

2013 ACTUARIAL REPORT ON THE
TEACHERS' RETIREMENT SYSTEM OF LOUISIANA



ACTUARIAL VALUATION AS OF
JUNE 30, 2013
ISSUED MARCH 2014

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2013 ACTUARIAL REPORT
TEACHERS' RETIREMENT SYSTEM OF LOUISIANA

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LOUISIANA LEGISLATIVE AUDITOR
DARYL G. PURPERA, CPA, CFE

March 17, 2014

The Honorable John A. Alario, Jr.,
President of the Senate
The Honorable Charles E. "Chuck" Kleckley,
Speaker of the House of Representatives

Dear Senator Alario and Representative Kleckley:

This report provides the results of an actuarial valuation of the Teachers' Retirement System of Louisiana as of June 30, 2013, as required under R.S. 11:127(C).

The report contains our findings, conclusions, and recommendations. I hope this report will benefit you in your legislative decision-making process.

Sincerely,

Daryl G. Purpera, CPA, CFE
Legislative Auditor

DGP:PTR:ch

TRSL 2013 VALUATION

SUMMARY

SUMMARY

2013 Actuarial Report on the Teachers' Retirement System of Louisiana

This report has been prepared by the Actuarial Services Section of the Office of the Louisiana Legislative Auditor as required under Louisiana Revised Statutes (R.S.) 11:127C. Under actuarial standards of practice, Daryl Purpera, the Legislative Auditor, is considered to be our principal. We recognize in the preparation of this report that we also have a responsibility to the Louisiana Public Retirement System Actuarial Committee, the Louisiana legislature, and the public in general.

This valuation has been prepared as of June 30, 2013, based on plan provisions for the Teachers' Retirement System of Louisiana (TRSL) as documented in R.S. 11:701 through 11:952. The purpose of the valuation, in general, is to:

1. Measure and compare plan assets and liabilities as of June 30, 2013.
2. Calculate actual employer contribution requirements for FYE 2014.
3. Determine the sources and amounts of gains and losses between June 30, 2012, and June 30, 2013.
4. Calculate projected employer contribution rates for FYE 2015.
5. Show measures of funding for actuarial obligations of the retirement system.
6. Provide information necessary for TRSL financial statements and the financial statements for agencies participating in the retirement system.
7. Assess the impact that currently prevailing law relative to the Experience Account will have on future employer contribution requirements.

A brief summary of information developed in this valuation and in prior year valuations is presented on the following page.

		----- Prior Years -----	
		June 30, 2012	June 30, 2011
	June 30, 2013		
A. Membership Data			
(1) Retirees	71,031	67,657	65,512
(2) Actives	82,910	84,513	86,742
(3) DROP	2,451	2,637	3,032
(4) Terminated Vested	5,991	6,439	5,852
B. Annual Benefits	\$ 1,644,237,684	\$ 1,548,631,764	\$ 1,471,714,284
C. Total Payroll	3,726,352,750	3,808,760,594	3,902,646,534
D. Valuation Assets	14,669,155,949	13,584,408,961	13,286,294,879
E. Experience Account	219,736,907	0	0
F. Investment Returns			
(1) Market (Total Assets)	12.57%	-0.39%	24.94%
(2) Market (excl OPR & self-directed)	12.78%	-0.32%	25.55%
(3) Net Actuarial Value	13.41%	5.05%	6.44%
(4) Rate for DROP Accounts	12.91%	4.55%	5.94%
G. Normal Costs			
(1) Total in Dollars	\$ 485,140,427	\$ 521,143,768	\$ 555,850,391
(2) Total Normal Cost Rate	13.02%	13.68%	14.24%
(3) Employer Normal Cost Rate	5.04%	5.22%	5.81%
H. Accrued Liability	\$ 26,017,708,304	\$ 24,540,079,870	\$ 24,096,753,776
I. Unfunded Accrued Liability	\$ 11,348,552,355	\$ 10,955,670,910	\$ 10,810,458,897
J. Funded Percentage	56.38%	55.40%	55.10%
K. Funding Requirements for the Fiscal Year Following the Valuation Date			
(1) Employees			
a) Contributions	\$ 302,615,201	\$ 312,565,974	\$ 320,347,489
b) Rate	7.98%	7.98%	7.98%
(2) Employers			
a) Contributions	\$ 1,155,693,968	\$ 1,088,298,250	\$ 1,064,568,518
b) Rate	27.3 %	25.0%	24.0%
L. Funding Requirements for the Subsequent Fiscal Year			
(1) Employees			
a) Contributions	\$ 311,972,058	\$ 320,748,756	N/A
b) Rate	7.98%	7.98%	7.98%
(2) Employers			
a) Contributions	\$ 1,312,733,624	\$ 1,211,086,287	\$ 1,116,280,330
b) Rate	30.1%	27.1%	24.5%

The above information reflects the cost of benefits that were in effect on June 30, 2013, including Acts of the 2013 Regular Session of the legislature.

June 30, 2013 Assets and Liabilities

The actuary for the office of the Louisiana Legislative Auditor (LLA) is required by R.S. 11:127(C) to prepare an actuarial valuation for review by PRSAC. More specifically, R.S. 11:127(C) states:

The actuaries for the public retirement systems, plans, and funds and for the legislative auditor shall submit annual actuarial valuations to the committee. The committee shall review and analyze all the assumptions and valuations submitted. The committee shall, with the consent of the majority of members present and voting, approve a single valuation for each public retirement system, plan, or fund. Once consent of the members is obtained, the actuarial valuations in the form of the official valuations adopted by the committee shall be submitted to the House and Senate committees on retirement and the Joint Legislative Committee on the Budget.

We have interpreted this provision of law to mean that the methods and assumptions used to prepare June 30, 2013 assets and liabilities became prescribed by PRSAC when it approved the June 30, 2012 valuation report for TRSL. The June 30, 2013 valuation report that will be adopted by PRSAC will prescribe the methods and assumptions to be used in the preparation of the assets and liabilities as of June 30, 2014.

An exception has been made in the calculation of the actuarial value of assets as of June 30, 2013. The actuary for the retirement system, Foster & Foster, and the actuary for the LLA have both elected to use a new method as of June 30, 2013.

The actuarial valuation report prepared by the LLA provides PRSAC with some assurance that June 30, 2013 asset and liability values were prepared correctly. The LLA actuary confirms that his calculation of assets and liabilities as of June 30, 2013 matched assets and liabilities prepared by Foster & Foster.

Sources and Amounts of Gains and Losses for FYE 2013

Gains and losses for FYE 2013 are shown below:

A.	Unfunded Accrued Liability on June 30, 2012		\$ 10,955,670,910
B.	Increases in the UAL Due to:		
1.	Interest on the UAL	\$ 903,842,850	
2.	Allocation to the Experience Account	219,736,907	
2.	Employer Contribution Shortfall	11,400,600	
3.	Assumption Change (Discount Rate)	580,606,082	
4.	Assumption Change (Experience Study Changes)	<u>291,075,809</u>	
5.	Total Increases = B1 + B2 + B3 + B4		\$ 2,006,662,248
C.	Decreases in the UAL Due to:		
1.	Employer Amortization Payment	\$ 919,796,517	
2.	Change in Asset Valuation Method	25,686,597	
3.	Investment Gain	588,100,619	
4.	Experience Gain	<u>80,197,070</u>	
5.	Total Decreases = C1 + C2 + C3 + C4		\$ 1,613,780,803
D.	Unfunded Accrued Liability on June 30, 2013		
	= A + B5 – C5		\$ 11,348,552,355

Projected Employer Contribution Rates for 2015

We determined the employer contribution rate for FYE 2015 to be 30.1% of payroll. Foster & Foster determined it to be 27.7%. The primary reasons for the difference are summarized below.

1. The LLA used a discount rate of 7.75%, net of investment expenses. Foster & Foster used a rate of 8.00% net of investment expenses and net of future transfers to the Experience Account.
2. The LLA explicitly recognized future transfers to the Experience Account. We established a liability that approximates the cost of providing a 6% increase in benefits for eligible retirees. Foster & Foster implicitly recognized future transfers to the Experience Account by reducing the discount rate that would otherwise be used by 50 basis points. In other words, if Foster & Foster has explicitly recognized future transfers, its discount rate would have been 8.50%.

Accounting Information

Foster & Foster's calculations of accounting information were used by the System's auditors and ultimately in the State's Comprehensive Annual Financial Report for June 30, 2013.

Beginning with FYE 2014, TRSL and the LLA will prepare financial accounting information based on new standards set forth in GASB Statement No 67.

Experience Account Analysis

A detailed analysis of the Experience Account is presented in Section III. The 2010 amendment to the Louisiana Constitution (Article (10)(29)(F)) and discussions with General Counsel and with legislative staff have led us to reconsider the treatment of the Experience Account process. We have concluded the following.

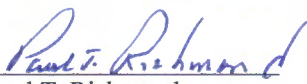
1. Laws pertaining to transfers of gains to the Experience Account are still in force.
2. Laws pertaining to grants of permanent benefit increases are still on the books. However, they cannot be implemented because of the constitutional amendment.
3. Therefore, TRSL still has an obligation under the law to fund the Experience Account up to the maximum level (the present value of a 6% benefit increase to eligible retirees). However, there is no law that allows dollars in the Experience Account to be used at this time. Disbursements from the Experience Account occur only after a bill is introduced by the legislature, passed each house with a two-thirds vote, and signed by the governor.

We have prepared our employer contribution requirements for FYE 2015 in accordance with our understanding of the law as summarized above.

Actuarial Certification

This report is considered to be a Statement of Actuarial Opinion. Therefore, I make the following certification:

I, Paul T. Richmond, am the Manager of Actuarial Services for the Office of the Louisiana Legislative Auditor. I am a member of the American Academy of Actuaries, an Associate in the Society of Actuaries, an Enrolled Actuary, and I meet the Qualification Standards of the American Academy of Actuaries to necessary render the actuarial opinion contained herein.


Paul T. Richmond

3/17/14
Date

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SECTION I:
DEVELOPMENT OF EMPLOYER CONTRIBUTIONS

1. Employer Contribution Requirements for FYE 2015 - Sub Plans

The calculations of employer contribution rates for FYE 2015 for employers participating in each sub plan of TRSL are shown below. These contribution requirements are based on revised assumptions and methods.

A. Regular Teachers Sub Plan

	Dollar Contribution	Projected Payroll	Contribution Rate
Normal Cost	\$ 193,596,469	\$ 3,307,462,053	5.8534%
Shared Amortization Costs	811,281,962		24.5288%
Total	\$ 1,004,878,431		30.3822%

B. Higher Education Sub Plan for Non ORP Members

	Dollar Contribution	Projected Payroll	Contribution Rate
Normal Cost	\$ 23,743,469	\$ 576,227,680	4.1206%
Shared Amortization Costs	141,341,948		24.5288%
Total	\$ 165,085,417		28.6494%

C. Higher Education Sub Plan for ORP Members

	Dollar Contribution	Projected Payroll	Contribution Rate
Normal Cost	\$ 0	\$ 0	0.0000%
Shared Amortization Costs	134,707,460	\$ 549,179,973	24.5288%
Total	\$ 134,707,460	N/A	24.5288%

D. Lunch Plan A Sub Plan

	Dollar Contribution	Projected Payroll	Contribution Rate
Normal Cost	\$ 93,505	\$ 856,556	10.9166%
Shared Amortization Costs	210,103		24.5288%
Total	\$ 303,608		35.4454%

E. Lunch Plan B Sub Plan

	Dollar Contribution	Projected Payroll	Contribution Rate
Normal Cost	\$ 1,889,011	\$ 23,929,781	7.8940%
Shared Amortization Costs	5,869,697		24.5288%
Total	\$ 7,758,708		32.4229%

F. Total For All Sub Plans

	Dollar Contribution	Projected Payroll	Contribution Rate
Normal Cost	\$ 219,332,454	\$ 3,908,476,070	5.6115%
Shared Amortization Costs	1,093,411,170	\$ 4,457,656,043	24.5288%
Net Employer Cost	\$ 1,312,733,624	N/A	30.1403%

2. Employer Contribution Requirements for FYE 2014 - Combined Plan

Employer contribution requirements for FYE 2014, as measured for all sub plans combined using assumptions and methods applicable to the 2013-14 fiscal year, are calculated below. These values have been determined as if the entire system had been measured as a single financial entity. Although R.S. 11:102D requires separate calculations of normal cost for each sub plan within TRSL, values in the aggregate are useful for comparisons with contribution requirements for prior years.

	<u>Dollar Amount</u>	<u>Percent of Salary</u>
A. Employer Portion of Normal Cost	\$ 190,977,958	5.037334%
B. Shared Amortization Payments	911,127,344	21.071599%
C. Amortization Payments for Sub Plans	0	0.000000%
D. Contribution Variance Payments	<u>53,588,666</u>	<u>1.239343%</u>
E. Total Contribution = A + B + C + D	\$ 1,155,693,968	27.348275%
F. Projected Payroll for FYE 2014		
1. Projected Payroll for Normal Costs	3,791,250,659	
2. Projected Payroll for Amortization Costs	4,323,959,289	
G. Total Contribution Rate for FYE 2014		
1. Employer Normal Cost Rate = A / F1	5.037334%	
2. Employer Amortization Cost Rate = (B + C + D) / F2	22.310942%	
3. Total Employer Contribution Rate = G1 + G2	27.35%	
H. Minimum Contribution Rate	15.50%	
I. Minimum Required Contribution for FYE 2014 = A + F2 x (15.5% - G1)	\$ 643,379,376	15.5%
J. Required Employer Contribution for FYE 2014 = The Greater of G and I	\$ 1,155,693,968	27.3%

3. Employer Contribution Requirements for FYE 2015 - Combined Plan

Employer contribution requirements for FYE 2015, as measured for all sub plans combined using assumptions and methods applicable to the 2014-15 fiscal year, are calculated below. These values have been determined as if the entire system had been measured as a single financial entity. Although R.S. 11:102D requires separate calculations of normal cost for each sub plan within TRSL, values in the aggregate are useful for comparisons with contribution requirements for prior years.

	<u>Dollar Amount</u>	<u>Percent of Salary</u>
A. Employer Portion of Normal Cost	\$ 219,322,454	5.611457%
B. Shared Amortization Payments	1,026,008,424	23.016770%
C. Amortization Payments for Sub Plans	0	0.000000%
D. Contribution Variance Payments	<u>67,402,746</u>	<u>1.512067%</u>
E. Total Contribution = A + B + C + D	\$ 1,312,733,624	30.140294%
F. Projected Payroll for FYE 2015		
1. Projected Payroll for Normal Costs	3,908,476,069	
2. Projected Payroll for Amortization Costs	4,457,656,041	
G. Total Contribution Rate for FYE 2015 = E ÷ F		
1. Employer Normal Cost Rate = A / F1	5.611457%	
2. Employer Amortization Cost Rate = (B + C + D) / F2	24.528837%	
3. Total Employer Contribution Rate = G1 + G2	30.1%	
H. Minimum Contribution Rate	15.5%	
I. Minimum Required Contribution for FYE 2015 = A + F2 x (15.5% - G1)	\$ 660,119,688	15.5%
J. Required Employer Contribution for FYE 2015 = The Greater of E and I	\$ 1,312,733,624	30.1%

4. Normal Cost Values - Combined Plan

Employer and Employee Normal Costs

Funding rules under R.S. 11:21 require a measurement of normal costs to be calculated in accordance with the Projected Unit Credit Funding method. Employee and employer normal cost values for the 2013-14 fiscal year are based on the valuation of normal costs as of June 30, 2013. The total normal cost percentage is calculated as the total normal cost for 2013-14 divided by the payroll as of June 30, 2013. The employee normal cost is calculated as employee contributions collected in FYE 2013 divided by the June 30, 2013 payroll. The employer normal cost percentage is equal to the difference between the total normal cost percentage and the employee normal cost percentage. These percentages are then multiplied by the project payroll for the 2013-14 fiscal year to determine dollar contribution amounts for FYE 2014.

Projected normal costs for 2014-15 are calculated in a similar manner. The calculated normal percentages, however, are multiplied by projected payroll amounts for FYE 2015.

Normal costs and projected payroll values for FYE 2014 are based on an 8.00% discount rate net of investment expenses, and other assumptions and methods applicable to FYE 2014 as described in Section IV of this report. Projected normal costs and employer payrolls for FYE 2015 are based on a 7.75% discount rate.

	<u>2014-15</u>	<u>2013-14</u>	<u>2012-13</u>
A. Total Normal Cost			
1. Retirement Benefits	\$ 394,317,656	\$ 376,149,702	\$ 400,168,156
2. Disability Benefits	13,987,053	12,346,039	13,636,985
3. Survivor Benefits	9,362,178	9,953,472	11,373,584
4. Voluntary Terminations	88,867,227	86,691,214	77,565,043
5. Expenses	<u>0</u>	<u>0</u>	<u>0</u>
6. Total Normal Cost	\$ 506,534,114	\$ 485,140,427	\$ 502,743,768
B. Payrolls			
1. On Valuation Date	\$ 3,726,325,750	\$ 3,726,325,750	\$ 3,808,760,594
2. Projected for Year after Valuation Date	N/A	3,791,250,659	3,915,342,521
3. Projected for 2nd Year after Valuation Date	3,908,476,069	N/A	4,017,843,743
C. Normal Cost Rates			
1. Total Normal Cost Rate = A6 ÷ B1	13.593393%	13.019270%	13.199668%
2. Employee Normal Cost Rate	7.981936%	7.981936%	7.983107%
3. Employer Normal Cost Rate = C1 – C2	5.611457%	5.037334%	5.216561%
D. Employer Normal Costs			
1. Actual Cost for FYE after Valuation Date = B2 x C3	N/A	\$ 190,977,975	\$ 204,246,231
2. Projected Cost for 2nd FYE after Valuation Date ^a = B3 x C3	\$ 219,322,454	N/A	\$ 230,715,099

Note: The projected employer normal cost rate for FYE 2014 based on the June 30, 2012 valuation was 5.74226161%.

	<u>2014-15</u>	<u>2013-14</u>	<u>2012-13</u>
E. Employee Normal Costs			
1. Actual Cost for FYE after Valuation Date = B2 x C2	N/A	\$ 302,615,201	\$ 312,565,974
2. Projected Cost for 2nd FYE after Valuation Date = B3 x C2	\$ 311,972,058	N/A	\$ 320,748,756

Increases in Normal Costs Attributable to Change in Asset Valuation Method

The method used to determine the actuarial value of assets was changed effective June 30, 2013. This change had no effect on normal costs or projected payrolls.

Increases in Normal Costs Attributable to Assumption Changes

The discount rate and the salary increase assumption used to calculate normal costs were changed effective June 30, 2014. Normal costs before and after the changes were calculated as of June 30, 2013. It is assumed that the increase in normal cost as of June 30, 2014, would be the same as the increase calculated as of June 30, 2013. Values associated with normal costs changes resulting from the change in assumptions are shown below.

	<u>Old Assumptions</u>	<u>New Assumptions</u>	<u>Increase/ (Decrease)</u>
A. Total Normal Cost			
1. Retirement Benefits	\$ 376,149,702	\$ 394,317,656	\$ 18,167,954
2. Disability Benefits	12,346,039	13,987,053	1,641,014
3. Survivor benefits	9,953,472	9,362,178	(591,294)
4. Voluntary Terminations	<u>86,691,214</u>	<u>88,867,227</u>	<u>2,176,013</u>
5. Total Normal Cost	\$ 485,140,427	\$ 506,534,114	\$ 21,393,687
B. Payrolls			
1. Payroll on June 30, 2013	\$ 3,726,325,750	\$ 3,726,325,750	\$ 0
2. Projected Payroll for FYE 2014	3,791,250,659	3,791,250,659	0
3. Projected Payroll for FYE 2015	3,908,476,069	3,908,476,069	0
4. ORP - Salary Adjustment Factor	1.140510	1.140510	0
C. Normal Cost Rates			
1. Total Normal Cost Rate = A5 ÷ B1	13.019270%	13.593393%	0.574123%
2. Employee Normal Cost Rate	7.981936%	7.981936%	0.000000%
3. Employer Normal Cost Rate = C1 – C2	5.037334%	5.611457%	0.574123%
D. Employer Normal Costs			
1. Actual Cost for FYE 2014 = B2 x C3	\$ 190,977,958	N/A	N/A
2. Projected Cost for FYE 2015 = B3 x C3	196,882,994	219,322,454	22,439,460

	<u>Old</u> <u>Assumptions</u>	<u>New</u> <u>Assumptions</u>	<u>Increase/</u> <u>(Decrease)</u>
E. Employee Normal Costs			
1. Actual Cost for FYE 2014 = B2 x C2	\$ 294,162,469	\$ 293,789,714	\$ 0
2. Projected Cost for FYE 2015 = B3 x C2	311,972,058	311,972,058	0

Increases in Normal Costs Attributable to Benefit Changes

A liability associated with gain sharing will be included in the accrued liability effective June 30, 2014. The entire present value of future transfers to the Experience Account will be included in the liability value. Therefore there is no normal cost associated with the recognition of gain sharing.

5. Unfunded Actuarial Accrued Liability

Unfunded Accrued Liability as of June 30, 2013

Funding rules under R.S. 11:21 require a measurement of the unfunded actuarial accrued liability for the plan to be calculated in accordance with the Projected Unit Credit Funding method. This measurement is to be made for all sub plans combined. Accrued liability values as of June 30, 2013, are based on an 8.00% discount rate net of investment expenses, and other assumptions and methods applicable to FYE 2014 as described in Section IV of this report. The unfunded accrued liability is based on the new actuarial value of assets that became effective on June 30, 2013.

The components of the unfunded accrued liability on June 30, 2013, are shown below.

	<u>June 30, 2013</u>	<u>June 30, 2012</u>
A. Accrued Liability		
1. Accrued Liability for Active Members		
a. Retirement Benefits	\$ 6,089,231,315	\$ 6,196,601,462
b. Disability Benefits	142,775,895	166,406,007
c. Survivor Benefits	117,858,857	136,903,174
d. Voluntary Terminations	<u>593,646,964</u>	<u>529,779,407</u>
e. Total	\$ 6,943,513,031	\$ 7,029,690,050
2. Accrued Liability for Retired and Inactive Members		
a. Regular Retirees	\$ 14,316,669,060	\$ 12,579,520,901
b. Disability Retirees	381,873,693	362,653,262
c. Survivors	880,416,660	789,779,038
d. Members with a Deferred Benefit	257,044,615	417,025,887
e. Contributions to Be Refunded	118,843,083	119,287,734
f. Deferred Benefits for DROP Members	1,970,606,145	2,083,175,860
g. Account Balances for DROP Members	<u>1,148,742,017</u>	<u>1,158,947,138</u>
h. Total	\$ 19,074,195,273	\$ 17,510,389,821
3. Total Accrued Liability	\$ 26,017,708,304	\$ 24,540,079,871
B. Valuation Assets (after Change in Asset Method for June 30, 2013)	\$ 14,669,155,949	\$ 13,584,408,961
C. Unfunded Accrued Liability (after Change in Asset Method) on June 30, 2013	\$ 11,348,552,355	\$ 10,955,670,910

Reconciliation of UALs between June 30, 2012 and June 30, 2013

Accrued liabilities, valuation assets, and unfunded accrued liabilities are summarized below for June 30, 2013, and June 30, 2012.

	<u>June 30, 2013</u>	<u>June 30, 2012</u>
A. Actuarial Accrued Liability	\$ 26,017,708,304	\$ 24,540,079,871
B. Valuation Assets	<u>14,669,155,949</u>	<u>13,584,408,961</u>
C. Unfunded Accrued Liability = A – B	\$ 11,348, 552,355	\$ 10,955,670,910

The unfunded accrued liability on June 30, 2013, is reconciled below with the unfunded accrued liability on June 30, 2012.

A. Unfunded Accrued Liability on June 30, 2012		\$ 10,955,670,910
B. Increases in the UAL Due to:		
1. Interest on the UAL	\$ 903,842,850	
2. Allocation to the Experience Account	219,736,907	
2. Employer Contribution Shortfall	11,400,600	
3. Assumption Change (Discount Rate)	580,606,082	
4. Assumption Change (Experience Study Changes)	<u>291,075,809</u>	
5. Total Increases = B1 + B2 + B3 + B4		\$ 2,006,662,248
C. Decreases in the UAL Due to:		
1. Employer Amortization Payment	\$ 919,796,517	
2. Change in Asset Valuation Method	25,686,597	
3. Investment Gain	588,100,619	
4. Experience Gain	<u>80,197,070</u>	
5. Total Decreases = C1 + C2 + C3 + C4		\$ 1,613,780,803
D. Unfunded Accrued Liability on June 30, 2013		
= A + B5 – C5		\$ 11,348,552,355

Increases in Accrued Liabilities on June 30, 2014 Attributable to Assumption Changes

The discount rate and the salary increase assumption used to calculate accrued liabilities were changed effective June 30, 2014. Liabilities, before and after the changes, were calculated as of June 30, 2013. It is assumed that the increase in accrued liability as of June 30, 2014, would be the same as the increase calculated as of June 30, 2013, plus interest for one year. Values associated with accrued liabilities resulting from the change in assumptions are shown below.

	<u>Old Assumptions</u>	<u>New Assumptions</u>	<u>Increase/ (Decrease)</u>
A. Accrued Liability			
1. Accrued Liability for Active Members			
a. Retirement Benefits	\$ 6,089,231,315	\$ 6,342,935,982	\$ 253,704,667
b. Disability Benefits	142,775,895	159,488,786	16,712,891
c. Survivor Benefits	117,858,857	104,372,968	(13,485,889)
d. Voluntary Terminations	<u>593,646,964</u>	<u>602,331,738</u>	<u>8,684,774</u>
e. Total	\$ 6,943,513,031	\$ 7,209,129,474	\$ 265,616,443
2. Accrued Liability for Retired and Inactive Members			
a. Regular Retirees	\$ 14,316,669,060	\$ 14,590,264,978	\$ 273,595,918
b. Disability Retirees	381,873,693	388,823,615	6,949,922
c. Survivors	880,416,660	891,859,036	11,442,376
d. Members with a Deferred Benefit	257,044,615	267,639,968	10,595,353
e. Contributions to Be Refunded	118,843,083	118,843,083	0
f. Deferred Benefits for DROP Members	1,970,606,145	2,014,385,231	43,779,086
g. Account Balances for DROP Members	<u>1,148,742,017</u>	<u>1,148,742,017</u>	<u>0</u>
h. Total	\$ 19,074,195,273	\$ 19,420,557,928	\$ 346,362,655
3. Total Accrued Liability: A1e + A2h	\$ 26,017,708,304	\$ 26,629,687,402	\$ 611,979,098
B. Interest Adjustment for One Year			\$ 48,958,328
C. Increase in Accrued Liability Due to Change in Assumptions = A3 + B			\$ 660,937,426
D. Explicit Recognition of Gain Sharing			\$ 535,623,508

Increases in Accrued Liabilities Attributable to Benefit Changes

Liabilities associated with past gain sharing have already been recognized either permanent benefit increases already given or through the transfer of \$219,736,907 to the Experience Account on June 30, 2013. The liability associated with future gain sharing transfers to the Experience Account has been measured to be \$535,623,508. This amount will be included as a liability of the retirement system for the first time effective June 30, 2014.

Projected Unfunded Accrued Liability on June 30, 2014

The calculation of the projected unfunded accrued liability as of June 30, 2014 is shown below.

A.	Unfunded Accrued Liability on June 30, 2013		\$	11,348,552,355
B.	Increases in the UAL Due to:			
1.	Interest on the UAL	\$	907,884,188	
2.	Expected Employer Contribution Shortfall		13,261,027	
3.	Recognition of Gain Sharing		535,623,508	
4.	Change in Assumptions		<u>660,937,426</u>	
5.	Total Increases = B1 + B2 + B3 + B4		\$	2,117,706,149
C.	Decreases in the UAL Due to:			
1.	Employer Amortization Payment	\$	1,002,562,287	
2.	Investment Gain		0	
3.	Experience Gain		<u>0</u>	
4.	Total Decreases = C1 + C2 + C3		\$	1,002,562,287
D.	Unfunded Accrued Liability on June 30, 2014 = A + B5 – C4		\$	12,463,696,217

6. Assets

A. Actuarial Value of Assets (New Method)

The method for determining the actuarial value of assets has been changed effective June 30, 2013. The new method is based on the market value of assets adjusted to phase in realized and unrealized investment gains and losses over the four year period immediately prior to the valuation date. This method is shown below.

	<u>June 30, 2013</u>	<u>June 30, 2012</u>	<u>June 30, 2011</u>	<u>June 30, 2010</u>
A. Investment Gain/(Losses) Based on Market				
1. BOY Market Value	\$ 14,188,983,721	\$ 14,577,210,581	\$ 12,021,431,384	\$ 11,250,281,297
2. Contributions	1,423,250,702	1,418,546,185	1,286,002,270	1,073,682,331
3. Benefit Payments	1,859,319,285	1,731,667,282	1,658,026,678	1,572,736,318
4. Administrative Expenses	17,661,969	18,864,917	18,189,491	19,100,619
5. EOY Market Value	15,490,236,860	14,188,983,721	14,577,210,581	12,021,431,384
6. Actual Investment Income = A5 – A1 – A2 + A3 + A4	1,754,983,691	(56,240,846)	2,945,993,096	1,289,304,693
7. Expected Investment Income Based on the Discount Rate	1,151,874,772	1,188,925,450	975,671,766	906,774,330
8. Gain/(Loss) = A6 – A7	\$ 603,108,919	\$ (1,245,166,296)	\$ 1,970,321,330	\$ 382,530,363
B. Market Value Adjustment				
	<u>Gain/(Loss)</u>	<u>Factor</u>	<u>Market Value</u>	
	<u>(a)</u>	<u>(b)</u>	<u>Adjustment</u>	
1. Adjustment for 2013	\$ 603,108,919	80%	\$ 482,487,135	
2. Adjustment for 2012	(1,245,166,296)	60%	(747,099,778)	
3. Adjustment for 2011	1,970,321,330	40%	788,128,532	
4. Adjustment for 2010	382,530,363	20%	76,506,073	
5. Total Market Value Adjustment			\$ 600,021,962	
C. Preliminary Actuarial Value				
1. Market Value on June 30, 2013 = A5		\$ 15,490,236,860		
2. Market Value Adjustment = B5		<u>600,021,962</u>		
3. Preliminary Actuarial Value = C1 – C2		\$ 14,890,214,898		
D. Corridor Values				
1. 85% x Market Value		13,166,701,331		
2. 115% x Market Value		17,813,772,389		
E. Actuarial Value of Assets =				
Preliminary Value if Preliminary Value is inside the Corridor.				
Otherwise the Actuarial Value = the average between the Preliminary Value and the Corridor		\$ 14,890,214,898		

B. Market and Book Values

The market value of assets and the book value of assets shown below have been extracted from the June 30, 2013, actuarial valuation report for TRSL prepared by Foster and Foster.

<u>Date</u>	<u>Asset Values</u>		<u>Unrealized Appreciation (c) = (a) – (b)</u>
	<u>Market Value (a)</u>	<u>Book Value (b)</u>	
June 30, 2013	\$ 15,490,236,860	\$ 14,874,504,768	\$ 615,732,092
June 30, 2012	14,188,983,721	14,323,159,913	(134,176,192)
June 30, 2011	14,577,210,581	13,973,613,138	603,597,443
June 30, 2010	12,021,431,384	13,258,187,814	<u>(1,236,756,430)</u>
Total			\$ (151,603,087)

C. Actuarial Value of Assets (Old Method)

The old method for determining the actuarial value of assets is based on an algebraic formula that is equivalent to the formula used by Foster and Foster.

A. Book Value on June 30, 2013	\$ 14,874,504,768
B. Average Unrealized Appreciation	
1. Total Unrealized Appreciation	(151,603,087)
2. Averaging Factor	25%
3. Average Unrealized Appreciation = B1 x B2	(37,900,772)
C. Preliminary Actuarial Value = A + B3	\$ 14,836,603,996
D. Asset Corridor	
1. 80% x Market Value of Assets	12,392,189,488
2. 120% x Market Value of Assets	18,588,284,232
E. Actuarial Value of Assets = C, but not less than D1 or greater than D2	\$ 14,836,603,996

Caveat: This method treats realized gains and losses differently from unrealized gains and losses. Realized gains and losses are recognized immediately but recognition of unrealized gains and losses is delayed. Under this method, an increase in asset turnover may cause a significant change in the actuarial value of assets. This caveat is provided in accordance with Actuarial Standards of Practice No. 44 Section 3.4.2.

D. Effect of the Change in the Asset Valuation Method

As a result of the change in the asset valuation method, the unfunded accrued liability decreased \$53,610,902.

A. June 30, 2013, Actuarial Value under New Method	\$ 14,890,214,898
B. June 30, 2013, Actuarial Value under Old Method	14,836,603,996
C. Decrease in the Unfunded Accrued Liability Resulting from the Change in Asset Valuation Method = A - B	\$ 53,610,902

E. Investment Gain

Investment gain/(losses) are measured as the difference between actuarial and expected investment earnings during FYE 2013.

A. Components of the Gain/(Loss) Calculation	
1. Net Actuarial Value of Assets on June 30, 2012 (Old Method)	\$ 13,184,404,384
2. Contributions for FYE 2013	1,294,812,613
3. Benefits Paid for FYE 2013	1,732,428,127
4. Administrative Expenses Paid for FYE 2013	17,661,969
5. Net Actuarial Value of Assets on June 30, 2013 (New Method)	\$ 14,466,748,611
6. Expected Rate of Return on Assets	8.25%
B. Actual Investment Earnings = A5 – A1 – A2 + A3 + A4	\$ 1,737,621,709
C. Expected Investment Earnings	1,069,305,308
D. Gross Investment Gain/(Loss) = B - C	\$ 668,316,401
E. Excess Investment Earnings Allocated for Other Purposes	
1. Excess Earnings Paid to DROP Accounts	\$ 27,811,218
2. Excess Earnings Paid to LSU Ag Ext Service Account	99,249
3. Miscellaneous Items	932,121
4. Allocation of Excess Investment Earnings Due to Asset Method Change to the Experience Account	<u>51,373,194</u>
5. Total Allocations for Other Purposes	80,215,782
F. Net Investment Gain/(Loss) = D – E5	\$ 588,100,619

F. Allocation of Investment Gains to the Experience Account

According to R.S. 11:883.1, 50% of the total investment gain, not associated with DROP accounts, in excess of \$100 million will be transferred from the regular asset pool to the Experience Account unless the Experience Account already exceeds the statutory limit which is two times the actuarial present value of a full 3% COLA adjustment. The amount of assets to be transferred under R.S. 11:883.1 from the regular pool of assets to the Experience Account is calculated below.

A.	Excess Investment Earnings = Gross Investment Gain	\$	668,316,401
B.	Excess Investment Earnings Paid to DROP Accounts		
1.	DROP Accounts Eligible for System Investment Earnings		
a.	Total of all DROP and IBO accounts	\$	1,079,167,534
b.	DROP accounts for Actives not entitled to system earnings		135,043,440
c.	Self-directed DROP accounts not entitled to system earnings		<u>423,466,287</u>
d.	DROP accounts entitled to system earnings = B1a – B1b – B1c		520,657,807
2.	Actual Return on Investments for DROP Accounts ^a		69,574,484
3.	Expected Return on Investments for DROP Accounts ^b		<u>41,763,264</u>
4.	Excess Investment Earnings Paid to DROP Accounts = B2 – B3		27,811,218
C.	Excess Earnings Paid to LSU Ag Ext Service Account		
1.	LSU Ag Ext Service Account at Beginning of the Year		638,773
2.	Contributions to the LSU Ag Ext Service at the Beginning of the Year		2,059,554
3.	Benefit Payments from the LSU Ag Ext Service Account at Mid-Year		1,632,154
4.	Actual Return on Investments for LSU Ag Ext Service Account (Old Method)		255,869
5.	Expected Return for LSU Ag Ext Service Account		156,620
6.	Excess Investment Earnings Paid to LSU Ag Ext Service Account (Old Method) = B2d – B2e	\$	99,249
D.	Miscellaneous Items		
1.	Miscellaneous Revenue		912,843
2.	Processing Fees		15,666
3.	Receivable Interest		<u>3,612</u>
4.	Total Miscellaneous Items	\$	932,121
E.	Net Excess Investment Earnings = A – B4 – C6 – D	\$	639,473,813
F.	Allocation of Excess Investment Earnings to the Experience Account		
1.	Net Excess Investment Earnings = E	\$	639,473,813
2.	Administrative Expense		0
3.	Threshold Gain		<u>200,000,000</u>
4.	Gain Available for Gain Sharing = F1 – F2 – F3	\$	439,473,813
5.	Gain Sharing Percentage		50%
6.	Allocation of Gains to the Experience Account = F4 x F5	\$	219,736,907

Notes: a. $B2 = B1d \times 12.910922\% \times 1.035$

b. $B3 = B1d \times 7.750000\% \times 1.035$

G. Employer Shortfall/(Surplus)**Employer Contribution Shortfall for FYE 2013**

Total contributions received from participating employers were lower in FYE 2014 than were expected. As a result, asset values are less than what they would have been otherwise. The unfunded accrued liability has increased because of this deficit in contributions. The calculation of the shortfall as of June 30, 2013 is shown below.

A. Actual Employer Contributions		
1. Total Contributions	\$	1,423,250,702
2. Employee Contributions		327,767,936
3. LSU Ag Ext Service Account Contribution		2,059,554
4. Transfers between Retirement Systems		<u>1,963,081</u>
5. Actual Employer Contributions for Pension Benefits = A1 - A2 - A3 - A4	\$	1,091,460,131
B. Expected Employer Contributions		
1. Salaries on Which Contributions Were Received	\$	4,186,008,141
2. Prior Year Employer Normal Cost Rate		5.21656161%
3. Employer Normal Costs = B3 x B4		218,365,694
4. Contributions to the Employer Credit Account		0
5. Amortization Payments		858,114,104
6. Payment toward Prior Contribution Variances		<u>25,937,890</u>
7. Expected Employer Contributions = B3 + B4 + B5 + B6		1,102,417,688
C. Mid-Year Employer Shortfall for FYE 2013 = B7 - A5	\$	10,957,557
D. Interest at 8.00% for One-Half Year		<u>443,043</u>
E. Employer Shortfall on June 30, 2013 = C + D	\$	11,400,600

Projected Employer Contribution Shortfall for FYE 2014

A shortfall in employer contributions is expected to occur because the actual employer contribution rate, 27.3% of pay for FYE 2014, is greater than the projected 27.1% rate of pay set by PRSAC a year ago. The expected shortfall of employer contributions is calculated below.

A. Projected Employer Contribution Shortfall Relative to Regular Non-ORP Members

1. Projected Mid-Year Payroll for FYE 2014 for All Members Except ORP	\$	3,791,250,659
2. Actual Employer Contribution Rate for FYE 2014		27.3%
3. Actual Employer Contributions Required in Mid-Year for FYE 2014 = A1 x A2		1,035,011,430
4. Projected Employer Contribution Rate for FYE 2014		27.1%
5. Projected Employer Contributions Expected in Mid-Year for FYE 2014 = A1 x A4		1,027,428,929
6. Shortfall of Regular Employer Contributions Expected Mid-Year for FYE 2014 = A3 – A5	\$	7,582,501

B. Projected Employer Contribution Shortfall Relative to ORP Members

1. Projected Employer Contribution Rate for FYE 2014		
a. Projected Amortization Payments for FYE 2014	\$	980,356,315
b. Projected Payroll for Regular Members for FYE 2014		4,017,843,743
c. ORP Payroll Factor		1.14345
d. Total Projected Payroll for FYE 2014 Including ORP = B1b x B1c		4,594,203,428
e. Projected Employer Contribution Rate for FYE 2014 = B1a / B1d		21.339%
2. Actual Employer Contribution Rate for FYE 2014		
a. Actual Amortization Payments for FYE 2014		964,716,010
b. Actual Payroll for Regular Members for FYE 2014		3,791,250,659
c. ORP Payroll Factor		1.14051
d. Total Actual Payroll for FYE 2014 Including ORP = B2b x B2c		4,323,959,289
e. Actual Employer Contribution Rate for FYE 2014 = B2a / B2d		22.31%
3. Contribution Rate Shortfall for FYE 2014 = B2e – B1e		0.97%
4. Actual OPR Payroll for FYE 2014 = B2d – B2b		532,708,630
5. Shortfall of ORP Employer Contributions Expected Mid-Year for FYE 2014 = B3 x B4	\$	5,177,928

C. Total Employer Contribution Shortfall at Mid-Year 2014 = A6 + B5 \$ 12,760,429

D. Interest for One-Half Year 500,598

E. Total Employer Contribution Shortfall at FYE 2014 \$ 13,261,027

H. Asset Allocation (Market Values)

		<u>June 30, 2013</u>	<u>June 30, 2012</u>
A. Short-Term Assets			
1. Cash/Cash Equivalents	\$	199,799,910	\$ 198,662,009
2. Short-Term Investments		1,005,978,360	884,290,767
B. Bonds			
1. Domestic Issues		1,611,411,082	1,477,406,933
2. International Issues		1,162,848,924	972,447,063
C. Equities			
1. Domestic Stock		4,322,095,263	3,794,815,270
2. International Stock		3,148,691,961	2,904,306,050
D. Other Assets			
1. Fixed Assets		4,027,869	4,148,693
2. Real Estate and Alternative Investments		3,927,445,271	3,874,754,802
E. Securities Lending (Assets minus Liabilities)		<u>107,938,220</u>	<u>78,152,134</u>
F. Total Assets			
1. Market Value	\$	15,490,236,860	\$ 14,188,983,721
2. Book Value		14,874,504,768	14,323,159,913

I. Income Statement (Market Value)

	<u>FYE Ending June 30, 2013</u>	<u>FYE Ending June 30, 2012</u>
A. Income		
1. Contribution Income		
a. Member	\$ 327,767,936	\$ 333,908,454
b. Employer	980,403,146	974,089,064
c. ORP	<u>111,013,985</u>	<u>107,420,377</u>
d. Total = A1a + A1b + A1c + A1d	1,419,185,067	1,415,417,895
2. Other Income		
a. IUAL Appropriations	0	0
b. Other Appropriations	43,000	44,944
c. LSU Coop/Ext	2,059,554	1,903,781
d. Miscellaneous	<u>1,963,081</u>	<u>1,179,565</u>
e. Total = A2a + A2b + A2c + A2d	4,065,635	3,128,290
3. Net Investment Income		
a. Investment Income	1,787,459,766	(25,752,161)
b. Investment Expense	<u>32,476,075</u>	<u>30,488,685</u>
c. Net Investment Income = A3a – A3b	1,754,983,691	(56,240,846)
4. Total Income = A1d + A2e + A3c	\$ 3,178,234,393	\$ 1,362,305,339
B. Expense		
1. Operating Expense		
a. General Administration	\$ 16,310,674	\$ 17,374,529
b. Post-Employment Benefits	974,146	1,050,097
c. Depreciation	0	0
d. Other Expenses	<u>377,149</u>	<u>440,291</u>
e. Total = B1a + B1b + B1c	17,661,969	18,864,917
2. Benefit Payments		
a. Pension Benefits	1,800,166,804	1,682,528,254
b. Return of Employee Contributions	<u>59,152,481</u>	<u>49,139,028</u>
c. Total = B2a + B2b	1,859,319,285	1,731,667,282
3. Total Expense = B1e + B2c	\$ 1,876,981,254	\$ 1,750,532,199
C. Net Income = A4 – B3	\$ 1,301,253,139	\$ (388,226,860)

J. Allocation of Assets to Sub Accounts

		<u>FYE Ending June 30, 2013</u>	<u>FYE Ending June 30, 2012</u>
A.	Employer Credit Account		
1.	Beginning Balance for Current Year	\$ 0	\$ 0
2.	Allocation for Current Year	0	0
3.	Disbursements for Current Year	0	0
4.	Accumulated Interest for Current Year	<u>0</u>	<u>0</u>
5.	Ending Balance for Current Year = A1 + A2 – A3 + A4	\$ 0	\$ 0
B.	Initial UAL Amortization Fund		
1.	Beginning Balance for Current Year	\$ 0	\$ 0
2.	Allocation for Current Year	0	0
3.	Disbursements for Current Year	0	0
4.	Accumulated Interest	<u>0</u>	<u>0</u>
5.	Ending Balance for Current Year = B1 + B2 – B3 + B4	\$ 0	\$ 0
C.	Experience Account Fund		
1.	Beginning Balance for Current Year	\$ 0	\$ 0
2.	Allocation for Current Year	219,736,907	0
3.	Disbursements for Current Year	0	0
4.	Accumulated Interest	<u>0</u>	<u>0</u>
5.	Ending Balance for Current Year = C1 + C2 – C3 + C4	\$ 219,736,907	\$ 0
D.	LSU Ag/Ext Service		
1.	Beginning Balance for Current Year	\$ 638,773	\$ 280,197
2.	Allocation for Current Year	2,059,554	1,903,781
3.	Disbursements for Current Year	1,632,154	1,615,226
4.	Accumulated Interest	<u>255,869</u>	<u>70,021</u>
5.	Ending Balance for Current Year = D1 + D2 – D3 + D4	\$ 1,322,042	\$ 638,773
E.	Valuation Assets		
1.	Actuarial Value of Assets	\$ 14,890,214,898	\$ 13,585,047,734
2.	Employer Credit Account = A5	0	0
3.	Initial UAL Amortization Fund = B5	0	0
4.	Experience Account Fund = C5	219,736,907	0
5.	LSU Ag/Ext Service = D5	<u>1,322,042</u>	<u>638,773</u>
6.	Valuation Assets = E1 – E2 – E3 – E4 – E5	\$ 14,669,155,949	\$ 13,584,408,961

7. Rate of Return on Investments

A. Rates of Return on Investments Based on Market Values

The market value of assets includes funds that have been invested outside the trust fund by members with money in ORP and self-directed accounts. Column (a) shows the rate of return on investments with these account funds included; column (b) shows the rate of return associated with ORP and self-directed account funds; and column (c) shows the rate of return with these funds excluded.

	Market Value (a)	Self-Directed & ORP Values (b)	Net Market Value (c) = (a) – (b)
A. Asset Value on June 30, 2012	\$ 14,188,983,721	\$ 400,643,350	\$ 13,788,340,371
B. Contributions	1,423,250,702	128,438,089	1,294,812,613
C. Benefit Payments	1,859,319,285	126,891,158	1,732,428,127
D. Administrative Expenses	17,661,969	0	17,661,969
E. Asset Value on June 30, 2013	\$ 15,490,236,860	\$ 423,466,287	\$ 15,066,770,573
F. Investment Income = E – A – B + C + D	\$ 1,754,983,691	\$ 21,276,007	\$ 1,733,707,684
G. Unrounded Rates of Return = $F \div [A + \frac{1}{2} \times (B - C - D)]$	12.569609%	5.300228%	12.784793%
H. Rounded Rate of Return on Investments	12.57%	5.30%	12.78%

B. Rates of Return on Investments Based on Actuarial Value

The actuarial value of assets includes funds that have been invested outside the trust fund by members with money in ORP and self-directed accounts. Column (a) shows the rate of return on investments with these account funds included; column (b) shows the rate of return associated with ORP and self-directed account funds; and column (c) shows the rate of return with these funds excluded.

	Actuarial Value (a)	Self-Directed & ORP Values (b)	Net Actuarial Value (c) = (a) – (b)
A. Asset Value on June 30, 2012	\$ 13,585,047,734	\$ 400,643,350	\$ 13,184,404,384
B. Contributions	1,423,250,702	128,438,089	1,294,812,613
C. Benefit Payments	1,859,319,285	126,891,158	1,732,428,127
D. Administrative Expenses	17,661,969	0	17,661,969
E. Asset Value on June 30, 2013	\$ 14,890,214,898	\$ 423,466,287	\$ 14,466,748,611
F. Investment Income = E – A – B + C + D	\$ 1,758,897,716	\$ 21,276,007	\$ 1,737,621,709
G. Unrounded Rates of Return = $F \div [A + (\frac{1}{2} \times (B - C - D))]$	13.167193%	5.300228%	13.410922%
H. Rounded Rate of Return on Investments	13.17%	5.30%	13.41%

C. Summary of Rates of Return on Investments

		<u>Rates Measured on June 30</u>		
		<u>2013</u>	<u>2012</u>	<u>2011</u>
A.	Total Market Value	12.57%	-0.39%	24.94%
B.	Net Market Value	12.78%	-0.32%	25.55%
C.	Actuarial Value	13.17%	4.81%	N/A
D.	Net Actuarial Value	13.41%	5.05%	6.44%
E.	Rate Payable on DROP Accounts other than ORP and Self-Directed Funds	12.91%	4.55%	5.94%
F.	Five Year Geometric Average of Total Actuarial Value	1.96%	0.43%	2.30%

8. Amortization Payments for FYE 2014

<u>Year</u>	<u>Description</u>	<u>Amortization</u>		<u>Initial Liability</u>	<u>Years Remaining</u>	<u>Balance on June 30,2013</u>	<u>Mid-Year Payment</u>	<u>Balance on June 30, 2014</u>
		<u>Method</u>	<u>Period</u>					
Shared Bases								
2010	Orig Amort Base	I	19	\$ 2,677,501,778	16	\$ 2,612,612,675	\$ 219,564,650	\$ 2,593,443,411
2010	Exp Acct Amort Base	I	30	3,999,115,151	27	4,064,252,064	291,113,415	4,086,858,294
2009	Change in Liability	L	30	2,979,708,647	26	2,866,088,783	255,124,962	2,830,242,248
2010	Change in Liability	L	30	1,150,854,854	27	1,119,279,128	98,492,054	1,106,465,513
2011	Change in Liability	L	30	(175,198,199)	28	(172,122,179)	(14,987,193)	(170,316,805)
2012	Change in Liability	L	30	125,767,665	29	124,707,329	10,754,196	123,507,827
2013	Experience Account	L	30	219,736,907	30	219,736,907	18,781,845	217,797,194
2013	Investment Gain	L	30	(588,100,619)	30	(388,100,619)	(33,172,605)	(384,674,687)
2013	Liability Gain	L	30	(80,197,070)	30	(80,197,070)	(6,854,783)	(79,489,136)
2013	Assumption Change	L	30	871,681,891	30	871,681,891	74,506,345	863,987,177
2013	Asset Method	L	30	<u>(25,686,597)</u>	30	<u>(25,686,597)</u>	<u>(2,195,542)</u>	<u>(25,459,851)</u>
Total				\$ 11,155,184,408		\$ 11,212,252,312	\$ 911,127,344	\$ 11,162,361,185
Employers Credit Balance								
2009	Contribution Variance	L	5	\$ (44,404,927)	1	\$ (10,341,689)	\$ (10,747,398)	\$ 0
2008	Contribution Variance	L	5	148,936,071	2	66,729,412	36,007,220	34,647,964
2008	Contribution Variance	L	5	105,925,850	3	68,511,720	25,581,278	47,407,814
2010	Contribution Variance	L	5	0	4	0	0	0
2011	Contribution Variance	L	5	<u>11,400,600</u>	5	<u>11,400,600</u>	<u>2,747,566</u>	<u>9,457,294</u>
Total				\$ 221,857,594		\$ 136,300,043	\$ 53,588,666	\$ 91,513,072
Grand Total						\$ 11,348,552,355	\$ 964,716,010	\$ 11,253,874,257

9. Amortization Payments for FYE 2015

Year	Description	Amortization		Initial Liability	Years Remaining	Balance on June 30,2014	Mid-Year Payment	Balance on June 30, 2015
		Method	Period					
Shared Bases								
2010	Original Amort. Base	I	19	\$ 2,677,501,778	15	\$ 2,593,443,411	\$ 230,291,893	\$ 2,555,386,078
2010	Exp Acct Amort Base	I	30	3,999,115,151	26	4,086,858,294	303,482,611	4,088,566,675
2009	Change in Liability	L	30	2,979,708,647	25	2,830,242,248	249,988,498	2,790,091,218
2010	Change in Liability	L	30	1,150,854,854	26	1,106,465,513	96,461,424	1,092,087,030
2011	Change in Liability	L	30	(175,198,199)	27	(170,316,805)	(14,671,243)	(168,287,211)
2012	Change in Liability	L	30	125,767,665	28	123,507,827	10,522,700	122,156,837
2013	Experience Account	L	30	219,736,907	29	217,797,194	18,369,544	215,608,394
2013	Investment Gain	L	30	(588,100,619)	29	(384,674,687)	(32,444,396)	(380,808,817)
2013	Liability Gain	L	30	(80,197,070)	29	(79,489,136)	(6,704,307)	(78,690,293)
2013	Assumption Change	L	30	871,681,891	29	863,987,177	72,870,774	855,304,354
2013	Asset Method	L	30	(25,686,597)	29	(25,459,851)	(2,147,346)	(25,203,986)
2014	Assumption Change	L	30	660,937,426	30	660,937,426	55,229,942	654,829,907
2014	Initial Gain Sharing	L	30	<u>535,623,508</u>	30	<u>535,623,508</u>	<u>44,758,330</u>	<u>530,673,976</u>
Total				\$ 12,351,745,342		\$ 12,358,922,119	\$ 1,026,008,424	\$ 12,251,714,162
Employers Credit Balance								
2010	Contribution Variance	L	5	\$ 148,936,071	1	\$ 34,647,964	35,965,521	\$ 0
2011	Contribution Variance	L	5	105,925,850	2	47,407,814	25,523,182	24,588,168
2012	Contribution Variance	L	5	0	3	0	0	0
2013	Contribution Variance	L	5	11,400,600	4	9,457,294	2,735,460	7,350,753
2014	Contribution Variance	L	5	<u>13,261,027</u>	5	<u>13,261,027</u>	<u>3,178,583</u>	<u>10,989,302</u>
Total				\$ 279,523,548		\$ 104,774,099	\$ 67,402,746	\$ 42,928,223
Grand Total						\$ 12,463,696,218	\$ 1,093,411,170	\$ 12,294,642,385

SECTION II
MEASURES OF FUNDED PENSION
OBLIGATIONS

1. Comparison of Assets to Accrued Liability

An actuarial funding method is a procedure for allocating the actuarial present value of projected benefits and expenses over working life time of the plan participants. The actuarial funding method provides the retirement system with a tool to annually budget for estimated annual pension costs. In other words, it is the process of assigning the cost of benefits to the years during which those benefits are earned by participants; from the date of hire to the full eligibility date.

One way to measure the success of the budgeting process is to determine whether there are sufficient assets to cover estimated pension obligations. Note that the selection of the discount rate directly impacts the measurement of pension obligations, and consequently, whether the plan is on budget. The retirement system is on budget when there is sufficient money to pay all benefit obligations when due, if plan assets are invested and have earned the expected rate of return. When plan assets earn lower returns than expected, additional funds are required; when plan assets earn higher returns than expected, a surplus fund develops.

TRSL uses the Projected Unit Credit funding (or cost) method. Under this method, the annual accrued benefit is called the Normal Cost and it is the actuarial present value of all benefits earned in that year. The actuarial present value of all benefits earned prior to valuation date is called actuarial accrued liability. The unfunded accrued liability is the actuarial accrued liability minus the actuarial value of assets.

	<u>June 30, 2013</u>	<u>June 30, 2012</u>
Accrued Liability	\$ 26,017,708,304	\$ 24,540,079,871
Actuarial Value of Assets	14,669,155,949	13,584,408,961
Unfunded Accrued Liability	11,348,552,355	10,955,670,910
Ratio of Assets to the Accrued Liability	56.38%	55.36%

It is also useful to determine which portion of the accrued liability is covered by assets. A comparison of assets and accrued liability on this basis is shown below.

	<u>June 30, 2013</u>	<u>June 30, 2012</u>
Actuarial Value of Assets	\$ 14,669,155,949	\$ 13,584,408,961
Accrued Liability for Inactive Members	19,074,195,273	17,510,389,820
Ratio of Assets to Inactive Liabilities	76.91%	77.58%
Asset Shortfall for Inactive Members	\$ 4,405,039,324	\$ 3,925,980,859
Assets Available for Active Members	\$ 0	\$ 0
Accrued Liability for Active Members	6,943,513,031	7,029,690,050
Ratio of Assets to Active Liabilities	0.00%	0
Asset Shortfall for Active Members	\$ 6,943,513,031	\$ 7,029,690,050

The following conclusions can be drawn from the above tables:

1. There are no assets to cover benefit obligations to active participants. Active employee contributions and employer contributions budgeted to pay for Normal Cost are diverted to pay for the immediate obligations to current retirees.

2. Plan assets are only sufficient to cover 77% of the liability for members who are no longer employed by the state. The retirement system may consider that the investment return on current assets and contributions from active employees and retirement system will pay the scheduled benefits for many years and there is no immediate funding shortfall. However, eventually there will be funding shortfall unless additional contributions are made to the system.

2. Funding Measures for GASB

Accounting disclosure requirements for the Teachers' Retirement System of Louisiana are set forth by the Government Accounting Standards Board (GASB). The Retirement System must comply with GASB Statement No. 25 as modified by Statement No. 50. Employers participating in TRSL must disclose in accordance with GASB Statement No. 27 as modified by Statement No. 50.

Information pertaining to these disclosure requirements is set forth below using the format suggested in the GASB statements. These formats are not necessarily the ones that will be used for reporting by TRSL or any of its participating employers. Unless otherwise disclosed, the information contained herein reflects valuation measurements prepared by the LLA.

DRAFT NOTES TO FINANCIAL STATEMENTS

Teachers' Retirement System of Louisiana

Draft Notes to the Financial Statements

For the Fiscal Year Ended June 30, 2013

The Teachers' Retirement System of Louisiana (TRSL) administers one defined benefit pension plan. System assets may be used only for the payment of benefits to members of the plan, in accordance with the terms of the plan, and for the payment of expenses associated with administering the retirement system.

A. Summary of Significant Accounting Policies

Basis of Accounting: TRSL financial statements are prepared using the accrual basis of accounting. Member contributions are recognized in the period in which the contributions are due. Employer contributions are recognized when due and the employer has made a formal commitment to provide the contributions. Benefits and refunds of employee contributions are recognized when due and payable in accordance with the terms of the plan.

Method Used to Value Investments: Investments are reported at fair value. Short-term investments are reported at cost, which approximates fair value. Mortgages are valued on the basis of future principal and interest payments, and are discounted at prevailing interest rates for similar instruments. The fair value of real estate investments is based on independent appraisals. Fair value of other securities is determined by the mean of the most recent bid and asked prices as obtained from dealers that make markets in such securities. Investments for which market quotations are not readily available are valued at their fair values as determined by the custodian under the direction of the TRSL board of trustees, with the assistance of a valuation service.

Please note: The statement given above relative to the method used to value investments is a statement that is typically made. The LLA does not affirm the validity of this statement relative to the valuation of TRSL assets.

B. Plan Description and Contribution Information

Membership in TRSL consisted of the following on June 30, 2013, the date of the latest actuarial valuation.

Retirees and beneficiaries receiving benefits*	73,482
Terminated plan members entitled to, but not yet receiving benefits	5,991
Active plan members	82,910
Total	162,383
Number of participating employers	208

* This includes 2,451 members who are participating in DROP.

Plan Description: TRSL is a multiple employer defined benefit pension plan that covers teachers and certain cafeteria workers in public K-12 schools, and teachers employed in higher education. TRSL provides retirement, disability and death benefits to members, beneficiaries and survivors. Cost of living adjustments (COLAs) are provided at the discretion of the TRSL board of trustees as long as specified thresholds set forth in the law are met and approval is given by the legislature.

Contributions: Plan members are generally required to contribute from 8.0% of their annual covered compensation. Some cafeteria workers contribute 9.1% of pay; others contribute 5.0%. The State of Louisiana is required to contribute at an actuarially determined rate.

C. Funded Status and Funding Progress

The funded status of the retirement system as of June 30, 2013, the most recent actuarial valuation date, is as follows (in thousands).

Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b) – (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b) – (a)]/(c)
6/30/13	\$ 14,669,156	\$ 26,017,708	\$ 11,348,552	56.4%	\$ 3,726,336	304.55%

Dollar values are shown in thousands of dollars.

The schedules of funding progress, presented as required supplementary information (RSI) following the notes to the financial statements, present multiyear trend information about whether the actuarial values of plan assets are increasing or decreasing over time relative to the AALs for benefits.

Additional information as of the latest actuarial valuation follows:

Valuation date	June 30, 2013
Actuarial cost method	Projected Unit Credit Method
Amortization method	Increasing payments until 2029 with generally level payments thereafter. New debits and credits are generally amortized over 30 years.
Remaining amortization period	30 years ^a
Asset valuation method	The market value of assets minus 80% of investment gains/losses for the prior year, 60% of gains/losses for the 2 nd prior year, 40% of gains/losses for the 3 rd prior year and 20% of gains/losses for the 4 th prior year. The actuarial value so determined must fall within a 15% corridor of the market value. If not, the actuarial value is calculated as the average of the preliminary actuarial value and the corridor value.
Actuarial Assumptions	
Investment rate of return ^b	8.00%, net of investment expenses and net of future transfers to the Experience Account.
Projected salary increases ^b	Generally ranges from 3.5% to 6.0%
COLAs	Current law has no provisions automatically providing for the payment of COLA benefits. However, current law provides for automatic transfers of investment gains to the Experience Account if investment gains exceed \$200 million. The Experience Account is then used to provide COLAs when sufficient funds exist. The automatic transfer of assets to the Experience Account has been valued; the subsequent granting of COLA benefits has not been.

- a. The UAAL is being amortized over various periods of time with some payments calculated as level dollar amounts and some payments increased at various rates from year to year. Amortization payments for FYE 2013 were sufficient to pay interest on the UAAL as well as a portion of the principal balance. Larger amortization payments are scheduled to be made in future years with the entire UAAL scheduled for complete amortization in 30 years.
- b. Includes inflation at 2.5% per year

REQUIRED SUPPLEMENTARY INFORMATION**Schedules of Funding Progress (in Thousands)**

Fiscal Year	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b) – (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b) – (a)]/(c)
2004	\$ 11,409,404	\$ 18,067,486	\$ 6,658,082	63.1%	\$ 3,017,087	220.7%
2005	12,082,682	18,699,765	6,617,083	64.6%	3,132,169	211.3%
2006	13,088,358	19,390,781	6,302,423	67.5%	2,892,959	217.9%
2007	14,812,298	20,772,330	5,960,032	71.3%	3,224,566	184.8%
2008	15,507,834	22,090,516	6,582,682	70.2%	3,675,014	179.1%
2009	13,500,766	22,839,411	9,338,645	59.1%	3,912,326	238.7%
2010	12,868,484	23,674,842	10,806,358	54.4%	3,977,819	271.7%
2011	13,286,295	24,096,754	10,810,459	55.1%	3,902,647	277.0%
2012	13,584,409	24,540,080	10,955,671	55.4%	3,808,761	287.6%
2013	14,669,156	26,017,708	11,348,552	56.4%	3,726,326	304.6%

Schedule of Employer Contributions

Fiscal Year	Actuarial Required Contribution (ARC)	Percentage of ARC Contributed	Annual Pension Cost (APC)	Actual Contribution	Percentage of APC Contributed	Net Pension Obligation
2004	\$ 527,899	94.4%	\$ 554,175	\$ 498,237	89.9%	\$ (1,689)
2005	555,170	105.6%	568,930	586,217	103.0%	(18,975)
2006	555,342	103.1%	564,283	572,773	101.0%	(24,466)
2007	578,896	106.5%	584,362	616,430	105.5%	(56,533)
2008	637,098	116.2%	644,187	740,511	115.0%	(152,858)
2009	697,191	106.4%	724,857	741,595	102.3%	(169,596)
2010	904,383	83.5%	949,342	755,447	79.6%	24,300
2011	1,086,320	90.2%	1,101,900	980,394	89.0%	145,805
2012	1,127,265	100.0%	1,121,770	1,127,265	100.5%	140,310
2013	1,149,134	99.0%	1,133,723	1,137,734	100.4%	136,300

Notes:

1. All shaded information was taken from valuation reports prepared by the System actuary.
2. The information in the above table has been prepared using the projected unit credit actuarial cost method.
3. All dollar amounts are in thousands of dollars.

DRAFT NOTES TO THE FINANCIAL STATEMENTS

For Employers Participating in TRSL

Draft Notes to the Financial Statements

For the Fiscal Year Ended June 30, 2013

Plan Description: TRSL is a multiple employer defined benefit pension plan that covers teachers and certain cafeteria workers in public K-12 schools, and teachers employed in higher education. TRSL provides retirement, disability and death benefits to members, beneficiaries and survivors. Cost of living adjustments (COLAs) are provided at the discretion of the TRSL board of trustees as long as specified thresholds set forth in the law are met and approval is given by the legislature. The Louisiana state legislature has the authority to establish and amend benefit provisions. TRSL issues a publically available financial report that includes financial statements and required supplementary information (RSI) for the system. That report may be obtained by writing to TRSL, at P.O. Box 94123, Baton Rouge, LA 70804, or by calling (877) 275-8775.

Funding Policy: Sources of funding are established and may be amended by the Louisiana state legislature. Plan members are generally required to contribute 8.0% of their covered compensation. Some cafeteria workers contribute 9.1% of pay; others contribute 5.0%. The state of Louisiana is required to contribute at an actuarially determined rate.

Annual Pension Cost and Net Pension Obligation: The annual pension cost for all employers participating in TRSL and the net pension obligation in the aggregate to TRSL for the year ending June 30, 2013, was as follows:

Annual required contribution (ARC)	\$	1,149,134
Interest on net pension obligation		11,576
Adjustment to ARC		26,987
Annual pension cost	\$	1,133,723
Employer contributions made	\$	1,137,734
Increase (decrease) in net pension obligation		(4,010)
Net pension obligation beginning of the year		140,310
Net pension obligation end of the year	\$	136,300

All dollar amounts are in thousands of dollars.

Schedule of Employer Contributions

Fiscal Year	Actuarial Required Contribution (ARC)	Percentage of ARC Contributed	Annual Pension Cost (APC)	Actual Contribution	Interest Adjusted Actual Contribution	Percentage of APC Contributed	Net Pension Obligation
2004	\$ 527,899	94.4%	\$ 554,175	\$ 498,237	\$ 350,788	96.1%	\$ (1,689)
2005	555,170	105.6%	568,930	586,217	408,275	100.9%	(18,975)
2006	555,342	103.1%	564,283	572,773	394,108	94.9%	(24,466)
2007	578,896	106.5%	584,362	616,430	421,900	100.4%	(56,533)
2008	637,098	116.2%	644,187	740,511	526,963	119.5%	(152,858)
2009	697,191	106.4%	724,857	741,595	506,264	103.0%	(169,596)
2010	904,383	83.5%	949,342	755,447	510,542	86.4%	24,300
2011	1,086,320	90.2%	1,101,900	980,394	580,107	86.3%	145,805
2012	1,127,265	100.0%	1,121,770	1,127,265	663,053	94.9%	140,310
2013	1,149,134	99.0%	1,133,723	1,137,734	674,491	92.3%	136,300

Notes:

1. All shaded information was taken from valuation reports prepared by the System actuary.
2. The information in the above table has been prepared using the projected unit credit actuarial cost method.
3. All dollar amounts are in thousands of dollars.

Funded Status and Funding Progress: As of June 30, 2013, the most recent actuarial valuation date, the plan was 56.4% funded. The actuarial accrued liability for accrued benefits was \$26,017,708,304 and the actuarial value of assets was \$14,669,155,949 resulting in an unfunded actuarial accrued liability (UAAL) of \$11,348,552,355. The covered payroll (annual payroll of active employees covered by the plan) was \$3,726,250,069 and the ratio of the UAAL to the covered payroll was 304.6%.

The schedule of funding progress, presented as RSI following the notes to the financial statements, presents multiyear trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liability for benefits. Information about the funded status of TRSL has been calculated using the projected unit credit cost method.

Schedules of Funding Progress

Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b) – (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b) – (a)]/(c)
6/30/04	\$ 13,088,358	\$ 18,067,486	\$ 4,979,128	72.4%	\$ 3,017,087	165.0%
6/30/05	12,082,682	18,699,765	6,617,083	64.6%	3,132,169	211.3%
6/30/06	13,088,358	19,390,781	6,302,423	67.5%	2,892,959	217.9%
6/30/07	14,812,298	20,772,330	5,960,032	71.3%	3,224,566	184.8%
6/30/08	15,507,834	22,090,516	6,582,682	70.2%	3,675,014	179.1%
6/30/09	13,500,766	22,839,411	9,338,645	59.1%	3,912,326	238.7%
6/30/10	12,868,484	23,674,842	10,806,358	54.4%	3,977,819	271.7%
6/30/11	13,286,295	24,096,754	10,810,459	55.1%	3,902,647	277.0%
6/30/12	13,584,409	24,540,080	10,955,671	55.4%	3,808,761	287.6%
6/30/13	14,669,156	26,017,708	11,348,552	56.4%	3,726,326	304.6%

Actuarial Methods and Assumptions: In the June 30, 2013, actuarial valuation, the projected unit credit actuarial cost method was used. Actuarial assumptions included (a) 8.00 percent investment rate of return net of investment expenses and net of future transfers to the Experience Account and (b) projected salary increases that generally range from 3.5 percent to 6.0 percent per year. Both (a) and (b) included an inflation component of 2.50% per year. The actuarial value of assets was determined using techniques that spread the effects of short term volatility in the market value of investments over a four year period. The UAAL is being amortized over various periods of time with some payments calculated as level dollar amounts and some payments increased at various rates from year to year. Amortization payments for FYE 2013 were sufficient to pay interest on the UAAL as well as a portion of the principal balance. Larger amortization payments are scheduled to be made in future years with the entire UAAL scheduled for complete amortization in 30 years.

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SECTION III
VALUATION OF EXPERIENCE ACCOUNT PROVISIONS

1. Actuarial Basis for the Valuation of the Experience Account

A. Actuarial Interpretation of Louisiana Law

Prior to November 2010, the law provided for automatic transfers of investment gains from the regular pool of assets to the Experience Account. This transfer is a legislative mandate and must occur. There is no mandate that a COLA be granted. The law, prior to the 2010 Constitutional amendment, merely provided a process by which a COLA could be approved. The approval process required certain numerical tests to be satisfied and also required a recommendation by the board of trustees to the legislature, a favorable vote by the House and Senate on a concurrent resolution approving the recommendation, and certification by the actuary for the Legislative Auditor that there are sufficient funds in the Experience Account to fully pay for the COLA requested.

From an actuarial perspective, the annual valuation must recognize a liability associated with the transfer of investment gains. It is less clear whether future COLA grants should be measured and included as part of the system's liability. It can be argued that future COLA grants are not part of current plan provisions. Future COLA grants become a plan provision only after a successful approval process, which includes the enactment of a legislative instrument, has been completed.

The Legislative Auditor's actuary took the position that since the inception of the gain sharing COLA program, approvals have been granted every time that the necessary conditions had been satisfied. Only once was a COLA not granted and that occurred when the CPI-U was 0.1% for the year. As a result, we have contended that COLA grants were *substantively automatic* and should be recognized in the valuation of liabilities.

We included a section in our valuation reports discussing the effect that automatic COLA grants would have on liabilities, normal costs and employer contribution requirements, but recognized that the System's actuary took the position that the COLA's were not automatic.

In November 2010, Article (10)(29)(F) of the Louisiana Constitution was amended to include the following language.

F) Benefit Provisions; Legislative Enactment. Benefit provisions for members of any public retirement system, plan, or fund that is subject to legislative authority shall be altered only by legislative enactment. No such benefit provisions having an actuarial cost shall be enacted unless approved by two-thirds of the elected members of each house of the legislature. Furthermore, no such benefit provision for any member of a state retirement system having an actuarial cost shall be approved by the legislature unless a funding source providing new or additional funds sufficient to pay all such actuarial cost within ten years of the effective date of the benefit provision is identified in such enactment. This Paragraph shall be implemented as provided by law.

Underlining added to identify relevant content.

Based on our reading of the amendment, our discussions with General Counsel, and our discussions with legislative staff, future COLA grants will require the introduction of a bill, approval by two-thirds of the House and Senate, and the signature of the governor. Our valuation will treat COLAs as not automatic.

B. Recognition of Experience Account Transfers for the June 30, 2013 Valuation

Louisiana law provides an automatic transfer of a portion of investment gains to an Experience Account whenever the actual rate of return on the actuarial value of assets exceeds the stated assumed discount rate. This is commonly referred to as gain sharing. This transfer from the regular pool of assets must be accounted for in the actuarial valuation of the plan. For the June 30, 2013 valuation, future transfers of

assets to the Experience Account were recognized by adjusting the discount rate by 50 basis points. The stated discount rate for the June 30, 2013 valuation was 8.00%, net of investment expenses, and net of future transfers. This is the same as explicitly measuring gain sharing and stating the discount rate as 8.50%, net of investment earnings.

Because this method only implicitly recognizes gain sharing, no specific measurement of the effect on actuarial calculations of normal costs and liabilities has been made.

C. Recognition of Experience Account Transfers for the June 30, 2014 Valuation

The method used to recognize automatic transfers to the Experience Account will be changed July 1, 2014. Instead of recognizing transfers implicitly through a reduction in the discount rate, gain sharing will be measured explicitly by the Legislative Auditor's actuary and the discount rate will be net of investment expenses only. The explicit method we used in this valuation is described below.

1. TRSL has an obligation to make future transfers to the Experience Account until the value of the account is equal to the cost of a 6% increase in benefits for eligible retirees. Future transfers thereafter will be required only if the account balance is less than the 6% present value target. A shortfall may occur because of changes to the census data or as a result of investment losses.
2. The TRSL obligation for future gain sharing transfers will be treated as a plan liability on June 30, 2014. This liability has been determined using stochastic modeling with investment returns as the random variable based on capital market assumptions, and reflecting the future growth of assets and future changes to the retiree census. This liability has been determined to be \$755,360,415 based on the assumptions stated under item D below.
3. On June 30, 2014, it is expected that the balance in the Experience Account (the reserve pool) will be \$219,736,907. The difference between the liability and the amount in the reserve pool, \$535,623,508, will be collected from future employer contributions by amortizing the liability over a 30-year period.
4. In the future, whenever an investment gain is required to be transferred to the Experience Account, cash will flow from the regular asset pool to the Experience Account equal to the calculated transfer amount. However, at the same time, the liability (or debt) for the reserve will be reduced by the same amount. These transactions will have no net effect on the system's UAL.
5. In the future, a COLA bill may be enacted that uses funds in the Experience Account. When this occurs, the system will take on additional liability associated with the present value cost of the COLA. It will receive assets from the Experience Account equal to that liability. However, the reserve liability will increase by the present value cost of the COLA grant. According to Article (10)(29)(F) of the constitution, the increase in the reserve liability must be amortized over a ten-year period.

D. Assumptions and Methods

Stochastic Models

This initial reserve liability has been determined using stochastic modeling with investment returns as the random variable based on capital market assumptions, and reflecting the future growth of assets and future changes to the retiree census.

Open Group Valuation

The stochastic model was based on an open group valuation with a projection of new participants into the retirement system. New members were assumed to join the system in such a manner as to maintain the same number of active members in the future as existed on the valuation date.

Reliance on Other Actuaries

The LLA engaged Gabriel Roeder Smith (GRS) to assist with the development of the stochastic models. We further relied on GRS to run the models on our behalf.

Discount Rate

The discount rate used is 7.75% net of investment expenses. The discount rate was developed using the building block approach and capital market assumptions shown in Section IV.

E. Additional Explanations

Additional information related to the gain sharing provisions of the law pertaining to TRSL is given in the following sub sections of this report.

- The Legal Basis for the Payment of COLAs
- Compliance with Actuarial Standards of Practice

2. The Legal Basis for the Payment of COLAs

The legal basis for the payment of cost-of-living adjustments to retirees of the Teachers' Retirement System of Louisiana is found in R.S. 11:102.2 and 11:883.1. A special account called the Experience Account is established by R.S. 11:542. Act 497 of the 2009 regular Session set the balance of this account to \$0 on June 30, 2009. The balance in the Experience Account on June 30, 2013, was \$194,050,310.

A. Experience Account

Rules pertaining to future debits and credits to the Experience Account are summarized below:

Inflows:

1. TRSL will calculate each year the amount of investment gain or loss that has occurred during the system's fiscal year. The gain or loss will be based on the actuarial value of assets. A gain occurs when the rate of return on the actuarial value of assets exceeds the assumed discount rate. A loss occurs when the rate of return is less than the assumed discount rate. The assumed discount rate for the June 30, 2013 valuation is 8.00% net of investment expenses and net of future transfers to the Experience Account. For the June 30, 2014 valuation the LLA actuary assumed discount rate will be 7.75% net of investment expenses.
2. Fifty percent (50%) of any investment gain that exceeds \$200 million will be transferred from the regular pool of assets for TRSL into TRSL's Experience Account. The effective date of this transfer is June 30 of the fiscal year in which the investment gain occurs.
3. Funds in the Experience Account are invested in the same manner as the regular pool of assets. The balance in the Experience Account at the beginning of the fiscal year earns the same rate of return as assets in the regular asset pool. This return may be positive or negative. The effective date of this credit or debit is June 30 of the fiscal year in which the investment return is earned.
4. The maximum value permitted in the Experience Account is equal to two (2) times the actuarial cost of providing a full COLA of 3% to all eligible retirees and beneficiaries. In other words, the amount of any transfer of investment gains cannot cause the Experience Account value to exceed two times the actuarial cost of a full COLA.

Outflows:

1. Whenever a permanent benefit increase is granted through a legally prescribed approval process using Experience Account assets as a funding source, an amount equal to the actuarial cost of the benefit so granted is transferred from the Experience Account back to the regular pool of assets. This transfer occurs on the same date that eligible retirees begin to receive the permanent benefit increase, which is the July 1 following the completion of the approval process.
2. The value of the Experience Account cannot be less than \$0.

B. Approval Process

Prior to the June 30, 2011 Valuation

A permanent benefit increase potentially becomes payable whenever there is an increase in the cost of living based on the Consumer Price Index for all urban consumers (CPI-U) and other specified numerical measures are satisfied. Prior to June 30, 2011, a permanent benefit increase could be granted only in accordance with the following approval process.

1. The actuary for TRSL must determine that the necessary conditions exist for a permanent increase to be granted and then determines the actuarial cost that will be incurred by the Experience Account should such an increase be approved.
2. The TRSL actuary must also declare that there are sufficient dollars in the Experience Account to cover the actuarial cost of the permanent benefit increase.
3. The actuary for the Legislative Auditor must review the actuarial cost analysis and must not disagree with the assessment prepared by the TRSL actuary.
4. The TRSL board of trustees must approve the permanent benefit increase.
5. The TRSL board of trustees must ask the Speaker of the House and the President of the Senate for a concurrent resolution to authorize the permanent benefit increase. A COLA is granted with a 50% majority vote by the legislature on the concurrent resolution.
6. The permanent benefit increase becomes effective on the first day of the fiscal year following the legislative session.

Effective with the June 30, 2011 Valuation

As discussed above, we believe it is more likely than not that COLAs will be granted only if a bill to make such a grant is introduced to the legislature, the bill passes both houses with a two-thirds vote, and is then signed into law by the governor. This is not to be construed as a legal opinion. It is merely our best judgment based in information available to us during the preparation of this valuation report.

This valuation has recognized a liability associated with automatic transfers to investment gains to the Experience Account. It does not reflect any liability associated with future COLA grants.

3. Compliance with Actuarial Standards of Practice

According to Section 3.5.3 of Actuarial Standards of Practice No. 4:

Some plan provisions may create pension obligations that are difficult to measure using deterministic procedures and assumptions selected in accordance with ASOP Nos. 27 and 35. Such plan provisions can include those provisions in which future benefits vary asymmetrically with future economic or demographic experience relative to the estimated projected benefits based on a particular set of actuarial assumptions. Examples of such plan provisions include the following:

- a. Gain sharing provisions that trigger benefit increases when investment returns are favorable; (underlining emphasis added).*
- b. Floor-offset provisions that provide a minimum defined benefit in the event a participant's account balance in a separate plan falls below some threshold; or*
- c. Benefit provisions that are tied to an external index, but subject to a floor or ceiling, such as certain cost of living adjustment provisions and cash balance crediting provisions.*

For such plan provisions, the actuary should consider using alternative procedures, such as stochastic modeling, option-pricing techniques, or assumptions that are adjusted to reflect the asymmetric impact of variations in experience from year to year. In selecting valuation procedures for such plan provisions, the actuary should use professional judgment based on the purpose of the measurement and other relevant factors. For example, using alternative procedures to capture the impact of asymmetric plan provisions may be appropriate for estimating an economic value. On the other hand, when determining plan contributions, concerns that certain assumed economic or demographic outcomes may not occur may lead the actuary to ignore asymmetric plan provisions such as shutdown benefits in order to avoid excess funding.

The revised June 30, 2011 valuation, the June 30, 2012 valuation and the June 30, 2013 valuation prepared by the TRSL actuary complied with the above ASOP by reducing the otherwise assumed discount rate by 50 basis points. This implicit method for recognizing gain sharing in the valuation is acceptable under actuarial standards of practice.

However, to provide clarity the June 30, 2014 valuation will be prepared by explicitly measuring the cost of future transfers to the Experience Account. We will assume that COLA grants can occur only through the enactment of new legislation. Therefore, if no new legislation is enacted, the Experience Account will be filled to and retained at the maximum level (i.e., an amount equal to the value of a 6% benefit increase).

SECTION IV
BASIS FOR THE VALUATION

1. Basis for the Valuation

The June 30, 2013 valuation is used to determine actuarial liabilities as of June 30, 2013, actual employer contribution requirements for FYE 2014, and projected employer contribution requirements for FYE 2015. Census data, actuarial methods, and actuarial assumptions used in the preparation of June 30, 2013 assets, liabilities, and employer contribution requirements for FYE 2014 are shown in this section of the report. Additional information is provided whenever a change has been made since the June 30, 2012 valuation or it is expected that a change will be made in the preparation of the June 30, 2014 valuation.

2. Census Data

Census data used in the preparation of the June 30, 2013 valuation is summarized below. The census data was provided by TRSL. The accuracy of the data was confirmed by Financial Services within the office of the Louisiana legislative Auditor. A comparison with census summaries prepare by the TRSL actuary confirmed the reasonability of the census data used in preparing this report.

	<u>2013 Census</u>	<u>2012 Census</u>	<u>2011 Census</u>
Active Members			
Regular Teachers	69,832	70,816	74,645
Higher Education	8,807	8,980	7,077
Lunch Plan A	22	46	79
Lunch Plan B	1,187	1,220	1,231
Post DROP	<u>3,062</u>	<u>3,451</u>	<u>3,710</u>
Total	82,910	84,513	86,742
Retired and Inactive Members			
Regular Retirees	60,714	57,619	55,723
Disability Retirees	4,049	3,993	3,983
Survivors	6,268	6,045	5,806
DROP Participants	2,451	2,637	3,032
Vested & Reciprocal	5,991	6,439	5,852
Inactive Non-Vested (Due Refunds)	<u>18,355</u>	<u>18,069</u>	<u>17,610</u>
Total Retired and Inactive	97,828	94,802	92,006
Total Members	180,738	179,315	178,748
Less Inactive Non-Vested (Due Refunds)	(18,355)	(18,069)	(17,610)
Total Active and Vested Inactive Members	162,383	161,246	161,138

Membership Reconciliation

	<u>Active (Pre DROP)</u>	<u>Active After DROP</u>	<u>Terminated Vested</u>	<u>In DROP</u>	<u>Retired, Disabled, Survivor</u>	<u>Total</u>
Members on June 30, 2012	81,062	3,451	6,439	2,637	67,657	161,246
Adjustment of 2012 Pending Status	<u>(386)</u>	<u>(16)</u>	<u>(990)</u>	<u>691</u>	<u>695</u>	<u>(6)</u>
June 30, 2012 Adjusted Census	80,676	3,435	5,449	3,328	68,352	161,240
Additions to Census						
Newly Hired Members	7,127	0	69	0	0	7,196
Change in Status						
New Regular Retirees	(2,049)	(930)	(183)	(723)	3,885	0
New Disability Retirees	(171)	0	(21)	0	192	0
New Survivors	(40)	(4)	(9)	(1)	54	0
Active to Terminated Vested	(1,509)	0	1,509	0	0	0
Active to DROP	(421)	0	0	421	0	0
Terminated Vested to Active	395	0	(395)	0	0	0
Disability to Active	1	0	0	0	(1)	0
Disability to Term Vested	0	0	2	0	(2)	0
DROP to Active After DROP	<u>0</u>	<u>568</u>	<u>0</u>	<u>(568)</u>	<u>0</u>	<u>0</u>
Total	(3,794)	(366)	903	(871)	4,128	0
Eliminated from Census						
Refunded or Due Refund	(4,073)	0	(409)	0	0	(4,482)
Deceased	<u>(30)</u>	<u>(9)</u>	<u>(20)</u>	<u>(5)</u>	<u>(1,466)</u>	<u>(1,530)</u>
Total	(4,103)	(9)	(429)	(5)	(1,466)	(6,012)
Data Revisions	<u>(58)</u>	<u>2</u>	<u>(1)</u>	<u>(1)</u>	<u>17</u>	<u>(41)</u>
Members on June 30, 2013	79,848	3,062	5,991	2,451	71,031	162,383

Membership Profile
Categorized By Age and Years Employed

TRS RETIREMENT SYSTEM
ALL ACTIVE MEMBERS

Cells Depict - Member Count
Total Salary

Valuation Date 6/30/2013

Age/Years	(0-1)	[1-5]	[5-10]	[10-15]	[15-20]	[20-25]	[25-30]	[30-35]	[35+]	TOTALS
[0-19)	1 18,318	- -	- -	- -	- -	- -	- -	- -	- -	1 18,318
[20-24)	803 35,086,746	821 32,585,093	8 199,177	- -	- -	- -	- -	- -	- -	1,632 67,871,016
[25-29)	1,137 48,832,351	4,327 177,332,121	1,577 67,566,170	2 41,326	- -	- -	- -	- -	- -	7,043 293,771,968
[30-34)	898 38,024,353	3,166 125,198,095	4,831 212,602,698	1,242 60,086,061	2 50,041	- -	- -	- -	- -	10,139 435,961,248
[35-39)	698 30,087,906	2,324 92,518,075	3,370 142,746,591	3,577 178,244,537	834 44,168,982	1 48,299	- -	- -	- -	10,804 487,814,390
[40-44)	562 22,886,034	2,053 79,477,422	2,898 114,789,280	2,579 121,988,817	3,172 168,547,710	850 47,662,881	2 70,645	- -	- -	12,116 555,422,789
[45-49)	400 16,092,730	1,630 62,430,895	2,477 91,331,931	2,077 85,577,304	1,997 95,929,486	2,294 126,615,282	851 48,077,704	2 82,236	- -	11,728 526,137,568
[50-54)	347 14,230,112	1,179 44,044,193	1,981 72,560,307	1,935 75,632,456	2,127 90,884,805	1,788 89,100,360	1,891 108,184,586	94 5,760,965	1 45,038	11,343 500,442,822
[55-59)	227 9,644,295	899 34,878,674	1,555 59,085,288	1,568 63,752,889	1,817 76,150,391	1,781 83,058,606	360 19,729,790	175 12,917,849	54 4,228,498	8,436 363,446,280
[60-64)	119 5,419,385	492 21,997,392	935 37,899,247	667 29,769,748	841 37,238,531	990 48,244,231	282 16,878,132	152 11,911,857	70 5,427,932	4,548 214,786,455
[65-69)	27 1,349,983	155 6,451,177	284 12,085,198	222 10,254,762	246 11,215,340	250 12,042,769	208 12,267,722	103 8,497,255	55 5,287,090	1,550 79,451,296
[70-74)	8 302,898	55 2,303,605	87 3,133,278	66 2,968,177	54 2,141,543	61 3,667,371	65 4,466,366	58 4,146,839	54 4,722,974	508 27,853,051
TOTALS	5,227 221,975,110	17,101 679,216,742	20,003 813,999,165	13,935 628,316,077	11,090 526,326,829	8,015 410,439,799	3,659 209,674,945	584 43,317,001	234 19,711,532	79,848 3,552,977,200

Averages

Attained Age 44.36
Service Years 10.85
Annual Salary \$ 44,497

Membership Profile
Categorized By Age and Years Employed

TRS RETIREMENT SYSTEM
ACTIVE - REGULAR TEACHERS

Cells Depict - Member Count
Total Salary

Valuation Date 6/30/2013

Age/Years	(0-1)	(1-5)	(5-10)	(10-15)	(15-20)	(20-25)	(25-30)	(30-35)	(35+)	TOTALS
[0-19]	1	-	-	-	-	-	-	-	-	1
	18,318	-	-	-	-	-	-	-	-	18,318
[20-24]	719	773	8	-	-	-	-	-	-	1,500
	31,841,716	30,991,859	199,177	-	-	-	-	-	-	63,032,752
[25-29]	893	3,873	1,507	1	-	-	-	-	-	6,274
	37,905,982	159,181,202	64,821,246	18,987	-	-	-	-	-	261,927,417
[30-34]	668	2,600	4,415	1,203	2	-	-	-	-	8,888
	26,444,563	99,338,723	193,662,073	58,074,254	50,041	-	-	-	-	377,569,654
[35-39]	522	1,874	2,975	3,408	819	1	-	-	-	9,599
	19,756,179	69,779,919	121,986,571	169,219,018	43,316,313	48,299	-	-	-	424,106,299
[40-44]	429	1,656	2,516	2,369	3,065	829	2	-	-	10,866
	15,556,366	59,038,511	94,812,426	109,334,288	162,294,291	46,438,213	70,645	-	-	487,544,740
[45-49]	306	1,267	2,120	1,877	1,857	2,208	831	2	-	10,468
	11,339,278	44,108,400	73,963,127	75,906,416	88,264,991	121,377,020	46,910,699	82,236	-	461,952,167
[50-54]	245	889	1,627	1,700	1,976	1,665	1,789	82	1	9,974
	8,861,846	29,818,752	53,845,066	63,557,617	83,836,873	82,275,656	102,053,401	5,269,343	45,038	429,563,592
[55-59]	164	628	1,251	1,374	1,658	1,636	269	123	48	7,151
	6,117,471	19,930,490	42,922,904	53,207,726	69,289,828	74,492,851	14,191,355	8,117,522	3,767,462	292,037,609
[60-64]	77	328	739	550	744	897	199	88	42	3,664
	2,871,485	11,789,762	26,892,176	22,427,266	31,728,266	42,328,220	10,000,901	5,432,425	2,900,954	156,371,455
[65-69]	14	103	208	166	211	211	168	49	14	1,144
	518,178	3,593,348	7,662,462	6,256,807	8,924,925	9,661,553	8,226,771	2,635,953	1,018,131	48,498,128
[70-74]	5	37	56	41	46	41	36	26	15	303
	170,756	1,047,306	1,516,513	1,533,283	1,690,946	1,920,888	1,580,728	1,112,625	594,159	11,167,204
TOTALS	4,043	14,028	17,422	12,689	10,378	7,488	3,294	370	120	69,832
	161,402,136	528,618,272	682,283,741	559,535,662	489,396,474	378,542,700	183,034,500	22,650,104	8,325,744	3,013,789,333

Averages Attained Age 44.05
Service Years 11.15
Annual Salary \$ 43,158

Membership Profile
Categorized By Age and Years Employed

TRS RETIREMENT SYSTEM
ACTIVE - HIGHER EDUCATION

Cells Depict - Member Count
Total Salary

Valuation Date 6/30/2013

Age/Years	(0-1)	[1-5]	[5-10]	[10-15]	[15-20]	[20-25]	[25-30]	[30-35]	[35+]	TOTALS
[0-19]	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
[20-24]	83	47	-	-	-	-	-	-	-	130
	3,224,024	1,577,299	-	-	-	-	-	-	-	4,801,323
[25-29]	242	445	69	1	-	-	-	-	-	757
	10,893,448	17,996,102	2,728,251	22,339	-	-	-	-	-	31,640,140
[30-34]	218	547	402	38	-	-	-	-	-	1,205
	11,354,167	25,541,625	18,689,020	1,983,127	-	-	-	-	-	57,567,939
[35-39]	165	421	369	164	14	-	-	-	-	1,133
	10,138,868	22,314,588	20,276,155	8,932,326	837,512	-	-	-	-	62,499,449
[40-44]	125	366	341	196	101	20	-	-	-	1,149
	7,194,832	19,913,272	19,223,314	12,393,196	6,114,430	1,207,425	-	-	-	66,046,469
[45-49]	84	301	288	138	111	81	15	-	-	1,018
	4,585,722	17,314,218	16,105,388	8,476,412	7,018,221	5,128,211	1,038,493	-	-	59,666,665
[50-54]	85	232	291	173	96	94	82	5	-	1,058
	5,075,285	13,313,351	17,639,923	10,940,346	5,924,474	6,179,756	5,658,417	332,824	-	65,064,376
[55-59]	55	220	240	160	99	116	55	49	6	1,000
	3,406,411	14,107,683	15,022,514	9,886,795	5,620,539	7,965,221	4,760,889	4,733,635	461,036	65,964,723
[60-64]	39	146	163	109	83	86	80	60	27	793
	2,502,307	9,911,892	10,429,878	7,185,902	5,161,731	5,698,323	6,816,380	6,389,752	2,494,299	56,590,464
[65-69]	11	45	65	52	35	38	40	52	39	377
	794,361	2,753,406	4,242,209	3,933,721	2,290,415	2,362,010	4,040,951	5,813,046	4,201,118	30,431,237
[70-74]	3	14	28	25	8	20	28	29	32	187
	132,142	1,204,469	1,569,300	1,434,894	450,597	1,746,483	2,868,469	2,987,189	4,027,527	16,421,070
TOTALS	1,110	2,784	2,256	1,056	547	455	300	195	104	8,807
	59,301,565	145,947,905	125,925,952	65,189,058	33,417,919	30,287,429	25,183,599	20,256,446	#####	516,693,853

Averages Attained Age 45.85
Service Years 8.51
Annual Salary \$ 58,669

Membership Profile
Categorized By Age and Years Employed

TRS RETIREMENT SYSTEM
LUNCH PLAN A

Cells Depict - Member Count
Total Salary

Valuation Date 6/30/2013

Age/Years	(0-1)	[1-5)	[5-10)	[10-15)	[15-20)	[20-25)	[25-30)	[30-35)	[35+)	TOTALS
[0-19)	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
[20-24)	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
[25-29)	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
[30-34)	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
[35-39)	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
[40-44)	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
[45-49)	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
[50-54)	-	-	-	-	-	-	2	3	-	5
	-	-	-	-	-	-	61,622	72,079	-	133,701
[55-59)	-	-	-	-	-	-	1	2	-	3
	-	-	-	-	-	-	14,498	46,472	-	60,970
[60-64)	-	-	-	-	-	1	-	2	1	4
	-	-	-	-	-	25,937	-	54,986	32,679	113,602
[65-69)	-	-	-	-	-	-	-	2	1	3
	-	-	-	-	-	-	-	48,256	33,691	81,947
[70-74)	-	-	-	-	-	-	-	2	5	7
	-	-	-	-	-	-	-	36,825	66,683	103,508
TOTALS	-	-	-	-	-	1	3	11	7	22
	-	-	-	-	-	25,937	76,120	258,618	133,053	493,728

Averages Attained Age 63.38
 Service Years 32.90
 Annual Salary \$ 22,443

Membership Profile
Categorized By Age and Years Employed

TRS RETIREMENT SYSTEM
LUNCH PLAN B

Cells Depict - Member Count
Total Salary

Valuation Date 6/30/2013

Age/Years	(0-1)	[1-5)	[5-10)	[10-15)	[15-20)	[20-25)	[25-30)	[30-35)	[35+)	TOTALS
[0-19)	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
[20-24)	1	1	-	-	-	-	-	-	-	2
	21,007	15,935	-	-	-	-	-	-	-	36,942
[25-29)	2	9	1	-	-	-	-	-	-	12
	32,921	154,817	16,673	-	-	-	-	-	-	204,411
[30-34)	12	19	14	1	-	-	-	-	-	46
	225,623	317,747	251,605	28,680	-	-	-	-	-	823,655
[35-39)	11	29	26	5	1	-	-	-	-	72
	192,860	423,568	483,865	93,193	15,157	-	-	-	-	1,208,643
[40-44)	8	31	41	14	6	1	-	-	-	101
	134,836	525,639	753,540	261,333	138,989	17,243	-	-	-	1,831,580
[45-49)	10	62	69	62	29	5	5	-	-	242
	167,730	1,008,277	1,263,416	1,194,476	646,274	110,051	128,512	-	-	4,518,736
[50-54)	17	58	63	62	55	29	18	4	-	306
	292,981	912,090	1,075,318	1,134,493	1,123,458	644,948	411,146	86,719	-	5,681,153
[55-59)	8	51	64	34	60	29	35	1	-	282
	120,414	840,501	1,139,870	658,368	1,240,024	600,534	763,048	20,220	-	5,382,979
[60-64)	3	18	33	8	14	6	3	2	-	87
	45,593	295,738	577,193	156,580	348,534	191,751	60,851	34,694	-	1,710,934
[65-69)	2	7	11	4	-	1	-	-	1	26
	37,445	104,423	180,527	64,234	-	19,206	-	-	34,150	439,985
[70-74)	-	4	3	-	-	-	1	1	2	11
	-	51,830	47,465	-	-	-	17,169	10,200	34,605	161,269
TOTALS	74	289	325	190	165	71	62	8	3	1,187
	1,271,408	4,650,565	5,789,472	3,591,357	3,512,436	1,583,733	1,380,726	151,833	68,755	22,000,285

Averages

Attained Age 51.12
Service Years 10.07
Annual Salary \$ 18,534

Membership Profile
 Categorization By Active After DROP Current Age and Service After DROP

TRS RETIREMENT SYSTEM
 ACTIVE AFTER DROP

Cells Depict - Member Count
 Total Salary
 DROP Benefits

Valuation Date 6/30/2013

Age/Years	(0-1)	(1-2)	(2-3)	(3-4)	(4-5)	(5-10)	(10-15)	(15-20)	(20-)	TOTALS
[0-34)	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
[35-39)	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
[40-44)	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
[45-49)	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
[50-54)	28	10	3	-	1	-	-	-	-	42
	1,033,646	351,447	111,211	-	20,551	-	-	-	-	1,516,855
	981,300	232,104	69,576	-	13,104	-	-	-	-	981,300
[55-59)	323	279	160	129	81	35	-	-	-	1,007
	13,949,804	17,383,772	10,065,891	8,258,524	5,363,897	2,002,046	-	-	-	57,023,934
	12,246,240	11,158,752	6,300,708	4,812,156	3,023,220	1,098,288	-	-	-	13,344,528
[60-64)	190	160	161	150	165	353	1	-	-	1,180
	5,980,175	7,617,874	9,560,766	8,778,085	10,437,435	24,545,132	82,626	-	-	67,002,093
	4,360,416	3,545,292	5,347,548	4,731,276	5,503,944	12,440,904	39,012	-	-	16,840,332
[65-69)	9	15	80	78	54	273	83	2	-	594
	147,311	691,860	3,365,412	3,010,114	2,700,373	17,046,835	6,949,832	148,861	-	34,060,598
	54,300	138,276	1,219,152	1,165,848	1,084,404	7,156,212	2,865,516	56,352	-	10,132,380
[70-74)	2	7	4	6	5	93	84	38	-	239
	77,329	210,117	166,254	266,297	130,297	4,064,363	5,323,585	3,506,829	-	13,745,071
	21,240	36,852	70,008	43,320	17,772	1,177,440	1,847,196	1,249,152	-	4,295,028
TOTALS	552	471	408	363	306	754	168	40	-	3,062
	21,188,265	26,255,070	23,269,534	20,313,020	18,652,553	47,658,376	12,356,043	3,655,690	-	173,348,551
	17,663,496	15,111,276	13,006,992	10,752,600	9,642,444	21,872,844	4,751,724	1,305,504	-	94,106,880

Averages

Attained Age 62.49
 Post DROP Years 4.02
 Annual Salary \$ 56,613
 Annual Benefit \$ 30,734

Membership Profile
Categorized By Current Age and Years Retired

TRS RETIREMENT SYSTEM
REGULAR RETIREES

Cells Depict - Member Count
Total Benefits

Valuation Date 6/30/2013

Age/Years Retired	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20-)	TOTALS
[0-39)	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
[40-44)	60	28	9	1	1	-	-	-	-	99
	994,200	533,280	200,556	10,968	7,944	-	-	-	-	1,746,948
[45-49)	149	105	46	38	42	66	3	-	-	449
	2,645,424	2,450,496	971,928	784,500	823,404	1,041,372	35,880	-	-	8,753,004
[50-54)	388	173	95	77	73	368	121	1	-	1,296
	8,236,524	4,798,872	2,555,364	1,742,064	1,492,128	6,693,648	1,591,224	8,028	-	27,117,852
[55-59)	1,179	911	587	565	380	926	573	168	6	5,295
	34,070,520	33,281,148	20,702,328	20,005,152	12,957,828	22,808,364	8,508,144	2,066,076	39,636	154,439,196
[60-64)	1,369	1,347	1,152	1,082	1,010	4,544	914	660	234	12,312
	31,056,996	36,078,240	31,559,076	30,425,988	29,003,964	146,507,508	19,885,932	9,423,360	3,035,556	336,976,620
[65-69)	608	637	599	635	600	5,585	3,162	636	734	13,196
	15,124,968	17,543,988	17,207,712	16,859,604	14,934,276	137,984,676	91,117,584	12,373,488	10,740,768	333,887,064
[70-74)	122	205	182	191	216	2,396	3,900	2,015	1,217	10,444
	3,263,064	5,688,324	5,457,708	6,204,900	5,989,992	56,977,944	88,729,344	57,538,692	22,174,404	252,024,372
[75-79)	26	35	45	56	47	713	1,761	2,472	2,571	7,726
	741,504	1,198,476	1,332,588	1,829,604	1,823,148	19,801,440	38,724,156	57,007,980	56,340,756	178,799,652
[80-84)	8	10	17	8	19	169	484	1,256	3,539	5,510
	225,660	605,796	580,536	124,644	603,096	5,346,996	11,731,824	29,839,272	68,859,396	117,917,220
[85-89)	1	1	2	6	2	29	82	256	2,461	2,840
	9,108	36,420	192,480	132,444	149,424	851,928	2,267,748	6,389,136	42,573,696	52,602,384
[90-99)	-	1	-	-	-	5	11	27	1,503	1,547
	-	4,212	-	-	-	180,708	296,952	681,012	23,404,128	24,567,012
TOTALS	3,910	3,453	2,734	2,659	2,390	14,801	11,011	7,491	12,265	60,714
	96,367,968	102,219,252	80,760,276	78,119,868	67,785,204	398,194,584	262,888,788	175,327,044	227,168,340	1,488,831,324

Averages

Attained Age 70.15
Years Retired 12.01
Annual Benefit \$ 24,522

Membership Profile
Categorized By Current Age and Years Retired

TRS RETIREMENT SYSTEM
DISABILITY RETIREES

Cells Depict - Member Count
Total Benefits

Valuation Date 6/30/2013

Age/Years Retired	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20-)	TOTALS
[0-39)	7 126,108	9 128,832	7 99,840	5 81,300	5 63,132	8 94,140	- -	- -	- -	41 593,352
[40-44)	9 172,500	11 205,560	14 306,336	5 67,968	3 50,616	23 279,024	7 74,064	1 9,252	- -	73 1,165,320
[45-49)	28 501,444	22 522,108	18 353,520	14 216,900	15 208,812	55 714,708	21 215,280	7 66,072	1 8,748	181 2,807,592
[50-54)	48 751,044	40 622,200	27 500,352	24 342,648	20 261,792	85 1,048,848	65 676,428	22 198,852	18 215,940	349 4,618,104
[55-59)	35 613,008	36 492,720	43 621,516	33 524,268	35 415,044	170 2,075,220	133 1,529,292	62 603,780	53 500,904	600 7,375,752
[60-64)	19 258,420	21 301,548	35 460,680	36 585,864	30 415,332	251 2,954,172	162 1,731,312	121 1,414,332	129 1,541,388	804 9,663,048
[65-69)	3 34,548	6 102,204	9 136,752	14 195,144	9 115,656	170 1,952,316	224 2,177,172	125 1,156,788	209 2,407,596	769 8,278,176
[70-74)	2 20,628	1 10,836	4 64,488	- -	- -	23 290,988	138 1,328,988	156 1,375,404	249 2,619,492	573 5,710,824
[75-79)	- -	- -	1 12,648	- -	- -	9 73,764	22 191,052	66 578,460	259 2,648,448	357 3,504,372
[80-84)	- -	- -	- -	- -	- -	4 31,548	1 3,564	8 60,192	172 1,737,264	185 1,832,568
[85-89)	- -	- -	- -	- -	- -	- -	1 8,568	2 38,280	79 847,788	82 894,636
[90-99)	- -	- -	- -	- -	- -	- -	- -	- -	35 363,012	35 363,012
TOTALS	151 2,477,700	146 2,386,008	158 2,556,132	131 2,014,092	117 1,530,384	798 9,514,728	774 7,935,720	570 5,501,412	1,204 12,890,580	4,049 46,806,756

Averages

Attained Age 64.97
Years Retired 14.48
Annual Benefit \$ 11,560

Membership Profile
Categorized By Survivor Current Age and Years in DROP

TRS RETIREMENT SYSTEM
SURVIVOR BENEFITS

Cells Depict - Member Count
Total Benefits

Valuation Date 6/30/2013

Age/Years Retired	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20-)	TOTALS
[0-39)	45 492,864	35 371,964	36 302,124	38 369,552	40 370,128	112 978,828	38 301,032	19 152,868	2 7,776	365 3,347,136
[40-44)	9 127,764	12 205,512	10 113,628	9 110,544	6 86,352	40 507,360	21 225,876	14 157,824	5 38,460	126 1,573,320
[45-49)	11 302,868	11 158,208	11 139,440	13 195,420	8 61,236	48 445,116	37 514,320	17 191,784	12 156,876	168 2,165,268
[50-54)	13 203,736	20 338,112	21 219,348	14 262,260	20 166,164	66 843,804	54 650,148	22 337,428	15 185,544	245 3,206,544
[55-59)	28 529,728	35 648,420	28 532,224	37 487,128	32 409,572	106 1,890,384	57 686,292	47 550,788	27 270,288	397 6,004,824
[60-64)	37 943,344	44 1,090,992	48 1,154,832	45 1,070,700	39 845,760	132 2,728,704	103 1,795,632	60 860,376	73 861,240	581 11,351,580
[65-69)	53 1,050,336	58 1,233,132	59 1,260,336	43 958,068	42 963,768	213 4,558,152	148 2,999,952	94 1,534,464	97 1,212,948	807 15,771,156
[70-74)	58 1,376,244	59 1,415,028	62 1,627,788	46 755,532	46 1,007,220	217 4,614,720	154 3,285,168	110 2,048,568	157 2,504,688	909 18,634,956
[75-79)	47 868,872	74 1,579,548	61 1,184,196	43 1,034,388	57 1,244,172	263 5,115,924	178 3,582,708	113 2,015,400	207 3,310,404	1,043 19,935,612
[80-84)	44 986,724	55 966,324	41 608,652	47 720,564	47 836,760	163 3,232,284	140 2,509,836	102 1,934,688	176 2,774,016	815 14,569,848
[85-89)	27 393,504	29 441,120	28 503,244	25 371,376	25 390,672	102 1,495,056	89 1,309,068	67 998,796	140 2,199,420	532 8,102,256
[90-99)	9 124,548	5 94,980	6 79,344	12 205,584	5 74,796	56 798,588	48 680,772	40 491,592	99 1,386,900	280 3,937,104
TOTALS	381 7,400,532	437 8,543,340	411 7,725,156	372 6,541,116	367 6,456,600	1,518 27,208,920	1,067 18,540,804	705 11,274,576	1,010 14,908,560	6,268 108,599,604

Averages

Survivor Attained Age 69.37
Years Retired 10.94
Annual Benefit \$ 17,326

Membership Profile
Categorized By DROP Current Age and Years in DROP

TRS RETIREMENT SYSTEM
DROP PARTICIPANTS

Cells Depict - Member Count
Total Benefits

Valuation Date 6/30/2013

Age/Years	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20-)	TOTALS
[0-39)	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
[40-44)	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
[45-49)	2	-	-	-	-	-	-	-	-	2
	37,092	-	-	-	-	-	-	-	-	37,092
[50-54)	127	246	159	9	-	-	-	-	-	541
	5,455,284	10,425,228	6,543,192	370,968	-	-	-	-	-	22,794,672
[55-59)	264	478	519	26	-	-	-	-	-	1,287
	9,089,460	17,193,024	19,618,320	1,216,356	-	-	-	-	-	47,117,160
[60-64)	137	242	205	13	-	-	-	-	-	597
	2,490,300	4,733,628	4,272,084	424,164	-	-	-	-	-	11,920,176
[65-69)	3	6	10	-	-	-	-	-	-	19
	10,068	33,012	60,588	-	-	-	-	-	-	103,668
[70-74)	-	2	2	-	-	-	-	-	-	4
	-	13,500	6,360	-	-	-	-	-	-	19,860
[75-79)	-	1	-	-	-	-	-	-	-	1
	-	10,320	-	-	-	-	-	-	-	10,320
[80-84)	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
[85-89)	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
[90-99)	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
TOTALS	533	975	895	48	-	-	-	-	-	2,451
	17,082,204	32,408,712	30,500,544	2,011,488	-	-	-	-	-	82,002,948

Averages DROP Attained Age 48.87
 Years Retired 1.60
 Annual Benefit \$ 33,457

Membership Profile
Categorized By Age and Years Employed

TRS RETIREMENT SYSTEM
TERM-VESTED RECIPROCAL

Cells Depict - Member Count
Total Benefit

Valuation Date 6/30/2013

Age/Years	(0-1)	[1-5]	[5-10]	[10-15]	[15-20]	[20-25]	[25-30]	[30-35]	[35+]	TOTALS
[0-19)	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
[20-24)	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
[25-29)	-	-	71	-	-	-	-	-	-	71
	-	-	396,187	-	-	-	-	-	-	396,187
[30-34)	-	-	499	28	-	-	-	-	-	527
	-	-	3,513,227	336,816	-	-	-	-	-	3,850,043
[35-39)	-	2	612	175	4	-	-	-	-	793
	-	5,915.88	4,188,254	2,274,673	62,832	-	-	-	-	6,531,675
[40-44)	1	7	660	284	58	2	-	-	-	1,012
	537	24,461	3,945,725	3,120,068	948,633	44,301	-	-	-	8,083,725
[45-49)	-	5	542	282	113	17	2	-	-	961
	-	10,452	3,090,399	2,876,796	1,809,084	410,729	79,044	-	-	8,276,504
[50-54)	-	5	527	359	166	43	16	-	-	1,116
	-	17,941	2,948,694	3,267,963	2,397,958	934,122	500,323	-	-	10,067,001
[55-59)	1	2	455	399	170	31	10	1	-	1,069
	102	1,251	2,689,945	3,698,419	2,400,423	669,241	261,383	20,023	-	9,740,785
[60-64)	1	6	150	84	34	19	6	2	-	302
	388	7,907	836,320	688,373	491,525	554,500	123,805	70,040	-	2,772,856
[65-69)	-	2	31	26	13	3	2	1	1	79
	-	6,446	134,039	209,416	220,206	83,333	75,633	20,151	152,251	901,474
[70-74)	-	-	21	14	11	8	3	3	1	61
	-	-	149,564	60,565	108,311	213,469	81,517	66,313	47,145	726,886
TOTALS	3	29	3,568	1,651	569	123	39	7	2	5,991
	1,027	74,374	21,892,353	16,533,088	8,438,973	2,909,694	1,121,705	176,527	199,395	51,347,136

Averages Attained Age 47.83
 Service Years 9.83
 Annual Benefit \$ 8,571

3. Plan Provisions

A. SUMMARY OF PLAN PROVISIONS

EFFECTIVE DATE:

August 1, 1936

EMPLOYER:

The State of Louisiana, the parish school board, the city school board, the State Board of Education, the State Board of Supervisors, University or any other agency of and within the State by which a teacher is paid.

ELIGIBILITY FOR PARTICIPATION:

In general, with few exceptions, all teachers shall become members of this system as a condition of their employment. R.S.11.721

SERVICE:

Service as a "Teacher," within the meaning of paragraph R.S. 701.(33)

CREDITABLE SERVICE:

"Prior Service" plus "Membership Service" for which credit is allowable. "Prior Service" means allowable service rendered prior to the date of establishment of the retirement system and "Membership Service" means service as a teacher rendered while a member of the retirement system.

ADDITIONAL CREDITABLE SERVICE:

1. Credit for service canceled by withdrawal of accumulated contributions may be restored by member by paying the amount withdrawn plus interest.
2. Service rendered in public school system of another state may be purchased at the actuarial cost of the additional retirement benefit, or at the member's option receive service credit based on the funds actually transferred.
3. Credit for service in non-public or parochial schools may be purchased at the actuarial cost of the additional retirement benefit, or at the member's option receive service credit based on the funds actually transferred.
4. Maximum of 4 years of credit for military service may be obtained for each member, contingent on payment of actuarial cost.
5. Credit for legislative service of former teacher, now legislator, may be purchased at the actuarial cost.
6. Conversion of Sick Leave to Membership Service: At retirement, or at death before retirement of member with surviving spouse or dependent or both who are entitled to benefits, unused accumulated sick leave will be added to membership service. Conversion of unused sick and annual leave cannot be used to obtain retirement eligibility. Leave accumulated after January 30, 1990, can be converted to a maximum one year service credit. Leave is converted on the following basis:

Leave Earned Prior to 6/30/88	
Accumulated Sick Days	Fraction of Year Credit
25-45	0.25 year
46-90	0.50 year
91-135	0.75 year
136-180	1.00 year
181-225	1.25 years
226-270	1.50 years
271-315	1.75 years
316-360	2.00 years

Leave Earned After 6/29/88				
Accumulated Sick Days (by Member Classification)				Fraction of Year Credit
9 Month	10 Month	11 Month	12 Month	
10-18	11-20	12-22	13-24	0.1
19-36	21-40	23-44	25-48	0.2
37-54	41-60	45-66	49-72	0.3
55-72	61-80	67-88	73-96	0.4
73-90	81-100	89-110	97-120	0.5
91-108	101-120	111-132	121-144	0.6
109-126	121-140	133-154	145-168	0.7
127-144	141-160	155-176	169-192	0.8
145-162	161-180	177-198	193-216	0.9
163-180	181-200	199-220	217-240	1.0

EARNABLE COMPENSATION:

The compensation earned by a member for qualifying service.

FINAL AVERAGE COMPENSATION

For members whose first employment makes them eligible for membership in a Louisiana state retirement system on or after January 1, 2011, the average annual earnable compensation is the highest 60 successive months of employment. The average compensation for purposes of computing benefits cannot increase more than 15% per year.

For all other members, the average annual earnable compensation is the highest 36 successive months of employment; the average compensation for purposes of computing benefits cannot increase more than 10% per year.

Per R.S.11:892, if the maximum benefit accrual (100%) is reached, employee contributions are discontinued, average final compensation is not limited to the years for which employee contributions were made. Compensation is limited by the Internal Revenue Code Section 401(a)(17) compensation limit.

Includes workmen's compensation, and PIP's program in accordance with the following:

Years of Participation	% of Earnings to Be Included
3	60%
4	80%
5	100%

However, if member completed at least two years and subsequently becomes disabled, he shall receive 40% of such earnings. If he has completed one year and becomes disabled, he shall receive 20% of such earnings.

ACCUMULATED CONTRIBUTIONS:

Sum of all amounts deducted from compensation of members.

EMPLOYEE CONTRIBUTIONS:

8% of earnable compensation. Prior to July 1, 1989, 7% of earnable compensation.

EMPLOYER CONTRIBUTIONS:

Determined in accordance with Act 81 of the 1988 Legislative Session based on the Public Retirement Systems' Actuarial Committee's recommendation to the Legislature.

NORMAL RETIREMENT BENEFIT:

Eligibility and Benefit:

After submitting written application to the Board, members are eligible for the following:

1. Members whose first employment makes them eligible for membership in a Louisiana state retirement system on or after January 1, 2011 may retire with a 2.5% accrual rate after attaining age 60 with at least 5 years of service credit. Members are eligible for an actuarially reduced benefit with 20 years of service at any age.

2. For all other members:

If hired on or after July 1, 1999, members are eligible for a 2.5% accrual rate at the earliest of age 60 with five years of service, age 55 with 25 years of service, or at any age with 30 years of service. Members may retire with an actuarially reduced benefit with 20 years of service at any age.

If hired before July 1, 1999, members are eligible for a 2% accrual rate at the earliest of age 60 with five years of service, or at any age with 20 years of service and are eligible for a 2.5% accrual rate at the earliest of age 65 with 20 years of service, age 55 with 25 years of service, or at any age with 30 years of service.

Benefit:

Annuity which shall be the actuarial equivalent of accumulated employee contributions at retirement date, and Annual pension, which, together with annuity, provides total allowance equal to the applicable accrual rate times final average compensation times years of creditable service (including unused sick leave). Members hired before June 30, 1986 receive an additional \$300 annual supplemental benefit (Act 608 of 1986).

- A. Annual benefit may not exceed 100% of average earnable compensation.

- B. Legislator's benefit is calculated based on either Teacher's or Legislator's salary but not both- for new legislators (their option to choose); employee contribution to be 12% of either salary and expense allowance as legislator, not both.
- C. For Members employed on or after July 1, 1999, the annual pension cannot exceed the maximum benefit provided under Section 415(b) of the Internal Revenue Service Code and related Federal Regulations as adjusted for inflation and form of benefit other than life annuity or qualified joint and survivor annuity for retirement ages as follows:

Age	Maximum	Age	Maximum	Age	Maximum
48	\$ 57,561	56	\$ 116,851	64	\$ 205,000
49	62,755	57	128,059	65	205,000
50	68,455	58	140,456	66	205,000
51	74,715	59	154,182	67	205,000
52	81,593	60	169,395	68	205,000
53	89,163	61	186,271	69	205,000
54	97,502	62	205,000	70	205,000
55	106,700	63	205,000		

POST RETIREMENT INCREASES:

Permanent benefit increases, previously referred to as cost of living adjustments, may be granted, with legislative approval, provided there are sufficient funds in the Experience Account to fully fund the increase on an actuarial basis. Beginning July 1, 2009, the Experience Account is credited with fifty percent of excess investment income above \$200,000,000. Excess investment income is investment income in excess of the actuarial valuation rate of 8.25% (8.00% beginning July 1, 2013 and 7.75% beginning July 1, 2014). Balances in the experience account accrue interest at the average actuarial yield for the System portfolio. The Employee Experience Account balance is limited to the funds necessary to fund two such increases. The Experience Account is debited for the increase in actuarial accrued liability resulting from the increases.

If the actuarial rate of return for the prior plan year is at least 8.25%, regardless of the actuarial valuation rate, the benefit increase is limited to the lesser of 3% or the increase in the CPI-U for the calendar year immediately preceding the increase. If the actuarial rate of return for the prior plan year is less than 8.25%, regardless of the actuarial valuation rate, the increase is limited to the lesser of 2% or the increase in the CPI-U for the calendar year immediately preceding the increase, provided the System is at least 80% funded. If the actuarial rate of return for the prior plan year is less than the actuarial valuation rate and the System is not at least 80% funded, no increase can be granted.

Benefits are restricted to those retirees who have attained the age of 60 and have been retired for at least one year. The minimum age 60 for the receipt of a benefit increase does not apply to disability retirees. The increase shall be based on the first seventy thousand dollars of the retiree's annual benefit, indexed annually for years after 2001.

DISABILITY RETIREMENT:

Eligibility:

Members whose first employment makes them eligible for membership in a Louisiana state retirement system on or after January 1, 2011 are eligible with 10 years of service credit. All other members are eligible with 5 years of service; certification of disability by medical board (medical examination required once in every year for the first 5 years of disability retirement, and once in every 3 years thereafter, until age 60).

Benefit: Act 572 of 1995

- (1) If ineligible for service retirement at disability, disability pension will be 2.5% of average compensation multiplied by years of service. Benefit is limited to 50% of average compensation, but will not be less than the lesser of 40% of the state minimum salary for a beginning teacher with a bachelor's degree or 75% of average compensation.
- (2) Additional 50% of member's benefit payable if minor child is present, but total amount to family limited to 75% of final average compensation.
- (3) Member will become a regular retiree upon attainment of the earliest age for retirement eligibility as if the member continued in service, without further change in compensation. Benefit is based on years of creditable service but not less than the disability benefit. Benefit for minor children continue as long as the retiree has a minor child.
- (4) Upon death of a disability retiree, surviving spouse, married to retiree at least two years prior to death of the disability retiree, shall receive 75% of disability benefit. Upon death of an unmarried retiree with minor children, the benefit shall equal 50% of disability benefit.
- (5) Upon recovery of disability as determined by the board of trustees, upon advice of the medical board, and returns to active membership for at least three years starting no later than one year after recovery, then he shall be credited with one year of service for each year disabled for purposes of establishing benefit eligibility, but not for computation of benefits.

SURVIVOR'S BENEFITS (Effective July 13, 1978):Eligibility and Benefit:

1. Surviving Spouse with minor children of an active member with 5 years of creditable service with at least 2 years earned immediately prior to death; or a member with 20 years of creditable service regardless of when earned or whether in active service at time of death will receive:

The greater of:

A.) \$600 per month, or

B.) 50% of benefit that would have been payable upon service retirement at age 60 had member continued in service to age 60 without change in compensation. 50% of spouse's benefit payable for each minor child (not greater than two), with total benefit to family at least equal to the Option 2, accrued Benefit based on actual service credit. Benefits to spouse cease upon remarriage, but resumes upon subsequent divorce or death of new spouse; however, if the member was eligible to retire or had reached age 55 on the date of his death, benefits shall not cease upon remarriage. When minor children are no longer present, spouse's benefit reverts to benefit in B, for eligible spouse.

2. Surviving Spouse without minor children of either an active member with 10 years of creditable service with at least 2 years earned immediately prior to death, or a member with 20 years of creditable service regardless of when earned or whether in active service at time of death will receive:

The greater of:

A.) \$600 per month, or

B.) Option 2 equivalent of accrued benefit based on actual service. Spouse's benefit payable for life. Benefits to spouse cease upon remarriage, but resumes upon subsequent divorce or death of

new spouse; however, if the member was eligible to retire on the date of his death, benefits shall not cease upon remarriage.

3. Beneficiary not eligible for 1 or 2 will receive return of member's accumulated contributions.

OPTIONAL FORMS OF BENEFIT:

In lieu of receiving normal retirement benefit, member may elect to receive actuarial equivalent of retirement allowance in a reduced form as follows:

- Option 1 If a member dies before receiving present value of annuity in monthly payments, balance paid to designated beneficiary.
- Option 2 Reduced retirement allowance, if member dies, to be continued to designated beneficiary for his lifetime.
- Option 3 One-half of reduced retirement allowance, if member dies, to be continued to designated beneficiary for his lifetime.
- Option 4 Other benefits of equal actuarial value may be elected with approval of board.

Options 2A, 3A, 4A

Same as Options 2, 3, and 4, except that reduced benefit reverts back to maximum if beneficiary predeceases retiree.

Automatic COLA Option

Members may choose an irrevocable election at retirement to receive an actuarially reduced benefit which increases 2.5% annually. The increase begins on the first retirement anniversary date, but not before the retiree attains age 55 or would have attained age 55 in the case of a surviving spouse. This option can be chosen in combination with the above options. (Per Act 270 of 2009, effective July 1, 2009)

Initial Lump Sum Benefit Option

Members who did not participate in DROP may elect an actuarially reduced pension and receive a lump-sum equal to not more than 36 months of the maximum monthly pension.

REFUND OF CONTRIBUTIONS:

Death prior to retirement - accumulated contributions credited to individual account in annuity savings fund are returnable to designated beneficiary, if any; otherwise, to his estate.

TERMINATION WITH VESTED SERVICE:

Any member with credit for 5 years of service who withdraws from service may elect to leave accumulated contributions in system until age 60, when he may apply for retirement and begin receiving a retirement benefit based on the credits he had at date of withdrawal.

DEFERRED RETIREMENT OPTION PLAN:

Instead of terminating employees and accepting a service retirement allowance, any member who has met the eligibility requirements may elect to participate in the Deferred Retirement Option Plan (DROP) and defer receipt of benefits.

Normal Eligibility:

Any member who is eligible to receive a 2.5% service retirement allowance, or who has 10 years of service credit, exclusive of military service, at age 60 may begin participation on the first retirement eligibility date for a period not to exceed the third anniversary of retirement eligibility.

Benefit:

Upon termination of employment, a participant will receive, at his option:

- (1) Lump sum payment (equal to the payments to the account);
- (2) A true annuity based upon his account; or
- (3) Other methods of payment approved by the board of trustees.

If a participant dies during the period of participation in the program, his account balance shall be paid to the beneficiary, or if none, to his estate in any form approved by the Board of Trustees.

If employment is not terminated at the end of DROP participation, payments into the account ceases and account earns interest. The participant resumes active contributing membership and earns an additional retirement benefit based on additional service rendered. The method of computation of the additional benefit is subject to the following:

- (1) If additional service was less than the period used to determine Final Average Compensation, average compensation figure to calculate the additional benefit will be the same as used to calculate initial benefit.
- (2) If additional service was earned for a period greater the number of months used to determine Final Average Compensation, the average compensation figure used to calculate the additional benefit will be based on compensation during the period of additional service.

DROP Accounts established prior to January 1, 2004, earn interest following termination of DROP at a rate 0.5% below the actuarial rate of the System's investment portfolio.

DROP accounts established on or after January 1, 2004 are credited with Money Market rates.

B. DESCRIPTION OF BENEFITS FOR MERGED LSU EMPLOYEES

GENERAL:

Eligibility for benefits based on the eligibility requirements of the Teachers' plan, except for deaths and disabilities before 1984. All service, funded and non-funded, is used in determining eligibility.

Final Average Salary was the average of the three highest years, except for academic year employees who retired within three years after January 1, 1979. For this group, any salary used in the Final Average Salary calculation, which was earned before January 1, 1979, was increased by 2/9ths.

The Social Security breakpoint average, for service under the funded LSU plan, was frozen at the December 31, 1978, level. That is, the breakpoint average for funded service was calculated as of December 31, 1978, and kept constant. This produced the following breakpoint averages:

Social Security Breakpoint Average (for LSU funded service)

<u>Calendar Year of Entry</u>	<u>Breakpoint Average</u>
1971 or before	13,400
1972	13,800
1973	14,600
1974	15,360
1975	15,900
1976	16,500
1977	17,100
1978	17,700

RETIREMENT BENEFITS:

Retirement benefits calculated using LSU funded service with the LSU formula and service after December 31, 1978, with the Teacher's formula. Thus, the "funded" benefit is (1) 1.33% of final average salary under the Social Security breakpoint average plus 2.5% of final average salary over the Social Security breakpoint average, times years of "funded" service with LSU before December 31, 1978, plus (2) 2.5% (or 2% if total service less than 20 years) times final average salary times years since January 1, 1979, plus \$300.

SURVIVOR'S BENEFITS:

For deaths after 1983, the provisions of the Teachers' plan apply. However, the benefit is calculated using all service, funded and non-funded, then prorated by service between the funded and non-funded portions. Children's benefits are also prorated into the funded and non-funded portions.

DISABILITY BENEFITS:

For disabilities after 1983, the provisions of the Teachers' plan apply. However, the benefit is calculated using all service, then prorating by service between the funded and non-funded portions. Children's benefits are also prorated.

VESTING BENEFITS:

Benefits for terminated vested members was determined as outlined under "Retirement Benefits."

REFUND OF CONTRIBUTIONS:

Terminated members are allowed a refund of accumulated contributions as described by the Teachers' plan.

COOPERATIVE EXTENSION PERSONNEL:

The LSU employees are eligible for the supplemental benefit described in Section 700.2 of Act 643 of 1978. The benefit is equal to 1% for the first five years of service, 3/4% for the next five years, and 1/2% thereafter. The funded benefit is the benefit based on service after September 12, 1975.

OPTIONAL FORMS OF BENEFITS:

Retiring members may elect options as described by the Teachers' plan.

DEFERRED RETIREMENT OPTION PLAN:

Eligible members may participate under same requirements as described by the Teachers' plan.

C. DESCRIPTION OF BENEFITS FOR MERGED SCHOOL LUNCH EMPLOYEES**EFFECTIVE DATE:**

The School Lunch Employees' Retirement System was originally established on January 1, 1953.

On July 1, 1980, the School Lunch Employees' Retirement System was restructured. All individuals who become employed after July 1, 1980, shall become members of Plan A or Plan B as determined by the agreement in effect for each employer.

Plan A: Parishes which had withdrawn from Social Security coverage became known as Plan A parishes. Those participating in both the regular and the supplemental plan or only in the supplemental plan shall become members of Plan A.

Plan B: Parishes which had not withdrawn from Social Security coverage became known as Plan B parishes. Those participating only in the regular plan shall become members of Plan B.

Effective July 1, 1983, Plan A and Plan B were merged into TRSL.

CREDITABLE SERVICE:

Service as an employee while member of the system.

MILITARY SERVICE:

Maximum of 4 years of credit may be purchased.

ADDITIONAL CREDITABLE SERVICE:

Credit for service canceled by withdrawal of accumulated contributions may be restored by paying into system the amount withdrawn plus regular interest.

EMPLOYEE CONTRIBUTIONS:

Plan A: 9.10% of monthly earnings

Plan B: 5% of monthly earnings

EMPLOYER CONTRIBUTIONS:

Plan A and Plan B: Actuarial Required Amount (Effective July 1, 1989)

D. SCHOOL LUNCH PLAN A**RETIREMENT BENEFIT:**

Members hired after June 30, 1983 earn Regular Teachers Benefits. Benefits description below applies to members hired prior to July 1, 1983.

NORMAL RETIREMENT:Eligibility:

1. Age 60 and 5 years of creditable service.
2. Age 55 and 25 years of creditable service.
3. 30 years of creditable service, regardless of age.

Benefit:

3% of average final compensation times years of creditable service.

Members of only the supplemental plan prior to July 1, 1980 who were age 60 or older at the time the member's employer terminated its agreement with the Department of Health, Education and Welfare, and who became a member of the retirement system because of this termination earned 1% of average final compensation plus \$2 per month for each year of service credited prior to July 1, 1980, plus 3% of average final compensation for each year of service credited after July 1, 1980.

*These members are eligible to retire upon reaching age 70, with less than 10 years of creditable service.

Members hired before June 30, 1986 receive an additional \$300 annual supplemental benefit.

Benefits are limited to 100% of average final compensation.

DISABILITY RETIREMENT:Eligibility:

Five years of creditable service; certification of disability by the State Medical Disability Board.

Benefit:

Normal retirement allowance if eligible; otherwise, an amount equal to the normal retirement allowance to which the member would have been entitled had he met eligibility requirements; provided the amount is subject to a minimum of 60% and a maximum of 100% of average final compensation, in the event no optional selection is chosen.

SURVIVOR'S BENEFITS:Eligibility:

1. Surviving spouse with minor children of a member with 5 years of service credit with at least 2 years earned immediately prior to death, or 20 years of service credit regardless of when earned or whether the deceased member was in active service at the time of death.
2. Surviving spouse with no minor children of member with 10 or more years of service credit with at least 2 years earned immediately prior to death, or 20 years of service credit regardless of when earned or whether the deceased member was in active service at the time of death.
3. Beneficiary not eligible for 1 or 2.

Benefit:

1. Greater of:
 - A. \$600 per month, or
 - B. 50% of benefit that would have been payable upon retirement at age 60 had member continued in service to age 60 without change in compensation. 50% of spouse's benefit payable for each minor child (maximum two children), with total benefit to family at least equal to the Option 2 benefit. Accrued Benefit based on actual service credit. Benefits to spouse cease upon remarriage, but will resume upon subsequent death or divorce. When minor children are no longer present, spouse's benefit reverts to benefit in (2), if spouse is eligible for such benefit.
2. Greater of:
 - A. \$600 per month, or
 - B. Option 2 equivalent of accrued benefit based on actual service. Surviving spouse must have been married to the deceased member at least one year prior to death. If the member had not been eligible for retirement upon date of death, benefits to spouse cease upon remarriage, but resume upon subsequent death or divorce of new spouse.
3. Return of member's accumulated contributions.

E. SCHOOL LUNCH PLAN B**NORMAL RETIREMENT:**Eligibility:

1. Age 60 and 5 years of creditable service.
2. Age 55 and 30 years of creditable service.

Benefit:

Annual pension which provides total allowance equal to 2% of average final compensation times years of creditable service. Members hired before June 30, 1986 receive an additional \$300 annual supplemental benefit.

NOTE:

Benefit reduced by 3% for each year under age 62, unless member has 25 years of creditable service.

DISABILITY RETIREMENT:**Eligibility:**

Five years of creditable service; certification of disability by the State Medical Disability Board.

Benefit:

Normal retirement allowance if eligible therefore; otherwise 2% of average final compensation times years of creditable service; provided amount not less than 30%, nor more than 75% of average final compensation, in the event no optional selection is made.

SURVIVOR'S BENEFITS:

Eligibility: Twenty or more years of creditable service.

Benefit: Option 2 benefit.

F. SCHOOL LUNCH PLAN A and PLAN B**OPTIONAL FORMS OF BENEFIT:**

Retiring members may elect options as described by the Teachers' plan.

RETURN OF CONTRIBUTIONS:

Should a member not eligible to retire cease to be an employee, he shall be paid the amount of his accumulated contributions upon demand. Should a member's death occur prior to retirement with no survivors eligible for benefits, his accumulated contributions are returnable to a designated beneficiary, if any; otherwise, to his estate.

TERMINATION WITH VESTED SERVICE:

Any member with credit for 5 years of service who withdraws from service may elect to leave accumulated contributions in system until his earliest normal retirement date, when he may apply for retirement and begin receiving a retirement benefit based on average final compensation and creditable service at date of withdrawal.

DEFERRED RETIREMENT OPTION PLAN:

Retiring members may elect options as described by the Teachers' plan.

4. Actuarial Methods and Assumptions

Actuarial assumptions and methods used in the June 30, 2013 valuation are summarized in this section of the report. Significant changes in methods and assumptions are summarized below.

Assumption or Method	June 30, 2012 Valuation	June 30, 2013 Valuation	June 30, 2014 Valuation
Discount Rate	8.25%, net of investment expenses and net of future gain sharing transfers	8.00%, net of investment expenses and net of future gain sharing transfers	7.75%, net of investment expenses
Inflation Component of the Salary Increase Assumption	3.00%	2.50%	2.50%
Asset Valuation Method	Adjustment to market value based on deferred recognition of unrealized investment gains and losses	Adjustment to market value based on a deferred recognition of realized and unrealized investment gains and losses	Adjustment to market value based on a deferred recognition of realized and unrealized investment gains and losses
Gain Sharing and COLAS	Implicit recognition of gain sharing and COLAs	Implicit recognition of gain sharing and COLAs	Explicit recognition of gain sharing; no recognition of COLAs
Mortality Factors	RP-2000 table	RP-2000 table with projection scale AA for 25 years	RP-2000 table with projection scale AA for 25 years
Disability Factors	RP-2000 disability table	RP-2000 disability table	RP-2000 disability table
Termination Factors		Revised based on recent Experience Study	Revised based on recent Experience Study
Retirement Factors		Revised based on recent Experience Study	Revised based on recent Experience Study
Salary Scale		Revised based on recent Experience Study	Revised based on recent Experience Study

COST METHOD:

The "Projected Unit Credit" cost method was used to calculate the funding requirements of the retirement system, as required by Louisiana Statutes, R. S. 11:22. Under this cost method, the actuarial present value of projected benefits of each individual included in the valuation is accumulated from the participant's attained age to the anticipated retirement date(s). That portion of the actuarial present value attributable to the current year's projected benefit accruals is called the normal cost. The actuarial present value of future projected benefits in proportion to service accrued on the date of valuation is called the actuarial accrued liability.

ASSET VALUATION:

For the June 30, 2012 valuation, the actuarial value of assets was determined as the market value adjusted to recognize unrealized investment gains and losses over the prior four year period. The actuarial value was subject to the corridor limits of 80%-120% of the market value of assets.

For the June 30, 2013 valuation, the actuarial value of assets was determined as the market value adjusted to recognize realized and unrealized investment gains and losses over the prior five year period. If the preliminary actuarial value so determined exceeded 15% of the market value of assets, the actuarial value was calculated to be the average between the preliminary actuarial value and 115% of the market value. If the preliminary actuarial value so determined was less than 85% of the market value of assets, the actuarial value was calculated to be the average between the preliminary actuarial value and 85% of the market value.

Detailed formulas are shown on pages 18-19 of this report.

ACCOUNTING DISCLOSURE:

The Governmental Accounting Standards Board Statement No. 25 requires the disclosure of "Credited Projected Benefits" for Public Employee Retirement Systems. The disclosures illustrated in SECTION II were developed using the Projected Unit Credit cost method. The statement of assets provided by the TRSL audit staff was the final draft prior to publication. Should the statement of assets received differ from the final audit report, a revised actuarial statement will be issued, but only to the extent that any difference in reporting affects the employer's contribution rate or the yield to the Actuarial Value of Assets.

ADMINISTRATIVE EXPENSES:

R.S.11:102 has been interpreted by the TRSL's actuary to require that administrative expenses be excluded from any calculation of normal cost. As a result, the retirement system incurs an actuarial loss each year equal to administrative expense actually paid.

This method is not in accordance with actuarial standards of practice, which requires either implicit or explicit recognition. However, because this practice is prescribed under Louisiana law, the actuary must give priority to the legal standard.

ACTUARIAL ASSUMPTIONS:

Assumptions used in the valuation were adopted by the Board of Trustees following the most recent experience study. The Retirement System is required to conduct an experience study every five years, but the scope of such a study is not necessarily limited to a five year period. An experience study was recently completed for the observation period of 2008-2012. The recommended rates were adopted by the Board, effective July 1, 2013. The experience was reviewed separately for Regular Teachers, Higher Education, School Lunch Plan A, and School Lunch Plan B. The prior and recently adopted rate tables are illustrated at the end of this section.

MORTALITY ASSUMPTIONS:

Pre-retirement deaths and post-retirement life expectancies were previously based upon the RP-2000 table with no projection of mortality improvement. The table recently adopted by the Board, in accordance with the most recent Experience Study, is based upon the RP-2000 table with mortality projected from year 2000 through year 2025 using scale AA.

DISABILITY ASSUMPTION:

Rates for total and permanent disability were projected by age in accordance with the most recent Experience Study. The rates are based upon attained age at occurrence. For mortality after disability, rates are based upon the RP-2000 disability table with no projection of mortality improvement. This table did not change as a result of the most recent Experience Study.

RETIREMENT/DROP ASSUMPTION:

Eligibility for normal retirement benefits and DROP participation is based on age and service requirements that vary by plan. Previously, retirement and DROP rates were each determined for all plans and were age based. The most recent experience study developed the Retirement and DROP rates in combination and added a service component to the assumptions. Prior and recently adopted tables are shown at the end of this section.

TERMINATION ASSUMPTIONS:

Voluntary termination or withdrawal rates are revised based on the most recent experience study. Rates for Regular Teachers and Higher Education members are based on select and ultimate age and service-based tables. Rate for Lunch Plan A and Lunch Plan B are service-based tables.

For members terminating with vested benefits, it is assumed that 80% will not withdraw their accumulated employee contribution and will receive a benefit beginning at age 60.

SALARY GROWTH:

The rates of annual salary growth are based upon the member's years of service. Rates were recently revised, in accordance with the recent Experience Study. Salary assumptions shown below are merit increases only and do not reflect inflation. In addition to merit increases, it is assumed that salary will increase with inflation at the rate of 2.50% per year for the June 30, 2013 valuation and thereafter. Current salaries and projected future salaries are subject to Section 401(a)(17) limit of the Internal Revenue Service Code. Projected salaries include a 2.5% inflation assumption on the Section 401(a)(17) limit for 2013 and thereafter.

FAMILY STATISTICS:

The composition of the family is based on Current Population Reports published by the United States Census Bureau. Seventy-five percent of the membership is assumed to be married. The wife assumed to be three (3) years younger than the husband. These assumptions did not change as a result of the most recent Experience Study. Sample rates are as follows:

Age of Member	Number of Minor Children	Years for Youngest Child to Attain Majority
25	1.2	15
30	1.4	13
35	1.7	11
40	1.7	9
45	1.4	6
50	1.1	4

ASSUMPTION FOR INCOMPLETE DATA:

Records identified as containing suspicious data or errors in data were assumed to possess the same characteristics of "good data" in the same cohort.

INVESTMENT EARNINGS:

The rate of return on the actuarial value of assets is commonly referred to as the discount rate. Rate used in the preparation of this valuation report are summarized below:

June 30, 2013 Valuation:

- 8.00%, net of investment expenses, and net of future gain sharing transfers.
- Capital market assumptions used to determine the discount rate included a 2.5% inflation rate.

June 30, 2014 Valuation:

- 7.75%, net of investment expenses.
- Capital market assumptions used to determine the discount rate included a 2.5% inflation rate.

CONVERTED LEAVE:

Converted Leave is assumed to increase the accrued benefit at retirement as follows according to the following table, based on the most recent experience study. The reduction from the prior rates to current rates shown below is due to statutory limits placed on the amount of leave earned after June 30, 1990 that can be converted to service credit.

	Prior Rates	Current Rates
Regular Teachers	2.5%	1.5%
Higher Education	2.8%	1.5%
Lunch Plan A	1.5%	1.0%
Lunch Plan B	1.5%	1.0%

BENCHMARKING

Valuation results were tested by comparing normal cost and liability values produced by our valuation system with values produced by the valuation software used by Foster & Foster. Comparisons of values were made for each sub plan, for each member status category, and for each type of decrement. Our values in the aggregate were generally within 2% of the values produced by Foster & Foster. Comparative values by sub plan, by status category, and by decrement exhibited larger deviations, but on the whole produced values acceptable for valuation purposes.

Because we could not precisely match results produced by Foster & Foster, normal cost values in our valuation for FYE 2014 were calculated according to the following formula.

Value = A x B / C, where

- A = The value produced by Foster & Foster for FYE 2014 using the current set of assumptions.
- B = The value produced by the LLA for FYE 2014 using the revised set of assumptions, and
- C = The value produced by the LLA for FYE 2014 the current set of assumptions.

CAPITAL MARKET ASSUMPTIONS

The 8.5% gross discount rate used in the preparation of June 30, 2013 liabilities and contribution requirements for FYE 2014 is based in part on capital market assumptions developed by internal professional investment staff relying substantially, but not completely, on information provided by NEPC, TRSL investment advisor. Capital market assumptions of investment consulting firms are considered to be confidential and therefore are not disclosed in this report.

The 7.75% discount rate used in the preparation of contribution requirements for FYE 2014 and in the stochastic analysis associated with gain sharing is based on capital market assumptions developed by Gabriel Roeder Smith (GRS). GRS' assumptions reflect an average of the capital market assumptions of eight major investment consulting firms. Once again, capital market assumptions of the eight firms are confidential.

The major differences between the rates used by Foster and Foster and the rate used by the LLA are summarized below:

1. LLA used a mid-term time horizon in its analysis. TRSL used a 30-year horizon.
2. The LLA based its discount rate on an average of the capital market assumptions for eight investment firms. TRSL based its rate on the capital market assumptions, with some modification, of Hewitt.

RP-2000 MORTALITY TABLE FOR ALL SUB-PLANS
Prior to July 1, 2013

For Regular Teachers Sub Plan, Higher Education Sub Plan, Lunch A Sub Plan and Lunch B Sub Plan.

Death Rate			Death Rate			DROP		
Age	Male	Female	Age	Male	Female	Age	Male	Female
18	0.000316	0.000188	53	0.002916	0.002207	88	0.15059	0.10730
19	0.000331	0.000190	54	0.003196	0.002424	89	0.16642	0.11915
20	0.000345	0.000191	55	0.003624	0.002717	90	0.18341	0.13168
21	0.000357	0.000192	56	0.004200	0.003090	91	0.19977	0.14460
22	0.000366	0.000194	57	0.004693	0.003478	92	0.21661	0.15762
23	0.000373	0.000197	58	0.005273	0.003923	93	0.23366	0.17043
24	0.000376	0.000201	59	0.005945	0.004441	94	0.25069	0.18280
25	0.000376	0.000207	60	0.006747	0.005055	95	0.26749	0.19451
26	0.000378	0.000214	61	0.007676	0.005814	96	0.28391	0.20538
27	0.000382	0.000223	62	0.008757	0.006657	97	0.29985	0.21524
28	0.000393	0.000235	63	0.010012	0.007648	98	0.31530	0.22395
29	0.000412	0.000248	64	0.011280	0.008619	99	0.33021	0.23139
30	0.000444	0.000264	65	0.012737	0.009706	100	0.34456	0.23747
31	0.000499	0.000307	66	0.014409	0.010954	101	0.35863	0.24483
32	0.000562	0.000350	67	0.016075	0.012163	102	0.37169	0.25450
33	0.000631	0.000394	68	0.017871	0.013445	103	0.38304	0.26604
34	0.000702	0.000435	69	0.019802	0.014860	104	0.39200	0.27906
35	0.000773	0.000475	70	0.022206	0.016742	105	0.39789	0.29312
36	0.000841	0.000514	71	0.024570	0.018579	106	0.40000	0.30781
37	0.000904	0.000554	72	0.027281	0.020665	107	0.40000	0.32273
38	0.000964	0.000598	73	0.030387	0.022970	108	0.40000	0.33744
39	0.001021	0.000648	74	0.033900	0.025458	109	0.40000	0.35154
40	0.001079	0.000706	75	0.037834	0.028106	110	0.40000	0.36462
41	0.001142	0.000774	76	0.042169	0.030966	111	0.40000	0.37625
42	0.001215	0.000852	77	0.046906	0.034105	112	0.40000	0.38602
43	0.001299	0.000937	78	0.052123	0.037595	113	0.40000	0.39351
44	0.001397	0.001029	79	0.057927	0.041506	114	0.40000	0.39831
45	0.001508	0.001124	80	0.064368	0.045879	115	0.40000	0.40000
46	0.001616	0.001223	81	0.072041	0.050780	116	0.40000	0.40000
47	0.001734	0.001326	82	0.080486	0.056294	117	0.40000	0.40000
48	0.001860	0.001434	83	0.089718	0.062506	118	0.40000	0.40000
49	0.001995	0.001550	84	0.099779	0.069517	119	0.40000	0.40000
50	0.002138	0.001676	85	0.110757	0.077446	120	1.00000	1.00000
51	0.002449	0.001852	86	0.122797	0.086376			
52	0.002667	0.002018	87	0.136043	0.096337			

REGULAR TEACHERS
ACTUARIAL TABLES AND RATES - Prior to July 1, 2013

*Hired prior to 1/1/11; **Hired on or after 1/1/11; ***Salary Scale is (1+ Inflation) x (1+ Merit)

	Disability	Termination	Retirement		DROP			Merit
Age	Rates	Rates	Rates*	Rates**	Rates*	Rates**	Duration	Scale***
18	0.0000	0.05	0.000	0.00	0.00	0.00	0	0.024272
19	0.0000	0.05	0.000	0.00	0.00	0.00	1	0.037864
20	0.0000	0.10	0.000	0.00	0.00	0.00	2	0.033010
21	0.0000	0.09	0.000	0.00	0.00	0.00	3	0.032039
22	0.0000	0.04	0.000	0.00	0.00	0.00	4	0.031068
23	0.0001	0.07	0.000	0.00	0.00	0.00	5	0.031068
24	0.0001	0.13	0.000	0.00	0.00	0.00	6	0.030097
25	0.0001	0.13	0.000	0.00	0.00	0.00	7	0.030097
26	0.0001	0.13	0.000	0.00	0.00	0.00	8	0.029126
27	0.0001	0.13	0.000	0.00	0.00	0.00	9	0.029126
28	0.0001	0.13	0.000	0.00	0.00	0.00	10	0.028155
29	0.0001	0.13	0.000	0.00	0.00	0.00	11	0.028155
30	0.0001	0.13	0.000	0.00	0.00	0.00	12	0.026214
31	0.0003	0.11	0.000	0.00	0.00	0.00	13	0.022330
32	0.0003	0.11	0.000	0.00	0.00	0.00	14	0.020388
33	0.0003	0.10	0.000	0.00	0.00	0.00	15	0.020388
34	0.0003	0.10	0.000	0.00	0.00	0.00	16	0.020388
35	0.0006	0.09	0.000	0.00	0.00	0.00	17	0.020388
36	0.0010	0.08	0.000	0.00	0.00	0.00	18	0.020388
37	0.0007	0.07	0.000	0.00	0.00	0.00	19	0.020388
38	0.0007	0.06	0.020	0.00	0.00	0.00	20	0.017476
39	0.0011	0.06	0.040	0.00	0.00	0.00	21	0.017476
40	0.0011	0.06	0.040	0.00	0.00	0.00	22	0.017476
41	0.0013	0.05	0.030	0.00	0.00	0.00	23	0.017476
42	0.0016	0.05	0.030	0.00	0.00	0.00	24	0.017476
43	0.0016	0.05	0.030	0.00	0.00	0.00	25	0.013592
44	0.0016	0.04	0.030	0.00	0.00	0.00	26	0.013592
45	0.0022	0.04	0.030	0.00	0.00	0.00	27	0.013592
46	0.0022	0.04	0.030	0.00	0.00	0.00	28	0.017476
47	0.0022	0.04	0.030	0.00	0.00	0.00	29	0.017476
48	0.0022	0.03	0.030	0.00	0.01	0.00	30	0.017476
49	0.0022	0.03	0.028	0.00	0.02	0.00	31	0.022330
50	0.0025	0.03	0.028	0.00	0.03	0.00	32	0.022330
51	0.0025	0.03	0.030	0.00	0.15	0.00	33	0.048544
52	0.0025	0.04	0.035	0.00	0.50	0.00	34+	0.027184
53	0.0030	0.04	0.050	0.00	0.40	0.00		

	Disability	Termination	Retirement		DROP			
Age	Rates	Rates	Rates*	Rates**	Rates*	Rates**		
54	0.0030	0.04	0.075	0.00	0.40	0.00		
55	0.0040	0.04	0.200	0.00	0.60	0.00		
56	0.0050	0.04	0.230	0.00	0.15	0.00		
57	0.0055	0.04	0.250	0.00	0.07	0.00		
58	0.0055	0.04	0.365	0.00	0.07	0.00		
59	0.0055	0.04	0.280	0.00	0.07	0.00		
60	0.0080	0.04	0.280	0.75	0.15	0.35		
61	0.0050	0.04	0.280	0.28	0.03	0.03		
62	0.0035	0.04	0.280	0.28	0.01	0.01		
63	0.0035	0.04	0.330	0.33	0.01	0.01		
64	0.0035	0.04	0.330	0.33	0.01	0.01		
65	0.0035	0.04	0.330	0.33	0.01	0.01		
66	0.0020	0.04	0.400	0.40	0.00	0.00		
67	0.0020	0.04	0.340	0.34	0.00	0.00		
68	0.0020	0.04	0.340	0.34	0.00	0.00		
69	0.0020	0.04	0.340	0.34	0.00	0.00		
70	0.0020	0.04	0.340	0.34	0.00	0.00		
71	0.0020	0.04	0.340	0.34	0.00	0.00		
72	0.0020	0.04	0.500	0.50	0.00	0.00		
73	0.0020	0.04	0.990	0.99	0.00	0.00		
74	0.0020	0.04	0.990	0.99	0.00	0.00		

**HIGHER EDUCATION
ACTUARIAL TABLES AND RATES - Prior to July 1, 2013**

*Hired prior to 1/1/11; **Hired on or after 1/1/11; ***Salary Scale is (1+ Inflation) x (1+ Merit)

	Disability	Termination	Retirement		DROP			Merit
Age	Rates	Rates	Rates*	Rates**	Rates*	Rates**	Duration	Scale***
18	0.0000	0.05	0.00	0.00	0.00	0.00	0	0.024271
19	0.0000	0.05	0.00	0.00	0.00	0.00	1	0.039805
20	0.0000	0.05	0.00	0.00	0.00	0.00	2	0.026213
21	0.0000	0.05	0.00	0.00	0.00	0.00	3	0.023301
22	0.0000	0.05	0.00	0.00	0.00	0.00	4	0.023301
23	0.0001	0.05	0.00	0.00	0.00	0.00	5	0.023301
24	0.0001	0.10	0.00	0.00	0.00	0.00	6	0.023301
25	0.0001	0.10	0.00	0.00	0.00	0.00	7	0.021360
26	0.0001	0.16	0.00	0.00	0.00	0.00	8	0.021360
27	0.0001	0.13	0.00	0.00	0.00	0.00	9	0.021360
28	0.0001	0.12	0.00	0.00	0.00	0.00	10	0.019418
29	0.0001	0.12	0.00	0.00	0.00	0.00	11	0.019418
30	0.0001	0.12	0.00	0.00	0.00	0.00	12	0.019418
31	0.0001	0.10	0.00	0.00	0.00	0.00	13	0.019418
32	0.0001	0.12	0.00	0.00	0.00	0.00	14	0.019418
33	0.0001	0.10	0.00	0.00	0.00	0.00	15	0.018447
34	0.0001	0.10	0.00	0.00	0.00	0.00	16	0.018447
35	0.0001	0.10	0.00	0.00	0.00	0.00	17	0.018447
36	0.0001	0.07	0.00	0.00	0.00	0.00	18	0.017476
37	0.0001	0.07	0.00	0.00	0.00	0.00	19	0.017476
38	0.0001	0.08	0.00	0.00	0.00	0.00	20	0.017476
39	0.0010	0.08	0.00	0.00	0.00	0.00	21	0.017505
40	0.0010	0.07	0.05	0.00	0.00	0.00	22	0.014563
41	0.0010	0.06	0.09	0.00	0.00	0.00	23	0.014563
42	0.0010	0.05	0.09	0.00	0.00	0.00	24	0.014563
43	0.0010	0.05	0.09	0.00	0.00	0.00	25	0.014563
44	0.0010	0.05	0.09	0.00	0.00	0.00	26	0.014563
45	0.0010	0.04	0.09	0.00	0.00	0.00	27	0.014563
46	0.0010	0.04	0.09	0.00	0.00	0.00	28	0.014563
47	0.0010	0.04	0.06	0.00	0.00	0.00	29	0.014563
48	0.0010	0.03	0.06	0.00	0.00	0.00	30	0.014563
49	0.0010	0.03	0.05	0.00	0.00	0.00	31	0.014563
50	0.0010	0.02	0.04	0.00	0.00	0.00	32	0.014563
51	0.0010	0.02	0.03	0.00	0.03	0.00	33	0.014563
52	0.0040	0.02	0.05	0.00	0.07	0.00	34	0.014563
53	0.0040	0.02	0.05	0.00	0.12	0.00	35	0.014563

	Disability	Termination	Retirement		DROP			Merit
Age	Rates	Rates	Rates*	Rates**	Rates*	Rates**	Duration	Scale***
54	0.0010	0.02	0.09	0.00	0.12	0.00	36	0.014563
55	0.0010	0.02	0.18	0.00	0.55	0.00	>36	0.014563
56	0.0010	0.02	0.18	0.00	0.10	0.00		
57	0.0010	0.02	0.18	0.00	0.10	0.00		
58	0.0010	0.02	0.28	0.00	0.07	0.00		
59	0.0010	0.02	0.21	0.00	0.07	0.00		
60	0.0010	0.02	0.28	0.50	0.07	0.25		
61	0.0010	0.02	0.21	0.21	0.02	0.02		
62	0.0010	0.02	0.21	0.21	0.01	0.01		
63	0.0010	0.02	0.21	0.21	0.01	0.01		
64	0.0010	0.02	0.21	0.21	0.01	0.01		
65	0.0010	0.02	0.28	0.28	0.01	0.01		
66	0.0010	0.02	0.28	0.28	0.01	0.01		
67	0.0010	0.02	0.28	0.28	0.01	0.01		
68	0.0010	0.02	0.28	0.28	0.01	0.01		
69	0.0005	0.02	0.20	0.20	0.01	0.01		
70	0.0005	0.02	0.20	0.20	0.01	0.01		
71	0.0005	0.02	0.20	0.20	0.01	0.01		
72	0.0005	0.02	0.50	0.50	0.01	0.01		
73	0.0005	0.02	0.50	0.50	0.01	0.01		
74	0.0005	0.02	0.99	0.99	0.01	0.01		

LUNCH PLAN A
ACTUARIAL TABLES AND RATES - Prior to July 1, 2013

*Salary Scale is (1+ Inflation) x (1+ Merit)

	Disability	Termination	Retirement	DROP		Merit
Age	Rates	Rates	Rates	Rates	Duration	Scale*
18	0.0000	0.00	0.00	0.00	0	0.033981
19	0.0000	0.00	0.00	0.00	1	0.043689
20	0.0000	0.00	0.00	0.00	2	0.038835
21	0.0000	0.00	0.00	0.00	3	0.034951
22	0.0000	0.00	0.00	0.00	4	0.034951
23	0.0000	0.00	0.00	0.00	5	0.027184
24	0.0000	0.00	0.00	0.00	6	0.027184
25	0.0000	0.00	0.00	0.00	7	0.027184
26	0.0000	0.00	0.00	0.00	8	0.027184
27	0.0000	0.00	0.00	0.00	9	0.014563
28	0.0000	0.00	0.00	0.00	10	0.014563
29	0.0000	0.00	0.00	0.00	11	0.014563
30	0.0000	0.02	0.00	0.00	12	0.014563
31	0.0001	0.02	0.00	0.00	13	0.014563
32	0.0001	0.02	0.00	0.00	14	0.014563
33	0.0001	0.02	0.00	0.00	15	0.014563
34	0.0001	0.02	0.00	0.00	16	0.014563
35	0.0001	0.02	0.00	0.00	17	0.014563
36	0.0001	0.02	0.00	0.00	18	0.014563
37	0.0001	0.02	0.00	0.00	19	0.021359
38	0.0001	0.02	0.00	0.00	20	0.014563
39	0.0001	0.02	0.00	0.00	21	0.009709
40	0.0001	0.02	0.00	0.00	22	0.009709
41	0.0001	0.02	0.00	0.00	23	0.014563
42	0.0001	0.02	0.00	0.00	24	0.014563
43	0.0001	0.02	0.00	0.00	25	0.017476
44	0.0100	0.02	0.00	0.00	26	0.017476
45	0.0100	0.02	0.00	0.00	27	0.017476
46	0.0100	0.02	0.00	0.00	28	0.017476
47	0.0100	0.02	0.00	0.00	29	0.019417
48	0.0100	0.02	0.00	0.02	30	0.019417
49	0.0150	0.02	0.01	0.02	31	0.029126
50	0.0150	0.02	0.01	0.02	32	0.019417
51	0.0150	0.02	0.01	0.02	33	0.019417
52	0.0150	0.02	0.01	0.02	34	0.019417
53	0.0150	0.02	0.03	0.02	35	0.014563

	Disability	Termination	Retirement	DROP		Merit
Age	Rates	Rates	Rates	Rates	Duration	Scale*
54	0.0150	0.02	0.03	0.02	36	0.014563
55	0.0300	0.02	0.15	0.50	37+	0.014563
56	0.0250	0.02	0.15	0.20		
57	0.0250	0.02	0.15	0.20		
58	0.0250	0.02	0.25	0.20		
59	0.0250	0.02	0.25	0.20		
60	0.0100	0.02	0.35	0.55		
61	0.0002	0.01	0.35	0.20		
62	0.0002	0.01	0.35	0.10		
63	0.0002	0.01	0.50	0.02		
64	0.0002	0.01	0.50	0.02		
65	0.0002	0.01	0.40	0.02		
66	0.0002	0.01	0.40	0.02		
67	0.0002	0.01	0.35	0.02		
68	0.0002	0.01	0.25	0.02		
69	0.0000	0.01	0.20	0.02		
70	0.0000	0.01	0.20	0.02		
71	0.0000	0.01	0.20	0.02		
72	0.0000	0.01	0.50	0.02		
73	0.0000	0.01	0.50	0.02		
74	0.0000	0.01	0.99	0.02		

LUNCH PLAN B
ACTUARIAL TABLES AND RATES - Prior to July 1, 2013

*Salary Scale is (1+ Inflation) x (1+ Merit)

	Disability	Termination	Retirement	DROP		Merit
Age	Rates	Rates	Rates	Rates	Duration	Scale*
18	0.0000	0.00	0.00	0.00	0	0.033981
19	0.0000	0.00	0.00	0.00	1	0.043689
20	0.0000	0.00	0.00	0.00	2	0.038835
21	0.0000	0.00	0.00	0.00	3	0.034951
22	0.0000	0.10	0.00	0.00	4	0.034951
23	0.0000	0.10	0.00	0.00	5	0.027184
24	0.0000	0.10	0.00	0.00	6	0.027184
25	0.0000	0.20	0.00	0.00	7	0.027184
26	0.0000	0.15	0.00	0.00	8	0.027184
27	0.0000	0.07	0.00	0.00	9	0.024272
28	0.0000	0.07	0.00	0.00	10	0.024272
29	0.0000	0.07	0.00	0.00	11	0.024272
30	0.0000	0.07	0.00	0.00	12	0.024272
31	0.0000	0.07	0.00	0.00	13	0.019417
32	0.0000	0.07	0.00	0.00	14	0.019417
33	0.0000	0.07	0.00	0.00	15	0.019417
34	0.0000	0.07	0.00	0.00	16	0.019417
35	0.0000	0.07	0.00	0.00	17	0.019417
36	0.0010	0.07	0.00	0.00	18	0.019417
37	0.0010	0.07	0.00	0.00	19	0.019417
38	0.0010	0.06	0.00	0.00	20	0.012621
39	0.0010	0.06	0.00	0.00	21	0.012621
40	0.0030	0.06	0.00	0.00	22	0.012621
41	0.0030	0.06	0.00	0.00	23	0.012621
42	0.0030	0.06	0.00	0.00	24	0.012621
43	0.0030	0.05	0.00	0.00	25	0.012621
44	0.0030	0.04	0.00	0.00	26	0.012621
45	0.0030	0.04	0.00	0.00	27	0.012621
46	0.0030	0.04	0.00	0.00	28	0.012621
47	0.0060	0.04	0.00	0.00	29	0.012621
48	0.0060	0.03	0.00	0.00	30	0.012621
49	0.0060	0.03	0.00	0.00	31	0.004854
50	0.0150	0.03	0.00	0.00	32	0.004854
51	0.0150	0.03	0.00	0.00	33+	0.004854
52	0.0150	0.03	0.00	0.00		
53	0.0150	0.03	0.00	0.00		

	Disability	Termination	Retirement	DROP		Merit
Age	Rates	Rates	Rates	Rates	Duration	Scale*
54	0.0255	0.03	0.00	0.30		
55	0.0255	0.03	0.35	0.50		
56	0.0255	0.03	0.33	0.45		
57	0.0255	0.03	0.30	0.15		
58	0.0255	0.03	0.30	0.15		
59	0.0255	0.03	0.30	0.15		
60	0.0050	0.03	0.30	0.15		
61	0.0050	0.03	0.30	0.03		
62	0.0050	0.03	0.30	0.01		
63	0.0050	0.03	0.45	0.01		
64	0.0050	0.03	0.45	0.01		
65	0.0030	0.03	0.30	0.01		
66	0.0030	0.03	0.25	0.01		
67	0.0030	0.03	0.25	0.01		
68	0.0030	0.03	0.25	0.01		
69	0.0000	0.03	0.25	0.01		
70	0.0000	0.03	0.50	0.01		
71	0.0000	0.03	0.50	0.01		
72	0.0000	0.03	0.50	0.01		
73	0.0000	0.03	0.50	0.01		
74	0.0000	0.03	0.99	0.01		

RP-2000 PROJECTED TO 2025 w/AA FOR ALL SUB-PLANS
On or after July 1, 2013

For Regular Teachers Sub Plan, Higher Education Sub Plan, Lunch A Sub Plan and Lunch B Sub Plan.

Death Rate			Death Rate			DROP		
Age	Male	Female	Age	Male	Female	Age	Male	Female
18	0.00020	0.00013	53	0.00176	0.00163	88	0.13285	0.09707
19	0.00021	0.00013	54	0.00193	0.00189	89	0.14682	0.11053
20	0.00021	0.00013	55	0.00224	0.00222	90	0.16592	0.12215
21	0.00023	0.00013	56	0.00267	0.00266	91	0.18072	0.13414
22	0.00024	0.00013	57	0.00306	0.00307	92	0.20094	0.14621
23	0.00026	0.00013	58	0.00352	0.00346	93	0.21675	0.16211
24	0.00027	0.00014	59	0.00397	0.00392	94	0.23255	0.17388
25	0.00029	0.00015	60	0.00451	0.00446	95	0.25443	0.18501
26	0.00033	0.00016	61	0.00526	0.00513	96	0.27005	0.19535
27	0.00034	0.00017	62	0.00600	0.00587	97	0.28521	0.20992
28	0.00035	0.00017	63	0.00704	0.00675	98	0.30751	0.21842
29	0.00036	0.00018	64	0.00793	0.00760	99	0.32205	0.22567
30	0.00039	0.00021	65	0.00895	0.00856	100	0.33605	0.23160
31	0.00044	0.00025	66	0.01039	0.00966	101	0.35863	0.24483
32	0.00050	0.00029	67	0.01159	0.01073	102	0.37169	0.25450
33	0.00056	0.00031	68	0.01256	0.01186	103	0.38304	0.26604
34	0.00062	0.00034	69	0.01392	0.01311	104	0.39200	0.27906
35	0.00068	0.00036	70	0.01522	0.01477	105	0.39789	0.29312
36	0.00074	0.00038	71	0.01684	0.01598	106	0.40000	0.30781
37	0.00080	0.00040	72	0.01870	0.01778	107	0.40000	0.32273
38	0.00083	0.00042	73	0.02083	0.01927	108	0.40000	0.33744
39	0.00086	0.00044	74	0.02323	0.02136	109	0.40000	0.35154
40	0.00088	0.00048	75	0.02660	0.02299	110	0.40000	0.36462
41	0.00091	0.00053	76	0.02964	0.02533	111	0.40000	0.37625
42	0.00095	0.00058	77	0.03382	0.02861	112	0.40000	0.38602
43	0.00099	0.00064	78	0.03854	0.03154	113	0.40000	0.39351
44	0.00103	0.00071	79	0.04393	0.03482	114	0.40000	0.39831
45	0.00109	0.00075	80	0.05007	0.03849	115	0.40000	0.40000
46	0.00114	0.00080	81	0.05747	0.04260	116	0.40000	0.40000
47	0.00119	0.00084	82	0.06584	0.04723	117	0.40000	0.40000
48	0.00124	0.00091	83	0.07340	0.05244	118	0.40000	0.40000
49	0.00130	0.00098	84	0.08371	0.05832	119	0.40000	0.40000
50	0.00136	0.00109	85	0.09292	0.06663	120	1.00000	1.00000
51	0.00152	0.00124	86	0.10302	0.07620			
52	0.00161	0.00142	87	0.11704	0.08715			

REGULAR TEACHERS
ACTUARIAL TABLES AND RATES - On or after July 1, 2013

*Salary Increase is $(1 + \text{Inflation}) \times (1 + \text{Merit}) - 1$

Age	Disability Rates	Termination Rates				Retirement/DROP Rates			Duration	Merit Scale*
		< 3 Years	3 Years	4 Years	5+ Years	<25	25-29	30+		
18	0.0000	0.200	0.200	0.095	0.180	0.000	0.000	0.000	0	0.0325
19	0.0000	0.200	0.200	0.095	0.180	0.000	0.000	0.000	1	0.0325
20	0.0000	0.200	0.200	0.095	0.180	0.000	0.000	0.000	2	0.0325
21	0.0000	0.200	0.200	0.095	0.180	0.000	0.000	0.000	3	0.0325
22	0.0000	0.200	0.200	0.095	0.180	0.000	0.000	0.000	4	0.0325
23	0.0001	0.200	0.200	0.095	0.180	0.000	0.000	0.000	5	0.0250
24	0.0001	0.200	0.200	0.095	0.180	0.000	0.000	0.000	6	0.0250
25	0.0001	0.180	0.126	0.095	0.090	0.000	0.000	0.000	7	0.0250
26	0.0001	0.180	0.126	0.095	0.060	0.000	0.000	0.000	8	0.0250
27	0.0001	0.190	0.126	0.095	0.060	0.000	0.000	0.000	9	0.0250
28	0.0001	0.190	0.126	0.095	0.055	0.000	0.000	0.000	10	0.0225
29	0.0001	0.190	0.126	0.095	0.053	0.000	0.000	0.000	11	0.0225
30	0.0001	0.190	0.120	0.109	0.053	0.000	0.000	0.000	12	0.0225
31	0.0003	0.190	0.120	0.109	0.050	0.000	0.000	0.000	13	0.0225
32	0.0003	0.190	0.120	0.109	0.045	0.000	0.000	0.000	14	0.0225
33	0.0003	0.190	0.120	0.109	0.045	0.000	0.000	0.000	15	0.0200
34	0.0003	0.190	0.120	0.109	0.045	0.000	0.000	0.000	16	0.0200
35	0.0006	0.180	0.117	0.095	0.040	0.000	0.000	0.000	17	0.0200
36	0.0010	0.180	0.117	0.095	0.040	0.000	0.000	0.000	18	0.0200
37	0.0007	0.180	0.117	0.095	0.040	0.000	0.000	0.000	19	0.0200
38	0.0007	0.180	0.117	0.095	0.040	0.050	0.000	0.000	20	0.0150
39	0.0011	0.180	0.117	0.095	0.040	0.040	0.000	0.000	21	0.0150
40	0.0011	0.165	0.123	0.090	0.037	0.040	0.000	0.000	22	0.0150
41	0.0013	0.165	0.123	0.090	0.037	0.025	0.000	0.000	23	0.0150
42	0.0016	0.165	0.123	0.090	0.037	0.025	0.000	0.000	24	0.0150
43	0.0016	0.165	0.123	0.090	0.037	0.025	0.000	0.000	25	0.0125
44	0.0016	0.165	0.123	0.090	0.040	0.025	0.000	0.000	26	0.0125
45	0.0022	0.163	0.099	0.090	0.040	0.025	0.020	0.000	27	0.0125
46	0.0022	0.163	0.099	0.090	0.040	0.025	0.020	0.000	28	0.0125
47	0.0022	0.163	0.099	0.090	0.040	0.025	0.020	0.000	29	0.0125
48	0.0022	0.163	0.099	0.090	0.040	0.030	0.020	0.700	30+	0.0175
49	0.0022	0.163	0.099	0.090	0.040	0.030	0.020	0.600		
50	0.0025	0.175	0.112	0.090	0.040	0.030	0.050	0.300		
51	0.0025	0.175	0.112	0.090	0.040	0.030	0.170	0.600		
52	0.0025	0.175	0.112	0.090	0.040	0.030	0.280	0.600		
53	0.0030	0.175	0.112	0.090	0.040	0.100	0.280	0.500		

	Disability	Termination Rates				Retirement/DROP Rates				
Age	Rates	< 3 Year	3 Years	4 Years	5+ Years	<25	25-29	30+		
54	0.0030	0.175	0.112	0.090	0.040	0.150	0.450	0.400		
55	0.0040	0.175	0.106	0.090	0.040	0.150	0.750	0.300		
56	0.0050	0.175	0.106	0.090	0.040	0.150	0.330	0.200		
57	0.0055	0.155	0.106	0.090	0.040	0.150	0.250	0.200		
58	0.0055	0.200	0.106	0.090	0.040	0.250	0.250	0.200		
59	0.0055	0.200	0.106	0.090	0.040	0.250	0.300	0.200		
60	0.0055	0.200	0.106	0.090	0.040	0.250	0.300	0.200		
61	0.0050	0.200	0.106	0.090	0.040	0.150	0.300	0.200		
62	0.0050	0.200	0.106	0.090	0.040	0.150	0.220	0.250		
63	0.0050	0.200	0.106	0.090	0.040	0.150	0.170	0.150		
64	0.0035	0.200	0.106	0.090	0.040	0.200	0.200	0.300		
65	0.0035	0.200	0.106	0.090	0.040	0.200	0.200	0.300		
66	0.0020	0.200	0.106	0.090	0.040	0.200	0.200	0.300		
67	0.0020	0.200	0.106	0.090	0.040	0.200	0.200	0.200		
68	0.0020	0.200	0.106	0.090	0.040	0.200	0.300	0.300		
69	0.0020	0.200	0.106	0.090	0.040	0.200	0.300	0.300		
70	0.0020	0.200	0.106	0.090	0.040	0.200	0.300	0.400		
71	0.0020	0.200	0.106	0.090	0.040	0.200	0.300	0.200		
72	0.0020	0.200	0.106	0.090	0.040	0.200	0.300	0.250		
73	0.0020	0.200	0.106	0.090	0.040	0.200	0.300	0.250		
74	0.0020	0.200	0.106	0.090	0.040	0.200	0.300	0.250		

HIGHER EDUCATION
ACTUARIAL TABLES AND RATES - On or after July 1, 2013

*Salary Increase is $(1 + \text{Inflation}) \times (1 + \text{Merit}) - 1$

Age	Disability Rates	Termination Rates				Retirement/DROP Rates			Duration	Merit Scale*
		< 3 Years	3 Years	4 Years	5+ Years	<25	25-29	30+		
<=25	0.0000	0.250	0.250	0.170	0.120	0.00	0.00	0.00	0	0.075
26	0.0001	0.210	0.250	0.170	0.120	0.00	0.00	0.00	1	0.075
27	0.0001	0.210	0.220	0.170	0.120	0.00	0.00	0.00	1	0.075
28	0.0001	0.220	0.220	0.170	0.120	0.00	0.00	0.00	1	0.075
29	0.0001	0.240	0.220	0.170	0.120	0.00	0.00	0.00	1	0.075
30	0.0001	0.250	0.160	0.170	0.180	0.00	0.00	0.00	2	0.065
31	0.0001	0.220	0.178	0.170	0.100	0.00	0.00	0.00	3	0.055
32	0.0001	0.220	0.190	0.160	0.100	0.00	0.00	0.00	4	0.015
33	0.0001	0.190	0.170	0.150	0.120	0.00	0.00	0.00	5	0.045
34	0.0001	0.230	0.155	0.100	0.120	0.00	0.00	0.00	6	0.025
35	0.0001	0.220	0.175	0.130	0.120	0.00	0.00	0.00	7	0.045
36	0.0001	0.220	0.160	0.150	0.120	0.00	0.00	0.00	8	0.045
37	0.0001	0.220	0.108	0.150	0.120	0.00	0.00	0.00	9	0.020
38	0.0001	0.190	0.180	0.150	0.100	0.10	0.08	0.60	10	0.020
39	0.0001	0.190	0.140	0.150	0.100	0.10	0.08	0.60	11	0.020
40	0.0001	0.230	0.185	0.150	0.100	0.10	0.08	0.60	12	0.020
41	0.0001	0.165	0.108	0.150	0.100	0.10	0.08	0.60	13	0.020
42	0.0001	0.230	0.115	0.150	0.100	0.10	0.08	0.60	14	0.015
43	0.0001	0.155	0.168	0.150	0.100	0.07	0.08	0.60	15	0.015
44	0.0001	0.195	0.135	0.150	0.100	0.07	0.08	0.60	16	0.015
45	0.0001	0.190	0.116	0.150	0.100	0.07	0.08	0.60	17	0.015
46	0.0008	0.162	0.170	0.150	0.080	0.07	0.08	0.60	18	0.015
47	0.0008	0.210	0.140	0.150	0.090	0.07	0.08	0.60	19	0.015
48	0.0008	0.135	0.180	0.150	0.090	0.07	0.08	0.60	20	0.015
49	0.0008	0.135	0.125	0.150	0.090	0.07	0.08	0.60	21	0.015
50	0.0008	0.185	0.108	0.060	0.090	0.07	0.08	0.60	22	0.015
51	0.0008	0.145	0.070	0.050	0.090	0.07	0.16	0.60	23	0.015
52	0.0008	0.155	0.110	0.095	0.090	0.07	0.16	0.60	24	0.015
53	0.0008	0.220	0.130	0.125	0.090	0.07	0.16	0.60	25	0.015
54	0.0008	0.220	0.075	0.017	0.090	0.15	0.28	0.40	26	0.015
55	0.0008	0.200	0.104	0.140	0.090	0.15	0.35	0.20	27	0.010
56	0.0020	0.135	0.122	0.10	0.080	0.15	0.2	0.05	28+	0.010
57	0.0020	0.250	0.055	0.140	0.080	0.15	0.13	0.05		
58	0.0020	0.100	0.115	0.200	0.100	0.15	0.13	0.05		
59	0.0005	0.100	0.210	0.125	0.080	0.15	0.13	0.05		
60	0.0005	0.150	0.160	0.090	0.060	0.15	0.13	0.05		

	Disability	Termination Rates				Retirement/DROP Rates				
Age	Rates	< 3 Years	3 Years	4 Years	5+ Years	<25	25-29	30+		
61	0.0005	0.150	0.160	0.090	0.060	0.12	0.12	0.12		
62	0.0005	0.150	0.160	0.090	0.060	0.12	0.12	0.12		
63	0.0005	0.150	0.160	0.090	0.060	0.12	0.12	0.12		
64	0.0005	0.150	0.160	0.090	0.060	0.12	0.12	0.12		
65	0.0005	0.150	0.160	0.090	0.060	0.12	0.16	0.20		
66	0.0005	0.150	0.160	0.090	0.060	0.12	0.16	0.18		
67	0.0005	0.150	0.160	0.090	0.060	0.12	0.16	0.18		
68	0.0005	0.150	0.160	0.090	0.060	0.12	0.16	0.18		
69	0.0005	0.150	0.160	0.090	0.060	0.12	0.16	0.28		
70	0.0005	0.150	0.160	0.090	0.060	0.12	0.16	0.28		
71	0.0000	0.150	0.160	0.090	0.060	0.12	0.16	0.20		
72	0.0000	0.150	0.160	0.090	0.060	0.12	0.16	0.20		
73	0.0000	0.150	0.160	0.090	0.060	0.12	0.16	0.20		
74	0.0000	0.150	0.160	0.090	0.060	0.12	0.16	0.20		
75	0.0000	0.150	0.160	0.090	0.060	1.00	1.00	1.00		

LUNCH PLAN A
ACTUARIAL TABLES AND RATES - On or after July 1, 2013

*Salary Increase is $(1 + \text{Inflation}) \times (1 + \text{Merit}) - 1$

	Disability	Retirement/DROP Rates			Merit	Termination
Age	Rates	<30 Years	30+ Years	Duration	Scale*	Rates
31-37	0.0001	0.000	0.000	0	0.035	0.14
38	0.0001	0.600	0.300	1	0.035	0.14
39	0.0001	0.600	0.300	2	0.035	0.14
40	0.0001	0.600	0.300	3	0.035	0.14
41	0.0001	0.600	0.300	4	0.035	0.14
42	0.0001	0.600	0.300	5	0.035	0.14
43	0.0001	0.600	0.300	6	0.035	0.14
44	0.0001	0.600	0.300	7	0.035	0.14
45	0.0001	0.600	0.300	8	0.035	0.14
46	0.0001	0.600	0.300	9	0.035	0.14
47	0.0001	0.600	0.300	10	0.035	0.14
48	0.0001	0.600	0.300	11	0.035	0.14
49	0.0100	0.600	0.300	12	0.023	0.14
50	0.0100	0.600	0.300	13	0.023	0.14
51	0.0100	0.600	0.300	14	0.023	0.14
52	0.0150	0.600	0.700	15	0.035	0.14
53	0.0175	0.600	0.700	16	0.035	0.14
54	0.0175	0.600	0.700	17	0.045	0.14
55	0.0175	0.800	0.700	18	0.045	0.14
56	0.0002	0.350	0.700	19	0.011	0.14
57	0.0002	0.350	0.700	20	0.011	0.14
58	0.0002	0.350	0.700	21	0.011	0.14
59	0.0002	0.600	0.700	22	0.011	0.14
60	0.0002	0.450	0.700	23	0.035	0.14
61	0.0002	0.200	0.500	24	0.035	0.14
62	0.0002	0.200	0.500	25+	0.015	0.14
63	0.0002	0.350	0.500			
64	0.0002	0.100	0.500			
65	0.0002	0.100	0.500			
66	0.0002	0.100	0.250			
67-68	0.0002	0.200	0.250			
69-74	0.0000	0.200	0.250			
75+	0.0000	1.000	1.000			

LUNCH PLAN B
ACTUARIAL TABLES AND RATES - On or after July 1, 2013

*Salary Increase is $(1 + \text{Inflation}) \times (1 + \text{Merit}) - 1$

	Disability	Retirement/DROP		Merit	Termination
Age	Rates	Rates	Duration	Scale*	Rates
36-39	0.0010	0.00	0	0.030	0.100
40-49	0.0050	0.00	1	0.030	0.100
50-54	0.0130	0.00	2	0.030	0.090
55	0.0175	0.80	3	0.030	0.080
56	0.0175	0.80	4	0.030	0.070
57	0.0225	0.80	5	0.030	0.060
58	0.0225	0.80	6	0.030	0.050
59	0.0150	0.60	7	0.030	0.050
60	0.0050	0.50	8	0.030	0.045
61	0.0050	0.25	9	0.030	0.045
62	0.0050	0.25	10	0.030	0.045
63	0.0050	0.25	11	0.020	0.045
64	0.0010	0.25	12	0.020	0.045
65	0.0010	0.15	13	0.020	0.040
66	0.0010	0.15	14	0.020	0.030
67	0.0010	0.30	15	0.020	0.030
68	0.0010	0.45	16	0.025	0.030
69-74	0.0010	0.20	17	0.025	0.050
75+	0.0010	1.00	18	0.025	0.050
			19	0.015	0.050
			20	0.015	0.030
			21+	0.015	0.040

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SECTION V
APPENDIX

**Appendix A: Financial Effect of the Differences Between Valuations
Produced by Foster & Foster and LLA – TRSL
For FYE 2015**

Change in Gain Sharing Method From Indirect to Direct Recognition

Discount Rate	8.00%	8.50%	
Salary Increases	Merit + 2.50%	Merit + 2.50%	Increase /
Gain Sharing Method	Indirect	Direct	(Decrease)
Projected Payroll	\$ 3,908,476,069	\$ 3,908,476,069	\$ 0
Employer Normal Cost	196,882,994	155,927,207	(40,955,787)
Unfunded Accrued Liability	11,267,135,283	10,526,089,402	(741,045,881)
Employer Amortization Cost	1,011,853,412	952,376,229	(59,477,183)
Total Employer Cost	1,208,736,406	1,108,303,436	(100,432,970)
Total Employer Cost Rate	27.70%	25.40%	(2.30)%

50 Basis Point Change in Real Rates of Return on Investments

Discount Rate	8.50%	8.00%	
Salary Increases	Merit + 2.50%	Merit + 2.50%	Increase /
Gain Sharing Method	Direct	Direct	(Decrease)
Projected Payroll	\$ 3,908,476,069	\$ 3,908,476,069	\$ 0
Employer Normal Cost	155,927,207	196,882,994	40,955,787
Unfunded Accrued Liability	10,526,089,402	11,789,483,364	1,263,393,962
Employer Amortization Cost	952,376,229	1,056,500,716	104,124,487
Total Employer Cost	1,108,303,436	1,253,383,710	145,080,274
Total Employer Cost Rate	25.40%	28.70%	3.30%

25 Basis Point Change in Real Rates of Return on Investments

Discount Rate	8.00%	7.75%	
Salary Increases	Merit + 2.50%	Merit + 2.50%	Increase /
Gain Sharing Method	Direct	Direct	(Decrease)
Projected Payroll	\$ 3,908,476,069	\$ 3,908,476,069	\$ 0
Employer Normal Cost	196,882,994	219,322,454	22,439,460
Unfunded Accrued Liability	11,789,483,364	12,463,696,217	674,212,853
Employer Amortization Cost	1,056,500,716	1,093,411,171	36,910,455
Total Employer Cost	1,253,383,710	1,312,733,625	59,349,915
Total Employer Cost Rate	28.70%	30.10%	1.40%

Summary of All Changes Combined

Discount Rate	8.00%	7.75%	
Salary Increases	Merit + 2.50%	Merit + 2.50%	Increase /
Gain Sharing Method	Indirect	Direct	(Decrease)
Projected Payroll	\$ 3,908,476,069	\$ 3,908,476,069	\$ 0
Employer Normal Cost	196,882,994	219,322,454	22,439,460
Unfunded Accrued Liability	11,267,135,283	12,463,696,217	1,196,560,934
Employer Amortization Cost	1,011,853,412	1,093,411,171	81,557,759
Total Employer Cost	1,208,736,406	1,312,733,625	103,997,219
Total Employer Cost Rate	27.70%	30.10%	2.40%

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