



STATE TEACHERS RETIREMENT SYSTEM  
OF OHIO

# Comprehensive Annual Financial Report

Fiscal Year Ended June 30, 2003





STATE TEACHERS RETIREMENT SYSTEM  
OF OHIO

2003 Comprehensive Annual Financial Report  
Fiscal Year Ended June 30, 2003

Prepared through the joint efforts of the STRS Ohio staff

# 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, 2002

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.



President

Executive Director

# Table of Contents

## 2003 Comprehensive Annual Financial Report

### Introduction

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

### Financial

Independent Auditors' Report .....	8
Management's Discussion and Analysis.....	9
Financial Statements	
Statements of Plan Net Assets .....	15
Statements of Changes in Plan Net Assets .....	16
Notes to Financial Statements .....	17
Required Supplementary Information	
Required Schedule of Funding Progress, 1998–2003 .....	26
Required Schedule of Employer Contributions, 1998–2003 .....	26
Notes to the Trend Data .....	26
Additional Information	
Schedule of Administrative Expenses .....	27
Schedule of Investment Expenses.....	28

### Investments

Investment Review .....	29
Investment Objective and Policy .....	33
Investment Performance .....	45
STRS Ohio Long-Term Policy Objective (5 Years).....	45
Summary of Investment Assets as of June 30, 2003 and 2002 .....	46
Investment Distribution by Fair Value as of June 30, 2003.....	47
Ohio Investment Profile as of June 30, 2003.....	47
Schedule of U.S. Stock Brokerage Commissions Paid.....	47
Schedule of Largest Investment Holdings as of June 30, 2003 .....	48

### Actuarial

Actuary's Certification Letter .....	50
Statement of Actuarial Assumptions and Methods.....	51
Benefit Recipients Added to and Removed From the Rolls, 1998–2003.....	52
Schedule of Valuation Data — Active Members, 1994–2003.....	52
Schedule of Valuation Data — Retirees/Beneficiaries, 1994–2003.....	52
Solvency Test, 1994–2003 .....	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 .....	58

### Statistical

Expenses by Type, 1994–2003 .....	59
Revenues by Source, 1994–2003 .....	59
Number of Benefit Recipients by Type, 1994–2003 .....	60
Average Monthly Allowances by Type, 1994–2003.....	60
Benefit Expenses by Type, 1994–2003 .....	60
Selected Funding Information, 1994–2003 .....	61
Number of Reporting Employers by Type, 1994–2003 .....	61



**Deborah Scott, Chair**  
Teacher member since 1994.  
Finneytown Local Schools,  
Hamilton County

**Eugene E. Norris,  
Vice Chair**  
Teacher member since 1996.  
South-Western City Schools,  
Franklin County

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

**Jack H. Chapman**  
Teacher member since 1990.  
Reynoldsburg City Schools,  
Franklin County

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

## 2002–2003 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.

The majority of the board is composed of six elected members — five active teachers and one retired teacher — who have first-hand knowledge of the

### STRS Ohio Senior Staff Members

- Damon F. Asbury**, interim executive director
- Sandra L. Knoesel**, deputy executive director — Member Benefits
- Stephen A. Mitchell**, deputy executive director — Investments
- Robert A. Slater**, deputy executive director — Finance and chief financial officer
- Terri Bierdeman**, director of Governmental Relations
- Eileen F. Boles**, executive assistant
- Lorrie Diaz**, director of Human Resource Services
- Laura R. Ecklar**, director of Communication Services
- Cynthia E. Hvizdos**, general counsel
- Greg Taylor**, director of Information Technology Services



**Mary Beth Foley**  
 Representing Betty D. Montgomery, Auditor of State. Ex officio member of the board since elected to office in 2003.



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



**O'Neal Saunders**  
 Representing James M. Petro, Attorney General. Ex officio member of the board since elected to office in 2003.



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



**Damon F. Asbury**  
 Interim Executive Director, State Teachers Retirement System of Ohio

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 the state, the attorney general and the superintendent of public instruction.

During the 2002–2003 fiscal year, Michael N. Billirakis was reelected to a four-year term as an active teacher member on the board for a term beginning September 2003 and ending August 2007.



Dec. 9, 2003

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, 2003. 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 Mellon HR&IS; and (5) the Statistical Section includes historical data showing the progress of the system.

## Major Initiatives

Although the laws that create and govern STRS Ohio neither promise nor fund health care coverage, the Retirement Board was granted authority more than 25 years ago to help retirees with these costs. During 2002–2003, the board continued to address two main issues. The first is how to provide adequate and affordable health care coverage to our existing retirees. Second is how to extend the life of the Health Care Stabilization Fund so that future eligible retirees may receive benefits.

Helping benefit recipients obtain affordable health care coverage is not just a problem faced by STRS Ohio, it is a national problem. However, lacking any federal relief, STRS Ohio remains absolutely committed to finding a solution to a funding crisis that has resulted from declining investment markets and rising health care costs and utilization. In 2003, changes for calendar year 2004 in plan design, premiums and eligibility were made to the STRS Ohio Health Care Program to extend the life of the health care fund for 10 years.

A Premium Assistance Program was also established by the Retirement Board to help low-income retirees with the cost of their health care premiums beginning in 2004. The program applies to retirees with 25 or more years of service credit and disability benefit recipients. Eligibility requirements are based on total family income.

The Retirement Board has stated its commitment to identifying a dedicated revenue stream for health care coverage for current and future STRS Ohio benefit recipients.

Many administrative expense reduction plans were implemented in fiscal 2003. Total administrative expenses (including investment expenses) finished the year 5% lower than the prior year as a result.

With passage of Senate Bill 247 during summer 2002, STRS Ohio now offers a Partial Lump-Sum Option Plan (PLOP). Defined Benefit and Combined Plan retirees may take a lump-sum payment that equals from six to 36 times their monthly Single Life Annuity benefit. The PLOP became available to members who retired on or after Oct. 1, 2002.

275 East Broad Street  
Columbus, OH 43215-3771  
614-227-4090  
www.strsoh.org

### RETIREMENT BOARD

EUGENE E. NORRIS, *Chair*  
South-Western City Schools  
Franklin County

JOSEPH I. ENDRY, *Vice Chair*  
Retired Teacher Member

MICHAEL N. BILLIRAKIS  
Perry Local Schools  
Lake County

ROBERT B. BROWN  
The Ohio State University

JACK H. CHAPMAN  
Reynoldsburg City Schools  
Franklin County

BETTY D. MONTGOMERY  
Auditor of State

JAMES M. PETRO  
Attorney General of Ohio

DEBORAH SCOTT  
Finneytown Local Schools  
Hamilton County

SUSAN TAVE ZELMAN  
Superintendent of  
Public Instruction



DAMON F. ASBURY  
*Interim Executive Director*

CYNTHIA E. HVIZDOS  
*General Counsel*

TERRI BIERDEMAN  
*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*



During 2002–2003, many members took advantage of the new rollover options for purchasing service credit made possible through the passage of the Economic Growth and Tax Relief Reconciliation Act of 2001. Service credit purchases doubled.

Sharp declines in investment markets have taken a toll on funding pension benefits. The unfunded actuarial accrued liability increased to \$17 billion as of July 1, 2003, an increase of \$2.7 billion from the year earlier. Two actions were taken to reduce the funding period. First, 3.5% of employer contributions were reallocated to funding pension benefits instead of subsidizing retiree health care effective July 1, 2002. Secondly, the member contribution rate was increased from 9.3% to 10% of compensation effective July 1, 2003. Several changes to the actuarial assumptions were made as a result of a five-year experience study to reflect that career teachers are working longer, fewer teachers than expected become disabled, and retirees are living longer. In addition, two economic assumptions were changed: the investment assumption increased to 8% from 7.75% and the average member annual salary increase was raised to 5.5% from 5%. Following these changes, the amortization period for the unfunded pension liability is 42.3 years as of July 1, 2003.

For additional financial information, refer to Management’s Discussion and Analysis on Pages 9 through 14.

## Investments

Total investments increased to \$47.9 billion (excluding collateral on loaned securities) as of June 30, 2003. The Investment Review starting on Page 29 discusses the investment environment during fiscal 2003. 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, 2003, investments provided a 2.32% return. STRS Ohio’s annualized rate of return over the last three years was -4.15% and 1.86% for the last five years. Similar benchmark returns over the same one-, three- and five-year periods were 2.07%, -3.96%, and 2.17%, 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 improved by \$5.37 billion compared to the prior year as investment markets generated positive performance in fiscal 2003. Member and employer contributions increased from last year by 7.3% and 4.7%, respectively. Total contributions include amounts paid by employers of participants in alternative retirement plans (ARP). ARP participants are not members of STRS Ohio; however, their employers are required to contribute 3.5% of salaries to STRS Ohio to help pay for unfunded liabilities.

## Additions to Plan Net Assets

(dollar amounts in thousands)

	2003
Net Investment Income	\$ 914,558
Contributions:	
Member	\$ 886,931
Employer	\$ 1,275,136
Other	\$ 113,650
<b>Total Contributions</b>	<b>\$ 2,275,717</b>
<b>Total Additions to Plan Net Assets</b>	<b>\$ 3,190,275</b>

## Deductions From Plan Net Assets

The principal purpose for STRS Ohio is to provide retirement, survivor and disability benefits specified by statute 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 \$3.45 billion in fiscal 2003, a 6.8% increase over 2002.

## Deductions From Plan Net Assets

(dollar amounts in thousands)

	2003
Benefits	\$ 3,301,647
Withdrawals	\$ 77,529
Administrative Expenses	\$ 73,919
<b>Total Deductions from Net Assets</b>	<b>\$ 3,453,095</b>

## 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 Mellon HR&IS, Chicago, Ill. The July 1, 2003, valuation shows that the amortization period for the unfunded accrued liability, based on statutory contribution rates, increased to 42.3 years from 39 years, and the ratio of assets to total accrued liabilities decreased to 74.2% from 77.4%.

Accounting principles generally accepted in the United States of America require pension plans to report the annual required contributions at the amount necessary to have a maximum amortization period of 40 years for disclosure purposes. For financial accounting purposes, the amortization period on Page 26 is 40 years to comply with accounting principles generally accepted in the United States of America.

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

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, 2002. 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 13 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,



Dr. Damon Asbury  
Interim Executive Director



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

# Independent Auditors' Report



191 West Nationwide Boulevard  
Suite 500  
Columbus, OH 43215-2568

Telephone 614 249 2300  
Fax 614 249 2348

## Independent Auditors' Report

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, 2003 and 2002, 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, 2003 and 2002, 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.

The management's discussion and analysis on pages 9 through 14 and the schedules of funding progress and employer contributions on page 26 are not a required part of the basic financial statements, but are supplementary information required by Governmental Accounting Standards Board. 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.

In accordance with *Government Auditing Standards*, we have also issued a report dated December 4, 2003, 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.

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 27 and 28 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, 2003 and 2002, and, in our opinion, is fairly stated in all material respects in relation to the financial statements taken as a whole.

The introduction section on pages 1 through 7, the investments section on pages 29 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 financial statements and, accordingly, we express no opinion on them.

**KPMG LLP**

December 4, 2003

# 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, 2003. This information is intended to supplement the financial statements, which begin on Page 15 of this report. We encourage readers to consider additional information and data in STRS Ohio's 2003 *Comprehensive Annual Financial Report*.

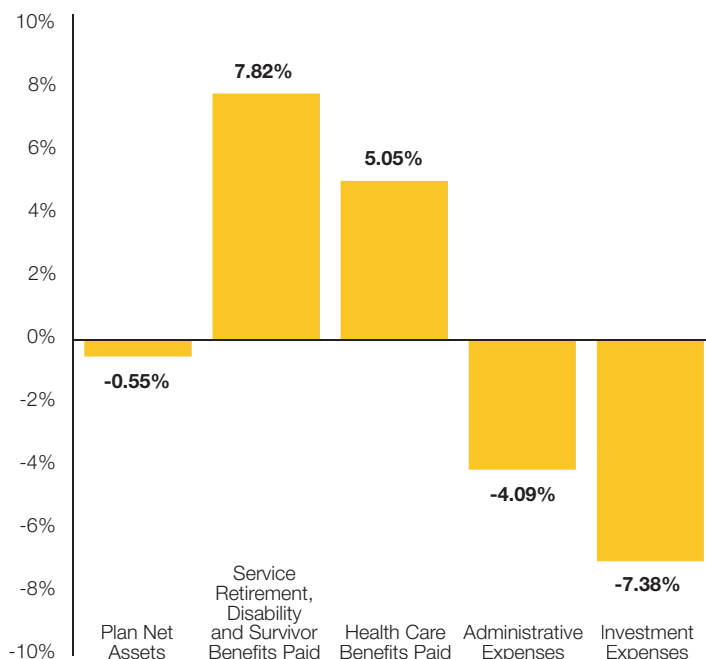
## Financial Highlights

The chart below illustrates the percentage changes in plan assets and expenses between July 1, 2002, and June 30, 2003. Highlights of the fiscal year include:

- Investment markets improved slightly in fiscal 2003. The investment rate of return for fiscal 2003 was 2.32% following fiscal 2002's return of -8.13%. Five- and 10-year returns are 1.86% and 7.07%, respectively.
- Total plan net assets decreased in value by .55% during the fiscal year to \$47.7 billion at June 30, 2003.

- Total benefit payments were \$3.3 billion during fiscal 2003, an increase of 7.43% from fiscal 2002. STRS Ohio paid members more than \$2.8 billion in service retirement, disability and survivor benefits plus \$456 million for health care benefits.
- Total additions to plan net assets were \$3.2 billion. Net investment income in 2003 rebounded to \$915 million from the net investment loss of \$4.3 billion for 2002. Employer and member contributions totaled \$2.16 billion for 2003.
- Administrative expenses declined by 4.09% to end the year at \$73.9 million. Investment expenses, which include salaries and benefits for investment personnel, declined by 7.38% to \$24.5 million.
- The funded ratio for pension benefits declined to 74.2% as of July 1, 2003, from 77.4% the previous year.

**Percentage Changes in Plan Assets and Expenses Between Fiscal Years 2002 and 2003**

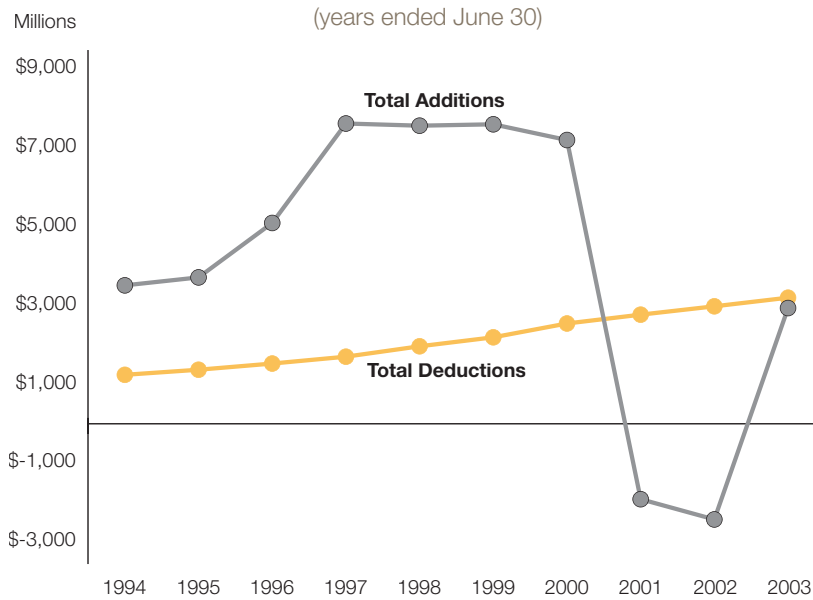


## Annual Financial Review

Fiscal 2003 showed some signs of investment market recovery from the dismal investment results posted the prior two fiscal years. The actual investment return in 2003 was positive, although still well under the actuarial assumed rate of return of 7.75%. This shortfall, coupled with the prior two year's poor investment performance, impacted the funding for pension and health care benefits. There are signs of stronger investment returns as the first quarter of fiscal 2004 ended with a 3.8% positive return. 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.

The unfunded pension liability for STRS Ohio, as of July 1, 2003, is \$17.0 billion, up from \$14.3 billion as of July 1, 2002. To help reduce the amortization period for the unfunded pension liability, the teacher contribution rate increased from 9.3% of earned compensation to 10% effective July 1, 2003. Additionally, starting July 1, 2002, 3.5% of employer contributions were reallocated to funding pension benefits instead of subsi-

## Historical Expense vs. Revenue Trends



dizing retiree health care. The expected amortization period to pay off the unfunded liability is 42.3 years at current contribution rates.

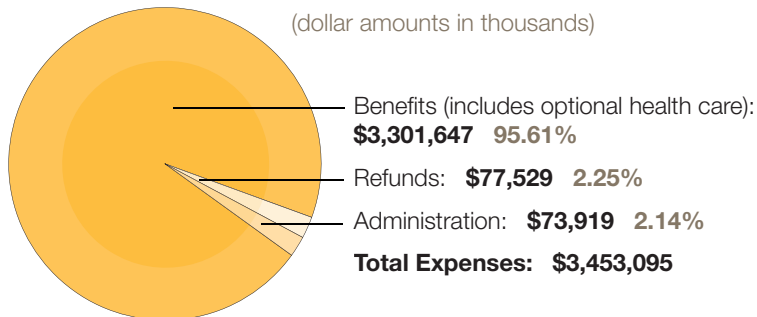
Historical expense and revenue trends indicate a continual increase in expenses (deductions) compared to a varying revenue (additions) stream, as shown in the chart to the left. Expenses by type and revenues by source for fiscal year ended June 30, 2003, are shown in the pie charts below.

Rising health care costs are of great concern for STRS Ohio and have been for several years. The balance in the Health Care Stabilization Fund (post-employment health care) decreased from \$3.01 billion as of June 30, 2002, to \$2.8 billion as of June 30, 2003. Several changes to STRS Ohio's Health Care Program have been made for 2004. STRS Ohio is committed to offering health care benefits to eligible retirees in the future.

Administrative expenses were reduced in fiscal 2003. Total investment and administrative expenses decreased by \$5.1 million or 4.9% from fiscal 2002. The decision to move computer processing in-house from a leased mainframe environment resulted in significant savings from 2002 expenditures. In addition, efforts were made to reduce discretionary expenses in 2003 resulting in several line-item reductions to expenses like computer support services, printing, supplies and travel.

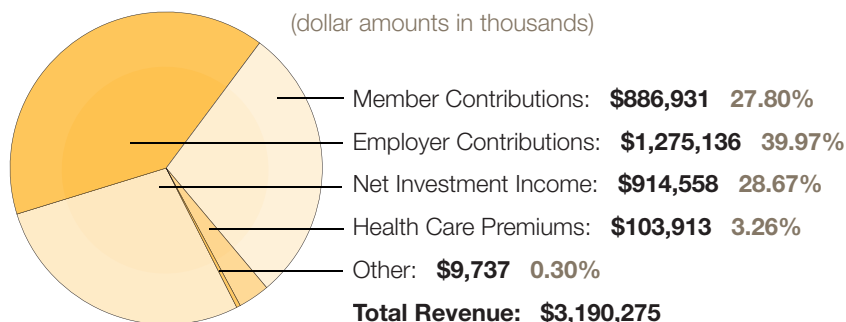
## Expenses by Type — Year Ended June 30, 2003

(dollar amounts in thousands)



## Revenues by Source — Year Ended June 30, 2003

(dollar amounts in thousands)



## Overview of the Financial Statements of STRS Ohio

The two basic 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 generally accepted accounting principles.

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 Health Care Stabilization Fund.

- 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 final average salary. In addition to service retirement, DB participants are eligible for disability and survivor benefits.
- The Defined Contribution Plan began on July 1, 2001. It is an optional plan available to new members. DC participants allocate both member and employer contributions to 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 Health Care Stabilization Fund consists of assets set aside to subsidize health care benefits 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 basic financial statements and footnotes, a *Schedule of Funding Progress*, a *Schedule of Employer Contributions* and a *Notes to the Trend Data* are included as "required supplementary information." These schedules emphasize the long-term nature of pension plans and show the 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 grows stronger from a funding standpoint.

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.

## Investment Performance

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

### 1-Year Returns (2003)

Asset Category	STRS Ohio Return	Index Name	Index Return
Domestic Stocks	0.19%	Domestic Equity Composite*	0.18%
International	(4.76%)	EAFE/Emerging Composite	(6.96%)
Fixed Income	13.00%	Lehman Universal	11.51%
Real Estate	6.24%	Real Estate Composite	6.93%
<b>Total Fund</b>	<b>2.32%</b>	Total Fund Composite Benchmark Inflation (GDP Deflator)	2.07% 1.54%

### 5-Year Returns (1999–2003)

Asset Category	STRS Ohio Return	Index Name	Index Return
Domestic Stocks	(1.83%)	Domestic Equity Composite*	(0.87%)
International	(0.60%)	EAFE/Emerging Composite	(2.41%)
Fixed Income	8.07%	Lehman Universal**	7.50%
Real Estate	9.27%	Real Estate Composite	8.89%
<b>Total Fund</b>	<b>1.86%</b>	Total Fund Composite Benchmark Inflation (GDP Deflator)	2.17% 1.72%

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

<b>Equities: 8%–10%</b>	<b>Fixed Income: 6%–7%</b>	<b>Real Estate: 8%–9%</b>	<b>Total Fund: 8%</b>
-------------------------	----------------------------	---------------------------	-----------------------

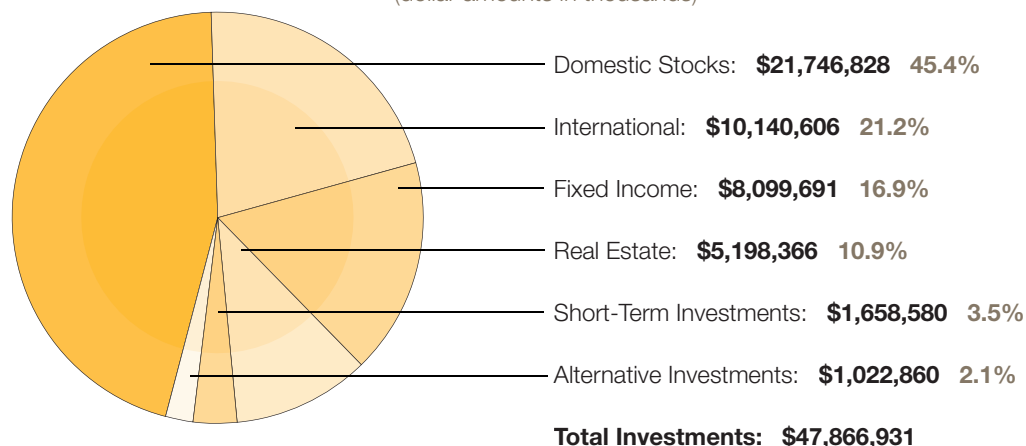
Investment performance is calculated using a time-weighted rate of return.

\*The domestic stocks benchmark is calculated using the Domestic Equity Composite for all periods beginning on or after April 1, 2003, and the S&P 1500 Index from Jan. 1, 1998, through March 31, 2003.

\*\*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, 2003

(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.

# Management's Discussion and Analysis

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 detail the administrative and investment costs to operate STRS Ohio.

## Investment Allocation and Fiscal Year Performance

For fiscal year 2003, total investments achieved a 2.32% rate of return. The STRS Ohio portfolio of U.S. stocks returned 0.19% while international stocks lost 4.76% for the 2003 fiscal year. Real estate and fixed income generated positive returns for the fiscal year of 6.24% and 13%, respectively. See Page 12 for detailed investment performance.

## Financial Statement Analysis

The table on the top of this page shows condensed information from the *Statements of Plan Net Assets*.

The value of plan net assets changed less than 1% during the 2003 fiscal year. Revenues from contributions and investments were approximately equal to payments for benefits and expenses.

## Plan Net Assets

(dollar amounts in thousands)

	2003	2002	Percentage Change
Cash and investments	\$ 47,874,292	\$ 47,726,785	0.31%
Receivables	631,560	597,638	5.68%
Securities lending collateral	3,559,733	3,256,401	9.31%
Capital assets	141,971	148,429	(4.35%)
<b>Total net assets</b>	<b>52,207,556</b>	<b>51,729,253</b>	<b>0.92%</b>
Liabilities	4,547,276	3,806,153	19.47%
<b>Plan net assets</b>	<b>\$ 47,660,280</b>	<b>\$ 47,923,100</b>	<b>(0.55%)</b>

## Additions to Plan Net Assets

(dollar amounts in thousands)

	2003	2002	Percentage Change
Contributions:			
Member contributions	\$ 886,931	\$ 826,910	7.26%
Employer contributions	1,275,136	1,218,475	4.65%
Health care premiums	103,913	79,590	30.56%
Other	9,737	6,225	56.42%
<b>Total contributions</b>	<b>2,275,717</b>	<b>2,131,200</b>	<b>6.78%</b>
Total investment income (loss)	914,558	(4,308,089)	121.23%
<b>Total additions to plan net assets</b>	<b>\$ 3,190,275</b>	<b>\$ (2,176,889)</b>	<b>246.55%</b>

## Deductions from Plan Net Assets

(dollar amounts in thousands)

	2003	2002	Percentage Change
Deductions:			
Benefit payments	\$ 2,845,433	\$ 2,638,953	7.82%
Health care benefits	456,214	434,287	5.05%
Refunds to members	77,529	84,077	(7.79%)
Administrative expenses	73,919	77,069	(4.09%)
<b>Total deductions</b>	<b>\$ 3,453,095</b>	<b>\$ 3,234,386</b>	<b>6.76%</b>

The tables above show condensed information from the *Statements of Changes in Plan Net Assets*.

Total additions to plan net assets increased substantially compared to fiscal 2002.



The 2003 positive investment returns contributed to the large percentage increase in plan additions. This was a turnaround of \$5.2 billion in investment income. In 2003, total fund return was 2.32% compared to a 2002 return of -8.13%.

Member contributions increased by 7.26% as salaries increased and members took advantage of more flexible rollover provisions to purchase service credit. Contribution rates during the fiscal year were 9.3% of earned compensation for members and 14% for employers.

To offset some of the increases in health care costs, health care premiums charged to benefit recipients were increased effective Jan. 1, 2003. Total health care premiums paid by participating retirees grew by 30.56% from the prior year.

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 were \$3.45 billion for 2003, a 6.8% increase over 2002. The largest component was monthly benefit payments for service retirement, disability and survivor benefits. Total pension benefits increased 7.8% over fiscal 2002 as a result of new retirees and cost-of-living adjustments.

Health care costs increased a moderate 5% for 2003, down from the 18% increase experienced the year before. Prescription rebates as well as cost-containment measures helped lower the increase in health care costs. Health care expenses still exceeded the revenues from retiree premiums and the allocated employer contributions by almost \$213 million.

## Funding Analysis

The unprecedented losses caused by the sustained fall in stock markets from 2000 until February 2003 resulted in a major decline

in the funding status of STRS Ohio pension benefits. During the past year, the State Teachers Retirement Board took two major actions to improve pension benefits funding. First, the allocation of employer contributions to pension benefits was increased from 9.5% to 13% of payroll, effective July 1, 2002. This action required reducing the allocation to health care benefits to 1% from 4.5%. Second, the STRS Ohio member contribution rate was increased to the 10% legal maximum from 9.3%, effective July 1, 2003.

The Retirement Board adopted several changes to the system's actuarial assumptions to reflect that career teachers are working longer before retiring, fewer teachers than expected become disabled and retirees are living longer. The board also adjusted two significant economic assumptions by changing the average annual salary increase assumption for members to 5.5% from 5% and the actuarial assumed rate of return for investments to 8% from 7.75%. With these changes, the unfunded accrued liability for STRS Ohio pension benefits is \$17.0 billion as of July 1, 2003. The funding period, which refers to the time needed to pay off the unfunded accrued liability, is now 42.3 years. The funded ratio of valuation assets divided by the accrued pension liability decreased to 74.2% from the 2002 level of 77.4%.

## 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

Statements of Plan Net Assets (in thousands)

	June 30, 2003				June 30, 2002			
	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	\$ 1,597,632	\$ 6,064	\$ 102,346	\$ 1,706,042	\$ 501,556	\$ 3,214	\$ 34,708	\$ 539,478
<b>Receivables:</b>								
Accrued interest & dividends	102,155		6,520	108,675	125,040		8,598	133,638
Employer contributions	192,548	79	12,293	204,920	176,719	42	12,154	188,915
Retirement incentive	3,903			3,903	8,931			8,931
Member contributions	111,076	151		111,227	111,769	82		111,851
Due from defined contribution plans	6,207			6,207	5,525			5,525
Securities sold	184,292		11,761	196,053	138,010		9,490	147,500
Miscellaneous receivables	575			575	1,278			1,278
<b>Total receivables</b>	<b>600,756</b>	<b>230</b>	<b>30,574</b>	<b>631,560</b>	<b>567,272</b>	<b>124</b>	<b>30,242</b>	<b>597,638</b>
<b>Investments, at fair value:</b>								
Fixed income	9,065,140	19,919	579,797	9,664,856	9,819,660	9,227	675,835	10,504,722
Common and preferred stock	20,411,444	30,787	1,304,597	21,746,828	20,017,900	17,893	1,377,663	21,413,456
International	8,018,822	4,481	512,037	8,535,340	7,968,598	2,791	548,114	8,519,503
Real estate	4,881,755	4,760	311,851	5,198,366	5,462,657	2,730	375,801	5,841,188
Alternative investments	961,498		61,362	1,022,860	849,993		58,445	908,438
<b>Total investments</b>	<b>43,338,659</b>	<b>59,947</b>	<b>2,769,644</b>	<b>46,168,250</b>	<b>44,118,808</b>	<b>32,641</b>	<b>3,035,858</b>	<b>47,187,307</b>
Invested securities lending collateral	3,346,184		213,549	3,559,733	3,046,896		209,505	3,256,401
Capital assets, at cost, net of accumulated depreciation of \$61,104 and \$56,502, respectively	141,971			141,971	148,429			148,429
<b>Total assets</b>	<b>49,025,202</b>	<b>66,241</b>	<b>3,116,113</b>	<b>52,207,556</b>	<b>48,382,961</b>	<b>35,979</b>	<b>3,310,313</b>	<b>51,729,253</b>
<b>Liabilities:</b>								
Securities purchased	528,682		33,740	562,422	113,411		7,798	121,209
Real estate note payable	329,003		20,997	350,000	327,482		22,518	350,000
Accrued expenses & other liabilities	18,791		1,199	19,990	21,530		1,480	23,010
Due to defined benefit plans		6,207		6,207		5,525		5,525
Medical benefits payable			48,924	48,924			59,074	59,074
Obligations under securities lending program	3,346,184		213,549	3,559,733	3,038,413		208,922	3,247,335
<b>Total liabilities</b>	<b>4,222,660</b>	<b>6,207</b>	<b>318,409</b>	<b>4,547,276</b>	<b>3,500,836</b>	<b>5,525</b>	<b>299,792</b>	<b>3,806,153</b>
<b>Net assets held in trust for defined benefit, defined contribution and post-employment health care benefits:</b>								
(A schedule of funding progress is presented on Page 26.)	\$ 44,802,542	\$ 60,034	\$ 2,797,704	\$ 47,660,280	\$ 44,882,125	\$ 30,454	\$ 3,010,521	\$ 47,923,100

See accompanying Notes to Financial Statements.

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

	Year Ending June 30, 2003				Year Ending June 30, 2002			
	Defined Benefit	Defined Contribution	Post-employment Health Care	Totals	Defined Benefit	Defined Contribution	Post-employment Health Care	Totals
<b>Additions</b>								
Contributions:								
Member	\$ 868,157	\$ 18,774		\$ 886,931	\$ 815,339	\$ 11,571		\$ 826,910
Employer	1,164,734	10,136	\$ 88,587	1,263,457	817,742	6,536	\$ 380,437	1,204,715
Plan transfers					(19,792)	19,792		
Retirement incentive	11,679			11,679	13,760			13,760
Benefit recipient health care premiums			103,913	103,913			79,590	79,590
Other retirement systems	9,807			9,807	6,164			6,164
Additional death benefits (net)	(70)			(70)	61			61
<b>Total contributions</b>	<b>2,054,307</b>	<b>28,910</b>	<b>192,500</b>	<b>2,275,717</b>	<b>1,633,274</b>	<b>37,899</b>	<b>460,027</b>	<b>2,131,200</b>
Investment income (loss) from investing activities:								
Net appreciation (depreciation) in fair value of investments	(413,236)	2,655	(26,170)	(436,751)	(5,417,726)	(1,530)	(358,415)	(5,777,671)
Interest	512,276	56	32,655	544,987	571,370	25	37,790	609,185
Dividends	449,783		28,669	478,452	421,480		27,876	449,356
Real estate income	316,822		20,194	337,016	389,294		25,747	415,041
	865,645	2,711	55,348	923,704	(4,035,582)	(1,505)	(267,002)	(4,304,089)
Less investment expenses	(23,017)	(34)	(1,469)	(24,520)	(24,813)	(20)	(1,642)	(26,475)
<b>Net income (loss) from investing activities</b>	<b>842,628</b>	<b>2,677</b>	<b>53,879</b>	<b>899,184</b>	<b>(4,060,395)</b>	<b>(1,525)</b>	<b>(268,644)</b>	<b>(4,330,564)</b>
From securities lending activities								
Securities lending income	57,814		3,685	61,499	95,654		6,326	101,980
Securities lending expenses	(43,361)		(2,764)	(46,125)	(74,573)		(4,932)	(79,505)
<b>Net income from securities lending activities</b>	<b>14,453</b>		<b>921</b>	<b>15,374</b>	<b>21,081</b>		<b>1,394</b>	<b>22,475</b>
<b>Net investment income (loss)</b>	<b>857,081</b>	<b>2,677</b>	<b>54,800</b>	<b>914,558</b>	<b>(4,039,314)</b>	<b>(1,525)</b>	<b>(267,250)</b>	<b>(4,308,089)</b>
<b>Total additions</b>	<b>2,911,388</b>	<b>31,587</b>	<b>247,300</b>	<b>3,190,275</b>	<b>(2,406,040)</b>	<b>36,374</b>	<b>192,777</b>	<b>(2,176,889)</b>
<b>Deductions</b>								
Benefits:								
Service retirement	2,588,800			2,588,800	2,395,318			2,395,318
Disability retirement	175,620			175,620	168,704			168,704
Survivor benefits	73,680			73,680	69,214			69,214
Health care			456,214	456,214			434,287	434,287
Other retirement systems	7,333			7,333	5,717			5,717
<b>Total benefit payments</b>	<b>2,845,433</b>		<b>456,214</b>	<b>3,301,647</b>	<b>2,638,953</b>		<b>434,287</b>	<b>3,073,240</b>
Refunds to members who have withdrawn	76,453	1,076		77,529	83,859	218		84,077
Administrative expenses	69,085	931	3,903	73,919	69,991	3,169	3,909	77,069
<b>Total deductions</b>	<b>2,990,971</b>	<b>2,007</b>	<b>460,117</b>	<b>3,453,095</b>	<b>2,792,803</b>	<b>3,387</b>	<b>438,196</b>	<b>3,234,386</b>
<b>Net increase (decrease)</b>	<b>(79,583)</b>	<b>29,580</b>	<b>(212,817)</b>	<b>(262,820)</b>	<b>(5,198,843)</b>	<b>32,987</b>	<b>(245,419)</b>	<b>(5,411,275)</b>
<b>Net assets held in trust for defined benefit, defined contribution and post-employment health care benefits:</b>								
<b>Beginning of year</b>	<b>44,882,125</b>	<b>30,454</b>	<b>3,010,521</b>	<b>47,923,100</b>	<b>50,080,968</b>	<b>(2,533)</b>	<b>3,255,940</b>	<b>53,334,375</b>
<b>End of year</b>	<b>\$ 44,802,542</b>	<b>\$ 60,034</b>	<b>\$ 2,797,704</b>	<b>\$ 47,660,280</b>	<b>\$ 44,882,125</b>	<b>\$ 30,454</b>	<b>\$ 3,010,521</b>	<b>\$ 47,923,100</b>

See accompanying Notes to Financial Statements.

# Notes to Financial Statements

Years ended June 30, 2003 and 2002

## 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.

**Capital Assets** — Capital 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. Capital 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, with maturities less than one year, 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** — Under Section 401(a) of the Internal Revenue Code, STRS Ohio is exempt from federal income taxes.

**Reclassifications** — Certain 2002 balances have been reclassified to conform to the current-year presentation.

## 2. Description of the STRS Ohio Plan

**Plan Membership** — STRS Ohio is a state-wide 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 18 for member and retiree data and participating employers.

In addition to the Defined Benefit Plan and the Combined Plan members, there were 5,831 and 4,021 members in the Defined Contribution Plan at July 1, 2003 and 2002, respectively.

**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 mem-

### Member and Retiree Data at June 30, 2003 and 2002

	2003	2002
Current active members	179,944	178,557
Inactive members eligible for refunds only	113,588	106,746
Terminated members entitled to receive a benefit in the future	18,012	17,838
Retirees and beneficiaries currently receiving a benefit	108,294	105,300
Reemployed retirees	16,933	15,730
<b>Total Plan Membership</b>	<b>436,771</b>	<b>424,171</b>

### Participating Employers at June 30, 2003 and 2002

	2003	2002
City school districts	194	194
Local school districts	369	369
County educational service centers	60	60
Exempted village school districts	49	49
Joint vocational schools	49	49
Colleges and universities	37	37
County boards of mental retardation and developmental disabilities	76	77
Community schools	130	101
State of Ohio	1	1
Other	7	7
<b>Total</b>	<b>972</b>	<b>944</b>

bers were offered a Defined Contribution (DC) Plan and a Combined Plan. The DC Plan allows members to allocate 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 allocated 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.

# Notes to Financial Statements

Years ended June 30, 2003 and 2002

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 Chapter 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 determines how to allocate the member and employer money among various investment options. The member receives a quarterly statement of his or her account activity and balance. The remaining 3.5% of the 14.0% employer rate is allocated to the defined benefit unfunded liability.

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 member 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 balances. 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 DC portion of the account may be taken as a lump sum or converted to a lifetime monthly annuity.

Both 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. All 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 year ended June 30, 2002, 4.5% of covered payroll was allocated by the Retirement Board to post-employment health care. Effective July 1, 2002, 1% of covered payroll was allocated to post-employment health care.

Pension and post-employment health care assets are commingled for investment purposes. Consequently, amounts reported

for individual asset classes are allocated between pension and post-employment health care based upon ending net assets.

**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 accounts, 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, 2001, until Sept. 30, 2001. The employer rate was 3.5% from Oct. 1, 2001, through June 30, 2003. The employer contribution 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, 2003, the ARP participant payroll totaled \$238,146,000, and there were 5,956 participants. For the year ended June 30, 2002, the ARP participant payroll totaled \$215,333,000 for 5,223 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, 2003 and 2002, were 14% and 9.3%, respectively. Effective July 1, 2003, the member rate was 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 post-employment 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 the ETF 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 TSF and the ETF.

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.

# Notes to Financial Statements

Years ended June 30, 2003 and 2002

## Fund Balances (in thousands)

	June 30, 2003	June 30, 2002
Teachers' Savings Fund	\$ 8,155,685	\$ 7,771,703
Employers' Trust Fund	4,466,355	7,600,551
Annuity and Pension Reserve Fund	34,205,217	31,781,551
Survivors' Benefit Fund	772,989	738,841
Defined Contribution Fund	60,034	30,454
<b>Total</b>	<b>\$ 47,660,280</b>	<b>\$ 47,923,100</b>

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, 2003 and 2002, plan net assets were included in the various funds as shown above.

## 4. Commitments and Contingencies

STRS Ohio has made commitments to fund various real estate investments totaling approximately \$370,667,437 as of June 30, 2003. The commitments as of June 30, 2003, have expected funding dates from August 2003 to June 2006.

STRS Ohio has made commitments to fund various alternative investments totaling approximately \$1,344,409,353 as of June 30, 2003. The expected funding dates for the commitments as of June 30, 2003, range from July 2003 to June 2009.

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, 2003 and 2002, 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, 2003 and 2002, the carrying amounts of STRS Ohio cash deposits were approximately \$7,361,000 and \$10,830,000 and the bank cash balances were approximately \$14,524,000 and \$17,894,000, 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, 2003 and 2002, are summarized in the chart on Page 22.



## Investments Held at Fair Value by STRS Ohio at June 30, 2003 and 2002

(summarized and in thousands)

Category	June 30, 2003	June 30, 2002
<b>Short-term:</b>		
Commercial paper	\$ 1,650,081	\$ 505,148
Government notes	10,000	10,000
Short-term investment funds	38,600	13,500
<b>Total short-term</b>	<b>1,698,681</b>	<b>528,648</b>
<b>Fixed income:</b>		
Guaranteed mortgages	2,604,577	3,172,675
U.S. government/agencies:		
Not on securities loan	267,446	318,957
On securities loan	1,455,001	1,291,917
Corporate bonds:		
Not on securities loan	4,109,920	4,554,406
On securities loan	213,160	88,223
Canadian bonds	43,582	82,797
Supnationals	64,429	131,554
High yield and emerging market:		
Not on securities loan	830,200	738,731
On securities loan	76,541	125,462
<b>Total fixed income</b>	<b>9,664,856</b>	<b>10,504,722</b>
<b>Common and preferred stock:</b>		
Not on securities loan	20,741,416	20,406,561
On securities loan	1,005,412	1,006,895
<b>Total common and preferred stock</b>	<b>21,746,828</b>	<b>21,413,456</b>
<b>International: (See Note 6)</b>		
Not on securities loan	7,836,488	7,867,248
On securities loan	698,852	652,255
<b>Total international</b>	<b>8,535,340</b>	<b>8,519,503</b>
<b>Real estate: (See Note 7)</b>		
East region	971,298	1,008,957
Midwest region	540,500	812,875
South region	920,412	979,320
West region	1,126,215	1,301,161
REITs	337,842	447,139
Other	1,302,099	1,291,736
<b>Total real estate</b>	<b>5,198,366</b>	<b>5,841,188</b>
<b>Alternative investments: (See Note 8)</b>	<b>1,022,860</b>	<b>908,438</b>
<b>Invested securities lending collateral</b>	<b>3,559,733</b>	<b>3,256,401</b>
<b>Total investments and invested securities lending collateral</b>	<b>\$ 51,426,664</b>	<b>\$ 50,972,356</b>

**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 security 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 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, 2003, the average maturity of the invested cash collateral is 262 days. Because much of the cash collateral is invested in floating rate securities, interest rates are reset every 15 days on average as of June 30, 2003. 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 \$3,448,966,000 and \$3,164,752,000 as of June 30, 2003 and 2002, respectively. The fair value of the associated collateral received as of June 30, 2003 and 2002, was approximately \$3,559,733,000 and \$3,247,335,000, respectively.

# Notes to Financial Statements

Years ended June 30, 2003 and 2002

## 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:

#### Emerging Stock and Country Funds

— STRS Ohio actively invests in developed and emerging markets through individual stock selection and 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.

#### Equity Swaps

— Six international equity swap agreements were contracted during fiscal 2003 with maturity dates in fiscal 2004. 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 \$1.62 billion have been set

aside at the Bank of New York as security.

Equity swaps were also used in the emerging stock fund during 2003. Of the total emerging stock holdings, \$5.6 million was invested in swap agreements at June 30, 2003. See Note 9 for additional information about equity swaps.

The fair values of international investments held at June 30, 2003 and 2002, are shown in the following chart.

### Fair Values of International Investments Held at June 30, 2003 and 2002 (in thousands)

	June 30, 2003	June 30, 2002
<b>Externally managed</b>		
International stocks	\$ 4,321,409	\$ 4,799,027
International fixed income	59,168	61,777
International currency and liquidity reserves	188,248	158,472
Forward contracts	15,889	(31,059)
<b>Total externally managed</b>	<b>4,584,714</b>	<b>4,988,217</b>
<b>Internally managed</b>		
Emerging stock and country funds	985,699	591,392
EAFE Index Fund	1,169,872	1,317,950
EAFE stock	1,608,506	1,401,330
EMF Index Fund		256,996
EAFE Equity Swaps	186,549	(36,382)
<b>Total internally managed</b>	<b>3,950,626</b>	<b>3,531,286</b>
<b>Total international</b>	<b>\$ 8,535,340</b>	<b>\$ 8,519,503</b>

## 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 on Page 23.

**Real Estate Note Payable and Interest Rate Swap** — During fiscal 2002, STRS Ohio borrowed \$350 million, collateralized by general real estate assets. The note has a two-year term with two one-year options to extend the loan agreement. Also during fiscal 2002, STRS Ohio entered into a two-year interest rate swap agreement to effectively convert the variable-rate note to a fixed-rate loan. The 90-day LIBOR variable rate was swapped for a fixed rate of 4.19%.

## 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 \$1.62 billion. The market risk of the swap is the same as if STRS Ohio owned the underly-

ing 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, 2003 and 2002.

**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 and EMF equity swap agreements. STRS Ohio is obligated to deliver the 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 \$1.4 billion and \$1.0 billion of currency exposure in various currencies with varying maturities as of June 30, 2003 and 2002, respectively. At June 30, 2003, STRS Ohio hedged \$1.4 billion and \$0.9 billion of currency exposure on the internally managed EAFE Index and stock funds and equity swap funds, respectively. At June 30, 2002, STRS Ohio hedged \$1.5 billion and \$0.8 billion of currency exposure on the EAFE Index and stock funds and equity swap 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 2002 to June 2003, the fair value of underlying securities of S&P futures contracts ranged from \$60.3 million to \$1.3 billion. From July 2001 to June 2002, the fair value of underlying securities of S&P futures contracts ranged from \$19.2 million

# Notes to Financial Statements

Years ended June 30, 2003 and 2002

to \$630.1 million. There were no outstanding S&P futures contracts at June 30, 2003. Approximately \$539.6 million was invested in S&P 500 futures at June 30, 2002. Additionally, futures were used in the EAFE Index Fund. Of the total EAFE Index Fund holdings, \$13.2 million and \$16.9 million was invested in futures at June 30, 2003 and 2002, respectively. External money managers also used futures. Approximately \$66.3 million and \$36.9 million of external money managers' holdings were invested in futures at June 30, 2003 and 2002, 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, 2003 or 2002.

## 10. Pension Plan

Substantially all STRS Ohio employees are required to participate in a contributory retirement plan administered by the Ohio Public Employees Retirement System (OPERS). OPERS 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 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 OPERS 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; 8.55% is the portion used to fund pension obligations, with the remainder used to fund the health care program for retirees. OPERS 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 below.

### STRS Ohio Required Employer Contributions to OPERS

Year Ended June 30	Annual Required Contributions	Percentage Contributed
2003	\$ 6,073,000	100%
2002	\$ 6,030,000	100%
2001	\$ 3,968,000	100%

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

OPERS also provides post-employment 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 provided by the retirement system is considered an Other Post-employment Benefit (OPEB) as described in GASB Statement No. 12. A portion of each employer's contribution to OPERS is set aside for funding post-employment health care. The Revised Code provides statutory authority for employer contributions. For calendar years 2002 and 2001, 5.00% and 4.30%, respectively, was the portion of the employer rate that was used to fund health care for those years.

OPERS expenditures for OPEB during calendar year 2002 were \$776,007,000.

**Required Schedule of Funding Progress**  
**For the Years Ending June 30, 1998–2003** (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
2003	\$ 65,936,357	\$ 48,899,215	\$ 17,037,142	74.2%	\$ 9,206,086	185%
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%

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

\*\*Covered payroll includes salaries for alternative retirement plan participants. For 2003 and 2002, alternative retirement plan participant payroll totaled \$238,146 and \$215,333, respectively.

**Required Schedule of Employer Contributions**  
**For the Years Ending June 30, 1998–2003**  
(in thousands)

Year Ended June 30	Annual Required Contributions*	Percentage Contributed
2003	\$1,163,732	100%
2002	814,647	100%
2001	777,416	100%
2000	470,343	100%
1999	446,655	100%
1998	746,773	100%

\*The amounts reported in this schedule do not include contributions for post-employment health care benefits. The Government Accounting Standards Board (GASB) requires disclosure of the Annual Required Contribution (ARC) using a maximum amortization period. Amounts shown as the ARC for each year may be different from the contributions required by state statute. The information here was determined as part of the actuarial valuations for the dates indicated. Additional information as of the latest actuarial valuation is shown in the table below.

**Notes to the Trend Data**

Valuation date	July 1, 2003	July 1, 2002
Actuarial cost method	Entry age	Entry age
Amortization method	Level percent open	Level percent open
Remaining amortization period (for GASB disclosure)	40.0 years	39.0 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	8.00%	7.75%
Projected salary increases	10.45% at age 20 to 3.85% 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 for the dates indicated.

**Schedule of Administrative Expenses  
For the Years Ending June 30, 2003 and 2002**

	2003	2002
<b>Personnel</b>		
Salaries and wages	\$ 31,430,974	\$ 30,028,465
Retirement contributions	4,148,664	4,020,039
Benefits	3,914,906	3,975,546
<b>Total personnel</b>	<b>39,494,544</b>	<b>38,024,050</b>
<b>Professional and technical services</b>		
Computer support services	7,775,333	8,940,728
Health care services	1,334,514	1,282,837
Actuary	651,737	445,352
Auditing	58,713	139,647
Defined contribution administrative fees	552,848	497,684
Legal	161,123	208,323
Temporary employment services	83,509	125,262
<b>Total professional and technical services</b>	<b>10,617,777</b>	<b>11,639,833</b>
<b>Communications</b>		
Postage and courier services	1,833,467	1,808,166
Printing and supplies	2,529,703	2,932,953
Telephone	777,349	920,218
<b>Total communications</b>	<b>5,140,519</b>	<b>5,661,337</b>
<b>Other expenses</b>		
Equipment repairs and maintenance	3,267,356	2,770,346
Building utilities and maintenance	1,525,896	1,791,081
Transportation and travel	484,894	535,119
Recruitment fees	43,941	182,221
Equipment rental	1,575,683	4,936,174
Depreciation	9,937,462	9,819,929
Member and staff education	313,849	369,197
Insurance	594,032	387,416
Memberships and subscriptions	163,767	172,000
Retirement study commission	242,353	277,558
Miscellaneous	516,593	502,441
<b>Total other expenses</b>	<b>18,665,826</b>	<b>21,743,482</b>
<b>Total administrative expenses</b>	<b>\$ 73,918,666</b>	<b>\$ 77,068,702</b>

Note: Above amounts do not include investment administrative expenses, which are deducted from investment income.

See accompanying independent auditors' report.

**Schedule of Investment Expenses  
For the Years Ending June 30, 2003 and 2002**

	2003	2002
<b>Personnel</b>		
Salaries and wages	\$ 14,595,168	\$ 15,226,813
Retirement contributions	1,923,899	2,009,717
Benefits	1,357,896	1,268,516
<b>Total personnel</b>	<b>17,876,963</b>	<b>18,505,046</b>
<b>Professional and technical services</b>		
Legal	45,755	83,017
Investment research	462,694	717,076
Real estate and international advisors	524,655	579,151
Investment advisors	356,194	430,000
Banking fees	4,196,532	4,885,502
<b>Total professional and technical services</b>	<b>5,585,830</b>	<b>6,694,746</b>
<b>Other expenses</b>		
Printing and supplies	27,118	14,963
Building utilities and maintenance	349,675	322,578
Travel	389,699	562,176
Equipment rental	126,944	165,715
Memberships and subscriptions	117,167	105,342
Miscellaneous	46,998	104,182
<b>Total other expenses</b>	<b>1,057,601</b>	<b>1,274,956</b>
<b>Total investment expenses</b>	<b>\$ 24,520,394</b>	<b>\$ 26,474,748</b>

See accompanying independent auditors' report.

## Investment Review

For Fiscal Year July 1, 2002, through June 30, 2003  
Prepared by STRS Ohio's Investments Associates

### **Another “jobless recovery” combines with moderate economic growth and low inflation**

In the July 1, 2002–June 30, 2003, fiscal year, the U.S. economy continued to grow, but at a moderate pace. Real gross domestic product (GDP), the broadest measure of economic activity, grew only 2.5% for the year. That rate of growth roughly matched economic growth during the previous fiscal year, but fell short of the economy's longer-term potential growth rate of about 3.25%. With the official end to the recession having occurred in the second quarter of fiscal year 2002, annualized real GDP growth has been only 2.7% for the first six quarters of the economic expansion. In the prior eight expansions that lasted six quarters or more since World War II, annualized growth during the same time span had been nearly four percentage points higher at 6.5%. So far, the economic expansion can only be described as subpar, matching the slow start to the expansion of the 1990s that eventually developed into the country's longest economic upturn.

That expansion, like the current one, began with a “jobless recovery.” There was virtually no job growth during the first six quarters of that expansion, while jobs in the current expansion have been lost at an annual rate of more than 600,000. The weak labor market has led businesses to question whether consumer spending — which had grown by 2.8% at an annualized rate during the early quarters of the expansion — can continue to grow. However, the unemployment rate — at 6.2% during the last quarter of the fiscal year — remained low for the early stages of an expansion. It is almost 1.5 percentage points below the unemployment rate during the same period of the prior expansion and only slightly above the post-World War II average. Real disposable income growth was relatively strong. Furthermore, a continued fall in

long-term interest rates — helped along by highly stimulative monetary policy from the Federal Reserve Board — created the largest mortgage refinancing boom on record. Lower mortgage payments and home equity that was cashed out to help consolidate other higher-interest debt freed up income for consumer purchases. The drop in interest rates during the fiscal year also kept the housing boom alive, pushing housing affordability levels toward record highs and home sales growth to roughly 10% over the four quarters.

Nevertheless, the business sector refused to invest in plant and equipment or add to dwindling inventories. Growth in after-tax corporate profits soared while consumer demand remained solid, but businesses largely saw little need to expand capacity or add jobs. Along with shaky foreign economies that have become dependent upon U.S. economic growth to spark their exports and create global economic growth, the largely dormant business community was a drag on economic activity throughout the fiscal year.

Federal government spending, however, added to economic growth much like it did in the prior fiscal year when federal spending significantly contributed to real GDP growth for the first time since 1987. The faster pace of federal spending occurred in national defense spending. The buildup to the war with Iraq, the need to replenish supplies after the war and continuing anti-terrorism efforts in Afghanistan and elsewhere led to far greater federal spending than seen in recent years. Meanwhile, state and local government spending slowed dramatically as governing bodies were forced to balance their budgets in an economic climate that produced much lower revenue growth.

While the real economy advanced at only a moderate pace, prices grew at a faster



rate. The consumer price index grew 2.2% through the four quarters of the fiscal year — a full percentage point faster than the rate of growth during fiscal year 2001–2002. However, all the acceleration in prices came from energy costs that soared more than 10% during the fiscal year after falling by the same amount in the prior fiscal year. Increasing concerns about OPEC oil production and the threat of a prolonged and disruptive war with Iraq caused oil prices to average nearly \$30 a barrel in the United States during fiscal year 2002–2003 — more than \$6 a barrel higher than the average for the prior fiscal year. Natural gas prices also soared to an average of nearly \$5 per million BTU during the fiscal year after averaging less than \$3 in fiscal year 2001–2002.

Excluding energy costs, growth in consumer prices actually decelerated to 1.5% during the fiscal year from 2.4% in fiscal year 2001–2002. The four-quarter growth rate in non-energy consumer prices was the slowest in nearly 40 years. Slower inflation and only moderate real economic activity forced the Federal Reserve to lower short-term interest rates further during the fiscal year. The federal funds rate controlled by the Federal Reserve ended the fiscal year at 1.0% — the lowest rate in 45 years — after starting the year at 1.75%. Federal Reserve officials indicated by fiscal year end that monetary policy would remain stimulative to the economy for quite some time to avoid a further deceleration in price growth or an outright drop in broad price levels.

In addition to stimulative monetary policy, federal fiscal policy was loosened up further during fiscal year 2002–2003, though most of its impact will be felt in fiscal year 2003–2004. Though the realized economic impact will be less than the total package of tax cuts, the recently passed tax changes amount to roughly 2.1% of nominal GDP in fiscal year 2004 with much of the stimulus coming early in the year. Consumers will benefit from both marginal income tax rate changes (which go into effect at the begin-

ning of fiscal year 2003–2004) and the child tax credit increase (which resulted in \$14 billion in checks being mailed out to taxpayers early in the fiscal year). In addition, businesses will benefit from accelerated depreciation of equipment and lower dividend and capital gains taxes. The \$350 billion tax cut package is timely for a struggling economy and, along with easy monetary policy, should help produce a solid foundation for an improving economy.

Disappointing economic growth during fiscal year 2002–2003 helped to force policy changes that provided promising signs of better economic activity for fiscal year 2003–2004. An improvement late in the fiscal year in stock markets around the world and higher prices for a broader range of goods and services suggest the U.S. economy will avoid a deflationary episode that could have driven the economy back into recession.

Following is a summary of how these economic forces affected different asset classes during the 2002–2003 fiscal year.

### **Short- and long-term interest rates fell in another year of strong fixed-income markets**

During the fiscal year, the domestic economy experienced moderate growth and low inflation. To stimulate sluggish economic growth, the Federal Reserve continued its accommodative monetary policy that began in January 2001. Subsequently, long-term interest rates declined as 10-year Treasury rates fell from 4.8% to 3.5%. Because inflation remained low, rising bond prices and improving fundamentals in the credit sectors of the market helped fixed-income market returns.

The Lehman Universal Bond Index returned 11.51% 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. The highest quality sectors of the index, represented by U.S. Treasury securities,

agencies and mortgage-backed securities, returned 11.94%, 10.32% and 6.34%, respectively, in the fiscal year. These sectors represent about 62% of the Lehman Universal Bond Index.

Early in the fiscal year, returns in the investment-grade credit and high yield sectors of the market were hurt by lack of investor confidence as major accounting scandals were uncovered. Later in the fiscal year, investor confidence improved as corporations addressed governance issues, reduced expenses and restructured their balance sheets. These actions, coupled with an improving global outlook, allowed these sectors to recover and post excellent returns. U.S. investment-grade corporate securities, which represent approximately 30% of the index, returned 14.64% for the period. High yield securities had a return of 22.76%.

Finally, emerging market debt was helped by investor demand for higher-yielding assets, improving fundamentals and economic stability in key countries. This relatively minor sector of the market had the highest returns in the fiscal year, up 32.47%.

The STRS Ohio fixed-income portfolio returned 13.00% versus the benchmark's return of 11.51%. Over the three prior fiscal years, the STRS Ohio fixed-income portfolio returned an annualized rate of return of 10.85% versus the benchmark's return of 10.00%. The STRS Ohio performance over the prior five fiscal years was 8.07% versus the benchmark's 7.50%. A more complete report of STRS Ohio performance appears on Page 45.

## Signs of recovery appear for domestic stocks

After a brutal 2-1/2-year bear market, stocks showed signs of stabilization and recovery during fiscal 2003. While the full year was basically flat, the first and second halves were a study in contrast. For the full year, the S&P 500 returned 0.25% and the NASDAQ generated 11.44%. In the first half, the returns were -10.30% and -8.51%,

respectively. In the second half, however, the market came roaring back with returns of 11.76% for the S&P 500 and 21.82% for the NASDAQ.

As is normally the case, stock market investors were looking forward and expecting continued economic recovery. Though there were signs of stabilization with many economic segments improving, employment and business spending continued to stagnate. Corporate earnings began to recover during the year, which in combination with a stable interest rate environment, led to higher stock prices.

The STRS Ohio domestic equities portfolio returned 0.19%, slightly exceeding the benchmark return of 0.18%. Over the past three years, the STRS Ohio domestic equities portfolio returned an annualized rate of return of -10.29% versus the benchmark's -9.97%. The STRS Ohio performance over the past five fiscal years was -1.83% versus the benchmark's -0.87%. A more complete report of STRS Ohio performance appears on Page 45.

## International stock markets are weak again

During fiscal 2003, equity markets around the world exhibited weak performance for the third year in a row. The developed markets, represented by the Morgan Stanley Capital International (MSCI) Europe, Australasia, Far East (EAFE) Index (50% hedged), fell 11.25%, the third straight year of double-digit declines. The weakness was confined primarily to the larger markets with several smaller markets producing positive results. There has been a significant recovery that began during the fiscal year's fourth quarter and the markets have been buoyant since that time.

Emerging markets had a much better year, nearly across the board. The emerging markets, represented by the MSCI Emerging Markets Free (EMF) Index, rose 6.96%. Asia and the Far East were weak, unlike 2002, but Latin America, Eastern Europe

and the Middle East rallied significantly. Again, these markets also had a powerful move to the upside during the last half of the fiscal year and into fiscal 2004.

The STRS Ohio international portfolio returned -4.76% during fiscal year 2003, far outpacing its benchmark as the STRS Ohio international hybrid index — consisting of 75% of the MSCI EAFE Index (50% hedged) and 25% of the MSCI EMF Index — returned -6.96% during the year. The STRS Ohio international portfolio returned an annualized rate of return of -10.52% versus the benchmark's return of -12.75% over the past three fiscal years. Over the past five fiscal years, the portfolio returned an annualized rate of return of -0.60% versus the benchmark's return of -2.41%. A more complete report of STRS Ohio performance appears on Page 45.

### **Real estate returns continue to hold up well despite weakened fundamentals**

Despite the soft economy, the real estate markets performed relatively well during fiscal year 2003 and the near-term outlook remains hopeful. Over the last year, the asset class attracted significant capital due to its attractive yield. This has had an impact on asset pricing despite extremely weak tenant demand. Real estate fundamentals will not show real signs of improvement until job growth resumes, leading to increased tenant demand and thereby lowering vacancy rates and increasing rental growth. Job growth and interest rates will be the primary determinants of how the asset class will fare during the period between the recovery of the broader market and the recovery of the property markets.

The return for the public real estate equity market improved in the last half of the fiscal year, although it lagged the private market for the year. As with private real estate, public real estate securities are yield-driven and thus have been attracting significant capital. Pricing here, as well, has been

pushed up and, therefore, valuations are relatively high. It is anticipated that private real estate will outperform public real estate over the next year, albeit below the 9% long-term average of the private market.

Although STRS Ohio's real estate portfolio improved its performance over the previous year, it underperformed its composite benchmark in fiscal year 2003. The STRS Ohio real estate portfolio returned 6.24% versus the benchmark return of 6.93%. Over the past three fiscal years, the STRS Ohio real estate portfolio returned an annualized rate of return of 7.50% versus the benchmark's return of 8.03%. The STRS Ohio portfolio performance over the past five fiscal years was 9.27% versus the benchmark return of 8.89%. A more complete report of STRS Ohio performance appears on Page 45.

### **Total fund returns outperform benchmark returns in fiscal year 2003**

During fiscal 2003, the STRS Ohio fund returned 2.32% versus the benchmark's (hybrid index of industry benchmarks) return of 2.07%. Falling returns in the international equity markets were offset by slightly positive growth in domestic equity markets, moderate returns in real estate and strong returns in the fixed-income markets. Over the three prior fiscal years, the STRS Ohio fund returned an annualized rate of return of -4.15% versus the benchmark's return of -3.96%. The STRS Ohio fund performance over the prior five fiscal years was 1.86% versus the benchmark's 2.17%. All of the returns measured over those periods were below the 8% absolute long-term return goal for STRS Ohio investments. 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 0.14%.

## Investment Objective and Policy

Effective May 16, 2003

### 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.
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,

### 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.

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%	Russell 3000**
International	8-10%	75% EAFE*/25% EMF
Real Estate	8-9%	NCREIF Adjusted
Alternative Investments	14-16%	Actual Return

\*50% hedged and effective July 1, 2003.

\*\*Effective July 1, 2003, with an appropriate pre- and post-transition period.

## 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 pro-

hibited. 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 Russell 3000 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.

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 guidelines outlined below. It is recognized that this asset class is of an illiquid nature, relative to the other primary asset classes. As such, it is possible the portfolio may deviate from the established guidelines, from time to time. Rebalancing the portfolio to be within the guidelines shall be managed in the most appropriate manner and timeframe without unduly jeopardizing overall performance.

- Property Type:** The STRS Ohio equity interest value of each property type shall generally fall within the ranges outlined below for only the "core" real estate portfolio. The "core" real estate portfolio shall include all internally managed real estate investments (excluding REITs) and all externally managed investments that reflect a core strategy. Investments in the "specialty" property type shall not exceed 25% of total real estate assets. Specialty property types include, but are not limited to, timberland, farmland and senior living.

<b>Property Type</b>	<b>Range</b>
Office	25-50%
Industrial	10-35%
Residential	10-35%
Retail	10-35%
Other	0-10%

- Geographical Concentration:** The STRS Ohio equity interest value of each of the four regions as defined by the National Council of Real Estate Investment Fiduciaries (NCREIF) will generally fall within the ranges outlined on Page 39 for only the "core" real estate portfolio. Investments in international real estate will be limited to 10% of total 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.

<u>Region</u>	<u>Range</u>
West	25–45%
East	20–40%
South	15–30%
Midwest	10–25%

- 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 15% of total 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 50% of the "core" real estate portfolio excluding, however, externally managed investments that reflect a core strategy.
- 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.
- 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 20% of total 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 materi-

ally 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, 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 review, 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").

## 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.
3. Review triennially, the general internal

management of real estate and its efficiency, with the objective of completing an overall operational review.

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. Annual Investment Plan;
3. Individual transactions outside policy and/or strategy;
4. Monthly Investment Activity Reports; and
5. 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 July of each fiscal 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 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 Russell 3000\* 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 (WREIT) Index. 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's World ex USA\*\* 50% hedged and 25% of the Morgan

Stanley 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.

\*Effective July 1, 2003, with an appropriate pre- and post-transition period.

\*\*Effective July 1, 2003.

(This page intentionally left blank.)

# Investments

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

### 1-Year Returns (2003)

Asset Category	STRS Ohio Return	Index Name	Index Return
Domestic Stocks	0.19%	Domestic Equity Composite*	0.18%
International	(4.76%)	EAFE/Emerging Composite	(6.96%)
Fixed Income	13.00%	Lehman Universal	11.51%
Real Estate	6.24%	Real Estate Composite	6.93%
<b>Total Fund</b>	<b>2.32%</b>	Total Fund Composite Benchmark	2.07%
		Inflation (GDP Deflator)	1.54%

### 3-Year Returns (2001–2003)

Asset Category	STRS Ohio Return	Index Name	Index Return
Domestic Stocks	(10.29%)	Domestic Equity Composite*	(9.97%)
International	(10.52%)	EAFE/Emerging Composite	(12.75%)
Fixed Income	10.85%	Lehman Universal	10.00%
Real Estate	7.50%	Real Estate Composite	8.03%
<b>Total Fund</b>	<b>(4.15%)</b>	Total Fund Composite Benchmark	(3.96%)
		Inflation (GDP Deflator)	1.69%

### 5-Year Returns (1999–2003)

Asset Category	STRS Ohio Return	Index Name	Index Return
Domestic Stocks	(1.83%)	Domestic Equity Composite*	(0.87%)
International	(0.60%)	EAFE/Emerging Composite	(2.41%)
Fixed Income	8.07%	Lehman Universal**	7.50%
Real Estate	9.27%	Real Estate Composite	8.89%
<b>Total Fund</b>	<b>1.86%</b>	Total Fund Composite Benchmark	2.17%
		Inflation (GDP Deflator)	1.72%

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

Equities: 8%–10%	Fixed Income: 6%–7%	Real Estate: 8%–9%	<b>Total Fund: 8%</b>
------------------	---------------------	--------------------	-----------------------

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

\*The domestic stocks benchmark is calculated using the Domestic Equity Composite for all periods beginning on or after April 1, 2003, and the S&P 1500 Index from Jan. 1, 1998, through March 31, 2003.

\*\*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, 2003 and 2002** (dollar amounts in thousands)

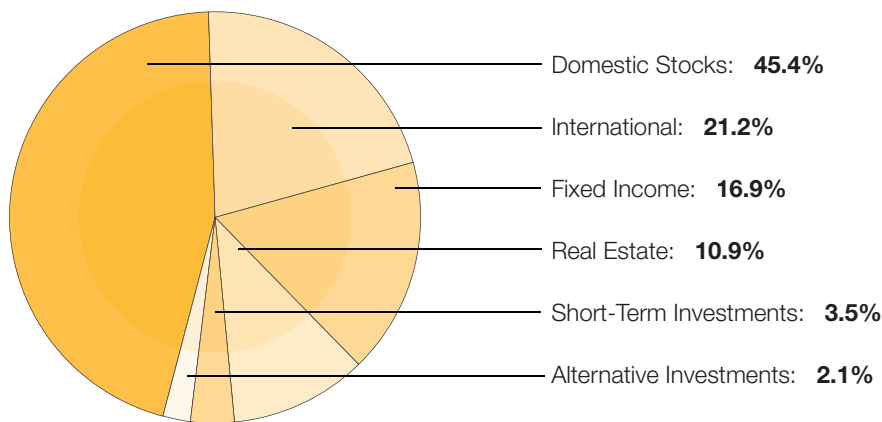
	June 30, 2003 Fair Value	%	June 30, 2002 Fair Value	%
<b>Short term</b>				
Commercial paper	\$ 1,609,980	3.4%	\$ 425,333	0.9%
Government notes	10,000	0.0%	10,000	0.0%
Corporate notes		0.0%		0.0%
Short-term investment funds	38,600	0.1%	13,500	0.0%
<b>Total short term</b>	1,658,580	3.5%	448,833	0.9%
<b>Fixed income</b>				
Guaranteed mortgages	2,684,600	5.7%	3,349,000	7.1%
U.S. government and governmental agencies	1,683,747	3.5%	1,573,909	3.3%
Corporate bonds	2,781,021	5.8%	3,005,219	6.3%
Canadian bonds	43,582	0.1%	82,797	0.2%
Municipal bonds		0.0%		0.0%
High yield and emerging market	906,741	1.8%	864,193	1.8%
<b>Total fixed income</b>	8,099,691	16.9%	8,875,118	18.7%
<b>Common and preferred stock</b>	21,746,828	45.4%	21,413,456	44.9%
<b>Real estate</b>				
East region	971,298	2.0%	1,008,957	2.1%
Midwest region	540,500	1.1%	812,875	1.7%
South region	920,412	1.9%	979,320	2.1%
West region	1,126,215	2.4%	1,301,161	2.7%
REITs	337,842	0.7%	447,139	0.9%
Other	1,302,099	2.8%	1,291,736	2.7%
<b>Total real estate</b>	5,198,366	10.9%	5,841,188	12.2%
<b>Alternative investments</b>	1,022,860	2.1%	908,438	1.9%
<b>International</b>	10,140,606	21.2%	10,228,922	21.4%
<b>Total investments</b>	<b>\$ 47,866,931</b>	<b>100.0%</b>	<b>\$ 47,715,955</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

## Investment Distribution by Fair Value — as of June 30, 2003



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.

STRS Ohio continues to engage in quality Ohio investments. As of June 30, 2003, STRS Ohio investments in companies with headquarters in Ohio are valued at more than \$1.4 billion.

### Ohio Investment Profile as of June 30, 2003 (in thousands)

Liquidity reserves	\$ 64,986
Fixed income	149,244
Common stock	785,883
Alternative investments	122,868
Real estate	297,252
<b>Total Ohio-headquartered investments</b>	<b>\$1,420,233</b>

## Schedule of U.S. Stock Brokerage Commissions Paid

(for the year ended June 30, 2003)

Brokerage Firm	Shares Traded	Commissions Paid	Avg. Cents Per Share
Lehman Brothers	62,785,340	\$ 1,829,383	2.9
Morgan Stanley	78,559,953	1,441,074	1.8
UBS Warburg	18,653,802	1,037,278	5.6
Bear, Stearns, & Company	17,494,738	964,015	5.5
Jefferies & Company	18,228,893	936,490	5.1
Citigroup	17,060,330	868,722	5.1
Goldman, Sachs & Company	16,250,126	821,705	5.1
Prudential Securities	13,199,435	678,777	5.1
SG Cowen Securities	11,051,328	606,155	5.5
Merrill Lynch	11,138,600	589,188	5.3
Deutsche Bank	9,960,785	559,400	5.6
Cantor Fitzgerald	10,185,850	556,914	5.5
Standard & Poor's Securities	8,887,140	483,012	5.4
J.P. Morgan	10,424,789	468,033	4.5
Bloomberg Tradebook	22,927,260	458,545	2.0
Credit Suisse First Boston	7,918,501	429,260	5.4
Sanford Bernstein & Company	6,745,534	401,962	6.0
Banc of America	5,094,548	251,375	4.9
CIBC World Markets	4,288,500	245,667	5.7
Bank of NY Direct Execution Inc.	5,135,400	235,948	4.6
Robert W. Baird & Company	3,151,500	185,740	5.9
Fidelity Capital	3,124,700	167,120	5.3
Legg Mason	2,523,350	149,475	5.9
FTN Midwest Research	2,240,400	132,550	5.9
Fleet Institutional	1,990,900	119,454	6.0
Others (includes 38 brokerage firms and external managers)	202,496,868	4,954,654	2.4
<b>Total</b>	<b>571,518,570</b>	<b>\$19,571,896</b>	<b>3.4</b>

# Schedule of Largest Investment Holdings\*

(as of June 30, 2003)

## Domestic Stocks — Top 20 Holdings

	Shares	Fair Value
Microsoft Corp.	23,771,627	\$ 608,791,367
General Electric Co.	20,883,120	\$ 598,927,881
Pfizer Inc.	17,124,735	\$ 584,809,700
Exxon Mobil Corp.	13,785,418	\$ 495,034,360
Russell 2000 I-Shares	5,155,100	\$ 458,288,390
Wal-Mart Stores Inc.	8,476,526	\$ 454,935,150
Citigroup Inc.	10,468,095	\$ 448,034,466
Johnson & Johnson	6,086,174	\$ 314,655,196
Merck & Co. Inc.	5,152,223	\$ 311,967,102
Intel Corp.	14,036,819	\$ 291,741,246
American International Group	4,990,920	\$ 275,398,965
International Business Machines Corp.	3,316,737	\$ 273,630,802
Bank of America	3,361,370	\$ 265,649,071
Procter & Gamble Co.	2,865,087	\$ 255,508,459
Verizon Communications	5,910,201	\$ 233,157,429
Coca-Cola Co.	4,954,463	\$ 229,936,628
Altria Group Inc.	4,976,512	\$ 226,132,705
Cisco Systems	12,780,346	\$ 213,303,975
Wells Fargo Co.	3,706,588	\$ 186,812,035
Pepsico Inc.	3,950,831	\$ 175,811,979

## International Stocks — Top 20 Holdings

	Shares	Fair Value
Vodafone (United Kingdom)	59,061,671	\$115,491,882
Nokia Corp. (Finland)	6,832,626	\$112,529,984
Canon Inc. (Japan)	1,577,200	\$ 72,389,604
Telefonica SA (Spain)	6,020,718	\$ 69,908,647
GlaxoSmithKline (United Kingdom)	3,103,380	\$ 62,630,920
Nissan Motor Co. (Japan)	6,123,500	\$ 58,557,085
Astrazeneca (United Kingdom)	1,423,238	\$ 57,070,435
Royal Bank Scot (United Kingdom)	2,016,933	\$ 56,580,629
E. on AG (Germany)	1,089,294	\$ 56,009,754
UBS AG (Switzerland)	980,289	\$ 54,544,954
Repsol YPF (Spain)	3,318,158	\$ 53,810,028
Samsung Electronic (Republic of Korea)	178,524	\$ 53,123,236
Eni Spa (Italy)	3,274,805	\$ 49,533,918
Bank of Nova Scotia (Canada)	1,076,700	\$ 47,633,176
BNP Paribas (France)	833,392	\$ 42,353,964
Novartis AG (Switzerland)	1,065,797	\$ 42,184,847
BP Amoco Capital (United Kingdom)	6,055,884	\$ 41,996,456
British Sky Broadcast (United Kingdom)	3,574,754	\$ 39,611,342
Total SA (France)	261,160	\$ 39,472,443
NTT Docomo Inc. (Japan)	17,770	\$ 38,485,631

## Fixed Income — Top 20 Holdings

	Par Value	Fair Value
U.S. Treasury, 8.75%, due 08/15/2020, AAA+	\$ 92,110,000	\$144,132,156
U.S. Treasury, 10.375%, due 11/15/2009, AAA+	\$111,230,000	\$126,552,008
TBA 15YR FN, 5.00%, due 12/1/2017, AAA+	\$120,000,000	\$124,030,800
U.S. Treasury, 7.25%, due 08/15/2022, AAA+	\$ 78,670,000	\$108,751,643
U.S. Treasury, 12.00%, due 08/15/2013, AAA+	\$ 70,000,000	\$105,161,201
U.S. Treasury, 2.25%, due 07/31/2004, AAA+	\$ 98,500,000	\$100,695,108
U.S. Treasury, 8.875%, due 02/15/2019, AAA+	\$ 63,000,000	\$ 98,582,560
FNMA Pool, 5.50%, due 11/01/2032, AAA+	\$ 86,106,831	\$ 89,457,534
U.S. Treasury, 0.00%, due 05/15/2005, AAA+	\$ 89,400,000	\$ 87,519,024
FHLMC Gold, 6.50%, due 08/01/2032, AAA+	\$ 70,623,872	\$ 73,736,030
U.S. Treasury, 4.75%, due 11/15/2008, AAA+	\$ 60,000,000	\$ 66,879,395
FNMA, 6.25%, due 05/15/2029, AAA+	\$ 53,000,000	\$ 62,556,754
TBA 15YR FN, 4.50%, due 05/01/2018, AAA+	\$ 60,000,000	\$ 61,260,600
TBA 30YR FG, 5.00%, due 06/01/2033, AAA+	\$ 60,000,000	\$ 61,016,400
FNMA, 5.25%, due 01/15/2009, AAA+	\$ 53,000,000	\$ 60,719,892
FHR, 6.50%, due 10/15/2028, AAA+	\$ 57,335,571	\$ 58,649,512
U.S. Treasury, 8.00%, due 11/15/2021, AAA+	\$ 36,700,000	\$ 53,559,150
FNMA Pool, 5.50%, due 05/01/2033, AAA+	\$ 49,037,599	\$ 50,964,449
U.S. Treasury, 8.75%, due 05/15/2017, AAA+	\$ 31,774,000	\$ 47,910,593
Freddie Mac, 5.125%, due 10/15/2008, AAA+	\$ 42,000,000	\$ 47,303,317

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

(This page intentionally left blank.)

November 12, 2003

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, 2003, 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 8% per annum compounded annually. Based on our recommendations and effective with this valuation, the Board adopted revised actuarial assumptions. Specifically, the 30-year rates of retirement were decreased to reflect experience, early retirement rates were modified to reflect experience, disability rates were decreased and modified to reflect experience, termination rates were increased and modified to reflect experience, an updated mortality table was adopted, and the salary scale was increased to an overall average of 5.5%. The valuation interest rate was increased from 7 3/4% to 8%.

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 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 23% for pension and survivor benefits. The valuation indicates that the contribution rates of 23% for fiscal 2004 and after is sufficient to provide for the payment of the promised pension and survivor benefits, with a 42.3-year funding period to amortize the unfunded accrued liability. The funding period has increased 3.3 years from last year's funding period (i.e., increased from 39.0 years to 42.3 years). The funding period increased because of the actuarial and investment losses, as well as changes to the assumptions.

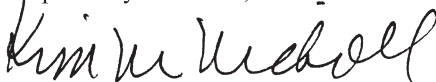
The valuation indicates that for the fiscal year ending June 30, 2003, the actuarial experience of STRS Ohio was unfavorable and generated net actuarial losses of \$2.548 billion.

#### **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 Comprehensive Annual Financial Report. The actuary prepared the trend data schedules included in the Financial Section of the STRS 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.

Respectively submitted,



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

Suite 1400 • One Dearborn Street • Chicago, IL 60602-4336  
(312) 846-3000 Office • (312) 846-3999 Fax  
www.mellon.com

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

## 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:** 8% per annum, compounded annually. (Adopted 2003)

**Death After Retirement:** According to the UP 94 Mortality Table (Projection 2002 — Scale AA), with two-year setback in age for males and one-year setback in age for females. Special mortality tables are used for the period after disability retirement. (Adopted 2003)

**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, 2003, 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	.1500	.0002	—	—	—	—	.1045
30	.1500	.0400	.0006	.0002	—	—	—	.0825
40	.1375	.0240	.0009	.0010	.2500	—	—	.0605
50	.1340	.0150	.0013	.0024	.2500	—	—	.0473
55	.1340	.0150	.0020	.0030	.1500	.2000	—	.0440
60	.1340	.0150	.0033	.0035	.2000	.0900	.1500	.0413
65	.1340	—	.0060	.0040	.4000	.2500	.1800	.0385
70	.1340	—	.0110	.0040	.2500	.1500	.1400	.0385
<b>WOMEN</b>								
20	.1500	.2000	.0002	—	—	—	—	.1045
30	.1175	.0800	.0003	.0002	—	—	—	.0825
40	.0900	.0250	.0005	.0012	.2200	—	—	.0605
50	.0900	.0200	.0009	.0024	.2200	—	—	.0473
55	.0900	.0200	.0012	.0030	.1500	.2000	—	.0440
60	.0725	.0200	.0021	.0035	.3000	.1300	.2500	.0413
65	.0725	—	.0040	.0040	.3500	.3500	.2300	.0385
70	.0725	—	.0079	.0040	.3500	.2000	.1300	.0385

\*Includes an inflation adjustment of 3.50%.

### Benefit Recipients Added to and Removed From the Rolls, 1998–2003

Fiscal Year Ended	Beginning	Additions	Deletions	Ending
<b>2003</b>	<b>105,300</b>	<b>6,299</b>	<b>3,305</b>	<b>108,294</b>
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

### Schedule of Valuation Data — Active Members, 1994–2003

Valuation Date	Number	Annualized Salaries (in thousands)	Annual Average Pay	% Increase in Average Pay
<b>2003</b>	<b>179,944</b>	<b>\$8,425,838</b>	<b>\$46,825</b>	<b>4%</b>
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%

### Schedule of Valuation Data — Retirees/Beneficiaries, 1994–2003

Valuation Date	Number	Annual Allowances (in thousands)	% Increase in Annual Allowances	Average Annual Allowances
<b>2003</b>	<b>108,294</b>	<b>\$3,021,825</b>	<b>8%</b>	<b>\$27,904</b>
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

## Solvency Test, 1994–2003 (dollar amounts in thousands)

Accrued Liability for:

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)
<b>2003</b>	<b>\$8,155,685</b>	<b>\$34,938,341</b>	<b>\$25,640,035</b>	<b>\$51,696,919</b>	<b>100%</b>	<b>100%</b>	<b>34%</b>
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%

\*The amounts reported include funds set aside to pay post-employment 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:				
	2003	2002	2001	2000	1999
Investment income. If there is greater investment income than assumed, there is a gain. If less, there is a loss.	\$(2,976,966)	\$(8,336,907)	\$ (52,901)	\$ 2,656,964	\$ 2,432,975
Payroll growth. If more contributions from payroll growth are received than expected, there is a gain. If less, there is a loss.	71,967	80,926	32,051	138,966	0
Salary increases. If there are smaller salary increases than assumed, there is a gain. If greater increases, there is a loss.	(285,789)	(564,621)	(554,162)	(472,983)	(368,504)
Retirement and other separation experience. 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.	766,258	(378,242)	184,272	(64,386)	35,715
Death after retirement. If retirees live shorter than expected, there is a gain. If retirees live longer than assumed, there is a loss.	(117,031)	359,922	(254,890)	(150,951)	120,664
Gain (or loss) during year from financial experience	(2,541,561)	(8,838,922)	(645,630)	2,107,610	2,220,850
Nonrecurring items adjustment for plan amendments	(6,207)	(5,525)	(70,159)	0	0
<b>Composite gain (or loss) during the year</b>	<b>\$(2,547,768)</b>	<b>\$(8,844,447)</b>	<b>\$ (715,789)</b>	<b>\$ 2,107,610</b>	<b>\$ 2,220,850</b>



## 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 allow-

ance 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 remainder 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: 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 benefits, 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: 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.

### 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 4, 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: 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, 1994–2003** (in thousands)

Fiscal Year	Benefits	Refunds	Administration	Total
<b>2003</b>	<b>\$3,301,647</b>	<b>\$77,529</b>	<b>\$73,919</b>	<b>\$3,453,095</b>
2002	3,073,240	84,077	77,069	3,234,386
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

**Revenues by Source**  
**Years Ending June 30, 1994–2003** (in thousands)

Fiscal Year	Member Contributions	Employer Contributions	Net Investment Income	Health Care Premiums	State Appropriations	Other	Total
<b>2003</b>	<b>\$886,931</b>	<b>\$1,275,136</b>	<b>\$914,558</b>	<b>\$103,913</b>	<b>\$0</b>	<b>\$9,737</b>	<b>\$3,190,275</b>
2002	826,910	1,218,475	(4,308,089)	79,590	0	6,225	(2,176,889)
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

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

## Number of Benefit Recipients by Type, 1994–2003

As of July 1	Service Retirement	Disability Benefits	Beneficiaries Receiving Optional Allowances	Survivor Benefits	Total
<b>2003</b>	<b>89,257</b>	<b>6,552</b>	<b>6,885</b>	<b>5,600</b>	<b>108,294</b>
2002	86,666	6,498	6,623	5,513	105,300
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

## Average Monthly Allowances by Type, 1994–2003

As of July 1	Service Retirement	Disability Benefits	Beneficiaries Receiving Optional Allowances	Survivor Benefits	Average
<b>2003</b>	<b>\$2,462</b>	<b>\$2,321</b>	<b>\$1,519</b>	<b>\$1,141</b>	<b>\$2,325</b>
2002	2,349	2,241	1,457	1,096	2,221
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

## Benefit Expenses by Type, 1994–2003 (in thousands)

Fiscal Year Ended	Service Retirement	Disability Benefits	Survivor Benefits	Supplemental Benefit	Health Care*	Other	Total
<b>2003</b>	<b>\$2,588,800</b>	<b>\$175,620</b>	<b>\$73,680</b>	<b>\$0</b>	<b>\$456,214</b>	<b>\$7,333</b>	<b>\$3,301,647</b>
2002	2,395,318	168,704	69,214	0	434,287	5,717	3,073,240
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

\*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, 1994–2003 (dollars in thousands)

As of July 1	Contribution Rate		Interest Assumption	Payroll Growth Assumption	Unfunded Accrued Liability*	Funding Period
	Member	Employer				
<b>2003</b>	<b>10.00%</b>	<b>14.00%</b>	<b>8.00%</b>	<b>5.500%</b>	<b>\$17,037,142</b>	<b>42.3 Yrs.</b>
2002	9.30%	14.00%	7.75%	4.500%	14,256,819	39.0 Yrs.
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.

\*Excluding health care

## Number of Reporting Employers by Type, 1994–2003

Fiscal Year Ended	County									Total
	City School Districts	Local School Districts	Educational Service Centers	Exempted Village Districts	Vocational & Technical Schools	Colleges & Universities	County MR/DD Boards	Community Schools*	Other	
<b>2003</b>	<b>194</b>	<b>369</b>	<b>60</b>	<b>49</b>	<b>49</b>	<b>37</b>	<b>76</b>	<b>130</b>	<b>8</b>	<b>972</b>
2002	194	369	60	49	49	37	77	101	8	944
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

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



(This page intentionally left blank.)





