PUBLIC SCHOOL RETIREMENT SYSTEM OF THE CITY OF ST. LOUIS

MINUTES OF THE BOARD OF TRUSTEES REGULAR MEETING

October 17, 2016

I. ROLL CALL AND ANNOUNCEMENT OF A QUORUM

The October meeting of the Board of Trustees of the Public School Retirement System of the City of St. Louis (PSRSSTL) was called to order at 4:35 p.m., Monday, October 17, 2016. The meeting was held in the 2nd floor boardroom of the PSRSSTL office building located at 3641 Olive Street, St. Louis, Missouri. Joseph Clark, Chairman of the Board of Trustees, was the presiding officer.

Roll Call was taken and Trustees Christina Bennett, Paula Bentley, Joseph Clark, Sheila Goodwin, Mary Houlihan, Charles Shelton, Rick Sullivan and Eural Thomas were present. The Board of Trustees had a quorum at the meeting. Trustee John Moten joined the meeting in progress. Trustee Yvette Levy was absent.

Executive Director, Andrew Clark, Accounting Specialist, Terry Mayes, PSRSSTL Attorney Representative, Matt Gierse, PSRSSTL Actuary, Steve Siepman, and PSRSSTL Actuary Representative, Paul Baughner, were also present.

The Chairman asked for a motion to move the New Business agenda item to after the Report of the Attorney.

Charles Shelton made a motion, seconded by Sheila Goodwin, to move the New Business agenda item to the end of the meeting after the Report of the Attorney.

By voice vote, motion carried.

II. APPROVAL OF MINUTES FROM LAST MEETING

Christina Bennett made a motion, seconded by Charles Shelton, to approve the minutes of the Board of Trustees Regular Meeting of August 15, 2016.

By voice vote, motion carried.

III. READING OF COMMUNICATIONS TO THE BOARD OF TRUSTEES

None

IV. PRESENTATIONS BY INTERESTED PARTIES

None

V. CONSENT AGENDA

Christina Bennett made a motion, seconded by Sheila Goodwin, to approve the Retirements and Benefits for September and October 2016.

By voice vote, motion carried.

Christina Bennett made a motion, seconded by Charles Shelton, to approve the Refunds and Bills for August and September 2016.

By voice vote, motion carried.

VI. UNFINISHED BUSINESS

None

VII. REPORT OF THE CHAIRPERSON

None

VIII. REPORT OF THE EXECUTIVE DIRECTOR

The Executive Director reported on the Independent Auditor's Report on the Schedules of Pension Information for Participating Employers as required under Governmental Accounting Standards Board (GASB) Statement No. 68, and 2016 Trustee Travel Expenses, by referring to documents in the board packet. The Executive Director updated the Trustees on the status of the contract and funding of the new hedge fund investment with Grosvenor Capital Management, L.P., and the two Active Trustee Elections. The Executive Director concluded the report by announcing the retirement of the Receptionist, Brenda Buggs, and updating the Trustees on the search to find a new receptionist.

IX. REPORT OF THE INVESTMENT CONSULTANT

None

X. REPORT OF THE ACTUARY

The Actuary presented the retirement system's Five-Year Experience Analysis for calendar years 2011 – 2016 by reviewing a discussion document with the Board of Trustees. The Actuary reported findings on the system's withdrawal, retirement and mortality rates, and made several recommendations on changes to the Actuarial Assumptions in these areas.

The Actuary continued by presenting findings on two key Economic Assumptions: annual salary increases and the investment return percentage. The Actuary recommended decreasing the investment return assumption from 8% to 7.5%, and changing the assumed annual salary increase from 4.5% to 5% for members with less than five (5) years of service and to 3.5% for members with five (5) or more years of service.

There was lengthy discussion on the effects of the recommended assumption changes to future employer contribution rates. The Actuary presented information on the consequences of maintaining the current, closed 30-year amortization period started in 2006 vs. resetting the amortization period to a new 30-year period beginning with 2016.

The Trustees discussed the amortization period issue until it appeared a general consensus was reached on the Five-Year Experience Analysis.

Charles Shelton made a motion, seconded by Sheila Goodwin, to adopt the Five-Year Experience Study and assumption changes as recommended by the Actuary.

A roll call vote was taken.

Christina Bennett	Yes	Paula Bentley	Yes	Joseph Clark	Yes
Sheila Goodwin	Yes	Mary Houlihan	Yes	John Moten	Yes
Charles Shelton	Yes	Rick Sullivan	Yes	Eural Thomas	Yes

With nine yes votes, motion carried.

Christina Bennett made a motion, seconded by Sheila Goodwin, to reset the Unfunded Frozen Actuarial Accrued Liability (UFAAL) amortization period to 30-years according to the Five-Year Experience Study presented by the Actuary.

A roll call vote was taken.

Christina Bennett	Yes	Paula Bentley	Yes	Joseph Clark	Yes
Sheila Goodwin	Yes	Mary Houlihan	Yes	John Moten	Yes
Charles Shelton	Yes	Rick Sullivan	Yes	Eural Thomas	Yes

With nine yes votes, motion carried.

XI. REPORTS OF COMMITTEES OF THE BOARD OF TRUSTEES

The Chairman asked for reports from the Committees.

Benefits Committee

None

Trustee Business Committee

None

Investment Committee

Joe Clark, Chair of the Investment Committee, reported on the meeting of August 18, 2016, by reviewing the meeting minutes. The Chair informed the Trustees that the two recommended action items were being delayed until after the Investment Committee and Special Board Meetings scheduled for Thursday, October 20, 2016. It was clarified that the Investment Committee recommendations were being delayed, not rescinded.

The Chair encouraged all the Trustees to attend the upcoming Investment Committee and Special Board Meetings on Thursday, October 20, 2016.

Legislative, Rules & Regulations Committee

None

Professional Contracts Committee

None

XII. REPORT OF THE ATTORNEY

None

XIII. NEW BUSINESS

The Chairman asked for a motion to close the meeting and move into Executive Session.

Christina Bennett made a motion, seconded by Eural Thomas, to close the meeting and move into Executive Session, Pursuant to R. S. Mo. Section 610.21(12), to discuss a document related to a negotiated contract.

Christina Bennett	Yes	Paula Bentley	Yes	Joseph Clark	Yes
Sheila Goodwin	Yes	Mary Houlihan	Yes	John Moten	Yes
Charles Shelton	Yes	Rick Sullivan	Yes	Eural Thomas	Yes

With nine yes votes, motion carried, and the meeting closed at around 6:05 p.m.

Sheila Goodwin made a motion, seconded by Charles Shelton, to open the meeting and move out of Executive Session.

A vote was taken, and since a "yes" was heard from Christina Bennett, Paula Bentley, Joseph Clark, Sheila Goodwin, John Moten, Charles Shelton, Rick Sullivan and Eural Thomas, motion carried, and the meeting opened at around 6:45 p.m.

There were no decisions made during the closed portion of the meeting regarding the outcome of a negotiated contract.

XIV. ADJOURNMENT

Christina Bennett made a motion, seconded by Charles Shelton, to adjourn the meeting.

By voice vote, motion carried and the meeting adjourned at 6:45 p.m.

Attachments:

Retirements Paid: September and October 2016
Refunds & Bills Paid: August and September 2016
Employer Schedules and Independent Auditors' Report, December 31, 2015 and 2014
Travel Activity and Expenses, Calendar Year 2016
PSRSSTL Five-Year Experience Analysis – October 17, 2016

APPLICATIONS FOR RETIREMENT

NAME \ POSITION	RETIREM DATE	IENT TYPE	CREDITED SERVICE	FINAL AVG SALARY	MONTHLY BENEFIT
Gene Johns Stationary Engineer	6/1/2016	Normal	30.0000	\$57,249.73	\$2,862.49
Deanna Anderson Director Transportation	8/1/2016	Early	12.9522	\$131,717.57	\$2,274.67
Patricia Beglin Teacher	8/1/2016	Normal	18.5943	\$59,973.17	\$1,858.60
Carolyn Cox Teacher	8/1/2016	Normal	21.7611	\$66,056.78	\$2,395.78
Susie Day Head Custodian	8/1/2016	Early	5.0293	\$43,624.88	\$316.91
Ruby Goatley Teacher	8/1/2016	Normal	24.7444	\$72,162.21	\$2,976.02
John Knott Adult Ed Personnel	8/1/2016	Early	5.7722	\$70,467.96	\$597.98
Patricia Lamperti Teacher	8/1/2016	Normal	7.5688	\$44,205.30	\$448.90
James Morrison Teacher	8/1/2016	Early	9.0756	\$48,996.91	\$601.13
Terry Noble Director of HR	8/1/2016	Normal	5.2952	\$143,316.86	\$1,264.82
Barbara White School Nurse	8/1/2016	Normal	22.9444	\$66,135.33	\$2,529.06

Page 1 of 1 September 2016

APPLICATIONS FOR RETIREMENT

NAME \ POSITION	RETIR DATE	EMENT TYPE	CREDITED SERVICE	FINAL AVG SALARY	MONTHLY BENEFIT
Susan Decker Teacher	9/1/2016	Early	20.6944	\$76,617.92	\$2,525.14
Carlos Sproaps HVAC Technician	9/1/2016	Disability	10.4562	\$70,000.83	\$1,458.35

Page 1 of 1 October 2016

Distributions - August, 2016

FIRST NAME/MI				;		
	PAY	TAXES W/H	PAY	R(etired)	S(eparation)	NOTES
DAPHYNE	(13,485.55)	(2,697.11)	(10,788.44)	Α	S	VOID AND REISSUE
PAUL	(4,724.23)		(4,724.23)	Α	S	VOID AND REISSUE
SCOTT	882.76	176.55	706.21	٧	S	CLA
CASSANDRA	7,724.59	1,544.92	6,179.67	Α	S	JAMAA
MEGAN	2,675.76	535.15	2,140.61	Α	S	SLLIS
KATHLEEN	4,701.34		4,701.34	Α	S	
JACKIE	7,181.00	1,436.20	5,744.80	A	S	
ZOE	4,701.34	940.27	3,761.07	Α	S	
CHRISTA	3,151.97		3,151.97	Α	S	
MARIA	2,677.40	535.48	2,141.92	Α	S	
TRIMIEL C	4,161.85	832.37	3,329.48	Α	S	
VANESSA	5,803.68		89.803.68	4	S	
KEVIN	2269	111.91	447.66	∢	S	
MELISSA	2,457.11	491.42	1,965.69	Α	S	
JESSICA	2,457.11	491.42	1,965.69	Α	S	
BRIAN	9,794.53	1,958.91	7,835.62	∢	S	
ALEX	4,701.36		4,701.36	Α	S	
KYLIE	7,180.82	1,436.16	5,744.66	Α	S	
KATHARINE	2,507.38	501.48	2,005.90	Α	S	
CRYSTAL	9,888.14	1,977.63	7,910.51	Α	S	
DIANA	56,299.68		56,299.68	٧	S	
ANDREA	1,026.16	205.23	820.93	⋖	S	
PAUL	4,724.23		4,724.23	٧	S	VOID AND REISSUE
KELLY	6,271.72	1,254.34	5,017.38	٧	S	IESM SLPS
TIFFANY	348.59		348.59	⋖	တ	LFL
MELISSA	3,791.73		3,791.73	⋖	S	GSA-STL
SAVANNAH	10,398.38		10,398.38	4	S	KIPP SLPS
ISYED	215.97	43.19	172.78	Α	S	SLLIS
RYAN	683.36	136.67	546.69	⋖	S	BLCA
STEPHANIE	3,483.38		3,483.38	⋖	S	SLLIS SLPS
BRITTANY	3,133.45	65.69	2,506.76	4	S	CA
ELIZABETH	1,439.65	287.93	1,151.72	Α	S	BLCA CLOSED
LAVON	4,106.05	821.21	3,284.84	Α	S	КІРР
ALEXANDER	6,222.05	1,244.41	4,977.64	⋖	S	GCAA SEF
NANCY	36,500.59	7,300.12	29,200.47	⋖	S	
PHYLLIS	2,152.45	430.49	1,721.96	4	တ	
RALPH	1,300.29	260.06	1,040.23	⋖	တ	
RASHAAN	1,635.66	327.13	1,308.53	∢	S	
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Distributions - August, 2016

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5,924.15 A S 12,000.00 A S 11,566.46 A S 10,679.54 A S 3,737.17 A S 25,021.77 A S 10,000.00 A S 18,817.65 A S 63,748.10 A D 63,748.10 A D 305.54 A S 1,397.90 A S 1,397.90 A S 1,322.15 A S 2,021.28 A S 788.42 A S 1,322.15 A S		4,701.35	MARIANNE 4,701.35
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10,000.00 A S 18,817.65 A S 63,748.10 A D 305.54 A S 1,397.90 A S 1,542.22 A S 788.42 A S 2,021.28 A S 1,322.15 A S 2,021.28 A S		1,277.21	
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76.38 305.54 A S 859.83 3,439.31 A S 349.48 1,397.90 A S 385.56 1,542.22 A S 197.11 788.42 A S 505.32 2,021.28 A S 330.54 1,322.15 A S 605.21 2,420.86 A S	15	8,856.03	_D 78,
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385.56 1,542.22 A S 197.11 788.42 A S 505.32 2,021.28 A S 330.54 1,322.15 A S 605.21 2,420.86 A S		1,747.38	Y
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505.32 2,021.28 A S 330.54 1,322.15 A S 605.21 2,420.86 A S		985.53	JESSICA 985.53
330.54 1,322.15 A S 605.21 2,420.86 A S		2,526.60	TYSON 2,526.60
605.21 2,420.86 A		1,652.69	ADRIANNE 1,652.69
		3,026.07	WAYNE 3,026.07
.15 A	_	8,873.94	
1,381.98 A		1,727.47	

Distributions - August, 2016

עחבטו	VULL			33000		FUZ	(0),(i+0)	(4too/Q	
NUMBER	DATE	LAST NAME	FIRST NAME/MI	PAY	TAXES W/H	PAY	R(etired)	R(etired) S(eparation)	NOTES
072059	08/29/16	CIOLEK	RAYMOND	25,602.28		25,602.28	A	S	
072060	08/29/16	HENDERSON	JAMES	30,291.75	6,058.35	24,233.40	A	S	
072061	08/29/16	IOVALDI	BARBARA	8,994.54	1,798.91	7,195.63	Α	တ	
072062	08/29/16	KILIAN	ABBY	2,202.28		2,202.28	A	တ	
072063	08/29/16	MAILLE	MARY	21,800.62		21,800.62	A	S	
072064	08/29/16	MOISEEV	HANNAH	4,701.34		4,701.34	A	S	
072065	08/29/16	RAY	ROBYN	16,814.11	3,362.82	13,451.29	A	S	
072066	08/29/16	ROGERS	MELANIE	8,464.65	1,692.93	6,771.72	A	S	
072067	08/29/16	SILVERS	TONYA	22,223.24		22,223.24	Α	S	
072068	08/29/16	SMITH	RODNEY	10,655.77		10,655.77	Α	S	
072069	08/29/16	STRICKLIN	ADAM	2,310.78	462.16	1,848.62	A	S	
072070	08/29/16	VANDEGRIFF	JOSEPH	4,701.34	940.27	3,761.07	Α	S	
072071	08/29/16	WILKS	ASHLEY	1,949.25	389.85	1,559.40	A	တ	
072072	08/29/16	WILLIAMS III	JOSEPH	15,320.18		15,320.18	A	S	
072073	08/29/16	CAHILL	CLAYTON	68,870.89	6,887.09	61,983.80	Α	Ω	DEC: JANET CAHILL
072074	08/29/16	HOLMES	TYRELL	86.69	12.00	47.98	Α	S	BAL OF CONTRIB
072075	08/29/16	JACKSON	TASHARA	9.91	1.98	7.93	٧	S	BAL OF CONTRIB
072076	08/29/16	MOORE	IRMA	89.22	17.84	71.38	٧	S	BAL OF CONTRIB
072077	08/29/16	O BRYANT	BRITTANY	47.59	9.52	38.07	Α	S	BAL OF CONTRIB
072078	08/29/16	RUSSELL	JOYCE	69.73	13.95	55.78	٧	S	BAL OF CONTRIB
072079	08/29/16	LOVE	DAPHYNE	13,485.55	2,697.11	10,788.44	٧	S	VOID AND REISSUE
			TOTAL	\$ 918,315.77	\$122,742.66	\$ 795,573.11			

Distributions - September, 2016

FIRST NAME/MI
JESSICA
JEANETTE
AMANDA
MEGAN
PAULA
KRISTIN
TEQUILA
STEVEN
LORINDA
SAMANTHA
STACEY
TRISTI
NATJELLI
LESLEY
JULIE
DIANE
LINDA
CASSANDRA
STACIE
CANDICE
FERNANDO
ILEY
ROSHION
JOSEPH J
BRIAN
SHONTA
ANITA
ANDREA
AMANDA
KALONDA
STEFANIE
ERIKA
GARNET
GILLIAN
MURIEL
SAMANTHA
NHOP
KIMBERLY

Distributions - September, 2016

		NOTES													VOID & REISSUE	JAMAA SLPS	CA	CA	CA	CA	EAGLE	CA	CA	CA	CA	IAAS SLPS	CA	KIPP	CA	GSA STL	CA	GCAA								
	D(eath)	S(eparation)	S	S	S	S	S	S	S	တ	S	S	S	S	S	တ	S	S				S				S	S	S	S	S	S	S	S	S	တ	S	S	S	S	S
) - -	A(ctive)	R(etired)	Y	Α	Α	Α	Α	Y	Y	A	Y	Α	Α	A	٧	A	٧	A	Y	Α	Α	Α	Α	٧	Y	Α	Α	Α	Α	Α	Α	Α	Y	٧	٧	٧	٧	Α	Α	Α
	NET	PAY	3,268.02	3,484.64	5,747.76	6,276.73	2,592.46	9,287.58	7,482.96	1,271.73	1,108.50	44,589.66	2,319.19	7,585.03	4,004.33	3,002.26	5,134.82	7,163.95	10,278.55	1,560.00	386.66	6,376.04	510.85	2,109.92	1,668.94	17,701.70	3,871.03	2,238.12	1,064.30	1,283.82	3,433.22	2,293.27	29,569.98	37,338.36	11,225.53	2,198.73	1,909.51	1,630.68	1,322.01	5,366.05
2000	FEDERAL	TAXES W/H		871.16	1,436.94		648.12	2,321.90	1,870.74	317.93	277.13	11,147.42				750.57	1,283.70	1,790.99		390.00	29.96		127.72	527.48	417.23	4,425.43	92.796	559.53	266.07	320.95	858.30				2,806.38		477.38	407.67	330.50	1,341.51
_	GROSS	PAY	3,268.02	4,355.80	7,184.70	6,276.73	3,240.58	11,609.48	9,353.70	1,589.66	1,385.63	55,737.08	2,319.19	7,585.03	4,004.33	3,752.83	6,418.52	8,954.94	10,278.55	1,950.00	483.33	6,376.04	638.57	2,637.40	2,086.17	22,127.13	4,838.79	2,797.65	1,330.37	1,604.77	4,291.52	2,293.27	29,569.98	37,338.36	14,031.91	2,198.73	2,386.89	2,038.35	1,652.51	6,707.56
Σ Σ		FIRST NAME/MI	NIKKOLE	TRAVIS	MICHEL	JENNIFER	MARY	CARYN	SONJELA	VERNITA	LAWRENCE	WILLIAM	STEPHANIE	ADAM	JESSICA	ASHLEY	SUZANNE	TAMEKA	JULIA	DANIELA	LESLEA	NICHOLAS	ERIK	CHRYSTAL	JESSICA	PARIS	MARY ELLEN	MARY	KERRI	AMINA	KENRIC	MIL	CHRISTOPHER	MERRIMAN	MIA	ROSLYN	KATHRYN	TRENESHA	EBONY	AVIVA
		LAST NAME	BRIGGS	BUCKLEY	ELLISON	HENNESSEY	NOSNHOC	LEWIS	MCCOTTRELL	MILLER	PATIENT	PECK	WIEGERT	DURHAM	NOSNHOC	BYRD	CATARINICCHIA	COOLEY	LEZ-FRANKLI	GREENE	HARTZKE	HOWARD	JEFFERSON	MCCOY	7		SCHEETZ	SHEPLEY	SIERRA-SCOTT	STAMBOLIC	WALKER SR	WOODCOCK	AZAR	BOYD	CARPENTER	HARVEY	JONES	MILLER	NAVARRETE	PAGE
	CHECK	DATE	09/20/16		09/20/16	09/20/16	09/20/16	09/20/16		09/20/16	09/20/16	09/20/16	09/20/16	09/20/16	09/20/16	09/28/16	09/28/16	09/28/16	09/28/16	09/28/16	09/28/16	09/28/16	09/28/16	09/28/16	09/28/16	09/28/16	09/28/16	09/28/16				09/28/16	09/28/16	09/28/16	09/28/16	09/28/16	09/28/16	09/28/16	09/28/16	09/28/16
	CHECK	NUMBER	072156	072157	072158	072159	072160	072161	072162	072163	072164	072165	072166	072167	072168	072169	072170	072171	072172	072173	072174	072175	072176	072177	072178	072179	072180	072181	072182	072183	072184	072185	072186	072187	072188	072189	072190	072191	072192	072193

Distributions - September, 2016

		NOTES				DEC: A HILL THOMAS Benef #2	
	D(eath)	R(etired) S(eparation) NOTES	S	တ	S	Ω	
	A(ctive)	R(etired)	Α	Α	Α	Α	
d	NET	PAY	7,581.02	4,655.82	1,977.18	18,595.28	\$ 500,171.89
	FEDERAL	TAXES W/H	1,895.25		494.29	2,066.14	579,616.77 \$ 79,444.88 \$ 500,171.89
	GROSS	PAY	9,476.27	4,655.82	2,471.47	20,661.42	\$ 579,616.77
		FIRST NAME/MI	DENNIS	SAMANTHA	LESLIE	CHARLES	TOTAL \$
		LAST NAME	PORTER	09/28/16 RICHARDS	SMITH	FOSTER	
	CHECK	DATE	09/28/16	09/28/16	09/28/16 SMITH	09/28/16 FOSTER	
	CHECK	NUMBER	072194	072195	072196	072197	

Public School Retirement System of the City of St. Louis Checks Written During the Month of August, 2016

<u>Payee</u>		<u>Description</u>	Amount
Date Paid August 5, 2016			
Office Payroll	ACH	Office Payroll	9,958.26
AXA Equitable	ACH	457 Contributions	2,423.00
Ameren Missouri	71926	Electric Service	2,846.24
AT&T	71927	U-Verse Internet	50.00
Purchase Power	71928	Postage	1,000.00
Office Essentials	71929	Office Supplies	79.21
OffsiteDataSync	71930	Online Backups	208.12
BuildingStars STL Operations, Inc.	71931	Janitorial Service and Supplies	1,713.26
Windstream Communications Minuteman Press	71932 71933	Telephone, Data Window Envelopes	517.74 401.25
MSD	71933	Sewer Service	43.11
Crossroads Courier, Inc.	71934	Courier Service	5.84
Pitney Bowes, Inc.	71936	Postage Supplies	101.99
Tech Electronics, Inc.	71937	Technical Support	1,832.00
MAPERS	71938	Conference Registration Fee - Sheila Goodwin	75.00
Paula R. Bentley	71939	Reimbursement - 2016 MAPERS Conference	5.43
Paula R. Bentley	71940	Reimbursement - NCTR Annual Trustee Worksho	3.13
Republic Services #346	71941	Trash Pick-Up	134.01
St. Louis Mat & Linen Company	71942	Floor Mats	53.00
Tech Electronics, Inc.	71943	Central Monitoring of Fire Alarm System	87.00
Greenland Fire Protection, LLC	71944	Backflow Inspection	195.00
Causeway Capital Management LLC	71945	2nd Quarter 2016 Management Fee	63,783.27
The Edgar Lomax Company	71946	2nd Quarter 2016 Management Fee	42,018.29
Fidelity Institutional Asset Mgmt. Trust Company	71947	2nd Quarter 2016 Management Fee 2nd Quarter 2016 Management Fee	63,183.42
INTECH Investment Management LLC New Amsterdam Partners, LLC	71948 71949	2nd Quarter 2016 Management Fee 2nd Quarter 2016 Management Fee	31,014.36 21,399.91
Progress Investment Management Co. LLC	71949	2nd Quarter 2016 Management Fee	66,630.85
TCW Asset Management Company	71950	2nd Quarter 2016 Management Fee	46,615.39
Westfield Capital Management Company, LP	71952	2nd Quarter 2016 Management Fee	52,279.44
US Bank	71953	2nd Quarter 2016 Custodial Fees	37,311.10
Board of Education St. Louis Benefits Trust	71956	Office Employees Insurance - Life	63.60
Board of Education St. Louis Benefits Trust	71957	Office Employees Insurance - Dental	242.94
Board of Education St. Louis Benefits Trust	71958	Office Employees Insurance - Vision	16.16
Date Paid August 19, 2016			
Office Payroll	ACH	Office Payroll	9,958.26
AXA Equitable	ACH	457 Contributions	2,423.00
Date Paid August 22, 2016			
Absopure Water Company	72024	Water Cooler Service	53.85
Buck Consultants, LLC	72025	Actuarial Consulting Services - July and August	13,966.00
Access	72026	Scanning Services	395.30
Gallagher Benefit Services, Inc.	72027	Group Ins. Consulting Services Monthly Fee	3,320.25
Blade Technologies, Inc.	72028	Professional Services	1,571.34
Charter Communications	72029	Spectrum Internet and Voice	179.96
Parking Management Services, LLC	72030	September 2016 Parking - 1 Employee	65.00
Parking Management Services, LLC	72031	Parking Ticket Validations - July 2016	34.50
Eazy Business Mailers, Inc.	72032 72033	Postage - Daily Pickup	200.00 150.00
Digital Intersection Hartnett Gladney Hettermann, L.L.C.	72033 72034	Monthly Data Center Housing Legal Fees	9,686.35
Andrew Clark	72034	Miscellaneous Trustee Meeting Expenses	38.67
Office Essentials	72036	Office Supplies	256.49
Crossroads Courier, Inc.	72037	Courier Service	7.02
American Solutions for Business	72038	Laser Checks - Operating Account	277.44
Jupiter Consulting Services, LLC	72039	Programming Consulting	7,812.00
The Berwyn Group	72040	Death Check Verification Services	110.00
NCTR	72041	Trustee Workshop Registration - Sheila Goodwin	2,060.00
NCTR	72042	Annual Conference Registration - Charles Shelton	1,080.00
CBRE - 608844	72043	Building Mgmt September 2016	1,100.00
CBRE - 608844	72044	Engineer Services	1,049.88
Mellon Capital Management Corporation	72045	2nd Quarter 2016 Management Fee	71,818.54
Mellon Capital Management Corporation	72046	2nd Quarter 2016 Management Fee	783.17
NEPC, LLC	72047	2nd Quarter 2016 Consulting Fee	33,013.82
NEPC, LLC	72048	2nd Quarter 2016 Alt. Investment Mgmt. Fee	12,500.00
		TOTAL	\$620,202.16

Public School Retirement System of the City of St. Louis Checks Written During the Month of September, 2016

Payee	Ck. Number	Description	<u>Amount</u>
Date Paid September 2, 2016			
Office Payroll	ACH	Office Payroll	9,958.26
AXA Equitable	ACH	457 Contributions	2,423.00
Date Paid September 6, 2016			
Ameren Missouri	72080	Electric Service	2,688.17
AT&T	72081	U-Verse Internet	50.00
Purchase Power	72082	Postage	1,068.64
Office Essentials	72083	Office Supplies	74.08
OffsiteDataSync	72084	Online Backups	208.12
Windstream Communications	72085	Telephone, Data	517.73
Minuteman Press	72086	Newsletters & Envelopes, Member Handbooks	3,439.64
MSD Digital Interpostion	72087 72088	Sewer Service	47.45
Digital Intersection Parking Management Services, LLC	72089	Monthly Data Center Hosting Parking Ticket Validations - August 2016	150.00 27.00
Eazy Business Mailers, Inc.	72009	Postage - Daily Pickup	230.00
Eazy Business Mailers, Inc.	72091	Postage & Service - Benefits Stmts, Newsletters	6,766.20
Konika Minolta Business Solutions USA Inc.	72092	Service - Copier C364E	449.10
Charles L. Shelton, Jr.	72093	Advance - NCTR Conference	2,080.00
Machinists' District 9 Building Corporation	72094	Hall Rental - Open Enrollment November 2, 2016	900.00
Republic Services #346	72095	Trash Pick-Up	133.00
CBRE - 608844	72096	Engineer Services	709.38
Blue Chip Pest Services	72097	Pest Control	44.00
Chicago Equity Partners, LLC	72098	2nd Quarter 2016 Management Fee	38,323.55
Board of Education St. Louis Benefits Trust	72099	Office Employees Insurance - Dental	242.94
Board of Education St. Louis Benefits Trust	72100	Office Employees Insurance - Vision	16.16
Board of Education St. Louis Benefits Trust	72101	Office Employees Insurance - Life	63.60
Date Paid September 16, 2016		·	
Office Payroll	ACH	Office Payroll	9,958.26
AXA Equitable	ACH	457 Contributions	2,423.00
Date Paid September 16, 2016			
Absopure Water Company	72128	Water Cooler Service	32.85
Buck Consultants, LLC	72129	Actuarial Consulting Services - August & Sept.	20,966.00
AT&T	72130	Monthly Service Charge	154.71
Access	72131	Scanning Services	396.95
Gallagher Benefit Services, Inc.	72132	Group Ins. Consulting Services Monthly Fee	3,320.25
Blade Technologies, Inc.	72133	Professional Services	1,209.34
Parking Management Services, LLC	72134	October 2016 Parking - 1 Employee	65.00
Hartnett Gladney Hettermann, L.L.C.	72135	Legal Fees	3,736.50
Office Essentials	72136	Office Supplies	710.15
Crossroads Courier, Inc.	72137	Courier Service	5.84
Pitney Bowes Global Financial Services LLC	72138	Lease Charges	1,410.00
BuildingStars STL Operations, Inc.	72139	Janitorial Services & Supplies	1,661.10
Anders CPAs & Advisors	72140	GASB 68 Audit Security Guard 08/15/2016	2,000.00 144.00
GCI Security, Inc. John Moten III	72141 72142	Reimbursement - NASP Conference	1,011.88
Sheila P. Goodwin	72142	Reimbursement - MAPERS Conference	905.74
CBRE - 608844	72143	Building Mgmt October 2016	1,100.00
Date Paid September 30, 2016	12177	Danaing Might. October 2010	1,100.00
Office Payroll	ACH	Office Payroll	9,958.26
AXA Equitable	ACH	457 Contributions	2,423.00
	,	TOTAL	\$134,202.85
		IOIAL	Ψ10-7,202.03

PUBLIC SCHOOL RETIREMENT SYSTEM OF THE CITY OF ST. LOUIS

SCHEDULES OF PENSION INFORMATION
FOR PARTICIPATING EMPLOYERS
AND
INDEPENDENT AUDITORS' REPORT
FOR THE YEARS ENDED DECEMBER 31, 2015 AND 2014

Contents

	<u>Page</u>
Independent Auditors' Report	1 - 2
Schedules of Pension Information for Participating Employers	
Schedules of Employer Allocations	3
Schedules of Pension Amounts by Employer	4 - 5
Notes to Schedules	6 - 9



Independent Auditors' Report

The Board of Trustees
Public School Retirement System of the City of St. Louis
St. Louis, Missouri

Report on Schedules

We have audited the accompanying schedules of employer allocations and pension amounts by employer for Public School Retirement System of the City of St. Louis (the "System"), including the total for all entities of the columns titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total employer pension expense as of and for the years ended December 31, 2015 and 2014, and the related notes to the schedules.

Management's Responsibility for the Schedules

The System's management is responsible for the preparation and fair presentation of these schedules in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of schedules that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on the schedules of employer allocations and pension amounts by employer based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the schedules of employer allocations and specified column totals included in the schedules of pension amounts by employer are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the schedules of employer allocations and specified column totals included in the schedule of pension amounts by employer. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the schedules of employer allocations and specified column totals included in the schedules of pension amounts by employer, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the System's preparation and fair presentation of the schedules in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the schedules of employer allocations and specified column totals included in the schedules of pension amounts by employer.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the accompanying schedules referred to above present fairly, in all material respects, the employer allocations and net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense for the total of all participating entities of the System as of and for the years ended December 31, 2015 and 2014 in accordance with accounting principles generally accepted in the United States of America.

Other Matters

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of the System as of and for the years ended December 31, 2015 and 2014, and our report thereon, dated April 15, 2016, expressed an unmodified opinion on those financial statements.

Restriction of Use

Our report is intended solely for the information and use of the System's management, the Board of Trustee's, the System's employers, and their auditors and is not intended to be used by anyone other than these specified parties.

September 26, 2016

anders Minteles Heler & Helm LLP

Public School Retirement System of the City of St. Louis Schedules of Employer Allocations December 31, 2015 and 2014

		201	5	201	4
Employer	Employer Name		Employer Allocation Percentage	Compensation	Employer Allocation Percentage
		<u> </u>	<u> </u>	<u></u>	<u> </u>
1	Public Schools Retirement System of				
	the City of St. Louis	\$ 454,115	0.20 %		0.22 %
2	St. Louis Public Schools	175,851,589	78.05	173,926,365	79.13
3	Better Learning Communities				
	Academy	413,648	0.18	641,669	0.29
4	Carondelet Leadership				
	Academy	2,115,158	0.94	1,959,264	0.89
5	Confluence Academy	14,515,603	6.44	15,101,401	6.87
6	Construction Career				
	Center	-	-	586,326	0.27
7	City Garden Montessori				
	Schools	1,404,645	0.62	1,161,512	0.53
8	EAGLE College				
_	Preparatory School	1,170,493	0.52	596,636	0.27
9	Gateway Science				
4.0	Academy of St. Louis	4,536,132	2.01	4,078,795	1.85
10	Grand Center Arts	0.040.040	4.00	0 445 505	4.40
4.4	Academy	2,910,949	1.29	2,415,535	1.10
11	Hawthorn Leadership	407 440	0.22	62.042	0.02
10	School for Girls	497,410	0.22	62,912	0.03
12 13	JAMAA Learning Center	654,925	0.29 2.09	550,281	0.25 1.18
14	KIPP Inspire Academy La Salle Middle School	4,705,326 327,603	2.09 0.15	2,594,372	1.10
15	Lafayette Preparatory	327,003	0.15	-	
13	Academy	722,601	0.32	482,496	0.22
16	Lift for Life Academy	3,387,447	1.50	3,222,562	1.47
17	North Side Community	3,307,777	1.50	3,222,302	1.77
17	School	1,662,931	0.74	1,349,008	0.61
18	Preclarus Mastery	1,002,001	0.7 4	1,010,000	0.01
10	Academy	772,640	0.34	689,448	0.31
19	Premier Charter School	5,056,784	2.24	5,308,021	2.41
20	South City Preparatory	0,000,101		0,000,02	
20	Academy	1,086,735	0.48	1,159,185	0.53
21	St. Louis Language	.,555,.55	5.10	.,.55,.55	2.30
	Immersion School	3,032,220	1.35	3,441,144	1.57
22	The Biome	64,426	0.03	-	-
	Total Compensation for	#005 040 000	400.00 0/	#040 700 704	400.00 0/
	all Employers	\$225,343,380	100.00 %	\$219,799,781	100.00 %

See notes to schedules Page 3

Public School Retirement System of the City of St. Louis Schedule of Pension Amounts by Employer December 31, 2015

	Total Employer Plan Pension	Expense	\$ 102,682	39,762,572	93,532	478,268	3,282,186	•	317,610	264,665	1,025,685	658,207	112,472	148,088	1,063,942	74,076	163,390	765,950	376,013	174,705	1,143,412	245,726	685,629	14,568	\$ 50,953,378
ources	Total Deferred Inflows of	Resources	\$ (15,674)	(6,069,550)	(14,277)	(73,005)	(501,009)		(48,482)	(40,400)	(156,565)	(100,472)	(17,168)	(22,605)	(162,405)	(11,307)	(24,941)	(116,918)	(24,396)	(26,668)	(174,536)	(37,509)	(104,658)	(2,224)	\$ (7,777,769)
Deferred Inflows of Resources	Change in	Assumptions	. ↔	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	1	- ₩
Deferred	Difference Between Expected and Actual	Experience	\$ (15,674)	(6,069,550)	(14,277)	(73,005)	(501,009)		(48,482)	(40,400)	(156,565)	(100,472)	(17,168)	(22,605)	(162,405)	(11,307)	(24,941)	(116,918)	(57,396)	(26,668)	(174,536)	(32,209)	(104,658)	(2,224)	\$ (7,777,769)
sources	Total Deferred Outflows of	Resources	\$ 171,597	66,449,336	156,306	799,258	5,485,035	•	530,776	442,296	1,714,076	1,099,965	187,957	247,478	1,778,009	123,792	273,050	1,280,020	628,375	291,959	1,910,815	410,646	1,145,790	24,345	\$85,150,881
Deferred Outflows of Resources	Change in	Assumptions	. ↔	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•		•		'	<u>'</u>
Deferred	Net Difference Between Projected and Actual Investment Earnings on Pension Plan	Investments	\$ 171,597	66,449,336	156,306	799,258	5,485,035	•	530,776	442,296	1,714,076	1,099,965	187,957	247,478	1,778,009	123,792	273,050	1,280,020	628,375	291,959	1,910,815	410,646	1,145,790	24,345	\$ 85,150,881
	Ending Net Pension	Liability	\$ 649,399	251,473,429	591,530	3,024,744	20,757,779	•	2,008,688	1,673,843	6,486,815	4,162,751	711,312	936,564	6,728,768	468,483	1,033,343	4,844,158	2,378,045	1,104,900	7,231,364	1,554,066	4,336,172	92,131	\$ 322,248,284
	Beginning Net Pension	Liability	570,232	209,746,574	773,821	2,362,775	18,211,541	707,080	1,400,726	719,513	4,918,825	2,913,015	75,869	663,612	3,128,684	•	581,866	3,886,250	1,626,837	831,440	6,401,210	1,397,920	4,149,849		\$ 265,067,639
		r Employer Name	Public Schools Retirement System of the City of \$ St. Louis	St. Louis Public Schools	Better Learning Communities Academy	Carondelet Leadership Academy	Confluence Academy	Construction Career Center	City Garden Montessori Schools	EAGLE College Preparatory School	Gateway Science Academy of St. Louis	Grand Center Arts Academy	Hawthorn Leadership School for Girls	JAMAA Learning Center	KIPP Inspire Academy	La Salle Middle School	Lafayette Preparatory Academy	Lift for Life Academy	North Side Community School	Preclarus Mastery Academy	Premier Charter School	South City Preparatory Academy	St. Louis Language Immersion School		⇔ 1
		Employer	~	2	ဇ	4	2	9	7	80	о	10	7	12	13	4	15	16	17	18	19	20	21	22	

Public School Retirement System of the City of St. Louis Schedule of Pension Amounts by Employer December 31, 2014

Total Employer Plan Pension Expense	\$ 77,573	28,533,222	105,268	321,424	2,477,437	96,189	190,550	97,880	669,140	396,277	10,321	90,276	425,616	79,155	528,672	221,309	113,106	870,799	190,168	564,532	\$ 36,058,914
vurces Total Deferred Inflows of Resources	· \$	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	٠ ن
Deferred Inflows of Resources rence ween ted and Change in Inflicience Assumptions Rese	· &	•	•	•	•	•	•	•	•	•	•	•	1	•	•	•	•	•	•	-	٠ د
Deferred Difference Between Expected and Actual Experience	· \$	•	•	•	•	•		•		•		•	•	•		•	•	•	•	-	· •
sources Total Deferred Outflows of Resources	\$ 65,479	24,084,903	88,857	271,314	2,091,206	81,193	160,843	82,621	564,822	334,497	8,712	76,202	359,262	66,815	446,253	186,807	95,473	735,042	160,521	476,521	\$ 30,437,343
Deferred Outflows of Resources ference ween ted and trual truent Defe on Plan Change in Outflow The Change in Change	· \$	•	•	•	•	•	•	•	•	•	•	•	1	•	•	•	•	•	•	•	٠ د
Deferred Net Difference Between Projected and Actual Investment Earnings on Pension Plan	\$ 65,479	24,084,903	88,857	271,314	2,091,206	81,193	160,843	82,621	564,822	334,497	8,712	76,202	359,262	66,815	446,253	186,807	95,473	735,042	160,521	476,521	\$ 30,437,343
Ending Net Pension Liability	\$ 570,232	209,746,574	773,821	2,362,775	18,211,541	707,080	1,400,726	719,513	4,918,825	2,913,015	75,869	663,612	3,128,684	581,866	3,886,250	1,626,837	831,440	6,401,210	1,397,920	4,149,849	\$ 265,067,639
Beginning Net Pension Liability	517,013	190,170,897	701,600	2,142,257	16,511,855	641,088	1,269,996	652,361	4,459,750	2,641,143	68,788	601,677	2,836,684	527,561	3,523,546	1,475,004	753,842	5,803,784	1,267,452	3,762,543	\$ 240,328,841
Employer Name	Public Schools Retirement System of the City of \$ St. Louis	St. Louis Public Schools	Better Learning Communities Academy	Carondelet Leadership Academy	Confluence Academy	Construction Career Center	City Garden Montessori Schools	EAGLE College Preparatory School	Gateway Science Academy of St. Louis	Grand Center Arts Academy	Hawthorn Leadership School for Girls	JAMAA Learning Center	KIPP Inspire Academy	Lafayette Preparatory Academy	Lift for Life Academy	North Side Community School	Preclarus Mastery Academy	Premier Charter School	South City Preparatory Academy	St. Louis Language Immersion School	
Employer	~	7	က	4	2	9	7	∞	တ	10	1	12	13	4	15	16	17	18	19	20	

1. Description of System

General

The Public School Retirement System of the City of St. Louis (the "System") is the administrator of a cost-sharing multiple-employer pension plan existing under provisions of the Revised Statutes of the State of Missouri (the "Statutes") to provide retirement benefits for all employees of the Board of Education of the City of St. Louis, of the Charter Schools located within the St. Louis School District, and of all employees of the System.

Operations and management of the System are generally prescribed in the Statutes and are supervised by the Board of Trustees.

Membership and Eligibility

All persons employed on a full-time basis by the St. Louis Schools Board of Education, Charter Schools in the City of St. Louis, and the System are members of the plan as a condition of employment.

Benefits

Upon retirement at age 65, or at any age if age plus years of credited service equals or exceeds 85 (Rule of 85), members receive monthly payments for life of yearly benefits equal to years of credited service multiplied by 2% of average final compensation, but not to exceed 60% of average final compensation. Early retirement can occur at age 60 with 5 years of service. The service retirement allowance is reduced five ninths of one percent for each month of commencement prior to age 65 or the age at which the Rule of 85 would have been satisfied had the employee continued working until that age, if earlier.

In lieu of the benefit paid over the lifetime of the participant, reduced benefit options are available for survivor and beneficiary payments.

Members are eligible, after accumulation of five years of credited service, for disability benefits prior to eligibility of normal retirement. Survivor benefits are available for qualified beneficiaries of members who die after at least 18 months of active membership.

2. Summary of Significant Accounting Policies

Basis of Presentation and Accounting

The schedules of the System have been prepared in accordance with the criteria established by the Governmental Accounting Standards Board ("GASB") and the provisions of Financial Accounting Standards Board ("FASB"), Accounting Standards Codification (the "FASB ASC"), which is the source of authoritative, non-governmental accounting principles generally accepted in the United States of America ("GAAP"). The System's schedules are prepared using the accrual basis of accounting.

The System's employers are required to report pension information in their schedules for periods beginning after June 15, 2014, in accordance with Governmental Accounting Standards Board Statement No. 68, *Accounting and Financial Reporting for Pensions*. The Schedules of Employer Allocations and Pension Amounts by Employer provide employers with the required information for financial reporting under that standard.

The underlying financial information used to prepare the pension allocation schedules is based on the System's financial statements, accounting, and payroll reporting systems. The schedules were prepared using the accrual basis of accounting and in accordance with GAAP.

Member and employer contributions are recognized when due, pursuant to formal commitments and statutory requirements. Benefits and refunds of employee contributions are recognized when due and payable in accordance with the statutes governing the System. Expenses are recognized when the liability is incurred, regardless of when payment is made. Investments are reported at fair value on a trade date basis.

Total employer compensation as of and for the years ended December 31, 2015 and 2014 was used as the basis for determining each employer's proportionate share of the collective pension amounts reported on the schedules, respectively. Total employer compensation as of and for the year ended December 31, 2014 was used as the basis for determining the employer's proportionate share of the beginning net pension liability since the System did not believe there was a significant change in the allocation percentage amount.

Use of Estimates

The preparation of schedules in conformity with GAAP requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

Fair Value Measurements

The System follows guidance issued by the GASB on fair value measurements, which establishes a framework for measuring fair value, clarifies the definition of fair value within that framework, and expands disclosures about the use of fair value measurements. This guidance applies whenever fair value is the applicable measurement. The three general valuation techniques used to measure fair value are the market approach, cost approach, and income approach.

Subsequent Events

The System has evaluated subsequent events through September 26, 2016, the date the schedules of pension information for participating employers were available to be issued.

3. Schedules of Employer Allocations

The Schedules of Employer Allocations reflects employer compensation as of and for the years ended December 31, 2015 and 2014 and includes the following for each individual employer:

- employer contributing entity;
- the amount of the employer contributing entity's compensation; and,
- the employer contributing entity's compensation as a percentage of total employer compensation, as defined by this policy.

The components of the net pension liability of the participating employers as of December 31, 2015 and 2014 are as follows:

	 2015		2014
Total pension liability	\$ 1,190,927,333	\$	1,201,998,138
Fiduciary net position	 868,679,049	_	936,930,499
Employers' net pension liability	\$ 322,248,284	\$	265,067,639
Plan net position as a percentage of total pension			
liability	72.94 %		77.95 %
Covered employee payroll	\$ 225,343,380	\$	219,799,781
Employers' net pension liability			
as a percentage of employee covered payroll	143.00 %		120.60 %

4. Schedules of Pension Amounts by Employer

The Schedules of Pension Amounts by Employer includes only certain categories of deferred outflows of resources and deferred inflows of resources. These include differences between expected and actual experience, changes in assumptions, and differences between projected and actual earnings on plan investments. The Schedules do not include deferred outflows/inflows of resources for changes in the employer's proportionate share of contributions or employer contributions made subsequent to measurement date. The net pension liability as of December 31, 2014 is based on the December 31, 2014 actuarial valuation for the first year of implementation.

5. Sensitivity of Net Pension Eligibility to Changes in the Discount Rate

The following presents the net pension liability, calculated using the discount rate of 8%, as well as what the net pension liability would have been if it were calculated using a discount rate that is one percentage point lower (7%) or one percentage point higher (9%) than the current rate:

Discount Data	1	1% Decrease		irrent Discount		1% Increase
Discount Rate		(7.0%)		Rate (8.0%)		(9.0%)
Net pension liability for the year ended December 31,						
-	Φ	424 220 260	Φ	222 240 204	φ	220 500 002
2015	Ф	431,230,360	Ф	322,248,284	Ф	220,509,903
2014	\$	375,649,108	\$	265,067,639	\$	169,951,694

The projection of cash flows used to determine the discount rate assumes that employer contributions will continue to follow the current funding policy. Based on those assumptions, the System's fiduciary net position was projected to be sufficient to make all projected future benefit payments of current plan members.

Under GASB Statement No. 68, all employers participating in the plan would recognize a cumulative total pension expense of \$50,953,378 and \$36,058,914 for the years ended December 31, 2015 and 2014, respectively, as noted on the schedules of pension amounts by employer.

6. **Actuarial Methods and Assumptions**

The information presented in the aforementioned schedules was determined as part of the 2015 and 2014 actuarial valuation prepared by Buck Consultants at June 6, 2016 and June 9, 2015, respectively.

Additional information related to the above actuarial valuation, as applicable for both years presented, is as follows:

Actuarial cost method Frozen entry age

Rate of investment return 8.00%, net of expenses

Participant account interest

crediting rate 5.00%

Turnover or withdrawal rates Various by age and year of membership based on

actual

Mortality and death rates Mortality tables mandated by the Pension

> Protection Act as specified in IRS Regulation 1.430(h)(3)-1 applied on a static basis, projected 7 years from the valuation date for annuitants and

15 years for non-annuitants

Disability rates RP-2000 Disability Mortality Table

Rates of retirement between the Various based on actual experience of the

ages of 55 and 70

Rate of salary increases Based on actual experience of the System, at the

rate of 4.5% per year

Asset valuation method The assumed yield method of valuing assets

The Unfunded Actuarial Accrued Liability ("UFAAL") was originally determined and frozen as of January 1, 1981. Effective January 1, 2006, the UFAAL was re-determined. The UFAAL is being amortized over thirty (30) years.

Public School Retirement System of the City of St. Louis Travel Activity and Expenses - Calendar Year 2016

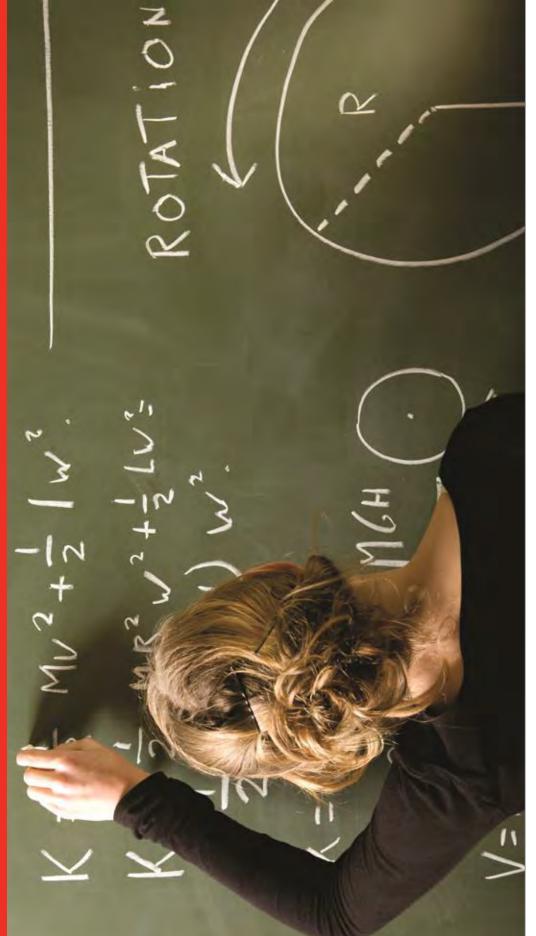
		DATES	ES.		ADVANCES	REIMBURSEMENTS	EMENTS	TOTAL	EXP	VOUCHER	
NAME	SPONSOR	FROM	ТО	LOCATION	ТО	ТО	FROM	COST	RPT	STATUS* NOTES	NOTES
Bennett, Christina	NASP	06/12/2016	06/15/2016 Atlanta, GA	Atlanta, GA		\$1,636.22		\$1,636.22	Υ	Pending	
	NASP	06/12/2016	06/12/2016 06/15/2016 Atlanta, GA	Atlanta, GA	\$1,770.00	\$236.09		\$2,006.09	٨	Pending	
Bentley, Paula	MAPERS	07/11/2016	07/13/2016	07/11/2016 07/13/2016 Osage Beach, MO	\$958.76	\$5.43		\$964.19	٨	Pending	
	NCTR	07/24/2016	07/27/2016 Berkley, CA	Berkley, CA	\$1,769.00	\$3.13		\$1,772.13	٨	Pending	
	NEPC	05/09/2016	05/09/2016 05/11/2016 Boston, MA	Boston, MA		\$2,111.55		\$2,111.55	٨	Pending	
	NASP	06/13/2016	06/13/2016 06/15/2016 Atlanta, GA	Atlanta, GA		\$2,058.31		\$2,058.31	٨	Pending	
Goodwin, Sheila	MAPERS	07/11/2016	07/13/2016	07/11/2016 07/13/2016 Osage Beach, MO		\$905.74		\$905.74	٨	Pending	
	NCTR	07/24/2016	07/27/2016 Berkley, CA	Berkley, CA		\$2,197.70		\$2,197.70	٨	Pending	
	NCTR	10/08/2016		10/12/2016 Providence, RI							
	NEPC	05/09/2016		05/11/2016 Boston, MA	\$1,475.00	\$6.33		\$1,481.33	>	Pending	
Levy, Yvette	NASP	06/13/2016	06/15/2016 Atlanta, GA	Atlanta, GA	\$2,000.00			\$2,000.00			
	MAPERS	07/11/2016		07/13/2016 Osage Beach, MO							
Moten John	NEPC	05/09/2016	05/09/2016 05/11/2016 Boston, MA	Boston, MA		\$1,446.52		\$1,446.52	٨	Pending	
1100	NASP	06/12/2016	06/15/2016 Atlanta, GA	Atlanta, GA		\$1,011.88		\$1,011.88	٨	Pending	
	NEPC	05/09/2016	05/11/2016 Boston, MA	Boston, MA	\$1,921.00	\$441.40		\$2,362.40	>	Pending	
Shelton, Charles	NASP	06/13/2016	06/15/2016 Atlanta, GA	Atlanta, GA	\$1,422.97	\$388.73		\$1,811.70	Υ	Pending	
	NCTR	10/08/2016		10/12/2016 Providence, RI	\$2,080.00			\$2,080.00			Committee meetings on Saturday, October 8th
Thomas, Eural	NASP	06/12/2016	06/15/2016 Atlanta, GA	Atlanta, GA		\$1,698.36		\$1,698.36	>	Pending	
							Total Cost	\$27,544.12			
					,						

MAPERS - Missouri Association of Public Employees Retirement Systems NASP - National Association of Securities Professionals NCTR - National Council on Teacher Retirement NEPC - New England Pension Consultants

*Pending = pending board approval

Public School Retirement System of the City of St. Louis, Missouri

Experience Analysis – October 17, 2016



Executive Summary

Periodically review system's actuarial assumptions

- Compile data and compare actual experience with our assumptions
- Goal is to ensure assumptions are consistent with actual participant behavior
- Ensure predictive value of actuarial valuations
- Detailed study generally performed every five years
- We analyzed experience during 2011 2015, prior study considered 2006 2010
- Demographic assumptions rates of retirement, termination, mortality, etc.
 - Relatively stable, recommendations are generally fine-tuning of assumptions
- Economic assumptions expected salary scale, inflation, asset return

Considerations in making recommendations

- Past experience is an important predictor, but judgments must be made
- Careful to consider factors that might make future different from the past
- Consider experience from prior experience study periods as well

Withdrawal

Summary

- System experiencing high withdrawal
- Total withdrawal 16% higher than expected this study, 80% and 100% higher the last two studies, respectively
- Select rates have mixed experience, ultimate rates were higher than assumed
- 5-year select period
- Currently assumes higher turnover in first five years
- Charter experience shows turnover is higher in all five of the first years employed
- Non-Charter experience shows some years higher some lower overall slightly lower
- Ultimate period
- Currently age-based rates assumed, with decreasing rates with age
- Overall, actual rates were 12% higher than expected

Recommendation

- Increase age-based assumed rates 10% across the board
- Increase all select rates for Charter
- Increase the last few years rates for Non-Charter
- Despite increased withdrawal rates, the allocation of costs to the current year generates a cost increase of 0.24% of active payroll

Withdrawal - Recommended Change Select Period

Board <u>Proposed</u>	25.0%	20.0%	20.0%	20.0%	15.0%	age based
Board Assumption	25.0%	20.0%	15.0%	12.5%	10.0%	age based
Charter <u>Proposed</u>	35.0%	35.0%	35.0%	25.0%	15.0%	age based
Charter <u>Assumption</u>	30.0%	25.0%	20.0%	15.0%	10.0%	age based
Service	0	_	7	က	4	2+

Withdrawal - Recommended Change Ultimate Period

Proposed Assumption	20.4%	17.1%	12.1%	%6.6	8.3%	4.4%	2.8%	2.2%	1.7%
Current <u>Assumption</u>	18.5%	15.5%	11.0%	%0.6	7.5%	4.0%	2.5%	2.0%	1.5%
Age	20	25	30	35	40	45	90	55	09

Table shows sample ages only

buckconsultants

Retirement

Summary

- Current rates age-based, with 25% rate at first Rule of 85 & 30 years service
- Rule of 85 Members
- Members overall retiring at lower rates in all years, not just first year eligible
- Generally lower rates by both age and service
- No increase in retirement rates upon reaching 30 years of service
- Non-Rule of 85 Members
- Members overall retiring at lower rates in all years
- Retirements for Members age 66-69 higher than expected

Recommendation

- Assume lower or same rates for those qualifying for Rule of 85
- Eliminate 25% rate at first Rule of 85 & 30 years service
- Assume lower or same rates for those not qualifying for Rule of 85 through age 65
- Increase rates for those age 66-69
- Decrease in required employer contribution is (0.17)% of active payroll

Retirement - Recommended Change

Not Rule of 85 <u>Proposed</u>	A/N	10.0%	10.0%	15.0%	15.0%	20.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	100.0%
Not Rule of 85 Current	A/N	10.0%	15.0%	20.0%	17.5%	20.0%	35.0%	20.0%	20.0%	20.0%	20.0%	30.0%	100.0%
Rule of 85 Proposed	15.0%	20.0%	20.0%	25.0%	25.0%	25.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	100.0%
Rule of 85 <u>Current</u>	20.0%	20.0%	20.0%	25.0%	25.0%	25.0%	35.0%	20.0%	20.0%	20.0%	20.0%	30.0%	100.0%
Age	09>	09	61	62	63	64	65	99	29	89	69	70 – 71	72

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Post-Retirement Mortality

Summary

- Current assumption is table mandated for private sector pension plans
- Mandated static mortality table projected 7 years from the valuation date for annuitants and 15 years for non-annuitants
- Society of Actuaries completed a mortality study in late 2014
- SOA has summarized their position on appropriate mortality assumptions for measuring pension plan obligations
- The RP-2014 table is recommended to replace RP-2000 tables and the MP-2014 projection scale is recommended to replace Scale AA
- Actual deaths higher than expected number during study period

Recommendation

- Switch to RP-2014 mortality rolled back to 2006 and projected with mortality improvement Scale MP-2015, applied on a fully generational basis
- Mortality rates adjusted for credibility weighting of actual plan experience
- Increase in required employer contribution is 1.54% of active payroll
- Note: Impact is aggregated with Post-Disabled Mortality change

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Post-Disability Mortality

Summary

- Current assumption is RP-2000 Disability Mortality Table
- Experienced more deaths than expected during the study period
- Small sample sizes limit data credibility
- There is a table specifically constructed for disability mortality from the SOA mortality study
- The RP-2014 table is recommended to replace RP-2000 tables and the MP-2014 projection scale is recommended to replace Scale AA

Recommendation

- Switch to RP-2014 disabled mortality rolled back to 2006 and projected with mortality improvement Scale MP-2015, applied on a fully generational basis
- Increase in required employer contribution is 1.54% of active payroll Mortality rates adjusted for credibility weighting of actual plan experience
 - - Note: Impact is aggregated with Post-Retirement Mortality change

Other Assumptions

Other demographic assumptions have little impact on valuation

- Disability
- Occurs infrequently, not enough data to suggest changes
- Percentage married, age difference, and family structure
- Small impact, limited data
- Initially set based on social security data for entire country
- Recommend no change to these

Economic Assumption – Salary Increases

Current assumption

Salary increases: 4.5% per year

Comments

- Economic assumptions are meant to be long term assumptions
- Reasonable expectation for the future more important than recent experience
- Many plans use age or service weighted salary scales
- Experience for this system supports this for the first years of employment
- Overall higher rates for first years of employment, lower rates later

Recommendation

- 5.0% annual salary increases for less than 5 years of service
- 3.5% annual salary increases for 5 years of service or more
- Decrease in required employer contribution is (0.86)% of active payroll

Economic Assumption - Investment Return

Current assumptions

Investment return: 8.0% per year

Comments

- Economic assumptions are meant to be long term assumptions
- Reasonable expectation for the future more important than recent experience
- NEPC expected returns for the current asset allocation lower than 8.0%
- 6.6% expected over next 5-7 years. 7.6% expected over next 30 years

Recommendation

- Investment return: 7.5% per year
- Increase in required employer contribution is 2.41% of active payroll

Total Cost Impact of Proposed Changes

Based on January 1, 2016 Valuation Results

		Before		<u>After</u>	Net	Net Change
Normal cost contributions	↔	23.13	↔	24.75	\$	1.62
Actuarial accrued liability contribution	↔	16.53	↔	22.87	\$	6.34
Annual required contribution (ARC)	↔	39.66	↔	47.62	\$	7.96
Covered compensation	↔	252.13	↔	252.13	\$	0.00
ARC as a % of covered compensation		15.73%		18.89%		3.16%

Dollar amounts in millions

Total Cost Impact of Proposed Changes – Amortization Reset to 30 Years

Based on January 1, 2016 Valuation Results

		<u>Before</u>		<u>After</u>	Ne	Net Change
Normal cost contributions	↔	23.13	\$	6.19	↔	\$ (16.94)
Actuarial accrued liability contribution	↔	16.53	⇔	33.78	↔	17.25
Annual required contribution (ARC)	↔	39.66	⇔	39.97	↔	0.31
Covered compensation	\$	252.13	⇔	252.13	↔	0.00
ARC as a % of covered compensation		15.73%		15.85%		0.12%

Dollar amounts in millions

- Initial amortization period reset to 30 years
- Actuarial value of assets reset to market value of assets

Questions?

Acceptance of Experience Analysis