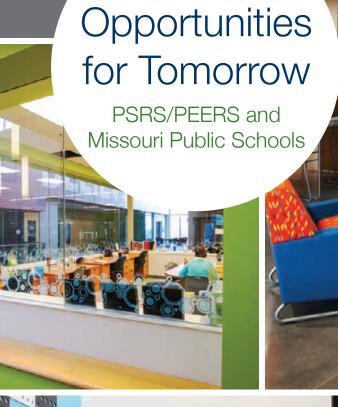
for the fiscal year ended June 30, 2019









# PSRS/PE

RETIREMENT SYSTEMS OF MISSOURI



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### A Snapshot of PSRS/PEERS Members

PSRS/PEERS has helped more than 135,000 members and their families achieve financial security during retirement. We are dedicated to helping our current and future members achieve the financially secure retirement they deserve after a full career of service to Missouri's public schools and students.

While the average age and years of service among our working members have remained fairly constant over the past five years, average annual salaries have increased moderately, and total PSRS and PEERS membership continues to grow. As our membership grows, we remain dedicated to maintaining our financial strength and providing the highest level of service and retirement security to all of our members, now and in the future.

PSRS Active Member Profile						
	2019	2018	2017	2016	2015	
Average Age	42.2	42.1	42.0	42.0	42.0	
Average Years of Service	12.0	11.8	11.7	11.6	11.5	
Average Annual Salary	\$62,769	\$61,634	\$60,643	\$59,005	\$58,582	

PEERS Active Member Profile							
	2019	2018	2017	2016	2015		
Average Age	48.1	48.2	48.3	48.3	48.4		
Average Years of Service	8.3	8.4	8.5	8.6	8.6		
Average Annual Salary	\$35,110	\$34,361	\$33,643	\$32,887	\$32,220		

	PSRS Total Mem	· ·			
	2019*	2018*	2017*	2016*	2015*
Active	78,863	78,700	78,274	78,129	78,318
Inactive	18,075	17,524	16,756	16,376	16,260
Retired	57,502	55,930	54,629	53,069	51,345
Disabled	1,020	991	981	957	892
Survivors	4,550	4,374	4,162	3,994	3,884
Total Membership	160,010	157,519	154,802	152,525	150,699

PEERS Total Membership							
	2019*	2018*	2017*	2016*	2015*		
Active	49,345	48,549	47,953	47,851	46,864		
Inactive	37,118	35,409	33,152	31,577	30,999		
Retired	28,947	27,575	26,335	25,061	23,900		
Disabled	832	813	804	782	767		
Survivors	2,071	1,972	1,863	1,740	1,631		
Total Membership	118,313	114,318	110,107	107,011	104,161		

<sup>\*</sup>Inactive members includes vested and non-vested accounts, as well as terminated accounts.

### **About Our Retirees**

We take great pride in the long-term strength and stability of the Systems. We believe our retired members, after a full career of service to our schools, students and communities, are deserving of the peace of mind that comes with knowing they will receive lifetime retirement benefits.

Most PSRS/PEERS benefit recipients are service retirees. Lifetime service retirement benefits are payable to members who have met age and service requirements. Disability benefits are provided for members who are unable to earn a livelihood due to permanent disability and who have met eligibility criteria. The Systems also provide death benefits to qualified beneficiaries of deceased members.

#### PSRS 2018-2019 School Year\* Retirees

Years of Service at Retirement	Number of Retirees	Average Years of Service	Average Single Life Monthly Benefit	Average Age at Retirement
5 - 9.9	249	6.9	\$ 657	61.8
10 - 14.9	267	12.1	\$ 1,323	61.7
15 - 19.9	267	17.3	\$ 2,260	62.1
20 - 24.9	494	22.5	\$ 3,273	60.5
25 - 29.9	766	27.1	\$ 4,364	55.5
30 - 34.9	408	31.3	\$ 5,480	56.6
35 - 39.9	38	36.7	\$7,506	62.3
40+	13	43.2	\$8,813	67.7
Overall Average		22.5	\$ 3,484	58.8

#### PEERS 2018-2019 School Year\* Retirees

Years of Service at Retirement	Number of Retirees	Average Years of Service	Average Single Life Monthly Benefit	Average Age at Retirement
5 - 9.9	544	7.1	\$ 253	63.1
10 - 14.9	396	12.2	\$ 521	64.4
15 - 19.9	374	17.4	\$ 828	63.9
20 - 24.9	424	22.3	\$ 1,206	61.4
25 - 29.9	231	26.9	\$ 1,691	60.4
30+	135	34.0	\$ 2,530	62.6
Overall Average		16.8	\$ 902	62.8

<sup>\*</sup> A school year runs July 1 to June 30.

The average 2018-2019 single life monthly benefit for new PSRS retirees is \$3,484 and for PEERS retirees is \$902. How much will your benefit be? Use our online Benefit Estimator located under Web Member Services at **www.psrs-peers.org** to estimate your own monthly retirement benefit amount.

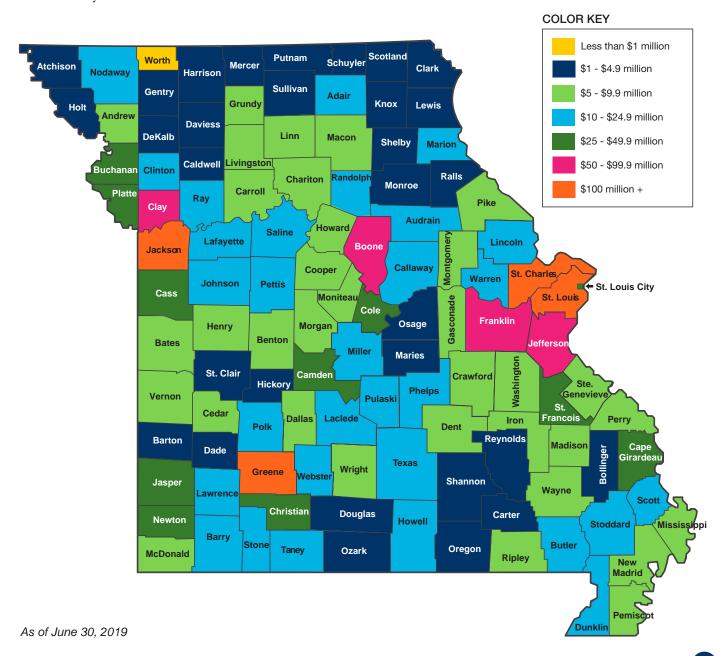
### Retirees and the Economic Impact of Benefits

The benefits distributed to our retirees make a sizable contribution to Missouri's economy.

In fiscal year 2019, PSRS/PEERS paid nearly \$3 billion in retirement benefits to more than 94,000 retirees and beneficiaries. Of this amount, more than \$2.6 billion, or 89% was paid to Missouri residents. These benefits serve not only as a reliable source of income for those retirees and beneficiaries, but also fuel the local economies in which the retirees live.

Pension benefits received by our retirees are often spent in their local communities. As one person's spending becomes another person's income, the funds begin to ripple through the economy. In this way, the expenditure and sales tax revenue our retired members generate stimulate the growth of Missouri's economy.

If you look at it in terms of providing paychecks for Missourians, PSRS/PEERS would qualify as one of the state's largest employers. We have a positive impact on every county in the state, regardless of swings in the economy.



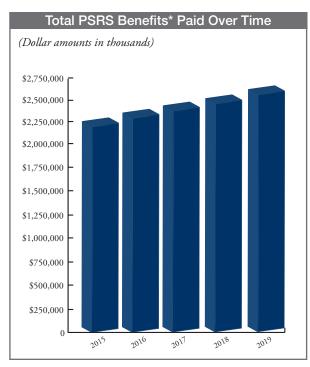
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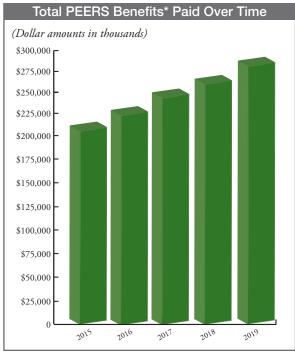
### **Retirement Trends**

The total number of PSRS/PEERS retirees and amount of benefits paid each year continue to grow. In fiscal year 2019 (July 1, 2018 to June 30, 2019) we helped 4,606 individuals begin their retirement by providing them with PSRS/PEERS benefits.

PSRS Members Retiring By Year								
	2019	2018	2017	2016	2015			
Number of Retirements	2,502	2,406	2,601	2,603	2,570			
Average Age	58.8	59.1	59.0	59.1	59.3			
Average Years of Service	22.5	22.3	22.5	22.3	22.3			
Average Monthly Benefit	\$3,484	\$3,365	\$3,359	\$3,239	\$3,230			

PEERS Members Retiring By Year								
	2019	2018	2017	2016	2015			
Number of Retirements	2,104	2,025	2,023	1,903	1,884			
Average Age	62.8	62.7	62.8	62.9	63.1			
Average Years of Service	16.8	16.5	16.5	16.5	16.3			
Average Monthly Benefit	\$902	\$864	\$844	\$826	\$813			





<sup>\*</sup>Annual benefits paid to service retirees, disability retirees, and survivors. Includes PLSO Payments.



### Funding Status and Valuation Results

The PSRS/PEERS Board of Trustees and staff take great pride in serving Missouri's public school educators and staff by helping to provide them with a secure financial future. As part of that service, the Board evaluates a large amount of information each year including, but not limited to, the annual actuarial evaluations prepared by the Systems' external actuaries, PricewaterhouseCoopers, LLC.

The Board of Trustees' funding goals are:

Provide
for the security
and financial stability
of the Systems, including
maintaining at least an 80%
pre-funded ratio, continuing to
amortize the unfunded liability
until PSRS/PEERS is 100%
pre-funded, and allowing for a
reasonable assumed rate
of return given capital
market estimates

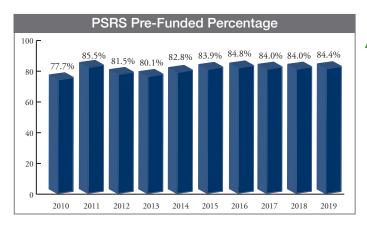
Maintain the contribution rates of both Systems at or below current levels

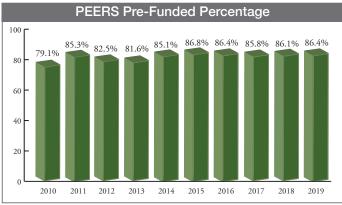
Provide a consistent
COLA for PSRS/PEERS
benefit recipients to maintain
their purchasing power, noting
COLAs should be dependable
and affordable without harming
the financial stability of
the Systems

The Systems' funding objective continues to be the achievement of a funded ratio of 100% over a closed 30-year period. For this purpose, funded ratio is defined as the actuarial value of assets divided by the actuarial accrued liability determined under the entry age normal cost method and the actuarial assumptions adopted by the Board of Trustees.

As of June 30, 2019, PSRS was 84.4% pre-funded, while PEERS was 86.4% pre-funded. Both Systems showed a slight increase in funding from the June 30, 2018 funded percentages of 84.0% for PSRS and 86.1% for PEERS.

Additional information on actuarial assumptions and funding can be found in the actuarial section of the *Comprehensive Annual Financial Report*. Based upon the June 30, 2019 valuations and overall financial projections, the Board of Trustees set the fiscal year 2021 contribution rates at the fiscal year 2020 level for both members and employers.





Actuarial value of assets as a percentage of actuarial accrued liabilities

Missouri law requires the Systems to maintain a funding level that covers current and anticipated future benefit promises. This guarantees availability of funds to pay benefits as prescribed by law.

The pre-funded status of both systems has remained relatively stable over the last 10 years.

### **Funding Sources**

#### **MEMBERS**

While working, members contribute a percentage of salary to PSRS and PEERS to help fund benefits. The contribution rate is set each year by the PSRS/PEERS Board of Trustees, based on the recommendation of the Systems' actuary after the annual actuarial valuation is complete.

#### **EMPLOYERS**

Employers contribute an equal amount. All employer contributions are used solely to fund benefits for retirees and beneficiaries of deceased members.

### **INVESTMENTS**

Investment earnings account for the majority of the assets needed to fund benefits. The investment portfolios of PSRS and PEERS represent all contributions to the plans, from members and their employers, as well as all net earnings on these assets.

These funds are held in support of current and future liabilities.

Over the last 20 years, approximately 60¢ of every dollar used to pay retirees is generated from investment earnings.

20-Year Average



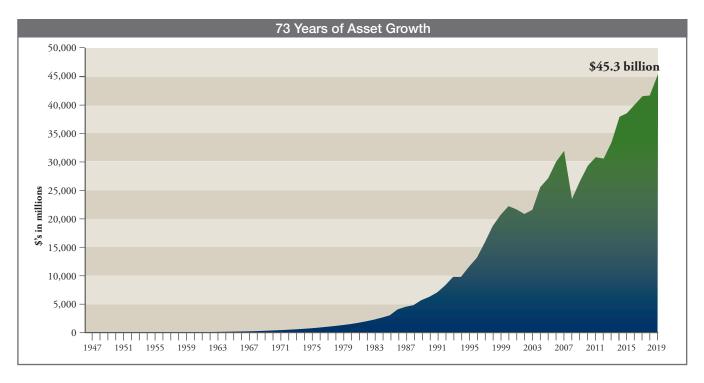
Note: The 21¢ includes member contributions and service purchases.



### **Growth in Assets**

Prudent and cost-efficient management of investments is a major tenant of the PSRS/PEERS investment program. Our investment staff has produced consistent and stable investment returns over long periods of time that exceed the actuarial assumed rate of return.

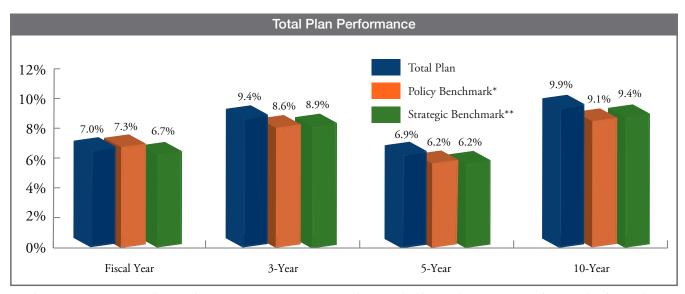
The Systems' total invested assets were \$45.3 billion as of June 30, 2019. There has been a long-term growth in assets since the inception of PSRS in 1946 and PEERS in 1965, as shown in the graph below.



### Plan Performance

The Systems earned an investment return of 7.0% for fiscal year 2019 (6.9% net of all investment expenses and fees) with an ending market value of invested assets at \$45.3 billion. The Systems' well-structured investment portfolio added approximately \$2.9 billion in investment earnings to the growth of assets during the year. The fiscal year 2019 total plan return of 7.0% fell short of the long-term goal (actuarial required rate of return) of 7.5% and the total plan policy benchmark return of 7.3%. However, PSRS and PEERS are long-term investors with a diversified portfolio that continues to produce strong long-term returns where the annualized investment return is 8.3% (8.1% net of all investment expenses and fees) over the last 30 years.

Within the Systems' investment portfolio, all asset classes produced positive returns for the year. Private Risk Assets produced the strongest returns for the year as Private Equity performed especially well returning 15.4%. Public Risk Assets and Safe Assets also did well overall for the year driven by positive returns from both equity markets and fixed income markets with U.S. Public Equities returning 7.4% and U.S. Treasuries returning 7.3%. Each of these asset classes strongly contributed to the Systems' investment return of 7.0% for the year.



\*As of June 30, 2019: 39.0% Russell 3000 Index, 16.5% MSCI ACWI ex-USA net Index, 16% Bloomberg Barclays U.S. Treasury Index, 15% Bloomberg Barclays U.S. Intermediate Credit Index, 7.5% NFI-ODCE, 4% Bloomberg Barclays U.S. TIPS 1-10 Years Index, and 2% ICE BofAML U.S. High Yield Master II Index.

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<sup>\*\*</sup>As of June 30, 2019: 41.9% Russell 3000 Index, 18.9% MSCI ACWI ex-USA net Index, 12.6% Bloomberg Barclays U.S. Treasury Index, 10.4% Bloomberg Barclays U.S. Intermediate Credit Index, 8.2% NFI-ODCE, 3.7% Merrill Lynch 3- Month U.S. Treasury Bill Index, 3.3% Bloomberg Barclays U.S. TIPS 1-10 Years Index, and 1.0% ICE BofAML U.S. High Yield Master II Index. The Total Plan Strategic Benchmark changes monthly based on the actual asset allocation at the end of the previous month.

### **Asset Allocation**

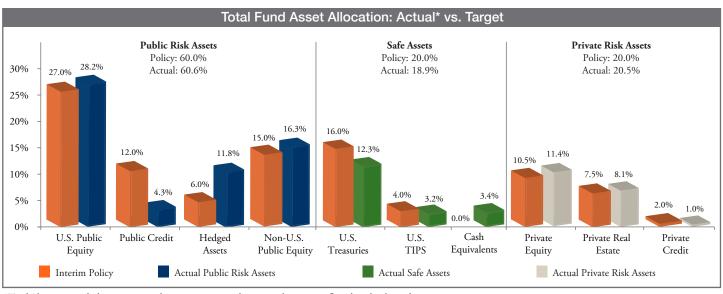
The internal investment staff, under the direction of the PSRS/PEERS Board of Trustees, has adopted a disciplined and diversified investment portfolio that includes allocations to multiple asset classes. Over time, every specific asset class within the PSRS/PEERS' investment portfolio performs a valuable function.

The Board amended the long-term asset allocation at the June 2016 Board of Trustees meeting. The allocation to each investment program considers risk tolerance of the Systems and the long-term return objective. The long-term target asset allocation is expected to maintain similar levels of total portfolio risk, while allowing for more efficient investment returns. Implementation of the changes will be achieved over a number of years through a disciplined investment approach. The changes to the asset allocation are as follows: Public Risk Assets decreased 5% and Private Risk Assets increased 5%. Within Public Risk Assets, Public Credit decreased from 12% to 7%. Within Private Risk Assets, Private Equity increased from 10.5% to 12%, Real Estate increased from 7.5% to 9% and Private Credit increased from 2% to 4%.

For fiscal year 2019, the interim policy allocation was 60% Public Risk Assets, 20% Safe Assets and 20% Private Risk Assets. The interim policy allocations have been established to reflect meaningful progress towards the new long-term targets. Within each broad policy target, the Board has established sub-asset-class targets. For example, as the chart below indicates, the target allocation to U.S. Public Equity was 27% as of June 30, 2019.

Internal staff utilized the flexibility built into the investment policy to strategically overweight or underweight certain asset classes throughout the year. Strategic decisions within the Public Risk Assets program included an overweight to U.S. equities and Non-U.S. equities, which provided meaningful returns to the Systems in fiscal year 2019.

The Systems' asset allocation as of fiscal year-end, was as follows:



<sup>\*</sup>Total Plan assets include 0.2% invested in an operating cash account that is not reflected in the chart above.

## Top 10 Stock Holdings

The top 10 U.S. Public Equity holdings as of June 30, 2019 are shown in the table below.

U.S. Public Equity - Top 10 Holdings						
Top 10 Largest Holdings*			% of Total			
June 30, 2019		Fair Value	U.S. Public Equity			
Amazon.com Inc.	\$	139,403,360	1.1%			
Microsoft Corp.		124,236,781	1.0%			
Alphabet Inc.		105,537,152	0.8%			
Facebook Inc.		92,611,436	0.7%			
Apple Inc.		91,518,010	0.7%			
Johnson & Johnson		73,897,372	0.6%			
Medtronic PLC.		72,670,373	0.6%			
Coca-Cola Co.		71,314,631	0.6%			
Cisco Systems Inc.		63,439,021	0.5%			
Exact Sciences Corp.		57,323,647	0.4%			
TOTAL	\$	891,951,783	7.0%			

<sup>\*</sup> Includes only actively managed separate accounts.

The following table displays the top 10 Non-U.S. Public Equity holdings as of June 30, 2019.

Non-U.S. Public Equity - Top 10 Holdings						
Top 10 Largest Holdings*			% of Total Non-U.S.			
June 30, 2019		Fair Value	<b>Public Equity</b>			
Roche Holding AG	\$	97,174,832	1.3%			
Nestle SA		69,682,166	0.9%			
SAP SE		61,959,068	0.8%			
AIA Group Ltd.		55,817,035	0.8%			
Hoya Corp.		53,343,792	0.7%			
LVMH SE		45,301,725	0.6%			
Schneider Electric SE		41,857,869	0.6%			
Tata Consultancy Services Ltd.		40,813,700	0.6%			
Canadian National Railway Co.		37,766,317	0.5%			
Novo Nordisk A/S		37,331,353	0.5%			
Total	\$	541,047,857	7.3%			

<sup>\*</sup> Includes only actively managed separate accounts.

 $A\ complete\ list\ of\ portfolio\ holdings\ is\ available\ upon\ request.$ 

A complete list of portfolio holdings is available upon request.

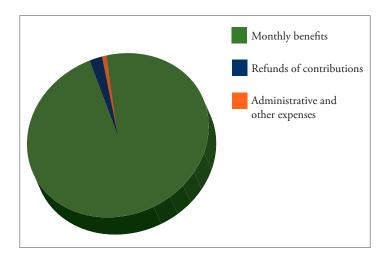


### Fiscal Year 2019 Expenses

#### Expenses for Fiscal Year 2019

The sole purpose of the Retirement Systems is to provide financial benefits to our members and their beneficiaries.

Therefore, it is no surprise that the primary expense incurred by PSRS/PEERS is the payment of monthly benefits to members and beneficiaries.



Benefits Paid in Fiscal Year 2019 (000's)							
Type of Benefit	PSRS		PEERS			Total	
Service Retirement Benefits	\$	2,494,174	\$	274,310	\$	2,768,483	
Disability Benefits		27,826		4,622		32,448	
Beneficiary Payments	\$	138,978	\$	12,637	\$	151,615	
Subtotal Monthly Benefits	\$	2,660,978	\$	291,569	\$	2,952,547	
Refunds to Former Members	\$	49,296	\$	18,674	\$	67,970	

- The largest percentage of the Systems' benefit recipients is service retirees. Monthly service retirement benefits are payable to members who have met age and service requirements.
- Disability benefits are paid to members who are unable to earn a livelihood due to a permanent disability and who have met certain eligibility requirements.
- Beneficiary payments are available to survivors if the retiree elected this option. In PSRS, survivor benefits are also available to designated beneficiaries of members who die before retirement.

Other expenses include the payment of refunds of contributions to former members, and the costs to administer the Systems.

For a detailed look at the Systems' expenses during fiscal year 2019, see the financial statements on page 19.

### Financial Statements

The Statements of Fiduciary Net Position present information on the assets and liabilities of the Systems, with the difference between the two reported as net position. The net position of the Systems reflect the resources available to pay benefits to members when due. Over time, increases and decreases in net position measure whether the Systems' financial position is improving or deteriorating.

Statements of Fiduciary Net Position											
(As of June 30, 2019 with comparative totals for June 30,	Combined Totals										
	PSRS	PEERS	June 30, 2019	June 30, 2018							
ASSETS											
Cash	\$ 63,231,559	\$ 13,436,039	\$ 76,667,598	\$ 621,911,512							
Receivables	2,152,895,128	266,717,306	2,419,612,434	2,629,493,025							
Investments, at fair value	40,764,562,759	5,039,050,774	45,803,613,533	43,732,896,140							
Invested securities lending collateral	229,699,265	28,388,411	258,087,676	374,910,695							
Prepaid expenses	2,737,979	334,569	3,072,548	44,150							
Capital assets, net of accumulated depreciation	22,128,631	-	22,128,631	23,131,284							
TOTAL ASSETS	43,235,255,321	5,347,927,099	48,583,182,420	47,382,386,806							
DEFERRED OUTFLOW OF RESOURCES											
Outflows related to other post employment benefit obligations	93,020	59,472	152,492	98,798							
LIABILITIES	2,641,399,656	329,341,596	2,970,741,252	3,353,081,314							
DEFERRED INFLOW OF RESOURCES											
Inflows related to other post employment benefit obligations	189,820	121,360	311,180	93,590							
NET POSITION - RESTRICTED											
FOR PENSIONS	\$ 40,593,758,865	\$ 5,018,523,615	\$ 45,612,282,480	\$ 44,029,310,700							

The Statements of Changes in Fiduciary Net Position show the incoming revenue (additions) and outgoing expenses (deductions) of the Systems throughout the fiscal year.

Statements of Changes in Fiduciary Net Position											
(For the year ended June 30, 2019 with comparative totals for the year ended June 30, 2018)  Combined Totals Year Ended											
	PSRS PEERS				June 30, 2019 June 30, 2018						
ADDITIONS											
Employer contributions	\$	712,545,096	\$	120,042,046	\$	832,587,142	\$	812,073,541			
Member contributions		747,402,726		126,609,105		874,011,831		848,464,011			
Net investment income		2,595,859,169		319,773,097		2,915,632,266		3,555,255,364			
Other income	_	6,366		163		6,529		4,519			
TOTAL ADDITIONS		4,055,813,357		566,424,411		4,622,237,768		5,215,797,435			
DEDUCTIONS											
Monthly benefits		2,660,977,570		291,568,479		2,952,546,049		2,825,019,884			
Refunds of contributions		49,295,932		18,673,920		67,969,852		69,599,237			
Administrative expenses		11,282,371		7,414,688		18,697,059		18,125,409			
Other expenses	_	44,027		9,001		53,028		406,276			
TOTAL DEDUCTIONS		2,721,599,900		317,666,088		3,039,265,988		2,913,150,806			
NET INCREASE IN NET POSITION		1,334,213,457		248,758,323		1,582,971,780		2,302,646,629			
NET POSITION - RESTRICTED FOR PENSIONS											
Beginning of year	_	39,259,545,408		4,769,765,292		44,029,310,700		41,726,664,071			
End of year	\$	40,593,758,865	\$	5,018,523,615	\$	45,612,282,480	\$	44,029,310,700			

