

Section IX – Risk Assessment

TABLE 3

TEACHERS' RETIREMENT SYSTEM OF KENTUCKY			
WAGE INFLATION ASSUMPTION SENSITIVITY ANALYSIS AS OF JUNE 30, 2021			
	(\$1,000's)		
	Valuation Results	Decrease Wage Inflation to 1.25%	No Wage Inflation
Actuarial Accrued Liability	\$ 39,581,704	\$ 39,581,704	\$ 39,581,704
Actuarial Value of Assets	<u>22,624,398</u>	<u>22,624,398</u>	<u>22,624,398</u>
Unfunded Actuarial Accrued Liability	\$ 16,957,306	\$ 16,957,306	\$ 16,957,306
Funded Ratio	57.2%	57.2%	57.2%
Employer ADEC – University*	37.245%	42.075%	46.465%
Employer ADEC – Non-University*	38.725%	43.555%	47.945%
Discount Rate	7.10%	7.10%	7.10%
Wage Inflation Rate	2.75%	1.25%	0.00%
Price Inflation Rate	2.50%	2.50%	2.50%

* Less 1% for members hired before July 1, 2008. The ADEC rates do not include the impact of direct-rate smoothing.



Schedule A – Valuation Balance Sheet and Solvency Test

SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES
AS OF JUNE 30, 2021
(Dollar amounts in thousands)

ACTUARIAL LIABILITIES		
(1)	Present value of prospective benefits payable on account of present active members	
-	Service retirement benefits	\$ 18,372,260
-	Disability retirement benefits	679,933
-	Death and survivor benefits	113,044
-	Refunds of member contributions	<u>224,966</u>
	Total	\$ 19,390,203
(2)	Present value of prospective benefits payable on account of present retired and disabled members, and beneficiaries of deceased members	
-	Service retirement benefits	\$ 22,895,771
-	Disability retirement benefits	1,001,568
-	Death and survivor benefits	<u>966,503</u>
	Total	\$ 24,863,842
(3)	Present value of prospective benefits payable on account of inactive members and members entitled to deferred vested benefits	\$ <u>503,788</u>
(4)	TOTAL ACTUARIAL LIABILITIES	<u>\$ 44,757,833</u>
PRESENT AND PROSPECTIVE ASSETS		
(5)	Actuarial value of assets	\$ 22,624,398
(6)	Present value of total future contributions = (4)-(5)	\$ 22,133,435
(7)	Present value of future member contributions and employer normal contributions	\$ 5,176,129
(8)	Prospective unfunded actuarial accrued liability contributions = (6)-(7)	\$ <u>16,957,306</u>
(9)	TOTAL PRESENT AND PROSPECTIVE ASSETS	<u>\$ 44,757,833</u>



Schedule A – Valuation Balance Sheet and Solvency Test

SOLVENCY TEST (Dollar amounts in millions)

Valuation Date	Aggregate Actuarial Accrued Liability For			Valuation Assets	Portion of Accrued Liabilities Covered by Assets		
	(1)	(2)	(3)		(1)	(2)	(3)
	Active Member Contributions	Retirants And Beneficiaries	Active Members (Employer Financed Portion)				
6/30/2016	\$3,756.0	\$20,416.4	\$7,855.8	\$17,496.9	100%	67%	0%
6/30/2017	3,849.9	21,108.0	7,862.1	18,514.6	100	69	0
6/30/2018	3,927.8	21,922.5	7,945.4	19,496.1	100	71	0
6/30/2019	4,022.4	22,601.6	8,052.7	20,154.2	100	71	0
6/30/2020	4,158.7	23,158.6	8,265.0	20,796.5	100	72	0
6/30/2021	4,282.8	25,367.6	9,931.3	22,624.4	100	72	0



Schedule B – Development of the Actuarial Value of Assets

AS OF JUNE 30, 2021

(1)	Actuarial Value of Assets Beginning of Year	\$ 20,796,494,009
(2)	Net Position at Market Value at End of Year	\$ 25,935,779,206
(3)	Net Position at Market Value at Beginning of Year	\$ 20,717,000,324
(4)	Cash Flow	
a.	Contributions	\$ 1,474,810,846
b.	Benefit Payments	2,260,614,434
c.	Administrative Expense	<u>12,601,841</u>
d.	Net: (4)a – (4)b – (4)c	\$ (798,405,429)
(5)	Investment Income	
a.	Market total: (2) – (3) – (4)d	\$ 6,017,184,311
b.	Assumed Rate	7.50%
c.	Amount for Immediate Recognition: [(3) x (5)b] + [(4)d x (5)b x 0.5]	\$ 1,523,834,821
d.	Amount for Phased-In Recognition: (5)a – (5)c	\$ 4,493,349,490
(6)	Phased-In Recognition of Investment Income	
a.	Current Year: 0.20 x (5)d	\$ 898,669,898
b.	First Prior Year	(81,156,976)
c.	Second Prior Year	(77,474,783)
d.	Third Prior Year	115,121,921
e.	Fourth Prior Year	<u>247,314,723</u>
f.	Total Recognized Investment Gain	\$ 1,102,474,783
(7)	Actuarial Value of Assets End of Year: (1) + (4)d + (5)c + (6)f	\$ 22,624,398,184
(8)	Difference Between Market & Actuarial Values: (2) – (7)	\$ 3,311,381,022
(9)	Net Investment Rate of Return on Actuarial Value:	12.9%



Schedule C – Summary of Receipts and Disbursements

SUMMARY OF RECEIPTS AND DISBURSEMENTS* (Market Value)

	For the Year Ending	
	June 30, 2021	June 30, 2020
Receipts for the Year		
Contributions		
Members	\$ 327,833,177	\$ 324,664,055
Employers	<u>1,146,977,669</u>	<u>1,134,281,095</u>
Total	1,474,810,846	1,458,945,150
Net Investment Income	<u>6,017,184,311</u>	<u>1,094,023,378</u>
TOTAL	\$ 7,491,995,157	\$ 2,552,968,528
Disbursements for the Year		
Benefit Payments	\$ 2,235,240,616	\$ 2,167,239,241
Refunds to Members	25,373,818	28,472,217
Miscellaneous, including expenses	<u>12,601,841</u>	<u>12,166,651</u>
TOTAL	\$ 2,273,216,275	\$ 2,207,878,109
Excess of Receipts over Disbursements	\$ 5,218,778,882	\$ 345,090,419
Reconciliation of Net Position		
Net Position as of the Beginning of the Year	\$ 20,717,000,324	\$ 20,371,909,905
Excess of Receipts over Disbursements	<u>5,218,778,882</u>	<u>345,090,419</u>
Net Position as of the End of the Year	<u>\$ 25,935,779,206</u>	<u>\$ 20,717,000,324</u>
Net Investment Rate of Return on Market Value	29.6%	5.5%

* Excludes assets for Health Insurance Trust, the 403(b) Program Reserve Fund and the Life Insurance Trust.



Schedule D – Outline of Actuarial Assumptions and Methods

The assumptions and methods used in the valuation were selected based on the actuarial experience study prepared as of June 30, 2020, submitted to, and adopted by the Board on September 20, 2021.

INVESTMENT RATE OF RETURN: 7.10% per annum, compounded annually, including price inflation at 2.50% per annum.

SALARY INCREASES: Representative values of the assumed annual rates of future salary increases are as follows and include wage inflation at 2.75% per annum:

Service	Annual Rate
1	7.50%
2	5.50%
3	5.00%
4	5.00%
5	5.00%
6	4.75%
7	4.50%
8	4.25%
9	4.00%
10	4.00%
11	4.00%
12	3.75%
13	3.50%
14	3.50%
15	3.25%
16	3.25%
>=17	3.00%



Schedule D – Outline of Actuarial Assumptions and Methods

SEPARATIONS FROM SERVICE: Representative values of the assumed annual rates of death, disability, withdrawal, service retirement and early retirement are as follows:

MALES							
Age	Annual Rate of						
	DEATH*	DISABILITY	WITHDRAWAL			RETIREMENT	
			Service			Before 27 Years of Service	After 27 Years of Service**
			0 – 4	5 – 9	10+		
20	0.031%	0.01%	20.00%				
25	0.020	0.01	11.00	3.25%			
30	0.032	0.01	10.00	3.60	2.80%		
35	0.042	0.02	11.00	3.60	1.55		
40	0.052	0.07	12.50	4.00	1.25		
45	0.072	0.18	11.50	4.00	1.10		17.00%
50	0.115	0.28	14.25	4.50	1.10		25.00
55	0.187	0.40	15.00	6.00	1.25	5.25%	40.00
60	0.304	0.50	15.00	0.00	0.00	13.50	33.00
62	0.366	0.50	15.00	0.00	0.00	15.00	30.00
65	0.478	0.50	20.00	0.00	0.00	20.00	30.00
70	0.723	0.50	20.00	0.00	0.00	25.00	30.00
75	1.141	0.50	20.00	0.00	0.00	100.00	100.00

*Base Rates.

**Plus 8.5% in year when first eligible for unreduced retirement with 27 years of service.

FEMALES							
Age	Annual Rate of						
	DEATH*	DISABILITY	WITHDRAWAL			RETIREMENT	
			Service			Before 27 Years of Service	After 27 Years of Service**
			0 – 4	5 – 9	10+		
20	0.014%	0.01%	13.00%				
25	0.010	0.01	9.00	4.50%			
30	0.013	0.02	11.00	4.25	1.00%		
35	0.022	0.06	11.00	3.50	1.60		
40	0.030	0.10	12.50	4.00	1.20		
45	0.041	0.24	13.50	4.00	1.00		17.00%
50	0.058	0.38	15.00	4.50	1.25		20.00
55	0.091	0.50	15.00	5.00	1.60	5.00%	50.00
60	0.141	0.60	17.50	0.00	0.00	15.00	40.00
62	0.166	0.62	17.50	0.00	0.00	15.00	40.00
65	0.212	0.65	25.00	0.00	0.00	25.00	40.00
70	0.344	0.65	25.00	0.00	0.00	30.00	35.00
75	0.639	0.65	25.00	0.00	0.00	100.00	100.00

*Base Rates.

**Plus 10.0% in year when first eligible for unreduced retirement with 27 years of service.



Schedule D – Outline of Actuarial Assumptions and Methods

DEATHS AFTER RETIREMENT:

Mortality Assumption: All mortality rates use Pub-2010 benefit-weighted tables.

Mortality Projection: All mortality rates are projected from 2010 using generational improvement with Scale MP-2020 adjusted to 75% of the standard rates.

Service Retirements: Mortality rates are based on the Teachers Mortality Table for Retirees. Rates for male members are set forward 2 years and multiplied by 102%. Rates for female members are set forward 2 years and multiplied by 98%.

Survivors of Deceased Members: Mortality rates are based on the Teachers Mortality Table for Contingent Survivors. Rates for male members are set forward 2 years and multiplied by 101%.

Disabled Members at Retirement: Mortality rates are based on the Teachers Mortality Table for Disabled Retirees. Rates for male members are set forward 1 year and multiplied by 96%. Rates for female members are set back 2 years and multiplied by 98%.

Representative values of the assumed annual rates of death after service retirement, disability retirement, and survivors of deceased members are shown below:

Age	Annual Rate of Death After*					
	Service Retirement		Disability Retirement		Survivors of Deceased Members	
	Male	Female	Male	Female	Male	Female
45	0.0836%	0.0568%	1.0646%	0.7755%	0.6020%	0.2620%
50	0.1357	0.0843	1.6435	1.1910	0.7545	0.3200
55	0.2744	0.2215	2.1130	1.5416	0.8959	0.4460
60	0.4427	0.3322	2.4806	1.7616	1.1413	0.6220
65	0.7579	0.5351	3.0653	1.9834	1.6443	0.8990
70	1.4066	0.9682	3.9485	2.4149	2.5876	1.3530
75	2.6816	1.8649	5.3155	3.2562	4.1006	2.1510
80	5.0500	3.5819	7.6118	4.7705	6.5630	3.5730
85	9.4585	6.8071	11.2109	7.3423	10.7717	6.3160
90	16.9116	12.6077	16.9738	11.1653	17.7306	11.3290
95	26.9423	21.5110	24.2170	15.7356	26.8670	18.5900

*Base Rates.



Schedule D – Outline of Actuarial Assumptions and Methods

ASSETS: Five-year market related actuarial value, as developed in Schedule B. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected actuarial value of assets, based on the ultimate assumed valuation rate of return of 7.10%. The amount recognized each year is 20% of the difference between market value and expected actuarial value.

ADMINISTRATIVE EXPENSE LOAD: 0.32% of payroll added to the normal cost rate.

PERCENT MARRIED: 100%, with females 3 years younger than males.

UNUSED SICK LEAVE LOAD: 3% of active liability at the time of retirement.



Schedule E – Actuarial Cost Method

1. The valuation is prepared on the projected benefit basis, under which the present value, at the interest rate assumed to be earned in the future, of each active member's expected benefit at retirement or death is determined, based on his/her age, service, sex and compensation. The calculations take into account the probability of a member's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his/her terminating with a service, disability or survivor's benefit. Future salary increases and post-retirement cost-of-living adjustments are also anticipated. The present value of the expected benefits payable on account of the active members is added to the present value of the expected future payments to retired members and beneficiaries and inactive members to obtain the present value of all expected benefits payable from the system on account of the present group of members and beneficiaries.
2. The employer contributions required to support the benefits of the system are determined following a level funding approach and consist of a normal contribution and an actuarial accrued liability contribution.
3. The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made to determine the uniform and constant percentage rate of employer contribution which, if applied to the compensation of the average new member during the entire period of his/her anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his/her behalf.
4. The unfunded actuarial accrued liability is determined by subtracting the present value of prospective employer normal contributions and member contributions, together with the current actuarial value of assets held, from the present value of expected benefits to be paid from the system.



Schedule F – Summary of Main System Provisions

AS INTERPRETED FOR VALUATION PURPOSES

The Teachers' Retirement System of the State of Kentucky was established on July 1, 1940. The valuation took into account amendments to the system effective through June 30, 2021. The following summary describes the main benefit and contribution provisions of the system as interpreted for the valuation.

1 - DEFINITIONS

"Final average salary" means the average of the five highest annual salaries which the member has received for service in a covered position and on which the member has made contributions or on which the public board, institution or agency has picked up the member contributions. For a member who retires after attaining age 55 with 27 years of service, "final average salary" means the average of the three highest annual salaries.

2 - BENEFITS

Service Retirement Allowance

Members Before 7/1/2008

Condition for Allowance	Completion of 27 years of service or attainment of age 55 and 5 years of service.
Amount of Allowance	The annual retirement allowance for non-university members is equal to: <ul style="list-style-type: none"> (a) 2.0% of final average salary multiplied by service before July 1, 1983, plus (b) 2.5% of final average salary multiplied by service after July 1, 1983. (c) For individuals who become members of the retirement system on or after July 1, 2002 and have less than 10 years of service at retirement, the retirement allowance is 2.0% of final average salary multiplied by service. If, however, they have 10 or more years, they receive a benefit percentage of 2.5% for all years of service up to 30 years.



Schedule F – Summary of Main System Provisions

- (d) For members retiring on or after July 1, 2004, the retirement allowance formula is 3.0% of final average salary for each year of service credit earned in excess of 30 years.

The annual retirement allowance for university members is equal to 2.0% of final average salary multiplied by all years of service.

For all members, the annual allowance is reduced by 5% per year from the earlier of age 60 or the date the member would have completed 27 years of service.

The minimum annual service allowance for all members is \$440 multiplied by credited service.

Members on and after 7/1/2008

Condition for Retirement

Completion of 27 years of service, attainment of age 60 and 5 years of service or attainment of age 55 and 10 years of service.

Amount of Allowance

The annual retirement allowance for non-university members is equal to:

- 1.7% of final average salary if service is 10 years or less.
- 2.0% of final average salary if service is greater than 10 years and no more than 20 years.
- 2.3% of final average salary if service is greater than 20 years but no more than 26 years.
- 2.5% of final average salary if service is greater than 26 years but no more than 30 years.
- 3.0% of final average salary for years of service greater than 30 years.

The annual retirement allowance for university members is equal to:

- 1.5% of final average salary if service is 10 years or less.
- 1.7% of final average salary if service is greater than 10 years and no more than 20 years.
- 1.85% of final average salary if service is greater than 20 years but less than 27 years.
- 2.0% of final average salary if service is greater than or equal to 27 years.

For all members, the annual allowance is reduced by 6% per year from the earlier of age 60 or the date the member would have completed 27 years of service.



Schedule F – Summary of Main System Provisions

Disability Retirement Allowance

Condition for Allowance

Totally and permanently incapable of being employed as a teacher and under 27 years of service but after completing 5 years of service.

Amount of Allowance

The disability allowance is equal to 60% of the member's final average salary. The disability allowance is payable over an entitlement period equal to 25% of the service credited to the member at the date of disability or five years, whichever is longer. After the disability entitlement period has expired and if the member remains disabled, he will be retired under service retirement. The service retirement allowance will be computed with service credit given for the period of disability retirement. The allowance will not be less than \$6,000 per year. The service retirement allowance will not be reduced for commencement of the allowance before age 60 or the completion of 27 years of service.

Benefits Payable on Separation from Service

Any member who ceases to be in service is entitled to receive his contributions with allowable interest. A member who has completed 5 years of creditable service and leaves his contributions with the system may be continued in the membership of the system after separation from service, and file application for service retirement after the attainment of age 60.

Life Insurance

A separate Life Insurance Trust has been created as of June 30, 2000 to pay benefits on behalf of deceased TRS active and retired members.



Schedule F – Summary of Main System Provisions

Death Benefits

A surviving spouse of an active member with less than 10 years of service may elect to receive an annual allowance of \$2,880 except that if income from other sources exceeds \$6,600 per year the annual allowance will be \$2,160.

A surviving spouse of an active member with 10 or more years of service may elect to receive an allowance which is the actuarial equivalent of the allowance the deceased member would have received upon retirement. The allowance will commence on the date the deceased member would have been eligible for service retirement and will be payable during the life of the spouse.

If the deceased member is survived by unmarried children under age 18 the following schedule of annual allowances applies:

<u>Number of Children</u>	<u>Annual Allowance</u>
1	\$ 2,400
2	4,080
3	4,800
4 or more	5,280

The allowances are payable until a child attains age 18, or age 23 if a full-time student.

If the member has no eligible survivor, a refund of his accumulated contributions is payable to his estate.

Options

In lieu of the regular Option 1, a retirement allowance payable in the form of a life annuity with refundable balance, any member before retirement may elect to receive a reduced allowance which is actuarially equivalent to the full allowance, in one of the following forms:

Option 2. A single life annuity payable during the member's lifetime with payments for 10 years certain.

Option 3. At the death of the member his allowance is continued throughout the life of his beneficiary.

Option 3(a). At the death of the beneficiary designated by the member under Option 3, the member's benefit will revert to what would have been paid had he not selected an option.

Option 4. At the death of the member one half of his allowance is continued throughout the life of his beneficiary.



Schedule F – Summary of Main System Provisions

Option 4(a). At the death of the beneficiary designated by the member under Option 4, the member's benefit will revert to what would have been paid had he not selected an option.

Post-Retirement Adjustments

The retirement allowance of each retired member and of each beneficiary shall be increased by 1.50% each July 1.

3 - CONTRIBUTIONS

Member Contributions

University members contribute 7.625% of salary to the retirement system. Non-university members contribute 9.105% of salary to the retirement system. Member contributions are picked up by the employer.



Schedule G – Tables of Employee Data

**TABLE 1
AGE – SERVICE TABLE**

Distribution of Active Members as of June 30, 2021 by Age and Service Groups

Attained Age	Completed Years of Service									Total	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Over	No.	Payroll
Under 25	1,532	1,856	4							3,392	\$ 90,641,018
25 to 29	632	4,433	1,933							6,998	299,260,435
30 to 34	418	1,885	4,250	1,499	2					8,054	404,571,295
35 to 39	370	1,328	2,108	4,212	1,596	6				9,620	546,010,412
40 to 44	402	1,176	1,363	2,008	4,383	1,308	4			10,644	653,419,418
45 to 49	258	859	988	1,336	1,995	3,895	1,012	3		10,346	680,678,821
50 to 54	459	704	642	1,005	1,360	2,001	2,425	374	4	8,974	582,342,175
55 to 59	605	717	422	535	843	1,017	802	291	23	5,255	301,740,472
60 to 64	452	766	281	256	421	433	356	113	63	3,141	147,378,070
65 to 69	357	568	221	103	137	186	121	49	32	1,774	57,690,361
70 & Over	252	410	174	59	52	37	34	15	25	1,058	20,667,746
Total Count	5,737	14,702	12,386	11,013	10,789	8,883	4,754	845	147	69,256	\$ 3,784,400,223

Average Age: 43.4
Average Service: 11.7



Schedule G – Tables of Employee Data

TABLE 2

SCHEDULE OF ACTIVE MEMBER VALUATION DATA

<u>Valuation Date</u>	<u>Number</u>	<u>Annual Payroll</u>	<u>Annual Average Pay</u>	<u>% Increase in Average Pay</u>
6/30/2021	69,256	\$ 3,784,400,223	\$ 54,644	7.35%
6/30/2020	73,151	3,723,481,576	50,901	1.35
6/30/2019	72,647	3,648,427,710	50,221	0.58
6/30/2018	72,205	3,605,115,787	49,929	1.06
6/30/2017	72,130	3,563,584,342	49,405	0.35
6/30/2016	71,848	3,537,226,348	49,232	1.19
6/30/2015	72,246	3,515,113,127	48,655	2.45
6/30/2014	73,407	3,486,326,799	47,493	2.12
6/30/2013	74,831	3,480,066,406	46,506	1.51
6/30/2012	75,951	3,479,567,004	45,813	1.33



Schedule G – Tables of Employee Data

TABLE 3

**NUMBER OF RETIRED MEMBERS AND BENEFICIARIES
AND THEIR BENEFITS BY AGE
AS OF JUNE 30, 2021**

Attained Age	Number of Members	Total Annual Benefits	Average Annual Benefits
49 & Under	803	\$ 9,465,245	\$ 11,787
50 - 54	1,602	67,058,670	41,859
55 - 59	4,217	189,483,762	44,933
60 - 64	7,032	301,805,954	42,919
65 - 69	10,932	453,797,433	41,511
70 - 74	14,216	568,443,423	39,986
75 - 79	9,002	345,260,894	38,354
80 - 84	5,226	190,248,293	36,404
85 - 89	2,804	93,145,292	33,219
90 - 94	1,246	36,594,008	29,369
95 & Over	<u>385</u>	<u>10,020,384</u>	<u>26,027</u>
Total	57,465	\$ 2,265,323,358	\$ 39,421

Average Current Age: 70.7

Average Age at Retirement: 56.2



Schedule G – Tables of Employee Data

TABLE 4

SCHEDULE OF RETIRANTS, BENEFICIARIES AND SURVIVORS ADDED TO AND REMOVED FROM ROLLS

Fiscal Year Ending June 30	ADDED TO ROLLS		REMOVED FROM ROLLS		ROLLS AT END OF YEAR		Increase In Annual Allowances	Average Annual Allowance
	Number	Annual Allowances (in millions)	Number	Annual Allowances (in millions)	Number	Annual Allowances (in millions)		
2012	2,513	\$111.2	838	\$19.4	46,094	\$1,525.2	6.4%	\$33,089
2013	2,303	105.7	991	22.2	47,406	1,608.7	5.5%	33,934
2014	2,146	99.6	976	23.4	48,576	1,684.9	4.7%	34,685
2015	2,917	119.1	1,671	36.3	49,822	1,767.6	4.9%	35,479
2016	2,753	128.2	1,012	26.9	51,563	1,868.9	5.7%	36,244
2017	2,638	119.8	1,235	35.2	52,966	1,953.5	4.5%	36,881
2018	2,499	120.0	1,088	30.0	54,377	2,043.5	4.6%	37,581
2019	2,355	113.8	1,119	32.8	55,613	2,124.5	4.0%	38,201
2020	2,145	107.6	1,129	34.0	56,629	2,198.1	3.5%	38,816
2021	2,137	108.3	1,301	41.1	57,465	2,265.3	3.1%	39,421



Schedule H – 30-year Baseline Projection of TRS

The results of actuarial valuations are a “snapshot” of the financial position on the valuation date, based on the assumed number of active employees and current beneficiaries. Projections simulate future actuarial valuation results over a forecast period (twenty years in this case) by “creating” future new hires and performing valuations using the projected membership. The following items are assumed for the projected results provided on the following page.

- Active Employee Growth Rate: 0.00%
- Valuation Discount Rate: 7.10%
- Investment Rate of Return: 7.10% each year
- Actuarial Value of Assets: 5 year smoothing, No Corridor
- Amortization Method: Level Percent of Payroll, Closed
- Amortization Bases:
 - Legacy amortization from 2014 valuation amortized over closed 30-year period
 - Subsequent bases amortized over closed 20-year period from date of valuation
- Amortization Period: Weighted 22.9-year period as of Valuation Date
- Future Contributions: Based on Expected Actuarially Determined Contributions including the impact of direct-rate smoothing of the impact of the assumption changes over a 5-year period beginning with the 2021 valuation

All other demographic and economic changes are assumed to occur in accordance with the actuarial assumptions used for the actuarial valuation.



Schedule H – 30-year Baseline Projection of TRS

(\$ in millions)

Fiscal Year End	Non-University Payroll (1)	University Payroll (2)	Total Payroll (3)	Unfunded Accrued Liability (4)	Funding Ratio (5)	Direct Rate Smoothing Contribution in Dollars (6)	Salary Percentage Contribution in Dollars (7)	Additional for Unfunded Accrued Liability (8)
2024	\$3,741	\$186	\$3,927	\$16,957	57.2%	\$1,237	\$590	\$647
2025	3,820	186	4,006	16,130	60.1%	1,263	588	675
2026	3,899	187	4,086	15,390	62.8%	1,307	588	719
2027	3,976	189	4,165	14,546	65.6%	1,343	588	755
2028	4,051	191	4,242	13,580	68.6%	1,370	589	781
2029	4,130	195	4,325	13,462	69.5%	1,400	596	804
2030	4,213	198	4,411	13,298	70.4%	1,431	604	827
2031	4,298	202	4,500	13,093	71.5%	1,463	612	851
2032	4,388	205	4,593	12,842	72.5%	1,496	621	875
2033	4,480	209	4,689	12,542	73.6%	1,530	630	900
2034	4,574	213	4,787	12,187	74.8%	1,565	639	926
2035	4,675	217	4,892	11,773	76.0%	1,601	648	953
2036	4,781	221	5,002	11,295	77.3%	1,640	658	982
2037	4,893	226	5,119	10,749	78.8%	1,679	669	1,010
2038	5,011	230	5,241	10,126	80.3%	1,769	681	1,088
2039	5,134	236	5,370	9,421	81.9%	1,769	694	1,075
2040	5,265	242	5,507	8,626	83.6%	1,873	708	1,165
2041	5,403	248	5,651	7,684	85.6%	1,948	723	1,225
2042	5,548	254	5,802	6,677	87.6%	1,997	737	1,260
2043	5,698	261	5,959	5,493	90.0%	2,034	753	1,281
2044	5,855	268	6,123	4,151	92.5%	1,805	767	1,038
2045	6,019	276	6,295	2,666	95.3%	1,941	788	1,153
2046	6,191	284	6,475	1,042	98.2%	2,072	810	1,262
2047	6,369	292	6,661	0	100.0%	0	832	0
2048	6,554	301	6,855	0	100.0%	0	856	0
2049	6,747	310	7,057	0	100.0%	0	881	0
2050	6,957	319	7,276	0	100.0%	0	906	0
2051	7,169	327	7,496	0	100.0%	0	933	0
2052	7,388	335	7,723	0	100.0%	0	962	0
2053	7,612	343	7,955	0	100.0%	0	991	0