TEACHERS' RETIREMENT
SYSTEM OF LOUISIANA

JUNE 30, 2019

ACTUARIAL VALUATION
(Revised January 9, 2020)

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

January 9, 2020

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

Dear Board Members:

This report is prepared for the Board of Trustees of Teachers' Retirement System of Louisiana (TRSL) to present the results of the actuarial valuation of assets and liabilities and funding requirements, as of June 30, 2019. The primary purpose of the report is to provide a measure of the plan's liability and funding levels and to determine the actuarially required contribution for fiscal year ending 2020. Note the projected actuarially required contribution rate for fiscal year ending 2021, as reported in the valuation adopted by the Board on October 3, 2019 has been revised due to the Board's adoption of a 7.45% discount rate, effective June 30, 2020. Section IV provides disclosures of the Fiduciary Net Position and Net Pension Liabilities required by the Governmental Accounting Standards Board Statements 67/68. 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, plan assets and other matters as detailed in 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 liabilities and normal costs 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, other sets of assumptions and methods could also be reasonable and could produce materially different results. Actual results may vary from the assumptions used to prepare the valuation.

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.

Appendix D has been added to comply with the guidance provided by Actuarial Standard of Practice, No 51, applicable to valuations on or after November 1,2018. 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 Pat is a Fellow in the Society of Actuaries. Shelley and Pat are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,

FOSTER & FOSTER INC.

Shelley R. Johnson, ASA, MAAA

D. Patrick McDonald, FSA, EA, MAAA, FCA

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PRESENTATION OF VALUATION RESULTS

SUMMARY OF VALUATION RESULTS

			----- Prior Years -----	
		June 30, 2019	**June 30, 2018**	**June 30, 2017**
I.	Membership Census			
	Retirees	79,647	78,423	77,258
	Actives	85,998	85,045	84,228
	DROP	2,462	2,420	2,478
	Terminated Vested	7,574	7,211	6,941
II.	Annual Benefits	$2,033,557,103	$1,986,400,248	$1,939,661,208
III.	Current Payroll			
	Regular Teachers, Lunch Plans	3,386,982,919	3,373,253,993	3,316,780,178
	Higher Education	684,771,436	624,797,320	584,847,614
	Total	4,071,754,355	3,998,051,313	3,901,627,792
IV.	Market Value of Assets	21,652,482,372	21,046,702,165	19,513,345,675
	Valuation Assets	21,183,177,985	20,319,561,584	19,210,425,004
V.	Investment Yield			
	Market Value (Total Assets)	5.86%	11.15%	15.19%
	Market Value (Excl LaDROP Assets)	5.95%	11.35%	15.55%
	Actuarial Value	7.48%	9.48%	9.15%
	DROP	6.98%	8.98%	8.65%
VI.	Experience Account	91,497,197	85,129,775	37,154,395
VII.	Total Normal Cost	454,344,240	439,691,899	473,025,011
	Total Normal Cost % of Payroll	11.16%	11.00%	12.12%
	Employer Normal Cost % of Payroll	3.18%	3.01%	4.14%
VIII.	Unfunded Actuarial Accrued Liability	10,390,968,872	10,552,318,323	10,552,198,909
IX.	Funded Percentage	67.1%	65.8%	64.5%
X.	Funding Requirements (Mid-year Pmt)			
	1) Discount Rate (Current Year)[1]	7.55%	7.65%	7.70%
	Discount Rate (Next Year)[1]	7.45%	7.55%	7.65%
	2) Employee Contribution	328,587,112	322,492,929	317,192,109
	3) Employer Contribution	1,170,078,214	1,194,312,374	1,172,121,854
	Aggregate Rate (Current Year) [2]	25.4%	26.4%	26.4%
	4) Projected Employer Contribution	1,204,979,667	1,191,113,503	1,211,871,889
	Aggregate Rate (Next Year) [3]	25.6%	25.9%	26.5%

The above funding requirements measure the cost of benefits that were in effect on June 30, 2019.

1 The discount rate is the long-term expected return on investments less 40 basis points for gain-sharing, and 10 basis points in 2017 for administrative expenses (see Discussion of Risk Section, Investment Risk)
2 Reflects the restated aggregate employer contribution rate for the fiscal year following the valuation.
3 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 Techers (K-12) employer contribution rate. The term "plan" refers to each employer group specified in the Act, rather than each plan referring to 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 for a specific plan or group of plans by specific 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 2020/2021					
	Total Normal Cost Rate	Aggregate Employee Normal Cost Rate	Employer Normal Cost Rate	Administrative Expense Rate	Shared UAL Rate	**Total Employer Contribution Rate**
Regular Teachers, Lunch A & B	11.5%	7.9794%	3.5504%	0.39%	21.8%	25.8%
Higher Education	10.7%	8.0000%	2.7356%	0.39%	21.8%	25.0%
Aggregate Rate	11.4%	7.9829%	3.4133%	0.39%	21.8%	25.6%

The variation in normal cost by plan reflects differences in benefits, actuarial assumptions, and member demographics based on the entry age normal cost method.

CHANGES SINCE PRIOR VALUATION

The Board has adopted a plan to reduce the discount rate to 7.50% in 0.05% annual increments. The discount rate for Fiscal Year 2018/2019 was 7.65%. The Board accelerated the discount rate reduction plan by reducing the discount rate to 7.55%, effective July 1, 2019. This discount rate was used to determine the recommended contribution rate for FY 2019/2020 and used the discount rate for the June 30, 2019 valuation. However, the employer contribution rate for Fiscal Year 2020/2021, determined by this valuation, was determined using a discount rate of 7.45%.

CHANGE IN FUNDING REQUIREMENTS

The aggregate employer contribution rate established by the Public Retirement Systems' Actuarial Committee for the 2019/2020 plan year was 25.9%. The restated employer contribution rate determined by this valuation for the 2019/2020 plan year is 25.4%. Therefore, a contribution surplus of 0.5% is expected next year.

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 projected aggregate employer contribution rate decreased from 25.9% to 25.6% from Fiscal Year2019/2020 to Fiscal Year 2020/2021. The reasons for the change are detailed 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 are not additive and may overlap.

Employer Contribution Rate Reconciliation

Normal Cost	
Demographic Shift	-0.07%
Discount Rate Change (7.55% to 7.45%)	0.24%
Normal Cost Total Change	0.17%
UAL Payment	
Investment Experience Loss	0.06%
Other Experience Gain	-0.22%
Statutory UAL Payment Increase *	-0.08%
Contribution Variance Payment Change	-0.01%
Discount Rate Change (7.55% to 7.45%)	0.38%
Total UAL Payment Change	0.13%
Payroll Change	-0.47%
Administrative Expenses	-0.06%
Total	-0.23%
Actual Contribution Rate Change	-0.3%

CHANGE IN UNFUNDED ACCRUED LIABILITY

The plan's total unfunded accrued liability (UAL) decreased, mainly due to receipt of the prior year's UAL payment and an experience gain from non-investment related actuarial assumptions. This decrease was partially offset by increases resulting from the change in the discount rate.

Unfunded Liability - June 30, 2018		$ 10,552,318,323
Interest on Unfunded Liability	$ 807,252,352	
Employer Amortization Payment	(1,093,595,853)	
Act 50 of 2019 Appropriation	(21,327,137)	
Contribution Variance Surplus	(59,425,625)	
Investment Experience Loss	34,045,276	
Other Experience Gain	(126,683,093)	
Discount Rate Change (7.65% to 7.55%)	298,384,629	
Total Change		$ (161,349,451)
Unfunded Liability - June 30, 2019		$ 10,390,968,872

PLAN EXPERIENCE

The actuarial assumptions represent the best estimate of future experience in order to properly fund 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 Appendix E of the valuation report. A gain or loss occurs if the actual experience differs from the prior year's projected plan measurements. The funding policy, in Appendix C, describes how investment and non-investment gains are amortized or allocated for other purposes.

Demographic and Salary Assumption Experience

Demographic assumptions include rates of retirement/DROP, rates at which members become disabled, turnover rates, mortality rates, and several other assumptions. Salary assumptions anticipate future salary increases. During the 2018/2019 plan year, the system incurred an experience gain of $126,683,093 from plan experience differing from that anticipated by the demographic and salary assumptions. The gain is amortized over 30 years with level payments.

A breakdown of the non-investment experience gain/(loss) is provided below:

Active Member Decrements	($81,714,158)
Active Member Salaries	$139,470,880
Inactive Mortality	$5,572,671
Administrative Expenses	$3,681,627
Other	$59,672,073
Total Change	$126,683,093

Investment Assumption Experience

The market value of assets and actuarial value of assets include funds from the DROP accounts created for members eligible for DROP after January 1, 2004, which are invested in money market accounts. The rate of return on the actuarial value of assets is determined for trust assts net of these accounts.

	Actuarial Value of Assets	Money Market DROP Accounts	Net Actuarial Value of Assets
Beginning Assets	20,407,476,271	366,738,539	20,040,737,732
Contributions	1,622,738,503	94,503,718	1,528,234,785
Benefits Payments and Expenses	(2,230,880,465)	(102,925,124)	(2,127,955,341)
Investment Income	1,478,326,284	2,572,470	1,475,753,814
Ending Asset Value	21,277,660,593	360,889,603	20,916,770,990
Net AVA Rate of Return			7.48%

For the plan year ending June 30, 2019, the System's actuarial rate of return of 7.48% was less than the 7.65% discount rate, resulting in an investment experience loss of $34,045,276. Investment experience losses are amortized over 30 years with level payments. Investment experience gains up to the threshold amounts, are allocated to the Original Amortization Base and Experience Account Allocation Base. The remaining gain is amortized over 30 years with level payments. One-half of the remaining gain is allocated to the experience account, up to the statutory cap, to be used to fund future permanent benefit increases, when granted by the legislature, and is amortized over ten years as a loss. The development of investment gains/losses and any resulting allocations are shown below:

Development of Investment Gain/(Loss)	
A. Beginning Net Actuarial Value of Assets	$ 20,040,737,732
B. Total Contributions	1,528,234,785
C. Benefits Payments and Expenses	2,127,955,341
D. Ending Net Actuarial Value of Assets	20,916,770,990
E. Investment Income (D - A - B + C)	1,475,753,814
Investment Rate of Return	7.48%
F. Expected Investment Income	1,509,799,089
Expected Rate of Return	7.65%
G. Investment Gain/(Loss) (E - F)	(34,045,276)
Current Allocation of Gain Threshold to OAB/EAAB	
H. $200,000,000 Indexed by AVA Increase	$ 240,616,401

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 allocated to the Experience Account and administrative expenses (when not directly funded), which is currently 7.95% for Fiscal Year 2019/2020 and 7.90% for Fiscal Year 2020/2021.

	Actuarial Rate of Return		Geometric Average
2014	13.14%	5 Year	8.80%
2015	11.26%	10 Year	8.04%
2016	6.67%	15 Year	7.42%
2017	9.15%	20 Year	6.25%
2018	9.48%	25 Year	7.75%
2019	7.48%	30 Year	8.20%

DROP accounts for members eligible for DROP prior to January 1, 2004 are credited with interest following termination of DROP at the System's actuarial rate of return less a 0.5% expense adjustment, but not below zero. The DROP interest rate for the period July 1, 2018 through June 30, 2019 after the expense adjustment is 6.98%. DROP accounts for members eligible for DROP after are January 1, 2004 are invested in money market accounts.

ACTUARIAL ASSETS/VALUATION ASSETS

The gross actuarial value of assets, developed in Section II, are determined based on the market value of assets, with gradual recognition of gains and losses relative to the discount rate over a five-year period in order to smooth the effects of short-term market volatility. Valuation assets are determined as the gross actuarial value of assets less the assets held in side-fund accounts. Valuation assets are used to determine the employer contribution rate (see Section III).

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 $2,985,411.

Experience Account Fund: The account is used to fund permanent benefit increases for retirees. Fifty percent of any excess return above the statutory threshold will be credited to the Experience Account. There was no current year allocation, other than the interest credited on the current balance, based on the System's actuarial return. The current balance is $91,497,179.

LEGISLATIVE/PLAN CHANGES

Act 50 of 2019 provided a supplemental appropriation of $21,327,137 to TRSL to be applied to the IUAL, which is a component of the Original Amortization Base.

The following provisions of Act 95 of 2016 will be implemented in future valuations, once certain triggers are met:

- 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.
- Provides for re-amortization of the OAB with level-dollar payments to 2029 in Fiscal Year 2020/2021 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 the net remaining liability of the OAB and EAAB shall be re-amortized after application of the hurdle payments in the Fiscal Year 2019/2020 and in every fifth fiscal year thereafter until the system is 80% funded

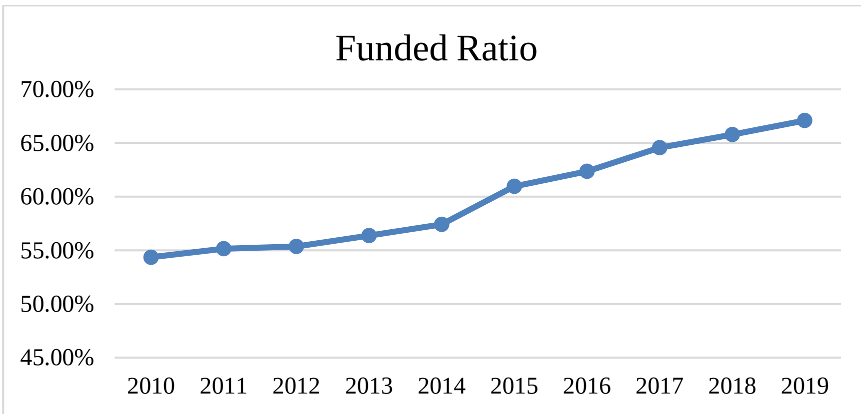
ACCELERATED REDUCTION OF OAB AND EAAB

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 of 2014 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, $474,232,407 has been applied to the OAB and $813,992,620 has been applied to the EAAB. When combined with the surplus dollars appropriated to the System by the legislature, the OAB would be paid off by 2027, two years earlier than the 2029 payoff required by the State Constitution, and the EAAB would be paid off by 2032, eight years earlier than the original pay-off date of 2040. Per Act 94 of 2016, the OAB and EAAB schedules were re-amortized to their original statutorily required pay-off dates. A projection of future UAL and UAL payments based on the projected amortization schedules, after re-amortization, is shown in Appendix F. This projection assumes that the actuarially determined contributions will be paid when due and all actuarial assumptions will be realized.

FUNDED STATUS

The funded status is a measure of the plan's assets relative to the plan's obligations. The current funded ratio is 67.09%, as measured by the plan's valuation assets divided by the total actuarial accrued liability, based on the asset valuation method, actuarial cost method, and actuarial assumptions described in Appendix E. The funded ratio reflects the change in the discount rate to 7.55%.

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. The financial crisis of 2008, and gradual recognition of the losses, resulted in a funded ratio of 54.4% in 2010. The chart below shows the recovery to date as exhibited by the steady increase in the funded ratio through June 30, 2019, based on the actuarial value of assets.



ASSETS/FINANCIAL SUMMARY

STATEMENT OF REVENUES AND EXPENSES

		----- Prior Years -----	
	June 30, 2019	**June 30, 2018**	**June 30, 2017**
OPERATING REVENUES:			
1. **Contribution Income**			
Member	$ 341,398,896	$ 337,928,752	$ 328,541,240
Employer	1,124,923,542	1,110,943,147	1,037,915,514
Legis Appropriations	21,327,137	8,585,163	0
Other Appropriations	27,033	8,137	28,103
ORP - Unfunded	132,340,454	130,984,645	122,560,251
LSU Ag Center Coop. Ext.	1,995,075	1,873,303	1,754,855
Miscellaneous	726,366	(556,254)	536,662
TOTAL CONTRIBUTIONS	1,622,738,503	1,589,766,893	1,491,336,625
2. **Investment Income**			
Investments	1,250,580,485	2,177,985,187	2,650,391,172
Less Advisor Fees	(36,658,316)	(37,287,214)	(34,883,417)
TOTAL INVESTMENT INCOME	1,213,922,169	2,140,697,973	2,615,507,755
3. **Total Revenues**	2,836,660,672	3,730,464,866	4,106,844,380
OPERATING EXPENSES:			
1. General Administration	13,445,962	14,046,725	14,368,886
Other Post-Employment Benefits[1]	95,273	13,633,156	586,166
GASB 68 Pension Expense	880,211	1,385,063	2,807,080
Depreciation Expense	396,927	400,766	432,238
TOTAL ADMIN. EXPENSE	14,818,373	29,465,710	18,194,370
2. **Benefits Paid**			
Pension Benefits	2,163,684,514	2,116,953,537	2,061,454,295
LSU Ag Center Coop. Ext.	2,075,869	2,017,909	1,995,075
Refund of Contributions	50,301,709	48,671,220	49,805,920
TOTAL BENEFITS PAID	2,216,062,092	2,167,642,666	2,113,255,290
3. **Total Expenses**	2,230,880,465	2,197,108,376	2,131,449,660
NET MARKET VALUE INCREASE:	605,780,207	1,533,356,490	1,975,394,720

[1] The 2018 OPEB Expense includes a $13,190,993 adjusting entry related to GASB 75 implementation.

COMPARATIVE SUMMARY OF REVENUES BY SOURCE AND EXPENSES BY TYPE

Revenues by Source				
Fiscal Year	Members Contribution	Employer Contribution[1]	Investment Income	Total
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 [2]	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
2017	328,541,240	1,162,795,385	2,615,507,755	4,106,844,380
2018	337,928,752	1,251,838,141	2,140,697,973	3,730,464,866
2019	341,398,896	1,281,339,607	1,213,922,169	2,836,660,672

Expenses by Type				
Fiscal Year	Benefits	Refunds	Administrative Expenses	Total
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
2017	2,063,449,370	49,805,920	18,194,370	2,131,449,660
2018	2,118,971,446	48,671,220	29,465,710	2,197,108,376
2019	2,165,760,383	50,301,709	14,818,373	2,230,880,465

[1] Includes Miscellaneous Contribution/Income in addition to direct employer contributions.
[2] Includes $5,578,791 legislative appropriation from Act 55 of 2014.

STATEMENT OF ASSETS

ASSETS:	June 30, 2019	----Prior Years--- June 30, 2018	June 30, 2017
1. Short-term Assets			
Cash and Cash Equivalents	$ 196,030,213	$ 277,091,189	$ 216,603,032
Short Term Securities	905,937,551	1,076,810,833	1,033,090,820
2. Bonds			
Domestic Bonds	2,383,646,988	2,371,403,311	1,913,773,495
International Bonds	1,357,674,230	1,278,291,190	1,568,601,507
3. Equities			
Domestic Equities	6,220,517,726	6,321,369,477	5,927,969,405
International Equities	3,629,497,706	3,635,793,802	3,465,254,946
4. Other Assets			
Alternative Investments	7,219,278,272	6,465,934,316	5,296,424,434
Property and Equipment	3,738,196	3,402,044	3,430,912
Receivables less Payables	(263,891,846)	(384,369,200)	84,413,700
Deferred Outflows less Deferred Inflows	53,336	975,203	3,783,424
TOTAL ASSETS - Market Value	21,652,482,372	21,046,702,165	19,513,345,675

ACTUARIAL VALUE OF ASSETS

The actuarial value of assets (AVA) is determined as the market value of assets (MVA) adjusted to gradually recognize investment gains and losses relative to the net assumed investment return, over a 5-year period in 20% increments. The actuarial value of assets is subject to Corridor Limits of 80% to 120% of the Market Value of Assets. The tables below show the development of the actuarial value of assets and the amount of deferred gains and losses to be recognized in future years.

Plan Year	Asset G/L	Deferred %		Deferred $
2016	(1,185,490,155)	20%		(237,098,031)
2017	1,281,120,936	40%		512,448,374
2018	661,883,532	60%		397,130,119
2019	(372,073,354)	80%		(297,658,683)
			$	374,821,779
Market Value of Assets			$	21,652,482,372
Deferred Asset G/L				374,821,779
Preliminary Actuarial Value of Assets			$	21,277,660,593
CORRIDOR LIMITS				
Minimum = 80% of Market Value			$	17,321,985,898
Maximum = 120% of Market Value				25,982,978,846
Actuarial Value of Assets			$	21,277,660,593

Deferred Gain/(Loss) to be Recognized in Actuarial Value of Assets in Future Years

Plan Year	Deferred Gain/(Loss)	2020	2021	2022	2023
2016	(237,098,031)	(237,098,031)			
2017	512,448,374	256,224,187	256,224,187		
2018	397,130,119	132,376,706	132,376,706	132,376,707	
2019	(297,658,683)	(74,414,671)	(74,414,671)	(74,414,671)	(74,414,670)
	374,821,779	77,088,191	314,186,222	57,962,036	(74,414,670)

SIDE ACCOUNTS AND DEVELOPMENT OF VALUATION ASSETS

		June 30, 2019	---- Prior Years ---- June 30, 2018	June 30, 2017
EMPLOYER CREDIT ACCOUNT[1]:				
	Prior Year Ending Balance	$ -	$ -	$ -
+	Contributions	-	-	-
-	Disbursements	-	-	-
+	Accumulated Interest	-	-	-
	Account Balance - Year End	-	-	-
LSU AG/EXT SERVICE:				
	Prior Year Ending Balance	$ 2,784,912	$ 2,598,899	$ 2,535,804
+	Contributions	1,995,075	1,873,303	1,754,855
-	Benefit Disbursements	2,075,869	2,017,909	1,995,075
+	Accumulated Interest	281,293	330,619	303,315
	Account Balance - Year End	2,985,411	2,784,912	2,598,899
EXPERIENCE ACCOUNT FUND:				
	Prior Year Ending Balance	$ 85,129,775	$ 37,154,395	$ 24,977,477
+	Experience Account Allocation	-	44,451,679	9,891,500
-	Benefit Disbursements	-	-	-
+	Accumulated Interest	6,367,422	3,523,701	2,285,418
	Fund Balance - Year End	91,497,197	85,129,775	37,154,395
DEVELOPMENT OF VALUATION ASSETS:				
	Actuarial Value of Assets	$ 21,277,660,593	$ 20,407,476,271	$ 19,250,178,299
-	Employer Credit Account	-	-	-
-	LSU Ag/Ext Service Account	2,985,411	2,784,912	2,598,899
-	Experience Account Fund	91,497,197	85,129,775	37,154,395
	Valuation Assets	$ 21,183,177,985	$ 20,319,561,584	$ 19,210,425,005

[1] The Employer Credit Account was created by ACT 588 of 2004.

DEVELOPMENT OF COSTS, LIABILITIES AND CONTRIBUTIONS

Normal Costs and Accrued Liabilities are calculated in accordance with the Entry Age Normal cost method, based on the Provisions of the Plan as summarized in Appendix B and the Actuarial Methods and Assumptions outlined in Appendix E.

	June 30, 2019		---- Prior Year ---- June 30, 2018	
	Dollar Amount	**% of Salary**	**Dollar Amount**	**% of Salary**
Discount Rate	7.55%		7.65%	
I. Normal Costs				
Active Members				
a) Retirement Benefits	266,087,993	6.53%	260,824,572	6.52%
b) Disability Benefits	14,978,417	0.37%	14,630,889	0.37%
c) Survivor Benefits	5,999,335	0.15%	5,803,964	0.15%
d) Voluntary Termination	167,278,495	4.11%	158,432,474	3.96%
e) Total	454,344,240	11.16%	439,691,899	11.00%
II. Actuarial Accrued Liability				
a) Active Members				
1) Retirement Benefits	7,935,913,083		7,825,644,336	
2) Disability Benefits	181,761,503		175,693,735	
3) Survivor Benefits	78,330,533		76,338,252	
4) Voluntary Termination	551,585,776		467,907,982	
	8,747,590,895		8,545,584,305	
b) Retired and Inactive Members				
1) Regular Retirees	17,607,062,821		17,208,468,188	
2) Disability Benefits	481,196,961		478,522,212	
3) Survivors	1,206,342,833		1,160,517,476	
4) Vested Deferred [1]	414,694,784		377,615,212	
5) Contributions Refunded [2]	150,184,798		147,388,316	
6) DROP Deferred Benefits	1,879,813,212		1,853,334,674	
7) DROP Account Balances	1,087,260,553		1,100,449,524	
	22,826,555,962		22,326,295,602	
c) Total	31,574,146,857		30,871,879,907	

[1] Includes pending Retirement/DROP applications.
[2] Includes terminated employee and rehired retiree contributions to be refunded.

		June 30, 2019	---- Prior Year ---- June 30, 2018
II.	Actuarial Accrued Liability	31,574,146,857	30,871,879,907
	Discount Rate	7.55%	7.65%
III.	Valuation Assets	21,183,177,985	20,319,561,584
IV.	Unfunded Actuarial Accrued Liabilitiy [1]	10,390,968,872	10,552,318,323
	a) Change over prior year	-161,349,451	119,414
	b) Funded Percentage	67.1%	65.8%
V.	Employer Contributions		
	To Fund Current Plan Year [1]		
	a) Employer Portion of Normal Cost	130,709,555	121,789,981
	b) Administrative Expenses	16,500,000	18,500,000
	c) Amortization Payments	1,022,868,659	1,054,022,393
	d) Prior Contribution Variance	0	0
	Total Required Contribution	1,170,078,214	1,194,312,374
	Total Contribution Rate	25.4%	26.4%
	PRSAC Approved rate [1]	25.9%	26.4%
	Aggregate Employer Normal Cost Rate	3.1755%	3.0148%
VI.	Projected Employer Contributions		
	Discount Rate	7.45%	7.55%
	To Fund Next Plan Year [1]		
	a) Employer Portion of Normal Cost	143,185,080	133,581,324
	b) Administrative Expenses	16,500,000	18,500,000
	c) Amortization Payments	1,045,294,587	1,038,481,622
	c) Prior Contribution Variance	0	550,557
	Total Required Contribution	1,204,979,667	1,191,113,503
	Total Contribution Rate	25.6%	25.9%
	Projected Aggregate Employer Normal Cost Rate	3.4133%	3.2473%
VII.	Current Payroll	4,071,754,355	3,998,051,313
	Projected Payroll - Mid Year	4,116,137,144	4,039,796,674
	Projected Payroll - Next Year	4,194,867,977	4,113,668,781
	Optional Retirement Plan (ORP) Salary Adjustment Factor [2]	1.14077	1.13843

[1] Dollar Amounts reflect estimated payments due mid-year on January 1st per Act 81. Constitutional Minimum is ll.8% without regard to the statutory minimum of 15.5%.

[2] Amortization payments are paid as a percentage of plan member and ORP payroll. The ORP salary adjustment factor is used to convert amortization payments to percentage of payroll.

GASB STATEMENT NO. 67/68 REPORTING

The Governmental Accounting Standards Board Statements No. 67/68 establish financial reporting standards for state and local governmental pension plans and their plan sponsors 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 LIABILI

	June 30, 2019	June 30, 2018	June 30, 2017
Total Pension Liability	$ 31,574,146,857	$ 30,871,936,837	$ 29,762,623,913
Plan Fiduciary Net Position [1]	$ 21,649,496,961	$ 21,043,916,901	$ 19,510,746,776
Employers' Net Pension Liability	$ 9,924,649,896	$ 9,828,019,936	$ 10,251,877,137
Plan Fiduciary Net Position as a percentage of Total Pension Liability	68.6%	68.2%	65.6%
Covered Employee Payroll	$ 4,071,754,355	$ 3,998,051,313	$ 3,901,627,792
Net Pension Liability as a percentage of Covered Payroll	243.7%	245.8%	262.8%

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal Year	Actuarial Determined Contribution	Contributions in Relation to Actuarial Determined Contribution	Contribution Deficiency (Excess) [2]	Covered Payroll	Contributions as a % of Covered Payroll
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%
2017	1,188,962,275	1,204,634,319	(15,672,044)	3,901,627,792	30.9%
2018	1,227,397,115	1,288,863,851	(61,466,736)	3,998,051,313	32.2%
2019	1,246,577,897	1,306,003,522	(59,425,625)	4,074,754,355	32.1%

[1] Plan Fiduciary Net Position excludes side-fund assets held for the LSU Agriculture and Extension Service
[2] See Appendix D for an explanation of the Contribution Deficiency/(Excess)

SCHEDULE OF CHANGES IN EMPLOYERS' NET PENSION LIABILITY

	June 30, 2019	June 30, 2018	June 30, 2017
Total Pension Liability			
Service Cost	439,691,899	473,025,011	466,591,480
Interest	2,310,654,625	2,244,768,414	2,222,960,660
Changes of Benefit Terms	-	-	-
Diff. Between Expected and Actual	(132,534,910)	(130,859,239)	(223,202,835)
Changes of Assumptions	298,384,629	688,003,495	135,132,845
Retirement Benefits [1]	(2,163,684,514)	(2,116,953,537)	(2,061,454,295)
Refunds/Transfers of Member Contributions	(50,301,709)	(48,671,220)	(49,805,920)
Net Change in Total Pension Liability	702,210,020	1,109,312,924	490,221,935
Total Pension Liability - Beginning	30,871,936,837	29,762,623,913	29,272,401,978
Total Pension Liability - Ending (a)	$ 31,574,146,857	$ 30,871,936,837	$ 29,762,623,913
Plan Fiduciary Net Position			
Employer Contributions [1]	1,217,167,321	1,201,829,353	1,122,277,562
Non-Employer Contributions	40,850,075	39,550,321	38,762,968
Employee Contributions	341,398,896	337,928,752	328,541,240
Net Investment Income [1]	1,208,949,546	2,137,541,062	2,612,231,923
Other Income	26,018,466	11,411,104	2,972,517
Retirement Benefits [1]	(2,163,684,514)	(2,116,953,537)	(2,061,454,295)
Refunds/Transfers of Member Contributions	(50,301,709)	(48,671,220)	(49,805,920)
Administrative Expense	(13,445,962)	(15,431,788)	(17,175,966)
Other Postemployment Benefit Expenses [2]	(95,273)	(13,633,156)	(586,166)
Depreciation and Amortization Expenses	(1,277,138)	(400,766)	(432,238)
Adjusting Entry [3]	352	-	-
Net Change in Plan Fiduciary Net Position	605,580,060	1,533,170,125	1,975,331,625
Plan Fiduciary Net Position - Beginning	21,043,916,901	19,510,746,776	17,535,415,151
Plan Fiduciary Net Position - Ending (b)	$ 21,649,496,961	$ 21,043,916,901	$ 19,510,746,776
Net Pension Liability - Ending (a) - (b)	$ 9,924,649,896	$ 9,828,019,936	$ 10,251,877,137
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	68.6%	68.2%	65.6%
Covered Employee Payroll	$ 4,071,754,355	$ 3,998,051,313	$ 3,901,627,792
Net Pension Liability as a Percentage of Covered Employee Payroll	243.7%	245.8%	262.8%

[1] Amounts shown exclude side-fund assets, contributions, and benefits for the LSU Agriculture and Extension Service.
[2] The 2018 OPEB Expense includes a $13,190,993 adjusting entry related to GASB 75 implementation.
[3] Adjusting entry to correct variance from prior year beginning Fiduciary Net Position.

Actuarial Assumptions:

All assumptions used for purposes of GASB Statement 67/68 reporting requirements are described in Appendix D. Administrative expenses will be directly reflected in the employer pension expense in the year incurred in the Statement 67/68 reporting, rather than with an explicit reduction in the discount rate. A description of the discount rate used for GASB Statement 67/68 reporting is provided below.

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 geometric nominal expected return is 8.48%. Best estimates of long-term real rates of return for each major asset class included in the pension plan's target asset allocation as of June 30, 2019, are summarized in the following table:

Asset Class	Long Term Expected Real Rate of Return
Domestic Equity	4.60%
International Equity	5.70%
Domestic Fixed Income	1.69%
International Fixed Income	2.10%
Private Equity	8.67%
Other Private Assets	3.65%

The discount rate used to measure the total pension liability is 7.55 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 7.55%, 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 6.55%	Current Discount Rate 7.55%	1% Increase 8.55%
Employers’ Net Pension Liability	$13,211,129,157	$9,924,649,896	$7,154,649,653

The Schedule of Pension Amounts, that follows, 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 average remaining service life, when rounded up to the next higher whole number, remains at 5 years. Differences between projected and actual investment returns are amortized over a closed 5-year period.

SCHEDULE OF PENSION AMOUNTS

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	(9,828,019,936)	(1,617,819,778)	1,292,149,642	
Total Pension Liability Factors:				
Service cost	(439,691,899)			439,691,899
Interest	(2,310,654,625)			2,310,654,625
Changes in benefit terms	-			-
Differences between expected and actual experience	132,534,910	(132,534,910)	-	
Amortization of current year		26,506,982	-	(26,506,982)
Amortization of prior years		119,634,377	-	(119,634,377)
Changes in assumptions	(298,384,629)	-	298,384,629	
Amortization of current year		-	(59,676,926)	59,676,926
Amortization of prior years		-	(164,627,268)	164,627,268
Benefit payments	2,163,684,514			
Refunds/Transfers of Member Contributions	50,301,709			
Net Change in Total Pension Liability	(702,210,020)	13,606,449	74,080,435	2,828,509,359
Plan Fiduciary Net Position:				
Contributions - Employer	1,217,167,321			
Contributions - Non-Empl. Contributing Entities	40,850,075			
Contributions - Employees	341,398,896			(341,398,896)
Expected earnings on pension plan investments	1,585,964,984			(1,585,964,984)
Diff. between projected and actual investment earnings	(377,015,438)	-	377,015,438	
Amortization of current year		-	(75,403,088)	75,403,088
Amortization of prior years		387,412,007	(422,948,596)	35,536,589
Retirement Benefits	(2,163,684,514)			
Administrative Expense	(14,421,446)			14,421,446
Refunds/Transfers of Member Contributions	(50,301,709)			
Adjusting Entry	352			(352)
Other	25,621,539			(25,621,539)
Net Change in Plan Fiduciary Net Position	605,580,060	387,412,007	(121,336,246)	(1,827,624,648)
Ending Balance	(9,924,649,896)	(1,216,801,322)	1,244,893,831	1,000,884,711

MEMBERSHIP DATA

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 provided. Our review of submitted data is limited to validation of reasonableness and consistency in several areas, such as age, service, salary, and current benefits. Our review includes checks for duplicate records and a comparison of the current year records to those submitted in prior years. Records identified as containing suspicious data were assigned values based on information from similar records or based on historical averages for similarly situated members. Suspicious data are not necessarily errors, but data which fall outside the normal parameters. 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. The data summarized in the tables that follow serve as the basis for determining costs and liabilities. Salary data contained in the profiles and valuation report exceed the amount reported by internal audit for members with less than one year of service. In the valuation process, salaries are annualized for members with fractional service in the first year of employment. 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.

	2019		2018	
Active Members	Members	Avg. Salary	Members	Avg. Salary
Regular Teachers	72,097	45,208	71,986	45,043
Higher Education	10,543	63,295	9,633	62,883
Lunch Plan A	2	22,859	4	24,320
Lunch Plan B	1,144	19,889	1,138	19,612
Subtotal Actives	83,786	47,138	82,761	46,769
Post DROP	2,212	55,281	2,284	55,784
Total Active	85,998	47,347	85,045	47,011

	2019	2018
Retired and Inactive Members	Members	Members
Regular Retirees	67,746	66,760
Disability Retirees	4,208	4,248
Survivors	7,693	7,415
DROP Participants	2,462	2,420
Vested & Reciprocals	7,574	7,211
Inactive Non-Vested (Due Refunds)	23,510	22,364
Total Retired and Inactive	113,193	110,418
Total Members	199,191	195,463
Less Inactive Non-Vested (Due Refunds)	-23,510	-22,364
Total Active and Vested Inactive Members	175,681	173,099

MEMBER RECONCILIATION

	Active (Pre-DROP)	Active after DROP	Terminated Vested	In DROP	Retired, Disabled, Survivor	Total
June 20, 2018	82,761	2,284	7,211	2,420	78,423	173,099
Additions to Census						
Newly Hired Members	8,747					8,747
Change in Status						
New Regular Retirees	(1,599)		(192)		1,791	0
New Disability Retirees	(112)		(11)		123	0
New Survivors	(29)		(11)		40	0
Active to Terminated Vested	(1,417)		1,417			0
Active to DROP	(914)			914		0
Terminated Vested to Active	481		(481)			0
Disability to Active/TV	1				(1)	0
DROP to Active After DROP		381		(381)		0
Act aft DROP to Ret/Srv		(450)			450	0
Terminated Vested to DROP			(5)	5		0
DROP to Ret/Srv				(490)	490	0
Eliminated from Census						
Refunded or Due Refund	(4,091)		(372)		(1)	(4,464)
Deceased	(33)	(7)	(16)	(5)	(1,754)	(1,815)
No Further Survivor Ben Due						0
Data Revisions	(9)	4	34	(1)	86	114
June 20, 2019	83,786	2,212	7,574	2,462	79,647	175,681

TRSL MEMBERSHIP PROFILE
ALL ACTIVE MEMBERS (PRE-DROP)

CELLS DEPICT - MEMBER COUNT
TOTAL SALARY

VALUATION DATE 6/30/2019

Age/Years	<1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35+	Total
< 25	745 $31,571,901	1,225 $49,527,025	2 $99,269							1,972 $81,198,195
25 - 29	1,046 $43,120,743	5,277 $221,092,328	1,305 $60,237,179	2 $71,753						7,630 $324,522,003
30 - 34	979 $43,031,783	3,967 $166,859,376	3,893 $185,569,111	1,028 $51,816,012						9,867 $447,276,282
35 - 39	815 $35,096,730	3,491 $146,467,662	3,019 $141,840,903	3,877 $200,640,325	1,031 $57,686,394	1 $41,564				12,234 $581,773,578
40 - 44	637 $27,552,673	2,630 $106,598,649	2,265 $104,310,981	2,700 $135,090,432	3,246 $183,711,595	766 $46,111,624	3 $154,803			12,247 $603,530,757
45 - 49	494 $20,595,548	2,102 $85,840,651	1,959 $87,748,807	2,279 $105,637,569	2,285 $123,035,898	2,789 $166,897,361	796 $50,115,508	1 $60,881		12,705 $639,932,223
50 - 54	410 $17,219,846	1,596 $60,879,534	1,461 $61,840,649	1,932 $83,514,786	1,752 $83,654,988	1,791 $96,388,865	1,972 $121,733,165	87 $6,100,732		11,001 $531,332,565
55 - 59	314 $12,898,285	1,302 $50,293,995	1,171 $48,931,812	1,597 $66,277,741	1,602 $71,010,936	1,624 $78,675,620	345 $18,689,666	133 $9,081,601	26 $1,870,459	8,114 $357,730,115
60 - 64	173 $7,149,851	777 $31,381,255	712 $30,016,899	932 $40,380,442	868 $38,384,059	1,034 $48,082,854	324 $17,093,417	107 $7,473,727	76 $5,898,875	5,003 $225,861,379
65 - 69	69 $2,798,070	285 $11,529,929	287 $12,935,141	344 $15,802,574	321 $16,765,327	307 $14,896,607	299 $15,304,748	102 $6,957,382	95 $8,696,013	2,109 $105,685,791
70+	26 $827,420	120 $5,013,901	100 $4,497,389	175 $8,657,425	120 $6,135,845	87 $4,522,075	89 $4,870,379	85 $5,903,040	102 $10,201,851	904 $50,629,325
Total	5,708 $241,862,849	22,772 $935,484,305	16,174 $738,028,140	14,866 $707,889,059	11,225 $580,385,042	8,399 $455,616,570	3,828 $227,961,686	515 $35,577,363	299 $26,667,198	83,786 $3,949,472,212

AVERAGES --- Attained Age 44.44
Service Years 10.48
Active Salary $47,138

Non-Vested	28,480
Vested	55,306
	83,786

TRSL MEMBERSHIP PROFILE
ACTIVE - REGULAR K-12

CELLS DEPICT - MEMBER COUNT
TOTAL SALARY

VALUATION DATE 6/30/2019

Age/Years	<1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35+	Total
< 25	582 $24,362,421	1,143 $46,649,900	1 $57,793							1,726 $71,070,114
25 - 29	732 $28,526,358	4,645 $195,416,143	1,244 $57,319,192	2 $71,753						6,623 $281,333,446
30 - 34	688 $26,004,948	3,199 $127,375,713	3,537 $166,914,800	988 $49,747,102						8,412 $370,042,563
35 - 39	580 $21,173,368	2,791 $106,442,397	2,561 $113,977,408	3,601 $184,510,083	1,003 $55,879,204					10,536 $481,982,460
40 - 44	461 $17,474,765	2,148 $79,413,718	1,903 $81,719,020	2,380 $114,766,758	3,069 $172,034,097	753 $45,238,857	3 $154,803			10,717 $510,802,018
45 - 49	378 $14,425,932	1,726 $64,432,959	1,670 $69,938,184	1,999 $88,454,089	2,100 $109,833,496	2,691 $159,625,927	775 $48,551,673	1 $60,881		11,340 $555,323,141
50 - 54	301 $10,913,737	1,292 $44,501,483	1,222 $48,135,580	1,665 $67,300,927	1,589 $73,534,438	1,678 $89,088,928	1,895 $116,194,808	79 $5,612,045		9,721 $455,281,946
55 - 59	219 $7,625,953	1,002 $33,485,723	917 $33,449,221	1,343 $51,333,953	1,409 $59,840,540	1,492 $70,640,035	287 $15,250,626	119 $7,514,798	22 $1,670,817	6,810 $280,811,666
60 - 64	121 $4,130,855	553 $18,121,511	515 $18,005,455	751 $28,307,597	756 $31,060,315	955 $42,875,162	271 $13,206,048	76 $4,528,776	53 $3,683,741	4,051 $163,919,460
65 - 69	49 $1,693,679	201 $6,605,081	193 $6,848,766	271 $10,566,772	247 $10,795,694	266 $12,125,372	256 $12,289,735	69 $3,347,713	44 $3,105,761	1,596 $67,378,573
70+	22 $654,140	82 $2,452,004	65 $2,291,791	110 $3,768,161	73 $2,741,798	62 $2,722,797	63 $2,811,632	52 $2,314,231	36 $1,649,534	565 $21,406,088
Total	4,133 $156,986,157	18,782 $724,896,632	13,828 $598,657,210	13,110 $598,827,195	10,246 $515,719,582	7,897 $422,317,078	3,550 $208,459,325	396 $23,378,444	155 $10,109,853	72,097 $3,259,351,476

AVERAGES	---	Attained Age	44.22
		Service Years	10.88
		Active Salary	$45,208

TRSL MEMBERSHIP PROFILE
ACTIVE - HIGHER EDUCATION

CELLS DEPICT - MEMBER COUNT
TOTAL SALARY

VALUATION DATE 6/30/2019

Age/Years	<1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35+	Total
< 25	155 $7,066,063	77 $2,806,564	1 $41,476							233 $9,914,103
25 - 29	308 $14,484,436	612 $25,348,958	57 $2,850,547							977 $42,683,941
30 - 34	279 $16,797,960	737 $38,892,304	347 $18,484,310	37 $2,006,970						1,400 $76,181,544
35 - 39	212 $13,428,401	654 $39,132,636	437 $27,408,435	265 $15,886,558	27 $1,776,146	1 $41,564				1,596 $97,673,740
40 - 44	165 $9,836,300	439 $26,448,184	333 $22,040,211	305 $19,957,781	173 $11,585,002	13 $872,767				1,428 $90,740,245
45 - 49	107 $6,002,296	337 $20,652,194	261 $17,219,201	249 $16,582,290	172 $12,894,945	93 $7,148,070	21 $1,563,835			1,240 $82,062,831
50 - 54	96 $6,042,992	247 $15,407,556	188 $12,675,135	221 $15,226,939	124 $9,302,483	96 $6,853,151	71 $5,390,421	5 $425,062		1,048 $71,323,739
55 - 59	84 $5,072,899	234 $15,586,044	201 $14,476,138	205 $13,970,923	143 $10,127,401	92 $7,103,399	38 $3,000,196	14 $1,566,803	3 $174,405	1,014 $71,078,208
60 - 64	45 $2,877,104	182 $12,476,758	155 $11,258,020	162 $11,730,901	101 $7,087,662	68 $4,911,152	46 $3,734,129	30 $2,925,029	20 $2,149,776	809 $59,150,531
65 - 69	19 $1,088,107	70 $4,698,385	85 $5,924,411	65 $5,082,353	73 $5,952,675	40 $2,742,444	41 $2,917,933	31 $3,570,651	51 $5,590,252	475 $37,567,211
70+	4 $173,281	34 $2,497,311	31 $2,144,838	60 $4,798,011	44 $3,333,841	25 $1,799,278	26 $2,058,747	33 $3,588,809	66 $8,552,317	323 $28,946,433
Total	1,474 $82,869,840	3,623 $203,946,894	2,096 $134,522,722	1,569 $105,242,726	857 $62,060,155	428 $31,471,825	243 $18,665,261	113 $12,076,354	140 $16,466,750	10,543 $667,322,527

AVERAGES --- Attained Age 45.22
Service Years 7.98
Active Salary $63,295

TRSL MEMBERSHIP PROFILE
ACTIVE - LUNCH PLAN A

CELLS DEPICT - MEMBER COUNT
TOTAL SALARY

VALUATION DATE 6/30/2019

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										
60 - 64									2 $45,717	2 $45,717
65 - 69										
70+										
Total									2 $45,717	2 $45,717

AVERAGES --- Attained Age 62.65
Service Years 35.33
Active Salary $22,859

TRSL MEMBERSHIP PROFILE
ACTIVE - LUNCH PLAN B

CELLS DEPICT - MEMBER COUNT
TOTAL SALARY

VALUATION DATE 6/30/2019

Age/Years	<1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35+	Total
< 25	8 $143,417	5 $70,561								13 $213,978
25 - 29	6 $109,948	20 $327,227	4 $67,440							30 $504,615
30 - 34	12 $228,875	31 $591,359	9 $170,001	3 $61,940						55 $1,052,175
35 - 39	23 $494,961	46 $892,629	21 $455,060	11 $243,684	1 $31,044					102 $2,117,378
40 - 44	11 $241,608	43 $736,747	29 $551,750	15 $365,893	4 $92,496					102 $1,988,494
45 - 49	9 $167,320	39 $755,498	28 $591,422	31 $601,190	13 $307,457	5 $123,364				125 $2,546,251
50 - 54	13 $263,116	57 $970,495	51 $1,029,934	46 $986,920	39 $818,067	17 $446,786	6 $147,936	3 $63,625		232 $4,726,879
55 - 59	11 $199,432	66 $1,222,228	53 $1,006,453	49 $972,865	50 $1,042,995	40 $932,186	20 $438,844		1 $25,237	290 $5,840,240
60 - 64	7 $141,892	42 $782,986	42 $753,424	19 $341,944	11 $236,082	11 $296,540	7 $153,240	1 $19,922	1 $19,641	141 $2,745,671
65 - 69	1 $16,284	14 $226,463	9 $161,964	8 $153,449	1 $16,958	1 $28,791	2 $97,080	2 $39,018		38 $740,007
70+		4 $64,586	4 $60,760	5 $91,253	3 $60,206					16 $276,805
Total	101 $2,006,853	367 $6,640,779	250 $4,848,208	187 $3,819,138	122 $2,605,305	74 $1,827,667	35 $837,100	6 $122,565	2 $44,878	1,144 $22,752,493

AVERAGES --- Attained Age 51.08
Service Years 8.68
Active Salary $19,889

TRSL MEMBERSHIP PROFILE
DROP PARTICIPANTS

CELLS DEPICT - MEMBER COUNT
TOTAL BENEFITS

VALUATION DATE 6/30/2019

Age/Years	<1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 10	10 - 15	15 - 20	20+	Total
< 40										
40 - 44										
45 - 49	1 $36,000	1 $43,260								2 $79,260
50 - 54	261 $10,270,800	195 $8,650,812	100 $4,229,544	5 $194,856						561 $23,346,012
55 - 59	491 $17,715,180	484 $18,090,792	459 $18,021,948	22 $1,098,960						1,456 $54,926,880
60 - 64	122 $3,407,700	141 $3,357,684	161 $3,740,388	8 $227,784						432 $10,733,556
65 - 69		3 $13,632	4 $32,016							7 $45,648
70 - 74		2 $6,360	1 $9,024							3 $15,384
75 - 79		1 $3,420								1 $3,420
80 - 84										
85 - 89										
90+										
Total	875 $31,429,680	827 $30,165,960	725 $26,032,920	35 $1,521,600						2,462 $89,150,160

AVERAGES --- Attained Age 56.96
Years Retired 1.34
Annual Benefit $36,210

TRSL MEMBERSHIP PROFILE
ACTIVE AFTER DROP

CELLS DEPICT - MEMBER COUNT
TOTAL BENEFITS
DROP BENEFITS

VALUATION DATE 6/30/2019

Age/Years	<1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 10	10 - 15	15 - 20	20+	Total
< 44										
45 - 49										
50 - 54	15 $656,215 $602,364	6 $311,971 $219,036	1 $57,166 $37,200							22 $1,025,352 $858,600
55 - 59	208 $9,080,069 $7,942,356	144 $8,682,478 $5,633,652	63 $3,939,399 $2,696,892	42 $2,911,704 $1,906,512	19 $1,425,379 $903,768	17 $856,777 $545,424				493 $26,895,806 $19,628,604
60 - 64	145 $4,331,086 $3,354,084	141 $6,271,301 $3,360,540	133 $7,730,884 $4,559,880	105 $6,555,341 $3,909,624	104 $6,109,068 $3,650,220	246 $15,316,597 $9,173,520	14 $959,153 $495,480			888 $47,273,430 $28,503,348
65 - 69	3 $82,120 $26,676	17 $655,554 $229,872	55 $2,540,170 $1,166,880	45 $2,421,945 $970,104	54 $2,170,166 $978,456	241 $13,615,346 $6,642,876	109 $8,174,954 $3,919,692	1 $31,670 $15,936		525 $29,691,925 $13,950,492
70+	1 $19,511 $3,432		2 $109,569 $20,244	2 $140,286 $101,544	4 $149,022 $28,560	93 $3,850,223 $1,127,664	107 $6,675,109 $2,502,864	61 $5,061,327 $1,844,196	14 $1,390,582 $498,024	284 $17,395,629 $6,126,528
Total	372 $14,169,001 $11,928,912	308 $15,921,304 $9,443,100	254 $14,377,188 $8,481,096	194 $12,029,276 $6,887,784	181 $9,853,635 $5,561,004	597 $33,638,943 $17,489,484	230 $15,809,216 $6,918,036	62 $5,092,997 $1,860,132	14 $1,390,582 $498,024	2212 $122,282,142 $69,067,572

AVERAGES	---		
		Attained Age	64.09
		Post Drop Years	4.98
		Active Salary	$55,281
		Annual Benefit	$31,224

TRSL MEMBERSHIP PROFILE
REGULAR RETIREES

CELLS DEPICT - MEMBER COUNT
TOTAL BENEFITS

VALUATION DATE 6/30/2019

Age/Years	<1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 10	10 - 15	15 - 20	20+	Total
< 40										
40 - 44	29 $652,948	22 $499,404	8 $163,872	1 $10,056						60 $1,326,280
45 - 49	78 $1,988,268	98 $2,405,520	83 $1,913,164	75 $1,670,220	45 $994,116	94 $1,964,460				473 $10,935,748
50 - 54	128 $3,707,328	135 $4,425,504	121 $3,409,224	108 $3,155,884	112 $2,862,132	427 $9,494,772	61 $1,047,588			1,092 $28,102,432
55 - 59	215 $6,331,007	250 $8,141,204	291 $9,742,188	499 $18,233,196	585 $21,916,968	1,195 $40,613,916	356 $6,674,088	86 $1,141,860	1 $8,028	3,478 $112,802,455
60 - 64	605 $11,505,095	616 $11,796,228	624 $11,707,944	699 $14,079,880	718 $15,279,616	3,780 $139,792,608	1,894 $66,935,700	484 $7,462,560	162 $1,941,972	9,582 $280,501,602
65 - 69	411 $9,937,163	411 $9,528,016	477 $11,443,432	504 $11,942,020	543 $12,955,524	4,464 $98,406,408	5,438 $192,369,540	2,501 $84,894,012	849 $12,394,236	15,598 $443,870,350
70 - 74	108 $3,097,396	149 $4,576,320	163 $4,644,348	203 $5,579,196	243 $6,460,956	2,067 $53,941,740	3,822 $72,706,452	5,376 $180,837,708	2,414 $61,520,952	14,545 $393,365,068
75 - 79	29 $1,046,308	40 $978,012	46 $1,482,096	39 $1,418,568	72 $2,322,924	571 $16,955,568	1,096 $26,793,108	3,074 $54,844,716	5,344 $158,618,628	10,311 $264,459,928
80 - 84	7 $227,412	11 $248,952	8 $185,544	13 $565,008	14 $443,604	134 $4,393,668	304 $8,913,156	862 $19,062,576	5,239 $127,415,424	6,592 $161,455,344
85 - 89	1 $29,500	2 $104,856	2 $33,216	1 $13,740	3 $157,236	19 $493,212	65 $2,210,436	179 $4,153,236	3,716 $83,306,388	3,988 $90,501,820
90+						3 $67,272	9 $399,264	24 $691,512	1,991 $38,371,440	2,027 $39,529,488
Total	1,611 $38,522,424	1,734 $42,704,016	1,823 $44,725,028	2,142 $56,667,768	2,335 $63,393,076	12,754 $366,123,624	13,045 $378,049,332	12,586 $353,088,180	19,716 $483,577,068	67,746 $1,826,850,515

AVERAGES --- Attained Age 71.85
Years Retired 15.01
Annual Benefit $26,966

TRSL MEMBERSHIP PROFILE
DISABILITY RETIREES

CELLS DEPICT - MEMBER COUNT
TOTAL BENEFITS

VALUATION DATE 6/30/2019

Age/Years	<1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 10	10 - 15	15 - 20	20+	Total
< 40	3 $64,632	5 $81,048	6 $112,236	7 $112,752	3 $51,696	4 $61,308	2 $26,244			30 $509,916
40 - 44	3 $59,964	12 $286,080	13 $255,648	10 $170,796	9 $141,540	29 $481,464	5 $55,248			81 $1,450,740
45 - 49	23 $496,908	18 $447,636	20 $407,700	25 $629,004	18 $410,856	45 $836,424	16 $205,272	5 $45,312		170 $3,479,112
50 - 54	20 $343,284	30 $556,356	36 $657,804	34 $582,000	29 $657,852	91 $1,710,972	49 $622,128	24 $223,584	7 $64,836	320 $5,418,816
55 - 59	32 $520,548	36 $531,432	44 $636,504	54 $897,588	42 $620,940	149 $2,346,156	75 $917,592	58 $640,596	44 $402,048	534 $7,513,404
60 - 64	17 $211,188	31 $492,012	37 $522,600	47 $655,476	36 $555,108	186 $2,793,156	147 $1,834,176	126 $1,530,756	85 $837,180	712 $9,431,652
65 - 69	2 $20,436	2 $22,632	14 $188,196	12 $141,360	17 $250,848	140 $2,096,832	204 $2,480,916	163 $1,858,248	218 $2,617,788	772 $9,677,256
70 - 74	3 $30,156	1 $13,500	4 $55,632	3 $46,632	9 $121,308	42 $651,960	146 $1,725,804	200 $2,119,524	276 $2,922,084	684 $7,686,600
75 - 79		1 $10,776				10 $127,356	22 $328,320	106 $1,178,700	336 $3,556,260	475 $5,201,412
80 - 84			1 $10,428			1 $11,484	6 $62,664	17 $185,040	251 $2,435,448	276 $2,705,064
85 - 89								3 $19,056	116 $1,251,372	119 $1,270,428
90+								1 $8,820	34 $344,868	35 $353,688
Total	103 $1,747,116	136 $2,441,472	175 $2,846,748	192 $3,235,608	163 $2,810,148	697 $11,117,112	672 $8,258,364	703 $7,809,636	1,367 $14,431,884	4,208 $54,698,088

AVERAGES	---	Attained Age	66.42
		Years Retired	15.70
		Annual Benefit	$12,999

TRSL MEMBERSHIP PROFILE
SURVIVOR BENEFITS

CELLS DEPICT - MEMBER COUNT
TOTAL BENEFITS

VALUATION DATE 6/30/2019

Age/Years	<1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 10	10 - 15	15 - 20	20+	Total
< 40	23 $272,268	31 $348,060	32 $434,640	31 $328,728	29 $299,100	90 $924,480	38 $417,888	19 $136,284	6 $59,052	299 $3,220,500
40 - 44	16 $238,080	22 $240,240	13 $157,908	8 $92,832	7 $101,892	38 $634,032	22 $345,324	9 $126,096	6 $70,080	141 $2,006,484
45 - 49	16 $190,872	19 $286,764	21 $266,136	17 $174,672	16 $192,648	62 $832,020	35 $442,068	23 $282,876	17 $192,852	226 $2,860,908
50 - 54	20 $474,072	26 $419,304	20 $268,836	18 $374,832	17 $209,400	72 $1,164,156	51 $489,660	44 $588,312	25 $278,160	293 $4,266,732
55 - 59	26 $355,848	26 $478,872	27 $514,584	28 $462,312	24 $387,012	93 $1,448,952	74 $803,556	52 $712,320	38 $587,556	388 $5,751,012
60 - 64	38 $880,476	36 $817,056	38 $849,264	39 $750,684	33 $776,484	172 $2,933,040	121 $2,049,144	50 $674,628	76 $895,980	603 $10,626,756
65 - 69	70 $1,506,312	67 $1,591,812	59 $1,441,848	53 $1,476,648	49 $1,200,444	214 $5,527,188	127 $2,900,568	97 $1,721,148	119 $1,641,852	855 $19,007,820
70 - 74	70 $1,568,844	96 $2,553,636	77 $2,089,632	57 $1,623,036	72 $1,604,004	291 $7,054,368	201 $4,512,816	129 $2,624,724	172 $2,534,748	1,165 $26,165,808
75 - 79	76 $1,898,388	83 $2,218,668	89 $2,235,936	75 $1,866,288	51 $1,301,844	256 $6,363,336	190 $4,416,096	134 $2,843,532	238 $4,211,388	1,192 $27,355,476
80 - 84	75 $1,822,092	76 $1,672,164	68 $1,528,416	79 $1,677,996	69 $1,821,648	224 $5,179,080	198 $4,242,384	139 $3,081,552	280 $5,040,720	1,208 $26,066,052
85 - 89	40 $951,504	49 $1,013,040	50 $1,078,848	35 $598,044	37 $869,220	174 $3,297,432	132 $2,587,020	100 $2,020,740	212 $3,801,528	829 $16,217,376
90+	18 $281,808	16 $347,364	17 $315,288	18 $398,808	21 $448,224	98 $1,636,344	91 $1,516,776	61 $871,608	154 $2,647,356	494 $8,463,576
Total	488 $10,440,564	547 $11,986,980	511 $11,181,336	458 $9,824,880	425 $9,211,920	1,784 $36,994,428	1,280 $24,723,300	857 $15,683,820	1,343 $21,961,272	7,693 $152,008,500

AVERAGES --- Attained Age 71.90
Years Retired 11.28
Annual Benefit $19,759

TRSL MEMBERSHIP PROFILE
TERM-VESTED/RECIPROCAL

CELLS DEPICT - MEMBER COUNT
TOTAL BENEFITS

VALUATION DATE 6/30/2019

Age/Years	<1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35+	Total
< 20										
20 - 24										
25 - 29			81 $512,273							81 $512,273
30 - 34			577 $4,313,743	21 $266,404						598 $4,580,147
35 - 39			926 $7,400,959	248 $3,594,123	12 $317,641					1,186 $11,312,724
40 - 44		5 $16,260	757 $6,053,691	383 $5,736,592	100 $2,297,403	1 $11,932				1,246 $14,115,878
45 - 49	1 $672	4 $15,352	739 $5,544,052	389 $5,365,678	128 $2,887,076	22 $646,703	1 $54,999			1,284 $14,514,534
50 - 54		6 $17,647	685 $4,930,700	362 $4,770,877	142 $2,664,939	27 $744,902	18 $772,349			1,240 $13,901,413
55 - 59		3 $10,361	621 $4,286,498	414 $4,919,105	175 $2,863,567	30 $667,758	5 $147,845	2 $108,716		1,250 $13,003,849
60 - 64		2 $959	241 $1,454,399	136 $1,286,336	66 $900,845	19 $482,628	4 $115,613			468 $4,240,781
65 - 69	1 $388	5 $8,330	70 $367,468	33 $421,547	13 $213,647	5 $89,736	2 $20,006			129 $1,121,121
70+			40 $224,686	27 $213,065	9 $70,837	6 $152,275	3 $99,097	4 $98,026	3 $138,283	92 $996,270
Total	2 $1,059	25 $68,910	4,737 $35,088,470	2,013 $26,573,727	645 $12,215,956	110 $2,795,934	33 $1,209,909	6 $206,742	3 $138,283	7,574 $78,298,989

AVERAGES --- Attained Age 47.85
Service Years 9.53
Annual Benefit $10,338

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:

Leave Earned Prior to 6/30/88

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

Leave Earned After 6/29/88

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

EARNABLE COMPENSATION:

The compensation earned by a member for qualifying service.

FINAL AVERAGE COMPENSATION

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

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

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

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

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

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

ACCUMULATED CONTRIBUTIONS:

Sum of all amounts deducted from compensation of members.

EMPLOYEE CONTRIBUTIONS:

Eight percent of earnable compensation. Prior to July 1, 1989, seven percent of earnable compensation.

EMPLOYER CONTRIBUTIONS:

Determined in accordance with Louisiana Revised Statutes, Sections 11:102 and 11:102.2, 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 five 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.

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).

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

2. 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 Code and related Federal Regulations as adjusted for inflation and form of benefit other than life annuity or qualified joint and survivor annuity.

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:

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, PBIs are limited to the lesser of the increase in the Consumer Price Index, U.S. city average for all urban consumers (CPI-U) for the 12--month period ending on the system's valuation date, or by a percentage increase 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 ten-years of service credit. All other members are eligible with five years of service; certification of disability by medical board (medical examination required once in every year for the first five 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 and will not be less than the lesser of 40% of the state minimum salary for a beginning teacher with a bachelor's degree or 75% of average compensation.

2. Additional 50% of member's benefit payable if minor child is present, but total amount to family limited to 75% of final average compensation.

3. Member will become a regular retiree upon attainment of the earliest age for retirement eligibility as if the member continued in service, without further change in compensation. Benefit is based on years of creditable service but not less than the disability benefit. Benefit for minor children continue as long as the retiree has a minor child.

4. Upon death of a disability retiree, surviving spouse, married to retiree at least two years prior to death of the disability retiree, shall receive 75% of disability benefit. Upon death of an unmarried retiree with minor children, the benefit shall equal 50% of disability benefit.

5. Upon recovery of disability as determined by the board of trustees, upon advice of the medical board, members returning to active membership for at least three years, starting no later than one year after recovery, 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 five years of service with at least two 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 and 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 ten 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 ten 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 an active member with ten 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 and resume 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.

REFUND OF CONTRIBUTIONS:

Members who terminate employment in all positions eligible for TRSL membership are entitled to a full refund of member contributions. If membership ceases due to death prior to retirement, accumulated member contributions are returnable to a designated beneficiary, if any; or to the member's estate.

TERMINATION WITH VESTED SERVICE:

Any member with credit for five 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:

<u>Option l</u> - If a member dies before receiving present value of annuity in monthly payments, balance paid to designated beneficiary.

<u>Option 2</u> - Reduced retirement allowance, if member dies, to be continued to designated beneficiary for his lifetime.

<u>Option 3</u> - One-half of reduced retirement allowance, if member dies, to be continued to designated beneficiary for his lifetime.

<u>Option 4</u> - Other benefits of equal actuarial value may be elected with approval of the Board of Trustees.

Options 2A, 3A, 4A **-** Same as Options 2, 3, and 4, except that reduced benefit reverts 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).

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 years of service (YOS) at any age, 25 YOS 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 of service 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 before June 30, 2015, who has 30 years of service at age 55 or ten years of service 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 five years of service 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 cease 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.

DESCRIPTION OF BENEFITS
FOR MERGED LSU EMPLOYEES

GENERAL:

Eligibility for benefits is 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)

Calendar Year of Entry	Breakpoint Average
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 are 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 the sum of (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; (2) 2.5% (or 2% if total service less than 20 years) of final average salary for years since January 1, 1979; and (3) $300.

SURVIVOR'S BENEFITS:

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

DISABILITY BENEFITS:

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

VESTING BENEFITS:

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

REFUND OF CONTRIBUTIONS:

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

COOPERATIVE EXTENSION PERSONNEL:

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

OPTIONAL FORMS OF BENEFITS:

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

DEFERRED RETIREMENT OPTION PLAN:

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

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)

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 five 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 one percent of average final compensation plus two dollars 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.

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

Benefits are limited to 100% of average final compensation.

DISABILITY RETIREMENT:

Eligibility:

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

Benefit:

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

SURVIVOR'S BENEFITS:

Eligibility:

1. Surviving spouse with minor children of a member with five years of service credit with at least two 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 ten or more years of service credit with at least two 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 and 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, and resume upon subsequent death or divorce of new spouse.

3. Return of member's accumulated contributions.

SCHOOL LUNCH PLAN B

NORMAL RETIREMENT:

Eligibility:

1. Age 60 and five years of creditable service.

2. Age 55 and 30 years of creditable service.

Benefit:

Annual pension which provides total allowance equal to two percent 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; otherwise two percent 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: 20 or more years of creditable service.

Benefit: Option 2 benefit.

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 five 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.

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 Appendix E. 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 Section II. 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 ten 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 to increases in the actuarial value of assets, 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 ten-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 2020/2021 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.

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 Appendix F.

Employers pay the full required employer contribution rate, as recommended to the legislature by the Public Retirement Systems' Actuarial Committee (PRSAC). 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 the actuarially determined contributions will be paid when due and all actuarial assumptions will be realized.

DISCUSSION OF RISK

Measuring pension obligations and calculating actuarially determined contributions require the use of assumptions regarding future economic and demographic experience. It should be noted that the liabilities and the corresponding funded status presented in this report would differ if a different assumption set were utilized. Future plan experience may differ from the assumptions used in this valuation resulting in actuarial gains and losses. The extent of these differences will impact the plan's future financial condition, the volatility of future plan measurements, and the volatility of future required contributions. Actuarial losses on assets and liabilities will lead to higher contribution amounts, while actuarial gains on assets and liabilities will lead to lower contribution amounts. Because these risks may not be apparent to the reader, we have included a summary of the key risk factors that should be considered.

Investment Risk

For most plans, investment returns are a significant portion of the assets used to fund plan benefits. Therefore, current plan liabilities are developed by discounting future expected benefits based on the expected returns that will be used to fund those benefits.

Statutory funding policy provides that a portion of investment gains will be transferred to the experience account to fund future Permanent Benefit Increases, should the legislature grant them. The guidance provided in Actuarial Standard of Practice No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*, makes it clear that the discount rate is not necessarily the same as the expected investment return assumption. Section 3.5.1 states that the actuary may determine that it is appropriate to adjust the economic assumptions for provisions that are difficult to measure, of which the definition includes gain-sharing provisions. Therefore, in accordance with this guidance, the reasonableness of the discount rate is evaluated against the expected investment return less the portion of returns that are expected to be transferred to the experience account rather than fund regular plan benefits. We have determined that 0.40% is a reasonable expected margin for gain-sharing.

Due to the nature of investments, long-term expectations are not a guarantee and actual average long-term returns may be above or below the assumed investment return. Investment experience gains and losses will develop from two sources: (1) the extent to which the actual long-term rate of return used to fund regular plan benefits differs from the discount rate, and (2) the extent to which transfers to the experience account differ from the margin described above. Short-term volatility in actual returns is expected and will result in year-over-year fluctuations in financial metrics. Prolonged periods of investment performance below the assumed rate of return can result in a decrease in funded status (i.e. increases unfunded liabilities) and an increase in contributions required in future years. Of course, the opposite is also true. Therefore, as part of the annual valuation process, the expected return is evaluated in comparison to TRSL's investment consultant's expected return for TRSL's portfolio and industry-average long-term capital market assumptions to determine if the return assumption continues to be reasonable.

Demographic Risk

The results in this report assume demographic characteristics of the plan will follow a pattern consistent with assumptions disclosed for termination of employment, incidence of disabilities, timing of retirement, and duration of payments throughout retirement. Actuarial assumptions are applied to large groups of individuals to reasonably estimate plan liabilities and are not necessarily intended to be applied on an individual basis. As actual demographic experience will differ from the assumptions future experience gains and losses will develop.

Payroll Risk

Individual Salary - Total plan liabilities include the estimated impact of future salary increases on future benefits for individual plan participants. To the extent that future salary increases differ from plan assumptions, gains and losses will develop.

Aggregate Plan Payroll - The valuation determines the Actuarially Determined Contribution for the year immediately following the valuation date and projects the Actuarially Determined Contribution for the following year. The employer contribution rate for the second fiscal year following the valuation date, which is the rate actually paid by the employer, is determined as the projected actuarily determined contribution divided by projected aggregate payroll If actual aggregate payroll for the projected period exceeds expected aggregate payroll, a contribution surplus will develop. Conversely, if actual aggregate payroll for the projected period is less than expected aggregate payroll, a contribution deficit will develop.

Contribution Risk

This risk results from the potential that actual employer contributions may deviate from actuarially determined contributions, which are determined in accordance with statutory funding policy. The funding policy provides contribution requirements that will result in a reasonable expectation that assets will accumulate to be sufficient to pay plan benefits when due, and eventually reach a 100% funded status if actuarial assumptions are realized in the aggregate. The Louisiana Constitutional requirement that the legislature provide an amount necessary to fund the normal cost and the UAL existing prior to June 30, 1988 further reduces contribution risk.

Other Considerations

Significant legislative changes have been enacted since 2009, which reduced the plan's risk of not accumulating sufficient assets to pay plan benefits when due. Highlights of these changes are listed below:

- Restructuring of UAL payment schedules. The Original Amortization Base payments increase by 2% annually. All other schedules are amortized with level payments.
- Dedication of significantly more investment experience gains to the reduction of UAL debt before credits can be made to the Experience Account to fund future Permanent Benefit Increases (PBIs).
- Reduction in the maximum PBI percentage that can be granted, until funded status reaches 80%.
- Limitations on frequency of potential for Board to request that future PBI's be granted.
- Introduction of a trigger to implement shorter future amortization schedules, from 30 years to 20 years.
- Requirement that contribution variance surpluses and a portion of investment experience gains be used to reduce the UAL without an immediate reduction to employer contributions.
- Requirement of direct funding of administrative expenses, included in the employer contribution rate, rather than with investment returns.
- Constitutional requirement that benefit provisions enacted by the legislature that have an actuarial cost be amortized over a 10-year period.

Impact of Plan Maturity on Risk

For newer pension plans, most of the participants and associated liabilities are related to active members who have not yet reached retirement age. As pension plans continue in operation and active members reach retirement ages, liabilities begin to shift from being primarily related to active members to being shared among active and retired members. Plan maturity is a measure of the extent to which this shift has occurred. It is important to understand that plan maturity can have an impact on the risk characteristics and risk tolerance of the plan. For example, plans with a large amount of liability attributable to retirees have a shorter time horizon to recover from losses (such as investment experience losses due to lower than expected investment returns) than plans where the majority of the liability is attributable to active members. For this reason, highly mature plans with a substantial liability due to retirees and inactive members have less tolerance for risk. Similarly, mature plans paying substantial retirement benefits resulting in a small positive or negative net cash flow can be more sensitive to near term investment volatility, particularly if the size of the fund is shrinking, which can result in less assets being available for investment in the market.

To assist with determining the maturity of the plan and assessing risk, we have provided some relevant metrics and discuss the highlights of information derived from these metrics below.

* Asterisks in tables in this section denote dollar values shown in millions.

	(A) Total Active Members	(B) DROP Members	(C) Inactive Members	(D) Inactive Accrued Liability *	(E) Total Accrued Liability *	(F) Valuation Assets *	(F)/(E) **Funded Ratio**	(A)/(B+C) **Support Ratio**	(D)/(E) **Accrued Liability Ratio**
2010	88,783	3,148	69,685	$16,504	$23,675	$12,868	54.4%	121.9%	69.7%
2011	86,742	3,032	71,364	$16,999	$24,097	$13,286	55.1%	116.6%	70.5%
2012	84,513	2,637	74,096	$17,510	$24,540	$13,584	55.4%	110.1%	71.4%
2013	82,910	2,451	77,022	$19,074	$26,018	$14,669	56.4%	104.3%	73.3%
2014	82,886	2,291	79,531	$20,014	$28,120	$16,146	57.4%	101.3%	71.2%
2015	83,602	2,283	81,865	$20,498	$28,646	$17,457	60.9%	99.4%	71.6%
2016	84,068	2,504	82,517	$21,017	$29,272	$18,254	62.4%	98.9%	71.8%
2017	84,228	2,478	84,199	$21,438	$29,763	$19,210	64.5%	97.2%	72.0%
2018	85,045	2,420	85,634	$22,326	$30,872	$20,320	65.8%	96.6%	72.3%
2019	85,998	2,464	87,041	$22,827	$31,574	$21,183	67.1%	96.1%	72.3%

Funded Ratio: The funded ratio, determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability, has increased from 54.4% to 67.1% over the last ten years. This ratio generally reflects the financial health of the plan but should not be considered in isolation since changes in methods and assumptions may reduce the funded ratio but reduce future potential losses and resulting contribution rate increases. For example, during this time period, TRSL has reduced the discount rate from 8.25% to 7.55% and changed the actuarial cost method from projected unit credit to entry age normal which in total have increased the unfunded accrued liability by $3.2 billion. If not for these changes, the funded ratio would be approximately 75%. However, these changes have improved the financial stability of the plan by reducing the potential for future contribution rate increases. If all actuarial assumptions are realized, the funded ratio is expected to increase as unfunded liabilities are amortized in accordance with the plan's funding policy.

Support Ratio: The support ratio is determined as the ratio of active to inactive members. Active membership, which includes Active After DROP members, has remained fairly level since 2010. Inactive membership, which includes retirees, survivors, and terminated vested members, has been steadily increasing since 2010. The support ratio has decreased from 121.9% to 96.1% over the last ten years. This should be monitored by the investment staff to be sure no cash-flow issues develop that would require pre-mature liquidation of assets, which could result in investment experience losses.

Accrued Liability Ratio: The accrued liability ratio, which is a measure of the proportion of total liability attributable to inactive members, has remained fairly level at just above 70% for most of the last 10 years. With a plan of this maturity, losses due to lower than expected investment returns or demographic factors should be amortized over a shorter time horizon than for a less mature plan. The legislature has enacted a provision that will reduce the amortization period from 30 years to 20 years once the funded ratio reaches 70%

	(A) Market Value of Assets *	(B) Total Payroll (incl. ORP) *	**(A)/(B) Asset Volatility Ratio**
2010	$12,021	$4,542	264.7%
2011	$14,577	$4,455	327.2%
2012	$14,189	$4,355	325.8%
2013	$15,490	$4,250	364.5%
2014	$17,900	$4,301	416.2%
2015	$17,896	$4,371	409.4%
2016	$17,538	$4,423	396.5%
2017	$19,513	$4,443	439.2%
2018	$21,047	$4,551	462.4%
2019	$21,652	$4,645	466.2%

Asset Volatility Ratio: The asset volatility ratio, determined as the ratio of the market value of assets to total payroll, is a measure of the impact of investment volatility on employer contributions which are paid as a percentage of payroll. Since amortization payments for gains and losses are paid as a percentage of total payroll, including payroll for Optional Retirement Plan (ORP) members, the asset liability ratio is determined using payroll that includes ORP payroll. Although MVA growth that exceeds payroll growth may contribute to the financial stability of the plan, the amortization of changes in these higher asset values have a greater impact on contribution volatility as this ratio increases. Since 2010, the asset volatility ratio has increased from 264.7% to 466.2%.

	(A) Contributions*	(B) Benefits*	(A)-(B) Contributions less Benefits*	(C) Market Value of Assets*	(B)/(C) Benefits/ MVA	[(A)-(B)]/(C)
2010	$1,074	$1,592	($518)	$12,021	13.2%	-4.3%
2011	$1,286	$1,676	($390)	$14,577	11.5%	-2.7%
2012	$1,419	$1,751	($332)	$14,189	12.3%	-2.3%
2013	$1,423	$1,877	($454)	$15,490	12.1%	-2.9%
2014	$1,544	$1,952	($408)	$17,900	10.9%	-2.3%
2015	$1,592	$2,028	($436)	$17,896	11.3%	-2.4%
2016	$1,529	$2,068	($539)	$17,538	11.8%	-3.1%
2017	$1,491	$2,131	($640)	$19,513	10.9%	-3.3%
2018	$1,590	$2,197	($607)	$21,047	10.4%	-2.9%
2019	$1,623	$2,231	($608)	$21,652	10.3%	-2.8%

Cash Flow Measures: Mature plans paying substantial retirement benefits resulting in small positive or negative cash flows may be more sensitive to near term investment volatility. Note investment returns result in significant asset growth despite the negative cash flow.

	(A) Investment Experience Gains/(Losses)*	(B) Other Experience Gains/(Losses)*	(A)+(B) Total Experience Gain/(Loss)*
2010	($1,184)	$33	($1,151)
2011	($223)	$398	$175
2012	($407)	$322	($85)
2013	$588	$55	$643
2014	$694	$162	$857
2015	$540	$50	$590
2016	($184)	$158	($27)
2017	$237	$197	$435
2018	$320	$109	$429
2019	($34)	$127	$93

Experience Gains and Losses: As plan experience differs from actuarial assumptions, experience gains and losses will develop. If assumptions are appropriately determined, gains and losses are expected to offset over time. Consistent gains or losses may be an indication that actuarial assumptions need to be re-evaluated. TRSL's consistent "other" experience gains result primarily from salary and mortality assumptions. Recent changes following the experience study are expected to more closely mirror actual experience.

The risks identified and discussed above are the most significant risks based on the characteristics of the plan, however this is not an exhaustive list of potential risks that could be considered. Advanced modelling, as well as the identification of additional risks, can be helpful and can be provided upon request of the Board.

ACTUARIAL COST METHODS AND ASSUMPTIONS

ACTUARIAL COST METHOD:

Louisiana, 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 five-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:

Prior to July 1, 2018, administrative expenses were not explicitly assumed but rather funded in accordance with Louisiana 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 were instead funded through the employer rate as part of the total experience gain/loss which is amortized over a 30-year period. In accordance with Actuarial Standard of Practice Statement 27, (paragraph 3.8.3.e.), the investment return assumption was reduced by ten basis points to reflect administrative expenses that are paid from plan assets and not otherwise recognized. Therefore, these expenses and the resulting experience losses were expected to be offset by long-term investment earnings.

Act 94 of 2016 requires direct funding of administrative expenses to begin in the first fiscal year in which the projected aggregate employer contribution rate does not increase, without regard to any changes in the board-approved actuarial valuation rate. The projected aggregate employer rate for Fiscal Year 2018/2019 met the requirements provided by Act 94. Therefore, the projected funding requirements beginning with Fiscal Year 2018/2019 include expected projected administrative expenses.

POST RETIREMENT BENEFIT INCREASES:

The actuarial accrued liability includes previously granted post-retirement benefit increases. 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 Appendix B of this report. The legislature and governor have the ultimate authority as to whether 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. The liabilities in this report were not developed to include future ad hoc retiree benefit increases. However, the assumptions include an adjustment to recognize that investment earnings will be allocated to the Experience Account to fund potential future increases, in accordance with Actuarial Standard of Practice No. 27 (paragraph 3.5.1).

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, 2018. The study was based on an observation period of July 1, 2012-June 30, 2017. 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, and the School Lunch Plans (Plan A and Plan B). The experience study report, dated March 1, 2018, provides further information regarding the rationale for these assumptions. The revised rate tables are illustrated at the end of this appendix.

INFLATION ASSUMPTION:

The salary and expected investment earnings were developed using a 2.50% inflation assumption, as adopted by the Board of Trustees. This rate remained unchanged following the most recent Experience Study.

DISCOUNT RATE / INVESTMENT EARNINGS:

Funding Valuation Assumptions: A discount rate of 7.55% was used for the June 30, 2019 valuation. Projected contribution requirements for Fiscal Year 2020/2021 were determined using a 7.45% discount rate.

The discount rate for funding purposes reflects the assumed investment rate of return, net of investment expenses, and net of investment gains expected to be allocated to the Experience Account to fund future permanent benefit increases. Therefore, by excluding returns expected to be used for purposes other than funding plan benefits, the discount rate represents the expected returns to be used to fund regular plan benefits.

A long-term (30-year) average of 40 basis points is assumed to be transferred to the Experience Account annually. Therefore, the gross expected return inherent in the valuation is 7.95%. The expected return inherent in the valuation is supported by capital market assumptions provided by the Board's investment consultants and by the average expected returns provided in the Horizon Actuarial Services Survey of Capital Market Assumptions, 2019 edition.

June 30, 2019 GASB Assumptions: A discount rate of 7.55% is used for GASB reporting purposes.

MORTALITY ASSUMPTIONS:

The mortality tables for active, non-disabled retirees, and disabled retirees, were revised effective June 30, 2018, based on the most recent experience study.

Active Members Mortality Table: RP-2014 White Collar Employee tables for males and females, adjusted by 1.010 for males and by 0.997 for females.

Non-Disabled Retiree/Inactive Members: RP-2014 White Collar Healthy Annuitant tables for males and females, adjusted by 1.366 for males and by 1.189 for females.

Disability Retiree Mortality: RP-2014 Disability tables for males and females, adjusted by factors of 1.111 for males and by 1.134 for females.

The base tables for active members, non-disabled retirees, and disabled retirees are adjusted from 2014 to 2018 using the MP-2017 generational improvement table, with continued future mortality improvement projected using the MP-2017 generational mortality improvement tables.

DISABILITY ASSUMPTION:

Rates for total and permanent disability are based on attained age and were revised effective June 30, 2018, based on 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. Retirement and DROP rates are developed in combination and include an age and service component. The rates were revised effective June 30, 2018, based on the most recent experience study.

TERMINATION ASSUMPTIONS:

Voluntary termination or withdrawal rates were revised effective June 30, 2018, 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 were revised effective June 30, 2018, based on the most recent experience study. The rates were developed as the inflation assumption plus the assumed real rates of wage growth, which include increases due to promotion and longevity (often called merit increases) which are generally service related. 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 for regular teachers and the lunch plans 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. In the most recent experience study, higher education experience was reviewed independently from regular teachers. The study showed that higher education members convert significantly more leave to service credit at retirement.

	Current Rates
Regular Teachers	0.9%
Higher Education	3.0%
Lunch Plans A & B	0.9%

FAMILY STATISTICS:

The composition of the family is based on Current Population Reports published by the United States Census Bureau. 75% 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, 2018
Regular Teachers

AGE	DISABILITY RATES	TERMINATION RATES < 1 YEAR	1-2 YEARS	2-3 YEARS	4+ YEARS	RETIREMENT/DROP RATES < 25 YOS	25-29 YOS	30+ YOS	DUR	SALARY INCREASE
18	0.0001	0.250	0.250	0.165	0.170	0.000	0.000	0.000	**1**	0.048
19	0.0001	0.250	0.250	0.165	0.170	0.000	0.000	0.000	**2**	0.039
20	0.0001	0.250	0.250	0.165	0.170	0.000	0.000	0.000	**3**	0.039
21	0.0001	0.250	0.250	0.165	0.170	0.000	0.000	0.000	**4**	0.039
22	0.0001	0.250	0.250	0.165	0.170	0.000	0.000	0.000	**5**	0.039
23	0.0001	0.180	0.200	0.165	0.170	0.000	0.000	0.000	**6**	0.037
24	0.0001	0.180	0.200	0.165	0.170	0.000	0.000	0.000	**7**	0.037
25	0.0001	0.180	0.135	0.165	0.090	0.000	0.000	0.000	**8**	0.037
26	0.0001	0.180	0.135	0.125	0.090	0.000	0.000	0.000	**9**	0.037
27	0.0001	0.180	0.135	0.122	0.090	0.000	0.000	0.000	**10**	0.037
28	0.0001	0.180	0.135	0.119	0.085	0.000	0.000	0.000	**11**	0.037
29	0.0001	0.180	0.135	0.116	0.080	0.000	0.000	0.000	**12**	0.037
30	0.0003	0.180	0.135	0.113	0.070	0.000	0.000	0.000	**13**	0.037
31	0.0003	0.180	0.135	0.110	0.070	0.000	0.000	0.000	**14**	0.034
32	0.0003	0.165	0.135	0.107	0.060	0.000	0.000	0.000	**15**	0.034
33	0.0003	0.165	0.135	0.104	0.060	0.000	0.000	0.000	**16**	0.034
34	0.0003	0.165	0.130	0.101	0.050	0.000	0.000	0.000	**17**	0.034
35	0.0007	0.165	0.130	0.098	0.050	0.000	0.000	0.000	**18**	0.034
36	0.0008	0.165	0.120	0.095	0.045	0.000	0.000	0.000	**19**	0.034
37	0.0009	0.165	0.120	0.095	0.045	0.000	0.000	0.000	**20**	0.034
38	0.0010	0.165	0.120	0.095	0.042	0.035	0.000	0.000	**21**	0.034
39	0.0011	0.165	0.120	0.092	0.042	0.035	0.000	0.000	**22**	0.034
40	0.0012	0.165	0.120	0.090	0.042	0.035	0.000	0.000	**23**	0.034
41	0.0013	0.165	0.120	0.090	0.042	0.035	0.000	0.000	**24**	0.034
42	0.0014	0.150	0.120	0.090	0.042	0.035	0.000	0.000	**25**	0.034
43	0.0015	0.150	0.120	0.090	0.042	0.035	0.000	0.000	**26**	0.034
44	0.0016	0.150	0.120	0.090	0.042	0.035	0.000	0.000	**27**	0.034
45	0.0019	0.150	0.120	0.090	0.042	0.035	0.020	0.000	**28**	0.034
46	0.0020	0.150	0.120	0.090	0.042	0.035	0.020	0.000	**29**	0.034
47	0.0022	0.150	0.120	0.090	0.042	0.035	0.020	0.000	**30**	0.034
48	0.0023	0.150	0.120	0.090	0.042	0.035	0.025	0.450	**31**	0.034
49	0.0025	0.150	0.120	0.090	0.042	0.035	0.025	0.450	**32**	0.034
50	0.0030	0.150	0.120	0.090	0.042	0.035	0.045	0.450	**33**	0.034
51	0.0035	0.150	0.120	0.090	0.042	0.035	0.140	0.600	**34**	0.034
52	0.0040	0.150	0.120	0.090	0.042	0.035	0.240	0.600	**35**	0.034
53	0.0045	0.150	0.120	0.090	0.042	0.040	0.240	0.450	**36**	0.034
54	0.0050	0.150	0.120	0.090	0.042	0.100	0.470	0.360	**37**	0.034
55	0.0050	0.150	0.120	0.090	0.042	0.180	0.760	0.270	**38**	0.034
56	0.0050	0.150	0.120	0.090	0.042	0.180	0.350	0.210	**39**	0.034
57	0.0050	0.150	0.120	0.090	0.042	0.180	0.310	0.220	**40**	0.034
58	0.0050	0.150	0.120	0.090	0.042	0.190	0.310	0.230	**41**	0.034
59	0.0050	0.150	0.120	0.090	0.100	0.235	0.250	0.230	**42**	0.034
60	0.0048	0.150	0.120	0.090	0.100	0.235	0.250	0.230	**43**	0.034
61	0.0046	0.150	0.120	0.090	0.100	0.145	0.250	0.230	**44**	0.034
62	0.0044	0.150	0.120	0.090	0.100	0.145	0.240	0.230	**45**	0.034
63	0.0042	0.150	0.120	0.090	0.100	0.145	0.220	0.210	**46**	0.034
64	0.0040	0.150	0.120	0.090	0.100	0.180	0.240	0.290	**47**	0.034
65	0.0034	0.150	0.120	0.090	0.100	0.250	0.235	0.270	**48**	0.034
66	0.0029	0.150	0.120	0.090	0.100	0.200	0.220	0.225	**49**	0.034
67	0.0024	0.150	0.120	0.090	0.100	0.200	0.220	0.225	**50**	0.034
68	0.0022	0.150	0.120	0.090	0.100	0.200	0.220	0.225	**51**	0.034
69	0.0020	0.150	0.120	0.090	0.100	0.200	0.220	0.225	**52**	0.034
70	0.0020	0.150	0.120	0.090	0.100	0.200	0.220	0.225	**53**	0.034
71	0.0020	0.150	0.120	0.090	0.100	0.200	0.220	0.225	**54**	0.034
72	0.0020	0.150	0.120	0.090	0.100	0.200	0.220	0.225	**55**	0.034
73	0.0020	0.150	0.120	0.090	0.100	0.200	0.220	0.225	**56**	0.034
74	0.0020	0.150	0.120	0.090	0.100	0.200	0.220	0.225	**57**	0.034

Actuarial Assumptions, effective July 1, 2018
Higher Education

AGE	DISABILITY RATES	TERMINATION RATES < 1 YEAR	1-2 YEARS	2-3 YEARS	4+ YEARS	RETIREMENT/DROP RATES < 25 YOS	25-29 YOS	30+ YOS
18	0.0000	0.230	0.250	0.170	0.250	0.000	0.000	0.000
19	0.0000	0.230	0.250	0.170	0.250	0.000	0.000	0.000
20	0.0000	0.230	0.250	0.170	0.250	0.000	0.000	0.000
21	0.0000	0.230	0.250	0.170	0.250	0.000	0.000	0.000
22	0.0000	0.230	0.250	0.170	0.250	0.000	0.000	0.000
23	0.0000	0.230	0.250	0.170	0.250	0.000	0.000	0.000
24	0.0000	0.230	0.250	0.170	0.250	0.000	0.000	0.000
25	0.0000	0.230	0.250	0.170	0.250	0.000	0.000	0.000
26	0.0000	0.230	0.210	0.230	0.250	0.000	0.000	0.000
27	0.0000	0.230	0.210	0.220	0.200	0.000	0.000	0.000
28	0.0001	0.230	0.210	0.215	0.120	0.000	0.000	0.000
29	0.0001	0.230	0.210	0.210	0.120	0.000	0.000	0.000
30	0.0001	0.230	0.210	0.205	0.120	0.000	0.000	0.000
31	0.0001	0.230	0.180	0.200	0.120	0.000	0.000	0.000
32	0.0001	0.210	0.180	0.195	0.120	0.000	0.000	0.000
33	0.0001	0.210	0.180	0.190	0.120	0.000	0.000	0.000
34	0.0001	0.210	0.180	0.185	0.100	0.000	0.000	0.000
35	0.0002	0.210	0.180	0.180	0.100	0.000	0.000	0.000
36	0.0002	0.210	0.180	0.175	0.090	0.000	0.000	0.000
37	0.0002	0.195	0.180	0.170	0.090	0.000	0.000	0.000
38	0.0002	0.195	0.180	0.165	0.090	0.080	0.050	0.400
39	0.0003	0.195	0.180	0.160	0.080	0.080	0.050	0.400
40	0.0003	0.195	0.180	0.155	0.080	0.080	0.050	0.400
41	0.0004	0.195	0.200	0.153	0.080	0.080	0.050	0.400
42	0.0004	0.195	0.200	0.151	0.080	0.080	0.050	0.400
43	0.0005	0.195	0.200	0.149	0.080	0.070	0.050	0.400
44	0.0006	0.195	0.200	0.147	0.080	0.045	0.050	0.400
45	0.0007	0.195	0.200	0.145	0.080	0.045	0.050	0.400
46	0.0008	0.195	0.190	0.143	0.080	0.033	0.050	0.400
47	0.0008	0.195	0.180	0.141	0.080	0.033	0.050	0.400
48	0.0008	0.195	0.170	0.139	0.080	0.033	0.050	0.400
49	0.0008	0.195	0.160	0.137	0.080	0.033	0.050	0.400
50	0.0008	0.195	0.150	0.135	0.080	0.033	0.050	0.400
51	0.0008	0.195	0.140	0.133	0.080	0.033	0.100	0.500
52	0.0008	0.195	0.140	0.131	0.080	0.033	0.100	0.250
53	0.0008	0.195	0.140	0.129	0.080	0.033	0.100	0.250
54	0.0008	0.195	0.140	0.127	0.080	0.100	0.320	0.400
55	0.0008	0.195	0.140	0.125	0.080	0.125	0.500	0.155
56	0.0008	0.195	0.140	0.123	0.080	0.125	0.250	0.155
57	0.0008	0.195	0.140	0.121	0.080	0.100	0.200	0.155
58	0.0008	0.195	0.140	0.119	0.080	0.145	0.120	0.155
59	0.0006	0.195	0.140	0.117	0.080	0.160	0.135	0.155
60	0.0004	0.195	0.140	0.115	0.080	0.200	0.180	0.155
61	0.0003	0.195	0.140	0.115	0.080	0.120	0.150	0.155
62	0.0002	0.195	0.140	0.115	0.080	0.120	0.150	0.155
63	0.0001	0.195	0.140	0.115	0.080	0.080	0.150	0.155
64	0.0001	0.195	0.140	0.115	0.080	0.130	0.120	0.155
65	0.0001	0.195	0.140	0.115	0.080	0.180	0.165	0.155
66	0.0001	0.195	0.140	0.115	0.080	0.180	0.180	0.155
67	0.0001	0.195	0.140	0.115	0.080	0.140	0.100	0.155
68	0.0001	0.195	0.140	0.115	0.080	0.140	0.100	0.155
69	0.0001	0.195	0.140	0.115	0.080	0.140	0.160	0.155
70	0.0001	0.195	0.140	0.115	0.080	0.140	0.160	0.155
71	0.0001	0.195	0.140	0.115	0.080	0.140	0.160	0.155
72	0.0001	0.195	0.140	0.115	0.080	0.140	0.160	0.155
73	0.0001	0.195	0.140	0.115	0.080	0.140	0.160	0.155
74	0.0001	0.195	0.140	0.115	0.080	0.140	0.160	0.155

DUR	SALARY INCREASE
1	0.048
2	0.048
3	0.045
4	0.039
5	0.039
6	0.039
7	0.039
8	0.039
9	0.039
10	0.036
11	0.036
12	0.036
13	0.036
14	0.036
15	0.036
16	0.036
17	0.036
18	0.036
19	0.033
20	0.033
21	0.033
22	0.033
23	0.033
24	0.033
25	0.033
26	0.033
27	0.033
28	0.033
29	0.033
30	0.033
31	0.033
32	0.033
33	0.033
34	0.033
35	0.033
36	0.033
37	0.033
38	0.033
39	0.033
40	0.033
41	0.033
42	0.033
43	0.033
44	0.033
45	0.033
46	0.033
47	0.033
48	0.033
49	0.033
50	0.033
51	0.033
52	0.033
53	0.033
54	0.033
55	0.033
56	0.033
57	0.033

Actuarial Assumptions, effective July 1, 2018
Lunch Plans A and B

AGE	DISABILITY RATES	RETIREMENT/ DROP RATES
18	0.0000	0.000
19	0.0000	0.000
20	0.0000	0.000
21	0.0000	0.000
22	0.0000	0.000
23	0.0000	0.000
24	0.0000	0.000
25	0.0000	0.000
26	0.0000	0.000
27	0.0000	0.000
28	0.0000	0.000
29	0.0000	0.000
30	0.0000	0.000
31	0.0000	0.000
32	0.0000	0.000
33	0.0000	0.000
34	0.0000	0.000
35	0.0001	0.000
36	0.0003	0.000
37	0.0005	0.000
38	0.0007	0.500
39	0.0009	0.500
40	0.0011	0.500
41	0.0015	0.500
42	0.0019	0.500
43	0.0024	0.500
44	0.0029	0.500
45	0.0037	0.500
46	0.0045	0.500
47	0.0050	0.500
48	0.0056	0.500
49	0.0064	0.500
50	0.0074	0.500
51	0.0084	0.500
52	0.0094	0.500
53	0.0098	0.500
54	0.0098	0.500
55	0.0100	0.700
56	0.0100	0.430
57	0.0100	0.390
58	0.0100	0.350
59	0.0100	0.330
60	0.0030	0.430
61	0.0025	0.230
62	0.0020	0.230
63	0.0015	0.230
64	0.0011	0.300
65	0.0009	0.280
66	0.0008	0.240
67	0.0007	0.240
68	0.0006	0.240
69	0.0005	0.240
70	0.0005	0.240
71	0.0005	0.240
72	0.0005	0.240
73	0.0005	0.240
74	0.0005	0.240

DUR	TERMINATION RATES	SALARY INCREASE
0	0.150	4.60%
1	0.135	4.60%
2	0.120	3.60%
3	0.105	3.30%
4	0.090	3.30%
5	0.075	3.30%
6	0.060	3.30%
7	0.045	3.30%
8	0.045	3.30%
9	0.045	3.30%
10	0.045	3.30%
11	0.045	3.30%
12	0.045	3.30%
13	0.045	3.30%
14	0.045	3.30%
15	0.045	3.30%
16	0.045	3.30%
17	0.045	3.30%
18	0.045	3.30%
19	0.045	3.30%
20	0.045	3.30%
21	0.045	3.30%
22	0.045	3.30%
23	0.045	3.30%
24	0.045	3.30%
25	0.045	3.30%
26	0.045	3.30%
27	0.045	3.30%
28	0.045	3.30%
29	0.045	3.30%
30	0.045	3.30%
31	0.045	3.30%
32	0.045	3.30%
33	0.045	3.30%
34	0.045	3.30%
35	0.045	3.30%
36	0.045	3.30%
37	0.045	3.30%
38	0.045	3.30%
39	0.045	3.30%
40	0.045	3.30%
41	0.045	3.30%
42	0.045	3.30%
43	0.045	3.30%
44	0.045	3.30%
45	0.045	3.30%
46	0.045	3.30%
47	0.045	3.30%
48	0.045	3.30%
49	0.045	3.30%
50	0.045	3.30%
51	0.045	3.30%
52	0.045	3.30%
53	0.045	3.30%
54	0.045	3.30%
55	0.045	3.30%
56	0.045	3.30%

Actuarial Assumptions, effective July 1, 2018
Mortality Tables

Active Member Mortality

Adjusted RP-2014 Base Table			Projected 2020 Table			Projected 2050 Table		
Age	Male	Female	Age	Male	Female	Age	Male	Female
20	0.000288	0.000137	20	0.000266	0.000132	20	0.000195	0.000099
30	0.000320	0.000183	30	0.000329	0.000190	30	0.000243	0.000142
40	0.000444	0.000333	40	0.000462	0.000346	40	0.000357	0.000267
50	0.001194	0.000927	50	0.001115	0.000889	50	0.000849	0.000679
60	0.003321	0.002054	60	0.003312	0.002093	60	0.002448	0.001567

Non-Disabled Retiree Mortality

Adjusted RP-2014 Base Table			Projected 2020 Table			Projected 2050 Table		
Age	Male	Female	Age	Male	Female	Age	Male	Female
50	0.003776	0.002468	50	0.003525	0.002367	50	0.002685	0.001807
60	0.007137	0.004626	60	0.007118	0.004714	60	0.005261	0.003530
70	0.016941	0.012549	70	0.016409	0.011871	70	0.012455	0.009030
80	0.050961	0.036168	80	0.048168	0.034546	80	0.035915	0.025595
90	0.172376	0.119146	90	0.164979	0.115535	90	0.125508	0.088364

Disabled Mortality

Adjusted RP-2014 Base Table			Projected 2020 Table			Projected 2050 Table		
Age	Male	Female	Age	Male	Female	Age	Male	Female
30	0.008794	0.003405	30	0.009051	0.003535	30	0.006678	0.002650
40	0.012218	0.006185	40	0.012703	0.006419	40	0.009821	0.004966
50	0.022659	0.013503	50	0.021153	0.012952	50	0.016114	0.009884
60	0.029557	0.019277	60	0.029479	0.019645	60	0.021788	0.014709
70	0.044824	0.031982	70	0.043417	0.030254	70	0.032955	0.023015
80	0.085120	0.069215	80	0.080455	0.066111	80	0.059989	0.048982

AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY
June 30, 2019 (7.55% discount rate)

Date	Description	Notes	Amtz. Period	Initial Liability	Years Remain	Remaining Balance	Mid-Year Payment
2019	OAB	Note 1	10	1,693,839,112	10	1,693,839,112	220,397,306
2019	EAAB	Note 2,3	21	3,020,662,280	21	3,020,662,280	280,805,118
2019	2009 Experience G/L		20	2,594,919,708	20	2,594,919,708	246,378,482
2019	2010 Experience G/L		21	1,022,174,170	21	1,022,174,170	95,022,784
2019	2011 Experience G/L		22	(158,415,810)	22	(158,415,810)	(14,445,748)
2019	2012 Experience G/L		23	115,584,054	23	115,584,054	10,356,354
2019	2013 Experience G/L		24	(231,841,415)	24	(231,841,415)	(20,441,916)
2019	2013 Assump/Method Chg		24	789,089,675	24	789,089,675	69,575,597
2019	2014 Assump/Method Change		25	1,373,379,375	25	1,373,379,375	119,325,066
2019	2014 Other Experience G/L		25	(153,560,551)	25	(153,560,551)	(13,341,997)
2019	2015 Experience G/L		26	(360,994,702)	26	(360,994,702)	(30,944,558)
2019	2016 Experience G/L		27	25,809,006	27	25,809,006	2,185,135
2019	2017 Discount Rate Change		28	132,503,564	28	132,503,564	11,091,606
2019	2017 Experience G/L		28	(212,770,054)	28	(212,770,054)	(17,810,552)
2019	2017 Experience Acct Allocation		8	8,451,424	8	8,451,424	1,393,989
2019	2018 Discount Rate Change		29	136,682,205	29	136,682,205	11,322,321
2019	2018 Assump Change		29	544,846,623	29	544,846,623	45,133,368
2019	2018 Experience G/L		29	(196,468,431)	29	(196,468,431)	(16,274,822)
2019	2018 Experience Acct Allocation		9	41,331,823	9	41,331,823	6,261,051
2019	2019 Experience G/L		30	(92,637,817)	30	(92,637,817)	(7,600,279)
2019	2019 Discount Rate Change		30	298,384,629	30	298,384,629	24,480,354
	Total Outstanding Balance					**$ 10,390,968,868**	**$ 1,022,868,659**
Employers Credit Balance							
2019	2016 Contribution Variance	Note 3	-	-	-	-	-
2019	2017 Contribution Variance	Note 3	-	-	-	-	-
2019	2018 Contribution Variance	Note 3	-	-	-	-	-
2019	2019 Contribution Variance	Note 3	-	-	-	-	-
2019	2020 Contribution Variance	Note 3	-	-	-	-	-
	Total Credit Balance					**$ -**	**$ -**
Total Unfunded Actuarial Accrued Liability						**$ 10,390,968,868**	**$ 1,022,868,659**

See UAL Amortization Schedule Notes within this Appendix.

AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY

Projected June 30, 2020 (7.45% discount rate)

Date	Description	Notes	Amtz. Period	Initial Liability	Years Remain	Remaining Balance	Mid-Year Payment
2020	OAB	Note 1	9	1,593,158,038	9	1,593,158,038	223,938,824
2020	EAAB	Note 2,3	20	2,933,702,514	20	2,933,702,514	278,832,357
2020	2009 Experience G/L		19	2,535,326,098	19	2,535,326,098	244,689,236
2020	2010 Experience G/L		20	1,000,803,690	20	1,000,803,690	94,346,744
2020	2011 Experience G/L		21	(155,395,051)	21	(155,395,051)	(14,339,376)
2020	2012 Experience G/L		22	113,570,457	22	113,570,457	10,277,607
2020	2013 Experience G/L		23	(228,145,884)	23	(228,145,884)	(20,281,752)
2020	2013 Assump/Method Change		23	776,511,658	23	776,511,658	69,030,467
2020	2014 Assump/Method Change		24	1,353,321,888	24	1,353,321,888	118,363,558
2020	2014 Other Experience G/L		24	(151,317,880)	24	(151,317,880)	(13,234,488)
2020	2015 Experience G/L		25	(356,158,341)	25	(356,158,341)	(30,688,573)
2020	2016 Experience G/L		26	25,491,463	26	25,491,463	2,166,608
2020	2017 Discount Rate Change		27	131,004,887	27	131,004,887	10,995,363
2020	2017 Experience G/L		27	(210,363,526)	27	(210,363,526)	(17,656,008)
2020	2017 Experience Acct Allocation		7	7,643,852	7	7,643,852	1,389,830
2020	2018 Discount Rate Change		28	135,259,750	28	135,259,750	11,221,917
2020	2018 Assump Change		28	539,176,390	28	539,176,390	44,733,134
2020	2018 Experience G/L		28	(194,423,779)	28	(194,423,779)	(16,130,500)
2020	2018 Experience Acct Allocation		8	37,959,271	8	37,959,271	6,239,988
2020	2019 Experience G/L		29	(91,750,002)	29	(91,750,002)	(7,531,490)
2020	2019 Discount Rate Chg (7.55%)		29	295,524,995	29	295,524,995	24,258,784
2020	2020 Discount Rate Chg (7.45%)		30	303,525,467	30	303,525,467	24,672,357
	Total Outstanding Balance					**10,394,425,955**	**$1,045,294,587**
Employers Credit Balance							
2020	2016 Contribution Variance	Note 3	-	-	-	-	-
2020	2017 Contribution Variance	Note 3	-	-	-	-	-
2020	2018 Contribution Variance	Note 3	-	-	-	-	-
2020	2019 Contribution Variance	Note 3	-	-	-	-	-
2020	2020 Contribution Variance	Note 3	-	-	-	-	-
	Total Credit Balance					**$ -**	**$ -**
Total Unfunded Actuarial Accrued Liability						**$ 10,394,425,955**	**$1,045,294,587**

See UAL Amortization Schedule Notes within this Appendix.

UAL 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 were re-amortized effective July 1, 2019, using a discount rate of 7.55% and include the July 1, 2019 re-amortization of the OAB and EAAB to the originally statutory pay-off dates, per Act 94 of 2016. Projected July 1, 2020 schedules are based on a 7.45% discount rate.

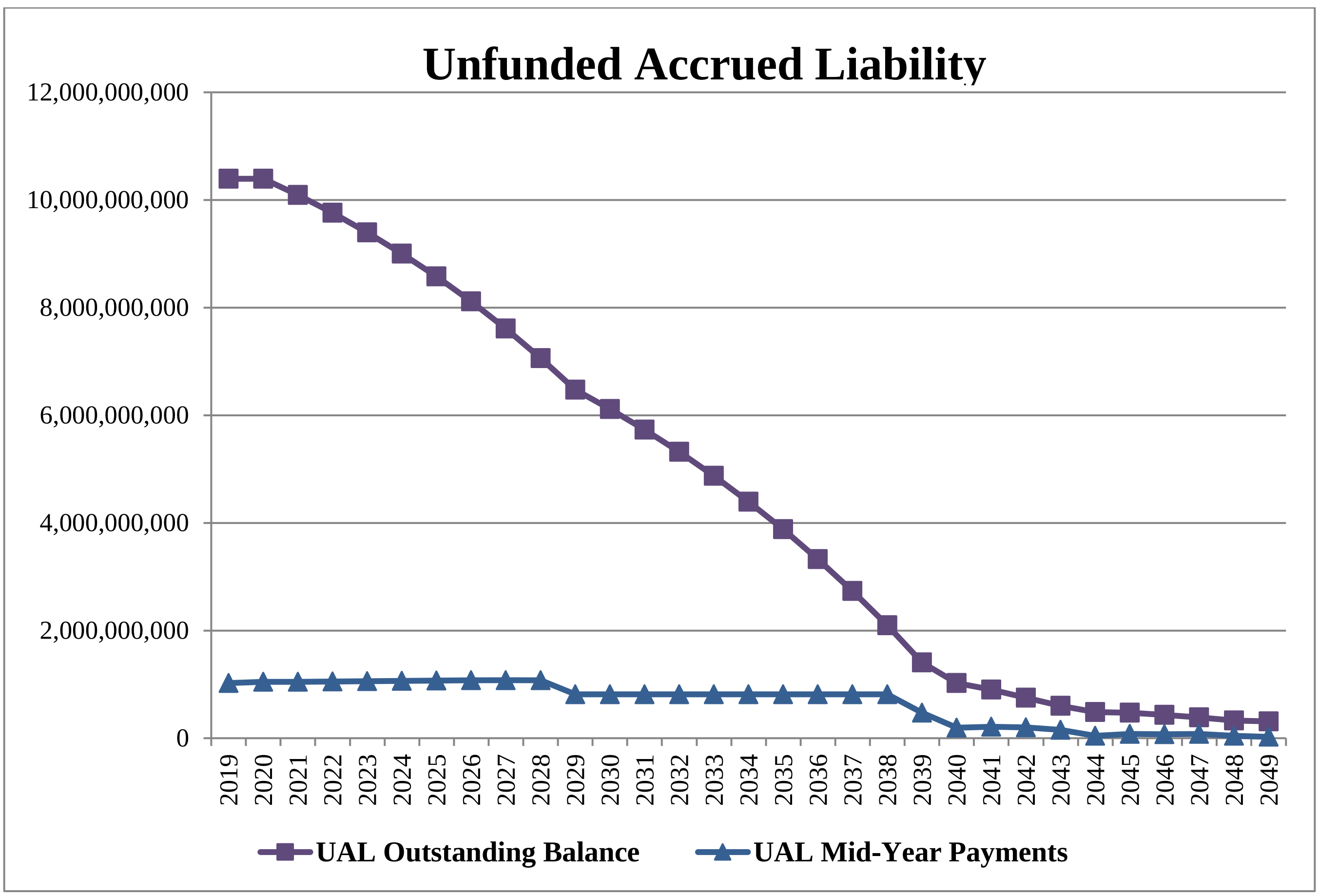
Note 1: Act 497 of 2009 created the Original Amortization Base, effective July 1, 2010, which includes the Initial Unfunded Accrued Liability (IUAL) and certain negative bases that existed before 2009. The combined balance was reduced by applying funds from the IUAL Fund, excluding the subaccount of this fund. 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. The schedule was credited appropriations from Act 55 of 2014, Act 56 of 2015, Act 59 of 2018, and Act 50 of 2019. Future payments will increase by 2.0% until paid off in or before 2029.

Note 2: Act 497 of 2009 created the Experience Account Amortization Base, which combined the liability resulting from Act 588 of 2004 which zeroed out the Experience Account, and certain other positive schedules that existed prior to 2009. 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 be level until paid off in or before 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, 2016, 2017, 2018, and 2019 contribution variance surpluses of $40,289,648, $91,284,653, $64,452,206, $15,672,044, $61,466,736, and $59,425,625 respectively, were used to reduce the EAAB, per Act 399 of 2014.

UAL Outstanding Balance and Payment Schedule
Based on June 30, 2020 Projected UAL Schedules

FY Beginning	UAL Outstanding Balance (Millions)	UAL Mid-Year Payments (Millions)	Payment % Change	FY Beginning	UAL Outstanding Balance (Millions)	UAL Mid-Year Payments (Millions)	Payment % Change
2019	10,391	1,023	0.0%	2035	3,880	814	0.0%
2020	10,394	1,045	2.2%	2036	3,328	814	0.0%
2021	10,090	1,050	0.4%	2037	2,734	814	0.0%
2022	9,759	1,054	0.4%	2038	2,095	814	0.0%
2023	9,397	1,059	0.4%	2039	1,409	471	-42.1%
2024	9,004	1,064	0.4%	2040	1,025	196	-58.4%
2025	8,576	1,069	0.5%	2041	899	210	7.3%
2026	8,112	1,074	0.5%	2042	749	200	-4.9%
2027	7,607	1,077	0.3%	2043	598	151	-24.4%
2028	7,061	1,076	-0.1%	2044	486	46	-69.5%
2029	6,475	814	-24.4%	2045	475	77	66.7%
2030	6,116	814	0.0%	2046	431	75	-2.8%
2031	5,731	814	0.0%	2047	386	81	8.9%
2032	5,318	814	0.0%	2048	330	41	-49.0%
2033	4,873	814	0.0%	2049	312	25	-40.4%
2034	4,395	814	0.0%	2050	310	0	-100.0%



Components of Original Amortization Base
(Dollar amounts in millions)

	Annual Outstanding Balance					Annual Payments				
	IUAL	Other Schedules	IUAL Acct	Employer Credit Account	Total OAB	IUAL	Other Schedules	IUAL Acct	Employer Credit Account	Total OAB
2019	5,107.1	(3,008.6)	(323.6)	(81.1)	1,693.8	664.5	(391.5)	(42.1)	(10.6)	220.4
2020	4,803.6	(2,829.8)	(304.3)	(76.3)	1,593.2	677.8	(399.3)	(42.9)	(10.8)	224.8
2021	4,463.3	(2,629.4)	(282.8)	(70.9)	1,480.3	691.4	(407.3)	(43.8)	(11.0)	229.3
2022	4,083.3	(2,405.5)	(258.7)	(64.8)	1,354.3	705.2	(415.4)	(44.7)	(11.2)	233.9
2023	3,660.2	(2,156.3)	(231.9)	(58.1)	1,214.0	719.3	(423.7)	(45.6)	(11.4)	238.6
2024	3,190.6	(1,879.6)	(202.1)	(50.7)	1,058.2	733.7	(432.2)	(46.5)	(11.7)	243.3
2025	2,670.6	(1,573.3)	(169.2)	(42.4)	885.7	748.4	(440.9)	(47.4)	(11.9)	248.2
2026	2,096.2	(1,234.9)	(132.8)	(33.3)	695.2	763.3	(449.7)	(48.4)	(12.1)	253.2
2027	1,462.8	(861.7)	(92.7)	(23.2)	485.2	778.6	(458.7)	(49.3)	(12.4)	258.2
2028	765.8	(451.1)	(48.5)	(12.2)	254.0	794.2	(467.9)	(50.3)	(12.6)	263.4
2029	0.0	(0.0)	(0.0)	(0.0)	0.0	-	-	-	-	-

This table has changed from previously published tables due the 2019 legislative appropriation allocated to the IUAL, the change in discount rate from 7.60% to 7.55%, and the re-amortization of the OAB to its original required payoff date of 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 in Appendix 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 actuarial cost 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 in Appendix 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 ensure 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.