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## ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION

### **Annual Report**

for the fiscal year ended June 30, 2015

St. Paul Teachers' Retirement Fund Association 1619 Dayton Avenue, Room 309 Saint Paul, Minnesota 55104-6276

Phone 651-642-2550 Fax 651-642-2553 www.sptrfa.org

Jill E. Schurtz Executive Director

**Christine MacDonald** Deputy Director

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# Mission

Provide our members and their beneficiaries with retirement, survivor, and disability benefits as specified in law and the Association Articles and Bylaws.

Assist our members in planning a secure retirement by providing friendly, high quality, consumer oriented service, pre-retirement education and information in a professional and cost effective manner.

Invest the assets of the fund to provide the optimum return while preserving principal by controlling portfolio risk.

## **SPTRFA Board of Trustees**

John R. Kunz, Jr.	President
Mike McCollor	Vice President
Eugene R. Waschbusch	Secretary-Treasurer
Jean O'Connell	Ex-Officio Trustee
W. Matt Bogenschultz	Trustee
Feryle W. Borgeson	Trustee
Lori Borgeson	Trustee
Karen A. Odegard	Trustee
James Paddock	Trustee
Stephanie Pignato	Trustee

### SPTRFA Staff

Jill E. Schurtz	Executive Director
Christine MacDonald	Deputy Director
Nancy Langer	Member Services and Outreach
Susan Nystrom	Finance and Member Services
Rachel Pastick	Communications and Member Services
Janet Williams	<b>Operations and Member Services</b>
Tamera Zielinski	Administrative Assistant

#### **TRUSTEES & OFFICERS**

W. Matthew Bogenschultz Karen Odegard Feryle W. Borgeson Lori Borgeson Jean O'Connell

James Paddock Stephanie Pignato John R. Kunz, Jr. ..... President Mike McCollor ..... Vice President Eugene R. Waschbusch ...... Secretary-Treasurer Jill E. Schurtz..... Executive Director

1619 Dayton Avenue, Room 309 Saint Paul, MN 55104-6206

### Letter of Transmittal

Members of the Association:

The trustees and staff of the St. Paul Teachers' Retirement Fund Association (SPTRFA) present the Annual Financial Report for the fiscal year ended June 30, 2015, in accordance with the provisions of Minnesota Statutes § 356.20.

This report is intended to provide readers with sufficient information to make informed assessments about the organization's financial condition, fiscal activities, actuarial status, investment performance, and compliance with laws, regulations, bylaws and policies.

This is the complete Annual Report of the Association. This report is also available on the Fund's website at: www.sptrfa.org, or by request from the SPTRFA office.

Major sections included in this report and their content are as follows:

#### Introduction

Mission Statement, Board of Trustees, professional service relationships, and organizational structure.

#### Benefits

Summary information regarding Plan benefit options, calculation methods, and a history of annual retirements

#### Investments

Fund investment returns, security holdings, and investment advisors under contract with the Association.

#### Actuarial Valuation

Actuary's Certification Letter and various actuarial valuation sections that assess the Plan's long-term funded status and adequacy of revenues and describe relevant actuarial methods and assumptions.

#### • Appendix A – State Auditor's Report

SPTRFA received an "unmodified opinion" – the highest opinion level possible. The report contains management's discussion and analysis of the financial performance of the Fund and is available on our website at: www.sptrfa.org, or directly from the Minnesota Office of the State Auditor at: www.osa.state.mn.us

The audit report was prepared in conformity with standards established by the Governmental Accounting and Standards Board. Internal controls are intended to provide the highest level of assurance, within reasonable constraints on cost, that the funds of the Association are secure and transactions undertaken are at all times consistent with law and general norms of prudent management of the organization.

The SPTRFA Board and staff are responsible for the safekeeping of the Association's assets, the prudent investment of those assets, and for ensuring that benefits are calculated properly and paid timely. Administrative costs are budgeted at a level sufficient to meet service needs of the members. We strive to be service providers of the first order and our administrative costs remain extremely efficient.

The Board and staff of the SPTRFA serve as fiduciaries on behalf of our members and their survivors and beneficiaries. We manage the assets entrusted to our care in concert with the Prudent Person Standard in Minn. Stat. § 356A.04, subd. 2, and as specified under Minn. Stat. § 356A.06, subd. 7.

Fulfilling the SPTRFA's mission requires assistance from a number of valued consultants, advisors and regulators:

The Office of the State Auditor audits the financial statements of the SPTRFA.

**Gabriel Roeder Smith & Company**, Minneapolis, Minnesota, performs the actuarial valuation for the Association. Key portions of its valuation, reflecting our funding status and adequacy of contributions over a long-term funding horizon, are included.

**Oppenheimer Wolff & Donnelly LLP**, Minneapolis, Minnesota, serves as primary Legal Counsel to the Board and staff, providing advice, representation, and monitoring of ongoing legal and regulatory developments.

Asset Consulting Group, St Louis, MO, serves as consultant to the Board and staff for investment performance measurement and certain compliance services.

U.S. Bank Institutional Trust & Custody, provides Custody services to the Fund.

With over 106 years of service to our members, the SPTRFA Board and staff remain committed to administering the affairs of the Association with the highest degree of diligence and efficiency.

Respectfully submitted,



Egen A Waadhah

John R. Kunz, Jr.

Eugene R. Waschbusch

Jill E. Schurtz

### Independent Professional Service Providers During the Fiscal Year Ending June 30, 2015

**Actuary** Gabriel Roeder Smith & Company

**Auditor** Minnesota Office of the State Auditor

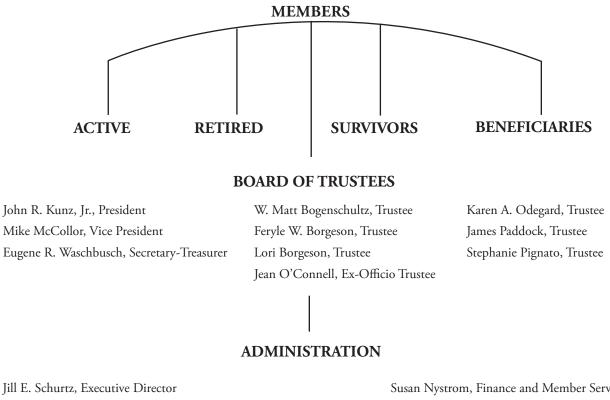
Investment Managers Advantus Capital Management Allianz Global Investors BlackRock Institutional Trust Co. Barrow, Hanley, Mewhinney & Strauss, LLC The Boston Company Asset Management, LLC Brandywine Global Investment Management, LLC Corvex Management, LP Dimensional Fund Advisors, Inc. Dune Real Estate Partners **EnTrust** Capital Franklin Park Guggenheim Partners Investment Management, LLC JPMorgan Investment Management, Inc. Morgan Stanley Investment Management, Inc. North Sky Private Equity Partners IV Parametric Portfolio Associates **RWI** Ventures I **RWI** Ventures II State Board of Investment TCW Asset Management Co. **Tortoise Capital Advisors** T. Rowe Price UBS Realty Investors, LLC U.S. Bank Venture Investment Advisors Wellington Management Company, LLP

Investment Consultant

Asset Consulting Group

Legal Counsel Oppenheimer Wolff & Donnelly LLP Rice, Michels & Walther, LLP

### **Organizational Chart**



Jill E. Schurtz, Executive Director Christine MacDonald, Deputy Director Nancy Langer, Member Services and Outreach Susan Nystrom, Finance and Member Services Rachel Pastick, Communications and Member Services Janet Williams, Operations and Member Services Tamera Zielinski, Administrative Assistant



Active Member Services Retired Member Services Records Management Member Counseling Benefit Payments & Reporting

#### OPERATIONS & FINANCE

Business Administration Accounting/Reporting Office Payroll & Benefits Budget Administration Investment Mgmt. & Reporting Publications Information Systems

#### PROFESSIONAL TECHNICAL SERVICES

Actuary

Gabriel Roeder Smith & Company Custodian U.S. Bank Investment Managers Legal Counsel Oppenheimer Wolff & Donnelly LLP Rice, Michels & Walther, LLP Medical Advisors Dr. Ronald Vessey M.D. Dr. David Johnson M.D. Performance Measurement Asset Consulting Group (ACG)

### GOVERNMENTAL RELATIONS

#### Minnesota State Auditor

Legislative Commission on Pensions & Retirement

Minnesota Department of Management and Budget

Minnesota Department of Revenue

Minnesota Campaign Finance & Public Disclosure Board

U.S. Department of the Treasury

# BENEFITS

## **Pre-Retirement Topics**

Membership	SPTRFA membership is mandatory upon employment in any position requiring a license issued by the MN Department of Education for employment with Saint Paul Public Schools (SPPS), St. Paul College (SPC) – if you were first employed prior to July 1, 1995, or St. Paul Charter Schools – from July 1, 1995 through June 30, 2002. Hereinafter collectively referred to as "Saint Paul Schools."
Allowable Retirement Service Credit	A full year of retirement service credit is earned after 170 days are worked during each fiscal year. Partial years are calculated based on the ratio of days worked to 170 days. No more than one year of retirement service credit is allowable during any fiscal year.
Definition of Salary	Minnesota Statutes Chapter 354A and the Association Articles and Bylaws define salary as the entire compensation upon which member contributions are required and made.
Refund of Contributions	Coordinated and Basic members who resign from St. Paul Schools may apply for a refund of employee contributions, plus applicable interest. Basic Plan members must be either under Age 55 or ineligible for a pension to receive a refund of contributions.
Repaying a Refund of Contributions	A member who received a refund may reinstate previous retirement service credit by repaying the amount refunded plus applicable interest. Such repayments may only be made after the member has accumulated at least two years of allowable retirement service credit since the last refund was taken.
Leaves of Absence	Subject to certain requirements, members may purchase retirement service credit for the following Saint Paul Schools approved leaves of absence: Sabbatical, Military, Parental, Mobility, Medical, Family Medical.
Service Payments	Members may repay refunds or purchase SPTRFA retirement service credit by using personal savings or by transferring money from their tax-sheltered retirement accounts, such as 403(b), 457, 401(k), IRAs, or from another plan qualified under 401(a).
Beneficiary	A beneficiary is the person or persons designated to receive a refund of employee contributions, plus applicable interest, upon the death of the member if no survivor or family benefit is payable. If no valid beneficiary designation form is on file for a member, a refund of contributions plus applicable interest will be paid to the member's estate.
Marriage Dissolution	Minnesota Statutes Chapter 518 covers marriage dissolutions and requires that SPTRFA receive a copy of the petition and summons, including a copy of the affidavit of service, before any information may be released. In the event that a court order requires a division of pension benefits, a judge signed copy of a decree or domestic relations order is required. All inquires are kept confidential. Any survivor benefit coverage ends at the dissolution of marriage.
Disability Benefit	Subject to certain requirements, a disability benefit is available to vested members who become totally and permanently disabled.

## **Retirement Topics**

Basic Plan Retirement Options		Basic Plan members receive a formula benefit payable for life. An automatic spousal survivor benefit is also provided. This survivor benefit coverage does not cause a reduction in the member's benefit, but does terminate at any dissolution of marriage.					
	dinated Plan ement ons	At the time of retirement, Coordinated Plan members select one of the five benefit annuity options below:					
C1	Member Life Only	Monthly benefit payable for life to the member, with nothing payable after the member's death.					
C2	Guaranteed Refund	Reduced monthly benefit payable for life to the member. In exchange for the member's benefit reduction, after the member's death, SPTRFA pays a refund to a designated beneficiary. The refund is equal to the difference between SPTRFA pre- retirement member contributions less cumulative SPTRFA post-retirement benefits paid to the member prior to death.					
C3	15-Year Certain	Reduced monthly benefit payable for life to the member. In exchange for the member's benefit reduction, SPTRFA continues monthly payments to a beneficiary if the member's death occurs within 15 years after retirement. Beneficiary payments end after the balance of the 15 years of SPTRFA benefit payments (member and beneficiary combined) is fulfilled.					
C4	100% Joint & Survivor	Reduced monthly benefit payable for life to the member. In exchange for the member's benefit reduction, after the member's death, the member's spouse receives the same monthly benefit for life. If the spouse predeceases the member, the member's benefit would bounceback to the full, unreduced benefit amount payable under the C1 option. Survivor benefit coverage ends at any dissolution of marriage.					
C5	50% Joint & Survivor	Reduced monthly benefit payable for life to the member. In exchange for the member's benefit reduction, after the member's death, the member's spouse receives 50% of the member's benefit as a monthly benefit for life. If the spouse predeceases the member, the member's benefit would bounceback to the full, unreduced benefit amount payable under the C1 option. Survivor benefit coverage ends at any dissolution of marriage.					

### **Post-Retirement Topics**

Post-Retirement SPPS Reemployment	If a retired member is reemployed by SPPS prior to Age 65, their 5 benefits will be reduced if the retired member earns more than \$4 in any calendar year. The following year's pension will be reduced three dollars in SPPS earnings over \$46,000, with the amount of to to SPTRFA. After age 65, retired members have no SPPS re-emp limitation. Retired members can work for any other employer with their SPTRFA pension benefits.	6,000 from SPPS by one dollar for every he reduction forfeited loyment earnings				
90 Day Period of Separation	Newly retired members must have a complete and continuous 90 day separation from Independent School District No. 625 employment in any form. Importantly, "employment" for this purpose includes "any service provided to ISD #625 directly, as an independent contractor, or as an employee of an independent contractor."					
Post-Retirement Adjustment	Post-retirement adjustments are determined annually under Minnesota statutes, which may be amended from time to time. Effective July 1, 2015, post-retirement adjustments are based on SPTRFA's funding ratio in each of the two most recent actuarial valuations, according to the following table:					
	Accrued Liability Funding Ratio (AVA)	Full COLA Rate				
		<u>(%)</u>				
	Less than 80 percent	1.0				
	Greater than or equal to 80 percent, but less than 90 percent	2.0				
	Greater than or equal to 90 percent	2.5				

The postretirement benefit increase applies to each eligible member on January 1 of each year. Members in retirement payment status for at least one full year will receive the full increase noted above. Members in retirement payment status after January 1st but on or before July 1st of the preceding year will receive one-half of the full increase.

### **Basic Plan - Summary of Tier Benefits**

Vested members of the Basic Plan are eligible to receive a lifetime monthly pension based on the member's Final Average Salary (FAS), Years of Service (YOS) and a Percentage Multiplier.

The following chart provides an overview of the Tier 1 and Tier 2 retirement benefits:

Normal	rmal Minimum		]		
Benefit	Benefit Age Service		<b>Computation of Annual Benefit</b>		
Tier 1					
Unreduced	Rule of 90				
	60 65	25 5	$\int FAS \times YOS \times 2.0\%$		
Reduced	55	5	Reduced for early retirement by 0.25% for each month a member's age is under 65.		
	55	25	Reduced for early retirement by 0.25% for each month a member's age is under 60.		
Tier 2					
Unreduced	65	5	FAS x YOS x 2.5%		
Reduced	55	5	Formula reduced for early retirement by the use of actuarial tables.		
Deferred Reti	rement				
	55	5	Annual Benefit (see above).		

Formula Key: FAS: Final Average Salary YOS: Years of Service 2.0% or 2.5%: Percentage Multiplier

#### **Coordinated Plan - Summary of Tier Benefits**

Vested members of the Coordinated Plan are eligible to receive a lifetime monthly pension based on the member's Final Average Salary (FAS), Years of Service (YOS) and a Percentage Multiplier. Members first hired after June 30, 1989 are only eligible for Tier 2 benefits.

The following chart provides an overview of the Tier 1 and Tier 2 retirement benefits effective as of July 1, 2015.

Normal Minimum		um					
Benefit	Age	Service	Computation of Annual Benefit				
Tier 1							
Unreduced	Rule of 90		(FAS x First 10 YOS x Multiplier*)				
	62	30	+				
	65	3	(FAS x YOS greater than 10 x Multiplier*)				
Reduced	55	3	Reduced for early retirement by 0.25% for each month a member's age is under 65.				
	Any Age	30	Reduced for early retirement by 0.25% for each month a member's age is under 62.				
			*Tier 1 Multipliers         First 10 YOS         Over 10 YOS           Service Prior to July 1, 2015         1.2%         1.7%           Service Effective July 1, 2015         1.4%         1.9%				
Tier 2							
Unreduced	If first employ	yed before	July 1, 1989:				
	65	3	FAS x YOS x Multiplier*				
	If first employ	byed on or after July 1, 1989:					
	65-66	3	FAS x YOS x Multiplier*				
Reduced	55	3	Reduced for early retirement by the use of actuarial tables.				
		*Tier	2 MultipliersService Prior to July 1, 20151.7%Service Effective July 1, 20151.9%				
Deferred Reti	rement						
	55	3	Annual Benefit (see above) with augmentation <sup>1</sup> .				
	Any Age	30					
	3% per year from o st hired prior to Ju		ation to January 1 after reaching Age 55, then 5% per year				
Augmented by	2.5% for all years i	f first hired or	n or after July 1, 2006.				
	for all members, re occuring after Jun		ire date, changed to 2% as of July 1, 2012 for the portion of				

## **Retirement History Record**

Fiscal Year Ending	Pensions Granted	Persons On Payroll	Benefits Paid (\$)	Fiscal Year Ending	Pensions Granted	Persons On Payroll	Benefits Paid (\$)
June 1910	15	13	\$ 4,860	December 1975	52	778	\$ 3,765,322
June 1931	8	125	69,024	December 1976	77	883	4,393,513
June 1932	8	130	72,961	December 1977	63	919	5,050,507
June 1933	2	126	74,190	December 1978	48	946	5,523,548
June 1934	6	127	74,120	December 1979	40	946	6,240,309
June 1935	9	131	74,001	December 1980	47	963	6,623,804
June 1936	14	135	75,864	December 1981	47	981	7,139,037
June 1937	19	151	80,747	December 1982	61	996	7,725,617
June 1938	17	160	89,709	December 1983	72	1,042	8,555,099
June 1939	11	161	93,184	December 1984	64	1,061	9,466,664
June 1939 to				January 1985 to			
December 1939	0	158	23,870	June 1985	59	1,103	5,324,727
December 1940	71	222	170,685	June 1986	66	1,134	11,267,144
December 1941	35	246	210,257	June 1987	117	1,191	12,478,180
December 1942	27	266	234,217	June 1988	70	1,210	14,690,455
December 1943	38	286	253,031	June 1989	67	1,236	15,506,957
December 1944	34	311	282,299	June 1990	67	1,270	17,382,410
December 1945	56	350	308,113	June 1991	80	1,309	18,811,677
December 1946	51	378	337,512	June 1992	83	1,357	20,509,335
December 1947	28	387	360,571	June 1993	120	1,426	22,763,806
December 1948	42	413	375,912	June 1994	92	1,469	25,044,494
December 1949	42	441	419,618	June 1995	113	1,539	26,792,534
December 1950	30	461	450,641	June 1996	119	1,595	29,446,215
December 1951	27	476	472,670	June 1997	179	1,720	32,056,967
December 1952	28	486	508,923	June 1998	129	1,789	37,852,099
December 1953	32	487	525,959	June 1999	114	1,861	41,724,751
December 1954	10	482	529,429	June 2000	144	1,964	47,121,179
December 1955	38	509	666,994	June 2001	130	2,050	53,851,893
December 1956	46	529	750,146	June 2002	127	2,136	58,738,724
December 1957	59	560	840.883	June 2003	126	2,248	63,357,052
December 1958	41	579	1,019,502	June 2004	141	2,361	67,941.921
December 1959	30	585	1,084,506	June 2005	192	2,505	72,448,201
December 1960	38	600	1,144,380	June 2006	146	2,624	78,420,222
December 1961	39	611	1,230,715	June 2007	138	2,744	82,809,201
December 1962	49	624	1,352,779	June 2008	122	2,851	88,273,233
December 1962	42	647	1,467,461	June 2009	114	2,933	92,137,480
December 1964	33	653	1,545,252	June 2010	166	3,044	95,299,300
December 1965	40	668	1,631,554	June 2011	233	3,212	97,264,937
December 1966	43	676	1,770,083	June 2012	141	3,292	101,989,143
December 1967	36	682	1,862,249	June 2012	166	3,404	103,237,869
December 1968	45	695	1,969,760	June 2014	100	3,529	105,742,221
December 1969	53	726	2,319,186	June 2015	178	3,633	108,877,858
December 1909	31	719	2,385,868	Julie 2015	1/0	5,055	100,077,030
December 1970	47	719	2,585,808				
December 1971 December 1972	47 51	731 745	2,522,550				
December 1973 December 1974	36 46	744 754	3,039,253				
December 19/4	40	/34	3,372,453				

# **INVESTMENTS**

### Investment Returns for Fiscal Year End June 30, 2015

	Assets Under Management (Market Value)	Fiscal Year Investment <u>Performance*</u>
Domestic Equity Barrow, Hanley, Mewhinney & Strauss, Inc. BlackRock S&P 500 (added in January 2015) The Boston Company Asset Management Dimensional Fund Advisors, Inc. State Board of Investments - Domestic Equity Wellington Management Company, LLP	52,173,661 9,058,852 49,494,822 51,214,248 199,369,309 53,528,764 <b>\$ 414,839,656</b>	6.35% N/A* 7.85% 2.95% 7.29% 6.47%
International Equity State Board of Investments - Int'l Equity	91,858,277 <b>\$ 91,858,277</b>	-3.79%
Global Equity Morgan Stanley Global Franchise JP Morgan Focus	52,742,388 54,618,778 <b>\$ 107,361,166</b>	2.88% 1.44%
Fixed Income Brandywine Global Opportunistic Fixed Allianz Cash Overlay T Rowe Price Global Multi-sector Bond T Rowe Price IGM (added in June 2015) Guggenheim Core Plus	45,391,279 24,110,709 20 28,354,522 107,864,216 <b>\$ 205,720,746</b>	-5.63% 5.21% 0.00% N/A* 3.77%
Real Assets         Advantus         UBS Trumbull Fund         UBS Growth & Income Fund         Tortoise MLP         Dune Realty Partners         Parametric - TIPS         Private Equity         Franklin Park         North Sky         RWI Ventures I         RWI Ventures II	31,773,602 40,854,518 13,392,779 23,696,058 1,947,269 16,768,774 <b>\$ 128,433,000</b> 12,584,919 7,860,606 246,720 1,261,290	5.54% 11.53% 15.23% -13.59% 12.32% -1.98%
TCW LLC (added in March 2015) VIA Partners	3,405,046 964,224 <b>\$ 26,322,805</b>	3.13%
Alternatives Parametric Defensive Equity (added in June 2015)	10,000,000 <b>\$ 10,000,000</b>	N/A*
<b>Opportunistic</b> Corvex (added in February 2015) Entrust (added in March 2015)	16,048,446 2,293,120 \$ 18,341,566	N/A* N/A*
Cash Cash - US Bank Custody Cash - US Bank Checking Parametric Cash Overlay	7,357,865 3,676,885 1,991,885 <b>\$ 13,026,634</b>	0.03% 2.77%
Total Fund (net of fees) Total Fund Benchmark	\$ 1,015,903,852	2.65% 1.82%

\*NOTE: Investment returns are calculated by Asset Consulting Group (performance measurement consultant) and Fiscal Year Investment Performance is included only for those managers with whom SPTRFA was invested for a full 12 month period. In the case of mid-year additions, performance is listed as "N/A".

Asset Class / Security Type / Issuer	Quantity <u>Shares or Units</u>	<u>Cost</u>	<u>Market Value</u>	I	Accrued interest or Dividends	<u>Mk</u>	t + Accrued
Cash or Equivalents							
Imprest Cash	-	\$ 500	\$ 500	\$	-	\$	500
U.S. Bank Interest Bearing Checking Acct	-	(12,620)	(12,620)		-		(12,620)
U.S. Bank Commercial Paper Sweep	-	3,689,006	3,689,006		-		3,689,006
Custodian Short Term Investment Pool	-	 24,876,553	 24,876,553		99,812		24,976,366
Subtotal - Cash or Equivalents	-	\$ 28,553,438	\$ 28,553,438	\$	99,812	\$	28,653,251
Domestic Equity Securities							
Acadia Rlty Tr	13,969	\$ 351,860	\$ 406,638	\$	3,473	\$	410,110
Advance Auto Parts Inc	6,900	1,032,727	1,099,101		414		1,099,515
Agribank Fcb	1,000	100,000	105,000		1,719		106,719
Akorn Inc Com	14,352	619,457	626,608		-		626,608
Alexandria Real Estate Equities Inc	11,000	888,765	962,060		8,470		970,530
Alliance Data Systems Corp	1,600	284,954	467,104		-		467,104
Altria Group Inc	31,200	520,688	1,525,992		16,224		1,542,216
American Airlines Group Inc	15,300	604,292	611,006		-		611,006
American Campus Cmntys Inc	10,300	416,851	388,207		-		388,207
American Express Co	21,000	1,151,182	1,632,120		6,090		1,638,210
American Public Education	28,000	970,993	720,160		-		720,160
American Residential Propert	16,609	347,703	307,267		-		307,267
Antero Midstream Partners Lp	14,471	391,589	414,449		-		414,449
Anthem Inc	2,900	108,182	476,006		-		476,006
Apartment Invt Mgmt Co Cl A	12,626	484,132	466,278		-		466,278
Arrow Electrs Inc	15,309	659,369	854,242		-		854,242
Aspen Insurance Hldg Ltd	25,725	649,471	648,270		10,772		659,042
At&T Inc	16,700	590,327	593,184		-		593,184
Atwood Oceanics Inc	20,200	762,237	534,088		5,050		539,138
Avalonbay Cmntys Inc	9,000	1,239,346	1,438,830		11,250		1,450,080
Avnet Inc	13,950	445,559	573,485		-		573,485
Ball Corp	1,300	62,542	91,195		-		91,195
Bank Of America Corp	58,028	1,118,869	987,637		-		987,637
Beacon Roofing Supply Inc	4,417	140,981	146,733		-		146,733
Belden Inc	27,100	1,778,939	2,201,333		1,285		2,202,618
Boston Pptys Inc	12,679	1,356,990	1,534,666		8,241		1,542,908
Boston Scientific Corp	49,100	702,174	869,070		-		869,070
Bp Plc Spons A D R	32,100	1,453,745	1,282,716		-		1,282,716
Brixmor Property Group Inc	12,600	326,006	291,438		-		291,438
Buckeye Partners Lp	18,114	1,263,009	1,339,168		-		1,339,168
Camden Ppty Tr	6,900	417,061	512,532		4,830		517,362
Cameron International Corp	4,900	278,012	256,613		-		256,613
Capital One Financial Corp	12,800	918,833	1,126,016		-		1,126,016
Cardinal Health Inc	12,200	525,136	1,020,530		4,721		1,025,251
Carnival Corp	24,500	773,443	1,210,055		-		1,210,055
Cdw Corp De	42,600	1,228,169	1,460,328		-		1,460,328
Centaur Funding Corp	800	1,001,000	984,750		-		984,750
Cerner Corporation	10,500	756,439	725,130		-		725,130
Chemtura Corp	13,632	496,211	555,782		-		555,782
Chesapeake Lodging Trust	7,500	240,713	228,600		2,275		230,875

	Quantity			Accrued Interest or	
Asset Class / Security Type / Issuer	Shares or Units	Cost	<u>Market Value</u>	Dividends	Mkt + Accrued
Chevron Corporation	5,500	255,954	530,585	-	530,585
Chipotle Mexican Grill Inc	300	194,230	181,497	-	181,497
Ciena Corp	41,076	735,073	972,680	-	972,680
Cigna Corp	4,300	314,492	696,600	-	696,600
Citigroup Inc	18,610	770,568	1,028,016	-	1,028,016
Clarcor Inc	2,147	142,345	133,629	-	133,629
Cognizant Tech Solutions Cl A	7,200	330,325	439,848	-	439,848
Columbia Banking System Inc	17,682	465,525	575,372	-	575,372
Columbia Pipeline Partners L P	9,143	244,125	230,404	-	230,404
Conocophillips	14,700	374,941	902,727	-	902,727
Corelogic Inc	29,249	753,355	1,160,893	-	1,160,893
Cracker Barrel Old Ctry Store	4,200	451,673	626,472	-	626,472
Crh Plc	47,000	1,047,194	1,321,170	-	1,321,170
Cubesmart	17,057	275,582	395,040	2,729	397,769
Cvb Finl Corp	17,585	223,664	309,672	-	309,672
D R Horton Inc	48,000	1,065,945	1,313,280	-	1,313,280
Dana Holding Corp	8,153	142,861	167,789	-	167,789
Dcp Midstream Partners Lp	9,932	537,072	304,813	-	304,813
Dct Industrial Trust Inc	11,000	343,263	345,840	3,080	348,920
Ddr Corp	8,700	150,516	134,502	1,501	136,003
Dealertrack Technologies Inc	12,887	474,054	809,175	-	809,175
Deere Co	12,200	1,089,339	1,184,010	7,320	1,191,330
Digital Realty Trust Inc	3,700	243,383	246,716	-	246,716
Dollar General Corp	7,000	516,295	544,180	1,408	545,588
Dollar Tree Inc	8,600	454,282	679,314	_,	679,314
Duke Realty Corporation	39,900	645,562	740,943	_	740,943
Dunkin Brands Group Inc	7,600	365,539	418,000	_	418,000
E Trade Financial Corp	38,511	557,706	1,153,404	_	1,153,404
Edwards Lifesciences Corp	3,500	448,566	498,505	_	498,505
Emerson Electric Co	17,800	661,785	986,654	_	986,654
Enbridge Energy Partners L P	26,224	992,329	874,046	_	874,046
	34,117	1,056,764	2,189,288	_	2,189,288
Energy Transfer Equity L P	3,689	129,734	114,691	-	114,691
Enlink Midstream Darte and Le				-	
Enlink Midstream Partners Lp	6,620	200,721	145,441 479,400	-	145,441
Entergy Corporation	6,800	268,443		-	479,400
Enterprise Prods Partners L P	70,963	2,068,480	2,121,084	-	2,121,084
Envision Healthcare Holdings Inc	19,500	659,606	769,860	-	769,860
Eqt Gp Holdings Lp	3,914	118,229	133,037	-	133,037
Eqt Midstream Partners Lp	10,376	786,982	846,059	-	846,059
Equifax Inc	1,936	128,054	187,966	-	187,966
Equinix Inc	1,400	351,470	355,600	-	355,600
Equity Lifestyle Pptys Inc	8,800	475,822	462,704	3,300	466,004
Equity Residential	23,200	1,397,275	1,627,944	12,818	1,640,762
Essex Ppty Tr Inc	6,194	989,312	1,316,225	8,919	1,325,144
Everbank Financial Corp	59,767	1,129,109	1,174,422	-	1,174,422
Expedia Inc	6,870	536,098	751,235	-	751,235
Extra Space Storage Inc	10,700	524,364	697,854	-	697,854
F E I Co	16,514	1,315,230	1,369,506	-	1,369,506
Federal Rlty Invt Tr	6,400	762,104	819,776	5,568	825,344

	Quantity			Accrued Interest or	
Asset Class / Security Type / Issuer	Shares or Units	Cost	Market Value	<b>Dividends</b>	Mkt + Accrued
Fidelity National Financial Inc	31,629	625,179	1,169,957	-	1,169,957
Fidelity National Financial Inc	29,051	660,050	446,804	-	446,804
First Republic Bank San Fran	8,425	481,509	531,028	-	531,028
Five Below	2,200	69,693	86,966	-	86,966
Fleetcor Technologies Inc	2,500	336,005	390,150	-	390,150
Flir Systems Inc	30,806	991,681	949,441	-	949,441
Fluor Corp	7,838	472,947	415,492	-	415,492
Fortinet Inc	21,275	646,588	879,296	-	879,296
Generac Holdings Inc	15,076	686,978	599,271	-	599,271
General Dynamics Corp	7,300	566,409	1,034,337	5,037	1,039,374
General Growth Properties	41,500	950,795	1,064,890	-	1,064,890
Genesis Energy Lp	10,945	561,281	480,376	-	480,376
Grand Canyon Education Inc	34,400	1,390,003	1,458,560	-	1,458,560
Grubhub Inc	11,600	462,898	395,212	-	395,212
Gw Pharmaceuticals Adr	11,582	901,853	1,422,733	-	1,422,733
Haemonetics Corp	11,600	483,568	479,776	-	479,776
Harley Davidson Inc	10,800	589,870	608,580	-	608,580
Harman International	11,600	1,312,135	1,379,704	-	1,379,704
Hcp Inc	6,900	301,616	251,643	-	251,643
Hd Supply Holdings Inc	31,689	975,408	1,114,819	-	1,114,819
Health Care Reit Inc	19,100	1,233,798	1,253,533	-	1,253,533
Heartland Payment Systems Inc	11,000	446,046	594,550	-	594,550
Heartware International Inc	13,934	1,207,536	1,012,862	-	1,012,862
Highwoods Properties Inc	10,700	450,825	427,465	-	427,465
Hilton Worldwide Holdings In	13,900	369,911	382,945	-	382,945
Honeywell International Inc	11,200	367,583	1,142,064	-	1,142,064
Host Hotels Resorts Inc	51,410	1,026,621	1,019,460	10,282	1,029,742
Houghton Mifflin Harcourt Co	292	7,171	7,358	-	7,358
Hsn Inc	5,600	382,162	393,064	-	393,064
Hubbell Inc Cl B	4,603	509,256	498,413	-	498,413
Hudson Pacific Properties Inc	13,900	445,193	394,343	-	394,343
Huron Consulting Group Inc	2,361	155,261	165,482	-	165,482
Icon Plc	25,400	1,297,656	1,709,420	-	1,709,420
Ims Health Holdings Inc	35,500	952,571	1,088,075	-	1,088,075
Infoblox Inc	67,388	1,140,436	1,766,239	-	1,766,239
Ingram Micro Inc Cl A	37,135	968,779	929,489	-	929,489
Intel Corp	26,100	478,177	793,832	-	793,832
Intercontinental Exchange In	1,043	241,353	233,225	-	233,225
Interface Inc	18,903	328,302	473,520	-	473,520
Ishares Russell 2000 Index Etf	2,028	243,552	253,216	-	253,216
Itc Holdings Corp	15,560	515,642	500,721	-	500,721
J P Morgan Chase Co	25,800	1,003,732	1,748,208	-	1,748,208
Janus Capital Group Inc	63,900	1,077,557	1,093,968	-	1,093,968
Jazz Pharmaceuticals Plc	4,600	817,782	809,922	-	809,922
Jds Uniphase Corp	79,764	982,667	923,667	-	923,667
Johnson Controls Inc	21,600	1,052,961	1,069,848	5,616	1,075,464
Johnson Johnson	13,400	875,974	1,305,964	-	1,305,964
Kansas City Southern	1,100	118,669	100,320	363	100,683
Keysight Technologies Inc	25,313	878,042	789,512	-	789,512

	Quantity			Accrued Interest or	
Asset Class / Security Type / Issuer	Shares or Units	Cost	Market Value	<u>Dividends</u>	Mkt + Accrued
Kilroy Rlty Corp	5,600	318,215	376,040	1,960	378,000
Kimco Realty Corp	30,000	661,649	676,200	-	676,200
Kirby Corp	9,038	612,955	692,853	-	692,853
Kite Realty Group Trust	9,925	262,757	242,865	-	242,865
Kroger Co	5,200	226,258	377,052	-	377,052
L Brands Inc	3,700	249,619	317,201	-	317,201
Lasalle Hotel Properties	3,600	119,055	127,656	1,620	129,276
Lazard Ltd Cl A	18,639	1,034,741	1,048,257	-	1,048,257
Leucadia Natl Corp	64,068	1,468,084	1,555,571	-	1,555,571
Liberty Ppty Tr	7,000	244,882	225,540	3,325	228,865
Lincoln National Corp	16,300	911,802	965,286	-	965,286
Lkq Corp	34,913	923,567	1,055,944	-	1,055,944
Lululemon Athletica Inc	2,900	141,177	189,370	-	189,370
Mack Cali Realty Corp	12,600	244,814	232,218	-	232,218
Magellan Midstream Partners Lp	29,514	1,668,352	2,165,737	-	2,165,737
Manpowergroup Inc	5,200	363,603	464,776	-	464,776
Marathon Oil Corporation	28,600	655,222	759,044	_	759,044
Marketaxess Hldgs Inc	1,400	128,682	129,878	_	129,878
Markwest Energy Partners Lp	19,520	1,295,120	1,100,538	_	1,100,538
Media General Inc	21,172	348,155	349,761	_	349,761
Medivation Inc	5,700	580,148	650,940	_	650,940
Mednax Inc	12,842	660,344	951,721	_	951,721
Medtronic Plc	23,300	1,792,935	1,726,530	9,424	1,735,954
Mellanox Technologies Ltd A D R	8,346	343,789	405,532	-	405,532
Merck And Co Inc	20,200	852,503	1,149,986	9,090	1,159,076
Michaels Cos Inc The	48,700	1,078,596	1,310,517	-	1,310,517
Microsemi Corp	14,440	391,196	504,678	_	504,678
Microsoft Corp	32,200	607,748	1,421,630	_	1,421,630
Mid-Amer Apt Cmntys Inc	1,460	102,961	106,303	_	106,303
Miller Herman Inc	37,287	963,235	1,078,713	3,906	1,082,619
Monster Beverage Corp	3,700	250,316	495,874	-	495,874
Mplx Lp	12,145	451,233	866,910	_	866,910
Mylan Nv	12,600	617,498	855,036	_	855,036
New Gold Inc	143,211	571,949	385,238		385,238
Newmont Mining Corp	10,330	242,755	241,309	_	241,309
Nielsen Nv	19,120	848,135	856,002	_	856,002
Northern Tr Corp	2,800	217,799	214,088	_	214,088
Norwegian Cruise Line Holdings Ltd	12,700	669,744	711,708		711,708
Occidental Petroleum Corporation	13,200	362,579	1,026,564	9,900	1,036,464
Old Dominion Fght Line Inc	11,000	795,158	754,655	5,500	754,655
Oneok Inc	7,771	436,228	306,799	-	306,799
Oneok Partners Lp	8,194	430,228 301,539	278,596	-	278,596
1	37,300	1,532,932	1,503,190	-	1,503,190
Oracle Corporation P N C Financial Services Group Inc	12,000	707,425	1,147,800	-	1,147,800
	12,000	707,423	1,147,000	- 935	
Packaging Corp America	-	- 045 417	- 229,944		935 231 217
Paramount Group Inc	13,400 892	245,417 72,413		1,273	231,217 103 766
Parker Hannifin Corp Bakklahmaak Hatal Trust	892 11,600	72,413 439,456	103,766 497,408	- 3,596	103,766 501,004
Pebblebrook Hotel Trust				3,390	
Pentair Plc	8,500	613,114	584,375	-	584,375

	Quantity	Cast	Mariat Value	Accrued Interest or	
Asset Class / Security Type / Issuer	Shares or Units	<u>Cost</u>	Market Value	<u>Dividends</u>	Mkt + Accrued
Perkin Elmer Inc	9,800	444,809	515,872	-	515,872
Pfizer Inc	39,755	1,005,069	1,332,985	-	1,332,985
Philip Morris Intl	16,900	715,401	1,354,873	16,900	1,371,773
Phillips 66	7,450	113,717	600,172	-	600,172
Phillips 66 Partners Lp	8,395	406,189	604,440	-	604,440 724,100
Pinnacle Financial Partners	13,318	571,350	724,100	-	724,100
Plains All Amer Pipeline Lp	42,922	2,378,637	1,870,112	-	1,870,112
Plains Gp Holdings Lp Cl A	12,981	310,656	335,429	-	335,429
Platform Specialty Products	8,700	230,550	222,546	-	222,546
Popeyes Louisiana Kitchen Inc	3,600	148,738	215,964	-	215,964
Pra Group Inc	17,300	977,285	1,077,963	-	1,077,963
Prologis Inc	23,650	932,980	877,415	-	877,415
Public Storage Inc	7,700	1,136,623	1,419,649	-	1,419,649
Pvh Corp	3,349	354,629	385,805	-	385,805
Qualcomm Inc	23,200	1,637,937	1,453,016	-	1,453,016
Raymond James Finl Inc	13,333	710,309	794,380	-	794,380
Raytheon Company	8,200	383,771	784,576	5,494	790,070
Realogy Holdings Corp	36,632	1,476,512	1,711,447	-	1,711,447
Regal Beloit Corp	7,782	521,237	564,895	-	564,895
Ross Stores Inc	10,400	367,629	505,544	-	505,544
Royal Gold Inc	3,487	207,093	214,764	-	214,764
Sanofi A D R	26,400	1,002,041	1,307,592	-	1,307,592
Scansource Inc	21,430	771,497	815,626	-	815,626
Seaspan Corp	36,000	902,944	909,000	-	909,000
Shell Midstream Partners L P	8,538	261,682	389,760	-	389,760
Simon Property Group Inc	17,965	2,372,933	3,108,304	-	3,108,304
Sinclair Broadcast Group Inc A	28,135	833,692	785,248	-	785,248
Skyworks Solutions Inc	5,000	154,050	520,500	-	520,500
Sl Green Rlty Corp	7,000	631,904	769,230	4,200	773,430
Slm Corp	45,164	423,783	445,769	-	445,769
Southwestern Energy Co	9,600	259,262	218,208	-	218,208
Spectra Energy Corp	19,209	683,620	626,213	-	626,213
Staples Inc	28,917	483,001	442,719	-	442,719
State Str Corp	21,900	1,052,412	1,686,300	7,446	1,693,746
Steelcase Inc Cl A	64,928	933,315	1,227,788	-	1,227,788
Strategic Hotel Cap Inc	39,100	477,747	473,892	-	473,892
Sunoco Logistics Partners L P	31,687	1,008,121	1,205,057	-	1,205,057
Sunstone Hotel Invs Inc	19,600	326,190	294,196	980	295,176
Svb Finl Group	12,833	1,083,564	1,847,695	-	1,847,695
Swift Transportation Co	11,400	297,755	258,438	-	258,438
Synaptics Inc	10,000	847,081	867,350	-	867,350
Talmer Bancorp Inc Cl A	17,270	243,434	289,273	-	289,273
Targa Resources Corp	7,451	710,531	664,778	-	664,778
Target Corp	12,200	712,142	995,886	-	995,886
Tech Data Corp	3,940	234,486	226,786	-	226,786
Teladoc, Inc.	54	1,026	1,026	-	1,026
Tesoro Logistics Lp	14,850	847,112	848,232	-	848,232
Teva Pharmaceutical Inds Ltd A D R	16,500	626,150	975,150	-	975,150
Texas Instruments Inc	22,400	556,681	1,153,824	-	1,153,824

	Quantity					Accrued nterest or		
Asset Class / Security Type / Issuer	Shares or Units	Cost	Ma	arket Value	<u>D</u>	<u>ividends</u>	M	<u>kt + Accrued</u>
Textron Inc	15,600	618,105		696,228		324		696,552
Thor Industries Inc	14,700	847,427		827,316		3,969		831,285
Tiffany & Co	4,000	350,304		367,200		1,600		368,800
Travelers Cos Inc	13,600	559,481		1,314,576		-		1,314,576
Trinet Group Inc	10,700	312,476		271,245		-		271,245
Trueblue Inc	36,954	852,991		1,104,925		-		1,104,925
Tuesday Morning Corp	26,000	348,821		292,890		-		292,890
Udr Inc	21,400	602,262		685,442		-		685,442
United Health Group Inc	15,600	695,592		1,903,200		-		1,903,200
Universal Display Corporation	24,042	775,075		1,243,693		-		1,243,693
Universal Health Svcs Inc	6,300	578,111		895,230		-		895,230
Valero Energy Partners Lp	8,487	291,015		433,516		-		433,516
Valspar Corp	15,149	1,140,383		1,239,491		-		1,239,491
Vantiv Inc	16,700	514,001		637,773		-		637,773
Veeco Instrs Inc Del	34,466	1,179,150		990,553		-		990,553
Ventas Inc	14,361	913,160		891,674		-		891,674
Verint Systems Inc	19,800	1,059,599		1,202,751		-		1,202,751
Verizon Communications Inc	33,396	1,417,638		1,556,588		-		1,556,588
Vodafone Group Plc A D R	13,272	678,249		483,764		15,462		499,226
Vornado Realty Trust	13,542	1,154,092		1,285,542		-		1,285,542
Voya Financial Inc	9,470	284,476		440,071		-		440,071
Wabco Hldgs Inc	5,900	621,619		729,948		-		729,948
Waddell & Reed Financial Inc	20,800	1,061,632		984,048		-		984,048
Wal Mart Stores Inc	16,600	1,005,176		1,177,438		-		1,177,438
Web Com Group Inc	66,700	1,537,049		1,615,474		-		1,615,474
Weingarten Rlty Invts	13,900	470,720		454,391		-		454,391
Wells Fargo Co	33,900	899,174		1,906,536		-		1,906,536
Western Gas Equity Partners Lp	6,215	258,186		372,900		-		372,900
Western Gas Partners Lp	13,815	869,157		875,457		-		875,457
Whirlpool Corp	2,500	494,962		432,625		-		432,625
Williams Cos Inc	11,446	468,723		656,886		-		656,886
Williams Sonoma Inc	2,993	240,235		246,234		-		246,234
Xylem Inc	9,008	332,260		333,927		-		333,927
Yamana Gold Inc	273,152	1,698,975		819,456		-		819,456
Zebra Technologies Corp Cl A	7,700	695,317		855,085		-		855,085
Zimmer Biomet Holdings Inc	9,100	1,055,676		993,993		1,650		995,643
Subtotal - Domestic Equity	5,025,767	\$ 177,943,373	\$	210,737,427	\$	255,809	\$	210,993,236
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Domestic Equity Commingled Accounts								
BlackRock S&P	12,933	\$ 8,999,158	\$	9,058,852	\$	-	\$	9,058,852
Dimensional Fund Advisors	22,973	11,738,157		51,214,248		-		51,214,248
SBI Domestic Index Stock	4,985,056	175,000,000		199,369,309		-		199,369,309
Subtotal - Domestic Equity Commingled	5,020,962	\$ 195,737,315	\$	259,642,409	\$	-	\$	259,642,409
International Equity Commingled Accounts								
JPMorgan Global Focus	2,419,972	\$ 38,380,763	\$	54,618,778	\$	-	\$	54,618,778
SBI - International	11,434,079	 90,995,156		91,858,277			\$	91,858,277
Subtotal - International Equity Commingled	13,854,051	\$ 129,375,919	\$	146,477,055	\$	-	\$	146,477,055

Asset Class / Security Type / Issuer	Quantity <u>Shares or Units</u>	<u>Cost</u>	M	larket Value	Int	ccrued erest or vidends	Mk	<u>t + Accrued</u>
International Equity Mutual Funds								
Morgan Stanley Ins Glb Fra I	2,441,276	\$ 43,471,459	\$	52,742,388	\$	-	\$	52,742,388
Subtotal - Int'l Equity Mutual Fund	2,441,276	\$ 43,471,459	\$	52,742,388	\$	-	\$	52,742,388
Fixed Income Commingled Accounts								
Allianz Global Investors	22,000,000	\$ 22,000,000	\$	24,110,709	\$	-	\$	24,110,709
Brandywine Global Opportunistic Fi	1,118,505	46,113,888		45,391,279		-		45,391,279
Trowe Price IGM	2,923,147	24,753,260		28,354,522		-		28,354,522
Subtotal - Fixed Income Commingled	26,041,651	\$ 92,867,147	\$	97,856,510	\$	-	\$	97,856,510
Fixed Income Securities								
Acc Group Housing Llc	200,000	\$ 200,000	\$	200,000	\$	5,856	\$	205,856
Acis Clo Ltd	600,000	582,000		598,710		5,889		604,599
Acis Clo Ltd	600,000	587,400		600,702		4,533		605,235
Acis Clo Ltd	1,000,000	995,000		996,520		5,786		1,002,306
Adams Outdoor Advertising	650,000	650,000		650,000		1,092		651,092
Adt Corp	500,000	500,000		525,000		6,597		531,597
Aes Corp Va	400,000	399,000		400,000		1,087		401,087
Aim Aviation Finance Limited	976,190	976,190		966,721		1,828		968,549
Alm Loan Funding	750,000	716,250		741,660		4,076		745,736
Alm Loan Funding	350,000	334,250		346,801		1,902		348,703
Alm Loan Funding	250,000	245,925		247,483		1,425		248,907
Amtrust Financial Services Inc	750,000	750,000		743,438		17,354		760,792
Anchorage Capital Clo Ltd	500,000	494,375		496,795		2,148		498,943
Anchorage Credit Funding Ltd	1,000,000	1,000,000		1,000,000		2,628		1,002,628
Ares Clo Funds	700,000	677,600		699,510		3,482		702,992
Army Hawaii Family Hsg	500,000	500,000		500,000		1,278		501,278
Army Hawaii Family Hsg	500,000	500,000		500,000		1,278		501,278
At T Inc	500,000	498,555		459,645		3,563		463,208
Atlantic Marine Corp Com	241,284	231,963		234,984		1,092		236,076
Avaya Inc	250,000	248,750		244,375		4,375		248,750
Avis Budget Rental Car Funding Aesop	250,000	249,969		251,310		269		251,579
Babcock Brown Air Funding Ltd	1,081,401	919,191		919,191		270		919,461
Banc Of America Commercial Mortgage	477,950	496,097		479,690		2,523		482,212
Banc Of America Funding Corporation	1,021,404	929,477		1,021,404		46		1,021,450
Banc Of America Funding Corporation	1,008,948	944,943		1,008,948		263		1,009,211
Bank Of America Corp	450,000	445,000		440,888		897		441,784
Bank Of America Corp	50,000	51,188		49,782		1,007		50,788
Bank Of America Corp	550,000	550,000		543,125		9,692		552,817
Barc Repo 00101Jak2	(427,500)	(427,500)		(427,500)		-		(427,500)
Barclays Repo	(3,000)	(3,000)		(3,000)		-		(3,000)
Barclays Repo	(10,000)	(10,000)		(10,000)		-		(10,000)
Barclays Repo 00206Rcp5	(407,193)	(407,193)		(407,193)		-		(407,193)
Barclays Repo 25714Pcw6	(398,750)	(398,750)		(398,750)		-		(398,750)
Bcap Llc Trust	995,817	932,022		935,670		50		935,719
Black Diamond Clo Ltd	750,000	745,313		749,333		4,355		753,687
Blade Engine Securitization Ltd	777,235	531,192		544,064		411		544,476
Boca Hotel Portfolio Trust	750,000	750,000		749,558		1,079		750,636

	Quantity			Accrued Interest or	
Asset Class / Security Type / Issuer	Shares or Units	<u>Cost</u>	Market Value	Dividends	Mkt + Accrued
Bon Secours Charity Hlth	500,000	500,000	510,205	3,646	513,851
Capmark Military Housing Trust	728,605	731,337	728,605	2,442	731,047
Capmark Military Housing Trust	830,000	910,925	1,212,721	3,862	1,216,583
Cent Clo Lp	250,000	250,000	249,705	1,037	250,742
Cerberus Onshore Ii Clo Llc	250,000	247,493	250,533	1,591	252,123
Cgbam Coml Mortgage	500,000	500,000	498,100	502	498,602
Chesterfield Financial Holding Llc	474,000	474,000	474,000	948	474,948
Chicago Il Brd Of Edu Cap Apprec Sch	480,000	228,360	232,819	-	232,819
Chicago Il Cabs City Colleges Agm Cr	100,000	48,872	45,719	-	45,719
Chicago Il Ref Proj Ser B	300,000	247,683	243,096	8,148	251,244
Chicago Il Wtr Rev Build America	220,000	301,783	249,513	2,472	251,985
Chinos Intermed Hldgs A	500	494	403	6	409
Churchill Financial Cayman Ltd	1,000,000	897,500	991,180	3,519	994,699
Cifc Fdg	1,000,000	1,000,000	990,030	1,577	991,607
Citigroup Inc	400,000	400,000	401,000	2,964	403,964
Citigroup Inc	720,000	720,000	721,584	11,868	733,452
Citigroup Inc	500,000	500,000	482,600	5,537	488,137
Coa Summit Clo Ltd	500,000	497,500	493,365	3,057	496,422
Comm Mortgage Trust	400,000	400,000	399,484	501	399,985
Comm Mortgage Trust	800,000	800,000	797,992	1,163	799,155
Cook Cnty Il Build Amer Bonds	650,000	699,072	646,354	5,174	651,527
Corp Financiera De Desar	200,000	204,000	201,500	4,842	206,342
Countrywide Alternative Loan Trust	684,423	698,967	710,862	2,994	713,857
Credit Acceptanc	100,000	102,500	100,250	2,314	102,564
Csmc Tr	800,000	800,000	796,288	882	797,170
Detroit Mi City Sch Dist Build	370,000	380,175	442,039	4,777	446,816
Detroit Mi City Sch Dist Qualified	300,000	296,250	317,694	3,323	321,017
Detroit Mi Swr Disp Sys Revenue	300,000	293,642	300,750	7,500	308,250
Divcore Clo	250,000	248,975	250,000	452	250,452
Dominican Republic	500,000	522,835	510,000	14,651	524,651
Drug Royalty Ii Lp 1	226,672	226,672	229,720	312	230,033
Dryden Senior Loan Fund	1,000,000	974,283	1,000,000	-	1,000,000
Dryden Senior Loan Fund	250,000	250,000	249,728	1,702	251,430
Dynagas Lng Partnersfin	300,000	292,000	282,000	3,177	285,177
Ecaf Ltd	750,000	750,000	750,000	1,237	751,237
Emerald Aviation Finance Limited	1,030,208	1,038,807	1,057,251	2,129	1,059,380
Emerald Aviation Finance Limited	447,917	446,633	459,115	1,264	460,379
Entertainment Properties	950,000	982,215	1,018,752	20,636	1,039,388
Epr Properties	250,000	249,095	245,505	3,281	248,786
Fifth Third Bancorp	489,000	462,105	458,438	69	458,507
Fifth Third Bank	400,000	400,000	381,320	4,954	386,274
Figueroa Clo Ltd	250,000	246,000	242,745	868	243,613
First Franklin Mtg Loan Asset Backed	500,000	436,250	442,545	44	442,589
Fort Benning Fam	750,000	582,188	750,000	1,814	751,814
0					
Fortress Credit Funding Lp	1,000,000	1,000,000	994,620 1,000,000	3,820 486	998,440 1 000 486
Fortress Credit Investments Ltd	1,000,000	1,000,000	1,000,000	486	1,000,486
Fortress Credit Opportunities Clo	750,000	741,825	748,328	4,927	753,255
Fortress Credit Opportunities Clo Lp	250,000	245,825	247,478	1,625	249,103
Fortress Credit Opportunities Clo Lp	200,000	194,080	195,844	1,654	197,498

	Quantity			Accrued Interest or	
Asset Class / Security Type / Issuer	Shares or Units	Cost	Market Value	Dividends	Mkt + Accrued
Gallatin Funding Ltd	250,000	250,000	245,495	1,672	247,167
Garrison Funding Ltd	750,000	746,250	752,228	3,167	755,395
Garrison Funding Ltd	1,000,000	997,000	1,000,000	2,085	1,002,085
Gasco	613,016	1	613,016	3,916	616,933
Gasco	621,774	1	621,774	5,164	626,938
Gcat	1,551,921	1,542,221	1,560,844	930	1,561,775
Gmac Commercial Mortgage Asset Corp	382,831	364,685	382,831	1,394	384,224
Gmh Military Hsg Navy Ne	485,000	507,844	485,000	6,448	491,448
Golub Capital Partners Clo Ltd	250,000	249,238	252,353	1,808	254,160
Golub Capital Partners Clo Ltd	250,000	250,000	246,903	1,767	248,670
Great Lakes Clo Ltd	250,000	250,000	250,368	2,114	252,481
Great Lakes Clo Ltd	750,000	750,000	751,515	7,019	758,534
Halcyon Loan Advisors Funding Ltd	250,000	249,063	251,408	381	251,788
Harbinger Group Inc	472,000	493,080	497,960	17,140	515,100
Hilton Usa Trust	850,000	857,294	857,378	2,705	860,083
Hp Communities Llc	412,741	436,729	429,180	6,405	435,585
Hsbc Holdings Plc	150,000	150,000	150,375	2,763	153,138
Icahn Enterprises Fin	95,000	98,133	98,088	2,375	100,463
Illinois St Agm Credit	250,000	255,348	244,813	1,177	245,990
Illinois St Build America Bonds Agm	125,000	127,711	133,558	3,453	137,011
Illinois St Ser 2 Babs	250,000	288,383	270,853	5,750	276,603
Illinois St Ser B Agm Cr	300,000	283,557	309,240	8,025	317,265
Industry Public Ca	700,000	700,000	704,991	-	704,991
Inland Vly Ca Dev Agy Successor Agy	150,000	147,000	159,995	2,750	162,745
Ivy Hill Middle Market Credit Fund	550,000	539,825	540,348	4,098	544,445
Jefferson Cnty Al Swr Revenue	200,000	81,330	87,332	-	87,332
Jefferson Cnty Al Swr Revenue	200,000	72,050	80,804	_	80,804
Jefferson Cnty Al Swr Revenue	575,000	174,082	200,094	_	200,094
Jefferson Cnty Al Swr Revenue	375,000	113,130	121,770	_	121,770
Jefferson Cnty Al Swr Revenue	625,000	175,875	190,144	_	190,144
Jpmorgan Chase Co	500,000	500,000	496,300	5,153	501,453
Jpmorgan Chase Co	800,000	792,063	783,000	20,000	803,000
	500,000	566,250	541,250	3,438	544,688
Kaiser Aluminum Corporat Kehe Distributors Llc Fi	250,000	252,569	262,500	7,201	269,701
	500,000				
Kkr Financial Clo Ltd		498,750	500,605	2,357	502,962
Kkr Financial Clo Ltd	500,000	495,750	500,000 486,930	3,317	503,317
Kvk Clo Ltd	500,000	489,806	,	1,992	488,922
Lancer Fin Spv Ltd	353,057	357,470	346,875	1,721	348,596
Lstar Securities Investment Trust	488,131	482,349	488,131	916	489,048
Lstar Securities Investment Trust	979,619	966,867	979,619	1,839	981,458
Lstar Securities Investment Trust	1,071,095	1,057,554	1,071,095	1,947	1,073,042
Lstar Securities Investment Trust	1,032,810	1,033,396	1,036,037	2,917	1,038,955
Lstar Securities Investment Trust	985,568	975,933	985,568	598	986,166
Lvii Resecuritization Trust	1,000,000	1,042,500	1,000,000	4,301	1,004,301
Marathon Clo Ltd	1,250,000	1,244,531	1,250,475	3,838	1,254,313
Marea Clo Ltd	1,000,000	1,000,000	1,000,000	-	1,000,000
Mcf Clo Llc	350,000	334,600	339,388	2,248	341,636
Mcgraw Hill Global Ed	400,000	450,500	440,000	9,750	449,750
Miami Dade Cnty Fl Spl Oblig Cap	3,250,000	736,385	826,800	-	826,800

	Quantity Shares or Units	Cost	Market Value	Accrued Interest or Dividends	Mkt + Accrued
Asset Class / Security Type / Issuer				Dividends	
Miami Dade Cnty Fl Spl Oblig Cap	500,000	107,055	111,480	-	111,480
Mid State Trust	421,395	432,457	452,523	2,458	454,982
Monroe Capital Clo Ltd	600,000	577,500	595,704	4,441	600,145
Morgan Stanley	500,000	500,000	496,375	7,863	504,238
Motel 6 Trust	1,000,000	1,000,000	998,080	3,776	1,001,856
Mt Wilson Clo	1,000,000	971,250	976,180	-	976,180
N Star Real Estate Cdo Ltd	849,409	787,068	823,409	337	823,746
Navigators Group Inc	750,000	750,000	796,005	9,104	805,109
New Century Home Equity Loan Trust	1,100,000	977,625	976,305	127	976,432
Newstar Arlington Senior Loan	250,000	243,827	241,508	5,019	246,526
Newstar Commercial Loan Funding Frn	250,000	243,438	251,830	2,263	254,093
Newstar Trust	400,000	354,000	396,348	793	397,141
Newstar Trust	750,000	750,000	745,118	1,154	746,271
Nomura Resecuritization Trust	286,396	264,884	278,541	20	278,560
Northern Group Housing	400,000	400,000	450,996	1,209	452,205
Nzcg Funding Ltd	750,000	750,000	750,000	2,253	752,253
Nzcg Funding Ltd	500,000	493,760	500,000	1,877	501,877
Nzcg Funding Ltd	500,000	473,325	500,000	2,177	502,177
Nzcg Funding Ltd	750,000	750,000	750,675	4,835	755,510
Octagon Investment Partners Xix Ltd	800,000	774,800	800,568	5,310	805,878
Pacific Northwest Commun	300,000	300,000	346,725	788	347,513
Port Auth Of New York New Jersey	190,000	210,079	200,480	4,204	204,684
Port Auth Of New York New Jersey Ny	750,000	750,000	737,483	3,014	740,497
Puerto Rico Cmwlth Ref Pub Impt Ser	300,000	300,000	285,060	7,500	292,560
Puerto Rico Highway Transprtn Auth	200,000	194,000	195,984	5,500	201,484
Race Point Clo Ltd	500,000	500,000	500,350	701	501,051
Rait Cre Cdo Ltd	1,028,967	709,080	1,028,967	178	1,029,144
Rampart Clo	1,000,000	985,000	1,000,000	-	1,000,000
Rbc Capital Repo 26884Uab5	(241,250)	(241,250)	(241,250)	-	(241,250)
Rbc Capital Repo 638904Ab8	(780,000)	(780,000)	(780,000)	-	(780,000)
Rbc Capital Repo 79588Taa8	(828,750)	(828,750)	(828,750)	-	(828,750)
Rbc Repo 29380Tat2	(1,007,000)	(1,007,000)	(1,007,000)	-	(1,007,000)
Regatta Funding Ltd	1,000,000	997,000	1,000,000	1,574	1,001,574
Republic Of Kenya	650,000	681,888	659,477	869	660,346
Resource Capital Corp Ltd	1,000,000	1,000,000	1,000,000	1,631	1,001,631
Rockwall Cdo	774,836	728,346	756,194	648	756,841
Sammons Financial Group	750,000	750,000	848,183	11,083	859,266
San Marcos Ca Unif Sch Dist Cabs	500,000	122,365	113,325	-	113,325
Scottrade Financ Service	150,000	155,328	162,216	4,339	166,555
Skyway Concession Co Llc	250,000	200,500	207,500	4	207,504
Srers Funding Ltd	1,149,944	1,021,328	1,118,620	304	1,118,924
Stockton Ca Unif Sch Dist Cap Apprec	400,000	147,856	169,988	-	169,988
Stockton Ca Unif Sch Dist Cap Apprec	615,000	214,549	249,450	-	249,450
Store Master Funding Llc	499,583	499,324	492,639	637	493,276
Suntrust Banks Inc	1,250,000	1,250,000	1,257,813	3,125	1,260,938
Teachers Insur Annuity	700,000	699,349	713,832	10,099	723,931
Telos Clo Ltd	250,000	242,500	247,945	2,356	250,301
Tenet Healthcare Corp	500,000	497,500	504,375	_,000	504,375
Ticc Clo Llc	250,000	251,000	250,793	1,288	252,080
TRUE OF LR	200,000	201,000	200,793	1,200	202,000

	Quantity Shares or Units		Cost		Market Value	Ir	Accrued nterest or vividends	M	lkt + Accrued
Asset Class / Security Type / Issuer	· <u> </u>							111	
Time Warner Cable Inc	600,000 150,000		478,187		489,420		7,950 583		497,370
Tpc Group Inc			157,875		138,750		585		139,333
Treman Park Clo Ltd	500,000		472,755		500,000		-		500,000
Turbine Engine Securitization Ltd	754,763		751,683		754,763		1,719		756,482
U S Treasury	15,314,556		17,183,199		16,767,916		-		16,767,916
U S Treasury Bond	1,714,000		703,460		662,033		-		662,033
U S Treasury Note	2,702,000		2,675,614		2,651,543		8,092		2,659,635
Unit Corp	180,000		190,350		174,600		1,524		176,124
United Mexican States	250,000		249,960		231,250		5,047		236,297
Vector Group Ltd	500,000		529,500		535,000		14,639		549,639
Venture Cdo Ltd	250,000		245,938		244,660		736		245,396
Wendys Funding Llc	750,000		750,000		737,123		2,811		739,933
Westside Ca Union Sch Dist Cap	350,000		72,380		86,002		-		86,002
Willis Engine Securitization Trust	420,281		419,230		420,281		1,027		421,308
Wilton Re Finance Llc	625,000		634,063		648,644		9,282		657,925
Wintrust Financial Corp	600,000		600,000		612,048		1,500		613,548
Wynn Las Vegas Llc Corp	500,000		500,000		476,250		10,160		486,410
Yamana Gold Inc	750,000		755,537		722,423		17,119		739,541
Ziggurat Clo Ltd	700,000		655,200		675,080		8,881		683,961
Subtotal - Fixed Income	124,498,801	\$	116,408,559	\$	119,035,687	\$	627,849	\$	119,663,536
Deel Fatata Commingle d Fund									
Real Estate Commingled Fund	4.052	¢	20 205 504	¢	40 9E4 E19	¢		ď	40,854,518
UBS Trumbull Property Fund	4,052	\$	29,395,506	\$	40,854,518	\$	-	\$	
UBS Growth & Income Fund	734		10,432,421		13,392,779		-		13,392,779
Dune Real Estate Partners	1,947,269		1,947,269	-	1,947,269	_	-	-	1,947,269
Subtotal - Real Estate Commingled	1,952,055	\$	41,775,196	\$	56,194,566	\$	-	\$	56,194,566
Private Equity									
North Sky - PEP IV Fund		\$	5,827,386	\$	7,860,606	\$	-	\$	7,860,606
Franklin Park Private Equity Fund			10,895,887		12,584,919		-		12,584,919
RWI Group - Ventures I Capital Ltd Ptnr			246,001		246,720		-		246,720
RWI Group - Ventures II Capital Ltd Ptnr			3,125,115		1,261,290		-		1,261,290
VIA Fund III			928,262		964,224		-		964,224
Subtotal - Private Equity	-	\$	21,022,651	\$	22,917,759	\$	-	\$	22,917,759
Private Equity / Alternative									
TCW		\$	3,510,000	\$	3,405,046	\$	-	\$	3,405,046
Subtotal - Private Equity / Alternative	-	\$	3,510,000	\$	3,405,046	\$	-	\$	3,405,046
Opportunistic									
Corvex		\$	15,000,000	\$	16,048,446	\$	-	\$	16,048,446
Entrust			2,260,491	Ŧ	2,293,120		-	ŕ	2,293,120
Subtotal - Opportunistic	-	\$	17,260,491	\$	18,341,566	\$	-	\$	18,341,566
TOTAL FUND	178,834,564	\$	867,925,548	\$	1,015,903,852	\$	983,470	\$	1,016,887,323

# **ACTUARIAL SECTION**



100 South Fifth Street Suite 1900 Minneapolis, MN 55402-1267 612.605.6200 phone 612.605.6203 fax www.gabrielroeder.com

December 7, 2015

Ms. Jill E. Schurtz Executive Director St. Paul Teachers' Retirement Fund Association 1619 Dayton Avenue, Room 309 St. Paul, MN 55104-6206

Dear Ms. Schurtz:

We are pleased to present the report of the actuarial valuation of the St. Paul Teachers' Retirement Fund Association ("Fund") as of July 1, 2015. This report provides among other things, the required annual contribution rate of the Fund for the Plan Year commencing July 1, 2015 and ending on June 30, 2016.

The valuation was based upon information furnished by the Fund staff, concerning Retirement Fund benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. Their efforts in furnishing the materials needed are gratefully acknowledged. We checked for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by the Fund.

The report has been prepared at the request of the Fund's Board of Trustees in accordance with Section 356.215 of the Minnesota Statutes as well as the Standards for Actuarial Work established by the State of Minnesota Legislative Commission on Pensions and Retirement. To the best of our knowledge, this report is complete and accurate, and has been prepared in accordance with generally accepted actuarial principles and practice. This report is intended for use by the Fund and those determined or approved by the Fund's Board of Trustees. This report may be provided to parties other than the Fund only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of such future measurements.

This report should not be relied on for any purpose other than the purpose described in this report. Determinations of financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

Ms. Jill E. Schurtz December 7, 2015 Page 2

Actuarial assumptions, including discount rates, mortality tables and others identified in this report, are prescribed by Minnesota Statutes Section 356.215, the Legislative Commission on Pensions and Retirement (LCPR), and the Board of Trustees. These parties are responsible for selecting the plan's funding policy, actuarial valuation methods, asset valuation methods, and assumptions. The policies, methods and assumptions used in this valuation are those that have been so prescribed and are described in the Actuarial Basis of this report. The Fund is solely responsible for communicating to GRS any changes required thereto.

Bonita J. Wurst and James D. Anderson are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions herein. The signing actuaries are independent of the plan sponsor.

We will be pleased to review this report with you at your convenience.

Respectfully submitted,

Bonito J. Wurst

Bonita J. Wurst, ASA, EA, MAAA

James D. anderson

James D. Anderson, FSA, EA, MAAA

BJW/JDA:sc

## **SUMMARY OF VALUATION RESULTS**

	July 1, 2014		July 1, 2015	
	Valuation		Valuation	
A. CONTRIBUTIONS % OF PAYROLL				
1. Statutory Contributions - Chapter 354A		19.75%		20.66%
2. Required Contributions - Chapter 356		21.94%		22.26%
3. Sufficiency / (Deficiency)		(2.19%)		(1.60%)
B. FUNDING RATIOS				
1. Accrued Liability Funding Ratio				
a Current Assets	\$	947,972	\$	999,736
b. Actuarial Accrued Liability		1,533,603		1,596,770
c. Funding Ratio		61.81%		62.61%
2. Projected Benefit Funding Ratio				
a. Current and Expected Future Assets	\$	1,683,810	\$	1,758,646
b. Current and Expected Future Benefit Obligations		1,745,155		1,833,521
c. Funding Ratio		96.48%		95.92%
C. PLAN PARTICIPANTS				
1. Active Members				
a. Number		3,876		3,597
b. Projected Annual Earnings	\$	273,990	\$	280,488
c. Average Annual Earnings (Projected dollars)	\$	68,316	\$	73,704
d. Average Age		44.7		44.4
e. Average Service		11.4		12.1
f. Additional Members on Leave of Absence		83		159
2. Others				
a. Service Retirements		3,156		3,277
b. Disability Retirements		34		33
c. Survivors		339		323
d. Deferred Retirements		1,829		1,892
e. Terminated Other Non-Vested		1,616		1,981
f. Total - Others		6,974		7,506
3. Grand Total $(1.a + 1.f + 2.f)$		10,933		11,262

### ACCOUNTING BALANCE SHEET AS OF JUNE 30, 2015

(dollars in thousands)

		Market Value		Cost Value
	\$	30,344	\$	30,344
		202,771		194,746
		613,018		494,561
		126,897		108,271
		44,664		41,793
		2,884		2,884
	\$	1,020,578	\$	872,599
	\$	5,609	\$	5,609
	\$	168,912	\$	168,912
		846,057		698,078
	\$	1,014,969	\$	866,990
	\$	1,020,578	\$	872,599
	\$	1,014,969		
\$ (55,629)				
95,762				
46,697				
(82,006)				
		15,232		
	\$	999,736		
Mark	et Valu	e		
\$	41			
	29			
	6			
e	-			
\$				
Ŷ	133			
	95,762 46,697 (82,006) <u>Mark</u> \$		$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $

\*Numbers may not add due to rounding.

## CHANGE(S) IN ASSETS AVAILABLE FOR BENEFITS AS OF JUNE 30, 2015

(dollars in thousands)

	Market Value		Cost Value	
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	\$	1,045,435	\$	884,293
B. OPERATING REVENUES	¢	17 567	¢	17 567
1. Member Contributions	\$	17,567	\$	17,567
2. Employer Contributions		25,505		25,505
3. Supplemental Contributions		10,665		10,665
4. Reemployed Annuitant Employer Contributions		541		541
5. Investment Income		14,656		15,735
6. Investment Expenses		(4,524)		(4,524)
7. Net Realized Gain / (Loss)		27,709		27,709
8. Other		0		0
9. Net Change in Unrealized Gain / (Loss)		(12,084)		0
10. Total Operating Revenue	\$	80,035	\$	93,198
C. OPERATING EXPENSES				
1. Service Retirements	\$	97,277	\$	97,277
2. Disability Benefits		750		750
3. Survivor Benefits		10,851		10,851
4. Refunds		875		875
5. Administrative Expenses		748		748
6. Total Operating Expenses	\$	110,501	\$	110,501
D. OTHER CHANGES IN RESERVES	\$	0	\$	0
E. ASSETS AVAILABLE AT END OF PERIOD	\$	1,014,969	\$	866,990
<ul><li>F. DETERMINATION OF CURRENT YEAR UNRECOGNIZED ASSET</li><li>1. Average Balance</li></ul>	RETU	RN		
(a) Assets available at BOY:			\$	1,045,435
(b) Assets available at EOY:				1,014,969
(c) Average balance $\{[(a) + (b) - Net Investment Income] / 2\}$			\$	1,017,324
{Net investment income: B.5+B.6+B.7+B.9}				
2. Expected Return: .080 * F.1				81,386
3. Actual Return				25,757
4. Current Year Gross Asset Gain/(Loss): F.3 - F.2			\$	(55,629)

### ACTUARIAL BALANCE SHEET AS OF JULY 1, 2015 (dollars in thousands)

A.	CURRENT ASSETS	\$	999,736
B.	EXPECTED FUTURE A SSETS		
	<ol> <li>Present Value of Expected Future Statutory Supplemental Contributions*</li> </ol>	\$	522,159 236,751
	2. Present Value of Future Normal Costs	\$	758,910
	3. Total Expected Future Assets	+	
C.	TOTAL CURRENT AND EXPECTED FUTURE ASSETS	\$	1,758,646
D.	TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS	\$	1,833,521
E.	CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (D - C)	\$	74,875

\* Includes the effect of scheduled employee and employer contribution increases of 0.50% each and supplemental state contributions.

#### DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL) AND SUPPLEMENTAL CONTRIBUTION RATE AS OF JULY 1, 2015

(dollars in thousands)

		Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
Α.	<ul> <li>DETERMINATION OF ACTUARIAL</li> <li>ACCRUED LIABILITY (AAL)</li> <li>1. Active Members* <ul> <li>a. Retirement Benefits</li> <li>b. Disability Benefits</li> <li>c. Surviving Spouse and Child Benefits</li> <li>d. Vested Withdrawals</li> <li>e. Refund Liability Due to Death or Withdrawal</li> <li>f. Total</li> </ul> </li> <li>2. Deferred Retirements</li> <li>3. Former Members without Vested Rights</li> <li>4. Annuitants</li> <li>5. Total</li> </ul>	\$ 634,413 13,347 8,959 36,597 3,165 696,481 \$ 78,303 4,913 1,053,824 \$ 1,833,521	\$ 173,661 5,325 3,184 40,175 14,406 236,751 0 0 0 0 \$ 236,751	\$ 460,752 8,022 5,775 (3,578) (11,241) 459,730 \$ 78,303 4,913 1,053,824 \$ 1,596,770
B.	<ul> <li>DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)</li> <li>1. Actuarial Accrued Liability (A.5)</li> <li>2. Current Assets</li> <li>3. Unfunded Actuarial Accrued Liability (B.1 - B.2)</li> <li>DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE</li> <li>1. Present Value of Future Payrolls Through the Amortization Date of June 30, 2042<sup>#</sup></li> <li>2. Supplemental Contribution Rate (B.3 / C.1)</li> </ul>			\$ 1,596,770 \$ 999,736 \$ 597,034 \$ 4,641,140 12.86%
D.	Includes members on leave of absence.			

<sup>#</sup>Calculated using 8.0% annual investment return rate.

#### CHANGES IN UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL) AS OF JULY 1, 2015 (dollars in thousands)

Α.	UAAL AT BEGINNING OF YEAR	\$ 585,631
B.	CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
	1. Normal Cost and Expenses	\$ 24,072
	2. Contributions	(53,737)
	3. Interest*	 51,596
	4. Total	\$ 21,930
C.	EXPECTED UAAL AT END OF YEAR (A + B.4)	\$ 607,561
D.	INCREASE / (DECREASE) DUE TO ACTUARIAL LOSSES / (GAINS)	
	BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
	1. Age and Service Retirements	\$ 31
	2. Disability Retirements	(20)
	3. Death-in-Service Benefits	20
	4. Withdrawals	(1,560)
	5. Salary Increases	(5,081)
	6. Investment Income	(34,183)
	7. Mortality of Annuitants	590
	8. Other Items	 13,580
	9. Total	\$ (26,623)
E.	UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES	\$ 580,938
	IN ACTUARIAL ASSUMPTIONS (C + D.9)	
F.	CHANGE IN UAAL DUE TO PLAN AMENDMENTS	(9,700)
G.	CHANGE IN UAAL DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS	 25,796
H.	UAAL AT END OF YEAR (E + F + G)	\$ 597,034

\*Interest on assets determined at 8.00%; interest on liability determined at 8.40%.

## **DETERMINATION OF CONTRIBUTION SUFFICIENCY** AS OF JULY 1, 2015 (dollars in thousands)

	Percent-of- Payroll	Dolla	ar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A			
1. Employee Contributions	7.00%	\$	19,648
2. Employer Contributions	9.85%		27,618
3. Supplemental Contribution			
a. 1996 Legislation	0.30%		838
b. 1997 Legislation	1.01%		2,827
c. 2014 Legislation	2.50%		7,000
4. Total	20.66%	\$	57,931
<ul><li>B. REQUIRED CONTRIBUTIONS - CHAPTER 356</li><li>1. Normal Cost</li></ul>			
a. Retirement Benefits	6.82%	\$	19,126
b. Disability Benefits	0.19%		538
c. Surviving Spouse and Child Benefits	0.12%		329
d. Vested Withdrawals	1.45%		4,071
e. Refund Liability Due to Death or Withdrawal	0.55%		1,532
f. Total	9.13%	\$	25,596
2. Supplemental Contribution Amortization	12.86%		36,071
3. Allowance for Administrative Expenses	0.27%		757
4. Total	22.26%	\$	62,424
C. CONTRIBUTION SUFFICIENCY / (DEFICIENCY) (A.4 - B.4)	(1.60%)		(4,493)
Projected Annual Payroll for Fiscal Year Beginning on the Valuation	Date:	\$	280,488

#### I. ACTUARIAL COST METHOD

An Actuarial Cost Method is a set of techniques used by the actuary to develop contribution levels under a retirement plan. The Actuarial Cost Method used in this valuation for all purposes is the Entry Age Actuarial Cost Method. Under this Method, a Normal Cost is developed by amortizing the actuarial value of benefits expected to be received by each active participant (as a level percentage of pay) over the total working lifetime of that participant, from hire to termination. Years of Service for valuation purposes was provided by the Retirement Fund. Age as of the valuation date was calculated based on the dates of birth provided by the Retirement Fund. Entry Age for valuation purposes was calculated as the age on the valuation date minus the years of service on the valuation date.

To the extent that current assets and future Normal Costs do not support participants' expected future benefits, an Unfunded Actuarial Accrued liability ("UAAL") develops. The UAAL is amortized over the closed statutory amortization period ending June 30, 2042 using level percent-of-payroll assuming payroll increases of 4.00% per annum. The total contribution developed under this method is the sum of the Normal Cost and the payment toward the UAAL.

#### II. CURRENT ACTUARIAL ASSUMPTIONS

The assumptions were last updated for the July 1, 2013 valuation as a result of an experience study during the five-year period of July 1, 2006 to June 30, 2011, as well as a legislated change to the investment return assumption effective July 1, 2015.

#### A. Demographic Assumptions

Mortality:

- 1. Healthy Mortality\*:
  - a. Male: RP-2000 Combined Mortality Table for males projected with Scale AA to 2020 set back 1 year
  - b. Female: RP-2000 Combined Mortality Table for females projected with Scale AA to 2020 set back 3 years
- 2. Disabled Mortality:
  - i. Male: RP-2000 Disabled Life Mortality Table for males
  - ii. Female: RP-2000 Disabled Life Mortality Table for females
- \* Mortality rates were adjusted to include margin for future mortality improvement as described in the table name above.

#### ACTUARIAL METHODS AND ASSUMPTIONS AS OF JULY 1, 2015

		althy •tality		abled tality
<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
20	2	1	226	75
21	2	1	226	75
22	2	1	226	75
23	3	1	226	75
24	3	1	226	75
25	3	1	226	75
26	3	1	226	75
27	3	1	226	75
28	3	2	226	75
29	4	2	226	75
30	4	2	226	75
31	4	2	226	75
32	5	2	226	75
33	5	2	226	75
34	6	3	226	75
35	6	3	226	75
36	7	3	226	75
37	8	4	226	75
38	8	4	226	75
39	9	4	226	75
40	9	4	226	75
41	9	5	226	75
42	10	5	226	75
43	10	5	226	75
44	10	6	226	75

Deaths Expressed as the Number of Occurrences per 10,000:

		althy tality		abled tality
<u>Age</u>	<u>Male</u>	Female	<u>Male</u>	Female
45	11	6	226	75
46	12	7	238	82
47	12	8	251	90
48	13	8	264	98
49	13	9	277	106
50	14	9	290	115
51	15	10	303	125
52	17	11	316	135
53	18	12	329	145
54	19	13	342	155
55	21	15	354	165
56	25	17	367	176
57	29	20	380	187
58	33	23	393	197
59	38	27	407	208
60	43	31	420	218
61	49	35	435	229
62	57	40	450	241
63	65	46	466	253
64	76	53	483	266
65	85	60	502	280
66	96	69	522	296
67	111	78	545	313
68	124	88	569	332
69	135	99	596	353

Deaths Expressed as the Number of Occurrences per 10,000:

#### ACTUARIAL METHODS AND ASSUMPTIONS AS OF JULY 1, 2015

#### Rates of Disability:

Age	Disability	Age	Disability
20	2	45	5
21	2	46	5
22	2	47	5
23	2 2	48	5
24	2	49	5
25	2	50	10
26	2	51	10
27	2	52	10
28	2 2	53	10
29	2	54	10
30	3	55	20
31	3	56	20
32	3	57	20
33	3	58	20
34	3	59	20
35	3	60	40
36	3	61	40
37	3	62	40
38	3	63	40
39	3	64	40
40	3		
41	3		
42	3		
43	3		
44	3		

Disability Expressed as the Number of Occurrences per 10,000:

#### Rates of Termination:

Years of	Number of Terminations per 1,000 Active Members		
Service	<u> </u>	Female	
0	400	400	
1	180	180	
2	140	140	
3	100	100	
4	60	67	
5	50	59	
6	45	51	
7	41	43	
8	37	35	
9	33	31	
10	29	27	
11	25	23	
12	20	19	
13	20	15	
14	20	13	
15 & Over	20	13	

#### Rates of Retirement:

#### Retirements Expressed as the Number of Occurrences per 10,000:

Age	Basic Members Eligible for Rule of 90 Provision		Male Coordinated Members Eligible for Rule of 90 Provision	Female Coordinated Members Eligible for Rule of 90	Members Not	Female Coordinated Members Not Eligible for Rule of 90 Provision
~~	5 000	000	2,500	2,500	700	500
55	5,000	800	3,500	3,500	700	500
56	5,000	1,300	3,500	3,500	700	500
57	4,000	1,300	3,500	3,500	700	500
58	4,000	1,800	3,500	3,500	700	500
59	3,500	1,800	3,500	3,500	700	500
60	3,500	2,000	3,500	3,500	1,100	800
61	3,500	2,000	3,500	3,500	1,500	1,100
62	3,500	4,000	3,500	3,500	1,900	1,400
63	3,500	4,000	3,500	3,500	2,300	1,900
64	4,000	4,000	3,500	4,000	2,700	2,400
65	5,000	5,000	3,500	5,000	3,100	3,500
66	3,000	5,000	3,500	5,000	3,500	3,500
67	3,000	5,000	3,500	5,000	3,500	3,500
68	3,000	5,000	3,500	5,000	3,500	3,500
69	3,000	5,000	3,500	5,000	3,500	3,500
70 & Over	10,000	10,000	10,000	10,000	10,000	10,000

#### ACTUARIAL METHODS AND ASSUMPTIONS AS OF JULY 1, 2015

#### **B.** Economic Assumptions

Investment Return Rate:	8.00%
Cost of Living Increases:	1.00% per year through 2040; 2.00% beginning 2041; 2.50% beginning 2051.
Wage Inflation:	4.00% per year
Future Salary Increases:	In addition to the age-based rates shown below, during the first 15 years of employment, a service-based component of $0.20\% \times (15-T)$ , where T is completed years of service, is included in the salary increase used.

Ago	Ultimate Rate of Annual Salary	4.50	Ultimate Rate of Annual Salary
Age	Increases	Age	Increases
<22	5.90%	45	4.75%
23	5.85	46	4.70
24	5.80	47	4.65
		48	4.60
25	5.75	49	4.55
26	5.70		
27	5.65	50	4.50
28	5.60	51	4.45
29	5.55	52	4.40
		53	4.35
30	5.50	54	4.30
31	5.45		
32	5.40	55	4.25
33	5.35	56	4.20
34	5.30	57	4.15
		58	4.10
35	5.25	59	4.05
36	5.20		
37	5.15	60 & Over	4.00
38	5.10		
39	5.05		
40	5.00		
41	4.95		
42	4.90		
43	4.85		
44	4.80		

#### Annual Salary Increases

Asset Value:

The actuarial value of assets is smoothed by using a five-year average market value.

#### C. Other Assumptions

Marital Status:	It is assumed that 75% of male members and 60% of female members have an eligible spouse. The male spouse is assumed to be two years older than the female spouse. Married members are assumed to have two dependent children.
Deferred Benefit Commencement:	Basic Plan members who terminate vested are assumed to commence benefits at age 61. Coordinated Plan members are assumed to commence benefits at age 62. If the member is already past the assumed deferral age, the member is assumed to commence benefits one year from the valuation date.
Administrative Expenses:	Prior year administrative expenses (excluding investment expenses) are expressed as a percentage-of-payroll and then applied to current projected payroll.
Allowance for Combined Service Annuity:	7.00% load on liabilities for active members hired before July 1, 1989;
	2.00% load on liabilities for active members hired after June 30, 1989; and
	30.00% load on liabilities for former members.
Missing Salary and Salary Minimums:	Active members with reported salaries of \$100 or less were assumed to have the average non-zero active salary. Active members with salaries less than those reported at the prior valuation date are valued using their prior salary amount. Active members who have been hired within one year of the valuation date have had their pay annualized by dividing by months of service credited, not to exceed the average non-zero active salary. For members on leave of absence at valuation date who were not on leave at the prior valuation date, the prior year's valuation pay was used.
Missing Data for Deferred Vested Members:	Deferred vested members without salary information were assumed to have a final average salary of \$40,000.
Decrement Timing:	Retirement and Termination: end of valuation year – consistent with retirements and terminations occurring at the end of the school year.
	Death and Disability: middle of valuation year.

Valuation of Future Post- Retirement Benefit Increases:	If the plan has reached the funding ratio threshold required to pay a different benefit increase, Minnesota Statutes require the benefit increase rate to be reflected in the liability calculations. If the plan has not yet reached the funding ratio threshold required to pay a benefit increase, Minnesota Statutes require a projection to be performed to determine the expected attainment of the funding ratio thresholds, and the expected payment of benefit increases must be reflected in the liability calculations.
Supplemental Contributions:	1996 legislation provides for a variable amortization aid contribution paid annually on July 15. We assumed the annual amortization aid contribution will equal \$838,000, which was the actual contribution for the most recent fiscal year. Additionally, according to 1997 legislation, annual supplemental contributions currently equal to \$2,827,000 are scheduled to be paid on October 1. According to 2014 legislation, the State of Minnesota will make annual additional supplemental contributions of \$7,000,000 on October 1. The contributions described herein will continue until the plan is 100% funded or until June 30, 2042, whichever occurs earlier.
Projected Annual Payroll Calculation:	The census data as of July 1, 2015 reflects retirements and terminations occurring during the months of May and June; however, it does not necessarily reflect the replacements hired to fill their positions who may have hire dates in August and September. We assumed that May and June retirements are replaced by members coming in at the B.A. Step 1 salary level of \$43,021; and the Projected Annual Payroll for the fiscal year ending June 30, 2015 includes this replacement salary amount.

## **APPENDIX –** State Auditor's Report

# **STATE OF MINNESOTA** Office of the State Auditor



## Rebecca Otto State Auditor

The SPTRFA received the highest possible audit opinion for its fiscal year ended June 30, 2015 financial statements. We invite you to read the full report on the website of the Minnesota Office of the State Auditor <a href="http://www.osa.state.mn.us">http://www.osa.state.mn.us</a>

### ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION ST. PAUL, MINNESOTA

FOR THE YEAR ENDED JUNE 30, 2015