increase in contribution rates and/or significant improvements in investment returns (see text box for additional details).

Statutory Provisions to Protect the Pension Fund Disallow Future Benefit Enhancements

Key statutory provisions enacted to protect the financial soundness of the pension fund disallow future benefit increases under certain circumstances. Specifically, Texas Government Code, Section 821.006, states that:

(a) A rate of member or state contributions to or a rate of interest or the rate of a fee required for the establishment of credit in the retirement system may not be reduced or eliminated, a type of service may not be made creditable in the retirement system, a limit on the maximum permissible amount of a type of creditable service may not be removed or raised, a new monetary benefit payable by the retirement system may not be established, and the determination of the amount of a monetary benefit from the system may not be increased, if, as a result of the particular action, the time, as determined by an actuarial valuation, required to amortize the unfunded actuarial liabilities of the retirement system would be increased to a period that exceeds 30 years by one or more years.

(b) If the amortization period for the unfunded actuarial liabilities of the retirement system exceeds 30 years by one or more years at the time an action described by Subsection (a) is proposed, the proposal may not be adopted if, as a result of the adoption, the amortization period would be increased, as determined by an actuarial valuation.

The System's actuary considers the System's pension plan to be "actuarially sound" as long as the length of time required to fund the unfunded actuarially accrued liability does not exceed 31 years. While it has not yet categorized the plan as unsound, the System's actuary anticipates that, unless the plan's contribution rate and/or investment returns increase, it might not be possible to provide benefit increases within most of the current decade. The actuary further states that if there is no significant market recovery over the near term, an increase in the contribution rate will be necessary to maintain the actuarial soundness of the System.

At the end of fiscal year 2002:

- The pension plan's funded ratio (the actuarial value of assets expressed as a percentage of the actuarial accrued liability) was 96.3 percent. At the end of the previous fiscal year, the funded ratio was 102.5 percent.

- The amount of the pension plan's actuarial accrued liability exceeded actuarial assets by approximately $3.3 billion. At the end of the previous fiscal year, the pension plan's actuarial assets exceeded the actuarial accrued liability by $2.1 billion.

While the pension plan is now underfunded, as Table 1 indicates, its 96.3 percent funded ratio compares favorably with the funded ratios of other pension plans. However, the actuarial condition could deteriorate if the pension plan ultimately must recognize its $16.2 billion in deferred losses.

Table 1 – Despite its underfunded status, the System pension plan's funded ratio compares favorably with other pension plans.

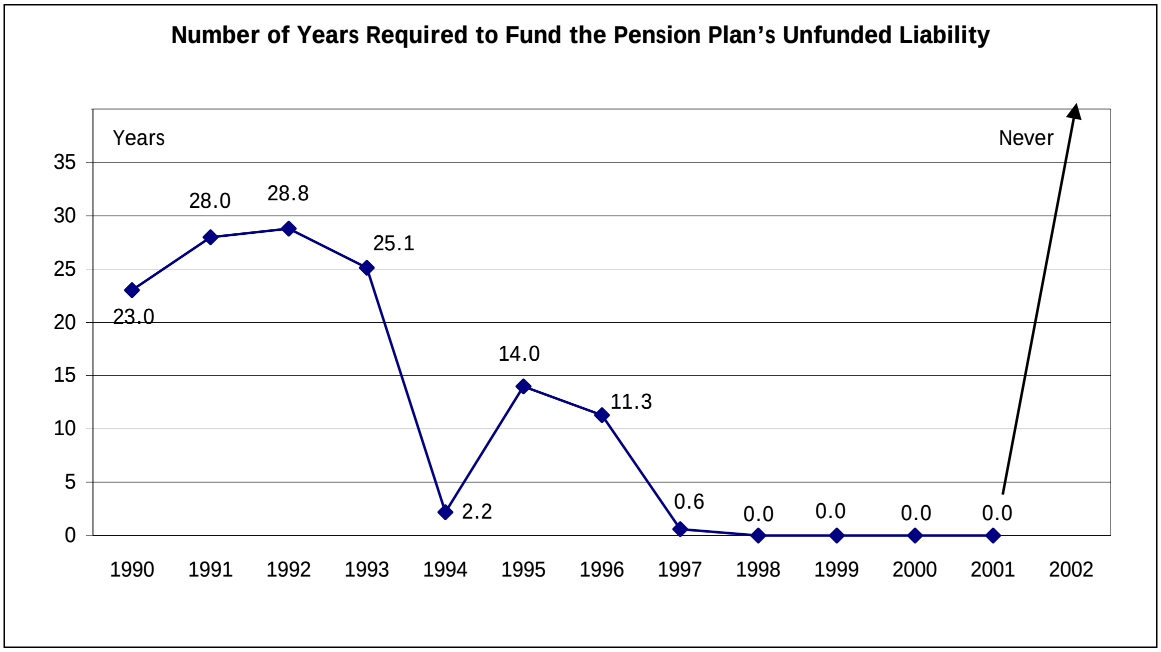
Comparison of the System's Pension Plan Ratio with Other Pension Plans				
State	**Pension Fund**	**Funded Ratio**	**Net Assets**	**As of Date**
Ohio	Public Employees' Retirement System of Ohio	103.0%	$53.8 billion	December 31, 2001
Texas	Employees Retirement System Fund	102.5%	$16.4 billion	August 31, 2002
Texas	**Teacher Retirement System Pension Plan**	**96.3%**	**$71.7 billion**	**August 31, 2002**
Missouri	Public School Retirement System of Missouri	95.3%	$20.0 billion	June 30, 2002
New Mexico	Educational Retirement Board of New Mexico	86.8%	$6.0 billion	June 30, 2002
Oklahoma	Teachers' Retirement System of Oklahoma	51.4%	$5.4 billion	June 30, 2002

Sources: Gabriel, Roeder, Smith & Company, Consultants & Actuaries; *Employees Retirement System of Texas 2002 Comprehensive Annual Financial Report;* and *Employees Retirement System of Texas Actuarial Valuation Report*, August 31, 2002.

Private pension plans are subject to the funding requirement of the Employee Retirement Income Security Act (ERISA) of 1974, and their contributions are actuarially determined. The System's pension fund is not directly comparable to the private pension funds. However, it is important to note that if a private pension plan is underfunded by more than 10 percent, the employer is generally required to contribute additional funds, usually over a period of three to five years.

As the pension plan's funded status has changed over the years, the time required to fund the pension plan's unfunded actuarial liability also has fluctuated significantly, from a low of zero years in fiscal years 1998–2001 to an infinite number of years in fiscal year 2002 (see Figure 1).

Figure 1 – The time required to fund the pension plan's unfunded liability has fluctuated significantly over the last 12 years.



Source: Actuarial Valuation Presentation to the System's Board of Directors made by Gabriel, Roeder, Smith & Company, Consultants & Actuaries.

The pension plan's actuarial valuation does not include net investment losses of $16.2 billion. These losses were $6.9 billion during the previous fiscal year and increased in fiscal year 2002 because of declining stock market conditions. These losses will be recognized during the next four years in accordance with the System actuary's use of a smoothing process to translate annual market returns to actuarial returns.

The pension plan's actuarial valuation does not currently recognize net investment losses of $16.2 billion that will be recognized during the next four years. The increase in deferred investment losses was the product of two consecutive years of negative investment returns resulting from declining stock market conditions. The pension plan's actuarial valuation has not yet incorporated all of the $16.2 billion investment losses because it uses a process to smooth out year-to-year fluctuations in market rates of return. In the smoothing process, the actuary recognizes only 20 percent of each year's investment gains or losses in the year they are earned. The remaining 80 percent is deferred and recognized equally over the next four years. Recognizing the $16.2 billion deferred losses would further deteriorate the pension plan's funded status by significantly increasing the unfunded liability.

The System's actuary estimates that the pension plan would need to average a 12.4 percent return on investments during the next 4 years (or a 21.2 percent return on investments for the next 3 years) to achieve its 8 percent actuarial expected investment rate of return. The pension plan's average annual investment return for the last five fiscal years was 4.2 percent; for the last ten fiscal years, the average annual investment return was 8.8 percent.

The pension trust fund's net assets decreased by $7.7 billion to $71.7 billion during fiscal year 2002 because of unfavorable investment returns resulting from declining stock market conditions and benefit payments that exceeded contributions by $1.6 billion.

The pension plan's rate of return on investments for fiscal year 2002 was negative 7.81 percent, as compared with its benchmark rate of return of negative 7.90 percent. (It is not unusual to have a negative benchmark rate of return in the short term. However, the System manages the pension plan for the long term.) The pension plan's rate of return on investments was negative 10.61 percent in fiscal year 2001. As discussed above, for the last ten fiscal years, the average annual investment return was 8.8 percent.

Pension plan membership increased to 1,048,086 (a 4.2 percent increase) during fiscal year 2002.

The number of current members increased by 3.6 percent to 846,645, while retirement recipient membership increased by 6.6 percent to 201,441. Pension plan deductions (primarily consisting of benefit payments) increased by 17.3 percent to $4.6 billion in fiscal year 2002, largely because of growth in retiree membership and benefit enhancements enacted during the 76th and 77th legislative sessions.

Chapter 2

Key Issues Regarding the Teacher Retirement System's Retiree Health Insurance Plan

Although the net assets of the retiree health insurance plan increased during fiscal year 2002 because of $285.5 million in supplemental state appropriations, significant changes will have to be made to keep the plan solvent.

Net assets grew from a negative $36.0 million to positive $71.9 million during fiscal year 2002 because of $285.5 million in supplemental state appropriations. However, excluding the supplemental state appropriations, fiscal year 2002 retiree health insurance plan expenses of $470.7 million exceeded fiscal year 2002 contributions of $293.1 million by $177.6 million because of growing enrollment and rising health care costs. Therefore, under the current funding structure, significant changes will have to be made to keep the plan solvent if there are no additional state appropriations. The plan does not have any contingency reserves.

Retiree Health Insurance Plan Funding Sources

Texas Insurance Code, Article 3.50-4, Section 16, specifies that:

- Each active employee shall contribute 0.25 percent of his or her salary.
- The State shall contribute 0.50 percent of the salary of each active employee.
- The State may contribute additional amounts.

Other funding sources include:

- Premiums paid by covered retirees.
- Deductibles, co-pays, and Medicare Part B premiums paid by covered retirees.
- Investment earnings.

In its Legislative Appropriations Request for the 2004-2005 biennium, the System requested $1.369 billion ($628 million for fiscal year 2004 and $741 million for fiscal year 2005). This amount is $720 million more than the amount appropriated for the 2002-2003 biennium and is necessary for the retiree health insurance plan to remain solvent through August 31, 2005.

The System's management has been closely monitoring the funding status of the retiree health insurance plan and reporting information regarding the plan's funding status to state leaders on a monthly basis for the past three years.

Results of an external health claims audit indicate that the accuracy of the retiree health insurance plan's health care and prescription drug claims compares favorably with plans of a similar size.

The audit found 97.0 percent and 98.3 percent accuracy rates, respectively, for health care claims and prescription drug claims processed by external vendors.

Other Information

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, 2002.

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. We also conducted interviews, administered questionnaires, reviewed documents, and recalculated significant amounts.

Distribution Information

Legislative Audit Committee

The Honorable James E. "Pete" Laney, Speaker of the House, Chair
The Honorable Bill Ratliff, Lieutenant Governor, Vice Chair
The Honorable Rodney Ellis, Senate Finance Committee
The Honorable Florence Shapiro, Senate State Affairs Committee
The Honorable Robert Junell, House Appropriations Committee
The Honorable Rene O. Oliveira, House Ways and Means Committee

Office of the Governor

The Honorable Rick Perry, Governor

Teacher Retirement System

Chair and Members of the Board of Trustees
Mr. Charles L. Dunlap, Executive Director