COMMONWEALTH OF PENNSYLVANIA
STATE EMPLOYES' RETIREMENT SYSTEM
POST OFFICE BOX 1147
HARRISBURG, PENNSYLVANIA 17108-1147
(717)787-6293

ANNUAL REPORT OF OPERATIONS
FOR THE YEAR ENDED
DECEMBER 31, 1991

WILLIAM J. MORAN
CHAIRMAN
STATE EMPLOYES' RETIREMENT BOARD

JOHN BROSIUS
EXECUTIVE DIRECTOR

REPORT PREPARED BY
THE STAFF OF
THE STATE EMPLOYES' RETIREMENT SYSTEM

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P.O. BOX 1147
HARRISBURG, PENNSYLVANIA 17108-1147
TELEPHONE: 717-787-6293

Honorable Robert P. Casey,
Governor, Commonwealth of Pennsylvania

Members, Pennsylvania General Assembly
Members, Pennsylvania State Employes'
Retirement System

Dear Governor Casey, Legislators and Members:

The Pennsylvania State Employes' Retirement Board is
its 1991 Annual Report of operations. This report
highlights, actuarial data, and other financial inform
an independent audit of the Fund by Coopers & Lybr
1989 was completed and a separate report by the inde
is included. The consulting actuary, Hay/Huggins, h
soundness of the Fund and that report is contained herein

The total market value of the Fund's investments
1991 was $11.8 billion reflecting a total investmen
22.7%, after all fees and expenses, for the year. This
result of the strong capital markets in the United
35.2% return in stocks exceeded the standard benchma
& Poor's 500 Stock Index (30.5%) and the return of
Stock Index (34.2%). The Fund's 19.0% return on its
portfolio also exceeded the benchmark of the Shearso
Bond Index (16.0%). The Fund remains well diversifie
a high quality, long-term investment plan for the
experienced an 11.2% average rate of return, after
five years; and a 14.4% rate of return, after fees,
years. These returns exceeded the actuarial return
Fund over this time horizon.

Act 1991-23, the "Mellow Bill," provided a retir
potentially 15% of the active members of the
Employes' Retirement System who qualified and retir
1991. The Retirement System received nearly three
number of retirement applications it receives in one
the greatest impact on System operations since the r
Retirement Code in 1974, causing the largest rate
demands for member services in System history. Activ
complete processing of retirement accounts, follow-
of member records will continue throughout most of 1992

The Retirement Board is committed to improve
membership and to make prudent investments for the Fun

Respectfully submitted,

John Brosius

John Brosius
Executive Director

Contents

Administrative Section

SERS Board Members*

Mr. William J. Moran
Chairman

Hon. Anthony B. Andrezeski
State Senator

Mr. Robert A. Bittenbender
Executive Director
Senate Appropriations Committee (R)

Hon. Catherine Baker Knoll
State Treasurer

Hon. Nicholas Maiale
State Representative

Hon. Gibson E
State Se

Hon. James
State Repre

Mr. Charles J
Retired Member and State Ci

Mr. K. Paul
Budget A
House Minority Appropr

SERS Administrative Staff

John Brosius
Executive Director

Dale H. Everhart
Assistant Executive Director

Kenneth G. Mertz, II
Chief Investment Officer

Francis J. Donlev
Director of Financial Mar

Jeffrey B. Clay, Esq
Acting Chief Coun

Fund Custodian

The State Treasurer

Agent Bank and Trust Accounting Services

CoreStates Bank, N.A.

Consultants

Wilshire Associates Incorporated
(Investments)

Pathway Capital Management
(Venture Capital and Alternative Investments)

Ronald A. Kar
(Real

Hay/Huggins
(Consulti

Independent Auditor

Coopers & Lybrand

*Two vacant seats as of December 31, 1991.

STATE EMPLOYES' RETIREMENT SYSTEM
PLAN PROVISIONS OVERVIEW

The Pennsylvania State Employes' Retirement System (SERS), established in 1923, is one of the nation's oldest and largest statewide retirement plans for public employes, with over 188,000 members. SERS also ranks among the top public plans in pension assets with approximately $11.8 billion invested in various portfolios. A brief overview of the major elements of the plan follows.

PURPOSE

The SERS provides regular and disability retirement benefits for state employes and elected state officials. The SERS is responsible for administering retirement law in accordance with the expressed intent of the General Assembly and bears a fiduciary obligation to the state employes and retirees who are the plan beneficiaries.

ADMINISTRATION

The Retirement Code provides that the administration of the SERS and the fiduciary responsibility for management of the Fund be vested in an eleven member Board of Trustees. Six of the members are appointed by the Governor and confirmed by the Senate; two members are appointed by the President Pro Tempore of the Senate; and two members are appointed by the Speaker of the House of Representatives. The State Treasurer serves as a member of the Board, ex-officio.

The management of the SERS is the responsibility of the Executive Director. This individual functions as the Chief Administrative Officer and Agent of the Board on all matters pertaining to the System and, with the approval of the Board, contracts for professional services and employs the staff needed to operate the System.

MEMBERSHIP ELIGIBILITY

Permanent full-time state employes and employes of certain independent agencies are required to join the SERS. Permanent part-time employes who are paid a salary must also join the System. All part-time employes who are paid by the hour or day must join SERS if they work 750 hours or 100 days in a calendar year.

Members and employes of the Legislature, certain elected persons in the executive branch, department heads, and certain school employes are not required to join the SERS.

CONTRIBUTIONS

The SERS member contribution rates are applied to gross pay. The basic contribution rate is 5% of gross pay for those in continuous membership since July 21, 1983. For those employes becoming members of SERS on or after July 22, 1983, the contribution rate is 6.25% of gross pay. These contributions are deposited into an individually identified account and are credited with interest each quarter. A member's contributions and credited interest vest immediately and are returned upon termination of service if the member is not eligible for other benefits. The employer's contribution rate is set after each annual actuarial valuation of the liabilities and reserve requirements of the Fund. Employers contributed at a composite rate of 9.87% of employe payroll for Fiscal Year 1991-92.

SERVICE

The amount of credited service a member has is one of the factors used to determine the eligibility for and amount of benefits. Credited service is defined as state service and creditable non-state service. Creditable non-state service is limited to: intervening military service; non-intervening military service; out-of-state educational service; and other governmental service.

CREDITABLE STATE SERVICE

Currently, state service is credited on the basis of the hours for which a member is paid. One thousand six hundred and fifty (1650) hours in a calendar year are credited as one year of service.

CREDITABLE NON-STATE SERVICE

INTERVENING MILITARY SERVICE is creditable for that military service rendered during a leave of absence from state employment.

NON-INTERVENING MILITARY SERVICE is limited to five years of credit, with certain prohibitions due to a member's use of this service toward another pension.

OUT-OF-STATE EDUCATIONAL SERVICE is limited to ten years of credit. Certain restrictions apply as to the type of service which is creditable. For example, only service as an administrator, teacher, or instructor may be considered.

OTHER GOVERNMENTAL SERVICE is creditable if former service with some other governmental agency was ended because of a transfer, by law, to the Commonwealth.

RETIREMENT BENEFITS

ELIGIBILITY FOR MONTHLY RETIREMENT BENEFITS

A member is eligible for monthly benefits if, upon leaving employment, the member has ten or more years of credited service at any age or the member has reached normal retirement age with at least three years of credited state service.

NORMAL RETIREMENT

Normal retirement age is age 60 or the age at which a member has 35 years of service, whichever occurs first. There are some exceptions to this: normal retirement is age 50 for members of the Legislature, corrections officers, liquor law enforcement officers, psychiatric security aides, officers of the state police and Delaware river port authority police, and certain nurses.

A member is eligible for unreduced retirement benefits upon reaching normal retirement age if the member has at least three years of credited service.

EARLY RETIREMENT

A member can retire prior to normal retirement age if the member has at least ten years of credited service. The early retirement benefit amount is reduced for the number of years the member is under normal retirement age.

RETIREMENT BENEFIT CALCULATION

The amount of normal unreduced retirement benefits depends on three things: years of service; final average salary; and the member's age. The formula for the annual full retirement allowance is .02 x years of service x final average salary. The final average salary, generally speaking, is the average of the three highest years of compensation. Members electing early retirement will receive a reduced pension.

RETIREMENT OPTIONS

The retiring member may select among several retirement payment options.

FULL RETIREMENT ALLOWANCE. This plan provides the maximum amount of pension per month to which the member is entitled. Monthly pension payments will be made for life. When the member dies, his/her beneficiary will receive the member's Accumulated Deductions less the amount of pension payments the member received.

OPTION 1. Under this plan the member will receive a smaller pension per month than under a Full Retirement Allowance. Monthly pension payments to the member are for life. This plan provides greater death benefit protection than Full Retirement. When the member dies, his/her beneficiary will receive the account's Present Value at retirement less the amount of pension payments the member received.

OPTION 2. This plan will also provide the member with less benefit per month than a Full Retirement Allowance. This plan provides a lifetime monthly pension to the member and, upon the member's death, to his/her Designated Survivor Annuitant for that person's lifetime. Upon the member's death his/her Designated Survivor Annuitant will begin to receive the same monthly pension the member received.

OPTION 3. This plan also provides the member with a monthly pension less than a Full Retirement Allowance. This plan provides a lifetime monthly pension to the member and, upon the member's death, to his/her Designated Survivor Annuitant for that person's lifetime. Upon the member's death, his/her Designated Survivor Annuitant will begin to receive one-half of the monthly pension the member received.

OPTION 4. This plan allows the member to withdraw all or part of his/her contributions plus interest. The member may elect to receive this withdrawal in up to four installment payments. Once the election is made, it may not be changed for any reason. The installment payments will earn interest at the rate of 4% per year until the time they are paid to the member. This will make the member's lifelong monthly pension smaller since his/her pension is then computed on the remainder of the account's Present Value. If the member elects this option, the member must also elect one of the monthly payment plans listed above. Option 4 is a one-time option and must be selected at the time the member applies for his/her retirement benefit.

SPECIAL OPTION PLAN. If none of these plans suit the member's personal needs, the member may request a Special Option which he/she must design, subject to Retirement Law restrictions. Approval by the Retirement Board is required in advance of the member's actual retirement.

DISABILITY RETIREMENT ELIGIBILITY

A member must have at least five years of credited service to be eligible to apply for a disability pension. State police and liquor law enforcement officers have no minimum service requirement. The member must be physically or mentally incapable of performing the duties of the member's present job. A member will not qualify for disability benefits unless the medical evidence, which documents the disability, is approved by the Board's physician(s).

DEATH BENEFITS

If a member dies in state service before normal retirement age, and with less than ten years of credited service, the member's contributions plus interest will be paid to the member's beneficiary.

If a member dies while still in state service and after becoming eligible for a monthly retirement benefit, it will be assumed that the member retired under Option 1 the day before the member's death. In that event, the present value of the member's annuity will be payable to the member's beneficiary. If the present value is $5,000 or more, the beneficiary may choose to receive the death benefit in either monthly payments or a lump sum payment. A lump sum payment is made if the present value is less than $5,000.

VESTING

If a member leaves state employment prior to normal retirement age with ten or more years of credited service and does not want an immediate benefit, the member may elect to vest. When vesting, the member's contributions plus interest remain in the Fund allowing the member to defer receiving a benefit until a later time. By vesting, the member's monthly benefit will increase as the member approaches normal retirement age. Interest is credited on the member's contributions during the vesting period.

TAXATION OF BENEFITS

Pennsylvania law provides that no Pennsylvania state or local taxes are payable on any payments received from SERS. Generally, all payments are subject to federal taxation. Since the Tax Reform Act of 1986, certain payments made prior to age 55 may also be subject to an additional tax. Members are advised to obtain reliable tax advice prior to selection of a retirement option.

COST OF LIVING ADJUSTMENTS

Cost of living adjustments are granted by the Legislature periodically on an ad hoc basis. Cost of living adjustments were granted by the Legislature in 1968, 1974, 1979, and 1984. The most recent cost of living increase to eligible members was January 1, 1989.

SPECIAL EARLY RETIREMENT PROVISION

A special early retirement provision has been in effect since July 1, 1985. The closing date of this provision has been extended to June 30, 1993 and an earlier age restriction was lifted.

A member must meet all of the following conditions to qualify for the special early retirement provision, which reduces and in some cases eliminates the early retirement reduction factor:

- Terminate employment between July 1, 1985 and June 30, 1993;
- Terminate employment prior to normal retirement age;
- Have at least 30 years, but no more than 34.9999 years, of credited service in the Retirement System at termination; and
- File a retirement application for benefits on or before June 30, 1993.

EARLY RETIREMENT INCENTIVE PROGRAM

Act 1991-23, the "Mellow Bill," enacted on August 5, 1991 created an early retirement incentive for approximately 15 percent of State Employes' Retirement System (SERS) active members. To qualify for the incentive a member had to meet the following conditions:

- Terminate active State service (including being furloughed) during the period February 1, 1991 to December 31, 1991;
- Be at least 55 years of age by January 31, 1992;
- Have at least 10 years of retirement credited service by December 31, 1991; and
- File an application for retirement benefits before January 1, 1992.

If qualified, a member received an additional 10 percent service credit at retirement.

More then 18,000 members were eligible for this incentive and approximately 7,000 of those individuals took advantage of the incentive. The majority of those retirements occurred in December 1991. This volume is significant since SERS typically processes 4,000 retirements in one year.

This incentive caused a substantial need for member counseling by the SERS retirement counseling field office staff and Agency personnel offices (where SERS field offices are not open). These offices handled 77,645 telephone inquiries and conducted 20,808 personal retirement counseling sessions from August through December of 1991. While SERS Central Office was sending out through the payroll distribution system approximately 15,000 automated estimate letters to active members eligible to retire under the Mellow Bill, SERS field office staff and Agency personnel offices were producing another 9,312 customized retirement estimates for individuals requesting them. Activities related to the complete processing of these retirement accounts will continue throughout most of 1992.

STATE EMPLOYES' RETIREMENT SYSTEM
ADMINISTRATIVE BUDGET SUMMARY

STATE EMPLOYES' RETIREMENT FUND	ADMINISTRATIVE EXPENSES Proposed 1992-93	Authorized 1991-92	Actual 1990-91
Personnel Expense	$7,014	$6,667	$5,324
Operational Expense			
State Treasury	450	431	421
Auditor General	5	3	3
Comptroller Operations	53	50	43
Commonwealth Central Services & Other Contracted Services	1,484	370	247
Postage & Printing	425	408	352
Data Processing	450	385	269
Central Headquarters & Field Office Rental	1,329	483	411
Office Expense	820	787	649
Total Operating Expenses	$5,016	$2,917	$2,395
Fixed Asset Expense			
Equipment & Furniture	210	248	46
EDP	450	0	163
Total Fixed Expense	660	248	209
New Programs & Expansion of Existing Programs:			
Publications Administration	0	66	0
Training Office	0	97	0
Computer System Redesign	0	1,810	0
Investment Office	0	149	0
	0	$2,122	0
Total Expenses	$12,690	$11,954	$7,928
Number of Full-time Positions (Authorized)	164	164	159

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REPORT OF INDEPENDENT ACCOUNTA

Board of Trustees
Commonwealth of Pennsylvania
State Employes' Retirement System:

We have audited the statements of net a
benefits of the Commonwealth of Pennsylvania Sta
Retirement System (System) as of December 31, 19
related statements of changes in net assets avai
for the years then ended. These financial state
responsibility of the System's management. Our
express an opinion on these financial statements

We conducted our audits in accordance w
auditing standards. Those standards require tha
the audit to obtain reasonable assurance about w
statements are free of material misstatement. A
examining, on a test basis, evidence supporting
disclosures in the financial statements. An aud
assessing the accounting principles used and sig
made by management, as well as evaluating the ov
statement presentation. We believe that our aud
reasonable basis for our opinion.

In our opinion, the financial statement
present fairly, in all material respects, the fi
Commonwealth of Pennsylvania State Employes' Ret
December 31, 1990 and 1989, and the changes in i
for the years then ended in conformity with gene
accounting principles.

Our audits were conducted for the purpo
opinion on the basic financial statements taken
Supplementary Information is presented in accord
No. 5 of the Governmental Accounting Standards B
additional analysis and is not a required part o
statements. Such information for the years 1982
through 1990 has been subjected to the auditing
the audit of the basic financial statements and,
fairly stated, in all material respects, in rela
financial statements taken as a whole. We previ
expressed unqualified opinions on the basic fina
the years 1982 through 1984 and 1988. Such info
1981 and 1985 through 1987 has been subjected to
procedures applied in the audits of the basic fi
which were audited by other auditors, whose repo
unqualified opinions, and, in their opinion such
stated in all material respects in relation to t
statements taken as a whole.

5 North Fifth Street
Harrisburg, Pennsylvania
July 11, 1991

COMMONWEALTH OF PENNSYLVANIA
STATE EMPLOYES' RETIREMENT SYSTEM

STATEMENTS OF NET ASSETS AVAILABLE FOR BENEFITS

December 31, 1990 and 1989

	1990	1989
	(000's omitted)	
ASSETS		
Investments at fair value:		
United States Government securities	$1,921,104	$1,500,946
Corporate and foreign bonds and notes	1,026,855	1,064,314
Common and preferred stocks, including collective trust funds	4,768,574	4,922,289
Temporary investments	409,805	612,912
Mortgage loans	632,558	589,250
Real estate	862,145	828,661
Venture capital	93,849	88,274
Total investments	9,714,890	9,606,646
Contributions receivable:		
Employers	106,582	106,685
Employes	4,756	5,133
Accrued investment income receivable	59,152	72,572
Due from brokers	14,768	8,118
Cash	1	1
Total assets	9,900,149	9,799,155
LIABILITIES		
Accounts payable and accrued expenses	(9,192)	(6,754)
Due to brokers	(5,057)	(7,827)
Total liabilities	(14,249)	(14,581)
Contingencies (Note 7)		
NET ASSETS AVAILABLE FOR BENEFITS	$9,885,900	$9,784,574

The accompanying notes are an integral part of the financial statements.

COMMONWEALTH OF PENNSYLVANIA
STATE EMPLOYES' RETIREMENT SYSTEM

STATEMENTS OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

for the years ended December 31, 1990 and 1989

	1990	1989
	(000's omitted)	
ADDITIONS:		
Investment income:		
Net (depreciation) appreciation in fair value of investments	$ (430,408)	$ 912,653
Interest and dividends	565,414	569,655
	135,006	1,482,308
Less investment expenses	20,832	17,601
	114,174	1,464,707
Contributions:		
Employers	418,655	416,513
Employes	175,422	164,653
Total additions	708,251	2,045,873
DEDUCTIONS:		
Benefits and refunds paid to participants	599,525	567,101
Administrative expenses	7,400	6,028
Total deductions	606,925	573,129
Net increase	101,326	1,472,744
Net assets available for benefits at beginning of year	9,784,574	8,311,830
Net assets available for benefits at end of year	$9,885,900	$9,784,574

The accompanying notes are an integral part of the financial statements.

1. Description of the System:

The State Employes' Retirement System (System) is the administrator of a cost-sharing multiple-employer retirement system established by the Commonwealth of Pennsylvania (Commonwealth) to provide pension benefits for employes of state government and certain independent agencies. At December 31, 1990, there were 112 participating state and independent agencies. The System is considered part of the Commonwealth of Pennsylvania financial reporting entity and is included in the Commonwealth's financial reports as a pension trust fund.

Membership in the System is mandatory for most state employes, members and employes of the legislature and certain elected persons in the executive branch. Certain other employes are not required, but are given the option to participate. At December 31, 1990, System membership consisted of:

Retirees and beneficiaries currently receiving benefits and terminated employes entitled to benefits but not yet receiving them	77,840
Current employes:	
Vested	68,243
Nonvested	43,005
Total members	189,088

The System provides retirement, death, and disability benefits. Retirement benefits vest after 10 years of credited service. Employes who retire at age 60, or with 35 years of service if under age 60, are entitled to a normal annual retirement benefit. Members of the legislature and certain law enforcement officers can retire with full benefits at age 50.

The general annual benefit is 2% of the member's highest three-year average salary times years of service. Members of the legislature who were members of the System before March 1, 1974 are entitled to a benefit of 7.5% of average salary for each year of legislative service.

Continued

1. Description of the System, continued:

Covered employes are required to contribute to the System at a rate of 5% of their gross pay, except for employes hired on or after July 22, 1983, who contribute at a rate of 6.25% of their gross pay. Higher contributions are required of legislators and judges (18.75% and 7.5% to 10.0% of gross pay, respectively) who are entitled to increased benefits. The contributions are recorded in an individually identified account which is also credited with interest, calculated quarterly to yield 4% per annum, as mandated by statute. Accumulated employe contributions and credited interest, which amounted to $1,855,312,000 and $1,725,724,000 as of December 31, 1990 and 1989, respectively, vest immediately and are returned to the employe upon termination of service if the employe is not eligible for other benefits.

Participating agency contributions are also mandated by statute and are based upon an actuarially determined percentage of gross pay that is necessary to provide the System with assets sufficient to meet the benefits to be paid to System members.

According to the retirement code, all obligations of the System will be assumed by the Commonwealth should the System terminate.

2. Significant Accounting Policies:

Basis of Accounting:

The financial statements are prepared using the accrual basis of accounting. The System follows Statements No. 3, "Deposits with Financial Institutions, Investments (Including Repurchase Agreements), and Reverse Repurchase Agreements," and No. 5, "Disclosure of Pension Information by Public Employee Retirement Systems and State and Local Governmental Employers," of the Governmental Accounting Standards Board (GASB) for reporting and disclosure purposes.

Valuation of Investments:

Marketable securities, which consist of debt and equity securities, are stated principally at market value. Securities traded on a national securities exchange are valued at the last reported sales price on the last day of business of each plan year. Securities which were not traded on the last day of the plan year or which were not traded on a national securities exchange are valued by the plan advisor based on similar securities sales. Temporary investments are valued at cost, which approximates market value.

Continued

2. Significant Accounting Policies, continued:

Valuation of Investments, continued:

The fair value of the participation units owned by the System in the collective trust funds was based on quoted redemption value on the last business day of the year.

Mortgage loans are valued by the mortgage advisors using a discounted cash flow method. Investments in real estate are stated at appraised value. Venture capital pools are stated at fair values as determined by the general partners of the venture capital funds.

The System presents in the statements of changes in net assets the net appreciation (depreciation) in the fair value of its investments which consists of the realized gains or losses and the unrealized appreciation (depreciation) on those investments. Realized gains or losses on sales of investments are determined on a specific identification or average cost basis, depending upon the type of investment.

3. Funding Status and Progress:

The amount shown as "pension benefit obligation" is a standardized disclosure measure of the present value of pension benefits, adjusted for the effects of projected salary increases, estimated to be payable in the future as a result of employe service to date. The measure is the actuarial present value of credited projected benefits and is intended, on an ongoing basis, to facilitate the assessment of the System's funding status and progress made in accumulating sufficient assets to pay benefits when due and to allow for appropriate comparison of this data among public employe retirement systems. The pension benefit obligation is calculated based on GASB Statement No. 5 and is independent of the actuarial funding method used to determine contributions to the System as discussed in Note 4.

The pension benefit obligation was determined as part of an actuarial valuation at December 31, 1990 and 1989. Significant actuarial assumptions used include (a) a rate of return on the investment of present and future assets of 9.25% and 8.75% per year compounded annually in 1990 and 1989, (b) projected salary increases of 4% per year compounded annually, attributable to inflation in 1990 and 1989, (c) additional projected salary increases of approximately 2.5% and 1.6% in 1990 and 1989, respectively, attributable to merit/promotion, and (d) no post-retirement benefit increases.

Continued

3. Funding Status and Progress, continued:

The pension benefit obligation at December 31, 1990 and 1989 is as follows:

	1990	1989
	(000's omitted)	
Pension benefit obligation:		
Retirees and beneficiaries currently receiving benefits and terminated employes entitled to benefits but not yet receiving them	$3,554,545	$3,474,269
Current employes:		
Accumulated employe contributions	1,855,312	1,725,724
Employer-financed, vested	3,776,219	3,277,541
Employer-financed, nonvested	350,255	303,984
Total pension benefit obligation	9,536,331	8,781,518
Net assets available for benefits, at fair value (Note 2)	9,885,900	9,784,574
Net assets in excess of pension benefit obligation	$ 349,569	$1,003,056

A comparative ten-year summary of the pension benefit obligation, which has been calculated in conformance with the requirements of GASB Statement No. 5, is presented as supplementary information following the notes to the financial statements. This information is presented for purposes of additional analysis of System progress in accumulating sufficient assets to pay benefits when due. The calculation of the pension benefit obligation under GASB Statement No. 5 differs from the calculation required under Financial Accounting Standards Board (FASB) Statement No. 35 of the actuarial present value of accumulated plan benefits principally by the consideration of future salary increases.

Continued

3. Funding Status and Progress, continued:

The significant actuarial assumptions used in the valuations of the actuarial present value of accumulated plan benefits under FASB Statement No. 35 as of December 31, 1990 and 1989 are as follows:

Mortality:	
Superannuation (normal retirement) and early retirement:	The 1971 Group Annuity Mortality Table
Disability:	Modifications of the 1965 Railroad Retirement Board Mortality Among Totally Disabled Annuitants
Assumed rate of return on investments:	7.25% in 1990 and 1989

The accumulated plan benefit information at December 31, 1990 and 1989 is as follows:

	1990	1989
	(000's omitted)	
Actuarial present value of accumulated plan benefits:		
Vested benefits:		
Participants currently receiving payments	$4,619,085	$4,322,357
Other participants	4,026,829	3,805,152
	8,645,914	8,127,509
Nonvested benefits	134,783	140,921
Total	$8,780,697	$8,268,430

The changes in the actuarial present value of accumulated plan benefits for the year ended December 31, 1990 are as follows:

	(000's omitted)
Actuarial present value of accumulated plan benefits at January 1, 1990	$8,268,430
Increase during the year attributable to:	
Passage of time and other causes	354,136
Plan provision changes	57,331
Changes in interest rate and salary assumptions	100,800
Actuarial present value of accumulated plan benefits at December 31, 1990	$8,780,697

Continued

4. Contributions:

The System funding policy provides for periodic member contributions at statutory rates and employer contributions at actuarially determined rates (expressed as a percentage of annual gross pay) that are sufficient to accumulate assets to pay benefits when due. All required contributions were made for the years 1990 and 1989.

Employer contribution rates are determined using the entry age normal actuarial cost method, with amortization of the unfunded actuarial liability and of supplemental annuities arising from cost of living and other adjustments over varying periods ending June 30, 2004. These rates are computed based upon actuarial valuations on the Commonwealth's fiscal year of June 30; therefore the employer contribution rates in effect for the System's year end of December 31 reflect a blended average of the rates as calculated. The blended contribution rates were as follows:

	1990	1989
Employer normal cost	4.67%	4.71%
Amortization of unfunded actuarial liability	5.87	6.45
Amortization of supplemental annuities	2.14	1.91
Total employer cost	12.68%	13.07%

Significant actuarial assumptions used to compute contribution requirements are the same as those used to compute the pension benefit obligation, except for an assumed rate of return on investments of 5.5% per annum and certain revisions to salary increase assumptions.

5. Investments:

As provided by statute, the System's Board of Trustees (Board) has exclusive control and management responsibility of System funds and full power to invest the funds. In exercising its fiduciary responsibility to System membership, the Board is governed by the "prudent man" rule, which requires the exercise of due care in establishing investment policy, and has adopted its Statement of Investment Policy to formally document investment objectives and responsibilities. This policy, as well as applicable state law, defines permissible investments of the System, including all investment types held in the portfolio at December 31, 1990 and 1989 and at all times during the years.

5. Investments, continued:

The investments of the System at December 31, 1990 and 1989 have been categorized to indicate the level of risk assumed by the System, in accordance with GASB Statement No. 3. In accordance with a contractual relationship between the Commonwealth's Treasury Department and a custodial agent, substantially all securities subject to categorization are held in book entry form in a unique account so as to be identified at all times as the possession of the Commonwealth; all such investments, as well as certain securities held in physical form at the Commonwealth's Treasury Department, the statutory custodian of the Fund, are reflected in Category 1, which is defined as securities insured or registered, or held by the System or its agent in the System's name. GASB Statement No. 3 provides for Category 2 and 3 investments, which reflect a higher risk. The System has no holdings of these types at December 31, 1990 and 1989. Certain investments have not been categorized because securities are not used as evidence of the investment. The investments not categorized include ownership interests in collective trust funds, mortgage loans, real estate and venture capital pools.

Summary of Investment Risk	Fair Value 1990	Fair Value 1989
	(000's omitted)	
Category 1		
United States Government securities	$1,196,987	$ 946,086
Corporate and foreign bonds and notes	970,532	1,013,925
Common and preferred stocks	1,796,686	2,068,625
Mortgage loans	1,046	1,348
	3,965,251	4,029,984
Not Categorized		
Investments held by broker/dealers under reverse repurchase agreements:		
United States government securities	724,117	554,860
Corporate and foreign bonds and notes	56,323	50,389
Common and preferred stocks	56,904	18,574
Collective trust funds	2,914,984	2,835,090
Temporary investments	409,805	612,912
Mortgage loans	631,512	587,902
Real estate	862,145	828,661
Venture capital	93,849	88,274
	5,749,639	5,576,662
Total investments	$9,714,890	$9,606,646

Continued

5. Investments, continued:

The System's investments are managed by various fund managers. At December 31, 1990, two fund managers accounted for approximately 43% of the System's total investment portfolio. This concentration is in accordance with the System's Statement of Investment Policy. Because the System's assets are invested in a variety of financial instruments, the related values as presented in the financial statements are subject to various market fluctuations which include changes in the equity markets, interest rate environment and the general economic conditions.

The System's investments in real estate are concentrated principally in office, industrial, retail, and residential projects. Approximately $243,000,000 of the real estate portfolio is located in Pennsylvania. The System's remaining real estate investments are not concentrated in any one geographic area or industry.

The System participates in a security lending program, whereby certain securities are transferred to an independent broker/dealer in exchange for collateral equal to 102% of the market value of securities on loan (reverse repurchase agreements). As the System represents only one of several Commonwealth agencies participating in the security lending program and, as collateral received by the custodial agent in exchange for System securities is not specifically identifiable by agency, the System does not record the receipt of such collateral or the corresponding liability to return collateral via repurchase of securities under loan. Securities under loan, however, are maintained on the System's financial records and have been classified accordingly in the summary of investment risk. The System has minimized its exposure to credit risk due to broker/dealer default by having the custodial agent determine daily that required collateral meets 102% of the market value of securities on loan. The System has not experienced any losses due to credit risk on security lending activity since implementation of the program.

Continued

5. Investments, continued:

The System uses a variety of financial instruments including futures, options, and security borrowing arrangements to adjust market exposure. These instruments are integral to the asset allocation and risk management and control systems of overall investment management strategies and practices. The following table summarizes the hedged and unhedged market exposure, expressed in cash market equivalents, related to financial instrument positions at December 31, 1990:

	Market Exposure		
	Unhedged	Hedged	Credit Exposure
	(000's omitted)		
Equity future contracts	-	$36,359	$1,941
Currency forward contracts	$16,465	48,996	-
Option contracts	95	6,558	-

These financial instruments necessarily involve counterparty credit exposure. The policy of the System is to require collateral to the maximum extent possible under normal trading practices. In the event of counterparty default, the System has the right to use the collateral to offset the loss associated with the replacement of the exchange agreements. Specific credit limits have been established for each counterparty and are monitored and adjusted daily. The limits are developed based on the counterparty's creditworthiness, overall industry and other considerations, such as the length and legal structure of the contract, type of collateral advanced, and historical volatility indicators. Credit exposures shown in the above table primarily represent cash or securities advanced by the System to meet legal margin requirements in connection with future, forward, and option contracts.

Continued

5. Investments, continued:

The System's investments, including investments bought, sold, as well as held during the year appreciated (depreciated) in fair value by $(430,408,000) and $912,653,000 in 1990 and 1989, respectively, as follows:

	1990	1989
	(000's omitted)	
Fair value as determined by quoted market price:		
United States Government securities	$ 54,071	$ 48,536
Corporate and foreign bonds and notes	(66,406)	16,551
Common and preferred stocks, including collective trust funds	(391,805)	823,773
	(404,140)	888,860
Fair value estimated by using discounted cash flow, appraised value and fair value:		
Mortgage loans	1,335	7,353
Real estate	(26,053)	12,854
Venture capital	(1,550)	3,586
	(26,268)	23,793
Total appreciation (depreciation)	$(430,408)	$912,653

The fair value of individual investments that represent 5% or more of the System's net assets available for benefits are as follows:

	1990	1989
	(000's omitted)	
Wells Fargo Bank:		
Equity Index Fund P - 163,294,950 units in 1990	$1,637,889	-
Equity Index Fund - 23,679,726 units in 1989	-	$1,629,930
Asset Allocation Fund - 32,354,297 and 35,775,833 units in 1990 and 1989, respectively	689,293	700,336

Continued

6. Income Taxes:

Management believes the System meets the definition of a Governmental Plan and in the System's communications with the Internal Revenue Service (IRS) has been treated as a qualified plan. Therefore, the System has not requested a determination letter from the IRS relating to the status of the System under the Internal Revenue Code.

7. Contingencies:

The System is involved in various lawsuits which, if settled adversely, would not have a material effect on the financial statements in management's opinion. However, the individual cases involve legal issues that, if extended to the entire membership, may result in significant costs to the System. If such an event were to occur, the additional costs would be recovered by the System through adjustments to the employer contribution rate.

COMMONWEALTH OF PENNSYLVANIA
STATE EMPLOYES' RETIREMENT SYSTEM

TEN-YEAR HISTORICAL TREND INFORMATION

Analysis of Funding Progress
(in millions of dollars)
at December 31, 1990

Fiscal Year	(1) Net Assets Available for Benefits*	(2) Pension Benefit Obligation	(3) Percentage Funded (1)/(2)	(4) Unfunded (Assets in Excess of) Pension Benefit Obligation (2)-(1)	(5) Annual Covered Payroll	(6) Unfunded (Assets in Excess of) Pension Benefit Obligation as a Percentage of Annual Covered Payroll (4)/(5)
1981	$2,817	$6,456	43.6 %	$3,639	$2,187	166.4 %
1982	3,730	5,931	62.9	2,201	2,334	94.3
1983	4,396	6,367	69.0	1,971	2,386	82.6
1984	4,922	6,896	71.4	1,974	2,464	80.1
1985	6,157	6,565	93.8	408	2,427	16.8
1986	7,120	6,984	101.9	(136)	2,518	(5.4)
1987	7,367	7,384	99.8	17	2,663	0.6
1988	8,312	8,257	100.7	(55)	2,779	(2.0)
1989	9,785	8,782	111.4	(1,003)	2,998	(33.5)
1990	9,876	9,536	103.6	(340)	3,197	(10.6)

Analysis of the dollar amounts of net assets available for benefits, pension benefit obligation, and unfunded (assets in excess of) pension benefit obligation in isolation can be misleading. Expressing the net assets available for benefits as a percentage of the pension benefit obligation provides one indication of the System's funding status on a going-concern basis. Analysis of this percentage over time indicates whether the system is becoming financially stronger or weaker. Generally the greater this percentage, the stronger the Plan. Trends in unfunded (assets in excess of) benefit obligation and annual covered payroll are both affected by inflation. Expressing the unfunded (assets in excess of) pension benefit obligation as a percentage of annual covered payroll approximately adjusts for the effects of inflation and aids analysis of the System's progress made in accumulating sufficient assets to pay benefits when due. Generally, where there is an unfunded pension benefit obligation the smaller this percentage, the stronger the Plan. However, when assets are in excess of pension benefit obligation the higher the bracketed percentage, the stronger the Plan.

* Reflects investment valuation at fair value (Note 2).

COMMONWEALTH OF PENNSYLVANIA
STATE EMPLOYES' RETIREMENT SYSTEM

TEN-YEAR HISTORICAL TREND INFORMATION
Revenues by Source and Expenses by Type
(in thousands of dollars)
at December 31, 1990

	Revenues by Source				
Fiscal Year	Employe Contributions	Employer Contributions*	Investment Income**	Total	Employer Contributions as a Percentage of Annual Covered Payroll
1981	$116,283	$325,688	$14,070	$456,041	14.9 %
1982	121,589	383,519	758,038	1,263,146	16.4
1983	135,841	413,809	488,266	1,037,916	17.3
1984	121,929	439,835	363,365	925,129	17.9
1985	132,695	460,435	1,105,778	1,698,908	19.0
1986	139,454	407,276	916,323	1,463,053	16.2
1987	147,061	366,463	223,382	736,906	13.8
1988	153,131	382,413	929,778	1,465,322	13.8
1989	164,653	416,513	1,464,707	2,045,873	13.8
1990	175,422	418,655	114,174	708,251	13.1

* Contributions were made in accordance with actuarially determined contribution requirements.

** Includes net realized and unrealized appreciation or depreciation in fair value of investments and is net of investment expense.

	Expenses by Type			
Fiscal Year	Benefit Payments	Refunds of Employe Contributions	Administrative Expenses	Total
1981	$311,838	$13,862	$3,001	$328,701
1982	335,342	11,785	2,938	350,065
1983	360,434	8,528	2,856	371,818
1984	384,406	11,247	4,044	399,697
1985	447,556	10,680	5,472	463,708
1986	483,603	11,338	4,938	499,879
1987	474,598	10,671	4,811	490,080
1988	504,697	10,446	5,391	520,534
1989	556,324	10,777	6,028	573,129
1990	589,832	9,693	7,400	606,925

Actuarial Section

Hay/Huggins Company, Inc.
Actuarial and Benefits Consultants
1500 K Street, N.W.
Suite 1000
Washington, DC 20005
(202) 637-6600
Fax: (202) 637-0160

March 9, 1992

Hay/Huggins
Company

Retirement Board
Pennsylvania State Employes'
Retirement System
909 Green Street
Harrisburg, PA 17102-2999

Dear Board Members:

An actuarial valuation was last performed as of De
determine actuarial liabilities under the Pennsylvania
Retirement System. The valuation was carried out in acc
actuarial principles in a manner which, in my opinion, refl
provisions of the State Employes' Retirement Code. The va
as the basis for determining the contributions required t
Commonwealth to fund the liabilities of the System.

Valuations are made annually based on data supplie
Retirement Board. The experience under the Retirement
every five years. The last such review was for the period of
results of the review are used to develop the assumptio
actuarial valuations. Thus, required contributions are dete
actuarial basis reflecting actual experience under the syster

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ACTUARIAL BALANCE SHEET
AS OF DECEMBER 31, 1990
(000's omitted)

ASSETS

* ACTUARIAL VALUE OF ASSETS IN THE FUND		$9,489,410
PRESENT VALUE OF FUTURE PROJECTED CONTRIBUTIONS:		
MEMBER CONTRIBUTIONS (1)	$1,773,428	
EMPLOYER NORMAL CONTRIBUTIONS (2).....	$2,646,538	
ACCRUED LIABILITY CONTRIBUTIONS (3)....	$461,469	
SUPPLEMENTAL ANNUITY CONTRIBUTIONS(4)	$405,642	
		$5,287,077
TOTAL ASSETS		**$14,776,487**

LIABILITIES

PRESENT VALUE OF BENEFITS PAYABLE TO ANNUITANTS & BENEFICIARIES	$3,453,943
PRESENT VALUE OF PROJECTED BENEFITS PAYABLE TO ACTIVE & INACTIVE MEMBERS	$11,322,544
TOTAL LIABILITIES	**$14,776,487**

(1) Present Value of contributions that current active members will make.

(2) Present Value of the normal contributions employers will make on behalf of current active members.

(3) Present Value of the contributions necessary to pay off the accrued liabilities of the Pension Plan. The liability is being funded over 20 years from July 1, 1991.

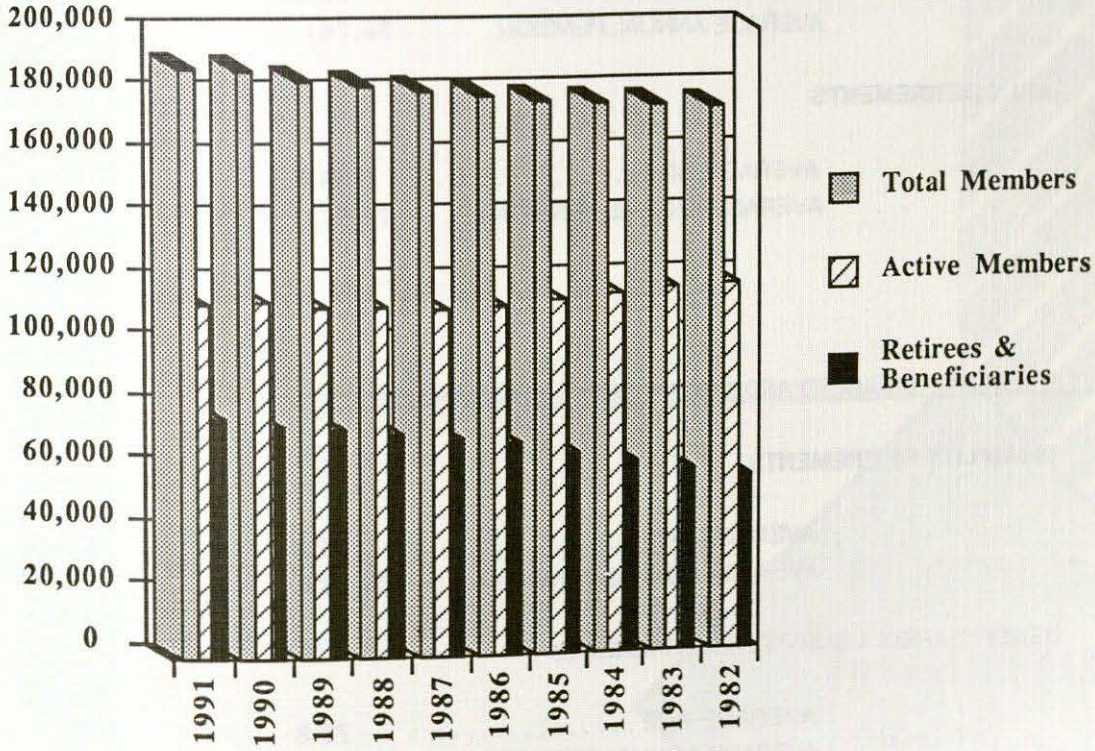
(4) Present Value of the contributions necessary to fund the cost-of-living increases. These liabilities are funded over a 20-year period from July 1, 1991.

* The Actuarial value of the fund assets is determined by using the five-year moving average method which recognizes the difference between the expected actuarial value of assets and the market value of assets over a five-year period.

STATE EMPLOYES' RETIREMENT SYSTEM
COMPARATIVE MEMBERSHIP STATISTICS
As of December 31, 1991

Ending December 31	Total Members	% Change	Active Members	% Change	Retirees & Beneficiaries
1991	188,886	0.40%	112,757	-1.12%	76,109
1990	188,114	1.71%	114,032	1.58%	74,082
1989	184,945	1.02%	112,259	0.32%	72,686
1988	183,076	1.06%	111,901	0.14%	71,175
1987	181,147	0.95%	111,743	-0.10%	69,404
1986	179,448	0.84%	111,855	-1.83%	67,593
1985	177,953	0.66%	113,940	-1.71%	64,013
1984	176,786	0.50%	115,923	-1.33%	60,863
1983	175,915	0.44%	117,488	-1.72%	58,427
1982	175,139	1.68%	119,548	-0.15%	55,591

STATE EMPLOYES' RETIREMENT SYSTEM
COMPARATIVE MEMBERSHIP STATISTICS*



*Membership figures are subject to minor adjustments during Actuarial Review

STATE EMPLOYES' RETIREMENT SYSTEM
AS OF DECEMBER 31, 1990

OFILE OF ACTIVE MEMBERS

AVERAGE AGE	43.8
AVERAGE SERVICE ...	13.1

FILE OF RETIREES & BENEFICIARIES

AR RETIREMENTS

AVERAGE AGE	72.9
AVERAGE ANNUAL PENSION	$6,761

RETIREMENTS

AVERAGE AGE	54.6
AVERAGE ANNUAL PENSION ...	$4,411

E OF DISABLED AND BENEFICIARY & SURVIVOR RETIREES

ITY RETIREMENTS

AVERAGE AGE	59.2
AVERAGE ANNUAL PENSION ...	$5,169

ARIES & SURVIVOR RETIREMENTS

AVERAGE AGE	73.8
AVERAGE ANNUAL PENSION ...	$3,745

Investments Section

STATE EMPLOYES' RETIREMENT SYSTEM
AS OF DECEMBER 31, 1990

E AND SERVICE PROFILE OF ACTIVE MEMBERS

AVERAGE AGE	43.8
AVERAGE SERVICE ...	13.1

E AND BENEFIT PROFILE OF RETIREES & BENEFICIARIES

REGULAR RETIREMENTS

AVERAGE AGE	72.9
AVERAGE ANNUAL PENSION	$6,761

EARLY RETIREMENTS

AVERAGE AGE	54.6
AVERAGE ANNUAL PENSION ...	$4,411

BENEFIT PROFILE OF DISABLED AND BENEFICIARY & SURVIVOR RETIREES

DISABILITY RETIREMENTS

AVERAGE AGE	59.2
AVERAGE ANNUAL PENSION ...	$5,169

BENEFICIARIES & SURVIVOR RETIREMENTS

AVERAGE AGE	73.8
AVERAGE ANNUAL PENSION ...	$3,745

Investments Section

Investment Policy

The State Employes' Retirement Board adopted a formal Statement of Inve Policy in 1979 which has been revised to reflect and incorporate legi changes governing investments.

The purpose of the Statement is to formalize the Board's investment obje policies, and procedures, to establish guidelines for the investment of the of the Fund, and to define the duties and responsibilities of the various e involved in the investment process.

The major elements of the Statement are:

As fiduciaries, the Board will exercise that degree of judgment, skill, and care under the circumstances then prevailing which persons of prudence, discretion, and intelligence, who are familiar with such matters, exercise in the management of their own affairs in investment matters;

Where investment characteristics, including yield, risk, and liquidity, are equivalent, the Board's policy favors investments which have a positive impact on the economy of Pennsylvania;

The Fund's overall investment objective is to provide a Total Rate of Return, over full economic cycles, which exceeds the return of a fully diversified market portfolio within each asset class. The Board seeks to meet this objective within acceptable risk parameters through adherence to a policy of diversification of investments by type, industry, quality, and geographic location;

The Board contracts with highly qualified investment advisors and consultants to provide expert, professional judgment in all investment decisions;

Guidelines are established for each category of assets used by the Fund's investment advisors to provide a framework for monitoring quality, diversification, and liquidity;

An annual Investment Plan is prepared to control the allocation of funds during the year among investment advisors and categories of assets; and

All records of investment transactions are available for public inspection at the offices of the State Employes' Retirement System.

Investment Objectives

To assure an adequate accumulation of reserves in the Fund at the least cost to the citizens of the Commonwealth and to provide some protection against the erosion of principal by inflation. The minimum total return objectives of the Fund, including income and both realized and unrealized gains and losses over full economic cycles, are:

A. Achieve and maintain State-Employes' Retirement Fund in excess of Accrued Benefit Liability;

B. Achieve a Real Total Rate of Return (as measured by the GNP Implicit Price Deflator). Achieve an Absolute Total Rate of Return not less than the actuarial investment return assumption;

C. Achieve in Equity Securities (Common Stock, Convertible Preferred Stock, and Convertible Bonds) a total return that exceeds the total return of the Wilshire 5000 Index;

D. Achieve in Bonds/Mortgages a total return that exceeds the total return of the Shearson Lehman Aggregate Bond Index;

E. Achieve in residential mortgage investments a total return superior to the total return of the Salomon Brothers Mortgage Pass-Through Security Total Rate of Return Index. Commercial mortgage investment return should be competitive with the total return on similar institutional portfolios and on other fixed income investments;

F. Achieve in Equity Real Estate Investments a total return that is competitive with market returns for similar types of real estate investments;

G. Achieve in Short-Term Securities relative performance better than U.S. Treasury Bills (90 days).

Total return includes income and both realized and unrealized gains and losses and is computed on market value.

The Board seeks to meet these objectives within acceptable risk parameters through adherence to a policy of diversification of investments by type, industry, investment manager style, and geographic location. In addition, investments are selected in accordance with quality guidelines.

Investment Highlights

The unaudited market value of the State Employes' Retirement System investments including accruals, was $11,826.8 million as of December 31, 1991. This was an increase of $2,054.1 million from the $9,772.7 million market value as of December 31, 1990. The increase was from investment income, changes in asset market values, net realized and unrealized gains and losses, and from net contributions (employer and employe contributions minus benefit and administrative payments). Based on market value of assets, SERS is the 23rd largest public pension fund in the nation and the 37th largest public and corporate pension fund.

For the year ended December 31, 1991, SERS realized a 22.7% total investment rate of return after fees. The Fund achieved in equity securities a 35.2% total return compared to the 34.2% total return of the Wilshire 5000 Index. The Fund achieved in bonds & mortgages a 19.0% total return compared to the 16.0% total return of the Shearson Lehman Aggregate Bond Index. SERS annualized five year investment rate of return was 11.2%. This return exceeded the 3.6% for the GNP Implicit Price Deflator.

SERS invests in six asset classes and uses multiple external investment advisors with various investment styles as a method to ensure overall fund diversification. As of December 31, 1991 the asset class allocation was: 49.2% stocks; 36.3% bonds & mortgages; 7.1% real estate; 6.6% cash; 0.6% venture capital; and 0.2% alternative investments. As of December 31, 1991 SERS had retained the services of 54 external investment advisors to manage 66 portfolios.

As of December 31, 1991 SERS had $1,056.3 million, over 8.9% of SERS total fund, invested in Pennsylvania. Of this amount, SERS had placed over $801.0 million in portfolios which were specially designed for Pennsylvania investment. The Pennsylvania portfolios include: a stock index fund; a private placement long term loan account; a mortgage - conventional commercial, FHA projects, and residential properties - portfolio; several real estate portfolios; 14 venture capital limited partnerships; and one LBO limited partnership. SERS has committed additional amounts to these portfolios and to several new Pennsylvania portfolios.

Rate of Return (after fees)

Asset Class	5 years 1987-91	1991	1990	1989	1988	1987
SERS - Stocks	**14.2%**	**35.2%**	**-5.6%**	**27.9%**	**17.4%**	**1.6%**
Wilshire 5000 Index	14.4%	34.2%	-6.2%	29.2%	17.9%	2.3%
S&P 500 Index	15.4%	30.5%	-3.2%	31.5%	16.8%	5.2%
SERS - Bonds & Mortgages	**10.0%**	**19.0%**	**7.6%**	**11.6%**	**8.9%**	**3.7%**
Shearson Lehman Aggregate Bond Index	9.9%	16.0%	8.9%	14.5%	7.9%	2.8%
SERS - Real Estate	**3.0%**	**-9.0%**	**1.8%**	**7.1%**	**7.9%**	**8.6%**
FRC Property Index	1.4%	-7.6%	0.2%	4.7%	5.9%	4.3%
SERS - Cash	**9.0%**	**11.5%**	**8.8%**	**10.7%**	**7.4%**	**6.6%**
90-Day Treasury Bills	7.1%	6.4%	8.3%	9.0%	6.7%	5.4%
SERS - Venture Capital	**3.8%**	**11.7%**	**-0.4%**	**6.3%**	**1.7%**	**-0.1%**
SERS - Alternative Investments	**NA**	**2.1%**	**3.2%**	**4.0%**	**3.1%**	**NA**
SERS - Total Fund*	**11.2%**	**22.7%**	**1.1%**	**17.8%**	**12.9%**	**3.4%**
Inflation - GNP Implicit Price Deflator	3.6%	3.3%	4.0%	3.4%	4.3%	3.0%
Inflation - Consumer Price Index	4.5%	3.1%	6.1%	4.6%	4.4%	4.4%

* *Includes the Wells Fargo Asset Allocation Fund.*
The venture capital and alternative investments rates of return were estimated.

Market Value
1987-91
($ in millions)

Asset Class	12/31/91	12/31/90	12/31/89	12/31/88	12/31/87
Stocks	$ 5,814.2	$4,339.6	$4,484.7	$3,431.5	$3,164.4
Bonds & Mortgages	4,297.1	3,221.9	2,886.6	2,673.4	2,720.2
Real Estate	838.6	862.2	833.0	566.5	421.3
Cash	781.5	1,255.7	1,382.4	1,387.0	832.6
Venture Capital	68.8	67.8	67.4	62.8	53.3
Alternative Investments	26.5	25.7	21.9	19.7	8.0
Total Fund	$11,826.8	$9,772.7	$9,676.0	$8,140.9	$7,199.8

Asset Allocation
1987-91

Asset Class	12/31/91	12/31/90	12/31/89	12/31/88	12/31/87
Stocks	49.2%	44.4%	46.4%	42.2%	43.9%
Bonds & Mortgages	36.3%	33.0%	29.8%	32.8%	37.8%
Real Estate	7.1%	8.8%	8.6%	7.0%	5.9%
Cash	6.6%	12.8%	14.3%	17.0%	11.6%
Venture Capital	0.6%	0.7%	0.7%	0.8%	0.7%
Alternative Investments	0.2%	0.3%	0.2%	0.2%	0.1%
Total Fund	100.0%	100.0%	100.0%	100.0%	100.0%

Numbers may not add due to rounding

Asset Allocation
December 31, 1991
($ in millions)

Investment Manager - Portfolio	Stocks	Bonds & Mortgages	Real Estate	Cash	Venture Capital	Alternative Investments	Total Market Value	Percent of Total Market Value
Barrow, Hanley, Mewhinney & Strauss, Inc.	$606.0						$606.0	5.1%
Geewax, Terker & Company	37.3						37.3	0.3%
Mellon Capital Management- PA Index	162.6						162.6	1.4%
Mellon Equity Associates - Special Equity	367.5						367.5	3.1%
Miller, Anderson & Sherrerd	240.8						240.8	2.0%
Pilgrim, Baxter, Greig & Associates	226.6						226.6	1.9%
Provident Investment Counsel, Inc.	310.1						310.1	2.6%
SunBank Capital Management, N.A.	405.0						405.0	3.4%
Trinity Investment Management Corporation	246.1						246.1	2.1%
Wells Fargo Nikko - Equity Index Fund (S&P 500)	2,004.2						2,004.2	16.9%
Wells Fargo Nikko - Extended Equity Market Fund	549.2						549.2	4.6%
Miller, Anderson & Sherrerd - international	240.5						240.5	2.0%
Morgan Grenfell Investment - European	80.9						80.9	0.7%
Scudder, Stevens & Clark, Inc. - Pacific Basin	81.9						81.9	0.7%
Wells Fargo Nikko - Enhan Asset Allocation Fund	255.6	$596.3					851.9	7.2%
Cigna - PA Private Placement		2.8					2.8	0.0%
Delaware Investment Advisers		150.1					150.1	1.3%
W. R. Huff Asset Management		241.7					241.7	2.0%
TCW Special Credits Fund IIb		40.0					40.0	0.3%
TCW Special Credits Fund III		10.0					10.0	0.1%
Mellon Bond Associates -SLH Agg Bond Index		760.1					760.1	6.4%
Miller, Anderson & Sherrerd - global		1,517.5					1,517.5	12.8%
U. S. Treasury bonds & notes		181.5					181.5	1.5%
Latimer & Buck Financial Services, Inc.		796.9					796.9	6.7%
Heitman Advisory Corporation			$245.0				245.0	2.1%
JMB - separate account			181.8				181.8	1.5%
Aetna - 4 pooled funds			103.0				103.0	0.9%
Corporate Property Investors			118.1				118.1	1.0%
JMB Group Trust III			42.5				42.5	0.4%
9 other real estate pooled funds			148.2				148.2	1.3%
Payden & Rygel				$702.5			702.5	5.9%
PA State Treasury - Treasury Investment Pool Fund *				68.4			68.4	0.6%
APA/Fostin Pennsylvania Venture Capital Fund**					$20.2		20.2	0.2%
13 other PA venture capital limited partnerships **					48.6		48.6	0.4%
8 alternative investments **						$26.5	26.5	0.2%
investment manager cash in transit				10.6			10.6	0.1%
TOTAL MARKET VALUE	$5,814.2	$4,297.1	$838.6	$781.5	$68.8	$26.5	$11,826.8	100.0%
PERCENT OF TOTAL MARKET VALUE	49.2%	36.3%	7.1%	6.6%	0.6%	0.2%	100%	
1991 Investment Plan Policy - Target	45%	35%	10%	8%	1%	1%	100%	
1991 Investment Plan Policy - Range	40%-50%	30%-40%	7.5%-12.5%	5.5%-10.5%	0%-1%	0%-1%		

* Treasury Investment Pool Fund values are at cost.

** Venture capital and alternative investment market values are estimates.

Numbers may not add due to rounding.

Pennsylvania Investments

Members of the State Employes' Retirement Board (Board), employes of SERS and agents of the Board stand in a fiduciary relationship to the members of the System regarding the investments and disbursements of the Fund. Subject to restrictions on investments contained in the Retirement Code and the Fiscal Code, the Board has exclusive control and management of the Fund and full power to invest the assets of the Fund. The Board adopted a formal Statement of Investment Policy in 1979 which has been revised to reflect and incorporate legislative changes governing investments. Where investment characteristics including yield, risk and liquidity are equivalent, the Board's policy favors investments which have a positive impact on the economy of Pennsylvania.

SERS investment portfolios have always had substantial investments in Pennsylvania firms, as some of the largest national firms are headquartered in the Pittsburgh, Philadelphia and Harrisburg areas. These firms include Bell Atlantic, Westinghouse, Sun, Rohm & Haas, and H. J. Heinz. In addition, SERS has invested in portfolios which were designed to give emphasis to investments in Pennsylvania. As of December 31, 1991, SERS had $1,056.3 million (over 8.9% of SERS total fund) invested in Pennsylvania. Of this amount, SERS had placed $801.0 million in portfolios which were specially designed for Pennsylvania investments.

Stocks

SERS designed the Pennsylvania Equity Index Fund to increase exposure in smaller "in-state" corporations. The fund consists of 233 corporations that are either Pennsylvania based or employ Pennsylvanians equal to at least 25% of its total corporate employment. Mellon Capital Management manages this passive fund for SERS. The market value of the Pennsylvania Equity Index Fund was $162.6 million as of December 31, 1991.

The following are some of the top performers included in the Pennsylvania Index Fund. The performance given for each company is an annualized price performance over approximately the last 4 years. For comparison, the Standard and Poor's 500 Index had annualized price performance of 12.5%.

Company Location	Performance (annualized to date price appreciation)
• Advanta - Horsham	105%
• Betz Labs - Trevose	31%
• Chambers Development - Pittsburgh	73%
• Conrail - Philadelphia	28%
• Continental Medical - Mechanicsburg	49%
• P. H. Gladfelter - Spring Grove	18%
• Herley Industries - Lancaster	45%
• Mylan Labs - Pittsburgh	42%

Bonds & Mortgages

As of December 31, 1991, SERS had $2.8 million invested in loans of the Pennsylvania Private Placement Separate Account which was designed by the Pennsylvania MILRITE Council and is managed by Cigna. The purpose of these investments was to provide long-term, fixed rate loans to established Pennsylvania firms that do not have access to the public bond markets. SERS is pleased that these investments provide an attractive rate of return while they simultaneously provide financing for Pennsylvania companies to foster economic development within the Commonwealth.

SERS had $374.1 million invested in Pennsylvania mortgages ($239.1 million in conventional commercial, $27.0 million in FHA projects, and $108.0 million in residential properties) as of 12/31/91. The residential segment of this portfolio is comprised of competitive rate mortgages that are distributed solely throughout Pennsylvania, in accordance with SERS policy to originate 100% of all residential mortgages within the Commonwealth. The commercial segment listed above is comprised of competitive rate mortgages on various industrial, retail, apartment and office complexes within Pennsylvania. Latimer & Buck, SERS mortgage advisor, in Philadelphia, has committed on a best efforts basis under its fiduciary responsibility to invest at least 50% of the entire SERS mortgage portfolio (commercial and residential combined) in Pennsylvania-based mortgages. In addition to these figures, Latimer & Buck currently has outstanding

commitments for an additional $33.8 million in commercial mortgages within Pennsylvania; these commitments should be funded during 1992. Also during 1992, SERS plans to make available an additional $40 million to Latimer & Buck for investment in residential and commercial mortgages. With these funds and other cash flows from the portfolio, residential mortgages will continue to be originated by Latimer & Buck solely within the Commonwealth, while a "best efforts" basis will be employed to originate commercial mortgages within Pennsylvania. It is conservatively estimated that as of 12/31/91, the various commercial projects financed within the Commonwealth by SERS under the commercial mortgage program directly employ at least 5,000 workers; this figure does not take into account those who are employed in the property management and maintenance areas of these projects, nor does it consider the favorable "ripple effect" that such jobs may have on the local economy.

Some examples which help to illustrate how SERS has prudently sought opportunities to provide financing for worthwhile commercial projects within the Commonwealth include:

- Super Rite Foods Warehouse in Harrisburg
- Rydal Square in Jenkintown
- Heights Plaza Shopping Center in Natrona Heights

SERS had $12.3 million invested as of December 31, 1991 in corporate securities issued by Pennsylvania-based companies; these securities are held in SERS various externally-managed bond portfolios.

Cash

SERS is one of the largest investors in two Treasury Investment Pools which are managed by the Pennsylvania State Treasury Department. These Treasury Investment Pools have significant holdings of 1) certificates of deposit issued by Pennsylvania-based financial institutions, 2) short-term notes and commercial paper issued by Pennsylvania-based companies, 3) notes and obligations of selected Pennsylvania state agencies, and 4) FNMA mortgage-backed securities backed by loans issued under the Homestart program. The Homestart program is designed to encourage home ownership within the Commonwealth by making mortgages available to lower, moderate, and middle-income Pennsylvania households.

Real Estate

In 1987, SERS established two separate account real estate portfolios which are managed by Heitman Advisory Corporation and JMB Institutional Realty. To date, these managers have met their commitment to invest approximately 50% of SERS portfolio in Pennsylvania properties. As of December 31, 1991, these two portfolios had over $174 million invested in eight Pennsylvania properties, along with other pension fund investors who invested an additional $127.4 million in them, for a total market value of $301.4 million. The SERS separate account portfolios contain eight notable investments that are listed in the Real Estate Separate Account Pennsylvania Properties section of this report.

As of December 31, 1991, SERS had an interest in $12.0 million of various Pennsylvania properties through pooled real estate funds. Due to the weak real estate markets throughout the country SERS purchased just one property in 1991.

Venture Capital

SERS committed $95 million to 17 Pennsylvania-based venture capital partnership funds. These funds are diversified among various geographic regions and financing stages (including five seed funds designated by the Ben Franklin Partnership). SERS, in conjunction with the Pennsylvania Public School Employes' Retirement System (PSERS), created the Pennsylvania Venture Capital Fund with the commitment of $20 million from each fund. The partnership of Alan Patricof Associates/Fostin Capital manages this venture capital fund.

A key aspect of SERS venture capital investment is the attraction of national funds into Pennsylvania investments. Alan Patricof Associates' expertise as the lead investor in the majority of their investments continues to provide Pennsylvania with a flow of venture capital money from numerous out-of-state funds and investors. The progress of Pennsylvania within the national venture capital community should reap substantial rewards in future years for both Pennsylvania and the SERS Fund. As of September 30, 1991,

SERS venture capital limited partnerships have attracted over $120 million of out-of-state funds to finance their active venture companies.

An entrepreneurial environment is necessary to enhance returns on venture capital investing and to continue an expansion of various business opportunities. A continuous effort to create this business environment, along with the availability of venture capital money, encourage continued economic growth as has been exhibited in such states as California and Massachusetts.

SERS has been active in seed and early stage financings of Pennsylvania-based companies. SERS investment in NEPA Venture Fund has during its six year history, provided investment in 17 Pennsylvania-based startup companies which possess a technology orientation. SERS recent commitment to NEPA Venture Fund II will enable NEPA to cover the Pittsburgh area in addition to Eastern Pennsylvania. The goal of NEPA Venture Fund II will be to invest over the next five years in up to five startup companies within the Pittsburgh area. Examples of Pennsylvania success stories can be found in companies and places such as:

- Metallized Paper Corporation of America in McKeesport
- Zynaxis in Philadelphia
- City Pride Bakery in Pittsburgh
- Swan Technologies in State College
- Intelligent Electronics in Lionville

The limited partnerships funded by SERS have invested in 53 Pennsylvania companies currently active within their portfolio. The Pennsylvania portfolio companies plus non-Pennsylvania based companies employ 6,980 Pennsylvanians and have an estimated 1992 payroll of $130,911,654.

As of December 31, 1991, $18 million of venture capital funds previously drawn down by SERS venture capital partnerships is currently available for investing in those companies seeking a home in Pennsylvania. In addition, $21.1 million of committed funds are available for drawdown by SERS venture capital partnerships as of December 31, 1991.

Alternative Investments

SERS has funded $10 million to one LBO limited partnership fund with a Pennsylvania focus. This LBO fund invests in non-hostile, "friendly," privately negotiated, non-auction deals which are completed with present management in place. The LBO fund focuses on small-to-medium capitalization companies (between $5 and $100 million). SERS believes that this particular focus offers the largest potential returns given the risk levels for these types of investments. Examples of these types of investments include:

- Bundy Industries in Coraopolis
- Ductmate Industries in Monongahela
- Legend Medical Services in Pittsburgh
- Horizon Cellular Telephone Company in Doylestown

Summary of SERS Pennsylvania Investment Program

Asset Class	PA Market Value
Stocks	$ 402.7
Bonds & Mortgages	389.1
Real Estate	185.4
Venture Capital	68.8
Alternative Investments	10.2
Total	$1,056.2

Real Estate Separate Account Pennsylvania Properties

Property	Location	Description	Market Value of SERS ($ in millions)	Manager
1. Bucks County Business Park	Middletown & Falls Township, Bucks Co.	Five, one-story office flex buildings including warehouse and distribution space	$7.8	Heitman Advisory
2. Columbia Mall	Hemlock Township, Bloomsburg	Shopping Mall	$17.0	Heitman Advisory
3. Foster Plaza	Borough of Greentree, Pittsburgh	Multi-story office buildings	$33.1	JMB Institutional Realty
4. Greenwood Square	Bensalem Township, Bucks County	Multi-phased flex office facility	$15.5	Heitman Advisory
5. Heartland Properties	Reading, Harrisburg, Montgomeryville	Limited partnership consisting of industrial properties including warehouse, distribution, and limited mfg. facilities	$27.3	JMB Institutional Realty
6. Lincoln Green Apartments	Philadelphia	360 unit apt. complex consisting of 288 one bedroom units and 72 two bedroom units	$14.2	JMB Institutional Realty
7. 1818 Market Street	Philadelphia	40-story office tower with a 5 level parking garage	$38.9	Heitman Advisory
8. York Galleria	York	Shopping Mall	$19.3	Heitman Advisory

Investment Advisors

Aetna Life Insurance Company
Hartford, CT
(real estate)

Alex. Brown Kleinwort Benson
Realty Advisors Corporation
Sacramento, CA
(real estate)

APA Capital Risque III
New York, NY and Paris, France
(alternative investments)

APA/Fostin Pennsylvania Venture Capital Fund
Philadelphia, PA and Pittsburgh, PA
(venture capital)

Barrow, Hanley, Mewhinney & Strauss, Inc.
Dallas, TX
(stocks)

Brentwood Associates Buyout Fund, L.P.
Los Angeles, CA
(alternative investments)

CEO Venture Fund-S
CEO Venture Fund II
Pittsburgh, PA
(venture capital)

Code, Hennessy & Simmons, L.P.
Chicago, IL
(alternative investments)

Connecticut General Life Insurance Company
Hartford, CT and Philadelphia, PA
(bonds & mortgages)

Copley Real Estate Advisors
Boston, MA
(real estate)

P.G. Corbin Asset Management, Inc.
Philadelphia, PA
contract pending
(bonds & mortgages)

Corporate Property Advisors
New York, NY
(real estate)

Delaware Investment Advisers
Philadelphia, PA
(bonds & mortgages)

Fostin Capital Associates
Fostin Capital Associates II
Pittsburgh, PA
(venture capital)

Genesis Seed Fund, Ltd
Philadelphia, PA
(venture capital)

Grotech Partners III
Timonium, MD
(venture capital)

Hamil & Holte
Denver, CO
contract pending
(bonds & mortgages)

Heitman Advisory Corporation
Chicago, IL
(real estate)

JMB Institutional Realty Corporation
Chicago, IL
(real estate)

John Hancock Mutual Life Insurance Company
Boston, MA
(real estate)

Keystone Venture II, L.P.
Philadelphia, PA
(venture capital)

Latimer & Buck Financial Services, Inc.
Philadelphia, PA
(bonds & mortgages)

Maverick Pennsylvania Fund
Pittsburgh, PA
(alternative investments)

Mellon Bank, N.A.
Pitttsburgh, PA
(stocks)

Mellon Bond Associates
Philadelphia, PA
(bonds & mortgages)

Mellon Equity Associates
Pittsburgh, PA
(stocks)

Investment Advisors (Continued)

Metric Institutional Realty Advisors
Foster City, CA
(real estate)

Miller, Anderson & Sherrerd
West Conshohocken, PA
(stocks, bonds & mortgages)

Morgan Grenfell Investment Services Limited
New York, NY
(stocks)

Murphy & Fauver, L.P.
New York, NY
(alternative investments)

NEPA Venture Fund, L.P.
Bethlehem, PA
(venture capital)

Payden & Rygel
Los Angeles, CA
(cash)

Pennsylvania Fund #1
RR&Z Capital Group Inc.
Pittsburgh, PA
(alternative investments)

Pilgrim, Baxter, Greig and Associates
Wayne, PA
(stocks)

Pittsburgh Seed Fund
Pittsburgh, PA
(venture capital)

PNC Venture Group I
Pittsburgh, PA
(venture capital)

Point Venture Partners
Pittsburgh, PA
(venture capital)

Provident Investment Counsel, Inc.
Pasadena, CA
(stocks)

The Prudential Asset Management Company, Inc.
Newark, NJ
(real estate)

PSI Institutional Realty
Glendale, CA
(real estate)

Scudder, Stevens & Clark, Inc
New York, NY
(stocks)

Sentinel Corporation
New York, NY
(real estate)

Sturdivant & Co., Inc.
Camden, NJ
funded 1/14/92
(stocks)

SunBank Capital Management, N
Orlando, FL
(stocks)

TDH II Limited
Radnor, PA
(venture capital)

Trinity Investment Management Corp
Bellefonte, PA
(stocks)

Trust Company of the West
Los Angeles, (CA)
(bonds & mortgages)

Wells Fargo Nikko Investment Advi
San Francisco, CA
(stocks, TAA)

W.R. Huff Asset Management
Morristown, NJ
(bonds & mortgages)

Zero Stage Capital II - Central Pennsyl
Limited Partnership
State College, PA
(venture capital)

Zevenbergen Capital Inc.
Seattle, WA
funded 1/14/92
(stocks)

Commissions
Paid by SERS Stock Managers to Brokers
1991

Broker	Commissions
Alex Brown & Sons	$59,666.00
Allied Research	12,500.00
Alpha Management Inc.	5,668.00
Autranet, Inc.	8,259.70
Bear Stearns	211,985.00
Bridge Trading	8,035.00
Broadcort	185,318.00
Burns Fry Hoare Govett Inc.	17,465.00
Cantor Fitzgerald	23,440.00
Capital Institutional	19,801.00
Cazenave & Co.	2,600.00
County Natwest Securities Corp	17,928.00
Cowen & Co.	5,808.00
Cyrus J. Lawrence	77,318.98
Dean Witter Reynolds	15,837.00
Dillon Read	2,774.00
Ewing Capital	24,466.50
Execution Services	20,231.00
Fidelity Institutional	4,786.00
First Boston Corp.	100,702.86
Fourteen Research Corp.	3,125.00
Gerard Klaver Mattison & Co.	6,344.00
Goldman Sachs	81,577.00
Gordon Haskett	8,753.00
Gruntal & Co.	4,181.90
Helfant Trading Inc.	6,472.00
Instinet Corp.	63,311.45
Interstate Securities	3,343.00
Invemed Associates	6,830.00
Janney Montgomery Scott	15,882.00
Jefferies & Co.	144,646.27
Josephthal & Co.	15,690.00
Keefe Bruyette & Woods	6,362.00
Kidder Peabody & Co.	79,427.43
Leg Mason Wood Walker, Inc.	38,434.00
Lewco Securities	6,875.00
Lynch Jones & Ryan	$183,134.00
Mabon Nugent	8,852.00
Merrill Lynch Pierce Fenner	215,394.50
Mesirow & Co.	3,600.00
Miller, Tabak, Hirsch & Co.	46,120.93
Montgomery Securities	30,979.00
Morgan Stanley	56,326.00
Neuberger & Berman	5,030.00
O'Neil, William & Co.	7,718.00
Oppenheimer & Co.	150,021.00
PA Merchant Group Limited	3,000.00
Paine Webber Jackson Curtis	52,429.00
Pershing Div of DL & J	80,429.50
Piper, Jaffray & Hopwood	4,632.00
Prudential/Bache Securities	39,451.00
Pryor Govan & Counts	8,153.00
Quick & Reilly	7,070.00
Robert Brandt & Co.	9,107.00
Rosenblatt & Co.	2,788.00
Salomon Brothers	16,666.00
Sanford C. Bernstein	11,711.00
Shearson Lehman Hutton Inc.	157,448.50
Smith Barney Harris Upham	65,993.00
Stamford Company Inc.	6,648.00
Standard & Poors	12,095.00
Stuart Frankel & Company	4,783.00
Sturdivant & Co., Inc.	19,898.00
The Chapman Company	19,100.00
W.R. Lazard & Laidlaw	87,979.00
Warburg, S.G. & Co., Inc.	5,656.00
Weeden & Co.	64,573.00
Wertheim Schroder	40,777.00
Wheat, First Securities	2,959.30
Wilshire Assoc.	346,222.80
Other	39,482.50
Total Commissions	$3,132,071.12