

PUBLIC SCHOOL RETIREMENT SYSTEM OF THE CITY OF ST. LOUIS

**SCHEDULES OF PENSION INFORMATION
FOR PARTICIPATING EMPLOYERS
AND
INDEPENDENT AUDITORS' REPORT
YEARS ENDED DECEMBER 31, 2017 AND 2016**

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Independent Auditors' Report

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

Report on the Schedules

We have audited the accompanying schedules of employer allocations for Public School Retirement System of the City of St. Louis (the "System") as of and for the years ended December 31, 2017 and 2016, and the related notes to the schedules. We have also audited 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 plan expense ("specified column totals") included in the accompanying schedules of pension amounts by employer of the System as of and for the years ended December 31, 2017 and 2016, 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 the schedules that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on the schedules of employer allocations and the specified column totals included in the schedules of 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 schedules 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 of employer allocations and specified column totals included in the schedules of pension amounts by employer 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 employer pension plan expense for the total of all participating entities of the System as of and for the years ended December 31, 2017 and 2016, 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, 2017 and 2016, and our report thereon, dated April 13, 2018, 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 Trustees, the System's employers, and their auditors and is not intended to be used by anyone other than these specified parties.

A handwritten signature in blue ink that reads "Anders Minkler Huber & Helms LLP". The signature is written in a cursive style.

October 15, 2018

Public School Retirement System of the City of St. Louis
Schedules of Employer Allocations
December 31, 2017 and 2016

<u>Employer</u>	<u>Employer Name</u>	<u>2017</u>		<u>2016</u>	
		<u>Compensation</u>	<u>Employer Allocation Percentage</u>	<u>Compensation</u>	<u>Employer Allocation Percentage</u>
1	Public Schools Retirement System of the City of St. Louis	\$ 535,096	0.23 %	\$ 478,280	0.21 %
2	St. Louis Public Schools	175,741,386	74.74	173,412,355	76.47
3	Better Learning Communities Academy	-	-	-	-
4	Carondelet Leadership Academy	2,269,316	0.97	2,007,245	0.88
5	City Garden Montessori School	1,600,524	0.68	1,332,315	0.59
6	Confluence Academy	14,138,330	6.01	13,937,922	6.14
7	Construction Career Center	-	-	-	-
8	EAGLE College Preparatory School	2,236,495	0.95	1,655,809	0.73
9	Gateway Science Academy of St. Louis	5,785,082	2.46	4,794,992	2.11
10	Grand Center Arts Academy	3,124,331	1.33	3,155,676	1.39
11	Hawthorn Leadership School for Girls	1,210,545	0.51	879,164	0.39
12	JAMAA Learning Center	-	-	-	-
13	KIPP Inspire Academy	8,155,182	3.47	6,452,042	2.84
14	La Salle Middle School	692,541	0.29	595,310	0.26
15	Lafayette Preparatory Academy	1,364,175	0.58	931,056	0.41
16	Lift for Life Academy	3,601,413	1.53	3,636,601	1.60
17	North Side Community School	2,126,487	0.90	2,001,352	0.88
18	Preclarus Mastery Academy	754,013	0.32	608,211	0.27
19	Premier Charter School	5,915,343	2.52	5,976,622	2.63
20	South City Preparatory Academy	1,917,863	0.82	1,476,991	0.65
21	St. Louis Language Immersion School	3,177,575	1.35	3,158,352	1.39
22	The Arch Community School	176,366	0.08	-	-
23	The Biome	610,529	0.26	352,188	0.16
	Total Compensation for all Employers	<u>\$ 235,132,592</u>	<u>100.00 %</u>	<u>\$ 226,842,483</u>	<u>100.00 %</u>

Public School Retirement System of the City of St. Louis
Schedule of Pension Amounts by Employer
December 31, 2017

ER	Employer Name	Net Pension Liability		Deferred Outflows of Resources				
		Beginning Net Pension Liability	Ending Net Pension Liability	Difference Between Expected and Actual Experience	Changes in Assumptions	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources
1	Public Schools Retirement System of the City of St. Louis	\$ 876,434	\$ 1,727,361	\$ 7,274	\$ 746,330	\$ 119,079	\$ 46,352	\$ 919,035
2	St. Louis Public Schools	317,772,735	567,317,055	2,388,891	245,117,100	39,109,188	-	286,615,179
3	Better Learning Communities Academy	-	-	-	-	-	-	-
4	Carondelet Leadership Academy	3,678,215	7,325,660	30,847	3,165,151	505,010	202,899	3,903,907
5	City Garden Montessori School	2,441,426	5,166,708	21,756	2,232,347	356,178	265,828	2,876,109
6	Confluence Academy	25,540,808	45,640,450	192,185	19,719,581	3,146,320	-	23,058,086
7	Construction Career Center	-	-	-	-	-	-	-
8	EAGLE College Preparatory School	3,034,218	7,219,710	30,401	3,119,374	497,706	904,913	4,552,394
9	Gateway Science Academy of St. Louis	8,786,673	18,675,029	78,638	8,068,802	1,287,402	964,647	10,399,489
10	Grand Center Arts Academy	5,782,678	10,085,765	42,470	4,357,693	695,283	265,583	5,361,029
11	Hawthorn Leadership School for Girls	1,611,040	3,907,805	16,455	1,688,421	269,393	613,492	2,587,761
12	JAMAA Learning Center	-	-	-	-	-	30,070	30,070

Public School Retirement System of the City of St. Louis
Schedule of Pension Amounts by Employer (Continued)
December 31, 2017

ER	Employer Name	Net Pension Liability		Deferred Outflows of Resources				
		Beginning Net Pension Liability	Ending Net Pension Liability	Difference Between Expected and Actual Experience	Changes in Assumptions	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources
13	KIPP Inspire Academy	\$ 11,823,165	\$ 26,326,036	\$ 110,855	\$ 11,374,524	\$ 1,814,840	\$ 2,906,912	\$ 16,207,131
14	La Salle Middle School	1,090,886	2,235,616	9,414	965,928	154,117	318,891	1,448,350
15	Lafayette Preparatory Academy	1,706,130	4,403,741	18,544	1,902,697	303,581	539,921	2,764,743
16	Lift for Life Academy	6,663,959	11,625,850	48,955	5,023,108	801,452	150,016	6,023,531
17	North Side Community School	3,667,415	6,864,588	28,906	2,965,939	473,225	315,603	3,783,673
18	Preclarus Mastery Academy	1,114,527	2,434,056	10,249	1,051,667	167,797	131,564	1,361,277
19	Premier Charter School	10,951,973	19,095,531	80,409	8,250,486	1,316,390	478,323	10,125,608
20	South City Preparatory Academy	2,706,540	6,191,124	26,070	2,674,960	426,798	550,392	3,678,220
21	St. Louis Language Immersion School	5,787,581	10,257,644	43,193	4,431,955	707,132	57,191	5,239,471
22	The Arch Community School	-	569,334	2,397	245,988	39,248	156,655	444,288
23	The Biome	645,375	1,970,869	8,299	851,541	135,866	394,466	1,390,172
		<u>\$415,681,778</u>	<u>\$759,039,932</u>	<u>\$ 3,196,208</u>	<u>\$327,953,592</u>	<u>\$ 52,326,005</u>	<u>\$ 9,293,718</u>	<u>\$392,769,523</u>

**Public School Retirement System of the City of St. Louis
Schedule of Pension Amounts by Employer (Continued)
December 31, 2017**

		<u>Deferred Inflows of Resources</u>				
ER	Employer Name	Difference Between Expected and Actual Experience	Difference Between Projected and Actual Investment Earnings	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Total Employer Pension Plan Expense
1	Public Schools Retirement System of the City of St. Louis	\$ (21,064)	\$ (115,090)	\$ (10,157)	\$ (146,311)	\$ 450,204
2	St. Louis Public Schools	(6,918,094)	(37,798,972)	(6,323,888)	(51,040,954)	141,442,661
3	Better Learning Communities Academy	-	-	(305,654)	(305,654)	(170,164)
4	Carondelet Leadership Academy	(89,332)	(488,091)	(65,840)	(643,263)	1,915,083
5	City Garden Montessori School	(63,005)	(344,245)	(44,084)	(451,334)	1,412,110
6	Confluence Academy	(556,558)	(3,040,913)	(958,608)	(4,556,079)	11,097,801
7	Construction Career Center	-	-	(199,146)	(199,146)	(142,247)
8	EAGLE College Preparatory School	(88,040)	(481,032)	-	(569,072)	2,262,119
9	Gateway Science Academy of St. Louis	(227,731)	(1,244,272)	-	(1,472,003)	5,153,215
10	Grand Center Arts Academy	(122,990)	(671,990)	(130,279)	(925,259)	2,681,954
11	Hawthorn Leadership School for Girls	(47,653)	(260,368)	-	(308,021)	1,293,275
12	JAMAA Learning Center	-	-	(355,846)	(355,846)	(156,444)

Public School Retirement System of the City of St. Louis
Schedule of Pension Amounts by Employer (Continued)
December 31, 2017

		<u>Deferred Inflows of Resources</u>				
ER	Employer Name	Difference Between Expected and Actual Experience	Difference Between Projected and Actual Investment Earnings	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Total Employer Pension Plan Expense
13	KIPP Inspire Academy	\$ (321,030)	\$ (1,754,041)	\$ -	\$ (2,075,071)	\$ 8,107,281
14	La Salle Middle School	(27,262)	(148,954)	-	(176,216)	741,650
15	Lafayette Preparatory Academy	(53,701)	(293,411)	-	(347,112)	1,355,388
16	Lift for Life Academy	(141,770)	(774,602)	(149,304)	(1,065,676)	2,984,115
17	North Side Community School	(83,710)	(457,371)	-	(541,081)	1,916,763
18	Preclarus Mastery Academy	(29,682)	(162,175)	(91,525)	(283,382)	628,000
19	Premier Charter School	(232,859)	(1,272,289)	(376,024)	(1,881,172)	4,915,361
20	South City Preparatory Academy	(75,497)	(412,500)	(33,688)	(521,685)	1,776,464
21	St. Louis Language Immersion School	(125,086)	(683,442)	(249,676)	(1,058,204)	2,489,328
22	The Arch Community School	(6,943)	(37,933)	-	(44,876)	200,732
23	The Biome	(24,034)	(131,314)	-	(155,348)	671,858
		<u>\$ (9,256,041)</u>	<u>\$ (50,573,005)</u>	<u>\$ (9,293,719)</u>	<u>\$ (69,122,765)</u>	<u>\$ 193,026,507</u>

Public School Retirement System of the City of St. Louis
Schedule of Pension Amounts by Employer
December 31, 2016

ER	Employer Name	Net Pension Liability		Deferred Outflows of Resources				
		Beginning Net Pension Liability	Ending Net Pension Liability	Difference Between Expected and Actual Experience	Changes in Assumptions	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources
1	Public Schools Retirement System of the City of St. Louis	\$ 649,399	\$ 876,434	\$ 10,108	\$ 111,534	\$ 168,747	\$ 17,119	\$ 307,508
2	St. Louis Public Schools	251,473,429	317,772,735	3,665,067	40,439,384	61,183,276	-	105,287,727
3	Better Learning Communities Academy	591,530	-	-	-	-	-	-
4	Carondelet Leadership Academy	3,024,744	3,678,215	42,423	468,085	708,195	60,473	1,279,176
5	City Garden Montessori School	2,008,688	2,441,426	28,158	310,693	470,067	121,446	930,364
6	Confluence Academy	20,757,779	25,540,808	294,578	3,250,293	4,917,572	-	8,462,443
7	Construction Career Center	-	-	-	-	-	-	-
8	EAGLE College Preparatory School	1,673,843	3,034,218	34,995	386,131	584,202	703,984	1,709,312
9	Gateway Science Academy of St. Louis	6,486,815	8,786,673	101,342	1,118,182	1,691,767	386,459	3,297,750
10	Grand Center Arts Academy	4,162,751	5,782,678	66,695	735,897	1,113,384	429,220	2,345,196
11	Hawthorn Leadership School for Girls	711,312	1,611,040	18,581	205,019	310,186	552,262	1,086,048
12	JAMAA Learning Center	936,564	-	-	-	-	51,549	51,549

Public School Retirement System of the City of St. Louis
Schedule of Pension Amounts by Employer (Continued)
December 31, 2016

ER	Employer Name	Net Pension Liability		Deferred Outflows of Resources				
		Beginning Net Pension Liability	Ending Net Pension Liability	Difference Between Expected and Actual Experience	Changes in Assumptions	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources
13	KIPP Inspire Academy	\$ 6,728,768	\$ 11,823,165	\$ 136,364	\$ 1,504,602	\$ 2,276,407	\$ 2,550,555	\$ 6,467,928
14	La Salle Middle School	468,483	1,090,886	12,582	138,825	210,037	401,033	762,477
15	Lafayette Preparatory Academy	1,033,343	1,706,130	19,678	217,120	328,495	294,330	859,623
16	Lift for Life Academy	4,844,158	6,663,959	76,860	848,048	1,283,064	230,960	2,438,932
17	North Side Community School	2,378,045	3,667,415	42,299	466,711	706,116	424,000	1,639,126
18	Preclarus Mastery Academy	1,104,900	1,114,527	12,855	141,833	214,589	37,372	406,649
19	Premier Charter School	7,231,364	10,951,973	126,316	1,393,735	2,108,669	717,484	4,346,204
20	South City Preparatory Academy	1,554,066	2,706,540	31,216	344,431	521,111	310,106	1,206,864
21	St. Louis Language Immersion School	4,336,172	5,787,581	66,751	736,521	1,114,329	85,788	2,003,389
22	The Arch Community School	-	-	-	-	-	-	-
23	The Biome	92,131	645,375	7,444	82,130	124,259	269,221	483,054
		<u>\$322,248,284</u>	<u>\$415,681,778</u>	<u>\$ 4,794,312</u>	<u>\$ 52,899,174</u>	<u>\$ 80,034,472</u>	<u>\$ 7,643,361</u>	<u>\$145,371,319</u>

**Public School Retirement System of the City of St. Louis
Schedule of Pension Amounts by Employer (Continued)
December 31, 2016**

		<u>Deferred Inflows of Resources</u>			
		Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions			
ER	Employer Name	Difference Between Expected and Actual Experience	Total Deferred Inflows of Resources	Total Employer Pension Plan Expense	
1	Public Schools Retirement System of the City of St. Louis	\$ (11,576)	\$ (17,412)	\$ (28,988)	\$ 163,096
2	St. Louis Public Schools	(4,197,038)	(4,319,906)	(8,516,944)	58,139,437
3	Better Learning Communities Academy	-	(475,818)	(475,818)	(170,164)
4	Carondelet Leadership Academy	(48,581)	(98,761)	(147,342)	683,256
5	City Garden Montessori School	(32,246)	(66,125)	(98,371)	487,200
6	Confluence Academy	(337,335)	(1,094,890)	(1,432,225)	4,387,311
7	Construction Career Center	-	(341,393)	(341,393)	(142,247)
8	EAGLE College Preparatory School	(40,075)	-	(40,075)	831,108
9	Gateway Science Academy of St. Louis	(116,051)	-	(116,051)	1,796,236
10	Grand Center Arts Academy	(76,376)	-	(76,376)	1,249,955
11	Hawthorn Leadership School for Girls	(21,278)	-	(21,278)	507,222
12	JAMAA Learning Center	-	(533,768)	(533,768)	(156,444)

**Public School Retirement System of the City of St. Louis
Schedule of Pension Amounts by Employer (Continued)
December 31, 2016**

ER	Employer Name	<u>Deferred Inflows of Resources</u>			Total Employer Pension Plan Expense
		Difference Between Expected and Actual Experience	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	
13	KIPP Inspire Academy	\$ (156,156)	\$ -	\$ (156,156)	\$ 3,168,062
14	La Salle Middle School	(14,408)	-	(14,408)	354,113
15	Lafayette Preparatory Academy	(22,534)	-	(22,534)	429,406
16	Lift for Life Academy	(88,015)	-	(88,015)	1,332,816
17	North Side Community School	(48,438)	-	(48,438)	843,531
18	Preclarus Mastery Academy	(14,720)	(137,287)	(152,007)	179,181
19	Premier Charter School	(144,650)	(218,718)	(363,368)	2,205,436
20	South City Preparatory Academy	(35,747)	(57,751)	(93,498)	587,749
21	St. Louis Language Immersion School	(76,441)	(281,532)	(357,973)	998,529
22	The Arch Community School	-	-	-	-
23	The Biome	(8,524)	-	(8,524)	214,028
		<u>\$ (5,490,189)</u>	<u>\$ (7,643,361)</u>	<u>\$ (13,133,550)</u>	<u>\$ 78,088,817</u>

Public School Retirement System of the City of St. Louis
Notes to Schedules
December 31, 2017 and 2016

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 defined benefit 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. The System's annual reports for December 31, 2017 and 2016 are available at www.psrstl.org.

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 80 (Rule of 80) for the year ended December 31, 2017 and 85 (Rule of 85) for the year ended December 31, 2016, 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 five 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 80 would apply for the year ended December 31, 2017 and Rule of 85 would apply for the year ended December 31, 2016, 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 member, 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.

Public School Retirement System of the City of St. Louis
Notes to Schedules
December 31, 2017 and 2016

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"), which is the source of authoritative accounting principles generally accepted in the United States of America ("GAAP"), as applied to governmental units. 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.

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 state of Missouri 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, 2017 and 2016, was used as the basis for determining each employer's proportionate share of the collective pension amounts reported on the schedules, respectively.

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 October 15, 2018, the date the schedules of pension information for participating employers were available to be issued.

Public School Retirement System of the City of St. Louis
Notes to Schedules
December 31, 2017 and 2016

3. Schedules of Employer Allocations

The Schedules of Employer Allocations reflect employer compensation as of and for the years ended December 31, 2017 and 2016 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, 2017 and 2016 are as follows:

	<u>2017</u>	<u>2016</u>
Total pension liability	\$ 1,673,122,191	\$ 1,265,862,200
Fiduciary net position	<u>914,082,259</u>	<u>850,180,422</u>
Employers' net pension liability	<u>\$ 759,039,932</u>	<u>\$ 415,681,778</u>
Plan net position as a percentage of total pension liability	54.63 %	67.16 %
Covered employee payroll	\$ 235,132,592	\$ 226,842,483
Employers' net pension liability as a percentage of employee covered payroll	322.81 %	183.25 %

4. Schedules of Pension Amounts by Employer

The Schedules of Pension Amounts by Employer include only certain categories of deferred outflows of resources and deferred inflows of resources. These include differences between expected and actual experience, changes in assumptions, differences between projected and actual earnings on plan investments, and changes in proportion and difference between employer contributions and proportionate share of contributions. 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.

Public School Retirement System of the City of St. Louis
Notes to Schedules
December 31, 2017 and 2016

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

The following presents the net pension liability at December 31, 2017 and 2016, calculated using the discount rate of 4.78 percent and 7.50 percent, respectively, 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 or one-percentage-point higher than the current rate:

	1% Decrease (3.78%)	Current Discount Rate (4.78%)	1% Increase (5.78%)
Net pension liability - 2017	\$ 961,985,980	\$ 759,039,932	\$ 590,565,070
	1% Decrease (6.50%)	Current Discount Rate (7.50%)	1% Increase (8.50%)
Net pension liability - 2016	\$ 541,091,150	\$ 415,681,778	\$ 309,269,186

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

Under GASB Statement No. 68, employers participating in the plan could recognize a proportionate share of total pension expense of \$193,026,507 and \$78,088,817 for their fiscal years beginning after June 15, 2017 and 2016, respectively.

6. Actuarial Methods and Assumptions

The information presented in the aforementioned schedules was determined as part of the 2017 and 2016 actuarial valuation prepared by Conduent at June 8, 2018 and June 5, 2017, respectively.

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

	2017	2016
Actuarial cost method	Frozen entry age	Frozen entry age
Rate of investment return	4.78%, net of expenses	7.50%, net of expenses
Participant account interest crediting rate	5.00%	5.00%
Turnover or withdrawal rates	Various by age and year of membership based on actual	Various by age and year of membership based on actual

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	<u>2017</u>	<u>2016</u>
Mortality and death rates	a) RP-2014 Combined Healthy Mortality Table (rolled back to 2006) for active Members, and deferred vested Members, projected fully generationally using projection scale MP- 2015. b) RP-2014 Combined Healthy Mortality Table (rolled back to 2006) for Inactive (In Receipt) Members adjusted by an additional 10% to account for the higher mortality experienced by the Plan, projected fully generationally using projection scale MP-2015.	a) RP-2014 Combined Healthy Mortality Table (rolled back to 2006) for active Members, and deferred vested Members, projected fully generationally using projection scale MP- 2015. b) RP-2014 Combined Healthy Mortality Table (rolled back to 2006) for Inactive (In Receipt) Members adjusted by an additional 10% to account for the higher mortality experienced by the Plan, projected fully generationally using projection scale MP-2015.
Disability rates	RP-2014 Disability Mortality Table (rolled back to 2006)	RP-2014 Disability Mortality Table (rolled back to 2006)
Rates of retirement between the ages of 55 and 70	Various based on actual experience of the System	Various based on actual experience of the System
Rate of salary increases	Salaries are assumed to increase at the rate of 5.0% per year for the first five years of employment and at the rate of 3.5% per year thereafter	Salaries are assumed to increase at the rate of 5.0% per year for the first five years of employment and at the rate of 3.5% per year thereafter
Asset valuation method	The assumed yield method of valuing assets	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.

Benefit changes effective as of August 28, 2017:

1. Reduce the "Rule of 85" to "Rule of 80."
2. Change the percent of pay benefit multiplier from 2.00 percent of Average Final Compensation to 1.75 percent of Average Final Compensation for members hired on or after January 1, 2018.

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Contribution changes effective as of August 28, 2017:

1. Increase the employee contribution requirement from a flat 5.00 percent of compensation during 2017 to 9.00 percent in 0.50 percent annual increments for employees hired before January 1, 2018.
2. Set employee contribution rate to a flat 9.00 percent for employees hired on or after January 1, 2018.
3. Set the employer contribution rate to a flat 16.00 percent of covered payroll for plan year 2018 with annual decreases of 0.50 percent until reaching 9.00 percent of covered payroll.

Assumption changes effective as of January 1, 2017:

1. Revised investment return assumption of 7.50 percent to a blended discount rate of 4.78 percent. Blended discount rate is a municipal bond rate of 3.16 percent and long-term rate of return of 7.50 percent.

As of December 31, 2017, cumulative impact of changes from the prior valuation was an increase in the Entry Age Normal Liability by approximately \$72.7 million.

Assumption changes effective as of January 1, 2016:

1. Revised investment return assumption of 7.50% based on analysis of asset allocation.
2. Updated Withdrawal assumption based on Plan experience for the 5 years ending December 31, 2015.
3. Updated Retirement assumption based on Plan experience for the 5 years ending December 31, 2015.
4. Revised Salary increase assumption.
5. Updated mortality assumption, reflecting most recent mortality improvements.

Cumulative impact on Net Pension Liability at December 31, 2016 is an increase of \$70.5 million.