

**TEACHERS' RETIREMENT  
SYSTEM OF LOUISIANA**

**JUNE 30, 2016**

**ACTUARIAL VALUATION**

October 7, 2016

Board of Trustees  
Teachers' Retirement System of Louisiana  
Post Office Box 94123, Capitol Station  
Baton Rouge, Louisiana 70804-9123

Ladies and Gentlemen:

This report is prepared for the Board of Trustees of Teachers' Retirement System of Louisiana to present the results of the actuarial valuation of assets and liabilities, as well as funding requirements, as of June 30, 2016. The primary purpose of the report is to determine the actuarially required contribution for fiscal year ending 2017 and the projected actuarially required contribution rate for fiscal year ending 2018. The valuation measures the liability and funding levels and provides other information for financial reporting. Results should not be relied upon for other purposes.

In preparing this valuation, we have relied upon the information provided by the System regarding plan provisions, plan membership data, plan assets and other matters as detailed in the exhibits of this report. In particular, we have relied upon the Statements of Fiduciary Net Position and Changes in Fiduciary Net Position as audited by Duplantier, Hrapmann, Hogan & Maher, LLP, Certified Public Accountants. We did not audit the data or plan assets but reviewed for reasonableness and consistency with prior year data. Our review concluded that the data is reasonable and consistent with the prior year's data.

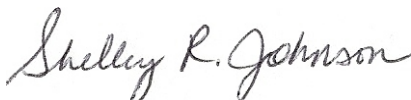
The present values shown herein have been estimated on the basis of the actuarial cost method specified in Louisiana Revised Statutes Title 11 Section 22(13). All actuarial assumptions have been adopted by the Board of Trustees and are reasonable and appropriate for the purposes of this valuation, unless otherwise stated herein. However, the use of another set of assumptions and methods could also be reasonable and could produce materially different results. Actual results may vary from assumptions used to prepare the valuation.

Exhibit 3 provides disclosures of the Fiduciary Net Position and Net Pension Liabilities required by the Governmental Accounting Standards Board Statements 67/68. This report has been prepared in accordance with actuarial standards of practice, and to the best of our knowledge, fairly reflects the actuarial present value of accrued benefits of the Teachers' Retirement System of Louisiana.

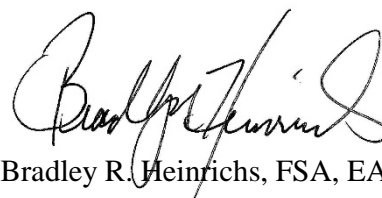
Shelley is an Associate in the Society of Actuaries and Brad is a Fellow in the Society of Actuaries. Shelley and Brad are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

FOSTER & FOSTER INC.



Shelley R. Johnson, ASA, MAAA



Bradley R. Heinrichs, FSA, EA, MAAA

## TABLE OF CONTENTS

	<u>Page #</u>
<b>LETTER OF CERTIFICATION</b>	
<b>SUMMARY OF VALUATION RESULTS</b>	
Summary of Valuation Results	2
Projected Contribution Rates by Plan	3
Changes in Funding Requirements and UAL	3
Actuarial Assets/Valuation Assets	4
Plan Experience	5
Legislative/Plan Changes	6
Funding Policy	6
Accelerated Reduction of OAB and EAAB	8
Funded Status	9
Funding of Administrative and Investment Expenses	9
Funding of Future Post Retirement Benefit Increases	9
<b>EXHIBIT 1 DEVELOPMENT OF COSTS, LIABILITIES &amp; CONTRIBUTIONS</b>	11 - 12
Provides a detail by benefit type of the cost to accrue annual pension benefits, liabilities accrued to date, and funding requirements	
<b>EXHIBIT 2 FINANCIAL SUMMARY</b>	13 - 16
Contains the statement of revenue and expenses as well as assets available to pay pension benefits	
<b>EXHIBIT 3 PENSION ACCOUNTING AND FINANCIAL DISCLOSURES</b>	17 - 20
Exhibit 3 - GASB Statement No. 67/68 Reporting	
<b>EXHIBIT 4 CENSUS DATA</b>	21 - 33
Describes the employee data, data processing for valuation purposes, member reconciliation, and depicts employee profiles by classification, age and service	
<b>EXHIBIT 5 SUMMARY OF PLAN PROVISIONS</b>	34 - 48
Restates in summary outline form the basic plan provisions which were incorporated in the projected retirement pension benefit	
<b>EXHIBIT 6 ACTUARIAL COST METHODS AND ASSUMPTIONS</b>	49 - 55
Discloses cost methods and economic/demographic assumptions which are expected to reflect plan experience	
<b>EXHIBIT 7 AMORTIZATION SCHEDULE</b>	
Exhibit 7-A – June 30, 2016	56
Exhibit 7-C – June 30, 2017 – Projected	57
Exhibit 7-C – Table and Graph of Payment Schedule	58
Exhibit 7-D – Amortization Schedule Notes	59
Exhibit 7-E – Components of Original Amortization Base	60
<b>GLOSSARY</b>	61 - 63

**SUMMARY OF VALUATION RESULTS**

A brief summary of the more important figures developed in this valuation, with comparable results from previous valuations are as follows:

	----- Prior Years -----		
	June 30, 2016	June 30, 2015	June 30, 2014
I. Membership Census			
1) Retirees	75,830	75,259	73,195
2) Actives	84,068	83,602	82,886
3) DROP	2,504	2,283	2,291
4) Terminated Vested	6,687	6,606	6,336
II. Annual Benefits	\$1,887,454,080	\$1,820,201,496	\$1,744,088,016
III. Current Payroll			
Regular Teachers	3,286,545,957	3,236,664,474	3,204,777,925
Higher Education	559,338,768	554,919,522	534,984,836
Lunch A	1,061,059	1,237,594	1,582,879
Lunch B	22,784,240	22,828,072	23,609,087
Total	3,869,730,024	3,815,649,662	3,764,954,727
IV. Valuation Assets	18,254,321,142	17,457,243,696	16,145,772,807
V. Investment Yield			
Market Value (Total Assets)	1.02%	2.52%	18.44%
Market Value (Excl LaDROP Assets)	1.04%	2.58%	18.90%
Actuarial Value	6.67%	11.26%	13.14%
DROP	6.17%	10.76%	12.64%
VI. Experience Account	24,977,477	226,356,559	218,148,161
VII. Total Normal Cost	466,591,480	463,783,246	459,658,120
Total Normal Cost -% of Payroll	12.06%	12.15%	12.21%
Employer Normal Cost (% of Payroll)	4.07%	4.17%	4.23%
VIII. Unfunded Actuarial Accrued Liability	11,018,080,836	11,189,053,201	11,973,763,757
IX. Funded Percentage	62.4%	60.9%	57.4%
X. Funding Requirements (Mid-year Pmt)			
1) Employee Contribution <sup>1</sup>	314,143,467	310,300,114	306,132,676
2) Employer Contribution	1,137,651,636	1,125,876,876	1,158,523,507
Aggregate Rate (Current Year) <sup>2</sup>	25.8%	25.8%	27.0%
3) Projected Employer Contribution	1,199,029,516	1,142,698,314	1,162,619,515
Aggregate Rate (Next Year) <sup>3</sup>	26.4%	25.4%	26.2%

The above funding requirements measure the cost of benefits that were in effect on June 30, 2016, and Acts of the 2016 Regular Legislative Session.

<sup>1</sup> Member Contributions: Regular and Higher Ed – 8.0%, Lunch Plan A – 9.10%, Lunch Plan B – 5.00%

<sup>2</sup> Reflects the restated aggregate employer contribution rate for the fiscal year following the valuation, as determined by the current year valuation.

<sup>3</sup> Reflects the projected aggregate employer contribution rate for fiscal year that begins one year after the valuation date.

## PROJECTED CONTRIBUTION RATES BY PLAN

Act 716 of 2012 requires the employer contribution rate to be individually determined for each plan type as defined within the Act beginning with Fiscal Year 2012/2013. Per Act 95 of 2016, the Lunch Plan contribution requirements are consolidated with the Regular Teachers (K-12) employer contribution rate. The term “plan” is used to define each employer group defined in the Act, and not to imply that each group has a separate plan of benefits. The normal cost portion of each plan’s employer contribution rate varies based upon that plan’s benefits, member demographics, and the rate contributed by employees. The shared UAL contribution rate is determined in aggregate for all plans. The UAL established due to a specific plan or group of plans due to legislation will be allocated entirely to that plan or those plans. The recommended employer rates by plan are as follows:

	Recommended Employer Rate for FY 17/18					Total Employer Contribution Rate
	Total Normal Cost Rate	Aggregate Employee Normal Cost Rate	Employer Normal Cost Rate	Shared UAL Rate	Particularized UAL Rate	
Regular Teachers, Lunch A & B	12.3%	7.9797%	4.3642%	22.2%	0.0%	<b>26.6%</b>
Higher Education	11.2%	8.0%	3.2194%	22.2%	0.0%	<b>25.4%</b>
Aggregate Rate	12.2%	7.9826%	4.1988%	22.2%	0.0%	<b>26.4%</b>

The variation in normal cost by plan reflects differences in benefits, actuarial assumptions, and member demographics based on the entry age normal cost method. A reconciliation of the change in projected rate from the prior year’s projected rate is included below.

## CHANGES IN UAL AND FUNDING REQUIREMENTS

Changes in the required contribution are generally the result of gains or losses resulting from actual experience differing from expected plan experience, expected changes in the UAL payment due to statutory requirements, and changes in actuarial assumptions or methods. Changes in the employer contribution rate are impacted by both the change in the total dollar required contribution and by the total aggregate payroll for active members.

The aggregate employer contribution rate established by the Public Retirement Systems' Actuarial Committee for the 2016/2017 plan year was 25.4%. The restated employer contribution rate determined by this valuation for the 2016/2017 plan year is 25.8%. Therefore, an employer contribution deficit of 0.4% is expected in next year’s valuation.

The increase in projected contribution requirements for FY 2017/18 is due mainly to the statutory 6.5% increase in the UAL payments for the OAB and EAAB schedules. **Note that this is the last year that statutes require this increase. Future OAB payments will increase by 2% and future EAAB payments will be level, which will result in a smaller likelihood of future employer contribution rate increases.** The investment experience loss relative to the discount rate was largely offset by an experience gain relative to all other actuarial assumptions. The current actuarial valuation discloses a decrease in the plan’s unfunded accrued liability (UAL) due mainly to UAL amortization payments received. **The contribution variance surplus of \$64,452,206 was used to reduce the EAAB rather than reduce employer contribution requirements, per Act 497 of 2009, which would have created a credit to the employer rate of 0.3%.**

The change in the projected employer contribution rate and the change unfunded accrued liability are detailed in the tables below. The total of the items contributing to the contribution rate change may not exactly equal the actual contribution rate change due to rounding and since the items impacting the rate do not operate in isolation of each other, hence are not additive.

**Aggregate Contribution Rate Change from FY 16/17 to FY 17/18**

Normal Cost	
Member Demographics Change	-0.10%
Discount Rate Change	0.12%
UAL Payment	
Investment Experience Loss	0.33%
Other Experience Gain	-0.28%
Statutory UAL Payment Increase	0.77%
Contribution Variance Payment Change	0.10%
Discount Rate Change	0.27%
Payroll Change	-0.15%
<b>Total</b>	<b>1.06%</b>
Actual Contribution Rate Change	1.00%

**Change In Unfunded Actuarial Accued Liability**

Unfunded Liability - June 30, 2015		\$ 11,189,053,201
Interest on Unfunded Liability	\$ 867,151,623	
Employer Amortization Payment	(1,000,284,318)	
Permanent Benefit Increase	216,473,124	
Experience Account Disbursement	(216,473,124)	
Contribution Variance Surplus	(64,452,206)	
Investment Experience Loss	184,298,067	
Other Experience Gain	(157,685,531)	
<b>Total Change</b>		<b>(170,972,365)</b>
Unfunded Liability - June 30, 2016		\$ 11,018,080,836

**ACTUARIAL ASSETS/VALUATION ASSETS**

Because the market value of assets can be volatile from one year to the next, an asset valuation method is generally used to adjust the market value of assets to smooth the effects of short-term volatility. The adjusted asset value is called the actuarial value of assets. The method gradually recognizes investment gains and losses relative to the assumed rate over five years.

The gross actuarial value of assets represents the total assets to fund all liabilities of the pension plan as well as side-fund accounts dedicated for other purposes. The valuation assets exclude the side-fund accounts for purposes of determining the employer contribution rate as illustrated in Exhibit 2.

The side-fund accounts excluded from valuation assets are as follows:

**Employer Credit Account:**

This account, established by Act 588 of 2004, accumulates the excess contributions based on the statutory minimum employer contribution rate of 15.5% over the actuarially required employer contribution (ARC), as restated in the current valuation. The minimum rate is not currently applicable, and the account continues to have a zero balance.

**LSU Agriculture and Extension Service Fund:**

Participants of the LSU Agriculture and Extension Service receive supplemental benefits from TRSL equal to the difference between the TRSL benefit formula and the Federal Civil Service formula. The funding is recorded separately in the side-fund with assets co-mingled with the TRSL assets. The current balance is \$2,535,804.

**Experience Account Fund:**

The account is used to fund permanent benefit increases for retirees. Fifty percent of any excess return above \$200,000,000, indexed to increases in the actuarial value of assets beginning June 30, 2016, are credited to the Experience Account, subject to the restrictions provided in Act 399 of 2014, described in Exhibit 5. Based on the current funded ratio, the account balance is currently restricted to the reserve needed to fund one 1.5% permanent benefit increase. The cost of the 1.5% PBI, per Act 93 of 2016, was disbursed from the fund. The account was credited with interest based on the System’s actuarial return. The current balance is \$24,977,477.

PLAN EXPERIENCE

The actuary is charged with recommending actuarial assumptions based on the best estimate of future plan experience to properly fund future benefits. The results of the actuarial valuation are dependent on the actuarial assumptions used. These assumptions, which are adopted by the Board of Trustees, are detailed in Exhibit 6 of the valuation report. If the actual experience differs from the projected experience, a gain or loss occurs. For the current measurement period, this gain or loss is amortized over a 30 year period with level dollar payments, except for investment gains allocated to the OAB, EAAB, or the Experience Account.

**Economic/Investment Experience**

For the plan year ending June 30, 2016, the System’s actuarial rate of return of 6.67% was less than the 7.75% discount rate, resulting in an investment experience loss of \$184,298,067. The investment experience.

The historical geometric average rates of return on the total actuarial value of assets, net of investment expenses, for plan years ending June 30 are shown below. The discount rate reflects the expected return needed to fund regular plan benefits. The returns shown below are comparable to the discount rate plus returns expected to be used to fund the experience account and administrative expenses, or 8.10%.

	Actuarial Rate of Return		Geometric Average
2012	5.05%	5 Year	9.85%
2013	13.41%	10 Year	6.01%
2014	13.14%	20 Year	7.27%
2015	11.26%	25 Year	7.97%
2016	6.67%	30 Year	8.35%

**Demographic Experience and Salary Assumptions:**

Demographic assumptions include rates of retirement/DROP, rates at which members become disabled, turnover rates, mortality rates, and several other demographic assumptions. Salary assumptions anticipate future salary increases. During the 2015/2016 plan year, the system incurred an experience gain of \$157,685,531 from plan experience differing from that anticipated by the demographic and salary assumptions. The experience gain includes a reduction for administrative expenses, as described below.

**LEGISLATIVE/PLAN CHANGES**

Act 93 of 2016 provides for a 1.5% permanent benefit increase, calculate on the first \$60,000 of a recipient's benefit for eligible members, effective July 1, 2016. All retirees must have been retired by June 30, 2015 to be eligible. Regular retirees must be at least age 60. There is no age requirement for disability retirees. Non-retiree beneficiaries are eligible if the retiree would have attained age 60 by June 30, 2015.

Act 94 of 2016 provides for direct funding by employers of noninvestment-related administrative expenses beginning in the first fiscal year in which the projected aggregate employer contribution rate, calculated without regard to any changes in the board-approved actuarial valuation rate, will not increase.

Act 95 of 2016 amends the funding policy and other provisions as follows:

- Accelerates the implementation of the reduction in amortization period for most actuarial changes, gains, or losses from 30 years to 20 years. The 20 year amortization will begin once the funded ratio reaches 70%, rather than 85%, as previously required.
- Accelerates the implementation of the change in amortization of actuarial gains allocated to the experience account. The transfer of gains to the experience account will be amortized as a loss with level payments over a ten-year period, beginning with the first system valuation following June 30, 2015, in which an allocation is made to the system's experience account, rather than beginning on June 30, 2019, as provided by prior law.
- Provides for re-amortization of the OAB with level-dollar payments to 2029 in 2020-2021 Fiscal Year or later, when such re-amortization results in annual payments that are not more than the next annual payment otherwise required under prior law.
- Provides that until a system is 80% funded, the net remaining liability of the OAB and EAAB shall be re-amortized after application of the hurdle payments in the 2019-2020 Fiscal Year and in every fifth fiscal year thereafter.
- Accelerates the timing of the review of volatility of payment schedules. Prior law required that the results of the study be reported to the Public Retirement Systems' Actuarial Committee by Nov. 1, 2019. Act 95 requires the review of volatility to be done following the close of Fiscal Year 2016-2017 and the report to be submitted by Nov. 1, 2017.
- Consolidates all K-12 employee groups at Teachers' into a single plan for rate purposes.

**FUNDING POLICY**

TRSL's funding policy is established by Sections 102 and 102.2 of Title 11 of the Louisiana Revised Statutes. TRSL is funded by employee and employer contributions, as a percentage of payroll, plus investment earnings. The basic elements of the annual required contribution are the normal cost, which is the cost of benefits earned by current active employees that is allocated to the current year, plus amortization of the unfunded accrued liability (UAL). Act 55 of 2014, Section 1, appropriates a percentage of nonrecurring revenue in accordance with the Constitution Article VII, Section 10(D)(2)(b)(ii) and requires the funds to be used to reduce the Initial UAL (IUAL). The funds are used to reduce the Original Amortization Base (OAB), which includes the IUAL.



Per State constitutional provisions, the employer contribution rate cannot drop below 11.8%, without regard to employer credits, and without a corresponding adjustment to the employee contribution rate. Per statutory provisions, the employer contribution rate cannot drop below 15.5% until the UAL that existed on June 30, 2004 is fully funded. Amounts paid to the system due to the minimum will be accumulated in the employer credit account to be used exclusively to reduce any UAL created before July 1, 2004.

Employee contribution rates are fixed and established by statutes. Employer contributions are determined using the Entry Age Normal actuarial cost method, as required by statute, and actuarial assumptions regarding future plan experience, such as long-term expected investment rates of return, future salary increases, and demographic assumptions such as rates of retirement, termination, disability, and mortality. The actuarial assumptions utilized in this valuation can be found in Exhibit 6. The cost method is used to determine the normal cost, which is divided into the employee and employer portion, both expressed as a percentage of payroll. The cost method also determines the plan's total actuarial accrued liability. The UAL is determined as the total actuarial accrued liability less the plan's valuation assets, which are developed in Exhibit 2 of this report. The UAL changes annually due to gains or losses that develop as actual plan experience differs from that assumed by the actuarial assumptions, and if applicable, changes in benefits, or actuarial methods and/or assumptions. Statutes provide for the amortization of changes in the UAL.

Benefit changes resulting in an actuarial cost can only be enacted by a two-thirds vote of the legislature and must be paid within 10 years. Non-investment experience gains and losses and investment losses are amortized over 30 years with level payments. Investment gains are first allocated to the OAB and EAAB, without re-amortization, up to the \$200 million threshold amounts, indexed beginning June 30, 2016, as required by Act 399 of 2014. By not re-amortizing, gains applied to these schedules result in earlier pay-off of these schedules. One-half of any remaining gains are credited to the experience account up to the statutory cap. Any remaining gains are then amortized over 30 years with level payments. Beginning in 2016, the full investment gain remaining after the allocation to the OAB and EAAB will be amortized over 30 years, and any gains credited to the experience account will be amortized as an offsetting loss over a 10 year period. Once the fund attains a funded ratio of 70%, future gains or losses that would have otherwise been amortized over 30 years will be amortized over 20 years. The OAB will be re-amortized with level-dollar payments to 2029 in fiscal year 2020/21 or later, when such re-amortization results in annual payments that are not more than the next annual payment otherwise required. If the System is less than 80% funded, the net remaining liability of the OAB and EAAB shall be re-amortized after application of the "threshold allocations" in Fiscal Year 2019-2020 and in every fifth fiscal year thereafter. Once the system attains an 80% funded ratio, the OAB and EAAB will be re-amortized following allocations of "threshold allocations" or contribution variance surpluses.

Future payments to amortize the OAB and Experience Account Amortization Base will increase as shown in the following table, as required by Act 497 of 2010. All other schedules will have level payments.

Plan Year	Original Amortization Base	Experience Account Amortization Base
2016/2017 – 2017/2018	6.5%	6.5%
2018/2019 +	2.0%	Level Payments

If aggregate payroll increases at the same rate as the percentage increase in total amortization payments, the employer contribution rate attributable to the amortization payments would maintain a level percentage of payroll. If future aggregate payroll increases at a higher rate than total amortization payments, the employer contribution rate will decrease. Future total UAL amortization payments for all current schedules and the annual percentage change are shown in Exhibit 7-C.

Employers pay the full required employer contribution rate, as recommended to the legislature by the Public Retirement Systems' Actuarial Committee (PR SAC). This rate is determined as the projected actuarially determined contribution divided by the projected payroll. The actual actuarially determined contribution and

actual payroll will vary from the projected amounts, resulting in a contribution variance. Per statutory requirements, contribution surpluses through fiscal year 2039/2040 will be allocated to the EAAB and contribution deficits will be amortized over a five year period with level payments.

The funding policy described above is consistent with the plan accumulating adequate assets to make benefit payments when due and improving the funded status of the plan by fully amortizing the unfunded accrued liability, assuming that the actuarially determined contributions will be paid when due and all actuarial assumptions will be realized.

**ACCELERATED REDUCTION OF OAB AND EAAB**

Act 497 of 2009 established the OAB and EAAB and required the application of certain investment gains and contribution variance credits to these schedules. Act 399 modified the provisions of Act 497 and specifies that until the System’s funded ratio reaches 85%, the funds applied to these schedules will be used to pay off the schedules early, rather than to reduce employer contributions. Since 2009, \$250,000,000 has been applied to the OAB and \$453,195,808 has been applied to the EAAB. When combined with the surplus dollars appropriated to the System by the legislature, these result in the acceleration of the payoff of the OAB to 2028, one year earlier than the 2029 payoff required by the State Constitution. These funds have resulted in the acceleration of the payoff of the EAAB by 2035, five years earlier than the statutory requirement that this schedule be paid by 2040. A projection of future UAL and UAL payments based on current amortization schedules is shown in Exhibit 7-C. This projection assumes that the actuarially determined contributions will be paid when due and all actuarial assumptions will be realized.

The table below illustrates the impact of Acts 497 and 399 by showing how investment gains and contribution variance surpluses occurring between 2010 and 2016 have been allocated compared to the allocation that would have occurred prior to these Acts. To date, \$546,642,127 million in gains/surpluses have reduced the UAL rather than credit the Experience Account based on the change in funding policy.

	<b>Investment Gain and Contribution Surplus</b>	<b>Allocation of Gains/Surplus Pre-Acts 497/399 (If Not Enacted)</b>		<b>Actual Allocation of Gains/Surplus Based on Acts 497/399</b>	
		<b>Reduce UAL</b>	<b>Credit Experience Account</b>	<b>Reduce UAL</b>	<b>Credit Experience Account</b>
2010	0	0	0	0	0
2011	0	0	0	0	0
2012	7,169,301	7,169,301	0	7,169,301	0
2013	639,473,813	319,736,907	319,736,907	419,736,907	219,736,906
2014	734,622,453	387,456,051	347,166,403	564,287,565	170,334,888
2015	630,905,879	361,095,266	269,810,613	630,905,879	0
2016	64,452,206	64,452,206	0	64,452,206	0
<b>Total</b>	<b>2,076,623,652</b>	<b>1,139,909,731</b>	<b>936,713,923</b>	<b>1,686,551,858</b>	<b>390,071,794</b>
<b>Total Gains/Surplus</b>	<b>2,076,623,652</b>	<b>2,076,623,654</b>		<b>2,076,623,652</b>	

## FUNDED STATUS

The funded status is a measure of the plan's assets relative to the plan's obligations. The current funded ratio is 62.36%, as measured by the plans valuation assets divided by the total actuarial accrued liability, based on the asset valuation method, actuarial cost method, and actuarial assumptions described above. There were no changes in these assumptions or methods since the prior valuation. The funded status measure is appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's obligations and for assessing the amount of future contributions. This measure would be different if the measure reflected the market value of assets rather than the actuarial value of assets. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements and changes in plan provisions or applicable law. The scope of this report does not include an analysis of the range of such future measurements.

## FUNDING OF ADMINISTRATIVE AND INVESTMENT EXPENSES

The employer contribution rate is determined in accordance with R.S. 11 Section 102, which by omission of language regarding the funding of administrative expenses precludes funding of these expenses by a direct allocation through the employer contribution rate. These expenses are instead funded through the employer rate with the 30 year amortization of the experience loss. Per Actuarial Standard of Practice No. 27, (paragraph 3.8.3.e.) the investment return assumption should be reduced to reflect investment and administrative expenses that are paid from plan assets and not otherwise recognized. The discount rate was developed with a margin of 10 basis points to account for these expenses, therefore these losses are expected to be offset by long-term investment earnings. Exhibit 6 provides further explanation regarding the impact of administrative expenses on plan assumptions/experience.

Act 94 of 2016 provides for direct funding by employers of noninvestment-related administrative expenses beginning in the first fiscal year in which the projected aggregate employer contribution rate, calculated without regard to any changes in the board-approved actuarial valuation rate, will not increase.

Investment manager fees are treated as a direct offset to investment income.

## FUNDING OF FUTURE POST RETIREMENT BENEFIT INCREASES

The liability for previously granted benefit increases is included in the retiree reserve. Louisiana law pertaining to TRSL retiree benefit increases provides for the funding of future increases by requiring the automatic transfer of a portion of excess investment earnings to the Experience Account. The law does not provide for automatic benefit increases. Many conditions must be met before an increase can be granted, as described in the Post Retirement Increases section of the Summary of Plan Provisions in Exhibit 5 of this report. The legislature and governor have the ultimate authority as to whether or not a future increase will be granted. Since a portion of investment earnings will be used to fund these benefits, which are not accrued benefits of the plan, the accrued benefits are discounted using a net discount rate. The net discount rate is determined as the gross expected long-term return less investment and administrative expenses and the expected return used to provide for future retiree benefit increases. This adjustment is made in accordance with Actuarial Standards of Practice No. 27 regarding the selection of economic assumptions, which states that it is appropriate to adjust the economic assumptions to provide for plan provisions that are difficult to measure, such as gain-sharing provisions.

The adjustment for gain-sharing reflects TRSL's specific statutory provisions which require 50% of investment gains, determined using the actuarial value of assets, above the statutory threshold of \$200 million, indexed to increases in the actuarial value of assets. Transfers to the Experience Account are limited based upon the maximum balance of this account, which has been significantly decreased by Act 399 of 2014. While the liabilities in this report do not explicitly include liabilities for future ad hoc retiree benefit increases, the assumptions recognize that investment earnings will be diverted to fund the increases. This disclosure is provided in accordance with Actuarial Standards of Practice No. 4.

**EXHIBIT 1**  
**DEVELOPMENT OF**  
**COSTS, LIABILITIES AND CONTRIBUTIONS**

Normal Costs and Accrued Liabilities are calculated in accordance with the Entry Age Normal cost method, and the Actuarial Assumptions outlined in Exhibit 6 based on the Provisions of the Plan as summarized in Exhibit 5.

	<b>June 30, 2016</b>		<b>---- Prior Year ----</b>	
	<b>Dollar Amount</b>	<b>% of</b>	<b>Dollar Amount</b>	<b>% of</b>
	<b>Salary</b>		<b>Salary</b>	
<b>I. Normal Costs</b>				
Active Members				
a) Retirement Benefits	304,492,745	7.87%	306,147,279	8.02%
b) Disability Benefits	14,365,660	0.37%	14,130,553	0.37%
c) Survivor Benefits	10,964,092	0.28%	10,664,199	0.28%
d) Voluntary Termination	136,768,983	3.53%	132,841,215	3.48%
e) Total	<u>466,591,480</u>	12.06%	<u>463,783,246</u>	12.15%
<b>II. Actuarial Accrued Liability</b>				
a) Active Members				
1) Retirement Benefits	7,703,033,944		7,642,648,734	
2) Disability Benefits	144,592,915		141,698,457	
3) Survivor Benefits	135,025,810		132,277,860	
4) Voluntary Termination	272,396,531		231,997,284	
	<u>8,255,049,200</u>		<u>8,148,622,335</u>	
b) Retired and Inactive Members				
1) Regular Retirees	16,101,366,471		15,700,534,358	
2) Disability Benefits	445,123,589		415,620,096	
3) Survivors	1,057,732,944		1,004,696,859	
4) Vested Deferred <sup>1</sup>	306,722,016		298,144,696	
5) Contributions Refunded <sup>2</sup>	131,749,421		129,177,219	
6) DROP Deferred Benefits	1,873,371,007		1,822,045,328	
7) DROP Account Balances	1,101,287,330		1,127,456,006	
	<u>21,017,352,778</u>		<u>20,497,674,562</u>	
c) Total	29,272,401,978		28,646,296,897	

<sup>1</sup> Includes pending Retirement/DROP applications.

<sup>2</sup> Includes terminated employee and rehired retiree contributions to be refunded.

**Exhibit 1 (Continued)****Costs, Liabilities & Contributions**

	<b>June 30, 2016</b>	<b>---- Prior Year ---- June 30, 2015</b>
II. Actuarial Accrued Liability	29,272,401,978	28,646,296,897
III. Valuation Assets	18,254,321,142	17,457,243,696
IV. Unfunded Actuarial Accrued Liability <sup>1</sup>	11,018,080,836	11,189,053,201
a) Change over prior year	-170,972,365	-784,710,556
b) Funded Percentage	62.4%	60.9%
V. Employer Contributions To Fund Current Plan Year <sup>1</sup>		
a) Employer Portion of Normal Cost	160,360,450	162,236,872
b) Amortization Payments	974,555,726	935,381,362
c) Prior Contribution Variance	2,735,460	28,258,642
Total Required Contribution	<u>1,137,651,636</u>	<u>1,125,876,876</u>
Total Contribution Rate	25.8%	25.8%
PERSAC Approved rate <sup>1</sup>	25.4%	26.2%
Aggregate Employer Normal Cost Rate	4.0749%	4.1731%
VI. Projected Employer Contributions To Fund Next Plan Year <sup>1</sup>		
a) Employer Portion of Normal Cost	170,179,978	167,630,952
b) Amortization Payments	1,021,447,416	972,331,902
c) Prior Contribution Variance	7,402,122	2,735,460
Total Required Contribution	<u>1,199,029,516</u>	<u>1,142,698,314</u>
Total Contribution Rate	26.4%	25.4%
Projected Aggregate Employer Normal Cost Rate <sup>2</sup>	4.1988%	4.1731%
VII. Current Payroll	3,869,730,024	3,815,649,662
Projected Payroll - Mid Year	3,935,352,728	3,887,668,656
Projected Payroll - Next Year	4,053,069,190	4,016,926,538
ORP - Salary Adjustment Factor <sup>2</sup>	1.14294	1.14553

<sup>1</sup> Dollar Amounts reflect estimated payments due mid-year on January 1st per Act 81. Constitutional Minimum is 11.8% without regard to the statutory minimum of 15.5%.

<sup>2</sup> Normal costs, normal cost rates, and UAL payments projected for FY 2017/18 were determined using a discount rate of 7.70%.

<sup>3</sup> The ORP salary adjustment factor is used to convert amortization payments to percentage of payroll.

**EXHIBIT 2**

**FINANCIAL SUMMARY  
STATEMENT OF REVENUES AND EXPENSES  
FOR FISCAL YEAR ENDING**

	<b>June 30, 2016</b>	<b>----- Prior Years -----</b>	
		<b>June 30, 2015</b>	<b>June 30, 2014</b>
<b><u>OPERATING REVENUES:</u></b>			
<b>1. Contribution Income</b>			
Member	\$ 330,773,316	\$ 324,920,644	\$ 326,007,091
Employer	1,066,521,193	1,120,150,411	1,084,221,275
Legis Appropriations	-	10,384,806	5,578,791
Other Appropriations	34,500	41,721	48,165
ORP - Unfunded	128,543,466	133,771,593	124,874,274
LSU Ag Center Coop. Ext.	1,830,995	1,851,985	2,028,819
Miscellaneous	995,292	928,581	1,265,971
<b>TOTAL CONTRIBUTIONS</b>	<b>1,528,698,762</b>	<b>1,592,049,741</b>	<b>1,544,024,386</b>
<b>2. Investment Income</b>			
Investments	216,567,366	481,866,158	2,853,792,892
Less Advisor Fees	-35,975,157	-36,705,991	-35,729,758
<b>TOTAL INVESTMENT INCOME</b>	<b>180,592,209</b>	<b>445,160,167</b>	<b>2,818,063,134</b>
<b>3. Total Revenues</b>	<b>1,709,290,971</b>	<b>2,037,209,908</b>	<b>4,362,087,520</b>
<b><u>OPERATING EXPENSES:</u></b>			
<b>1. General Administration <sup>1</sup></b>	<b>17,025,314</b>	<b>18,880,795</b>	<b>17,200,014</b>
Depreciation Expense	407,105	384,426	322,881
<b>2. Benefits Paid</b>			
Pension Benefits	1,999,272,395	1,955,102,582	1,875,366,921
LSU Ag Center Coop. Ext.	1,873,303	1,754,855	1,746,982
Refund of Contributions	49,141,575	51,545,762	57,652,124
<b>TOTAL BENEFITS PAID</b>	<b>2,050,287,273</b>	<b>2,008,403,199</b>	<b>1,934,766,027</b>
<b>3. Total Expenses</b>	<b>2,067,719,692</b>	<b>2,027,668,420</b>	<b>1,952,288,922</b>
<b><u>NET MARKET VALUE INCREASE</u></b>	<b>-358,428,721</b>	<b>9,541,488</b>	<b>2,409,798,598</b>

<sup>1</sup> The General Administration Operating Expense includes \$1,047,832, \$1,685,836, and -\$24,005 for 2014, 2015, and 2016, Other Post-Employment Benefits (OPEB), respectively and \$2,078,530, and 1,773,559 for 2015 and 2016 GASB 68 Pension Expense, respectively.

**EXHIBIT 2 (Continued)**  
**Financial Summary**

**STATISTICAL DATA**  
**COMPARATIVE SUMMARY OF REVENUES BY SOURCE**  
**AND EXPENSES BY TYPE**

Revenues by Source				
Fiscal Year	Members Contribution	Employer Contribution <sup>1</sup>	Investment Income	Total
2007	282,326,101	593,819,853	2,622,473,864	3,498,619,818
2008	323,678,452	753,661,042 <sup>2</sup>	-793,655,054	283,684,440
2009	344,547,871	714,703,222	-3,287,852,517	-2,228,601,424
2010	347,114,632	726,567,699	1,289,304,693	2,362,987,024
2011	342,323,329	943,678,941	2,945,993,096	4,231,995,366
2012	333,908,454	1,084,637,731	-56,240,846	1,362,305,339
2013	327,767,936	1,095,482,766	1,754,983,691	3,178,234,393
2014	326,007,091	1,218,017,295 <sup>3</sup>	2,818,063,134	4,362,087,520
2015	324,920,644	1,267,129,097	445,160,167	2,037,209,908
2016	330,773,315	1,197,925,446	180,592,209	1,709,290,970

Expenses by Type				
Fiscal Year	Benefits	Refunds	Administrative Expenses	Total
2007	1,295,552,338	47,579,251	14,370,760	1,357,502,349
2008	1,383,381,577	34,285,358	18,498,003 <sup>4</sup>	1,436,164,938
2009	1,464,106,312	33,939,436	19,321,250	1,517,366,998
2010	1,532,526,141	40,210,177	19,100,619	1,591,836,937
2011	1,615,778,191	42,248,487	18,189,491	1,676,216,169
2012	1,682,528,254	49,139,028	18,864,917	1,750,532,199
2013	1,800,166,804	59,152,481	17,661,969	1,876,981,254
2014	1,877,113,902	57,652,124	17,522,895	1,952,288,921
2015	1,956,857,437	51,545,762	19,265,221	2,027,668,420
2016	2,001,145,698	49,141,575	17,432,419	2,067,719,692

<sup>1</sup> Includes Miscellaneous Contribution/Income in addition to direct employer contributions.

<sup>2</sup> Includes \$40,000,000 legislative appropriation from Act 7 of 2008 (2<sup>nd</sup> Extraordinary Session).

<sup>3</sup> Includes \$5,578,791 legislative appropriation from Act 55 of 2014.

<sup>4</sup> Includes OPEB expense, beginning in 2008.



**EXHIBIT 2 (Continued)**  
**Financial Summary**

**FINANCIAL SUMMARY**  
**STATEMENT OF ASSETS**  
**FOR FISCAL YEAR ENDING**

ASSETS:	----Prior Years---		
	June 30, 2016	June 30, 2015	June 30, 2014
Cash and Cash Equivalents	\$ 5,279,450	\$ 236,026,000	\$ 205,397,273
Short Term Securities	1,307,428,499	990,777,882	871,504,691
Domestic Bonds	1,828,132,715	1,775,656,703	1,770,055,139
International Bonds	1,413,994,202	1,489,882,945	1,667,920,752
Domestic Equities	5,161,381,152	5,478,561,612	5,201,856,937
International Equities	3,166,197,700	3,429,594,486	3,688,369,407
Alternative Investments	4,573,041,477	4,358,084,637	4,312,950,822
Property and Equipment	3,710,875	4,051,370	4,100,275
Receivables less Payables	76,602,964	132,407,761	177,880,162
Deferred Outflows less Deferred Inflows	2,181,921	1,336,282	-
<b>TOTAL ASSETS - Market Value</b>	<b>17,537,950,955</b>	<b>17,896,379,678</b>	<b>17,900,035,458</b>
2014 MVA Adjustment due to Accounting Principle Change			(13,197,268)
Restated 2014 Market Value of Assets			17,883,182,410

**ACTUARIAL VALUE OF ASSETS**

The market value of assets gradually recognizes investment gains and losses relative to the net assumed investment return, over a 5 year period in 20% increments. The adjusted asset value is subject to Corridor Limits of 80% to 120% of the Market Value of Assets.

Plan Year	Asset G/L	Deferred %	Deferred \$
2013	603,108,919	20%	120,621,784
2014	1,595,397,918	40%	638,159,167
2015	(923,787,158)	60%	(554,272,295)
2016	(1,185,490,155)	80%	(948,392,124)
			\$ (743,883,468)
Market Value of Assets			\$ 17,537,950,955
Deferred Asset G/L			(743,883,468)
Preliminary Actuarial Value of Assets			\$ 18,281,834,423
<b>CORRIDOR LIMITS</b>			
Minimum = 80% of Market Value			\$ 14,030,360,764
Maximum = 120% of Market Value			21,045,541,146
Actuarial Value of Assets			\$ 18,281,834,423

**EXHIBIT 2 (Continued)**  
**Financial Summary**

**FINANCIAL SUMMARY  
STATEMENT OF ASSETS  
FOR FISCAL YEAR ENDING**

	---- Prior Years ----		
	June 30, 2016	June 30, 2015	June 30, 2014
<b>EMPLOYER CREDIT ACCOUNT<sup>1</sup>:</b>			
Prior Year Ending Balance	\$ -	\$ -	\$ -
+ Contributions	-	-	-
- Disbursements	-	-	-
+ Accumulated Interest	-	-	-
Account Balance - Year End	-	-	-
<b>LSU AG/EXT SERVICE:</b>			
Prior Year Ending Balance	\$ 2,360,090	\$ 1,933,057	\$ 1,322,042
+ Contributions	1,830,995	1,851,985	2,028,819
- Benefit Disbursements	1,873,303	1,754,855	1,746,982
+ Accumulated Interest	218,022	329,903	329,178
Account Balance - Year End	2,535,804	2,360,090	1,933,057
<b>EXPERIENCE ACCOUNT FUND:</b>			
Prior Year Ending Balance	\$ 226,356,559	\$ 218,148,161	\$ 219,736,906
+ Experience Account Allocation	-	-	170,334,888
- Benefit Disbursements	216,473,124	-	200,806,602
+ Accumulated Interest	15,094,042	8,208,398 <sup>2</sup>	28,882,969
Fund Balance - Year End	24,977,477	226,356,559	218,148,161
<b>DEVELOPMENT OF VALUATION ASSETS:</b>			
Actuarial Value of Assets	\$ 18,281,834,423	\$ 17,685,960,345	\$ 16,365,854,025
- Employer Credit Account	-	-	-
- LSU Ag/Ext Service Account	2,535,804	2,360,090	1,933,057
- Experience Account Fund	24,977,477	226,356,559	218,148,161
Valuation Assets	18,254,321,142	17,457,243,696	16,145,772,807

<sup>1</sup> The Employer Credit Account was created by ACT 588 of 2004.

<sup>2</sup> The 2015 Experience Account interest credit was calculated to be \$24,553,922, but the total account balance is limited to \$226,356,559, or the cost of one PBI. The remaining interest was credited to valuation assets to be used for regular plan funding.

**EXHIBIT 3****GASB STATEMENT NO. 67/68 FINANCIAL REPORTING**

The Governmental Accounting Standards Board Statements No. 67/68 establish financial reporting standards for state and local governmental pension plans that are administered through trusts or equivalent arrangements. The required actuarial disclosures are illustrated below. The Plan Fiduciary Net Position is the Market Value of Assets used for the funding valuation, excluding assets held for the LSU Agriculture and Extension Service. The Total Pension Liability was developed using the Entry Age Normal cost method.

**SCHEDULE OF EMPLOYERS' NET PENSION LIABILITY**

	<u>June 30, 2016</u>	<u>June 30, 2015</u>	<u>June 30, 2014</u>
Total Pension Liability	\$ 29,272,401,978	\$ 28,646,296,897	\$ 28,119,536,563
Plan Fiduciary Net Position <sup>1</sup>	\$ 17,535,415,151	\$ 17,894,019,588	\$ 17,898,102,401
Employers' Net Pension Liability	\$ 11,736,986,827	\$ 10,752,277,309	\$ 10,221,434,162
Plan Fiduciary Net Position as a percentage of Total Pension Liability	59.9%	62.5%	63.7%
Covered Employee Payroll	\$ 3,869,730,024	\$ 3,815,648,662	\$ 3,764,954,727
Net Pension Liability as a percentage of Covered Payroll	303.3%	281.8%	271.5%

Fiscal Year	Actuarial Determined Contribution	Contributions in Relation to Actuarial Determined Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a % of Covered Payroll
2007	578,895,501	616,429,526	(37,534,025)	3,224,562,742	19.1%
2008	637,097,695	740,511,169	(103,413,474)	3,675,013,831	20.1%
2009	697,190,561	741,595,487	(44,404,926)	3,912,326,326	19.0%
2010	904,382,657	755,446,587	148,936,070	3,977,819,262	19.0%
2011	1,086,319,774	980,393,924	105,925,850	3,902,646,534	25.1%
2012	1,120,095,898	1,127,265,199	(7,169,301)	3,808,760,594	29.6%
2013	1,149,134,132	1,137,733,532	11,400,600	3,726,325,750	30.5%
2014	1,218,397,771	1,258,687,418	(40,289,647)	3,764,954,727	33.4%
2015	1,212,285,929	1,303,570,582	(91,284,653)	3,815,648,662	34.2%
2016	1,177,993,580	1,242,445,786	(64,452,206)	3,869,730,024	32.1%

<sup>1</sup> Plan Fiduciary Net Position excludes side-fund assets held for the LSU Agriculture and Extension Service

**EXHIBIT 3 (Continued)**  
**Pension Accounting & Financial Disclosure**

**SCHEDULE OF CHANGES IN EMPLOYERS' NET PENSION LIABILITY**

	<u>June 30, 2016</u>	<u>June 30, 2015</u>	<u>June 30, 2014</u>
<b>Total Pension Liability</b>			
Service Cost	441,619,569	459,658,120	462,730,192
Interest	2,174,908,690	2,137,096,756	2,086,494,384
Changes of Benefit Terms	216,473,124	-	200,806,602
Diff. Between Expected and Actual	(157,739,253)	(62,489,198)	(122,326,978)
Changes of Assumptions	-	-	-
Retirement Benefits <sup>1</sup>	(1,999,272,395)	(1,955,102,582)	(1,877,113,903)
Refunds/Transfers of Member Contributions	(49,884,654)	(52,402,762)	(58,777,337)
<b>Net Change in Total Pension Liability</b>	<u>626,105,081</u>	<u>526,760,334</u>	<u>691,812,960</u>
<b>Total Pension Liability - Beginning</b>	<u>28,646,296,897</u>	<u>28,119,536,563</u>	<u>27,427,723,603</u>
<b>Total Pension Liability - Ending (a)</b>	<u>\$ 29,272,401,978</u>	<u>\$ 28,646,296,897</u>	<u>\$ 28,119,536,563</u>
<b>Plan Fiduciary Net Position</b>			
Employer Contributions <sup>1</sup>	1,157,901,123	1,217,466,676	1,176,569,685
Non-Employer Contributions	38,193,328	37,425,629	35,927,881
Employee Contributions	330,773,316	324,920,644	326,007,091
Net Investment Income <sup>1</sup>	177,422,752	443,034,317	2,815,090,995
Other Income	2,951,433	13,866,589	7,880,853
Retirement Benefits <sup>1</sup>	(1,999,272,395)	(1,955,102,582)	(1,877,113,903)
Refunds/Transfers of Member Contributions	(49,884,654)	(52,402,762)	(58,777,337)
Administrative Expense	(16,306,240)	(18,023,794)	(15,026,969)
Other Postemployment Benefit Expenses	24,005	(1,685,836)	(1,047,832)
Depreciation and Amortization Expenses	(407,105)	(384,426)	(322,881)
Accounting Principle Change	-	(13,197,268)	-
<b>Net Change in Plan Fiduciary Net Position</b>	<u>(358,604,437)</u>	<u>(4,082,813)</u>	<u>2,409,187,583</u>
<b>Plan Fiduciary Net Position - Beginning</b>	<u>17,894,019,588</u>	<u>17,898,102,401</u>	<u>15,488,914,818</u>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<u>\$ 17,535,415,151</u>	<u>\$ 17,894,019,588</u>	<u>\$ 17,898,102,401</u>
<b>Net Pension Liability - Ending (a) - (b)</b>	<u>\$ 11,736,986,827</u>	<u>\$ 10,752,277,309</u>	<u>\$ 10,221,434,162</u>
<b>Plan Fiduciary Net Position as a Percentage of the Total Pension Liability</b>	59.9%	62.5%	63.7%
<b>Covered Employee Payroll</b>	\$ 3,869,730,024	\$ 3,815,648,662	\$ 3,764,954,727
<b>Net Pension Liability as a Percentage of Covered Employee Payroll</b>	303.3%	281.8%	271.5%

<sup>1</sup> Amounts shown exclude side-fund assets held for the LSU Agriculture and Extension Service and associated contributions and benefits.

**EXHIBIT 3 (Continued)**  
**Pension Accounting & Financial Disclosure**

**Actuarial Assumptions:**

All assumptions used for purposes of GASB Statement 67/68 reporting requirements are described in Exhibit 6, except for administrative expenses and the discount rate. Administrative expenses will be directly reflected in the employer pension expense in the year incurred in the Statement 67/68 reporting. Please see below for a description of the discount rate used for GASB Statement 67/68 reporting.

**Discount Rate:**

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expenses and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage, and by adding expected inflation and an adjustment for the effect of rebalancing/ diversification. The resulting long-term geometrical nominal expected return is 8.23%. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of June 30, 2016 are summarized in the following table:

Asset Class	Long Term Expected Real Rate of Return
Domestic Equity	4.50%
International Equity	5.31%
Domestic Fixed Income	2.45%
International Fixed Income	3.28%
Private Equity	6.80%
Other Private Assets	4.82%

The discount rate used to measure the total pension liability was 7.75 percent.

The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

**Sensitivity of the Net Pension Liability to Changes in the Discount Rate:**

The following presents the net pension liability calculated using the discount rate of 7.75%, and what the net pension liability would be if it were calculated using a discount rate that is 1% lower or 1% higher.

	1% Decrease 6.75%	Current Discount Rate 7.75%	1% Increase 8.75%
Employers' Net Pension Liability	14,639,614,986	11,736,986,827	9,267,046,412

The Schedule of Pension Amounts, below, provides employers with amounts to be recognized in the financial statements and note disclosures for GASB 68 reporting. In accordance with GASB Statement 68, changes in total pension liability due to differences between actual and expected experience and changes in assumptions are amortized over a period equal to the average of the expected remaining service lives of all employees that are provided with pensions through the pension plan (active and inactive employees) determined as of the beginning of the measurement period. The current and prior year's average remaining service life is shown below. Differences between projected and actual investment returns are amortized over a closed 5-year period.

**EXHIBIT 3 (Continued)**  
**Pension Accounting & Financial Disclosure**

**SCHEDULE OF PENSION AMOUNTS**

	<b>Net Pension Liability</b>	<b>Deferred Inflows</b>	<b>Deferred Outflows</b>	<b>Pension Expense</b>
<b>Beginning balance</b>	(10,752,277,309)	(1,107,596,057)	740,920,215	
<b>Total Pension Liability Factors:</b>				
Service cost	(463,783,246)			463,783,246
Interest	(2,176,626,375)			2,176,626,375
Changes in benefit terms	(216,473,124)			216,473,124
Differences between expected and actual experience	181,620,615	(181,620,615)	-	
Amortization of current year		36,324,123	-	(36,324,123)
Amortization of prior years		36,963,235	-	(36,963,235)
Changes in assumptions	-	-	-	
Amortization of current year		-	-	-
Amortization of prior years		-	-	-
Benefit payments	1,999,272,395			(1,999,272,395)
Refunds/Transfers of Member Contributions	49,884,654			(49,884,654)
<b>Net Change in Total Pension Liability</b>	<b>(626,105,081)</b>	<b>(108,333,257)</b>	<b>-</b>	<b>734,438,338</b>
<b>Plan Fiduciary Net Position:</b>				
Contributions - Employer	1,157,901,123			
Contributions - Non-Empl. Contributing Entities	38,193,328			
Contributions - Employees	330,773,316			(330,773,316)
Expected earnings on pension plan investments	1,366,015,464			(1,366,015,464)
Differences between projected and actual earnings on pension plan investments	(1,188,592,712)	-	1,188,592,712	
Amortization of current year		-	(237,718,542)	237,718,542
Amortization of prior years		326,069,504	(185,230,054)	(140,839,450)
Retirement Benefits	(1,999,272,395)			1,999,272,395
Administrative Expense	(16,282,235)			16,282,235
Refunds/Transfers of Member Contributions	(49,884,654)			49,884,654
Other	2,544,328			(2,544,328)
<b>Net Change in Plan Fiduciary Net Position</b>	<b>(358,604,437)</b>	<b>326,069,504</b>	<b>765,644,116</b>	<b>462,985,268</b>
<b>Ending Balance</b>	<b>(11,736,986,827)</b>	<b>(889,859,810)</b>	<b>1,506,564,331</b>	<b>1,197,423,606</b>

<b>2016 Average Remaining Service Life</b>	<b>Plan Year</b>	<b>Amortization Period</b>
Active	2014	5.0
Active Post-DROP	2015	5.0
Inactive/Retired	2016	5.0
Average		4.32
Amort. Period (Rounded up)		5.0

**EXHIBIT 4****CENSUS DATA****GENERAL COMMENTS**

TRSL provides the data for individual members of the system as of the valuation date. The validity of the results of any actuarial valuation is dependent upon the accuracy of the data base. Our review of submitted information is limited to validation of reasonableness and consistency in several areas, such as age, service, salary, and current benefits. In order to minimize coverage errors (i.e., missing or duplicated individual records) the records are checked for duplicates, and a comparison of the current year's records to those submitted in prior years is made. Records identified as containing suspicious data were assumed to possess the same characteristics of "good data" in the same cohort. Suspicious data are not necessarily errors, but data which fall outside the parameters of the editing process for further checking. The assigned values are based on information from similar records or based on historical averages for similarly situated members. Notwithstanding our efforts to review both census and financial data for apparent errors, we must rely upon the system's administrative staff and accountants to provide accurate information.

The data contained in this valuation is summarized on the following pages with exceptions noted below. The profile depicted in the cellular graphs represents "error-free data," which serves as the basis for determining costs and liabilities. Active members are allocated to cells based upon attained age and years of service. Retirees and survivors are allocated to cells based upon attained age and years elapsed since retirement or commencement of benefits.

Disability retirees who have reached normal retirement eligibility requirements are considered regular retirees by TRSL but are classified as disability retirees for purposes of the actuarial valuation. Liabilities are calculated accordingly.

Salary data contained in the profiles and valuation report exceed the sums reported by internal audit due to annualized salaries. In the valuation process, membership data with fractional service in the first year of employment annualizes the salary.

The following is a summary by plan of the data submitted for valuation:

Active Members	2016		2015	
	Census	Avg. Salary	Census	Avg. Salary
Regular Teachers	71,511	44,339	70,881	43,965
Higher Education	8,792	61,158	8,803	60,338
Lunch Plan A	8	23,638	10	23,922
Lunch Plan B	1,162	19,029	1,192	18,625
Post DROP	2,595	53,576	2,716	53,675
<b>Total</b>	<b>84,068</b>	<b>46,031</b>	<b>83,602</b>	<b>45,641</b>

**EXHIBIT 4 (Continued)**  
**Census Data**

	<b>2016</b>	<b>2015</b>
	<b>Census</b>	<b>Census</b>
Retired and Inactive Members		
Regular Retirees	64,593	64,366
Disability Retirees	4,238	4,121
Survivors	6,997	6,772
DROP Participants	2,504	2,283
Vested & Reciprocals	6,687	6,606
Inactive Non-Vested (Due Refunds)	19,842	19,005
<b>Total Retired and Inactive</b>	<b>104,861</b>	<b>103,153</b>
<b>Total Members</b>	<b>188,929</b>	<b>186,755</b>
<b>Less Inactive Non-Vested (Due Refunds)</b>	<b>-19,842</b>	<b>-19,005</b>
<b>Total Active and Vested Inactive Members</b>	<b>169,087</b>	<b>167,750</b>

**MEMBER RECONCILIATION**

	Active (Pre-DROP)	Active after DROP	Terminated Vested	In DROP	Retired, Disabled, Survivor	Total
<b>June 30, 2015 Valuation</b>	80,886	2,716	6,606	2,283	75,259	167,750
<b>Additions to Census</b>						
Newly Hired Members	7,782		0			7,782
<b>Change in Status</b>						
New Regular Retirees	(1,473)	(558)	(209)	(505)	2,745	0
New Disability Retirees	(187)		(18)		205	0
New Survivors	(41)	(4)	(5)	(3)	53	0
Active to Terminated Vested	(1,160)		1,160			0
Active to DROP	(899)			899		0
Terminated Vested to Active	498		(498)			0
Disability to Active	1				(1)	0
Terminated Vested to DROP			(2)	2		0
DROP to Active After DROP		437		(437)		0
<b>Eliminated from Census</b>						
Refunded or Due Refund	(3,848)		(364)		(2)	(4,214)
Deceased	(40)	(1)	(19)	(2)	(2,158)	(2,220)
Data Revisions	(46)	5	36	267	(273)	(11)
<b>June 30, 2016 Valuation</b>	<b>81,473</b>	<b>2,595</b>	<b>6,687</b>	<b>2,504</b>	<b>75,828</b>	<b>169,087</b>



**TRSL MEMBERSHIP PROFILE  
ALL ACTIVE MEMBERS (PRE-DROP)**

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY

VALUATION DATE 6/30/2016

Age/Years	<1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35+	Total
< 25	665 \$27,123,254	1,186 \$48,007,115								1,851 \$75,130,369
25 - 29	1,051 \$42,891,612	5,357 \$225,075,052	949 \$42,920,451	2 \$70,623						7,359 \$310,957,738
30 - 34	830 \$35,793,835	3,936 \$164,181,859	4,225 \$194,651,004	1,067 \$53,450,286	2 \$42,213					10,060 \$448,119,197
35 - 39	715 \$30,210,045	3,126 \$124,460,106	3,134 \$141,037,354	3,646 \$185,814,288	1,036 \$56,283,030	2 \$61,319				11,659 \$537,866,142
40 - 44	517 \$22,465,756	2,386 \$95,758,068	2,476 \$106,630,412	2,441 \$117,939,536	3,096 \$172,293,981	785 \$45,337,813	1 \$32,892			11,702 \$560,458,458
45 - 49	449 \$18,440,938	1,956 \$74,864,012	2,191 \$88,286,845	2,139 \$96,157,536	2,210 \$112,683,464	2,545 \$149,102,102	729 \$43,795,055	4 \$162,953		12,223 \$583,492,905
50 - 54	318 \$12,670,358	1,549 \$58,169,995	1,774 \$69,248,315	1,868 \$77,234,481	1,853 \$82,444,732	1,781 \$90,545,899	2,107 \$125,067,141	106 \$6,768,837		11,356 \$522,149,758
55 - 59	249 \$10,737,137	1,122 \$42,251,116	1,327 \$52,000,011	1,445 \$58,145,300	1,745 \$74,507,155	1,615 \$75,633,111	326 \$18,134,110	122 \$7,717,564	32 \$2,365,910	7,983 \$341,491,414
60 - 64	141 \$6,780,970	584 \$23,449,343	796 \$33,915,283	852 \$37,358,330	845 \$37,653,601	921 \$43,359,607	362 \$18,952,180	137 \$10,066,082	121 \$10,808,651	4,759 \$222,344,047
65 - 69	39 \$1,284,572	217 \$8,842,345	338 \$14,734,491	315 \$14,347,549	287 \$13,642,834	277 \$13,045,967	249 \$13,517,925	114 \$8,035,606	73 \$7,119,201	1,909 \$94,570,490
70+	19 \$886,787	46 \$1,912,691	115 \$4,515,605	89 \$4,649,953	71 \$3,270,842	74 \$3,377,529	66 \$3,786,819	71 \$6,027,982	61 \$5,690,475	612 \$34,118,683
<b>Total</b>	4,993 \$209,285,266	21,465 \$866,971,702	17,325 \$747,939,771	13,864 \$645,167,882	11,145 \$552,821,852	8,000 \$420,463,347	3,840 \$223,286,122	554 \$38,779,024	287 \$25,984,237	81,473 \$3,730,699,203

AVERAGES --- Attained Age 44.31  
Service Years 10.65  
Active Salary \$45,791

**TRSL MEMBERSHIP PROFILE  
ACTIVE - REGULAR K-12**

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY

VALUATION DATE 6/30/2016

Age/Years	<1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35+	Total
< 25	558 \$22,823,368	1,117 \$45,720,665								1,675 \$68,544,033
25 - 29	830 \$32,920,465	4,875 \$205,887,352	911 \$41,191,395	2 \$70,623						6,618 \$280,069,835
30 - 34	627 \$24,474,538	3,297 \$132,529,153	3,892 \$178,643,676	1,038 \$51,920,899	2 \$42,213					8,856 \$387,610,479
35 - 39	564 \$21,205,749	2,562 \$94,947,235	2,728 \$118,594,824	3,405 \$172,528,529	1,008 \$54,695,187	2 \$61,319				10,269 \$462,032,843
40 - 44	414 \$15,835,341	1,988 \$73,567,643	2,165 \$89,079,125	2,195 \$103,638,679	2,993 \$165,614,115	772 \$44,614,633	1 \$32,892			10,528 \$492,382,428
45 - 49	360 \$13,263,340	1,655 \$59,765,651	1,885 \$71,897,988	1,890 \$80,674,166	2,065 \$103,794,519	2,436 \$142,118,288	715 \$42,885,226	4 \$162,953		11,010 \$514,562,131
50 - 54	256 \$8,748,133	1,229 \$41,946,295	1,465 \$53,788,908	1,620 \$62,944,378	1,698 \$74,763,670	1,676 \$84,536,206	2,032 \$119,697,700	95 \$6,266,859		10,071 \$452,692,149
55 - 59	180 \$6,479,451	857 \$27,542,716	1,037 \$36,370,109	1,236 \$46,359,099	1,581 \$66,208,668	1,486 \$68,245,268	258 \$14,251,515	98 \$6,121,830	29 \$2,254,635	6,762 \$273,833,291
60 - 64	97 \$3,943,226	424 \$13,752,563	611 \$21,933,428	696 \$27,197,469	769 \$33,521,088	855 \$39,256,461	304 \$14,522,437	74 \$4,159,177	86 \$6,788,934	3,916 \$165,074,783
65 - 69	31 \$960,475	146 \$5,098,666	246 \$8,985,314	244 \$9,186,166	237 \$10,536,876	237 \$10,553,455	199 \$9,404,998	73 \$3,729,107	24 \$1,821,428	1,437 \$60,276,485
70+	12 \$362,607	26 \$920,155	73 \$2,207,903	54 \$1,846,412	50 \$1,906,160	58 \$2,280,493	47 \$2,114,594	32 \$1,416,724	17 \$564,159	369 \$13,619,207
<b>Total</b>	3,929 \$151,016,692	18,176 \$701,678,094	15,013 \$622,692,670	12,380 \$556,366,420	10,403 \$511,082,496	7,522 \$391,666,123	3,556 \$202,909,362	376 \$21,856,650	156 \$11,429,156	71,511 \$3,170,697,663

AVERAGES --- Attained Age 44.01  
Service Years 10.91  
Active Salary \$44,339

**TRSL MEMBERSHIP PROFILE  
ACTIVE - HIGHER EDUCATION**

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY

VALUATION DATE 6/30/2016

Age/Years	<1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35+	Total
< 25	98 \$4,130,989	65 \$2,225,264								163 \$6,356,253
25 - 29	214 \$9,794,635	467 \$18,924,347	37 \$1,710,575							718 \$30,429,557
30 - 34	198 \$11,192,059	611 \$31,192,349	320 \$15,770,462	29 \$1,529,387						1,158 \$59,684,257
35 - 39	146 \$8,921,361	515 \$28,671,644	387 \$22,065,955	233 \$13,129,529	27 \$1,565,646					1,308 \$74,354,135
40 - 44	99 \$6,551,620	360 \$21,535,162	284 \$17,019,687	230 \$13,974,816	100 \$6,618,933	12 \$709,133				1,085 \$66,409,351
45 - 49	76 \$4,931,335	253 \$14,303,765	249 \$15,331,440	218 \$14,848,608	128 \$8,501,988	102 \$6,811,881	12 \$870,272			1,038 \$65,599,289
50 - 54	55 \$3,793,483	245 \$14,936,866	235 \$14,115,813	197 \$13,275,446	102 \$6,611,896	85 \$5,617,250	70 \$5,261,435	5 \$354,490		994 \$63,966,679
55 - 59	52 \$3,857,448	209 \$13,763,239	226 \$14,512,265	165 \$10,932,492	116 \$7,248,228	94 \$6,635,152	43 \$3,315,874	21 \$1,529,003	1 \$61,478	927 \$61,855,179
60 - 64	41 \$2,785,347	133 \$9,250,322	157 \$11,483,587	138 \$9,841,181	64 \$3,903,525	59 \$3,872,944	53 \$4,327,222	59 \$5,835,046	34 \$3,989,074	738 \$55,288,248
65 - 69	5 \$272,192	60 \$3,571,042	80 \$5,543,155	67 \$5,079,269	47 \$3,052,788	39 \$2,407,013	48 \$4,011,476	41 \$4,306,499	49 \$5,297,773	436 \$33,541,207
70+	7 \$524,180	18 \$966,815	35 \$2,189,785	33 \$2,770,537	21 \$1,364,682	16 \$1,097,036	17 \$1,636,543	38 \$4,592,519	42 \$5,073,923	227 \$20,216,020
<b>Total</b>	991 \$56,754,648	2,936 \$159,340,815	2,010 \$119,742,724	1,310 \$85,381,265	605 \$38,867,686	407 \$27,150,409	243 \$19,422,822	164 \$16,617,557	126 \$14,422,248	8,792 \$537,700,174

AVERAGES --- Attained Age 45.79  
Service Years 8.64  
Active Salary \$61,158

**TRSL MEMBERSHIP PROFILE  
ACTIVE - LUNCH PLAN A**

CELLS DEPICT -

MEMBER COUNT  
TOTAL SALARY

VALUATION DATE 6/30/2016

Age/Years	<1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35+	Total
< 25										
25 - 29										
30 - 34										
35 - 39										
40 - 44										
45 - 49										
50 - 54										
55 - 59									1 \$24,816	1 \$24,816
60 - 64								2 \$34,719	1 \$30,643	3 \$65,362
65 - 69							1 \$27,795			1 \$27,795
70+								1 \$18,739	2 \$52,393	3 \$71,132
<b>Total</b>							1 \$27,795	3 \$53,458	4 \$107,852	8 \$189,105

AVERAGES

---

Attained Age 64.41  
Service Years 33.29  
Active Salary \$23,638

**TRSL MEMBERSHIP PROFILE  
ACTIVE - LUNCH PLAN B**

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY

VALUATION DATE 6/30/2016

Age/Years	<1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35+	Total
< 25	9 \$168,898	4 \$61,186								13 \$230,084
25 - 29	7 \$176,513	15 \$263,353	1 \$18,481							23 \$458,347
30 - 34	5 \$127,238	28 \$460,357	13 \$236,866							46 \$824,461
35 - 39	5 \$82,936	49 \$841,227	19 \$376,575	8 \$156,230	1 \$22,197					82 \$1,479,165
40 - 44	4 \$78,795	38 \$655,263	27 \$531,600	16 \$326,041	3 \$60,933	1 \$14,047				89 \$1,666,679
45 - 49	13 \$246,264	48 \$794,596	57 \$1,057,417	31 \$634,762	17 \$386,957	7 \$171,933	2 \$39,557			175 \$3,331,486
50 - 54	7 \$128,742	75 \$1,286,834	74 \$1,343,594	51 \$1,014,657	53 \$1,069,166	20 \$392,443	5 \$108,006	6 \$147,488		291 \$5,490,930
55 - 59	17 \$400,239	56 \$945,161	64 \$1,117,637	44 \$853,709	48 \$1,050,259	35 \$752,691	25 \$566,721	3 \$66,731	1 \$24,981	293 \$5,778,129
60 - 64	3 \$52,398	27 \$446,458	28 \$498,268	18 \$319,680	12 \$228,988	7 \$230,202	5 \$102,521	2 \$37,140		102 \$1,915,655
65 - 69	3 \$51,905	11 \$172,637	12 \$206,022	4 \$82,114	3 \$53,170	1 \$85,499	1 \$73,656			35 \$725,003
70+		2 \$25,721	7 \$117,917	2 \$33,004			2 \$35,682			13 \$212,324
<b>Total</b>	73 \$1,513,926	353 \$5,952,793	302 \$5,504,377	174 \$3,420,197	137 \$2,871,670	71 \$1,646,815	40 \$926,143	11 \$251,359	1 \$24,981	1,162 \$22,112,261

AVERAGES --- Attained Age 51.25  
Service Years 9.41  
Active Salary \$19,029

**TRSL MEMBERSHIP PROFILE  
DROP PARTICIPANTS**

CELLS DEPICT -

MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2016

Age/Years	<1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 10	10 - 15	15 - 20	20+	Total
< 40										
40 - 44										
45 - 49	3 \$96,408	1 \$20,196								4 \$116,604
50 - 54	211 \$9,456,252	215 \$9,236,736	116 \$4,877,520	4 \$158,568						546 \$23,729,076
55 - 59	458 \$15,827,988	442 \$15,039,636	392 \$14,725,776	15 \$766,956						1,307 \$46,360,356
60 - 64	188 \$3,878,772	217 \$4,640,316	224 \$5,075,436	4 \$120,036						633 \$13,714,560
65 - 69	3 \$17,196	5 \$25,944	4 \$35,796	1 \$20,352						13 \$99,288
70 - 74		1 \$3,168								1 \$3,168
75 - 79										
80 - 84										
85 - 89										
90+										
<b>Total</b>	863 \$29,276,616	881 \$28,965,996	736 \$24,714,528	24 \$1,065,912						2,504 \$84,023,052

AVERAGES --- Attained Age 57.40  
Years Retired 1.36  
Annual Benefit \$33,556

**TRSL MEMBERSHIP PROFILE  
ACTIVE AFTER DROP**

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS  
DROP BENEFITS

VALUATION DATE 6/30/2016

Age/Years	<1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 10	10 - 15	15 - 20	20+	Total
< 44										
45 - 49										
50 - 54	13 \$118,966 \$482,124	4 \$194,865 \$129,900	3 \$99,720 \$71,136	2 \$76,950 \$53,904						22 \$490,501 \$737,064
55 - 59	255 \$7,057,126 \$10,042,380	194 \$11,819,268 \$7,824,672	98 \$5,817,750 \$3,973,920	75 \$4,797,082 \$3,169,812	50 \$2,936,672 \$1,895,124	29 \$1,626,913 \$966,156				701 \$34,054,811 \$27,872,064
60 - 64	139 \$3,240,547 \$3,284,460	163 \$7,191,224 \$3,632,784	125 \$6,860,584 \$4,057,572	136 \$7,853,717 \$4,698,792	106 \$6,923,801 \$4,115,784	363 \$24,471,498 \$13,220,436	12 \$859,936 \$397,608			1044 \$57,401,307 \$33,407,436
65 - 69	2 \$20,600 \$6,996	12 \$439,004 \$116,292	68 \$2,760,890 \$1,143,108	78 \$3,670,791 \$1,621,860	65 \$2,809,140 \$1,070,280	261 \$15,204,238 \$6,859,992	82 \$6,285,950 \$2,809,056	2 \$103,452 \$36,984		570 \$31,294,065 \$13,664,568
70+	2 \$132,761 \$101,544	2 \$46,021 \$8,856	2 \$38,331 \$7,080	4 \$208,521 \$36,480	3 \$115,461 \$19,284	83 \$3,700,399 \$1,205,508	114 \$7,467,744 \$2,725,548	44 \$3,673,479 \$1,304,868	4 \$407,421 \$157,572	258 \$15,790,138 \$5,566,740
<b>Total</b>	411 \$10,570,000 \$13,917,504	375 \$19,690,382 \$11,712,504	296 \$15,577,275 \$9,252,816	295 \$16,607,061 \$9,580,848	224 \$12,785,074 \$7,100,472	736 \$45,003,048 \$22,252,092	208 \$14,613,630 \$5,932,212	46 \$3,776,931 \$1,341,852	4 \$407,421 \$157,572	2595 \$139,030,822 \$81,247,872

AVERAGES --- Attained Age 63.18  
Post Drop Years 4.59  
Active Salary \$53,576  
Annual Benefit \$31,309

**TRSL MEMBERSHIP PROFILE  
REGULAR RETIREES**

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2016

Age/Years	<1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 10	10 - 15	15 - 20	20+	Total
< 40										
40 - 44	30 \$637,524	14 \$297,804	12 \$214,164	4 \$99,840		1 \$14,904		1 \$27,276		62 \$1,291,512
45 - 49	78 \$1,793,568	91 \$2,159,268	94 \$2,014,464	109 \$2,392,992	64 \$1,368,612	54 \$1,085,136	4 \$39,744			494 \$10,853,784
50 - 54	155 \$5,081,772	160 \$4,852,140	147 \$3,826,272	181 \$4,440,672	132 \$3,091,320	250 \$5,175,336	104 \$1,618,896	3 \$14,160	1 \$1,416	1,133 \$28,101,984
55 - 59	596 \$21,625,056	675 \$24,997,968	612 \$22,518,108	577 \$20,940,216	353 \$12,153,048	557 \$15,340,224	468 \$7,815,888	176 \$2,226,816	6 \$38,832	4,020 \$127,656,156
60 - 64	789 \$20,548,896	921 \$26,267,448	1,172 \$36,917,316	1,336 \$44,526,672	1,208 \$40,863,624	3,669 \$122,816,112	1,338 \$31,365,240	705 \$10,007,736	286 \$3,298,968	11,424 \$336,612,012
65 - 69	497 \$12,893,472	610 \$16,803,204	783 \$21,603,840	1,080 \$30,664,788	1,094 \$30,613,548	4,759 \$137,743,728	4,950 \$150,432,888	1,064 \$20,683,056	1,040 \$13,938,912	15,877 \$435,377,436
70 - 74	88 \$2,754,096	169 \$5,284,008	214 \$6,502,164	259 \$7,747,356	346 \$10,076,664	2,156 \$57,620,532	4,402 \$114,992,916	2,744 \$76,561,836	1,385 \$22,810,392	11,763 \$304,349,964
75 - 79	38 \$1,251,852	55 \$1,849,680	55 \$1,865,112	73 \$2,169,528	92 \$2,880,264	648 \$19,223,736	2,049 \$49,972,992	2,889 \$70,510,200	2,689 \$63,108,444	8,588 \$212,831,808
80 - 84	16 \$327,888	15 \$200,400	11 \$303,096	14 \$456,912	19 \$832,140	174 \$5,517,984	543 \$14,495,316	1,391 \$32,565,588	3,934 \$88,310,448	6,117 \$143,009,772
85 - 89	13 \$247,728	3 \$211,536	3 \$41,568	2 \$45,120	3 \$72,228	40 \$1,608,288	102 \$2,896,236	326 \$8,341,836	2,921 \$58,155,492	3,413 \$71,620,032
90+	2 \$37,980			3 \$77,268	2 \$43,212	5 \$82,344	13 \$397,560	40 \$885,660	1,637 \$28,230,456	1,702 \$29,754,480
<b>Total</b>	2,302 \$67,199,832	2,713 \$82,923,456	3,103 \$95,806,104	3,638 \$113,561,364	3,313 \$101,994,660	12,313 \$366,228,324	13,973 \$374,027,676	9,339 \$221,824,164	13,899 \$277,893,360	64,593 \$1,701,458,940

AVERAGES --- Attained Age 70.97  
Years Retired 12.85  
Annual Benefit \$26,341



**TRSL MEMBERSHIP PROFILE  
DISABILITY RETIREES**

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2016

Age/Years	<1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 10	10 - 15	15 - 20	20+	Total
< 40	15 \$249,516	13 \$208,860	7 \$128,544	3 \$51,768	4 \$47,472	7 \$97,428				49 \$783,588
40 - 44	12 \$277,200	8 \$193,608	11 \$243,660	6 \$111,324	8 \$126,012	23 \$339,924	3 \$33,612			71 \$1,325,340
45 - 49	27 \$620,268	28 \$732,132	27 \$560,568	21 \$459,372	15 \$373,284	40 \$649,524	24 \$303,816	7 \$64,728	2 \$22,236	191 \$3,785,928
50 - 54	48 \$719,568	43 \$736,572	22 \$422,664	39 \$637,128	23 \$357,864	89 \$1,494,276	42 \$472,284	30 \$299,136	9 \$94,164	345 \$5,233,656
55 - 59	54 \$862,428	42 \$647,100	41 \$645,840	44 \$760,176	40 \$627,912	134 \$1,818,276	117 \$1,450,152	68 \$776,148	40 \$406,944	580 \$7,994,976
60 - 64	17 \$252,372	33 \$496,080	40 \$594,144	41 \$691,704	32 \$429,552	185 \$2,571,396	176 \$2,049,708	99 \$1,080,444	126 \$1,433,664	749 \$9,599,064
65 - 69	5 \$89,976	11 \$160,464	10 \$167,328	19 \$234,132	9 \$154,716	165 \$2,110,044	242 \$2,733,432	158 \$1,629,084	231 \$2,752,284	850 \$10,031,460
70 - 74	2 \$22,632	4 \$72,552	1 \$11,016	2 \$18,756	3 \$31,812	36 \$489,024	130 \$1,466,184	182 \$1,852,632	263 \$2,932,644	623 \$6,897,252
75 - 79			1 \$11,484			4 \$48,144	19 \$203,568	95 \$863,844	298 \$3,026,940	417 \$4,153,980
80 - 84							12 \$103,932	9 \$80,304	212 \$2,201,112	233 \$2,385,348
85 - 89								3 \$52,200	81 \$784,848	84 \$837,048
90+									46 \$497,436	46 \$497,436
<b>Total</b>	180 \$3,093,960	182 \$3,247,368	160 \$2,785,248	175 \$2,964,360	134 \$2,148,624	683 \$9,618,036	765 \$8,816,688	651 \$6,698,520	1,308 \$14,152,272	4,238 \$53,525,076

AVERAGES --- Attained Age 65.58  
Years Retired 14.92  
Annual Benefit \$12,630

**TRSL MEMBERSHIP PROFILE  
SURVIVOR BENEFITS**

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2016

Age/Years	<1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 10	10 - 15	15 - 20	20+	Total
< 40	34 \$446,580	45 \$569,532	40 \$519,228	55 \$711,648	27 \$345,492	113 \$1,358,844	51 \$458,796	27 \$262,764	5 \$58,308	397 \$4,731,192
40 - 44	9 \$132,804	9 \$97,716	13 \$157,908	8 \$129,444	7 \$154,032	22 \$297,324	17 \$246,780	9 \$123,600	5 \$56,328	99 \$1,395,936
45 - 49	18 \$295,548	21 \$290,820	14 \$146,592	13 \$220,860	13 \$192,996	49 \$643,452	33 \$409,140	26 \$268,632	12 \$133,788	199 \$2,601,828
50 - 54	14 \$181,092	15 \$149,760	19 \$210,744	17 \$353,760	13 \$127,944	68 \$661,764	54 \$806,424	39 \$435,984	20 \$315,000	259 \$3,242,472
55 - 59	32 \$602,880	31 \$560,028	29 \$427,272	23 \$307,668	25 \$473,364	108 \$1,576,308	67 \$1,008,816	49 \$630,996	31 \$337,056	395 \$5,924,388
60 - 64	40 \$911,604	39 \$1,127,544	53 \$1,641,864	29 \$699,672	41 \$927,000	141 \$2,879,004	91 \$1,581,012	73 \$992,832	64 \$765,780	571 \$11,526,312
65 - 69	60 \$1,772,424	77 \$1,775,976	72 \$1,843,644	74 \$1,709,556	50 \$1,154,496	247 \$5,987,616	157 \$3,024,288	101 \$1,795,764	111 \$1,617,684	949 \$20,681,448
70 - 74	52 \$1,524,000	63 \$1,362,552	64 \$1,671,480	60 \$1,306,104	54 \$1,245,816	207 \$4,660,152	153 \$3,391,140	129 \$2,555,544	153 \$2,399,448	935 \$20,116,236
75 - 79	90 \$2,025,672	72 \$1,866,576	66 \$1,666,404	64 \$1,491,228	65 \$1,661,508	249 \$5,683,260	189 \$3,946,272	137 \$3,078,216	208 \$3,601,020	1,140 \$25,020,156
80 - 84	54 \$1,090,416	63 \$1,466,496	47 \$1,254,972	49 \$1,108,884	69 \$1,308,012	202 \$3,694,128	150 \$3,065,364	134 \$2,692,620	244 \$4,104,288	1,012 \$19,785,180
85 - 89	37 \$726,336	41 \$841,584	43 \$592,944	38 \$660,768	27 \$435,300	145 \$2,548,200	102 \$1,896,048	64 \$1,208,172	156 \$2,621,484	653 \$11,530,836
90+	14 \$221,316	17 \$270,408	17 \$267,180	18 \$276,984	16 \$221,268	63 \$942,000	66 \$1,014,480	53 \$822,168	124 \$1,878,276	388 \$5,914,080
<b>Total</b>	454 \$9,930,672	493 \$10,378,992	477 \$10,400,232	448 \$8,976,576	407 \$8,247,228	1,614 \$30,932,052	1,130 \$20,848,560	841 \$14,867,292	1,133 \$17,888,460	6,997 \$132,470,064

AVERAGES --- Attained Age 70.43  
Years Retired 11.04  
Annual Benefit \$18,932

**TRSL MEMBERSHIP PROFILE  
TERM-VESTED/RECIPROCAL**

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2016

Age/Years	<1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35+	Total
< 20										
20 - 24										
25 - 29			46 \$280,007							46 \$280,007
30 - 34			633 \$4,653,977	14 \$173,101						647 \$4,827,077
35 - 39		2 \$8,750	746 \$5,736,535	237 \$3,355,956	8 \$167,210					993 \$9,268,451
40 - 44	1 \$537	5 \$13,302	711 \$5,180,830	288 \$3,983,019	79 \$1,453,113	3 \$63,556				1,087 \$10,694,356
45 - 49		5 \$18,102	691 \$4,578,069	334 \$4,089,003	107 \$1,949,293	13 \$324,361				1,150 \$10,958,828
50 - 54		4 \$9,016	577 \$3,726,068	363 \$3,943,613	136 \$2,081,894	23 \$534,311	12 \$395,687			1,115 \$10,690,589
55 - 59		4 \$7,638	550 \$3,556,160	416 \$4,315,084	167 \$2,368,877	17 \$403,639	7 \$215,542	1 \$45,975		1,162 \$10,912,915
60 - 64	2 \$490	2 \$3,640	169 \$967,164	94 \$912,597	40 \$547,599	16 \$427,526	5 \$76,347			328 \$2,935,362
65 - 69		2 \$1,280	45 \$221,670	29 \$239,343	9 \$124,433	4 \$94,864	2 \$42,582	1 \$40,484		92 \$764,656
70+			25 \$133,603	16 \$96,556	9 \$82,687	8 \$210,009	3 \$81,006	4 \$86,618	2 \$63,664	67 \$754,143
<b>Total</b>	3 \$1,027	24 \$61,727	4,193 \$29,034,083	1,791 \$21,108,271	555 \$8,775,106	84 \$2,058,267	29 \$811,164	6 \$173,077	2 \$63,664	6,687 \$62,086,385

AVERAGES --- Attained Age 47.49  
Service Years 9.52  
Annual Benefit \$9,285

**EXHIBIT 5**  
**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:**

Condition of employment for all teachers

**CREDITABLE SERVICE:**

Service as a teacher while member of the system.

**ADDITIONAL 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:

**EXHIBIT 5 (Continued)**  
**Plan Provisions**

<b>Leave Earned Prior to 6/30/88</b>	
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

<b>Leave Earned After 6/29/88</b>				
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	133-14	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 401a(17) compensation limit.

**EXHIBIT 5 (Continued)**  
**Plan Provisions**

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

<u>Years of Participation</u>	<u>% of Earnings to be Included</u>
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 Louisiana Revised Statutes Sections 102 and 102.2, which require the employer rate to be actuarially determined and set annually, based on the Public Retirement Systems' Actuarial Committee's recommendation to the Legislature.

**NORMAL RETIREMENT ELIGIBILITY AND BENEFIT:**

Retirement Eligibility:

1. Members whose first employment making them eligible for membership in one of the state systems occurred on or after July 1, 2015 are eligible for a regular retirement benefit at age 62 with five years of service credit. These members may also retire with an actuarial reduction with 20 years of service credit at any age.
2. Members whose first employment makes them eligible for membership in a Louisiana state retirement system on or after January 1, 2011 and before July 1, 2015 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.
3. 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.

**EXHIBIT 5 (Continued)**  
**Plan Provisions**

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. 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:

<b>Age</b>	<b>Maximum</b>	<b>Age</b>	<b>Maximum</b>	<b>Age</b>	<b>Maximum</b>
48	\$ 63,236	56	\$ 123,573	64	210,000
49	68,621	57	134,737	65	210,000
50	74,504	58	147,011	66	210,000
51	80,937	59	160,525	67	210,000
52	87,975	60	175,424	68	210,000
53	95,683	61	191,862	69	210,000
54	104,132	62	210,000	70	210,000
55	113,401	63	210,000		

**POST RETIREMENT INCREASES:**

The provisions regarding future permanent benefit increases (PBIs) were substantially changed by Act 399 of 2014. PBIs may be granted, if requested by the Board and approved with a two-thirds vote of both houses of the legislature, provided there are sufficient funds in the Experience Account to fully fund the increase on an actuarial basis.

**Experience Account Credits/Debits:** After allocation of the first \$200,000,000 to the unfunded accrued liability, the Experience Account is credited with up to 50% of the remaining excess investment income, up to a maximum balance as described below. The \$200,000,000 threshold is indexed based upon the increase in the actuarial value of assets. Excess investment income is investment income for the prior fiscal year in excess of the expected income based on the actuarial valuation rate for that fiscal year. Balances in the experience account accrue interest at the actuarial rate of return during the prior year. All credits are limited as follows:

**EXHIBIT 5 (Continued)**  
**Plan Provisions**

If the system's funded ratio is less than 80%, the Experience Account is limited to the reserve necessary to grant one PBI. If the funded ratio is at least 80%, the Experience Account is limited to the reserve necessary to fund two PBI's. The Experience Account is debited for the increase in actuarial accrued liability resulting from the increases.

Permanent Benefit Increases: No increase can be granted if the legislature granted an increase in the preceding fiscal year, unless the system is 85% funded or greater. Additionally, PBI's are limited to the lesser of the increase in the CPI-U for the twelve month period ending on the system's valuation date, or an amount determined by the system's funded ratio:

Funded Ratio	PBI Increase Limit
< 55%	0%
55% to <65%	1.5%
65% to <75%	2.0%
75% to <80%	2.5%
80% +	3.0%

Beginning July 1, 2015, any increase is limited to the first \$60,000 of a retiree's annual benefit, increased annually by the CPI-U for the 12 month period ending in June. If the actuarial rate of return for the prior plan year is less than 8.25%, regardless of the discount rate, the increase is limited to the lesser of 2% or the amount described above.

Eligibility Requirements: Benefits are restricted to those retirees who have attained age 60 and have been retired for at least one year. The minimum age of 60 for the receipt of a benefit increase does not apply to disability retirees.

**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 if first employment making member eligible for membership in a state retirement system occurred before July 1, 2015 or until age 62 otherwise.

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.



**EXHIBIT 5 (Continued)**  
**Plan Provisions**

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:**

Eligibility and Benefit:

1. Surviving Spouse with minor children of an active member with 5 years of service with at least 2 years earned immediately prior to death; or a member with 20 years of 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 (up to 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 resume 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 and the deceased member had at least 10 years of service, the spouse's benefit reverts to the Option 2 retirement benefit for the eligible spouse. If a deceased member had less than 10 years, then the spouse will receive a refund of any remaining member contributions and monthly survivor benefits will cease.
2. Surviving Spouse without minor children of either an active member with 10 years of creditable service 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. Beneficiaries not eligible for survivor benefits described above will receive a lump-sum refund of the member's accumulated contributions.

**EXHIBIT 5 (Continued)**  
**Plan Provisions**

**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.

**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.

**DEFERRED RETIREMENT OPTION PLAN:**

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

**EXHIBIT 5 (Continued)**  
**Plan Provisions**

Normal Eligibility:

Members whose first employment making him eligible for membership in one of the state retirement systems occurred on or before December 31, 2010, and who is not covered by Lunch Plan A or Lunch Plan B and who has 30 at any, 25 at 55, or 20 YOS (exclusive of military service other than qualified military service as provided in 26 U.S.C. 414(u) earned on or after December 12, 1994), and is at least age 65 may elect to participate in DROP. A member with 10 YOS exclusive of military service other than qualified military service as provided in 26 U.S.C. 414(u) earned on or after December 12, 1994, and who is at least age 60 may elect to participate in DROP, but all benefits payable at any time shall be calculated using only a 2% benefit formula.

Members whose first employment making him eligible for membership in one of the state retirement systems occurred between January 1, 2011 and June 30, 2015, and not in Lunch Plan A or Lunch Plan B, and who has 5 years at 60 may participate in DROP.

Members whose first employment making him eligible for membership in one of the state retirement system occurred on or before June 30, 2015, who has 30 years at age 55 or 10 years at age 60 may participate in DROP.

Members whose first employment making him eligible for membership in one of the state retirement systems occurred on or after July 1, 2015, who has at least 5 years at age 60 may participate in DROP.

An election to participate may only be made once, for a period not to exceed three years beginning within 60 days of reaching the eligibility described above.

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 than 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.

**Exhibit 5 (Continued)**  
**Plan Provisions**

**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.

**Exhibit 5 (Continued)**  
**Plan Provisions**

**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.

**EXHIBIT 5 (Continued)**  
**Plan Provisions**

**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)

**EXHIBIT 5 (Continued)**  
**Plan Provisions**

**SCHOOL LUNCH PLAN A**

**RETIREMENT BENEFIT:**

Members hired after June 30, 1983 earn regular teachers' benefits. The benefit 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.

**EXHIBIT 5 (Continued)**  
**Plan Provisions**

**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 of new spouse. 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.



**EXHIBIT 5 (Continued)**  
**Plan Provisions**

**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.

**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.

**EXHIBIT 5 (Continued)**  
**Plan Provisions**

**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.

**EXHIBIT 6****ACTUARIAL COST METHODS AND ASSUMPTIONS****COST METHOD:**

Louisiana Statute, R. S. 11:22, prescribes the Entry Age Normal cost method for funding valuation purposes. This cost method generally produces normal costs that are level as a percentage of the member's projected pay if the composition of the active group with regard to age, sex, and service is stable. Normal costs are attributed from the first period in which a member accrues benefits through all assumed exit ages until retirement.

**ASSET VALUATION:**

The market value of assets is adjusted to gradually recognize investment gains and losses relative to the discount rate, over a 5 year period in 20% increments. The adjusted asset value is subject to Corridor Limits of 80% to 120% of the Market Value of Assets.

**ACCOUNTING DISCLOSURE:**

The Statements of Fiduciary Net Position and Changes in Fiduciary Net Position provided by the accounting staff were the final drafts prior to publication. Should these Statements differ from the final audited report, a revised actuarial valuation 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:**

Administrative expenses are not explicitly assumed but rather funded in accordance with R.S. 11:102, which by omission of language regarding the funding of administrative expenses precludes funding of these expenses by a direct allocation through the employer contribution rate. These expenses are instead funded through the employer rate as an experience loss which is amortized over a 30-year period. Per Actuarial Standard of Practice Statement 27, (paragraph 3.8.3.e.) the investment return assumption includes a 10 basis point reduction to reflect administrative expenses that are paid from plan assets and not otherwise recognized. Therefore, these losses are expected to be offset by long-term investment earnings.

**ACTUARIAL ASSUMPTIONS:**

Demographic and salary assumptions used in the valuation were adopted by the Board of Trustees following the most recent experience study, effective July 1, 2013. The study was based on an observation period of 2008-2012. 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. The experience was reviewed separately for Regular Teachers, Higher Education, School Lunch Plan A, and School Lunch Plan B. The experience study report, dated March 27, 2013, provides further information regarding the rationale for these assumptions. The current rate tables are illustrated at the end of this exhibit.

**EXHIBIT 6 (Continued)**  
**Cost Methods & Assumptions****DISCOUNT RATE / INVESTMENT EARNINGS:**

The Board of Trustees adopted a discount rate of 7.75%, effective June 30, 2014. The Board of Trustees adopted a plan to gradually reduce the discount rate to 7.50%, in 0.05% increments annually, beginning July 1, 2017. Therefore, the projected contribution requirements for fiscal year 2017/18 were determined using a discount rate of 7.70%.

The discount rate for funding purposes reflects the assumed investment rate of return, net of investment and administrative expenses, and net of investment gains expected to be deferred to the experience account to fund future permanent benefit increases. Therefore, by excluding investment returns to be used to fund expenses and permanent benefit increases, the discount rate represents the expected return on investments to be used to fund regular plan benefits.

Based on a historical review of administrative expenses relative to plan assets, it is assumed that 10 basis points will be used to offset administrative expenses. Based on a historical review of investment earnings, with modifications for the current statutory provisions regarding transfers to the experience account and future allowable benefit increases, it is expected that a long-term average of approximately 25 basis points will be transferred to the experience account. A forward looking projection using historical volatility and the plan's projected assets confirmed this conclusion. The analysis is supported by the system's expected long-term rate of return based on capital market assumptions provided by the Board's investment consultant, with a 2.50% inflation component, which results in an expected long-term geometric average nominal rate of return of 8.23%. Exhibit 3 of this report provides expected real rates of return by asset class.

**MORTALITY ASSUMPTIONS:**

The mortality table for non-disabled retirees is based upon the RP-2000 table with mortality improvement projected through 2025 using scale AA. The adjustment for mortality improvement anticipates future improvements in mortality beyond the measurement date, based on actual plan experience. This table was determined to be appropriate relative to actual experience and adopted by the Board following the most recent experience study.

Mortality assumptions for disability benefits are based upon the RP-2000 disability table with no projection of mortality improvement.

**DISABILITY ASSUMPTION:**

Rates for total and permanent disability, based on attained age, are projected using rates developed from 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, based on the most recent experience study. Retirement and DROP rates are developed in combination, and include an age and service component.

**EXHIBIT 6 (Continued)**  
**Cost Methods & Assumptions**

**TERMINATION ASSUMPTIONS:**

Voluntary termination or withdrawal rates are based on the most recent experience study. Rates for Regular Teachers and Higher Education members are based on a combination of age and service. Rates for Lunch Plans A and B are based on service. For members terminating with vested benefits, it is assumed that 20% will elect to withdraw their accumulated employee contribution, and 80% 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 based on the most recent experience study. The rates include anticipated productivity growth, merit adjustments, and a 2.5% inflation component. For valuation purposes, current salaries and projected future salaries are limited to the Section 401(a)(17) limit of the Internal Revenue Code, with future indexed increases.

**CONVERTED LEAVE:**

Converted Leave is assumed to increase the accrued benefit at retirement 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%

**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 with the wife assumed to be three (3) years younger than the husband. Sample rates are as follows:

Member Age	Number of Minor Children	Years for Youngest Child to Attain Majority
25	1.2	17
30	1.4	15
35	1.7	13
40	1.7	10
45	1.4	8
50	1.1	4

**Actuarial Assumptions, effective July 1, 2013**  
**Regular Teachers**

AGE	DEATH RATES		DISABILITY RATES	TERMINATION RATES				RETIREMENT/DROP RATES			DUR	SALARY INCREASE
	MALE	FEMALE		< 1 YEAR	1-2 YEARS	2-3 YEARS	4+ YEARS	< 25 YOS	25-29 YOS	30+ YOS		
18	0.00020	0.00013	0.0000	0.200	0.200	0.095	0.180	0.000	0.000	0.000	0	0.0575
19	0.00021	0.00013	0.0000	0.200	0.200	0.095	0.180	0.000	0.000	0.000	1	0.0575
20	0.00021	0.00013	0.0000	0.200	0.200	0.095	0.180	0.000	0.000	0.000	2	0.0575
21	0.00023	0.00013	0.0000	0.200	0.200	0.095	0.180	0.000	0.000	0.000	3	0.0575
22	0.00024	0.00013	0.0000	0.200	0.200	0.095	0.180	0.000	0.000	0.000	4	0.0575
23	0.00026	0.00013	0.0001	0.200	0.200	0.095	0.180	0.000	0.000	0.000	5	0.0500
24	0.00027	0.00014	0.0001	0.200	0.200	0.095	0.180	0.000	0.000	0.000	6	0.0500
25	0.00029	0.00015	0.0001	0.180	0.126	0.095	0.090	0.000	0.000	0.000	7	0.0500
26	0.00033	0.00016	0.0001	0.180	0.126	0.095	0.060	0.000	0.000	0.000	8	0.0500
27	0.00034	0.00017	0.0001	0.190	0.126	0.095	0.060	0.000	0.000	0.000	9	0.0500
28	0.00035	0.00017	0.0001	0.190	0.126	0.095	0.055	0.000	0.000	0.000	10	0.0475
29	0.00036	0.00018	0.0001	0.190	0.126	0.095	0.053	0.000	0.000	0.000	11	0.0475
30	0.00039	0.00021	0.0001	0.190	0.120	0.109	0.053	0.000	0.000	0.000	12	0.0475
31	0.00044	0.00025	0.0003	0.190	0.120	0.109	0.050	0.000	0.000	0.000	13	0.0475
32	0.00050	0.00029	0.0003	0.190	0.120	0.109	0.045	0.000	0.000	0.000	14	0.0475
33	0.00056	0.00031	0.0003	0.190	0.120	0.109	0.045	0.000	0.000	0.000	15	0.0450
34	0.00062	0.00034	0.0003	0.190	0.120	0.109	0.045	0.000	0.000	0.000	16	0.0450
35	0.00068	0.00036	0.0006	0.180	0.117	0.095	0.040	0.000	0.000	0.000	17	0.0450
36	0.00074	0.00038	0.0010	0.180	0.117	0.095	0.040	0.000	0.000	0.000	18	0.0450
37	0.00080	0.00040	0.0007	0.180	0.117	0.095	0.040	0.000	0.000	0.000	19	0.0450
38	0.00083	0.00042	0.0007	0.180	0.117	0.095	0.040	0.050	0.000	0.000	20	0.0400
39	0.00086	0.00044	0.0011	0.180	0.117	0.095	0.040	0.040	0.000	0.000	21	0.0400
40	0.00088	0.00048	0.0011	0.165	0.123	0.090	0.037	0.040	0.000	0.000	22	0.0400
41	0.00091	0.00053	0.0013	0.165	0.123	0.090	0.037	0.025	0.000	0.000	23	0.0400
42	0.00095	0.00058	0.0016	0.165	0.123	0.090	0.037	0.025	0.000	0.000	24	0.0400
43	0.00099	0.00064	0.0016	0.165	0.123	0.090	0.037	0.025	0.000	0.000	25	0.0375
44	0.00103	0.00071	0.0016	0.165	0.123	0.090	0.040	0.025	0.000	0.000	26	0.0375
45	0.00109	0.00075	0.0022	0.163	0.099	0.090	0.040	0.025	0.020	0.000	27	0.0375
46	0.00114	0.00080	0.0022	0.163	0.099	0.090	0.040	0.025	0.020	0.000	28	0.0375
47	0.00119	0.00084	0.0022	0.163	0.099	0.090	0.040	0.025	0.020	0.000	29	0.0375
48	0.00124	0.00091	0.0022	0.163	0.099	0.090	0.040	0.030	0.020	0.700	30	0.0425
49	0.00130	0.00098	0.0022	0.163	0.099	0.090	0.040	0.030	0.020	0.600	31	0.0425
50	0.00136	0.00109	0.0025	0.175	0.112	0.090	0.040	0.030	0.050	0.300	32	0.0425
51	0.00152	0.00124	0.0025	0.175	0.112	0.090	0.040	0.030	0.170	0.600	33	0.0425
52	0.00161	0.00142	0.0025	0.175	0.112	0.090	0.040	0.030	0.280	0.600	34	0.0425
53	0.00176	0.00163	0.0030	0.175	0.112	0.090	0.040	0.100	0.280	0.500	35	0.0425
54	0.00193	0.00189	0.0030	0.175	0.112	0.090	0.040	0.150	0.450	0.400	36	0.0425
55	0.00224	0.00222	0.0040	0.175	0.106	0.090	0.040	0.150	0.750	0.300	37	0.0425
56	0.00267	0.00266	0.0050	0.175	0.106	0.090	0.040	0.150	0.330	0.200	38	0.0425
57	0.00306	0.00307	0.0055	0.155	0.106	0.090	0.040	0.150	0.250	0.200	39	0.0425
58	0.00352	0.00346	0.0055	0.200	0.106	0.090	0.040	0.250	0.250	0.200	40	0.0425
59	0.00397	0.00392	0.0055	0.200	0.106	0.090	0.040	0.250	0.300	0.200	41	0.0425
60	0.00451	0.00446	0.0055	0.200	0.106	0.090	0.040	0.250	0.300	0.200	42	0.0425
61	0.00526	0.00513	0.0050	0.200	0.106	0.090	0.040	0.150	0.300	0.200	43	0.0425
62	0.00600	0.00587	0.0050	0.200	0.106	0.090	0.040	0.150	0.220	0.250	44	0.0425
63	0.00704	0.00675	0.0050	0.200	0.106	0.090	0.040	0.150	0.170	0.150	45	0.0425
64	0.00793	0.00760	0.0035	0.200	0.106	0.090	0.040	0.200	0.200	0.300	46	0.0425
65	0.00895	0.00856	0.0035	0.200	0.106	0.090	0.040	0.200	0.200	0.300	47	0.0425
66	0.01039	0.00966	0.0020	0.200	0.106	0.090	0.040	0.200	0.200	0.300	48	0.0425
67	0.01159	0.01073	0.0020	0.200	0.106	0.090	0.040	0.200	0.200	0.200	49	0.0425
68	0.01256	0.01186	0.0020	0.200	0.106	0.090	0.040	0.200	0.300	0.300	50	0.0425
69	0.01392	0.01311	0.0020	0.200	0.106	0.090	0.040	0.200	0.300	0.300	51	0.0425
70	0.01522	0.01477	0.0020	0.200	0.106	0.090	0.040	0.200	0.300	0.400	52	0.0425
71	0.01684	0.01598	0.0020	0.200	0.106	0.090	0.040	0.200	0.300	0.200	53	0.0425
72	0.01870	0.01778	0.0020	0.200	0.106	0.090	0.040	0.200	0.300	0.250	54	0.0425
73	0.02083	0.01927	0.0020	0.200	0.106	0.090	0.040	0.200	0.300	0.250	55	0.0425
74	0.02323	0.02136	0.0020	0.200	0.106	0.090	0.040	0.200	0.300	0.250	56	0.0425

**Actuarial Assumptions, effective July 1, 2013  
Higher Education**

AGE	DEATH RATES		DISABILITY RATES	TERMINATION RATES				RETIREMENT/DROP RATES			DUR	SALARY INCREASE
	MALE	FEMALE		< 1 YEAR	1-2 YEARS	2-3 YEARS	4+ YEARS	< 25 YOS	25-29 YOS	30+ YOS		
18	0.00020	0.00013	0.0000	0.250	0.250	0.170	0.120	0.000	0.000	0.000	0	0.100
19	0.00021	0.00013	0.0000	0.250	0.250	0.170	0.120	0.000	0.000	0.000	1	0.100
20	0.00021	0.00013	0.0000	0.250	0.250	0.170	0.120	0.000	0.000	0.000	2	0.090
21	0.00023	0.00013	0.0000	0.250	0.250	0.170	0.120	0.000	0.000	0.000	3	0.080
22	0.00024	0.00013	0.0000	0.250	0.250	0.170	0.120	0.000	0.000	0.000	4	0.040
23	0.00026	0.00013	0.0001	0.250	0.250	0.170	0.120	0.000	0.000	0.000	5	0.070
24	0.00027	0.00014	0.0001	0.250	0.250	0.170	0.120	0.000	0.000	0.000	6	0.050
25	0.00029	0.00015	0.0001	0.250	0.250	0.170	0.120	0.000	0.000	0.000	7	0.070
26	0.00033	0.00016	0.0001	0.210	0.250	0.170	0.120	0.000	0.000	0.000	8	0.070
27	0.00034	0.00017	0.0001	0.210	0.220	0.170	0.120	0.000	0.000	0.000	9	0.045
28	0.00035	0.00017	0.0001	0.220	0.220	0.170	0.120	0.000	0.000	0.000	10	0.045
29	0.00036	0.00018	0.0001	0.240	0.220	0.170	0.120	0.000	0.000	0.000	11	0.045
30	0.00039	0.00021	0.0001	0.250	0.160	0.170	0.180	0.000	0.000	0.000	12	0.045
31	0.00044	0.00025	0.0001	0.220	0.178	0.170	0.100	0.000	0.000	0.000	13	0.045
32	0.00050	0.00029	0.0001	0.220	0.190	0.160	0.100	0.000	0.000	0.000	14	0.040
33	0.00056	0.00031	0.0001	0.190	0.170	0.150	0.120	0.000	0.000	0.000	15	0.040
34	0.00062	0.00034	0.0001	0.230	0.155	0.100	0.120	0.000	0.000	0.000	16	0.040
35	0.00068	0.00036	0.0001	0.220	0.175	0.130	0.120	0.000	0.000	0.000	17	0.040
36	0.00074	0.00038	0.0001	0.220	0.160	0.150	0.120	0.000	0.000	0.000	18	0.040
37	0.00080	0.00040	0.0001	0.220	0.108	0.150	0.120	0.000	0.000	0.000	19	0.040
38	0.00083	0.00042	0.0001	0.190	0.180	0.150	0.100	0.100	0.080	0.600	20	0.040
39	0.00086	0.00044	0.0001	0.190	0.140	0.150	0.100	0.100	0.080	0.600	21	0.040
40	0.00088	0.00048	0.0001	0.230	0.185	0.150	0.100	0.100	0.080	0.600	22	0.040
41	0.00091	0.00053	0.0001	0.165	0.108	0.150	0.100	0.100	0.080	0.600	23	0.040
42	0.00095	0.00058	0.0001	0.230	0.115	0.150	0.100	0.100	0.080	0.600	24	0.040
43	0.00099	0.00064	0.0001	0.155	0.168	0.150	0.100	0.070	0.080	0.600	25	0.040
44	0.00103	0.00071	0.0001	0.195	0.135	0.150	0.100	0.070	0.080	0.600	26	0.040
45	0.00109	0.00075	0.0001	0.190	0.116	0.150	0.100	0.070	0.080	0.600	27	0.035
46	0.00114	0.00080	0.0008	0.162	0.170	0.150	0.080	0.070	0.080	0.600	28	0.035
47	0.00119	0.00084	0.0008	0.210	0.140	0.150	0.090	0.070	0.080	0.600	29	0.035
48	0.00124	0.00091	0.0008	0.135	0.180	0.150	0.090	0.070	0.080	0.600	30	0.035
49	0.00130	0.00098	0.0008	0.135	0.125	0.150	0.090	0.070	0.080	0.600	31	0.035
50	0.00136	0.00109	0.0008	0.185	0.108	0.060	0.090	0.070	0.080	0.600	32	0.035
51	0.00152	0.00124	0.0008	0.145	0.070	0.050	0.090	0.070	0.160	0.600	33	0.035
52	0.00161	0.00142	0.0008	0.155	0.110	0.095	0.090	0.070	0.160	0.600	34	0.035
53	0.00176	0.00163	0.0008	0.220	0.130	0.125	0.090	0.070	0.160	0.600	35	0.035
54	0.00193	0.00189	0.0008	0.220	0.075	0.017	0.090	0.150	0.280	0.400	36	0.035
55	0.00224	0.00222	0.0008	0.200	0.104	0.140	0.090	0.150	0.350	0.200	37	0.035
56	0.00267	0.00266	0.0020	0.135	0.122	0.100	0.080	0.150	0.200	0.050	38	0.035
57	0.00306	0.00307	0.0020	0.250	0.055	0.140	0.080	0.150	0.130	0.050	39	0.035
58	0.00352	0.00346	0.0020	0.100	0.115	0.200	0.100	0.150	0.130	0.050	40	0.035
59	0.00397	0.00392	0.0005	0.100	0.210	0.125	0.080	0.150	0.130	0.050	41	0.035
60	0.00451	0.00446	0.0005	0.150	0.160	0.090	0.060	0.150	0.130	0.050	42	0.035
61	0.00526	0.00513	0.0005	0.150	0.160	0.090	0.060	0.120	0.120	0.120	43	0.035
62	0.00600	0.00587	0.0005	0.150	0.160	0.090	0.060	0.120	0.120	0.120	44	0.035
63	0.00704	0.00675	0.0005	0.150	0.160	0.090	0.060	0.120	0.120	0.120	45	0.035
64	0.00793	0.00760	0.0005	0.150	0.160	0.090	0.060	0.120	0.120	0.120	46	0.035
65	0.00895	0.00856	0.0005	0.150	0.160	0.090	0.060	0.120	0.160	0.200	47	0.035
66	0.01039	0.00966	0.0005	0.150	0.160	0.090	0.060	0.120	0.160	0.180	48	0.035
67	0.01159	0.01073	0.0005	0.150	0.160	0.090	0.060	0.120	0.160	0.180	49	0.035
68	0.01256	0.01186	0.0005	0.150	0.160	0.090	0.060	0.120	0.160	0.180	50	0.035
69	0.01392	0.01311	0.0005	0.150	0.160	0.090	0.060	0.120	0.160	0.280	51	0.035
70	0.01522	0.01477	0.0005	0.150	0.160	0.090	0.060	0.120	0.160	0.280	52	0.035
71	0.01684	0.01598	0.0000	0.150	0.160	0.090	0.060	0.120	0.160	0.200	53	0.035
72	0.01870	0.01778	0.0000	0.150	0.160	0.090	0.060	0.120	0.160	0.200	54	0.035
73	0.02083	0.01927	0.0000	0.150	0.160	0.090	0.060	0.120	0.160	0.200	55	0.035
74	0.02323	0.02136	0.0000	0.150	0.160	0.090	0.060	0.120	0.160	0.200	56	0.035

**Actuarial Assumptions, effective July 1, 2013  
Lunch Plan A**

AGE	DEATH RATES		DISABILITY RATES	RETIREMENT/DROP RATES		DUR	TERMINATION RATES	SALARY INCREASE
	MALE	FEMALE		< 30 YOS	>= 30 YOS			
18	0.00020	0.00013	0.0000	0.000	0.000	0	0.14	0.06
19	0.00021	0.00013	0.0000	0.000	0.000	1	0.14	0.06
20	0.00021	0.00013	0.0000	0.000	0.000	2	0.14	0.06
21	0.00023	0.00013	0.0000	0.000	0.000	3	0.14	0.06
22	0.00024	0.00013	0.0000	0.000	0.000	4	0.14	0.06
23	0.00026	0.00013	0.0000	0.000	0.000	5	0.14	0.06
24	0.00027	0.00014	0.0000	0.000	0.000	6	0.14	0.06
25	0.00029	0.00015	0.0000	0.000	0.000	7	0.14	0.06
26	0.00033	0.00016	0.0000	0.000	0.000	8	0.14	0.06
27	0.00034	0.00017	0.0000	0.000	0.000	9	0.14	0.06
28	0.00035	0.00017	0.0000	0.000	0.000	10	0.14	0.06
29	0.00036	0.00018	0.0000	0.000	0.000	11	0.14	0.06
30	0.00039	0.00021	0.0000	0.000	0.000	12	0.14	0.05
31	0.00044	0.00025	0.0001	0.000	0.000	13	0.14	0.05
32	0.00050	0.00029	0.0001	0.000	0.000	14	0.14	0.05
33	0.00056	0.00031	0.0001	0.000	0.000	15	0.14	0.06
34	0.00062	0.00034	0.0001	0.000	0.000	16	0.14	0.06
35	0.00068	0.00036	0.0001	0.000	0.000	17	0.14	0.07
36	0.00074	0.00038	0.0001	0.000	0.000	18	0.14	0.07
37	0.00080	0.00040	0.0001	0.000	0.000	19	0.14	0.04
38	0.00083	0.00042	0.0001	0.600	0.300	20	0.14	0.04
39	0.00086	0.00044	0.0001	0.600	0.300	21	0.14	0.04
40	0.00088	0.00048	0.0001	0.600	0.300	22	0.14	0.04
41	0.00091	0.00053	0.0001	0.600	0.300	23	0.14	0.06
42	0.00095	0.00058	0.0001	0.600	0.300	24	0.14	0.06
43	0.00099	0.00064	0.0001	0.600	0.300	25	0.14	0.04
44	0.00103	0.00071	0.0001	0.600	0.300	26	0.14	0.04
45	0.00109	0.00075	0.0001	0.600	0.300	27	0.14	0.04
46	0.00114	0.00080	0.0001	0.600	0.300	28	0.14	0.04
47	0.00119	0.00084	0.0001	0.600	0.300	29	0.14	0.04
48	0.00124	0.00091	0.0001	0.600	0.300	30	0.14	0.04
49	0.00130	0.00098	0.0100	0.600	0.300	31	0.14	0.04
50	0.00136	0.00109	0.0100	0.600	0.300	32	0.14	0.04
51	0.00152	0.00124	0.0100	0.600	0.300	33	0.14	0.04
52	0.00161	0.00142	0.0150	0.600	0.700	34	0.14	0.04
53	0.00176	0.00163	0.0175	0.600	0.700	35	0.14	0.04
54	0.00193	0.00189	0.0175	0.600	0.700	36	0.14	0.04
55	0.00224	0.00222	0.0175	0.800	0.700	37	0.14	0.04
56	0.00267	0.00266	0.0002	0.350	0.700	38	0.14	0.04
57	0.00306	0.00307	0.0002	0.350	0.700	39	0.14	0.04
58	0.00352	0.00346	0.0002	0.350	0.700	40	0.14	0.04
59	0.00397	0.00392	0.0002	0.600	0.700	41	0.14	0.04
60	0.00451	0.00446	0.0002	0.450	0.700	42	0.14	0.04
61	0.00526	0.00513	0.0002	0.200	0.500	43	0.14	0.04
62	0.00600	0.00587	0.0002	0.200	0.500	44	0.14	0.04
63	0.00704	0.00675	0.0002	0.350	0.500	45	0.14	0.04
64	0.00793	0.00760	0.0002	0.100	0.500	46	0.14	0.04
65	0.00895	0.00856	0.0002	0.100	0.500	47	0.14	0.04
66	0.01039	0.00966	0.0002	0.100	0.250	48	0.14	0.04
67	0.01159	0.01073	0.0002	0.200	0.250	49	0.14	0.04
68	0.01256	0.01186	0.0002	0.200	0.250	50	0.14	0.04
69	0.01392	0.01311	0.0000	0.200	0.250	51	0.14	0.04
70	0.01522	0.01477	0.0000	0.200	0.250	52	0.14	0.04
71	0.01684	0.01598	0.0000	0.200	0.250	53	0.14	0.04
72	0.01870	0.01778	0.0000	0.200	0.250	54	0.14	0.04
73	0.02083	0.01927	0.0000	0.200	0.250	55	0.14	0.04
74	0.02323	0.02136	0.0000	0.200	0.250	56	0.14	0.04



**Actuarial Assumptions, effective July 1, 2013  
Lunch Plan B**

AGE	DEATH RATES		DISABILITY RATES	RETIREMENT/DROP RATES	DUR	TERMINATION RATES	SALARY INCREASE
	MALE	FEMALE					
18	0.00020	0.00013	0.0000	0.00	0	0.100	0.055
19	0.00021	0.00013	0.0000	0.00	1	0.090	0.055
20	0.00021	0.00013	0.0000	0.00	2	0.080	0.055
21	0.00023	0.00013	0.0000	0.00	3	0.070	0.055
22	0.00024	0.00013	0.0000	0.00	4	0.060	0.055
23	0.00026	0.00013	0.0000	0.00	5	0.050	0.055
24	0.00027	0.00014	0.0000	0.00	6	0.050	0.055
25	0.00029	0.00015	0.0000	0.00	7	0.045	0.055
26	0.00033	0.00016	0.0000	0.00	8	0.045	0.055
27	0.00034	0.00017	0.0000	0.00	9	0.045	0.055
28	0.00035	0.00017	0.0000	0.00	10	0.045	0.055
29	0.00036	0.00018	0.0000	0.00	11	0.045	0.045
30	0.00039	0.00021	0.0000	0.00	12	0.040	0.045
31	0.00044	0.00025	0.0000	0.00	13	0.030	0.045
32	0.00050	0.00029	0.0000	0.00	14	0.030	0.045
33	0.00056	0.00031	0.0000	0.00	15	0.030	0.045
34	0.00062	0.00034	0.0000	0.00	16	0.050	0.050
35	0.00068	0.00036	0.0000	0.00	17	0.050	0.050
36	0.00074	0.00038	0.0010	0.00	18	0.050	0.050
37	0.00080	0.00040	0.0010	0.00	19	0.030	0.040
38	0.00083	0.00042	0.0010	0.00	20	0.040	0.040
39	0.00086	0.00044	0.0010	0.00	21	0.040	0.040
40	0.00088	0.00048	0.0050	0.00	22	0.040	0.040
41	0.00091	0.00053	0.0050	0.00	23	0.040	0.040
42	0.00095	0.00058	0.0050	0.00	24	0.040	0.040
43	0.00099	0.00064	0.0050	0.00	25	0.040	0.040
44	0.00103	0.00071	0.0050	0.00	26	0.040	0.040
45	0.00109	0.00075	0.0050	0.00	27	0.040	0.040
46	0.00114	0.00080	0.0050	0.00	28	0.040	0.040
47	0.00119	0.00084	0.0050	0.00	29	0.040	0.040
48	0.00124	0.00091	0.0050	0.00	30	0.040	0.040
49	0.00130	0.00098	0.0050	0.00	31	0.040	0.040
50	0.00136	0.00109	0.0130	0.00	32	0.040	0.040
51	0.00152	0.00124	0.0130	0.00	33	0.040	0.040
52	0.00161	0.00142	0.0130	0.00	34	0.040	0.040
53	0.00176	0.00163	0.0130	0.00	35	0.040	0.040
54	0.00193	0.00189	0.0130	0.00	36	0.040	0.040
55	0.00224	0.00222	0.0175	0.80	37	0.040	0.040
56	0.00267	0.00266	0.0175	0.80	38	0.040	0.040
57	0.00306	0.00307	0.0225	0.80	39	0.040	0.040
58	0.00352	0.00346	0.0225	0.80	40	0.040	0.040
59	0.00397	0.00392	0.0150	0.60	41	0.040	0.040
60	0.00451	0.00446	0.0050	0.50	42	0.040	0.040
61	0.00526	0.00513	0.0050	0.25	43	0.040	0.040
62	0.00600	0.00587	0.0050	0.25	44	0.040	0.040
63	0.00704	0.00675	0.0050	0.25	45	0.040	0.040
64	0.00793	0.00760	0.0010	0.25	46	0.040	0.040
65	0.00895	0.00856	0.0010	0.15	47	0.040	0.040
66	0.01039	0.00966	0.0010	0.15	48	0.040	0.040
67	0.01159	0.01073	0.0010	0.30	49	0.040	0.040
68	0.01256	0.01186	0.0010	0.45	50	0.040	0.040
69	0.01392	0.01311	0.0010	0.20	51	0.040	0.040
70	0.01522	0.01477	0.0010	0.20	52	0.040	0.040
71	0.01684	0.01598	0.0010	0.20	53	0.040	0.040
72	0.01870	0.01778	0.0010	0.20	54	0.040	0.040
73	0.02083	0.01927	0.0010	0.20	55	0.040	0.040
74	0.02323	0.02136	0.0010	0.20	56	0.040	0.040

**Exhibit 7-A****AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY  
June 30, 2016**

<b>Date</b>	<b>Description</b>	<b>Amtz. Method</b>	<b>Amtz. Period</b>	<b>Initial Liability</b>	<b>Years Remain</b>	<b>Remaining Balance</b>	<b>Mid-Year Payment</b>
2014	OAB	Note 1	15	2,537,864,619	13	2,315,374,153	261,202,822
2014	EAAB	Note 2,3	26	3,996,568,647	24	3,694,542,686	344,217,565
2014	2009 Experience G/L	L	25	2,830,242,246	23	2,746,828,480	249,988,498
2014	2010 Experience G/L	L	26	1,106,465,512	24	1,076,594,214	96,461,424
2014	2011 Experience G/L	L	27	(170,316,807)	25	(166,100,327)	(14,671,243)
2014	2012 Experience G/L	L	28	123,507,827	26	120,701,146	10,522,700
2014	2013 Experience G/L	L	29	(246,366,627)	27	(241,222,916)	(20,779,159)
2014	2013 Assump/Method Change	L	29	838,527,326	54	821,020,320	70,723,428
2014	2014 Investment Experience	L	5	(423,997,917)	3	(273,099,957)	(101,629,570)
2014	2014 Assump/Meth Change	L	30	1,452,120,642	28	1,424,243,499	121,343,619
2014	2014 Other Experience G/L	L	30	(162,364,784)	28	(159,247,780)	(13,567,695)
2015	2015 Experience G/L	L	30	(376,727,393)	29	(373,246,171)	(31,480,487)
2016	2016 Experience G/L	L	30	26,612,533	30	26,612,533	2,223,824
<b>Total Outstanding Balance</b>						<b>\$ 11,012,999,880</b>	<b>\$ 974,555,726</b>
<b>Employers Credit Balance</b>							
2014	2012 Contribution Variance	Note 3	-	-	-	-	-
2014	2013 Contribution Variance	L	4	9,457,295	2	5,080,956	2,735,460
2014	2014 Contribution Variance	Note 3	-	-	-	-	-
2015	2015 Contribution Variance	Note 3	-	-	-	-	-
2016	2016 Contribution Variance	Note 3	-	-	-	-	-
<b>Total Credit Balance</b>						<b>\$ 5,080,956</b>	<b>\$ 2,735,460</b>
<b>Total Unfunded Actuarial Accrued Liability</b>						<b>\$ 11,018,080,836</b>	<b>\$ 977,291,186</b>

See Exhibit 7-D for Notes.

**Exhibit 7-B****AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY  
June 30, 2017 - Projected**

<b>Date</b>	<b>Description</b>	<b>Amtz. Method</b>	<b>Amtz. Period</b>	<b>Initial Liability</b>	<b>Years Remain</b>	<b>Remaining Balance</b>	<b>Mid-Year Payment</b>
2017	OAB	Note 1	12	2,223,680,075	12	2,223,680,075	277,558,112
2017	EAAB	Note 2,3	23	3,669,519,961	23	3,623,562,627	365,395,967
2017	2009 Experience G/L	L	22	2,700,212,883	22	2,700,212,883	249,046,832
2017	2010 Experience G/L	L	23	1,059,900,706	23	1,059,900,706	96,087,157
2017	2011 Experience G/L	L	24	(163,743,956)	24	(163,743,956)	(14,612,723)
2017	2012 Experience G/L	L	25	119,132,639	25	119,132,639	10,479,627
2017	2013 Experience G/L	L	26	(238,348,365)	26	(238,348,365)	(20,692,015)
2017	2013 Assump/Method Chg	L	26	811,236,568	26	811,236,568	70,426,828
2017	2014 Investment Experience	L	2	(188,770,969)	2	(188,770,969)	(101,583,287)
2017	2014 Assump/Method Change	L	27	1,408,664,420	27	1,408,664,420	120,823,022
2017	2014 Other Experience G/L	L	27	(157,505,849)	27	(157,505,849)	(13,509,486)
2017	2015 Experience G/L	L	28	(369,495,154)	28	(369,495,154)	(31,342,513)
2017	2016 Experience G/L	L	29	26,366,615	29	26,366,615	2,213,880
2017	2017 DR Change	L	30	134,115,300	30	134,115,300	11,156,015
<b>Total Outstanding Balance</b>						<b>\$ 10,989,007,540</b>	<b>\$ 1,021,447,416</b>
<b>Employers Credit Balance</b>							
2017	2013 Contribution Variance	L	1	2,635,249	1	2,635,249	2,734,825
2017	2014 Contribution Variance	Note 3	-	-	-	-	-
2017	2015 Contribution Variance	Note 3	-	-	-	-	-
2017	2016 Contribution Variance	Note 3	-	-	-	-	-
2017	2017 Contribution Variance	L	5	19,493,198	5	19,493,198	4,667,297
<b>Total Credit Balance</b>						<b>\$ 22,128,447</b>	<b>\$ 7,402,122</b>
<b>Total Unfunded Actuarial Accrued Liability</b>						<b>\$ 11,011,135,987</b>	<b>\$ 1,028,849,538</b>

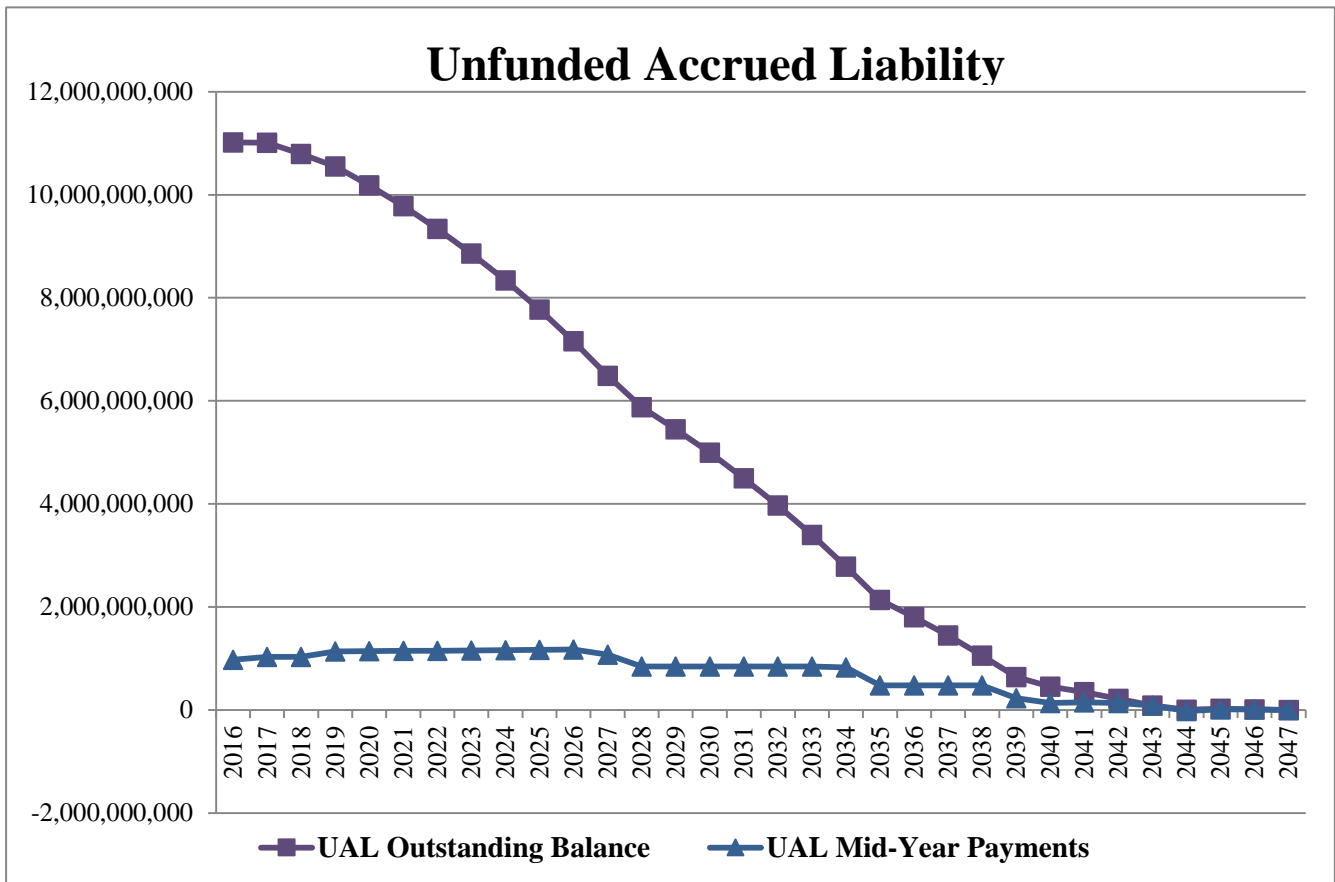
See Exhibit 7-D for Notes.

**Exhibit 7-C**

**UAL Outstanding Balance and Payment Schedule  
Based on June 30, 2017 Projected UAL Schedules\***

<b>FY Beginning</b>	<b>UAL Outstanding Balance (Millions)</b>	<b>UAL Mid-Year Payments (Millions)</b>	<b>Payment % Change</b>	<b>FY Beginning</b>	<b>UAL Outstanding Balance (Millions)</b>	<b>UAL Mid-Year Payments (Millions)</b>	<b>Payment % Change</b>
2016	11,018	977	1.4%	2032	3,968	845	0.0%
2017	11,011	1,029	5.3%	2033	3,396	845	0.0%
2018	10,791	1,032	0.3%	2034	2,781	825	-2.4%
2019	10,552	1,139	10.4%	2035	2,138	480	-41.8%
2020	10,182	1,145	0.5%	2036	1,804	480	0.0%
2021	9,778	1,151	0.5%	2037	1,445	480	0.0%
2022	9,337	1,152	0.1%	2038	1,058	480	0.0%
2023	8,861	1,158	0.5%	2039	642	231	-51.9%
2024	8,341	1,164	0.5%	2040	451	135	-41.6%
2025	7,775	1,171	0.5%	2041	346	150	10.8%
2026	7,159	1,177	0.6%	2042	217	139	-7.0%
2027	6,488	1,072	-8.9%	2043	90	89	-35.8%
2028	5,875	845	-21.1%	2044	4	-18	-120.1%
2029	5,450	845	0.0%	2045	23	13	-174.4%
2030	4,992	845	0.0%	2046	11	11	-16.6%
2031	4,499	845	0.0%	2047	0	0	-100.0%

\* Includes the projected 2017 contribution variance and amortized with 7.70% discount rate



## Exhibit 7-D

### Amortization Schedule Notes

Act 497 of 2009 consolidated all schedules established prior to 2009 into two amortization schedules, the Original Amortization Base (OAB) and the Experience Account Amortization Base (EAAB). The OAB consists of the outstanding balance of the Initial Unfunded Accrued Liability and schedules with negative outstanding balances. The outstanding balance of this schedule was credited with funds from the Initial UAL account, excluding the subaccount of this fund, and the balance of the Employer Credit Account. The OAB payment schedule is prescribed by statute, as described in Note 1 below. The EAAB consists of the 2004 schedule and all remaining schedules. The outstanding balance of this schedule was credited with the balance of funds from the Initial UAL subaccount, which were transferred from the Employee Experience Account on June 30, 2009. The EAAB payment schedule is prescribed by statute, as described in Note 2 below.

All schedules shown in Exhibit 7-A were re-amortized on July, 1, 2014, using a rate of 7.75%. All schedules shown in Exhibit 7-B, projected for July 1, 2017, were re-amortized as of July 1, 2017 using a discount rate of 7.70%.

**Note 1:** Act 497 of 2009 created the Original Amortization Base, effective July 1, 2010, which combines the following schedules: 1993-1996, 1998-2000, and 2005-2008. The combined balance was reduced by applying funds from the IUAL Fund, excluding the subaccount of this fund. In addition to regular payments, the schedule was reduced by \$100 million on June 30, 2013 and re-amortized, by \$50 million and \$100 million on June 30, 2014 and 2015, respectively, and not re-amortized, per Act 399 of 2014. The schedule was credited appropriations from Act 55 of 2014 and Act 56 of 2015. Future payments will increase by 6.5% for 3 years, then by 2.0% until paid off in 2029.

**Note 2:** Act 497 of 2009 created the Experience Account Amortization Base, which combines the following schedules shown in Exhibit A-1: 1997, 2001-2003, 2004 (the liability resulting from Act 588 of 2004 which zeroed out the Experience Account), and 2008. The combined balance was reduced by applying funds from the subaccount of the IUAL Fund, which were transferred from the Experience Account on June 30, 2009. In addition to regular payments and contribution variance credits, the schedule was reduced by investment gains up to the annual “thresholds” created by Act 497 of 2009 and Act 399 of 2014. Future payments will increase by 6.5% for 3 years and then will be level until paid off in 2040.

**Note 3:** The 2012 contribution variance surplus of \$7,169,301 was used to reduce and re-amortize the EAAB, per Act 497 of 2009. The 2014, 2015, and 2016 contribution variance surpluses of \$40,289,648, \$91,284,653, and \$64,452,206, respectively, were used to reduce the EAAB, with no re-amortization, per Act 399 of 2014.

**Exhibit 7-E****Components of Original Amortization Base  
(Dollar amounts in millions)**

	<b>Annual Outstanding Balance</b>					<b>Annual Payments</b>				
		Other	IUAL	Employer	Total		Other	IUAL	Employer	Total
	IUAL	Schedules	Acct	Account	OAB	IUAL	Schedules	Acct	Account	OAB
2016	6,424.5	(3,622.0)	(389.5)	(97.6)	2,315.4	724.8	(408.6)	(43.9)	(11.0)	261.2
2017	6,170.1	(3,478.6)	(374.1)	(93.8)	2,223.7	771.9	(435.2)	(46.8)	(11.7)	278.2
2018	5,847.1	(3,296.4)	(354.5)	(88.9)	2,107.3	787.3	(443.9)	(47.7)	(12.0)	283.7
2019	5,483.0	(3,091.2)	(332.4)	(83.3)	1,976.0	803.1	(452.7)	(48.7)	(12.2)	289.4
2020	5,074.3	(2,860.8)	(307.7)	(77.1)	1,828.8	819.1	(461.8)	(49.7)	(12.4)	295.2
2021	4,617.3	(2,603.1)	(279.9)	(70.2)	1,664.0	835.5	(471.0)	(50.7)	(12.7)	301.1
2022	4,107.8	(2,315.9)	(249.1)	(62.4)	1,480.4	852.2	(480.5)	(51.7)	(13.0)	307.1
2023	3,541.6	(1,996.7)	(214.7)	(53.8)	1,276.4	869.3	(490.1)	(52.7)	(13.2)	313.3
2024	2,913.7	(1,642.7)	(176.7)	(44.3)	1,050.1	886.6	(499.9)	(53.8)	(13.5)	319.5
2025	2,219.2	(1,251.1)	(134.6)	(33.7)	799.8	904.4	(509.9)	(54.8)	(13.7)	325.9
2026	1,452.4	(818.8)	(88.1)	(22.1)	523.4	922.5	(520.1)	(55.9)	(14.0)	332.5
2027	607.4	(342.5)	(36.8)	(9.2)	218.9	630.5	(355.5)	(38.2)	(9.6)	227.2
2028	-	-	-	-	-	-	-	-	-	-
2029	-	-	-	-	-	-	-	-	-	-

## GLOSSARY

**Accrued Benefit** – The pension benefit that an individual has earned as of a specific date based on the provisions of the plan and the individual's age, service, and salary as of that date.

**Actuarial Accrued Liability** – Computed differently under different funding methods, the actuarial accrued liability generally represents the portion of the actuarial present value of benefits attributable to service credit earned (or accrued) as of the valuation date.

**Actuarial Present Value of Benefits** – Amount which, together with future interest, is expected to be sufficient to pay all benefits to be paid in the future, regardless of when earned, as determined by the application of a particular set of actuarial assumptions; equivalent to the actuarial accrued liability plus the present value of future normal costs attributable to the members.

**Actuarial Assumptions** – Assumptions as to the occurrence of future events affecting pension costs. These assumptions include rates of investment earnings, changes in compensation, rates of mortality, withdrawal, disablement, and retirement as well as statistics related to marriage and family composition.

**Actuarial Cost Method** – A method of determining the portion of the cost of a pension plan to be allocated to each year; sometimes referred to as the "actuarial funding method." Each cost method allocates a certain portion of the actuarial present value of benefits between the actuarial accrued liability and future normal costs.

**Actuarial Equivalence** – Series of payments with equal actuarial present values on a given date when valued using the same set of actuarial assumptions.

**Actuarial Present Value** - The amount of funds required as of a specified date to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payments between the specified date and the expected date of payment.

**Actuarial Value of Assets** – The value of cash, investments, and other property belonging to the pension plan as used by the actuary for the purpose of the actuarial valuation. This may correspond to market value of assets, or some modification using an asset valuation method to reduce the volatility of asset values.

**Actuarially Reduced** – The method of adjusting a benefit received at an early date, or paid in a form other than the lifetime of the member so that the expected total cost to the retirement system is equivalent to the cost if the benefit did not begin until later, or was paid for the lifetime of the member.

**Asset Gain (Loss)** – That portion of the actuarial gain attributable to investment performance above (below) the expected rate of return in the actuarial assumptions.

**Amortization** – Paying off an interest-discounted amount with periodic payments of interest and (generally) principal, as opposed to paying off with a lump sum payment.

**Amortization Payment** – That portion of the pension plan contribution designated to pay interest and reduce the outstanding principal balance of unfunded actuarial accrued liability. If the amortization payment is less than the accrued interest on the unfunded actuarial accrued liability the outstanding principal balance will increase.

**Contribution Variance** – The difference between actuarially required contribution and the actual amount received based upon a projected contribution rate. Results in an increase or decrease to future required contributions.

**Discount Rate** – The interest rate used in developing present values to reflect the time value of money.

**Decrements** – Events which result in the termination of membership such as retirement, disability, withdrawal, or death.

**Employer Normal Cost** – Portion of the normal cost, excluding administrative expenses, not paid by employee contributions.

**Entry Age Normal (EAN) Funding Method** – A standard actuarial funding method whereby each member's normal costs (service costs) are generally level as a percentage of pay from entry age until retirement. The annual cost of benefits is comprised of the normal cost plus an amortization payment to reduce the UAL.

**Experience Gain (Loss)** – The difference between actual unfunded actuarial accrued liabilities and anticipated unfunded actuarial accrued liabilities during the period between two valuation dates. It is a measurement of the difference between actual and expected experience, and may be related to investment earnings above (or below) those expected or changes in the liability due to fewer (or greater) than expected numbers of retirements, deaths, disabilities, or withdrawals, or variances in pay increases relative to assumed pay increases. The effect of such gains (or losses) is to decrease (or increase) future costs.

**Experience Account Amortization Base (EAAB)** – Amortization base created in 2010 by Act 497 of 2009. Consolidated and re-amortized schedules created in the following valuation years, which existed prior to Act 497: 1997, 2001-2003, 2004 (the liability resulting from Act 588 of 2004 which zeroed out the experience account), and 2008. The new combined balance was credited with funds from the sub-account of the IUAL Fund, which were transferred from the Experience Account on June 30, 2009. See Note 2 on Exhibit 7-D for additional details.

**Funded Ratio** – A measure of the ratio of the actuarial value of assets to liabilities of the system. Typically the assets used in the measure are the actuarial value of assets as determined by the asset valuation method adopted by the Board of Trustees; the liabilities are determined using the actuarial funding method specified by Louisiana statute. Thus the funded ratio depends not only on the financial strength of the plan but also on the asset valuation method used to determine the assets and on the funding method used to determine the liabilities.

**Governmental Accounting Standards Board (GASB)** – Governmental agency that sets the accounting standards for state and local government operations.

**Market Value of Assets (MVA)** – The value of assets as they would trade on an open market.

**Normal Cost** – Computed differently under different funding methods, generally that portion of the actuarial present value of benefits allocated to the current plan year.



**Original Amortization Base (OAB)** – Amortization base created in 2010 by Act 497 of 2009. Consolidated and re-amortized schedules created in the following valuation years, which existed prior to Act 497: 1993 (Initial Unfunded Accrued Liability), 1993 (Change in Liability), 1994-1996, 1998-2000, and 2005-2008. See Note 1 on Exhibit 7-D for additional details.

**Permanent Benefit Increase** – An increase in specified current retiree benefits authorized by statutes.

**Projected Benefits** – The benefits expected to be paid in the future based on the provisions of the plan and the actuarial assumptions. The projected values are based on anticipated future advancement in age and accrual of service as well as increases in salary paid to the participant.

**Projected Unit Credit (PUC) Funding Method** – A standard actuarial funding method whereby the actuarial present value of projected benefits of each individual is accumulated from the participant's attained age to anticipated retirement. The portion attributable to current year benefit accruals is called the normal cost. The actuarial present value of future benefits in proportion to service accrued on the date of valuation is called the actuarial accrued liability. The annual cost of benefits is comprised of the normal cost plus an amortization payment to reduce the unfunded actuarial accrued liability.

**Public Retirement Systems' Actuarial Committee (PRSAC)** – A committee created by state law within the Louisiana Department of the Treasury to insure orderly and consistent strategies for continuing development and growth that will attain and maintain the soundness of the public retirement systems, plans and funds and to report all findings and recommendations to the House and Senate committees on retirement and the Joint Legislative Committee on the Budget.

**Side-Fund Assets** – Assets held in the trust for purposes other than for paying the accrued benefits or administrative expenses of the plan.

**Unfunded Actuarial Accrued Liability (UAAL or UAL)** – The excess of the actuarial accrued liability over the valuation assets; sometimes referred to as "unfunded past service liability". UAL increases (decreases) each time an actuarial loss (gain) occurs and when new benefits are added without being fully funded initially.

**Valuation Assets** – The actuarial value of assets less side-fund assets; represents the portion of the actuarial value of assets available to pay the accrued benefits of the plan.

**Vested Benefit** – Benefits that the members are entitled to regardless of employment status.