

**TEACHERS' RETIREMENT  
SYSTEM OF LOUISIANA**

**JUNE 30, 2020**

**ACTUARIAL VALUATION**





October 1, 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, 2020. 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 2021. 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 Hawthorne, Waymouth & Carroll, 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 included 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, 2020	June 30, 2019	June 30, 2018
I. Membership Census			
Retirees	80,536	79,647	78,423
Actives	86,860	85,998	85,045
DROP	2,359	2,462	2,420
Terminated Vested	7,992	7,574	7,211
II. Annual Benefits	\$2,072,641,570	\$2,033,557,103	\$1,986,400,248
III. Current Payroll			
Regular Teachers, Lunch Plans	3,498,582,193	3,386,982,919	3,373,253,993
Higher Education	731,038,788	684,771,436	624,797,320
Total	<u>4,229,620,981</u>	<u>4,071,754,355</u>	<u>3,998,051,313</u>
IV. Market Value of Assets	21,220,586,002	21,652,482,372	21,046,702,165
Valuation Assets	21,971,040,392	21,183,177,985	20,319,561,584
V. Investment Yield			
Market Value (Total Assets)	0.82%	5.86%	11.15%
Market Value (Excl LaDROP Assets)	0.83%	5.95%	11.35%
Actuarial Value	6.80%	7.48%	9.48%
DROP	6.30%	6.98%	8.98%
VI. Experience Account	97,714,607	91,497,197	85,129,775
VII. Total Normal Cost	468,547,375	454,344,240	439,691,899
Total Normal Cost % of Payroll	11.08%	11.16%	11.00%
Employer Normal Cost % of Payroll	3.10%	3.18%	3.01%
VIII. Unfunded Actuarial Accrued Liability	10,369,997,921	10,390,968,872	10,552,318,323
IX. Funded Percentage	67.9%	67.1%	65.8%
X. Funding Requirements (Mid-year Pmt)			
1) Discount Rate (Current Year) <sup>1</sup>	7.45%	7.55%	7.65%
Discount Rate (Next Year) <sup>1</sup>	7.40%	7.45%	7.55%
2) Employee Contribution	340,628,608	328,587,112	322,492,929
3) Restated Required Employer Contribution	1,193,919,270	1,170,078,214	1,194,312,374
Aggregate Rate (Current Year) <sup>2</sup>	25.0%	25.4%	26.4%
Restated Expected Employer Contribution <sup>3</sup>	1,223,558,559	1,194,115,857	1,193,117,398
4) Projected Required Employer Contribution	1,214,905,342	1,204,979,667	1,191,113,503
Aggregate Rate (Next Year) <sup>4</sup>	25.1%	25.6%	25.9%

The above funding requirements measure the cost of benefits that were in effect on June 30, 2020.

<sup>1</sup> The discount rate is the long-term expected return on investments less 35 basis points for gain-sharing.

<sup>2</sup> Reflects the restated aggregate employer contribution rate for the fiscal year following the valuation date.

<sup>3</sup> The current year PRSAC approved employer contribution rate multiplied by restated current year projected payroll.

<sup>4</sup> Reflects the projected aggregate employer contribution rate for fiscal year that begins one year after the valuation date.

**PROJECTED CONTRIBUTION RATES BY PLAN**

Act 716 of 2012 requires the employer contribution rate to be individually determined for each plan type as defined within the Act beginning with Fiscal Year 2012/2013. 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, actuarial assumptions 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:

	<b>Recommended Employer Rate for FY 2021/2022</b>					
	<b>Total Normal Cost Rate</b>	<b>Aggregate Employee Normal Cost Rate</b>	<b>Employer Normal Cost Rate</b>	<b>Administrative Expense Rate</b>	<b>Shared UAL Rate</b>	<b>Total Employer Contribution Rate</b>
Regular Teachers, Lunch A & B	11.3%	7.9780%	3.3377%	0.38%	21.47%	25.2%
Higher Education	10.6%	8.0000%	2.6210%	0.38%	21.47%	24.5%
Aggregate Rate	11.2%	7.9818%	3.2138%	0.38%	21.47%	25.1%

**CHANGES SINCE PRIOR VALUATION**

The discount rate for the June 30, 2020 valuation was reduced from 7.55% to 7.45%. This change was anticipated in the determination of the projected contribution requirements for Fiscal Year 2020/2021. Effective June 30, 2020, the inflation assumption was reduced from 2.50% to 2.30% and all salary assumptions were reduced by 0.2%. The Board adopted a reduction in the discount rate to 7.40%, for purposes of determining the projected contribution requirements for Fiscal Year 2021/2022.

**CHANGE IN FUNDING REQUIREMENTS**

The aggregate employer contribution rate established by the Public Retirement Systems' Actuarial Committee for the 2020/2021 plan year was 25.6%. The restated employer contribution rate determined by this valuation for the 2020/2021 plan year is 25.0%. Therefore, a contribution surplus of 0.6% 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 25.6% for Fiscal Year 2020/2021 to 25.1% for Fiscal Year 2021/2022. 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	-0.08%
Salary Assumption Change	-0.24%
Discount Rate Change (7.45% to 7.40%)	0.12%
<u>Normal Cost Total Change</u>	<u>-0.20%</u>
UAL Payment	
Investment Experience Loss	0.26%
Other Experience Loss	0.01%
Statutory 2% OAB Payment Increase	0.09%
Contribution Variance Payment Change	0.00%
Salary Assumption Change	-0.13%
Discount Rate Change (7.45% to 7.40%)	0.19%
<u>Total UAL Payment Change</u>	<u>0.42%</u>
Payroll Change	-0.66%
Administrative Expenses	-0.01%
<u>Total</u>	<u>-0.45%</u>
Actual Contribution Rate Change	-0.50%

**CHANGE IN UNFUNDED ACCRUED LIABILITY**

The plan's total unfunded accrued liability (UAL) decreased, mainly due to principal reduction from receipt of UAL payments, reductions in the salary assumption, and a contribution variance surplus. This decrease was partially offset by increases resulting from an investment experience loss and change in the discount rate.

Unfunded Liability - June 30, 2019		\$ 10,390,968,872
Interest on Unfunded Liability	\$ 784,518,150	
Employer Amortization Payment	(1,060,779,405)	
Act 255 of 2020 Appropriation	(36,789,397)	
Contribution Variance Surplus	(92,666,407)	
Investment Experience Loss	155,871,616	
Other Experience Loss	3,270,174	
Salary Assumption Change	(83,970,203)	
Discount Rate Change (7.55% to 7.45%)	309,574,521	
<u>Total Change</u>		<u>\$ (20,970,951)</u>
Unfunded Liability - June 30, 2020		\$ 10,369,997,921

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 2019/2020 plan year, the system incurred an experience loss of \$3,270,174 from plan experience differing from that anticipated by the demographic and salary assumptions. The loss is amortized over 30 years with level payments.

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

Active Member Decrements	(\$76,533,705)
Active Member Salaries	(\$27,205,905)
Inactive Mortality	\$21,429,368
Administrative Expenses	\$623,316
Other	\$78,416,752
<b>Total Change</b>	<b>(\$3,270,174)</b>

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 assets net of these accounts.

	Actuarial Value of Assets	Money Market DROP Accounts	Net Actuarial Value of Assets
Beginning Assets	21,277,660,593	360,889,603	20,916,770,990
Contributions	1,656,055,824	97,329,201	1,558,726,623
Benefits Payments and Expenses	(2,261,963,029)	(89,012,477)	(2,172,950,552)
Investment Income	1,400,290,856	1,074,874	1,399,215,982
Ending Asset Value	22,072,044,244	370,281,201	21,701,763,043
Net AVA Rate of Return			6.80%

For the plan year ending June 30, 2020, the System's actuarial rate of return of 6.80% was less than the 7.55% discount rate, resulting in an investment experience loss of \$155,871,616. 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	\$ 20,916,770,990
B. Total Contributions	1,558,726,623
C. Benefits Payments and Expenses	2,172,950,552
D. Ending Net Actuarial Value of Assets	21,701,763,043
E. Investment Income (D - A - B + C)	1,399,215,982
Investment Rate of Return	6.80%
F. Expected Investment Income	1,555,087,598
Expected Rate of Return	7.55%
G. Investment Gain/(Loss) (E - F)	(155,871,616)
Current Allocation of Gain Threshold to OAB/EAAB	
H. \$200,000,000 Indexed by AVA Increase	\$ 249,599,612

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.

	Actuarial Rate of Return		Geometric Average
2015	11.26%	5 Year	7.91%
2016	6.67%	10 Year	8.85%
2017	9.15%	15 Year	7.22%
2018	9.48%	20 Year	5.74%
2019	7.48%	25 Year	7.80%
2020	6.80%	30 Year	8.09%

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, 2019 through June 30, 2020 after the expense adjustment is 6.30%. 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 \$3,289,245.

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 \$97,714,607.

#### LEGISLATIVE/PLAN CHANGES

Act 255 of 2020 provided a supplemental appropriation of \$36,789,397 to TRSL to be applied to the IUAL, which is a component of the Original Amortization Base.

Act 337 of 2020 creates options for retired teachers who choose to return to work in a TRSL eligible position. Option 1 allows a retiree to continue receiving their benefit subject to an earnings cap equal to 25% of their final average compensation. Option 2 suspends the retirement benefit but allows the retiree to return to work without an earnings cap and earn a supplemental benefit. The Act is effective August 1, 2020 so has no effect on this valuation.

The following provisions of Act 95 of 2016 will be implemented as 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%.
- 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

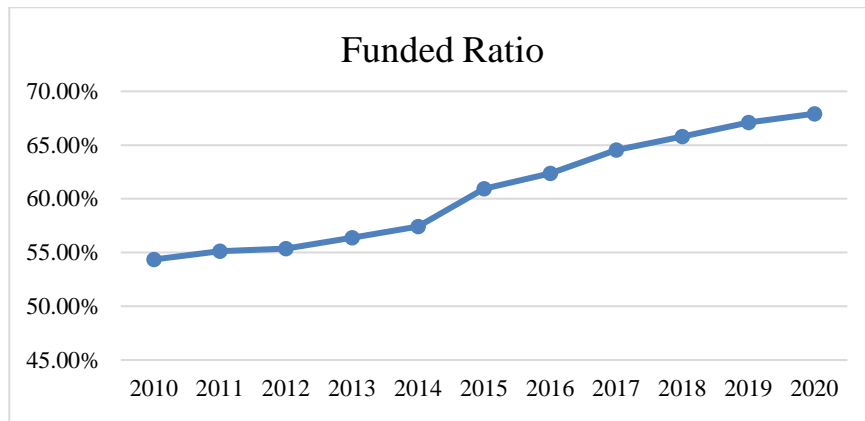
#### ACCELERATED REDUCTION OF OAB AND EAAB

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 \$906,659,027 has been applied to the EAAB. Per Act 95 of 2016, the OAB and EAAB schedules were re-amortized to their original statutorily required pay-off dates in FY 2019/2020. 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 67.9%, 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 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, 2020, based on the actuarial value of assets. Please see additional discussion in Appendix D regarding the impact to the funded ratio of changes in actuarial assumption and methods over the past 10 years.



**ASSETS/FINANCIAL SUMMARY**  
**STATEMENT OF REVENUES AND EXPENSES**

	----- Prior Years -----		
	June 30, 2020	June 30, 2019	June 30, 2018
<b><u>OPERATING REVENUES:</u></b>			
<b>1. Contribution Income</b>			
Member	\$ 351,287,975	\$ 341,398,896	\$ 337,928,752
Employer	1,129,963,855	1,124,923,542	1,110,943,147
Legis Appropriations	36,789,397	21,327,137	8,585,163
Other Appropriations	25,399	27,033	8,137
ORP - Unfunded	134,957,347	132,340,454	130,984,645
LSU Ag Center Coop. Ext.	2,017,909	1,995,075	1,873,303
Miscellaneous	1,013,941	726,366	(556,254)
<b>TOTAL CONTRIBUTIONS</b>	<b>1,656,055,823</b>	<b>1,622,738,503</b>	<b>1,589,766,893</b>
<b>2. Investment Income</b>			
Investments	209,737,077	1,250,580,485	2,177,985,187
Less Advisor Fees	(35,726,244)	(36,658,316)	(37,287,214)
<b>TOTAL INVESTMENT INCOME</b>	<b>174,010,833</b>	<b>1,213,922,169</b>	<b>2,140,697,973</b>
<b>3. Total Revenues</b>	<b>1,830,066,656</b>	<b>2,836,660,672</b>	<b>3,730,464,866</b>
<b><u>OPERATING EXPENSES:</u></b>			
<b>1. General Administration</b>			
General Administration	14,418,013	13,445,962	14,046,725
Other Post-Employment Benefits <sup>1</sup>	(540,170)	95,273	13,633,156
GASB 68 Pension Expense	1,576,153	880,211	1,385,063
Depreciation Expense	422,685	396,927	400,766
<b>TOTAL ADMIN. EXPENSE</b>	<b>15,876,681</b>	<b>14,818,373</b>	<b>29,465,710</b>
<b>2. Benefits Paid</b>			
Pension Benefits	2,193,873,471	2,163,684,514	2,116,953,537
LSU Ag Center Coop. Ext.	1,987,638	2,075,869	2,017,909
Refund of Contributions	50,225,236	50,301,709	48,671,220
<b>TOTAL BENEFITS PAID</b>	<b>2,246,086,345</b>	<b>2,216,062,092</b>	<b>2,167,642,666</b>
<b>3. Total Expenses</b>	<b>2,261,963,026</b>	<b>2,230,880,465</b>	<b>2,197,108,376</b>
<b><u>NET MARKET VALUE INCREASE:</u></b>	<b>-431,896,370</b>	<b>605,780,207</b>	<b>1,533,356,490</b>

<sup>1</sup> The 2018 OPEB Expense includes a \$13,190,993 adjusting entry related to GASB 75 implementation.

**AND EXPENSES BY TYPE**

Revenues by Source				
Fiscal Year	Members Contribution	Employer Contribution <sup>1</sup>	Investment Income	Total
2011	342,323,329	943,678,941	2,945,993,096	4,231,995,366
2012	333,908,454	1,084,637,731	(56,240,846)	1,362,305,339
2013	327,767,936	1,095,482,766	1,754,983,691	3,178,234,393
2014	326,007,091	1,218,017,295 <sup>2</sup>	2,818,063,134	4,362,087,520
2015	324,920,644	1,267,129,097	445,160,167	2,037,209,908
2016	330,773,315	1,197,925,446	180,592,209	1,709,290,970
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
2020	351,287,975	1,304,767,848	174,010,833	1,830,066,656

Expenses by Type				
Fiscal Year	Benefits	Refunds	Administrative Expenses	Total
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
2020	2,195,861,109	50,225,236	15,876,681	2,261,963,026

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

<sup>2</sup> Includes \$5,578,791 legislative appropriation from Act 55 of 2014.

**STATEMENT OF ASSETS**

<b>ASSETS:</b>	<b>June 30, 2020</b>	<b>----Prior Years---</b>	
		<b>June 30, 2019</b>	<b>June 30, 2018</b>
1. Short-term Assets			
Cash and Cash Equivalents	\$ 239,806,968	\$ 196,030,213	\$ 277,091,189
Short Term Securities	869,649,603	905,937,551	1,076,810,833
2. Global Debt	3,579,000,756	3,741,321,218	3,649,694,501
3. Global Equities	9,140,896,138	9,850,015,432	9,957,163,279
4. Other Assets			
Alternative Investments	7,725,680,541	7,219,278,272	6,465,934,316
Property and Equipment	3,582,219	3,738,196	3,402,044
Receivables less Payables	(337,194,283)	(263,891,846)	(384,369,200)
Deferred Outflows less Deferred Inflows	(835,940)	53,336	975,203
<b>TOTAL ASSETS - Market Value</b>	<b>21,220,586,002</b>	<b>21,652,482,372</b>	<b>21,046,702,165</b>



**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 five-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.

<b>Plan Year</b>	<b>Asset G/L</b>	<b>Deferred %</b>	<b>Deferred \$</b>
2017	1,281,120,936	20%	256,224,187
2018	661,883,532	40%	264,753,413
2019	(372,073,354)	60%	(223,244,012)
2020	(1,436,489,787)	80%	(1,149,191,830)
			\$ (851,458,242)
Market Value of Assets			\$ 21,220,586,002
- Deferred Asset G/L			(851,458,242)
Preliminary Actuarial Value of Assets			\$ 22,072,044,244
<b>CORRIDOR LIMITS</b>			
Minimum = 80% of Market Value			\$ 16,976,468,802
Maximum = 120% of Market Value			25,464,703,202
Actuarial Value of Assets			\$ 22,072,044,244

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

<b>Plan Year</b>	<b>Deferred Gain/(Loss)</b>	<b>Deferred</b>			
		<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
2017	256,224,187	256,224,187			
2018	264,753,413	132,376,707	132,376,706		
2019	(223,244,012)	(74,414,671)	(74,414,671)	(74,414,670)	
2020	(1,149,191,830)	(287,297,958)	(287,297,958)	(287,297,958)	(287,297,956)
	(851,458,242)	26,888,265	(229,335,923)	(361,712,628)	(287,297,956)

**SIDE ACCOUNTS AND  
DEVELOPMENT OF VALUATION ASSETS**

	---- Prior Years ----		
	June 30, 2020	June 30, 2019	June 30, 2018
<b>EMPLOYER CREDIT ACCOUNT<sup>1</sup>:</b>			
Prior Year Ending Balance	\$ -	\$ -	\$ -
+ Contributions	-	-	-
- Disbursements	-	-	-
+ Accumulated Interest	-	-	-
Account Balance - Year End	-	-	-
<b>LSU AG/EXT SERVICE:</b>			
Prior Year Ending Balance	\$ 2,985,411	\$ 2,784,912	\$ 2,598,899
+ Contributions	2,017,909	1,995,075	1,873,303
- Benefit Disbursements	1,987,638	2,075,869	2,017,909
+ Accumulated Interest	273,563	281,293	330,619
Account Balance - Year End	3,289,245	2,985,411	2,784,912
<b>EXPERIENCE ACCOUNT FUND:</b>			
Prior Year Ending Balance	\$ 91,497,197	\$ 85,129,775	\$ 37,154,395
+ Experience Account Allocation	-	-	44,451,679
- Benefit Disbursements	-	-	-
+ Accumulated Interest	6,217,410	6,367,422	3,523,701
Fund Balance - Year End	97,714,607	91,497,197	85,129,775
<b>DEVELOPMENT OF VALUATION ASSETS:</b>			
Actuarial Value of Assets	\$ 22,072,044,244	\$ 21,277,660,593	\$ 20,407,476,271
- Employer Credit Account	-	-	-
- LSU Ag/Ext Service Account	3,289,245	2,985,411	2,784,912
- Experience Account Fund	97,714,607	91,497,197	85,129,775
Valuation Assets	\$ 21,971,040,392	\$ 21,183,177,985	\$ 20,319,561,584

<sup>1</sup> 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.

	<b>June 30, 2020</b>		<b>---- Prior Year ---- June 30, 2019</b>	
	<b>Dollar Amount</b>	<b>% of Salary</b>	<b>Dollar Amount</b>	<b>% of Salary</b>
Discount Rate	7.45%		7.55%	
<b>I. Normal Costs</b>				
Active Members				
a) Retirement Benefits	270,325,934	6.39%	266,087,993	6.53%
b) Disability Benefits	15,432,109	0.36%	14,978,417	0.37%
c) Survivor Benefits	6,191,043	0.15%	5,999,335	0.15%
d) Voluntary Termination	176,598,289	4.18%	167,278,495	4.11%
e) Total	<u>468,547,375</u>	11.08%	<u>454,344,240</u>	11.16%
<b>II. Actuarial Accrued Liability</b>				
a) Active Members				
1) Retirement Benefits	8,177,111,380		7,935,913,083	
2) Disability Benefits	191,729,973		181,761,503	
3) Survivor Benefits	81,449,117		78,330,533	
4) Voluntary Termination	<u>657,641,565</u>		<u>551,585,776</u>	
	9,107,932,035		8,747,590,895	
b) Retired and Inactive Members				
1) Regular Retirees	17,927,649,533		17,607,062,821	
2) Disability Benefits	483,093,856		481,196,961	
3) Survivors	1,273,408,196		1,206,342,833	
4) Vested Deferred <sup>1</sup>	441,537,875		414,694,784	
5) Contributions Refunded <sup>2</sup>	140,787,058		150,184,798	
6) DROP Deferred Benefits	1,871,917,934		1,879,813,212	
7) DROP Account Balances	<u>1,094,711,826</u>		<u>1,087,260,553</u>	
	23,233,106,278		22,826,555,962	
c) Total	32,341,038,313		31,574,146,857	

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

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

**Section III**  
**DEVELOPMENT OF COSTS, LIABILITIES, AND CONTRIBUTIONS**

**TRSL Actuarial Valuation**  
**June 30, 2020**

	<b>June 30, 2020</b>	<b>---- Prior Year ---- June 30, 2019</b>
II. Actuarial Accrued Liability	32,341,038,313	31,574,146,857
Discount Rate	7.45%	7.55%
III. Valuation Assets	21,971,040,392	21,183,177,985
IV. Unfunded Actuarial Accrued Liability <sup>1</sup>	10,369,997,921	10,390,968,872
a) Change over prior year	(20,970,951)	(161,349,451)
b) Funded Percentage	67.9%	67.1%
V. Employer Contributions		
To Fund Current Plan Year <sup>1</sup>		
a) Employer Portion of Normal Cost	132,120,744	130,709,555
b) Administrative Expenses	16,500,000	16,500,000
c) Amortization Payments	1,045,298,526	1,022,868,659
d) Prior Contribution Variance	0	0
Total Required Contribution	<u>1,193,919,270</u>	<u>1,170,078,214</u>
Total Contribution Rate	25.0%	25.4%
PR SAC Approved rate <sup>1</sup>	25.6%	25.9%
Aggregate Employer Normal Cost Rate	3.0959%	3.1755%
VI. Projected Employer Contributions		
Discount Rate	7.40%	7.45%
To Fund Next Plan Year <sup>1</sup>		
a) Employer Portion of Normal Cost	139,273,835	143,185,080
b) Administrative Expenses	16,500,000	16,500,000
c) Amortization Payments	1,059,131,507	1,045,294,587
c) Prior Contribution Variance	0	0
Total Required Contribution	<u>1,214,905,342</u>	<u>1,204,979,667</u>
Total Contribution Rate	25.1%	25.6%
Projected Aggregate Employer Normal Cost Rate	3.2138%	3.4133%
VII. Current Payroll	4,229,620,981	4,071,754,355
Projected Payroll - Mid Year	4,267,552,628	4,116,137,144
Projected Payroll - Next Year	4,333,568,632	4,194,867,977
Optional Retirement Plan (ORP) Salary Adjustment Factor <sup>2</sup>	1.13849	1.14077

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

<sup>2</sup> 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 LIABILITY**

	<u>June 30, 2020</u>	<u>June 30, 2019</u>	<u>June 30, 2018</u>
Total Pension Liability	\$ 32,340,867,066	\$ 31,574,146,857	\$ 30,871,936,837
Plan Fiduciary Net Position <sup>1</sup>	\$ 21,217,296,757	\$ 21,649,496,961	\$ 21,043,916,901
Employers' Net Pension Liability	\$ 11,123,570,309	\$ 9,924,649,896	\$ 9,828,019,936
Plan Fiduciary Net Position as a percentage of Total Pension Liability	65.6%	68.6%	68.2%
Covered Employee Payroll	\$ 4,229,620,981	\$ 4,071,754,355	\$ 3,998,051,313
Net Pension Liability as a percentage of Covered Payroll	263.0%	243.7%	245.8%

**SCHEDULE OF EMPLOYER CONTRIBUTIONS**

Fiscal Year	Actuarial Determined Contribution	Contributions in Relation to Actuarial Determined Contribution	Contribution Deficiency (Excess) <sup>2</sup>	Covered Payroll	Contributions as a % of Covered Payroll
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)	4,071,754,355	32.1%
2020	1,221,266,156	1,313,932,563	(92,666,407)	4,229,620,981	31.1%

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

<sup>2</sup> See Appendix D for an explanation of the Contribution Deficiency/(Excess)

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

	<u>June 30, 2020</u>	<u>June 30, 2019</u>	<u>June 30, 2018</u>
<b>Total Pension Liability</b>			
Service Cost	454,344,240	439,691,899	473,025,011
Interest	2,333,436,352	2,310,654,625	2,244,768,414
Changes of Benefit Terms	-	-	-
Diff. Between Expected and Actual	(2,565,994)	(132,534,910)	(130,859,239)
Changes of Assumptions	225,604,318	298,384,629	688,003,495
Retirement Benefits <sup>1</sup>	(2,193,873,471)	(2,163,684,514)	(2,116,953,537)
Refunds/Transfers of Member Contributions	(50,225,236)	(50,301,709)	(48,671,220)
<b>Net Change in Total Pension Liability</b>	<u>766,720,209</u>	<u>702,210,020</u>	<u>1,109,312,924</u>
<b>Total Pension Liability - Beginning</b>	<u>31,574,146,857</u>	<u>30,871,936,837</u>	<u>29,762,623,913</u>
<b>Total Pension Liability - Ending (a)</b>	<u>\$ 32,340,867,066</u>	<u>\$ 31,574,146,857</u>	<u>\$ 30,871,936,837</u>
<b>Plan Fiduciary Net Position</b>			
Employer Contributions <sup>1</sup>	1,222,809,468	1,217,167,321	1,201,829,353
Non-Employer Contributions	43,151,074	40,850,075	39,550,321
Employee Contributions	351,287,976	341,398,896	337,928,752
Net Investment Income <sup>1</sup>	170,755,803	1,208,949,546	2,137,541,062
Other Income	39,770,864	26,018,466	11,411,104
Retirement Benefits <sup>1</sup>	(2,193,873,471)	(2,163,684,514)	(2,116,953,537)
Refunds/Transfers of Member Contributions	(50,225,236)	(50,301,709)	(48,671,220)
Administrative Expense	(15,994,167)	(13,445,962)	(15,431,788)
Other Postemployment Benefit Expenses <sup>2</sup>	540,170	(95,273)	(13,633,156)
Depreciation and Amortization Expenses	(422,685)	(1,277,138)	(400,766)
Adjusting Entry <sup>3</sup>	-	352	-
<b>Net Change in Plan Fiduciary Net Position</b>	<u>(432,200,204)</u>	<u>605,580,060</u>	<u>1,533,170,125</u>
<b>Plan Fiduciary Net Position - Beginning</b>	<u>21,649,496,961</u>	<u>21,043,916,901</u>	<u>19,510,746,776</u>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<u>\$ 21,217,296,757</u>	<u>\$ 21,649,496,961</u>	<u>\$ 21,043,916,901</u>
<b>Net Pension Liability - Ending (a) - (b)</b>	<u>\$ 11,123,570,309</u>	<u>\$ 9,924,649,896</u>	<u>\$ 9,828,019,936</u>
<b>Plan Fiduciary Net Position as a Percentage of the Total Pension Liability</b>	65.6%	68.6%	68.2%
<b>Covered Employee Payroll</b>	\$ 4,229,620,981	\$ 4,071,754,355	\$ 3,998,051,313
<b>Net Pension Liability as a Percentage of Covered Employee Payroll</b>	263.0%	243.7%	245.8%

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

<sup>2</sup> The 2018 OPEB Expense includes a \$13,190,993 adjusting entry related to GASB 75 implementation.

<sup>3</sup> 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 8.17%. 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, 2020, are summarized in the following table:

Asset Class	Long Term Expected Real Rate of Return
Domestic Equity	4.60%
International Equity	5.54%
Domestic Fixed Income	0.69%
International Fixed Income	1.50%
Private Equity	8.62%
Other Private Assets	4.45%

The discount rate used to measure the total pension liability is 7.45 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 7.45%, 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	Current Discount Rate	1% Increase
	6.45%	7.45%	8.45%
Employers' Net Pension Liability	\$14,520,881,433	\$11,123,570,309	\$8,263,695,515

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**

	<u>Net Pension Liability</u>	<u>Deferred Inflows</u>	<u>Deferred Outflows</u>	<u>Pension Expense</u>
<b>Beginning balance</b>	(9,924,649,896)	(1,216,801,322)	1,244,893,831	
<b>Total Pension Liability Factors:</b>				
Service cost	(454,344,240)			454,344,240
Interest	(2,333,436,352)			2,333,436,352
Changes in benefit terms	-			-
Differences between expected and actual experience	2,565,994	(2,565,994)	-	
Amortization of current year		513,199	-	(513,199)
Amortization of prior years		133,643,521	-	(133,643,520)
Changes in assumptions	(225,604,318)	-	225,604,318	
Amortization of current year		-	(45,120,863)	45,120,864
Amortization of prior years		-	(224,304,194)	224,304,194
Benefit payments	2,193,873,471			
Refunds/Transfers of Member Contributions	50,225,236			
<b>Net Change in Total Pension Liability</b>	<u>(766,720,209)</u>	<u>131,590,726</u>	<u>(43,820,739)</u>	<u>2,923,048,931</u>
<b>Plan Fiduciary Net Position:</b>				
Contributions - Employer	1,222,809,468			
Contributions - Non-Empl. Contributing Entities	43,151,074			
Contributions - Employees	351,287,976			(351,287,976)
Expected earnings on pension plan investments	1,610,386,632			(1,610,386,632)
Diff. between projected and actual investment earnings	(1,439,630,829)	-	1,439,630,829	
Amortization of current year		-	(287,926,166)	287,926,166
Amortization of prior years		387,412,007	(313,121,632)	(74,290,377)
Retirement Benefits	(2,193,873,471)			
Administrative Expense	(15,453,997)			15,453,997
Refunds/Transfers of Member Contributions	(50,225,236)			
Adjusting Entry	-			-
Other	39,348,179			(39,348,179)
<b>Net Change in Plan Fiduciary Net Position</b>	<u>(432,200,204)</u>	<u>387,412,007</u>	<u>838,583,031</u>	<u>(1,771,933,001)</u>
<b>Ending Balance</b>	<u>(11,123,570,309)</u>	<u>(697,798,589)</u>	<u>2,039,656,123</u>	<u>1,151,115,930</u>



**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.

Active Members	2020		2019	
	Members	Avg. Salary	Members	Avg. Salary
Regular Teachers	72,375	46,512	72,097	45,208
Higher Education	11,108	64,344	10,543	63,295
Lunch Plan A	2	24,931	2	22,859
Lunch Plan B	1,160	21,556	1,144	19,889
Subtotal Actives	84,645	48,509	83,786	47,138
Post DROP	2,215	55,774	2,212	55,281
Total Active	86,860	48,695	85,998	47,347

Retired and Inactive Members	2020	2019
	Members	Members
Regular Retirees	68,382	67,746
Disability Retirees	4,145	4,208
Survivors	8,009	7,693
DROP Participants	2,359	2,462
Terminated Vested	7,992	7,574
Inactive Non-Vested (Due Refunds)	25,021	23,510
Total Retired and Inactive	115,908	113,193
Total Members	202,768	199,191
Less Inactive Non-Vested (Due Refunds)	-25,021	-23,510
Total Active and Vested Inactive	177,747	175,681

**ACTIVE MEMBERS**

	Pre-DROP	Post-DROP	Total
Non-Vested	28,737		28,737
Vested	55,908	2,215	58,123
	84,645	2,215	86,860

**MEMBER RECONCILIATION**

	Active (Pre- DROP)	Active after DROP	Terminated Vested	In DROP	Retired, Disabled, Survivor	Total
<b>June 20, 2019</b>	83,786	2,212	7,574	2,462	79,647	175,681
<b>Additions to Census</b>						
Newly Hired Members	8,389					8,389
<b>Change in Status</b>						
New Regular Retirees	(1,426)				1,426	0
New Disability Retirees	(94)				94	0
New Survivors	(44)				44	0
Active to Terminated Vested	(1,464)		1,464			0
Active to DROP	(840)			840		0
Terminated Vested to Active	445		(445)			0
Terminated Vested to Ret/Srv			(237)		237	0
Disability to Active/TV	2				(2)	0
DROP to Active After DROP		434		(434)		0
Act aft DROP to Ret/Srv		(427)			427	0
Terminated Vested to DROP			0	0		0
DROP to Ret/Srv				(504)	504	0
<b>Eliminated from Census</b>						
Refunded or Due Refund	(4,051)		(367)		0	(4,418)
Deceased	(43)	(6)	(24)	(2)	(1,909)	(1,984)
No Further Survivor Ben Due						0
Data Revisions	(15)	2	27	(3)	68	79
<b>June 20, 2020</b>	84,645	2,215	7,992	2,359	80,536	177,747

**Appendix A**  
**MEMBERSHIP DATA**

**TRSL Actuarial Valuation**  
**June 30, 2020**

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

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY

VALUATION DATE 6/30/2020

Age/Years	<1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35+	Total
< 25	721 \$31,064,512	1,346 \$56,036,507	3 \$71,215							2,070 \$87,172,234
25 - 29	991 \$40,677,950	5,179 \$222,884,127	1,400 \$66,595,708							7,570 \$330,157,785
30 - 34	878 \$38,108,079	4,072 \$174,881,387	4,063 \$198,583,281	835 \$43,527,324						9,848 \$455,100,071
35 - 39	801 \$35,075,502	3,489 \$149,786,156	3,205 \$156,220,563	3,789 \$203,061,738	994 \$57,325,455	2 \$58,665				12,280 \$601,528,079
40 - 44	564 \$24,590,102	2,772 \$115,206,503	2,436 \$113,460,903	2,687 \$139,766,961	3,257 \$189,139,042	880 \$53,273,246	2 \$80,477			12,598 \$635,517,234
45 - 49	464 \$20,574,378	2,181 \$92,736,420	2,000 \$93,172,822	2,169 \$106,227,475	2,224 \$122,175,048	2,724 \$167,905,025	769 \$49,701,370			12,531 \$652,492,538
50 - 54	369 \$16,902,673	1,701 \$69,276,503	1,493 \$64,836,242	1,870 \$85,570,473	1,774 \$89,968,725	1,843 \$104,290,182	2,129 \$135,562,684	95 \$7,516,766		11,274 \$573,924,248
55 - 59	279 \$11,622,065	1,349 \$52,837,102	1,253 \$53,610,197	1,523 \$65,977,850	1,599 \$72,140,345	1,564 \$78,637,368	365 \$20,081,629	135 \$9,574,458	34 \$2,403,213	8,101 \$366,884,227
60 - 64	200 \$8,669,033	806 \$32,455,072	809 \$35,144,356	888 \$39,958,879	900 \$41,010,822	1,010 \$48,132,220	337 \$17,718,974	114 \$7,357,345	68 \$4,759,492	5,132 \$235,206,193
65 - 69	58 \$2,840,396	343 \$14,312,668	312 \$15,101,104	359 \$16,945,247	346 \$17,699,460	306 \$14,932,143	294 \$14,958,650	105 \$6,855,713	99 \$9,133,129	2,222 \$112,778,510
70+	30 \$1,223,186	144 \$5,310,012	116 \$5,060,349	176 \$8,435,550	146 \$7,869,638	102 \$5,153,748	101 \$5,094,667	87 \$5,441,497	117 \$11,732,491	1,019 \$55,321,138
<b>Total</b>	5,355 \$231,347,878	23,382 \$985,722,457	17,090 \$801,856,740	14,296 \$709,471,497	11,240 \$597,328,535	8,431 \$472,382,597	3,997 \$243,198,451	536 \$36,745,779	318 \$28,028,325	84,645 \$4,106,082,259

AVERAGES --- Attained Age 44.52  
Service Years 10.47  
Active Salary \$48,509

**Appendix A**  
**MEMBERSHIP DATA**

TRSL Actuarial Valuation  
June 30, 2020

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

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY

VALUATION DATE 6/30/2020

Age/Years	<1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35+	Total
< 25	598 \$26,039,340	1,234 \$51,999,621	3 \$71,215							1,835 \$78,110,176
25 - 29	725 \$28,993,374	4,519 \$195,110,534	1,331 \$63,417,138							6,575 \$287,521,046
30 - 34	575 \$21,772,962	3,235 \$131,057,800	3,698 \$178,632,920	800 \$41,365,985						8,308 \$372,829,667
35 - 39	555 \$20,489,889	2,757 \$107,198,790	2,676 \$123,171,698	3,501 \$185,789,862	964 \$55,243,419	2 \$58,665				10,455 \$491,952,323
40 - 44	382 \$14,415,973	2,235 \$84,462,922	2,034 \$88,600,099	2,371 \$118,595,278	3,057 \$176,069,388	864 \$52,357,011	2 \$80,477			10,945 \$534,581,148
45 - 49	316 \$12,289,518	1,777 \$69,005,114	1,702 \$73,120,435	1,911 \$88,753,182	2,034 \$108,914,273	2,630 \$160,540,647	753 \$48,581,088			11,123 \$561,204,257
50 - 54	254 \$9,588,270	1,330 \$48,157,937	1,247 \$50,249,963	1,601 \$68,551,076	1,586 \$76,081,242	1,714 \$95,659,727	2,043 \$129,353,260	87 \$6,808,332		9,862 \$484,449,807
55 - 59	190 \$6,311,928	1,047 \$35,521,360	971 \$36,224,610	1,284 \$52,320,518	1,391 \$59,540,963	1,434 \$70,187,049	311 \$17,014,042	121 \$8,038,979	29 \$2,149,165	6,778 \$287,308,614
60 - 64	136 \$4,644,973	584 \$19,788,754	594 \$21,135,347	711 \$27,895,812	757 \$31,189,284	933 \$43,093,743	281 \$13,278,688	86 \$5,213,310	53 \$3,678,543	4,135 \$169,918,454
65 - 69	33 \$1,267,670	242 \$8,200,195	211 \$7,860,537	285 \$11,383,461	271 \$11,773,641	280 \$13,198,390	265 \$13,036,481	72 \$3,376,528	45 \$3,095,074	1,704 \$73,191,977
70+	16 \$481,078	104 \$3,129,088	77 \$2,545,671	121 \$4,248,864	85 \$3,306,055	76 \$3,486,859	79 \$3,449,824	56 \$2,752,760	41 \$1,828,161	655 \$25,228,360
<b>Total</b>	3,780 \$146,294,976	19,064 \$753,632,115	14,544 \$645,029,633	12,585 \$598,904,038	10,145 \$522,118,265	7,933 \$438,582,091	3,734 \$224,793,860	422 \$26,189,909	168 \$10,750,943	72,375 \$3,366,295,830

AVERAGES --- Attained Age 44.3  
Service Years 10.9  
Active Salary \$46,512

**Appendix A**  
**MEMBERSHIP DATA**

**TRSL Actuarial Valuation**  
**June 30, 2020**

**TRSL MEMBERSHIP PROFILE**  
**ACTIVE - HIGHER EDUCATION**

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY

VALUATION DATE 6/30/2020

Age/Years	<1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35+	Total
< 25	119 \$4,954,673	105 \$3,928,075								224 \$8,882,748
25 - 29	254 \$11,473,644	639 \$27,402,412	66 \$3,121,121							959 \$41,997,177
30 - 34	291 \$16,102,467	807 \$43,260,488	357 \$19,723,396	34 \$2,140,714						1,489 \$81,227,065
35 - 39	225 \$14,156,177	686 \$41,622,332	507 \$32,503,980	278 \$17,000,105	30 \$2,082,036					1,726 \$107,364,630
40 - 44	168 \$9,924,729	485 \$29,677,484	362 \$23,989,636	306 \$20,941,392	192 \$12,887,243	15 \$889,267				1,528 \$98,309,751
45 - 49	123 \$7,742,301	365 \$22,945,748	271 \$19,451,982	238 \$16,936,278	175 \$12,914,442	91 \$7,298,987	15 \$1,090,909			1,278 \$88,380,647
50 - 54	104 \$7,122,862	309 \$19,919,037	204 \$13,714,064	225 \$15,978,366	166 \$13,332,408	111 \$8,137,424	79 \$6,026,748	7 \$686,930		1,205 \$84,917,839
55 - 59	69 \$4,888,494	241 \$16,139,071	218 \$15,989,500	186 \$12,537,560	159 \$11,417,130	96 \$7,602,480	36 \$2,674,610	13 \$1,514,807	3 \$192,504	1,021 \$72,956,156
60 - 64	60 \$3,935,617	179 \$11,765,782	178 \$13,230,399	158 \$11,687,155	129 \$9,506,077	64 \$4,756,708	49 \$4,195,222	25 \$2,083,168	12 \$1,004,932	854 \$62,165,060
65 - 69	23 \$1,530,972	86 \$5,857,516	93 \$7,084,346	66 \$5,381,380	73 \$5,882,090	26 \$1,733,753	28 \$1,902,856	31 \$3,432,343	54 \$6,038,055	480 \$38,843,311
70+	13 \$715,084	35 \$2,095,424	35 \$2,440,841	49 \$4,054,415	57 \$4,477,089	26 \$1,666,889	22 \$1,644,843	31 \$2,688,737	76 \$9,904,330	344 \$29,687,652
<b>Total</b>	1,449 \$82,547,022	3,937 \$224,613,369	2,291 \$151,249,265	1,540 \$106,657,365	981 \$72,498,515	429 \$32,085,508	229 \$17,535,188	107 \$10,405,985	145 \$17,139,821	11,108 \$714,732,038

AVERAGES --- Attained Age 45.3  
Service Years 7.92  
Active Salary \$64,344

**Appendix A**  
**MEMBERSHIP DATA**

TRSL Actuarial Valuation  
 June 30, 2020

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

CELLS DEPICT -

MEMBER COUNT  
 TOTAL SALARY

VALUATION DATE 6/30/2020

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 \$49,861	2 \$49,861
65 - 69										
70+										
<b>Total</b>									2 \$49,861	2 \$49,861

AVERAGES --- Attained Age 64.45  
 Service Years 38.95  
 Active Salary \$24,931

**Appendix A**  
**MEMBERSHIP DATA**

**TRSL Actuarial Valuation**  
**June 30, 2020**

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

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY

VALUATION DATE 6/30/2020

Age/Years	<1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35+	Total
< 25	4 \$70,499	7 \$108,811								11 \$179,310
25 - 29	12 \$210,932	21 \$371,181	3 \$57,449							36 \$639,562
30 - 34	12 \$232,649	30 \$563,099	8 \$226,965	1 \$20,625						51 \$1,043,338
35 - 39	21 \$429,437	46 \$965,034	22 \$544,885	10 \$271,771						99 \$2,211,127
40 - 44	14 \$249,400	52 \$1,066,097	40 \$871,168	10 \$230,291	8 \$182,411	1 \$26,968				125 \$2,626,335
45 - 49	25 \$542,559	39 \$785,558	27 \$600,405	20 \$538,015	15 \$346,333	3 \$65,391	1 \$29,373			130 \$2,907,634
50 - 54	11 \$191,541	62 \$1,199,529	42 \$872,215	44 \$1,041,031	22 \$555,075	18 \$493,031	7 \$182,676	1 \$21,504		207 \$4,556,602
55 - 59	20 \$421,643	61 \$1,176,671	64 \$1,396,087	53 \$1,119,772	49 \$1,182,252	34 \$847,839	18 \$392,977	1 \$20,672	2 \$61,544	302 \$6,619,457
60 - 64	4 \$88,443	43 \$900,536	37 \$778,610	19 \$375,912	14 \$315,461	13 \$281,769	7 \$245,064	3 \$60,867	1 \$26,156	141 \$3,072,818
65 - 69	2 \$41,753	15 \$254,957	8 \$156,221	8 \$180,406	2 \$43,729		1 \$19,313	2 \$46,842		38 \$743,221
70+	1 \$27,023	5 \$85,500	4 \$73,837	6 \$132,271	4 \$86,494					20 \$405,125
<b>Total</b>	126 \$2,505,881	381 \$7,476,973	255 \$5,577,842	171 \$3,910,094	114 \$2,711,755	69 \$1,714,998	34 \$869,403	7 \$149,885	3 \$87,700	1,160 \$25,004,531

AVERAGES --- Attained Age 51.04  
Service Years 8.42  
Active Salary \$21,556

**Appendix A**  
**MEMBERSHIP DATA**

TRSL Actuarial Valuation  
June 30, 2020

**TRSL MEMBERSHIP PROFILE**  
**DROP PARTICIPANTS**

CELLS DEPICT -

MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2020

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 \$50,520									1 \$50,520
50 - 54	216 \$8,740,596	186 \$8,277,504	104 \$4,544,964	1 \$57,696						507 \$21,620,760
55 - 59	458 \$16,672,368	504 \$18,969,120	462 \$17,790,612	23 \$1,154,976						1,447 \$54,587,076
60 - 64	120 \$3,183,768	136 \$3,109,488	131 \$3,292,956	7 \$206,244						394 \$9,792,456
65 - 69	5 \$61,716	2 \$5,556	2 \$6,948							9 \$74,220
70 - 74			1 \$2,976							1 \$2,976
75 - 79										
80 - 84										
85 - 89										
90+										
<b>Total</b>	800 \$28,708,968	828 \$30,361,668	700 \$25,638,456	31 \$1,418,916						2,359 \$86,128,008

AVERAGES --- Attained Age 56.96  
Years Retired 1.37  
Annual Benefit \$36,510



**Appendix A**  
**MEMBERSHIP DATA**

**TRSL Actuarial Valuation**  
**June 30, 2020**

**TRSL MEMBERSHIP PROFILE**  
**ACTIVE AFTER DROP**

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS  
DROP BENEFITS

VALUATION DATE 6/30/2020

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 \$558,242 \$519,384	1 \$39,023 \$23,700	1 \$85,031 \$55,596							17 \$682,296 \$598,680
55 - 59	245 \$10,980,518 \$9,682,404	163 \$10,741,979 \$6,795,504	66 \$4,370,026 \$2,820,756	38 \$2,317,569 \$1,542,564	21 \$1,441,983 \$959,736	13 \$670,658 \$425,508				546 \$30,522,733 \$22,226,472
60 - 64	147 \$4,854,538 \$3,683,556	135 \$6,508,384 \$3,228,828	133 \$7,280,072 \$4,127,208	96 \$5,833,718 \$3,394,740	79 \$5,141,743 \$3,000,732	233 \$14,776,990 \$8,822,544	10 \$629,654 \$286,236			833 \$45,025,099 \$26,543,844
65 - 69	1 \$13,766 \$3,864	8 \$345,973 \$97,980	62 \$2,428,351 \$1,057,176	59 \$2,881,227 \$1,315,116	44 \$2,460,177 \$977,568	233 \$13,080,292 \$6,583,272	107 \$7,853,638 \$3,728,112	2 \$85,695 \$42,816		516 \$29,149,119 \$13,805,904
70+	3 \$49,065 \$16,140	1 \$20,961 \$3,432	2 \$55,115 \$9,888	2 \$110,778 \$20,244	1 \$120,615 \$98,340	98 \$4,462,818 \$1,463,316	121 \$7,051,409 \$2,652,480	54 \$4,499,882 \$1,625,388	21 \$1,788,833 \$650,016	303 \$18,159,476 \$6,539,244
<b>Total</b>	411 \$16,456,129 \$13,905,348	308 \$17,656,320 \$10,149,444	264 \$14,218,595 \$8,070,624	195 \$11,143,292 \$6,272,664	145 \$9,164,518 \$5,036,376	577 \$32,990,758 \$17,294,640	238 \$15,534,701 \$6,666,828	56 \$4,585,577 \$1,668,204	21 \$1,788,833 \$650,016	2215 \$123,538,723 \$69,714,144

AVERAGES --- Attained Age 64.07  
Post Drop Years 4.92  
Active Salary \$55,774  
Annual Benefit \$31,474

**Appendix A**  
**MEMBERSHIP DATA**

TRSL Actuarial Valuation  
June 30, 2020

**TRSL MEMBERSHIP PROFILE**  
**REGULAR RETIREES**

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2020

Age/Years	<1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 10	10 - 15	15 - 20	20+	Total
< 40										
40 - 44	15 \$255,204	11 \$237,264	8 \$169,488	1 \$17,628	1 \$10,056					36 \$689,640
45 - 49	70 \$1,693,300	79 \$1,934,460	81 \$1,903,920	72 \$1,624,420	55 \$1,206,552	66 \$1,408,332				423 \$9,770,984
50 - 54	106 \$3,146,136	137 \$4,277,448	132 \$4,138,176	113 \$3,103,992	94 \$2,293,572	459 \$10,229,232	54 \$1,009,932	1 \$9,348		1,096 \$28,207,836
55 - 59	173 \$5,205,707	257 \$8,103,980	309 \$10,895,656	531 \$19,388,580	521 \$19,759,540	1,224 \$41,783,520	298 \$5,722,116	82 \$1,140,648	1 \$6,420	3,396 \$112,006,167
60 - 64	542 \$10,583,150	664 \$12,495,744	604 \$11,323,988	649 \$12,842,596	682 \$14,505,384	3,600 \$131,400,540	1,607 \$57,556,536	433 \$7,144,188	185 \$2,271,612	8,966 \$260,123,737
65 - 69	350 \$9,170,339	486 \$11,841,712	450 \$10,846,536	507 \$12,025,236	530 \$12,090,756	4,455 \$97,974,168	5,178 \$186,907,824	2,424 \$83,604,816	832 \$12,112,248	15,212 \$436,573,635
70 - 74	109 \$3,035,104	154 \$4,238,680	188 \$5,283,876	226 \$6,033,204	278 \$7,470,468	2,267 \$58,650,060	3,830 \$75,389,628	5,692 \$194,380,500	2,706 \$70,083,096	15,450 \$424,564,616
75 - 79	22 \$814,640	45 \$1,664,316	43 \$1,140,528	54 \$1,688,436	44 \$1,469,760	635 \$18,121,908	1,155 \$28,201,224	3,063 \$56,293,308	5,637 \$167,890,332	10,698 \$277,284,452
80 - 84	3 \$160,480	11 \$391,296	12 \$249,144	11 \$270,120	14 \$489,720	135 \$4,113,744	317 \$9,666,384	837 \$18,730,956	5,441 \$134,088,564	6,781 \$168,160,408
85 - 89	1 \$21,828		3 \$123,480	2 \$33,216	5 \$303,300	30 \$868,056	66 \$2,299,476	184 \$3,888,756	3,881 \$89,374,572	4,172 \$96,912,684
90+						2 \$110,388	12 \$346,008	20 \$513,420	2,118 \$42,008,592	2,152 \$42,978,408
<b>Total</b>	1,391 \$34,085,887	1,844 \$45,184,900	1,830 \$46,074,792	2,166 \$57,027,428	2,224 \$59,599,108	12,873 \$364,659,948	12,517 \$367,099,128	12,736 \$365,705,940	20,801 \$517,835,436	68,382 \$1,857,272,566

AVERAGES --- Attained Age 72.17  
Years Retired 15.27  
Annual Benefit \$27,160

**Appendix A**  
**MEMBERSHIP DATA**

TRSL Actuarial Valuation  
June 30, 2020

**TRSL MEMBERSHIP PROFILE**  
**DISABILITY RETIREES**

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2020

Age/Years	<1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 10	10 - 15	15 - 20	20+	Total
< 40	4 \$69,432	3 \$66,336	4 \$61,536	5 \$87,684	6 \$88,296	3 \$50,628	2 \$26,244			27 \$450,156
40 - 44	6 \$158,424	5 \$84,696	9 \$185,868	10 \$209,916	9 \$172,620	28 \$461,532	5 \$71,376			72 \$1,344,432
45 - 49	26 \$567,636	19 \$435,504	18 \$458,628	18 \$359,076	16 \$369,816	46 \$878,688	17 \$224,136	2 \$17,616		162 \$3,311,100
50 - 54	19 \$398,808	26 \$507,372	28 \$541,548	25 \$485,640	30 \$587,832	116 \$2,296,620	32 \$443,688	22 \$216,780	8 \$73,512	306 \$5,551,800
55 - 59	25 \$406,164	27 \$448,236	30 \$456,180	57 \$863,988	56 \$889,344	142 \$2,278,500	80 \$1,005,660	48 \$505,932	37 \$334,560	502 \$7,188,564
60 - 64	4 \$67,056	25 \$372,408	37 \$576,804	37 \$515,556	50 \$727,476	200 \$2,968,248	139 \$1,807,056	124 \$1,488,372	89 \$969,828	705 \$9,492,804
65 - 69	5 \$49,884	4 \$48,684	4 \$45,264	18 \$247,572	15 \$182,340	142 \$2,080,560	180 \$2,397,768	158 \$1,885,740	221 \$2,474,088	747 \$9,411,900
70 - 74		3 \$30,156		4 \$55,632	4 \$57,552	40 \$630,168	162 \$1,965,300	188 \$2,010,336	304 \$3,406,512	705 \$8,155,656
75 - 79			2 \$24,276			12 \$151,560	17 \$250,884	101 \$1,135,956	343 \$3,627,672	475 \$5,190,348
80 - 84				1 \$10,428			5 \$73,704	18 \$179,400	263 \$2,552,340	287 \$2,815,872
85 - 89							1 \$9,516	3 \$23,508	121 \$1,303,212	125 \$1,336,236
90+								1 \$8,820	31 \$299,652	32 \$308,472
<b>Total</b>	89 \$1,717,404	112 \$1,993,392	132 \$2,350,104	175 \$2,835,492	186 \$3,075,276	729 \$11,796,504	640 \$8,275,332	665 \$7,472,460	1,417 \$15,041,376	4,145 \$54,557,340

AVERAGES --- Attained Age 66.72  
Years Retired 16.04  
Annual Benefit \$13,162

**Appendix A**  
**MEMBERSHIP DATA**

**TRSL Actuarial Valuation**  
**June 30, 2020**

**TRSL MEMBERSHIP PROFILE**  
**SURVIVOR BENEFITS**

CELLS DEPICT -

MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2020

Age/Years	<1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 10	10 - 15	15 - 20	20+	Total
< 40	30 \$343,044	32 \$389,076	31 \$344,460	27 \$357,960	30 \$313,776	86 \$864,600	44 \$440,148	15 \$132,312	7 \$59,928	302 \$3,245,304
40 - 44	10 \$183,372	16 \$210,192	17 \$215,844	14 \$198,732	7 \$78,960	42 \$671,640	19 \$370,092	14 \$166,452	11 \$120,792	150 \$2,216,076
45 - 49	14 \$215,148	19 \$240,852	17 \$267,060	15 \$170,676	15 \$175,968	66 \$891,504	28 \$380,748	22 \$308,136	13 \$136,512	209 \$2,786,604
50 - 54	19 \$387,288	25 \$366,504	28 \$375,984	26 \$335,856	20 \$361,368	68 \$978,252	54 \$659,268	43 \$558,960	32 \$374,136	315 \$4,397,616
55 - 59	32 \$631,308	32 \$675,780	26 \$545,340	22 \$385,164	20 \$287,676	96 \$1,456,272	69 \$779,412	53 \$726,792	46 \$677,928	396 \$6,165,672
60 - 64	52 \$1,166,904	38 \$784,536	34 \$677,340	36 \$843,996	38 \$805,356	162 \$2,963,652	116 \$1,733,088	61 \$836,676	73 \$827,544	610 \$10,639,092
65 - 69	56 \$1,388,388	74 \$1,600,032	51 \$1,266,240	52 \$1,240,380	51 \$1,322,040	203 \$5,246,256	134 \$3,006,504	89 \$1,542,084	123 \$1,685,076	833 \$18,297,000
70 - 74	113 \$3,117,276	82 \$1,792,092	102 \$2,517,816	69 \$1,762,812	57 \$1,373,064	306 \$7,325,760	204 \$4,721,220	150 \$3,041,532	181 \$2,813,244	1,264 \$28,464,816
75 - 79	105 \$2,819,256	81 \$1,962,936	80 \$2,089,476	84 \$2,217,408	63 \$1,849,164	270 \$6,480,360	179 \$3,960,900	142 \$2,952,036	260 \$4,698,612	1,264 \$29,030,148
80 - 84	82 \$1,978,872	78 \$1,920,972	78 \$1,886,808	75 \$1,772,820	80 \$1,770,072	249 \$6,503,520	189 \$4,220,160	136 \$2,872,068	274 \$5,141,364	1,241 \$28,066,656
85 - 89	45 \$1,209,324	52 \$1,143,552	47 \$1,017,108	47 \$1,083,372	36 \$634,872	172 \$3,491,784	150 \$2,875,584	96 \$1,997,016	238 \$4,460,304	883 \$17,912,916
90+	16 \$275,460	23 \$434,628	20 \$408,288	19 \$403,224	20 \$344,124	116 \$2,080,452	91 \$1,476,816	67 \$1,188,048	170 \$2,978,724	542 \$9,589,764
<b>Total</b>	574 \$13,715,640	552 \$11,521,152	531 \$11,611,764	486 \$10,772,400	437 \$9,316,440	1,836 \$38,954,052	1,277 \$24,623,940	888 \$16,322,112	1,428 \$23,974,164	8,009 \$160,811,664

AVERAGES ---

Attained Age 72.18  
Years Retired 11.25  
Annual Benefit \$20,079

**TRSL MEMBERSHIP PROFILE**  
**TERMINATED VESTED**

CELLS DEPICT -

MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2020

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 \$482,668							81 \$482,668
30 - 34			597 \$4,386,655	27 \$357,656						624 \$4,744,311
35 - 39			949 \$7,708,085	240 \$3,537,528	14 \$324,165					1,203 \$11,569,779
40 - 44		3 \$18,517	845 \$6,798,782	411 \$6,195,528	113 \$2,597,337	2 \$59,371				1,374 \$15,669,534
45 - 49	1 \$537	5 \$18,377	799 \$5,979,210	383 \$5,131,404	139 \$2,972,326	26 \$760,306				1,353 \$14,862,159
50 - 54		5 \$15,116	699 \$5,022,388	407 \$5,308,256	154 \$2,917,515	27 \$710,308	15 \$596,570			1,307 \$14,570,153
55 - 59		4 \$9,966	642 \$4,544,014	442 \$5,093,242	186 \$2,953,296	31 \$683,238	3 \$114,696	2 \$131,189		1,310 \$13,529,640
60 - 64		5 \$23,029	272 \$1,577,016	132 \$1,254,510	67 \$991,208	15 \$323,342	6 \$152,501			497 \$4,321,605
65 - 69		3 \$7,050	83 \$431,611	33 \$375,724	19 \$279,012	7 \$141,648	5 \$133,312	2 \$126,796		152 \$1,495,155
70+		3 \$4,818	42 \$200,710	27 \$151,200	7 \$61,941	6 \$152,275	2 \$82,921	3 \$70,036	1 \$50,866	91 \$774,767
<b>Total</b>	1 \$537	28 \$96,874	5,009 \$37,131,140	2,102 \$27,405,046	699 \$13,096,799	114 \$2,830,488	31 \$1,080,000	7 \$328,021	1 \$50,866	7,992 \$82,019,771

AVERAGES ---

Attained Age 47.90  
Service Years 9.53  
Annual Benefit \$10,263

## **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:

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

<b>Leave Earned After 6/29/88</b>				
Accumulated Sick Days (by Member Classification)				Fraction of Year
9 Month	10 Month	11 Month	12 Month	Credit
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:

<u>Years of Participation</u>	<u>% of Earnings to be Included</u>
3	60%
4	80%
5	100%

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

**ACCUMULATED CONTRIBUTIONS:**

Sum of all amounts deducted from compensation of members.

**EMPLOYEE CONTRIBUTIONS:**

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

**EMPLOYER CONTRIBUTIONS:**

Determined in accordance with Louisiana Revised Statutes, Sections 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 three 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:

- Option 1 - If a member dies before receiving present value of annuity in monthly payments, balance paid to designated beneficiary.
- Option 2 - Reduced retirement allowance, if member dies, to be continued to designated beneficiary for his lifetime.
- Option 3 - One-half of reduced retirement allowance, if member dies, to be continued to designated beneficiary for his lifetime.

Option 4 - Other benefits of equal actuarial value may be elected with approval of 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 ten 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 five 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)**

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

**RETIREMENT BENEFITS:**

Retirement benefits 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 four 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 2% of average final compensation times years of creditable service. Members hired before June 30, 1986 receive an additional \$300 annual supplemental benefit.

**DISABILITY RETIREMENT:**

Eligibility:

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

Benefit:

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

**SURVIVOR'S BENEFITS:**

Eligibility: 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 principal payments contributed toward the debt, 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 except when specifically allowed by law, gains applied to these schedules result in earlier pay-off of these schedules. Investment gains above the threshold amount are amortized over 30 years. One-half of investment gains above the threshold are credited to the Experience Account up to the statutory cap and amortized as a loss over 10 years. Once the fund attains a funded ratio of 70%, future gains or losses will be amortized over 20 years. The OAB will be re-amortized with level-dollar payments to 2029 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 2024/2025 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.

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 actuarially 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)	(B)	(C)	(D)	(E)	(F)	(F)/(E)	(A)/(B+C)	(D)/(E)
	Total	DROP	Inactive	Inactive	Total	Valuation	Funded	Support	Accrued
	Active	Members	Members	Accrued	Accrued	Assets *	Ratio	Ratio	Liability
	Members	Members	Members	Liability *	Liability *	Assets *	Ratio	Ratio	Ratio
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%
2020	86,860	2,359	88,528	\$23,233	\$32,341	\$21,971	67.9%	95.6%	71.8%

**Funded Ratio:** The funded ratio, determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability, has increased from 55.1% to 67.9% 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 7.45% and changed the actuarial cost method from projected unit credit to entry age normal which in total have increased the unfunded accrued liability by \$3.5 billion. If not for these changes, the funded ratio would be approximately 76.1%. 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 2011. Inactive membership, which includes retirees, survivors, and terminated vested members, has been steadily increasing since 2011. The support ratio has decreased from 116.6% to 95.6% 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 ten 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. Current law provides that the amortization period will reduce 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
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%
2020	\$21,221	\$4,815	440.7%

**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 2011, the asset volatility ratio has increased from 327.27% to 440.7%.

	(A) Contributions*	(B) Benefits*	(A)-(B) Contributions less Benefits*	(C) Market Value of Assets*	(B)/(C) Benefits/ MVA	[(A)-(B)]/(C)
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%
2020	\$1,656	\$2,262	(\$606)	\$21,221	10.7%	-2.9%

**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)*
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
2020	(\$156)	(\$3)	(\$159)

**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 experience relative to assumptions. Following the most recent experience study, assumptions are expected to mirror actual experience more closely.

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:**

Administrative expenses are funded directly by employers as a percentage of projected payroll beginning July 1, 2018, in accordance with Act 94 of 2016. Projected administrative expenses are determined based on prior year actual expenses with consideration of any expected variations provided by TRSL Accounting Department staff.

### **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, subject to the statutory maximum balance of the 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, if granted, the rate used to discount plan liabilities represents the long-term expected returns (net of investment expenses) less the expected returns used to fund future retiree benefit increases. This adjustment is made in accordance with Actuarial Standards of Practice No. 27 (paragraph 3.5.1) 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.

**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 Board of Trustees reduced the inflation assumption from 2.50% to 2.30%, effective July 1, 2020.

**DISCOUNT RATE / INVESTMENT EARNINGS:**

Funding Valuation Assumptions: A discount rate of 7.45% was used for the June 30, 2020 valuation. A discount rate of 7.40% was used to determine the recommended contribution requirement for Fiscal Year 2021/2022.

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 (35 basis points). Therefore, by excluding returns expected to be used for purposes other than funding regular plan benefits, the discount rate represents the expected returns to be used to fund regular plan benefits.

June 30, 2019 GASB Assumptions: A discount rate of 7.45% 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 on the 2014-2018 experience study. The rates vary based upon the member's years of service. All salary growth assumptions were reduced by 0.20%, effective July 1, 2020, based on the reduction in the inflation assumption from 2.50% to 2.30%. 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**  
**Regular Teachers**

AGE	DISABILITY RATES	TERMINATION RATES				RETIREMENT/DROP RATES			DUR	SALARY INCREASE	
		< 1 YEAR	1-2 YEARS	2-3 YEARS	4+ YEARS	< 25 YOS	25-29 YOS	30+ YOS		Eff. July 1, 2018	Eff. July 1, 2020
18	0.0001	0.250	0.250	0.165	0.170	0.000	0.000	0.000	1	0.048	0.046
19	0.0001	0.250	0.250	0.165	0.170	0.000	0.000	0.000	2	0.039	0.037
20	0.0001	0.250	0.250	0.165	0.170	0.000	0.000	0.000	3	0.039	0.037
21	0.0001	0.250	0.250	0.165	0.170	0.000	0.000	0.000	4	0.039	0.037
22	0.0001	0.250	0.250	0.165	0.170	0.000	0.000	0.000	5	0.039	0.037
23	0.0001	0.180	0.200	0.165	0.170	0.000	0.000	0.000	6	0.037	0.035
24	0.0001	0.180	0.200	0.165	0.170	0.000	0.000	0.000	7	0.037	0.035
25	0.0001	0.180	0.135	0.165	0.090	0.000	0.000	0.000	8	0.037	0.035
26	0.0001	0.180	0.135	0.125	0.090	0.000	0.000	0.000	9	0.037	0.035
27	0.0001	0.180	0.135	0.122	0.090	0.000	0.000	0.000	10	0.037	0.035
28	0.0001	0.180	0.135	0.119	0.085	0.000	0.000	0.000	11	0.037	0.035
29	0.0001	0.180	0.135	0.116	0.080	0.000	0.000	0.000	12	0.037	0.035
30	0.0003	0.180	0.135	0.113	0.070	0.000	0.000	0.000	13	0.037	0.035
31	0.0003	0.180	0.135	0.110	0.070	0.000	0.000	0.000	14	0.034	0.032
32	0.0003	0.165	0.135	0.107	0.060	0.000	0.000	0.000	15	0.034	0.032
33	0.0003	0.165	0.135	0.104	0.060	0.000	0.000	0.000	16	0.034	0.032
34	0.0003	0.165	0.130	0.101	0.050	0.000	0.000	0.000	17	0.034	0.032
35	0.0007	0.165	0.130	0.098	0.050	0.000	0.000	0.000	18	0.034	0.032
36	0.0008	0.165	0.120	0.095	0.045	0.000	0.000	0.000	19	0.034	0.032
37	0.0009	0.165	0.120	0.095	0.045	0.000	0.000	0.000	20	0.034	0.032
38	0.0010	0.165	0.120	0.095	0.042	0.035	0.000	0.000	21	0.034	0.032
39	0.0011	0.165	0.120	0.092	0.042	0.035	0.000	0.000	22	0.034	0.032
40	0.0012	0.165	0.120	0.090	0.042	0.035	0.000	0.000	23	0.034	0.032
41	0.0013	0.165	0.120	0.090	0.042	0.035	0.000	0.000	24	0.034	0.032
42	0.0014	0.150	0.120	0.090	0.042	0.035	0.000	0.000	25	0.034	0.032
43	0.0015	0.150	0.120	0.090	0.042	0.035	0.000	0.000	26	0.034	0.032
44	0.0016	0.150	0.120	0.090	0.042	0.035	0.000	0.000	27	0.034	0.032
45	0.0019	0.150	0.120	0.090	0.042	0.035	0.020	0.000	28	0.034	0.032
46	0.0020	0.150	0.120	0.090	0.042	0.035	0.020	0.000	29	0.034	0.032
47	0.0022	0.150	0.120	0.090	0.042	0.035	0.020	0.000	30	0.034	0.032
48	0.0023	0.150	0.120	0.090	0.042	0.035	0.025	0.450	31	0.034	0.032
49	0.0025	0.150	0.120	0.090	0.042	0.035	0.025	0.450	32	0.034	0.032
50	0.0030	0.150	0.120	0.090	0.042	0.035	0.045	0.450	33	0.034	0.032
51	0.0035	0.150	0.120	0.090	0.042	0.035	0.140	0.600	34	0.034	0.032
52	0.0040	0.150	0.120	0.090	0.042	0.035	0.240	0.600	35	0.034	0.032
53	0.0045	0.150	0.120	0.090	0.042	0.040	0.240	0.450	36	0.034	0.032
54	0.0050	0.150	0.120	0.090	0.042	0.100	0.470	0.360	37	0.034	0.032
55	0.0050	0.150	0.120	0.090	0.042	0.180	0.760	0.270	38	0.034	0.032
56	0.0050	0.150	0.120	0.090	0.042	0.180	0.350	0.210	39	0.034	0.032
57	0.0050	0.150	0.120	0.090	0.042	0.180	0.310	0.220	40	0.034	0.032
58	0.0050	0.150	0.120	0.090	0.042	0.190	0.310	0.230	41	0.034	0.032
59	0.0050	0.150	0.120	0.090	0.100	0.235	0.250	0.230	42	0.034	0.032
60	0.0048	0.150	0.120	0.090	0.100	0.235	0.250	0.230	43	0.034	0.032
61	0.0046	0.150	0.120	0.090	0.100	0.145	0.250	0.230	44	0.034	0.032
62	0.0044	0.150	0.120	0.090	0.100	0.145	0.240	0.230	45	0.034	0.032
63	0.0042	0.150	0.120	0.090	0.100	0.145	0.220	0.210	46	0.034	0.032
64	0.0040	0.150	0.120	0.090	0.100	0.180	0.240	0.290	47	0.034	0.032
65	0.0034	0.150	0.120	0.090	0.100	0.250	0.235	0.270	48	0.034	0.032
66	0.0029	0.150	0.120	0.090	0.100	0.200	0.220	0.225	49	0.034	0.032
67	0.0024	0.150	0.120	0.090	0.100	0.200	0.220	0.225	50	0.034	0.032
68	0.0022	0.150	0.120	0.090	0.100	0.200	0.220	0.225	51	0.034	0.032
69	0.0020	0.150	0.120	0.090	0.100	0.200	0.220	0.225	52	0.034	0.032
70	0.0020	0.150	0.120	0.090	0.100	0.200	0.220	0.225	53	0.034	0.032
71	0.0020	0.150	0.120	0.090	0.100	0.200	0.220	0.225	54	0.034	0.032
72	0.0020	0.150	0.120	0.090	0.100	0.200	0.220	0.225	55	0.034	0.032
73	0.0020	0.150	0.120	0.090	0.100	0.200	0.220	0.225	56	0.034	0.032
74	0.0020	0.150	0.120	0.090	0.100	0.200	0.220	0.225	57	0.034	0.032

**Actuarial Assumptions**  
**Higher Education**

AGE	DISABILITY RATES	TERMINATION RATES				RETIREMENT/DROP RATES			DUR	SALARY INCREASE	
		<1 YEAR	1-2 YEARS	2-3 YEARS	4+ YEARS	< 25 YOS	25-29 YOS	30+ YOS		Eff. July 1, 2018	Eff. July 1, 2020
18	0.0000	0.230	0.250	0.170	0.250	0.000	0.000	0.000	1	0.048	0.046
19	0.0000	0.230	0.250	0.170	0.250	0.000	0.000	0.000	2	0.048	0.046
20	0.0000	0.230	0.250	0.170	0.250	0.000	0.000	0.000	3	0.045	0.043
21	0.0000	0.230	0.250	0.170	0.250	0.000	0.000	0.000	4	0.039	0.037
22	0.0000	0.230	0.250	0.170	0.250	0.000	0.000	0.000	5	0.039	0.037
23	0.0000	0.230	0.250	0.170	0.250	0.000	0.000	0.000	6	0.039	0.037
24	0.0000	0.230	0.250	0.170	0.250	0.000	0.000	0.000	7	0.039	0.037
25	0.0000	0.230	0.250	0.170	0.250	0.000	0.000	0.000	8	0.039	0.037
26	0.0000	0.230	0.210	0.230	0.250	0.000	0.000	0.000	9	0.039	0.037
27	0.0000	0.230	0.210	0.220	0.200	0.000	0.000	0.000	10	0.036	0.034
28	0.0001	0.230	0.210	0.215	0.120	0.000	0.000	0.000	11	0.036	0.034
29	0.0001	0.230	0.210	0.210	0.120	0.000	0.000	0.000	12	0.036	0.034
30	0.0001	0.230	0.210	0.205	0.120	0.000	0.000	0.000	13	0.036	0.034
31	0.0001	0.230	0.180	0.200	0.120	0.000	0.000	0.000	14	0.036	0.034
32	0.0001	0.210	0.180	0.195	0.120	0.000	0.000	0.000	15	0.036	0.034
33	0.0001	0.210	0.180	0.190	0.120	0.000	0.000	0.000	16	0.036	0.034
34	0.0001	0.210	0.180	0.185	0.100	0.000	0.000	0.000	17	0.036	0.034
35	0.0002	0.210	0.180	0.180	0.100	0.000	0.000	0.000	18	0.036	0.034
36	0.0002	0.210	0.180	0.175	0.090	0.000	0.000	0.000	19	0.033	0.031
37	0.0002	0.195	0.180	0.170	0.090	0.000	0.000	0.000	20	0.033	0.031
38	0.0002	0.195	0.180	0.165	0.090	0.080	0.050	0.400	21	0.033	0.031
39	0.0003	0.195	0.180	0.160	0.080	0.080	0.050	0.400	22	0.033	0.031
40	0.0003	0.195	0.180	0.155	0.080	0.080	0.050	0.400	23	0.033	0.031
41	0.0004	0.195	0.200	0.153	0.080	0.080	0.050	0.400	24	0.033	0.031
42	0.0004	0.195	0.200	0.151	0.080	0.080	0.050	0.400	25	0.033	0.031
43	0.0005	0.195	0.200	0.149	0.080	0.070	0.050	0.400	26	0.033	0.031
44	0.0006	0.195	0.200	0.147	0.080	0.045	0.050	0.400	27	0.033	0.031
45	0.0007	0.195	0.200	0.145	0.080	0.045	0.050	0.400	28	0.033	0.031
46	0.0008	0.195	0.190	0.143	0.080	0.033	0.050	0.400	29	0.033	0.031
47	0.0008	0.195	0.180	0.141	0.080	0.033	0.050	0.400	30	0.033	0.031
48	0.0008	0.195	0.170	0.139	0.080	0.033	0.050	0.400	31	0.033	0.031
49	0.0008	0.195	0.160	0.137	0.080	0.033	0.050	0.400	32	0.033	0.031
50	0.0008	0.195	0.150	0.135	0.080	0.033	0.050	0.400	33	0.033	0.031
51	0.0008	0.195	0.140	0.133	0.080	0.033	0.100	0.500	34	0.033	0.031
52	0.0008	0.195	0.140	0.131	0.080	0.033	0.100	0.250	35	0.033	0.031
53	0.0008	0.195	0.140	0.129	0.080	0.033	0.100	0.250	36	0.033	0.031
54	0.0008	0.195	0.140	0.127	0.080	0.100	0.320	0.400	37	0.033	0.031
55	0.0008	0.195	0.140	0.125	0.080	0.125	0.500	0.155	38	0.033	0.031
56	0.0008	0.195	0.140	0.123	0.080	0.125	0.250	0.155	39	0.033	0.031
57	0.0008	0.195	0.140	0.121	0.080	0.100	0.200	0.155	40	0.033	0.031
58	0.0008	0.195	0.140	0.119	0.080	0.145	0.120	0.155	41	0.033	0.031
59	0.0006	0.195	0.140	0.117	0.080	0.160	0.135	0.155	42	0.033	0.031
60	0.0004	0.195	0.140	0.115	0.080	0.200	0.180	0.155	43	0.033	0.031
61	0.0003	0.195	0.140	0.115	0.080	0.120	0.150	0.155	44	0.033	0.031
62	0.0002	0.195	0.140	0.115	0.080	0.120	0.150	0.155	45	0.033	0.031
63	0.0001	0.195	0.140	0.115	0.080	0.080	0.150	0.155	46	0.033	0.031
64	0.0001	0.195	0.140	0.115	0.080	0.130	0.120	0.155	47	0.033	0.031
65	0.0001	0.195	0.140	0.115	0.080	0.180	0.165	0.155	48	0.033	0.031
66	0.0001	0.195	0.140	0.115	0.080	0.180	0.180	0.155	49	0.033	0.031
67	0.0001	0.195	0.140	0.115	0.080	0.140	0.100	0.155	50	0.033	0.031
68	0.0001	0.195	0.140	0.115	0.080	0.140	0.100	0.155	51	0.033	0.031
69	0.0001	0.195	0.140	0.115	0.080	0.140	0.160	0.155	52	0.033	0.031
70	0.0001	0.195	0.140	0.115	0.080	0.140	0.160	0.155	53	0.033	0.031
71	0.0001	0.195	0.140	0.115	0.080	0.140	0.160	0.155	54	0.033	0.031
72	0.0001	0.195	0.140	0.115	0.080	0.140	0.160	0.155	55	0.033	0.031
73	0.0001	0.195	0.140	0.115	0.080	0.140	0.160	0.155	56	0.033	0.031
74	0.0001	0.195	0.140	0.115	0.080	0.140	0.160	0.155	57	0.033	0.031



**Actuarial Assumptions**  
**Lunch Plans A and B**

AGE	DISABILITY RATES	RETIREMENT/ DROP RATES	DUR	TERMINATION RATES	SALARY INCREASE	
					Eff. July 1, 2018	Eff. July 1, 2020
18	0.0000	0.000	0	0.150	0.046	0.044
19	0.0000	0.000	1	0.135	0.046	0.044
20	0.0000	0.000	2	0.120	0.036	0.034
21	0.0000	0.000	3	0.105	0.033	0.031
22	0.0000	0.000	4	0.090	0.033	0.031
23	0.0000	0.000	5	0.075	0.033	0.031
24	0.0000	0.000	6	0.060	0.033	0.031
25	0.0000	0.000	7	0.045	0.033	0.031
26	0.0000	0.000	8	0.045	0.033	0.031
27	0.0000	0.000	9	0.045	0.033	0.031
28	0.0000	0.000	10	0.045	0.033	0.031
29	0.0000	0.000	11	0.045	0.033	0.031
30	0.0000	0.000	12	0.045	0.033	0.031
31	0.0000	0.000	13	0.045	0.033	0.031
32	0.0000	0.000	14	0.045	0.033	0.031
33	0.0000	0.000	15	0.045	0.033	0.031
34	0.0000	0.000	16	0.045	0.033	0.031
35	0.0001	0.000	17	0.045	0.033	0.031
36	0.0003	0.000	18	0.045	0.033	0.031
37	0.0005	0.000	19	0.045	0.033	0.031
38	0.0007	0.500	20	0.045	0.033	0.031
39	0.0009	0.500	21	0.045	0.033	0.031
40	0.0011	0.500	22	0.045	0.033	0.031
41	0.0015	0.500	23	0.045	0.033	0.031
42	0.0019	0.500	24	0.045	0.033	0.031
43	0.0024	0.500	25	0.045	0.033	0.031
44	0.0029	0.500	26	0.045	0.033	0.031
45	0.0037	0.500	27	0.045	0.033	0.031
46	0.0045	0.500	28	0.045	0.033	0.031
47	0.0050	0.500	29	0.045	0.033	0.031
48	0.0056	0.500	30	0.045	0.033	0.031
49	0.0064	0.500	31	0.045	0.033	0.031
50	0.0074	0.500	32	0.045	0.033	0.031
51	0.0084	0.500	33	0.045	0.033	0.031
52	0.0094	0.500	34	0.045	0.033	0.031
53	0.0098	0.500	35	0.045	0.033	0.031
54	0.0098	0.500	36	0.045	0.033	0.031
55	0.0100	0.700	37	0.045	0.033	0.031
56	0.0100	0.430	38	0.045	0.033	0.031
57	0.0100	0.390	39	0.045	0.033	0.031
58	0.0100	0.350	40	0.045	0.033	0.031
59	0.0100	0.330	41	0.045	0.033	0.031
60	0.0030	0.430	42	0.045	0.033	0.031
61	0.0025	0.230	43	0.045	0.033	0.031
62	0.0020	0.230	44	0.045	0.033	0.031
63	0.0015	0.230	45	0.045	0.033	0.031
64	0.0011	0.300	46	0.045	0.033	0.031
65	0.0009	0.280	47	0.045	0.033	0.031
66	0.0008	0.240	48	0.045	0.033	0.031
67	0.0007	0.240	49	0.045	0.033	0.031
68	0.0006	0.240	50	0.045	0.033	0.031
69	0.0005	0.240	51	0.045	0.033	0.031
70	0.0005	0.240	52	0.045	0.033	0.031
71	0.0005	0.240	53	0.045	0.033	0.031
72	0.0005	0.240	54	0.045	0.033	0.031
73	0.0005	0.240	55	0.045	0.033	0.031
74	0.0005	0.240	56	0.045	0.033	0.031

**Actuarial Assumptions**  
**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, 2020 (7.45% discount rate)**

<b>Date</b>	<b>Description</b>	<b>Notes</b>	<b>Amtz. Period</b>	<b>Initial Liability</b>	<b>Years Remain</b>	<b>Remaining Balance</b>	<b>Mid-Year Payment</b>
2020	OAB	Note 1	9	1,556,368,641	9	1,556,368,641	223,960,284
2020	EAAB	Note 2,3	20	2,864,843,232	20	2,864,843,232	272,212,739
2020	2009 Experience G/L		19	2,535,326,099	19	2,535,326,099	244,689,236
2020	2010 Experience G/L		20	1,000,803,691	20	1,000,803,691	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/Asset Method Chg		23	776,511,658	23	776,511,658	69,030,467
2020	2014 Assump/Cost Method Chg		24	1,353,321,888	24	1,353,321,888	118,363,558
2020	2014 Liability 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	7,643,854	7	7,643,854	1,389,830
2020	2018 Disc Rate/Assump Change		28	674,436,140	28	674,436,140	55,955,051
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 Change		29	295,524,995	29	295,524,995	24,258,784
2020	2020 Disc Rate/Sal Change		30	225,604,318	30	225,604,318	18,338,462
2020	2020 Experience G/L		30	159,141,790	30	159,141,790	12,935,992
<b>Total Outstanding Balance</b>						<b>\$ 10,369,997,921</b>	<b>\$ 1,045,298,526</b>
<b>Employers Credit Balance</b>							
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	-	-	-	-	-
<b>Total Credit Balance</b>						<b>\$ -</b>	<b>\$ -</b>
<b>Total Unfunded Actuarial Accrued Liability</b>						<b>\$ 10,369,997,921</b>	<b>\$ 1,045,298,526</b>

See UAL Amortization Schedule Notes within this Appendix.

**AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY**  
**June 30, 2021 - Projected (7.40% discount rate)**

<b>Date</b>	<b>Description</b>	<b>Notes</b>	<b>Amtz. Period</b>	<b>Initial Liability</b>	<b>Years Remain</b>	<b>Remaining Balance</b>	<b>Mid-Year Payment</b>
2021	OAB	Note 1	8	1,440,165,148	8	1,440,165,148	228,054,418
2021	EAAB	Note 2,3	19	2,767,539,917	19	2,767,539,917	271,301,742
2021	2009 Experience G/L		18	2,470,567,701	18	2,470,567,701	243,879,274
2021	2010 Experience G/L		19	977,565,531	19	977,565,531	94,021,691
2021	2011 Experience G/L		20	(152,108,059)	20	(152,108,059)	(14,288,101)
2021	2012 Experience G/L		21	111,377,884	21	111,377,884	10,239,562
2021	2013 Experience G/L		22	(224,119,075)	22	(224,119,075)	(20,204,209)
2021	2013 Assump/Asset Method Chg		22	762,806,111	22	762,806,111	68,766,544
2021	2014 Assump/Cost Method Chg		23	1,331,450,963	23	1,331,450,963	117,897,153
2021	2014 Liability G/L		23	(148,872,444)	23	(148,872,444)	(13,182,339)
2021	2015 Experience G/L		24	(350,880,948)	24	(350,880,948)	(30,564,182)
2021	2016 Experience G/L		25	25,144,713	25	25,144,713	2,157,590
2021	2017 Discount Rate Change		26	129,367,168	26	129,367,168	10,948,449
2021	2017 Experience G/L		26	(207,733,728)	26	(207,733,728)	(17,580,674)
2021	2017 Experience Acct Allocation		6	6,772,650	6	6,772,650	1,388,025
2021	2018 Disc Rate/Assump Change		27	666,679,694	27	666,679,694	55,710,670
2021	2018 Experience G/L		27	(192,187,782)	27	(192,187,782)	(16,060,051)
2021	2018 Experience Acct Allocation		7	34,318,984	7	34,318,984	6,230,658
2021	2019 Experience G/L		28	(90,778,379)	28	(90,778,379)	(7,497,867)
2021	2019 Discount Rate Change		28	292,395,415	28	292,395,415	24,150,485
2021	2020 Disc Rate/Sal Change		29	223,402,540	29	223,402,540	18,254,887
2021	2020 Experience G/L		29	157,588,651	29	157,588,651	12,877,038
2021	2021 Discount Rate Change		30	156,111,973	30	156,111,973	12,630,744
<b>Total Outstanding Balance</b>						<b>\$ 10,186,574,628</b>	<b>\$ 1,059,131,507</b>
<b>Employers Credit Balance</b>							
2021	2017 Contribution Variance	Note 3	-	-	-	-	-
2021	2018 Contribution Variance	Note 3	-	-	-	-	-
2021	2019 Contribution Variance	Note 3	-	-	-	-	-
2021	2020 Contribution Variance	Note 3	-	-	-	-	-
2021	2021 Contribution Variance	Note 3	-	-	-	-	-
<b>Total Credit Balance</b>						<b>\$ -</b>	<b>\$ -</b>
<b>Total Unfunded Actuarial Accrued Liability</b>						<b>\$ 10,186,574,628</b>	<b>\$ 1,059,131,507</b>

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, 2020, using a discount rate of 7.45%. Projected July 1, 2021 schedules are based on a 7.40% discount rate.

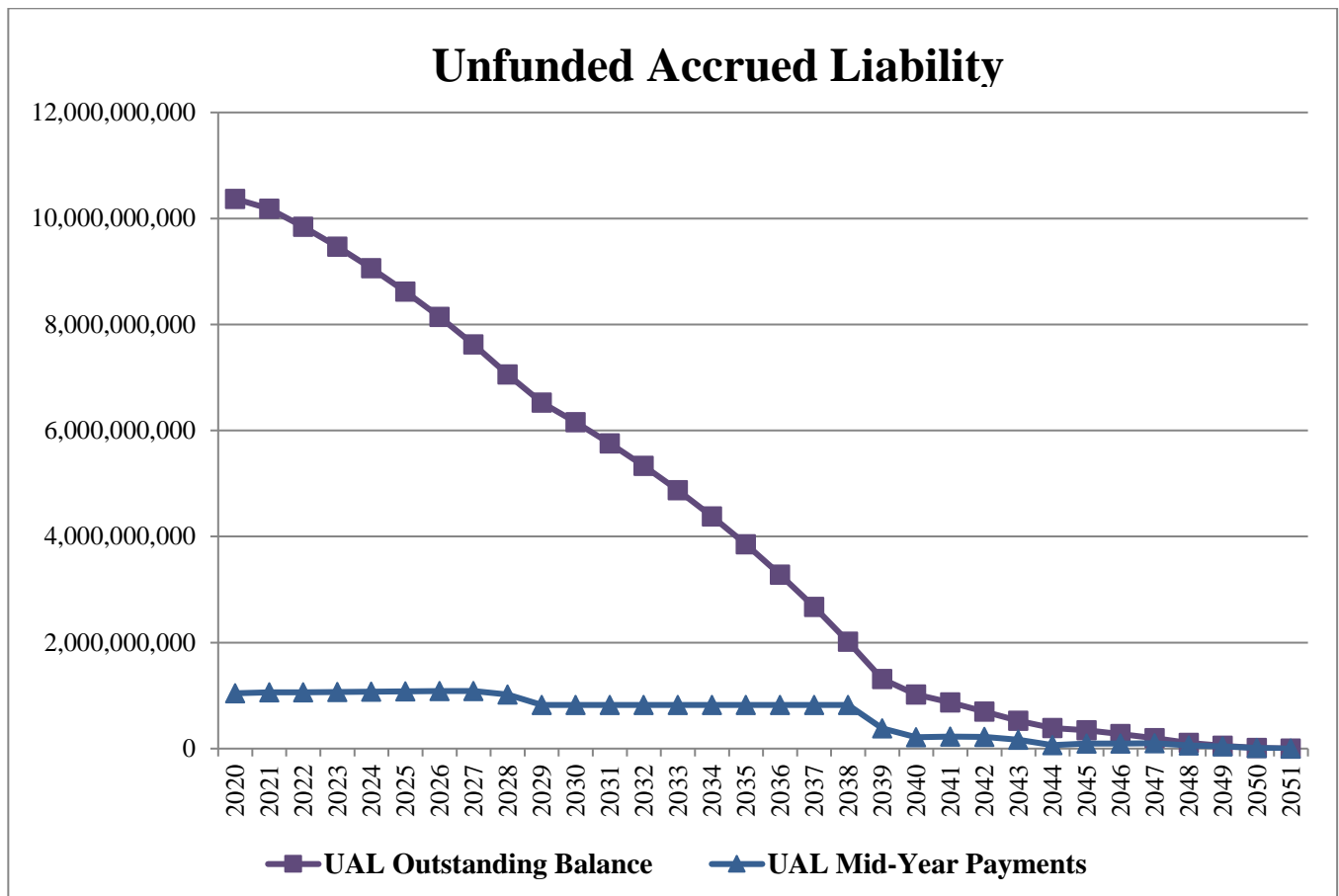
**Note 1:** Act 497 of 2009 created the Original Amortization Base, effective July 1, 2010, which includes the Initial Unfunded Accrued Liability (IUAL) and certain negative bases that existed before 2009. The combined balance was reduced by applying funds from the IUAL Fund, excluding the subaccount 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, Act 50 of 2019, and Act 255 of 2020. 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 2014-2020 contribution variance surpluses were used to reduce the EAAB, per Act 399 of 2014. The 2020 contribution variance surplus was updated from last year’s projected amount to \$92,666,407. The projected contribution variance surplus for 2021 is \$28,563,605.

**UAL Outstanding Balance and Payment Schedule**  
**Based on June 30, 2021 Projected UAL Schedules**

<b>FY Beginning</b>	<b>UAL Outstanding Balance (Millions)</b>	<b>UAL Mid-Year Payments (Millions)</b>	<b>Payment % Change</b>	<b>FY Beginning</b>	<b>UAL Outstanding Balance (Millions)</b>	<b>UAL Mid-Year Payments (Millions)</b>	<b>Payment % Change</b>
2020	10,370	1,045	0.0%	2036	3,284	823	0.0%
2021	10,187	1,059	1.3%	2037	2,673	823	0.0%
2022	9,843	1,064	0.4%	2038	2,018	823	0.0%
2023	9,469	1,068	0.4%	2039	1,314	380	-53.8%
2024	9,062	1,073	0.4%	2040	1,017	214	-43.6%
2025	8,621	1,078	0.5%	2041	870	229	6.7%
2026	8,142	1,083	0.5%	2042	698	218	-4.5%
2027	7,622	1,087	0.3%	2043	523	170	-22.2%
2028	7,060	1,017	-6.4%	2044	386	65	-61.7%
2029	6,528	823	-19.1%	2045	347	96	47.0%
2030	6,158	823	0.0%	2046	274	93	-2.3%
2031	5,760	823	0.0%	2047	197	100	7.1%
2032	5,333	823	0.0%	2048	108	60	-39.6%
2033	4,874	823	0.0%	2049	54	44	-27.6%
2034	4,381	823	0.0%	2050	12	13	-71.1%
2035	3,852	823	0.0%	2051	0	0	



**Components of Original Amortization Base**  
**(Dollar amounts in millions)**

	<b>Annual Outstanding Balance</b>					<b>Annual Payments</b>				
	IUAL	Other Schedules	IUAL Acct	Employer		IUAL	Other Schedules	IUAL Acct	Employer	
				Credit Account	Total OAB				Credit Account	Total OAB
2020	4,766.8	(2,829.8)	(304.3)	(76.3)	1,556.4	685.9	(407.2)	(43.8)	(11.0)	224.0
2021	4,410.9	(2,618.5)	(281.6)	(70.6)	1,440.2	699.7	(415.4)	(44.7)	(11.2)	228.4
2022	4,014.2	(2,383.1)	(256.3)	(64.2)	1,310.7	713.6	(423.7)	(45.6)	(11.4)	233.0
2023	3,573.6	(2,121.4)	(228.1)	(57.2)	1,166.8	727.9	(432.1)	(46.5)	(11.6)	237.7
2024	3,085.2	(1,831.6)	(197.0)	(49.4)	1,007.3	742.5	(440.8)	(47.4)	(11.9)	242.4
2025	2,545.4	(1,511.1)	(162.5)	(40.7)	831.1	757.3	(449.6)	(48.4)	(12.1)	247.3
2026	1,950.0	(1,157.6)	(124.5)	(31.2)	636.7	772.5	(458.6)	(49.3)	(12.4)	252.2
2027	1,294.6	(768.5)	(82.7)	(20.7)	422.7	787.9	(467.8)	(50.3)	(12.6)	257.3
2028	574.3	(340.9)	(36.7)	(9.2)	187.5	595.3	(353.4)	(38.0)	(9.5)	194.4
2029	-	-	-	-	-	-	-	-	-	-

This table has changed from previously published tables due the 2020 legislative appropriation allocated to the IUAL, the change in discount rate from 7.55% to 7.45%.

**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.



**GLOSSARY**

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**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.