

*Comprehensive Annual Financial Report*  
*Fiscal Year Ended June 30, 2002*

FOCUS  
on the future



STATE TEACHERS RETIREMENT SYSTEM  
OF OHIO





**Auditor of State  
Betty Montgomery**

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To the Retirement Board  
The State Teachers Retirement System of Ohio

We have reviewed the Independent Auditor's Report of the State Teachers Retirement System of Ohio, Franklin County, prepared by KPMG LLP, for the audit period July 1, 2001 through June 30, 2002. Based upon this review, we have accepted these reports in lieu of the audit required by Section 117.11, Revised Code. The Auditor of State did not audit the accompanying financial statements and, accordingly, we are unable to express, and do not express an opinion on them.

Our review was made in reference to the applicable sections of legislative criteria, as reflected by the Ohio Constitution, and the Revised Code, policies, procedures and guidelines of the Auditor of State, regulations and grant requirements. The State Teachers Retirement System of Ohio is responsible for compliance with these laws and regulations.

A handwritten signature in black ink that reads "Betty Montgomery".

BETTY MONTGOMERY  
Auditor of State

February 12, 2003

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# Certificate of Achievement for Excellence in Financial Reporting

Presented to

## The State Teachers Retirement System of Ohio

For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended  
June 30, 2001

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.



*Imelda Aru*  
President

*Jeffrey L. Esler*  
Executive Director

# Table of Contents

State Teachers Retirement System of Ohio  
2002 Comprehensive Annual Financial Report

A review of the 2001–2002 fiscal year  
Prepared through the joint efforts of the STRS Ohio staff

## Introduction

Certificate of Achievement .....	1
State Teachers Retirement Board .....	3
STRS Ohio Senior Staff Members.....	5
Letter of Transmittal .....	6

## Financial

Independent Auditors' Report .....	10
Management's Discussion and Analysis .....	11
Financial Statements	
Statements of Plan Net Assets .....	17
Statements of Changes in Plan Net Assets .....	18
Notes to Financial Statements .....	19
Required Supplementary Information	
Required Schedule of Funding Progress, 1997–2002 .....	28
Required Schedule of Employer Contributions, 1997–2002 .....	28
Notes to the Trend Data .....	28
Additional Information	
Schedule of Administrative Expenses .....	29
Schedule of Investment Expenses .....	30

## Investments

Investment Review .....	32
Investment Objective and Policy .....	35
Investment Performance .....	45
STRS Ohio Long-Term Policy Objective (5 Years).....	45
Summary of Investment Assets as of June 30, 2002 and 2001.....	46
Investment Distribution by Fair Value as of June 30, 2002 .....	47
Ohio Investment Profile as of June 30, 2002 .....	47
Schedule of Largest Investment Holdings as of June 30, 2002 .....	47
Schedule of U.S. Stock Brokerage Commissions Paid .....	47

## Actuarial

Actuary's Certification Letter .....	50
Statement of Actuarial Assumptions and Methods .....	51
Benefit Recipients Added to and Removed From the Rolls, 1997–2002 .....	52
Schedule of Valuation Data — Active Members, 1993–2002 .....	52
Schedule of Valuation Data — Retirees/Beneficiaries, 1993–2002 .....	52
Solvency Test, 1993–2002 .....	53
Analysis of Financial Experience .....	53
Summary of Benefit and Contribution Provisions — Defined Benefit Plan .....	54
Summary of Benefit and Contribution Provisions — Combined Plan .....	56
Summary of Benefit and Contribution Provisions — Defined Contribution Plan.....	57

## Statistical

Expenses by Type, 1993–2002 .....	59
Revenues by Source, 1993–2002 .....	59
Number of Benefit Recipients by Type, 1993–2002 .....	60
Average Monthly Allowances by Type, 1993–2002 .....	60
Benefit Expenses by Type, 1993–2002 .....	60
Selected Funding Information, 1993–2002 .....	61
Number of Reporting Employers by Type, 1993–2002 .....	61

# 2001-2002 State Teachers Retirement Board

Guiding the members of the Retirement Board is their collective belief that Ohio's public educators deserve comprehensive benefits and quality service from their retirement system during their careers and in retirement. It is the nine-member Retirement Board that provides the direction, fiduciary oversight and policies that enable STRS Ohio to fulfill its mission of assuring financial security for Ohio's educators.



**Deborah Scott**  
**Vice Chair**

Teacher member since 1994.  
Finneytown Local Schools,  
Hamilton County

**Richard Moore**

Representing Betty D. Montgomery,  
Attorney General.  
Ex officio member of the board  
since elected to office in 1995.

**Gloria L. Gaylord**

Representing James M. Petro,  
Auditor of State.  
Ex officio member of the  
board since elected to office  
in 1995.

**Jack H. Chapman**

Teacher member since 1990.  
Reynoldsburg City Schools,  
Franklin County

**Eugene E. Norris**

Teacher member since 1996.  
South-Western City Schools,  
Franklin County

The majority of the board is composed of six elected members — five active teachers and one retired teacher — who have firsthand knowledge of the needs and expectations of STRS Ohio members and benefit recipients. These individuals devote thousands of volunteer hours every year in service to STRS Ohio. Joining these six educators at the board table are three ex officio voting members: the auditor of state, the attorney general and the superintendent of public instruction.

In 2002, the election for two active teacher seats on the board was uncontested. As a result, Hazel A. Sidaway and Jack H. Chapman retained their seats on the board for terms beginning September 2002 and ending August 2006.



**Herbert L. Dyer**  
Executive Director,  
State Teachers Retirement  
System of Ohio

**Joseph I. Endry**  
Retired teacher member  
since 2001.  
Franklin County

**Paul Marshall**  
Representing Susan Tave  
Zelman, Superintendent  
of Public Instruction.  
Ex officio member of the  
board since appointed to  
office in 1999.

**Michael N. Billirakis**  
Teacher member since 2000.  
Perry Local Schools,  
Lake County

**Hazel A. Sidaway**  
**Chair**  
Teacher member since 1986.  
Canton City Schools,  
Stark County



# STRS Ohio Senior Staff Members

Shown here are the members of senior staff for 2001–2002. Pictured from left to right are: (back row) Laura R. Ecklar, director of Communication Services; Damon F. Asbury, deputy executive director — Administration; Cynthia E. Hvizdos, general counsel; Terri Meese Harrison, director of Governmental Relations; Eileen F. Boles, executive assistant; Lorrie Washburn, director of Human Resource Services; (front row) Stephen A. Mitchell, deputy executive director — Investments; Robert A. Slater, deputy executive director — Finance and chief financial officer; Sandra L. Knoesel, deputy executive director — Member Benefits; Adrian R. Mullins, director of Information Technology Services; and Herbert L. Dyer, executive director.





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RETIREMENT BOARD

- DEBORAH SCOTT, *Chair*  
Finneytown Local Schools  
Hamilton County
- EUGENE E. NORRIS, *Vice Chair*  
South-Western City Schools  
Franklin County
- MICHAEL N. BILLIRAKIS  
Perry Local Schools  
Lake County
- JACK H. CHAPMAN  
Reynoldsburg City Schools  
Franklin County
- JOSEPH I. ENDRY  
Retired Teacher Member
- BETTY D. MONTGOMERY  
Attorney General of Ohio
- JAMES M. PETRO  
Auditor of State
- HAZEL A. SIDAWAY  
Canton City Schools  
Stark County
- SUSAN TAVE ZELMAN  
Superintendent of  
Public Instruction



- HERBERT L. DYER  
*Executive Director*
- CYNTHIA E. HVIZDOS  
*General Counsel*
- TERRI MEESE HARRISON  
*Governmental Relations*
- EILEEN F. BOLES  
*Executive Assistant*



- DEPUTY EXECUTIVE DIRECTORS
- DAMON F. ASBURY  
*Administration*
- SANDRA L. KNOESEL  
*Member Benefits*
- STEPHEN A. MITCHELL  
*Investments*
- ROBERT A. SLATER  
*Chief Financial Officer*

Dec. 9, 2002

Members of the State Teachers Retirement Board:

We are pleased to present the *Comprehensive Annual Financial Report* of the State Teachers Retirement System of Ohio for the fiscal year ended June 30, 2002. This report is intended to provide readers with financial, investment, actuarial and statistical information in a single publication. STRS Ohio management is responsible for the accuracy of the data and for the completeness and fairness of the presentation.

STRS Ohio was created by legislative act on May 8, 1919, as an alternative to separate, often unstable local school district retirement plans. STRS Ohio is a cost-sharing, multiple-employer plan providing service retirement, disability, survivor and health care benefits to teachers and faculty members of public boards of education, state-supported colleges and universities, and the state of Ohio and its political subdivisions.

The *Comprehensive Annual Financial Report* is divided into five sections: (1) the Introductory Section includes this letter of transmittal and information about the administrative organization of STRS Ohio; (2) the Financial Section contains the financial statements, Management’s Discussion and Analysis, and footnotes along with the report of the independent auditors; (3) the Investment Section includes a summary of investment assets and the Retirement Board’s Objective and Policy Statement; (4) the Actuarial Section includes results of the annual actuarial valuation and the certification letter of Buck Consultants; and (5) the Statistical Section includes historical data showing the progress of the system.

The theme of this report, “Focus on the Future,” is intentional. During the 2001–2002 fiscal year, the State Teachers Retirement Board and the associates of STRS Ohio have continued to follow in the footsteps of their predecessors. Each decision is made not with just a review of the present, but also with an eye to the future. Decisions must not be made with only the interests of current benefit recipients in mind, but also in light of the needs of thousands of active members who will also someday be benefit recipients.

### Major Initiatives

STRS Ohio recognized that one retirement plan was not necessarily best for all members and that by providing different retirement plan options, members can choose the plan that best suits their personal needs. As an alternative to the existing Defined Benefit Plan (DB Plan), new members after July 1, 2001, can now select the Defined Contribution Plan (DC Plan) or the Combined Plan. Existing members with less than five years service in the DB Plan were also given a one-time opportunity to switch to one of the new plan options.

Defined Contribution Plan participants allocate both member and employer contributions among available investment choices. They may not withdraw employer contributions until they have been STRS Ohio members for at least one year. Available investment choices are all managed by STRS Ohio staff and include money market, fixed-income, U.S. stock, international and real estate funds. Retirement, disability and survivor benefits are all limited to the value of the member’s account. DC Plan members are not eligible to participate in STRS Ohio’s postemployment health care plan.

In the Combined Plan, members allocate their own contributions among the same investment choices as DC Plan members. Employer contributions are used to provide a reduced formula service retirement benefit along with disability and survivor protection. Combined Plan members are eligible for postemployment health care benefits on the same basis as DB Plan members.

With passage of Senate Bill 247 during the summer of 2002, STRS Ohio can now offer a Partial Lump-Sum Option Plan (PLOP). New Defined Benefit and Combined Plan retirees may take a lump-sum payment that equals from six to 36 times their monthly service retirement benefit. Subsequent monthly benefits are reduced proportionally. The PLOP is available to members who retire on or after Oct. 1, 2002.

Two consecutive years of sharp decline in investment markets have taken a toll on funding pension benefits. The unfunded actuarial accrued liability increased to \$14.3 billion as of July 1, 2002, from \$5.2 billion a year earlier. Two actions were taken to reduce the funding period. First, 3.5% of employer contributions will be reallocated to funding pension benefits instead of subsidizing retiree health care effective July 1, 2002. Secondly, the member contribution rate will be increased from 9.3% to 10% of compensation effective July 1, 2003. With these changes, the amortization period for the unfunded pension liability is 39 years as of July 1, 2002.

For additional financial information, refer to the Management’s Discussion and Analysis on Pages 11 through 15.

### Investments

Total investments decreased to \$47.7 billion (excluding collateral on loaned securities) as of June 30, 2002. The Investment Review starting on Page 32 discusses the declines experienced in the investment markets. The allocation of investment assets is designed to provide high long-term yields while minimizing risk. A summary of the asset allocation can be found on Page 47.

For the year ended June 30, 2002, investments provided a –8.13% return. STRS Ohio’s annualized rate of return over the last three years was –1.68% and 4.18% for the last five years. Similar benchmark returns over the same one-, three- and five-year periods were –7.32%, –1.73% and 4.37%, respectively.

### Additions to Plan Net Assets

Member and employer contributions, as well as income from investments, provide the reserves needed to finance retirement benefits. Total contributions and net investment income resulted in a negative figure for the fiscal year since total contributions of \$2.1 billion were more than offset by the \$4.3 billion investment loss. The net investment loss includes the fair value declines of our investment portfolio from last year to this year. Member and employer contributions increased from last year by 5.3% and 5.5%, respectively. Total contributions include amounts paid by employers of participants in alternative retirement plans (ARPs). ARP participants are not members of STRS Ohio; however, their employers are required to contribute 3.5% (5.76% prior to Oct. 1, 2001) of salaries to STRS Ohio to help pay for unfunded liabilities.

### Additions to Plan Net Assets (in thousands)

	2002
Net Investment Income (Loss)	\$ (4,308,089)
Contributions:	
Member	\$ 826,910
Employer	\$ 1,204,715
Other	\$ 99,631
Total Contributions	\$ 2,131,256
Total Additions to Plan Net Assets	\$ (2,176,833)

### Deductions From Plan Net Assets

The principal purpose for STRS Ohio is to provide retirement, survivor and disability benefits to qualified members and their beneficiaries. The cost of such programs includes recurring benefit payments as designated by the plan, refunds of contributions to terminated members, and the administrative costs of operating STRS Ohio. Benefit, withdrawal and administrative costs totaled \$3.2 billion in fiscal 2002, a 7.0% increase over fiscal 2001. The optional supplemental benefit was not paid in fiscal 2002 due to investment losses in the 2001 fiscal year.

### Deductions From Plan Net Assets (in thousands)

	2002
Benefits	\$ 3,073,240
Withdrawals	\$ 84,077
Administrative Expenses	\$ 77,125
Total Deductions from Net Assets	\$ 3,234,442

## *Funding*

Contribution rates are actuarially determined to provide a level basis of funding using the entry age normal cost method, and an actuarial valuation is performed annually by Buck Consultants, Chicago, Ill. The July 1, 2002, valuation shows that the amortization period for the unfunded accrued liability increased to 39 years from 27.5 years, and the ratio of assets to total accrued liabilities decreased to 77.4% from 91.2%. A detailed discussion of funding is provided in the Actuarial Section of this report beginning on Page 50.

## *Internal Controls*

The management of STRS Ohio is responsible for and has implemented systems of internal controls, which are designed to provide reasonable assurances for the safeguarding of assets and the reliability of financial records. We believe that the internal controls currently in place are adequate to meet the purpose for which they were intended.

## *Certificate of Achievement and Other Awards*

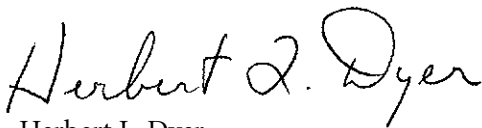
The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to STRS Ohio for its *Comprehensive Annual Financial Report* for the fiscal year ended June 30, 2001. The Certificate of Achievement is a prestigious national award recognizing conformance with the highest standards for preparation of state and local government financial reports.

To be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized comprehensive annual financial report that conforms to program standards. This report must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for one year. STRS Ohio has received a Certificate of Achievement for the last 12 years. We believe our current report continues to conform to the Certificate of Achievement program requirements and are submitting it to the GFOA.

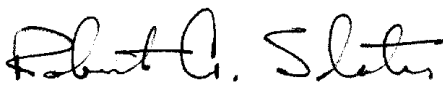
## *Acknowledgments*

The preparation of this report is possible only through the combined efforts of the STRS Ohio staff. It is intended to provide complete and reliable information as a basis for making management decisions, complying with legal provisions and determining responsible stewardship of the assets contributed by members and their employers.

Respectfully submitted,



Herbert L. Dyer  
Executive Director



Robert A. Slater, CPA  
Deputy Executive Director  
Chief Financial Officer

# Financial

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# Independent Auditors' Report



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To the Retirement Board  
The State Teachers Retirement System of Ohio:

We have audited the accompanying statements of plan net assets of the State Teachers Retirement System of Ohio (the System) as of June 30, 2002 and 2001, and the related statements of changes in plan net assets for the years then ended. These financial statements are the responsibility of the System's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits 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 audits provide 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 System as of June 30, 2002 and 2001, and the changes in its plan net assets for the years then ended in conformity with accounting principles generally accepted in the United States of America.

As described in Note 11, the System has implemented GASB Statement No. 34, *Basic Financial Statements — and Management's Discussion and Analysis — for State and Local Governments*, as of July 1, 2001.

In accordance with *Government Auditing Standards*, we have also issued a report dated December 3, 2002, on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grants. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* and should be read in conjunction with this report in considering the results of our audits.

The management's discussion and analysis on pages 11 through 15 and the schedules of funding progress and employer contributions on page 28 are not a required part of the 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.

The introduction section on pages 1 through 8, the investments section on pages 32 through 48, the actuarial section on pages 50 through 58, and the statistical section on pages 59 through 61 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.

Our audits were conducted for the purpose of forming an opinion on the financial statements taken as a whole. The financial information included on pages 29 and 30 is presented for the purpose of additional analysis and is not a required part of the financial statements. Such information has been subjected to the auditing procedures applied in the audits of the financial statements for the years ended June 30, 2002 and 2001, and, in our opinion, is fairly stated in all material respects in relation to the financial statements taken as a whole.

**KPMG LLP**

December 3, 2002



KPMG LLP, KPMG LLP, a U.S. limited liability partnership, is a member of KPMG International, a Swiss association.

# Management's Discussion and Analysis

Management is pleased to provide this overview and analysis of the financial activities of the State Teachers Retirement System of Ohio (STRS Ohio) for the year ended June 30, 2002. This information is intended to supplement the financial statements, which begin on Page 17 of this report. We encourage readers to consider additional information and data in STRS Ohio's 2002 *Comprehensive Annual Financial Report*.

## Financial Highlights

- Two new plan options were offered to selected members starting July 1, 2001. For the first time in STRS Ohio's history, new members have a choice of three retirement plan options. In addition to the Defined Benefit Plan, new members were offered a Defined Contribution Plan and a Combined Plan. Current members with less than five years of service credit as of June 30, 2001, could also switch to either the Defined Contribution Plan or the Combined Plan.
- Declining investment markets resulted in a loss to STRS Ohio for the second consecutive year. The investment rate of return for fiscal 2002 was -8.13% following fiscal 2001's return of -6.33%. Five- and 10-year returns are much more favorable at 4.18% and 8.15%, respectively.
- Total plan net assets decreased in value by 10% during the fiscal year to \$47.9 billion at June 30, 2002.
- Total benefit payments exceeded \$3 billion for the first time in STRS Ohio's history. STRS Ohio paid members more than \$2.6 billion in service retirement, disability and survivor benefits plus \$434.3 million for health care benefits.

## Annual Financial Review

Fiscal 2002 was not a good year financially for STRS Ohio. Investment losses had a severe impact on funding for both pension and health care benefits. However, it is important to remember that STRS Ohio is a long-term investor. Diversification of investments among U.S. stocks, real estate, international and fixed-income investments enable STRS Ohio to "ride out" short-term fluctuations in individual asset classes. In spite of investment losses the past two years, STRS Ohio's compound rate of return over the past 10 years was 8.15% — exceeding the actuarial assumption of 7.75%.

The unfunded pension liability for STRS Ohio, as of July 1, 2002, is \$14.3 billion, up significantly from \$5.2 billion as of July 1, 2001. To help reduce the amortization period for the unfunded pension liability, the teacher contribution rate will be increased from 9.3% of earned compensation to 10% effective July 1, 2003. Additionally, 3.5% of employer contributions will be reallocated to funding pension benefits instead of subsidizing retiree

health care effective July 1, 2002. With these changes, the expected amortization period to pay off the unfunded liability is 39 years.

Rising health care costs are of great concern for STRS Ohio and have been for several years. The balance in the Post-employment Health Care Fund decreased from \$3.26 billion as of June 30, 2001, to \$3.01 billion as of June 30, 2002. Several changes to STRS Ohio's Health Care Program have been made for 2003. Additional changes for 2004 and beyond are inevitable. STRS Ohio is committed to helping eligible retirees with access to affordable health care coverage. However, the cost to participants is expected to increase sharply.

## Overview of the Financial Statements of STRS Ohio

The two financial statements are the *Statements of Plan Net Assets* and the *Statements of Changes in Plan Net Assets*. Statements are shown for the most recent and previous fiscal years for comparison and analysis of changes in individual line items. The statements are prepared in conformity with accounting principles generally accepted in the United States.

The *Statements of Plan Net Assets* are a measure of STRS Ohio's assets and liabilities at the close of the fiscal year. Total assets less liabilities equal the net assets held in trust for future benefits.

The *Statements of Changes in Plan Net Assets* show revenues (additions) and expenses (deductions) for the fiscal year. The net increase (or decrease) is the change in net assets available for benefits since the end of the previous fiscal year.

For financial reporting purposes, STRS Ohio assets are divided into three

primary funds: the Defined Benefit (DB) Plan, the Defined Contribution (DC) Plan and the Postemployment Health Care Plan.

- The Defined Benefit Plan is the largest fund and includes member contributions, employer contributions and investment earnings for DB participants. The DB Plan pays service retirement benefits using a fixed formula based on age, years of service and salary. In addition to service retirement, DB participants are eligible for disability and survivor benefits.
- The Defined Contribution Plan began operations July 1, 2001. It is an optional plan initially available to STRS Ohio DB members with less than five years of service and new members. DC participants allocate both member and employer contributions among available investment choices. Benefits are limited to the member's account value.

As an alternative to the Defined Benefit or Defined Contribution Plan, certain members may elect the Combined Plan. Combined Plan participants allocate their member contributions among the same investment choices as DC members, and employer contributions are used to provide a reduced formula service retirement benefit along with disability and survivor protection. Assets designated to provide benefits to Combined Plan members are divided between the Defined Benefit Plan and the Defined Contribution Plan.

- The Postemployment Health Care Plan consists of assets set aside to subsidize health care premiums for members enrolled in the Defined Benefit and Combined Plans.

The *Notes to Financial Statements* are a fundamental part of the financial statements and provide important information to augment the figures in the financial statements. The notes describe accounting policies along with plan membership and benefits. Supplementary disclosures of selected financial data are included in the notes.

In addition to the financial statements and footnotes, a *Schedule of Funding Progress*, a *Schedule of Employer Contributions* and *Notes to the Trend Data* are included as required supplementary information. These schedules emphasize the long-term nature of pension plans and show progress of STRS Ohio in accumulating sufficient assets to pay benefits when due.

The *Schedule of Funding Progress* shows actuarial trend information for the past six years. It includes the ratio of valuation assets to actuarial accrued liability (funded ratio). The funded ratio increases over time as the funding status of a pension plan improves and vice versa. The *Schedule of Funding Progress* also shows the unfunded actuarial accrued liability as a percentage of member payroll. This percentage decreases as a pension plan's funding status grows stronger.

The *Schedule of Employer Contributions* shows the amount of required employer contributions determined in accordance with parameters established by Governmental Accounting Standards Board Statement 25 and the percentage actually contributed. Employer contributions to STRS Ohio have exceeded the required contributions for the six years shown on this schedule.

The *Notes to the Trend Data* provide the actuarial method and assumptions used to determine the data in the *Schedule of Funding Progress* and the *Schedule of Employer Contributions*.

A *Schedule of Administrative Expenses* and a *Schedule of Investment Expenses* are included to show detail of the administrative and investment costs to operate STRS Ohio.

### *Investment Allocation and Fiscal Year Performance*

For fiscal 2002, total investments resulted in an 8.13% loss. The U.S. and international stock portfolios suffered as the equity markets continued to decline in value. The STRS Ohio portfolio of U.S. stocks lost 17.50% while international stocks realized a 7.90% loss for the 2002 fiscal year. Real estate and fixed income generated positive returns for the fiscal year of 3.92% and 7.79%, respectively.



# Management's Discussion and Analysis

## Investment Performance (total returns, annualized on a fiscal-year basis, July 1–June 30)

### 1-Year Returns (2002)

Asset Category	STRS Ohio Return	Index Name	Index Return
Domestic Stocks	(17.50%)	Standard & Poor's (S&P) 1500*	(16.50%)
International	(7.90%)	EAFE/Emerging Composite	(10.82%)
Fixed Income	7.79%	Lehman Universal**	7.71%
Real Estate	3.92%	Real Estate Composite	5.48%
<b>Total Fund</b>	<b>(8.13%)</b>	S&P/Lehman/RE/International	(7.32%)
		Inflation (GDP Deflator)	1.03%

### 5-Year Returns (1998–2002)

Asset Category	STRS Ohio Return	Index Name	Index Return
Domestic Stocks	2.85%	Standard & Poor's (S&P) 1500*	4.21%
International	(1.42%)	EAFE/Emerging Composite	(3.86%)
Fixed Income	7.68%	Lehman Universal**	7.31%
Real Estate	11.61%	Real Estate Composite	10.56%
<b>Total Fund</b>	<b>4.18%</b>	S&P/Lehman/RE/International	4.37%
		Inflation (GDP Deflator)	1.65%

### STRS Ohio Long-Term Policy Objective (5 Years)

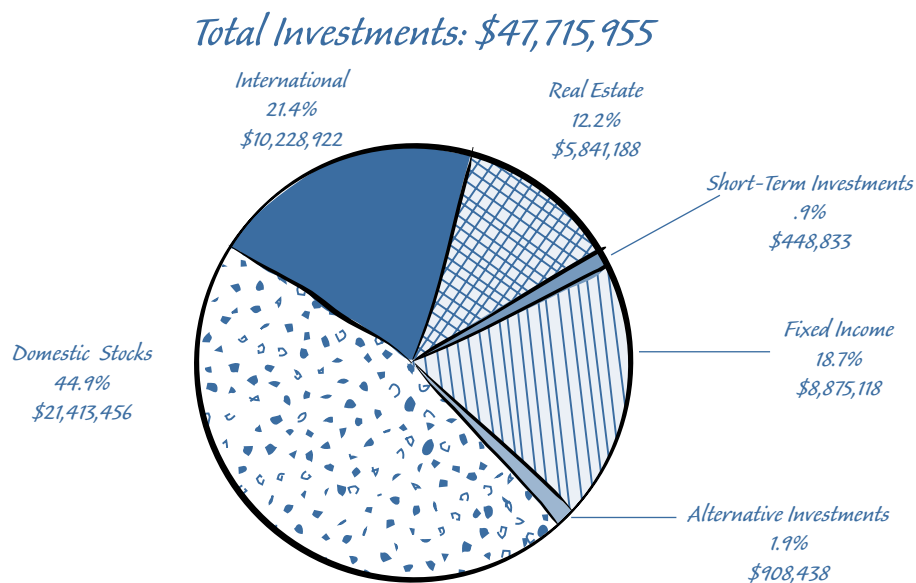
Equities: 8%–10%      Fixed Income: 6%–7%      Real Estate: 8%–9%      Total Fund: 8%

Investment performance is calculated using a time-weighted rate of return.

\*The domestic stocks benchmark is calculated using the S&P 1500 Index for all periods beginning on or after Jan. 1, 1998, and using the S&P 500 Index for all periods before Jan. 1, 1998.

\*\*The fixed-income benchmark is calculated using the Lehman Universal Index for all periods beginning on or after Oct. 1, 2000, and using the Lehman Aggregate Index for all periods before Oct. 1, 2000.

## Investment Distribution by Fair Value — as of June 30, 2002 (dollar amounts in thousands)



Certain U.S.-based short-term and fixed-income securities have been classified as international investments in order to approximate the investment exposure of international equity swaps.

## Financial Statement Analysis

The following table shows condensed information from the *Statements of Plan Net Assets*:

### *Plan Net Assets* (dollar amounts in thousands)

	2002	2001	Percentage Change
Cash and Investments	\$ 47,726,785	\$ 52,813,292	(9.63%)
Receivables	597,638	638,724	(6.43%)
Securities Lending Collateral	3,256,401	3,615,793	(9.94%)
Fixed Assets	148,429	149,524	(.73%)
<b>Total Net Assets</b>	<b>51,729,253</b>	<b>57,217,333</b>	<b>(9.59%)</b>
Liabilities	3,806,153	3,882,958	(1.98%)
<b>Plan Net Assets</b>	<b>\$ 47,923,100</b>	<b>\$ 53,334,375</b>	<b>(10.15%)</b>

The value of plan net assets decreased more than \$5 billion during the 2002 fiscal year. The decrease is the direct result of the 9.6% decrease in cash and investments.

As of June 30, 2002, total receivables decreased more than \$40 million from 2001. At the beginning of the fiscal year, STRS Ohio changed its method of collecting member and employer contributions from monthly deposits to individual payroll reporting. This change resulted in earlier collection and availability of funds for investment.

The following two tables show condensed information from the *Statements of Changes in Plan Net Assets*:

### *Additions to Plan Net Assets* (dollar amounts in thousands)

	2002	2001	Percentage Change
Contributions:			
Member Contributions	\$ 826,910	\$ 785,009	5.34%
Employer Contributions	1,204,715	1,142,440	5.45%
Health Care Premiums	79,590	68,582	16.05%
Other	20,041	35,000	(42.74%)
<b>Total Contributions</b>	<b>2,131,256</b>	<b>2,031,031</b>	<b>4.93%</b>
Total Investment Income (Loss)	(4,308,089)	(3,694,121)	16.62%
<b>Total Additions to Plan Net Assets</b>	<b>\$ (2,176,833)</b>	<b>\$ (1,663,090)</b>	<b>30.89%</b>

Total additions to plan net assets were actually a negative figure for fiscal 2002. Member contributions increased 5.3% during the year to \$827 million while employer contributions increased 5.5% to \$1.2 billion. The increases were primarily the result of increased teacher salaries and a slight growth in active membership. Contribution rates during the fiscal year were 9.3% of earned compensation for members and 14% for employers.

Unfortunately, contributions into STRS Ohio were more than offset by the \$4.3 billion investment income loss. To put the investment environment in perspective, the current stock market decline (48%) is greater than any bear market since the Depression era. In 1973–1974 when the stock market lost approximately 46% of its value, it took nearly six years to return to the levels reached before the decline began.

# Management's Discussion and Analysis

To offset some of the increases in health care costs, health care premiums charged to benefit recipients were increased Jan. 1, 2002. Total health care premiums paid by participating retirees grew by 16.1% from the prior year.

## Deductions from Plan Net Assets (dollar amounts in thousands)

	2002	2001	Percentage Change
Deductions:			
Benefit Payments	\$ 2,638,953	\$ 2,486,505	6.13%
Health Care Benefits	434,287	369,354	17.58%
Refunds to Members	84,077	93,868	(10.43%)
Administrative Expenses	77,125	72,277	6.71%
<b>Total Deductions</b>	<b>\$ 3,234,442</b>	<b>\$ 3,022,004</b>	<b>7.03%</b>

STRS Ohio was created to provide retirement, disability and survivor benefits to members and eligible beneficiaries. Costs include monthly benefit payments to eligible recipients, refunds of contributions to members who terminate employment, and the administrative costs of operating STRS Ohio.

Total deductions from plan net assets are \$3.2 billion for 2002, a 7% increase over 2001. The largest component is monthly benefit payments for service retirement, disability and survivor benefits. Total pension benefits increased 6.1% over fiscal 2001 as a result of new retirees and cost-of-living adjustments.

Health care costs increased nearly 18% during the fiscal year to \$434 million. Double-digit inflation combined with investment losses have reduced funding for retiree health care to a critical level. The State Teachers Retirement Board and management are searching for acceptable solutions, but increases in the cost to retirees are likely.

### Funding Analysis

The unprecedented losses caused by the sustained fall in stock markets resulted in a major decline in the funding status of STRS Ohio pension benefits. Upon recommendation of the executive director, the State Teachers Retirement Board during its November 2002 meeting unanimously approved two major actions to improve pension benefit funding. First, the allocation of employer contributions to pension benefits was increased from 9.5% to 13% of payroll effective July 1, 2002. Unfortunately, this action required reducing the allocation to the health care fund from 4.5% to 1%. Second, the STRS Ohio member contribution rate will be increased to the 10% legal maximum from the current 9.3% effective July 1, 2003.

With these changes, the unfunded accrued liability for STRS Ohio pension benefits is \$14.3 billion as of July 1, 2002. The funding period, which refers to the time needed to pay off the unfunded accrued liability, is now 39 years. The funded ratio of valuation assets divided by the accrued pension liability decreased to 77.4% from the 2001 level of 91.2%.

Recent investment declines are contributing to funding problems plaguing health care subsidies for STRS Ohio retirees and dependents. However, service retirement, disability and survivor benefits are not in jeopardy. STRS Ohio remains a financially sound pension plan.

### Requests for Information

Questions about any information provided in this report should be addressed to:

State Teachers Retirement System of Ohio  
ATTN: Chief Financial Officer  
275 E. Broad St.  
Columbus, OH 43215-3771

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## Statements of Plan Net Assets (in thousands)

	June 30, 2002				June 30, 2001			
	Defined Benefit	Defined Contribution	Post-employment Health Care	Totals	Defined Benefit	Defined Contribution	Post-employment Health Care	Totals
<b>Assets:</b>								
Cash & short-term investments	\$ 501,556	\$ 3,214	\$ 34,708	\$ 539,478	\$ 591,481		\$ 39,208	\$ 630,689
<b>Receivables:</b>								
Accrued interest & dividends	125,040		8,598	133,638	163,769		10,856	174,625
Employer contributions	176,719	42	12,154	188,915	189,137		12,537	201,674
Retirement incentive	8,931			8,931	14,507			14,507
Member contributions	111,769	82		111,851	161,166			161,166
Due from defined contribution plans	5,525			5,525	2,533			2,533
Securities sold	138,010		9,490	147,500	77,866		5,162	83,028
Miscellaneous receivables	1,278			1,278	1,191			1,191
<b>Total receivables</b>	<b>567,272</b>	<b>124</b>	<b>30,242</b>	<b>597,638</b>	<b>610,169</b>		<b>28,555</b>	<b>638,724</b>
<b>Investments, at fair value:</b>								
Fixed income	9,819,660	9,227	675,835	10,504,722	10,861,681		720,002	11,581,683
Common and preferred stock	20,017,900	17,893	1,377,663	21,413,456	22,671,485		1,502,852	24,174,337
International	7,968,598	2,791	548,114	8,519,503	8,598,248		569,963	9,168,211
Real estate	5,462,657	2,730	375,801	5,841,188	5,941,282		393,837	6,335,119
Alternative investments	849,993		58,445	908,438	865,857		57,396	923,253
Total investments	44,118,808	32,641	3,035,858	47,187,307	48,938,553		3,244,050	52,182,603
Invested securities lending collateral	3,046,896		209,505	3,256,401	3,391,009		224,784	3,615,793
Fixed assets, at cost, net of accumulated depreciation of \$56,502 and \$46,713, respectively	148,429			148,429	149,524			149,524
<b>Total assets</b>	<b>48,382,961</b>	<b>35,979</b>	<b>3,310,313</b>	<b>51,729,253</b>	<b>53,680,736</b>		<b>3,536,597</b>	<b>57,217,333</b>
<b>Liabilities:</b>								
Securities purchased	113,411		7,798	121,209	190,923		12,656	203,579
Real estate note payable	327,482		22,518	350,000				
Accrued expenses & other liabilities	21,530		1,480	23,010	14,461		958	15,419
Due to defined benefit plans		5,525		5,525		\$ 2,533		2,533
Medical benefits payable			59,074	59,074			42,035	42,035
Obligations under securities lending program	3,038,413		208,922	3,247,335	3,394,384		225,008	3,619,392
<b>Total liabilities</b>	<b>3,500,836</b>	<b>5,525</b>	<b>299,792</b>	<b>3,806,153</b>	<b>3,599,768</b>	<b>2,533</b>	<b>280,657</b>	<b>3,882,958</b>
<b>Net assets held in trust for defined benefit, defined contribution and postemployment health care benefits:</b>								
(A schedule of funding progress is presented on Page 28.)	\$ 44,882,125	\$ 30,454	\$ 3,010,521	\$ 47,923,100	\$ 50,080,968	\$ (2,533)	\$ 3,255,940	\$ 53,334,375

## Statements of Changes in Plan Net Assets (in thousands)

	Year Ending June 30, 2002				Year Ending June 30, 2001			
	Defined Benefit	Defined Contribution	Post- employment Health Care	Totals	Defined Benefit	Defined Contribution	Post- employment Health Care	Totals
<b>Additions</b>								
Contributions:								
Member	\$ 815,339	\$ 11,571		\$ 826,910	\$ 785,009			\$ 785,009
Employer	817,742	6,536	\$ 380,437	1,204,715	779,274		\$ 363,166	1,142,440
Plan transfers	(19,792)	19,792						
Retirement incentive	13,760			13,760	25,390			25,390
Benefit recipient health care premiums			79,590	79,590			68,582	68,582
Defined contribution participant fees		56		56				
Other retirement systems	6,164			6,164	9,416			9,416
Additional death benefits (net)	61			61	194			194
<b>Total contributions</b>	1,633,274	37,955	460,027	2,131,256	1,599,283		431,748	2,031,031
Investment (loss) income from investing activities:								
Net (depreciation) appreciation in fair value of investments	(5,417,726)	(1,530)	(358,415)	(5,777,671)	(4,993,942)		(318,843)	(5,312,785)
Interest	571,370	25	37,790	609,185	754,350		48,162	802,512
Dividends	421,480		27,876	449,356	395,654		25,261	420,915
Real estate income	389,294		25,747	415,041	379,727		24,244	403,971
	(4,035,582)	(1,505)	(267,002)	(4,304,089)	(3,464,211)		(221,176)	(3,685,387)
Less investment expenses	(24,813)	(20)	(1,642)	(26,475)	(21,662)		(1,383)	(23,045)
Net (loss) income from investing activities	(4,060,395)	(1,525)	(268,644)	(4,330,564)	(3,485,873)		(222,559)	(3,708,432)
From securities lending activities								
Securities lending income	95,654		6,326	101,980	208,346		13,302	221,648
Securities lending expenses	(74,573)		(4,932)	(79,505)	(194,894)		(12,443)	(207,337)
Net income from securities lending activities	21,081		1,394	22,475	13,452		859	14,311
Net investment (loss) income	(4,039,314)	(1,525)	(267,250)	(4,308,089)	(3,472,421)		(221,700)	(3,694,121)
<b>Total additions</b>	(2,406,040)	36,430	192,777	(2,176,833)	(1,873,138)		210,048	(1,663,090)
<b>Deductions</b>								
Benefits:								
Service retirement	2,395,318			2,395,318	2,203,280			2,203,280
Disability retirement	168,704			168,704	160,775			160,775
Survivor benefits	69,214			69,214	65,591			65,591
Supplemental benefit					50,386			50,386
Health care			434,287	434,287			369,354	369,354
Other retirement systems	5,717			5,717	6,473			6,473
Total benefit payments	2,638,953		434,287	3,073,240	2,486,505		369,354	2,855,859
Refunds to members who have withdrawn	83,859	218		84,077	93,868			93,868
Administrative expenses	69,991	3,225	3,909	77,125	65,884	\$ 2,533	3,860	72,277
<b>Total deductions</b>	2,792,803	3,443	438,196	3,234,442	2,646,257	2,533	373,214	3,022,004
<b>Net (decrease) increase</b>	(5,198,843)	32,987	(245,419)	(5,411,275)	(4,519,395)	(2,533)	(163,166)	(4,685,094)
<b>Net assets held in trust for defined benefit, defined contribution and postemployment health care benefits:</b>								
<b>Beginning of year</b>	50,080,968	(2,533)	3,255,940	53,334,375	54,600,363		3,419,106	58,019,469
<b>End of year</b>	\$ 44,882,125	\$ 30,454	\$ 3,010,521	\$ 47,923,100	\$ 50,080,968	\$ (2,533)	\$ 3,255,940	\$ 53,334,375

See accompanying Notes to Financial Statements.

# Notes to Financial Statements

Years ended June 30, 2002 and 2001

## 1. Summary of Significant Accounting Policies

The financial statements of the State Teachers Retirement System of Ohio (STRS Ohio) presented herein have been prepared on the accrual basis of accounting following the accounting policies set forth below.

**Organization** — STRS Ohio is a cost-sharing, multiple-employer plan that was created by Chapter 3307 of the Ohio Revised Code (Revised Code) and is administered by a board comprised of five active teacher members, one retired teacher and three voting ex officio members.

The accompanying financial statements comply with the provisions of the Governmental Accounting Standards Board (GASB) Statement No. 14, *The Financial Reporting Entity*. This statement requires that financial statements of the reporting entity include all of the organizations, activities, functions and component units for which the reporting entity is financially accountable. Financial accountability is defined as the appointment of a voting majority of the component unit's board and either (1) the reporting entity's ability to impose its will over the component unit, or (2) the possibility that the component unit will provide a financial benefit to or impose a financial burden on the reporting entity. STRS Ohio does not have financial accountability over any entities.

**Investment Accounting** — Purchases and sales of investments are recorded as of their trade date. Dividend income is recognized on the ex-dividend date. Interest and rental income is recognized as the income is earned.

STRS Ohio has no individual investment that exceeds 5% of net assets available for benefits.

**Contributions and Benefits** — Employer and member contributions are recorded in the period the related member salaries are earned. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

**Fixed Assets** — Fixed assets are recorded at historical cost. Depreciation is provided on a straight-line basis over estimated useful lives of five to 10 years for equipment and 40 years for building and building improvements. Fixed assets include purchases of \$500 or more with a useful life of at least five years.

### Method Used to Value Investments

— Investments are reported at fair value. Short-term investments are reported at amortized cost, which approximates fair value. Securities traded on a national or international exchange are valued at the last reported sales price at the then current exchange rates. Fixed-income investments are valued based on their coupon rate relative to the coupon rate for similar securities. The fair value of real estate investments is based on independent appraisals and internal valuations. The fair value of alternative investments is determined by the alternative investment partnership based on the valuation methodology outlined in the partnership agreement.

**Federal Income Tax Status** — STRS Ohio qualifies under Section 401(a) of the Internal Revenue Code and is exempt from federal income taxes.

**Reclassifications** — Certain 2001 balances have been reclassified to conform to the current-year presentation.

## 2. Description of the STRS Ohio Plan

**Plan Membership** — STRS Ohio is a statewide retirement plan for licensed teachers and other faculty members employed in the public schools of Ohio (the state) or any school, college, university, institution or other agency controlled, managed and supported, in whole or part, by the state or any political subdivision thereof.

See charts on Page 20 for member and retiree data and participating employers.

**Plan Options** — Effective July 1, 2001, two new plan options were offered to selected members. New members have a choice of three retirement plan options. In addition to the Defined Benefit (DB) Plan, new members were offered a Defined Contribution (DC) Plan and a Combined Plan. The DC Plan allows members to invest all their member contributions and employer contributions equal to 10.5% of earned compensation. The Combined Plan offers features of the DC Plan and the DB Plan. In the Combined Plan, member contributions are invested by the member. Employer contributions in the Combined Plan are used to fund a defined benefit payment at a reduced level from the regular DB Plan. Contributions into the DC Plan and the Combined Plan are credited to member accounts as employers submit their payroll information to STRS Ohio, generally on a biweekly basis.

Existing members with less than five years of service credit as of June 30, 2001, were given the option of making a one-time irrevocable decision to transfer their account balances from the existing



DB Plan into the DC Plan or the Combined Plan. This option expired on Dec. 31, 2001.

**DB Plan Benefits** — Plan benefits are established under Chapter 3307 of the Revised Code. Any member may retire who has (i) five years of service credit and attained age 60, (ii) 25 years of service credit and attained age 55, or (iii) 30 years of service credit regardless of age.

The maximum annual retirement allowance, payable for life, is the greater of the “formula benefit” or the “money-purchase benefit” calculation. Under the “formula benefit,” the retirement allowance is based on years of credited service and final average salary, which is the average of the member’s three highest salary years. The annual allowance is determined by multiplying final average salary by 2.2% for the first 30 years of credited service. Each year over 30 years is incrementally increased by .1%, starting at 2.5% for the 31st year of contributing service up to a maximum allowance of 100% of final average salary. Upon reaching 35 years of Ohio service, the first 31 years of Ohio contributing service is multiplied by 2.5%, and each year over 31 years is incrementally increased by .1% starting at 2.6% for the 32nd year. Members retiring before age 65 with less than 30 years of service credit receive a percentage reduction in benefit amounts.

Under the “money-purchase benefit” calculation, a member’s lifetime contributions plus interest at specified rates are matched by an equal amount from contributed employer funds. This total is then divided by an actuarially determined annuity factor to compute the maximum annual retirement allowance.

Since the plan is tax-qualified, benefits are subject to limits established by Section 415 of the Internal Revenue Code.

Prior to Feb. 1, 2002, benefits were increased annually by the greater of the

amount of the change in the Consumer Price Index (CPI) or the cumulative CPI increase since retirement, less previous cost-of-living increases, up to a maximum of 3% of the original base amount. Effective Feb. 1, 2002, benefits are increased annually by 3% of the original base amount, regardless of the change in the CPI.

A retiree of STRS Ohio or another Ohio public retirement system is eligible for reemployment as a teacher following the elapse of two months from the date of retirement. Contributions are made by

the reemployed member and employer during the reemployment. Upon termination of reemployment or age 65, whichever comes later, the retiree is eligible for a money-purchase benefit or a lump-sum payment in addition to the original retirement allowance.

**DC Plan Benefits** — Benefits are established under Sections 3307.80 to 3307.89 of the Revised Code.

For members who select the DC Plan, all member contributions and employer contributions at a rate of 10.5% are placed in an investment account. The

### *Member and Retiree Data at June 30, 2002 and 2001*

	2002	2001
Current active members	178,557	177,013
Inactive members eligible for refunds only	106,746	105,617
Terminated members entitled to receive a benefit in the future	17,838	17,827
Retirees and beneficiaries currently receiving a benefit	105,300	102,132
Reemployed retirees	15,730	14,380
<b>Total Plan Membership</b>	<b>424,171*</b>	<b>416,969</b>

\*In addition to the Defined Benefit and the Combined Plan, there were 4,021 members in the Defined Contribution Plan at July 1, 2002.

### *Participating Employers at June 30, 2002 and 2001*

	2002	2001
City school districts	194	194
Local school districts	369	369
County educational service centers	60	61
Exempted village school districts	49	49
Joint vocational schools	49	49
Colleges and universities	37	37
County boards of mental retardation and developmental disabilities	77	80
Community schools	101	72
State of Ohio	1	1
Other	7	7
<b>Total</b>	<b>944</b>	<b>919</b>

member determines how to allocate the member and employer money among nine investment choices. The member receives a quarterly statement of his or her account activity and balance.

A member is eligible to receive a retirement benefit at age 50 and termination of employment. The member may elect to receive a lifetime monthly annuity or a lump-sum withdrawal. Employer contributions into members' accounts are vested after the first anniversary of the first day of paid service.

Members in the DC Plan who become disabled are entitled only to their account balance. If a member dies before retirement benefits begin, the member's designated beneficiary is entitled to receive the member's account balance.

**Combined Plan** — In the Combined Plan, member contributions are allocated by the member, and employer contributions are used to fund a defined benefit payment.

A member's defined benefit is determined by multiplying 1% of the member's final average salary by the member's years of service credit. The defined benefit portion of the Combined Plan payment is payable to a member on or after age 60. The defined contribution portion of the account may be taken as a lump sum or converted to a lifetime monthly annuity at age 50.

DC and Combined Plan members will transfer to the Defined Benefit Plan during their fifth year of membership unless they permanently select the DC or Combined Plan.

### **Death, Survivor and Disability Benefits**

— A Defined Benefit Plan or Combined Plan member with five or more years of credited service who becomes disabled (illness or injury preventing individual's ability to teach for at least 12 months) is entitled to a disability benefit. Additionally, eligible survivors of members

who die prior to service retirement may qualify for monthly benefits.

A death benefit of \$1,000 is payable to the beneficiary of each deceased retired member who participated in the Defined Benefit Plan. Death benefit coverage up to \$2,000 can be purchased by participants in the DB, DC or Combined Plans. Various other benefits are available to members' beneficiaries.

### **Health Care Benefits After Retirement**

— Ohio law authorizes the State Teachers Retirement Board to provide access to health care coverage to retirees who participated in the Defined Benefit or Combined Plans and their dependents.

Coverage under the current program includes hospitalization, physicians' fees, prescription drugs and reimbursement of monthly Medicare Part B premiums. Pursuant to the Revised Code, the Retirement Board has discretionary authority over how much, if any, of the associated health care costs will be absorbed by the plan. Most benefit recipients pay a portion of the health care cost in the form of a monthly premium.

Under Ohio law, medical costs paid from the funds of the plan are included in the employer contribution rate, currently 14% of compensation. For the fiscal years ended June 30, 2002 and 2001, 4.5% of covered payroll was allocated by the Retirement Board to Postemployment Health Care. Effective July 1, 2002, 1% of covered payroll will be allocated to Postemployment Health Care.

Pension and Postemployment Health Care assets are commingled for investment purposes. Consequently, amounts reported for individual asset classes are allocated between pension and Postemployment Health Care based upon ending net assets.

**Supplemental Benefits** — In December of each year, if the Retirement Board determines that sufficient funds are avail-

able, a lump-sum supplemental benefit payment is made to eligible retirees of the Defined Benefit Plan. The payment is based on the retiree's years of service and date of retirement. The amount of the payment may vary and is not guaranteed from year to year.

**Refunds** — Withdrawal cancels a member's rights and benefits in STRS Ohio.

Upon termination of employment, a Defined Benefit Plan member may withdraw accumulated contributions made to STRS Ohio. Refunds of member contributions may include interest and 50% matching payments.

A Combined Plan member is eligible for the present value of future benefits from the defined benefit portion of the account if he or she terminates employment after at least five years of service. For the defined contribution portion of the account, the refund consists of member contributions plus any investment gains or losses on those contributions.

Defined Contribution Plan members receive their contributions and any investment gains or losses until they have completed one year of membership. After one year of membership, members receive the balance in their account, including employer contributions.

**Alternative Retirement Plan** — Eligible faculty of Ohio's public colleges and universities may choose to enroll in either STRS Ohio or an alternative retirement plan (ARP) offered by their employer.

Employees hired after the ARP is established have 120 days from their date of hire to select a retirement plan.

For employees who elect an ARP, employers are required to remit employer contributions to STRS Ohio. The employer rate was 5.76% from July 1, 2000, until Sept. 30, 2001. The employer rate was 3.5% from Oct. 1, 2001, through June 30, 2002. The employer contribution

## *Fund Balances* (in thousands)

	June 30, 2002	June 30, 2001
Teachers' Savings Fund	\$ 7,771,703	\$ 7,445,894
Employers' Trust Fund	7,600,551	15,899,016
Annuity and Pension Reserve Fund	31,781,551	29,293,437
Survivors' Benefit Fund	738,841	698,581
Defined Contribution Fund	30,454	(2,553)
<b>Total</b>	<b>\$ 47,923,100</b>	<b>\$ 53,334,375</b>

rate is the lower of a rate determined by independent actuarial study or the portion of the STRS Ohio DC Plan employer contribution rate that is allocated to the defined benefit unfunded liability. For the year ended June 30, 2002, the ARP participant payroll totaled \$215,333,000, and there were 5,223 participants. For the year ended June 30, 2001, the ARP participant payroll totaled \$186,332,000 for 4,380 participants.

### *3. Contribution Requirements and Reserves*

Employer and member contribution rates are established by the Retirement Board and limited by Chapter 3307 of the Revised Code. The employer rate is limited to 14% and the member rate is limited to 10% of covered payroll. The employer and member contribution rates for the years ended June 30, 2002 and 2001, were 14% and 9.3%, respectively. Effective July 1, 2003, the member rate will be increased to the legal maximum of 10%.

Various funds are established under the Revised Code to account for contributions, reserves, income and administrative expenses.

The Teachers' Savings Fund (TSF) is used to accumulate member contributions in trust.

The Employers' Trust Fund (ETF) is used to accumulate employer contributions in trust. The ETF includes assets allocated to Postemployment Health Care from which payments for comprehensive health care benefits are made.

The Annuity and Pension Reserve Fund (APRF) is the fund from which all annuities and pension payments to retired members are made. Reserves are transferred to this fund from the TSF and ETF funds at the time of retirement.

The Survivors' Benefit Fund is the fund from which all survivor benefit payments are made for which reserves have been transferred from the Teachers' Savings Fund and the Employers' Trust Fund.

The Defined Contribution Fund accumulates DC member and employer contributions, Combined Plan member contributions, investment earnings and DC plan expenses.

The Guarantee Fund is used to accumulate income derived from gifts, bequests and investments for the year.

The Expense Fund is the fund from which all expenses for the administration and management of STRS Ohio are paid each year.

After interest is allocated to the various funds, the Guarantee Fund and the Expense Fund are closed into the Employers' Trust Fund at year-end.

At June 30, 2002 and 2001, plan net assets were included in the various funds as shown in the chart to the left.

### *4. Commitments and Contingencies*

STRS Ohio has made commitments to fund various real estate investments totaling approximately \$411,235,000 as of June 30, 2002. The commitments as of June 30, 2002, have expected funding dates from September 2002 to July 2005.

STRS Ohio has made commitments to fund various alternative investments totaling approximately \$1,304,266,000 as of June 30, 2002. The average expected funding dates for the commitments as of June 30, 2002, range from July 2002 to June 2008.

STRS Ohio is a party in various lawsuits. While the final outcome cannot be determined at this time, management is of the opinion that the liability, if any, for these legal actions will not have a material adverse effect on the net assets available for benefits.

### *5. Cash and Investments*

**GASB Statement No. 3** — Statement No. 3 of the Governmental Accounting Standards Board requires governmental entities to categorize investments as an indication of the level of custodial credit risk at fiscal year-end. Category 1 includes investments that are insured or registered or for which the securities are held by STRS Ohio or its agent in the name of STRS Ohio. Category 2 includes uninsured and unregistered investments for which the securities are held by the counterparty's trust department or agent in the name of STRS Ohio. Category 3 includes uninsured and unregistered investments for which the securities are held by the counterparty in STRS Ohio's

name or held by the counterparty's trust department or agent but not in STRS Ohio's name.

All investments subject to categorization at June 30, 2002 and 2001, meet the criteria of Category 1. Investments are held in the name of STRS Ohio or its nominee by the Treasurer of the State of Ohio as custodian. Real estate investments, alternative investments and securities on loan are investments that, by their nature, are not required to be categorized.

At June 30, 2002 and 2001, the carrying amount of STRS Ohio cash deposits were approximately \$10,830,000 and \$2,441,000 and the bank cash balances were approximately \$17,894,000 and \$10,048,000, respectively. Of the bank balances, \$100,000 was insured by the Federal Deposit Insurance Corporation. The remaining bank balance was covered by collateral held in the name of STRS Ohio's pledging financial institution, as required by state statute (Category 3).

**Investment Authority** — The investment authority of the Retirement Board is governed by Section 3307.15 of the Revised Code that also requires the Retirement Board to publish its investment policies annually and make copies available to interested parties. This section requires that investments be made with care, skill, prudence and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims. It further provides that the Retirement Board may invest in bonds, notes, certificates of indebtedness, mortgage notes, real estate, stocks and debentures with certain restrictions as to the nature and quality of the investment and composition of the investment portfolio.

Investments held at fair value by STRS Ohio at June 30, 2002 and 2001, are summarized in the chart on the right.

## *Investments Held at Fair Value by STRS Ohio at June 30, 2002 and 2001*

(summarized and in thousands)

Category	June 30, 2002	June 30, 2001
<b>Short-term:</b>		
Commercial paper	\$ 505,148	\$ 613,248
Government notes	10,000	10,000
Short-term investment funds	13,500	5,000
<b>Total short-term</b>	<b>528,648</b>	<b>628,248</b>
<b>Fixed income:</b>		
Guaranteed mortgages	3,172,675	3,371,419
U.S. government/agencies:		
Not on securities loan	318,957	594,246
On securities loan	1,291,917	1,932,186
Corporate bonds:		
Not on securities loan	4,554,406	4,378,725
On securities loan	88,223	126,527
Canadian bonds	82,797	110,632
Supernationals	131,554	127,386
High yield and emerging market:		
Not on securities loan	738,731	827,737
On securities loan	125,462	112,825
<b>Total fixed income</b>	<b>10,504,722</b>	<b>11,581,683</b>
<b>Common and preferred stock:</b>		
Not on securities loan	20,406,561	23,325,508
On securities loan	1,006,895	848,829
<b>Total common and preferred stock</b>	<b>21,413,456</b>	<b>24,174,337</b>
<b>International: (See Note 6)</b>		
Not on securities loan	7,867,248	8,674,099
On securities loan	652,255	494,112
<b>Total international</b>	<b>8,519,503</b>	<b>9,168,211</b>
<b>Real estate: (See Note 7)</b>		
East region	1,008,957	1,260,205
Midwest region	812,875	939,894
South region	979,320	927,093
West region	1,301,161	1,602,373
REITs	447,139	636,360
Other	1,291,736	969,194
<b>Total real estate</b>	<b>5,841,188</b>	<b>6,335,119</b>
<b>Alternative investments (See Note 8)</b>	<b>908,438</b>	<b>923,253</b>
<b>Invested securities lending collateral</b>	<b>3,256,401</b>	<b>3,615,793</b>
<b>Total investments and invested securities lending collateral</b>	<b>\$ 50,972,356</b>	<b>\$ 56,426,644</b>

**Fair Valuation** — Stocks traded on a national securities exchange are valued at the closing price on the last business day of the fiscal year; stocks traded over the counter are valued at the closing price, as reflected by NASDAQ, on the last business day of the fiscal year; international investments are valued by the subcustodian using relevant closing market prices and exchange rates; U.S. government and governmental agency securities, bonds, certain guaranteed mortgages, and short-term corporate and government notes are valued based on information from an independent service organization for institutional investors; guaranteed mortgages are valued based on their coupon rate relative to the coupon rate for similar mortgages on the last business day of the fiscal year; short-term cash equivalent investments are stated at amortized cost which approximates fair value; real estate is valued based on appraisals performed by independent appraisers or, for properties not appraised, at the present value of the projected future net income stream. All real estate investments have independent appraisals at the minimum of every three years. The fair value of alternative investments is determined by the alternative investment partnership based on the valuation methodology outlined in the partnership agreement.

**Securities Lending** — STRS Ohio participates in a domestic and international securities lending program whereby securities are loaned to investment brokers/dealers (borrower). Securities loaned are collateralized by the borrower at 102% of the domestic loaned securities' fair value and 105% of the international loaned securities' fair value.

STRS Ohio lends domestic equities, international equities, U.S. Treasuries, agencies and corporate bonds. The collateral received is cash, U.S. Treasuries or related agency securities. STRS Ohio cannot sell or pledge non-cash collateral received. If

a borrower defaults, then the collateral can be liquidated.

A custodial agent bank administers the program and STRS Ohio receives a fee from the borrower for the use of loaned securities. Cash collateral from securities lending is invested in repurchase agreements, commercial paper and U.S. corporate obligations. The fair value of the invested cash collateral is reported in the basic financial statements. The difference between the invested collateral and the obligation to repay borrowers is a result of fair value appreciation (depreciation).

The credit quality of the invested cash collateral is the same as the credit quality on STRS Ohio direct holdings. There are slight mismatches between the duration of the cash invested and the length of time the securities are on loan. As of June 30, 2002, the average maturity of the invested cash collateral is 340 days. Because much of the cash collateral is invested in floating rate securities, interest rates are reset every 20 days on average as of June 30, 2002. STRS Ohio has minimized its exposure to credit risk due to borrower default by having the custodial agent bank determine daily that the required collateral meets the specified collateral requirements. There are no restrictions on the amount of securities that can be loaned. The fair value of the loaned securities was approximately \$3,164,752,000 and \$3,514,479,000 as of June 30, 2002 and 2001, respectively. The fair value of the associated collateral received as of June 30, 2002 and 2001, was approximately \$3,247,335,000 and \$3,619,392,000, respectively.

## 6. International Investments

**Externally Managed** — STRS Ohio has investments in international equity securities through the use of external money managers. It is the intent of STRS Ohio and the money managers to be fully

invested; however, cash and short-term fixed-income investments may be held temporarily. The portfolios are managed in accordance with various mandates based on Morgan Stanley Capital International's (MSCI) indexes. Investments are held in both developed and emerging international markets.

### Internally Managed:

**Country Funds** — STRS Ohio actively invests in developed and emerging markets through traded country funds. Each country fund consists of individual equity securities pooled together in an attempt to match or exceed the local country's index.

**Europe, Australasia and Far East (EAFE) Index Fund** — To increase diversification in international developed markets, STRS Ohio invests in an EAFE Index Fund. The EAFE Index Fund purchases foreign equities, futures and other traded investments to replicate the makeup of the EAFE benchmark.

**Emerging Markets Free (EMF) Index Fund** — STRS Ohio invests in an EMF Index Fund to increase diversification in emerging market countries. The fund invests in foreign equities, swaps and other traded investments to imitate the EMF Index.

**EAFE Equity Swaps** — Four international equity swap agreements were contracted during fiscal 2002 with maturity dates in fiscal 2003. In exchange for a negotiated LIBOR (London Interbank Offered Rate), STRS Ohio will receive dividends on a quarterly basis. At maturity, STRS Ohio will receive or pay the difference in the change in the various market indices included in the swap agreement. Fixed-income securities with an initial notional amount of

\$1.68 billion have been set aside at the Bank of New York as security.

The fair values of international investments held at June 30, 2002 and 2001, are shown in the chart below.

## 7. Real Estate Investments

**General** — STRS Ohio properties are geographically distributed throughout the United States. Real estate investments include retail single-tenant stores and malls, single and multitenant office properties and warehouses, apartments, REITs and other.

**REITs** — Real estate investment trusts (REITs) are real estate company stocks with a high dividend-income component. REITs divide the ownership of the real estate company and its properties among all the shareholders. REITs are required to distribute 95% of the company's taxable income to their shareholders. Distributions are taxable to shareholders rather

than the real estate company. STRS Ohio is exempt from federal and state income taxes.

**Other** — Other real estate investments include farmland, timberland and opportunity funds, that are externally managed, and private REITs. Farmland investments generate income primarily as a result of harvest proceeds. Income is generated from the sale of timber on timberland investments. Opportunity funds generate income as a result of operations and property sales, which are distributed to the investors. Finally, private REITs are privately traded real estate company stocks with a dividend-income component, similar to the public REIT investments discussed above.

**Real Estate Note Payable** — STRS Ohio borrowed \$350 million in May 2002. General real estate assets owned by STRS Ohio collateralize the short-term note. The note has a two-year term with two one-year options to extend the loan agreement. Interest at a rate of 4.19% is payable quarterly and the principle is pay-

able at maturity. The cash received was reinvested in other investment classes to more closely match the system's desired overall investment allocation.

## 8. Alternative Investments

Alternative investments are primarily investments in private equities, which include venture and buyout/growth opportunities. STRS Ohio invests as a limited partner in closed-end partnerships along with other pension funds, endowments and high-net-worth individuals. Individual alternative investments tend to be limited to a particular industry to take advantage of the general partner's knowledge and skill.

## 9. Derivatives

**Equity Swap Agreements** — As discussed in Note 6, STRS Ohio has entered into international equity swap agreements. No funds are required as collateral by either party; however, STRS Ohio has purchased fixed-income securities equivalent to the initial exposure, which are located in a subcustodial account at the Bank of New York. The initial notional amount of the fixed-income securities is \$1.68 billion. The market risk of the swap is the same as if STRS Ohio owned the underlying stocks that comprise the indexes. The revenues and expenses resulting from these agreements have been recorded in the financial statements. See Note 6 for the related equity swap fair values as of June 30, 2002 and 2001.

**Forward Contracts** — Forward contracts in various currencies were used to transact and hedge direct foreign equity investments that STRS Ohio maintains through the use of outside managers. Additionally, forward contracts were used to hedge currency exposure as a result of the EAFE equity swap agreements. STRS Ohio is obligated to deliver the

### Fair Values of International Investments Held at June 30, 2002 and 2001 (in thousands)

	June 30, 2002	June 30, 2001
<b>Externally managed</b>		
International stocks	\$ 4,799,027	\$ 5,179,648
International fixed income	61,777	95,390
International currency and liquidity reserves	158,472	222,157
Forward contracts	(31,059)	7,102
<b>Total externally managed</b>	<b>4,988,217</b>	<b>5,504,297</b>
<b>Internally managed</b>		
Country Funds	591,392	533,363
EAFE Index Fund	2,719,280	2,983,118
EMF Index Fund	256,996	253,394
EAFE Equity Swaps	(36,382)	(105,961)
<b>Total internally managed</b>	<b>3,531,286</b>	<b>3,663,914</b>
<b>Total international</b>	<b>\$ 8,519,503</b>	<b>\$ 9,168,211</b>

foreign currency at a certain dollar price sometime in the future. To fulfill this obligation at maturity, STRS Ohio must obtain the currency in the open market. Before the contract matures, STRS Ohio can enter into an offsetting forward contract that nets out the original contract. These events expose STRS Ohio to currency market risk, which can fluctuate. STRS Ohio is also subject to the risk that the counterparty will fail to fulfill the contract. The external money managers hedged \$1.0 billion and \$1.4 billion of currency exposure in various currencies with varying maturities as of June 30, 2002 and 2001, respectively. At June 30, 2002, STRS Ohio hedged \$1.5 billion and \$0.8 billion of currency exposure on the EAFE Index Fund and Equity Swap Funds, respectively. At June 30, 2001, STRS Ohio hedged \$1.4 billion and \$32 million of currency exposure on the EAFE Index Fund and the Country Funds, respectively.

**Futures** — STRS Ohio had investments in S&P 500 Index futures during the year. Index futures are designed to offer lower-cost and more efficient alternatives to buying individual stocks that comprise the index. The market and credit risk of the futures were the same as if STRS Ohio had owned the underlying stocks that comprise the index. From July 2001 to June 2002, S&P futures notional amounts ranged from \$19.2 million to \$630.1 million. Approximately \$539.6 million was invested in S&P 500 futures at June 30, 2002. From July 2000 to June 2001, S&P futures notional amounts ranged from \$7.1 million to \$896.6 million. Additionally, futures were used in the EAFE Index Fund. Of the total EAFE Index Fund holdings, \$16.9 million and \$15.1 million was invested in futures at June 30, 2002 and 2001, respectively. External money managers also used futures. Approximately \$36.9 million and \$52.7 million of external money managers' holdings were

invested in futures at June 30, 2002 and 2001, respectively.

**Options** — STRS Ohio writes option contracts on existing stock positions to enhance the return on the stock portfolio. In exchange for a premium, STRS Ohio gives the option buyer the right to buy or sell the underlying stock. Options are also purchased to “cover” existing written open option positions. There were no open option contracts as of June 30, 2002 or 2001.

### 10. Pension Plan

Substantially all STRS Ohio employees are required to participate in a contributory retirement plan administered by the Public Employees Retirement System of Ohio (PERS). PERS is a cost-sharing multiple-employer public employee retirement system.

Eligible employees are entitled to a retirement benefit, payable monthly for life, equal to 2.2% of their final average salary for each year of credited service up to 30 years and 2.5% for each year of service over 30 years. Final average salary is the employee's average salary over the highest three years of earnings. Benefits fully vest on reaching five years of service. Vested employees may retire at any age with 30 years of credited service, at age 55 with a minimum of 25 years of credited service, and at age 60 with a minimum of five

## STRS Ohio Required Employer Contributions to PERS

Year Ended June 30	Annual Required Contributions	Percentage Contributed
2002	\$ 6,030,000	100%
2001	\$ 3,968,000	100%
2000	\$ 4,151,000	100%

years of service. Employees retiring with less than 30 years of service and under age 65 receive reduced retirement benefits. Benefits are established by state law.

Employees covered by PERS are required by Ohio law to contribute 8.5% of their salary to the plan. STRS Ohio is required by the same statute to contribute 13.55% of covered payroll; 9.25% is the portion used to fund pension obligations, with the remainder used to fund the health care program for retirees. PERS made a one-time employer contribution rate rollback for calendar year 2000. The employer rate was 10.84% for calendar year 2000. The required employer contributions for the current year and the two preceding years are shown in the chart above.

Historical trend information showing the progress of PERS in accumulating sufficient assets to pay benefits when due is presented in the PERS *Comprehensive Annual Financial Report*. PERS issues a publicly available financial report for the plans. The report may be obtained by writing to PERS, 277 E. Town St., Columbus, OH 43215-4642.

PERS also provides postemployment health care coverage to age and service retirees with 10 or more years of qualifying Ohio service credit and to primary survivor recipients of such retirees. Health care coverage for disability recipients is available. The health care coverage

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provided by the retirement system is considered an Other Postemployment Benefit (OPEB) as described in GASB Statement No. 12. A portion of each employer's contribution to PERS is set aside for funding postemployment health care. The Revised Code provides statutory authority for employer contributions. For fiscal years 2002 and 2001, 4.30% was the portion of the employer rate that was used to fund health care for those years. PERS expenditures for OPEB during 2001 were \$693,484,000.

## 11. *New Accounting Pronouncements*

During the year ended June 30, 2002, STRS Ohio adopted the provisions of Governmental Accounting Standards Board Statement No. 34, *Basic Financial Statements — and Management's Discussion and Analysis — for State and Local Governments* and Statement No. 37, *Basic Financial Statements and Management's Discussion and Analysis for State and Local Governments: Omnibus*, effective July 1, 2001. These statements had no significant impact on the format and content of STRS Ohio's financial statements other than the inclusion of management's discussion and analysis.



*Required Schedule of Funding Progress*  
*For the Years Ending June 30, 1997–2002* (dollar amounts in thousands)

Valuation Year	Actuarial Accrued Liability (AAL)*	Valuation Assets*	Unfunded Actuarial Accrued Liability (UAAL)*	Ratio of Assets to AAL	Covered Payroll**	UAAL as % of Covered Payroll
2002	\$ 63,215,643	\$ 48,958,824	\$ 14,256,819	77.4%	\$ 8,747,101	163%
2001	59,425,300	54,194,672	5,230,628	91.2%	8,256,683	63%
2000	55,774,052	51,293,815	4,480,237	92.0%	7,845,021	57%
1999	51,979,974	46,341,436	5,638,538	89.2%	7,444,243	76%
1998	48,972,084	41,709,903	7,262,181	85.2%	7,112,124	102%
1997	44,704,237	36,883,739	7,820,498	82.5%	6,805,797	115%

\*The amounts reported in this schedule do not include assets or liabilities for postemployment health care benefits.

\*\*Covered payroll includes salaries for alternative retirement plan participants. For 2002 and 2001, alternative retirement plan participant payroll totaled \$215,333 and \$186,332, respectively.

*Required Schedule of Employer Contributions*  
*For the Years Ending June 30, 1997–2002* (in thousands)

Year Ended June 30	Annual Required Contributions*	Percentage Contributed
2002	\$ 814,647	100%
2001	777,416	100%
2000	470,343	100%
1999	446,655	100%
1998	746,773	100%
1997	816,696	100%

\*The amounts reported in this schedule do not include contributions for postemployment health care benefits.

*Notes to the Trend Data*

Valuation date	July 1, 2002	July 1, 2001
Actuarial cost method	Entry age	Entry age
Amortization method	Level percent closed	Level percent closed
Remaining amortization period	39.0 years	27.5 years
Asset valuation method	4-year smoothed market with 91%/109% corridor	4-year smoothed market with 91%/109% corridor
<b>Actuarial assumptions:</b>		
Investment rate of return	7.75%	7.75%
Projected salary increases	9.25% at age 20 to 3.25% at age 65	9.25% at age 20 to 3.25% at age 65
Inflation assumption	3.50%	3.50%
Cost-of-living adjustments	3% simple	3% simple

The information presented in the required supplemental schedules was determined as part of the actuarial valuations at the dates indicated. The information in the table is from the latest actuarial valuations.

## Schedule of Administrative Expenses For the Years Ending June 30, 2002 and 2001

	2002	2001
<b>Personnel</b>		
Salaries and wages	\$ 30,028,465	\$ 25,957,912
Retirement contributions	4,020,039	2,753,803
Benefits	3,975,546	3,862,264
<b>Total personnel</b>	<b>38,024,050</b>	<b>32,573,979</b>
<b>Professional and technical services</b>		
Computer support services	8,991,237	10,212,356
Health care services	1,282,837	1,548,734
Actuary	394,843	239,083
Auditing	139,647	71,329
DC administrative fees	497,684	
Legal	208,323	358,059
Temporary employment services	125,262	143,627
<b>Total professional and technical services</b>	<b>11,639,833</b>	<b>12,573,188</b>
<b>Communications</b>		
Postage and courier services	1,808,166	1,936,578
Printing and supplies	2,932,953	3,799,746
Telephone	920,218	869,822
<b>Total communications</b>	<b>5,661,337</b>	<b>6,606,146</b>
<b>Other expenses</b>		
Equipment repairs and maintenance	2,770,346	2,718,681
Building utilities and maintenance	1,791,081	1,351,114
Transportation and travel	535,119	627,349
Recruitment fees	182,221	238,320
Equipment rental	4,936,174	4,510,381
Depreciation	9,819,929	8,924,630
Member and staff education	369,197	408,420
Insurance	387,416	354,910
Memberships and subscriptions	172,000	190,328
Retirement study commission	277,558	318,430
Miscellaneous	558,307	881,525
<b>Total other expenses</b>	<b>21,799,348</b>	<b>20,524,088</b>
<b>Total administrative expenses</b>	<b>\$ 77,124,568</b>	<b>\$ 72,277,401</b>

*Schedule of Investment Expenses*  
*For the Years Ending June 30, 2002 and 2001*

	2002	2001
<b>Personnel</b>		
Salaries and wages	\$ 15,226,813	\$ 13,031,461
Retirement contributions	2,009,717	1,214,519
Benefits	1,268,516	1,254,054
<b>Total personnel</b>	<b>18,505,046</b>	<b>15,500,034</b>
<b>Professional and technical services</b>		
Legal	83,017	94,066
Investment research	717,076	851,936
Real estate and international advisors	579,151	579,753
Investment advisors	430,000	420,000
Banking fees	4,885,502	3,791,643
<b>Total professional and technical services</b>	<b>6,694,746</b>	<b>5,737,398</b>
<b>Other expenses</b>		
Printing and supplies	14,963	23,925
Equipment repairs and maintenance	3,855	460
Building utilities and maintenance	322,578	729,831
Travel	562,176	714,646
Equipment rental	165,715	167,869
Memberships and subscriptions	105,342	108,228
Miscellaneous	100,327	62,319
<b>Total other expenses</b>	<b>1,274,956</b>	<b>1,807,278</b>
<b>Total investment expenses</b>	<b>\$ 26,474,748</b>	<b>\$ 23,044,710</b>



# *Investments*



# Investment Review

For Fiscal Year July 1, 2001, through June 30, 2002  
Prepared by STRS Ohio's Investments Associates

## *A mild recession trudged into a modest recovery, producing mixed financial results*

Early in the July 1, 2001–June 30, 2002, fiscal year, the U.S. economy and financial markets were roiled by a continuing collapse of the stock market and the events of Sept. 11 that shook consumer and business confidence and kept the economy in recession. Productive activity came to a halt following Sept. 11. The recession, which developed out of a contraction in manufacturing activity related to the bursting of the technology and telecommunications equity bubble, extended toward the end of 2001. As with the long expansion of the 1990s, the United States led the way for the rest of the world — this time into a global recession.

Businesses slashed inventories and prices to realign supply with what was expected to be much slower demand. However, consumer spending rebounded, even as business spending dried up, and pushed economic growth significantly higher at the end of 2001 and the beginning of 2002. Job and income growth remained solid and large federal tax cuts provided more disposable income for consumers. Furthermore, lower long-term interest rates — helped along by extraordinary easing of monetary policy from the Federal Reserve Board — sparked a mortgage refinancing boom that allowed homeowners to consolidate other debt, purchase more goods and services, and invest in the financial markets. Low interest rates also sparked a housing boom that resulted in record new and existing home sales.

Rather than experiencing slower demand, businesses faced robust activity late in

2001 and early in 2002 that dictated a need for greater production to eventually rebuild inventories. Overall economic activity in the first half of 2002 was largely dependent upon this inventory change. Manufacturing production soared during the first half as businesses tried to stop the inventory drawdown. Yet, there was little indication from businesses that capital spending plans would soar as well. In addition, little help came from foreign economies during the fiscal year as the rest of the world waited for the United States to lead it out of the global morass. As a result, the fiscal year ended with consumer demand remaining the key to future economic activity until the equity markets rebound.

A few signs of wear and tear were showing up in consumer confidence, particularly because of a renewed decline in the stock market and the threat it posed for future job prospects. However, current job and income growth advanced at modest rates as 2002's first half ended. Real gross domestic product, the broadest measure of economic activity, grew just 2.2% over the four quarters ending in June 2002. That pace of growth was well below the economy's longer-term potential growth rate of roughly 3.25%, and it came on the heels of a disappointing –0.1% growth rate during the 2000–2001 fiscal year. During the first half of the 2001–2002 fiscal year, economic activity grew an annualized 1.2%. The second half of the year saw an average annualized growth rate of 3.1%, but it closed the second quarter of 2002 at only a 1.3% pace.

Inflation, meanwhile, remained tame throughout the fiscal year. Consumer prices rose only 1.3% during the year — just slightly above the 38-year low

in the growth rate registered through the first quarter of 2002. Low inflation allowed the Federal Reserve to maintain low short-term interest rates while economic growth has been sluggish. The likelihood of continuing low inflation will force businesses to control their costs and strive for productivity gains that should allow profit margins to grow. Together with slow real economic activity, low inflation over the next year should result in a low nominal growth business environment — one that puts a premium on companies that can produce profits without much pricing power.

As the U.S. economy trudges forward, slowly pulling other countries out of recession, the primary risk to a continuing recovery will come from further business and consumer retrenchment. The response of the financial markets to anecdotal signs of weakness or a string of poor economic reports will help to set the tone for how activity progresses in coming quarters. With the past stimulus from monetary and fiscal policy and the still-solid labor market, business spending should turn around as 2002 develops — reinforcing strength elsewhere in the economy. However, if instead the financial markets freeze from a lack of economic confidence, then they will help to create the very conditions they fear.

Following is a summary of how these economic forces affected different asset classes during the 2001–2002 fiscal year.

## *Short- and long-term interest rates fell in a strong fixed-income market*

The aggressive monetary policy actions of the Federal Reserve created a signifi-

cant drop in short-term interest rates. Compared to previous years, money market returns during the fiscal year were quite low. The 90-day U.S. Treasury bill returned just 2.17% during the year. Furthermore, over the fiscal year the universe of money market instruments underwent a significant change. Investment opportunities in the commercial paper market declined as a number of issuers merged and no longer issued commercial paper. Commercial paper is an unsecured promissory note issued by a corporation for a specific amount. These notes mature in 270 days or less. Some of the issuers that left the commercial paper market include American General, The Associates, Chase Bank, Mobil, Texaco, First Union and Transamerica. Other issuers that have been forced to exit the Tier One (high quality) market and find other sources of financing include AT&T, Ford, General Motors, Sara Lee, General Mills, Pacific Gas and Electric and Southern California Edison. Finally, many issuers took advantage of historically low interest rates and termed out their short-term debt, further reducing the money market instruments' supply.

To stimulate sluggish economic growth during the fiscal year, the Federal Reserve lowered short-term interest rates from 3.75% at the beginning of the fiscal year to 1.75% at the end of the fiscal year's first half. Consequently, long-term interest rates fell, too. The 10-year U.S. Treasury bond yield fell from 5.4% at the beginning of the fiscal year to 4.8% at the end. Since bond prices generally increase when interest rates fall, the overall market performed well. The Lehman Universal Bond Index returned 7.71% during the fiscal year. The index consists of high quality government, agency, corporate and mortgage-backed securities as well as high yield, emerging market and dollar-pay debt issued in foreign markets. Three of the better performing sectors of the

index included U.S. Treasury securities, up 8.49%; agency securities, up 9.39%; and mortgage-backed securities that returned 8.98% over the period. Together, those three sectors represented about two-thirds of the index. A weak global economy and damaged equity markets hurt the credit-sensitive sectors of the index. Below-investment-grade securities and emerging market debt returned -3.60% and -4.45%, respectively, in the fiscal year. Those two sectors represented a relatively small 7% of the index.

The STRS Ohio fixed-income portfolio returned 7.79% versus the benchmark's (Lehman Universal Bond Index) return of 7.71%. Over the three prior fiscal years, the STRS Ohio fixed income portfolio returned an annual average of 8.15% versus the benchmark's return of 7.67%. The STRS Ohio performance over the prior five fiscal years was 7.68% versus the benchmark's 7.31%. A more complete report of STRS Ohio performance appears on Page 45.

## *Domestic stocks went through another brutal year*

The past fiscal year was a rough one for U.S. stocks. The market was firmly in the grip of the bears. Even before Sept. 11, the weakening economy exacerbated the bursting of the technology bubble, resulting in a weak market. After Sept. 11, the market staged a patriotic rally with strong gains through the end of 2001. Since that point, however, the combination of security concerns, collapsing demand in the telecommunications sector, accounting fraud and corporate bankruptcies has led to continued selling pressures. The result has been brutal for the major stock market indices. The Dow Jones Industrial Average fell 10.31% during the fiscal year, while the broader S&P 500 Index fell 18.0% and the technology-heavy NASDAQ Composite plummeted 32.07%.

The STRS Ohio domestic equities portfolio returned -17.5% versus the benchmark's (S&P 1500) return of -16.5%. Over the past three fiscal years, the STRS Ohio domestic equities portfolio returned an annual average of -8.3% versus the benchmark's return of -7.66%. The STRS Ohio performance over the past five fiscal years was 2.85% versus the benchmark's 4.21%. A more complete report of STRS Ohio performance appears on Page 45.

## *International stock markets were weak again*

During fiscal 2002, equity markets around the world exhibited subpar performance. The developed markets, represented by the Morgan Stanley Capital International (MSCI) Europe, Australasia, Far East (EAFE) Index (50% hedged), fell 14.8%, the second straight year of double-digit declines. The primary cause for the downturn in international markets was the widening drop off in economic growth around the world. The September atrocities in the United States exacerbated the already weakening markets and drove risk premiums higher for all equity products. After a rebound in early 2002, international markets once again fell as the impact of the corporate accounting scandals in the United States spread overseas. The equity market weakness was widespread with only several smaller markets producing significantly positive results. The major markets were all off sharply.

Emerging markets were slightly positive for the year. The emerging markets, represented by the MSCI Emerging Markets Free (EMF) Index, rose a modest 1.3%. Asia and the Far East were very strong — reversing the trend from last year — but the weakness in Latin America and the Middle East pulled the overall average down significantly.

The STRS Ohio international portfolio returned -7.9% during the 2001-2002 fiscal year. Meanwhile, the benchmark STRS Ohio international hybrid index, consisting of 75% of the MSCI EAFE Index (50% hedged) and 25% of the MSCI EMF Index, returned -10.82%. Over the past three fiscal years, the STRS Ohio international portfolio returned an annual average of -3.38% versus the benchmark's return of -5.97%. The STRS Ohio performance over the past five fiscal years was -1.42% versus the benchmark's -3.86%. A more complete report of STRS Ohio performance appears on Page 45.

### *Real estate markets had positive returns, but fundamental conditions weakened*

Though the economy started its decline before the onset of the fiscal year, the impact shows up in real estate markets with a lag. However, the fundamentals of supply and demand are deteriorating for two reasons. First, there has been little-to-no new demand for space given the negative economic climate. Second, although new construction was moderate in most markets, there is an oversupply situation. This is largely attributable to the "overleasing" by tenants in previous years based on faulty growth expectations. When the slowdown began, tenants gave back significant sublease space to the market creating a rapid increase in vacancy rates. While the giveback of space appears to be leveling off, the lack of job growth and accompanying lessened demand for real estate will continue to have a dampening effect on the markets over the next couple of years. The real estate market will lag the overall market during the recovery phase as well.

Even with the significant declines in the broader equity markets over the year, the public equity market for real estate turned in another year of strong perfor-

mance of just over 16% for the fiscal year ended June 30, 2002. Despite weakening real estate fundamentals, there has been a similar trend of capital flowing into private sector real estate this past year. With the expectation of better performance in the overall equity market and continued weakness with real estate fundamentals, both public and private real estate should generate much lower returns than has been seen in recent years.

STRS Ohio underperformed the composite benchmark in fiscal year 2002 for the first time in five years. The STRS Ohio real estate portfolio returned 3.92% versus the benchmark's (real estate composite) return of 5.48%. Over the past three fiscal years, the STRS Ohio real estate portfolio returned an annual average of 9.49% versus the benchmark's return of 9.34%. The STRS Ohio performance over the past five fiscal years was 11.61% versus the benchmark's 10.56%. A more complete report of STRS Ohio performance appears on Page 45.

### *The soft economy and weak equity markets lessen total fund returns*

During fiscal 2002, the STRS Ohio fund returned -8.13% versus the benchmark's (hybrid index of industry benchmarks) return of -7.32%. Steep declines in domestic and international equities' returns, resulting from a soft economy and lack of clarity about future economic and financial market conditions, caused the overall decline in the total fund performance. Over the past three fiscal years, the STRS Ohio fund returned an annual average of -1.68% versus the benchmark's return of -1.73%. The STRS Ohio fund performance over the past five fiscal years was 4.18% versus the benchmark's 4.37%. All of the returns measured over those periods were below the 8% absolute long-term return goal for STRS

Ohio investments. Over the past 10 fiscal years, the total fund returned an annual average of 8.15% — slightly higher than the 8% absolute long-term return goal. The total return on STRS Ohio investment assets over the preceding five fiscal years exceeded the rate of inflation, as measured by the GDP deflator, by slightly more than 2.5 percentage points.



## Investment Objective and Policy

Effective Oct. 18, 2002

### General Policy Statement

#### Introduction

The State Teachers Retirement System of Ohio is governed by a board of nine members with broad statutory powers. The investment function is vested in the board as set forth in Section 3307.15 of the Ohio Revised Code. Section 3307.15 of the Ohio Revised Code requires the board to "... adopt in regular meeting, policies, objectives or criteria for the operation of the investment program ...". These policies, objectives and criteria are adopted under this authority.

It is the intent of the board to give consideration to investments that enhance the general welfare of Ohio provided such investments offer quality return and safety comparable to other investments currently available to the board. The board also will give consideration to investments that involve minority-owned and minority-controlled firms and firms owned or controlled by women.

Sections 3307.04 and 3307.15 of the Ohio Revised Code empower the board to authorize its administrative officers and committees to act for it in accord with its policies. In addition to the investment function, Section 3307.15 of the Ohio Revised Code also sets forth the fiduciary responsibility of the board and other fiduciaries in discharging their duties with respect to the fund. Section 3307.01 (K) of the Ohio Revised Code defines a fiduciary, and Sections 3307.151, 3307.181 and 3307.18 of the Ohio Revised Code list specific items a fiduciary shall and shall not do. This Investment Objective and Policy incorporates

and is subject to all of the above-mentioned sections of the Ohio Revised Code.

#### Staff and Board

Participation in the affairs of any public body demands high personal integrity and conduct. This is especially true when funds of others are involved. Members of the board and staff must discharge their responsibilities without prejudice or favor, avoiding at all times any conduct that could create or appear to create a conflict of interest.

Staff members shall carry out the duties and responsibilities delegated by the board in the best interest of members of the system and in accordance with the code of ethics of the Association for Investment Management and Research. No staff member shall engage in any activity in his or her official position or in a personal investment program that will in any way create a conflict of interest.

### Organization

#### Investment Committee

An Investment Committee is established and consists of all nine members of the board. The Investment Committee is empowered to advise the board in all investment matters.

#### Investment Advisors/ Consultants

The board shall employ competent, well-qualified organizations to assist in carrying out its fiduciary responsibility. Duties of the investment advisors/consultants shall include but not be limited to:

1. Recommending long-term investment objectives and review of these objectives at least annually.
2. Monitoring performance of the investment program.
3. Availability to counsel with in-house staff, executive director or members of the board.
4. Participation in bimonthly meetings of the Investment Committee.
5. Review and advise on detailed investment criteria for all investments.
6. Review of Annual Investment Plan.
7. Performance of such other duties as may be provided by contract.

#### Executive Director

Subject to this Investment Objective and Policy, the executive director is authorized by the board under Sections 3307.04 and 3307.15 to act for and on behalf of the board and the system in all purchases, sales or other investment transactions. Investment transactions since the last report will be reviewed by the Investment Committee at each meeting and upon such review shall be deemed accepted, ratified and adopted by the board. The Investment Committee may act at the time of such review to direct the subsequent sale or disposal of any investment.

#### Deputy Executive Director — Investments

The deputy executive director — Investments shall have the following responsibilities:

1. Supervise activities of the in-house staff.

2. Oversight of the external managers in conjunction with the directors of the asset classes.
3. In cooperation with the investment advisor and the executive director, formulate an Annual Investment Plan.
4. Make recommendations to the executive director and board concerning periodic modification of the Annual Investment Plan.
5. Assure that the portfolios comply with established parameters and risk levels.
6. Supervise execution of orders to buy and sell securities (including options), seeking always to maintain reasonable costs for such services.
7. Report in required detail to the executive director and the Investment Committee and/or the board on all activities of the investment staff.

## Objectives, Guidelines and Policies: Total Fund

### Objectives

In many if not most instances, payments from the pension fund are the major sources of income to retirees and a principal protection against the contingencies of death and disability for active workers. Therefore, the basic policy of the board is preservation of the capital investment and realization of sufficient return to secure and facilitate payment of the statutory benefit requirements of the system to its participants and beneficiaries. In this connection, it is recognized that the fund will achieve some protection against erosion of principal value through inflation if the actuarially assumed interest rate is achieved.

Maximization of return, from both

current income and capital appreciation consistent with the overall risk parameters described below, is an important objective. With the insight gained from careful studies of the benefits of diversification and asset return potential, the board sets a total return objective of 8% per annum. This is a long-term objective, and this total return expectation assumes a modest rate of inflation. The objective should be pursued consistent with prudent management.

The board anticipates that contributions to the pension fund and income from existing assets will exceed disbursements for the foreseeable future. Therefore, there is no special need for liquidity in the portfolio, other than that deemed necessary to accomplish investment objectives and strategies.

Given the expected contribution income, forecast of benefit obligations and acceptable actuarial asset value smoothing techniques, the risk level of the pension fund,

meaning the tolerance for fluctuations in market value of the total investment fund, can match that of the global stock market. This should protect the beneficiaries from any undue risk while capturing the desired return potential from the preferred asset mix.

The asset mix policy ranges and the average long-term weights for the major asset classes are listed below. The investment staff has the authority to operate within the policy ranges for each asset class. The average long-term weights were derived from the 2000 Asset Allocation Report, discussions with the board's consultants and staff input, and are based on each asset's long-term (five- to 10-year) expected rate of return and volatility.

It is expected that in each year's Annual Investment Plan, the board will adopt a current strategy which may deviate from the average long-term weights shown here based upon short- and intermediate-term expected returns of each asset.

Asset Class	Asset Mix General Policy Ranges at Market	Average Long-Term Weightings at Market
Liquidity Reserves	0–4%	1%
Fixed Income	13–28%	23%
Domestic Equities	43–50%	45%
International	15–25%	20%
Real Estate	6–12%	9%
Alternative Investments	1–3%	2%
		100%

Asset Class	Total Return Objective	Benchmarks
Liquidity Reserves	4–5%	90-Day Treasury Bills
Fixed Income	6–7%	Lehman Universal Bond Index
Domestic Equities	8–10%	S&P 1500
International	8–10%	75% EAFE*/25% EMF
Real Estate	8–9%	NCREIF Adjusted
Alternative Investments	14–16%	Actual Return

\*50% hedged

# Investments

## Objectives, Guidelines and Policies: Fixed Income

### Objectives

It is the board's policy to invest in fixed-income investments to diversify the investment portfolio. A total return objective of 6–7% per year over a five-year period is expected on these assets. Total returns in excess of the Lehman Brothers Universal Bond Index is the fixed income relative objective.

### Restrictions

It is the board's policy to maintain a normal invested position of 23% of total fund assets with a range of 13–28%. External management of fixed-income assets may be utilized. The staff will select and the board, through its consultant, will monitor performance of all outside money management firms used for fixed-income investments. Internally managed fixed-income assets will be U.S. dollar-denominated debt obligations. For externally managed portfolios, non-U.S. dollar-denominated debt securities may be purchased and currencies will be hedged at the discretion of the manager. The portfolio will seek diversification by market sector, quality and issuer. Emerging market and high-yield debt combined will be within 50% and 175% of the Lehman Brothers Universal Bond Index weight. The maximum investment in the securities of any one issuer shall not exceed 3% of the fixed-income portfolio at the time of purchase with the exception of U.S. Government and related agency securities. The portfolio will have a duration level between 80% and 120% of the index. Portfolio turnover will be moderate and a function of relative value changes of the securities comprising the

portfolio. Directly negotiated private placements by staff are prohibited investments.

Derivatives may be used in management of both the internal and external fixed-income portfolios as long as the underlying security is suitable for the portfolios. The use of leverage is prohibited. A mortgage that has an expected negative duration is also prohibited. Derivatives may be used to adjust the exposure to interest rates, individual securities or to various market sectors in the portfolio. All strategies must be of a hedging or positioning nature rather than speculative. Underlying exposure of derivatives for internally managed fixed-income investments will not exceed 5% of total fund assets.

## Objectives, Guidelines and Policies: Liquidity Reserves

### Objectives

It is the board's policy to hold liquidity reserves to fund the normal business needs of STRS Ohio. The portfolio seeks to preserve principal value and maintain a high degree of liquidity. The return objective of the portfolio is to exceed the return of a 90-day U.S. Treasury bill.

### Restrictions

It is the board's policy to maintain a normal invested position of 1% of total fund assets with a range of 0–4%. Liquidity reserves will be a portfolio of high quality short-term securities generally of A1/P1 quality. To preserve the principal value of the portfolio, interest rate risk will be low. The portfolio will consist of large marketable issuers in the short-term markets to provide the necessary liquidity.

## Objectives, Guidelines and Policies: Domestic Equities

### Objectives

For the domestic equity sector of the portfolio, a total return objective of 8–10%, averaged over a period of five years, is desired. Should the investment advisor believe attainment of this objective at any time is not possible without undue risk, it is the advisor's responsibility to recommend to the board a revised figure. The equity portfolio should reduce nonmarket risk by being diversified.

### Restrictions

It is the board's policy to maintain an investment in domestic equities in the range of 43–50% of assets. The amount invested at any time is determined by the long-term objectives established by the board in conjunction with the investment advisor/consultant and by the Annual Investment Plan and its periodic modifications.

No more than 6% of assets of the system invested in the equity sector may be invested in equities of any one corporation. The board shall not generally take a position constituting more than 5% of the outstanding equity of a corporation (except investments approved under the "Alternative Investments" section).

All American depository receipts and foreign stocks listed on a domestic stock exchange are eligible for purchase under this section.

Derivatives may be used in management of the equity portfolio in a manner consistent with each portfolio's guidelines. The use of leverage is prohibited. Derivatives are typically, but not exclusively, options, futures and options on futures

for market indices such as the S&P 500, S&P 400, S&P 100 and the S&P 600 Index. Options on individual stocks, stock baskets and unleveraged equity-linked notes are further examples. Strategies permitted must be of a hedging or positioning nature rather than speculative. Underlying exposure of equity derivatives cannot exceed 10% of total STRS Ohio assets.

### *Quality Standards and Portfolio Construction*

Domestic equity portfolios are normally invested in securities selected from a universe of more than 6,000 publicly traded issues. The investment style of individual portfolios follows STRS Ohio guidelines, as described in the Annual Investment Plan, and are monitored based on appropriate portfolio characteristics and risk levels. Stocks are selected for each portfolio based on a set of criteria appropriate for each style. The board's investment advisor/consultant must review each equity portfolio to measure the degree of compliance with STRS Ohio established parameters and risk levels. The investment advisor/consultant must report the results to the board at least annually.

### *Portfolio Allocation*

The allocations across the various domestic stock portfolios will be tied to the weights of the respective sectors in the S&P 1500 for the following sectors: growth versus value, and large, mid and small capitalization. Since these sector weights shift over time, the portfolio rebalancing will be a dynamic and ongoing process. At least quarterly, allocations will be reviewed and adjusted so that no sector is less than 75% nor more than 125% of the respective index weight.

### *External Managers*

The staff will select and the board, through its consultant, will monitor the performance of all external money managers used to provide supplemental active management.

## *Objectives, Guidelines and Policies: International*

### *Objectives*

It is the board's policy to invest in international investments in order to diversify the investment portfolio. A total return objective of 8–10% per year over a five-year period is expected on these assets. The primary emphasis will be on international equity securities, but some international debt instruments may also be included.

### *Restrictions*

It is the board's policy to maintain an exposure in international investments in the range of 15–25%. The staff will select and the board, through its consultant, will monitor performance of all outside money management firms used for international investments. Internal management of international assets will also be utilized. International assets will be a diversified portfolio including both developed and emerging countries. The targeted normal weighting of international investments will be comprised of 15% developed countries and 5% emerging countries. The staff may deviate from this weighting by plus or minus 2% on the emerging market weighting and plus or minus 3% on the developed market weighting. The neutral position for currencies will be 50% hedged for the developed markets. Currencies will be

hedged at the discretion of the manager. For the internally managed portfolio, currency will not be a primary investment tool and will be used for non-speculative purposes.



# Investments

Derivatives may be used in management of both the internal and external international portfolios as long as the underlying security is suitable for the portfolios. The use of leverage is prohibited. Derivatives may be used to adjust the exposure to countries or markets, to individual securities or to currencies in the portfolios. All strategies must be of a hedging or positioning nature rather than speculative. Underlying exposure of derivatives for international investments will not exceed 10% of total STRS Ohio assets.

## *Objectives, Guidelines and Policies: Alternative Investments*

### *Objectives*

The chief objective of the alternative investment program is to provide an attractive risk-adjusted rate of return to benefit the STRS Ohio membership. Most alternative investment options inherently possess a long-term investment horizon, illiquidity and a high standard deviation (volatility in the timing of returns). For these reasons, expected financial returns exceed those of other asset classes. Alternative asset returns are expected to be approximately 15% annualized over the life of the asset pool.

### *Restrictions*

Total value of alternative assets invested will not normally exceed 3% of total assets. Timber and farmland, often classified as alternative assets, are considered by the board as real estate for this policy statement and are managed under the real estate section of this statement.

Potential alternative investments will be analyzed for possible STRS Ohio investment. In addition to meeting

the legal requirements, underwriting criteria include: experienced general partners, solid track record and appropriate partnership terms. The Annual Investment Plan will set forth strategies, desirable types and specific current goals for alternative assets.

The executive director shall report any investment under consideration pursuant to this section to the Investment Committee prior to making any legally binding commitment to such investment.

The deputy executive director — Investments will inform the board of an individual to serve on a company board and to face election by shareholders of that company. If the named individual is an STRS Ohio associate, that individual must sign a letter of agreement with the State Teachers Retirement Board indicating that, should the staff member terminate employment at STRS Ohio, resignation from any and all company board seats would occur if the State Teachers Retirement Board so directs. The STRS Ohio associate can be reimbursed for actual expenses incurred in serving on a board of directors, but no director's fees will be accepted.

## *Objectives, Guidelines and Policies: Real Estate*

### *Objectives*

It is the board's policy to invest in real estate in order to diversify and reduce the volatility of the overall investment portfolio. Consequently, real estate investments will be acquired to provide a return commensurate with investment risk. Income yields shall be a key objective of the portfolio with long-term appreciation also a factor in real estate selection. A total return objective of 8-9% per year over a five-year period is expected for the real estate portfolio.

### *Guidelines*

It is the board's policy to maintain an investment in real estate in the range of 6–12% of total STRS Ohio assets, diversified within the following guidelines:

1. **Property Type:** The value for any one property type shall generally not exceed 50% of real estate assets. However, the "specialty" property



type shall not exceed 25% of real estate assets. Five such property types are:

- a. Office buildings;
  - b. Retail properties;
  - c. Distribution centers, warehouses and industrial parks;
  - d. Multifamily housing; and
  - e. Specialty, including but not limited to, timberland, farmland, senior living and hotels.
2. **Geographical Concentration:** The maximum value for any one of the four regions as defined by the National Council of Real Estate Investment Fiduciaries (NCREIF) will generally be 50% of real estate assets. Investments in international real estate will be limited to 10% of real estate assets. When properties located within Ohio offer quality, return and safety comparable to properties outside Ohio, the Ohio investment will be given preference.
3. **Investment Structure:** Equity-oriented ownership structures will be used such as direct ownership, participating or convertible mortgages, joint ventures, externally managed accounts, real estate securities and derivatives. Publicly traded real estate securities will be limited to 25% of real estate assets. Derivatives may be used in the management of the real estate portfolio. All derivative strategies must be of a hedging or positioning nature rather than speculative. Underlying exposure of real estate derivatives must not exceed 1% of total STRS Ohio assets. The staff will search for innovative structures for real estate investments to enhance STRS Ohio's total investment strength. STRS Ohio may borrow funds on a secured or unsecured basis. To manage the overall

volatility of the real estate portfolio, the aggregate amount of leverage allocated to the real estate portfolio will generally be limited to 35% of real estate assets.

4. **Investment Size Guidelines:** The minimum size for individual real estate properties will be generally: \$10 million for properties within Ohio and \$15 million for properties outside Ohio. Exceptions to this guideline are appropriate in areas where STRS Ohio has an existing concentration of real estate assets or is actively building a concentration. The maximum investment amount for an individual property will be limited to approximately 1% of total STRS Ohio assets.
5. **Investment Style:** The real estate portfolio will contain individual real estate investments along the risk/return continuum. However, the portfolio will generally limit "non-core" (i.e., relative higher risk) real estate investments to 30% of real estate assets.

## Procedures

### Due Diligence

The real estate investment management process will be subject to a number of procedures to safeguard STRS Ohio assets. New investments will have the following documentation:

1. A building and systems evaluation by a qualified engineering firm in the case of an existing building.
2. A review of plans, specifications and construction progress by a qualified architectural firm in the case of developmental properties.
3. An environmental review by a qualified consultant in accordance

with the Environmental Policy described below.

4. A financial analysis including, but not limited to, holding period, internal rate of return, initial yield and sensitivity to critical assumptions, by the real estate staff.
5. A review and approval of appropriate documents by legal counsel.

### Environmental Policy

Real estate investments will be subject to the requirements of an Environmental Policy addressing hazardous materials, wetlands, endangered species and other environmental issues affecting real property. The policy shall be reviewed by the board's real estate consultant for comparability to other institutional investor practices. The policy will ensure that STRS Ohio will be prudent and diligent in its evaluation of potential real estate investments having environmental issues. STRS Ohio will not make any real estate investment having environmental issues that, in all reasonable likelihood, would subject STRS Ohio to a material liability or would have a materially adverse impact on the value of the real estate investment that has not been taken into account in the underwriting decision, including without limitation, a prudent plan for diligently handling such environmental issues.

### Valuations

The valuation of real estate assets will be subject to the requirements of a Valuation Policy, addressing with more specificity the frequency, methodology and other valuation issues of both internal valuations and external appraisals. However, in general, each internally managed property will be valued annually, with an independent external appraisal no less than every third year. Additionally,

# Investments

a sample of internally valued properties will be reviewed externally to validate the internal results. The board's real estate consultant shall review, in conjunction with the operational audit, the Valuation Policy for comparability to other institutional investor practices.

## Performance

Real estate investment performance will be reported to the board on a quarterly basis. The real estate portfolio shall have as its benchmark, a composite index consisting of 80% of the NCREIF Property Index, 10% of the NCREIF Timberland Index and 10% of the Wilshire Real Estate Investment Trust Index (WREIT) (effective July 1, 2002).

## Board Consultant

The role of the real estate consultant is specifically outlined in the contract scope of services. The scope of services includes, but is not limited to, the following:

1. Report to the board on a semiannual basis regarding the investment performance of the system's real estate portfolio.
2. Review and comment on the real estate strategy as presented in the Annual Investment Plan and any revisions to the plan recommended during the year. Review and comment on the five-year real estate strategy prepared by staff.
3. Review triennially, the general internal management of real estate and its efficiency, with the objective of completing an overall operational audit.
4. Review certain predefined property-specific transactions.

## Real Estate Investment Committee (REIC)

A committee composed of a combination of internal staff and external industry professionals will review proposed real estate acquisitions, dispositions, significant modifications in existing deal structures, and any refurbishment project of an existing real estate asset costing 20% or more of the total value of that asset for recommendation to the deputy executive director — Investments and the executive director. The following will not be subject to REIC review:

1. Real estate acquisitions, dispositions or exchanges which are valued at less than 20% of the total value of, and are ancillary to, a real estate investment previously approved;
2. Public real estate securities, international real estate funds and securities, or externally managed accounts, such as timber, agriculture and "opportunity" funds;
3. Dispositions of individual sale-leaseback properties, or properties that have a market value of \$5 million or less at the time of disposition recommendation;
4. Mortgage restructurings, which limit the restructured terms to no more than four years and revert back to original terms; and
5. Actions regarding the management or operation of the real estate portfolio, such as (a) the settlement of actual or potential real estate litigation, (b) the borrowing of funds on either a secured or unsecured basis, or (c) actions allowed under existing investment documents (e.g., conversion options, loan prepayments, buy-sell agreements, etc).

## Board Review

The board adopts policy and monitors performance with the assistance of the real estate consultant. These responsibilities include review of the:

1. Investment Objective and Policy;
2. Long-term real estate strategy;
3. Annual Investment Plan;
4. Individual transactions outside policy and/or strategy;
5. Monthly Investment Activity Reports; and
6. Semiannual performance reports from the consultant.

## Objectives, Guidelines and Policies: Procedures

### Long-Term Objectives

The investment advisor shall recommend long-term objectives for the total plan and for each segment of the portfolio and adopted within this policy by the board. These long-term objectives, many of which are incorporated into this policy, shall be reviewed by the Investment Committee and/or the board at least annually. The objectives for staff-managed domestic portfolios of financial assets shall incorporate statements of investment criteria for both publicly traded bonds and stocks, as recommended by the investment advisor/consultant and approved by the board.

## Annual Investment Plan

By January of each calendar year, or at such other time as the board may designate, an Annual Investment Plan shall be proposed to the Investment Committee.

This proposed plan shall be based upon recommendations of the Investment Department and the investment consultants, with approval of the executive director. The Annual Investment Plan shall be based upon:

1. The long-term objectives and normal asset weights set by the board;
2. General economic outlook for the short and long term;
3. Expected relative outlook for asset types;
4. Short- and long-term interest rates;
5. Allocation of the Risk Budget; and
6. Such other factors as seem indicated.

The Annual Investment Plan will serve as a guide for the investment staff in its day-to-day operation. Any changes proposed to the plan are to be presented to and accepted by the board before adoption.

The plan as modified will become the operational plan for the investment staff until subsequent modification.

### *Reporting*

The Investment Committee and the board's advisors/consultants shall be furnished with the following:

### *Monthly*

1. Monthly Activity Report that includes:
  - a. Domestic Equities
    - (1) Summary of the equity markets
    - (2) Domestic equity performance comparisons
    - (3) Top 20 holdings
    - (4) Portfolio diversification — past, present and planned
    - (5) Status of special projects
  - b. International
  - c. Fixed Income
  - d. Real Estate
  - e. Cash Flow
  - f. Performance
  - g. Any Relevant Risk Statistics
2. Portfolio Summary, classified by asset type, at market and as percentages of the total.
3. Investment purchases and sales since the last report.

### *Bimonthly*

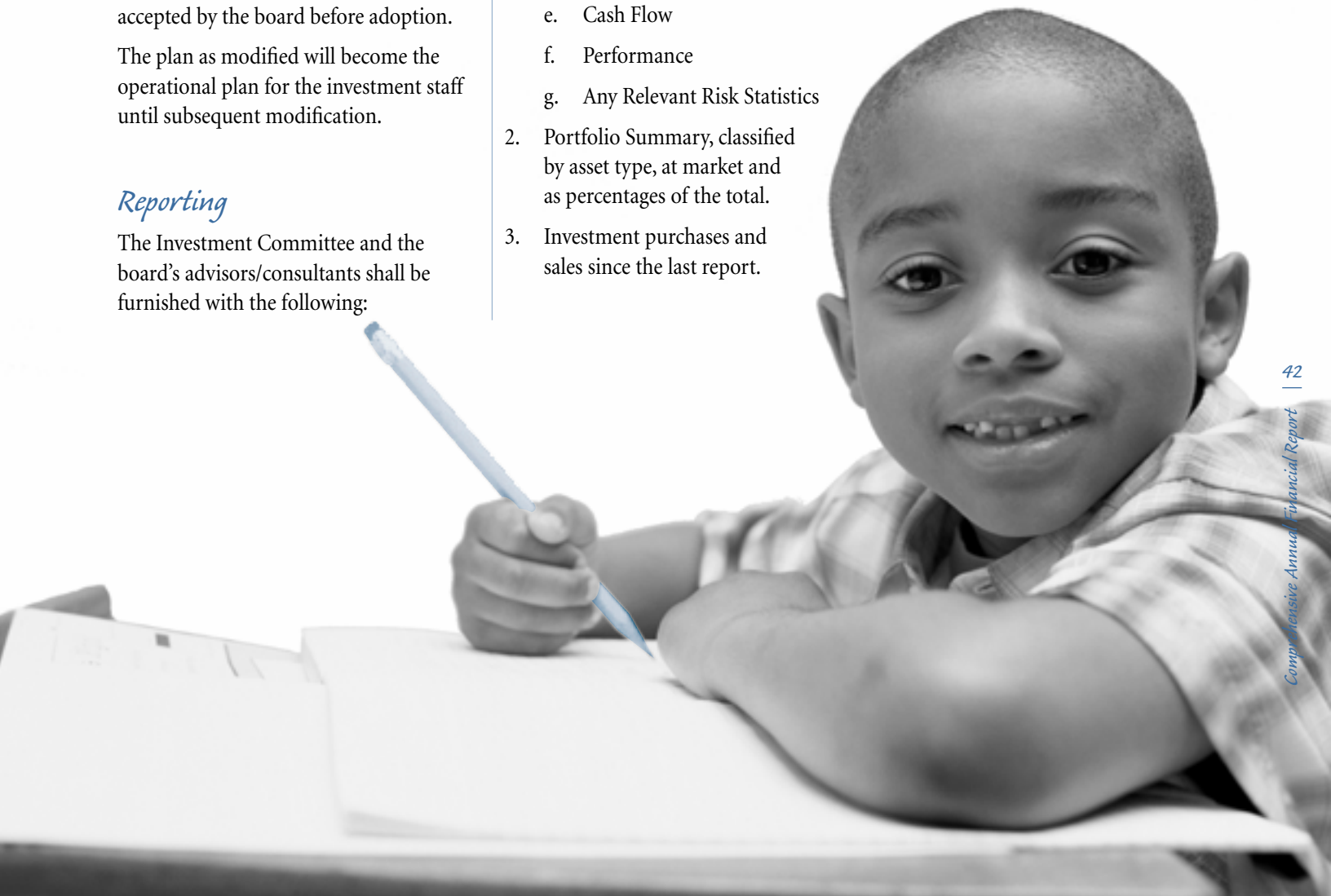
Appropriate commentary and reports on the progress with the Annual Investment Plan.

### *Semiannually*

All exposure in derivatives for all asset classes.

### *Proxy Voting*

The State Teachers Retirement Board believes that common stock proxies are valuable and should be voted in the best interest of the members and retirees. To this end, the Retirement Board shall maintain stock proxy voting policies and the staff and the proxy voting agents will





# Investments

use them as guides in meeting the fiduciary responsibility of the State Teachers Retirement Board in voting common stock proxies.

## Ohio Investments

It is the policy of the board to give consideration to investments that enhance the general welfare of the state and its citizens, provided the funds are invested solely in the interest of participants and beneficiaries. This goal will be pursued to the greatest extent possible within the limits of fiduciary responsibility. Preference will be given to Ohio investments offering competitive returns at risk levels comparable to similar investments currently available to the board.

To meet this objective an Ohio Investment Plan, incorporating all provisions of the STRS Ohio Investment Objective and Policy Statement, shall be maintained and implemented by the investment staff. This plan shall set forth procedures to assure that a special effort will be made by the investment staff to examine and evaluate all legal investment opportunities in the state and, where policy objectives are met, to acquire such investments.

## Broker-Dealers

Purchases and sales of publicly traded securities shall be executed with broker-dealers from a list reviewed by the Investment Committee. The list shall be limited, as practicable, to 65 firms plus those in the Ohio and emerging firms sublist. Selection shall be based on an evaluation by the investment staff as to financial soundness, underwriting capabilities, research services, execution capabilities and other factors required by the staff to fulfill its assigned investment responsibilities. Specific transactions will be directed to the broker on that list most capable of providing brokerage services

necessary to obtain both the best available price and the most favorable execution.

The board shall give equal consideration to minority-owned and controlled firms and to firms owned and controlled by women. The board shall be proactive in its intent to include firms that have an operating office located in Ohio, minority-owned and controlled firms, and firms owned and controlled by women.

Each firm listed shall file with the State Teachers Retirement Board on an annual basis such evidence of financial responsibility as required by the board. This information shall include, but not be limited to, an audited financial statement.

When stocks are purchased during an underwriting, allocations may be made to dealers not on the approved list provided the managing underwriter is so listed. Bond purchases may be made either at underwriting or in the secondary market from any firm holding membership in the National Association of Securities Dealers.

When entering into real estate transactions, the board shall give equal consideration to Ohio firms providing associated professional services, minority-owned and controlled firms, and firms owned and controlled by women.

## Securities Lending

The board may operate a securities lending program to enhance the income of the fund. The program must be operated by a bank trustee who follows the custodial requirements of the Treasurer of State and each security lent must be fully collateralized. Results of the program must be reported to the board annually.

## Measurement

The primary goal of the fund shall be to achieve the absolute return targets

described in the “Total Fund” section of this policy. However, a secondary measurement objective of the board is to relate the fund’s performance to various indices. The relative measurement of the total fund shall be made against a hybrid index consisting of weightings from liquidity reserves, equity, fixed-income, real estate, alternative investments and international indices.

Relative measurement of performance shall be made on a quarterly and annual basis. The primary time period for such comparisons shall be three years, although one-, five- and 10-year comparisons shall also be examined.

The benchmark against which investment return of the publicly traded bond sector will be measured is the Lehman Universal Bond Index and the GDP Deflator. The primary time period for such comparisons shall be three years, although one-, five- and 10-year comparisons shall also be examined.

The domestic equity portfolio shall be compared against the Standard & Poor’s 1500 Average. The board’s objective is to match or exceed performance of the yardsticks, subject to the volatility level expressed in the “Total Fund” section of this policy. The primary time period for such comparisons shall be three years, although one-, five- and 10-year comparisons shall also be examined.

The real estate portfolio shall have as its benchmark a composite index consisting of 80% of the NCREIF Property Index, 10% of the NCREIF Timberland Index and 10% of the Wilshire Real Estate Investment Trust Index (WREIT) (effective July 1, 2002). The primary time period for such comparisons shall be three years, although one-, five- and 10-year comparisons shall also be examined.

The international equity portfolio shall have as its benchmark a composite index consisting of 75% of the Morgan Stanley

Capital International Europe, Australasia, Far East Index (EAFE) 50% hedged and 25% of the Morgan Stanley Capital International Emerging Markets Free Index. The board's objective is to match or exceed performance of this composite index. The primary time period for such comparisons shall be three years, although one-, five- and 10-year comparisons shall also be examined.

In addition, the board and its investment advisors/consultants will maintain a performance monitoring system for individual asset categories and total fund.

### *Security Valuation*

Valuation of investments shall be the total of:

1. The primary closing price on the principal registered stock exchange for all common and preferred stocks so listed.
2. The last sale as reflected by NASDAQ for common and preferred stocks not listed on a registered stock exchange.
3. The current value as determined by a qualified independent service for all bonds, notes and certificates of indebtedness.
4. Amortized cost for commercial paper, certificates of deposit, repurchase agreements and other short-term investments with a maturity of 270 or fewer days.
5. Real estate valued through a combination of independent appraisals and in-house valuations. Methodology underlying internal valuations will be reviewed by the real estate consultant. REIT shares are valued at primary closing prices on the principal registered stock exchange.
6. The most recent valuation for venture capital and alternative investments.

7. International investments are valued by the subcustodian using relevant closing market prices and exchange rates.



# Investments

## Investment Performance (total returns, annualized on a fiscal-year basis, July 1–June 30)

### 1-Year Returns (2002)

Asset Category	STRS Ohio Return	Index Name	Index Return
Domestic Stocks	(17.50%)	Standard & Poor's (S&P) 1500*	(16.50%)
International	(7.90%)	EAFE/Emerging Composite	(10.82%)
Fixed Income	7.79%	Lehman Universal**	7.71%
Real Estate	3.92%	Real Estate Composite	5.48%
<b>Total Fund</b>	<b>(8.13%)</b>	S&P/Lehman/RE/International	(7.32%)
		Inflation (GDP Deflator)	1.03%

### 3-Year Returns (2000–2002)

Asset Category	STRS Ohio Return	Index Name	Index Return
Domestic Stocks	(8.30%)	Standard & Poor's (S&P) 1500*	(7.66%)
International	(3.38%)	EAFE/Emerging Composite	(5.97%)
Fixed Income	8.15%	Lehman Universal**	7.67%
Real Estate	9.49%	Real Estate Composite	9.34%
<b>Total Fund</b>	<b>(1.68%)</b>	S&P/Lehman/RE/International	(1.73%)
		Inflation (GDP Deflator)	1.86%

### 5-Year Returns (1998–2002)

Asset Category	STRS Ohio Return	Index Name	Index Return
Domestic Stocks	2.85%	Standard & Poor's (S&P) 1500*	4.21%
International	(1.42%)	EAFE/Emerging Composite	(3.86%)
Fixed Income	7.68%	Lehman Universal**	7.31%
Real Estate	11.61%	Real Estate Composite	10.56%
<b>Total Fund</b>	<b>4.18%</b>	S&P/Lehman/RE/International	4.37%
		Inflation (GDP Deflator)	1.65%

### STRS Ohio Long-Term Policy Objective (5 Years)

Equities: 8%–10%	Fixed Income: 6%–7%	Real Estate: 8%–9%	Total Fund: 8%
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Investment performance is calculated using a time-weighted rate of return.

\*The domestic stocks benchmark is calculated using the S&P 1500 Index for all periods beginning on or after Jan. 1, 1998, and using the S&P 500 Index for all periods before Jan. 1, 1998.

\*\*The fixed-income benchmark is calculated using the Lehman Universal Index for all periods beginning on or after Oct. 1, 2000, and using the Lehman Aggregate Index for all periods before Oct. 1, 2000.

State Teachers Retirement System of Ohio is defined and created by the Ohio Revised Code, Chapter 3307.15. The STRS Ohio Total Fund performance results consist of all assets of the fund, including both internally and externally managed accounts. All results are calculated in U.S. dollars and net of brokerage commissions, expenses related to trading, and applicable foreign withholding taxes on dividends, interest and capital gains. Performance results are generally gross of fees. Net of fees results are available upon request. Investment management fees vary among asset class. Dispersion data is not applicable. STRS Ohio has prepared this report in accordance with the Performance Presentation Standards of the Association for Investment Management and Research (AIMR-PPS), the U.S. and Canadian version of the Global Investment Management Performance Standards (GIPS). AIMR has not been involved in the preparation or review of this report.

*Summary of Investment Assets*  
*As of June 30, 2002 and 2001* (dollar amounts in thousands)

	June 30, 2002 Fair Value	%	June 30, 2001 Fair Value	%
<b>Short term</b>				
Commercial paper	\$ 425,333	0.9%	\$ 608,286	1.2%
Government notes	10,000	0.0%	10,000	0.0%
Corporate notes		0.0%		0.0%
Short-term investment funds	13,500	0.0%	5,000	0.0%
<b>Total short term</b>	<b>448,833</b>	<b>0.9%</b>	<b>623,286</b>	<b>1.2%</b>
<b>Fixed income</b>				
Guaranteed mortgages	3,349,000	7.1%	3,457,429	6.6%
U.S. government and governmental agencies	1,573,909	3.3%	2,492,022	4.7%
Corporate bonds	3,005,219	6.3%	3,086,300	5.8%
Canadian bonds	82,797	0.2%	110,632	0.2%
Municipal bonds		0.0%		0.0%
High yield and emerging market	864,193	1.8%	940,562	1.8%
<b>Total fixed income</b>	<b>8,875,118</b>	<b>18.7%</b>	<b>10,086,945</b>	<b>19.1%</b>
<b>Common and preferred stock</b>	<b>21,413,456</b>	<b>44.9%</b>	<b>24,174,337</b>	<b>45.8%</b>
<b>Real estate</b>				
East region	1,008,957	2.1%	1,260,205	2.4%
Midwest region	812,875	1.7%	939,894	1.8%
South region	979,320	2.1%	927,093	1.8%
West region	1,301,161	2.7%	1,602,373	3.0%
REITs	447,139	0.9%	636,360	1.2%
Other	1,291,736	2.7%	969,194	1.8%
<b>Total real estate</b>	<b>5,841,188</b>	<b>12.2%</b>	<b>6,335,119</b>	<b>12.0%</b>
<b>Alternative investments</b>	<b>908,438</b>	<b>1.9%</b>	<b>923,253</b>	<b>1.7%</b>
<b>International</b>	<b>10,228,922</b>	<b>21.4%</b>	<b>10,667,911</b>	<b>20.2%</b>
<b>Total investments</b>	<b>\$ 47,715,955</b>	<b>100.0%</b>	<b>\$ 52,810,851</b>	<b>100.0%</b>

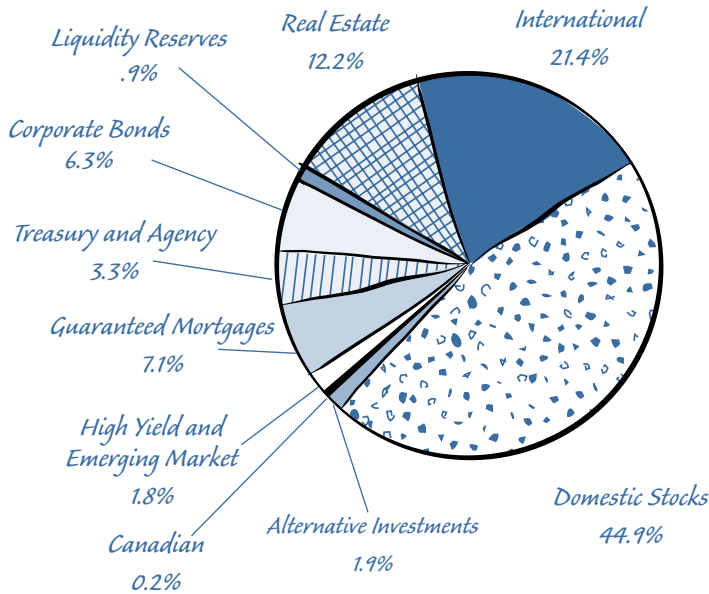
Investment asset schedule excludes invested securities lending collateral.

For purposes of this schedule, certain U.S.-based short-term and fixed-income securities have been classified as international investments in order to approximate the investment exposure of international equity swaps.

# Investments

Schedule of Largest Investment Holdings\* (as of June 30, 2002)

## Investment Distribution by Fair Value as of June 30, 2002



## Common Stocks — Top 20 Holdings

	Shares	Fair Value
Microsoft Corp.	11,142,588	\$ 609,499,563
General Electric Co.	20,002,274	\$ 581,066,060
Exxon Mobil Corporation	13,709,176	\$ 560,979,482
Wal-Mart Stores Inc.	8,820,978	\$ 485,242,000
Pfizer Inc.	12,926,477	\$ 452,426,695
Citigroup Inc.	10,458,789	\$ 405,278,074
American International Group	5,327,021	\$ 363,462,643
Johnson & Johnson	6,156,438	\$ 321,735,444
Coca-Cola Co.	4,973,015	\$ 278,488,840
Royal Dutch Petroleum	4,368,085	\$ 241,424,058
Intel Corp.	13,127,253	\$ 239,834,912
International Business Machines Corp.	3,261,834	\$ 234,852,048
Procter & Gamble Co.	2,598,747	\$ 232,068,107
Bank of America Corp.	3,188,524	\$ 224,344,549
Merck & Co., Inc.	4,411,363	\$ 223,391,422
Cisco Systems	15,590,473	\$ 217,487,098
Verizon Communications	5,396,220	\$ 216,658,233
SBC Communications Inc.	6,843,417	\$ 208,724,218
Philip Morris Companies	4,445,140	\$ 194,163,715
Wells Fargo Co.	3,620,767	\$ 181,255,596

\*A complete list of investment holdings is available from STRS Ohio.

## Schedule of U.S. Stock Brokerage Commissions Paid (for the Year Ended June 30, 2002)

STRS Ohio continues to engage in quality Ohio investments. As of June 30, 2002, STRS Ohio investments in companies with headquarters in Ohio are valued at nearly \$1.6 billion.

### Ohio Investment Profile as of June 30, 2002 (in thousands)

Fixed Income	\$ 115,080
Common stock	801,720
Alternative investments	131,347
Real estate	550,377
<b>Total Ohio-headquartered investments</b>	<b>\$1,598,524</b>

Brokerage Firm	Shares Traded	Commissions Paid	Average Cents Per Share
UBS Warburg	40,908,568	\$ 2,169,228	5.3
Lehman Brothers	40,842,928	1,548,603	3.8
Bear, Stearns & Company	29,992,603	1,276,905	4.3
Goldman, Sachs & Company	31,176,246	1,043,667	3.3
Credit Suisse First Boston	18,503,770	831,334	4.5
Jefferies & Company	15,654,932	772,708	4.9
Citigroup	19,016,655	655,619	3.4
Sanford Bernstein & Company	10,683,776	639,877	6.0
Morgan Stanley	30,907,668	627,466	2.0
Cantor Fitzgerald	11,032,401	537,601	4.9
JPMorgan	10,676,599	507,864	4.8
Merrill Lynch	16,990,867	493,551	2.9
SG Cowen Securities	10,276,583	487,773	4.7
Prudential Securities	12,156,287	468,146	3.9
Deutsche Bank	7,816,541	451,414	5.8
Standard & Poor's Securities	6,966,351	417,981	6.0
Banc of America	7,446,400	361,118	4.8
CIBC World Markets	6,169,338	315,027	5.1
Robert W. Baird & Company	2,175,700	126,736	5.8
McDonald Investments	2,067,660	119,469	5.8
Spear Leads	2,698,000	110,672	4.1
A.G. Edwards & Sons	2,199,417	109,200	5.0
Gerard, Klauer, Mattison & Company	1,567,698	93,632	6.0
Bloomberg Tradebook	4,565,490	91,310	2.0
Brown Brothers	1,562,100	85,736	5.5
Others (includes 40 brokerage firms)	69,273,185	2,335,457	3.4
<b>Total</b>	<b>413,327,763</b>	<b>\$16,678,094</b>	<b>4.0</b>

Schedule of Largest Investment Holdings (as of June 30, 2002) (continued)

*International Investments — Top 20 Holdings*

	Shares	Fair Value
Samsung Electronic (Republic of Korea)	399,981	\$109,570,149
Kookmin Bank (Republic of Korea)	2,004,591	\$ 97,475,532
Novartis AG (Switzerland)	1,677,597	\$ 73,799,384
Total Fina (France)	448,502	\$ 72,830,629
Eni Spa (Italy)	4,465,574	\$ 71,015,154
Honda Motor Co. (Japan)	1,561,920	\$ 63,336,931
BP Amoco Capital (United Kingdom)	7,496,421	\$ 62,965,365
BNP Paribas (France)	1,136,534	\$ 62,866,361
Ito-Yokado Co. (Japan)	1,181,000	\$ 59,123,905
Royal Bank Scot (United Kingdom)	1,989,205	\$ 56,401,239
Norsk Hydro (Norway)	1,178,091	\$ 56,226,714
Bank of Ireland (Ireland)	4,371,927	\$ 54,325,209
GlaxoSmithKline (Ireland)	2,403,248	\$ 51,948,257
UPM-Kymmene Corp. (Finland)	1,302,680	\$ 51,288,843
Fortis (Belgium)	2,205,266	\$ 47,224,582
BHP Billiton Ltd. (Australia)	8,076,977	\$ 46,703,454
Canon Inc. (Japan)	1,223,600	\$ 46,248,711
Astrazeneca (United Kingdom)	964,973	\$ 39,952,236
Lloyds (United Kingdom)	3,937,900	\$ 39,198,913
Peugeot (France)	753,503	\$ 39,111,599

*Fixed Income — Top 20 Holdings*

	Par Value	Fair Value
U.S. Treasury, 8.75%, due 08/15/2020, AAA+	\$121,960,000	\$169,644,278
U.S. Treasury, 10.375%, due 11/15/2009, AAA+	\$111,230,000	\$130,665,293
U.S. Treasury, 7.25%, due 08/15/2022, AAA+	\$ 92,570,000	\$112,769,475
U.S. Treasury, 8.875%, due 02/15/2019, AAA+	\$ 73,200,000	\$102,013,170
U.S. Treasury, 12.00%, due 08/15/2013, AAA+	\$ 70,000,000	\$101,015,101
U.S. Treasury, 0.00%, due 05/15/2005, AAA+	\$ 89,400,000	\$ 81,013,386
FNMA Balloon Pool, 5.50%, due 04/01/2009, AAA+	\$ 76,127,409	\$ 77,908,283
FHLMC Gold, 6.50%, due 07/01/2029, AAA+	\$ 69,389,389	\$ 71,477,778
FNMA Pool, 6.50%, due 01/01/2028, AAA+	\$ 68,682,717	\$ 70,785,553
U.S. Treasury, 6.125%, due 11/15/2027, AAA+	\$ 66,085,000	\$ 70,410,441
U.S. Treasury, 4.75%, due 11/15/2008, AAA+	\$ 60,000,000	\$ 61,448,795
Wal-Mart, 6.875%, due 08/10/2009, AA	\$ 53,325,000	\$ 59,892,351
U.S. Treasury, 8.75%, due 05/15/2017, AAA+	\$ 41,774,000	\$ 56,195,441
Asian Development, 7.50%, due 05/31/2005, AAA	\$ 50,000,000	\$ 55,556,417
FNMA Benchmark, 5.25%, due 01/15/2009, AAA+	\$ 53,000,000	\$ 55,353,112
Deutsche Aus, 7.00%, due 06/23/2005, AAA	\$ 50,000,000	\$ 54,575,278
FNMA Benchmark, 6.25%, due 05/15/2029, AAA+	\$ 53,000,000	\$ 53,695,154
FHLMC Gold, 6.50%, due 02/01/2022, AAA+	\$ 49,259,020	\$ 50,958,785
FORDO, 4.01%, due 03/15/2006, AAA	\$ 50,000,000	\$ 50,748,611
U.S. Treasury, 8.00%, due 11/15/2021, AAA+	\$ 36,700,000	\$ 47,325,655

# Actuarial





A Mellon Financial Company<sup>SM</sup>

One North Dearborn, Suite 1400  
Chicago, Illinois 60602-4336

November 22, 2002

The Retirement Board  
State Teachers Retirement System of Ohio  
275 East Broad Street  
Columbus, Ohio 43215

Ladies and Gentlemen:

This report presents the results of the annual actuarial valuation of the assets and liabilities of the State Teachers Retirement System of Ohio (STRS Ohio) as of July 1, 2002, prepared in accordance with Section 3307.51 of Chapter 3307 of the Ohio Revised Code. The valuation takes into account all of the promised benefits to which members are entitled, including pension and survivor benefits.

The valuation was based on the actuarial assumptions and methods as adopted by the Board of Trustees, including a valuation interest rate of 7 3/4% per annum compounded annually. The assumptions and methods are unchanged from the prior valuation.

The actuarial assumptions and methods comply with the parameters set forth in Governmental Accounting Standards No. 25.

#### **Assets and Membership Data**

STRS Ohio reported to the actuary the individual data for members of the System as of the valuation date. While we did not verify the data at their source, we did perform tests for internal consistency and reasonableness. The amount of assets in the trust fund taken into account in the valuation was based on statements prepared for us by STRS Ohio.

#### **Funding Adequacy**

The current total contribution rate from employers and members is 23.3%. The Board elected to increase the member contribution rate from 9.3% to 10% effective July 1, 2003. As a result, for fiscal 2004 and after, the total contribution rate will increase to 24%.

The Board allocates the total contribution rate between pension and survivor benefits and health care. For fiscal 2003 and after, the Board has allocated 1% toward health care, leaving 22.3% for pension and survivor benefits for fiscal 2003 and 23% for fiscal 2004 and after. The valuation indicates that the contribution rates of 22.3% for fiscal 2003 and 23% for fiscal 2004 and after are sufficient to provide for the payment of the promised pension and survivor benefits, with a 39.0-year funding period to amortize the unfunded accrued liability. The funding period has increased 11.5 years from last year's funding period (i.e., increased from 27.5 years to 39.0 years). The funding period increased because of the actuarial and investment losses.

The valuation indicates that for the fiscal year ending June 30, 2002, the actuarial experience of STRS Ohio was unfavorable and generated net actuarial losses of \$8.84 billion.

#### **Financial Results and Membership Data**

The valuation report shows detailed summaries of the financial results of the valuation and membership data used in preparing this valuation. The actuary prepared supporting schedules included in the Actuarial and Statistical Sections of the STRS Ohio Comprehensive Annual Financial Report. The actuary prepared the trend data schedules included in the Financial Section of the STRS Ohio Comprehensive Annual Financial Report.

Qualified actuaries completed the valuations in accordance with accepted actuarial procedures as prescribed by the Actuarial Standards Board. The qualified actuaries are members of the American Academy of Actuaries and are experienced in performing actuarial valuations of public employee retirement systems. To the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally accepted actuarial principles and practice.

Respectfully submitted,

Kim M. Nicholl, F.S.A.  
Consulting Actuary



# Actuarial

## Statement of Actuarial Assumptions and Methods

The assumptions below have been adopted by the State Teachers Retirement Board after consulting with the actuary.

**Financing Objective:** To establish contributions as a level percentage of active member payroll which, when invested, will be sufficient to provide specified benefits to STRS Ohio members and retirees.

**Interest Rate:** 7.75% per annum, compounded annually. (Adopted 2000)

**Death After Retirement:** According to the 1983 Group Annuity Mortality Table (Projection 1994 – Scale H), with one-year setback in age for males and one-year set forward in age for females. Special mortality tables are used for the period after disability retirement. (Adopted 1998)

**Future Expenses:** The assumed interest rate is net of the anticipated future administrative expenses of the fund.

**Actuarial Cost Method:** Projected benefit method with level percentage entry age normal cost and open-end unfunded accrued liability. Gains and losses are reflected in the accrued liability.

**Asset Valuation Method:** A four-year moving market average value of assets that spreads the difference between the actual investment income and the expected income (based on the valuation interest rate) over a period of four years. The actuarial value shall not be less than 91% or more than 109% of market value. (Adopted 1997)

**Payroll Growth:** 4.5% per annum compounded annually. Included in the total payroll growth assumption is a 3.50% increase as a result of inflation. (Adopted 1998)

### Separations From Active Service:

Representative values of the assumed rates of separation and annual rates of salary increase are shown in the table below. (Adopted 1993)

### Replacement of Retiring Members:

The majority of members who retire do so effective July 1. These members are replaced by new members who are hired after July 1. As a result, new members are not reported on the census data. To compensate for this, assumed payroll for these new members is equal to the difference between actual total system payroll for the fiscal year just ended and reported payroll for members reported on the valuation date.

**Census and Assets:** The valuation was based on members of the system as of July 1, 2002, and does not take into account future members. All census and asset data was supplied by the system.

## Superannuation

Age	Non-Vested Withdrawal	Vested Withdrawal	Death	Disability	30 Years Service Retirement	25–29 Years Service Retirement	Under 25 Years Service Retirement	Salary Increase*
<b>MEN</b>								
20	.1900	.0900	.0003	—	—	—	—	.0925
30	.1500	.0400	.0005	.0004	—	—	—	.0725
40	.1375	.0175	.0008	.0018	.2800	—	—	.0525
50	.1340	.0085	.0023	.0049	.2800	—	—	.0405
55	.1340	.0085	.0039	.0062	.3100	.0600	—	.0375
60	.1340	.0085	.0061	.0068	.3600	.0600	.1300	.0350
65	.1340	.0085	.0094	.0072	.5200	.1800	.2200	.0325
70	.1340	—	.0168	.0072	.4200	.2500	.2000	.0325
<b>WOMEN</b>								
20	.1500	.0450	.0002	—	—	—	—	.0925
30	.1175	.0480	.0003	.0005	—	—	—	.0725
40	.0900	.0165	.0005	.0018	.2700	—	—	.0525
50	.0900	.0125	.0012	.0036	.2700	—	—	.0405
55	.0900	.0125	.0019	.0058	.2900	.1000	—	.0375
60	.0725	.0125	.0032	.0064	.4000	.1600	.2200	.0350
65	.0725	.0125	.0053	.0072	.4900	.3100	.2100	.0325
70	.0725	—	.0090	.0072	.5000	.3500	.2000	.0325

\*Includes an inflation adjustment of 3.50%.

*Benefit Recipients Added to and Removed From the Rolls,  
1997–2002*

Fiscal Year Ended	Beginning	Additions	Deletions	Ending
2002	102,132	6,500	3,332	105,300
2001	99,011	6,436	3,315	102,132
2000	95,796	6,536	3,321	99,011
1999	91,999	6,922	3,125	95,796
1998	88,718	6,329	3,048	91,999
1997	86,132	5,777	3,191	88,718

*Schedule of Valuation Data — Active Members,  
1993–2002*

Valuation Date	Number	Annualized Salaries (in thousands)	Annual Average Pay	% Increase in Average Pay
2002	178,557	\$8,063,134	\$45,157	4%
2001	177,013	7,721,258	43,620	3%
2000	174,072	7,386,122	42,431	3%
1999	170,854	7,040,902	41,210	3%
1998	170,126	6,834,060	40,171	3%
1997	168,943	6,564,294	38,855	3%
1996	166,927	6,307,142	37,784	3%
1995	166,623	6,110,218	36,670	3%
1994	167,770	5,986,084	35,680	3%
1993	165,711	5,742,577	34,654	2%

*Schedule of Valuation Data — Retirees/Beneficiaries,  
1993–2002*

Valuation Date	Number	Annual Allowances (in thousands)	% Increase in Annual Allowances	Average Annual Allowances
2002	105,300	\$2,806,482	8%	\$26,652
2001	102,132	2,595,549	9%	25,414
2000	99,011	2,391,680	14%	24,156
1999	95,796	2,103,139	9%	21,954
1998	91,999	1,929,988	12%	20,978
1997	88,718	1,722,037	9%	19,410
1996	86,132	1,579,771	10%	18,341
1995	83,136	1,434,032	17%	17,249
1994	77,405	1,230,671	10%	15,899
1993	74,230	1,120,770	9%	15,099

## Solvency Test, 1993–2002 (dollar amounts in thousands)

Valuation Date	Accrued Liability for:			Valuation Assets*	Portion of Accrued Liabilities Covered by Valuation Assets		
	(1) Active Member Contributions*	(2) Retirees and Beneficiaries*	(3) Active Members (Employer-Financed Portion)*		(1)	(2)	(3)
2002	\$7,771,703	\$32,639,291	\$25,815,171	\$51,969,345	100%	100%	45%
2001	7,445,894	30,145,012	25,090,334	57,450,612	100%	100%	79%
2000	7,174,675	27,604,436	24,414,047	54,712,921	100%	100%	82%
1999	6,867,910	25,152,626	22,742,804	49,124,802	100%	100%	75%
1998	6,569,783	22,994,697	21,563,608	43,865,907	100%	100%	66%
1997	6,222,725	20,249,628	20,091,418	38,743,272	100%	100%	61%
1996	5,862,250	18,420,595	18,484,067	34,569,651	100%	100%	56%
1995	5,533,684	16,745,090	17,708,401	31,416,677	100%	100%	52%
1994	5,158,561	14,025,124	17,688,124	28,543,410	100%	100%	53%
1993	4,798,350	12,869,723	16,820,904	26,259,447	100%	100%	51%

\*The amounts reported include funds set aside to pay postemployment health care benefits.

## Analysis of Financial Experience

Gains and Losses in Accrued Liabilities Resulting From Differences Between Assumed Experience and Actual Experience (dollar amounts in thousands)

Type of Activity:	Gain (loss) for year ended June 30:				
	2002	2001	2000	1999	1998
<b>Investment income.</b> If there is greater investment income than assumed, there is a gain. If less, there is a loss.	\$ (8,336,907)	\$ (52,901)	\$ 2,656,964	\$ 2,432,975	\$ 2,505,273
<b>Payroll growth.</b> If more contributions from payroll growth are received than expected, there is a gain. If less, there is a loss.	80,926	32,051	138,966	0	0
<b>Salary increases.</b> If there are smaller salary increases than assumed, there is a gain. If greater increases, there is a loss.	(564,621)	(554,162)	(472,983)	(368,504)	(266,140)
<b>Retirement and other separation experience.</b> If members retire from service at an older age or with a lower final average salary than assumed, there is a gain. If separation claims are less than expected, there is a gain.	(378,242)	184,272	(64,386)	35,715	(109,263)
<b>Death after retirement.</b> If retirees live shorter than expected, there is a gain. If retirees live longer than assumed, there is a loss.	359,922	(254,890)	(150,951)	120,664	(204,876)
Gain (or loss) during year from financial experience	(8,838,922)	(645,630)	2,107,610	2,220,850	1,924,994
Nonrecurring items adjustment for plan amendments	(5,525)	(70,159)	0	0	(220,259)
Composite gain (or loss) during the year	\$ (8,844,447)	\$ (715,789)	\$ 2,107,610	\$ 2,220,850	\$ 1,704,735

# Summary of Benefit and Contribution Provisions — Defined Benefit Plan

## Eligibility for Membership

Immediate upon commencement of employment.

## Service Retirement

### Eligibility

Any age with 30 years of service, age 55 with 25 years of service, or age 60 with five years of service. Members retiring before age 65 with less than 30 years of service credit receive a percentage reduction in benefit amounts.

### Amounts

Annual amount equal to the greater of (a) 2.2% of final average salary for the three highest paid years, multiplied by years of total Ohio service credit, or 2.5% of final average salary for the three highest paid years if the member has 35 or more years of contributing service credit, multiplied by years of total service credit — except that for years of Ohio contributing service credit in excess of 30 the following formula percentage will apply:

Year	Percentage
31	2.5%
32	2.6%
33	2.7%
34	2.8%
35	2.9%
36	3.0%
37	3.1%
38	3.2%
39	3.3%

or (b) \$86 multiplied by years of service credit, and adjusted by the following percentage:

Attained Age	Years of Ohio Service Credit	Percentage of Base Amount
58	25	75%
59	26	80%
60	27	85%
61		88%
	28	90%
62		91%
63		94%
	29	95%
64		97%
65	30 or more	100%

Annual salary is subject to a limit of \$200,000 as adjusted under Section 401(a)(17).

**Maximum benefit** — The lesser of: (a) 100% of average annual salary for the three highest paid years, or (b) the limit as established by Section 415 of the Internal Revenue Code.

**Minimum benefit** — The sum of the annuity provided by: (a) the member's contribution with interest, (b) a pension equal to the annuity, and (c) an additional pension of \$40 multiplied by the number of years of prior and military service.

## Disability Retirement

### Eligibility

A member may qualify if the following criteria are met: membership before July 30, 1992, and election of this benefit; completion of five or more years of service; under age 60; and incapacitated for the performance of normal job duties for at least 12 months.

### Amount

- (1) Annuity with a reserve equal to the member's accumulated contributions, plus
- (2) The difference between (1) (noted above) and the greater of 2% of the average salary during the three highest paid years or \$86 times total service plus years and months from date of disability to age 60. Maximum allowance is 75% of final average salary. Minimum allowance is 30% of final average salary.

## Disability Allowance

### Eligibility

A member may qualify if the following criteria are met: membership after July 29, 1992, or membership on or before July 29, 1992, and election of this benefit; completion of five or more years of service; and incapacitated for the performance of normal job duties for at least 12 months.

### Amount

The amount is 2.2% of the average salary during the three highest paid years times total service. Maximum allowance is 60% of final average salary. Minimum allowance is 45% of final average salary. The disability allowance payment terminates at age 65 (or later if payment begins after age 60). After termination of the disability allowance, the member may apply for service retirement.

## Death After Retirement

Lump-sum payment of \$1,000 upon death after service or disability retirement.

## Survivor's Benefit

### Eligibility

A member may qualify for this benefit after at least 1-1/2 years of credit for Ohio service with at least 1/4 year of such service in the 2-1/2 years preceding death; or upon death of a disability retiree.

### Amount

If a member was eligible for retirement, a spouse or other sole dependent beneficiary may elect to receive Option 1 benefits in lieu of return of contributions. If a member was not eligible for retirement, certain designated beneficiaries may elect to receive dependent-based benefits in lieu of return of contributions (see chart below) or service-based benefits, which provide a minimum benefit of a percentage of final average salary based on years of credited service ranging from 29% with 20 years of service to 60% with 29 years of service.

Qualified beneficiaries are spouse, dependent children and/or dependent parents over age 65.

Number of Qualified Dependents	% of Average Annual Salary for Three Highest Paid Years	Minimum Annual Benefit
1	25%	\$ 1,152
2	40%	2,232
3	50%	2,832
4	55%	2,832
5 or more	60%	2,832

### Lump-Sum Withdrawal Option

In lieu of any other pension or survivor benefits, a member who leaves the system can receive his or her member contributions with interest in a lump sum according to the following schedule:

Credited Service	Lump-Sum Amount
Less than three years	Member contributions with 4% interest
Three or more years but less than five years	Member contributions with 5% interest
Five or more years	150% of member contributions with 5% interest

**The board has the authority to modify the interest credited to member contributions.**

### Optional Forms of Benefit

**Option 1** — 100% joint and survivorship. Reduced retirement allowance payable to the member and continuing for life to the member's sole beneficiary (named at retirement) after the member's death.

**Option 2** — A joint and survivorship annuity payable during the lifetime of the member, with the member's sole beneficiary (named at retirement) to receive some other portion of the member's annuity after the member's death.

**Option 3** — The member's reduced retirement allowance provided under Option 1 or Option 2 paid for life to the member's sole beneficiary (named at retirement) after the member's death. In the event of the death of the sole beneficiary or termination of marriage between the retiree and the sole beneficiary, the retiree may elect to return to a single lifetime benefit equivalent, available for an actuarially computed charge as determined by the Retirement Board. In the case of termination of marriage, the election may be made with the written consent of the beneficiary or by court order.

**Option 4** — A life annuity payable during the lifetime of the member with a guarantee that, upon the member's death before the expiration of a certain period, the benefit will continue for the remain-

der of such period to the beneficiary. Joint beneficiaries may receive the present value of any remaining payments in a lump-sum settlement. If all beneficiaries die before the expiration of the certain period, the present value of all remaining payments is paid to the estate of the beneficiary last receiving benefits.

**Option 5** — A plan of payment established by the Retirement Board combining any of the features of Options 1, 2 and 4.

### Refund of Contributions

A member's contributions with interest are refunded upon termination of employment where no other benefit is payable. Upon death after retirement or upon death of a survivor in receipt of benefits, the member's accumulated contributions, less payments made, are returned to the designated beneficiary.

### Cost-of-Living Benefits

The basic benefit is increased each year by 3% of the original base benefit.

### Health Care

Retirees, their spouse and dependents have access to a medical expense health care plan as may be offered by the Retirement Board and which is subject to changes in terms and conditions from time to time.

### Contribution

By members: 9.3% of salary effective July 1, 1994; 10% of salary effective July 1, 2003.

By employers: 14% of salaries of their employees who are members.

## Summary of Benefit and Contribution Provisions — Combined Plan

### Eligibility for Membership

New members hired on or after July 1, 2001, may elect in writing to participate in the Combined Plan.

### Service Retirement

#### Eligibility

Age 60 with five years of service.

#### Amount

The balance in the member's defined contribution account plus an annual amount equal to 1% of final average salary for the three highest paid years multiplied by years of total Ohio service credit.

Annual salary is subject to a limit of \$200,000 as adjusted under Section 401(a)(17).

### Vesting

#### Eligibility

Completion of five years of service for the defined benefit portion. Member contributions and earnings are 100% vested at all times.

#### Amount

A member who terminates with five or more years of service credit can receive the actuarial equivalent present value of the defined benefit formula. Prior to age 50, a withdrawal must include both the defined benefit and defined contribution portions of the account.

### Early Retirement

#### Eligibility

Before age 60 with five years of service.

#### Amount

The normal retirement benefit commencing at age 60. At age 50 or after, a member who elects to withdraw the full value of his or her defined contribution account may receive the withdrawal value of the formula benefit in a single sum, or leave the formula benefit on account for a benefit payable at age 60. The member may withdraw the defined benefit portion of the account only if he or she is also withdrawing the defined contribution account.

### Late Retirement

#### Eligibility

After age 60 with five years of service.

#### Amount

The formula benefit described in the service retirement section based on service credit and final average salary at termination without any actuarial adjustment.

### Disability Benefit

#### Eligibility

Completion of five or more years of service and permanently incapacitated for the performance of duty.

#### Amount

Members have the option of receiving disability benefits. All contributions and investment gains in the member's defined contribution account are used to fund the benefit. At age 65, the disability benefit converts to a service retirement benefit with a 2.2% formula. Alternatively, the member's defined contribution account is available upon termination of employment.

### Survivor's Benefit

#### Eligibility

Upon death after at least 1-1/2 years of credit for Ohio service with at least 1/4 year of such service in the 2-1/2 years preceding death or upon death of a disability retiree.

#### Amount

Qualified surviving members have the option of receiving survivor benefits paid as an annuity. All contributions and investment gains in the member's defined contribution account are used to fund the benefit. If a member had 30 years of service, was age 55 with 25 years of service or age 60 with five years of service, the spouse or other sole dependent beneficiary may elect to receive an Option 1 benefit in lieu of return of contributions.

If a member did not meet the eligibility requirements described above, certain designated beneficiaries may elect to receive the following benefits in lieu of return of contributions.

Number of Qualified Dependents	% of Average Annual Salary for Three Highest Paid Years	Minimum Annual Benefit
1	25%	\$ 1,152
2	40%	2,232
3	50%	2,832
4	55%	2,832
5 or more	60%	2,832

Service-based benefits provide a minimum benefit of a percentage of final average salary based on years of credited service ranging from 29% with 20 years of service to 60% with 29 years of service.

Alternatively, the member's defined contribution account is available.

Qualified beneficiaries are spouse, dependent children and/or dependent parents over age 65.

## *Optional Forms of Payment of Defined Benefit Portion*

A lump sum of the actuarial equivalent of the defined benefit formula benefit. If a member withdraws the defined contribution account prior to age 50, the formula benefit is paid in a lump sum.

### **Joint and Survivorship Options —**

Options 1 through 5 described in the Defined Benefit Plan provisions are available. All alternative forms of payment are the actuarial equivalent of the Single Life Annuity benefit payable at age 60.

## *Optional Forms of Payment of Member's Defined Contribution Account*

The actuarial equivalent of the member's defined contribution account can be paid on or after age 50 as a lifetime annuity. Options 1 through 5, described in the Defined Benefit Plan provisions, are also available. The monthly annuity must be \$100 or more to receive the member's defined contribution account in the form of an annuity.

The vested amount of the member's defined contribution account upon termination of employment can be paid as a single lump sum. If a member takes a lump sum of the defined benefit formula benefit, the member must simultaneously withdraw the lump-sum value of the member's defined contribution account in a single lump sum.

## *Cost-of-Living Benefits*

Not available on the service retirement benefit. For disability and survivor bene-

fits, the basic benefit is increased by 3% each year.

## *Health Care*

Retirees, their spouse and dependents have access to a medical expense health care plan as may be offered by the Retirement Board and which is subject to changes in terms and conditions from time to time.

## *Contribution*

By members: 9.3% of salary is deposited into the member's defined contribution account; 10% of salary is deposited into the member's defined contribution account effective July 1, 2003.

By employers: 13.7% of salaries is used to fund the defined benefit formula and health care; 0.3% of salaries is used to fund administrative expenses for the Defined Contribution Plan.

## *Summary of Benefit and Contribution Provisions — Defined Contribution Plan*

### *Eligibility for Membership*

New members hired on or after July 1, 2001, may elect in writing to participate in the Defined Contribution Plan.

### *Service Retirement*

#### **Eligibility**

Termination after age 50.

#### **Amount**

The balance in the member's defined contribution account.

### *Vesting*

#### **Eligibility**

Employer contributions and earnings on the member's account are vested after the first anniversary of membership. Member contributions and earnings are 100% vested at all times.

#### **Amount**

The balance in the member's defined contribution account.

### *Early Retirement*

#### **Eligibility**

Termination after age 50.

#### **Amount**

The balance in the member's defined contribution account.

### *Disability Benefit*

Not available. However, members who terminate employment may withdraw their account.

### *Survivor's Benefit*

#### **Eligibility**

Upon death.

#### **Amount**

The balance in the member's defined contribution account. A spouse may either continue to manage the member's defined contribution account or withdraw the account.

A black and white photograph of a person with short hair and glasses, looking down intently at a calculator they are holding in their hands. The person is wearing a light-colored sweater. The background is blurred, focusing attention on the person and the calculator.

### *Optional Forms of Payment*

The actuarial equivalent of the member's defined contribution account can be paid on or after age 50 as a lifetime annuity. Options 1 through 5, described in the Defined Benefit Plan provisions, are also available. The monthly annuity must be \$100 or more to receive the member's defined contribution account in the form of an annuity.

### *Cost-of-Living Benefits*

Not available.

### *Health Care*

Not available.

### *Contribution*

By members: 9.3% of salary is deposited into the member's defined contribution account; 10% of salary is deposited into the member's defined contribution account effective July 1, 2003.

By employers: 10.5% of salary is deposited into the member's defined contribution account; 3.5% of salaries is used to amortize the unfunded liability of the Defined Benefit Plan.



## Expenses by Type Years Ending June 30, 1993–2002 (in thousands)

Fiscal Year	Benefits	Refunds	Administration	Total
2002	\$3,073,240	\$84,077	\$77,125	\$3,234,442
2001	2,855,859	93,868	72,277	3,022,004
2000	2,634,484	105,759	57,817	2,798,060
1999	2,307,449	91,037	48,967	2,447,453
1998	2,088,869	87,705	42,489	2,219,063
1997	1,880,129	32,313	42,884	1,955,326
1996	1,718,861	24,118	37,747	1,780,726
1995	1,563,757	21,233	38,926	1,623,916
1994	1,438,446	18,235	38,770	1,495,451
1993	1,347,827	16,386	35,870	1,400,083

## Revenues by Source Years Ending June 30, 1993–2002 (in thousands)

Fiscal Year	Member Contributions	Employer Contributions	Net Investment Income	Health Care Premiums	State Appropriations	Other	Total
2002	\$826,910	\$1,218,475	\$(4,308,089)	\$79,590	\$0	\$6,281**	\$(2,176,833)
2001	785,009	1,167,830	(3,694,121)	68,582	0	9,610	(1,663,090)
2000	755,146	1,128,314	5,504,137	60,375	1,514	6,487	7,455,973
1999	716,551	1,076,879	6,003,597	47,819	1,780	7,896	7,854,522
1998	697,404	1,036,223	6,039,679	39,682	2,067	4,994	7,820,049
1997	679,499	1,005,354	6,143,363*	38,347	2,377	6,281	7,875,221
1996	635,716	1,002,441	3,664,683	37,224	2,698	6,782	5,349,544
1995	624,812	956,284	2,340,907	36,842	3,035	6,008	3,967,888
1994	589,186	902,299	2,231,241	34,603	3,396	4,805	3,765,530
1993	564,005	869,862	2,394,523	24,184	3,755	5,180	3,861,509

\*Effective July 1, 1996, net investment income includes the net (depreciation) appreciation in fair value of investments.

\*\*Effective July 1, 2001, "other" includes defined contribution account participant fees.

## Number of Benefit Recipients by Type, 1993–2002

As of July 1	Service Retirement	Disability Benefits	Beneficiaries Receiving Optional Allowances	Survivor Benefits	Total
<b>2002</b>	<b>86,666</b>	<b>6,498</b>	<b>6,623</b>	<b>5,513</b>	<b>105,300</b>
2001	83,918	6,449	6,340	5,425	102,132
2000	81,111	6,367	6,152	5,381	99,011
1999	78,341	6,259	5,948	5,248	95,796
1998	75,482	6,157	5,675	4,685	91,999
1997	72,601	6,000	5,486	4,631	88,718
1996	70,448	5,923	5,206	4,555	86,132
1995	67,989	5,711	4,941	4,495	83,136
1994	63,182	5,217	4,739	4,267	77,405
1993	61,515	5,020	4,478	3,217	74,230

## Average Monthly Allowances by Type, 1993–2002

As of July 1	Service Retirement	Disability Benefits	Beneficiaries Receiving Optional Allowances	Survivor Benefits	Average
<b>2002</b>	<b>\$2,349</b>	<b>\$2,241</b>	<b>\$1,457</b>	<b>\$1,096</b>	<b>\$2,221</b>
2001	2,238	2,168	1,396	1,047	2,118
2000	2,124	2,101	1,340	1,003	2,013
1999	1,938	1,961	1,086	894	1,830
1998	1,844	1,887	1,031	893	1,748
1997	1,705	1,764	974	822	1,618
1996	1,608	1,688	931	779	1,528
1995	1,510	1,603	886	732	1,437
1994	1,388	1,504	843	707	1,325
1993	1,304	1,433	803	748	1,258

## Benefit Expenses by Type, 1993–2002 (in thousands)

Fiscal Year Ended	Service Retirement	Disability Benefits	Survivor Benefits	Supplemental Benefit	Health Care*	Other	Total
<b>2002</b>	<b>\$2,395,318</b>	<b>\$168,704</b>	<b>\$69,214</b>	<b>\$0</b>	<b>\$434,287</b>	<b>\$5,717</b>	<b>\$3,073,240</b>
2001	2,203,280	160,775	65,591	50,386	369,354	6,473	2,855,859
2000	2,019,521	152,365	62,346	48,493	343,512	8,247	2,634,484
1999	1,764,172	139,296	52,863	46,448	297,748	6,922	2,307,449
1998	1,601,143	130,429	47,920	44,876	258,906	5,595	2,088,869
1997	1,440,163	118,893	43,539	43,278	230,424	3,832	1,880,129
1996	1,307,482	109,250	40,283	41,750	176,773	6,099	1,681,637
1995	1,185,066	100,805	37,756	34,567	165,767	2,954	1,526,915
1994	1,083,335	92,091	35,198	33,586	157,276	2,357	1,403,843
1993	985,024	83,888	32,804	32,489	187,318	2,120	1,323,643

\*Health care premiums prior to fiscal 1997 were netted against health care expenses. Starting in fiscal 1997, health care premiums are reflected as revenue.

## Selected Funding Information, 1993–2002 (dollars in thousands)

As of July 1	Contribution Rate		Interest Assumption	Payroll Growth Assumption	Unfunded Accrued Liability*	Funding Period
	Member	Employer				
<b>2002</b>	<b>9.30%</b>	<b>14.00%</b>	<b>7.75%</b>	<b>4.500%</b>	<b>\$14,256,819</b>	<b>39.0 Yrs.</b>
2001	9.30%	14.00%	7.75%	4.500%	5,230,628	27.5 Yrs.
2000	9.30%	14.00%	7.75%	4.500%	4,480,237	23.1 Yrs.
1999	9.30%	14.00%	7.50%	4.500%	5,638,538	16.3 Yrs.
1998	9.30%	14.00%	7.50%	4.500%	7,262,181	24.2 Yrs.
1997	9.30%	14.00%	7.50%	4.500%	7,820,498	26.9 Yrs.
1996	9.30%	14.00%	7.50%	4.500%	8,197,261	28.4 Yrs.
1995	9.30%	14.00%	7.50%	5.000%	8,570,498	29.3 Yrs.
1994	9.30%	14.00%	7.50%	5.000%	8,328,399	30.5 Yrs.
1993	9.25%	14.00%	7.50%	5.000%	8,229,529	31.5 Yrs.

\*Excluding health care

## Number of Reporting Employers by Type, 1993–2002

Fiscal Year Ended	City School Districts	Local School Districts	County Educational Service Centers	Exempted Village Districts	Vocational & Technical Schools	Colleges & Universities	County MR/DD Boards	Community Schools*	Other	Total
<b>2002</b>	<b>194</b>	<b>369</b>	<b>60</b>	<b>49</b>	<b>49</b>	<b>37</b>	<b>77</b>	<b>101</b>	<b>8</b>	<b>944</b>
2001	194	369	61	49	49	37	80	72	8	919
2000	194	369	61	49	49	37	82	51	8	900
1999	192	371	63	49	49	37	82	16	7	866
1998	192	372	65	49	49	37	82	*	8	854
1997	192	371	73	49	49	37	82	*	8	861
1996	192	371	80	49	49	37	82	*	8	868
1995	192	371	80	49	49	37	82	*	9	869
1994	192	371	81	49	49	37	82	*	6	867
1993	192	372	81	49	51	35	82	*	3	865

\*Community schools were added as reporting employers in fiscal 1999.





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**Independent Auditors' Report on Compliance and on Internal Control  
Over Financial Reporting Based on an Audit of Basic Financial Statements  
Performed in Accordance With *Government Auditing Standards***

To the Retirement Board  
The State Teachers Retirement System of Ohio:

We have audited the financial statements of the State Teachers Retirement System of Ohio (STRS Ohio) as of and for the years ended June 30, 2002 and 2001, and have issued our report thereon dated December 3, 2002. We conducted our audits 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.

**Compliance**

As part of obtaining reasonable assurance about whether STRS Ohio financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grants, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audits and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance that are required to be reported under *Government Auditing Standards*.

**Internal Control Over Financial Reporting**

In planning and performing our audits, we considered STRS Ohio's internal control over financial reporting in order to determine our auditing procedures for the purpose of expressing our opinion on the financial statements and not to provide assurance on the internal control over financial reporting. Our consideration of the internal control over financial reporting would not necessarily disclose all matters in the internal control over financial reporting that might be material weaknesses. A material weakness is a condition in which the design or operation of one or more of the internal control components does not reduce to a relatively low level the risk that misstatements in amounts that would be material in relation to the financial statements being audited may occur and not be detected within a timely period by employees in the normal course of performing their assigned functions. We noted no matters involving the internal control over financial reporting and its operation that we consider to be material weaknesses.

This report is intended solely for the information and use of the Ohio Auditor of State, and the management and members of the Retirement Board of the State Teacher's Retirement System of Ohio and is not intended to be and should not be used by anyone other than these specified parties.

**KPMG LLP**

December 3, 2002





**Auditor of State  
Betty Montgomery**

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**STATE TEACHERS RETIREMENT SYSTEM OF OHIO**

**FRANKLIN COUNTY**

**CLERK'S CERTIFICATION**

**This is a true and correct copy of the report which is required to be filed in the Office of the Auditor of State pursuant to Section 117.26, Revised Code, and which is filed in Columbus, Ohio.**

*Susan Babbitt*

**CLERK OF THE BUREAU**

**CERTIFIED  
FEBRUARY 25, 2003**