

# *Guiding*

## GROWTH & CHANGE

STATE TEACHERS RETIREMENT SYSTEM OF OHIO  
COMPREHENSIVE ANNUAL FINANCIAL REPORT

*Fiscal Year Ended June 30, 1997*

# *Guiding*

## GROWTH & CHANGE

**STATE TEACHERS RETIREMENT SYSTEM OF OHIO  
COMPREHENSIVE ANNUAL FINANCIAL REPORT**

*Fiscal Year Ended June 30, 1997*

Prepared through the joint efforts of the STRS staff

Copies of this report are available from:  
State Teachers Retirement System of Ohio  
275 E. Broad St.  
Columbus, Ohio 43215-3771  
(614) 227-4090

# 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, 1996

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.



*Linda K. Savitsky*  
President

*Jeffrey L. Esler*  
Executive Director

# GUIDING GROWTH AND CHANGE

## STATE TEACHERS RETIREMENT SYSTEM OF OHIO 1997 COMPREHENSIVE ANNUAL FINANCIAL REPORT

### INTRODUCTION

Certificate of Achievement .....	2
State Teachers Retirement Board .....	4
Professional Consultants .....	5
Senior Staff .....	5
Organizational Structure .....	5
Letter of Transmittal .....	6
Year in Review .....	9
Guiding Growth and Change .....	13

### FINANCIAL

Independent Auditors' Report .....	20
Combining Statement of Plan Net Assets as of June 30, 1997 .....	21
Combining Statement of Changes in Plan Net Assets, Year Ended June 30, 1997 .....	22
Notes to Financial Statements .....	23
Schedule of Funding Progress, 1992-1997 .....	30
Schedule of Employer Contributions, 1992-1997 .....	30
Notes to the Trend Data .....	30
Schedule of Administrative Expenses, Year Ended June 30, 1997 .....	31
Schedule of Investment Expenses, Year Ended June 30, 1997 .....	32

### INVESTMENTS

Investment Review .....	33
Investment Objective and Policy .....	37
Investment Performance .....	50
STRS Long-Term Policy Objective (5 years) .....	50
Summary of Investment Assets, Years Ended June 30, 1997 and 1996 .....	51
Investment Distribution by Market Value as of June 30, 1997 .....	52
Schedule of Largest Investment Holdings as of June 30, 1997 .....	53

### ACTUARIAL

Actuary's Certification Letter .....	55
Statement of Actuarial Assumptions and Methods .....	56
Schedule of Member Valuation Data, 1988-1997 .....	57
Schedule of Retirees and Beneficiaries, 1988-1997 .....	57
Benefit Recipients Added To and Removed From the Rolls, 1996-1997 .....	57
Analysis of Financial Experience .....	58
Solvency Test, 1988-1997 .....	58
Summary of Benefit and Contribution Provisions .....	59

### STATISTICAL

Revenues by Source and Benefit Expenses by Type, 1988-1997 .....	61
Number of Benefit Recipients by Type, 1988-1997 .....	62
Average Monthly Allowances by Type, 1988-1997 .....	62
Benefit Expenses by Type, 1988-1997 .....	63
Number of Reporting Employers by Type, 1988-1997 .....	63
Selected Funding Information, 1988-1997 .....	64

{ 3 }

# THE STATE TEACHERS RETIREMENT BOARD



The State Teachers Retirement Board meets monthly to transact business and set policy. Seated, from left to right, are: Betty Ocasek Peters; Hazel A. Sidaway, chair; and Deborah Scott, vice chair. Standing, from left to right, are: Herbert L. Dyer, executive director; Gloria Gaylord, representing the auditor of state; Jack H. Chapman; Dr. James Van Keuren, representing the superintendent of public instruction; Eugene E. Norris; William A. Dorsey; and Nedra Hadley, representing the attorney general.

Membership of the Retirement Board is set by the General Assembly and includes five active teachers, one retired teacher and three voting ex officio members.

Teacher members are elected to four-year terms by members of the Retirement System. The retired teacher member is elected to a four-year term by retirees receiving benefits from STRS. Board members serve without compensation other than actual, necessary expenses.

The Retirement Board is proud to present this *Comprehensive Annual Financial Report* for the fiscal year ended June 30, 1997.

{4}



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



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



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



**William A. Dorsey**  
Teacher member  
since 1990.  
Painesville City  
Local Schools,  
Lake County.



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



**Betty Ocasek Peters**  
Retired teacher  
member since 1983.  
Summit County.



**John M. Goff,**  
Superintendent of  
Public Instruction  
Ex officio member  
of the board since  
appointed to office  
in 1995.



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



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

## SENIOR STAFF



The STRS senior staff meets regularly to discuss day-to-day operations and develop procedures for administering policies adopted by the Retirement Board. Seated, from left to right are: G. Robert Bowers, deputy executive director — Administration; Stephen A. Mitchell, deputy executive director — Investments; Robert A. Slater, deputy executive director — Finance and chief financial officer; and J. Richard Zimmerman, deputy executive director — Member Benefits. Standing, from left to right are: Rebecca J. Stephenson, executive assistant; James W. Miller, director of Governmental Relations; Cynthia E. Hvizdos, staff counsel; Herbert L. Dyer, executive director; Joan M. Williams, director of Human Resource Services; Adrian R. Mullins, director of Information Technology Services; and Sandra L. Knoesel, director of Communication Services.

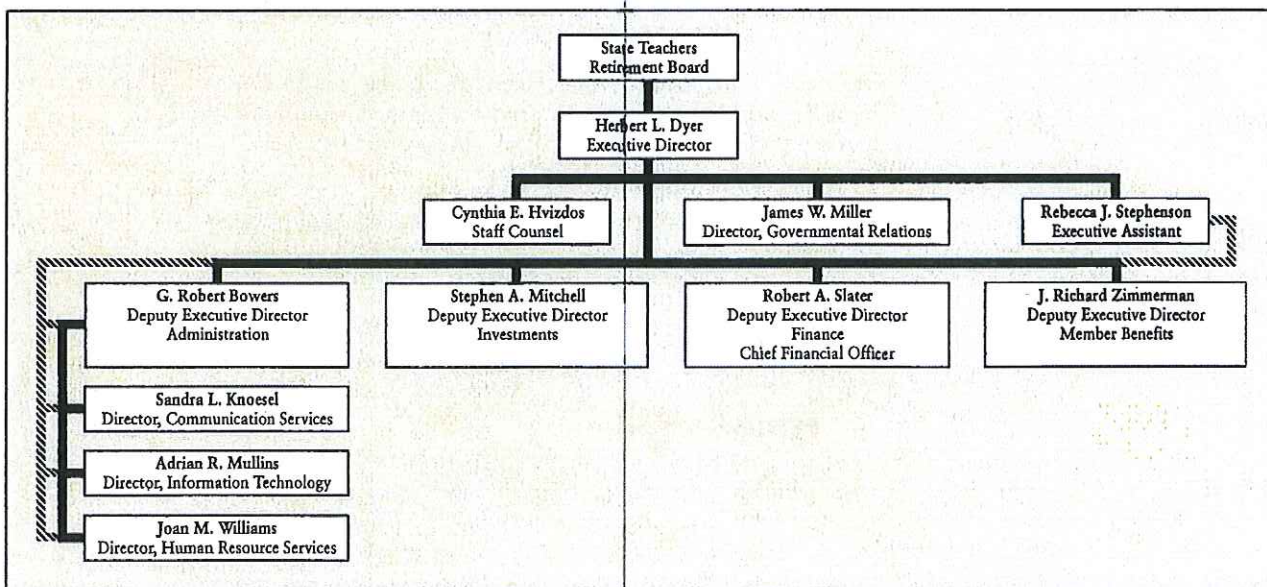
### PROFESSIONAL CONSULTANTS

**Independent Public Accountants**  
Deloitte & Touche LLP, Columbus, Ohio

**Investment Advisors**  
Frank Russell Company Real Estate Consulting, Tacoma, Washington  
Wellington Management Company, Boston, Massachusetts

**Actuarial Consultants**  
Buck Consultants, Chicago, Illinois

## ORGANIZATIONAL STRUCTURE



(5)

# THE STATE TEACHERS RETIREMENT SYSTEM OF OHIO

275 EAST BROAD STREET, COLUMBUS OH 43215-3771  
TELEPHONE (614) 227-4090

December 3, 1997

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 (STRS) for the fiscal year ended June 30, 1997. This report is intended to provide readers with financial, investment, actuarial and statistical information in a single publication. STRS management is responsible for the accuracy of the data and for the completeness and fairness of the presentation.

The State Teachers Retirement System was created by legislative act on May 8, 1919, as an alternative to separate, often-unstable local school district retirement plans. STRS 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; (2) the Financial Section contains the general-purpose financial statements and footnotes along with the report of the independent public accountants; (3) the Investment Section includes a summary of investment assets and the Retirement Board's Objective and Policy Statement; (4) the Actuarial Section includes results of the annual actuarial valuation and the certification letter of Buck Consultants; and (5) the Statistical Section includes historical data showing the progress of the system.

## Major Initiatives

New ways to enhance communication between STRS and its active and retired members are being developed. In June 1997, the Retirement Board approved the establishment of a toll-free phone number and the creation of an Internet Web site. The toll-free number, available in January 1998, will enable members and retirees to get quick answers to their questions.

The STRS Internet Web site, which went online in September 1997, provides members and retirees with comprehensive information about STRS from the convenience of their homes. Future enhancements will enable members to obtain personal account information through the site.

Recent legislation allows the payment of interest and matching funds — for members with five or more years of service credit — when STRS accounts are withdrawn at termination of employment. The bill also allows certain college and university faculty to select a defined contribution retirement plan administered by a private vendor instead of participating in STRS.

New legislation also removed statutory maximums on certain types of investments in favor of a "prudent person" standard. STRS assets are now to be invested with the care, skill, prudence and diligence of a person familiar with investment matters under similar circumstances without arbitrary limits on asset allocation.

STRS implemented Government Accounting Standards Board (GASB) Statements 25 and 26 for fiscal 1997. GASB Statement 25 provides formats for financial statement presentation, requires investments to be reported at fair value and eliminates disclosure of a standard measure of the pension benefit obligation. Plan assets and the changes during the year for postemployment health care benefits are reported separately from pension assets as required by GASB Statement 26.

## RETIREMENT BOARD

DEBORAH SCOTT, CHAIR — Finneytown Local Schools, Hamilton County  
WILLIAM A. DORSEY, VICE CHAIR — Palmsville City Local Schools, Lake County  
JACK H. CHAPMAN, Reynoldsburg City Schools, Franklin County  
JOHN M. GOFF, Superintendent of Public Instruction  
BETTY D. MONTGOMERY, Attorney General of Ohio  
EUGENE E. NORRIS, South-Western City Schools, Franklin County  
JAMES M. PETRO, Auditor of State  
ROBERT P. SHREVE, Retired Teacher Member, Westerville  
HAZEL A. SIDAWAY, Canton City Schools, Stark County

### Investments

Total investments grew to \$41.9 billion (excluding collateral on loaned securities) as of June 30, 1997, representing a 16.76% increase from 1996. The allocation of investment assets is designed to provide high long-term yields while minimizing risk. Expanded investment authority permits greater diversification opportunities. A summary of STRS' asset allocation is on Page 52.

In calendar-year 1996, investments provided a 10.21% rate of return. STRS' annualized rate of return was 10.82% for the last three years and 10.40% for the last five years. Similar benchmark returns over the same one-, three- and five-year periods were 13.24%, 12.27% and 10.33%, respectively.

### Additions to Plan Net Assets

	1997
Net Investment Income	\$6,143,363,000
Contributions:	
Member	\$ 679,499,000
Employer	\$ 953,447,000
Other	\$ 98,912,000
Total Contributions	\$1,731,858,000
Total Additions to Plan Net Assets	\$7,875,221,000

Member and employer contributions, along with income from investments, provide the reserves needed to finance retirement benefits. Total contributions and net investment income totaled \$7.88 billion. Member and employer contributions increased by 6.9% and 3.8%, respectively, from fiscal 1996.

### Deductions from Plan Net Assets

	1997
Benefits	\$1,880,129,000
Withdrawals	\$ 32,313,000
Administrative Expenses	\$ 42,884,000
Total Deductions from Plan Net Assets	\$1,955,326,000

The principle purpose for which STRS was created is to provide retirement, survivor and disability benefits to qualified members and their beneficiaries. The cost of such programs includes recurring benefit payments as designated by the plan, refund of contributions to terminated members and the administrative costs of operating STRS. Total 1997 deductions from plan net assets increased 12% from 1996.

(7)



## Funding

Contribution rates are actuarially determined to provide a level basis of funding using the entry age normal cost method, and an actuarial valuation is performed annually by Buck Consultants of Chicago. The July 1, 1997, valuation shows that the amortization period for the unfunded accrued liability decreased to 26.9 years from 28.4 years, and the ratio of assets to total accrued liabilities improved to 83% from 80%. A detailed discussion of funding is provided in the Actuarial Section of this report beginning on Page 55.

## Certificate of Achievement and Other Awards

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to STRS for its *Comprehensive Annual Financial Report* for the fiscal year ended June 30, 1996. 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 with 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 has received a Certificate of Achievement for the last seven years. We believe our current report continues to conform with the Certificate of Achievement program requirements and are submitting it to the GFOA.

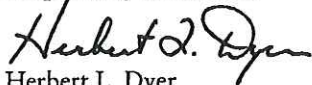
STRS was honored with a Public Pension Principles Achievement Award for 1996 by the Public Pension Coordinating Council. To receive the award, a retirement system must comply with 11 required principles and five exemplary principles related to actuarial valuation and review, benefits, financial reporting and auditing, investments and disclosure.

In addition, STRS was one of just 12 companies or organizations nationwide to receive a Silver Award from *Financial World* magazine. The award was for achieving the highest standards in annual report preparation and presentation.

## Acknowledgments

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

Respectfully submitted,



Herbert L. Dyer  
Executive Director



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

**HERBERT L. DYER, EXECUTIVE DIRECTOR**

**CYNTHIA E. HVIZDOS, Staff Counsel**  
**JAMES W. MILLER, Governmental Relations**  
**REBECCA J. STEPHENSON, Administrative Assistant — Board Functions**

**DEPUTY EXECUTIVE DIRECTORS:**  
**G. ROBERT BOWERS, Administration**  
**STEPHEN A. MITCHELL, Investments**  
**ROBERT A. SLATER, Chief Financial Officer**  
**J. RICHARD ZIMMERMAN, Member Benefits**

## YEAR IN REVIEW

July 1, 1996 through June 30, 1997

### BOARD MEMBER NAMED "OHIO RETIRED EDUCATOR OF THE YEAR"

Betty Ocasek Peters, retired teacher member of the Retirement Board, was named 1997 Ohio Retired Educator of the Year by the National Retired Teachers Association. The award recognizes excellence in promoting educational values. Peters, a retired Summit County educator, has served on the Retirement Board since 1983. She retired from the board in September 1997.

### FORMER STRS EXECUTIVE DIRECTOR DIES

C. James Grothaus, former executive director of STRS, died Jan. 28, 1997, at age 65. He served as executive director from 1983 through 1992. Under his leadership, pension fund assets grew to \$22 billion from \$6.2 billion.

Also during Grothaus' tenure at STRS, an optional early retirement incentive plan was established, the retirement benefit formula was increased and the purchase of service credit was made more equitable compared to the cost of earned credit. He was also the driving force behind many innovative member services, including the field counseling program and preretirement seminars.

### SUPPLEMENTAL BENEFIT, COST-OF-LIVING PAYMENTS APPROVED

Qualified benefit recipients received two retirement income enhancements. First, the STRS Retirement Board approved a 3% cost-of-living adjustment for benefit recipients who retired before July 1, 1995, and a 2.9% cost-of-living adjustment for benefit recipients who retired between July 1, 1995, and June 30, 1997. A law that became effective in 1996 allows STRS to pay a cost-of-living adjustment (COLA) up to and including 3% based on the increase in the Consumer Price Index. The COLA is calculated on the base benefit and is paid on the anniversary date of retirement.

The board also approved a supplemental benefit payment to retirees who have been receiving a benefit for the last 12 consecutive months. The payment was made in December 1996 to more than 81,000 benefit recipients. An estimated \$43 million of investment earnings were used to make the payment. The "unit value" (the amount awarded for each year of service and each year on retirement) of the check was \$14. The Retirement Board has the authority to grant this supplemental payment each year when investment earnings exceed funding requirements.

### LEGISLATION ADDRESSES INVESTMENT EXPANSION, ACCOUNT WITHDRAWAL AND VICTIM RESTITUTION

Several pieces of legislation were passed in fiscal year 1996-97.

Senate Bill 82 authorized the expansion of the system's investment authority by repeal of the "legal investment lists" and adoption of the "prudent person" standard. This legislation permits the full range of investments that would normally be selected by a careful, diligent person familiar with investments and given the needs of the plan. As a result of this legislation, STRS was able to increase its international investments and commitment to domestic equities. This bill was effective March 6, 1997.

Amended Substitute House Bill 586 provided, for the first time, the payment of interest and, for members with eligible service, 50% matching funds when STRS accounts are withdrawn at termination of employment. The bill also allows certain college and university faculty to select an alternative retirement plan in lieu of contributing to STRS. The bill was effective March 31, 1997. Full implementation of the legislation has been delayed pending action by the Ohio Department of Insurance.

(9)

YEAR IN REVIEW (CONT.)

House Bill 668 authorized the withholding of retirement benefits (other than survivor benefits), including the withdrawal of employee contributions, for members of the five state retirement systems who are required by court order to make restitution to victims of sex-related crimes. The pension plan has no responsibility for determining guilt or innocence of a crime. This bill was effective Dec. 6, 1996.

**MEMBER BENEFITS DEPARTMENT  
REMAINS RESPONSIVE TO MEMBERS**

The STRS Member Benefits Department continued its tradition of providing high-quality service to thousands of active and retired members. Among the department's accomplishments:

MEMBER BENEFITS	
PROGRAM	MEMBERS SERVED
Individual counseling sessions at STRS	5,129
Individual counseling sessions throughout Ohio	6,693
TeleConferences	2,678
Retired educator meetings	1,578
Benefit information meetings	3,748
Information Fair	1,037
Counseling/Member Service Center calls	170,553
Member Benefits Department correspondence	81,397
Retirement Planning Seminar	603
Life Planning Workshop	559
Toll-free Information Line	80,031
Active teacher newsletter circulation	267,000
Retired teacher newsletter circulation	83,000

**STRS EXPANDS SERVICES FOR ACTIVE,  
RETIRED MEMBERS**

The Member Services Center for active and retired members extended its hours in January 1997. The center's hours were set for the convenience of active and retired members, operating early morning through early evening and on Saturdays. The center, staffed by specially trained service representatives, provides members fast, accurate answers to their questions or quick responses to their problems in one phone call.

Also in January, STRS expanded its Tele-Conference program to make the service accessible to more members. TeleConference offers benefits counseling by phone at a time and place convenient to members. The program is now available to members statewide throughout the year and appointments can be made from 9 a.m. to 8 p.m. on weekdays and from 9 a.m. to 3 p.m. on Saturdays.

**SYSTEM REACHES OUT TO FLORIDA,  
ARIZONA RETIREES**

More than 1,500 benefit recipients who live in Florida and Arizona received a first-hand update on STRS as the retirement system hosted a series of informational meetings in these two states for the first time. Held in January and February, STRS board members and directors provided listeners the latest information about state and federal legislation, health care and other benefits.

**MEMBERS RATE STRS HEALTH  
CARE ADMINISTRATORS**

STRS conducted a comprehensive health care satisfaction survey in 1997 to assess benefit recipients' opinions about their health care plans. Eight plans, including indemnity, PPO and HMO plans, from four different health care plan administrators were rated. The written survey was conducted among 4,400 randomly selected benefit recipients. More than 70% of the benefit recipients returned their surveys.

(10)

Combined results from all the plans showed that 95% of those surveyed rated their quality of care as excellent, very good or good; 83.5% rated overall plan administration as excellent, very good or good; and 88% rated their overall benefit coverage as excellent, very good or good. Approximately 92% of survey participants would recommend their current health care plan to someone else.

This was the first time STRS benefit recipients were surveyed in this manner about their health care coverage. Survey results were shared with the health care plan administrators and will serve as "benchmarks" in measuring the improvement of providers offering retiree health care services.

STRS also conducted a survey to determine why benefit recipients changed health care plans during the 1996 open enrollment period. Results showed that only 2% of benefit recipients changed plans and only 28% of those who switched were dissatisfied with their old plan. The most important reasons for changing plans were to save money and increase access to providers. About 90% of benefit recipients surveyed indicated that STRS offers enough health care plan options and 4% said there were too many options.

#### STRS HOSTS BRIEFINGS FOR COLLEGE AND UNIVERSITY REPRESENTATIVES

In February and March, STRS held a series of informational meetings for representatives of Ohio's public universities and colleges to discuss implementation of Amended Substitute House Bill 586. This legislation, effective March 31, 1997, allows certain higher education faculty to select a retirement plan other than the STRS plan. More than 100 employer representatives attended the meetings. Full implementation of the legislation has been delayed pending action by the Ohio Department of Insurance.

#### WORKSHOPS DRAW HUNDREDS OF EMPLOYERS

To keep the lines of communication between STRS and reporting employers strong, the STRS Finance Department sponsored six employer workshops throughout the year. The workshops provided a review of and update on reporting procedures and requirements. More than 300 people representing 199 school districts attended the workshops.

#### SYSTEM RECEIVES PRINCIPLES, REPORTING, COMMUNICATION AWARDS

STRS was honored with a Public Pension Principles Achievement Award for 1996 by the Public Pension Coordinating Council. To receive the award, a retirement system must comply with 11 required principles and five exemplary principles related to actuarial valuation and review, benefits, financial reporting and auditing, investments and disclosure.

The system also received a Certificate of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association. The award, which STRS has received for seven consecutive years, recognizes conformance with the highest standards for preparation of state and local government financial reports.

In addition, STRS was one of just 12 companies or organizations nationwide to receive a Silver Award from *Financial World* magazine. The award was for achieving the highest standards in annual report preparation and presentation. STRS also won three awards from the Central Ohio chapter of the Public Relations Society of America for excellence in public relations. The awards were for communication programs relating to STRS' 75th anniversary.

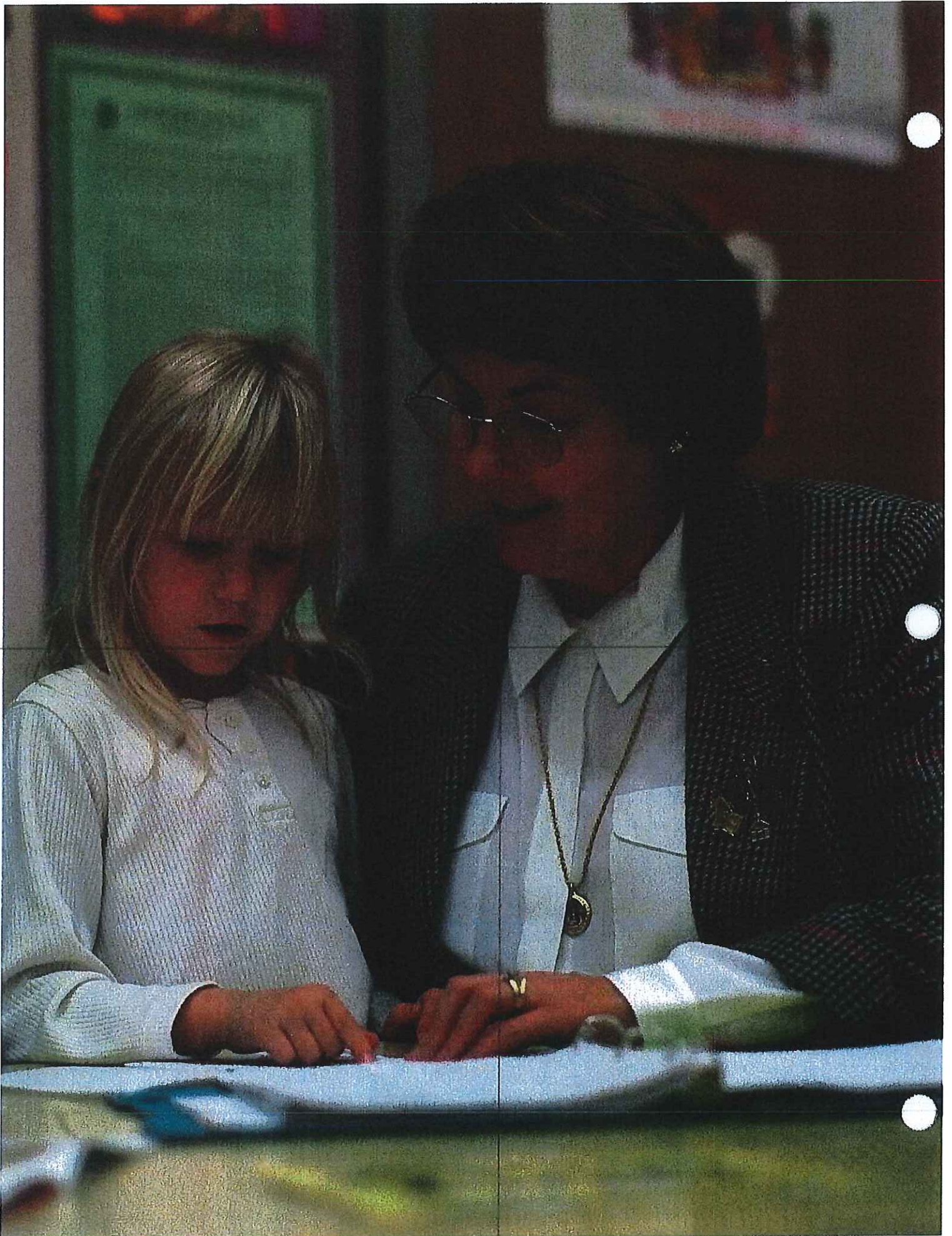
#### STRS ASSOCIATES GIVE GENEROUSLY TO COMMUNITY

Fund-raising campaigns, food drives and other events added up to a year of generous giving by STRS associates.

The United Way of Franklin County named STRS a "Trendsetter" organization because of its exceptional fundraising campaigns. The 1996 campaign was the most successful ever with associates contributing more than \$62,000.

In addition, STRS, with only 400 associates, ranked 16th among 70 state agencies in the total number of meals donated to Operation Feed. STRS associates gave a record-setting \$3,938 and 340 pounds of food to the campaign. Associates also donated generously to holiday charity activities. Their contributions of \$5,750 enabled STRS to provide 10 needy working families gift certificates of \$575 each for the holidays.

(ix)



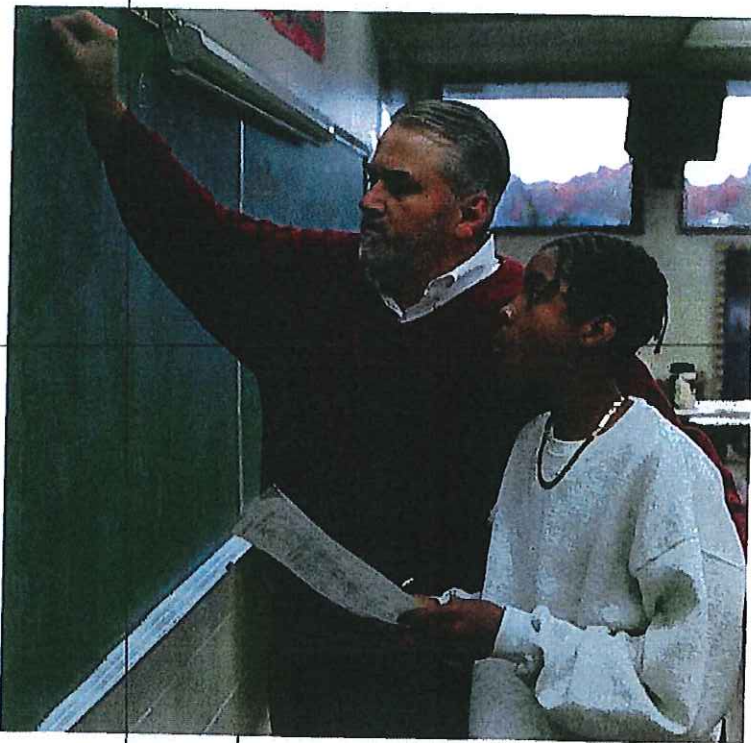
# Guiding Growth and Change

STRS entered this decade with a commitment to enhancing benefits and services, achieving exemplary financial growth and improving technology to better serve our members. More than midway through the decade, we have reached those initial goals.

In the last seven years, STRS has:

- established new records for investment earnings, number of members served and benefits paid;
- implemented programs for member benefit education;
- increased communications and member outreach efforts;
- improved the convenience and accessibility of member services;
- upgraded technology to provide more complete information faster;
- expanded and refined our investment strategies to increase earnings; and
- requested legislation to enhance the quality of life for members and their beneficiaries.

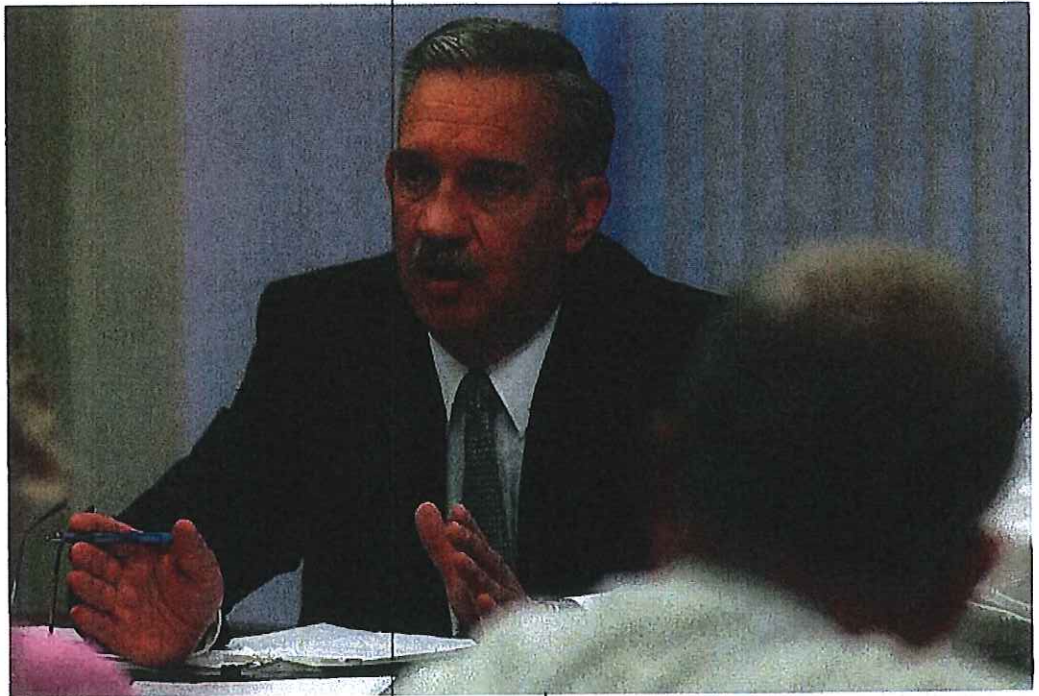
In short, we have honored our commitment. We will continue to honor this commitment throughout the next decade as we face unprecedented growth.



*Jack H. Chapman helps a student with mathematics at Reynoldsburg Junior High School in Reynoldsburg, Franklin County. Chapman has served on the Retirement Board since 1990.*

## GUIDING GROWTH AND CHANGE

*Hazel A. Sidaway, chair of the Retirement Board, guides a new reader in her first-grade class at Worley Elementary School in Canton, Stark County. Sidaway has been a member of the Retirement Board since 1986.*



*William A. Dorsey, a teacher from Painesville City Schools in Lake County, fulfills his current responsibilities as secretary-treasurer of the Ohio Education Association. Dorsey has been a Retirement Board member since 1990.*

{14}

## GUIDING GROWTH AND CHANGE

By the year 2007, STRS expects a 50% increase in the number of annual retirements. By the year 2017, STRS will serve twice as many retirees as it does today.

The Retirement Board is preparing now for the challenges this unparalleled growth will create. We expect the surge of retirements to begin as early as 1999, and we intend to be ready.

### INCREASING OUR RESOURCES

STRS' retired population is expected to grow over the next 20 years to 178,000 from today's level of about 89,000. Because of this growth:

- Retirement processing demands will be much greater and cost statements, benefit estimates and service retirement applications will be requested at ever-increasing rates.

- Requests for health care services and information will increase significantly because of the growing number of new retirees and the increasing complexity, variety and number of health care options.
- The number of phone calls received by STRS is expected to rise even more rapidly than the rate of new retirements.
- Individual benefits counseling appointments will increase dramatically.
- Additional retirement planning seminars and other member education services will be necessary as more and more members recognize the wisdom in being fully prepared for retirement.

To maintain an exemplary level of service to members over the next decade, STRS will increase the number of associates to approximately 600 from the present 440. New associates will include benefits, health care, communications and investment specialists.

# GUIDING GROWTH AND CHANGE

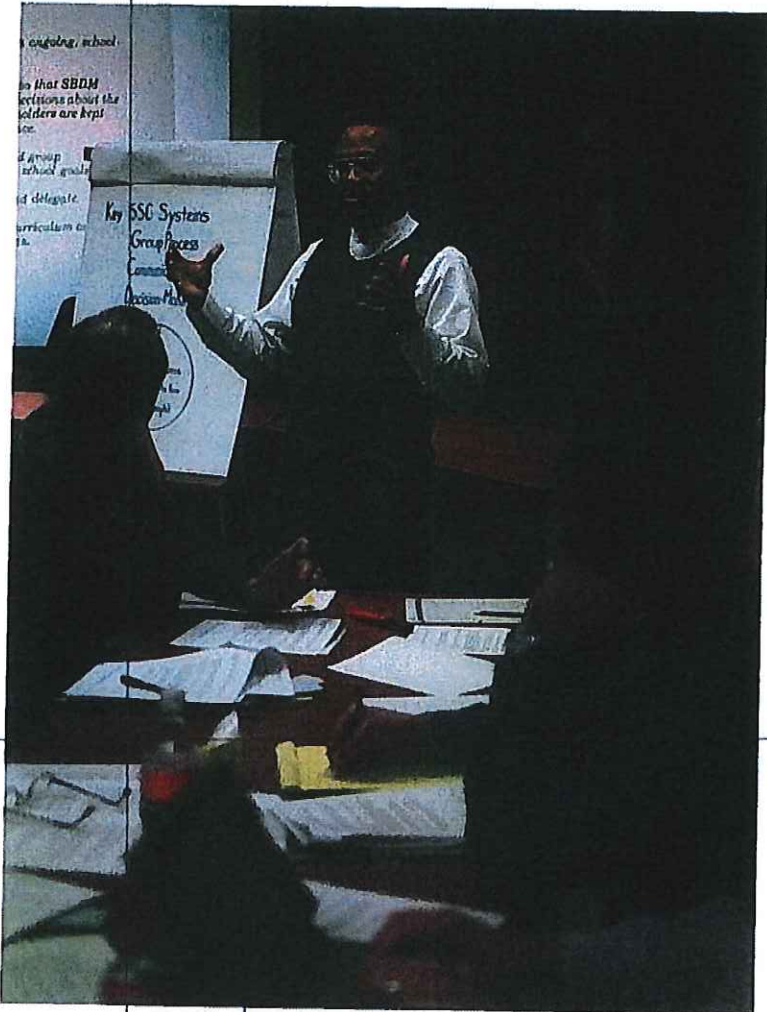


Betty Ocasek Peters retired from the Retirement Board in September 1997. She had represented retired educators on the board since May 1983.

Peters received numerous honors and awards during her distinguished career in education. One of her most significant tributes was being named the 1997 Ohio Retired Educator of the Year by the National Retired Teachers Association.

The long-time educator taught elementary grades in Mogadore and Nordonia Hills City Schools in Summit County for 32 years. She also served the University of Akron for 16 years as a part-time faculty lecturer and supervisor of student teachers.

Peters was chair of the Retirement Board in 1994. She also served as chair of several committees during her board membership.



*Eugene E. Norris, a Retirement Board member since 1996, instructs coworkers at South-Western City Schools. Norris is staff development coordinator for this school system in Franklin County.*





*Robert P. Shreve, retired teacher member of the Retirement Board since September 1997, talks with other retired Ohio educators. Shreve was a long-time educator and administrator in the Youngstown/Mahoning County areas.*

#### TAKING CARE OF BUSINESS

The present STRS building is already stretched beyond its capacity of 400. The Retirement Board studied numerous alternatives to accommodate the need for more physical space, including purchasing a larger building, relocating to a suburban location, leasing space, outsourcing certain functions or establishing regional offices. All were found to be less effective and efficient than expanding existing facilities. In June 1997, the board authorized construction of three floors of office space and a new parking garage. The combined structure will be built, beginning in 1998, on STRS-owned property adjacent to the current building in Columbus.

To accommodate the unprecedented number of members and associates, system operations must also grow and change. STRS will need to redefine internal processes and procedures and enhance its technological capabilities to efficiently manage, store and retrieve twice as much data as it does today. The board is prepared to support the development of technology that will increase the quality of service provided to members.

GUIDING GROWTH AND CHANGE

# GUIDING GROWTH AND CHANGE



*Attorney General Betty D. Montgomery, right, became a voting member of the Retirement Board in 1995 when she was elected to office. Nedra Hadley, left, represents Montgomery on the board.*

## EXPANDING OUR SERVICES

To effectively communicate with and remain accessible to our active and retired members, convenient and effective lines of communication must be available. In June 1997, the STRS board approved the establishment of a toll-free phone number and the creation of an STRS Internet Web site. The toll-free number will enable active members and retirees to get quick answers to their questions. The phone number, which will be available to all members in January 1998, will be staffed by more than 30 highly trained benefit specialists.

The STRS Internet Web site, which went online in September 1997, provides members and retirees comprehensive information about STRS from the convenience of their homes. Future plans include enabling members to obtain personal account information through the site.

STRS also plans to increase the number of seminars and other benefit education programs to help members better prepare for retirement. In addition, the system will seek ways to make its benefits counseling sessions and retirement application processes even more convenient for members.



*State Auditor James Petro, left, and Gloria Gaylord, right, who represents Petro on the Retirement Board, discuss STRS business. Petro has been a voting member of the board since elected to office in 1995.*

*Deborah Scott, vice chair of the Retirement Board, leads a reading session for her first-grade students at Cottonwood Elementary School in Finneytown, Hamilton County. Scott has served on the Retirement Board since 1994.*

{18}

## GUIDING GROWTH AND CHANGE

### ENHANCING OUR BENEFITS

STRS' mission emphasizes enhancing the quality of life for members and their beneficiaries through retirement benefits. This goal has and will continue to guide STRS' future support of legislation that improves member benefits. Potential legislation requiring Social Security contributions by public employees will continue to be actively opposed.

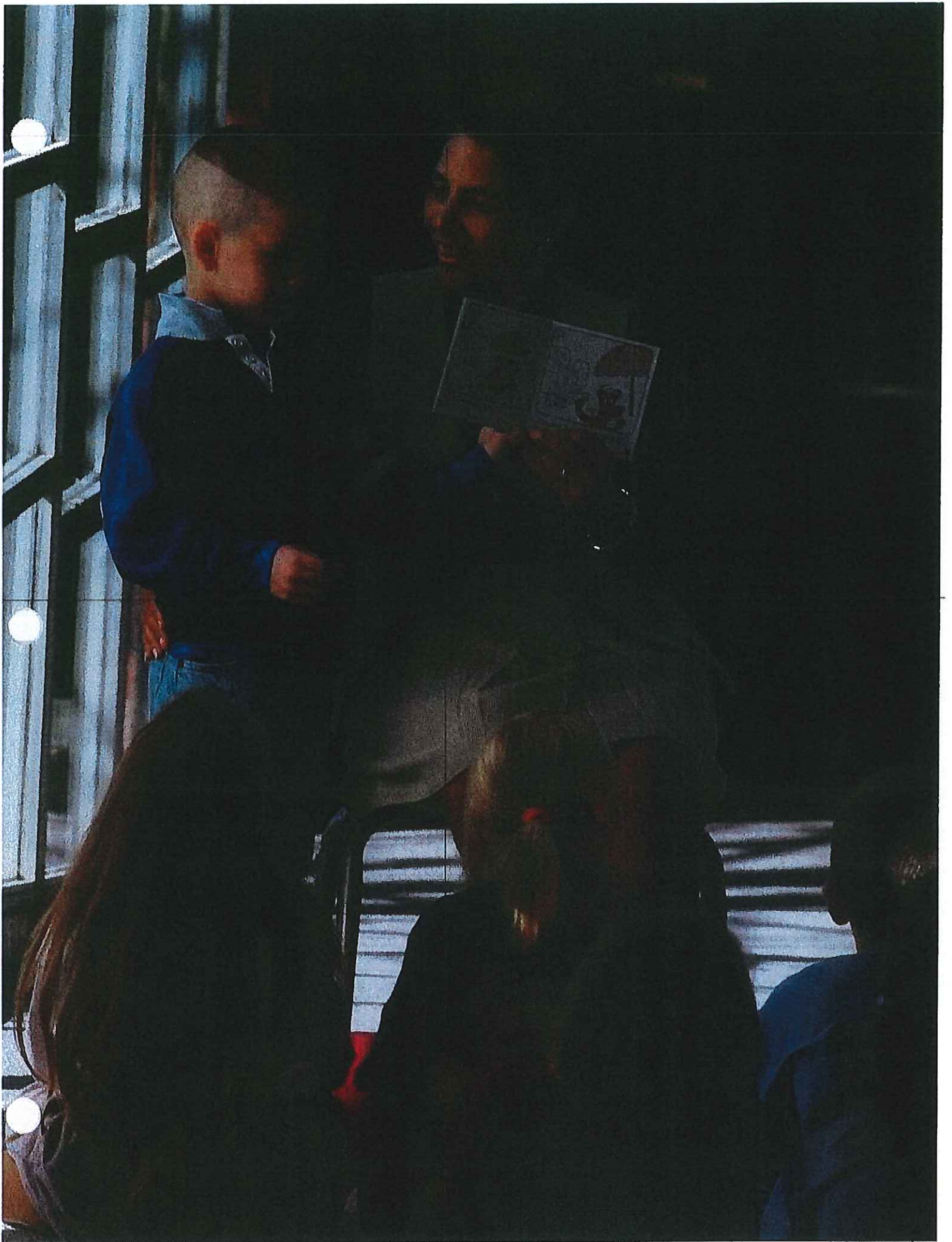
STRS is also committed to containing the cost of health care so that health care coverage for retirees can continue to be a valuable benefit. In addition, the board has pledged its support for continued payment of the supplemental benefit to retirees when funds are available.

### INVESTING FOR THE FUTURE

An emerging global economy will present more opportunities, challenges and risks which, in turn, will require more intense analysis and sophisticated investing by STRS. The sheer size of the portfolio — a possible \$100 billion by 2007 — will demand that STRS invest in many different instruments to achieve the needed diversification. To analyze and research opportunities and make the most prudent investments, STRS expects to increase its current 100-person investment staff throughout the next decade.

### RENEWING OUR COMMITMENT

The Retirement Board and STRS associates are ensuring the future right now. With additional staff, new facilities, active governmental relations, leading-edge technology and strong, responsible investments, members can rely on the security they have come to expect from STRS.



# Deloitte & Touche LLP



155 East Broad Street  
Columbus, Ohio 43215-3611

Telephone: (614) 221-1000  
Facsimile: (614) 229-4647

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

We have audited the accompanying combining statement of plan net assets of the State Teachers Retirement System of Ohio (the System) as of June 30, 1997, and the related combining statement of changes in plan net assets for the year 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 audit.

We conducted our audit in accordance with generally accepted auditing standards and *Government Auditing Standards* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, such financial statements present fairly, in all material respects, the plan net assets of the System as of June 30, 1997, and the changes in its plan net assets for the year then ended in conformity with generally accepted accounting principles.

As discussed in Note 1 to the financial statements, in 1997, the system changed its method of accounting to conform with Government Accounting Standards Board Statement No. 25, "Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans" and Government Accounting Standards Board No. 26, "Financial Reporting for Postemployment Healthcare Plans Administered by Defined Benefit Pension Plans."

Our audit was conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The additional information on Pages 31-32 is presented for the purpose of additional analysis and is not a required part of the basic financial statements. This additional information is the responsibility of the System's management. Such additional information has been subjected to the auditing procedures applied in our audits of the the basic financial statements for the year ended June 30, 1997, and, in our opinion, is fairly stated in all material respects when considered in relation to the basic 1997 financial statements taken as a whole.

In accordance with *Government Auditing Standards*, we have also issued a report dated November 23, 1997, on our consideration of the System's internal control structure and on its compliance with laws and regulations.

*Deloitte & Touche LLP*

November 23, 1997

**Deloitte Touche  
Tohmatsu  
International**

{ 20 }

## COMBINING STATEMENT OF PLAN NET ASSETS

As of June 30, 1997  
(In Thousands)

	Pensions	Postemployment Health Care	Totals
<b>ASSETS:</b>			
Cash and short-term investments	\$ 2,104,435	\$ 99,081	\$ 2,203,516
<b>RECEIVABLES:</b>			
Accrued interest and dividends	136,898	6,445	143,343
Employer contributions	161,795	7,618	169,413
Retirement incentive	48,590		48,590
Member contributions	130,651		130,651
Securities sold	103,900	4,892	108,792
State of Ohio appropriations	2,377		2,377
Total receivables	<u>584,211</u>	<u>18,955</u>	<u>603,166</u>
<b>INVESTMENTS, AT FAIR VALUE:</b>			
Fixed income	10,112,077	476,096	10,588,173
Common and preferred stock	17,232,610	811,345	18,043,955
International	7,264,448	342,024	7,606,472
Real estate	<u>3,290,028</u>	<u>154,901</u>	<u>3,444,929</u>
Collateral on loaned securities	904,459	42,584	947,043
Total investments	<u>38,803,622</u>	<u>1,826,950</u>	<u>40,630,572</u>
Fixed assets, at cost, net of accumulated depreciation of \$22,955	49,196		49,196
Total assets	<u>41,541,464</u>	<u>1,944,986</u>	<u>43,486,450</u>
<b>LIABILITIES:</b>			
Securities purchased	134,899	6,351	141,250
Accrued expenses and other liabilities	8,138	383	8,521
Medical benefits payable		36,135	36,135
Obligations under securities lending program	904,459	42,584	947,043
Total liabilities	<u>1,047,496</u>	<u>85,453</u>	<u>1,132,949</u>
<b>NET ASSETS HELD IN TRUST FOR PENSION AND POSTEMPLOYMENT HEALTH CARE BENEFITS:</b>			
(A schedule of funding progress is presented on Page 30)	<u>\$40,493,968</u>	<u>\$1,859,533</u>	<u>\$42,353,501</u>

(21)

See accompanying Notes to Financial Statements.

# COMBINING STATEMENT OF CHANGES IN PLAN NET ASSETS

For the year ended June 30, 1997  
(In Thousands)

	Pensions	Postemployment Health Care	Totals
<b>ADDITIONS:</b>			
Contributions:			
Member	\$ 679,499		\$ 679,499
Employer	817,331	\$ 136,116	953,447
Retirement incentive	51,907		51,907
State of Ohio appropriations	2,377		2,377
Benefit recipient health care premiums		38,347	38,347
Other retirement systems	6,011		6,011
Additional death benefits (net)	270		270
Total contributions	<u>1,557,395</u>	<u>174,463</u>	<u>1,731,858</u>
Investment Income:			
Net appreciation in fair value of investments	4,553,950	215,461	4,769,411
Interest	795,702	37,647	833,349
Dividends	393,596	18,622	412,218
Rent	131,984	6,245	138,229
Securities lending income	67,671	3,202	70,873
	<u>5,942,903</u>	<u>281,177</u>	<u>6,224,080</u>
Less investment expenses	(12,147)	(575)	(12,722)
Less securities lending expenses	<u>(64,923)</u>	<u>(3,072)</u>	<u>(67,995)</u>
Net investment income	<u>5,865,833</u>	<u>277,530</u>	<u>6,143,363</u>
Total additions	<u>7,423,228</u>	<u>451,993</u>	<u>7,875,221</u>
<b>DEDUCTIONS:</b>			
Benefits:			
Service retirement	1,440,163		1,440,163
Disability retirement	118,893		118,893
Survivor benefits	43,539		43,539
Supplemental benefit	43,278		43,278
Health care		230,424	230,424
Other retirement systems	3,832		3,832
Total benefit payments	<u>1,649,705</u>	<u>230,424</u>	<u>1,880,129</u>
Refunds to members who have withdrawn	32,313		32,313
Administrative expenses	41,998	886	42,884
Total deductions	<u>1,724,016</u>	<u>231,310</u>	<u>1,955,326</u>
<b>NET INCREASE</b>	5,699,212	220,683	5,919,895
<b>NET ASSETS HELD IN TRUST FOR PENSION AND POSTEMPLOYMENT HEALTH CARE BENEFITS</b>			
<b>BEGINNING OF YEAR (AS RESTATED)</b>	<u>34,794,756</u>	<u>1,638,850</u>	<u>36,433,606</u>
<b>END OF YEAR</b>	<u>\$40,493,968</u>	<u>\$1,859,533</u>	<u>\$42,353,501</u>

See accompanying Notes to Financial Statements.

# NOTES TO FINANCIAL STATEMENTS

Year ended June 30, 1997

## 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

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

- a. **Organization** — STRS (the plan) 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 members, one retired teacher and three voting ex officio members.

STRS is a separate financial reporting entity in accordance with criteria established by Governmental Accounting Standards Board Statement No. 14. Specifically, the plan is governed by a separately elected body, is legally separate and fiscally independent of other state and local governments.

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

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

- c. **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.
- d. **Fixed Assets** — Fixed assets are recorded at historical cost. Depreciation is provided on a straight-line basis over estimated useful lives of 5 to 10 years for equipment and 40 years for buildings and building improvements.

- e. **Method Used to Value Investments** — Investments are reported at fair value. Short-term investments are reported at cost, which approximates fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Mortgages are valued on the basis of future principal and interest payments, and are discounted at prevailing interest rates for similar instruments. The fair value of real estate investments is based on independent appraisals and internal valuations. Where an established market does not exist for an investment, the fair value is estimated.

- f. **Federal Income Tax Status** — STRS qualifies under section 401(a) of the Internal Revenue Code and was exempt from Federal income taxes.

- g. **New Accounting Pronouncements** — STRS has implemented Governmental Accounting Standards Board Statements No. 25 and 26 for the year ended June 30, 1997. Statement 25, "*Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans*," and Statement 26, "*Financial Reporting for Postemployment Healthcare Plans Administered by Defined Benefit Plans*," require, among other things, that investments be carried at fair value and a statement of plan net assets and changes therein be included; additional financial statement disclosures regarding health care benefits be included; and the elimination of disclosures regarding the pension benefit obligation. Plan assets not readily identifiable as pension or other postemployment health care are proportionately allocated.

STRS adopted Statements No. 25 and 26 in 1997 and has applied the provisions of these statements retroactively to July 1, 1996. The impact of the adoption of these statements was an increase in net assets of \$3,252,968,000 at July 1, 1996, from amounts previously recorded.

{ 23 }



NOTES TO FINANCIAL STATEMENTS (CONT.)

**2. DESCRIPTION OF THE STRS PLAN**

**Plan Membership** — STRS is a statewide retirement plan for certified 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 in part, by the state or any political subdivision thereof.

<b>At June 30, 1997, the number of participating employers was:</b>	
City school districts .....	192
Local school districts .....	371
County boards of education .....	73
Exempted village school districts .....	49
Joint vocational schools .....	48
Universities and colleges .....	38
County boards of mental retardation and developmental disabilities .....	82
State of Ohio .....	<u>1</u>
<b>Total</b> .....	<u><u>854</u></u>
<b>At July 1, 1997, the member and retirant data was:</b>	
Current active members .....	168,943
Inactive members eligible for refunds only .....	107,946
Terminated members entitled to receive a benefit in the future .....	17,597
Retirants and beneficiaries currently receiving a benefit .....	88,718
Reemployed retirees .....	<u>9,418</u>
<b>Total plan membership</b> .....	<u><u>392,622</u></u>

Effective August 1997, enacted legislation provided an adjustment for retirees whose benefits have not kept pace with the rate of inflation. This legislation also changed the formula for calculating the formula benefit for Ohio service greater than 30 years. Retroactively to July 1, 1997, each year over 30 years is incremented by .1%, starting at 2.5% for the 31st year of Ohio service.

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.

After retirement, benefits are 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.

A retiree of STRS or other Ohio public retirement systems 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.

**Death, Survivor and Disability Benefits** — A member with five or more years of credited service who becomes disabled (illness or injury preventing individual's ability to teach) is entitled to a disability benefit. Additionally, monthly benefits are paid to eligible survivors of members who die prior to retirement. A death benefit of \$1,000 is payable to the beneficiary of each deceased retired member. Additional death benefit coverage up to \$2,000 can be purchased. Various other benefits are available to members' beneficiaries.

**Health Care Benefits After Retirement** — The plan provides comprehensive health care benefits to retirees and their dependents.

**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 2.5% for each year of Ohio contributing service in excess of 30 years and by 2.1% for all other years of credited service up to a maximum allowance of 100% of final average salary. Members retiring before age 65 with less than 30 years of service credit receive a percentage reduction in benefit amounts.

{24}

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

Under Ohio law, medical costs paid from the funds of the plan are included in the employer contribution rate, currently 14% of compensation. The Retirement Board allocates employer contributions equal to 2% of covered payroll to the Health Care Reserve Fund within the Employers' Trust Fund from which payments for health care benefits are paid. For the fiscal year ended June 30, 1998, 3.5% of covered payroll will be allocated to the Health Care Reserve Fund.

**Supplemental Benefits** — In December of each year, if the Retirement Board determines that sufficient funds are available, a lump-sum supplemental benefit payment is made to eligible retirees. The payment is based on the retiree's years of service and date of retirement. The amount of the payment may vary and is not guaranteed from year to year.

**Refunds** — Upon termination of employment, a member may withdraw accumulated contributions made to STRS. Withdrawal cancels the individual's rights and benefits in STRS. Effective April 1997, refunds of member contributions may include interest and matching payments.

### 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 to 14% and 10%, respectively, of covered payroll. The employer and member contribution rates for the year ended June 30, 1997, were 14% and 9.3% respectively. Two percent of the 14% employer rate is allocated for postemployment health care. For the fiscal year ended June 30, 1998, 3.5% of covered payroll will be allocated to the Health Care Reserve Fund.

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 TSF was fully funded according to the latest actuarial study dated July 1, 1997.
- The Employers' Trust Fund (ETF) is used to accumulate employer contributions in trust. ETF includes assets allocated to the Health Care Reserve Fund from which payments for comprehensive health care benefits are made.
- The Annuity and Pension Reserve Fund (APRF) is the fund from which all annuities and pension payments to retired members are made. Reserves are transferred to this fund from the TSF and ETF funds at the time of retirement. The APRF was fully funded according to the latest actuarial study dated July 1, 1997.

- The Survivors' Benefit Fund is the fund from which all survivor benefit payments are made for which reserves have been transferred from the Teachers' Savings Fund and the Employers' Trust Fund. The Survivors' Benefit Fund was fully funded according to the latest actuarial study dated July 1, 1997.
- 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 are paid.

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, 1997, net assets available for benefits were included in the various funds as follows (in thousands):

Teachers' Savings Fund .....	\$ 6,222,725
Employers' Trust Fund .....	15,881,148
Annuity and Pension Reserve Fund .....	19,786,577
Survivors' Benefit Fund .....	463,051
<b>Total .....</b>	<b>\$42,353,501</b>

{ 25 }

### 4. COMMITMENTS AND CONTINGENCIES

STRS has made commitments to fund various real estate investments totaling approximately \$399,596,000 as of June 30, 1997.

In October 1997, the board passed a resolution that provides a lump-sum supplemental benefit payment to be paid to eligible retirees in December 1997. Estimated payments to be made are \$45 million.

STRS 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.

NOTES TO FINANCIAL STATEMENTS (CONT.)

5. CASH AND INVESTMENTS

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 market value by STRS at June 30, 1997, are summarized as follows:

<i>(In Thousands)</i>	
Category	
Short-term:	
Commercial paper	\$ 2,101,424
Government notes	10,000
Corporate notes	40,000
Short-term investment funds	23,033
Total short-term	<u>2,174,457</u>
Fixed Income:	
Guaranteed mortgages	2,780,487
U.S. government/agencies:	
Not on securities loan	4,861,436
On securities loan	840,198
Corporate bonds:	
Not on securities loan	1,995,513
On securities loan	3,265
Canadian bonds	106,186
Municipal bonds	1,088
Total fixed income	<u>10,588,173</u>
Common and Preferred Stock:	
Not on securities loan	17,940,375
On securities loan	103,580
Total Common and Preferred Stock	<u>18,043,955</u>
Real Estate (See Note 6):	
Multitenant properties	1,601,053
Joint ventures	649,929
Separate accounts	495,887
Real estate investment trusts	297,594
Sale leasebacks	216,330
Participating mortgages	151,425
Other	32,711
Total Real Estate	<u>3,444,929</u>
International (See Note 7)	7,606,472
Collateral on loaned securities	947,043
Total Investments	<u>\$42,805,029</u>

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

Statement No. 3 of the Governmental Accounting Standards Board requires governmental entities to categorize investments as an indication of the level of risk at fiscal year-end. Category 1 includes investments that are insured or registered or for which the securities are held by STRS or its agent in the name of STRS. 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. Category 3 includes uninsured and unregistered investments for which the securities are held by the counterparty in STRS' name or held by the counterparty's trust department or agent but not in STRS' name.

All investments subject to categorization at June 30, 1997, meet the criteria of Category 1. Investments are held in the name of STRS or its nominee by the treasurer of the state of Ohio as custodian. Real estate investments and securities on loan are investments that, by their nature, are not required to be categorized.

At June 30, 1997, the carrying amount of STRS' cash deposits was \$29,059,000 and the bank cash balance was \$19,763,000. Of the bank balance, \$100,000 was insured by the

{26}

Federal Deposit Insurance Corporation. The remaining bank balance was covered by collateral held in the name of STRS' pledging financial institution, as required by state statute (Category 3).

STRS participates in a domestic security lending program whereby securities are loaned to investment brokers/dealers (borrower). Securities loaned are cash collateralized by the borrower at 102% of the loaned securities' market value. The program is administered by a custodial agent bank. STRS receives a fee from the borrower for the use of loaned securities. STRS has minimized its exposure to credit risk because of borrower default by having the custodial agent bank determine daily that the required collateral meets at least 102% of the market value of securities on loan. The fair value of the loaned securities and associated collateral at June 30, 1997, were \$927,560,000 and \$947,043,000, respectively.

## 6. REAL ESTATE INVESTMENTS

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

**Participating Mortgages** — Participating mortgages consist principally of mortgages on apartments, retail, industrial and office properties. Fixed interest rates are generally one to two percentage points below the prevailing market rate at the inception of the mortgage in exchange for participation in the net cash flow generated by a project.

**Multitenant and Sale-Leaseback** — Multitenant properties and sale-leaseback arrangements consist of real estate leased subject to operating leases, which consist principally of commercial office space, retail store space and warehouse space.

**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 is exempt from federal and state income taxes.

**Separate Accounts, Joint Ventures and Other** — Separate accounts consist of group annuity contracts, opportunity funds, private REITs and group trusts. Joint ventures are arrangements with other investors. Other real estate includes syndicated mortgages consisting of land acquisition costs and mortgage receivables relating to the financing of buildings.

## 7. INTERNATIONAL INVESTMENTS

**Externally Managed** — STRS has investments in international equity securities through the use of external money managers. It is the intent of STRS and the money managers to be fully invested, however, cash and short-term fixed-income investments are 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 international developed and emerging markets.

### Internally Managed:

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

**Europe, Australia and Far East (EAFE) Index Fund** — To increase diversification in international developed markets, STRS 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 invests in an EMF Index Fund to increase diversification in emerging-market countries. The fund invests in foreign equities, swaps and other traded investments to imitate the EMF Index.

**EAFE Equity Swaps** — Three international equity swap agreements were contracted during fiscal 1997 with maturity dates in fiscal 1998. In exchange for a negotiated LIBOR (London Interbank Offered Rate), STRS will receive dividends and the difference in the change in the EAFE Index at maturity. Fixed-income securities equal to the initial notional amount of the equity swaps have been set aside as security.

(27)

NOTES TO FINANCIAL STATEMENTS (CONT.)

The market values of international investments held at June 30, 1997 are (in thousands):	
	1997 Market Value
<b>Externally Managed</b>	
International stocks	\$4,059,827
International fixed income	16,465
International currency and liquidity reserves	341,823
Total externally managed	<u>4,418,115</u>
<b>Internally Managed</b>	
Country Funds	172,568
EAFE Index Funds	1,167,187
EMF Index Fund	947,952
EAFE equity swaps	900,650
Total internally managed	<u>3,188,357</u>
<b>Total international</b>	<u><u>\$7,606,472</u></u>

8. DERIVATIVES

(28)

**Equity Swap Agreements** — As discussed in Note 7, STRS has entered into three international equity swap agreements. No funds are required as collateral by either party; however, STRS has purchased fixed-income securities equivalent to the initial exposure which are located in a subcustodial account at the Bank of New York. The market risk of the swap is the same as if STRS owned the underlying stocks that comprise the indexes. The net interest revenues and expenses resulting from these agreements have been recorded in the financial statements. See Note 7 for the related equity swap market values as of June 30, 1997. Equity swaps were also used in the EMF Index Fund during 1997. Of the total EMF holdings at June 30, 1997, \$19.1 million was invested in swap agreements.

**Forward Contracts** — Currency forward contracts were used to specifically hedge yen exposure as a result of equity swap agreements. Additionally, forward contracts in various currencies were used to transact and hedge direct foreign equity investments that STRS maintains through the use of outside managers. STRS is obligated to deliver the foreign currency at a certain dollar price sometime in the future. To fulfill this obligation at maturity, STRS must obtain the currency in the open market. Before the contract matures, STRS can enter into an offsetting forward contract that nets out the original contract. These events expose STRS to currency market risk, which at times can be volatile. During the year, outstanding yen forward contracts totaled \$50 million, which expired Dec. 18, 1996. The external money managers hedged \$967 million of currency exposure in various currencies with varying maturities as of June 30, 1997.

**Futures** — STRS 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. The market and credit risk of the futures were the same as if STRS had owned the underlying stocks that comprise the index. From January 1997 to April 1997, there were S&P futures ranging from \$77 million to \$200 million. Additionally, futures were used in the EAFE Index Fund. Of the total EAFE Index Fund holdings at June 30, 1997, \$18 million was invested in futures. Futures were also used by external money managers. Approximately \$176 million of external money managers' holdings were invested in futures at June 30, 1997.

**Options** — STRS writes option contracts to enhance the return on the stock portfolio. In exchange for a premium, STRS gives the option buyer the right to buy or sell the underlying stock. Options are also purchased to "cover" existing written open option positions. The option contract specifies the stock price and the expiration date of the option.

## 9. STATE APPROPRIATIONS

From time to time, the legislature of the state has increased benefit payments to retirees. In certain instances, concurrent with the passage of such legislation, a provision for payment of these benefits through future state appropriations has been made.

STRS received approximately \$2,377,000 from the state for increased benefits paid for the year ended June 30, 1997. Funding for these increased benefits is on a pay-as-you-go basis by the state.

## 10. PENSION PLAN

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

Eligible employees are entitled to a retirement benefit, payable monthly for life, equal to 2.1% 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 accredited service, and at age 60 with a minimum of 5 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 statute.

Employees covered by PERS are required by Ohio statute to contribute 8.5% of their salary to the plan. STRS is required by the same statute to contribute 13.55% of covered payroll; 8.44% is the portion used to fund pension obligations, with the remainder used to fund the health care program for

retirees. The required employer contributions for the current year and the two preceding years are as follows:

Year Ended June 30	Annual Required Contributions	Percentage Contributed
1997	\$2,727,000	100%
1996	\$2,303,000	100%
1995	\$2,022,000	100%

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

In addition to pension benefits, PERS provides postemployment health care benefits, in accordance with state statutes, to all employees who retire with 10 or more years of qualifying Ohio service credit and to disability recipients. At Dec. 31, 1996, the plan had approximately 491,000 participants.

A portion of each employer's contribution to PERS is set aside for the advanced funding of postemployment health care. Of the 13.55% of employee payroll contributed by STRS to PERS, 5.11%, or approximately \$1,029,000, was the portion used to fund health care. Statutory rates equal the actuarially determined contribution requirements.

## 11. REQUIRED SUPPLEMENTAL SCHEDULES AND ADDITIONAL INFORMATION

The schedule of funding progress, the schedule of employer contributions and the notes to the trend data are required supplemental schedules. These schedules are presented on Page 30 and are designed to provide information about STRS' progress in accumulating sufficient assets to pay benefits when due.

The schedule of administrative expenses and the schedule of investment expenses are included as additional information. These schedules are presented on Pages 31-32.

(29)

# SCHEDULE OF FUNDING PROGRESS

For the years ended June 30, 1992-1997  
(Dollar Amounts in Thousands)

Valuation Year	Actuarial Accrued Liabilities (AAL)*	Valuation Assets*	Unfunded Actuarial Accrued Liability (UAAL)*	Ratio of Assets to AAL	Active Member Payroll	UAAL as % of Active Member Payroll
1997	\$44,704,237	\$36,883,739	\$7,820,498	82.5%	\$6,805,797	115%
1996	41,128,062	32,930,801	8,197,261	80.1%	6,553,642	125%
1995	38,483,947	29,913,449	8,570,498	77.7%	6,327,049	135%
1994	36,042,209	27,713,810	8,328,399	76.9%	6,060,828	137%
1993	33,738,228	25,508,699	8,229,529	75.6%	5,816,209	141%
1992	30,403,865	22,139,970	8,263,895	72.8%	5,598,238	148%

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

# SCHEDULE OF EMPLOYER CONTRIBUTIONS

For the years ended June 30, 1992-1997  
(Dollar Amounts in Thousands)

Year Ended June 30	Annual Required Contributions*	Percentage Contributed
1997	\$816,696	100%
1996	786,437	100%
1995	759,246	100%
1994	727,299	100%
1993	697,945	100%
1992	671,789	100%

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

# NOTES TO THE TREND DATA

The information presented in the required supplemental schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation date	July 1, 1997
Actuarial cost method	Entry Age
Amortization method	Level percent closed
Remaining amortization period	26.9 years
Asset valuation method	4-year smoothed market with 91%/109% corridor
Actuarial assumptions:	
Investments rate of return	7.50%
Projected salary increases	9.25% at age 20 to 3.25% at age 65
Inflation assumption	3.75%
Cost-of-living adjustments	3% simple

# SCHEDULE OF ADMINISTRATIVE EXPENSES

For the year ended June 30, 1997

## PERSONNEL

Salaries and wages	\$13,118,509
Retirement contributions	1,778,448
Benefits	2,169,800
Total personnel	<u>17,066,757</u>

## PROFESSIONAL AND TECHNICAL SERVICES

Computer support services	6,277,475
Health care services	619,207
Actuary	324,660
Auditing	65,403
Legal	103,482
Total professional and technical services	<u>7,390,227</u>

## COMMUNICATIONS

Postage and courier services	1,449,268
Printing and supplies	2,330,544
Telephone	472,727
Total communications	<u>4,252,539</u>

## OTHER EXPENSES

Equipment repairs and maintenance	884,469
Building utilities and maintenance	770,483
Transportation and travel	467,541
Equipment rental	2,759,428
Depreciation	4,301,176
Insurance	306,769
Memberships and subscriptions	89,963
Retirement study commission	240,076
Miscellaneous	855,100
Loss on sale of assets	3,499,736
Total other expenses	<u>14,174,741</u>

## TOTAL ADMINISTRATIVE EXPENSES

\$42,884,264

NOTE: Above amounts do not include Investment Department administrative expenses which are deducted from income.

(31)



# SCHEDULE OF INVESTMENT EXPENSES

For the year ended June 30, 1997

## PERSONNEL

Salaries and wages	\$ 6,975,661
Retirement contributions	949,017
Benefits	<u>573,680</u>
Total personnel	<u>8,498,358</u>

## PROFESSIONAL AND TECHNICAL SERVICES

Legal	15,378
Investment research	143,411
Real estate advisor	322,459
Investment advisors	490,585
Banking fees	<u>2,021,134</u>
Total professional and technical services	<u>2,992,967</u>

## OTHER EXPENSES

Printing and supplies	19,978
Equipment repairs and maintenance	6,866
Building utilities and maintenance	468,119
Travel	481,294
Equipment rental	116,168
Memberships and subscriptions	82,594
Miscellaneous	<u>55,688</u>
Total other expenses	<u>1,230,707</u>

{32}

## TOTAL INVESTMENT EXPENSES

\$12,722,032

## INVESTMENT REVIEW

For the fiscal year July 1, 1996 through June 30, 1997

### ECONOMIC ACTIVITY STRENGTHENS DURING FISCAL YEAR; INFLATION REMAINS DORMANT

Significant economic growth during the middle quarters of fiscal year 1997 helped push real gross domestic product (GDP) up 3.4% for the entire year — an improvement on the fiscal 1996 growth rate of 3.2% and the second-highest rate of growth in the past eight fiscal years. The growth was led by a buildup of business inventories but was partially offset by slower residential investment and a strong increase in import growth that deteriorated foreign trade. Personal consumption and nonresidential investment continued to add significantly to real GDP during the fiscal year.

Real personal spending grew 2.5% during fiscal 1997, down modestly from the 2.8% pace recorded during fiscal 1996. Both growth rates exceeded the consensus belief for long-term sustainable economic activity. Meanwhile, nonresidential investment grew by 10.2% versus the 7.7% growth during the prior fiscal year. This heady growth rate was led by a 12.5% advance in capital equipment investment, particularly from spending on computers, computer-related products and transportation equipment.

Business inventories grew significantly in the second half of fiscal 1997 in response to robust consumer spending in the middle two quarters. However, residential investment turned negative in the first half of the year because of higher interest rates, but contributed to economic activity in the second half as a result of generally lower rates and improving incomes. Real net exports took a bite out of economic growth because of strong import growth that exceeded improving export activity. Imports grew 14.5%, up from 7.8% in fiscal 1996, while exports expanded to 13.6% growth from 9% the year before. Finally, federal, state and local government expenditures grew only marginally as the federal budget balance improved substantially.

Interest rates fluctuated within a relatively narrow band during the year. The Federal Reserve had kept monetary policy steady for nearly six months when fiscal 1997 began. It then remained on hold for nearly eight more months until robust signs of economic growth led to a marginal quarter-of-a-percentage point increase in the federal funds rate in March. The federal funds rate remained at 5.5% through the end of the fiscal year. Other short-term rates, too, moved within the narrow band established by the federal funds rate.

Long-term interest rates began the year above 7%, fell to 6.5% near the end of the first half, then rebounded again to higher than 7% before declining toward 6.75% in the final few months of the fiscal year. Changes in mortgage rates closely followed movements in long-term Treasury rates. The 30-year fixed-rate mortgage began the year at 8.25% and finished just above 7.5%.

Consumer prices decelerated modestly in the first half of the fiscal year, but slowed significantly in the second half. In fiscal 1996, consumer prices grew 2.8%. This growth fell to 2.3% for fiscal 1997. Broader price measures, such as the gross domestic product price index, held steady at a 2.2% growth rate in fiscal 1997.

### FIXED-INCOME INVESTMENTS RETURN EXCEEDINGLY WELL

Interest rates track closely with market expectations for economic growth and inflation. Rates generally rise when expectations for growth and inflation increase and fall when these expectations decrease. Economic growth was strong entering fiscal year 1997. As a result, inflation fears were high and long-term interest rates were above 7%. At the beginning of the fiscal year, economic growth slowed significantly and inflation fears subsided. Interest rates gradually declined — falling below 6.5% near the end of the fiscal year's first half.

{ 33 }

The lower long-term rates stimulated the economy, leading to more signs of robust growth. Interest rates, in turn, rose throughout much of the second half of the fiscal year, heading above 7% for a short time. The Federal Reserve increased short-term rates in March to slow the economic growth they feared would spark inflation. Instead, at the end of the fiscal year inflation was growing at a slower pace, allowing long-term rates to fall toward 6.75%.

The STRS fixed-income portfolio's duration at the fiscal year start was significantly longer than the market's duration. Duration is a measure of risk, with the market's duration represented as 100%. The fixed-income portfolio began the year at a relative duration of 115%, expecting to benefit from a decline in interest rates. During the first half of the fiscal year, interest rates fell and bond prices rose. This provided STRS an opportunity to increase returns relative to the benchmark. In the process, portfolio duration was reduced to 102%.

At the beginning of the fiscal year's second half, rates rose and bond prices declined. STRS extended its portfolio duration to 113%. Falling rates in the final quarter of fiscal 1997 created another opportunity to add relative performance, and the portfolio ended the year with a duration of 106%.

The net results of trading during the fiscal year decreased the duration of the portfolio while maintaining a quality level of AA+. The share of the total fund allocated to this area was reduced to 25% at market from 34% at the end of the previous fiscal year. The single-family whole loan and project-loan mortgage portfolios were sold with the proceeds going into international equity securities. Using book value of sales and maturities as a measure, portfolio turnover declined to 54% from 56% the prior year.

Performance measurement follows the industry convention of reporting on a calendar-year basis. The Lehman Brothers

aggregate bond index closely resembles the universe of investment alternatives for the STRS fixed-income portfolio and is used as the benchmark for relative performance. For calendar year 1996, this benchmark returned 3.63% versus the STRS fixed-income portfolio's return of 4.12%. The shifting of the portfolio's duration added performance relative to the index. Since interest rates rose for much of the calendar year and prices declined over the period, the total return was less than the coupon return. A more complete report of STRS performance appears on Page 50.

### DOMESTIC STOCK MARKET CONTINUES TO ROAR

In fiscal 1997, the Standard & Poor's composite index of 500 stocks (S&P 500) had a total return of 34.7%. It was the third straight fiscal year in which the stock market provided returns well in excess of more typical long-term returns of 8% to 10%. The equity market continued the long and strong advance that began in 1995 because the U.S. economy generated robust growth amid few signs of inflationary pressures. This favorable environment during fiscal 1997 enabled the financial, health care and technology sectors to be among the best performing sectors. In addition, the common stocks of many large multinational companies had especially strong performances. These companies achieved strong earnings growth that were coupled with expansions of their price-to-earnings multiples and resulted in superior financial returns.

A few of the largest component companies of the S&P 500 had exceptional price appreciation during both calendar 1996 and fiscal 1997. During these periods, the S&P 500 handily outperformed most actively managed portfolios and equity indexes that included wider groups of stocks. STRS performance reports follow the industry convention of reporting on a calendar-year basis. During the 1996 calendar year, STRS equities returned 17.80% while the S&P

500 grew 22.96%. The STRS domestic equity portfolio returns over calendar 1996 appear on Page 50.

To lessen the risk inherent in relying on a single approach of stock portfolio management, STRS has divided its equity holdings into groups that use complementary approaches to stock selection.

The valuation portfolio makes use of computer-driven models and fundamental analysis to select stocks that appear inexpensive. The industry index portfolio concentrates on individual stock selection by the analysts within the confines of the S&P 500 industry weights. The growth portfolio selects stocks based principally on a company's ability to grow earnings in excess of economic growth. The small/mid-size company portfolio pursues companies that are smaller than most found in the major indexes. The S&P 500 passive portfolio mimics the S&P 500 index by matching the names and weightings to get large-company market exposure.

During the second half of the fiscal year, two new passive portfolios were added. The S&P 400 and S&P 600 passive portfolios enable STRS to gain equity exposure to the mid-size and smallest public companies that are included in their respective indexes.

Domestic equities accounted for more than \$18 billion, or 43%, of total STRS assets at the end of fiscal 1997. The top 20 STRS common stock holdings are shown in the schedule of largest investment holdings starting on Page 53. Equity investment results are on Page 50.

#### INTERNATIONAL INVESTMENTS PERFORM BETTER THAN BENCHMARK

The international equity markets experienced good performance in fiscal 1997, although they lagged the U.S. equity markets for the third consecutive year. The STRS hybrid benchmark index, consisting of 60% of the MSCI Europe Australia Far East (EAFE) index for developed markets and 40% of the MSCI Emerging Markets Free (EMF) index, rose 14.03% for the fiscal year because of outstanding performance in the major European markets and in Latin America. The performance of the STRS international equities portfolio surpassed the benchmark performance in calendar year 1996, rising by 6.96% while the benchmark rose 6.13%. Performance results of the international equities portfolio on a calendar-year basis are on Page 50.

The international portfolio grew considerably during fiscal 1997 after legislative changes in early 1997 allowed for greater exposure to international markets. It will continue to grow into fiscal 1998 until it reaches a target of 20% of total assets. Of that 20%, 12% will be represented by developed-market investments (up from approximately 5% in fiscal 1996) and 8% will be invested in emerging markets (also up from 5% in 1996). No major changes are planned to the international allocations in fiscal 1998. As in fiscal 1997, approximately half of the international assets will remain with outside managers and half will be managed internally.

### REAL ESTATE RETURNS MATCH STRONG BENCHMARK RESULTS

The real estate cycle continues to mature with the rental-space market in balance but investor demand outstripping supply, resulting in rapidly escalating prices. The most important trend underway is the growth and consolidation of publicly traded real estate companies — the same companies who are among the most aggressive bidders for properties. STRS' outlook continues to be cautiously optimistic. Even though it is increasingly difficult to find reasonably priced properties, space absorption is strong and new construction is still moderate in most markets.

Returns for both the STRS portfolio and the industry as a whole have begun to escalate as increasing rental rates are driving both income and value appreciation. The fiscal year return for the portfolio was equal to the NCREIF property index at 10.7%. During calendar-year 1996, the STRS real estate portfolio grew 8.9%, while the benchmark NCREIF index rose 10.9%. Net assets increased more than \$800 million during the 12 months. This activity was just enough to keep pace with the growth of the overall portfolio, leaving real estate at 8.2% of total plan assets.

### TOTAL-FUND RETURNS AGAIN EXCEED LONG-TERM GOALS

The annualized rate of return for the total STRS fund was 16.79% during fiscal 1997. During calendar year 1996, the STRS fund returned 10.21% (STRS performance is more appropriately calculated on a calendar-year basis for adequate comparison with other performance publications). The rate of

return for the five-year period ending Dec. 31, 1996, was 10.4%, well above the 8% absolute long-term return goal and above the relative hybrid index of industry benchmarks which rose by 10.33%. Over the past three calendar years, the STRS fund returned 10.82%, while the hybrid index of industry benchmarks rose 12.27%.

The relative performance of STRS portfolios compared to industry benchmarks also continued to fare well. For the five years ending in 1996, the equities portfolio grew by an annualized 14.04%, while the S&P 500 grew by 15.23%. The relatively new international portfolio outgained its hybrid EAFE/EMF benchmark for a third straight year. The STRS international portfolio returned an annualized 6.66% over the past three calendar years, while the benchmark grew 5.77%. Fixed-income investments continue to exceed the Lehman bond index over the five-year and three-year periods. During the past five years, fixed-income investments have returned 7.82% while the benchmark rose 7.04%. Over the past three years, fixed-income investments grew 7.13% versus the benchmark's 6.02%. Returns from real estate investments outpaced the benchmark over the past five years by nearly two percentage points, growing at an annualized 6.02% versus the benchmark increase of 4.22%.

The total return on STRS investment assets over the preceding five-year period exceeded the rate of inflation by more than eight percentage points. Over the three-year period, the return on STRS investment assets exceeded the inflation rate by eight-and-three-quarters percentage points.

# INVESTMENT OBJECTIVE AND POLICY

(Effective Oct. 17, 1997)

## GENERAL POLICY STATEMENT

### Introduction

The State Teachers Retirement System of Ohio (STRS) 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 (Revised Code). Section 3307.15 of the 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 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 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 (T) of the Revised Code defines a fiduciary, and Sections 3307.14, 3307.15 and 3307.18 of the 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 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 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. Recommend long-term investment objectives and review of these objectives at least annually.
2. Monitor performance of the investment program.
3. Counsel with in-house staff, executive director or members of the board.
4. Participate in bimonthly meetings of the investment committee.
5. Review and advise on detailed investment criteria for all investments. Review of annual investment plan.
6. Perform other duties as may be provided by contract.

### Executive Director

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

(37)

**Deputy Executive Director of Investments**  
The deputy executive director of Investments shall have the following responsibilities:

1. Supervise activities of the in-house staff.
2. In cooperation with the investment advisor and the executive director, formulate an annual investment plan.
3. Make recommendations to the executive director and board concerning periodic modification of the annual investment plan.
4. Assure that the portfolios comply with established parameters and risk levels.
5. Supervise execution of orders to buy and sell securities (including options) seeking always to maintain reasonable costs for such services.
6. 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

{38}

Asset Class	Asset Mix General Policy Ranges at Market	Average Long-Term Weightings at Market
Cash Equivalents	0% - 6%	2%
Fixed Income	20% - 35%	23%
Domestic Equities	40% - 50%	45%
International	15% - 24%	20%
Real Estate	6% - 12%	9%
Alternative Investments	0% - 2%	1%
		100%
Asset Class	Total Return Objective	Benchmarks
Cash Equivalents	4% - 5%	90-day Treasury Bills
Fixed Income	6% - 7%	Lehman Aggregate
Domestic Equities	8% - 10%	S & P 500
International	8% - 10%	60% EAFE/40% EMF
Real Estate	8% - 9%	NCREIF Adjusted
Alternative Investments	14% - 16%	Absolute Return

objective of 8% per annum. This is a long-term objective and this total return expectation assumes an average inflation rate of 3.75%. The objective should be pursued consistent with prudent management.

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

Given the expected contribution income, forecast of benefit obligations and acceptable actuarial asset value smoothing techniques, the risk level of the pension fund, meaning the tolerance for fluctuations in market value of the total investment fund, can match that of the stock market as a whole. 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 on the previous page. The investment staff has the authority to operate within the policy ranges for each asset class. The average long-term weights were derived from asset allocation studies, 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 below based upon short- and intermediate-term expected returns of each asset.

## OBJECTIVES, GUIDELINES AND POLICIES: FIXED INCOME

### BONDS

#### Objective

For the publicly-traded bond sector of the portfolio, a total return of 6% to 7%, averaged over five to 10 years, is desired. Should conditions change in the bond market so as to make this objective unattainable without undue risk, it will be the responsibility of the investment advisor to recommend to the board a revised figure.

The low expected return, relative to the board goal of 8% overall, is acceptable in light of diversification benefits bonds bring to the portfolio asset mix.

#### Restrictions

It is the responsibility of the investment advisor to review and recommend changes in specific criteria for bond investments and to review such criteria at least annually with the investment committee. The purpose of the criteria is to provide assets of reasonable quality and marketability. It is not a substitute for prudent portfolio management nor will it ensure superior performance. Risks for which the investor is not compensated are to be avoided.

An average rating of A should be the minimum maintained in the publicly-traded sector of the bond portfolio, considering obligations of the U.S. Treasury and related agencies as Aaa+. All bond, note, pass-through security, trust certificate, trust preferred, debenture, foreign-related or medium-term note purchases shall:

1. Be issues or shelf registrations of at least \$50 million par value.
2. Be made with the intent of creating positions of at least \$1 million.
3. Not exceed 15% of any one issue except for U.S. Treasury, related agencies and other U.S. government guaranteed securities.
4. Not be more than 1% of the total plan assets if they are not rated and below BBB-rated securities.

The publicly traded bond sector of the portfolio will have a volatility level between 80% and 150% of the Lehman Aggregate Bond Index.

In managing the fixed-income portfolio, up to 5% of total fund market value in derivatives may be used as long as the underlying security is suitable for the portfolio. Treasury note and Treasury bond futures, options thereon, or over-the-counter (OTC) options on Treasury securities may be used to manage the volatility of the fixed-income portfolio. Use of such assets must be of a hedging or positioning nature rather than speculative. The use of leverage to enhance a derivative's effect is prohibited. Any



## INVESTMENT OBJECTIVE AND POLICY (CONT.)

security whose value is derived from an instrument which is not permitted under this policy for the fixed-income portfolio is prohibited. Mortgage pass-through securities that receive pro-rated principal and interest payments and also asset-backed securities will not be considered derivative investments for the purpose of this Policy and Objective Statement.

Variations of fixed-income exchanges and possible environments under which they can be considered are limitless. General criteria may be too restrictive to allow portfolio enrichment and not specific enough to avoid poor judgment. However, the following are required:

1. All bond exchanges are to be documented by the investment staff at time of execution as to specific details of price and yield and objectives of the individual exchange.
2. The investment advisor will review these exchanges periodically with the staff as to reasonableness and support of the overall investment plan and report to the board thereon.
3. The annual turnover ceiling shall be 150% of marketable bond assets. Turnover is defined as the total book value of sales and maturities as a percent of beginning book value.
4. A portfolio measurement will be made showing incremental advantage or disadvantage obtained through exchange activity.

Negotiated private placements shall be limited to 15% of assets invested in bonds and shall be purchased only when there is significant additional return (defined as approximately 50 basis points over the current yield rate of publicly traded bonds of similar quality) as an offset for the limited marketability of privately placed bonds.

The following foreign-related credits may be purchased under this section provided they do not exceed 5% of total assets:

1. Sovereign credits, Yankee bonds or Eurobonds rated A- or better.
2. State of Israel bonds (not rated) not to exceed \$10 million.
3. Total mortgages shall be limited to 15% of total assets. Mortgage securities issued by the Government National Mortgage Association (GNMA), the Federal Home Loan Mortgage Corporation (FHLMC) and the Federal National Mortgage Association (FNMA) shall be the primary emphasis.

Any collateralized mortgage obligation (CMO) or structured note whose price (under analysis at time of consideration) would change by more than 30% under a parallel shift in the yield curve of plus or minus 200 basis points is prohibited. A CMO that has an expected negative duration is also prohibited. Any CMO that conforms with the volatility levels described above is considered an appropriate investment for the mortgage portfolio and is not defined as a derivative.

### OBJECTIVES, GUIDELINES AND POLICIES: LIQUIDITY RESERVES

#### Objectives

It is the board's policy to hold some liquidity reserves to provide protection against expected downward market movements and to assist in reaching the overall return objectives.

#### Restrictions

Under normal circumstances, a reserve of 6% of the value of the total fund shall be considered the maximum limit. It will be the responsibility of the investment advisor, together with the deputy executive director of Investments, to recommend any modification of this position.

Positions should not exceed \$75 million in one obligor of commercial paper, certificates of deposit, or bankers' acceptances.

Investments may be made in commercial paper, Treasury obligations, certificates of deposit, bankers' acceptances, short-term investment funds or repurchase agreements, with the responsibility resting with the investment staff as to selection of the specific instrument at any given point in time.

1. Any commercial paper purchased by the system shall have a maturity of not more than 270 days and shall be rated P-1 by Moody's Investors Service, Inc. or A-1 by Standard & Poor's Corporation or an equivalent rating by a major rating service.
2. Certificates of deposit, time deposits, commercial paper and bankers' acceptances shall be purchased on those banks affiliated with the largest 100 U.S. bank holding companies in terms of assets or foreign banks with short-term debt ratings of P-1 or A-1 or an equivalent rating by a major rating service, or from the 20 largest bank holding companies in Ohio.

Repurchase agreements shall be collateralized by U.S. Treasury, related agency, or AAA asset-backed securities with a market value in excess of funds advanced.

## OBJECTIVES, GUIDELINES AND POLICIES: DOMESTIC EQUITIES

### Objectives

For the domestic equity sector of the portfolio, a total return objective of 8% to 10%, averaged over a period of five years, is desired. Should the investment advisor believe attainment of this objective at anytime 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 non-market risk by being diversified.

### Restrictions

It is the board's policy to maintain an investment in domestic equities in the range of 40% to 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. The use of leverage to enhance a derivative's effect 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 can not exceed 10% of total STRS 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 follow STRS 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 OBJECTIVE AND POLICY (CONT.)

DOMESTIC EQUITY PORTFOLIO ALLOCATIONS (AS A PERCENTAGE OF TOTAL ASSETS)			
Portfolio Name	Range % of Assets		Average Long-Term Weighting
	Low	High	
<b>Actively Managed</b>			
Small/Medium Companies	1%	5%	3%
Growth	5%	15%	7%
Valuation	5%	15%	<u>10%</u>
Subtotal Active			20%
<b>Core/Passively Managed</b>			
Industry Index	5%	15%	12%
S&P 500 Index	5%	15%	10%
S&P 400 Index	0%	5%	1%
S&P 600 Index	0%	5%	<u>2%</u>
Subtotal Core/Passive			25%
<b>Total Equities</b>	<b>40%</b>	<b>50%</b>	<b>45%</b>

investment advisor/consultant must review each equity portfolio to measure the degree of compliance with STRS' established parameters and risk levels. The investment advisor/consultant must report the results to the board at least annually.

**OBJECTIVES, GUIDELINES AND POLICIES: INTERNATIONAL INVESTMENTS**

**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% to 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% to 24%. The staff will select and the board 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 12% developed countries and 8% emerging countries. The staff may deviate from this weighting by plus or minus 2%. The neutral position for currencies will be 50% hedged for the developed markets. Currencies will be hedged at the discretion of the manager. The internally-managed portfolio will generally hedge

{42}

currencies in excess of the 50% neutral position only in cases of extreme under- or overvaluation.

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 to enhance a derivative's effect 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 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 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 investments will not normally exceed 2% 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 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 of 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 employee, that individual must sign a letter of agreement with the State Teachers Retirement Board indicating that, should the staff member terminate employment at STRS, resignation from any and all company board seats would occur if the State Teachers Retirement Board so directs. The STRS employee 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 the investment portfolio and to provide one means of insulating assets of the system against the effects of inflation. Consequently, real estate investments will be acquired to provide a real return commensurate with investment risk, coupled with an annual increase in cash flow. Cash-on-cash yield at purchase shall be a key objective of the portfolio with the opportunity for increasing cash flows during ownership. Long-term appreciation shall also be a factor in determining real estate selection, but shall be secondary to cash-on-cash yield and arrangements for securing increased cash flows for the dominant

## INVESTMENT OBJECTIVE AND POLICY (CONT.)

portion of the portfolio. A total return objective of 8% to 9% per year over a five period is expected on these assets.

### Restrictions

Real estate investments shall be not more than 12% of total assets. It is the board's policy to maintain an investment in real estate in the range of 6% to 12% of assets.

### Diversification:

1. **Investment type:** High-quality investments that are relatively general-purpose will provide both investment security and maximum equity growth potential. Six such types are:
  - a. Office buildings
  - b. Retail properties
  - c. Distribution centers, warehouses and industrial parks
  - d. Multi-family housing
  - e. Real estate securities
  - f. ~~Specialty (including but not limited to, timberland, farmland, senior living, hotels and international real estate).~~
2. **Geographical concentration:** The maximum value for any one of the eight divisions as defined by the National Council Of Real Estate Investment Fiduciaries will generally be 25% of the real estate portfolio. Two exceptions will be the East North Central Division which includes Ohio and the Pacific Division which contains a significant portion of the NCREIF property index as well as Pacific Northwest Timber.

These sectors will have a 35% value limit. When properties located within Ohio offer quality, return and safety comparable to properties outside Ohio, the Ohio investment will be given preference. The investment staff shall pursue an active plan to achieve this objective.

3. **Financing structure:** Real estate investments will include equity-type structures such as direct ownership, participating mortgages, joint ventures, co-ownership, externally managed accounts, real estate securities and derivatives. Real estate securities will be limited to 25% of the real estate portfolio. Derivatives may be used in the management of the real estate portfolio. All 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 assets. The staff will search for innovative ways to ~~approach structuring new real estate~~ investments to enhance STRS' total investment strength.
4. **Size guidelines:** The minimum size for real estate investments will be generally: \$10 million for properties within Ohio and \$15 million for properties outside Ohio. Exceptions to this guideline are appropriate in regions where STRS has an existing concentration of assets or is actively building a concentration. The maximum investment amount for an individual property will be limited to approximately 1% of total STRS assets.

## PROCEDURES

### Due Diligence

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

1. A building and systems' evaluation by a qualified engineering firm if an existing building.
2. A review of plans and specifications by an architectural firm in the case of developmental properties.
3. An appraisal by an independent third-party appraisal firm.
4. An environmental review by a qualified consultant in accordance with the Environmental Policy described below.
5. A financial analysis including, but not limited to, holding period, internal rate of return, initial yield and sensitivity to critical assumptions.
6. Legal review and approval of appropriate documents.

Real estate investments will be subject to the requirements of an environmental policy as reviewed by the board's real estate consultant. The policy will ensure that STRS will be prudent and diligent in its investments so as not to invest in property on which hazardous materials are present on or so near the property in such form and quantities as to cause STRS concern about its potentially significant legal or economic liability. The policy will also address potential investments in terms of wetlands, endangered species, or any other environmental issue that would potentially have a material impact on the value of the property or STRS liability.

### Valuations

Portfolio performance will be calculated on a quarterly basis, while individual properties will be valued annually. A combination of

internal valuations and external appraisals will be used on a rotating basis. The sale-leaseback portion of the portfolio will be valued on an internal basis with a random sample of external appraisals each year to validate the internal methodology. Each equity property will be valued each year, with an independent external appraisal no less than every third year. The methodology used in the internal valuations shall be reviewed by the board's real estate consultant.

### 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 75% of the NCREIF Property Index, 10% of the NCREIF Timberland Index, 5% of the NCREIF Farmland Index and 10% of the NAREIT Equity Index.

### 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. On a semiannual basis, review and comment on the annual real estate strategy prepared by the investment staff.
3. Review, on an annual basis, the five-year real estate strategy prepared by the staff.
4. Review biennially, the general internal management of real estate and its efficiency, with the objective of completing an overall operational audit.
5. Review certain predefined property-specific transactions.

## INVESTMENT OBJECTIVE AND POLICY (CONT.)

### Real Estate Investment Committee (REIC)

A committee composed of a combination of internal staff and external industry professionals will review proposed transactions before recommendation to the deputy executive director of Investments and the executive director. Transactions to be reviewed by the REIC include new acquisitions, dispositions from the existing portfolio and significant modifications in existing deal structures. The following transactions will not be subject to REIC review prior to executive director approval:

1. Ancillary purchases, sales, capital expenditures or exchanges valued at less than 20% of the total property value;
2. Public real estate securities provided the allocation limit in the "restrictions" section is met;
3. Actions allowed under existing investment documents (e.g., conversion options, loan prepayments, buy-sell agreements, etc.);
4. Sales of individual sale-leaseback properties;
5. Temporary mortgage restructurings, which limit the restructuring to no more than four years and revert back to original terms;
6. Settlement of actual or potential real estate litigation.

### Board Review

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

1. Investment objective and policy;
2. Long-term real estate strategy;
3. Annual investment plan;
4. Individual transactions outside policy and/or strategy;
5. Monthly investment activity reports;
6. Semiannual performance reports from the consultant.

## OBJECTIVES, GUIDELINES AND POLICIES: PROCEDURES

### Long-term Objectives

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

### Annual Investment Plan

By January of each calendar year, or at such other time as the board may designate, an annual investment plan shall be proposed to the investment committee. This proposed plan shall be based upon recommendations of the Investment Department and the investment consultants, with approval of the executive director. The annual investment plan shall be based on:

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. Other factors as 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 shall be furnished with the following:

**Monthly Reporting:**

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) Purchases and sales during the month
    - (5) Portfolio diversification — past, present and planned
    - (6) Status of special projects
  - b. International
  - c. Fixed income
    - (1) Summary of fixed-income markets
    - (2) Summary of trading markets
    - (3) Exchange summary
  - d. Real estate
  - e. Cash flow
  - f. Performance

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 Reporting:**

1. Appropriate commentary and reports on the progress with the annual investment plan.

**Semiannual Reporting:**

1. 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 all outside managers will use them as guides

in meeting the fiduciary responsibility of the State Teachers Retirement Board in voting common stock proxies. Common stock proxies may be executed by the deputy executive director of Administration, the deputy executive director of Investments or outside money managers.

**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 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.



---

## INVESTMENT OBJECTIVE AND POLICY (CONT.)

---

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

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.

### **Security Lending**

The board may operate a security lending program to enhance the income of the fund. The program must be operated by a bank trustee under the custodial supervision 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 cash equivalents, equity, fixed income, real estate 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 Aggregate Bond Index and the GDP Deflator. The primary time period for such comparisons shall be three years, although one-, five- and 10-year comparisons shall also be examined.

The domestic equity portfolio shall be compared against the Standard & Poor's 500 Average and the SEI State Plan Median Fund. 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 75% of the NCREIF Property Index, 10% of the NCREIF Timberland Index, 5% of the NCREIF Farmland Index and 10% of the NAREIT Equity 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 60% of the Morgan Stanley's Capital Markets Europe Australia Far East Index (EAFE) 50% hedged and 40% 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 closing price on the principal registered stock exchange for all common and preferred stocks so listed.
2. The last sale or, if not available, final bid 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 closing prices on the appropriate stock exchange.
6. The most recent valuation for venture capital and alternative investments.
7. Guaranteed mortgages assigned an estimated value based upon the most recent posted rate for new Veteran's Administration or Federal Housing Administration guaranteed mortgages.
8. International investments are valued by the subcustodian using relevant closing market prices and exchange rates.

# INVESTMENT PERFORMANCE

(Total returns, annualized)

1-YEAR RETURNS (1996)			
ASSET CATEGORY	STRS RETURN	INDEX NAME	INDEX RETURN
EQUITIES	17.80%	Standard & Poor 500 Cap Weighted	22.96%
		Standard & Poor 500 Equal Weighted	19.01%
		SEI Public Median*	21.50%
INTERNATIONAL	6.96%	EAFE/Emerging	6.13%
FIXED INCOME	4.12%	Lehman Aggregate	3.63%
REAL ESTATE	8.92%	Real Estate Composite**	10.92%
TOTAL FUND	10.21%	S&P/Lehman/RE/International Inflation (GDP Deflator) SEI Public Median*	13.24% 1.75% 12.20%

3-YEAR RETURNS (1994-1996)			
ASSET CATEGORY	STRS RETURN	INDEX NAME	INDEX RETURN
EQUITIES	15.43%	Standard & Poor 500 Cap Weighted	19.67%
		Standard & Poor 500 Equal Weighted	16.36%
		SEI Public Median*	17.20%
INTERNATIONAL	6.66%	EAFE/Emerging	5.77%
FIXED INCOME	7.13%	Lehman Aggregate	6.02%
REAL ESTATE	8.31%	Real Estate Composite**	8.26%
TOTAL FUND	10.82%	S&P/Lehman/RE/International Inflation (GDP Deflator) SEI Public Median*	12.27% 2.06% 11.50%

5-YEAR RETURNS (1992-1996)			
ASSET CATEGORY	STRS RETURN	INDEX NAME	INDEX RETURN
EQUITIES	14.04%	Standard & Poor 500 Cap Weighted	15.23%
		Standard & Poor 500 Equal Weighted	15.62%
		SEI Public Median*	14.80%
FIXED INCOME	7.82%	Lehman Aggregate	7.04%
REAL ESTATE	6.02%	Real Estate Composite**	4.22%
TOTAL FUND	10.40%	S&P/Lehman/RE/International Inflation (GDP Deflator) SEI Public Median*	10.33% 2.23% 10.60%

## STRS LONG-TERM POLICY OBJECTIVE (5 YEARS)

EQUITIES: 8%-10%	FIXED INCOME: 6%-7%	REAL ESTATE: 8%-9%	TOTAL FUND: 8%
------------------	---------------------	--------------------	----------------

Investment performance is in conformance with the presentation standards of the Association for Investment Management and Research (AIMR).

\* SEI Public Funds consist of 14 funds with a median size of \$4.9 billion. STRS is a \$42 billion fund. The median fund has an average commitment to stocks of 51%.

\*\* The Real Estate Composite benchmarks are calculated using the STRS Composite Index for all periods beginning on or after Jan. 1, 1996, and using only the NCREIF Property Index for all periods before Jan. 1, 1996.

## SUMMARY OF INVESTMENT ASSETS

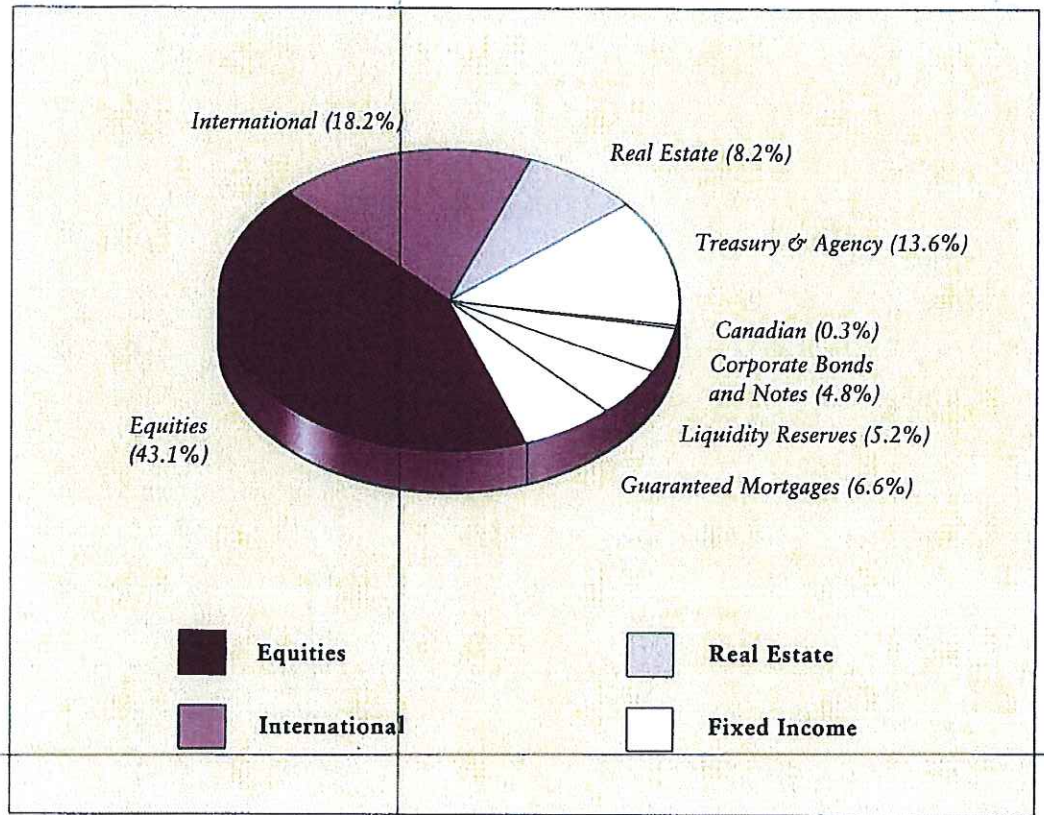
As of June 30, 1997 and 1996  
(Dollar Amounts in Thousands)

	June 30, 1997		June 30, 1996	
	Fair Market Value	%	Fair Market Value	%
<b>SHORT-TERM</b>				
Commercial paper	\$ 2,101,424	5.0%	\$ 2,149,244	6.0%
Government notes	10,000	0.0%	10,000	0.0%
Corporate notes	40,000	0.1%		0.0%
Short-term investment funds	23,033	0.1%		0.0%
Total short-term	2,174,457	5.2%	2,159,244	6.0%
<b>FIXED INCOME</b>				
Guaranteed mortgages	2,780,487	6.6%	4,205,753	11.7%
U.S. government and governmental agencies	5,701,634	13.6%	5,252,176	14.7%
Corporate bonds	1,998,778	4.8%	2,286,050	6.4%
Canadian bonds	106,186	0.3%	430,240	1.2%
Municipal bonds	1,088	0.0%	1,290	0.0%
Total fixed income	10,588,173	25.3%	12,175,509	34.0%
<b>COMMON AND PREFERRED STOCK</b>	18,043,955	43.1%	15,470,291	43.1%
<b>REAL ESTATE</b>				
Participating mortgages	151,425	0.4%	170,616	0.5%
Multitenant properties	1,601,053	3.8%	1,070,639	3.0%
Joint ventures	649,929	1.6%	468,325	1.3%
Sale-leasebacks	216,330	0.5%	229,385	0.6%
Separate accounts	495,887	1.2%	431,148	1.2%
Real estate investment trusts	297,594	0.7%	213,911	0.6%
Other	32,711	0.1%	51,043	0.1%
Total real estate	3,444,929	8.2%	2,635,067	7.4%
<b>INTERNATIONAL</b>	7,606,472	18.2%	3,410,895	9.5%
<b>TOTAL INVESTMENTS</b>	<u>\$41,857,986</u>	<u>100.0%</u>	<u>\$35,851,006</u>	<u>100.0%</u>

Investment asset schedule excludes collateral on loaned securities.

# INVESTMENT DISTRIBUTION

By Market Value as of June 30, 1997



# SCHEDULE OF LARGEST INVESTMENT HOLDINGS

As of June 30, 1997

## COMMON STOCKS – TOP 20 HOLDINGS

	Shares	Market Value
General Electric Company .....	5,485,514	\$356,558,410
Exxon Corporation .....	4,958,558	\$303,711,677
Coca Cola Company .....	3,624,047	\$246,435,196
Merck & Company Inc. ....	2,260,163	\$231,244,057
Microsoft Corporation .....	1,737,472	\$219,573,024
Intel Corporation .....	1,467,996	\$208,180,917
Philip Morris Companies .....	4,311,092	\$190,765,821
Marsh & McLennan Companies .....	2,633,070	\$187,935,358
K Mart Corporation .....	15,141,469	\$184,544,224
FMC Corporation .....	2,296,254	\$182,409,825
USX-Marathon Oil Group .....	6,236,620	\$180,082,402
Proctor & Gamble Company (The) .....	1,269,700	\$179,345,125
Johnson & Johnson .....	2,579,253	\$166,039,412
Digital Equipment Corporation .....	4,468,006	\$158,337,197
Browning-Ferris Industries Inc. ....	4,719,085	\$156,909,576
Pfizer Inc. ....	1,217,931	\$145,542,755
Bristol-Myers Squibb Company .....	1,724,940	\$139,720,140
Sun Company .....	4,213,898	\$130,630,838
Emerson Electric Company .....	2,309,200	\$127,151,480
AMP Inc. ....	2,996,283	\$125,094,815

## INTERNATIONAL INVESTMENTS – TOP 20 HOLDINGS

	Shares	Market Value
Telecomunicacoes Brasileiras (Telebras) .....	318,375	\$48,353,203
Royal Dutch Petroleum .....	681,600	\$35,921,829
Petrobras .....	128,624,500	\$35,845,192
Novartis SA .....	18,483	\$29,529,727
Schroder India .....	2,284,841	\$27,322,128
Fuji Photo Film .....	660,000	\$26,338,296
Smithkline Beecham .....	1,399,304	\$25,752,132
Hitachi Electronics Ltd. ....	2,251,000	\$24,941,828
Soc Natl Elf Aquitaine .....	223,352	\$24,105,469
Telefonos De Mexico ADS .....	493,900	\$23,645,462
Cheung Kong (Holdings) Ltd. ....	2,343,000	\$23,135,140
Mexico Fund Inc. ....	1,182,700	\$22,914,812
Matsushita Electric Industrial Company Ltd. ....	1,118,000	\$22,356,128
Nacional Telefonos De Venezuela .....	513,919	\$22,162,756
Sony Corporation .....	252,700	\$21,853,125
Centrais Electricas Brasileiras .....	37,514,000	\$20,943,719
Telefonaktiebolaget Lm Ericsson .....	519,300	\$20,447,437
Schweizerische Bankverein .....	76,086	\$20,364,347
Sap Ag Non/Vtg .....	97,400	\$20,239,251
Toyota Motor Corporation .....	671,000	\$19,632,790

SCHEDULE OF LARGEST INVESTMENT HOLDINGS (CONT.)

**BONDS – TOP 20 HOLDINGS**

	Par Value	Market Value
U.S. Treasury Bonds, 7.25%, due 8-15-2022, rating AAA .....	\$281,000,000	\$293,380,860
U.S. Treasury Bonds, 8.75%, due 8-15-2020, rating AAA .....	\$228,375,000	\$277,528,151
U.S. Treasury Bonds, 8.75%, due 5-15-2027, rating AAA .....	\$204,690,000	\$246,354,649
U.S. Treasury Bonds, 8.875%, due 2-15-2019, rating AAA .....	\$197,650,000	\$241,913,717
U.S. Treasury Bonds, 6.25%, due 2-15-2003, rating AAA .....	\$209,030,000	\$207,470,636
U.S. Treasury Bonds, 4.75%, due 9-30-1998, rating AAA .....	\$191,075,000	\$188,455,361
U.S. Treasury Bonds, 5.875%, due 11-15-2005, rating AAA .....	\$194,700,000	\$186,296,748
U.S. Treasury Bonds, 5.875%, due 1-31-1999, rating AAA .....	\$176,400,000	\$176,063,076
U.S. Treasury Bonds, 4.75%, due 8-31-1998, rating AAA .....	\$166,175,000	\$164,097,812
U.S. Treasury Bonds, 5.625%, due 2-28-2001, rating AAA .....	\$160,300,000	\$156,749,355
U.S. Treasury Bonds, 7.5%, due 11-15-2006, rating AAA .....	\$141,909,000	\$151,665,243
U.S. Treasury Bonds, 6.25%, due 4-30-2001, rating AAA .....	\$150,000,000	\$149,613,000
FNMA Sr Cap Debs, 0%, due 7-15-2014, rating AAA .....	\$470,000,000	\$142,109,200
U.S. Treasury Bonds, 10.375%, due 11-15-2009, rating AAA .....	\$111,230,000	\$135,174,482
U.S. Treasury Bonds, 7.875%, due 8-15-2001, rating AAA .....	\$125,375,000	\$132,172,832
U.S. Treasury Bonds, 6.375%, due 7-15-1999, rating AAA .....	\$129,525,000	\$130,263,292
U.S. Treasury Bonds, 8%, due 5-15-2001, rating AAA .....	\$109,605,000	\$115,783,433
U.S. Treasury Bonds, 7.25%, due 5-15-2016, rating AAA .....	\$109,380,000	\$114,075,683
U.S. Treasury Tints Bonds, 0%, due 8-15-2009, rating AAA .....	\$250,000,000	\$110,852,500
U.S. Treasury Bonds, 5.75%, due 8-15-2003, rating AAA .....	\$112,720,000	\$108,841,304

**BUCK  
CONSULTANTS**

One North Franklin, Suite 3500  
Chicago, Illinois 60606

November 10, 1997

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) as of July 1, 1997, prepared in accordance with Section 3307.20 of Chapter 3307 of the Ohio Revised Code. The valuation takes into account all of the promised benefits to which members are entitled, including pension and survivor benefits.

The valuation was based on the actuarial assumptions and methods as adopted by the Board of Trustees, including a valuation interest rate of 7-1/2% per annum compounded annually. The assumptions and methods are unchanged from the prior valuation with the exception of the asset valuation method which was modified to a four-year smoothing method from a three-year smoothing method.

#### Assets and Membership Data

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

#### Funding Adequacy

Currently, of the total contribution rate of 23.3% from employers and members, 2% is dedicated to the health care fund with 21.3% remaining for pension and survivor benefits. However, for fiscal 1998, an additional 1-1/2% of the total employer contribution rate will be deposited in the health care fund. The valuation indicates that the contribution rate of 21.3% is sufficient to provide for the payment of the promised pension and survivor benefits, while reducing the funding period of the unfunded accrued liability by 1.5 years from last year's funding period (i.e., reduced from 28.4 years to 26.9 years).

The valuation indicates that for the fiscal year ending June 30, 1997, the actuarial experience of STRS was favorable and generated net actuarial gains of \$1,111 million. The board elected to use \$45.3 million of the actuarial gain to fund supplemental benefit payments to retirees to be made in December 1997. The board elected to spread out the unusual investment gains recently earned by using the remainder of the gain to modify the asset valuation method to a four-year smoothing method.

#### Financial Results and Membership Data

Detailed summaries of the financial results of the valuation and membership data used in preparing the valuation are shown in the valuation report.

To the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally accepted actuarial principles and practice.

Respectfully submitted,



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

Buck Consultants, Inc.  
312 | 332-2285 Fax 312 | 332-5245



# 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 members and retirees.

**Interest Rate:** 7.5% per annum, compounded annually. (Adopted 1993)

**Death After Retirement:** According to the 1983 Group Annuity Mortality Table (Projection 1992-Scale H), with no setback in age for males and one year set forward in age for females. Special mortality tables are used for the period after disability retirement. (Adopted 1993)

**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 3.75% increase as a result of inflation. (Adopted 1996)

**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, 1997, and does not take into account future members. All census and asset data was supplied by the system.

SUPERANNUATION							
Age	Withdrawal	Death	Disability	30 Years Service Retirement	25-29 Years Service Retirement	Under 25 Years Service Retirement	Salary Increase*
<b>MEN</b>							
20	.0684	.0004	—	—	—	—	.0925
30	.0524	.0006	.0003	—	—	—	.0725
40	.0236	.0010	.0009	—	—	—	.0525
50	.0120	.0033	.0054	.2588	—	—	.0405
55	.0122	.0053	.0077	.2381	.0495	—	.0375
60	.0130	.0080	—	.2846	.0675	.0765	.0350
65	.0130	.0136	—	.4399	.3600	.2565	.0325
70	—	.0244	—	.4140	.3600	.3150	.0325
<b>WOMEN</b>							
20	.0453	.0002	—	—	—	—	.0925
30	.0479	.0003	.0005	—	—	—	.0725
40	.0198	.0005	.0012	—	—	—	.0525
50	.0119	.0013	.0048	.2588	—	—	.0405
55	.0101	.0020	.0070	.2588	.0900	—	.0375
60	.0093	.0033	—	.3002	.1305	.1440	.0350
65	.0098	.0055	—	.4658	.3600	.2970	.0325
70	—	.0093	—	.4140	.3150	.2700	.0325

\*Includes an inflation adjustment of 3.75%.

## SCHEDULE OF MEMBER VALUATION DATA

1988-1997

### ACTIVE MEMBERS

Valuation Date	Number	Annualized Salaries (in thousands)	Annual Average Pay	% Increase in Average Pay
1988	152,200	\$4,336,723	\$28,494	5%
1989	153,830	4,624,119	30,060	5%
1990	157,650	4,941,916	31,347	4%
1991	160,012	5,237,832	32,734	4%
1992	162,898	5,509,947	33,825	3%
1993	165,711	5,742,577	34,654	2%
1994	167,770	5,986,084	35,680	3%
1995	166,623	6,110,218	36,671	3%
1996	166,927	6,307,142	37,784	3%
1997	168,943	6,564,294	38,855	3%

## SCHEDULE OF RETIREES/BENEFICIARIES

1988-1997

### RETIREES AND BENEFICIARIES

Valuation Date	Number	Annual Allowances (in thousands)	% Increase in Annual Allowances	Average Annual Allowances
1988	64,957	\$ 713,028	11%	\$10,977
1989	66,453	773,339	8%	11,637
1990	68,739	854,536	10%	12,432
1991	70,583	938,137	10%	13,291
1992	72,599	1,029,952	10%	14,187
1993	74,230	1,120,770	9%	15,099
1994	77,405	1,230,671	10%	15,899
1995	83,136	1,434,032	17%	17,249
1996	86,132	1,579,771	10%	18,341
1997	88,718	1,722,037	9%	19,410

## BENEFIT RECIPIENTS ADDED TO AND REMOVED FROM THE ROLLS

1996-1997

Fiscal Year Ended	Beginning	Additions	Deletions	Ending
1996*	83,136	6,188	3,192	86,132
1997	86,132	5,777	3,191	88,718

\*Data not available for fiscal years before 1996.

# 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 (or loss) for year ended June 30:			
	1997	1996	1995	1994
Investment income. If there is greater investment income than assumed, there is a gain. If less, there is a loss.	\$2,486,916	\$758,473	\$694,274	\$241,010
Payroll growth. If more contributions from payroll growth are received than expected, there is a gain. If less, there is a loss.	(108,545)	(160,110)	113,910	(60,800)
Salary increases. If there are smaller salary increases than assumed, there is a gain. If greater increases, there is a loss.	(275,172)	(126,389)	(97,077)	(137,346)
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.	(272,366)	(51,317)	72,567	31,123
Death after retirement. If retirants live shorter than expected, there is a gain. If retirants live longer than assumed, there is a loss.	(48,397)	95,252	(44,797)	25,239
Gain (or loss) during year from financial experience	1,782,436	515,909	738,877	99,226
Nonrecurring items-adjustment for plan amendments	(671,174)	0	0	(65,099)
Composite gain (or loss) during the year	\$1,111,262	\$515,909	\$738,877	\$ 34,127

## SOLVENCY TEST

1988-1997

*(Dollar Amounts in Thousands)*

Valuation Date	Accrued liability for:			Valuation Assets	Portion of Accrued Liabilities Covered by Valuation Assets		
	(1) Active Member Contributions	(2) Retirees and Beneficiaries	(3) Active Members (Employer Financed Portion)		(1)	(2)	(3)
1988	\$3,153,950	\$ 7,932,553	\$10,286,465	\$14,613,182	100%	100%	34%
1989	3,446,312	8,618,907	11,553,469	16,407,002	100%	100%	38%
1990	3,729,945	9,576,506	12,576,887	18,242,453	100%	100%	39%
1991	4,076,990	10,440,584	13,591,787	20,094,849	100%	100%	41%
1992	4,434,876	11,506,994	14,858,368	22,536,343	100%	100%	44%
1993	4,798,350	12,869,723	16,820,903	26,259,447	100%	100%	51%
1994	5,158,561	14,025,124	17,688,124	28,543,410	100%	100%	53%
1995	5,533,684	16,745,090	17,708,401	31,416,677	100%	100%	52%
1996	5,862,250	18,420,596	18,484,067	34,569,651	100%	100%	56%
1997	6,222,725	20,249,628	20,091,418	38,743,272	100%	100%	61%

# SUMMARY OF BENEFIT AND CONTRIBUTION PROVISIONS

## ELIGIBILITY FOR MEMBERSHIP

Immediate upon commencement of employment.

## SERVICE RETIREMENT

### Eligibility

Age 60 with 5 years of service, or age 55 with 25 years of service, or 30 years of service regardless of age.

### Amounts

Annual amount equal to the greater of (a) 2.1% of final average salary for the three highest paid years, multiplied by years of total Ohio service credit, except that for years of Ohio contributing service 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%
40	3.4%
41	3.5%
42	3.6%
43	3.7%

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

Attained Age	or	Years of Ohio Service Credit	% of Base Amount
58		25	75%
59		26	80%
60		27	85%
61			88%
62		28	90%
63			94%
64		29	95%
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 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 service and military service.

## DISABILITY RETIREMENT

### Eligibility

Membership before July 30, 1992, and election of this benefit, completion of five or more years of service, under age 60 and permanently incapacitated for the performance of duty.

### Amount

(1) Annuity with a reserve equal to the member's accumulated contributions, plus

(2) The difference between (1) 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

Membership after July 29, 1992, or membership before July 30, 1992, and election of this benefit, completion of five or more years of service and permanently incapacitated for the performance of duty.

### Amount

The greater of 2.1% of the average salary during the three highest paid years or \$86 times total service. Maximum allowance is 60% of final average salary. Minimum allowance is 45% of final average salary. The disability allowance payment terminates at age 65 (or later if payment begins after age 60). After termination of the disability allowance, the member may apply for service retirement.

## DEATH AFTER RETIREMENT

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

## SURVIVOR'S BENEFIT

### Eligibility

Upon death after at least 1½ years of credit for Ohio service with at least ¼ year of such service in the 2½ years preceding death or upon death of a disability retiree.

### Amount

If member is eligible for retirement, spouse or other sole dependent beneficiary may elect to receive Option 1 benefits in lieu of return of contributions.

## SUMMARY OF BENEFIT AND CONTRIBUTION PROVISIONS (CONT.)

If member is not eligible for retirement, 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

A benefit of a percentage of final average salary based on years of credited service ranging from a minimum of 25% to a maximum of 60%.

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

### 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 3 years	Member contributions with 4% interest
3 or more years but less than 5 years	Member contributions with 6% interest
5 or more years	150% of member contributions with 6% 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 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 payments that remain are to be 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 Option 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 by the increase in the Consumer Price Index each year, but not to exceed 3% of the original base benefit.

### HEALTH CARE

Retirees, their spouses and dependents are eligible for a comprehensive medical expense health care plan as may be offered by the Retirement Board and which is subject to changes in terms and conditions from time to time.

### CONTRIBUTION

**By members:**

9.30% of salary effective July 1, 1994.

**By employers:**

14% of salaries of their employees who are members.

## REVENUES BY SOURCE AND EXPENSES BY TYPE

For the years ended June 30, 1988-1997  
(In Thousands)

## REVENUES BY SOURCE

Fiscal Year	Member Contributions	Employer Contributions	Net Investment Income	Health Care Premium	State Appropriations	Other	Total
1988	\$396,655	\$ 676,536	\$1,494,435	***	\$5,704	\$3,392	\$2,576,722
1989	423,639	703,773	1,617,196	***	5,287	3,468	2,753,363
1990	455,264	754,726	1,663,600	***	4,876	3,934	2,882,400
1991	511,269	793,132	1,719,115	***	4,490	3,841	3,031,847
1992*	548,841	862,655	2,294,646	***	4,099	4,540	3,714,781
1993	564,005	869,862	2,394,523	***	3,755	5,180	3,837,325
1994	589,186	902,299	2,231,241	***	3,396	4,805	3,730,927
1995	624,812	956,284	2,340,907	***	3,035	6,008	3,931,046
1996	635,716	1,002,441	3,664,683	***	2,698	6,782	5,312,320
1997**	679,499	1,005,354	6,143,363	38,347	2,377	6,281	7,875,221

## EXPENSES BY TYPE

Fiscal Year	Benefits	Refunds	Administration	Total
1988	\$ 845,476	\$15,526	\$13,610	\$ 874,612
1989	925,557	17,695	16,291	959,543
1990	1,009,464	17,070	20,415	1,046,949
1991	1,131,877	18,088	29,486	1,179,451
1992*	1,226,843	17,488	28,956	1,273,287
1993	1,323,643	16,386	35,870	1,375,899
1994	1,403,843	18,235	38,770	1,460,848
1995	1,526,915	21,233	38,926	1,587,074
1996	1,681,637	24,118	37,747	1,743,502
1997	1,880,129	32,313	42,884	1,955,326

\* Effective July 1, 1991, investment administrative expenses are deducted from gross investment income.

\*\* Effective July 1, 1996, net investment income includes the net appreciation in fair value of investments which can create significant fluctuations between years.

\*\*\* Health care premiums received are not available for fiscal years prior to 1997.

## NUMBER OF BENEFIT RECIPIENTS BY TYPE

1988-1997

As of July 1	Service Retirement	Disability Retirement	Beneficiaries Receiving Optional Allowances	Survivor Benefits	Total
1988	54,174	4,113	3,430	3,240	64,957
1989	55,234	4,296	3,569	3,354	66,453
1990	57,016	4,503	3,822	3,398	68,739
1991	58,436	4,643	4,001	3,503	70,583
1992	59,994	4,830	4,274	3,501	72,599
1993	61,515	5,020	4,478	3,217	74,230
1994	63,182	5,217	4,739	4,267	77,405
1995	67,989	5,711	4,941	4,495	83,136
1996	70,448	5,923	5,206	4,555	86,132
1997	72,601	6,000	5,486	4,631	88,718

## AVERAGE MONTHLY ALLOWANCES BY TYPE

1988-1997

As of July 1	Service Retirement	Disability Retirement	Beneficiaries Receiving Optional Allowances	Survivor Benefits	Average
1988	\$ 941	\$1,081	\$643	\$556	\$ 915
1989	1,000	1,144	661	581	970
1990	1,070	1,215	699	606	1,036
1991	1,147	1,288	740	637	1,108
1992	1,227	1,359	770	682	1,182
1993	1,304	1,433	803	748	1,258
1994	1,388	1,504	843	707	1,325
1995	1,510	1,603	886	732	1,437
1996	1,608	1,688	931	779	1,528
1997	1,705	1,764	974	822	1,618

## BENEFIT EXPENSES BY TYPE

1988-1997  
(In Thousands)

Fiscal Year Ended	Service Retirement	Disability Retirement	Survivor Benefits	Supplemental Benefit	Health Care*	Other	Total
1988	\$ 621,379	\$ 51,855	\$23,058	\$41,298	\$105,950	\$1,936	\$ 845,476
1989	678,448	57,132	25,171	35,780	126,319	2,707	925,557
1990	774,625	63,174	26,735	36,885	136,563	1,482	1,039,464
1991	822,842	70,150	28,851	38,110	170,583	1,342	1,131,878
1992	897,259	76,378	30,726	28,815	189,784	3,881	1,226,843
1993	985,024	83,888	32,804	32,489	187,318	2,120	1,323,643
1994	1,083,335	92,091	35,198	33,586	157,276	2,357	1,403,843
1995	1,185,066	100,805	37,756	34,567	165,767	2,954	1,526,915
1996	1,307,482	109,250	40,283	41,750	176,773	6,099	1,681,637
1997	1,440,163	118,893	43,539	43,278	230,424	3,832	1,880,129

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

## NUMBER OF REPORTING EMPLOYERS BY TYPE

1988-1997

Fiscal Year Ended	City School Districts	Local School Districts	County Education Service Centers	Exempted Village Districts	Vocational & Technical Schools	Colleges & Universities	County MR/DD Boards	State of Ohio	Total
1988	191	375	86	49	50	36	*	1	788
1989	192	372	85	49	49	37	*	1	785
1990	192	372	85	49	49	37	88	1	873
1991	193	371	85	49	49	37	88	1	873
1992	193	370	85	49	51	35	88	1	872
1993	192	372	81	49	51	35	82	1	863
1994	192	371	81	49	48	38	82	1	862
1995	192	371	80	49	48	38	82	1	861
1996	192	371	80	49	48	38	82	1	861
1997	192	371	73	49	48	38	82	1	854

\* County Boards of Mental Retardation and Developmental Disabilities were added as reporting employers in fiscal year 1990.



## SELECTED FUNDING INFORMATION

1988-1997

*(Dollar Amounts in Thousands)*

As of July 1	Contribution Rate		Interest Assumption	Payroll Growth Assumption	Unfunded Accrued Liability*	Funding Period
	Member	Employer				
1988	8.77%	14.00%	7.75%	5.500%	\$6,759,786	35.0 Yrs.
1989	8.77%	14.00%	7.75%	5.875%	7,211,686	34.5 Yrs.
1990	9.25%	14.00%	7.75%	5.875%	7,640,885	34.0 Yrs.
1991	9.25%	14.00%	7.75%	5.875%	8,014,512	33.5 Yrs.
1992	9.25%	14.00%	7.75%	5.875%	8,263,895	32.5 Yrs.
1993	9.25%	14.00%	7.50%	5.000%	8,229,529	31.5 Yrs.
1994	9.30%	14.00%	7.50%	5.000%	8,328,399	30.5 Yrs.
1995	9.30%	14.00%	7.50%	5.000%	8,570,498	29.3 Yrs.
1996	9.30%	14.00%	7.50%	4.500%	8,197,261	28.4 Yrs.
1997	9.30%	14.00%	7.50%	4.500%	7,820,498	26.9 Yrs.

\*Excluding health care

1997 COMPREHENSIVE ANNUAL FINANCIAL REPORT  
STATE TEACHERS RETIREMENT SYSTEM OF OHIO

275 E. Broad St.  
Columbus, Ohio 43215-3771  
(614) 227-4090