January 22, 2013

Mr. M. Steve Yoakum
Executive Director
PSRS and PEERS of Missouri
3210 West Truman Blvd.
Jefferson City, MO 65109

Re: Public Education Employee Retirement System of Missouri ("PEERS")
Cost Estimate of Proposed Benefit Changes

Dear Steve:

This letter has been prepared pursuant to the engagement letter dated October 27, 2008, between PricewaterhouseCoopers LLP ("PwC") and the Public School and Public Education Employee Retirement Systems of Missouri ("PSRS and PEERS of Missouri"). As requested, we have estimated the cost impact as of June 30, 2012 of the following proposed benefit change to PEERS of Missouri:

- **Permanent extension of the "25 & Out" Early Retirement Benefit which allows members of any age to retire after 25 years of service with a reduced benefit.**

We estimate that this change would result in an increase to the Actuarial Accrued Liability ("AAL") of approximately $1.5 million, which decreases the funded ratio of the system by 0.03%, and would increase the Annual Required Contribution percentage by 0.01%. Enclosed are four exhibits presenting the results of our analysis as follows:

- Exhibit I - Summary impact on the Annual Required Contribution
- Exhibit II - Detailed impact to the Funded Status and Annual Required Contribution
- Exhibit III - Actuarial assumptions and methods used in our analysis
- Exhibit IV - Disclosures relating to our analysis

When a member has 25 years of service, the member is at or near the eligibility threshold for unreduced benefits under the "Rule of 80". At most, members are five years away from meeting the eligibility requirement for unreduced benefits under the "30 & Out" benefit.

For members with 25 years of service or more, the actuarial present value of a reduced benefit commencing immediately after 25 years of service is nearly the same as the value of an unreduced benefit taken sometime later by delaying retirement until the member meets the requirements of the Rule of 80 or 30 & Out. The advantages of retiring at 25 years of service are that the member receives pension benefits for a longer period of time, the COLA starts earlier, and the member no longer contributes to the system. The disadvantages are that the member gives up future increases in their pension benefit due to service and salary increases, as well as improved subsidy, which can be significant as the member approaches eligibility for the Rule of 80 and 30 & Out. Whether the 25 & Out reduced benefit is more or less valuable than a deferred unreduced benefit depends on how soon after earning 25 years of service the member would be eligible for an unreduced benefit. As such, the results of our analysis are driven by the demographics of the current member population and by the retirement assumption.

The experience study completed in 2011 showed that a small percentage of members have elected to take the 25 & Out reduced benefit when eligible. The current assumption is that 5% of members will retire and elect the 25 & Out reduced benefit when eligible. If the benefit is made available to members permanently, the same 5%

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assumption would apply in future years. See Exhibit III for details of the retirement assumption. Based on this assumption and given the demographics of the active member population as of June 30, 2012, permanent extension of the 25 & Out benefit is expected to be a small cost increase.

In addition, please note the following when reviewing the results:

- Our analysis was performed by measuring the impact of the change at June 30, 2012, using census data collected from PSRS and PEERS of Missouri as of June 30, 2012. Our estimates do not incorporate the impact of future employees who may become members of PEERS. Please refer to our actuarial valuation report dated October 19, 2012 for a summary of the census data.

- The BASELINE results shown in Exhibit I are equal the results of our June 30, 2012 valuation of the system.

- Our analysis was performed based on our understanding of the current PEERS benefit provisions as set forth in Chapter 169 of the Missouri Revised Statutes, as well as the modification to those statutes to affect the change described above.

- Our analysis does not include any additional administrative cost that may be incurred by PEERS of Missouri to implement this change.

- Our analysis is based on the specific assumptions disclosed herein. The result of our analysis is heavily dependent on those assumptions. The actual cost of the proposed benefit change will depend on the actual future experience of plan members.

To the best of our knowledge this actuarial statement is complete and accurate and has been prepared in accordance with generally accepted actuarial principles and practice and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with our understanding of the requirements of Missouri state law. The undersigned actuaries are members of the Society of Actuaries and other professional organizations, including the American Academy of Actuaries, and meet the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States relating to pension plans. There is no relationship between the PwC practitioners involved in this engagement and PSRS and PEERS of Missouri that may impair our objectivity.

This document was not intended or written to be used, and it cannot be used, for the purpose of avoiding U.S. federal, state, or local tax penalties. This includes penalties that may apply if the transaction that is the subject of this document is found to lack economic substance or fails to satisfy any other similar rule of law. This document has been prepared pursuant to an engagement letter between PSRS and PEERS of Missouri and PwC, and is intended solely for the use and benefits of PSRS and PEERS of Missouri and not for reliance by any other person.

Please call with any questions or if you require additional information.

Sincerely,

Sheldon A. Gamzon, FSA, MAAA

Brandon Robertson, ASA, MAAA

Exhibit I

Public Education Employee Retirement System of Missouri

Fiscal Impact of Permanently Extending the 25 & Out Early Retirement Benefit as of June 30, 2012

	BASELINE	Permanent Extension of 25 & Out Benefit
Annual Required Contribution		
Normal Cost Rate	10.79%	10.79%
Unfunded Actuarial Accrued Liability Amortization Rate	2.78%	2.79%
Annual Required Contribution Rate	**13.57%**	**13.58%**
Change in Annual Required Contribution Rate		**0.01%**

Exhibit II

Public Education Employee Retirement System of Missouri

Fiscal Impact of Permanently Extending the 25 & Out Early Retirement Benefit as of June 30, 2012

	BASELINE	Permanent Extension of 25 & Out Benefit
Funded Status		
Actuarial Accrued Liability ("AAL")		
Active Members	2,076,085,680	2,077,601,525
Inactive Members	128,720,349	128,720,349
Pay Status Members	1,541,541,277	1,541,541,277
Total Actuarial Accrued Liability ("AAL")	$3,746,347,306	$3,747,863,151
% Change		0.04%
Actuarial Value of Assets ("AVA")	3,090,879,968	3,090,879,968
Unfunded Actuarial Accrued Liability (AAL - AVA)	$655,467,338	$656,983,183
Funded Percentage (AVA / AAL)	**82.50%**	**82.47%**
Change in Funded Percentage		**-0.03%**
Annual Required Contribution		
Expected Payroll	$1,437,310,138	$1,437,310,138
Normal Cost	$146,899,546	$146,984,699
Total Normal Cost With 1.5% Service Purchase Load	$149,103,039	$149,189,469
Normal Cost Rate	10.79%	10.79%
Unfunded Actuarial Accrued Liability Amortization	$38,433,073	$38,520,665
Unfunded Actuarial Accrued Liability Amortization Rate	2.78%	2.79%
Annual Required Contribution	$187,536,112	$187,710,134
Annual Required Contribution Rate	**13.57%**	**13.58%**
Change in Annual Required Contribution Rate		**0.01%**

ACTUARIAL ASSUMPTIONS

Inflation

Inflation is assumed to be 2.50% per annum.

Payroll Growth

Total payroll growth is assumed to be 3.75% per annum, consisting of 2.50% inflation, 0.75% additional inflation due to the inclusion of health care costs in pension earnings, and 0.50% of real wage growth.

Salary and Payroll Increases

Service	General Inflation	Health Care Inflation	Longevity	Total Increase
0	2.50%	0.75%	8.75%	12.00%
1	2.50%	0.75%	4.00%	7.25%
2	2.50%	0.75%	3.50%	6.75%
3	2.50%	0.75%	3.25%	6.50%
4	2.50%	0.75%	3.00%	6.25%
5	2.50%	0.75%	2.90%	6.15%
6	2.50%	0.75%	2.80%	6.05%
7	2.50%	0.75%	2.70%	5.95%
8	2.50%	0.75%	2.60%	5.85%
9	2.50%	0.75%	2.50%	5.75%
10	2.50%	0.75%	2.40%	5.65%
11	2.50%	0.75%	2.30%	5.55%
12	2.50%	0.75%	2.20%	5.45%
13	2.50%	0.75%	2.10%	5.35%
14	2.50%	0.75%	2.00%	5.25%
15	2.50%	0.75%	1.95%	5.20%
16	2.50%	0.75%	1.90%	5.15%
17	2.50%	0.75%	1.85%	5.10%
18	2.50%	0.75%	1.80%	5.05%
19	2.50%	0.75%	1.75%	5.00%
20+	2.50%	0.75%	1.75%	5.00%

Investment Return

It is assumed that investments of the System will return a yield of 8.00% per annum, net of system expenses (investment and administrative).

Cost of Living Adjustments

Cost of living adjustments ("COLA") are assumed to be 2.00% per year and compounded, based on the current policy of the Board to grant a 2.00% COLA whenever annual inflation, as measured by the CPI-U index for a fiscal year, increases between 0.00% and 5.00%.

The COLA assumption applies to service retirees and their beneficiaries. The COLA does not apply to the benefits for in-service death payable to spouses (where the spouse is over age 60), and does not apply to the spouse with children pre-retirement death benefit, the dependent children pre-retirement death benefit, or the dependent parent death benefit. The total lifetime COLA cannot exceed 80% of the original benefit. Future COLAs for current benefit recipients reflect actual cumulative adjustments granted at the time of valuation.

Mortality Rates

Mortality Rates for active and inactive members are based on the RP 2000 Mortality Table, set back one year for males and six years for females, then projected to 2016 using Scale AA. Illustrative rates per 1,000 members at various ages are as follows:

Active Member Mortality

Age	Male	Female
20	0.244	0.131
30	0.380	0.171
40	0.898	0.342
50	1.492	0.782
60	4.593	2.237
70	15.549	7.955

Mortality Rates for non-disabled retirees and beneficiaries are based on the RP 2000 Mortality Table, set forward one year for males and no setback for females, then projected to 2016 using Scale AA. Illustrative rates per 1,000 members at various ages are as follows:

Service Retiree, Beneficiary and Surviror Mortality

Age	Male	Female
40	1.004	0.554
50	1.831	1.274
60	5.930	4.665
70	19.292	15.452
80	61.340	41.002
90	187.360	125.502
100	352.933	233.696
110	400.000	364.617

Mortality Rates for disabled retirees are based on the RP 2000 Disabled Retiree Mortality Table. Illustrative rates per 1,000 members at various ages are as follows:

Disability Retiree Mortality

Age	Male	Female
40	22.571	7.450
50	28.975	11.535
60	42.042	21.839
70	62.583	37.635
80	109.372	72.312
90	183.408	140.049
100	344.556	237.467

Exhibit III

Retirement Rates

When the 25 & Out Benefit is available, retirement is assumed in accordance with the following rates per 1,000 eligible members:

	Service										
Age	< = 20	21	22	23	24	25	26	27	28	29	>= 30
<50	0	0	0	0	0	50	50	50	50	50	150
50	0	0	0	0	0	50	50	50	50	50	250
51	0	0	0	0	0	50	50	50	50	250	150
52	0	0	0	0	0	50	50	50	250	150	150
53	0	0	0	0	0	50	50	250	150	150	150
54	0	0	0	0	0	50	250	150	150	150	150
55	30	30	30	30	30	270	170	170	170	170	170
56	30	30	30	30	130	170	170	170	170	170	170
57	30	30	30	130	30	170	170	170	170	170	170
58	30	30	130	30	30	170	170	170	170	170	170
59	30	130	30	30	30	170	170	170	170	170	170
60	160	160	160	160	160	160	160	160	160	160	160
61	100	100	100	100	100	100	100	100	100	100	100
62	240	240	240	240	240	240	240	240	240	240	240
63	200	200	200	200	200	200	200	200	200	200	200
64	140	140	140	140	140	140	140	140	140	140	140
65	260	260	260	260	260	260	260	260	260	260	260
66	200	200	200	200	200	200	200	200	200	200	200
67	200	200	200	200	200	200	200	200	200	200	200
68	200	200	200	200	200	200	200	200	200	200	200
69	200	200	200	200	200	200	200	200	200	200	200
70	200	200	200	200	200	200	200	200	200	200	200
71	200	200	200	200	200	200	200	200	200	200	200
72	200	200	200	200	200	200	200	200	200	200	200
73	200	200	200	200	200	200	200	200	200	200	200
74	200	200	200	200	200	200	200	200	200	200	200
>=75	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

Without the permanent extension of the 25 & Out Benefit, after June 30, 2013, retirement is assumed in accordance with the following rates per 1,000 eligible members:

	Service										
Age	< = 20	21	22	23	24	25	26	27	28	29	>= 30
<50	0	0	0	0	0	0	0	0	0	0	150
50	0	0	0	0	0	0	0	0	0	0	250
51	0	0	0	0	0	0	0	0	0	250	150
52	0	0	0	0	0	0	0	0	250	150	150
53	0	0	0	0	0	0	0	250	150	150	150
54	0	0	0	0	0	0	250	150	150	150	150
55	30	30	30	30	30	270	170	170	170	170	170
56	30	30	30	30	130	170	170	170	170	170	170
57	30	30	30	130	30	170	170	170	170	170	170
58	30	30	130	30	30	170	170	170	170	170	170
59	30	130	30	30	30	170	170	170	170	170	170
60	160	160	160	160	160	160	160	160	160	160	160
61	100	100	100	100	100	100	100	100	100	100	100
62	240	240	240	240	240	240	240	240	240	240	240
63	200	200	200	200	200	200	200	200	200	200	200
64	140	140	140	140	140	140	140	140	140	140	140
65	260	260	260	260	260	260	260	260	260	260	260
66	200	200	200	200	200	200	200	200	200	200	200
67	200	200	200	200	200	200	200	200	200	200	200
68	200	200	200	200	200	200	200	200	200	200	200
69	200	200	200	200	200	200	200	200	200	200	200
70	200	200	200	200	200	200	200	200	200	200	200
71	200	200	200	200	200	200	200	200	200	200	200
72	200	200	200	200	200	200	200	200	200	200	200
73	200	200	200	200	200	200	200	200	200	200	200
74	200	200	200	200	200	200	200	200	200	200	200
>=75	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

Withdrawal Rates

Termination of membership prior to eligibility for retirement from all causes other than death and disability is assumed in accordance with the following illustrative rates per 1,000 members:

Active Member Withdrawal

Years of Service	Rate
0	300
1	220
2	150
3	120
4	100
5	81
10	48
15	33
20	18
25+	0

Disability Rates

Retirement for disability prior to age 60 is assumed in accordance with the following illustrative rates per 1,000 eligible members:

Active Member Disability

Age	Rates
30	0.080
35	0.160
40	0.320
45	0.640
50	1.040
55	1.680

Refund of Contributions

It is assumed that 80% of those leaving after earning 5 years of service leave their contributions in the fund and receive a vested benefit. The remaining 20% are assumed to take an immediate refund of their contributions, thus forfeiting their vested retirement benefit. If the present value of the deferred benefit is less than the member account balance, the member's account balance is valued.

It is assumed that 100% of those leaving prior to earning 5 years of service will take an immediate refund of their contributions.

Interest on Member Accounts

1.00% per annum.

Service Purchases

A 1.50% load is added to the Normal Cost to account for anticipated losses resulting from service purchases and reinstatements.

Provisions for Expenses

There is no specific provision for expenses. The implicit assumption is that administrative expenses are paid from investment income in excess of 8.00% per annum.

Dependent Assumptions

85% of male members and 70% of female members are assumed to be married.

Beneficiaries are assumed to be of the opposite sex from the member.

Male and Female members are assumed to be 5 years older than their beneficiary.

Return of Unused Member Account Balance

Under the single life annuity payment option, any unused balance of contributions and interest in the member account balance at the time of death is paid in a lump sum to a designated beneficiary. This benefit is approximated with a 3-year certain benefit.

Data Assumptions

Members without a date of birth provided are assumed to be 30 years old. Pensionable pay for valuation purposes is assumed to be the greater of the current year's salary, the previous year's salary and $5,000. Pensionable pay for active members hired in the current year is assumed to be the greater of annualized pay and $5,000. Pensionable pay for valuation purposes for inactive members is assumed to be the greater of the two most recent years of salary history provided and $5,000.

ACTUARIAL METHODS

Actuarial Cost Method

The actuarial cost method is Entry Age Normal - Level Percent of Payroll.

The normal cost is calculated separately for each active member and is equal to the level percentage of payroll needed as an annual contribution from entry age to retirement age to fund projected benefits. The actuarial accrued liability on any valuation date is the accumulated value of such normal costs from entry age to the valuation date.

Asset Valuation Method

The Actuarial Value of Assets is a smoothed value of assets. The actuarial value for a year is computed by taking the actuarial value at June 30 of the prior year, subtracting all expenses (including benefit payments), and adding contributions and expected investment return at 8% of actuarial value of assets. The difference between the actual returns at market value for the year and expected returns is determined. Twenty percent (20%) of that difference is added to the actuarial value along with corresponding amounts from each of the prior four years. The Actuarial Value of Assets was reset to market value at June 30, 2003.

Amortization of Unfunded Actuarial Accrued Liability

Gains and losses occurring from census experience different than assumed and assumption changes are amortized over a 30-year period as a level percent of payroll. A new gain or loss base is established each year based on the additional gain or loss during that year and that base is amortized over a new 30-year period. The purpose of the method is to give a smooth progression of the costs from year to year and, at the same time, provide for an orderly funding of the unfunded liabilities.

Increases or decreases in the Actuarial Accrued Liability caused by changes in the benefit provisions are amortized over 20 years, as determined in the 2007 session of the Legislature.

Public Education Employee Retirement System of Missouri

Disclosures

This letter has been prepared pursuant to the engagement letter between PricewaterhouseCoopers LLP and PSRS and PEERS of Missouri, dated October 27, 2008.

In preparing the results presented in this letter, we have relied upon information provided to us by PSRS and PEERS of Missouri regarding plan provisions, plan participants, and benefit payments. While the scope of our engagement did not call for us to perform an audit or independent verification of this information, we have reviewed this information for reasonableness. The accuracy of the results presented in this letter is dependent upon the accuracy and completeness of the underlying information.

To the best of our knowledge, the individuals involved in this engagement have no relationship that may impair or appear to impair the objectivity of our work.

No statement in this letter is intended as a recommendation in favor, or in opposition, of the proposed legislation. Except as otherwise noted, potential impacts on other benefit plans were not considered.

The calculations are based upon assumptions regarding future events. However, the plan's long term costs will be determined by actual future events, which may differ materially from the assumptions that were made. The calculations are also based upon present and proposed plan provisions that are outlined in the letter. If you have reason to believe that the assumptions that were used are unreasonable, that the plan provisions are incorrectly described, that important plan provisions relevant to this proposal are not described, or that conditions have changed since the calculations were made, you should contact PSRS and PEERS of Missouri.

In the event that more than one plan change is being considered, it is very important to remember that the results of separate actuarial valuations cannot generally be added together to produce a correct estimate of the combined effect of all of the changes. The total can be considerably greater or less than the sum of the parts due to the interaction of various plan provisions with each other, and with the assumptions that must be used.

This document was not intended or written to be used, and it cannot be used, for the purpose of avoiding U.S. federal, state or local tax penalties. This includes penalties that may apply if the transaction that is the subject of this document is found to lack economic substance or fails to satisfy any other similar rule of law. This document has been prepared pursuant to an engagement between PricewaterhouseCoopers LLP and PSRS and PEERS of Missouri and is intended solely for the use and benefit of PSRS and PEERS of Missouri and not for reliance by any other person.

February 20, 2013

Mr. M. Steve Yoakum
Executive Director
PSRS and PEERS of Missouri
3210 West Truman Blvd.
Jefferson City, MO 65109

Re: Public School Retirement System of Missouri ("PSRS")
Cost Estimate of Proposed Benefit Changes

Dear Steve:

This letter has been prepared pursuant to the engagement letter dated October 27, 2008, between PricewaterhouseCoopers LLP ("PwC") and the Public School and Public Education Retirement Systems of Missouri ("PSRS and PEERS of Missouri"). As requested, we have estimated the cost impact as of June 30, 2012 of the following proposed benefit change to PSRS of Missouri:

- **Permanent extension of the 2.55% formula factor for members who retire with 31 or more years of service.**

We estimate that this change would result in a reduction to the Present Value of Future Benefits ("PVFB") of approximately $64.7 million and a corresponding reduction in the Annual Required Contribution Rate ("ARC Rate") of approximately 0.09%. Enclosed are several exhibits presenting the results of our analysis, as follows:

- Exhibit I – Summary impact on the Annual Required Contribution
- Exhibit II – Detailed impact to the Funded Status and Annual Required Contribution
- Exhibit III – Summary impact of assumption changes since prior analysis
- Exhibit IV – Detail of retirement assumption used in prior analysis
- Exhibit V – Detail of retirement assumption used in current analysis
- Exhibit VI – Detail of individual salary growth assumption used in prior and current analysis
- Exhibit VII – Description of all actuarial assumptions and methods used in our analysis
- Exhibit VIII – Disclosures relating to our analysis

The PVFB of the system is equal to the present value of all benefits expected to be paid to current members of the system based on service and final average salary at retirement. When the 2.55% benefit is available, a larger percentage of active members are assumed to delay retirement until they earn 31 years of service or more. Although delaying retirement results in a higher monthly payment for the member, the present value of the delayed higher monthly payments are less than the present value of the unreduced benefit that could be taken after 30 years of service under the 2.50% formula multiplier for the active population as a whole. The reasons being that delaying retirement results in the member forgoing receipt of benefit payments, delaying future cost-of-living adjustments, and reducing the period of time that they will receive pension payments. As such, the PVFB is estimated to decrease when the 2.55% benefit is available because a larger percentage of members are assumed to delay retirement until they earn 31 years of service or more.

Because the PVFB is estimated to decrease, the ongoing cost of the system, represented by the ARC Rate, is also expected to decrease. Note that the ARC Rate is the sum of two components:

1. The Normal Cost Rate

2. The Unfunded Actuarial Accrued Liability Rate

These components are determined by applying the Entry Age Normal cost method to allocate the PVFB to past service and future service, which provides for orderly funding of the benefits over the working careers of the members. The portion of the PVFB allocated to past service is known as the Actuarial Accrued Liability ("AAL"), and the portion allocated to future service is known as the Present Value of Future Normal Costs. The portion allocated to the one-year period following the measurement date is referred to as the Normal Cost.

Since the assumed retirement rates are changed (employees are expected to remain in active service longer) when the 2.55% benefit is available, the expected service period over which the PVFB is allocated also changes. In this case, the result is somewhat of an anomaly in that the AAL increases even though the PVFB decreases, meaning that a larger portion of the PVFB gets allocated to past service. An increase in the AAL results in a larger unfunded AAL, which in turn increases the Unfunded AAL Rate component of the ARC Rate (from 9.17% to 9.30% of pay), as shown in Exhibit I.

However, a larger portion of the PFVB being allocated to past service means that a smaller portion is allocated to future service, resulting in a decrease in the Normal Cost. This reduces the Normal Cost Rate component of the ARC Rate (from 19.03% to 18.81% of pay), as shown in Exhibit I.

When the two components are added together, the result is a small decrease in the ARC Rate (from 28.20% to 28.11% of pay), which is directionally consistent with the small decrease in the PVFB.

In addition, please note the following when reviewing the results:

- Our analysis was performed by measuring the impact of the change at June 30, 2012, using census data collected from PSRS and PEERS of Missouri as of June 30, 2012. Our estimates do not incorporate the impact of future employees who may become members of PSRS. Please refer to our actuarial valuation report dated October 19, 2012 for a summary of the census data.

- The BASELINE results shown in Exhibits I and II are equal the results of our June 30, 2012 valuation of the system.

- Our analysis was performed based on our understanding of the current PSRS benefit provisions as set forth in Chapter 169 of the Missouri Revised Statutes, as well as the modification to those statutes to affect the change described above.

- Our analysis does not include any additional administrative cost that may be incurred by PSRS and PEERS of Missouri to implement this change.

- Our analysis is based on the specific assumptions disclosed herein. The result of our analysis is heavily dependent on those assumptions. The actual cost of the proposed benefit change will depend on the actual future experience of plan members.

To the best of our knowledge this actuarial statement is complete and accurate and has been prepared in accordance with generally accepted actuarial principles and practice and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with our understanding of the requirements of Missouri state law. The undersigned actuaries are members of the Society of Actuaries and other professional organizations, including the American Academy of Actuaries, and meet the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States relating to pension plans. There is no relationship between the PwC practitioners involved in this engagement and PSRS and PEERS of Missouri that may impair our objectivity.

This document was not intended or written to be used, and it cannot be used, for the purpose of avoiding U.S. federal, state, or local tax penalties. This includes penalties that may apply if the transaction that is the subject of this document is found to lack economic substance or fails to satisfy any other similar rule of law. This document has been prepared pursuant to an engagement letter between PSRS and PEERS of Missouri and PwC, and is intended solely for the use and benefits of PSRS and PEERS of Missouri and not for reliance by any other person.

Please call with any questions or if you require additional information.

Sincerely,

Sheldon A. Gamzon

Brandon A. Robertson

Sheldon A. Gamzon, FSA, MAAA

Brandon Robertson, ASA, MAAA

Public School Retirement System of Missouri — Exhibit I

Permanent Extension of 2.55% Formula Benefit After 31 Years of Service

Summary Cost Analysis as of June 30, 2012

	BASELINE	Permanent Extension of 2.55% Benefit
Annual Required Contribution		
Normal Cost Rate	19.03%	18.81%
Unfunded Actuarial Accrued Liability Amortization Rate	9.17%	9.30%
Annual Required Contribution Rate	**28.20%**	**28.11%**
Change in Annual Required Contribution Rate		**-0.09%**

Public School Retirement System of Missouri — Exhibit II

Permanent Extension of 2.55% Formula Benefit After 31 Years of Service

Cost Analysis as of June 30, 2012

	BASELINE	Permanent Extension of 2.55% Benefit
Funded Status		
Actuarial Accrued Liability ("AAL")		
Active Members		
Service less than 31 years	$12,873,153,908	$12,880,433,620
Service of 31+ years	991,541,891	1,085,007,180
State Members	11,398,812	11,398,812
Inactive Members	520,903,729	520,903,729
Pay Status Members	21,191,032,300	21,191,032,300
Total Actuarial Accrued Liability ("AAL")	$35,588,030,639	$35,688,775,641
% Change		0.28%
Actuarial Value of Assets ("AVA")	29,013,002,242	29,013,002,242
Unfunded Actuarial Accrued Liability (AAL - AVA)	$6,575,028,397	$6,675,773,399
Funded Percentage (AVA / AAL)	**81.52%**	**81.29%**
Change in Funded Percentage		**-0.23%**
Annual Required Contribution		
Expected Payroll	$4,379,059,546	$4,379,059,546
Normal Cost	$801,101,622	$791,870,527
Active Members		
Service less than 31 years	$768,027,408	$758,792,906
Service of 31+ years	17,160,054	17,550,749
State Members	206,285	206,285
Total Normal Cost	$785,393,747	$776,549,939
Total Normal Cost With 2% Service Purchase Load	$801,101,622	$792,080,938
Normal Cost Rate	19.03%	18.81%
Unfunded Actuarial Accrued Liability Amortization	$385,941,641	$391,763,153
Unfunded Actuarial Accrued Liability Amortization Rate	9.17%	9.30%
Annual Required Contribution	$1,187,043,263	$1,183,633,680
Annual Required Contribution Rate	**28.20%**	**28.11%**
Change in Annual Required Contribution Rate		**-0.09%**

Permanent Extension of 2.55% Formula Benefit After 31 Years of Service

Summary of Assumption Changes Since Prior Analysis

			Normal Cost	UAAL Amortization	ARC
Permanent Extension of 2.55% Formula Benefit - Old Assumptions [1]			**0.07%**	**0.09%**	**0.16%**
Impact of Assumption Changes:					
Assumption	Old Assumption	New Assumption			
Retirement [2]	See Exhibit IV	See Exhibit V	-0.27%	0.10%	-0.17%
Salary Increases [3]	Service based rates, starting at 10.25% in the first years of service and grading down to 5.00% for members with 15 or more years of service	Service based rates, starting at 10.00% in the first years of service and grading down to 4.00% for members with 30 or more years of service	-0.03%	-0.02%	-0.05%
COLA [4]	3.25%	2.00%	0.02%	-0.02%	0.00%
Mortality [5]	1994 GAM Mortality Tables, with adjustments to reflect longer life expectancy	RP 2000 Mortality Tables, with adjustments to reflect observed experience	-0.01%	-0.02%	-0.03%
		Total Impact	-0.29%	0.04%	-0.25%
Permanent Extension of 2.55% Formula Benefit - New Assumptions			**-0.22%**	**0.13%**	**-0.09%**

Notes

[1] This is comparable to a calculation performed by GRS in 2006 that showed an ARC increase of 0.13% (0.06% increase in Normal Cost and 0.07% increase in UAAL amortization). The 0.03% difference is likely due changes in the census data used in the analysis and other less significant assumption changes since 2006.

[2] Prior to the 2011 experience study, the retirement assumption for members with 30 or more years of service was the same whether the 2.55% formula benefit was available or not (see Exhibit IV). With no difference in assumed retirement, an extension of the 2.55% benefit is simply an increase in benefit for those assumed to work to 31 years of service or more, resulting in an estimated cost increase for extending the benefit. The 2011 experience study showed that when the 2.55% benefit is available, a greater percentage of members defer retirement to receive the higher monthly benefit, rather than retiring on or before 30 years of service (see Exhibit V). Despite the greater benefit formula, the delay of retirement benefits (and delay of future COLA increase) reduces the cost of the system.

[3] The 2011 experience showed the individual member salaries were growing slower that previously assumed. Under the new assumption, a member's benefit is not assumed to grow as fast when retirement is deferred beyond 30 years of service, reducing the cost of extending the 2.55% compared to the prior salary increase assumption.

[4] The value of incremental benefit provided by the 2.55% (i.e. the extra 0.05%) as a percentage of the total benefit value is very similar whether the assumed COLA is 3.25% or 2.00%. Therefore, the effect of changing the COLA assumption has virtually no impact on the ARC.

[5] The new mortality assumption removed some of the conservatism of the prior assumption in that the life expectancy of members is lower under the new assumption. Similar to the change in COLA assumption, this change reduces the value of all retirement benefits, including an extension of the 2.55% benefit, when compared to the prior assumption since it assumes that retirees will receive benefits for a shorter period of time.

Retirement Assumption Prior to 2011 Experience Study

Retirement Rates When 2.55% Formula Factor is Available [1]

	Active Member Retirement Per 1,000 Eligible Members											
	Service											
Age	<=20	21	22	23	24	25	26	27	28	29	30	>=31
<50	0	0	0	0	0	0	0	0	0	0	350	300
50	0	0	0	0	0	0	0	0	0	0	490	300
51	0	0	0	0	0	0	0	0	0	490	350	300
52	0	0	0	0	0	0	0	0	490	240	350	300
53	0	0	0	0	0	0	0	490	240	240	350	300
54	0	0	0	0	0	0	490	240	240	240	350	300
55	25	25	25	25	25	450	200	200	200	200	350	300
56	25	25	25	25	450	200	200	200	200	200	350	300
57	25	25	25	450	200	200	200	200	200	200	350	300
58	25	25	450	200	200	200	200	200	200	200	350	300
59	25	450	200	200	200	200	200	200	200	200	350	300
60	200	200	200	200	200	200	200	200	200	200	350	300
61	200	200	200	200	200	200	200	200	200	200	350	300
62	200	200	200	200	200	200	200	200	200	200	350	300
63	200	200	200	200	200	200	200	200	200	200	350	300
64	200	200	200	200	200	200	200	200	200	200	350	300
65	300	300	300	300	300	300	300	300	300	300	350	300
66	200	200	200	200	200	200	200	200	200	200	350	300
67	200	200	200	200	200	200	200	200	200	200	350	300
68	200	200	200	200	200	200	200	200	200	200	350	300
69	200	200	200	200	200	200	200	200	200	200	350	300
>70	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

Retirement Rates When 2.55% Formula Factor is Not Available

	Active Member Retirement Per 1,000 Eligible Members											
	Service											
Age	<=20	21	22	23	24	25	26	27	28	29	30	>=31
<50	0	0	0	0	0	0	0	0	0	0	350	300
50	0	0	0	0	0	0	0	0	0	0	490	300
51	0	0	0	0	0	0	0	0	0	490	350	300
52	0	0	0	0	0	0	0	0	490	240	350	300
53	0	0	0	0	0	0	0	490	240	240	350	300
54	0	0	0	0	0	0	490	240	240	240	350	300
55	25	25	25	25	25	450	200	200	200	200	350	300
56	25	25	25	25	450	200	200	200	200	200	350	300
57	25	25	25	450	200	200	200	200	200	200	350	300
58	25	25	450	200	200	200	200	200	200	200	350	300
59	25	450	200	200	200	200	200	200	200	200	350	300
60	200	200	200	200	200	200	200	200	200	200	350	300
61	200	200	200	200	200	200	200	200	200	200	350	300
62	200	200	200	200	200	200	200	200	200	200	350	300
63	200	200	200	200	200	200	200	200	200	200	350	300
64	200	200	200	200	200	200	200	200	200	200	350	300
65	300	300	300	300	300	300	300	300	300	300	350	300
66	200	200	200	200	200	200	200	200	200	200	350	300
67	200	200	200	200	200	200	200	200	200	200	350	300
68	200	200	200	200	200	200	200	200	200	200	350	300
69	200	200	200	200	200	200	200	200	200	200	350	300
>70	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

Notes

[1] Prior to 7/1/2013, 4% of members are assumed to retire in any year in which they are eligible for the 25-and-out benefit, but not otherwise eligible for normal or age-reduced retirement.

Retirement Assumption After 2011 Experience Study

Retirement Rates When 2.55% Formula Factor is Available [1]

	Active Member Retirement Per 1,000 Eligible Members											
	Service											
Age	**<=20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**>=31**
<50	0	0	0	0	0	0	0	0	0	0	200	400
50	0	0	0	0	0	0	0	0	0	0	200	400
51	0	0	0	0	0	0	0	0	0	200	200	400
52	0	0	0	0	0	0	0	0	200	200	200	400
53	0	0	0	0	0	0	0	300	200	200	200	400
54	0	0	0	0	0	0	300	200	200	200	200	400
55	50	50	50	50	50	400	200	200	200	200	200	400
56	50	50	50	50	400	200	200	200	200	200	200	400
57	50	50	50	400	200	200	200	200	200	200	200	400
58	50	50	400	200	200	200	200	200	200	200	200	400
59	50	400	200	200	200	200	200	200	200	200	200	400
60	150	150	150	150	150	200	200	200	200	200	200	400
61	150	150	150	150	150	200	200	200	200	200	200	400
62	150	150	150	150	150	200	200	200	200	200	200	400
63	150	150	150	150	150	200	200	200	200	200	200	400
64	150	150	150	150	150	200	200	200	200	200	200	400
65	250	250	250	250	250	400	400	400	400	400	400	400
66	250	250	250	250	250	300	300	300	300	300	300	400
67	250	250	250	250	250	300	300	300	300	300	300	400
68	250	250	250	250	250	300	300	300	300	300	300	400
69	250	250	250	250	250	300	300	300	300	300	300	400
>70	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

Retirement Rates When 2.55% Formula Factor is Not Available

	Active Member Retirement Per 1,000 Eligible Members											
	Service											
Age	**<=20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**>=31**
<50	0	0	0	0	0	0	0	0	0	0	450	450
50	0	0	0	0	0	0	0	0	0	0	450	450
51	0	0	0	0	0	0	0	0	0	200	450	450
52	0	0	0	0	0	0	0	0	200	200	450	450
53	0	0	0	0	0	0	0	300	200	200	450	450
54	0	0	0	0	0	0	300	200	200	200	450	450
55	50	50	50	50	50	400	200	200	200	200	450	450
56	50	50	50	50	400	200	200	200	200	200	450	450
57	50	50	50	400	200	200	200	200	200	200	450	450
58	50	50	400	200	200	200	200	200	200	200	450	450
59	50	400	200	200	200	200	200	200	200	200	450	450
60	150	150	150	150	150	200	200	200	200	200	450	450
61	150	150	150	150	150	200	200	200	200	200	450	450
62	150	150	150	150	150	200	200	200	200	200	450	450
63	150	150	150	150	150	200	200	200	200	200	450	450
64	150	150	150	150	150	200	200	200	200	200	450	450
65	250	250	250	250	250	400	400	400	400	400	450	450
66	250	250	250	250	250	300	300	300	300	300	450	450
67	250	250	250	250	250	300	300	300	300	300	450	450
68	250	250	250	250	250	300	300	300	300	300	450	450
69	250	250	250	250	250	300	300	300	300	300	450	450
>70	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

Notes
[1] Prior to 7/1/2013, 5% of members are assumed to retire in any year in which they are eligible for the 25-and-out benefit, but not otherwise eligible for normal or age-reduced retirement.

Individual Salary Increase Assumptions

Service	Prior to 2011 Experience Study	After 2011 Experience Study
0	10.25%	10.00%
1	9.25%	7.00%
2	7.75%	7.00%
3	7.75%	7.00%
4	7.75%	7.00%
5	7.50%	6.80%
6	7.25%	6.60%
7	7.00%	6.40%
8	6.75%	6.20%
9	6.50%	6.00%
10	6.25%	5.80%
11	6.00%	5.60%
12	5.75%	5.40%
13	5.50%	5.20%
14	5.25%	5.00%
15	5.00%	5.00%
16	5.00%	4.90%
17	5.00%	4.90%
18	5.00%	4.80%
19	5.00%	4.80%
20	5.00%	4.70%
21	5.00%	4.70%
22	5.00%	4.60%
23	5.00%	4.60%
24	5.00%	4.50%
25	5.00%	4.50%
26	5.00%	4.40%
27	5.00%	4.30%
28	5.00%	4.20%
29	5.00%	4.10%
30	5.00%	4.00%

Notes

Rates shown above are total assumed increase, including the effects of inflation and real wage growth.

ACTUARIAL ASSUMPTIONS

Inflation

Inflation is assumed to be 2.50% per annum.

Payroll Growth

Total payroll growth is assumed to be 3.50% per annum, consisting of 2.50% inflation, 0.50% additional inflation due to the inclusion of health care costs in pension earnings, and 0.50% of real wage growth.

Individual Salary Growth

Salaries are assumed to increase each year with general inflation of 2.50%, plus health care inflation of 0.50% (since health care costs are included in pension earnings), plus a longevity adjustment that accounts for merit, promotion, and other real wage growth.

Service	Inflation	Inflation	Longevity	Increase
0	2.50%	0.50%	7.00%	10.00%
1 - 4	2.50%	0.50%	4.00%	7.00%
5	2.50%	0.50%	3.80%	6.80%
6	2.50%	0.50%	3.60%	6.60%
7	2.50%	0.50%	3.40%	6.40%
8	2.50%	0.50%	3.20%	6.20%
9	2.50%	0.50%	3.00%	6.00%
10	2.50%	0.50%	2.80%	5.80%
11	2.50%	0.50%	2.60%	5.60%
12	2.50%	0.50%	2.40%	5.40%
13	2.50%	0.50%	2.20%	5.20%
14	2.50%	0.50%	2.00%	5.00%
15	2.50%	0.50%	2.00%	5.00%
16	2.50%	0.50%	1.90%	4.90%
17	2.50%	0.50%	1.90%	4.90%
18	2.50%	0.50%	1.80%	4.80%
19	2.50%	0.50%	1.80%	4.80%
20	2.50%	0.50%	1.70%	4.70%
21	2.50%	0.50%	1.70%	4.70%
22	2.50%	0.50%	1.60%	4.60%
23	2.50%	0.50%	1.60%	4.60%
24	2.50%	0.50%	1.50%	4.50%
25	2.50%	0.50%	1.50%	4.50%
26	2.50%	0.50%	1.40%	4.40%
27	2.50%	0.50%	1.30%	4.30%
28	2.50%	0.50%	1.20%	4.20%
29	2.50%	0.50%	1.10%	4.10%
30+	2.50%	0.50%	1.00%	4.00%

Investment Return

It is assumed that investments of the System will return a yield of 8.00% per annum, net of system expenses (investment and administrative).

Cost of Living Adjustments

Cost of living adjustments ("COLA") are assumed to be 2.00% per year and compounded, based on the current policy of the Board to grant a 2.00% COLA whenever annual inflation, as measured by the CPI-U index for a fiscal year, increases between 0.00% and 5.00%.

The COLA assumption applies to service retirees and their beneficiaries. The COLA does not apply to the benefits for in-service death payable to spouses (where the spouse is over age 60), and does not apply to the spouse with children pre-retirement death benefit, the dependent children pre-retirement death benefit, or the dependent parent death benefit. The total lifetime COLA cannot exceed 80% of the original benefit. Future COLAs for current benefit recipients reflect actual cumulative adjustments granted at the time of valuation.

Mortality Rates

Mortality Rates for active members are based on the RP 2000 Mortality Table, set back one year for males and six years for females, then projected to 2016 using Scale AA. Illustrative rates per 1,000 members at various ages are as follows:

Active Member Mortality

Age	Male	Female
20	0.244	0.131
30	0.38	0.171
40	0.898	0.171
50	1.492	0.782
60	4.593	2.237
70	15.549	7.955

Mortality Rates for non-disabled retirees and beneficiaries are based on the RP 2000 Mortality Table, set back one year for both males and females, then projected to 2016 using Scale AA. Illustrative rates per 1,000 members at various ages are as follows:

Service Retiree, Beneficiary and Surviror Mortality

Age	Male	Female
40	0.898	0.509
50	1.492	1.178
60	4.593	4.099
70	15.549	13.715
80	49.322	37.094
90	156.083	113.562
100	324.963	227.712
110	400	351.544

Mortality Rates for disabled retirees are based on the RP 2000 Disabled Retiree Mortality Table. Illustrative rates per 1,000 members at various ages are as follows:

Disability Retiree Mortality

Age	Male	Female
40	22.571	7.450
50	28.975	11.535
60	42.042	21.839
70	62.583	37.635
80	109.372	72.312
90	183.408	140.049
100	344.556	237.467
110	400.000	364.617

Exhibit VII

Retirement Rates

When the 2.55% Formula benefit is available (and the 25-and-out benefit is not available), retirement is assumed in accordance with the following rates per 1,000 eligible members:

	Service											
Age	< = 20	21	22	23	24	25	26	27	28	29	30	> = 31
<= 50	0	0	0	0	0	0	0	0	0	0	200	400
51	0	0	0	0	0	0	0	0	0	200	200	400
52	0	0	0	0	0	0	0	0	200	200	200	400
53	0	0	0	0	0	0	0	300	200	200	200	400
54	0	0	0	0	0	0	300	200	200	200	200	400
55	50	50	50	50	50	400	200	200	200	200	200	400
56	50	50	50	50	400	200	200	200	200	200	200	400
57	50	50	50	400	200	200	200	200	200	200	200	400
58	50	50	400	200	200	200	200	200	200	200	200	400
59	50	400	200	200	200	200	200	200	200	200	200	400
60	150	150	150	150	150	200	200	200	200	200	200	400
61	150	150	150	150	150	200	200	200	200	200	200	400
62	150	150	150	150	150	200	200	200	200	200	200	400
63	150	150	150	150	150	200	200	200	200	200	200	400
64	150	150	150	150	150	200	200	200	200	200	200	400
65	250	250	250	250	250	400	400	400	400	400	400	400
66	250	250	250	250	250	300	300	300	300	300	300	400
67	250	250	250	250	250	300	300	300	300	300	300	400
68	250	250	250	250	250	300	300	300	300	300	300	400
69	250	250	250	250	250	300	300	300	300	300	300	400
>= 70	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

Without the permanent extension of the 2.55% Formula Factor, after June 30, 2013, retirement is assumed in accordance with the following rates per 1,000 eligible members:

	Service											
Age	< = 20	21	22	23	24	25	26	27	28	29	30	> = 31
<= 50	0	0	0	0	0	0	0	0	0	0	450	450
51	0	0	0	0	0	0	0	0	0	200	450	450
52	0	0	0	0	0	0	0	0	200	200	450	450
53	0	0	0	0	0	0	0	300	200	200	450	450
54	0	0	0	0	0	0	300	200	200	200	450	450
55	50	50	50	50	50	400	200	200	200	200	450	450
56	50	50	50	50	400	200	200	200	200	200	450	450
57	50	50	50	400	200	200	200	200	200	200	450	450
58	50	50	400	200	200	200	200	200	200	200	450	450
59	50	400	200	200	200	200	200	200	200	200	450	450
60	150	150	150	150	150	200	200	200	200	200	450	450
61	150	150	150	150	150	200	200	200	200	200	450	450
62	150	150	150	150	150	200	200	200	200	200	450	450
63	150	150	150	150	150	200	200	200	200	200	450	450
64	150	150	150	150	150	200	200	200	200	200	450	450
65	250	250	250	250	250	400	400	400	400	400	450	450
66	250	250	250	250	250	300	300	300	300	300	450	450
67	250	250	250	250	250	300	300	300	300	300	450	450
68	250	250	250	250	250	300	300	300	300	300	450	450
69	250	250	250	250	250	300	300	300	300	300	450	450
>= 70	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

When the 25-and-out benefit is available, which is assumed to sunset on July 1, 2013, 5% (i.e. 50 of every 1,000) of members who qualify and are not otherwise eligible for retirement are assumed to retire.

Withdrawal Rates

Termination of membership prior to eligibility for retirement from all causes other than death and disability is assumed in accordance with the following illustrative rates per 1,000 members:

Active Member Withdrawal

Years of Service	Rate
0	190
1	105
2	85
3	73
4	62
5	52
10	23
15	12
20	5
25+	0

Disability Rates

Retirement for disability prior to age 60 is assumed in accordance with the following illustrative rates per 1,000 eligible members:

Active Member Disability

Age	Rates
25	0.017
30	0.080
35	0.160
40	0.320
45	0.610
50	0.960
55	1.310

Refund of Contributions

It is assumed that 88% of those leaving after earning 5 years of service leave their contributions in the fund and receive a vested benefit. If the present value of the deferred benefit is less than the member account balance, the member's account balance is valued. The remaining 12% are assumed to take an immediate refund of their contributions, thus forfeiting their vested retirement benefit.

It is assumed that 100% of those leaving prior to earning 5 years of service will take an immediate refund of their contributions.

Interest on Member Accounts

1.00% per annum.

Service Purchases

A 2.00% load is added to the Normal Cost to account for anticipated losses resulting from service purchases and reinstatements.

Provisions for Expenses

There is no specific provision for expenses. The implicit assumption is that administrative expenses are paid from investment income in excess of 8.00% per annum.

Dependent Assumptions

80% of male members and 70% of female members are assumed to be married.

Beneficiaries are assumed to be of the opposite sex from the member.

Male and Female members are assumed to be 4 years older than their beneficiary.

Survivor Benefits

All active members under age 50 are assumed to have 2 dependent children. Each child is assumed to receive payments of $860 per month for 18 years if the member is under age 32, and grading down to 0 years if the member is age 50.

Return of Unused Member Account Balance

Under the single life annuity payment option, any unused balance of contributions and interest in the member account balance at the time of death is paid in a lump sum to a designated beneficiary. This benefit is approximated with a 5-year certain benefit.

Data Assumptions

Members without a date of birth provided are assumed to be 30 years old. Pensionable pay for members who did not earn service during the past year is assumed to be the greater of the current year's salary, the previous year's salary and $10,000. Pensionable pay for other active members is assumed to be the greater of annualized pay and $10,000.

Assumption Changes Since the Prior Valuation

The 0.4% load to recognize the subsidy present in the joint and survivor reduction factors calculated without provision for cost-of-living adjustments was removed since new operating factors incorporating the 2% COLA assumption have been implemented.

Assumed interest on member contributions has been reduced from 2.00% to 1.00%.

ACTUARIAL METHODS

Acturial Cost Method

The actuarial cost method is Entry Age Normal - Level Percent of Payroll.

The normal cost is calculated separately for each active member and is equal to the level percentage of payroll needed as an annual contribution from entry age to retirement age to fund projected benefits. The actuarial accrued liability on any valuation date is the accumulated value of such normal costs from entry age to the valuation date.

Asset Valuation Method

The Actuarial Value of Assets is a smoothed value of assets. The actuarial value for a year is computed by taking the actuarial value at June 30 of the prior year, subtracting all expenses (including benefit payments), and adding contributions and expected investment return at 8% of actuarial value of assets. The difference between the actual returns at market value for the year and expected returns is determined. Twenty percent (20%) of that difference is added to the actuarial value along with corresponding amounts from each of the prior four years. The Actuarial Value of Assets was reset to market value at June 30, 2003.

Amortization of Unfunded Actuarial Accrued Liability

Gains and losses occurring from census experience different than assumed and assumption changes are amortized over a 30-year period as a level percent of payroll. A new gain or loss base is established each year based on the additional gain or loss during that year and that base is amortized over a new 30-year period. The purpose of the method is to give a smooth progression of the costs from year to year and, at the same time, provide for an orderly funding of the unfunded liabilities.

Increases or decreases in the Actuarial Accrued Liability caused by changes in the benefit provisions are amortized over 20 years, as determined in the 2007 session of the Legislature.

Method Changes Since the Prior Valuation

None

Public School Retirement System of Missouri

Disclosures

This letter has been prepared pursuant to the engagement letter between PricewaterhouseCoopers LLP and PSRS and PEERS of Missouri, dated October 27, 2008.

In preparing the results presented in this letter, we have relied upon information provided to us by PSRS and PEERS of Missouri regarding plan provisions, plan participants, and benefit payments. While the scope of our engagement did not call for us to perform an audit or independent verification of this information, we have reviewed this information for reasonableness. The accuracy of the results presented in this letter is dependent upon the accuracy and completeness of the underlying information.

To the best of our knowledge, the individuals involved in this engagement have no relationship that may impair or appear to impair the objectivity of our work.

No statement in this letter is intended as a recommendation in favor, or in opposition, of the proposed legislation. Except as otherwise noted, potential impacts on other benefit plans were not considered.

The calculations are based upon assumptions regarding future events. However, the plan's long term costs will be determined by actual future events, which may differ materially from the assumptions that were made. The calculations are also based upon present and proposed plan provisions that are outlined in the letter. If you have reason to believe that the assumptions that were used are unreasonable, that the plan provisions are incorrectly described, that important plan provisions relevant to this proposal are not described, or that conditions have changed since the calculations were made, you should contact PSRS and PEERS of Missouri.

In the event that more than one plan change is being considered, it is very important to remember that the results of separate actuarial valuations cannot generally be added together to produce a correct estimate of the combined effect of all of the changes. The total can be considerably greater or less than the sum of the parts due to the interaction of various plan provisions with each other, and with the assumptions that must be used.

This document was not intended or written to be used, and it cannot be used, for the purpose of avoiding U.S. federal, state or local tax penalties. This includes penalties that may apply if the transaction that is the subject of this document is found to lack economic substance or fails to satisfy any other similar rule of law. This document has been prepared pursuant to an engagement between PricewaterhouseCoopers LLP and PSRS and PEERS of Missouri and is intended solely for the use and benefit of PSRS and PEERS of Missouri and not for reliance by any other person.

February 20, 2013

Mr. M. Steve Yoakum
Executive Director
PSRS and PEERS of Missouri
3210 West Truman Blvd.
Jefferson City, MO 65109

Re: Public School Retirement System of Missouri ("PSRS")
Cost Estimate of Proposed Benefit Changes

Dear Steve:

This letter has been prepared pursuant to the engagement letter dated October 27, 2008, between PricewaterhouseCoopers LLP ("PwC") and the Public School and Public Education Employee Retirement Systems of Missouri ("PSRS and PEERS of Missouri"). As requested, we have estimated the cost impact as of June 30, 2012 of the following proposed benefit change to PSRS of Missouri:

- **Permanent extension of the "25 & Out" Early Retirement Benefit which allows members of any age to retire after 25 years of service with a reduced benefit.**

We estimate that this change would result in a decrease to the Actuarial Accrued Liability ("AAL") of approximately $78.1 million, which increases the funded ratio of the system by 0.18%, and would reduce the Annual Required Contribution percentage by 0.21%. Enclosed are several exhibits presenting the results of our analysis, as follows:

- Exhibit I – Summary impact on the Annual Required Contribution
- Exhibit II – Detailed impact to the Funded Status and Annual Required Contribution
- Exhibit III – Summary impact of assumption changes since prior analysis
- Exhibit IV – Detail of retirement assumption used in prior analysis
- Exhibit V – Detail of retirement assumption used in current analysis
- Exhibit VI – Detail of individual salary growth assumption used in prior and current analysis
- Exhibit VII – Description of all actuarial assumptions and methods used in our analysis
- Exhibit VIII – Disclosures relating to our analysis

When a member has 25 years of service, the member is at or near the eligibility threshold for unreduced benefits under the "Rule of 80". At most, members are five years away from meeting the eligibility requirement for unreduced benefits under the "30 & Out" benefit.

For members with 25 years of service or more, the actuarial present value of a reduced benefit commencing immediately after 25 years of service is nearly the same as the value of an unreduced benefit taken sometime later by delaying retirement until the member meets the requirements of the Rule of 80 or 30 & Out. The advantages of retiring at 25 years of service are that the member receives pension benefits for a longer period of time, the COLA starts earlier, and the member no longer contributes to the system. The disadvantages are that the member gives up future increases in their pension benefit due to service and salary increases, as well as improved subsidy, which can be significant as the member approaches eligibility for the Rule of 80 and 30 & Out. Whether the 25 & Out reduced benefit is more or less valuable than a deferred unreduced benefit depends on how soon after earning 25 years of service the member would be eligible for an unreduced benefit.

As such, the results of our analysis are driven by the demographics of the current member population and by the retirement assumption.

The experience study completed in 2011 showed that a small percentage of members have elected to take the 25 & Out reduced benefit when eligible. The current assumption is that 5% of members will retire and elect the 25 & Out reduced benefit when eligible. If the benefit is made available to members permanently, the same 5% assumption would apply in future years. See Exhibit III for details of the retirement assumption. Based on this assumption and given the demographics of the active member population as of June 30, 2012, permanent extension of the 25 & Out benefit is expected to be a small cost savings.

In addition, please note the following when reviewing the results:

- Our analysis was performed by measuring the impact of the change at June 30, 2012, using census data collected from PSRS and PEERS of Missouri as of June 30, 2012. Our estimates do not incorporate the impact of future employees who may become members of PSRS. Please refer to our actuarial valuation report dated October 19, 2012 for a summary of the census data.

- The BASELINE results shown in Exhibit I are equal the results of our June 30, 2012 valuation of the system.

- Our analysis was performed based on our understanding of the current PSRS benefit provisions as set forth in Chapter 169 of the Missouri Revised Statutes, as well as the modification to those statutes to affect the change described above.

- Our analysis does not include any additional administrative cost that may be incurred by PSRS of Missouri to implement this change.

- Our analysis is based on the specific assumptions disclosed herein. The result of our analysis is heavily dependent on those assumptions. The actual cost of the proposed benefit change will depend on the actual future experience of plan members.

To the best of our knowledge this actuarial statement is complete and accurate and has been prepared in accordance with generally accepted actuarial principles and practice and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with our understanding of the requirements of Missouri state law. The undersigned actuaries are members of the Society of Actuaries and other professional organizations, including the American Academy of Actuaries, and meet the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States relating to pension plans. There is no relationship between the PwC practitioners involved in this engagement and PSRS and PEERS of Missouri that may impair our objectivity.

This document was not intended or written to be used, and it cannot be used, for the purpose of avoiding U.S. federal, state, or local tax penalties. This includes penalties that may apply if the transaction that is the subject of this document is found to lack economic substance or fails to satisfy any other similar rule of law. This document has been prepared pursuant to an engagement letter between PSRS and PEERS of Missouri and PwC, and is intended solely for the use and benefits of PSRS and PEERS of Missouri and not for reliance by any other person.

Please call with any questions or if you require additional information.

Sincerely,

Sheldon A. Gamzon, FSA, MAAA

Brandon Robertson, ASA, MAAA

Permanent Extension of 25 & Out Early Retirement Benefit

Summary Cost Analysis as of June 30, 2012

	BASELINE	**Permanent Extension of the 25 & Out Benefit**
Annual Required Contribution		
Normal Cost Rate	19.03%	18.93%
Unfunded Actuarial Accrued Liability Amortization Rate	9.17%	9.06%
Annual Required Contribution Rate	**28.20%**	**27.99%**
Change in Annual Required Contribution Rate		**-0.21%**

Public School Retirement System of Missouri — Exhibit II

Permanent Extension of 25 & Out Early Retirement Benefit

Cost Analysis as of June 30, 2012

	BASELINE	Permanent Extension of the 25 & Out Benefit
Funded Status		
Actuarial Accrued Liability ("AAL")		
Active Members	13,864,695,798	13,786,554,794
State Members	11,398,812	11,398,812
Inactive Members	520,903,729	520,903,729
Pay Status Members	21,191,032,300	21,191,032,300
Total Actuarial Accrued Liability ("AAL")	$35,588,030,639	$35,509,889,635
% Change		-0.22%
Actuarial Value of Assets ("AVA")	29,013,002,242	29,013,002,242
Unfunded Actuarial Accrued Liability (AAL - AVA)	$6,575,028,397	$6,496,887,393
Funded Percentage (AVA / AAL)	**81.52%**	**81.70%**
Change in Funded Percentage		**0.18%**
Annual Required Contribution		
Expected Payroll	$4,379,059,546	$4,379,059,546
Normal Cost		
Active Members	$785,187,462	$781,389,559
State Members	206,285	206,285
Total Normal Cost	$785,393,747	$781,595,844
Total Normal Cost With 2% Service Purchase Load	$801,101,622	$797,227,761
Normal Cost Rate	19.03%	18.93%
Unfunded Actuarial Accrued Liability Amortization	$385,941,641	$381,426,292
Unfunded Actuarial Accrued Liability Amortization Rate	9.17%	9.06%
Annual Required Contribution	$1,187,043,263	$1,178,654,053
Annual Required Contribution Rate	**28.20%**	**27.99%**
Change in Annual Required Contribution Rate		**-0.21%**

Summary of Assumption Changes Since Prior Analysis

			Normal Cost	UAAL Amortization	ARC
Permanent Extension of the 25 & Out Benefit - Old Assumptions [1]			**0.05%**	**0.06%**	**0.11%**
Impact of Assumption Changes:					
Assumption	Old Assumption	New Assumption			
Retirement [2]	See Exhibit IV	See Exhibit V	-0.17%	-0.15%	-0.32%
Salary Increases [3]	Service based rates, starting at 10.25% in the first years of service and grading down to 5.00% for members with 15 or more years of service	Service based rates, starting at 10.00% in the first years of service and grading down to 4.00% for members with 30 or more years of service	0.00%	-0.03%	-0.03%
COLA [4]	3.25%	2.00%	0.01%	0.01%	0.02%
Mortality [5]	1994 GAM Mortality Tables, with adjustments to reflect longer life expectancy	RP 2000 Mortality Tables, with adjustments to reflect observed experience	0.01%	0.00%	0.01%
		Total Impact	-0.15%	-0.17%	-0.32%
Permanent Extension of the 25 & Out Benefit - New Assumptions			**-0.10%**	**-0.11%**	**-0.21%**

Notes

[1] This is comparable to a calculation performed by GRS in 2006 that showed an ARC increase of 0.05% (0.02% increase in Normal Cost and 0.03% increase in UAAL amortization). The 0.06% difference is likely due changes in the census data used in the analysis and other less significant assumption changes since 2006. It should be noted that our analysis showed a reduction in the total present value of future benefits ("PVFB") under both the old and new assumption. This is consistent with the sample member calculations previously provided that showed the 25-and-out benefit is less valuable than deferring retirement to an unreduced retirement age. However, because a percentage of members are assumed to retire earlier when the 25-and-out benefit is available, the period of service over which to spread the cost of member benefits is shorter. Under the prior assumptions, this results in an increase to the Actuarial Accrued Liability ("AAL") and Normal Cost, resulting in a small cost increase for extending the benefit.

[2] The 2011 experience study showed greater likelihood of members retiring under the 25-and-out benefit than was previously assumed, as well as less likelihood that members would retire when they were first eligible for the Rule of 80. This experience was reflected in changes to the retirement assumption (see Exhibits IV and V). The net result is that, on average, members are expected to work longer under the new assumption.

[3] A reduction in the individual salary growth assumption has little impact on the relative value of the 25-and-out benefit, resulting in no change to the Normal Cost rate. However, a reduction in salary scale reduces payroll growth assumption which is used in determining the annual UAAL amortization. A lower payroll growth assumption results in a larger amortization of the UAAL. Since extending the 25-and-out benefit reduces liability, that savings is recognized sooner.

[4] The value of the 25-and-out early retirement benefit relative to a deferred unreduced benefit is greater when the COLA is reduced, so there is less of a savings for extending the benefit when the COLA is decreased.

[5] The change in mortality assumption removed some of the prior conservatism, resulting is shorter assumed life expectancy. The relative value of the 25-and-out benefit to the Rule of 80 and 30-and-out unreduced benefits is greater when life expectancy is shorter, resulting is a slight increase in cost for extending the 25-and-out benefit compared to the prior assumption.

Retirement Assumption Prior to 2011 Experience Study

Retirement Rates When 25 & Out Benefit is Available

	Active Member Retirement Per 1,000 Eligible Members											
	Service											
Age	<=20	21	22	23	24	25	26	27	28	29	30	>=31
<50	0	0	0	0	0	40	40	40	40	40	350	300
50	0	0	0	0	0	40	40	40	40	40	490	300
51	0	0	0	0	0	40	40	40	40	490	350	300
52	0	0	0	0	0	40	40	40	490	240	350	300
53	0	0	0	0	0	40	40	490	240	240	350	300
54	0	0	0	0	0	40	490	240	240	240	350	300
55	25	25	25	25	25	450	200	200	200	200	350	300
56	25	25	25	25	450	200	200	200	200	200	350	300
57	25	25	25	450	200	200	200	200	200	200	350	300
58	25	25	450	200	200	200	200	200	200	200	350	300
59	25	450	200	200	200	200	200	200	200	200	350	300
60	200	200	200	200	200	200	200	200	200	200	350	300
61	200	200	200	200	200	200	200	200	200	200	350	300
62	200	200	200	200	200	200	200	200	200	200	350	300
63	200	200	200	200	200	200	200	200	200	200	350	300
64	200	200	200	200	200	200	200	200	200	200	350	300
65	300	300	300	300	300	300	300	300	300	300	350	300
66	200	200	200	200	200	200	200	200	200	200	350	300
67	200	200	200	200	200	200	200	200	200	200	350	300
68	200	200	200	200	200	200	200	200	200	200	350	300
69	200	200	200	200	200	200	200	200	200	200	350	300
>70	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

Retirement Rates When the 25 & Out Benefit is Not Available

	Active Member Retirement Per 1,000 Eligible Members											
	Service											
Age	<=20	21	22	23	24	25	26	27	28	29	30	>=31
<50	0	0	0	0	0	0	0	0	0	0	350	300
50	0	0	0	0	0	0	0	0	0	0	490	300
51	0	0	0	0	0	0	0	0	0	490	350	300
52	0	0	0	0	0	0	0	0	490	240	350	300
53	0	0	0	0	0	0	0	490	240	240	350	300
54	0	0	0	0	0	0	490	240	240	240	350	300
55	25	25	25	25	25	450	200	200	200	200	350	300
56	25	25	25	25	450	200	200	200	200	200	350	300
57	25	25	25	450	200	200	200	200	200	200	350	300
58	25	25	450	200	200	200	200	200	200	200	350	300
59	25	450	200	200	200	200	200	200	200	200	350	300
60	200	200	200	200	200	200	200	200	200	200	350	300
61	200	200	200	200	200	200	200	200	200	200	350	300
62	200	200	200	200	200	200	200	200	200	200	350	300
63	200	200	200	200	200	200	200	200	200	200	350	300
64	200	200	200	200	200	200	200	200	200	200	350	300
65	300	300	300	300	300	300	300	300	300	300	350	300
66	200	200	200	200	200	200	200	200	200	200	350	300
67	200	200	200	200	200	200	200	200	200	200	350	300
68	200	200	200	200	200	200	200	200	200	200	350	300
69	200	200	200	200	200	200	200	200	200	200	350	300
>70	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

Retirement Assumption After 2011 Experience Study

Retirement Rates When 25 & Out Benefit is Available

	Active Member Retirement Per 1,000 Eligible Members											
	Service											
Age	<=20	21	22	23	24	25	26	27	28	29	30	>=31
<50	0	0	0	0	0	50	50	50	50	50	200	400
50	0	0	0	0	0	50	50	50	50	50	200	400
51	0	0	0	0	0	50	50	50	50	200	200	400
52	0	0	0	0	0	50	50	50	200	200	200	400
53	0	0	0	0	0	50	50	300	200	200	200	400
54	0	0	0	0	0	50	300	200	200	200	200	400
55	50	50	50	50	50	400	200	200	200	200	200	400
56	50	50	50	50	400	200	200	200	200	200	200	400
57	50	50	50	400	200	200	200	200	200	200	200	400
58	50	50	400	200	200	200	200	200	200	200	200	400
59	50	400	200	200	200	200	200	200	200	200	200	400
60	150	150	150	150	150	200	200	200	200	200	200	400
61	150	150	150	150	150	200	200	200	200	200	200	400
62	150	150	150	150	150	200	200	200	200	200	200	400
63	150	150	150	150	150	200	200	200	200	200	200	400
64	150	150	150	150	150	200	200	200	200	200	200	400
65	250	250	250	250	250	400	400	400	400	400	400	400
66	250	250	250	250	250	300	300	300	300	300	300	400
67	250	250	250	250	250	300	300	300	300	300	300	400
68	250	250	250	250	250	300	300	300	300	300	300	400
69	250	250	250	250	250	300	300	300	300	300	300	400
>70	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

Retirement Rates When the 25 & Out Benefit is Not Available

	Active Member Retirement Per 1,000 Eligible Members											
	Service											
Age	<=20	21	22	23	24	25	26	27	28	29	30	>=31
<50	0	0	0	0	0	0	0	0	0	0	200	400
50	0	0	0	0	0	0	0	0	0	0	200	400
51	0	0	0	0	0	0	0	0	0	200	200	400
52	0	0	0	0	0	0	0	0	200	200	200	400
53	0	0	0	0	0	0	0	300	200	200	200	400
54	0	0	0	0	0	0	300	200	200	200	200	400
55	50	50	50	50	50	400	200	200	200	200	200	400
56	50	50	50	50	400	200	200	200	200	200	200	400
57	50	50	50	400	200	200	200	200	200	200	200	400
58	50	50	400	200	200	200	200	200	200	200	200	400
59	50	400	200	200	200	200	200	200	200	200	200	400
60	150	150	150	150	150	200	200	200	200	200	200	400
61	150	150	150	150	150	200	200	200	200	200	200	400
62	150	150	150	150	150	200	200	200	200	200	200	400
63	150	150	150	150	150	200	200	200	200	200	200	400
64	150	150	150	150	150	200	200	200	200	200	200	400
65	250	250	250	250	250	400	400	400	400	400	400	400
66	250	250	250	250	250	300	300	300	300	300	300	400
67	250	250	250	250	250	300	300	300	300	300	300	400
68	250	250	250	250	250	300	300	300	300	300	300	400
69	250	250	250	250	250	300	300	300	300	300	300	400
>70	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

Notes

[1] When the 2.55% benefit formula is not available for members with 31 or more years of service, retirement rates at 30 or more years of service are assumed to be 45% at all ages prior to age 70 and 100% at age 70.

Individual Salary Increase Assumptions

Service	Prior to 2011 Experience Study	After 2011 Experience Study
0	10.25%	10.00%
1	9.25%	7.00%
2	7.75%	7.00%
3	7.75%	7.00%
4	7.75%	7.00%
5	7.50%	6.80%
6	7.25%	6.60%
7	7.00%	6.40%
8	6.75%	6.20%
9	6.50%	6.00%
10	6.25%	5.80%
11	6.00%	5.60%
12	5.75%	5.40%
13	5.50%	5.20%
14	5.25%	5.00%
15	5.00%	5.00%
16	5.00%	4.90%
17	5.00%	4.90%
18	5.00%	4.80%
19	5.00%	4.80%
20	5.00%	4.70%
21	5.00%	4.70%
22	5.00%	4.60%
23	5.00%	4.60%
24	5.00%	4.50%
25	5.00%	4.50%
26	5.00%	4.40%
27	5.00%	4.30%
28	5.00%	4.20%
29	5.00%	4.10%
30	5.00%	4.00%

Notes

Rates shown above are total assumed increase, including the effects of inflation and real wage growth.

ACTUARIAL ASSUMPTIONS

Inflation

Inflation is assumed to be 2.50% per annum.

Payroll Growth

Total payroll growth is assumed to be 3.50% per annum, consisting of 2.50% inflation, 0.50% additional inflation due to the inclusion of health care costs in pension earnings, and 0.50% of real wage growth.

Individual Salary Growth

Salaries are assumed to increase each year with general inflation of 2.50%, plus health care inflation of 0.50% (since health care costs are included in pension earnings), plus a longevity adjustment that accounts for merit, promotion, and other real wage growth.

Service	Inflation	Inflation	Longevity	Increase
0	2.50%	0.50%	7.00%	10.00%
1 - 4	2.50%	0.50%	4.00%	7.00%
5	2.50%	0.50%	3.80%	6.80%
6	2.50%	0.50%	3.60%	6.60%
7	2.50%	0.50%	3.40%	6.40%
8	2.50%	0.50%	3.20%	6.20%
9	2.50%	0.50%	3.00%	6.00%
10	2.50%	0.50%	2.80%	5.80%
11	2.50%	0.50%	2.60%	5.60%
12	2.50%	0.50%	2.40%	5.40%
13	2.50%	0.50%	2.20%	5.20%
14	2.50%	0.50%	2.00%	5.00%
15	2.50%	0.50%	2.00%	5.00%
16	2.50%	0.50%	1.90%	4.90%
17	2.50%	0.50%	1.90%	4.90%
18	2.50%	0.50%	1.80%	4.80%
19	2.50%	0.50%	1.80%	4.80%
20	2.50%	0.50%	1.70%	4.70%
21	2.50%	0.50%	1.70%	4.70%
22	2.50%	0.50%	1.60%	4.60%
23	2.50%	0.50%	1.60%	4.60%
24	2.50%	0.50%	1.50%	4.50%
25	2.50%	0.50%	1.50%	4.50%
26	2.50%	0.50%	1.40%	4.40%
27	2.50%	0.50%	1.30%	4.30%
28	2.50%	0.50%	1.20%	4.20%
29	2.50%	0.50%	1.10%	4.10%
30+	2.50%	0.50%	1.00%	4.00%

Investment Return

It is assumed that investments of the System will return a yield of 8.00% per annum, net of system expenses (investment and administrative).

Cost of Living Adjustments

Cost of living adjustments ("COLA") are assumed to be 2.00% per year and compounded, based on the current policy of the Board to grant a 2.00% COLA whenever annual inflation, as measured by the CPI-U index for a fiscal year, increases between 0.00% and 5.00%.

The COLA assumption applies to service retirees and their beneficiaries. The COLA does not apply to the benefits for in-service death payable to spouses (where the spouse is over age 60), and does not apply to the spouse with children pre-retirement death benefit, the dependent children pre-retirement death benefit, or the dependent parent death benefit. The total lifetime COLA cannot exceed 80% of the original benefit. Future COLAs for current benefit recipients reflect actual cumulative adjustments granted at the time of valuation.

Mortality Rates

Mortality Rates for active members are based on the RP 2000 Mortality Table, set back one year for males and six years for females, then projected to 2016 using Scale AA. Illustrative rates per 1,000 members at various ages are as follows:

Active Member Mortality

Age	Male	Female
20	0.244	0.131
30	0.38	0.171
40	0.898	0.171
50	1.492	0.782
60	4.593	2.237
70	15.549	7.955

Mortality Rates for non-disabled retirees and beneficiaries are based on the RP 2000 Mortality Table, set back one year for both males and females, then projected to 2016 using Scale AA. Illustrative rates per 1,000 members at various ages are as follows:

Service Retiree, Beneficiary and Surviror Mortality

Age	Male	Female
40	0.898	0.509
50	1.492	1.178
60	4.593	4.099
70	15.549	13.715
80	49.322	37.094
90	156.083	113.562
100	324.963	227.712
110	400	351.544

Mortality Rates for disabled retirees are based on the RP 2000 Disabled Retiree Mortality Table. Illustrative rates per 1,000 members at various ages are as follows:

Disability Retiree Mortality

Age	Male	Female
40	22.571	7.450
50	28.975	11.535
60	42.042	21.839
70	62.583	37.635
80	109.372	72.312
90	183.408	140.049
100	344.556	237.467
110	400.000	364.617

Exhibit VII

Retirement Rates

Retirement rates when 25 & Out benefit is available

	Service											
Age	< = 20	21	22	23	24	25	26	27	28	29	30	> = 31
<= 50	0	0	0	0	0	50	50	50	50	50	200	400
51	0	0	0	0	0	50	50	50	50	200	200	400
52	0	0	0	0	0	50	50	50	200	200	200	400
53	0	0	0	0	0	50	50	300	200	200	200	400
54	0	0	0	0	0	50	300	200	200	200	200	400
55	50	50	50	50	50	400	200	200	200	200	200	400
56	50	50	50	50	400	200	200	200	200	200	200	400
57	50	50	50	400	200	200	200	200	200	200	200	400
58	50	50	400	200	200	200	200	200	200	200	200	400
59	50	400	200	200	200	200	200	200	200	200	200	400
60	150	150	150	150	150	200	200	200	200	200	200	400
61	150	150	150	150	150	200	200	200	200	200	200	400
62	150	150	150	150	150	200	200	200	200	200	200	400
63	150	150	150	150	150	200	200	200	200	200	200	400
64	150	150	150	150	150	200	200	200	200	200	200	400
65	250	250	250	250	250	400	400	400	400	400	400	400
66	250	250	250	250	250	300	300	300	300	300	300	400
67	250	250	250	250	250	300	300	300	300	300	300	400
68	250	250	250	250	250	300	300	300	300	300	300	400
69	250	250	250	250	250	300	300	300	300	300	300	400
>= 70	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

Retirement rates when 25 & Out benefit is not available

	Service											
Age	< = 20	21	22	23	24	25	26	27	28	29	30	> = 31
<= 50	0	0	0	0	0	0	0	0	0	0	200	400
51	0	0	0	0	0	0	0	0	0	200	200	400
52	0	0	0	0	0	0	0	0	200	200	200	400
53	0	0	0	0	0	0	0	300	200	200	200	400
54	0	0	0	0	0	0	300	200	200	200	200	400
55	50	50	50	50	50	400	200	200	200	200	200	400
56	50	50	50	50	400	200	200	200	200	200	200	400
57	50	50	50	400	200	200	200	200	200	200	200	400
58	50	50	400	200	200	200	200	200	200	200	200	400
59	50	400	200	200	200	200	200	200	200	200	200	400
60	150	150	150	150	150	200	200	200	200	200	200	400
61	150	150	150	150	150	200	200	200	200	200	200	400
62	150	150	150	150	150	200	200	200	200	200	200	400
63	150	150	150	150	150	200	200	200	200	200	200	400
64	150	150	150	150	150	200	200	200	200	200	200	400
65	250	250	250	250	250	400	400	400	400	400	400	400
66	250	250	250	250	250	300	300	300	300	300	300	400
67	250	250	250	250	250	300	300	300	300	300	300	400
68	250	250	250	250	250	300	300	300	300	300	300	400
69	250	250	250	250	250	300	300	300	300	300	300	400
>= 70	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

When the 2.55% benefit formula is not available for members with 31 or more years of service, retirement rates at 30 or more years of service are assumed to be 45% at all ages prior to age 70 and 100% at age 70.

Withdrawal Rates

Termination of membership prior to eligibility for retirement from all causes other than death and disability is assumed in accordance with the following illustrative rates per 1,000 members:

Active Member Withdrawal

Years of Service	Rate
0	190
1	105
2	85
3	73
4	62
5	52
10	23
15	12
20	5
25+	0

Disability Rates

Retirement for disability prior to age 60 is assumed in accordance with the following illustrative rates per 1,000 eligible members:

Active Member Disability

Age	Rates
25	0.017
30	0.080
35	0.160
40	0.320
45	0.610
50	0.960
55	1.310

Refund of Contributions

It is assumed that 88% of those leaving after earning 5 years of service leave their contributions in the fund and receive a vested benefit. If the present value of the deferred benefit is less than the member account balance, the member's account balance is valued. The remaining 12% are assumed to take an immediate refund of their contributions, thus forfeiting their vested retirement benefit.

It is assumed that 100% of those leaving prior to earning 5 years of service will take an immediate refund of their contributions.

Interest on Member Accounts

1.00% per annum.

Service Purchases

A 2.00% load is added to the Normal Cost to account for anticipated losses resulting from service purchases and reinstatements.

Provisions for Expenses

There is no specific provision for expenses. The implicit assumption is that administrative expenses are paid from investment income in excess of 8.00% per annum.

Dependent Assumptions

80% of male members and 70% of female members are assumed to be married.

Beneficiaries are assumed to be of the opposite sex from the member.

Male and Female members are assumed to be 4 years older than their beneficiary.

Survivor Benefits

All active members under age 50 are assumed to have 2 dependent children. Each child is assumed to receive payments of $860 per month for 18 years if the member is under age 32, and grading down to 0 years if the member is age 50.

Return of Unused Member Account Balance

Under the single life annuity payment option, any unused balance of contributions and interest in the member account balance at the time of death is paid in a lump sum to a designated beneficiary. This benefit is approximated with a 5-year certain benefit.

Data Assumptions

Members without a date of birth provided are assumed to be 30 years old. Pensionable pay for members who did not earn service during the past year is assumed to be the greater of the current year's salary, the previous year's salary and $10,000. Pensionable pay for other active members is assumed to be the greater of annualized pay and $10,000.

Assumption Changes Since the Prior Valuation

The 0.4% load to recognize the subsidy present in the joint and survivor reduction factors calculated without provision for cost-of-living adjustments was removed since new operating factors incorporating the 2% COLA assumption have been implemented.

Assumed interest on member contributions has been reduced from 2.00% to 1.00%.

ACTUARIAL METHODS

Acturial Cost Method

The actuarial cost method is Entry Age Normal - Level Percent of Payroll.

The normal cost is calculated separately for each active member and is equal to the level percentage of payroll needed as an annual contribution from entry age to retirement age to fund projected benefits. The actuarial accrued liability on any valuation date is the accumulated value of such normal costs from entry age to the valuation date.

Asset Valuation Method

The Actuarial Value of Assets is a smoothed value of assets. The actuarial value for a year is computed by taking the actuarial value at June 30 of the prior year, subtracting all expenses (including benefit payments), and adding contributions and expected investment return at 8% of actuarial value of assets. The difference between the actual returns at market value for the year and expected returns is determined. Twenty percent (20%) of that difference is added to the actuarial value along with corresponding amounts from each of the prior four years. The Actuarial Value of Assets was reset to market value at June 30, 2003.

Amortization of Unfunded Actuarial Accrued Liability

Gains and losses occurring from census experience different than assumed and assumption changes are amortized over a 30-year period as a level percent of payroll. A new gain or loss base is established each year based on the additional gain or loss during that year and that base is amortized over a new 30-year period. The purpose of the method is to give a smooth progression of the costs from year to year and, at the same time, provide for an orderly funding of the unfunded liabilities.

Increases or decreases in the Actuarial Accrued Liability caused by changes in the benefit provisions are amortized over 20 years, as determined in the 2007 session of the Legislature.

Method Changes Since the Prior Valuation

None

Public School Retirement System of Missouri

Disclosures

This letter has been prepared pursuant to the engagement letter between PricewaterhouseCoopers LLP and PSRS and PEERS of Missouri, dated October 27, 2008.

In preparing the results presented in this letter, we have relied upon information provided to us by PSRS and PEERS of Missouri regarding plan provisions, plan participants, and benefit payments. While the scope of our engagement did not call for us to perform an audit or independent verification of this information, we have reviewed this information for reasonableness. The accuracy of the results presented in this letter is dependent upon the accuracy and completeness of the underlying information.

To the best of our knowledge, the individuals involved in this engagement have no relationship that may impair or appear to impair the objectivity of our work.

No statement in this letter is intended as a recommendation in favor, or in opposition, of the proposed legislation. Except as otherwise noted, potential impacts on other benefit plans were not considered.

The calculations are based upon assumptions regarding future events. However, the plan's long term costs will be determined by actual future events, which may differ materially from the assumptions that were made. The calculations are also based upon present and proposed plan provisions that are outlined in the letter. If you have reason to believe that the assumptions that were used are unreasonable, that the plan provisions are incorrectly described, that important plan provisions relevant to this proposal are not described, or that conditions have changed since the calculations were made, you should contact PSRS and PEERS of Missouri.

In the event that more than one plan change is being considered, it is very important to remember that the results of separate actuarial valuations cannot generally be added together to produce a correct estimate of the combined effect of all of the changes. The total can be considerably greater or less than the sum of the parts due to the interaction of various plan provisions with each other, and with the assumptions that must be used.

This document was not intended or written to be used, and it cannot be used, for the purpose of avoiding U.S. federal, state or local tax penalties. This includes penalties that may apply if the transaction that is the subject of this document is found to lack economic substance or fails to satisfy any other similar rule of law. This document has been prepared pursuant to an engagement between PricewaterhouseCoopers LLP and PSRS and PEERS of Missouri and is intended solely for the use and benefit of PSRS and PEERS of Missouri and not for reliance by any other person.