

# 2013 Supplemental Budget Information

Prepared for the House Appropriations Committee





NICHOLAS J. MAIALE  
Chairman

Commonwealth of Pennsylvania  
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February 11, 2013

The Honorable William F. Adolph Jr.  
Chairman, Appropriations Committee  
Pennsylvania House of Representatives  
245 Main Capitol Building  
Harrisburg, PA 17120-2165

The Honorable Joseph F. Markosek  
Democratic Chairman, Appropriations Committee  
Pennsylvania House of Representatives  
512E Main Capitol Building  
Harrisburg, PA 17120-2025

Gentlemen and Members of the Appropriations Committee:

On behalf of the State Employees' Retirement System (SERS), I am pleased to share this detailed information about SERS' operations, investments, and request for spending authority. I trust this data will be useful in your careful deliberation of the Commonwealth's FY 2013/14 budget.

As you well know, the Commonwealth's financial obligation to its pension systems will be front-and-center in this year's budget negotiations. I trust that the information contained in this book will provide you with additional information for those discussions as well as further assurance that Pennsylvania's state employees' pension system is well run. The men and women who work for SERS are careful stewards of public dollars and take seriously our obligation to safeguard the financial security of nearly 230,000 current and former Commonwealth employees in their retirement years.

Some highlights of the information in this book include:

- Information about SERS' request for \$20.8 million in spending authority from the General Assembly. Nearly three quarters of our request is dedicated to employee salaries and benefits, including SERS' employer share of rising pension costs. Of the quarter that remains to support operations, well over half is consumed by information technology and real estate (rent and other expenses).
- Details of SERS' investment program, which generated an estimated 12% return in 2012, bringing the system's 10-year rate of return to 8.4% and adding more than \$2.9 billion to the SERS Fund. Additionally, investment fees were reduced by \$15.5 million, continuing SERS' ongoing trend and resulting in a total fee decrease of 23 basis points since 2010.
- Specifics about how Act 120's authorized 4.5% year-to-year increase in employer contributions impacts SERS' unfunded liability and how the unfunded liability drives current employer costs. To translate that 4.5% into dollars, some projections suggest that employer contributions to SERS will increase between about \$310 million and \$350 million per year for the next three years.

- Data about SERS members, including the 4,359 retirements and 9,356 new members added in 2012. This activity brings the number of active SERS members who belong to the post Act-120 classes of service to 10.9% of the total active population. (The cost of benefits for post Act-120 members was just 5.1% of payroll last year, as per SERS' 2011 actuarial valuation.) The vast majority of SERS members pay 6.25% of their pay to the Fund each payday for a retirement benefit that currently averages \$25,083 per year.

The current pension debate is and will continue to be the subject of extensive constituent interest and media coverage. Indeed, the stakes are high. SERS recognizes that determining the system and level of retirement benefits for state employees is properly the purview of the General Assembly and the Governor. We do not take positions on legislation and we hold the view that no one system is inherently superior to another; the adequacy and effectiveness of any retirement plan is based on countless individual variables.

Rather than relying on second-hand information, media accounts, or biased representations, I invite you to call upon SERS directly. We will share our expertise, our insight, and our data quickly and accurately to meet your needs.

SERS' Executive Director, Dave Durbin, and Chief Investment Officer, Tony Clark, and I are prepared to answer any questions you may have during our February 27 hearing. If you have any questions, comments, or concerns before then – or if there's any issue you would like to be sure that we are fully prepared to discuss with specificity – please contact Mr. Durbin at (717) 787-9657.

Thank you for your time and consideration. You have extremely challenging work ahead of you; if there is any way SERS or its professionals can help you, please don't hesitate to call.

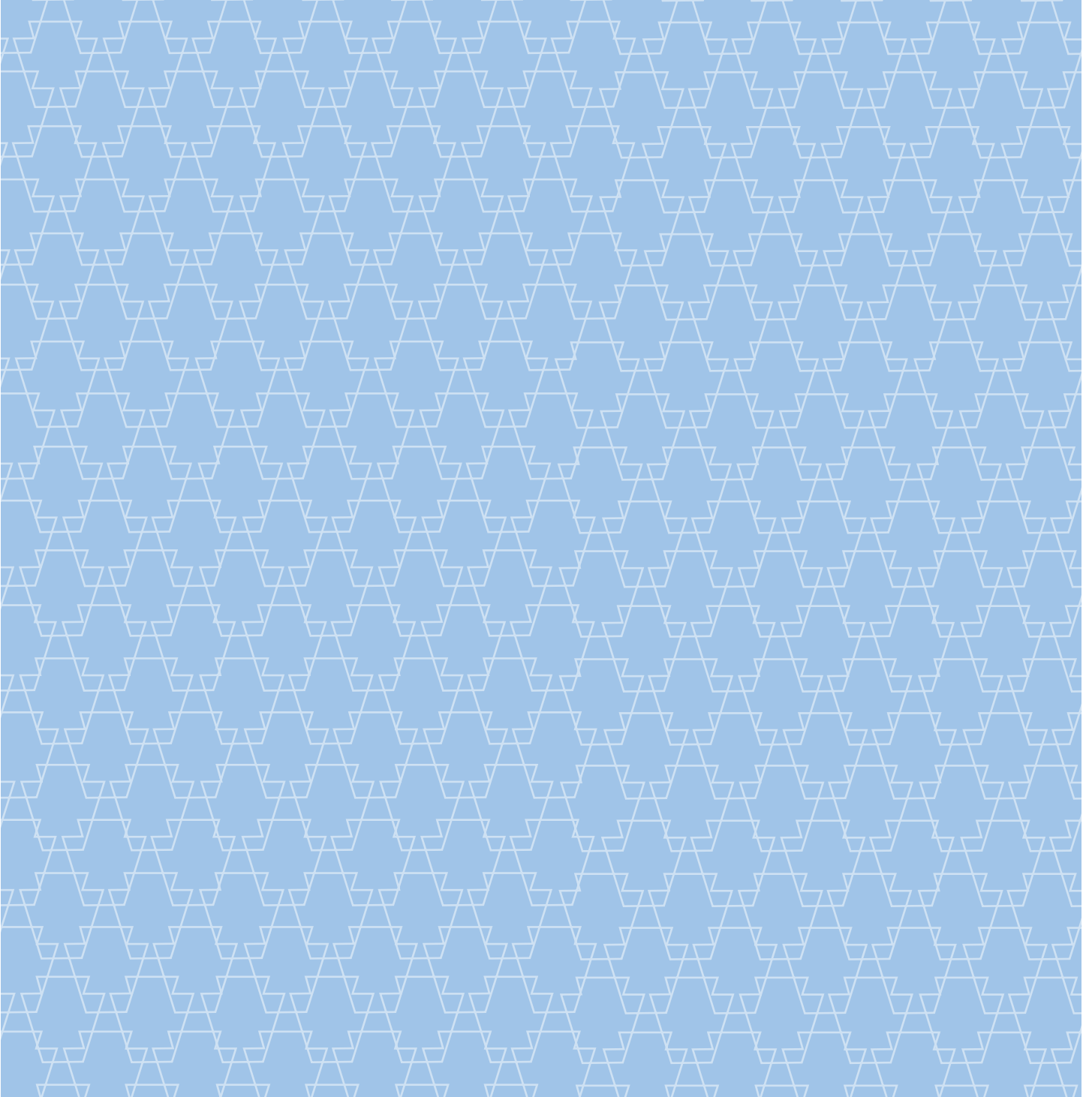
Sincerely,

A handwritten signature in black ink, appearing to read 'N. Maiale', written in a cursive style.

Nicholas J. Maiale  
Chairman

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# Mission, Vision & Guiding Principles

Established in 1923, SERS is one of the nation's oldest and largest statewide retirement plans for public employees, with nearly 230,000 members. SERS is among the largest of public and corporate pension funds, with assets of approximately \$25.3 billion as of December 31, 2012.

SERS is responsible for administering the State Employees' Retirement Code in accordance with the expressed intent of the General Assembly and bears a fiduciary obligation to the state employees and retirees who are the plan beneficiaries.

State law provides that the administration of the SERS Fund and the fiduciary responsibility for its management be vested in an 11-member Board. The management of SERS is the responsibility of the Executive Director who, with the approval of the Board, contracts for professional services and employs the staff needed to operate the System.

## **Mission**

The mission of SERS is to provide retirement benefits and services to our members through sound administration and prudent investments.

## **Vision**

To navigate the fiscal storm so that SERS continues to progress toward fully-funded status while sustaining effective and responsive member services.

## **Guiding Principles**

- Demonstrate Integrity
- Develop and Empower Employees
- Focus on Customer Service
- Fulfill Fiduciary Obligations
- Lead Innovation and Improvement
- Learn from Mistakes
- Safeguard Information, Facilities, and Staff
- Share Knowledge
- Think Strategically

# Organization & Operations

The agency's various program functions are administered by staff in SERS' Harrisburg Central Office and through a statewide network of seven Regional Retirement Counseling Centers. Assignment of major agency functions is as follows:

**Executive Office:** Supports the Executive Director who is the agency's senior staff administrator. Provides direct service to the Chairman of the Board and Board members. Makes arrangements for and conducts administrative functions for all Board meetings. Conducts research and provides agency direction on organizational development, strategic planning, pending retirement issues and actuarial considerations. Includes the Communications and Policy Office, which serves a variety of support functions related to communications and legislation. These include preparation and dissemination of retirement-related information and publications, tracking and reporting on retirement legislation, serving as the agency's legislative liaison and handling inquiries from the media, state Legislature and the public.

**Office of Member Services:** Provides individualized counseling and retirement-related seminars through SERS' statewide system of seven Regional Retirement Counseling Centers. Processes member and member-survivor benefit payments and provides membership account services. Researches issues in public pension programs, recommends adoption of new strategies, and performs special retirement-related functions.

**Investment Office:** Works closely with the Board to recommend and establish asset allocation, investment policy and investment managers for review and approval by the Board. The office works in tandem with the consultants monitoring the compliance and performance of the outside managers and undertaking research on investment products and investment managers.

**Office of Finance and Administration:** Provides the accounting structure for SERS' \$25.3 billion Fund; oversees all transactions, including payment of member benefits, purchase and sale of investment securities, receipt of employer and employee contributions and investment income, and administration of the agency operational budget. The office also manages agency operations and disaster recovery planning, while reporting to the Board on management of the approximately \$2.4 billion Commonwealth Deferred Compensation Program.

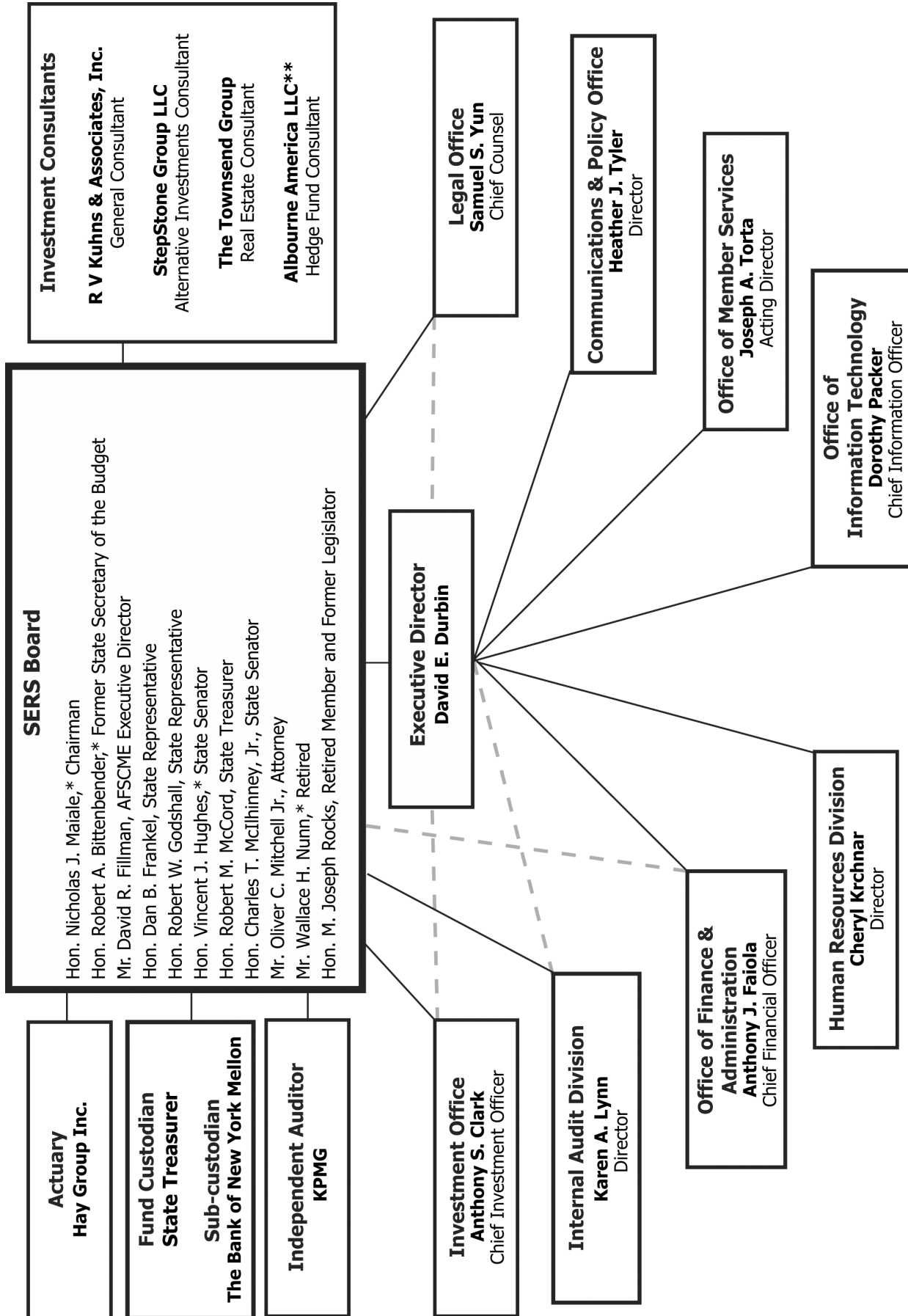
**Legal Office:** Provides counsel to the Board and the agency, including handling administrative hearings involving SERS members, reviewing investment and non-investment-related contracts, and providing legal advice.

**Office of Information Technology:** Provides all computer and technical support for SERS operations, including a Wide Area Network linking the agency's seven Regional Retirement Counseling Centers.

**Internal Audit Division:** Provides the Board with the assurance that internal controls are adequate and operating as designed through internal audits of business processes. Coordinates audits performed at SERS by external agencies and auditors.

**Human Resources Division:** Implements programs and provides direction for all aspects of organizational change and employee needs including, but not limited to, recruitment, classification, compensation, staff development, workforce planning, and labor relations.

# SERS Organizational Chart



\* Audit Committee Member  
\*\* Contract finalized 1/11/13





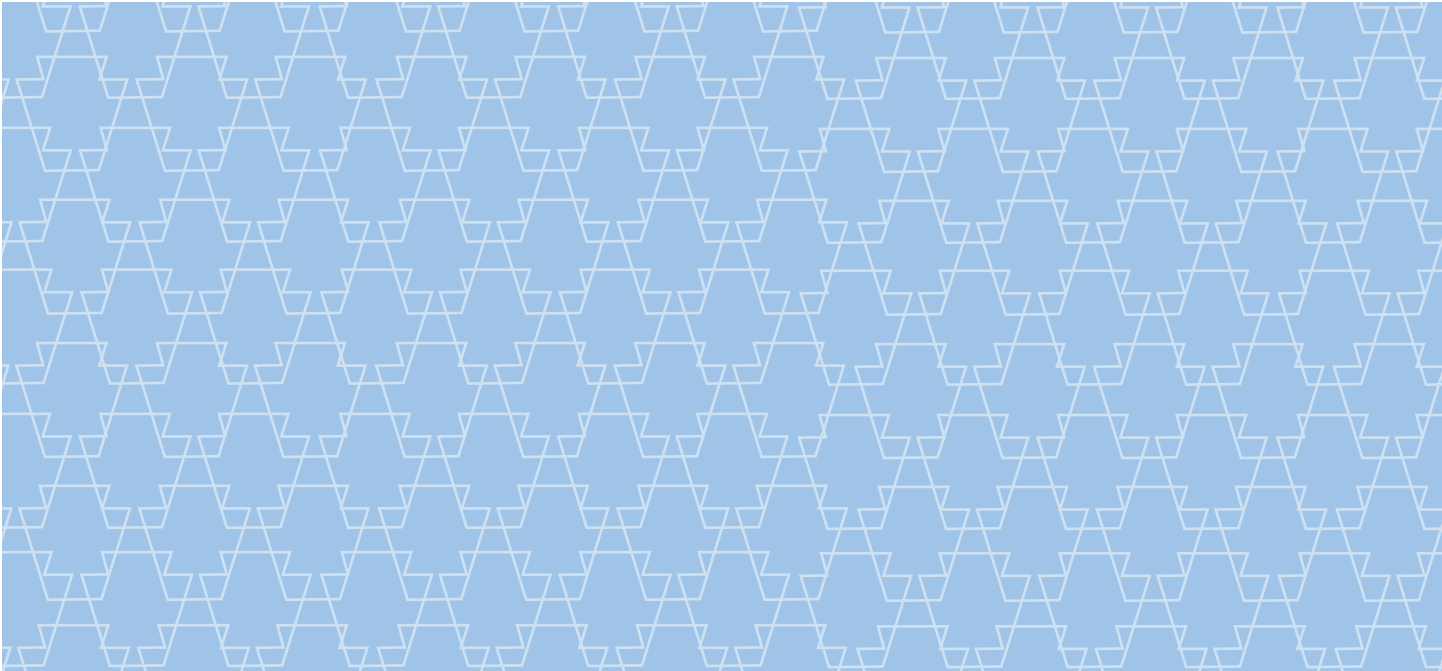
**2013-2014 Budget - Board Submission 2**



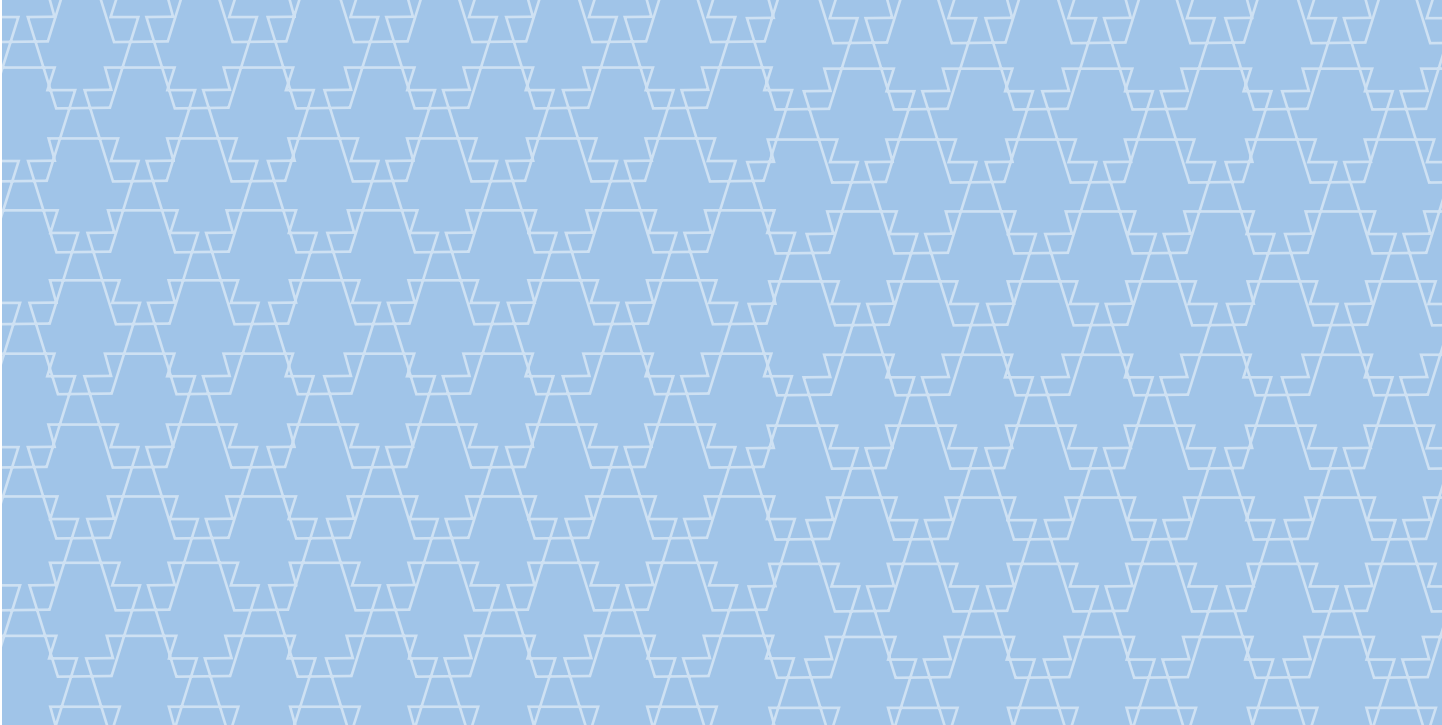
# SERS Budget 2013-2014

	Rebudget 2009-2010	Rebudget 2010-2011	Rebudget 2011-2012	Rebudget 2012-2013	Budget Request
<b>Personnel Services</b>	\$16,628,031	\$16,142,000	\$16,218,000	\$16,820,129	\$15,072,000*
<b>Operational:</b>					
Travel	249,700	224,600	141,800	183,600	35,800*
Training	200,050	164,900	97,400	90,500	66,500*
Communication Services	389,400	385,800	299,900	378,500	353,500
Consultant	4,439,000	4,874,000	4,799,000	396,500*	366,600*
Legal Services/Fees	52,000	188,000	100,500	175,500	123,800
Specialized Services	711,300	677,400	620,100	421,700	353,700
Advertising	5,000	5,000	10,000	20,000	10,000
IT Consulting	755,000	1,385,000	1,728,500	947,500	738,200
Contracted Maintenance & Repairs-Non-EDP	74,200	70,700	43,100	52,800	44,800
Hardware/Software and Maintenance	1,076,900	765,000	356,600	1,084,800	1,325,400
Real Estate	1,630,000	1,690,000	1,725,000	1,770,800	1,763,000
Vehicles	54,000	32,900	34,100	44,900	27,000
Office Equipment	179,300	95,900	90,000	68,000	75,500
Other Rentals/Leases	146,700	135,500	65,000	18,600	2,700
Office Supplies	48,500	87,300	80,000	84,900	86,900
Educational Supplies	1,000	1,000	2,400	1,700	5,800
Other Computer Equipment	619,500	400,000	0	0	0
Motorized Equipment Maintenance	19,900	18,100	14,800	10,900	2,600
Postage	320,000	210,000	203,100	294,700	300,000
Freight	8,800	8,800	4,500	3,200	3,000
Printing	225,500	197,600	172,400	226,200	116,600
Subscriptions & Investment Licensing	319,300	637,500	430,800	115,000*	112,000*
Membership Dues	141,900	70,400	61,200	59,500	15,000*
Conference Expenses	23,150	12,800	8,300	7,400	4,600
Insurance, Surety, & Fidelity Bonds	10,000	12,000	13,500	13,000	13,000
Other Operational	904,869	1,082,800	1,200,000	1,449,191	1,170,200
<b>Total Operational</b>	12,604,969	13,433,000	12,302,000	7,919,391	7,116,200
<b>Fixed Assets</b>	0	0	0	120,000	150,000
<b>Less Directed Commissions</b>	1,500,000	1,500,000	1,200,000	1,200,000	1,500,000
<b>Total Annual Budget</b>	\$27,733,000	\$28,075,000	\$27,320,000	\$23,659,520	\$20,838,200

\*Investment related expenditures previously included in these line items are accounted for as non-appropriated expenditures and reported as Investment Expenditures.



**Investment Advisory and Consultant Fees 3**



# Investment Advisory & Consultant Fees

(2012 - Unaudited)

## Advisory Fees

Assets	Fees	Fees <sup>1/</sup> (in basis points)
Alternative Investments	\$90,526,595	144.2
Global Public Equity	16,233,511	20.4
Real Assets	42,869,261	107.6
Diversifying Assets	13,954,907	69.3
Fixed Income	11,856,549	31.3
Liquidity Reserve	348,615	4.4
<b>Total Advisory Fees</b>	<b>\$175,789,438</b>	<b>71.0</b>

<sup>1/</sup>The fees were divided by SERS' total fund and asset class quarterly average values during calendar year 2012 to arrive at the basis point calculations.

## Average Basis Points Calendar Years Ended 2008-2012

Calendar Year	Fees (\$ millions)	Basis Points
2008	\$303.8	89.1
2009	252.1	97.0
2010	231.0	94.0
2011	191.3	75.0
2012	175.8	71.0

## Investment Related Expenses<sup>2/</sup>

Type	Expenses
Alternative Investments	\$12,922,942
Real Estate	1,117,257
Subscriptions	478,430
Custodial	194,056
Other	11,422

<sup>2/</sup>Excludes investment consultant fees which are reported below.

## Consultant Fees

Firm	Service Type	Fees
StepStone Group	Alternative Investments	\$1,544,463
R.V. Kuhns & Associates	General Investment	444,027
The Hay Group	Actuary	388,937
The Townsend Group	Real Estate	322,909
Credit Suisse Asset Management	Portfolio Management	260,157
Institutional Shareholders Services	Proxy Services	174,200

# Fees to Managers (Non-Budget Appropriation)

(Unaudited)

SERS employs outside investment managers because of their investment expertise. The managers of the SERS' investment portfolio are paid through a non-budget appropriation. Their fees are treated as a reduction of the investment revenue of the Fund, rather than as a direct administrative expense. Thus, when investment performance is reported elsewhere in this book, the numbers are reported net of fees - that is, performance after all investment management fees have been paid.

## 2012 Fees to Managers

Manager	City	State/Country	Fees
<b>Alternative Investments</b>			
Abingworth Bioventures IV	London	United Kingdom	\$400,000
Abingworth Bioventures V	London	United Kingdom	722,636
ABRY Advanced Securities Fund	Boston	MA	495,180
ABRY Broadcast Partners III	Boston	MA	7,970
ABRY Mezzanine Partners	Boston	MA	18,728
ABRY Partners IV	Boston	MA	69,999
ABRY Partners V	Boston	MA	125,816
ABRY Partners VI	Boston	MA	460,365
ABRY Partners VII	Boston	MA	550,179
ABRY Senior Equity II	Boston	MA	202,425
ABS Capital Partners IV	Baltimore	MD	10,513
ABS Capital Partners V	Baltimore	MD	150,917
ABS Capital Partners VI	Baltimore	MD	500,773
Accel Europe	London	United Kingdom	246,180
Adams Capital Management III	Sewickley	PA	331,625
Advanced Technology Ventures VII	Waltham	MA	144,593
Advent International GPE VI-A	Boston	MA	541,906
Advent International GPE VII	Boston	MA	303,333
Advent Latin American Private Equity Fund IV	Boston	MA	403,341
Advent Latin American Private Equity Fund V	Boston	MA	272,247
AG Capital Recovery Partners V	New York	NY	60,632
Alloy Ventures 2002	Palo Alto	CA	955,216
Alloy Ventures 2005	Palo Alto	CA	378,106
Alpha Private Equity Fund 4	Paris	France	36,247
Alpha Private Equity Fund 5	Paris	France	1,005,878
APAX Europe VI	London	United Kingdom	694,462
APAX Europe VII	London	United Kingdom	1,027,671
APAX Excelsior VI	New York	NY	50,775
Artiman Ventures II	Palo Alto	CA	582,925
Artiman Ventures III	Palo Alto	CA	555,571
Asia Alternatives I	San Francisco	CA	3,682
Asia Alternatives II	San Francisco	CA	36,533
Asia Alternatives III	San Francisco	CA	777,659
Audax Private Equity Fund	Boston	MA	9,373
Audax Private Equity Fund II	Boston	MA	43,764
Audax Private Equity Fund III	Boston	MA	108,535

# Fees to Managers

(Alternative Investments, continued)

Manager	City	State/Country	Fees
Austin Ventures IX	Austin	TX	\$310,490
Austin Ventures VIII	Austin	TX	99,595
Avenue Asia Special Situations IV	New York	NY	343,797
Avenue Special Situations VI	New York	NY	275,858
AXA Secondary Fund III	Paris	France	41,600
AXA Secondary Fund III-2	Paris	France	23,873
AXA Secondary Fund IV	Jersey	Channel Islands	623,704
AXA Secondary Fund V - B	Paris	France	1,477,365
Bain Capital Asia Fund	Boston	MA	237,847
Bain Capital Europe III	Boston	MA	589,837
Bain Capital Fund IX	Boston	MA	1,092,043
Bain Capital Fund VII	Boston	MA	37,843
Bain Capital Fund VIII-E	Boston	MA	211,891
Bain Capital Fund X	Boston	MA	2,000,703
Bain Capital IX Coinvestment Fund	Boston	MA	321,167
Bain Capital X Coinvestment Fund	Boston	MA	21,270
Baring India Private Equity Fund III Limited	Port Lewis	Mauritius	99,717
Baring Vostok PE IV	Guernsey	Channel Islands	409,133
Battery Ventures VIII	Waltham	MA	624,900
Battery Ventures VIII - Side Car	Waltham	MA	93,046
BC European Capital IX	London	United Kingdom	341,152
BC European Capital VIII	London	United Kingdom	356,974
Berkshire Fund VI	Boston	MA	202,642
Berkshire Fund VII	Boston	MA	792,266
Berkshire Fund VIII	Boston	MA	371,672
Birchmere Ventures III	Pittsburgh	PA	82,102
Blackstone Capital Partners V	New York	NY	689,138
Blackstone Communications Partners I	New York	NY	4,603
Brait IV	Grand Cayman	Cayman Islands	213,042
Brynwood Partners V	Greenwich	CT	71,326
Brynwood Partners VI	Greenwich	CT	190,412
Care Capital Investments III	Princeton	NJ	151,836
Centerbridge Capital Partners I	New York	NY	263,183
Cerberus Institutional Partners Series Four	New York	NY	612,622
Cerberus Institutional Partners Series Three	New York	NY	194,119
Cerberus Institutional Partners Series Two	New York	NY	52,737
Charterhouse Capital Partners IX	London	United Kingdom	973,240
Charterhouse Capital Partners VII	London	United Kingdom	143,997
Charterhouse Capital Partners VIII	London	United Kingdom	325,196
Chequers Capital XV	Paris	France	762,536
CID Greater China Venture Capital Fund II	Taipei	Taiwan	290,943
Clayton Dubilier & Rice VI	New York	NY	96,904
Clearstone Venture Partners III-A	Santa Monica	CA	492,932
Clessidra Capital Partners II	Milan	Italy	372,626

# Fees to Managers

(Alternative Investments, continued)

Manager	City	State/Country	Fees
Code Hennessy & Simmons V	Chicago	IL	\$50,912
Cognetas Fund II	London	United Kingdom	451,364
Cross Atlantic Technology Fund II	Radnor	PA	108,022
CVI Global Value Fund	Grand Cayman	Cayman Islands	983,358
Devon Park Bioventures	Wayne	PA	240,102
DLJ Merchant Banking Fund III	New York	NY	48,577
Dover Street VII	Boston	MA	374,687
Draper Fisher Jurvetson Fund VI	Menlo Park	CA	396,233
Draper Triangle Ventures	Pittsburgh	PA	56,147
Draper Triangle Ventures II	Pittsburgh	PA	165,000
Elevation Partners	Menlo Park	CA	155,582
Eureka II	Yardley	PA	130,339
Excelsior Capital Asia Partners III	Hong Kong	China	323,707
Francisco Partners	San Francisco	CA	10,483
Francisco Partners III	San Francisco	CA	122,307
Frazier Healthcare V	Seattle	WA	189,559
Great Hill Equity Partners III	Boston	MA	620,313
Great Hill Equity Partners IV	Boston	MA	661,968
Grotech Partners V	Timonium	MD	204,122
Gryphon Partners II	San Francisco	CA	104,791
Gryphon Partners III	San Francisco	CA	31,331
GTCR VII	Chicago	IL	7,701
GTCR IX	Chicago	IL	596,154
GTCR VIII	Chicago	IL	442,220
Guggenheim Technology Ventures I	King of Prussia	PA	40,045
H.I.G. Bayside Debt & LBO Fund II	Miami	FL	600,000
Harbourvest IPEP IV	Boston	MA	291,600
HarbourVest IPEP III	Boston	MA	24,001
HarbourVest Partners VI	Boston	MA	1,246,540
HarbourVest Partners VII	Boston	MA	682,472
HarbourVest Partners VIII	Boston	MA	1,000,000
HarbourVest V - Asia Pacific ROW	Boston	MA	300,000
Healthcare Ventures VII	Princeton	NJ	699,954
Healthcare Ventures VIII	Princeton	NJ	478,991
Hellman Friedman V	San Francisco	CA	187,280
Highland Capital Partners VI	Lexington	MA	262,874
Highland Capital Partners VII	Lexington	MA	887,052
Highland Consumer Fund I	Lexington	MA	625,068
Insight Venture Partners VI	New York	NY	452,537
Insight Venture Partners VII	New York	NY	434,048
InterMedia Partners VII	New York	NY	207,504
InterWest Partners IX	Menlo Park	CA	443,042
InterWest Partners X	Menlo Park	CA	750,000
Invemed Catalyst Fund	New York	NY	11,647
IP III	Bellevue	WA	96,253

# Fees to Managers

(Alternative Investments, continued)

Manager	City	State/Country	Fees
IP IV	Bellevue	WA	\$332,148
J.H. Whitney VI	Stamford	CT	105,590
J.H. Whitney VII	Stamford	CT	149,031
JMI Equity Fund V	Baltimore	MD	214,296
JMI Equity Fund VI	Baltimore	MD	490,239
JMI Equity Fund VII	Baltimore	MD	99,181
JP Morgan US Corp Finance Investors II	New York	NY	338,809
JP Morgan Venture Capital Investors	New York	NY	565,176
JP Morgan Venture Capital Investors II	New York	NY	668,199
JP Morgan Venture Capital Investors III	New York	NY	1,074,276
Kelso VII	New York	NY	162,698
Kelso VIII	New York	NY	2,250,000
Kline Hawkes Pacific	Los Angeles	CA	20,059
Knightsbridge Venture Capital VI	Bartlesville	OK	140,000
LBC Credit Partners III	Philadelphia	PA	26,495
Leeds Equity Partners IV	New York	NY	214,798
Lexington Capital Partners V	New York	NY	200,067
Lexington Capital Partners VI	New York	NY	327,582
Lightspeed Venture Partners VII	Menlo Park	CA	273,804
Lightspeed Venture Partners VIII	Menlo Park	CA	301,808
LLR Equity Partners	Philadelphia	PA	16,039
LLR Equity Partners II	Philadelphia	PA	212,621
LLR Equity Partners III	Philadelphia	PA	531,000
Madison Dearborn Capital Partners V	Chicago	IL	379,398
Madison Dearborn Capital Partners VI	Chicago	IL	704,454
Media/Communications Ventures Fund V	Boston	MA	131,114
Meridian Venture Partners II	Radnor	PA	313,295
Meritech Capital Partners III	Palo Alto	CA	633,523
Meritech Capital Partners IV	Palo Alto	CA	450,000
Morgenthaler IX	Menlo Park	CA	360,418
Morgenthaler VII	Menlo Park	CA	2,104
Morgenthaler VIII	Menlo Park	CA	522,241
New Enterprise Associates 11	Baltimore	MD	145,228
New Enterprise Associates 12	Baltimore	MD	311,510
New Enterprise Associates IX	Baltimore	MD	38,881
New Enterprise Associates X	Baltimore	MD	195,408
New York Life Capital Partners III	New York	NY	223,896
New York Life Capital Partners IV	New York	NY	500,000
Newbridge Asia IV	San Francisco	CA	219,562
NewSpring Growth Capital III	King of Prussia	PA	457,946
NewSpring Ventures II	King of Prussia	PA	200,000
Nordic Capital V	Stockholm	Sweden	56,294
Nordic Capital VI	Stockholm	Sweden	45,775
Nordic Capital VII	Stockholm	Sweden	1,169,143
Novitas Capital III	King of Prussia	PA	88,425



# Fees to Managers

(Alternative Investments, continued)

Manager	City	State/Country	Fees
Oak Investment Partners XI	Westport	CT	\$635,805
Oak Investment Partners XII	Westport	CT	906,908
Oakhill Capital Partners	Menlo Park	CA	6,040
OCM Opportunities Fund V	Los Angeles	CA	161,023
OCM Opportunities Fund VI	Los Angeles	CA	326,643
OCM Opportunities Fund VII	Los Angeles	CA	447,743
OCM Opportunities Fund VII b	Los Angeles	CA	464,545
OCM Opportunities Fund VIII, L.P.	Los Angeles	CA	165,471
OCM Opportunities Fund VIIIb	Los Angeles	CA	181,890
OCM Principal Opportunities Fund IV	Los Angeles	CA	250,569
Palamon European II	London	United Kingdom	320,717
Patriot Financial Partners	Philadelphia	PA	481,645
Permira Europe III	London	United Kingdom	767,176
Permira IV	London	United Kingdom	1,194,829
Pitango Venture Capital Fund IV	Herzliya	Israel	253,098
Pitango Venture Capital Fund V	Herzliya	Israel	674,968
Polaris Venture Partners IV	Waltham	MA	1,412,270
Polaris Venture Partners V	Waltham	MA	1,228,472
Providence Equity V	Providence	RI	212,746
Providence Equity VI	Providence	RI	366,240
Quaker BioVentures	Philadelphia	PA	400,487
Quaker BioVentures II	Philadelphia	PA	601,607
Sankaty Credit Opp III	Boston	MA	972,030
Sankaty Credit Opp IV	Boston	MA	782,939
SCP Private Equity Partners II	Wayne	PA	88,422
Segulah IV	Jersey	Channel Islands	487,106
ShoreView Capital Partners	Minneapolis	MN	4,796
ShoreView Capital Partners II	Minneapolis	MN	585,323
Siguler Guff BRIC Opportunities Fund	New York	NY	65,212
Siguler Guff BRIC Opportunities Fund II	New York	NY	212,254
Sofinnova Venture Partners VII	San Francisco	CA	424,755
Sterling Capital Partners I	Northbrook	IL	118,373
Sterling Capital Partners II	Northbrook	IL	100,035
Sterling Capital Partners III	Northbrook	IL	361,928
Summit Partners Private Equity Fund VII	Boston	MA	1,711,039
Summit Partners Venture Capital Fund II	Boston	MA	337,650
Summit Ventures VI	Boston	MA	305,660
T Rowe Price	Baltimore	MD	546,513
TA IX	Boston	MA	34,226
TA X	Boston	MA	1,574,593
Templeton Strategic Emerging Markets Fund II	Fort Lauderdale	FL	318,896
Templeton TSEMF III	Fort Lauderdale	FL	1,149,020
Thomas H. Lee Equity Fund V	Boston	MA	114,820
Thomas H. Lee Equity Fund VI	Boston	MA	482,773

# Fees to Managers

(Alternative Investments, continued)

Manager	City	State/Country	Fees
Three Arch Capital	Portola Valley	CA	\$71,532
Three Arch Partners IV	Portola Valley	CA	368,393
TL Ventures IV	Wayne	PA	38,752
TL Ventures V	Wayne	PA	192,914
TPG Asia V	Fort Worth	TX	337,764
TPG Partners V	Fort Worth	TX	401,259
TPG Partners VI	Fort Worth	TX	390,553
Versa Capital Partners	Philadelphia	PA	148,799
Versa Capital Partners II	Philadelphia	PA	152,582
Vestar Capital Partners IV	New York	NY	2,027,307
Vestar Capital Partners V	New York	NY	281,024
W Capital Partners II	New York	NY	763,815
Weathergage Venture Capital	Redwood City	CA	250,000
Weathergage Venture Capital II	Redwood City	CA	250,000
Weston Presidio V	Boston	MA	821,761
Worldview Technology Partners IV	San Mateo	CA	111,553
Yucaipa American Alliance Fund II	Los Angeles	CA	351,280

## Global Public Equity

Artisan Partners L.P. - Global ex US	Milwaukee	WI	2,038,318
BlackRock ACWI Ex-U.S. NL	San Francisco	CA	4,248
BlackRock S&P 500 Index NL	San Francisco	CA	1,860
BlackRock/Emerging Markets Index Non-Lendable Fund	San Francisco	CA	567,298
Cornerstone Growth	Edina	MN	600,917
Diamond Hill Concentrated	Columbus	OH	307,093
Emerald Advisers, Inc. - PA Companies	Lancaster	PA	1,512,596
Epoch Value	New York	NY	531,142
Harris Associates L.P.	Chicago	IL	2,664,524
Iridian Asset Management LLC	Westport	CT	1,281,267
Marathon London Global Fund	London	United Kingdom	793,361
Mellon Capital Management Corp - PA Companies	Pittsburgh	PA	246,317
Mellon Capital Management MSCI World ex US Index	Pittsburgh	PA	220,622
Mellon Capital Management Russell 1000 Index	Pittsburgh	PA	225,057
Morgan Stanley Investment Management Limited- Developed ex US	London	United Kingdom	1,398,131
Pictet Asset Management Limited	London	United Kingdom	929
Templeton Investment Counsel - Global ex US	Fort Lauderdale	FL	1,726,511
Walter Scott & Partners Limited	Edinburgh	United Kingdom	2,113,320

## Real Assets

AG Asia Realty Fund	New York	NY	140,396
BAAM Commodities	New York	NY	4,619,156
Berwind - BPG IX	Yardley	PA	84,708
Berwind - BPG V	Yardley	PA	70,591
Berwind - BPG VI	Yardley	PA	108,950

# Fees to Managers

(Real Assets, continued)

Manager	City	State/Country	Fees
Berwind - BPG VII	Yardley	PA	\$229,246
Berwind - BPG VIII	Yardley	PA	207,548
Blackstone - BREP IV	New York	NY	256,802
Blackstone - BREP V	New York	NY	619,088
Blackstone - BREP VI	New York	NY	948,583
Blackstone - BREP VII	New York	NY	1,497,891
Carlyle Energy Mezz Opp Fund	New York	NY	1,764,583
Clerestory Small Cap Real Estate Fund I	New York	NY	74,469
Colony Investors VIII	Los Angeles	CA	218,983
Denham Commodity VI	Boston	MA	837,082
Energy Spectrum Partners IV	Dallas	TX	321,762
Energy Spectrum Partners V	Dallas	TX	188,051
Fidelity Real Estate Opportunistic Income Fund	Smithfield	RI	345,108
Fillmore East Fund	San Francisco	CA	142,349
Fillmore West Fund	San Francisco	CA	196,701
First Reserve Fund X	Greenwich	CT	64,788
First Reserve Fund XI	Greenwich	CT	239,682
First Reserve Fund XII	Greenwich	CT	715,529
Forest IMA	Atlanta	GA	1,150,411
Goldman Sachs- Whitehall VII & VIII	New York	NY	4,703
GRIP I	Philadelphia	PA	310,643
Grosvenor Investment Management	Philadelphia	PA	1,922,537
Hawkeye Scout Fund I	Dallas	TX	516,454
Heitman American RE Trust	Chicago	IL	552,103
Heitman IMA	Chicago	IL	1,182,534
ING Clarion Real Estate	Radnor	PA	1,119,295
LaSalle IMA	Baltimore	MD	2,310,894
Lime Rock Partners III	Westport	CT	221,812
Lime Rock Partners IV	Westport	CT	388,236
Lime Rock Partners V	Westport	CT	843,694
Lime Rock Resources	Westport	CT	45,424
Lowe GTO	Los Angeles	CA	1,852,168
Lowe IMA	Los Angeles	CA	3,192,599
Lubert Adler Real Estate Fund II	Philadelphia	PA	25
Lubert-Adler V	Philadelphia	PA	25,808
Lubert-Adler VI	Philadelphia	PA	327,832
Oaktree Power Opportunities Fund III	Los Angeles	CA	349,503
OCM Opportunity Fund III	Los Angeles	CA	14,348
Oxford GSA Fund	Pittsburgh	PA	323,330
Prudential Latin America Residential Fund III	Parsippany	NJ	297,745
Prudential Latin America Retail Fund I	Parsippany	NJ	376,791
Prudential Senior Housing Partners II	Parsippany	NJ	513,277
Prudential Sr Housing III	Parsippany	NJ	368,354
Prudential Sr Housing IV	Parsippany	NJ	44,002

# Fees to Managers

(Real Assets, continued)

Manager	City	State/Country	Fees
Rockpoint Finance Fund I	Dallas	TX	\$17,568
Rockpoint Fund I	Dallas	TX	50,395
Rockpoint Fund II	Dallas	TX	235,805
Rockpoint Fund III	Dallas	TX	445,283
Sentinel	New York	NY	678,236
SFC Energy Partners I	Denver	CO	6,468
SFC Energy Partners II	Denver	CO	500,000
Starwood VI-A	Greenwich	CT	267,876
Starwood VII	Greenwich	CT	409,770
Starwood VIII	Greenwich	CT	793,037
UBS Trumbull Property Fund	Hartford	CT	798,842
UBS Trumbull Property Income Fund	Hartford	CT	590,851
Urdang Investment Management	Plymouth Meeting	PA	319,246
Wellington DIH	Boston	MA	3,858,178
Westbrook Real Estate Fund IV	Dallas	TX	28,679
Westbrook V	Dallas	TX	81,860
Westbrook VI	Dallas	TX	306,057
Westbrook VII	Dallas	TX	604,853
Westbrook VIII	Dallas	TX	729,689

## Diversifying Assets

Arden	New York	NY	1,198,221
BAAM - Stable Alpha	New York	NY	5,973,609
BAAM Keystone	New York	NY	2,490,993
Entrust Keystone	New York	NY	1,225,985
Mesirow Financial	Chicago	IL	1,357,987
PAAMCO	Irvine	CA	459,060
Rock Creek	Washington	DC	1,249,052

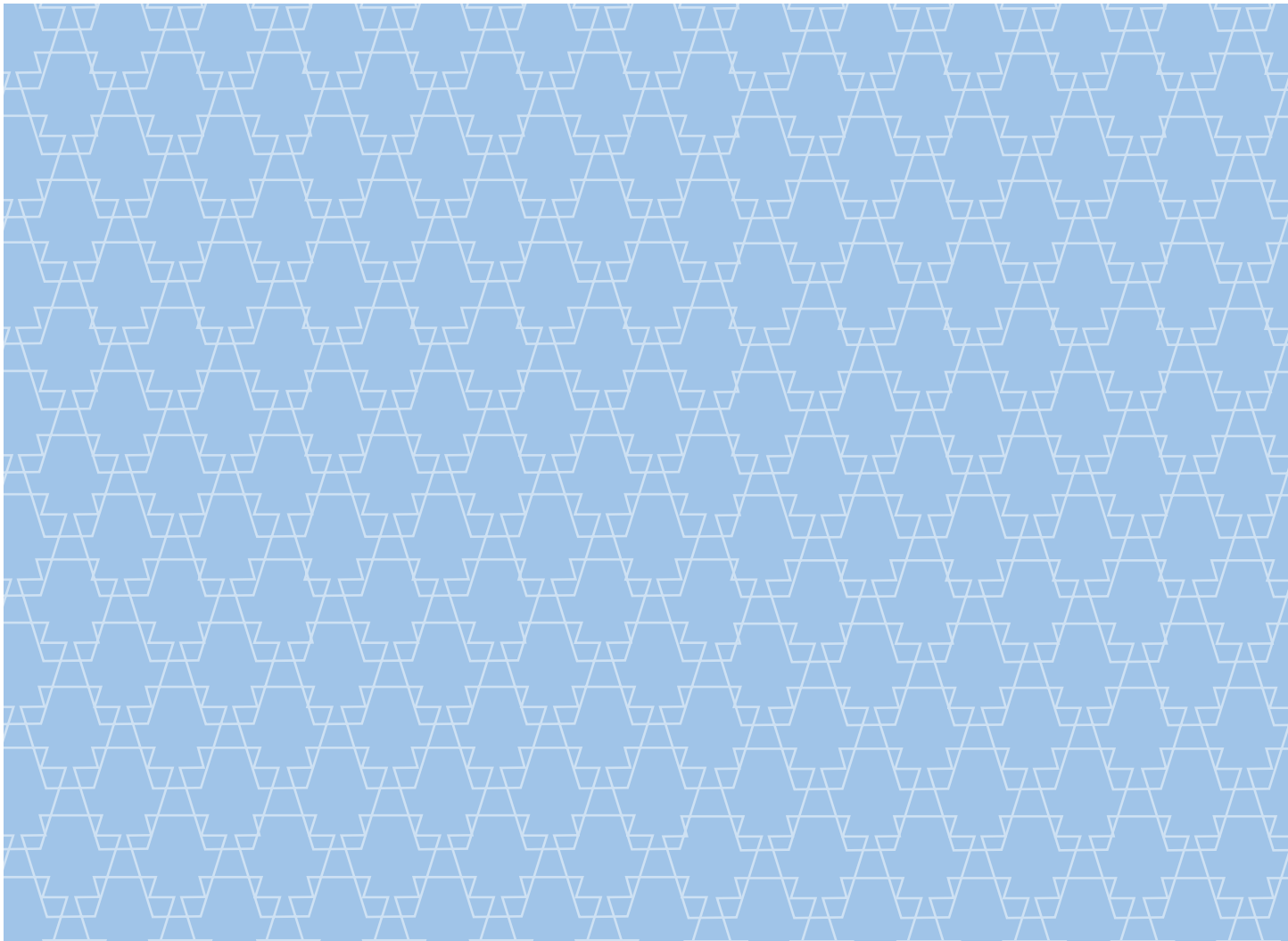
## Fixed Income

Ashmore Emerging Markets Debt Fund	London	United Kingdom	370,927
Ashmore Emerging Markets Local Currency Fund	London	United Kingdom	576,404
Berwind - PA Capital Fund	Philadelphia	PA	69,932
BNY Mellon Cash Investment Strategies	Pittsburgh	PA	171,318
Brandywine Global	Philadelphia	PA	676,653
Brown Brothers Global TIPS	New York	NY	252,913
Franklin Templeton Global Fixed Core Income	San Mateo	CA	288,535
New Century Global TIPS	Chevy Chase	MD	251,362
NISA TIPS	St. Louis	MO	665,082
PIMCO Core	Newport Beach	CA	42,431
PIMCO EMD	Newport Beach	CA	872,467
PIMCO Global TIPS	Newport Beach	CA	407,705
PIMCO Treasuries	Newport Beach	CA	181,593
Pyramis Global Advisors	Smithfield	RI	1,592,193

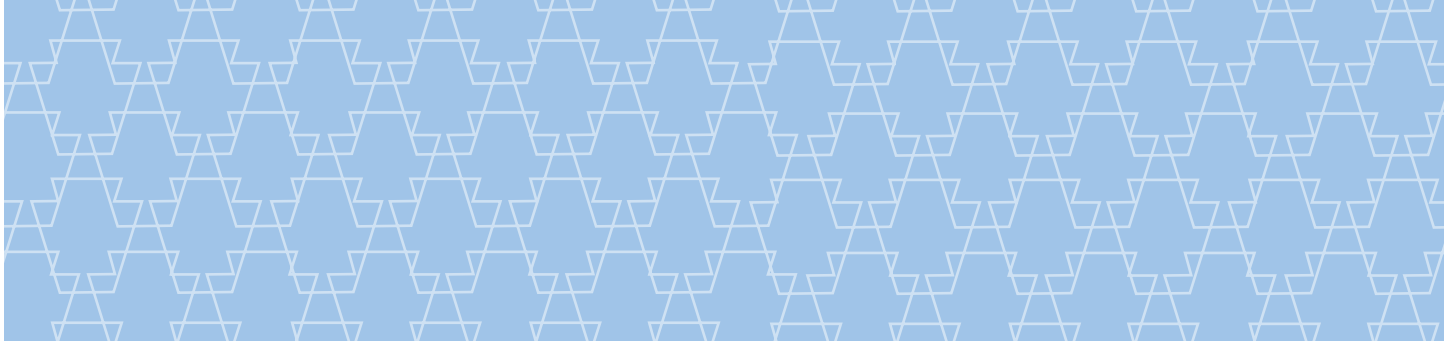
# Fees to Managers

(Fixed Income, continued)

<b>Manager</b>	<b>City</b>	<b>State/Country</b>	<b>Fees</b>
SEI	Oaks	PA	\$1,419,427
Stone Harbor Emerging Market Debt	New York	NY	743,296
Stone Harbor High Yield	New York	NY	1,446,906
Taplin Canida Habacht (TCH)	Miami	FL	450,742
W. R. Huff Asset Management	Morristown	NJ	3,394
Waterfall Asset Management	New York	NY	1,196,199
Wellington Treasuries	Boston	MA	177,070
<b>Liquidity Reserve</b>			
Ramius	New York	NY	348,615
<b>Total Fees to Managers</b>			<b>\$175,789,438</b>



**Directed Commissions 4**

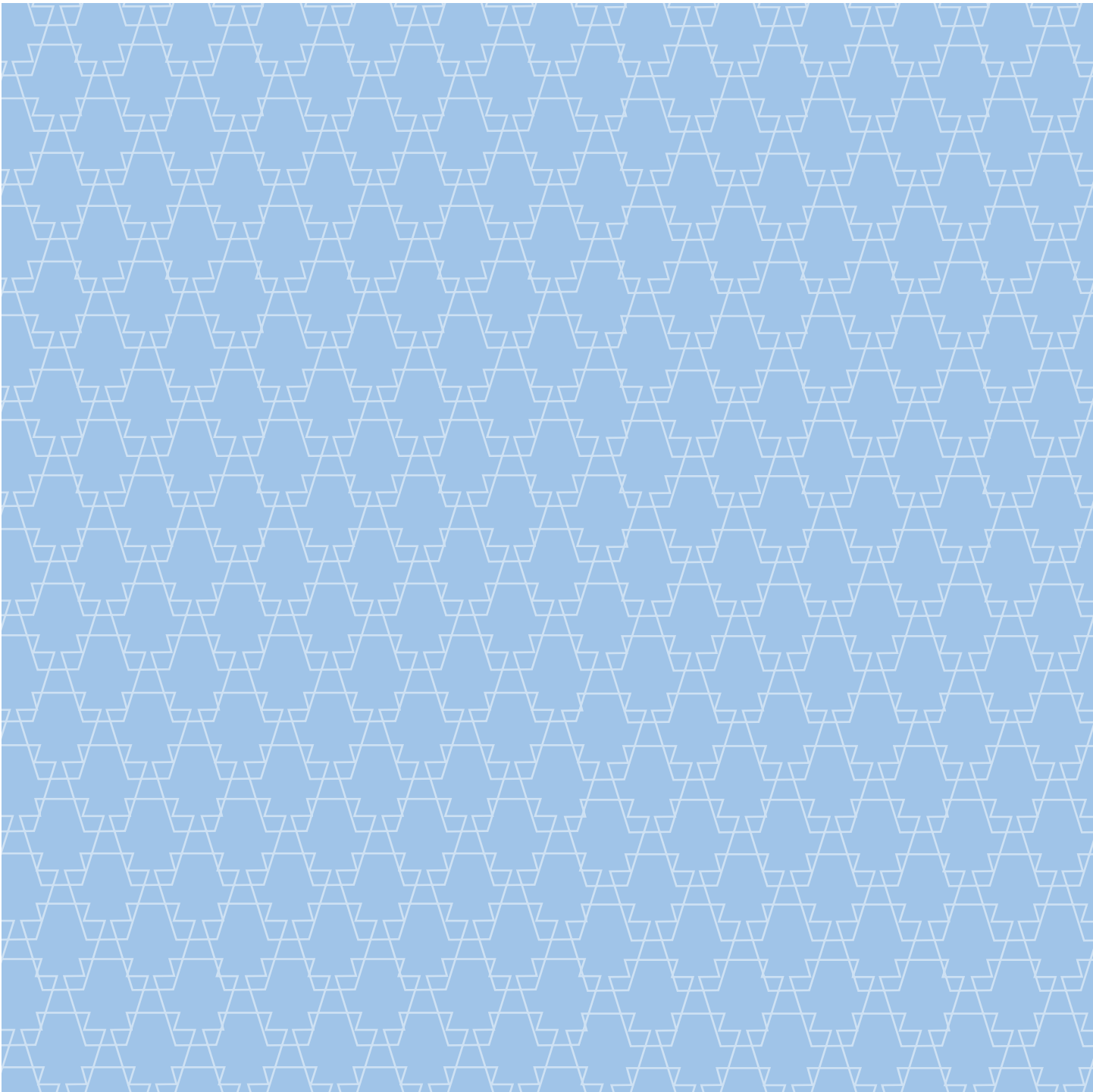


# Directed Commissions

## Directed Commissions\*

	FY 2012-13 Budget	FY 2013-14 Budget
<b>Beginning Balance</b>	<b>\$3,961,488</b>	<b>\$2,861,488</b>
Directed Commission Revenue	100,000	100,000
<b>Total Available</b>	<b>4,061,488</b>	<b>2,961,488</b>
Directed Commission Expense	1,200,000	1,500,000
<b>Ending Balance</b>	<b>\$2,861,488</b>	<b>\$1,461,488</b>

*\*Directed commissions are reimbursements to the System for a portion of the fee paid to a broker for executing a trade.*





# Member Services

The Office of Member Services provides a variety of services to SERS active members and annuitants. Following are lists of services provided through the seven Regional Retirement Counseling Centers.

## Services to Active Members

- Calculate regular retirement, disability retirement and vesting estimates upon request.
- Provide one-on-one counseling for any member who is considering retiring or terminating service.
- Provide active members with an annual *Member Statement of Account*.
- Provide counseling to deceased members' beneficiaries or survivor annuitants.
- Conduct group information sessions (Question & Answer Sessions, Pre-Retirement and Vestee Seminars).
- Provide resource speakers for various agency or association information sessions.
- Provide estimates and counsel members on the purchase of creditable State and nonstate service.
- Provide information on members' eligibility for retiree health benefits.

## Services to Retired Members

- Provide direct deposit forms, federal income tax withholding forms, and change of address forms upon request; and provide information and assistance to complete the forms.
- Provide beneficiary forms and assist members in completing the forms.
- Provide all annuitants with an annual *Personal Statement of Retirement Benefits*.
- Provide all annuitants with a *1099-R* or a *1042-S* federal tax form each tax year.
- Take information and process change of dependent information on the retiree's Retired Employees Health Program (REHP) coverage.
- Investigate and place stop payment transactions on checks not received by annuitants after ten working days.
- Provide resource speakers for group or association informational seminars.
- Receive and process notifications of death and serve as a contact for beneficiaries and survivors.
- Provide option change counseling for members when their designated survivor predeceases them, the retiree obtains a divorce, or when the retiree marries after the date of their retirement.
- Provide counseling on any change of monthly annuity payment, when applicable.

## Regional Retirement Counseling Centers

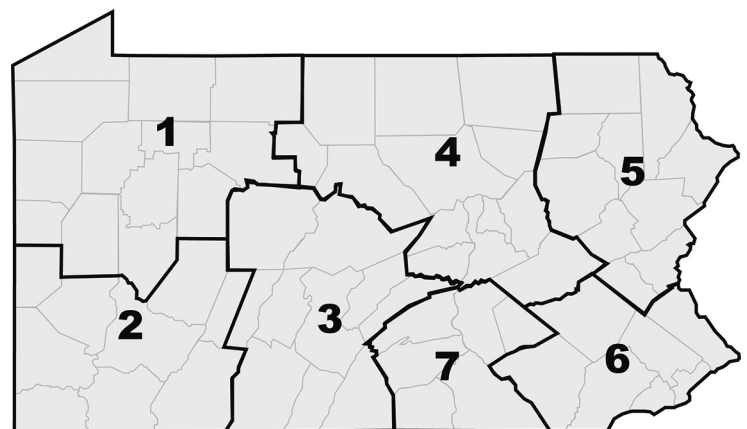
**Region 1 Seneca Office** - Serving Armstrong, Butler, Clarion, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, McKean, Mercer, Venango and Warren counties.

**Region 2 Pittsburgh Office** - Serving Allegheny, Beaver, Cambria (Western), Fayette, Greene, Indiana, Somerset, Washington and Westmoreland counties.

**Region 3 State College Office** - Serving Bedford, Blair, Cambria (Eastern), Centre, Clearfield, Franklin, Fulton, Huntingdon, Juniata and Mifflin counties.

**Region 4 Montoursville Office** - Serving Bradford, Cameron, Clinton, Columbia, Lycoming, Montour, Northumberland, Potter, Schuylkill, Snyder, Sullivan, Tioga and Union counties.

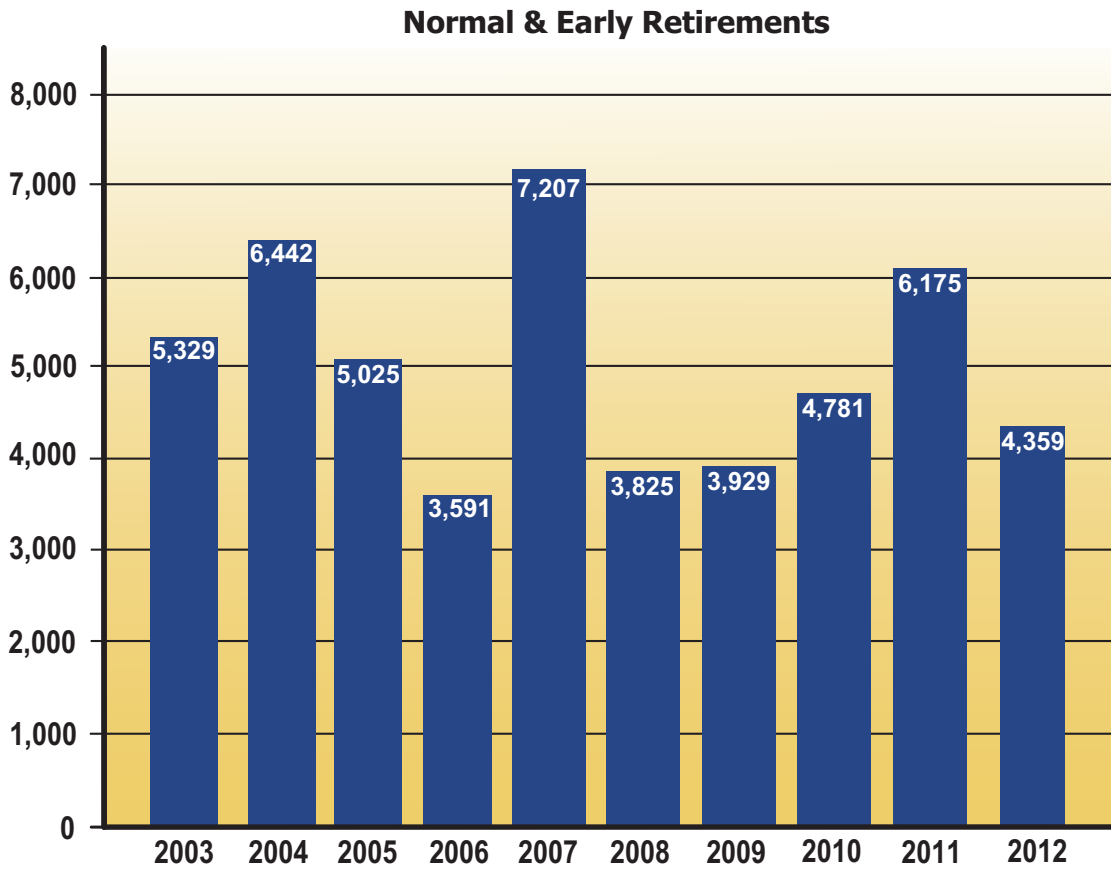
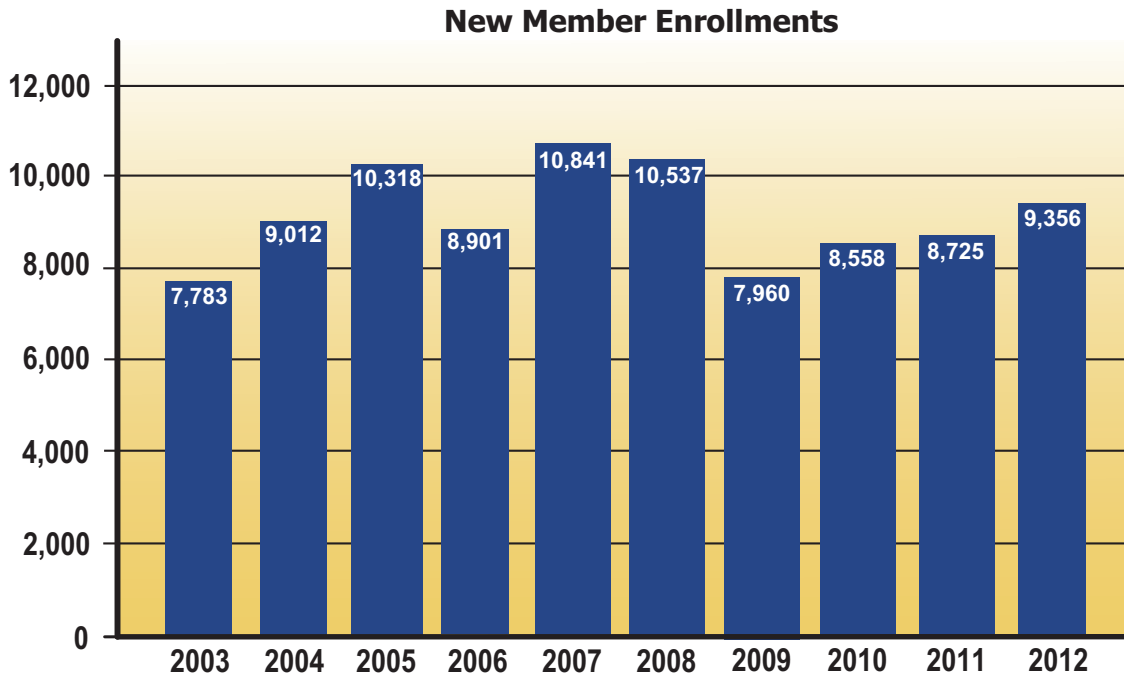
**Region 5 Hazleton Office** - Serving Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike, Susquehanna, Wayne and Wyoming counties.



**Region 6 Bensalem Office** - Serving Berks, Bucks, Chester, Delaware, Lancaster, Montgomery and Philadelphia counties.

**Region 7 Harrisburg Office** - Serving Adams, Cumberland, Dauphin, Lebanon, Perry and York counties.

# Benefit Processing



# SERS Member Demographics

Year Ending December 31	Membership		
	Total Members*	Active Members	Annuitants & Beneficiaries
2012	223,213	106,152	117,061
2011	222,363	107,021	115,342
2010	220,968	109,255	111,713
2009	220,097	110,458	109,639
2008	219,012	110,866	108,146
2007	216,740	109,610	107,130
2006	213,032	110,972	102,060
2005	211,160	109,981	101,179
2004	207,132	108,405	98,727
2003	203,430	109,018	94,412

\*These totals do not include inactive members.

Since 2003, annuitants and beneficiaries have increased by 24.0% while the number of active members has declined 2.6%.

## Active Member Age and Service as of December 31, 2012

Average Age:	46.8
Average Years of Service:	12.5

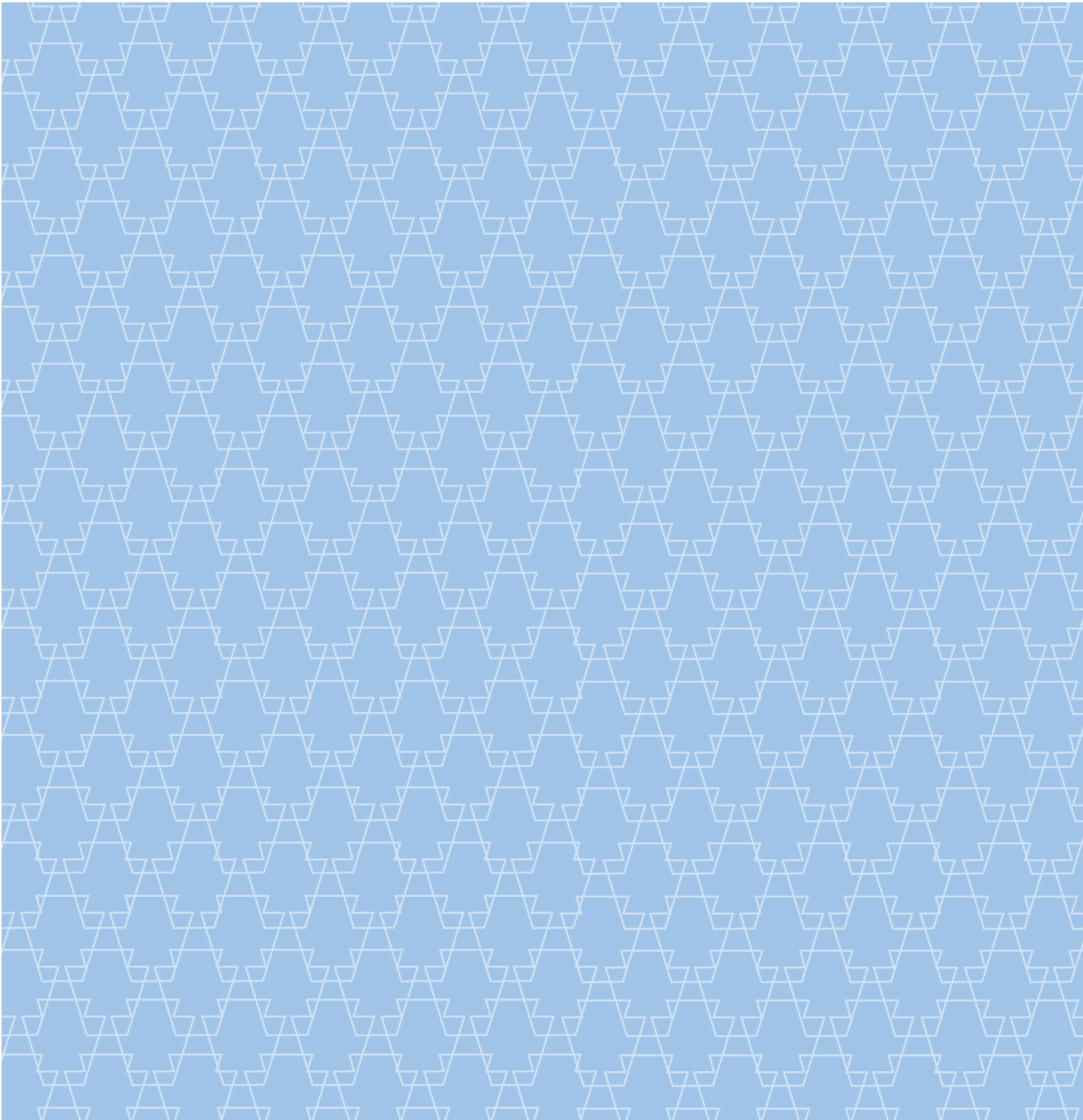
## Total Annuitants and Beneficiaries as of December 31

	2009	2010	2011	2012
Superannuation Annuitants	53,478	54,659	56,722	57,439
Early Retirees	38,624	39,241	40,483	41,181
Disabled Annuitants	7,674	7,801	7,891	8,053
Beneficiary/Survivors	9,863	10,012	10,246	10,388

## Profile of Annuitants, Beneficiaries and Survivor Annuitants as of December 31

	Average Age				Average Annual Pension			
	2009	2010	2011	2012	2009	2010	2011	2012
Superannuation Annuitants	72.8	72.7	72.4	72.5	\$22,695	\$23,491	\$24,448	\$25,083
Early Retirees	62.2	62.7	62.9	63.2	14,932	15,209	15,770	16,027
Disabled Annuitants	61.1	61.4	61.8	62.1	13,443	13,774	14,027	14,291
Beneficiary/Survivors	74.9	75.0	74.8	74.8	9,481	9,833	10,334	10,940

Since 2009, the average annual superannuation pension is up 10.5%.



# Legislation

## Legislation Enacted During 2012

On October 24, 2012, Governor Corbett signed House Bill 2591, which became Act 181. Under the proposed changes, the cost to purchase non-intervening military service (NIMS) for post-Act 2010-120 members would no longer be the full actuarial cost, but rather the cost based upon the employer-subsidized pre-Act 2010-120 formula. The new law:

- brings SERS into compliance with the Heroes Earnings Assistance and Relief Act of 2008, Pub. L. No. 110-245, (HEART Act) by the Act's December 31, 2012 implementation requirement;
- conforms Pennsylvania law regarding pension credit for military leave for state employees and SERS members to the Internal Revenue Code, 26 U.S.C. §§401(a)(37), 414(u), (IRC) and Uniformed Services Employment and Reemployment Rights Act, 38 U.S.C. §§4301-4334, (USERRA); and
- provides a largely revenue neutral proposal to revert the formula for purchase of SERS non-intervening military service credit to be consistent with the Public School Employees' Retirement System (PSERS) and to accommodate non-USERRA-covered military leaves. (See actuarial cost note on following pages.)

**Pennsylvania State Employees' Retirement System**

**Proposed Amendments to State Employees' Retirement Code  
Regarding the Handling of Credit for Military Service**

The following is an actuarial cost note to provide the cost impact of proposed amendments to the State Employees' Retirement Code to achieve compliance with the Heroes Earnings Assistance and Relief Tax Act ("HEART Act") and to conform to the Uniformed Services Employment and Reemployment Rights Act ("USERRA").

Currently, SERS members who enter SERS with military service have their pension benefits determined under three different statutes and these statutes are not consistent with each other or with the requirements of the HEART Act. Implementation of the proposed amendments would bring SERS into compliance with the HEART Act and at the same time conform Pennsylvania law regarding pension credit for military leave to the federal requirements under the Internal Revenue Code and USERRA. Under the proposed changes, the cost to purchase non-intervening military service (NIMS) for post-Act 2010-120 members would no longer be the full actuarial cost, but rather the cost based upon the employer-subsidized pre-Act 2010-120 formula. This will also make the SERS method consistent with the PSERS method.

The following table shows the estimated impact of these proposed changes on future employer costs assuming that the change in the cost of NIMS will become effective July 1, 2012 and will be funded beginning July 1, 2012. If the change is effective after that date, the costs presented below would change only slightly.

	<b>Baseline</b>	<b>With Proposed Changes</b>	<b>Difference</b>
<b>Payroll</b>	\$5,890,704,034	\$5,890,704,034	\$0
<b>Unfunded Liability</b>	\$14,663,401,046	\$14,616,054,218	-\$47,346,828
<b>Annual Payment</b>	\$1,254,523,345	\$1,247,625,578	-\$6,897,767
<b>Annual Payment as a Percent of Payroll</b>	21.29%	21.17%	-0.12%
<b>Employer Normal Cost</b>	5.10%	5.18%	0.08%
<b>Total Employer Cost</b>	26.39%	26.35%	-0.04%
<b>Collared Employer Cost</b>	11.50%	11.50%	0.00%

The change in purchase price for NIMS only affects Act 2010-120 members. This caused an increase in the Normal Cost from 5.10% to 5.18%. Under the SERS funding method, this increase was applied to all members, not just to the Act 2010-120 members. Therefore, this increase in Normal Cost ultimately results in a reduction in the Actuarial Accrued Liability because the additional future contributions will be covering more than the cost of the NIMS change for the very small affected population under Act 2010-120.

Note that if this change had resulted in an overall increase in the cost, this increase would have been added onto the SERS collared cost for 2012-2013 and would have resulted in a cost in excess of 11.50% of payroll. However, since the cost was negative, the 11.50% collared cost remains unchanged.

### *Underlying Data, Methods and Assumptions*

The liability and cost determinations made herein were based upon the same data, actuarial methods and actuarial assumptions as used for our December 31, 2011 actuarial valuation of SERS, including an interest rate of 7.5 percent per annum.

### *Actuarial Certification*

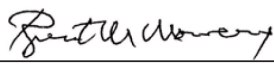
To the best of our knowledge, this cost note is complete and accurate and all liabilities and costs have been determined in conformance with generally accepted actuarial principles and on the basis of actuarial assumptions and methods which are reasonable (taking into account past experience and reasonable expectations) and which in combination represent our best estimate of anticipated experience under the plan.

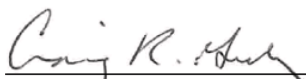
The results shown in this analysis are reasonable actuarial results. However, a different set of results could also be considered reasonable actuarial results. The reason for this is that actuarial standards of practice describe a "best-estimate range" for each assumption, rather than a single best-estimate value. Thus, reasonable results differing from those presented in this analysis could have been developed by selecting different points within the best-estimate ranges for various assumptions.

The actuaries certifying to this valuation are members of the Society of Actuaries or other professional actuarial organizations, and meet the General Qualification Standards of the American Academy of Actuaries for purposes of issuing Statements of Actuarial Opinion.

Please let us know if you have any questions.

Respectfully submitted,  
Hay Group, Inc.

By:   
Brent M. Mowery, FSA, FCA  
Member American Academy of Actuaries  
Enrolled Actuary No. 11-3885

By:   
Craig R. Graby, FCA  
Member American Academy of Actuaries  
Enrolled Actuary No. 11-7319

June 4, 2012



## Funding Process and Actuarial Status 7





# Funding Process & Actuarial Status

(Unaudited)

## **Funding Process: Defined Benefit Plan and Deferred Compensation Program**

The Pennsylvania State Employees' Retirement System administers two retirement plans to help safeguard the financial security of the Commonwealth's public workforce in their retirement years.

### **Defined Benefit Plan**

Most state employees are required to participate in Pennsylvania's defined benefit plan, which is frequently referred to simply as the "pension plan."

In the defined benefit plan, both the employer and the employee pay a certain percentage of the employee's salary to the SERS Fund for as long as the employee works for the Commonwealth. In FY 2012/13, employers generally are paying 11.5% and most employees are paying 6.25%. SERS aggregates and invests this money to achieve returns to help ensure sufficient funds are available to make payments to current and future retirees. In 2012, SERS earned an estimated 12% return on its investments.

When employees meet certain thresholds – working a specific number of years to achieve "vesting," for example – they become eligible to receive monthly retirement payments for the rest of their lives. The payment amount is based on a formula that includes the employee's length of service, age, compensation over a period of time and an "accrual rate" that is determined by the General Assembly. In 2012, SERS made \$2.7 billion in benefit payments, \$2.4 billion of which stayed in Pennsylvania. The average annual pension paid to a retired state employee who worked to full retirement age was \$25,083.

The rules of this plan are set forth in Pennsylvania law through the State Employees' Retirement Code. Additional details of the defined benefit plan are included in this section.

### **Deferred Compensation Program**

Commonwealth employees who are eligible to participate in the pension plan may choose to augment their retirement savings by voluntarily participating in the Commonwealth's Deferred Compensation Program. This plan is administered by Great-West Financial and is often referred to as "deferred comp."

In the deferred comp program, employees elect to have any sum they choose – as little as \$5 biweekly up to IRS limits – withheld from their pay to save for retirement and achieve certain tax advantages. There is no employer contribution. In 2012, SERS added a designated Roth option. In either the traditional or the Roth option, employees can enroll at any time and can change the amount they contribute at their discretion. Employees direct their own savings into the available investment options and may adjust their allocations at any time.

When employees leave service, they gain access to the amount they've saved through the program, including the earnings and/or losses on their investments. In 2012, more than 50,000 participants had approximately \$2.4 billion saved in the deferred comp program.

The cost of administering this program is extremely low and is borne solely by participants; using no Commonwealth funds.

The rules of this program are set forth in federal law through Section 457(b) of the Internal Revenue Code. Additional details of the deferred comp program are included in Tab 12 of this book.

# Funding Process & Actuarial Status (continued)

## Funding Process: Determining Adequate Funding for a Defined Benefit Plan

A defined benefit plan operates on a sound basis when the funds on hand, current and expected future contributions and investment earnings are sufficient to cover the value of all promised benefits.

It is a standard feature that employee and employer contributions invested throughout an employee's working career provide sufficient funding to pay for that particular employee's expected lifetime retirement benefit. Defined benefit plans are long-term propositions. When underlying principles remain intact, defined benefit plans offer efficient, stable and sustainable models for growing assets and delivering benefits through complete economic cycles.

Because a defined benefit plan guarantees a monthly payment to every retiree for life, it is impossible to develop precise, before-the-fact costs and cash flows for the plan. The number of people paying into the plan, the amount they earn, how long they work, the number of people retiring, the age at which each person retires and how long each retiree lives are among the myriad of factors that vary from day-to-day, month-to-month and year-to-year.

Actuarial science is used to develop accurate predictions. Actuarial science applies available data to a number of interrelated mathematical and statistical methods and uses investment and financial practices to study uncertain future events.

SERS' actuarial firm conducts an in-depth investigation and analysis – known as an experience study – of real-world economic and demographic data every five years. Economic assumptions include rates of investment return and salary growth, for example, which are significantly impacted by inflation. Demographic assumptions include workforce, disability and mortality trends. SERS' last experience study was delivered in early 2011 and is available at [www.SERS.state.pa.us](http://www.SERS.state.pa.us) in the "Publications" section, under "Actuarial Reports."

### What is an unfunded liability?

An unfunded liability – also commonly called an unfunded actuarial liability or UAL – is the degree to which the current and projected liabilities exceed the current and projected assets of a pension plan.

In other words, it is the difference between what the Commonwealth's pension plan is legally obligated to pay and what assets have been set aside to make those payments.

### 2013 Key Actuarial Assumptions

7.5%  
long-term  
investment return

6.2%  
average salary growth

2.75%  
rate of inflation

The selection of economic and demographic assumptions used is generally guided by the Actuarial Standards Board via the Actuarial Standard of Practice 35. In SERS' case, some very important assumptions – such as the length of time over which investment gains and losses are recognized – are set by Pennsylvania law.

Each year, SERS' actuarial firm uses the most recent employee and retiree demographic data to determine total expected future obligations. The actuary then compares those obligations to the expected value of the Fund's assets, based on current audited financial statements and future economic assumptions.

This calculation is factored in with the statutorily set employee contribution rate and the assumed investment rate of return as the basis for calculating how much employers need to contribute in order to fully fund their employees' retirement benefits.

# Funding Process & Actuarial Status (continued)

## Funding Process: Sources and Trends for SERS' Defined Benefit Plan

Defined benefit plans are designed to remain stable by receiving three regular funding streams – employee contributions, investment earnings and employer contributions.

### Employee Contributions

Active employees pay a certain percentage of their pay toward their retirement benefit. While different classes of employees pay different rates, most employees currently pay 6.25% of their pay. Employees' contributions are withheld from their paychecks and sent directly from their employer to SERS. The percentage is set by statute and the rate doesn't change from year to year. In 2012, employee contributions to SERS totaled \$347 million.

In the past, courts have ruled that public retirement benefits may not be retroactively changed in any way that may be a "net detriment" to employees. "Net detriment" has been interpreted as a reduction in already earned benefits and/or as an increase in employee contributions required to maintain such benefits.

There are some instances, however, in which employee contributions can increase. For example, Pennsylvania's Act 2010-120 introduced a "risk sharing" provision that allows for an increase in contributions of employees generally hired on or after January 1, 2011, if there is a multi-year period of investment returns below the assumed rate and if employers have met their contribution obligations to the pension system. An increased employee "shared risk contribution" can be established every three years beginning in 2014. The additional contribution cannot increase by more than 0.5% in any three-year period and cannot exceed 2% in total.

### Investment Earnings

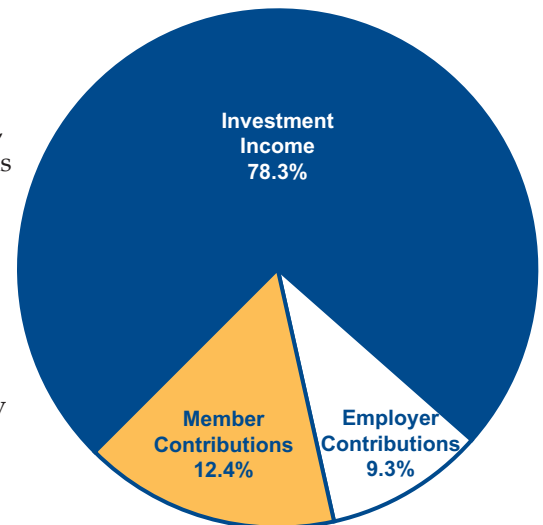
SERS' overall investment objective is to assure adequate Fund reserves at the least cost to Commonwealth citizens and to protect against the erosion of principal by inflation. SERS seeks to provide investment earnings that meet, or preferably exceed, the assumed rate of return over complete economic cycles. SERS strives to meet this objective by applying acceptable risk parameters and allocations to investments that are diversified by type, industry, quality and geography.

Investment earnings can vary widely from year to year; the Fund, for example, produced a nearly 25% return in 2003 and experienced more than a 25% loss in 2008's worldwide downturn. In order to minimize volatility, Pennsylvania law requires that the differences between actual performance and the assumed rate of return be recognized over a five-year period at a rate of 20% per year – a concept often referred to as "smoothing." Thus, 2008's losses continued to negatively impact SERS' unfunded liability through 2012 but have now been fully recognized.

SERS examines and sets its assumed rate of return each year based on global market dynamics, investment performance and other considerations. For example, in 2009, SERS reduced its assumed rate of return from 8.5% to 8%, largely as a result of 2008's global economic collapse.

As a result of SERS' nearly 90 years of operation and the generally increasing trend of individual longevity, the system now has more retired members than active members. In 2013, SERS is projected to pay out approximately \$147 million more each month than it takes in through employee and employer contributions. As a normal consequence of SERS' greater maturity, the liquidity needs of the Fund increase and require an ongoing rebalancing of assets. In recognition of this fact and in acknowledgement of continuing economic challenges, SERS again reduced its assumed rate of return in 2012; this time, from 8% to 7.5%. This change has significant implications for the employer contribution rate, as discussed on the following page.

**SERS Funding**  
(10-Year History)



# Funding Process & Actuarial Status (continued)

## Public Pension Fund Assumed Rates of Return (National Association of State Retirement Administrators, 2012)

Rate	# of Plans Using Rate
7.00%	4
7.25	5
7.50	23 (SERS)
7.75	21
8.00	43
8.25	9
8.50	4

Despite ongoing economic turbulence, in 2012 SERS achieved an estimated return of 12% and added more than \$2.9 billion to the Fund – which is nearly \$1 billion more than anticipated based on the 7.5% return assumption. As of December 31, 2012, the market value of the SERS Fund was \$25.3 billion, about a billion dollars larger than it was a year earlier. Moreover, the 2012 excess return reduced SERS’ unfunded liability by an estimated \$200 million.

For 12 of the last 17 years, SERS has exceeded its assumed rate of return. Moreover, even factoring in the unprecedented market volatility, the Fund has achieved a 20-year rate of return of 8.4% and a 30-year return of 9.7%. (SERS reports its returns net of fees.)

The “shared risk” provision of Act 2010-120, previously discussed, is designed to moderate the need for future employer rate increases that may be prompted by investment underperformance, should it occur.

### Employer Contributions

The “employer normal cost” is expressed as a percentage of payroll and is the amount employers would contribute if all actuarial assumptions were *precisely* correct, including the Fund earning *exactly* its assumed rate of return. The normal cost of benefits as of the 2011 actuarial valuation was 5.1%.

Because it is highly unlikely that every assumption could be correct, the Pennsylvania State Employees’ Retirement Code requires SERS to adjust the employer contribution rate each year based on actual experience and investment performance.

The employer contribution rate is calculated by an independent actuary, taking into account employee contributions, demographic activity, investment earnings and future liabilities.

Based on the actuary’s recommendation, the SERS Board annually certifies an employer contribution rate. The rate has fluctuated dramatically over the years: in the Commonwealth’s fiscal year 1985/86, the rate was approximately 18%; but in fiscal years 2001/02 and 2002/03 it was 0%. A rate can only be certified at 0% when Fund assets and investment earnings are predicted to more than cover the normal cost of benefits earned in any given year. When the contribution rate is less than the normal cost or as low as 0% of payroll, employers can redirect money to other purposes.

# Funding Process & Actuarial Status (continued)

As one would expect, then, the total dollars contributed by employers has varied from year to year. In 1982, employer contributions totaled \$384 million, in 2012 that figure was \$564 million.

According to the Budget Office, SERS employers under the Governor’s jurisdiction paid less than half of the employers’ total – about 45% – from general funds. About 22% came from special funds; about 15% came from federal funds; and about 18% came from other sources.

The employer contribution rate has two parts: the cost of the benefit for new SERS members in the current year (as applied to all active members) and a contribution toward the unfunded liability.

When SERS reduced its assumed rate of return from 8.5% to 8% in 2009, the change increased the unfunded liability by approximately \$1.6 billion which, in turn, increased future employer contribution rates. Likewise, when SERS changed its assumed rate of return from 8.0% to 7.5% in 2011, the change increased the unfunded liability by approximately \$2.1 billion.

The fiscal year 2013/14 employer contribution rate is currently legislated to be 16.0% of payroll with increases capped at 4.5% each year until no longer needed. If the contribution were not legislatively capped, the total rate would be 30.5% -- about 5.1% to fund the benefits of new SERS members in the current year normal cost and about 25.4% to pay toward the unfunded liability.

To translate the 4.5% increase into dollars, some projections suggest that increases in employer contributions will range from about \$310 million to \$350 million per year for the next three years. Looking at the relative sizes of the current-year and unfunded liability components discussed above, it’s clear to see that the unfunded liability is driving employer contribution rate increases. And, because the employer rate will remain below the total rate until at least 2015, SERS’ unfunded liability will continue to grow in the near term. The rate of growth will slow, however, as the annual employer rate rises.

## Long-Term Snapshot Contrasting Employer & Employee Contributions

	1982	2012
Employer Rate	16.77%	11.50%
Employer Contributions	\$384 million	\$564 million
Employee Rate	5.00%	6.25%
Employee Contributions	\$112 million	\$347 million
Active Employees	117,000	106,000
Annuitants	56,000	117,000

# Funding Process & Actuarial Status (continued)

## Projected Employer Contributions, Payout and Funding Status\*

Fiscal Year	FY Employer Contribution			Calendar Year	CY Payout	CY Funding Status <sup>∨</sup>	
	Expected FY Payroll (\$ millions)	Employer Contribution Rate	Expected FY Contribution (\$ millions)		Benefits & Expenses (\$ billions)	Funded Ratio	Unfunded Liability (\$ billions)
2013/14	\$6,070.4	16.00%	\$971.3	2012	\$2.7	58.6%	\$17.88
2014/15	6,255.5	20.50	1,282.4	2013	2.8	58.5	18.24
2015/16	6,446.3	25.00	1,611.6	2014	2.9	57.9	18.91
2016/17	6,642.9	29.50	1,959.7	2015	3.1	57.7	19.44
2017/18	6,845.5	30.53	2,090.0	2016	3.2	58.8	19.32
2018/19	7,054.3	29.91	2,109.9	2017	3.3	60.0	19.14
2019/20	7,269.5	29.24	2,125.7	2018	3.4	61.3	18.88
2020/21	7,491.2	28.59	2,141.8	2019	3.6	62.6	18.60
2021/22	7,719.7	27.96	2,158.4	2020	3.7	63.9	18.29
2022/23	7,955.1	27.35	2,175.7	2021	3.8	65.1	17.96
2023/24	8,197.8	26.76	2,193.5	2022	3.9	66.4	17.60
2024/25	8,447.8	26.18	2,211.9	2023	4.0	67.6	17.21
2025/26	8,705.4	25.63	2,230.9	2024	4.1	68.9	16.79
2026/27	8,971.0	25.09	2,250.6	2025	4.2	70.2	16.34
2027/28	9,244.6	24.56	2,270.8	2026	4.3	71.5	15.84
2028/29	9,526.5	24.06	2,291.6	2027	4.4	72.8	15.31
2029/30	9,817.1	23.56	2,313.1	2028	4.6	74.1	14.73
2030/31	10,116.5	23.08	2,335.3	2029	4.7	75.5	14.10
2031/32	10,425.1	22.62	2,358.2	2030	4.8	77.0	13.43
2032/33	10,743.0	22.17	2,381.7	2031	4.9	78.5	12.69
2033/34	11,070.7	21.73	2,406.1	2032	5.0	80.0	11.90
2034/35	11,408.4	21.31	2,431.2	2033	5.1	81.7	11.04
2035/36	11,756.3	20.90	2,457.0	2034	5.2	83.4	10.12
2036/37	12,114.9	20.50	2,483.7	2035	5.3	85.2	9.12
2037/38	12,484.4	20.11	2,511.2	2036	5.4	87.0	8.04
2038/39	12,865.2	19.74	2,539.6	2037	5.5	89.0	6.87
2039/40	13,257.5	19.38	2,568.8	2038	5.6	91.1	5.62
2040/41	13,661.9	15.55	2,124.7	2039	5.7	93.3	4.26
2041/42	14,078.6	12.79	1,800.5	2040	5.8	94.9	3.27
2042/43	14,508.0	9.70	1,407.7	2041	5.9	96.1	2.55

\* Assuming entry-age funding method, level-dollar amortization, 5-year smoothing of assets, Act 120 collars, 6.2% salary growth, 2.75% inflation, estimated 12% investment return in CY 2012 with 7.5% assumed return thereafter, 6.25% employee contribution

<sup>∨</sup> Figures are based on previous calendar year's actuarial valuation.

# Funding Process & Actuarial Status (continued)

## Actuarial Status: Current Funded Position of SERS' Defined Benefit Plan

The “funded position” of a defined benefit plan is measured by its “funded ratio” which is the actuarially calculated value of assets divided by the actuarially calculated sum of retirement benefits earned by all existing SERS members – nearly 230,000 active, vested and retired employees.

In general, a funding ratio of 80% or better is considered “healthy” for a pension system. Pennsylvania is among 33 other states that are currently below the 80% threshold. At the close of 2012, SERS’ estimated funded ratio was 58.6% (actuarial value) or 58.8% (market value).

SERS’ funded ratio has varied significantly over time. In 1983 it dipped below 60%, as it is now. By 2001, however, it had climbed back to well over 100%. Recent funded ratios include:

<b>SERS Funded Ratio</b>		
	<b>Actuarial Value</b>	<b>Fair (Market) Value</b>
1992	102.4%	108.4%
1997	107.4	123.3
2002	107.2	81.4
2007	97.1	111.8
2012 <sup>1/</sup>	58.6	58.8

<sup>1/</sup> 2012 values are projected.

The unfunded liability associated with the 2012 ratio is \$17.9 billion. As discussed, SERS’ unfunded liability grew in 2012, in part because of the lowered return assumption. The liability will continue to grow in the near term, however, as employer contribution rates are suppressed by Pennsylvania law.

Factors influencing the unfunded liability have been building over time, including but not limited to:

- sustained periods of employer contributions below normal costs: 1992 through 2009, for example
- losses that neutralized past investment gains used to justify the low employer contributions: -10.9% in 2002 and -28.7% in 2008, for example
- benefit increases – including cost of living adjustments and increased “accrual rates,” for example – without providing sufficiently off-setting funding streams: Act 9 of 2001 and Act 38 of 2002, for example
- legislatively mandated actuarial changes that extended the time over which liabilities be paid or artificially suppressed employer contribution rates: Act 40 of 2003 and Act 120 of 2010, for example
- cumulative negative impact of the above on the overall size of the Fund and its ability to realize investment returns in positive-earning years

# Funding Process & Actuarial Status (continued)

## Additions and Deductions to Plan Net Assets

Calendar Years  
(\$ millions)

Year	Member Contributions	Investment Earnings	Employer Contributions	Benefits and Expenses	Fair (Market) Value
2003	\$308	\$4,936	\$68	(\$1,656)	\$24,536
2004	310	3,568	107	(1,880)	26,641
2005	306	3,623	148	(1,966)	28,752
2006	318	4,730	196	(1,943)	32,053
2007	334	5,246	244	(2,361)	35,516
2008	337	(11,061)	235	(2,231)	22,796
2009	349	3,561	253	(2,297)	24,662
2010	349	3,076	273	(2,474)	25,886
2011	351	480	392	(2,732)	24,377
2012 <sup>1/</sup>	347	2,706 <sup>2/</sup>	564	(2,741)	25,253
<b>10 Year Total</b>	<b>\$3,309</b>	<b>\$20,865</b>	<b>\$2,480</b>	<b>(\$22,281)</b>	<b>*</b>

<sup>1/</sup>2012 figures are unaudited

<sup>2/</sup>Figure does not include 4<sup>th</sup> quarter earnings for Alternative Investments and the Private Energy, Non-Core Real Estate and Core Real Estate portions of Real Assets. Data not yet available. The Fund earned over \$2.9 billion on a full quarter lag basis, which is used for performance reporting purposes.

\*Ten year net additions and deductions were \$4,373.

It is difficult to make benefit changes that can substantially reduce the unfunded liability because courts have held that retirement benefits already earned by members of public pension systems are protected. Thus, the sum of benefits already earned by existing SERS members is a debt that has already been incurred by the Commonwealth.

The State Employee's Retirement Code, Title 71, Pa.C.S. §5951 sets forth that "Statutory interest charges payable, the maintenance of reserves in the Fund and payment of all annuities and other benefits granted by the Board under the provisions of this part are hereby made obligations of the Commonwealth. All income, interest and dividends derived from deposits and investments authorized by this part shall be used for the payment of the said obligations of the Commonwealth."

### Actuarial Status: Restoring SERS' Defined Benefit Plan Funding

SERS' unfunded liability is growing more slowly than it otherwise would have been growing because of Act 2010-120 which saves approximately \$1.5 billion over 30 years by reducing the retirement benefit "accrual rate;" increasing the normal retirement age; eliminating the lump sum withdrawal option; extending the vesting period from five years to ten years and other provisions for employees hired on or after January 1, 2011. One aspect of Act 120 is that retirement provisions for legislators elected after December 1, 2010, were reduced and made consistent with those of most rank-and-file employees.

It will, however, take considerable time to realize benefits from the lower costs. SERS' funded ratio will improve as employees hired before January 2011 retire and post-January 2011 hires begin to fill employee ranks in greater proportion. In 2012, SERS retired 4,359 state employees and added 9,356 new members. So, currently, 10.9% of SERS' active members belong to the post Act-120 classes of service.

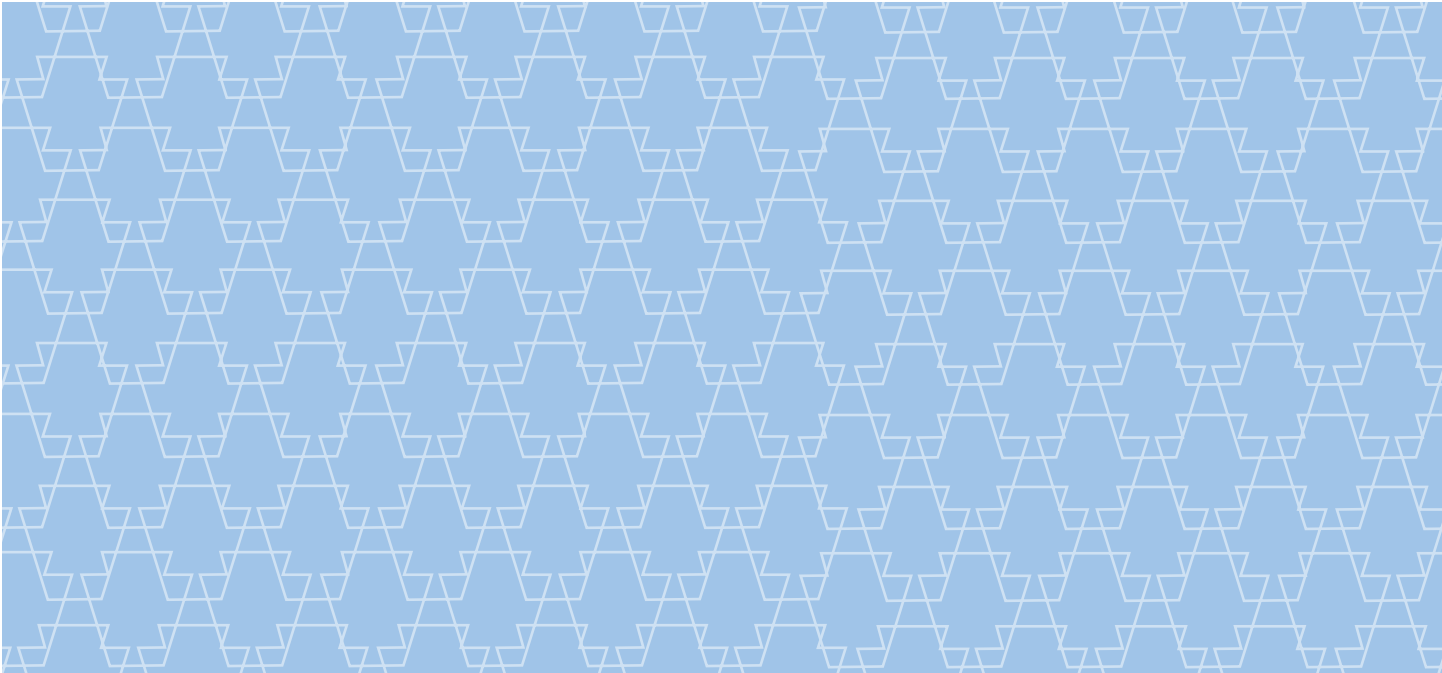
Act 2010-120 also recognized the need for greater rates of employer funding and does allow employer contributions to increase over time. To ensure predictability and to moderate overall budget impacts, the General Assembly set forth measured intervals for increased employer contribution rates.



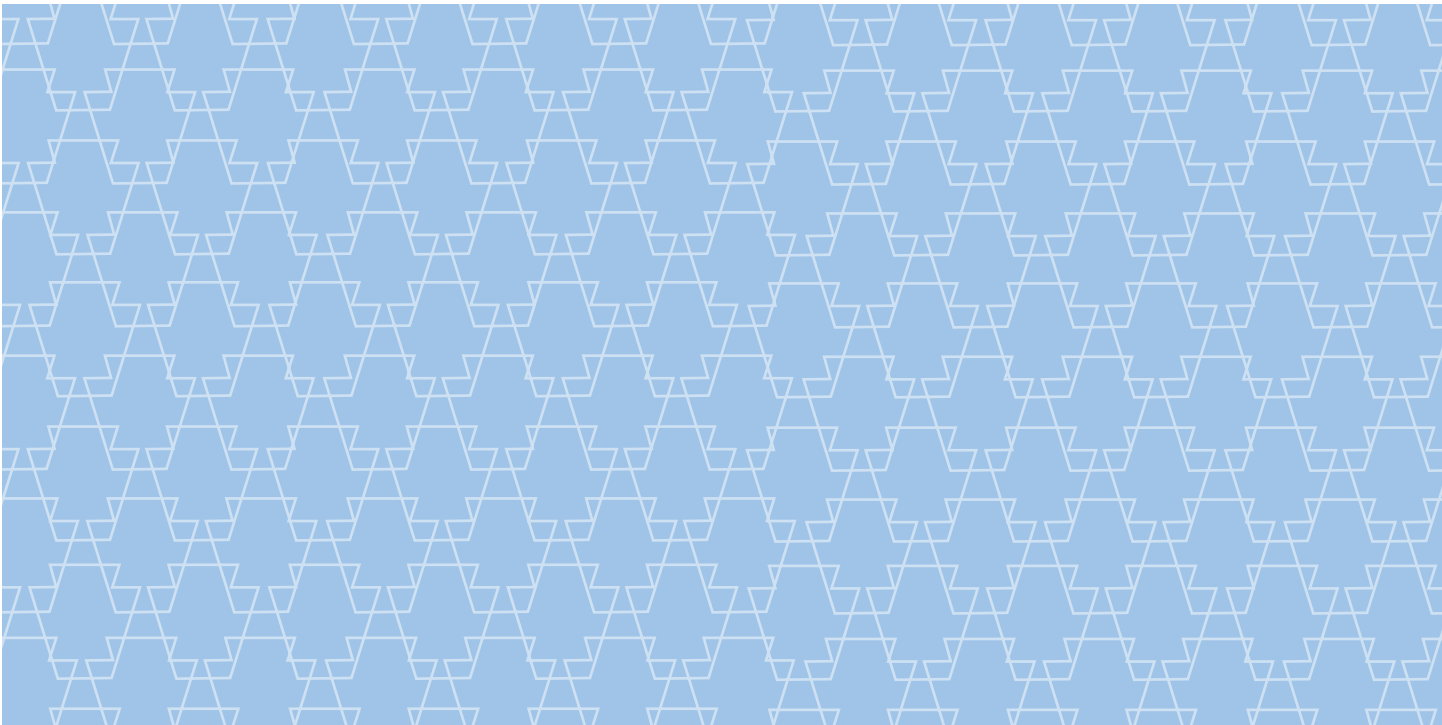
## Funding Process & Actuarial Status (continued)

Often referred to in shorthand as the “Act 120 collars,” as previously discussed, the legislation limits future year-to-year increases in employer contributions to 4.5%. Again, to translate 4.5% into dollars, some projections suggest that increases in SERS employer contributions may well range from about \$310 million to \$350 million per year for the next three years.

Because the employer rate is being suppressed by Act 120 collars for a number of years, SERS’ deficit will continue to grow in the near term. As the employer rate increases, however, its impact on paying down the liability is dramatic. Such funding is among the most crucial components of the overall, long-term stability of the pension system.



# Investment Policy, Objectives and Performance 8



# Investment Policy

The Board originally adopted a formal *Statement of Investment Policy* in 1979. It has been revised periodically, to reflect and incorporate legislative changes governing investments and amendments to policies and procedures guiding the investment of the defined benefit portfolio. The latest *Statement of Investment Policy* was adopted in 2009. The purpose of the statement is to formalize the Board's investment objectives, policies, and procedures; to establish guidelines for the investment of Fund assets; and to define the duties and responsibilities of the various entities 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 investors of prudence, discretion and intelligence, who are familiar with such matters, exercise in the management of their own affairs in investment matters;
- 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 employs an investment staff and also contracts with investment advisors and consultants to provide expert, professional judgment in all investment decisions;
- a strategic investment plan is prepared to establish the allocation of funds among investment advisors and categories of assets during the year;
- objectives are established for each category of assets used by the Fund's investment advisors to provide a framework for monitoring quality, diversification and liquidity;
- SERS is committed to promoting and improving good corporate governance practices of companies within the portfolio; and
- 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.

## Investment Objectives

As indicated in SERS' *Statement of Investment Policy*, the primary goal of the Fund is to provide benefit payments to plan participants and beneficiaries at the lowest cost to the Commonwealth through a carefully planned and diligently executed investment program.

Consistent with this goal, the Fund's overall investment objective is to achieve a total net return over a rolling five to ten-year period that:

- exceeds the actuarial rate of return adopted by the Board; and,
- exceeds the composite benchmark for the Fund in the Board-approved Strategic Investment Plan, with Market Risk (i.e., Equity Beta) that does not exceed that of the Fund's composite benchmark.

# Asset Allocation Trend

## Prudent Investor Investment Standards

The Board’s investment authority is governed by the “prudent investor” standard as set forth in Title 71, Pennsylvania Consolidated Statutes, Section 5931(a). Enactment of the “prudent investor” standard in Act 1994-29 and asset/liability studies completed by SERS’ general investment consultants and the SERS investment staff are the foundation of SERS’ investment strategy. With “prudent investor” investment authority, SERS is able to pursue a broader array of investment opportunities that enhance the ability to achieve reasonable rates of return while maintaining risk at acceptable levels. The asset/liability study demonstrated that the prudent application of this expanded authority should result in a more efficient portfolio that better serves the needs of SERS.

## Total Fund Asset Allocation

SERS develops a biennial strategic investment plan which provides direction for the SERS’ investment program. The *2012-2013 Strategic Investment Plan* will be used to guide the reallocation of investments within the asset classes shown below. The objective of the current plan is to achieve the reallocation by 2023. Every two years, the investment climate will be reassessed and a new strategic plan will be written, which may change the long-term allocation targets.

<b>Asset Allocation (Unaudited)</b>		
<b>12/31/2012</b>	<b>Asset Class/Strategy</b>	<b>Long-Term 10-Year Strategic Asset Allocation Target</b>
24.2%	Alternative Investments	13.0%
33.9	Global Public Equity	38.0
16.3	Real Assets	15.0
7.8	Diversifying Assets	12.0
15.4	Fixed Income	19.0
2.4	Liquidity Reserve	3.0
100.0%		100.0%

*\*Numbers may not add due to rounding.*

# Estimated Investment Performance\*

## Calendar Year Basis

through December 31, 2012 (net of fees)

Effective July 1, 2012 SERS changed its asset allocation. Data in this table reflects the asset classes currently being used.

Asset Class	1 Year Total Return	3 Years Total Return	5 Years Total Return	10 Years Total Return
Alternative Investments <sup>1/, 4/</sup>	11.4%	13.5%	4.7%	12.0%
<i>Alternative Investments Custom Benchmark</i> <sup>2/, 4/</sup>	14.3%	9.0%	3.0%	8.8%
<i>Russell 3000 Index + 3%</i> <sup>3/, 4/</sup>	34.1%	16.7%	4.3%	11.7%
Global Public Equity	17.6%	8.1%	-0.9%	8.9%
<i>MSCI ACWIMI Index (Net)</i> <sup>6/</sup>	16.4%	7.0%	-0.7%	8.6%
Real Assets <sup>4/</sup>	8.6%	7.3%	-2.0%	8.2%
<i>Real Assets Custom Benchmark</i> <sup>4/</sup>	12.3%	10.2%	-0.3%	7.6%
CPI + 3%	4.8%	5.1%	4.9%	5.5%
Diversifying Assets <sup>5/</sup>	8.6%	4.2%	1.6%	N/A
<i>Diversifying Assets Custom Benchmark</i>	6.6%	4.4%	4.0%	N/A
Fixed Income	10.0%	9.3%	7.3%	7.5%
<i>Barclays Capital U.S. Aggregate Bond Index</i> <sup>6/</sup>	4.2%	6.2%	5.9%	5.2%
Liquidity Reserve	0.4%	0.3%	1.0%	2.1%
<i>3 Month U.S. T-Bills Index</i>	0.1%	0.1%	0.5%	1.8%
<b>Total Fund</b>	<b>12.0%</b>	<b>8.8%</b>	<b>0.0%</b>	<b>8.4%</b>
<b>Total Fund Custom Benchmark</b>	<b>11.5%</b>	<b>8.7%</b>	<b>2.6%</b>	<b>9.1%</b>
<b>Total Fund Custom Public Market Equivalent Benchmark</b>	<b>15.7%</b>	<b>9.1%</b>	<b>2.8%</b>	<b>9.3%</b>

\* Returns for periods greater than one year are annualized.

<sup>1/</sup> Historical Alternative Investment performance includes Private Equity, Special Situations and Venture Capital.

<sup>2/</sup> The Alternative Investments Custom Benchmark is intended to measure the program's performance to its peers.

<sup>3/</sup> The R 3000 Index + 3% is a long-term benchmark by which SERS measures its private market performance. Shorter term variances (1-year and 3-year) can be pronounced due to the nature of private assets and are not as relevant for benchmark purposes.

<sup>4/</sup> Alternative Investments, its corresponding benchmarks, the Private Energy, Non-Core Real Estate, Core Real Estate, and REIT sections of Real Assets, and the corresponding Real Assets Custom Benchmark are reported on a quarter lag basis.

<sup>5/</sup> Diversifying Assets includes legacy Absolute Return Strategy funds-of-hedge funds which were initially funded in 2007 and Hedged Equity funds-of-one which were funded in 2012.

<sup>6/</sup> Represents the current benchmark. Benchmark has changed over time.

# Estimated Investment Performance\*

## Commonwealth Fiscal Year Basis

through June 30, 2012 (net of fees)

Effective July 1, 2012 SERS changed the Asset Allocation. Data in this table reflects the prior asset classes.

Asset Class	1 Year Total Return	3 Years Total Return	5 Years Total Return	10 Years Total Return
Global Stock <sup>1/</sup>	-3.6%	14.3%	1.0%	N/A
<i>MSCI World Index (Net)</i>	-5.0%	11.0%	-3.0%	N/A
U.S. Stock	2.1%	16.1%	-3.3%	5.1%
<i>Russell 3000 Index</i>	3.8%	16.7%	0.4%	5.8%
Non-U.S. Stock	-13.1%	8.4%	-7.0%	5.6%
<i>MSCI ACWI ex U.S. IMI Index (Net) <sup>2/</sup></i>	-14.8%	7.3%	-4.7%	7.5%
Fixed Income	5.1%	13.0%	7.0%	7.7%
<i>Fixed Income Custom Index</i>	7.6%	11.0%	7.7%	7.4%
Absolute Return Strategy <sup>3/</sup>	-1.3%	5.0%	0.8%	N/A
<i>3 Month LIBOR Index + 3%</i>	3.4%	3.4%	3.6%	N/A
Cash	0.0%	0.2%	1.4%	2.1%
<i>3 Month U.S. T-Bill Index</i>	0.1%	0.1%	1.0%	1.9%
Real Estate <sup>4/</sup>	8.2%	2.5%	-3.9%	6.2%
<i>Townsend Stylized Benchmark <sup>4/, 5/</sup></i>	11.9%	5.8%	-2.6%	6.0%
Private Equity <sup>4/</sup>	8.3%	19.4%	8.6%	14.8%
<i>Russell 3000 Index + 3% <sup>2/, 4/</sup></i>	10.4%	28.0%	5.2%	7.8%
Venture Capital <sup>4/</sup>	12.6%	12.4%	5.0%	1.2%
<i>Russell 3000 Index + 3% <sup>2/, 4/</sup></i>	10.4%	28.0%	5.2%	7.8%
Inflation Protection	-11.8%	7.0%	2.0%	9.0%
<i>Inflation Protection Custom Index</i>	-9.8%	6.2%	-0.8%	7.0%
<b>Total Fund</b>	<b>1.9%</b>	<b>10.9%</b>	<b>0.0%</b>	<b>7.0%</b>
<b>Total Fund Benchmark</b>	<b>4.6%</b>	<b>12.4%</b>	<b>2.8%</b>	<b>8.1%</b>

\* Returns for periods greater than one year are annualized.

<sup>1/</sup> Global Stock was initially funded in November 2006.

<sup>2/</sup> Represents the benchmark as of June 30, 2012. Benchmark has changed over time.

<sup>3/</sup> Absolute Return Strategy was initially funded in August 2007.

<sup>4/</sup> Real Estate, Private Equity, Venture Capital and its corresponding benchmark returns are reported on a quarter lag basis.

<sup>5/</sup> The private real estate component of the Townsend Stylized Benchmark is reported net of fees. The public real estate and timber components are reported before fees.

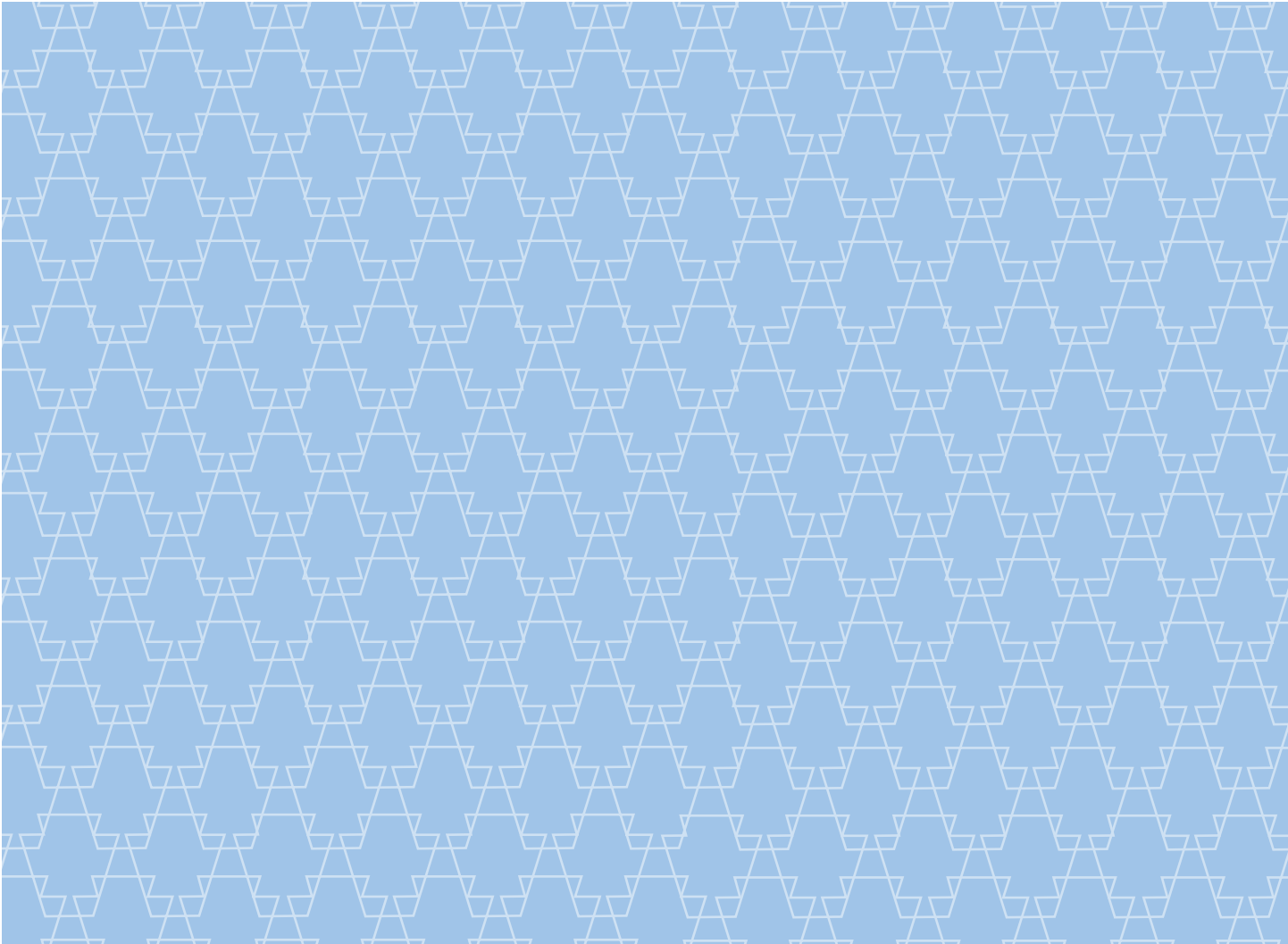
# Investment-Related Statistics

## SERS Investment-Related Statistics Calendar Year 1980 through 2012 (Unaudited)

Year End	SERS Fund Fair Value (\$ millions)	Annual Total Fund Rate of Return
1980	\$2,689	5.3%
1981	\$2,817	0.9%
1982	\$3,730	27.8%
1983	\$4,396	13.0%
1984	\$4,922	9.4%
1985	\$6,157	23.1%
1986	\$7,120	15.2%
1987	\$7,367	3.3%
1988	\$8,312	12.8%
1989	\$9,785	17.8%
1990	\$9,886	1.0%
1991	\$11,940	22.6%
1992	\$12,453	7.4%
1993	\$13,701	13.2%
1994	\$13,330	- 1.1%
1995	\$16,343	25.2%
1996	\$18,492	15.9%
1997	\$21,312	18.0%
1998	\$24,123	16.3%
1999	\$28,093	19.9%
2000	\$27,880	2.2%
2001	\$24,706	-7.9%
2002	\$20,880	-10.9%
2003	\$24,536	24.3%
2004	\$26,641	15.1%
2005	\$28,752	14.5%
2006	\$32,053	16.4%
2007	\$35,516	17.2%
2008	\$22,796	-28.7%
2009	\$24,662	9.1%
2010	\$25,886	11.9%
2011	\$24,377	2.7%
2012 <sup>1/</sup>	\$25,253 <sup>2/</sup>	12.0%

<sup>1/</sup>2012 values are estimated and unaudited.

<sup>2/</sup>Fund fair values for Alternative Investments and the Private Energy, Non-Core Real Estate, and Core Real Estate sections of Real Assets are lagged by one quarter.



## Investment Program Summary 9





# Investment Program Summary

as of December 31, 2012 - (Unaudited)

The assets of SERS are administered by the Board. The Board adopted an investment policy (Policy) that incorporates the provisions of the Retirement Code which govern the investment of SERS' assets. The Policy provides investment objectives and guidelines. SERS' investment plan is reviewed and updated biennially for strategic asset allocation purposes, as well as for diversification needs within each asset class.

## SERS Asset Allocation Report - Total Fund Summary

(Unaudited - Dollars in Millions)

Asset Class	Market Exposure *	% of Total Fund	2012-2013 Long-Term 10-Year Target
Alternative Investments	\$6,114.5	24.2%	13.0%
Global Public Equity	8,553.2	33.9	38.0
Real Assets	4,115.3	16.3	15.0
Diversifying Assets	1,969.2	7.8	12.0
Fixed Income	3,890.2	15.4	19.0
Liquidity Reserve	610.6	2.4	3.0
<b>Total Fund</b>	<b>\$25,253.1</b>	<b>100.0%</b>	<b>100.0%</b>

\*Numbers may not add due to rounding.

## Number of Investment Advisors

Asset Class	Investment Advisors
Alternative Investments	135
Global Public Equity	15
Real Assets	36
Diversifying Assets	9
Fixed Income	16
Liquidity Reserve	1
<b>Total Advisors</b>	<b>212</b>

## Number of Investment Portfolios

Asset Class	Investment Portfolios
Alternative Investments	338
Global Public Equity	17
Real Assets	80
Diversifying Assets	10
Fixed Income	20
Liquidity Reserve	2
<b>Total Portfolios</b>	<b>467</b>

# Alternative Investments Summary

as of December 31, 2012 - (Unaudited)

## Asset Class Description

Alternative Investments (AI) include all Fund assets held in commingled limited partnerships that pursue an array of private market investment strategies, including Private Equity, Special Situations, and Venture Capital. All these strategies require capital commitments greater than five years, offer premium returns to compensate for the illiquidity of these assets, and are subject to the funding limitation on illiquid investments established by this plan.

## Role in the SERS Fund

AI seeks high, long-term capital appreciation to enhance total Fund returns. The program's investment horizon is longer than most public investments, often targeting seven to ten-year investment periods.

The program is constructed to increase Fund diversification and participate in opportunities not available to other investors or from public markets.

The program includes both pro-cyclical and counter-cyclical positions across a broad range of industries, countries, and securities to generate returns in all economic environments.

**Portfolio Exposure:** The AI program is well-diversified by sub-sector, geography and industry focus. As of September 30, 2012, based on fair value, the program's exposure was as follows:

By Fund Sub-Sector:		By Portfolio Company Geography:		By Portfolio Company Industry:	
U.S. Private Equity	39.5%	United States	67.6%	Information Technology	22.3%
U.S. Venture Capital	24.1	United Kingdom	5.9	Financials	20.3
Non-U.S. <sup>1/</sup>	20.9	France	2.4	Consumer Discretionary	19.0
Distressed/Oppportunistic	11.9	China	2.1	Health Care	15.1
Pennsylvania-Related	3.7	Germany	2.0	Industrials	10.2
		Canada	2.0	Consumer Staples	3.5
		Italy	1.9	Materials	3.4
		Rest of World	15.8	Telecommunication Svcs	2.5
				Energy	1.7
				Other	2.0

<sup>1/</sup> Some managers with a domestic investment focus may invest globally. Thus, Non-U.S. exposure measured on a portfolio company basis will be greater.

# Alternative Investments Summary (continued)

as of December 31, 2012 - (Unaudited)

## Program Objectives

The 2012-2013 objectives of the AI program are to:

- generate investment returns that exceed the total return of public equity markets by 3% and the mean return for the asset class over a market cycle;
- reduce the overall Fund exposure to this asset class to 21% within five years and 13% within ten years;
- increase liquidity of the AI portfolio;
- decrease cash-flow volatility; and
- reduce program complexity and overhead.

## Asset Class Benchmarks

AI performance is measured and evaluated over a seven to ten-year period based on the following benchmarks:

- Public Market Benchmark – Russell 3000 + 300 basis points (illiquidity premium)
- Private Market Benchmark – Alternative Investments Custom Benchmark

## Alternative Investments

Sub-Asset Class	Unfunded Commitments (\$ millions)	Fair Value (\$ millions)	Percent of Total Fund
Private Equity	\$959.7	\$3,735.4	14.8%
Special Situations	336.6	972.0	3.8
Venture Capital	225.8	1,407.1	5.6
<b>Total Alternative Investments</b>	<b>\$1,522.1</b>	<b>\$6,114.5</b>	<b>24.2%</b>

*Numbers may not add due to rounding.*

# Private Equity Committed, Drawn and Distributed

The capital committed column represents total dollars allocated from SERS to each limited partnership. Capital drawn is the portion of SERS' capital commitments drawn by the General Partner to be invested with underlying portfolio companies. The distributions column shows the value of capital and profits returned to SERS.

Active Private Equity Funds Limited Partnership	Financing Stage Focus	SERS Initial Funding	Capital Committed**	Capital Drawn	Distributions
1. ABRY Broadcast Partners III	Growth Equity	02/07/1997	\$25,000,000	\$22,641,544	\$22,326,867
ABRY Partners IV	Middle	03/30/2001	35,000,000	25,254,201	45,522,786
ABRY Partners V	Middle	07/29/2005	45,000,000	41,229,820	66,324,832
ABRY Partners VI	Middle	03/26/2008	50,000,000	56,587,513	28,635,883
ABRY Partners VII	Middle	08/10/2011	30,000,000	9,277,823	1,909,973
2. ABS Capital Partners III	Growth Equity	03/26/1999	35,000,000	29,428,915	18,542,069
ABS Capital Partners IV	Growth Equity	10/13/2000	35,000,000	30,984,280	62,124,257
ABS Capital Partners V	Growth Equity	11/14/2005	20,000,000	19,704,037	18,334,131
ABS Capital Partners VI	Growth Equity	03/13/2009	40,000,000	36,649,033	2,975,636
3. Advent International GPE VI-A	Large	07/07/2008	35,000,000	31,541,325	4,783,825
Advent International GPE VII-B	Large	*	50,000,000	0	0
Advent Latin American Private Equity Fund IV	Middle	08/02/2007	30,000,000	28,350,000	10,492,308
Advent Latin American Private Equity Fund V	Middle	05/17/2010	15,000,000	4,402,500	0
4. Alpha Private Equity Fund 4	Small	05/15/2002	26,508,000	35,605,050	75,876,296
Alpha Private Equity Fund 5	Small	04/01/2006	57,796,800	65,860,055	44,105,238
5. APAX Europe IV	Mega	03/31/1999	32,424,000	29,909,800	38,420,276
APAX Europe V	Mega	04/27/2001	53,262,000	70,385,477	139,303,976
Apax Europe VI	Mega	05/19/2005	76,349,190	75,559,000	57,189,539
Apax Europe VII	Mega	06/27/2007	132,170,235	131,967,625	20,641,354
6. Apollo Investment Fund IV	Mega	09/30/1998	75,000,000	74,838,620	124,420,446
Apollo Investment Fund V	Mega	08/23/2001	50,000,000	46,638,778	109,524,671
Apollo Investment Fund VI	Mega	07/19/2006	40,000,000	36,361,834	8,698,952
7. Asia Alternatives Capital Partners	Fund of Funds	06/26/2007	50,000,000	22,545,379	6,332,919
Asia Alternatives Capital Partners II	Fund of Funds	03/07/2008	50,000,000	16,512,818	1,623,506
Asia Alternatives Capital Partners III	Fund of Funds	08/03/2012	50,000,000	7,291,355	0
Asia Alternatives Korea Buyout Investors (Hahn & Co)	Small	07/22/2011	7,000,000	4,153,033	33,137
Penn Asia Investors	Fund of Funds	09/28/2012	33,000,000	2,601,588	0
8. Asia Pacific Growth Fund III	Growth Equity	09/28/1999	15,000,000	15,328,255	12,712,967
9. Audax Private Equity Fund	Middle	05/25/2000	35,000,000	36,839,098	55,435,972
Audax Private Equity Fund II	Middle	06/17/2005	25,000,000	25,517,169	33,664,293
Audax Private Equity Fund III	Middle	11/07/2007	37,000,000	39,324,186	19,624,075
10. Bain Capital Asia Fund	Middle	10/18/2007	12,000,000	11,310,000	2,743,746
Bain Capital Europe III	Mega	07/10/2008	72,432,276	39,223,450	3,438,359
Bain Capital Fund IX	Mega	04/10/2006	75,000,000	73,354,725	22,351,476
Bain Capital Fund VII	Mega	07/06/2000	25,000,000	25,000,000	43,949,333
Bain Capital Fund VIII-E	Mega	12/15/2004	12,144,000	13,299,364	9,643,572

# Private Equity Committed, Drawn and Distributed (continued)

Active Private Equity Funds Limited Partnership	Financing Stage Focus	SERS Initial Funding	Capital Committed**	Capital Drawn	Capital Distributions
Bain Capital Fund X	Mega	01/15/2008	\$90,000,000	\$72,225,000	\$8,024,364
Bain Capital IX Coinvestment Fund	Mega	04/20/2006	15,000,000	14,640,000	4,119,987
Bain Capital X Coinvestment Fund	Mega	07/28/2008	5,000,000	1,225,000	16,957
11. Baring India Private Equity Fund III Limited	Small	10/10/2008	5,000,000	2,685,913	261,932
Baring Vostok Private Equity Fund IV	Middle	03/10/2008	30,000,000	23,406,458	1,163,149
12. BC European Capital IX	Large	09/16/2011	26,472,535	4,181,136	2,151
BC European Capital VII	Large	07/28/2000	32,658,500	37,754,746	95,769,965
BC European Capital VII Top Up	Large	07/02/2001	10,046,300	12,278,596	32,142,279
BC European Capital VIII	Large	12/13/2005	98,107,500	95,116,382	44,389,205
13. Berkshire Fund VI	Middle	07/11/2002	20,000,000	18,831,830	32,996,033
Berkshire Fund VII	Middle	11/15/2006	32,000,000	26,829,457	12,957,510
Berkshire Fund VIII	Middle	08/25/2011	30,000,000	3,405,496	0
14. Blackstone Capital III	Mega	11/03/1997	75,000,000	77,293,680	154,671,415
Blackstone Capital IV	Mega	02/26/2003	75,000,000	68,342,881	125,366,669
Blackstone Capital Partners V	Mega	05/30/2006	150,000,000	145,326,834	17,845,629
Blackstone Communications Partners I	Mega	08/29/2000	25,000,000	25,035,029	23,483,697
15. Brait IV	Small	12/11/2006	25,000,000	19,301,969	2,540,477
16. Brynwood Partners V	Small	07/31/2005	10,000,000	10,352,210	10,180,508
Brynwood Partners VI	Small	10/13/2009	10,000,000	7,532,348	1,723,397
17. Charterhouse Capital Partners IX	Middle	04/28/2009	66,385,000	35,764,063	8,867,964
Charterhouse Capital Partners VII	Middle	01/17/2003	61,145,000	54,529,726	94,710,603
Charterhouse Capital Partners VIII	Middle	04/19/2006	73,374,000	72,166,830	7,490,704
18. Charterhouse Equity Partners III	Middle	12/31/1997	50,000,000	55,395,586	75,000,205
19. Chequers Capital XV	Middle	07/05/2006	26,000,000	32,668,259	2,828,448
20. Clayton Dubilier & Rice V	Middle	06/30/1995	50,000,000	49,756,029	49,826,483
Clayton Dubilier & Rice VI	Middle	12/31/1998	50,000,000	36,433,007	56,532,998
21. Clessidra Capital Partners II	Middle	11/05/2008	20,000,000	9,640,077	2,242,896
22. Code Hennessy & Simmons	Middle	09/28/1989	10,000,000	9,650,000	29,444,933
Code Hennessy & Simmons III	Middle	09/30/1997	40,000,000	38,724,000	56,329,887
Code Hennessy & Simmons IV	Middle	09/16/1999	100,000,000	100,000,000	154,943,496
Code Hennessy & Simmons V	Middle	11/10/2005	50,000,000	53,357,135	25,827,074
23. Cognetas Fund II	Middle	11/02/2005	49,707,800	45,384,801	2,854,538
24. DLJ Merchant Banking Fund II	Large	03/31/1997	75,000,000	83,261,423	103,859,860
DLJ Merchant Banking Fund III	Large	08/14/2001	85,000,000	87,875,094	162,730,471
25. Elevation Partners	Middle	11/10/2005	35,000,000	30,626,170	19,333,075
26. Eureka II	Growth Equity	01/30/2006	20,000,000	17,521,463	7,544,104
27. Excelsior Capital Asia Partners III	Small	08/17/2006	25,000,000	23,310,259	4,675,694
28. Francisco Partners	Middle	07/27/2000	50,000,000	47,825,987	43,376,495
Francisco Partners II	Middle	07/10/2006	30,000,000	28,233,760	19,190,078
Francisco Partners III	Middle	10/17/2011	20,000,000	7,600,000	0
29. Frontenac VII	Growth Equity	09/30/1997	40,000,000	40,000,000	55,943,934
30. Great Hill Equity Partners	Middle	04/12/1999	30,000,000	30,000,000	30,444,856
Great Hill Equity Partners II	Middle	03/28/2001	35,000,000	35,063,336	68,540,735

# Private Equity Committed, Drawn and Distributed (continued)

Active Private Equity Funds Limited Partnership	Financing Stage Focus	SERS Initial Funding	Capital Committed**	Capital Drawn	Capital Distributions
Great Hill Equity Partners III	Middle	03/07/2006	\$35,000,000	\$34,037,500	\$5,250,000
Great Hill Equity Partners IV	Middle	09/08/2008	25,000,000	16,662,500	5,212,500
31. Gryphon Partners II	Small	11/03/1999	35,000,000	35,051,942	41,439,219
Gryphon Partners III	Small	09/08/2004	30,000,000	36,156,320	22,486,742
32. GTCR IX	Middle	12/01/2006	50,000,000	46,359,954	9,453,983
GTCR V	Middle	03/31/1997	11,400,000	11,400,000	20,502,976
GTCR VI	Middle	09/30/1998	50,000,000	50,000,000	43,229,799
GTCR VII	Middle	03/15/2000	55,000,000	50,074,671	121,729,912
GTCR VIII	Middle	07/07/2003	75,000,000	69,393,599	99,644,168
33. H.I.G. Growth Buyouts & Equity Fund II	Growth Equity	07/20/2011	15,000,000	1,317,964	0
34. Halpern Denny Fund III	Growth Equity	04/26/2000	25,000,000	24,900,560	27,407,758
35. Harbourvest IPEP II	Fund of Funds	06/30/1997	25,000,000	24,500,000	33,921,047
HarbourVest IPEP III	Fund of Funds	06/30/1998	40,000,000	39,400,000	56,568,683
Harbourvest IPEP IV	Fund of Funds	04/09/2001	40,000,000	38,200,000	47,114,655
HarbourVest Partners VI	Fund of Funds	05/07/1999	200,000,000	195,086,055	161,975,566
HarbourVest Partners VII	Fund of Funds	03/24/2003	75,000,000	69,000,000	26,989,875
HarbourVest Partners VIII	Fund of Funds	10/05/2006	100,000,000	78,000,000	10,889,137
HIPEP V-Asia Pacific & Rest of World	Fund of Funds	05/09/2006	30,000,000	25,845,316	3,925,862
36. Hellman & Friedman Capital Partners IV	Large	02/14/2000	75,000,000	67,317,209	188,912,266
Hellman & Friedman Capital Partners V	Large	12/20/2004	80,000,000	71,069,217	130,434,929
Hellman & Friedman Capital Partners VI	Large	06/05/2007	125,000,000	118,781,678	42,231,795
37. Incline Equity Partners III	Small	*	15,000,000	0	0
PNC Equity Partners II (Incline Equity)	Small	08/30/2007	15,000,000	13,200,402	4,300,595
38. InterMedia Partners VII	Small	01/05/2007	15,000,000	16,199,761	1,893,229
39. Invemed Catalyst Fund	Small	10/19/1999	25,000,000	14,245,496	11,020,749
40. J.H. Whitney Equity Fund III	Small	03/31/1998	20,000,000	20,171,316	50,793,206
J.H. Whitney IV	Small	02/01/2000	20,000,000	17,958,772	6,867,894
J.H. Whitney V	Small	03/29/2001	20,000,000	23,454,301	44,497,646
J.H. Whitney VI	Small	01/05/2006	50,000,000	48,969,661	20,996,914
J.H. Whitney VII	Small	10/12/2010	25,000,000	11,105,683	2,611,177
41. J.W. Childs Equity Partners III	Middle	08/20/2002	40,000,000	41,738,136	44,442,270
42. JMI Equity Fund V	Growth Equity	06/07/2005	24,000,000	23,117,205	33,460,342
JMI Equity Fund VI	Growth Equity	06/27/2007	40,000,000	39,120,000	9,093,796
JMI Equity Fund VII	Growth Equity	02/14/2011	10,000,000	4,840,000	0
43. Kelso VII	Middle	10/18/2004	40,000,000	40,156,958	32,332,307
Kelso VIII	Middle	11/29/2007	150,000,000	99,041,725	9,989,973
44. Leeds Equity Partners IV	Small	11/12/2004	20,000,000	20,104,739	7,652,650
45. LLR Equity Partners	Middle	02/04/2000	25,000,000	24,357,320	51,608,574
LLR Equity Partners II	Middle	01/29/2004	25,000,000	25,000,000	21,540,400
LLR Equity Partners III	Middle	07/24/2008	30,000,000	25,208,721	6,164,384
LLR Equity Partners IV	Middle	*	50,000,000	0	0
46. Madison Dearborn Capital Partners III	Middle	04/06/1999	75,000,000	75,186,728	112,755,445

# Private Equity Committed, Drawn and Distributed (continued)

Active Private Equity Funds Limited Partnership	Financing Stage Focus	SERS Initial Funding	Capital Committed**	Capital Drawn	Distributions
Madison Dearborn Capital Partners IV	Middle	04/02/2001	\$90,000,000	\$90,521,996	\$124,568,135
Madison Dearborn Capital Partners V	Middle	12/14/2006	75,000,000	70,440,041	20,305,826
Madison Dearborn Capital Partners VI	Middle	05/27/2008	50,000,000	21,159,173	16,478,489
47. Meridian Venture Partners II	Small	02/11/2005	10,000,000	10,000,000	7,325,308
48. New York Life Capital Partners III	Fund of Funds	06/30/2006	50,000,000	51,070,700	13,432,824
New York Life Capital Partners IV	Fund of Funds	04/04/2008	50,000,000	46,791,491	8,600,935
49. NewSpring Growth Capital II	Growth Equity	12/05/2006	10,000,000	8,000,000	4,383,422
NewSpring Growth Capital III	Growth Equity	07/27/2012	25,000,000	1,250,000	0
50. Nordic Capital V	Middle	05/07/2004	34,996,500	45,856,317	93,739,909
Nordic Capital VI	Middle	07/25/2006	54,369,000	64,015,419	36,362,879
Nordic Capital VII	Middle	05/02/2008	92,519,165	74,910,059	104,168
51. Palamon European Equity	Growth Equity	07/23/1999	29,779,989	38,373,776	55,410,378
Palamon European Equity II	Growth Equity	10/25/2005	36,114,000	39,110,389	21,030,990
52. Parthenon Investors II	Small	08/09/2001	20,000,000	22,038,045	27,043,453
53. Patriot Financial Partners	Small	06/12/2008	25,000,000	21,267,767	146,667
54. Permira European Fund	Large	09/30/1997	33,494,536	32,159,947	84,005,717
Permira European Fund II	Large	06/07/2000	48,000,000	45,672,612	84,520,061
Permira European Fund III	Large	01/12/2004	115,960,000	125,077,125	166,505,594
Permira IV	Large	12/14/2006	127,779,198	121,255,089	35,437,869
55. Providence Equity Partners IV	Large	11/27/2000	25,000,000	23,412,704	53,091,951
Providence Equity Partners V	Large	04/04/2005	45,000,000	42,078,920	28,914,674
Providence Equity Partners VI	Large	03/16/2007	50,000,000	47,195,495	9,896,582
56. Segulah IV	Middle	09/25/2008	16,705,647	9,413,218	63,821
57. ShoreView Capital Partners	Small	06/16/2003	38,000,000	31,462,555	48,438,606
ShoreView Capital Partners II	Small	03/27/2008	40,000,000	24,096,673	9,311,317
58. Sterling Capital Partners I	Middle	10/31/2002	15,000,000	15,272,797	23,366,651
Sterling Capital Partners II	Middle	08/18/2005	30,000,000	29,722,511	17,996,633
Sterling Capital Partners III	Middle	08/13/2007	32,000,000	29,631,471	2,408,422
59. Summit IV	Middle	09/30/1995	25,000,000	24,250,000	182,964,329
Summit Partners Private Equity Fund VII	Middle	02/09/2006	97,134,500	97,134,505	21,106,914
Summit V	Growth Equity	03/31/1998	37,500,000	36,187,500	49,398,777
Summit Ventures VI	Growth Equity	03/23/2001	62,000,000	63,914,751	77,812,028
60. TA IX	Middle	09/20/2000	45,000,000	43,659,073	98,743,201
TA X	Middle	04/25/2006	70,000,000	68,068,105	34,993,105
61. Thomas H. Lee Equity Fund V	Large	07/03/2001	100,000,000	104,702,576	149,190,921
Thomas H. Lee Equity Fund VI	Large	11/14/2006	50,000,000	40,231,333	7,314,411
62. TPG Partners III	Mega	01/13/2000	75,000,000	64,119,169	151,962,183
TPG Partners IV	Mega	12/29/2003	30,000,000	27,999,752	32,033,970
TPG Partners V	Mega	06/27/2006	100,000,000	89,768,411	13,861,116
TPG Partners VI	Mega	05/22/2008	45,000,000	33,178,745	6,706,109
TPG Asia V	Large	02/19/2008	22,500,000	20,440,460	2,827,800
Newbridge Asia III	Middle	02/15/2001	15,000,000	14,438,357	54,857,234
Newbridge Asia IV	Middle	09/27/2005	40,000,000	38,587,391	32,512,079
63. UMS Partners Fund I	Small	02/15/2005	5,000,000	5,000,000	3,004,752

# Private Equity Committed, Drawn and Distributed (continued)

	Active Private Equity Funds Limited Partnership	Financing Stage Focus	SERS Initial Funding	Capital Committed**	Capital Drawn	Distributions
64.	Vestar Capital Partners III	Middle	06/30/1997	\$25,000,000	\$24,362,534	\$27,600,015
	Vestar Capital Partners IV	Middle	01/25/2000	100,000,000	97,630,147	145,467,690
	Vestar Capital Partners V	Middle	01/25/2006	50,000,000	50,549,384	16,352,319
65.	Weston Presidio III	Growth Equity	12/31/1998	35,000,000	31,989,586	28,989,700
	Weston Presidio IV	Growth Equity	06/21/2000	35,000,000	34,451,015	34,789,577
	Weston Presidio V	Growth Equity	12/08/2005	50,000,000	43,097,829	21,129,987
66.	Yucaipa American Alliance Fund II	Middle	01/13/2009	25,000,000	24,967,780	7,695,134
<b>Total Active Private Equity</b>				<b>\$7,682,235,670</b>	<b>\$6,871,745,723</b>	<b>\$6,527,448,576</b>

*Numbers may not add due to rounding.*

*Cash flows as of 9/30/12*

*\* Not funded as of 9/30/12*

*\*\* Commitments as of 12/31/12*

## Inactive Private Equity Funds

	Capital Committed	Capital Drawn	Distributions
<b>Total Inactive Private Equity</b>	<b>\$643,630,323</b>	<b>\$634,381,543</b>	<b>\$1,228,422,850</b>



# Special Situations Committed, Drawn and Distributed

The capital committed column represents total dollars allocated from SERS to each limited partnership. Capital drawn is the portion of SERS' capital commitments drawn by the General Partner to be invested with underlying portfolio companies. The distributions column shows the value of capital and profits returned to SERS.

Active Special Situations Funds Limited Partnership	Financing Stage Focus	SERS Initial Funding	Capital Committed**	Capital Drawn	Distributions
1. ABRY Advanced Securities Fund	Distressed/Restructuring	08/01/2008	\$25,000,000	\$22,672,541	\$16,904,825
ABRY Mezzanine Partners	Mezzanine	03/15/2002	30,000,000	26,607,475	44,027,183
ABRY Senior Equity II	Mezzanine	07/27/2006	30,000,000	27,331,534	33,889,734
2. AG Capital Recovery Partners IV	Distressed/Restructuring	02/04/2003	50,000,000	35,415,216	55,777,537
AG Capital Recovery Partners V	Distressed/Restructuring	04/17/2006	20,000,000	20,000,000	17,677,673
3. Avenue Asia Special Situations Fund IV	Distressed/Restructuring	06/30/2006	50,000,000	31,897,973	11,765,932
Avenue Europe Special Situations Fund	Distressed/Restructuring	07/30/2008	38,632,500	25,749,356	31,785,451
Avenue Special Situations Fund IV	Distressed/Restructuring	03/27/2006	50,000,000	50,000,000	65,633,690
Avenue Special Situations Fund V	Distressed/Restructuring	06/04/2007	70,000,000	70,004,050	88,849,488
Avenue Special Situations Fund VI	Distressed/Restructuring	11/02/2010	20,000,000	18,210,238	356,781
4. AXA Secondary Fund III	Secondaries	11/19/2004	26,000,000	21,430,041	32,493,884
AXA Secondary Fund III-2	Secondaries	11/24/2004	14,000,000	11,494,000	16,482,881
AXA Secondary Fund IV	Secondaries	02/26/2007	80,000,000	61,602,693	13,501,138
AXA Secondary Fund V B	Secondaries	06/19/2012	75,000,000	27,447,380	0
5. B III Capital Partners	Distressed/Restructuring	09/30/1997	35,000,000	34,503,390	50,539,227
6. Centerbridge Capital Partners I	Distressed/Restructuring	02/27/2007	50,000,000	55,456,969	44,151,749
7. Cerberus Institutional Partners	Distressed/Restructuring	03/05/1999	35,000,000	35,000,000	77,876,355
Cerberus Institutional Partners Series Four	Distressed/Restructuring	11/27/2006	75,000,000	69,258,215	19,472,615
Cerberus Institutional Partners Series Three	Distressed/Restructuring	11/13/2003	35,000,000	22,321,354	25,703,130
Cerberus Institutional Partners Series Two	Distressed/Restructuring	10/09/2001	35,000,000	30,100,793	76,185,652
8. CVI Global Value Fund	Distressed/Restructuring	02/23/2007	60,000,000	57,151,667	27,023,177
9. Dover Street VII	Secondaries	07/02/2008	30,000,000	25,445,287	4,874,897
10. H.I.G. Bayside Debt & LBO Fund II	Distressed/Restructuring	06/17/2008	30,000,000	15,800,000	3,740,809
11. JP Morgan US Corp Finance Investors II	Distressed/Restructuring	01/14/2003	50,000,000	51,125,300	40,895,831

# Special Situations Committed, Drawn and Distributed (continued)

	Active Special Situations Funds Limited Partnership	Financing Stage Focus	SERS Initial Funding	Capital Committed**	Capital Drawn	Distributions
12.	Landmark Equity IV	Secondaries	03/31/1995	\$14,923,291	\$12,495,850	\$18,728,790
	Landmark Equity Partners V	Secondaries	12/31/1995	19,624,113	19,434,947	23,521,627
13.	LBC Credit Partners III	Mezzanine	*	50,000,000	0	0
14.	Lexington Capital Partners II	Secondaries	06/30/1998	40,000,000	39,538,000	50,512,359
	Lexington Capital Partners III	Secondaries	01/26/1999	35,000,000	34,516,449	41,204,203
	Lexington Capital Partners V	Secondaries	01/17/2002	75,000,000	74,623,418	104,082,394
	Lexington Capital Partners VI	Secondaries	10/21/2005	50,000,000	50,995,176	26,604,927
15.	Matlin Patterson Global Opportunities Partners	Distressed/Restructuring	05/31/2001	35,000,000	30,091,262	56,689,513
	Matlin Patterson Global Opportunities Partners II	Distressed/Restructuring	06/30/2004	30,000,000	30,410,597	10,578,309
16.	Oakhill Capital Partners	Distressed/Restructuring	05/17/1999	50,000,000	53,683,590	86,761,262
17.	Oaktree Capital Management	Distressed/Restructuring	05/28/2004	40,000,000	40,581,778	66,949,642
	OCM Opportunities Fund IX	Distressed/Restructuring	*	50,000,000	0	0
	OCM Opportunities Fund II	Distressed/Restructuring	03/31/1998	40,000,000	40,000,000	60,332,637
	OCM Opportunities Fund III	Distressed/Restructuring	01/20/2000	60,000,000	60,007,890	89,022,706
	OCM Opportunities Fund IV	Distressed/Restructuring	09/26/2001	70,000,000	70,000,000	115,396,501
	OCM Opportunities Fund V	Distressed/Restructuring	08/12/2004	40,000,000	40,003,507	59,495,797
	OCM Opportunities Fund VI	Distressed/Restructuring	09/28/2005	40,000,000	40,000,000	41,600,000
	OCM Opportunities Fund VII	Distressed/Restructuring	05/16/2007	40,000,000	40,000,000	32,750,032
	OCM Opportunities Fund VIIIb	Distressed/Restructuring	06/03/2008	40,000,000	36,000,000	36,000,000
	OCM Opportunities Fund VIII	Distressed/Restructuring	09/20/2010	12,500,000	12,583,425	0
	OCM Opportunities Fund VIIIb	Distressed/Restructuring	08/22/2011	12,500,000	7,187,500	0
	OCM Principal Opportunities Fund IV	Distressed/Restructuring	01/24/2007	20,000,000	20,400,000	7,036,481
	OCM Principal Opportunities II	Distressed/Restructuring	04/24/2001	25,000,000	25,000,000	39,481,616
18.	Sankaty Credit Opportunities III	Distressed/Restructuring	03/08/2007	50,000,000	50,000,000	7,360,126
	Sankaty Credit Opportunities IV	Distressed/Restructuring	07/15/2008	40,000,000	36,000,000	22,176,668
19.	Templeton Strategic Emerging Markets Fund II	Distressed/Restructuring	09/06/2005	100,000,000	76,394,099	149,948,034

# Special Situations Committed, Drawn and Distributed (continued)

Active Special Situations Funds Limited Partnership	Financing Stage Focus	SERS Initial Funding	Capital Committed**	Capital Drawn	Distributions
Templeton Strategic Emerging Markets Fund III	Distressed/ Restructuring	05/29/2009	\$100,000,000	\$68,685,538	\$16,836,350
20. Versa Capital Partners	Distressed/ Restructuring	10/16/2005	20,000,000	22,811,753	15,988,714
Versa Capital Partners II	Distressed/ Restructuring	07/31/2008	15,000,000	8,189,170	521,999
21. W Capital Partners II	Secondaries	08/08/2007	40,000,000	37,919,138	28,349,547
<b>Total Active Special Situations</b>			<b>\$2,268,179,904</b>	<b>\$1,923,578,559</b>	<b>\$2,007,539,873</b>

Numbers may not add due to rounding.

Cash flows as of 9/30/12

\* Not funded as of 9/30/12

\*\* Commitments as of 12/31/12

## Inactive Special Situations Funds

	Capital Committed	Capital Drawn	Distributions
<b>Total Inactive Special Situations</b>	<b>\$171,600,000</b>	<b>\$158,186,047</b>	<b>\$251,722,747</b>

# Venture Capital Committed, Drawn and Distributed

The capital committed column represents total dollars allocated from SERS to each limited partnership. Capital drawn is the portion of SERS' capital commitments drawn by the General Partner to be invested with underlying portfolio companies. The distributions column shows the value of capital and profits returned to SERS.

	Active Venture Capital Funds Limited Partnership	Financing Stage Focus	SERS Initial Funding	Capital Committed*	Capital Drawn	Distributions
1.	Abingworth Bioventures IV	Balanced	09/01/2003	\$20,000,000	\$19,020,000	\$7,045,960
	Abingworth Bioventures V	Balanced	01/23/2007	33,775,000	22,476,359	12,239,260
2.	Accel Europe	Early Stage	07/02/2001	15,000,000	11,350,000	11,433,483
3.	Adams Capital Management II	Early Stage	10/01/1999	30,000,000	30,000,000	3,800,000
	Adams Capital Management III	Early Stage	11/21/2000	30,000,000	30,000,000	4,761,905
4.	Advanced Technology Ventures VI	Balanced	03/09/2000	10,000,000	10,000,000	3,847,939
	Advanced Technology Ventures VII	Balanced	07/11/2001	27,000,000	25,784,700	13,053,074
5.	Alloy Annex I	Early Stage	10/31/2003	5,000,000	5,000,000	345,895
	Alloy Ventures 2000	Early Stage	05/19/2000	20,000,000	20,000,000	4,058,488
	Alloy Ventures 2002	Early Stage	07/22/2002	25,000,000	25,000,000	9,260,604
	Alloy Ventures 2005	Early Stage	08/11/2005	25,000,000	25,000,000	0
6.	Apax Excelsior VI	Balanced	07/03/2000	35,000,000	34,151,324	48,407,576
	P/A Fund I	Early Stage	06/30/1993	30,000,000	30,000,000	66,195,539
7.	APEX Investment Fund IV	Early Stage	09/17/1999	25,000,000	25,765,509	2,661,681
	APEX Investment Fund V	Early Stage	04/19/2002	20,000,000	20,568,870	5,027,374
8.	Artiman Ventures II	Early Stage	10/27/2006	25,000,000	23,312,500	0
	Artiman Ventures III	Early Stage	08/09/2010	20,000,000	6,450,000	0
9.	Atlas Venture Fund IV	Early Stage	03/31/1999	26,000,000	23,809,496	8,460,313
	Atlas Venture Fund V	Early Stage	02/07/2000	37,200,000	37,211,109	39,164,709
	Atlas Venture Fund VI	Early Stage	08/01/2001	24,800,000	24,800,000	8,447,523
10.	Austin Ventures IX	Balanced	01/09/2006	15,000,000	14,070,609	1,372,438
	Austin Ventures VIII	Balanced	07/26/2001	20,932,140	21,100,362	10,659,995
11.	Battery Ventures VIII	Balanced	08/13/2007	25,000,000	24,399,048	10,964,228
	Battery Ventures VIII Side Car Fund	Balanced	08/29/2008	9,000,000	6,391,962	5,281,102
12.	Birchmere Ventures III	Early Stage	05/05/2005	10,000,000	9,991,565	7,252,243
13.	Care Capital Investments III	Balanced	02/08/2006	25,000,000	16,064,046	2,928,536
14.	Charles River Partnership XI	Early Stage	02/15/2001	11,032,259	10,883,284	14,360,660
15.	CID Greater China Venture Capital Fund II	Balanced	08/10/2007	20,000,000	17,000,000	6,439,746
16.	Clearstone Venture Partners III-A	Early Stage	12/22/2004	25,000,000	23,000,000	267,818
17.	Cross Atlantic Technology Fund	Balanced	02/14/2000	20,000,000	20,149,041	22,362,181
	Cross Atlantic Technology Fund II	Balanced	01/28/2002	32,900,000	32,900,000	18,871,600
	Novo Vita	Balanced	12/26/2000	11,616,498	11,616,498	5,377,593
18.	Devon Park Bioventures	Balanced	12/15/2006	10,842,697	6,472,469	950,627
19.	Draper Fisher Jurvetson Fund VI	Early Stage	08/13/1999	8,000,000	8,000,000	3,820,841
	Draper Fisher Jurvetson Fund VII	Early Stage	09/22/2000	20,000,000	20,000,000	3,178,088
	Draper Triangle Ventures	Early Stage	12/20/1999	20,000,000	20,431,137	10,505,577
	Draper Triangle Ventures II	Early Stage	10/13/2004	12,000,000	12,192,324	696,538
20.	Fairview Capital	Fund of Funds	09/30/1994	10,000,000	10,000,000	4,543,128
	Fairview II	Fund of Funds	03/31/1998	10,000,000	9,870,000	3,982,519

# Venture Capital Committed, Drawn and Distributed (continued)

Active Venture Capital Funds Limited Partnership	Financing Stage Focus	SERS Initial Funding	Capital Committed*	Capital Drawn	Distributions
21. Frazier Healthcare III	Balanced	03/31/1999	\$30,000,000	\$30,000,000	\$10,337,350
Frazier Healthcare IV	Balanced	09/27/2001	30,000,000	29,670,000	19,873,617
Frazier Healthcare V	Balanced	05/10/2005	30,000,000	29,175,000	23,699,011
22. Grotech Partners V	Early Stage	09/30/1998	25,000,000	25,000,000	24,521,934
23. Guggenheim Technology Ventures I	Early Stage	11/17/2008	2,000,000	1,960,000	297,134
24. Healthcare Ventures V	Early Stage	12/31/1997	25,000,000	25,000,000	52,355,501
Healthcare Ventures VI	Early Stage	06/19/2000	35,000,000	35,000,000	3,542,050
Healthcare Ventures VII	Early Stage	10/29/2002	35,000,000	33,862,500	13,792,373
Healthcare Ventures VIII	Early Stage	08/22/2005	30,000,000	22,275,000	8,700,895
25. Highland Capital Partners VI	Early Stage	10/25/2001	25,000,000	25,000,000	32,442,073
Highland Capital Partners VII	Early Stage	10/13/2006	35,000,000	31,587,500	3,547,906
Highland Consumer Fund I	Early Stage	05/04/2007	25,000,000	20,263,199	0
26. IP II	Balanced	12/17/2001	8,600,000	8,584,074	1,437,641
IP III	Balanced	11/19/2004	10,500,000	9,555,000	3,019,134
IP IV	Balanced	09/21/2007	14,000,000	12,880,000	1,887,139
27. Insight Venture Partners VI	Balanced	08/21/2007	30,000,000	31,898,328	7,363,848
Insight Venture Partners VII	Balanced	04/27/2011	20,000,000	12,520,000	1,927,164
28. InterWest Partners IX	Balanced	10/19/2005	20,000,000	16,000,000	1,106,563
InterWest Partners VIII	Early Stage	08/25/2000	25,000,000	25,000,000	9,657,162
InterWest Partners X	Balanced	10/30/2008	30,000,000	15,000,000	0
29. JP Morgan Venture Capital Investors	Fund of Funds	07/08/1999	100,000,000	106,275,378	54,090,777
JP Morgan Venture Capital Investors II	Fund of Funds	09/08/2000	100,000,000	107,812,521	53,677,758
JP Morgan Venture Capital Investors III	Fund of Funds	06/20/2006	100,000,000	88,048,577	13,950,776
30. Kline Hawkes Pacific	Balanced	08/30/2000	15,000,000	15,100,498	6,873,957
31. Knightsbridge Venture Capital VI	Fund of Funds	12/07/2004	20,000,000	17,133,334	935,101
32. Lightspeed Venture Partners VII	Early Stage	02/27/2006	18,000,000	16,477,490	5,924,962
Lightspeed Venture Partners VIII	Early Stage	06/27/2008	15,000,000	12,300,000	6,673,550
33. Media/Communications Ventures Fund V	Growth Equity	09/27/2000	35,000,000	34,812,205	49,627,103
34. Meritech Capital Partners II	Late Stage	01/02/2001	26,475,166	24,842,529	32,317,264
Meritech Capital Partners III	Late Stage	04/05/2006	35,000,000	33,950,000	62,184,929
Meritech Capital Partners IV	Late Stage	02/10/2011	20,000,000	8,000,000	878,096
35. Mid-Atlantic Venture Fund III	Early Stage	06/30/1997	20,008,308	20,000,000	5,654,702
Mid-Atlantic Venture Fund IV	Early Stage	05/04/2000	30,000,000	30,000,000	1,835,977
NEPA Venture-II	Balanced	12/31/1992	7,500,000	7,500,000	34,879,769
36. Morgenthaler Partners IX	Balanced	11/25/2008	20,000,000	10,000,000	1,028,659
Morgenthaler Partners VII	Balanced	07/26/2001	35,000,000	35,000,000	24,815,617
Morgenthaler Partners VIII	Balanced	10/03/2005	35,000,000	31,500,000	14,803,400
37. New Enterprise Associates 11	Early Stage	03/01/2004	25,000,000	23,500,000	18,702,783
New Enterprise Associates 12	Early Stage	06/26/2006	35,000,000	32,029,833	11,255,558
New Enterprise Associates IX	Early Stage	11/15/1999	20,000,000	19,600,000	5,220,073
New Enterprise Associates VI	Early Stage	03/31/1994	25,000,000	25,000,000	200,407,487
New Enterprise Associates VII	Early Stage	12/31/1996	30,000,000	30,000,000	102,186,705
New Enterprise Associates X	Early Stage	12/11/2000	35,000,000	34,503,000	29,560,918

# Venture Capital Committed, Drawn and Distributed (continued)

Active Venture Capital Funds Limited Partnership	Financing Stage Focus	SERS Initial Funding	Capital Committed*	Capital Drawn	Distributions
38. Novitas Capital III	Early Stage	04/17/2003	\$10,000,000	\$8,950,000	\$3,049,757
39. Oak Investment Partners XI	Late Stage	07/21/2004	35,000,000	35,000,000	13,703,385
Oak Investment Partners XII	Late Stage	07/10/2006	40,000,000	36,710,052	9,376,418
40. Permira UK Venture Fund IV	Balanced	09/30/1996	15,248,000	15,993,572	22,721,533
41. Pitango Venture Capital Fund IV	Early Stage	07/19/2004	20,000,000	19,601,534	7,816,308
Pitango Venture Capital Fund V	Early Stage	08/22/2007	30,000,000	21,263,295	3,593,498
42. Polaris Venture Partners II	Balanced	09/30/1998	25,000,000	24,750,000	32,698,524
Polaris Venture Partners III	Balanced	01/21/2000	50,000,000	49,500,000	25,728,399
Polaris Venture Partners IV	Balanced	09/30/2002	50,000,000	49,750,000	21,854,628
Polaris Venture Partners V	Balanced	08/08/2006	50,000,000	41,750,000	9,870,463
43. Quaker BioVentures	Balanced	02/20/2003	20,000,000	20,000,000	3,526,430
Quaker BioVentures II	Balanced	04/03/2007	25,000,000	18,250,000	3,565,264
44. SCP Private Equity Partners II	Late Stage	06/15/2000	25,000,000	25,000,000	5,972,493
45. Siguler Guff BRIC Opportunities Fund	Fund of Funds	05/08/2006	10,000,000	9,558,299	2,270,657
Siguler Guff BRIC Opportunities Fund II	Fund of Funds	04/09/2008	25,000,000	19,929,950	1,009,385
46. Sofinnova Venture Partners VII	Early Stage	01/18/2007	20,000,000	15,800,000	12,769,943
47. Sprout VII	Early Stage	03/31/1995	18,000,000	18,000,000	47,828,701
48. Summit Accelerator Fund	Early Stage	11/15/1999	8,000,000	7,609,500	12,168,635
Summit Partners Venture Capital Fund II	Early Stage	09/22/2006	15,000,000	15,823,703	11,250,306
49. T.Rowe Price Stock Distribution Account	Late Stage	01/03/2005	0	442,918,329	415,021,515
50. TA/Advent VIII	Balanced	06/30/1997	30,000,000	29,400,000	66,756,735
51. Three Arch Capital	Balanced	12/20/2000	20,000,000	19,500,000	9,066,583
Three Arch Partners IV	Balanced	06/04/2004	20,000,000	18,050,000	6,209,207
52. TL Ventures IV	Early Stage	05/13/1999	35,000,000	35,000,000	25,582,809
TL Ventures V	Early Stage	10/18/2000	40,000,000	40,048,219	13,065,207
53. US Venture Partners VII	Balanced	02/18/2000	13,750,000	13,750,000	4,800,279
US Venture Partners VIII	Early Stage	06/01/2001	26,250,000	25,830,000	20,488,962
54. Weathergage Venture Capital	Fund of Funds	06/26/2007	25,000,000	18,875,000	2,086,714
Weathergage Venture Capital II	Fund of Funds	06/29/2010	25,000,000	7,250,000	0
55. Worldview Technology Partners IV	Balanced	01/31/2001	18,130,023	16,951,175	7,034,048
<b>Total Active Venture Capital</b>			<b>\$2,831,560,091</b>	<b>\$3,068,660,805</b>	<b>\$2,159,907,981</b>

Numbers may not add due to rounding.

Cash flows as of 9/30/12

\*Commitments as of 12/31/12

## Inactive Venture Capital Funds

	Capital Committed	Capital Drawn	Distributions
<b>Total Inactive Venture Capital</b>	<b>\$422,619,599</b>	<b>\$414,845,561</b>	<b>\$673,630,567</b>

# Global Public Equity Investments Summary

as of December 31, 2012 - (Unaudited)

## **Asset Class Description**

Global Public Equity (Global Equity) comprises Fund assets held in publicly traded equity securities of companies located throughout the developed world and emerging markets. These companies have a wide range of market capitalizations in different industries and sectors that offer vastly different return opportunities.

## **Role in the SERS Fund**

Global Equity provides the Fund with high total return but with high volatility. This asset class offers immediate liquidity in normal capital market conditions and can provide moderate inflation protection.

Investing in public equity securities globally – rather than in limited regions – offers the best risk-adjusted return and diversification benefits for the Fund.

## **Program Objective**

The 2012-2013 objective of the Global Equity program is to generate annualized total net return that exceeds the Global Equity benchmark return by 100 to 200 basis points per annum, accomplished through active and passive ownership of large, mid, and small capitalization stocks worldwide.

## **Asset Class Benchmark**

Global Equity performance is measured and evaluated over a three to five-year period relative to the MSCI All-Country World Investable Market Index (ACWI-IMI) benchmark.

# Global Public Equity Investments Summary (continued)

as of December 31, 2012 - (Unaudited)

## Global Public Equity

	Manager	Investment Style	Market Exposure as of 12/31/12* (\$ millions)
<b>Global Mandates</b>			
1.	Walter Scott & Partners Limited	Growth	\$529.4
<b>Total Global Mandates</b>			<b>529.4</b>
<b>U.S. Equity</b>			
2.	Cornerstone Growth	Large-cap growth	264.2
3.	Diamond Hill Concentrated	Large-cap concentrated	275.8
4.	Epoch Value	Large-cap value	268.3
5.	Iridian Asset Management LLC	Mid-cap private business value	252.7
6.	Mellon Capital Management Russell 1000 Index	Russell 1000 Index	2,676.8
	Mellon Capital Management Corp - PA Companies	Small-cap PA companies	194.2
7.	Emerald Advisers, Inc. - PA Companies	Small-cap PA companies	334.9
<b>Total U.S. Equity</b>			<b>4,267.0</b>
<b>Non-U.S. Developed Markets Equity</b>			
8.	Artisan Partners L.P. - Global ex US	Global ex-US growth	348.8
	Mellon Capital Management MSCI World ex US Index	MSCI World ex-US Index	1,278.0
9.	Morgan Stanley Investment Management Limited- developed ex US	EAFE value	369.0
10.	Templeton Investment Counsel - Global ex US	Global ex-US value	546.1
11.	Harris Associates L.P.	Small-cap intrinsic value	408.7
12.	Pictet Asset Management Limited	Small-cap value	0.2
<b>Total Non-U.S. Developed Markets Equity</b>			<b>2,950.9</b>
<b>Emerging Markets Equity</b>			
13.	BlackRock/Emerging Markets Index Non-Lendable Fund	MSCI Emerging Markets Index	631.3
14.	Vanguard/MSCI Emerging Market ETF	MSCI Emerging Markets Index	174.1
<b>Total Emerging Markets Equity</b>			<b>805.4</b>
<b>Transition Assets</b>			
15.	Northern Trust Public Equity	Transition Assets	0.6
<b>Total Transition Assets</b>			<b>0.6</b>
<b>Total Global Public Equity</b>			<b>\$8,553.2</b>

\*Includes stocks and cash which the manager had available for investment. Numbers may not add due to rounding.



# Real Assets Investments Summary

as of December 31, 2012 - (Unaudited)

## Asset Class Description

Real Assets (RA) include the Fund's investments that predominantly own or develop physical assets and that are highly correlated to inflation. Two categories of investments make up SERS' RA asset class:

- Real Estate
  - *Core Real Estate* through separate account relationships with reasonable levels of liquidity over a 12 to 18-month period.
  - *Non-core Real Estate* through private real estate limited partnerships requiring long-term capital commitments and offering limited liquidity.
  - *REITS* which are publicly traded real estate investment trusts.

The most recent property diversification data is as follows:

- 43% pooled funds, 57% separate accounts;
  - 22% office, 3% industrial, 9% retail, 28% multifamily, 11% hotel, 7% timber, 20% other (including senior and student housing, land and various niche property investments);
  - 9% Pennsylvania, 35% East excluding PA, 25% West, 14% South, 5% Midwest, 12% International;
  - 17% of the fair value of the separate accounts was invested in 14 investments located in Pennsylvania.
- Inflation Protection
    - *Public Energy* through commodities exposure, master limited partnerships, or other publicly traded securities with exposure to the energy markets.
    - *Private Energy* through investments in limited partnerships requiring long-term capital commitments and offering limited liquidity.
    - *Commodities* through both passive and active investment strategies which provide exposure to oil and gas, metals, livestock, and agricultural products.
    - *Natural Resources* through investment in publicly traded companies that generate a large portion of their revenues from natural resources.
    - *Timberland and Farmland* through direct and indirect investment in real estate whose value is determined by timber and farming operations.
    - *Infrastructure* through indirect investments in large-scale infrastructure projects such as toll roads, airports and ports, and pipelines.

## Role in the SERS Fund

RA provides positive real return during periods of high or rising inflation and thereby helps preserve the purchasing power of the Fund. The RA portfolio is also expected to generate attractive, long-term return with lower volatility than the broad equity markets.

RA provides significant diversification benefits to the Fund due to its relatively low correlation to economic-sensitive assets such as stocks and bonds.

Finally, energy investments, in particular, offer high total return opportunity, provide inflation protection, and are effective U.S. dollar hedges (because crude oil worldwide is denominated in U.S. Dollars). These attributes are particularly attractive because SERS' liabilities are not indexed to inflation and are denominated in U.S. dollars.

# Real Assets Investments Summary (continued)

as of December 31, 2012 - (Unaudited)

## Program Objectives

The 2012-2013 objectives of the RA program are to:

- primarily, generate real total return that exceeds inflation; and,
- secondarily, provide competitive total return over the long-term through capital appreciation and income generation.

## Asset Class Benchmarks

RA performance is measured and evaluated over a three to five-year period relative to the following benchmarks:

- Real Assets Custom Benchmark
- CPI + 3%

## SERS Real Assets Investments

Investment	Vintage Year	Asset Type	Investment Structure	Fair Value (\$ millions)
<b>Private Energy<sup>1/</sup></b>				
1. Carlyle Energy Mezz Opp Fund	2012	Energy	Limited Partnership	\$10.3
2. Denham Commodity VI	2012	Energy	Limited Partnership	1.1
3. Energy Spectrum Partners IV	2004	Energy	Limited Partnership	16.6
Energy Spectrum Partners V	2007	Energy	Limited Partnership	6.3
4. First Reserve Fund X	2004	Energy	Limited Partnership	12.2
First Reserve Fund XI	2006	Energy	Limited Partnership	48.7
First Reserve Fund XII	2008	Energy	Limited Partnership	34.9
5. Lime Rock Partners III	2004	Energy	Limited Partnership	12.3
Lime Rock Partners IV	2006	Energy	Limited Partnership	31.2
Lime Rock Partners V	2008	Energy	Limited Partnership	35.1
Lime Rock Resources	2005	Energy	Limited Partnership	8.1
6. Oaktree Power Opportunities Fund III	2010	Energy	Limited Partnership	5.1
OCM/GFI Power Opportunities Fund II	2005	Energy	Limited Partnership	2.2
7. SFC Energy Partners I	2007	Energy	Limited Partnership	15.8
SFC Energy Partners II	2011	Energy	Limited Partnership	4.8
<b>Total Private Energy (09/30/12)</b>				<b>244.7</b>
Fourth Quarter Net Cash Flow Adjustment				-11.8
<b>Total Private Energy (12/31/12)</b>				<b>232.9</b>
<b>Non-Core Real Estate<sup>1/</sup></b>				
8. AG Asia Realty Fund	2007	Diversified	Limited Partnership	12.2
9. Apollo Real Estate Fund III	1998	Diversified	Limited Partnership	6.1
10. Berwind Investment Partnership V	1999	Diversified	Limited Partnership	8.8
Berwind Investment Partnership VI	2002	Diversified	Limited Partnership	10.4
Berwind Investment Partnership VII	2005	Diversified	Limited Partnership	12.6
Berwind Investment Partnership VIII	2007	Diversified	Limited Partnership	11.1
Berwind Investment Partnership IX	2012	Diversified	Limited Partnership	5.5
11. Blackstone Real Estate Partners III	1999	Diversified	Limited Partnership	0.5
Blackstone Real Estate Partners IV	2003	Diversified	Limited Partnership	15.5

# Real Assets Investments Summary (continued)

as of December 31, 2012 - (Unaudited)

Investment	Vintage Year	Asset Type	Investment Structure	Fair Value (\$ millions)
Blackstone Real Estate Partners V	2006	Diversified	Limited Partnership	\$59.6
Blackstone Real Estate Partners VI	2007	Diversified	Limited Partnership	91.1
Blackstone Real Estate Partners VII	2011	Diversified	Limited Partnership	26.9
12. Clerestory Small Cap Fund I	2007	Diversified	Limited Partnership	11.4
13. Colony Investors VIII	2007	Diversified	Limited Partnership	7.5
14. Fillmore East Fund	2005	Debt	Limited Partnership	10.4
Fillmore West Fund	2008	Debt	Limited Partnership	20.4
15. Goldman Sachs Whitehall V & VI	1994	Diversified	Limited Partnership	0.2
Goldman Sachs Whitehall VII & VIII	1996	Diversified	Limited Partnership	1.1
16. Grosvenor Residential Investment Partners I	2007	Residential	Limited Partnership	16.2
17. Hawkeye Scout Fund I	2006	Diversified	Limited Partnership	70.5
18. LEM Real Estate High-Yield Debt Fund III	2012	Debt	Limited Partnership	-0.4
19. Lubert Adler Fund II	1998	Diversified	Limited Partnership	0.0
Lubert Adler Fund III	2000	Diversified	Limited Partnership	1.1
Lubert Adler Fund IV	2004	Diversified	Limited Partnership	5.0
Lubert Adler Fund V	2006	Diversified	Limited Partnership	9.3
Lubert Adler Fund VI	2008	Diversified	Limited Partnership	9.0
Lubert Adler Fund VI-A	2010	Diversified	Limited Partnership	2.3
20. OCM Real Estate Opp Fund A	1996	Diversified	Limited Partnership	1.8
OCM Real Estate Opp Fund II	1998	Diversified	Limited Partnership	0.7
OCM Real Estate Opp Fund III	2003	Diversified	Limited Partnership	4.2
21. Oxford GSA Fund	2006	Diversified	Limited Partnership	10.7
22. Prudential Latin America Residential Fund III	2007	Residential	Limited Partnership	27.3
Prudential Latin America Retail Fund I	2006	Retail	Limited Partnership	27.5
Prudential Senior Housing Fund III	2006	Senior housing	Limited Partnership	33.5
Prudential Senior Housing Fund IV	2011	Senior housing	Limited Partnership	4.4
23. Rockpoint Finance Fund I	2006	Diversified	Limited Partnership	1.1
Rockpoint Real Estate Fund I	2004	Diversified	Limited Partnership	2.0
Rockpoint Real Estate Fund II	2005	Diversified	Limited Partnership	12.0
Rockpoint Real Estate Fund III	2007	Diversified	Limited Partnership	38.8
24. Starwood Fund IV	1997	Diversified	Limited Partnership	0.2
Starwood Fund V	1999	Diversified	Limited Partnership	0.2
Starwood Fund VI	2001	Diversified	Limited Partnership	17.0
Starwood Fund VII	2005	Diversified	Limited Partnership	25.0
Starwood Fund VIII	2007	Diversified	Limited Partnership	53.1
25. Westbrook Fund II	1997	Diversified	Limited Partnership	0.1
Westbrook Fund III	1998	Diversified	Limited Partnership	2.4
Westbrook Fund IV	2000	Diversified	Limited Partnership	3.3
Westbrook Fund V	2004	Diversified	Limited Partnership	1.3
Westbrook Fund VI	2005	Diversified	Limited Partnership	9.8

# Real Assets Investments Summary (continued)

as of December 31, 2012 - (Unaudited)

Investment	Vintage Year	Asset Type	Investment Structure	Fair Value (\$ millions)
Westbrook Fund VII	2006	Diversified	Limited Partnership	\$39.3
Westbrook Fund VIII	2009	Diversified	Limited Partnership	47.8
<b>Total Non-Core Real Estate (09/30/12)</b>				<b>787.8</b>
Fourth Quarter Net Cash Flow Adjustment				-22.1
<b>Total Non-Core Real Estate (12/31/12)</b>				<b>765.7</b>
<b>Core Real Estate<sup>1/</sup></b>				
26. Fidelity Real Estate Opportunistic Income Fund	2007	Debt	Limited Partnership	48.5
27. Forest I.M.A.	1992	Timber	Separate Account	192.5
28. Heitman America Real Estate Trust	2007	Diversified	Limited Partnership	118.0
Heitman I.M.A.	1988	Diversified	Separate Account	91.2
29. LaSalle I.M.A.	1994	Diversified	Separate Account	268.3
30. Lowe I.M.A.	1994	Diversified	Separate Account	362.5
Lowe GTO	2012	Diversified	Separate Account	364.2
31. Sentinel Real Estate Fund	1986	Residential	Open-Ended Fund	64.1
32. UBS Trumbull Property Fund	1988	Diversified	Open-Ended Fund	79.7
UBS Trumbull Property Income Fund	1988	Diversified	Open-Ended Fund	74.4
<b>Total Core Real Estate (09/30/12)</b>				<b>1,663.4</b>
Fourth Quarter Net Cash Flow Adjustment				13.9
<b>Total Core Real Estate (12/31/12)</b>				<b>1,677.3</b>
<b>REITs<sup>2/</sup></b>				
33. CBRE Clarion Real Estate Securities	1996	REITs	Separate Account	314.7
34. Urdang Real Estate Securities	2002	REITs	Separate Account	68.0
<b>Total REITs</b>				<b>382.7</b>
<b>Commodities &amp; Infrastructure<sup>2/</sup></b>				
35. BAAM Commodities	2007	Commodities	Open-Ended Fund	569.1
36. Wellington DIH	2004	Commodities	Open-Ended Fund	487.6
<b>Total Commodities &amp; Infrastructure</b>				<b>1,056.7</b>
<b>Total Real Assets</b>				<b>\$4,115.3</b>

Numbers may not add due to rounding.

<sup>1/</sup>Fair values as of 9/30/12. They are lagged by one quarter due to the timing of the receipt of private market valuations and information.

<sup>2/</sup>Market exposure as of 12/31/12. Includes securities and cash which the manager had available for investments.

# Diversifying Assets Investments Summary

as of December 31, 2012 - (Unaudited)

## Asset Class Description

Diversifying Assets (DA) replaces SERS' Absolute Return Strategies (ARS) program, which included seven fund-of-hedge funds structured with a low-risk, low-return benchmark of LIBOR plus 300 basis points (3-4% annual total return). These funds were structured to serve as collateral for equity exposure derivatives to implement a "portable alpha" strategy. Extreme volatility in 2008-2009 prompted SERS to wind down its portable alpha program, leaving legacy assets in strategies with return objectives materially below the Fund's target rate of return.

To initiate rebalancing the former ARS return targets and liquidity profiles, the Board approved mandates with Tiger Management and Entrust Capital in 2011. Transitioning the remaining assets in ARS mandates into the DA program will bring the asset class to approximately 9% of Fund assets. The DA long-term target allocation in this plan is 12%.

The assets that comprise the DA portfolio include:

- **Fund-of-One** mandates with SERS as sole limited partner, with discretion given to General Partners to build customized programs in which SERS benefits from greater transparency, increased oversight, and better liquidity; and,
- **Fund-of-Hedge Funds** which include customized separate accounts and commingled funds that invests in hedge funds.

## Role in the SERS Fund

DA seeks to generate a return equal to or greater than the Fund's total return target with lower volatility than that of public equities. DA targets a liquidity profile between public equity markets and private equity buyouts, with a three-year investment horizon. The portfolio will provide significant Fund diversification due to the low correlation of the underlying strategies to public capital markets. Diversification is achieved through long/short equity, global macro, managed futures, long/short credit, and event-driven strategies – all with long-term histories of attractive risk-adjusted returns.

## Program Objectives

The 2012-2013 objectives of the DA program are to:

- produce annualized total returns of 8-12%, net of fees, with volatility (standard deviation of returns) below that of public equities;
- provide competitive total returns in bull markets and preserve capital in bear markets; and,
- increase Fund diversification.

## Asset Class Benchmarks

Performance of the DA program will be measured and evaluated over a five to seven-year period based on the Diversifying Assets Custom Benchmark.

# Diversifying Assets Investments Summary (continued)

as of December 31, 2012 - (Unaudited)

## Diversifying Assets

Manager	Investment Style	Market Exposure as of 12/31/12* (\$ millions)
<b>Absolute Return</b>		
1. Arden	Fund-of-Hedge Fund	\$117.3
2. BAAM - Stable Alpha	Fund-of-Hedge Fund	271.3
3. Mesirow Financial	Fund-of-Hedge Fund	114.2
4. Morgan Stanley Alternative Investment Partners	Fund-of-Hedge Fund	34.5
5. PAAMCO	Fund-of-Hedge Fund	51.8
6. Robeco Investment	Fund-of-Hedge Fund	1.1
7. Rock Creek	Fund-of-Hedge Fund	88.9
<b>Total Absolute Return Strategies</b>		<b>679.0</b>
<b>Hedged Strategies</b>		
BAAM Keystone	Fund-of-One	780.0
8. Entrust Keystone	Fund-of-One	260.0
9. Tiger Keystone	Fund-of-One	250.2
<b>Total Hedged Strategies</b>		<b>1,290.2</b>
<b>Total Diversifying Assets</b>		<b>\$1,969.2</b>

\*Includes securities and cash which the manager had available for investment. Numbers may not add due to rounding.

# Fixed Income Investments Summary

as of December 31, 2012 - (Unaudited)

## Asset Class Description

Fixed Income includes the Fund's investments in publicly-traded debt obligations of sovereign, quasi-sovereign, and corporate entities. Fixed Income generates income from the periodic payment of interest as well as the eventual repayment of principal at maturity. Debt obligations are contractual in nature and are senior to equity securities. The legal protection afforded to debt and the shorter duration of debt compared to equities result in lower volatility (i.e., investment risk) than equities.

## Role in the SERS Fund

Historically, the SERS' Fixed Income portfolio was managed for excess return. Changing financial and capital market conditions, threats from deflation and inflation, and increasing liquidity requirements of the Fund necessitate change in the role and strategy of the program.

Going forward, Fixed Income will be structured to generate current income to pay benefits, provide liquidity sufficient to preserve capital and satisfy liabilities, and protect the Fund against inflation and deflation. Secondly, when market conditions are favorable, the program will seek to enhance the total return of the Fund.

## Program Objectives

The 2012-2013 objectives of the Fixed Income allocation are to:

- provide income and liquidity with a relatively low risk;
- protect the Fund against inflation and deflation; and,
- contribute excess total return to the Fund when market conditions permit.

## Asset Class Benchmarks

Fixed Income performance will be evaluated over a three to five-year period related to the following benchmarks:

- Fixed Income – Barclay's Capital U.S. Aggregate Bond Index
- Liquidity Reserve – Barclay's Capital U.S. Government/Credit 1-3 Year Index\*

*\*Since 1-3 year credit managers were not hired as of December 31, 2012, SERS is using a three month U.S. T-Bills Index to benchmark cash management.*

# Fixed Income Investments Summary (continued)

as of December 31, 2012 - (Unaudited)

## SERS Fixed Income Investments

Manager	Investment Style	Market Exposure as of 12/31/12* (\$ millions)
<b>Core Plus</b>		
1. Berwind - PA Capital Fund	PA Capital Fund (liquidating)	\$2.7
2. Brandywine Global	Global Core Fixed	180.6
3. Oaktree Capital Management	Mezzanine Fund (liquidating)	0.2
4. PIMCO EMD	Emerging Market Debt (liquidating)	1.0
5. Pyramis Global Advisors	Commercial Mortgage-Backed Securities	241.7
6. SEI Structured Credit Fund	High Yield Bank Loans	181.9
7. Stone Harbor	Emerging Market Debt	152.1
Stone Harbor	Global High Yield	156.0
8. WaterfallAsset Management	Asset-Backed Securities	138.9
9. W.R. Huff	High Yield (liquidating)	16.8
<b>Total Core Plus Fixed Income</b>		<b>1,071.8</b>
<b>Core</b>		
10. BNY Mellon Cash Investment Strategies	Barclays Agreggate	673.3
PIMCO Core	Barclays Agreggate ex. Treasuries	249.3
11. Taplin, Canida & Habacht (TCH)	US Credit	181.0
<b>Total Core Fixed Income</b>		<b>1,103.6</b>
<b>Treasury Inflation Protected Securities (TIPS)</b>		
12. Brown Brothers Harriman	US TIPS	213.4
13. New Century Advisors	Global TIPS	106.8
14. NISA Investment Advisors	US TIPS	484.0
PIMCO TIPS	Global TIPS (liquidating)	3.1
<b>Total Treasury Inflation Protected Securities (TIPS)</b>		<b>807.2</b>
<b>Treasuries</b>		
PIMCO US Treasuries	Domestic Treasuries	257.3
15. Wellington US Treasuries	Domestic Treasuries	256.3
<b>Total Treasuries</b>		<b>513.6</b>
<b>Transition Assets</b>		
16. Northern Trust Fixed Income	Transition Management	394.0
<b>Total Transition Assets</b>		<b>394.0</b>
<b>Total Fixed Income Investments</b>		<b>\$3,890.2</b>

Numbers may not add due to rounding.

\*Includes securities and cash which the manager had available for investments.



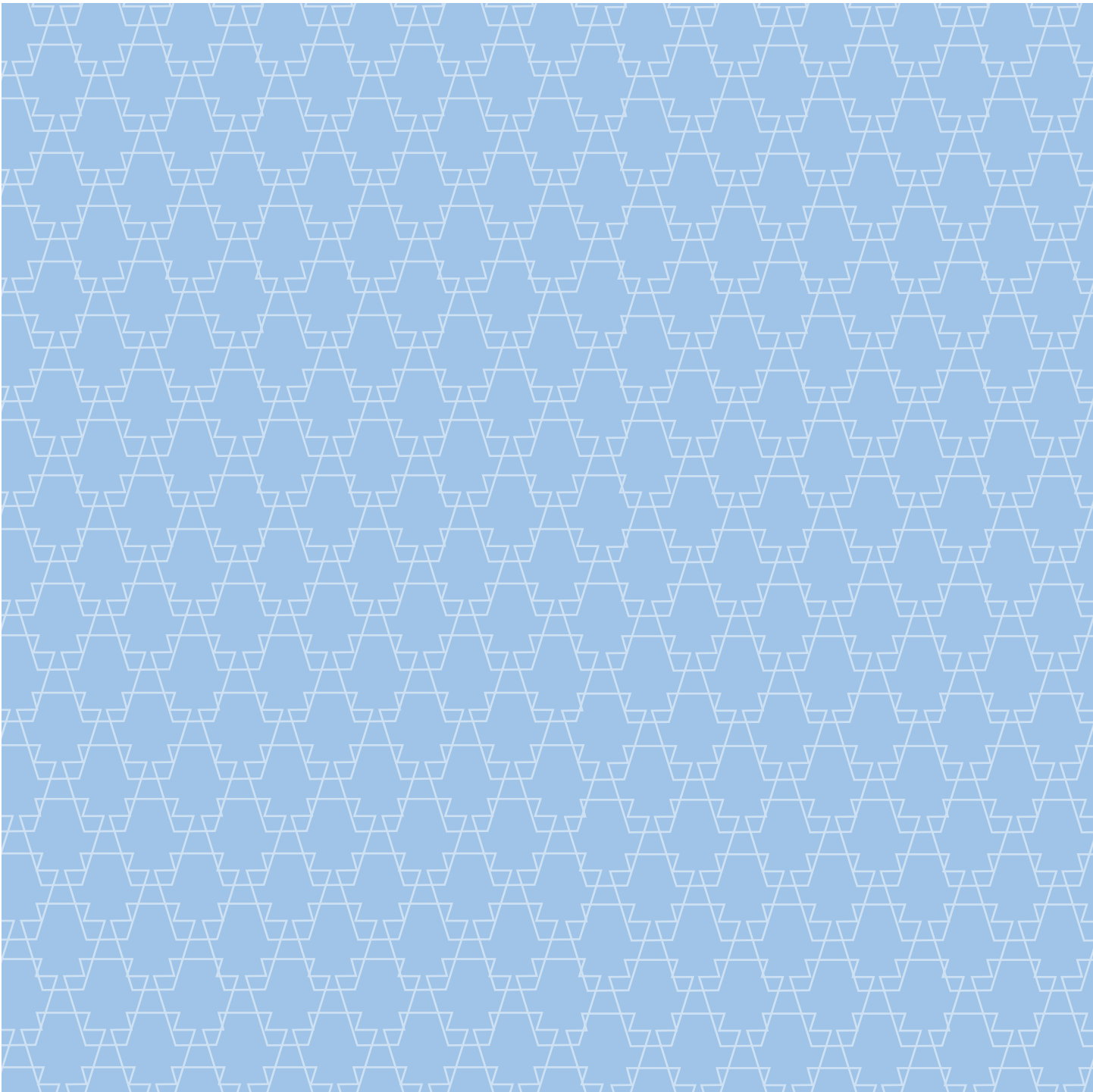
# Fixed Income Investments Summary (continued)

as of December 31, 2012 - (Unaudited)

## SERS Liquidity Reserve\*

Manager	Investment Style	Market Exposure as of 12/31/12 (\$ millions)
<b>Cash</b>		
1. PA State Treasury (STIF)	Cash	\$603.7
PA Treasury Overnight Cash	Cash	6.9
<b>Total Liquidity Reserve Investments</b>		<b>\$610.6</b>

*\*The SERS Liquidity Reserve will be jointly managed by SERS Fixed Income and Investment Operations.*



# Pennsylvania Investments Summary

as of December 31, 2012 - (Unaudited)

The Board, employees of SERS and agents of the Board stand in a fiduciary relationship to the members and beneficiaries of the System regarding the investments and disbursements of the Fund. Subject to "prudent investor" investment responsibilities 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 was last revised, effective April 2009, to reflect and incorporate subsequent legislative and policy changes governing investments. Where investment characteristics including yield, risk and liquidity are equivalent, the Board's policy favors investments that have a positive impact on the economy of Pennsylvania.

The most significant impact the Fund can have on the state's economy is to manage an overall program that achieves a fully funded status and lowers the employer contributions to the Fund below the normal cost. The reduction of such contributions may then be used by the legislature for purposes it deems most important to Pennsylvania citizens and taxpayers, such as tax reduction, economic development or other priorities. Nevertheless, the Fund also seeks to invest in state-based companies and other state entities when investment characteristics are equivalent.

**Fair Value of Pennsylvania Investments as December 31, 2012:** SERS' assets had an unaudited fair value in Pennsylvania investments of approximately \$1.0 billion, 4.0% of the SERS Fund.

## SERS Pennsylvania Investments By Asset Class (\$ millions)

Asset Class	Total PA Fair Value
Global Public Equity	\$563.1
Fixed Income	23.3
Real Assets	249.1
Alternative Investments	166.6
<b>Total Pennsylvania Investments</b>	<b>\$1,002.1</b>

SERS investment portfolios have historically held investments in Pennsylvania firms, as some large national firms are headquartered in Pennsylvania, including Comcast Corporation (Philadelphia-Communications), PNC Financial Services (Pittsburgh-Financial), Air Products & Chemicals, Inc. (Allentown-Basic Materials), H. J. Heinz Company (Pittsburgh-Consumer), and PPG Industries Inc. (Pittsburgh-Basic Materials). In addition, SERS has invested in portfolios that are designed to give emphasis to investments in Pennsylvania while meeting the fiduciary standards mentioned previously.

## Stocks

SERS' Pennsylvania stock universe is comprised of 388 publicly-traded corporations which: 1) name their headquarters as Pennsylvania and have Pennsylvania employees or operations; or 2) have Pennsylvania-based employment exceeding 25% of total corporate employment. The following are some of the top performing Pennsylvania stocks for the 2012 calendar year.

# Pennsylvania Investments Summary (continued)

## Top-Performing Pennsylvania Stocks

Company	Location	Return for 2012
<b>Bon-Ton Stores Inc</b> The Bon-Ton Stores, Inc. sells moderately priced, brand name fashions and accessories for men, women, and children. The company also sells cosmetics, jewelry, china, housewares, and other items through its chain department stores. Bon-Ton operates in secondary markets in Pennsylvania, Maryland, New York, Massachusetts, West Virginia, and New Jersey.	York	260%
<b>Radian Group Inc</b> Radian Group Inc. provides financial guarantee insurance. The company's products and services enable homebuyers to purchase homes more quickly and with smaller down payments, protect lenders against loan default, and lower the costs of mortgage origination and servicing. Radian also provides insurance and reinsurance to investors in corporate, municipal, and asset-backed securities.	Philadelphia	161%
<b>Dorman Products Inc</b> Dorman Products, Inc. supplies automotive products and home hardware. The company supplies its products to the automotive aftermarket and mass merchandise markets.	Colmar	91%
<b>Codorus Valley Bancorp Inc</b> Codorus Valley Bancorp, Inc. is the holding company for PeoplesBank. The bank offers a full range of commercial and consumer banking services through a network of offices in York County, Pennsylvania. The company also offers mortgage banking, investment, insurance, trust, and real estate settlement services.	York	90%
<b>NuPathe Inc</b> NuPathe Inc. develops pharmaceutical products used for the treatment and management of neurological and psychiatric diseases. The company offers various medicines for migraines, Parkinson's, schizophrenia, and other cognitive disorders.	Conshohocken	83%
<b>MAM Software Group Inc</b> MAM Software Group, Inc. develops and markets computer software. The company markets business management software for the automobile parts aftermarket.	Barnsley	76%
<b>Penn Real Estate Invest Trust</b> Pennsylvania Real Estate Investment Trust is a self-administered real estate investment trust involved in acquiring, managing and holding real estate interests for current yield and long-term appreciation. The company's real estate holdings consist of shopping malls, strip and power centers, and industrial properties in the mid-Atlantic and southeastern United States.	Philadelphia	68%
<b>Luzerne National Bank Corp</b> Luzerne National Bank Corporation is a bank holding company owning or controlling one or more banks.	Luzerne	65%
<b>PPG Industries Inc</b> PPG Industries, Inc. supplies products for the manufacturing, construction, automotive, chemical processing, and other industries worldwide. The company makes protective and decorative coatings, flat glass, fabricated glass products, continuous-strand fiber glass products, and industrial and specialty chemicals.	Pittsburgh	62%
<b>Toll Brothers Inc</b> Toll Brothers, Inc. builds luxury homes, serving both move-up and empty nester buyers in several regions of the United States. The company builds customized single and attached homes, primarily on land that it develops and improves. Toll Brothers also operates its own architectural, engineering, mortgage, title, security, landscape, insurance brokerage, and manufacturing operations.	Horsham	58%

# Pennsylvania Investments Summary (continued)

Emerald Advisors of Lancaster and Mellon Capital Management Corporation actively manage portfolios principally derived from the mid/small cap stocks in SERS' Pennsylvania stock universe. These two portfolios, plus the Pennsylvania stocks held in SERS' other stock portfolios, provided a total of \$563.1 million invested in Pennsylvania stocks.

## Fixed Income

SERS had approximately \$23.3 million invested as of December 31, 2012, in corporate securities issued by Pennsylvania-based companies. These securities are held in SERS' various externally managed bond portfolios.

In 1998, the SERS Board approved the funding for the Pennsylvania Capital Fund with a \$50 million allocation committed to the program. The program commenced in March 1999 managed by Berwind Financial Group (Berwind) and PNC Equity Management (PNC). Each advisor was awarded commitments of \$25 million to be invested over four years. Both entities matched SERS' investment. The program provided debt financing to support the expansion and growth of Pennsylvania small business. The Fund's objective was to lend to established, profitable companies in good financial condition with annual revenues ranging from \$10-\$100 million. The majority of the Fund's investments had a maturity of between five and ten years. Loan amounts usually ranged from \$2 million to \$15 million. As of December 31, 2012, SERS' portion of Berwind investments totaled \$2.7 million while the PNC investments had matured and all capital was returned to SERS. Nearly all of Berwind's investments have also matured and capital distributed back to SERS. The final security is expected to be going to market in the Spring of 2013.

To date, the fund also has PA exposure with various other asset managers. The break out is listed below:

## Cash

SERS is one of the largest investors in the Pennsylvania State Treasury Department's Short-Term Investment Pool.

Manager	Market Value (\$ millions)	% of Total PA Market Value
BNY Mellon Cash Investment Strategies	\$6.2	0.6%
PIMCO Core	3.5	0.3
Pyramis Global Advisors	6.5	0.6
Taplin Canida Habacht	3.9	0.4
Stone Harbor High Yield	3.2	0.3

## Real Assets

In 1987, SERS began investing directly in the Pennsylvania commercial real estate market and subsequently established two separate account real estate portfolios managed by Heitman Capital Management and Grosvenor Investment Management, formerly Legg Mason Real Estate Services, with a Pennsylvania focus. The Heitman separate account originally had a requirement to invest 50%, on a best efforts basis, of its initial allocation within the Commonwealth while the Grosvenor account is focused primarily on investing within the state.

As of December 31, 2012, the SERS real estate portfolio contained 49 Pennsylvania investments totaling 6.2 million square feet of office, retail, and warehouse space, and 4,829 apartment, hotel and senior housing units. The gross fair value of the Pennsylvania real estate portfolio investments totaled \$1.2 billion, of which SERS' ownership share was \$249.1 million.

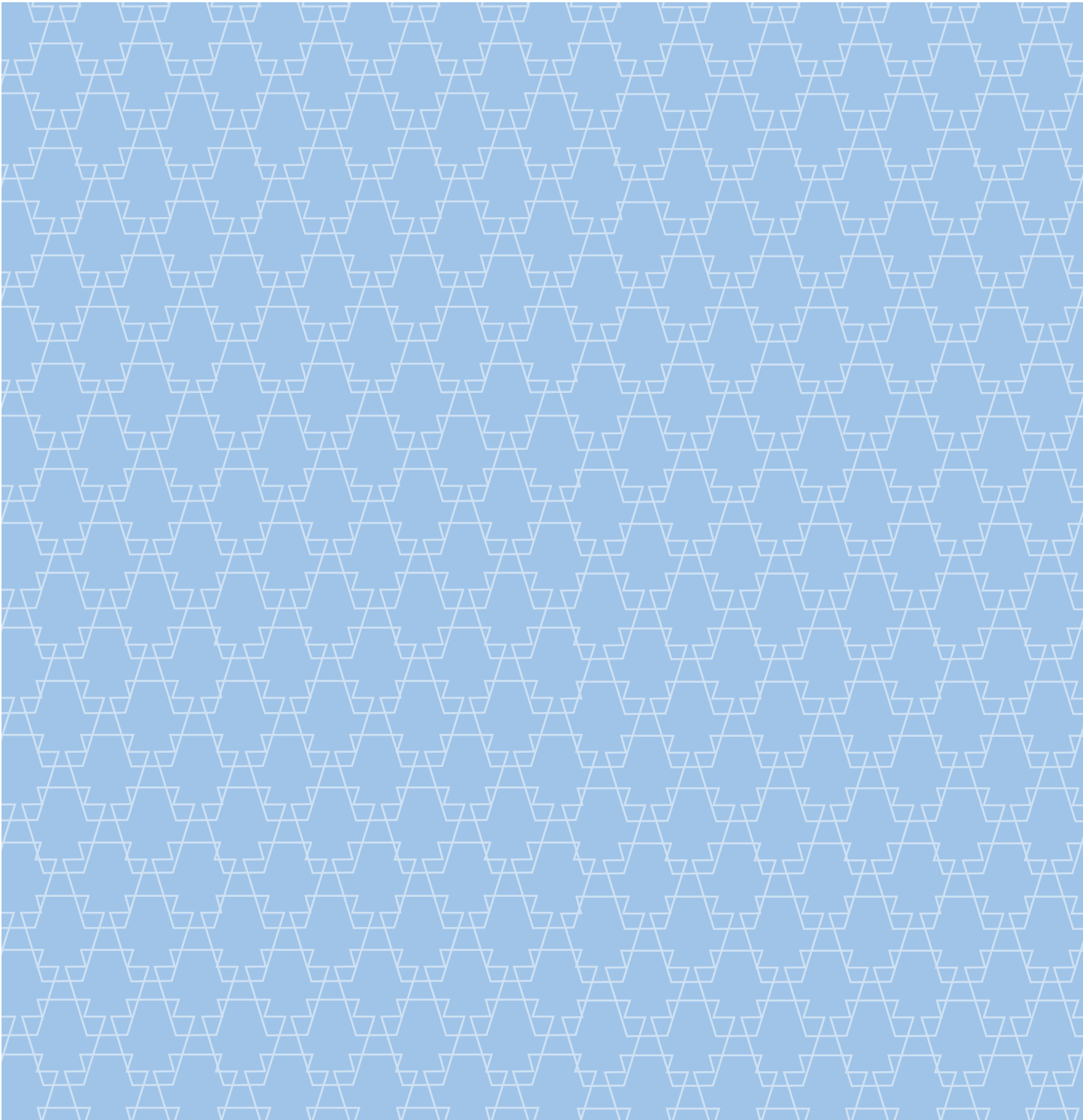
# Pennsylvania Investments Summary (continued)

## **Alternative Investments**

SERS' alternative investment program dates back to 1985. Initially, the program targeted a 1% allocation to venture capital with a focus to invest with managers located in Pennsylvania or with managers whom had a Pennsylvania investment mandate. Over its life, the program has grown to include national and international based private equity and venture capital managers. Since inception, SERS' Alternative Investment Private Market Investment program has made commitments of over \$1.1 billion to 57 limited partnerships based in Pennsylvania. In addition, the number of non-Pennsylvania based managers investing in companies that impact the state comprises a meaningful portion of the program.

As of December 31, 2012, SERS' active Alternative Investment managers held investments in 103 Pennsylvania-based companies. SERS pro-rata investment value in these companies is approximately \$167 million. This equates to 2.7% of the Alternative Investment program fair value and does not include investments headquartered outside of Pennsylvania that may have impactful operations within the state.

Although the Board's fiduciary duty is to SERS' members and beneficiaries, investments in Pennsylvania provide an ancillary and subordinate benefit to the state's economy. The investment policy acknowledges that such benefit, derived from investments in Pennsylvania-based companies, or firms employing Pennsylvanians, should be considered after other primary fiduciary investment characteristics are satisfied.



# Women/Minority Investment Advisor and Broker Report

as of December 31, 2012

## Investment Advisors

The following five women or minority-owned firms were under contract with SERS to provide investment advisory services as of December 31, 2012.

Firm	Status	SERS Assets Under Management
Fairview Capital I & II	Women/Minority Owned	\$20.0 million commitment; \$19.9 million funded
Hawkeye Partners	Women-Owned	\$75.0 million committed; \$75.0 million funded
New Century Advisors	Women-Owned	\$106.8 million fair value
Rock Creek (Penn Quarter, L.P.)	Women/Minority Owned	\$88.9 million fair value
Taplin Canida & Habacht, Inc.	Women/Minority Owned	\$181.0 million fair value

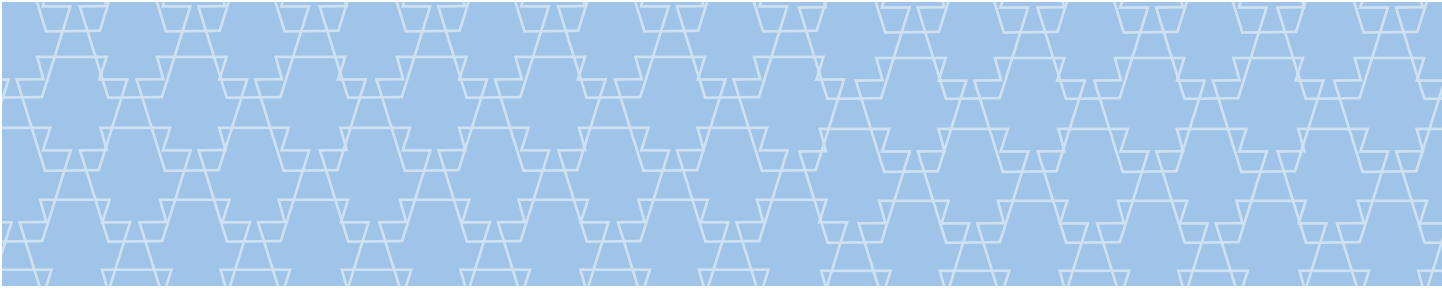
## Brokers and Brokerage Commissions

SERS's external investment advisors utilized the following minority-owned brokerage firms during calendar year 2012.

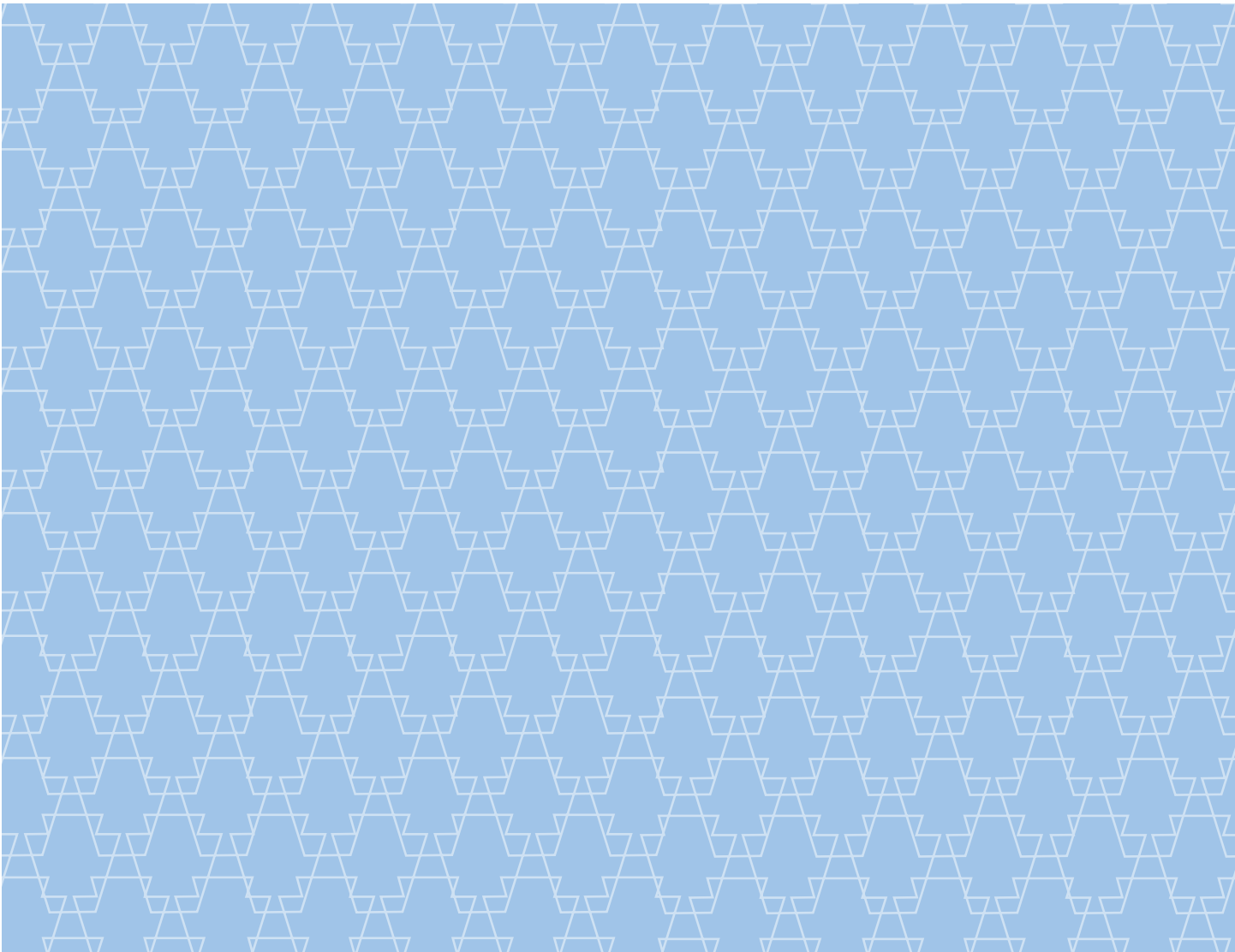
Minority commissions totaled \$169,596 for the year. Of this amount, international equity managers had \$52,199 of commissions credited to minority brokers. The SERS Board has a policy of targeting 5%-10% of U.S. equity commissions to be done with minority brokers. It is estimated that this year SERS U.S. equity managers directed approximately 7% of their trades through minority brokers. In addition, although not included in the Board mandate, other SERS advisors are encouraged to trade through minority brokers. Last year, fixed income managers traded \$6.7 million of securities through minority brokers.

Firm	Commissions
C L King	\$18,822
Cabrera Capital Markets	16,839
Divine Capital Markets	2,105
East West	5,833
Greentree Brokerage	4,940
HongKong Shanghai Bancorp	2,535
Loop Capital Management	14,457
M Ramsey King	10,431
Mischler Financial Group	1,080
Seslia Securities	5,922
Sturdivant & Company	80,207
Telsey	5,297
Valdez & Moreno	1,128
<b>Total Minority Commissions</b>	<b>\$169,596</b>





## Deferred Compensation Program 12



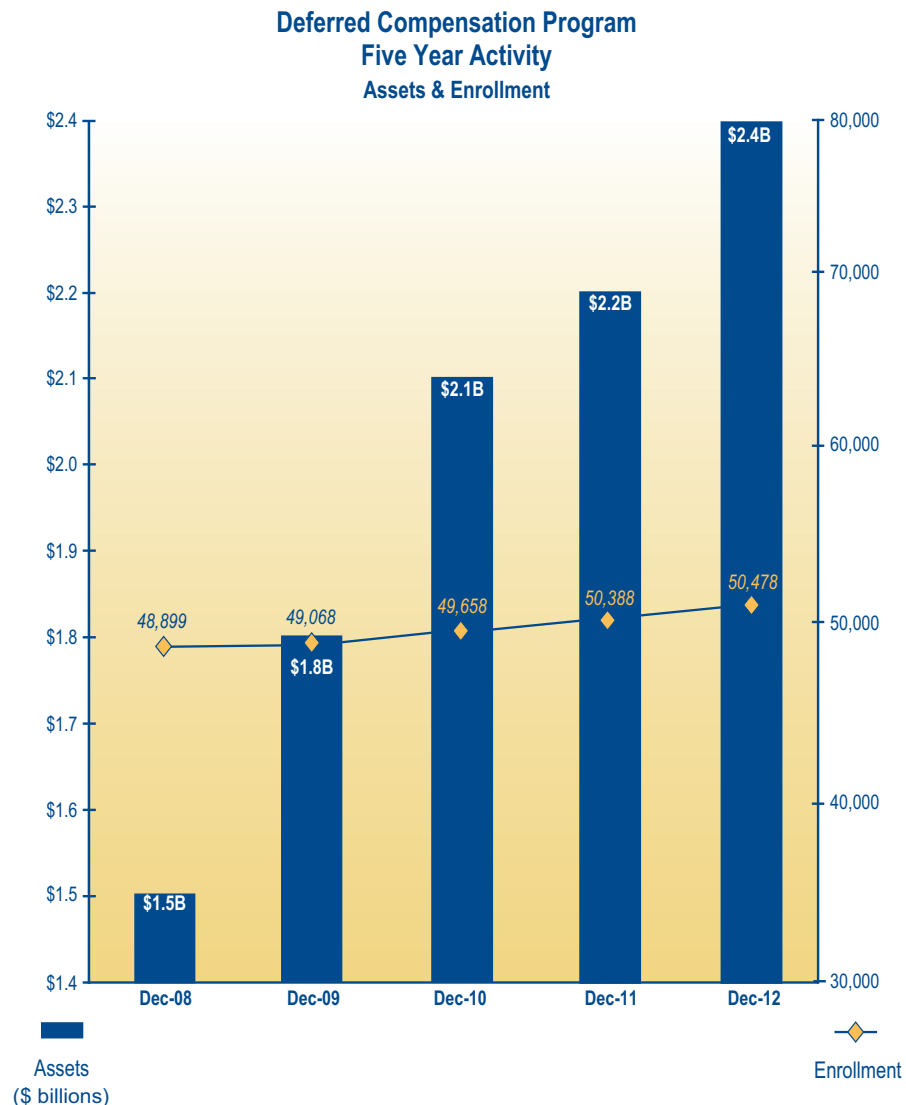
# Deferred Compensation Program

## Program History

Act 1987-81 assigned to the State Employees' Retirement Board (Board) the responsibility to establish and monitor a Deferred Compensation Program (Program) for Commonwealth officers and employees, through which participants may voluntarily build retirement savings by deferring a portion of salary to selected investment options. The Program is established as a trust and is administered in accordance with Internal Revenue Code Section 457(b). Through the Request for Proposal process, the Board selected Great-West Financial as Third Party Administrator (TPA) of the Program. The duties of the TPA are to maintain individual participant records, market the Program to employees, and counsel the members about the Program's benefits. The core investment options are selected by the Board and are independent of the TPA's functions.

## Growth of the Program

Over the past five years, the Program's assets have increased in value from \$1.5 billion to approximately \$2.4 billion. As of December 31, 2012, there were 31,665 active and 18,813 inactive participants in the Program. The amount of annual participant deferrals over the past five years has ranged from \$122 million to \$136 million. Benefit payments to participants increased over that same time span from \$48 million in 2008 to \$62 million in 2012. The chart below depicts the Program's asset and participation levels over the past five years.



# Deferred Compensation Program (continued)

## Program Highlights

The TPA provides participant assistance via individual and/or group counseling sessions with the eligible employee, at the employee's work site. The TPA has a local walk-in office in the Harrisburg downtown area. A toll free telephone service with counselors is also available to offer personal assistance. A telephone voice response unit can be accessed at anytime to allow the participant to check on their account balance, transfer funds among different investment options or inquire about other Program features. The participants may also access the Program's website to view their most recent investment position, to make future allocation changes, to transfer among investment options, to change deferral amounts and to update beneficiary information. Educational videos on financial, investment, and retirement planning are also available to help participants in their investment and retirement decisions. In January 2009, the Program began to offer managed accounts to its participants. Managed accounts are personalized investment portfolios put together from among the Program's investment options for participants who want a professional to do the investing for them. In 2012, the Program began accepting deferrals into designated Roth accounts, which have tax advantages that are different than traditional tax-deferred savings. Roth contributors pay federal income tax on their deferrals now; qualified distributions of principal and earnings will be tax-free in retirement. Participants may use a combination of before-tax and Roth salary deferrals to maximize their use of the Program's benefits.

