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NEBRASKA PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL RETIREMENT SYSTEM

ACTUARIAL VALUATION REPORT as of July 1, 2015

Sixty-Third Actuarial Report for State Fiscal Year Ending June 30, 2017 and System Plan Year Beginning July 1, 2015





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The experience and dedication you deserve

November 11, 2015

Public Employees Retirement Board Nebraska Public Employees Retirement System Post Office Box 94816 Lincoln, NE 68509

Dear Members of the Board:

At your request, we performed an actuarial valuation of the School Retirement System as of July 1, 2015 for the purpose of determining the actuarial required contribution rate for the plan year ending June 30, 2016. It is our understanding that any required additional State contributions for this plan year will be made on July 1, 2016 (State fiscal year end 2017). The major findings of the valuation are contained in this report, which reflects the benefit provisions in place on July 1, 2015. There were no changes to the actuarial assumptions and methods or the plan provisions from the prior valuation.

In preparing our report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, statutory provisions, member data and financial information. We found this information to be reasonably consistent and comparable with the information received in prior years. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete, our results may be different and our calculations may need to be revised.

We further certify that all costs, liabilities, rates of interest and other factors for the School Retirement System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer the best estimate of anticipated experience affecting the System. Nevertheless, the emerging costs will vary from those presented in this report to the extent actual experience differs from that projected by the actuarial assumptions. The Public Employees Retirement Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in Appendix C.

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

Public Employees Retirement Board November 11, 2015 Page 2



The actuarial computations presented in this report are for purposes of determining the funding amounts for the System as set out in the Nebraska state statutes. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes. For example, actuarial computations for purposes of fulfilling financial accounting requirements for the System under Governmental Accounting Standard No. 67 will be presented in a completely separate report.

The consultants who worked on this assignment are pension actuaries. Cavanaugh Macdonald's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein. We are available to answer any questions on the material contained in the report or to provide explanations or further details as may be appropriate.

We respectfully submit the following report and look forward to discussing it with you.

Sincerely,

Patrice A. Beckham, FSA, EA, FCA, MAAA

Principal and Consulting Actuary

Brent A. Banister Ph.D., FSA, EA, MAAA, FCA

Chief Pension Actuary



SECTION 1 - BOARD SUMMARY

This report presents the results of the July 1, 2015 actuarial valuation of the School Retirement System. The primary purposes of performing this actuarial valuation are to:

- Determine whether the employer, member and State contribution rates defined in the Nebraska State Statutes are sufficient to fund the total Formula Annuity for the Nebraska School System, and whether additional State contributions are required along with the State contribution for the Omaha Service Annuity for the plan year ending June 30, 2016;
- Disclose asset and liability measurements as well as the current funded status of the System on the valuation date;
- Compare actual and expected experience under the System during the plan year ended June 30, 2015; and
- Analyze and report on trends in System contributions, assets and liabilities over the past several years.

The Nebraska statutes require the State to make an additional contribution if the regular, payroll-related contributions by members, employers, and the State are insufficient to meet the actuarial required contribution for the plan year. Based on the results of the July 1, 2015 actuarial valuation, no additional State contribution is necessary for this plan year.

The actuarial valuation results provide a "snapshot" view of the System's financial condition on July 1, 2015. The System's unfunded actuarial accrued liability (UAAL) decreased from \$1.804 billion last year to \$1.293 billion this year and the funded ratio increased from 82.7% to 88.0%. In addition, the actuarial required contribution rate decreased from 18.39% of pay last year to 17.03% of pay in this year's valuation, a decrease of 1.36% of pay.

The valuation results reflect net favorable experience for the past plan year as demonstrated by an UAAL that was lower than expected. The UAAL on July 1, 2015 is \$1.293 billion as compared to an expected UAAL of \$1.764 billion. The favorable experience was due to the combined impact of an experience gain on both the actuarial value of assets and System liabilities. The rate of return on the market value of assets for FY 2015 was 3.8%, but the asset smoothing method only recognizes 20% of the shortfall between the 8% assumed rate of return and the actual return. Due to the smoothing of experience for FY 2015 and the recognition of some of the unrecognized investment gains from previous years, the rate of return on the actuarial (smoothed) assets was 11.5%. This generated an experience gain of \$296.3 million on the actuarial value of assets. There was also an experience gain of \$174.7 million on System liabilities, largely as the result of no cost-of-living-adjustment being granted this year to members currently receiving benefits.

LB 553, which was passed by the 2013 Legislature, made changes to the benefit structure for members hired on or after July 1, 2013 (Tier Two), including changing final average salary to the highest 60 months rather than the highest 36 months of service and changing the maximum cost of living adjustment from 2.5% to 1.0%. There were 6,180 members in Tier Two as of July 1, 2015, about 15% of the active membership, compared to 8% in the prior valuation. It will be many years before Tier Two has a meaningful impact on the valuation results.

A summary of the key results from the July 1, 2015 actuarial valuation, excluding the Omaha State Service annuity, is shown in the following table. As the table indicates, the statutory contribution rates



SECTION 1 - BOARD SUMMARY

are sufficient to meet the actuarial required contribution rate and no additional State appropriation is required. Further detail on the valuation results can be found in the following sections of this Board Summary.

	July 1, 2015 Valuation Results	July 1, 2014 Valuation Results
Unfunded Actuarial Accrued Liability (\$M)	\$1,293	\$1,804
Funded Ratio (Actuarial Assets)	88.01%	82.70%
Normal Cost Rate	12.11%	11.82%
UAAL Amortization Rate	4.92%	6.57%
Total Actuarial Required Contribution	17.03%	18.39%
Member Contribution Rate	(9.78%)	(9.78%)
Employer Contribution Rate	(9.88%)	(9.88%)
State Contribution Rate	(2.00%)	(2.00%)
Total Contribution Rate	(21.66%)	(21.66%)
Shortfall/(Margin)	(4.63%)	(3.27%)
Additional Required State Contribution	\$0	\$0

EXPERIENCE FOR THE LAST PLAN YEAR

Numerous factors contributed to the change in the System's assets, liabilities, and the actuarial contribution rate between July 1, 2014 and July 1, 2015. The components are examined in the following discussion.

ASSETS

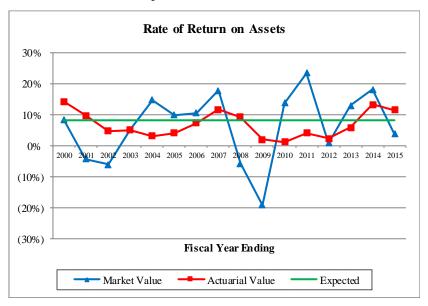
As of June 30, 2015, the System had net assets of \$9.686 billion, when measured on a market value basis. This was an increase of \$0.235 billion from the prior year.

The market value of assets is not used directly in the calculation of the unfunded actuarial accrued liability and the actuarial required contribution rate. An asset valuation method, which smoothes the effect of market fluctuations, is used to determine the value of assets used in the valuation. The resulting amount is called the actuarial value of assets. In this year's valuation, the actuarial value of assets is \$9.486 billion, an increase of \$0.864 billion from the prior year. The components of change in the asset values are shown in the following table:



	Mark	et Value (\$M)	Actuai	rial Value (\$M)
Net Assets, June 30, 2014	\$	9,450.98	\$	8,622.02
- Employer and Member Contributions- Benefit Payments- Net Investment Income	+ - +	384.30 502.19 352.73	+ - +	384.30 502.19 981.46
Net Assets, June 30, 2015	\$	9,685.82	\$	9,485.59
Estimated Rate of Return		3.8%		11.5%

The rate of return on the actuarial value of assets was 11.5%, which exceeds the 8.0% investment return assumption. As a result, there was an experience gain on assets of \$296.3 million. However, the investment return for FY 2015 of 3.8% reduced the deferred investment gains (market value of assets less actuarial value) from \$951 million in last year's valuation to \$200 million in the current valuation. Please see Section 3 of this report for more detailed information on the market and actuarial value of assets.



The rate of return of the actuarial value of assets has been less volatile than the market value return, illustrating the benefit of using an asset smoothing method.

LIABILITIES

The actuarial accrued liability is that portion of the present value of future benefits that will not be paid by future normal costs. The difference between this liability and the actuarial value of assets as of the valuation date is called the unfunded actuarial accrued liability (UAAL). The dollar amount of unfunded actuarial accrued liability is reduced if the contributions to the System exceed the normal cost for the year plus interest on the prior year's UAAL.



SECTION 1 - BOARD SUMMARY

The unfunded actuarial accrued liability is shown as of July 1, 2015 in the following table:

	Actuarial Value of Assets	Market Value of Assets
Actuarial Accrued Liability Value of Assets Unfunded Actuarial Accrued Liability	\$10,778,303,637 <u>9,485,594,650</u> \$1,292,708,987	\$10,778,303,637 <u>9,685,816,053</u> \$1,092,487,584
Funded Ratio	88.01%	89.86%

See Section 4 of the report for the detailed development of the unfunded actuarial accrued liability.

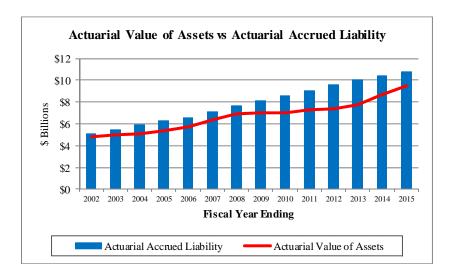
The net change in the UAAL from July 1, 2014 to July 1, 2015 was a decrease of \$511.4 million. The components of this net change are shown in the following table (in millions):

	(\$ Millions)
Unfunded Actuarial Accrued Liability, July 1, 2014	\$1,804.1
- Expected increase from amortization method	22.9
- Actual vs. Expected Contributions	(58.0)
- Investment experience	(296.3)
- Liability experience	(174.7)
- Other experience	(5.3)
Unfunded Actuarial Accrued Liability, July 1, 2015	\$1,292.7

As shown above, various components impacted the UAAL. Actuarial gains (losses), which result from actual experience that is more (less) favorable than anticipated based on the actuarial assumptions, are reflected in the UAAL and are measured as the difference between the expected UAAL and the actual UAAL, taking into account any changes due to actuarial assumptions and methods, or benefit provision changes. Overall, the System experienced a total actuarial gain of \$471.0 million. The actuarial gain may be explained by considering the separate experience of assets and liabilities. As noted earlier, there was a \$296.3 million gain on the actuarial value of assets and an experience gain of \$174.7 million on System liabilities. The liability gain was the net result of various components of actuarial gains and losses, the largest of which were a gain from salary increases that were lower than expected and a gain from no cost-of-living-adjustment being granted to members currently receiving benefits. A breakdown of the components of experience gains and losses can be found in Table 8 of this report.

As the following graph of historical actuarial assets and accrued liabilities shows, the System's liabilities had been growing at a faster pace than the System's assets for the five-year period beginning after the FY 2009 market downturn. As a result, the funded ratio declined over that period. Recently, the System's assets have been growing at a faster rate than the System's liabilities and the funded ratio has been improving.

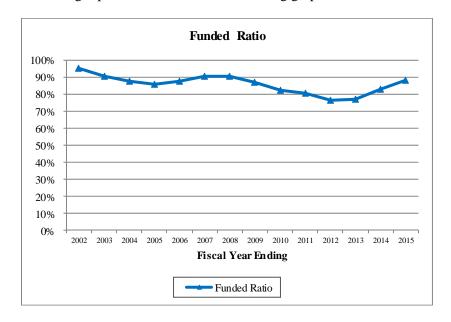




An evaluation of the UAAL on a pure dollar basis may not provide a complete analysis since only the difference between the assets and liabilities (which are both very large numbers) is reflected. Another way to evaluate the UAAL and the progress made in its funding is to track the funded ratio, the ratio of the actuarial value of assets to the actuarial accrued liability. The funded status information is shown below (in millions).

	7/1/2011	7/1/2012	7/1/2013	7/1/2014	7/1/2015
Funded Ratio	80.4%	76.6%	77.1%	82.7%	88.0%
UAAL	\$1,772.2	\$2,250.2	\$2,281.8	\$1,804.1	\$1,292.7

The funded ratio over a longer period is shown in the following graph:





ACTUARIAL REQUIRED CONTRIBUTION RATE

The System is funded by statutory contribution rates for members (9.78% of pay), employers (101% of the member rate) and the State (2.00% of pay). State statutes require the State to make an additional contribution if the regular, payroll-related contributions by employees, employers and the State are insufficient to meet the actuarial required contribution for the plan year. The additional State contributions for the plan year are made on the July 1 following the plan year end. Based on the results of the July 1, 2015 actuarial valuation, no additional State contribution is necessary for the current plan year.

Under the Entry Age Normal cost method, the actuarial contribution rate consists of two components:

- A "normal cost" for the portion of projected liabilities allocated by the actuarial cost method to service of members during the year following the valuation date.
- An "unfunded actuarial accrued liability contribution" for the excess of the portion of projected liabilities allocated to service to date over the actuarial value of assets.

The UAAL contribution rate is determined by calculating the amortization payments as a level percentage of payroll. This methodology results in payments that are lower in the initial years of the amortization period, but increase each year in the future with the assumed payroll growth assumption of 4%. Because the UAAL contribution rate is determined as a level percent of payroll, the dollar amount of the UAAL contribution is scheduled to increase 4% each year in the future even if all actuarial assumptions are met.

See Section 5 of the report for the detailed development of these rates, which are summarized in the following table:

Contribution Rates	July 1, 2015	July 1, 2014
Normal Cost Rate	12.11%	11.82%
2. UAAL Contribution Rate	4.92%	6.57%
3. Total Actuarial Required Contribution Rate	17.03%	18.39%
4. Member Contribution Rate	(9.78%)	(9.78%)
5. Employer Contribution Rate	(9.88%)	(9.88%)
6. State Contribution Rate	(2.00%)	(2.00%)
7. Total Contribution Rate	(21.66%)	(21.66%)
8. Shortfall/(Margin) [3+7]	(4.63%)	(3.27%)
9. Estimated Payroll	\$1,845,979,997	\$1,774,679,549
10. Additional State Required Contribution [8 * 9, but not less than \$0]	\$0	\$0

Note: Contribution rates exclude State funding of Omaha Service Annuity.

The actuarial required contribution rate for the current plan year is 17.03%. The member contribution rate of 9.78%, School District contributions of 9.88% (101% of 9.78%), and State contributions of 2.00%



SECTION 1 - BOARD SUMMARY

of pay result in total statutory contributions of 21.66% of pay. As a result, there is a contribution margin of 4.63% which indicates that the System will reach fully funded status sooner than targeted by the amortization schedule, <u>if all actuarial assumptions are met in future years</u>.

A history of actuarial required contribution rates and any resulting additional required State contributions, whether or not actually contributed, is shown below:

History of Required Contribution Rates and Additional State Funding							
Fiscal Year	Required Contribution Rate		Additional State Contributions*				
		ď	_				
2016/2017	17.03%	\$	0				
2015/2016	18.39%		0				
2014/2015	19.94%		0				
2013/2014	23.27%		48,092,426				
2012/2013	20.45%		23,465,817				
2011/2012	19.21%		18,871,705				
2010/2011	17.24%		0				
2009/2010	15.46%		0				
2008/2009	15.64%		0				
2007/2008	16.58%		0				
2006/2007	17.95%		12,847,537				
2005/2006	16.97%		15,415,949				
2004/2005	15.26%		0				
2003/2004	13.45%		0				

^{*} Excludes funding of Omaha Service Annuity.

Note: Information before Fiscal Year 2014/2015 was produced by prior actuary.

The actuarial required contribution rate, which is determined this year based on the snapshot of the System taken on the valuation date of July 1, 2015, will change each year as the deferred investment experience is recognized and other experience (both investment and demographic) impacts the System. While there is a contribution margin for the current plan year, this should not be viewed an unnecessary or excess contribution. In order for the financing of the System on a fixed contribution rate basis to succeed, contributions above the actuarial required contribution rate must be made to offset years where the fixed contribution rate will be below the actuarial required contribution rate.



SUMMARY OF PRINCIPAL RESULTS

		7/1/2015 Valuation		7/1/2014 Valuation	% Change
1. PARTICIPANT DATA			•		
Number of:					
Active Members - Tier One - Tier Two - Total		34,814 6,180 40,994	-	37,129 3,333 40,462	(6.24%) 85.42% 1.31%
Retired Members and Beneficiaries		21,512		20,551	4.68%
Disabled Members		324		338	(4.14%)
Inactive Members		21,013		20,700	1.51%
Total Members		124,837		82,051	52.15%
Projected Annual Salaries of Active Members	\$	1,845,979,997	\$	1,774,679,549	4.02%
Annual Retirement Payments for Retired Members, Disabled Members and Beneficiaries	\$	488,367,407	\$	462,313,114	5.64%
2. ASSETS AND LIABILITIES					
a. Market Value of Assets	\$	9,685,816,053	\$	9,450,981,723	2.48%
b. Actuarial Value of Assets		9,485,594,650		8,622,023,999	10.02%
c. Total Actuarial Accrued Liability		10,778,303,637		10,426,112,609	3.38%
d. Unfunded Actuarial Accrued Liability [c - b]	\$	1,292,708,987	\$	1,804,088,610	(28.35%)
e. Funded Ratio (Actuarial Value of Assets) [b/c]		88.01%		82.70%	6.42%
f. Funded Ratio (Market Value of Assets) [a/c]		89.86%		90.65%	(0.87%)
3. CONTRIBUTION RATES AS A PERCENT Of (excluding Omaha Service Annuity)	F PA	YROLL			
Normal Cost Amortization of Unfunded Actuarial		12.11%		11.82%	2.45%
Accrued Liability		4.92%		6.57%	(25.11%)
Actuarial Required Contribution Rate		17.03%		18.39%	(7.40%)
Member Contribution Rate		(9.78%)		(9.78%)	0.00%
Employer Required Contribution Rate*		(9.88%)		(9.88%)	0.00%
State Contribution Rate		(2.00%)	-	(2.00%)	0.00%
Shortfall/(Margin)		(4.63%)		(3.27%)	41.59%
Additional Required State Contribution Amount	\$	0	\$	0	0.00%

^{* 101%} of employee contribution rate



SECTION 2 – SCOPE OF THE REPORT

This report presents the actuarial valuation results of the School Retirement System as of July 1, 2015. This valuation was prepared at the request of the Public Employees Retirement Board of the Nebraska Public Employees Retirement System.

Please pay particular attention to our actuarial certification letter, where the guidelines employed in the preparation of this report are outlined. We also comment on the sources and reliability of both the data and the actuarial assumptions upon which our findings are based. Those comments are the basis for our certification that this report is complete and accurate to the best of our knowledge and belief.

A summary of the findings which result from this valuation is presented in the previous section. Section 3 describes the assets and investment experience of the System. Sections 4 and 5 describe how the obligations of the System are to be met under the actuarial cost method in use. Section 6 includes some historical funding information that was required by the Governmental Accounting Standards Board (GASB) in the past.

This report includes several appendices:

- Appendix A Schedules of valuation data classified by various categories of members.
- Appendix B A summary of the current benefit structure, as determined by the provisions of governing law on July 1, 2015.
- Appendix C A summary of the actuarial methods and assumptions used to estimate liabilities and determine contribution rates.
- Appendix D A glossary of actuarial terms.



SECTION 3 – ASSETS

In many respects, an actuarial valuation can be thought of as an inventory process. The inventory is taken as of the actuarial valuation date, which for this valuation is July 1, 2015. On that date, the assets available for the payment of benefits are appraised. The assets are compared with the liabilities of the System, which are generally in excess of assets. The actuarial process then leads to a method of determining the contributions needed by members and the employer in the future to balance the System assets and liabilities.

Market Value of Assets

The current market value represents the "snapshot" or "cash-out" value of System assets as of the valuation date. In addition, the market value of assets provides a basis for measuring investment performance from time to time. Table 1 is a comparison, at market values, of System assets as of July 1, 2015, and July 1, 2014, in total and by investment category. Table 2 summarizes the change in the market value of assets from July 1, 2014 to July 1, 2015.

Actuarial Value of Assets

Neither the market value of assets, representing a "cash-out" value of System assets, nor the book values of assets, representing the cost of investments, may be the best measure of the System's ongoing ability to meet its obligations.

To arrive at a suitable value of assets for the actuarial valuation, a technique for determining the actuarial value of assets is used which dampens swings in the market value while still indirectly recognizing market values. Under the asset smoothing methodology, the difference between the actual and assumed investment return on the market value of assets is recognized evenly over a five year period.

Table 3 shows the development of the actuarial value of assets (AVA) as of the valuation date.



SCHOOL RETIREMENT SYSTEM

MARKET VALUE OF ASSETS by Investment Category

	June 30, 2015		June 30, 2014		
1. Cash and Equivalents	\$ 5,91	3,413	\$ 6,85	55,429	
2. Investments	9,864,96	53,140	9,742,97	76,375	
3. Capital Assets		3,929		5,203	
4. Receivables and Prepaids	793,20	6,481	457,66	56,517	
5. Accounts Payable	(978,270),910)	(756,52	1,801)	
6. Net Assets Available for Pension Benefits $[1+2+3+4+5]$	\$ 9,685,81	6,053	\$ 9,450,98	81,723	



TABLE 2

SCHOOL RETIREMENT SYSTEM

CHANGE IN MARKET VALUE OF ASSETS

		ebraska School ystem Formula <u>Annuity</u>	0	maha Service <u>Annuity</u>	<u>Total</u>
1. Market Value of Assets, Beginning of Year	\$	9,439,223,083	\$	11,758,640	\$ 9,450,981,723
2. Contributions					
(a) Member (includes purchased service)(b) Employer	\$	174,797,341 173,013,848	\$	0 0	\$ 174,797,341 173,013,848
(c) State appropriations	_	35,493,591	_	997,858	36,491,449
(d) Total	\$	383,304,780	\$	997,858	\$ 384,302,638
3. Expenditures					
(a) Benefit payments	\$	500,285,833	\$	1,904,983	\$ 502,190,816
(b) Expenses and fees	_	3,153,883		0	3,153,883
(c) Total	\$	503,439,716	\$	1,904,983	\$ 505,344,699
4. Investment Return, Net of Expenses					
(a) Investment income	\$	120,444,427	\$	150,459	\$ 120,594,886
(b) Securities lending income		1,382,740		1,480	1,384,220
(c) Securities lending expense		(297,413)		(318)	(297,731)
(d) Net appreciation/(depreciation) in fair value					
of investments		233,878,536		287,603	234,166,139
(e) Other		28,877		0	28,877
(f) Investment return for $2014/2015$ [(a) + (b) + (c) + (d) + (e)]	\$	355,437,167	\$	439,224	\$ 355,876,391
5. Market Value of Assets, End of Year [1 + 2(d) - 3(c) + 4(f)]	\$	9,674,525,314	\$	11,290,739	\$ 9,685,816,053
6. Approximate Rate of Return, Net of Expenses					3.8%



TABLE 3
SCHOOL RETIREMENT SYSTEM
DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

	Year End							
		6/30/2012		6/30/2013		6/30/2014		6/30/2015
Actuarial Value of Assets, Beginning of Year	\$	7,267,497,259	\$	7,358,964,135	\$	7,703,084,507	\$	8,622,023,999
2. Unrecognized Return Beginning of Year	\$	(3,542,427)	\$	(112,652,354)	\$	389,868,523	\$	828,957,724
3. Contributions During Year(a) Member(b) Employer(c) State appropriations(d) Total	\$ _	147,046,053 145,582,040 23,430,550 316,058,643	\$ - \$	164,077,967 161,922,831 17,843,931 343,844,729	\$ - - \$	169,200,529 167,710,406 35,613,157 372,524,092	\$ ·	174,797,341 173,013,848 36,491,449 384,302,638
4. Benefit Payments	\$	391,133,707	\$	427,885,060	\$	466,161,224	\$	502,190,816
5. Expected Investment Income on (1), (2), (3) and (4) at 8%	\$	579,472,525	\$	577,831,647	\$	645,313,812	\$	753,124,603
6. Actual Return on Market Value, Net of All Expenses	\$	57,432,013	\$	930,681,580	\$	1,451,665,825	\$	352,722,508
7. Return to be Spread, End of Year [6 - 5]	\$	(522,040,512)	\$	352,849,933	\$	806,352,013	\$	(400,402,095)

Note: Information before 2013 was produced by prior actuary.



TABLE 3 (continued)

SCHOOL RETIREMENT SYSTEM

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

8. Return to be Spread

Plan Year	Return to be	Unrecognized	Unrecognized						
Ending	Spread	<u>Percent</u>	Return						
2015	(\$400,402,095)	80%	(\$320,321,676)						
2014	806,352,013	60%	483,811,208						
2013	352,849,933	40%	141,139,973						
2012	(522,040,512)	20%	(104,408,102)						
			\$200,221,403						
9. Total Market Value of Assets as of July 1, 2015 \$9,685,816,053									
10. Total Actuarial V [9 - 8]	Value of Assets as of	July 1, 2015	\$9,485,594,650						
11. Asset Ratios									
(a) Actuarial Valu	e to Market Value [10 / 9]	97.93%						
(b) Market Value	to Actuarial Value [9 / 10]	102.11%						



SECTION 4 – SYSTEM LIABILITIES

In the previous section, an actuarial valuation was compared with an inventory process, and an analysis was given of the inventory of assets of the School Retirement System as of the valuation date, July 1, 2015. In this section, the discussion will focus on the commitments (future benefit payments) of the System, which are referred to as its liabilities.

Table 4 contains an analysis of the actuarial present value of all future benefits (PVFB) for contributing members, inactive members, retirees and their beneficiaries.

The liabilities summarized in Table 4 include the actuarial present value of all future benefits expected to be paid with respect to each member. For an active member, this value includes the measurement of both benefits already earned and future benefits to be earned. For all members, active and retired, the value extends over benefits earnable and payable for the rest of their lives and for the lives of the surviving beneficiaries.

All liabilities reflect the benefit provisions in place as of July 1, 2015.

Actuarial Accrued Liability

A fundamental principle in financing the liabilities of a retirement program is that the cost of its benefits should be related to the period in which benefits are earned, rather than to the period of benefit distribution. An actuarial cost method is a mathematical technique that allocates the present value of future benefits into annual costs. In order to do this allocation, it is necessary for the funding method to "breakdown" the present value of future benefits into two components:

- (1) that which is attributable to the past and
- (2) that which is attributable to the future.

Actuarial terminology calls the part attributable to the past the "past service liability" or the "actuarial accrued liability." The portion allocated to the future is known as the present value of future normal costs, with the specific piece of it allocated to the current year being called the "normal cost." Table 5 contains the calculation of actuarial accrued liability for the System. The Entry Age Normal actuarial cost method is used to develop the actuarial accrued liability.



TABLE 4

SCHOOL RETIREMENT SYSTEM

PRESENT VALUE OF FUTURE BENEFITS (PVFB) AS OF JULY 1, 2015

1.	Active Employees		ebraska School stem Formula <u>Annuity</u>		Omaha Service <u>Annuity</u>		<u>Total</u>
	(a) Retirement(b) Withdrawal(c) Death(d) Disability(e) Total	\$ 	6,140,592,148 542,046,962 69,806,586 39,376,199 6,791,821,895	\$ 	16,349,116 1,899,325 145,351 177,035 18,570,827	\$ 	6,156,941,264 543,946,287 69,951,937 39,553,234 6,810,392,722
2.	Inactive Vested Members		319,594,991		1,169,844		320,764,835
3.	Inactive Nonvested Members		37,755,436		0		37,755,436
4.	Disabled Members		40,426,302		0		40,426,302
5.	Retirees		5,282,287,886		0		5,282,287,886
6.	Beneficiaries	_	195,946,471	_	0	_	195,946,471
7.	Total Present Value of Future Benefits $[1(e) + 2 + 3 + 4 + 5 + 6]$	\$	12,667,832,981	\$	19,740,671	\$	12,687,573,652



TABLE 5 SCHOOL RETIREMENT SYSTEM

ACTUARIAL ACCRUED LIABILITY AS OF JULY 1, 2015

		Nebraska School System Formula <u>Annuity</u>		Omaha Service <u>Annuity</u>		<u>Total</u>
Present Value of Future Benefits for Active Members	\$	6,791,821,895	\$	18,570,827	\$	6,810,392,722
2. Present Value of Future Normal Costs for Active Members						
(a) Retirement benefit(b) Termination benefit(c) Pre-Retirement death benefit(d) Disability benefit(e) Total	\$ \$	1,381,557,193 488,919,100 21,004,999 12,730,638 1,904,211,930	\$	3,651,042 1,301,773 39,144 66,126 5,058,085	\$ \$	1,385,208,235 490,220,873 21,044,143 12,796,764 1,909,270,015
3. Actuarial Accrued Liability for Active Members [1 - 2(e)]	\$	4,887,609,965	\$	13,512,742	\$	4,901,122,707
4. Actuarial Accrued Liability for Inactive Members		5,876,011,086		1,169,844		5,877,180,930
5. Total Actuarial Accrued Liability [3 + 4]		10,763,621,051		14,682,586		10,778,303,637
6. Actuarial Value of Assets		9,474,537,309		11,057,341		9,485,594,650
7. Unfunded Actuarial Accrued Liability [5-6]	\$	1,289,083,742	\$	3,625,245	\$	1,292,708,987



SCHOOL RETIREMENT SYSTEM

ACTUARIAL BALANCE SHEET

ASSETS

Actuarial Value of Assets			\$	9,485,594,650
Unfunded Actuarial Accrued Liability				1,292,708,987
Present Value of Future Normal Costs			-	1,909,270,015
Total Assets			\$	12,687,573,652
	LIABILITIE	<u>S</u>		
Present Value of Future Benefits				
Active members				
Retirement	\$	6,140,592,148		
Withdrawal		542,046,962		
Death		69,806,586		
Disability		39,376,199		
Total			\$	6,791,821,895
Inactive members		357,350,427		
Retirees, disabilities and beneficiaries		5,518,660,659		
Omaha Service Annuity			\$	5,876,011,086
Active		18,570,827		
Inactive vested		1,169,844		
Total			\$	19,740,671
Total Liabilities			\$	12,687,573,652



SCHOOL RETIREMENT SYSTEM

ACTUARIAL GAIN/(LOSS)

Liabilities

1. Actuarial Accrued Liability as of July 1, 2014	\$	10,426,112,609
2. Normal Cost for Plan Year Ending June 30, 2015		198,771,299
3. Benefit Payments During Plan Year Ending June 30, 2015		502,190,816
4. Interest at 8.0%	_	830,289,524
5. Expected Actuarial Accrued Liability as of July 1, 2015 [1 + 2 - 3 + 4]		10,952,982,616
6. Actuarial Accrued Liability as of July 1, 2015	\$	10,778,303,637
Assets		
7. Actuarial Value of Assets as of July 1, 2014	\$	8,622,023,999
8. Contributions During Plan Year Ending June 30, 2015		384,302,638
9. Benefit Payments During Plan Year Ending June 30, 2015		502,190,816
10. Interest at 8.0%	_	685,137,110
11. Expected Actuarial Value of Assets as of July 1, 2015 [7 + 8 - 9 + 10]		9,189,272,931
12. Actuarial Value of Assets as of July 1, 2015	\$	9,485,594,650
Gain / (Loss)		
13. Actuarial Gain / (Loss) on Liabilities [5 - 6]	\$	174,678,979
14. Actuarial Gain / (Loss) on Assets [12 - 11]	\$	296,321,719
15. Total Actuarial Gain / (Loss) for Plan Year Ending June 30, 2015 [13 + 14]	\$	471,000,698



SCHOOL RETIREMENT SYSTEM

GAIN/(LOSS) ANALYSIS BY SOURCE

Liability Sources		Gain/(Loss)
Retirement	\$	2,695,146
Termination		(41,406,419)
Disability		(760,985)
Mortality		(12,656,432)
Salary		80,897,999
New Entrants/Rehires		(20,669,675)
COLA		125,381,735
Miscellaneous	_	41,197,610
Total Liability Gain/(Loss)	\$	174,678,979
Asset Gain/(Loss)	\$	296,321,719
Net Actuarial Gain/(Loss)	\$	471,000,698



TABLE 9

SCHOOL RETIREMENT SYSTEM

PROJECTED BENEFIT PAYMENTS AS OF JULY 1, 2015

Plan Year Ending June 30	Current <u>Active Membe</u>		Current In-Pay <u>Members</u>	<u>Total</u>
2016	\$ 48,241,00	0 \$	485,649,000	\$ 533,890,000
2017	83,373,00	0	490,558,000	573,931,000
2018	119,064,00	0	495,177,000	614,241,000
2019	155,363,00	0	499,237,000	654,600,000
2020	192,672,00	0	502,543,000	695,215,000
2021	230,909,00	0	504,956,000	735,865,000
2022	269,799,00	0	506,553,000	776,352,000
2023	310,164,00	0	507,002,000	817,166,000
2024	352,024,00	0	506,479,000	858,503,000
2025	395,506,00	0	504,868,000	900,374,000
2026	440,954,00	0	501,905,000	942,859,000
2027	488,081,00	0	497,482,000	985,563,000
2028	536,538,00	0	491,592,000	1,028,130,000
2029	586,856,00	0	484,125,000	1,070,981,000
2030	639,041,00	0	475,233,000	1,114,274,000
2031	692,510,00	0	465,593,000	1,158,103,000
2032	747,756,00	0	454,693,000	1,202,449,000
2033	804,560,00	0	442,207,000	1,246,767,000
2034	861,251,00	0	428,115,000	1,289,366,000
2035	917,383,00	0	412,417,000	1,329,800,000
2036	974,027,00		395,143,000	1,369,170,000
2037	1,031,493,00	0	376,354,000	1,407,847,000
2038	1,089,236,00		356,142,000	1,445,378,000
2039	1,146,730,00		334,642,000	1,481,372,000
2040	1,203,486,00		312,053,000	1,515,539,000
2041	1,258,725,00		288,618,000	1,547,343,000
2042	1,311,584,00		264,615,000	1,576,199,000
2043	1,362,435,00		240,363,000	1,602,798,000
2044	1,410,616,00		216,184,000	1,626,800,000
2045	1,454,723,00	0	192,430,000	1,647,153,000

Note: Cash flows are the expected future non-discounted payments to current members. These numbers exclude refund payouts to any current vested or nonvested inactives and assume future retirees elect the normal form of payment. Also excludes Omaha appropriations.



SECTION 5 – EMPLOYER CONTRIBUTIONS

The previous two sections were devoted to a discussion of the assets and liabilities of the System. A comparison of Tables 3 and 4 indicates that current assets fall short of meeting the present value of future benefits (total liability). This is expected in all but a completely closed fund, where no further contributions are anticipated. In an active system, there will almost always be a difference between the actuarial value of assets and total liabilities. This deficiency has to be made up by future contributions and investment returns. An actuarial valuation sets out a schedule of future contributions that will deal with this deficiency in an orderly fashion.

The method used to determine the incidence of the contributions in various years is called the actuarial cost method. Under an actuarial cost method, the contributions required to meet the difference between current assets and current liabilities are allocated each year between two elements: (1) the normal cost rate and (2) the unfunded actuarial accrued liability contribution rate.

The term "fully funded" is often applied to a system in which contributions at the normal cost rate are sufficient to pay for the benefits of existing employees as well as for those of new employees. More often than not, systems are not fully funded, either because of past benefit improvements that have not been completely funded or because of actuarial deficiencies that have occurred because experience has not been as favorable as anticipated by the actuarial assumptions. Under these circumstances, an unfunded actuarial accrued liability (UAAL) exists. Likewise, when the actuarial value of assets is greater than the actuarial accrued liability, a surplus exists.

Description of Contribution Rate Components

The Entry Age Normal (EAN) actuarial cost method is used for the valuation. Under that method, the normal cost for each year from entry age to assumed exit age is a constant percentage of the member's year by year projected compensation. The portion of the present value of future benefits not provided by the present value of future normal costs is the actuarial accrued liability. The unfunded actuarial accrued liability/ (surplus) represents the difference between the actuarial accrued liability and the actuarial value of assets as of the valuation date. The unfunded actuarial accrued liability is calculated each year and reflects experience gains and losses.

In general, contributions are computed in accordance with a level percent-of-payroll funding objective. The contribution rate based on the July 1, 2015 actuarial valuation will be used to determine the actuarial required employer contribution rate to the School Retirement System for the plan year ending June 30, 2016. Any State contributions are expected to be deposited on July 1, 2016 (State fiscal year 2017). In this context, the term "contribution rate" means the percentage, which is applied to a particular active member payroll to determine the actual employer contribution amount (i.e., in dollars) for the group.

Contribution Rate Summary

In Table 10 the amortization payment related to the unfunded actuarial accrued liability, as of July 1, 2015, is developed. Table 11 develops the actuarial required contribution rate for the System and the amount of required State contributions.

The contribution rates shown in this report are based on the actuarial assumptions and cost methods described in Appendix C.



SCHOOL RETIREMENT SYSTEM

SCHEDULE OF AMORTIZATION BASES

Amortization Bases	Original Amount	July 1, 2015 Remaining Payments	Date of Last Payment	Outstanding Balance as of July 1, 2015	Annual Contribution*
2006 Unfunded Actuarial Accrued Liability Base	\$ 845,226,412	21	7/1/2036	\$ 794,418,580	\$ 55,868,167
2007 Unfunded Actuarial Accrued Liability Base	(163,793,512)	22	7/1/2037	(156,872,775)	(10,704,296)
2008 Unfunded Actuarial Accrued Liability Base	54,258,200	23	7/1/2038	52,865,836	3,506,950
2009 Unfunded Actuarial Accrued Liability Base	370,759,908	24	7/1/2039	366,960,879	23,707,745
2010 Unfunded Actuarial Accrued Liability Base	427,955,512	25	7/1/2040	429,700,647	27,080,560
2011 Unfunded Actuarial Accrued Liability Base	287,237,896	26	7/1/2041	292,233,089	17,992,366
2012 Unfunded Actuarial Accrued Liability Base	497,977,442	27	7/1/2042	512,799,388	30,886,407
2013 Unfunded Actuarial Accrued Liability Base	57,652,106	28	7/1/2043	60,031,244	3,541,648
2014 Unfunded Actuarial Accrued Liability Base	(514,341,070)	29	7/1/2044	(525,129,412)	(30,381,423)
2015 Unfunded Actuarial Accrued Liability Base	(534,298,489)	30	7/1/2045	(534,298,489)	(30,346,424)
Total				\$ 1,292,708,987	\$ 91,151,700

^{*} Contribution amount reflects mid-year timing.

1. Total UAAL Amortization Payments

\$ 91,151,700

2. Projected Payroll for FYE 2016

\$ 1,845,979,997

3. UAAL Amortization Payment Rate

4.94%

Note: Beginning with the July 1, 2013 valuation, the payments on each UAAL base are determined as a level percent of payroll using a 4% payroll growth assumption.



SCHOOL RETIREMENT SYSTEM

ACTUARIAL REQUIRED CONTRIBUTION and DEVELOPMENT OF ADDITIONAL STATE CONTRIBUTION

1. Normal Cost - Nebraska School System Formula Annuity					
(a) Amount				\$	205,364,742
(b) Expected pay for current actives					1,695,128,833
(c) Normal Cost Rate as % of pay					12.11%
2. Amortization Cost - Nebraska School System Formula Annuity	i/				
(a) Amount	!				90,896,076
(b) Expected pay for all actives					1,845,979,997
(c) Amortization Rate as % of pay					4.92%
		_			15.000
 Total Actuarial Required Contribution Rate - Nebraska School [1(c) + 2(c)] 	l Syste	m Form	ula Annuity		17.03%
4. Statutory Contribution Rates - Nebraska School System Formu	ula An	nuity			
(a) Member	#144 T 111	110110)			9.78%
(b) Employer (101% of Member)					9.88%
(c) State					2.00%
(d) Total				-	21.66%
5. Shortfall/(Margin) - Nebraska School System Formula Annuity [3 - 4(d)]	7				(4.63%)
6. Expected pay for all actives for FYE 2016					1,845,979,997
7. Additional Required State Contribution payable July 1, 2016					
[5 * 6, but not less than 0]				\$	0
8. State Contribution due July 1, 2016					
(a) State Statutory Amount due July 1, 2016				\$	36,919,600
[2% x Expected pay]					
(b) Omaha Service Annuity due July 1, 2016					
(i) Normal Cost amount	\$		731,466		
(ii) Amortization amount	_		265,652		
(iii) Total amount					997,118
(d) Additional Contribution				_	0
(e) Total				\$	37,916,718





HISTORICAL FUNDING AND OTHER INFORMATION

This section of the report provides a historical perspective on the System's funding and contribution practices, along with other information that may be of interest.

In the past, Governmental Accounting Standards Board (GASB) Statements No. 25, Financial Reporting for Defined Benefit Pension Plans, and Statement No. 27, Accounting for Pensions by State and Local Governmental Employers, applied to the preparation of financial reports of pension plans for state and local governments and sponsoring employers.

GASB 67, which is effective for plan years ending on or after June 15, 2014, replaces GASB 25 and represents a significant departure from the requirements of that older statement. GASB 25 was issued as a "funding friendly" statement that required pension plans to report items consistent with the results of the plan's actuarial valuations, as long as those valuations met certain parameters. GASB 67 basically separates accounting from funding by creating disclosure and reporting requirements that may or may not be consistent with the basis used for funding the System. A separate report that contains all of the information and exhibits of an actuarial nature that are necessary for the System's financial reporting under GASB 67 is issued.

GASB Statement No. 27 establishes standards for the measurement, recognition, and display of pension expense and related liabilities. Annual pension cost is measured and disclosed on the accrual basis of accounting. GASB 68 replaces GASB 27, and was effective fiscal year end 2015 for the state of Nebraska. A separate report containing all of the pertinent information is also prepared for GASB 68 reporting.



TABLE 12

SCHOOL RETIREMENT SYSTEM

HISTORICAL FUNDING INFORMATION

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded Actuarial Accrued Liability (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a % of Covered Payroll [(b - a) / c]
June 30, 2015	\$9,485,594,650	\$10,778,303,637	\$1,292,708,987	88.0%	\$1,845,979,997	70.0%
June 30, 2014	8,622,023,999	10,426,112,609	1,804,088,610	82.7%	1,774,679,549	101.7%
June 30, 2013	7,703,084,507	9,984,898,998	2,281,814,491	77.1%	1,735,175,956	131.5%
June 30, 2012	7,358,964,135	9,609,157,134	2,250,192,999	76.6%	1,593,184,929	141.2%
June 30, 2011	7,267,497,259	9,039,744,995	1,772,247,736	80.4%	1,590,225,983	111.4%
June 30, 2010	7,040,908,599	8,542,119,000	1,501,210,401	82.4%	1,543,930,532	97.2%
June 30, 2009	7,007,581,825	8,092,339,318	1,084,757,493	86.6%	1,481,568,432	73.2%
June 30, 2008	6,932,918,638	7,654,536,359	721,617,721	90.6%	1,389,124,819	51.9%
June 30, 2007	6,396,336,863	7,070,308,583	673,971,720	90.5%	1,325,616,322	50.8%
June 30, 2006	5,739,048,994	6,584,275,406	845,226,412	87.2%	1,247,684,378	67.7%
June 30, 2005	5,335,197,409	6,234,657,830	899,460,421	85.6%	1,214,227,197	74.1%
June 30, 2004	5,118,011,165	5,868,266,970	750,255,805	87.2%	1,170,601,127	64.1%
June 30, 2003	4,952,902,870	5,464,572,876	511,670,006	90.6%	1,138,776,241	44.9%

Note: Information before 2013 was produced by the prior actuary.



SCHOOL RETIREMENT SYSTEM

HISTORICAL FUNDING INFORMATION

SCHEDULE OF CONTRIBUTIONS FROM EMPLOYERS AND OTHER CONTRIBUTING ENTITIES

Actuarial Required Contributions*						
Plan Year Ending	School	State	Total	Percent Contributed		
June 30, 2015	\$115,776,948	\$35,493,591	\$151,270,539	138%		
June 30, 2014	138,544,708	34,703,519	173,248,227	117%		
June 30, 2013	161,922,831	64,966,961	226,889,792	79%		
June 30, 2012	145,582,040	45,866,350	191,448,390	88%		
June 30, 2011	135,328,339	40,779,653	176,107,992	89%		
June 30, 2010	121,277,758	21,380,352	142,658,110	105%		
June 30, 2009	105,497,775	20,620,548	126,118,323	104%		
June 30, 2008	101,368,968	15,832,941	117,201,909	104%		
June 30, 2007	102,849,748	15,219,871	118,069,619	104%		
June 30, 2006	102,089,105	28,056,703	130,145,808	100%		
June 30, 2005	90,178,025	30,274,438	120,452,463	87%		

^{*} Excludes Omaha appropriations.

Note: Contribution information is consistent with that shown in the GASB 67 report prepared for the System.



MEMBER DATA RECONCILIATION

	Active Members	Inactive Vested	Inactive Non- vested	Retirees and Beneficiaries	Disabled Members	Total
As of July 1, 2014	40,462	5,749	14,951	20,551	338	82,051
Changes in status						
a) Retirement	(1,101)	(249)	0	1,350	0	0
b) Deathc) Non-vested	(41)	(15)	0	(478)	(26)	(560)
terminations	(1,312)	0	1,312	0	0	0
d) Vested terminations	(768)	768	0	0	0	0
e) Contribution refund f) Beneficiaries in	(777)	(189)	(1,030)	0	0	(1,996)
receipt g) Disability	0	0	0	155	0	155
retirements h) Return to active	(8)	(4)	0	0	12	0
service	579	(170)	(409)	0	0	0
i) Expired benefits	0	0	0	(76)	0	(76)
j) Data adjustments	(2)	1	0	10	0	9
Total changes in status	(3,430)	142	(127)	961	(14)	(2,468)
New entrants	3,962	0	298	0	0	4,260
Net Change	532	142	171	961	(14)	1,792
As of July 1, 2015	40,994	5,891	15,122	21,512	324	83,843



SUMMARY OF MEMBERSHIP DATA

NEBRASKA SCHOOLS

A. ACTIVE MEMBERS	July 1, 2015		July 1, 2014	% Change
1. Number of Active Members				
(a) Tier 1	34,814		37,129	(6.2%)
(b) Tier 2	6,180		3,333	85.4%
(c) Total	40,994	-	40,462	1.3%
2. Annual Reported Salary				
(a) Tier 1	\$ 1,580,711,383	\$	1,605,878,553	(1.6%)
(b) Tier 2	160,807,883	_	68,934,889	133.3%
(c) Total	\$ 1,741,519,266	\$	1,674,813,442	4.0%
3. Accumulated Contributions	\$ 1,593,713,305	\$	1,551,264,633	2.7%
4. Active Member Averages				
(a) Age	45.5		45.7	(0.4%)
(b) Service	11.4		11.6	(1.7%)
(c) Compensation	\$ 42,482	\$	41,392	2.6%
B. INACTIVE MEMBERS				
Number of Inactive Members				
(a) System vested	5,891		5,749	2.5%
(b) System nonvested (refund only)	15,122	_	14,951	1.1%
(d) Total	21,013		20,700	1.5%
2. Accumulated Member Contributions (excluding Omaha)	\$ 191,628,861	\$	186,522,027	2.7%
3. Inactive Member Averages (excluding Omaha)				
(a) Age (vesteds only)	52.0		52.1	(0.2%)
(b) Accumulated member contributions	\$ 9,120	\$	9,011	1.2%
C. RETIREES, DISABLEDS, AND BENEFICIARIES				
1. Number of Members				
(a) Retired	20,247		19,322	4.8%
(b) Disabled	324		338	(4.1%)
(c) Beneficiaries	1,265		1,229	2.9%
(d) Total	21,836	-	20,889	4.5%
2. Annual Benefits				
(a) Retired	\$ 461,540,854	\$	436,486,954	5.7%
(b) Disabled	4,410,671		4,558,870	(3.3%)
(c) Beneficiaries	22,415,882	_	21,267,290	5.4%
(d) Total	\$ 488,367,407	\$	462,313,114	5.6%



SUMMARY OF MEMBERSHIP DATA

OMAHA SCHOOLS

A. ACTIVE MEMBERS	September 1, 2014	September 1, 2013	% Change
1. Number of Active Members	7,415	7,372	0.6%
2. Average Age	44.7	44.9	(0.4%)
3. Average Service	10.0	10.1	(1.0%)
B. INACTIVE VESTED MEMBER	RS		
1. Number of Inactive Members	937	818	14.5%
2. Average Age	45.8	45.7	0.2%
3. Average Service	9.0	8.8	2.3%

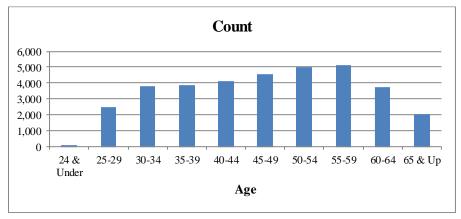
Note: Data was provided by the Omaha Schools Employee Retirement System (OSERS) for use in estimating the Service Annuity obligation. The data provided is from the prior OSERS valuation.

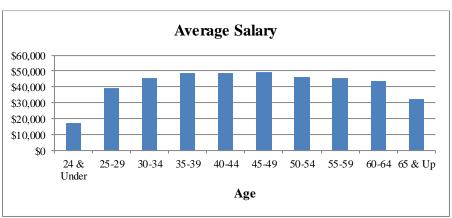


ACTIVE MEMBERS AS OF JULY 1, 2015

Tier 1 Members

Age	Male	<u>Female</u>	<u>Total</u>	Male	<u>Female</u>	<u>Total</u>
24 & Under	30	77	107	\$ 684,508	\$ 1,160,915	\$ 1,845,423
25-29	573	1,896	2,469	23,526,655	73,272,918	96,799,573
30-34	989	2,800	3,789	49,794,211	122,957,396	172,751,607
35-39	1,001	2,848	3,849	58,240,119	129,710,128	187,950,247
40-44	965	3,150	4,115	60,318,817	141,289,057	201,607,874
45-49	1,063	3,473	4,536	68,539,370	153,984,848	222,524,218
50-54	1,158	3,815	4,973	70,896,458	159,095,187	229,991,645
55-59	1,180	3,947	5,127	67,791,208	166,644,289	234,435,497
60-64	980	2,793	3,773	49,992,838	115,642,501	165,635,339
65 & Up	<u>749</u>	<u>1,327</u>	<u>2,076</u>	25,294,383	41,875,575	<u>67,169,958</u>
Total	8,688	26,126	34,814	\$ 475,078,567	\$ 1,105,632,814	\$ 1,580,711,381



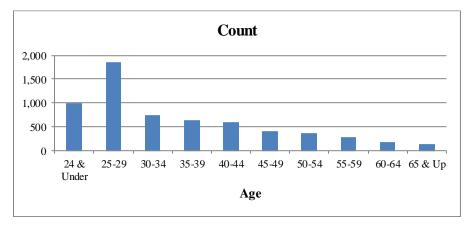


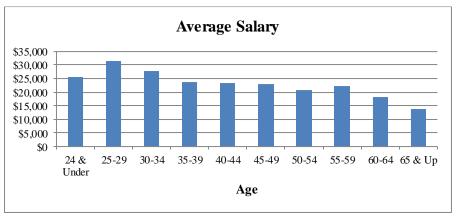


ACTIVE MEMBERS AS OF JULY 1, 2015

Tier 2 Members

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
24 & Under	186	817	1,003	\$ 5,234,123	\$ 20,447,036	\$ 25,681,159
25-29	482	1,364	1,846	16,322,596	41,279,771	57,602,367
30-34	173	577	750	6,152,989	14,563,765	20,716,754
35-39	110	522	632	4,221,345	10,772,599	14,993,944
40-44	111	478	589	4,149,524	9,544,002	13,693,526
45-49	69	333	402	2,355,545	6,933,674	9,289,219
50-54	87	277	364	2,566,938	4,944,067	7,511,005
55-59	77	206	283	2,397,834	3,887,214	6,285,048
60-64	65	107	172	1,510,185	1,603,554	3,113,739
65 & Up	<u>56</u>	<u>83</u>	<u>139</u>	<u>1,002,142</u>	<u>918,982</u>	<u>1,921,124</u>
Total	1,416	4,764	6,180	\$ 45,913,221	\$ 114,894,664	\$ 160,807,885





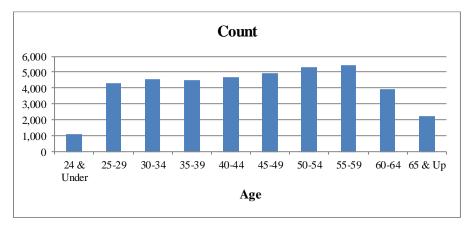


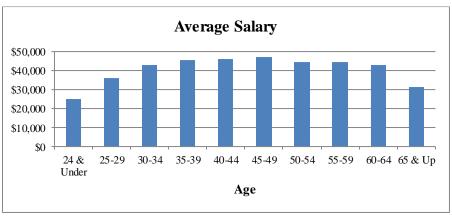
ACTIVE MEMBERS AS OF JULY 1, 2015

All Members

Count of Members	Reported FY 2015 Earnings for Current Members
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<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
24 & Under	216	894	1,110	\$ 5,918,631	\$ 21,607,951	\$ 27,526,582
25-29	1,055	3,260	4,315	39,849,251	114,552,689	154,401,940
30-34	1,162	3,377	4,539	55,947,200	137,521,161	193,468,361
35-39	1,111	3,370	4,481	62,461,464	140,482,727	202,944,191
40-44	1,076	3,628	4,704	64,468,341	150,833,059	215,301,400
45-49	1,132	3,806	4,938	70,894,915	160,918,522	231,813,437
50-54	1,245	4,092	5,337	73,463,396	164,039,254	237,502,650
55-59	1,257	4,153	5,410	70,189,042	170,531,503	240,720,545
60-64	1,045	2,900	3,945	51,503,023	117,246,055	168,749,078
65 & Up	<u>805</u>	<u>1,410</u>	2,215	26,296,525	42,794,557	69,091,082
Total	10,104	30,890	40,994	\$ 520,991,788	\$ 1,220,527,478	\$ 1,741,519,266







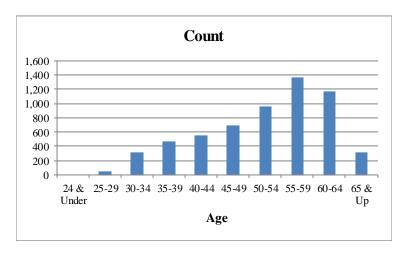
AGE AND SERVICE DISTRIBUTION AS OF JULY 1, 2015

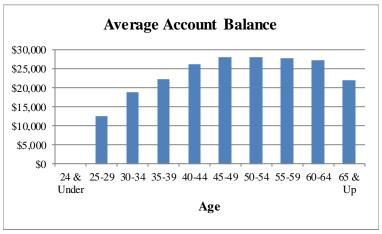
Age			0-4		5-9		10-14		15-19		20-24		25-29		30-34		Over 34		Total
24 &	Number		1,106		4		0		0		0		0		0		0		1,110
Under	Total Salary	\$	27,429,609	\$	96,973	\$	0	\$	0	\$	0	\$	0	\$	0	\$	0	\$	27,526,582
	Average Sal.	\$	24,801	\$	24,243	\$	0	\$	0	\$	0	\$	0	\$	0	\$	0	\$	24,799
25-29	Number		3,543		769		3		0		0		0		0		0		4,315
	Total Salary	\$	121,303,570	\$	33,028,086	\$	70,284	\$	0	\$	0	\$	0	\$	0	\$	0	\$	154,401,940
	Average Sal.	\$	34,238	\$	42,949	\$	23,428	\$	0	\$	0	\$	0	\$	0	\$	0	\$	35,783
30-34	Number		1,645		2,344		549		1		0		0		0		0		4,539
	Total Salary	\$	51,692,505	\$	111,852,319	\$	29,883,063	\$	40,474	\$	0	\$	0	\$	0	\$	0	\$	193,468,361
	Average Sal.	\$	31,424	\$	47,719	\$	54,432	\$	40,474	\$	0	\$	0	\$	0	\$	0	\$	42,624
35-39	Number		1,371		1,141		1,553		415		1		0		0		0		4,481
	Total Salary	\$	36,627,859	\$	51,902,930	\$	88,214,895	\$	26,142,621	\$	55,886	\$	0	\$	0	\$	0	\$	202,944,191
	Average Sal.	\$	26,716	\$	45,489	\$	56,803	\$	62,994	\$	55,886	\$	0	\$	0	\$	0	\$	45,290
40-44	Number		1,315		947		776		1,405		260		1		0		0		4,704
	Total Salary	\$	32,335,934	\$	36,766,569	\$	40,604,027	\$	87,733,630	\$	17,803,390	\$	57,850	\$	0	\$	0	\$	215,301,400
	Average Sal.	\$	24,590	\$	38,824	\$	52,325	\$	62,444	\$	68,475	\$	57,850	\$	0	\$	0	\$	45,770
45-49	Number		1,041		1,060		727		748		1,073		289		0		0		4,938
	Total Salary	\$	25,994,800	\$	35,938,642	\$	34,637,484	\$	43,055,667	\$	72,855,530	\$	19,331,314	\$	0	\$	0	\$	231,813,437
	Average Sal.	\$	24,971	\$	33,904	\$	47,644	\$	57,561	\$	67,899	\$	66,890	\$	0	\$	0	\$	46,945
50-54	Number		918		966		890		713		629		897		323		1		5,337
	Total Salary	\$	20,343,526	\$	29,711,881	\$	33,824,756	\$	33,494,212	\$	37,713,805	\$	60,522,347	\$	21,850,177	\$	41,946	\$	237,502,650
	Average Sal.	\$	22,161	\$	30,758	\$	38,005	\$	46,976	\$	59,958	\$	67,472	\$	67,648	\$	41,946	\$	44,501
55-59	Number	١.	787		791		771		843	١.	622		602		730		264		5,410
	Total Salary	\$	18,883,475	\$	23,344,339	\$	27,526,889	\$	35,495,297	\$	32,084,443	\$	35,945,426	\$	49,079,795	\$	18,360,881	\$	240,720,545
	Average Sal.	\$	23,994	\$	29,512	\$	35,703	\$	42,106	\$	51,583	\$	59,710	\$	67,233	\$	69,549	\$	44,495
60-64	Number	١.	621		553		469		554	١.	561		437		280		470		3,945
	Total Salary	\$	14,586,033	\$	18,093,788	\$	16,148,697	\$	23,033,633	\$	26,713,243	\$	22,135,575	\$	16,249,171	\$	31,788,938	\$	168,749,078
	Average Sal.	\$	23,488	\$	32,719	\$	34,432	\$	41,577	\$	47,617	\$	50,653	\$	58,033	\$	67,636	\$	42,775
65 &	Number		609	_	464	_	286	_	215		203	_	164	_	102	_	172	_	2,215
Up	Total Salary	\$	10,294,710	\$	11,453,119	\$	8,337,434	\$	7,336,693	\$	8,164,196	\$	7,661,059	\$	4,740,478	\$	11,103,393	\$	69,091,082
	Average Sal.	\$	16,904	\$	24,683	\$	29,152	\$	34,124	\$	40,218	\$	46,714	\$	46,475	\$	64,555	\$	31,192
Total	Number	_	12,956	_	9,039	_	6,024	_	4,894		3,349	_	2,390		1,435	_	907	_	40,994
	Total Salary	\$	359,492,021	\$	352,188,646	\$	279,247,529	\$	256,332,227	\$	195,390,493	\$	145,653,571	\$	91,919,621	\$	61,295,158	\$	1,741,519,266
	Average Sal.	\$	27,747	\$	38,963	\$	46,356	\$	52,377	\$	58,343	\$	60,943	\$	64,055	\$	67,580	\$	42,482



INACTIVE VESTED MEMBERS AS OF JULY 1, 2015

-	Cou	nt of Member	rs	Account Balances							
<u>Age</u>	<u>Male</u>	<u>Male Female</u>		<u>Male</u>	<u>Female</u>	<u>Total</u>					
24 & Under	0	0	0	\$ 0	\$ 0	\$ 0					
25-29	7	38	45	100,906	461,403	562,309					
30-34	53	266	319	1,023,690	4,975,764	5,999,454					
35-39	94	375	469	2,533,303	7,869,093	10,402,396					
40-44	110	449	559	3,935,180	10,715,609	14,650,789					
45-49	137	549	686	5,171,015	13,988,506	19,159,521					
50-54	162	796	958	7,013,199	19,726,873	26,740,072					
55-59	202	1,157	1,359	8,353,653	29,154,454	37,508,107					
60-64	166	1,008	1,174	6,789,946	24,987,035	31,776,981					
65 & Up	<u>64</u>	<u>258</u>	<u>322</u>	2,139,730	4,934,066	7,073,796					
Total	995	4,896	5,891	\$ 37,060,622	\$ 116,812,803	\$ 153,873,425					

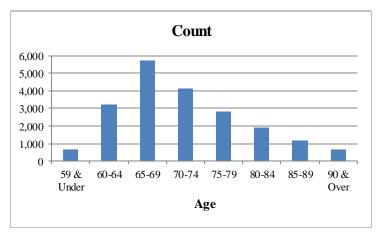


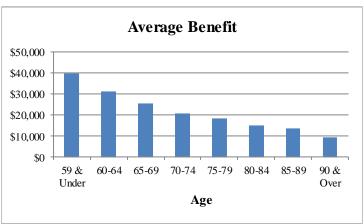




RETIRED MEMBERS AS OF JULY 1, 2015

	Cou	int of Membe	ers	Annual Benefits						
<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>	 <u>Male</u>	<u>Female</u>	<u>Total</u>				
59 & Under	226	452	678	\$ 9,437,433	\$ 17,380,505	\$ 26,817,938				
60-64	851	2,345	3,196	32,427,546	67,695,443	100,122,989				
65-69	1,755	3,956	5,711	55,981,231	90,276,531	146,257,762				
70-74	1,426	2,719	4,145	39,590,496	46,821,733	86,412,229				
75-79	900	1,919	2,819	22,621,279	28,937,761	51,559,040				
80-84	573	1,320	1,893	12,053,715	16,698,108	28,751,823				
85-89	323	833	1,156	5,586,432	9,902,921	15,489,353				
90 & Over	<u>102</u>	<u>547</u>	<u>649</u>	<u>1,418,048</u>	4,711,672	6,129,720				
Total	6,156	14,091	20,247	\$ 179,116,180	\$ 282,424,674	\$ 461,540,854				



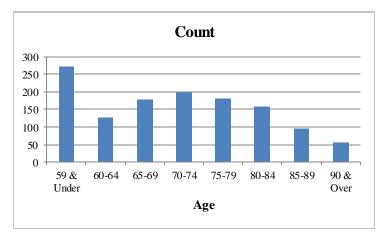


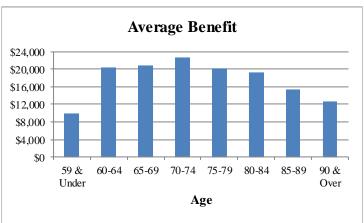


BENEFICIARIES RECEIVING BENEFITS AS OF JULY 1, 2015

	Count of Members									
Age	Male	<u>Female</u>	<u>Total</u>							
59 & Under	127	144	271							
60-64	48	78	126							
65-69	72	106	178							
70-74	67	131	198							
75-79	52	130	182							
80-84	36	122	158							
85-89	21	76	97							
90 & Over	<u>9</u>	<u>46</u>	<u>55</u>							
Total	432	833	1.265							

Annual Benefits									
<u>Male</u>	<u>Female</u>		<u>Total</u>						
\$ 1,155,622	\$ 1,566,458	\$	2,722,080						
989,064	1,575,777		2,564,841						
1,308,911	2,409,278		3,718,189						
1,315,805	3,188,630		4,504,435						
726,969	2,941,332		3,668,301						
555,875	2,479,776		3,035,651						
218,525	1,281,804		1,500,329						
143,831	<u>558,225</u>		<u>702,056</u>						
\$ 6,414,602	\$ 16,001,280	\$ 2	2,415,882						

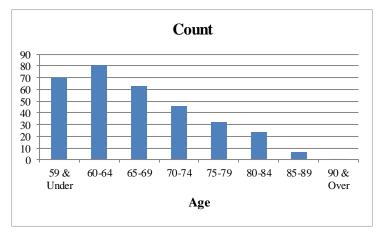


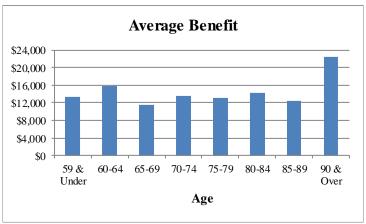




DISABLED MEMBERS AS OF JULY 1, 2015

	Cou		Annual Benefits							
Age	Male	<u>Female</u>	Total	_	<u>l</u>	Male_	Fε	emale_		Total
59 & Under	22	48	70		\$	310,445	\$	617,062	\$	927,507
60-64	18	63	81			273,373	1,	,001,140	1	1,274,513
65-69	25	38	63			264,009		456,408		720,417
70-74	18	28	46			253,008		366,304		619,312
75-79	13	19	32			173,332		244,335		417,667
80-84	8	16	24			124,868		216,230		341,098
85-89	3	4	7			37,643		50,078		87,721
90 & Over	<u>1</u>	<u>0</u>	<u>1</u>			22,436		<u>0</u>		22,436
Total	108	216	324		\$ 1	,459,114	\$ 2,	,951,557	\$ 4	1,410,671







Member

Any person employed by a public school 20 or more hours per week shall be a member of the system. Employees at the date of establishment could have elected not to participate, and those covered under another system do not participate. The Tier Two benefit structure covers members joining the System on or after July 1, 2013.

Participation Date

Date of becoming a member.

Definitions

Final average earnings

The average of the three highest twelve month periods of service during the period ending on the earlier of the participant's termination date or retirement date. For employees who become a member on or after July 1, 1996, earnings will be capped at the maximum earning defined in Code 401(a) (17). For Tier Two members, it is the average of the five highest twelve month periods of service.

Fiscal year

Twelve month period ending June 30.

Contributions

Members contribute 9.78% of pay. Such contributions are credited with interest based on the 1-year Treasury yield curve on July 1 of each year, as determined by State Statutes. The School Districts contribute at a rate equal to 101% of the members' rate. The State contributes 2% of pay, effective July 1, 2014 (previously 1%).

Monthly pension benefit

The greater of (1) or (2).

- (1) Amount: A monthly benefit equal to the sum of:
 - (a) A savings annuity which is the actuarial equivalent of the member's accumulated contributions, and
 - (b) A service annuity equal to \$3.50 per year of service.
- (2) Amount: Members employed by a class I, II, III, IV, VI School District may receive a formula annuity. The formula annuity is a monthly amount equal to the product of 2.00% of final average earnings times total years of service for those members who are employed on or after July 1, 2001.

To receive this benefit, retirement must occur after meeting the Rule of 85 requirements (minimum age 55) or attaining age 65.



An automatic annual cost-of-living adjustment (COLA) equal to the change in the CPI-W index, with a maximum increase of 2.5% in any one year is provided for current and future retirees. Also provided is a minimum floor benefit equal to 75% of the purchasing power of the original benefit. For Tier Two members, whom are hired on or after July 1, 2013, an automatic cost-of-living adjustment (COLA) equal to the change in the CPI-W index, not to exceed 1.0% in any one year. No purchasing power COLA applies.

Normal Retirement Date

(NRD)

First of month coinciding with or next following the attainment of

age 65 and one-half year of service.

Service Length of service includes all service as a school employee for

which contributions have been made. This service only includes years for which the member was employed on at least a half-time basis, and includes declared emergency service in the armed forces, provided certain conditions are met. Special provisions allow credit for service prior to 1945 and for up to ten years of service in another State upon payment of the actuarial cost of the additional benefit

granted.

Pensionable pay Gross earnings subject to contributions.

Eligibility for Benefits

Deferred vested Termination for reasons other than death or disability retirement

after completing five years of service.

Disability retirement Retirement by reason of disability.

Early retirement Retirement before NRD and on or after both attaining age 60 and

completing five years of service, or attaining 35 years of service regardless of age, or attaining age 55 and age plus service equals at

least 85 (Rule of 85).

Normal retirement Retire on NRD.

Postponed retirement Retire after NRD.

Pre-retirement spouse benefit Death prior to retirement.

Monthly Benefits Payable

Normal retirement Monthly pension benefit determined as of NRD.

Early retirement Monthly pension benefit determined as of early retirement date,

reduced by 3% for each year that commencement of payment



precedes age 65 (members must be age 60 with five years of service). Unreduced benefits are available to members who have attained age 55 and whose age plus service is greater than or equal to 85. Benefits payable upon retirement prior to age 60 (based on the 35 year service rule) are actuarially reduced from age 65. The service annuity is a life annuity actuarially reduced before age 65 using 8% interest and the 1994 Group annuity Mortality Table, 25% male, 75% female.

Postponed retirement

Monthly pension benefit determined as of actual retirement date.

Termination with deferred vested benefit

Monthly pension benefit determined as of termination date, reduced by 3% for each year that commencement of payment precedes age 65 (Early Commencement requires attainment of age 60).

Disability retirement

Monthly pension benefit determined as of disability retirement date.

Death with pre-retirement benefits

Survivor portion of 100% Joint and Survivor Annuity paid to spouse assuming retirement by member at death if the member is age 65 or has 20 years of service at death. If the member has met the 5-year vesting service requirement, has less than 20 years of service and is under age 65, the spouse may choose between the following two options:

- (1) a lump sum equal to the member's contributions with interest plus 101% of the member's contributions with interest, and
- (2) an annuity which equals the survivor portion of the 100% Joint and Survivor value of the member's accrued benefit, payable immediately, reduced for commencement before age 65 and the 100% joint and survivor form of payment.

Forms of payment

Pre-retirement death benefits are payable only as described above.

Monthly pension benefits are paid under the form of payment elected by the retiree at retirement. Payment forms include: life annuity, 5-year certain and life annuity, 100% joint and survivor annuity (spouse only), 10-year certain and life annuity, 15-year certain and life annuity, or a modified cash refund annuity. The normal form of payment for the formula annuity is a 5-year certain and life annuity.

Funding Arrangement

Pursuant to LB 407 enacted in 2002, the School Retirement Fund is created. Balances existing on June 30, 2002 in the School Employers Deposit Account, the School Employees Savings Account, the Service Annuity Account, the Annuity Reserve Account, and the School Employees Retirement System Reserve Fund (RSRF) shall be combined and transferred into the School Retirement Fund.



There are four funds established in the State Treasury, which receive monies and pay the expenses and benefits of the retirement system, as follows:

- 1. <u>School Retirement Fund</u> receives required deposits of the employers, the State, and employees. Upon retirement, the fund pays all savings annuities, service annuities, and formula annuities.
- 2. <u>Contingent Account</u> receives all interest, dividends, and miscellaneous income, pays all regular interest allocated to the other accounts or funds, and meets any deficiencies occurring in the other accounts or funds.
- 3. Expense Fund pays all expenses connected with the operation and administration of the system, and receives annual contributions to cover anticipated expenses.
- 4. Omaha Service Annuity Fund pays service annuity benefits to Omaha members.

State Appropriation

LB 700, passed in 1996, established a separate fund to provide for cost-of-living benefit adjustments to members ceasing employment on or after April 10, 1996. The COLA increases are 0.3% per year, beginning six years after retirement. This benefit is funded by State contributions. Beginning with the 1996/1997 fiscal year, the funding shall be 81.7873% of \$6,895,000 or \$5,639,235 annually, for each year through the 2010/2011 fiscal year. This appropriation is no longer applicable as of the July 1, 2012 valuation.

Benefits Reflected in Valuation

All benefits were valued, including future cost-of-living increases as provided for by LB 674 and LB 711.

Plan Provisions Effective after July 1, 2015

No future changes in plan provisions were recognized in determining the funded status or in determining the sufficiency of statutory contribution levels.

Changes in Plan Provisions Since the Prior Year

There have been no changes to plan provisions since the prior year.



A. ACTUARIAL METHODS

1. Calculation of Normal Cost and Actuarial Accrued Liability: The method used to determine the normal cost and actuarial accrued liability was the Entry Age Actuarial Cost Method described below.

Entry Age Actuarial Cost Method

Projected pension and preretirement spouse's death benefits were determined for all active members under age 80. Cost factors designed to produce annual costs as a constant percentage of each member's expected compensation in each year from the assumed entry age to the assumed retirement age were applied to the projected benefits to determine the normal cost (the portion of the total cost of the plan allocated to the current year under the method). The normal cost is determined by summing intermediate results for active members under age 80 and determining an average normal cost rate which is then related to the total payroll of active members. The actuarial assumptions shown on the following page were used in determining the projected benefits and cost factors. The actuarial accrued liability for active members (the portion of the total cost of the plan allocated to prior years under the method) was determined as the excess of the actuarial present value of projected benefits over the actuarial present value of future normal costs.

The actuarial accrued liability for retired members and their beneficiaries currently receiving benefits, active members age 80 and over, terminated vested members and disabled members not yet receiving benefits was determined as the actuarial present value of the benefits expected to be paid. No future normal costs are payable for these members.

The actuarial accrued liability under this method at any point in time is the theoretical amount of the fund that would have been accumulated had annual contributions equal to the normal cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date). The unfunded actuarial accrued liability is the excess of the actuarial accrued liability over the actuarial value of plan assets measured on the valuation date. The initial unfunded actuarial accrued liability established July 1, 2004, is amortized with a level dollar payment amount over 25 years. At subsequent valuation dates, amortization bases equal to changes in the unfunded actuarial accrued liability are established and amortized with a level dollar payment over a 25-year period. Beginning July 1, 2006, the unfunded liability was reinitialized as of July 1, 2006 and amortized over a 30-year period. At subsequent valuation dates, amortization bases equal to changes in the unfunded actuarial accrued liability are established and amortized over a level dollar payment over a 30-year period. If the unfunded actuarial accrued liability is \$0 or less on the valuation date, all previous amortization bases are considered fully amortized. Effective with the July 1, 2013 valuation, amortization payments were recalculated to amortize the remaining bases as a level percentage of expected payroll, per LB 553.

Under this Entry Age method, experience gains or losses, i.e., decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the unfunded actuarial accrued liability.



- **2.** Calculation of the Actuarial Value of Assets: The actuarial value of assets is based on a five-year smoothing method and is determined by spreading the effect of each year's investment return in excess of or below the expected return. The Market Value of assets on the valuation date is reduced by the sum of the following:
 - I. 80% of the return to be spread during the first year preceding the valuation date,
 - II. 60% of the return to be spread during the second year preceding the valuation date,
 - III. 40% of the return to be spread during the third year preceding the valuation date, and
 - IV. 20% of the return to be spread during the fourth year preceding the valuation date.

Changes in Methods and Procedures since the Prior Year

There have been no changes to the methods and procedures since last year.



ACTUARIAL ASSUMPTIONS

Economic Assumptions

1. Investment Return 8.00% per annum, compounded annually, net of expenses.

2. Inflation 3.25% per annum, compounded annually

3. Salary Increases Rates vary by service. Sample rates are as follows:

Rates by Service		
Years	Rate	
<1	9.00%	
1	8.50	
5	6.96	
10	5.68	
15	5.21	
20	4.95	
25	4.74	
30	4.57	
35	4.32	
40+	4.00	

4. Payroll Growth 4.00% per annum

5. Investment on Employee Contributions 4.25% per annum compounded annually.

6. Increase in Compensation 3.25% per annum on the 401(a)(17) compensation limit and 415 benefit limit

Demographic Assumptions

1. Mortality The mortality assumption includes an appropriate level of conservatism that reflects expected future mortality

conservatism that reflects expected future mortality

improvement.

a. Healthy lives - Active members 1994 Group Annuity Mortality Table, projected to 2015

using scale AA, set-back 1 year (55% of male rates for

males, 40% of female rates for females)

b. Healthy lives – Retired members

and beneficiaries

1994 Group Annuity Mortality Table, projected to 2015

using scale AA, set-back 1 year (sex distinct)

c. Disabled lives 1983 Railroad Retirement Board Disabled Annuitants

Mortality set-back 1 year (unisex)



d. Healthy mortality rates and life expectancies are shown below at sample ages:

	Pre-retirement Mortality			
	Mortality Rate		Life Expecta	ncy (Years)
Sample Age	Males	Females	Males	Females
20	0.02%	0.01%	68.3	74.7
30	0.04	0.01	58.5	64.8
40	0.05	0.02	48.7	54.9
50	0.09	0.04	39.0	45.0
60	0.28	0.14	29.5	35.3
70	0.89	0.46	20.8	26.1

	Post-retirement Mortality			
	Mortality Rate		Life Expecta	ncy (Years)
Sample Age	Males	Females	Males	Females
50	0.16%	0.09%	33.4	36.4
60	0.51	0.35	24.1	26.9
70	1.62	1.14	16.0	18.4
80	4.43	3.05	9.2	11.0
90	12.55	9.82	4.5	5.4

e. Disabled mortality rates and life expectancies are shown below at sample ages:

Sample Age	Mortality Rate	Life Expectancy
30	1.02%	30.7
40	1.29	23.8
50	3.00	17.7
60	4.14	13.5
70	6.38	9.5
80	9.97	6.2



2. Retirement

Rates vary by age and eligibility for benefits. Rates are as follows:

Retirement Rates When Eligible for Unreduced Benefits		
Age	Rate	
55	25%	
56	20	
57	20	
58	20	
59	20	
60	25	
61	25	
62	30	
63	25	
64	25	
65	30	
66	25	
67	20	
68	20	
69	20	
70	20	
71	20	
72	20	
73	20	
74	25	
75	25	
76	25	
77	25	
78	35	
79	35	
80	100	

Retirement Rates When Eligible for Reduced Benefits		
Age	Rate	
60	10%	
61	12	
62	15	
63	12	
64	18	



3. Termination

Rates vary by service. Sample rates are as follows:

Years	Rates by Service Male	Female
<1	27.5%	31.7%
1	17.0	20.3
5	6.7	8.4
10	4.3	4.7
15	2.5	3.1
20+	2.0	2.0

4. Disability

Rates vary by age. Sample rates are as follows:

Age	Rate
25	.00%
30	.00
35	.02
40	.02
45	.03
50	.04
55	.07
60	.09

Other Assumptions

1. Form of Payment

2. Marital Status

a. Percent married

b. Spouse's age

3. Administrative Expense

4. Commencement age for deferred vested benefit

5. Cost of Living Adjustment

Service annuity – Life annuity

Formula annuity – Five year certain and life annuity.

85% married

Females assumed to be two years younger than males.

Investment return is assumed to be net of expenses.

Age 62

Service annuity – none

Formula annuity – For members hired before January 1, 2013, it is 2.5% per annum, compounded annually and 3.25% per annum, compounded annually, after reaching 75% purchasing power floor benefit. For members hired on or after January 1, 2013, it is 1.0% per annum, compounded annually, and there is no floor for the purchasing power of the benefit.



6. State Contribution

State contributions for the current plan year are assumed to be contributed in a lump sum on the July 1 following the plan year end. These amounts from the prior plan year are treated as a contribution receivable on the plan's financial statements.

Changes in Assumptions since the Prior Year

There were no changes.

TECHNICAL VALUATION PROCEDURES

Data Procedures

Salaries for first year members are annualized by using the client's Calculated Salary field. For continuing active members, the Accumulated Salary field is used.

Other Valuation Procedures

Salary increases are assumed to apply to annual amounts.

Decrements are assumed to occur mid-year, except that immediate retirement is assumed for those who are at or above the age at which retirement rates are 100%. Standard adjustments are made for multiple decrements.

No actuarial liability is included for participants who terminated without being vested prior to the valuation date, except those due a refund of contributions.

Future monthly benefit amounts are not calculated or available for deferred vested members. The benefit liability for deferred vested members was calculated by loading the accumulated member contribution balances for deferred vested members by 100% to estimate the value of deferred benefit payments.



APPENDIX D – GLOSSARY OF TERMS

Actuarial Accrued Liability

The difference between the actuarial present value of system benefits and the actuarial value of future normal costs. Also referred to as "accrued liability" or "actuarial liability".

Actuarial Assumptions

Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Accrued Service

Service credited under the system which was rendered before the date of the actuarial valuation.

Actuarial Equivalent

A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate assumptions.

Actuarial Cost Method

A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of retirement system benefit between future normal cost and actuarial accrued liability. Sometimes referred to as the "actuarial funding method".

Experience Gain (Loss)

The difference between actual experience and actuarial assumptions anticipated experience during the period between two actuarial valuation dates.

Actuarial Present Value

The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest and by probabilities of payment.

Amortization

Paying off an interest-discounted amount with periodic payments of interest and principal, as opposed to paying off with lump sum payment.

Normal Cost

The actuarial present value of retirement system benefits allocated to the current year by the actuarial cost method.



APPENDIX D – GLOSSARY OF TERMS

Unfunded Actuarial Accrued Liability

The difference between actuarial accrued liability and the valuation assets. Sometimes referred to as "unfunded actuarial liability" or "unfunded accrued liability".

Most retirement systems have unfunded actuarial accrued liability. They arise each time new benefits are added and each time an actuarial loss is realized.

The existence of unfunded actuarial accrued liability is not in itself bad, any more than a mortgage on a house is bad. Unfunded actuarial accrued liability does not represent a debt that is payable today. What is important is the ability to amortize the unfunded actuarial accrued liability and the trend in its amount (after due allowance for devaluation of the dollar).