



Cavanaugh Macdonald
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**Teachers' Retirement System
of the State of Kentucky
Report of the Actuary on the
Annual Valuation of the
Retiree Health and Life
Insurance Trusts**

Prepared as of June 30, 2023





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

November 14, 2023

Board of Trustees
Teachers' Retirement System of the
State of Kentucky
479 Versailles Road
Frankfort, KY 40601-3800

Members of the Board:

This report covers the Retiree Medical Plan funded by the Health Insurance Trust (health trust) and OPEB liabilities related to the Life Insurance Plan funded by the Life Insurance Trust (life trust). Cavanaugh Macdonald Consulting, LLC (CMC) has submitted the results of the annual actuarial valuation prepared as of June 30, 2023. While not verifying the data at source, the actuary performed tests for consistency and reasonability.

In order to prepare the results in this report, we have utilized actuarial models that were developed to measure liabilities and develop actuarial costs. These models include tools that we have produced and tested, along with commercially available valuation software that we have reviewed to confirm the appropriateness and accuracy of the output. In utilizing these models, we develop and use input parameters and assumptions about future contingent events along with recognized actuarial approaches to develop the needed results.

The valuation covers benefits for members hired before July 1, 2002 (TRS 1), members hired between July 1, 2002 and June 30, 2008 (TRS 2), members hired between July 1, 2008 and December 31, 2021 (TRS 3), and members hired on/after January 1, 2022 (TRS 4).

The valuation indicates a total actuarially determined contribution of 4.21% as a percentage of active member payroll for the health trust payable for the fiscal year ending June 30, 2024 is required to support the benefits of the Kentucky Employees' Health Plan (KEHP) and the Medicare Eligible Health Plan (MEHP). This actuarially determined contribution reflects the actuarial value of assets of the health trust and a 7.10% discount rate for valuing liabilities.

The initial per capita costs of health care and the rates of health care inflation used to project the per capita health care costs have been revised since the previous valuation to reflect recent experience and revised expectations. In addition, we have updated our morbidity factors used for Medicare eligible retirees to the relative value factors developed from the Society of Actuaries' June 2013 research report Health Care Costs—From Birth to Death by Dale Yamamoto and from the ASOP 6 practice note developed by the American Academy of Actuaries. We have made no specific changes to the valuation results due to the Inflation Reduction Act, but we have included scenarios in our sensitivity analysis section in Schedule G to illustrate the potential impact of changes to the Medicare Part D plan design.



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The impact of the COVID-19 pandemic was considered in this valuation; however, no changes were incorporated at this time due to the level of uncertainty regarding the impact on both plan costs and contribution levels going forward. Given the uncertainty regarding COVID-19 (e.g., the impact of routine care being deferred, direct COVID-19 treatment and prevention costs, changes in contribution and budget projections), continued monitoring of the impact on the Plan's liability will be required.

We recommend that the Life Insurance Plan valuation maintain a total actuarially determined contribution of 0.08% of active member payroll payable for the fiscal year ending June 30, 2026 to support the benefits of the life trust. This actuarially determined contribution reflects the actuarial value of assets of the life trust and a 7.10% discount rate for valuing liabilities.

The promised benefits of the Retiree Medical and Life Insurance Plans are included in the actuarially calculated contribution rates that are developed using the entry age normal actuarial cost method. Five-year market related value of plan assets is used for actuarial valuation purposes. Gains and losses are reflected in the unfunded actuarial accrued liability that is being amortized by regular annual contributions as a level percentage of payroll within a 17-year period for the Retiree Medical Plan and a 21-year period for the Life Insurance Plan, on the assumption that payroll will increase by 2.75% annually. The assumptions recommended by the actuary and adopted by the Board are in aggregate reasonably related to the experience under the Retiree Medical and Life Insurance Plans and to reasonable expectations of anticipated experience under the Retiree Medical and Life Insurance Plans.

This is to certify that the independent consulting actuaries are members of the American Academy of Actuaries and have experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the Retiree Medical and Life Insurance Plans and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the Plans.

Future actuarial results may differ significantly from the current results 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 (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

This actuarial valuation was performed to determine the recommended funding amount for the system. The asset values used to determine unfunded liabilities and funded ratios are not market values, but less volatile market-related values. A smoothing technique is applied to market values to determine the market-related values. The unfunded liability amounts and funded ratios using the market value of assets would be different. The interest rate used for determining liabilities is based on the expected return of assets. Therefore, liability amounts in this report cannot be used to assess a settlement of the obligation.



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In our opinion, if the contributions to the Health Insurance Trust continue at the current statutorily required levels, the funded ratio of the Retiree Medical Plan will continue to increase, and the ability of the health trust to fund the benefits called for under the Retiree Medical Plan will improve.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Alisa Bennett'.

Alisa Bennett, FSA, EA, FCA, MAAA
President

A handwritten signature in blue ink, appearing to read 'Edward J. Koebel'.

Edward J. Koebel, EA, FCA, MAAA
Chief Executive Officer

AB/EK: jf



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Section I – Summary of Principal Results

**TEACHERS' RETIREMENT SYSTEM
OF THE STATE OF KENTUCKY
REPORT OF THE ACTUARY ON THE ANNUAL VALUATION
OF THE RETIREE HEALTH AND LIFE INSURANCE TRUSTS
PREPARED AS OF JUNE 30, 2023**

1. For convenience of reference, the principal results of the valuation and a comparison with the results of the previous valuation are summarized below:

HEALTH INSURANCE TRUST
(Dollar amounts in \$1,000's)

Valuation Date	June 30, 2023	June 30, 2022
Number of Eligible Active Members	71,005	70,427
Annual Salaries	\$ 4,138,909	\$ 4,033,509
Number of Deferred Vested Members	7,917	7,665
Number of Annuitants in Medical Plans	41,055	41,177
Number of Spouses and Beneficiaries in Medical Plans*	6,555	6,661
Total	47,610	47,838
Assets:		
Market Value	\$ 2,743,413	\$ 2,269,176
Actuarial Value	\$ 2,788,970	\$ 2,401,147
Actuarial Accrued Liability	\$ 3,909,612	\$ 3,768,713
Unfunded Actuarial Accrued Liability	\$ 1,120,642	\$ 1,367,566
Funded Ratio Based on Actuarial Value of Assets	71.3%	63.7%
Amortization Period (Years)	17	18
Discount Rate	7.10%	7.10%

**Spouses of post-65 retirees and surviving spouses of deceased retirees with a date of death on or after July 1, 2002 pay 100% of the full contribution. 100% of the full contribution for non-Medicare eligible dependents is paid through a combination of payments from beneficiaries and the State. There are 1,087 Surviving Spouses reflected in these headcounts.*



Section I – Summary of Principal Results

HEALTH INSURANCE TRUST CONTRIBUTION RATES FOR UNIVERSITY MEMBERS

Valuation Date	June 30, 2023			June 30, 2022		
Contribution for fiscal year ending:	June 30, 2024			June 30, 2023		
	TRS 1 & TRS 2	TRS 3	TRS 4	TRS 1 & TRS 2	TRS 3	TRS 4
Normal	2.04 %	2.04 %	2.04 %	2.00 %	2.00 %	2.00 %
Accrued liability	2.17	2.17	2.17	2.62	2.62	2.62
Total	4.21 %	4.21 %	4.21 %	4.62 %	4.62 %	4.62 %
Member	2.775 %	2.775 %	2.775 %	2.775 %	2.775 %	2.775 %
Employer	2.775	2.775	2.000	2.775	2.775	2.000
State*	1.870	1.870	1.870	1.570	1.570	1.570
Statutorily Required Prefunding**	(3.210)	(3.210)	(2.435)	(2.500)	(2.500)	(1.725)
Total	4.210 %	4.210 %	4.210 %	4.620 %	4.620 %	4.620 %

* This represents funding by the State to pay the cost of health insurance for retirees who are not eligible for Medicare and who retire on or after July 1, 2010, less the amounts that are otherwise required to be paid by the retirees under KTRS 161.675. See KRS 161.550(2).

** This represents funding by active members, local school districts, universities, and other employers toward the unfunded liability of the health trust. See KRS 161.540(1)(c)(3) & 161.550(5).

HEALTH INSURANCE TRUST CONTRIBUTION RATES FOR SCHOOL DISTRICT EMPLOYEES (NON-FEDERAL)

Valuation Date	June 30, 2023			June 30, 2022		
Contribution for fiscal year ending:	June 30, 2024			June 30, 2023		
	TRS 1 & TRS 2	TRS 3	TRS 4	TRS 1 & TRS 2	TRS 3	TRS 4
Normal	2.04 %	2.04 %	2.04 %	2.00 %	2.00 %	2.00 %
Accrued liability	2.17	2.17	2.17	2.62	2.62	2.62
Total	4.21 %	4.21 %	4.21 %	4.62 %	4.62 %	4.62 %
Member	3.750 %	3.750 %	3.750 %	3.750 %	3.750 %	3.750 %
Employer	3.000	3.000	3.000	3.000	3.000	3.000
State*	2.620	2.620	2.620	2.320	2.320	2.320
Statutorily Required Prefunding**	(5.160)	(5.160)	(5.160)	(4.450)	(4.450)	(4.450)
Total	4.210 %	4.210 %	4.210 %	4.620 %	4.620 %	4.620 %

* This represents funding by the State to pay the cost of health insurance for retirees who are not eligible for Medicare and who retire on or after July 1, 2010, less the amounts that are otherwise required to be paid by the retirees under KTRS 161.675. See KRS 161.550(2). Includes the State contribution of 0.75% on behalf of Non-Federal School District employees.

** This represents funding by active members, local school districts, universities, and other employers toward the unfunded liability of the health trust. See KRS 161.540(1)(c)(3) & 161.550(5).



Section I – Summary of Principal Results

HEALTH INSURANCE TRUST CONTRIBUTION RATES FOR OTHER EMPLOYEES

Valuation Date	June 30, 2023			June 30, 2022		
Contribution for fiscal year ending:	June 30, 2024			June 30, 2023		
	TRS 1 & TRS 2	TRS 3	TRS 4	TRS 1 & TRS 2	TRS 3	TRS 4
Normal	2.04 %	2.04 %	2.04 %	2.00 %	2.00 %	2.00 %
Accrued liability	2.17	2.17	2.17	2.62	2.62	2.62
Total	4.21 %	4.21 %	4.21 %	4.62 %	4.62 %	4.62 %
Member	3.750 %	3.750 %	3.750 %	3.750 %	3.750 %	3.750 %
Employer	3.750	3.750	3.750	3.750	3.750	3.750
State*	1.870	1.870	1.870	1.570	1.570	1.570
Statutorily Required Prefunding**	(5.160)	(5.160)	(5.160)	(4.450)	(4.450)	(4.450)
Total	4.210 %	4.210 %	4.210 %	4.620 %	4.620 %	4.620 %

* This represents funding by the State to pay the cost of health insurance for retirees who are not eligible for Medicare and who retire on or after July 1, 2010, less the amounts that are otherwise required to be paid by the retirees under KTRS 161.675. See KRS 161.550(2).

** This represents funding by active members, local school districts, universities, and other employers toward the unfunded liability of the health trust. See KRS 161.540(1)(c)(3) & 161.550(5).



Section I – Summary of Principal Results

LIFE INSURANCE TRUST (Dollar amounts in \$1,000's)

We recommend maintaining the Total Employer Contribution rate at 0.08% by rounding the Normal Contribution up to 0.03% for FY 2026 (from actual amount of 0.024%) and holding the Accrued Liability Contribution at 0.05%. The resulting contribution is equivalent to using an effective amortization period of 15 years.

Valuation Date	June 30, 2023	June 30, 2022
Number of Eligible Active Members	70,528	70,427
Annual Salaries	\$ 4,138,909	\$ 4,033,509
Number of Vested Former Members	11,216	10,573
Number of Retirees in Life Insurance Plan	53,379	52,213
Assets:		
Market Value	\$ 94,030	\$ 88,381
Actuarial Value	\$ 99,027	\$ 96,926
Actuarial Accrued Liability	\$ 122,611	\$ 119,197
Unfunded Actuarial Accrued Liability*	\$ 23,584	\$ 22,271
Funded Ratio Based on Actuarial Value of Assets	80.8%	81.3%
Amortization Period (Years)	21	22
Effective Amortization Period (Years)	15	16
Discount Rate	7.10%	7.10%
Contribution for fiscal year ending:	June 30, 2026	June 30, 2025
Normal	0.03 %	0.03 %
Accrued Liability	0.05	0.05
Total	<u>0.08 %</u>	<u>0.08 %</u>

* Includes liability for death in active service. This amount could be segregated from the OPEB liability and assets could be split for active and post-employment purposes. However, since this could be administratively burdensome and since death in active service liabilities can be considered de minimis, we will consider the entire liability an OPEB liability under GASB 74 and 75.

- The valuation indicates combined member, employer, and State contributions of 4.21% of active member payroll would be sufficient to support the current benefits of the Retiree Medical Plan and State contributions of 0.08% of active member payroll would be sufficient to support the current benefits of the Life Insurance Plan. Comments on the valuation results as of June 30, 2023 are given in Section IV and further discussion of the contribution levels is set out in Sections VI and VII.



Section I – Summary of Principal Results

3. Schedule B shows the development of the actuarial value of assets. The assumed investment rate of return is 7.10% for the health trust and 7.10% for the life trust.
4. Schedule D of this report outlines the full set of actuarial assumptions and methods employed in the current valuation. Since the previous valuation, the initial per capita costs of health care and the rates of health care inflation used to project the per capita health care costs have been revised to reflect recent experience. Additionally, the morbidity factors have been updated based on the Society of Actuaries' June 2013 research report Health Care Costs—From Birth to Death by Dale Yamamoto and from the ASOP 6 practice note developed by the American Academy of Actuaries.
6. The impacts of the COVID-19 pandemic, the ACA and the Inflation Reduction Act were considered in this valuation; however, no explicit changes were incorporated at this time due to the level of uncertainty regarding the impact on both plan costs and contribution levels going forward. We considered scenarios regarding economic factors, healthcare trend adjustments and changes to Medicare Part D Federal reimbursements and coverage gap discounts in our sensitivity analysis in Schedule G. Continued monitoring of the impact of these and any future such events on the Plan's liability will be required.
7. Provisions of the system, as summarized in Schedule E, were taken into account in the current valuation. As in the previous valuation, the phase out of the KEHP dependent subsidies offered to retirees has been reflected.
8. The funded ratio shown in the Summary of Principal Results is the ratio of actuarial value of assets to the actuarial accrued liability. The funded status would be different based on the market value of assets. The funded ratio is an indication of progress in funding the promised benefits. Since the ratio is less than 100%, there is a need for additional contributions toward the payment of the unfunded actuarial accrued liability. In addition, this funded ratio does not have any relationship to measuring the sufficiency if the plan had to settle its liabilities.



Section II – Membership Data

1. Data regarding the membership of the Retiree Medical and Life Insurance Plans for use as a basis of the valuation were furnished by the system's office. The following tables summarize the membership of the system as of June 30, 2023, upon which the valuation was based. Detailed tabulations of the data are given in Schedule F.

ACTIVE MEMBERS AS OF JUNE 30, 2023

Group	Number	Annual Salaries (\$1,000's)
<u>University Active Members</u>		
TRS 1 and TRS 2 Members	1,339	\$ 98,265
TRS 3 Members	1,410	85,225
TRS 4 Members	263	9,138
Total University Active Members	3,012	\$ 192,628
<u>Non-University Active Members</u>		
Full Time TRS 1 and TRS 2 Members	27,454	2,050,698
Full Time TRS 3 Members	29,812	1,673,453
Full Time TRS 4 Members	3,290	124,536
Part Time TRS 1 and TRS 2 Members	1,050	10,450
Part Time TRS 3 Members	6,570	64,701
Part Time TRS 4 Members	4,456	22,443
Total Non-University Members	72,632	\$ 3,946,281
Grand Total	75,644	\$ 4,138,909

2. The following tables show the number of retired members and their beneficiaries receiving health care as of the valuation date as well as average ages.

RETIREES RECEIVING HEALTH BENEFITS AS OF JUNE 30, 2023

	Non-Medicare	Medicare	Total
Number	8,692	32,363	41,055
Average Age	59.65	75.47	72.12



Section II – Membership Data

SPOUSES RECEIVING HEALTH BENEFITS AS OF JUNE 30, 2023

	Non-Medicare	Medicare	Total
Number	1,336	5,219	6,555
Average Age	60.04	75.13	72.05

3. The Retiree Medical Plan valuation includes 71,005 active members eligible for health care and the Life Insurance Plan valuation includes 70,528 active members eligible for life insurance. There were initially 75,644 active members eligible for health care and life insurance. However, 4,639 were ultimately excluded from the Retiree Medical Plan active headcounts and 5,116 from the Life Insurance Plan active headcounts as they are either retirees returning to work or members working an additional active position. They are already reflected in the active or retiree headcounts.
4. The Retiree Medical Plan valuation includes 7,917 deferred vested members eligible for health care at age 60, and the Life Insurance Plan valuation includes 11,216 deferred vested members eligible for retiree life insurance at age 60. There were initially 7,975 deferred vested members eligible for health care at age 60 and 11,331 deferred vested members eligible for retiree life insurance at age 60. However, 58 were ultimately excluded from the Retiree Medical Plan deferred vested headcounts and 115 from the Life Insurance Plan deferred vested headcounts as they are either retirees returning to work or members working an additional active position. They are already reflected in the active or retiree headcounts.
5. The Life Insurance Plan valuation includes 53,379 retired members eligible for life insurance. There were initially 54,742 retired members eligible for life insurance. However, 1,363 were ultimately excluded from the Life Insurance Plan retiree headcounts as they were listed multiple times, reflecting different pension benefits earned under multiple roles as an employee. They are already reflected in the retiree headcounts.



Section III – Assets

1. As of June 30, 2023, the market value of the health trust assets held by the Retiree Medical Plan amounted to \$2,743,413,081 and the market value of the life trust assets held by the Life Insurance Plan amounted to \$94,029,915. The market investment return for the plan year was 11.52% for the health trust and 9.63% for the life trust.
2. The five-year market related value of the health trust assets used for valuation purposes as of June 30, 2023 was \$2,788,969,835 and the five-year market related value of the life trust assets used for valuation purposes as of June 30, 2023 was \$99,026,964. Schedule B shows the development of the actuarial value of assets as of June 30, 2023.
3. Schedule C shows the receipts and disbursements for the year preceding the valuation date and a reconciliation of the asset balances for the health trust and the life trust.



Section IV – Comments on Valuation

1. Schedule A of this report outlines the results of the actuarial valuation. The valuation was prepared in accordance with the actuarial assumptions and the actuarial cost method, which are described in Schedule D.
2. The valuation shows the Retiree Medical Plan has an actuarial accrued liability of \$2,072,776,886 for benefits expected to be paid on account of the present active membership, based on service to the valuation date. The liability on account of deferred vested members amounts to \$82,001,781. The liability on account of benefits payable to retirees and covered spouses amounts to \$1,754,832,939. The total actuarial accrued liability of the Retiree Medical Plan amounts to \$3,909,611,606. Against these liabilities, the Retiree Medical Plan has present assets for valuation purposes of \$2,788,969,835. When this amount is deducted from the actuarial accrued liability of \$3,909,611,606, there remains \$1,120,641,771 as the unfunded actuarial accrued liability for the Retiree Medical Plan.
3. The normal contribution is equal to the actuarial present value of benefits accruing during the current year. The normal contribution for the Retiree Medical Plan is determined to be \$84,496,070, or 2.04% of payroll.
4. The valuation shows that the Life Insurance Plan has an actuarial accrued liability of \$16,542,923 for benefits expected to be paid on account of the present active membership, based on service to the valuation date. The liability on account of deferred vested members amounts to \$4,563,349. The liability on account of benefits payable to retirees amounts to \$101,504,368. The total actuarial accrued liability of the Life Insurance Plan amounts to \$122,610,640. This amount includes liability for death in active service. The liability for death in active service could be segregated from the OPEB liability and assets could be split for active and post-employment purposes. As this could be administratively burdensome, and as death in active service liabilities can be considered de minimis, we will consider the entire liability an OPEB liability under GASB 74 and 75. Against these liabilities, the Life Insurance Plan has present assets for valuation purposes of \$99,026,964. When this amount is deducted from the actuarial accrued liability of \$122,610,640, there remains \$23,583,676 as the unfunded actuarial accrued liability for the life insurance plan.



Section IV – Comments on Valuation

5. The normal contribution is equal to the actuarial present value of benefits accruing during the current year. The normal contribution for the life insurance plan is determined to be \$1,006,942, or 0.03% of payroll.



Section V – Derivation of Experience Gains and Losses

Actual experience will never (except by coincidence) coincide exactly with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) for the year ended June 30, 2023 is shown below (\$1,000's).

Experience (Gain)/Loss* of the:		Health Insurance Trust	Life Insurance Trust
(1)	UAAL as of 6/30/2022	\$ 1,367,566	\$ 22,271
(2)	Normal cost from last valuation	80,558	966
(3)	Expected employer contributions	186,176	3,065
(4)	Interest accrual: [(1) + (2)] x .071 - (3) x (.071)/2 for Health [(1) + (2)] x .071 - (3) x (.071)/2 for Life	96,207	1,541
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	\$ 1,358,155	\$ 21,713
(6)	Change due to updated Medicare Part B health care trend rates and aging factors	85,832	0
(7)	Change due to claims experience	(113,305)	0
(8)	Expected UAAL after changes: (5) + (6) + (7)	\$ 1,330,682	\$ 21,713
(9)	Actual UAAL as of 6/30/2023	1,120,642	23,584
(10)	Total (gain)/loss: (9) - (8)	(210,040)	1,871
	(a) Contribution and investment (gain)/loss	(153,855)	1,515
	(b) Experience (gain)/loss (10) - (10a)	(56,185)	356
(11)	Accrued liabilities as of 6/30/2022	\$ 3,768,713	\$ 119,197
(12)	Experience (gain)/loss as percent of actuarial accrued liabilities at start of year (10b) / (11)	(1.49%)	0.30%

* Rows labeled as a change, rather than a gain/(loss), are expressed as negative if the UAAL is decreased and positive if the UAAL is increased.



Section VI – Contributions Payable Under the Plans

- Sections 161.420 and 161.550 of the Kentucky Revised Statutes provide the amounts employers and the State are required to contribute to the Health Insurance Trust. These contribution amounts vary by date of membership and employee type.

Employer Percentage of Payroll Contribution Made to Health Insurance Trust								
University Employees			School District Employees (Non-Federal) *			Other Employees		
TRS 1 & TRS 2	TRS 3	TRS 4	TRS 1 & TRS 2	TRS 3	TRS 4	TRS 1 & TRS 2	TRS 3	TRS 3
2.775	2.775	2.000	3.000	3.000	3.000	3.750	3.750	3.750

* In addition to the amounts contributed by School Districts on behalf of Non-Federal employees, the State contributes 0.75%.

- For the fiscal year ending June 30, 2023, member contributions will be 2.775% for University employees and 3.750% for all other members. Based upon the amortization of the unfunded actuarial accrued liability over a 17-year period as a level percentage of payroll, the valuation indicates employer and State contributions of 1.435% of payroll for University employees and 0.460% of payroll for all other members.
- The State is scheduled to contribute 0.08% of salary to the Life Insurance Trust for the fiscal year ending June 30, 2025. We recommend maintain this rate for the fiscal year ending June 30, 2026 to support sufficiently the benefits of the Life Insurance Plan.



Section VI – Contributions Payable Under the Plans

REQUIRED CONTRIBUTION RATES

Health Insurance Trust									
For Fiscal Year Ending June 30, 2024									
Normal	2.04 %								
Accrued Liability	<u>2.17</u>								
Total	4.21 %								
	University Employees			School District Employees (Non-Federal)			Other Employees		
	TRS 1 & TRS 2	TRS 3	TRS 4	TRS 1 & TRS 2	TRS 3	TRS 4	TRS 1 & TRS 2	TRS 3	TRS 4
Member	2.775 %	2.775 %	2.775 %	3.750 %	3.750 %	3.750 %	3.750 %	3.750 %	3.750 %
Employer	2.775	2.775	2.000	3.000	3.000	3.000	3.750	3.750	3.750
State*	1.870	1.870	1.870	2.620	2.620	2.620	1.870	1.870	1.870
Statutorily Required Prefunding**	(3.210)	(3.210)	(2.435)	(5.160)	(5.160)	(5.160)	(5.160)	(5.160)	(5.160)
Total	<u>4.210 %</u>	<u>4.210 %</u>	<u>4.210 %</u>	<u>4.210 %</u>	<u>4.210 %</u>	<u>4.210 %</u>	<u>4.210 %</u>	<u>4.210 %</u>	<u>4.210 %</u>

Life Insurance Trust	
Normal	0.03 %
Accrued Liability	<u>0.05</u>
Total	0.08 %
Member	0.00 %
State	<u>0.08</u>
Total	0.08 %

* This represents funding by the State to pay the cost of health insurance for retirees who are not eligible for Medicare and who retire on or after July 1, 2010, less the amounts that are otherwise required to be paid by the retirees under KTRS 161.675. See KRS 161.550(2). Includes the State contribution of 0.75% on behalf of Non-Federal School District employees.

** This represents funding by active members, local school districts, universities, and other employers toward the unfunded liability of the health trust. See KRS 161.540(1)(c)(3) & 161.550(5).



Section VI – Contributions Payable Under the Plans

4. The valuation indicates that a total normal contribution of 2.04% of payroll is required to meet the cost of benefits currently accruing under the Retiree Medical Plan and 0.03% of payroll is required to meet the cost of benefits currently accruing under the Life Insurance Plan. The difference between the total contribution and the normal contribution remains to be applied toward the liquidation of the unfunded actuarial accrued liability. This accrued liability payment is 2.17% of payroll for the Retiree Medical Plan and 0.05% of payroll for the Life Insurance Plan.
5. The unfunded actuarial accrued liability amounts to \$1,120,641,771 for the Retiree Medical Plan and \$23,583,676 for the Life Insurance Plan as of the valuation date. An accrued liability contribution rate of 2.17% of payroll for the Retiree Medical Plan and 0.05% of payroll for the Life Insurance Plan is sufficient to amortize the unfunded actuarial accrued liabilities over a 17-year period for the Retiree Medical Plan and a 21-year period for the Life Insurance Plan, based on the assumption that the payroll will increase by 2.75% annually.



Section VII – Comments on Level of Funding

1. Beneficiary contributions and the system's monthly contribution for retirees who opt into the Retiree Medical Plan is based upon date of hire, date of attaining age 65, years of service at retirement, plan election, Medicare eligibility, and tobacco use. Beneficiary contributions for dependents are targeted to be 100% of the cost of expected claims and/or insured premiums for spouses age 65 and older. Historically, this target has been achieved. 100% of the full cost for non-Medicare eligible dependents is paid through a combination of payments from beneficiaries and the State on a current disbursement basis. Current employer and State contributions have been determined to be sufficient to fund the cost of the benefits to be provided. Benefits for university, school district (non-Federal), and other members are identical, although active employee contributions collected from university, school district (non-Federal), and other members differ. A listing of active member Retiree Medical Plan contributions by fiscal year, date of membership, and employer type is provided in Schedule E.
2. This valuation provides the contributions required to fund sufficiently the Retiree Medical Plan and to ensure the future solvency of the Health Insurance Trust. For all membership, a combined member contribution together with employer and State contributions totaling 4.21% of payroll is required to meet the cost of benefits currently accruing and provide for the amortization of the unfunded actuarial accrued liability over a period of 17 years.



Section VIII – Accounting Information

1. The information required under Governmental Accounting Standards Board (GASB) Statements No. 74 and 75 will be issued in separate reports. The following information is provided for informational purposes only.

NUMBER OF ACTIVE AND RETIRED MEMBERS IN RETIREE MEDICAL PLAN AS OF JUNE 30, 2023	
GROUP	NUMBER
Retirees currently receiving health benefits	41,055
Spouses of retirees currently receiving health benefits	6,555
Terminated employees entitled to benefits but not yet receiving benefits	7,917
Active plan members	<u>71,005</u>
Total	126,532

NUMBER OF ACTIVE AND RETIRED MEMBERS IN LIFE INSURANCE PLAN AS OF JUNE 30, 2023	
GROUP	NUMBER
Retirees	53,379
Terminated employees	11,216
Active plan members	<u>70,528</u>
Total	135,123



Section VIII – Accounting Information

SCHEDULE OF FUNDING PROGRESS Health Insurance Trust (Dollar amounts in \$1,000's)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Annual Salary (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
6/30/2015	\$ 637,839	\$ 3,525,584	\$ 2,887,745	18.1 %	\$ 3,515,113	82.2 %
6/30/2016 ¹	795,055	3,634,073	2,839,018	21.9	3,537,226	80.3
6/30/2017	985,694	3,691,719	2,706,025	26.7	3,563,584	75.9
6/30/2018	1,213,918	3,340,709	2,126,791	36.3	3,605,116	58.9
6/30/2019	1,442,522	3,133,202	1,690,680	46.0	3,648,428	46.3
6/30/2020	1,700,968	2,757,653	1,056,685	61.7	3,723,482	28.4
6/30/2021	2,072,648	3,456,677	1,384,029	60.0	3,784,400	36.6
6/30/2022	2,401,147	3,768,713	1,367,566	63.7	4,033,509	33.9
6/30/2023	2,788,970	3,909,612	1,120,642	71.3	4,138,909	27.1

¹Reflects change in decrement and participation assumptions.

SCHEDULE OF FUNDING PROGRESS Life Insurance Trust (Dollar amounts in \$1,000's)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Annual Salary (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
6/30/2015	\$ 97,186	\$ 98,739	\$ 1,553	98.4 %	\$ 3,515,113	0.04 %
6/30/2016 ¹	97,269	106,059	8,790	91.7	3,537,226	0.25
6/30/2017	95,730	109,069	13,339	87.8	3,563,584	0.37
6/30/2018	93,808	112,471	18,663	83.4	3,605,116	0.52
6/30/2019	92,506	117,485	24,979	78.7	3,648,428	0.68
6/30/2020	92,229	122,194	29,965	75.5	3,723,482	0.80
6/30/2021	95,483	116,656	21,173	81.9	3,784,400	0.56
6/30/2022	96,926	119,197	22,271	81.3	4,033,509	0.55
6/30/2023	99,027	122,611	23,584	80.8	4,138,909	0.57

¹Reflects change in decrement and participation assumptions.



Section VIII – Accounting Information

2. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2023. Additional information as of the latest actuarial valuation follows.

Valuation date	6/30/2023
Actuarial Cost Method	Entry Age
Amortization Method	Level Percent of Pay, Closed
Remaining Amortization Period	17 Years Retiree Medical Plan 21 Years Life Insurance Plan
Asset Valuation Method	5-Year Smoothed Market
Actuarial Assumptions:	
Investment Rate of Return*	7.10% Retiree Medical Plan 7.10% Life Insurance Plan
Medical Trend Assumption**	6.50%
Ultimate Trend Rate	4.50%
Year of Ultimate Trend Rate	2031

*Includes price inflation at 2.50%.

**Alternate trend rates were used for Medicare Part B premiums and are disclosed in Schedule D.



Section VIII – Accounting Information

SCHEDULE OF EMPLOYER CONTRIBUTIONS - Health Insurance Trust

Fiscal Year Ending Date	Statutorily Required Contribution (a)	Actual Employer Contribution (b)	Percentage of Statutory Contributed ((b) / (a))
6/30/2016	\$ 178,638,370	\$ 178,638,370	100.0 %
6/30/2017	180,375,986	180,375,986	100.0
6/30/2018	187,102,413	187,102,413	100.0
6/30/2019	183,146,155	183,146,155	100.0
6/30/2020	184,625,474	184,625,474	100.0
6/30/2021	184,887,065	184,887,065	100.0
6/30/2022	200,235,203	151,765,145	75.8
6/30/2023	208,815,818	208,815,818	100.0

SCHEDULE OF EMPLOYER CONTRIBUTIONS - Life Insurance Trust

Fiscal Year Ending Date	Actuarially Determined Contribution (a)	Actual Employer Contribution (b)	Percentage of ADC Contributed ((b) / (a))
6/30/2016	\$ 1,057,851	\$ 1,037,769	98.1 %
6/30/2017	1,065,122	1,049,683	98.6
6/30/2018	1,075,305	1,058,329	98.4
6/30/2019	1,081,535	1,421,227	131.4
6/30/2020	1,842,977	1,796,389	97.5
6/30/2021	2,252,365	2,138,375	94.9
6/30/2022	2,736,268	2,754,863	100.7
6/30/2023	3,268,967	3,223,560	98.6



Schedule A – Results of the Valuation and Solvency Test

RESULTS OF THE VALUATION AS OF JUNE 30, 2023
(Dollar amounts in \$1,000's)

	Health Insurance Trust	Life Insurance Trust
PAYROLL	\$ 4,138,909	\$ 4,138,909
ACTUARIAL ACCRUED LIABILITY Present value of prospective benefits payable in respect of:		
(a) Present active members	\$ 2,072,777	\$ 16,543
(b) Present terminated vested members	82,002	4,563
(c) Present retired members and covered spouses	1,754,833	101,505
(d) Total actuarial accrued liability	\$ 3,909,612	\$ 122,611
PRESENT ASSETS FOR VALUATION PURPOSES	\$ 2,788,970	\$ 99,027
UNFUNDED ACTUARIAL ACCRUED LIABILITY	\$ 1,120,642	\$ 23,584
CONTRIBUTIONS:	Fiscal Year Ending June 30, 2024	Fiscal Year Ending June 30, 2026
Normal	2.04 %	0.03 %
Accrued Liability	<u>2.17</u>	<u>0.05</u>
Total	4.21 %	0.08 %



Schedule A – Results of the Valuation and Solvency Test

**HEALTH INSURANCE TRUST
SOLVENCY TEST**
(Dollar amounts in millions)

Valuation Date	(1) Active Member Contributions	(2) (3) Accrued Liabilities		Valuation Assets	Portion of Accrued Liabilities Covered by Assets		
		Deferred Vested, Retirants, And Beneficiaries	Active Members (Employer Financed Portion)		(1)	(2)	(3)
6/30/2016	n/a	\$ 1,950.9	\$ 1,683.2	\$ 795.1	n/a	41	0
6/30/2017	n/a	1,985.1	1,706.6	985.7	n/a	50	0
6/30/2018	n/a	1,692.3	1,648.4	1,213.9	n/a	72	0
6/30/2019	n/a	1,604.3	1,528.9	1,442.5	n/a	90	0
6/30/2020	n/a	1,354.0	1,403.7	1,701.0	n/a	100	25
6/30/2021	n/a	1,690.3	1,766.3	2,072.6	n/a	100	22
6/30/2022	n/a	1,832.1	1,936.6	2,401.1	n/a	100	29
6/30/2023	n/a	1,836.8	2,072.8	2,789.0	n/a	100	46

**LIFE INSURANCE TRUST
SOLVENCY TEST**
(Dollar amounts in millions)

Valuation Date	(1) Active Member Contributions	(2) (3) Accrued Liabilities		Valuation Assets	Portion of Accrued Liabilities Covered by Assets		
		Deferred Vested, Retirants, And Beneficiaries	Active Members (Employer Financed Portion)		(1)	(2)	(3)
6/30/2015	n/a	\$ 82.7	\$ 16.0	\$ 97.2	n/a	100	91
6/30/2016	n/a	89.0	17.1	97.3	n/a	100	49
6/30/2017	n/a	92.1	17.0	95.7	n/a	100	21
6/30/2018	n/a	94.2	18.3	93.8	n/a	99	0
6/30/2019	n/a	99.1	18.4	92.5	n/a	93	0
6/30/2020	n/a	103.5	18.7	92.2	n/a	89	0
6/30/2021	n/a	100.7	16.0	95.5	n/a	95	0
6/30/2022	n/a	102.8	16.4	96.9	n/a	94	0
6/30/2023	n/a	106.1	16.5	99.0	n/a	93	0



Schedule B – Development of the Actuarial Value of Assets

HEALTH INSURANCE TRUST

AS OF JUNE 30, 2023

(1) Actuarial Value of Assets Beginning of Year	\$ 2,401,147,269
(2) Market Value of Assets End of Year	\$ 2,743,413,081
(3) Market Value of Assets Beginning of Year	\$ 2,269,175,689
(4) Cash Flow	
a. Contributions	\$ 503,384,392
b. Benefit Payments	270,224,923
c. Administrative Expense	1,974,318
d. Net: (4)a - (4)b - (4)c	\$ 231,185,151
(5) Investment Income	
a. Market Total: (2) - (3) - (4)d	\$ 243,052,241
b. Assumed Rate	7.10%
c. Amount for Immediate Recognition: [(3) x (5)b] + [(4)d x (5)b x 0.5]	169,318,547
d. Amount for Phased-In Recognition: 5(a) - 5(c)	\$ 73,733,694
(6) Phased-In Recognition of Investment Income	
a. Current Year: 0.20 x (5)d	\$ 14,746,739
b. First Prior Year	(77,903,191)
c. Second Prior Year	73,328,318
d. Third Prior Year	(17,490,773)
e. Fourth Prior Year	(5,362,225)
f. Total Recognized Investment Gain/(Loss)	\$ (12,681,132)
(7) Actuarial Value of Assets End of Year (1) + (4)d + (5)c + (6)f	\$ 2,788,969,835
(8) Difference Between Market & Actuarial Values: (2) - (7)	\$ (45,556,754)
(9) Rate of Return on Actuarial Value:	6.22%



Schedule B – Development of the Actuarial Value of Assets

LIFE INSURANCE TRUST

AS OF JUNE 30, 2023

(1) Actuarial Value of Assets Beginning of Year	\$	96,925,895
(2) Market Value of Assets End of Year	\$	94,029,915
(3) Market Value of Assets Beginning of Year	\$	88,380,503
(4) Cash Flow		
a. Contributions	\$	3,223,560
b. Benefit Payments		6,219,000
c. Administrative Expense		37,633
d. Net: (4)a - (4)b - (4)c	\$	<u>(3,033,073)</u>
(5) Investment Income		
a. Market Total: (2) - (3) - (4)d	\$	8,682,485
b. Assumed Rate		7.10%
c. Amount for Immediate Recognition: [(3) x (5)b] + [(4)d x (5)b x 0.5]		<u>6,167,342</u>
d. Amount for Phased-In Recognition: 5(a) - 5(c)	\$	<u>2,515,143</u>
(6) Phased-In Recognition of Investment Income		
a. Current Year: 0.20 x (5)d	\$	503,029
b. First Prior Year		(4,617,322)
c. Second Prior Year		3,534,632
d. Third Prior Year		(226,459)
e. Fourth Prior Year		<u>(227,080)</u>
f. Total Recognized Investment Gain/(Loss)	\$	<u>(1,033,200)</u>
(7) Actuarial Value of Assets End of Year (1) + (4)d + (5)c + (6)f	\$	99,026,964
(8) Difference Between Market & Actuarial Values: (2) - (7)	\$	(4,997,049)
(9) Rate of Return on Actuarial Value:		5.38%



Schedule C – Summary of Receipts and Disbursements

HEALTH INSURANCE TRUST SUMMARY OF RECEIPTS AND DISBURSEMENTS (Market Value)

	For the Year Ending	
	June 30, 2023	June 30, 2022
Receipts for the Year		
Contributions		
Members Statutory	\$ 149,209,656	\$ 145,681,855
Payment by Retired Members	63,329,256	60,680,394
Total Members	<u>\$ 212,538,912</u>	<u>\$ 206,362,249</u>
State Statutory Contributions	\$ 24,370,180	\$ 23,507,666
Employer Contributions	123,487,533	120,415,757
State's Shared Responsibility	60,958,105	7,841,722
Total Employer	<u>\$ 208,815,818</u>	<u>\$ 151,765,145</u>
Grand Total	\$ 421,354,730	\$ 358,127,394
Recovery Income	145,358,918	144,675,514
Net Investment Income	243,052,241	(219,500,061)
TOTAL	<u>\$ 809,765,889</u>	<u>\$ 283,302,847</u>
Disbursements for the Year		
Administrative Expense	\$ 1,974,318	\$ 2,074,227
Medical Insurance Expense	333,554,179	312,557,347
TOTAL	<u>\$ 335,528,497</u>	<u>\$ 314,631,574</u>
Excess of Receipts over Disbursements	\$ 474,237,392	\$ (31,328,727)
Reconciliation of Asset Balances		
Asset Balance as of the Beginning of the Year	\$ 2,269,175,689	\$ 2,300,504,416
Excess of Receipts over Disbursements	474,237,392	(31,328,727)
Asset Balance as of the End of the Year	<u>\$ 2,743,413,081</u>	<u>\$ 2,269,175,689</u>
Investment Rate of Return on Market Value	11.52%	(9.70%)



Schedule C – Summary of Receipts and Disbursements

**LIFE INSURANCE TRUST
SUMMARY OF RECEIPTS AND DISBURSEMENTS
(Market Value)**

	For the Year Ending	
	June 30, 2023	June 30, 2022
Receipts for the Year		
Contributions		
Members	\$ 0	\$ 0
State	2,599,486	2,194,049
Employer	624,074	560,814
Total	\$ 3,223,560	\$ 2,754,863
Net Investment Income	8,682,485	(15,582,277)
TOTAL	\$ 11,906,045	\$ (12,827,414)
Disbursements for the Year		
Benefit Payments	\$ 6,219,000	\$ 6,178,000
Miscellaneous, including expenses	37,633	40,999
TOTAL	\$ 6,256,633	\$ 6,218,999
Excess of Receipts over Disbursements	\$ 5,649,412	\$ (19,046,413)
Reconciliation of Asset Balances		
Asset Balance as of the Beginning of the Year	\$ 88,380,503	\$ 107,426,916
Excess of Receipts over Disbursements	5,649,412	(19,046,413)
Asset Balance as of the End of the Year	\$ 94,029,915	\$ 88,380,503
Investment Rate of Return on Market Value	9.63%	(14.96%)



Schedule D – Statement of Actuarial Assumptions and Methods

The rates of retirement, disability, mortality, termination, salary increases, and rates of future benefit participation 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. The health care cost trend rates and expected plan costs were determined by the actuary based on recent experience.

VALUATION DATE: June 30, 2023

DISCOUNT RATE: 7.10% per annum, compounded annually for the Health Insurance Trust
7.10% per annum, compounded annually for the Life Insurance Trust

HEALTH CARE COST TREND RATES: Following is a chart detailing health care trend assumptions.

Fiscal Year Ended	Medicare Part B	Medical
2024	5.92%	6.50%
2025	6.03	6.25
2026	6.71	6.00
2027	6.86	5.75
2028	6.78	5.50
2029	6.27	5.25
2030	5.82	5.00
2031	6.17	4.75
2032	5.61	4.50
2033	4.87	4.50
2034	4.62	4.50
2035 and beyond	4.50	4.50

EXPECTED ANNUAL CLAIMS: For retirees ages 65 and older, per capita costs are adjusted to reflect expected cost changes related to age. The relative value factors used were developed from the Society of Actuaries' June 2013 research report Health Care Costs—From Birth to Death by Dale Yamamoto and from the ASOP 6 practice note developed by the American Academy of Actuaries. Representative values of the expected annual claims based on a blended 2024 MEHP rate of \$207 per month, or \$2,484 per year, are as follows:

Age	Male	Female
65	\$1,709	\$1,629
70	2,078	2,002
75	2,467	2,338
80	2,864	2,694
85	3,226	3,039
90	3,543	3,300



Schedule D – Statement of Actuarial Assumptions and Methods

For the retiree health care liabilities of those under age 65, the current premium charged by the Kentucky Employees' Health Plan (KEHP) is used as the base cost and is projected forward using the health care trend assumption. No implicit rate subsidy is calculated or recognized, as the implicit rate subsidy is deemed the responsibility of the KEHP. Under Actuarial Standard of Practice No. 6 (ASOP No. 6), aging subsidies (or implicit rate subsidies) should be recognized, as the differences in health care utilization and cost due to age have been demonstrated and well quantified.

The impact of aging on a valuation's results can be as significant as the use of mortality, trend, and discounting. It has been the long-standing position that the responsibility for compliance with GASB Statement No. 43, when it relates to KEHP implicit subsidies, rests with KEHP, not the system, as the system has no operational authority over KEHP. As such, KEHP implicit subsidies are excluded from the OPEB valuation process of the Retiree Medical Plan. As GASB 74 and 75 prohibit such a deviation from ASOP No. 6, additional consideration to the current treatment of KEHP implicit rate subsidies may be needed in the future. Valuing the KEHP implicit subsidies will increase the actuarial accrued liability for GASB 74 and 75 purposes.

RETIREE MEDICAL PLAN COSTS: Assumed per capita health care costs were based on past experience and trended based on the assumptions. Following are charts detailing retiree per capita assumptions. These amounts include medical, drug, and administrative costs and represent the amount that the system pays as the full contribution amount. An additional \$8.00 per month is paid to the Department of Employee Insurance (DEI) and is not included in the under age 65 costs listed below. For retirees ages 65 and older, the average costs shown are normalized to age 65 and then age adjusted in calculating liabilities.

Monthly Under Age 65 KEHP Full Costs as of January 1, 2024			
Tier Elected	LivingWell CDHP	LivingWell PPO	LivingWell Basic CDHP
Single	\$930.76	\$949.04	\$901.04
Parent Plus	\$1,269.28	\$1,320.40	\$1,234.80
Couple	\$1,866.24	\$1,981.62	\$1,863.04
Family	\$2,078.08	\$2,185.78	\$2,069.88
Family C-R	\$1,068.66	\$1,126.28	\$1,057.40

RETIREE MEDICAL PLAN CONTRIBUTION: The portion of the medical plan premiums paid by participants is composed of a Plan Option Cost, a Time-Specific Adjustment Cost and a Shared Responsibility Cost. Retirees under the age of 65 who do not complete their LivingWell Promise will be charged an additional \$40 per month above the Plan Option Cost detailed below. An additional contribution is required to be paid by retirees under the age of 65 who use tobacco (\$40 for Single or Family Cross-Reference, and \$80 for Parent Plus, Couple or Family).

Monthly Under Age 65 KEHP Plan Option Costs as of January 1, 2024			
Tier Elected	LivingWell CDHP	LivingWell PPO	LivingWell Basic CDHP
Single	\$53.46	\$89.14	\$28.34
Parent Plus	\$137.06	\$254.10	\$67.52
Couple	\$339.34	\$571.76	\$281.42
Family	\$398.92	\$716.64	\$337.68
Family C-R*	\$86.90	\$170.48	\$31.50
Spouse – Single	\$938.76	\$957.04	\$909.04
Spouse – Parent Plus	\$1,277.28	\$1,328.40	\$1,242.80

*Per employee/retiree



Schedule D – Statement of Actuarial Assumptions and Methods

TIME-SPECIFIC ADJUSTMENT PLUS SHARED RESPONSIBILITY COST: The chart below and on the page following are the Time-Specific Adjustment costs paid by Retirees in addition to the Plan Option Costs shown prior.

Abbreviations for Time-Specific Adjustment Charts:

LW CDHP = LivingWell CDHP

LW PPO = LivingWell PPO

LW Basic = LivingWell Basic CDHP

Time-Specific Adjustments for Retirees Employed Before July 1, 2002 as of January 1, 2024						
Plan	Years of Service	Single	Parent Plus	Couple	Family	Family C-R
LW CDHP	5 – 9.99	\$701.65	\$956.57	\$1,351.25	\$1,503.51	\$806.11
	10 – 14.99	526.00	780.92	1,175.60	1,327.86	630.46
	15 – 19.99	350.35	605.27	999.95	1,152.21	454.81
	20 or More	174.70	429.62	824.30	976.56	279.16
LW PPO	5 – 9.99	\$688.60	\$890.65	\$1,234.21	\$1,293.49	\$780.15
	10 – 14.99	517.30	715.00	1,058.56	1,117.84	604.50
	15 – 19.99	346.00	539.35	882.91	942.19	428.85
	20 or More	174.70	363.70	707.26	766.54	253.20
LW Basic	5 – 9.99	\$698.20	\$991.63	\$1,405.97	\$1,556.55	\$850.25
	10 – 14.99	523.70	815.98	1,230.32	1,380.90	674.60
	15 – 19.99	349.20	640.33	1,054.67	1,205.25	498.95
	20 or More	174.70	464.68	879.02	1,029.60	323.30



Schedule D – Statement of Actuarial Assumptions and Methods

Time-Specific Adjustments for Retirees Employed On/After July 1, 2002 as of January 1, 2024						
Plan	Years of Service	Single	Parent Plus	Couple	Family	Family C-R
LW CDHP	5 – 9.99	\$807.04	\$1,061.96	\$1,456.64	\$1,608.90	\$911.50
	10 – 14.99	701.65	956.57	1,351.25	1,503.51	806.11
	15 – 19.99	561.13	816.05	1,210.73	1,362.99	665.59
	20 – 24.99	420.61	675.53	1,070.21	1,222.47	525.07
	25 – 25.99	244.96	499.88	894.56	1,046.82	349.42
	26 – 26.99	209.83	464.75	859.43	1,011.69	314.29
	27 or More	174.70	429.62	824.30	976.56	279.16
LW PPO	5 – 9.99	\$791.38	\$996.04	\$1,339.60	\$1,398.88	\$885.54
	10 – 14.99	688.60	890.65	1,234.21	1,293.49	780.15
	15 – 19.99	551.56	750.13	1,093.69	1,152.97	639.63
	20 – 24.99	414.52	609.61	953.17	1,012.45	499.11
	25 – 25.99	243.22	433.96	777.52	836.80	323.46
	26 – 26.99	208.96	398.83	742.39	801.67	288.33
	27 or More	174.70	363.70	707.26	766.54	253.20
LW Basic	5 – 9.99	\$802.90	\$1,097.02	\$1,511.36	\$1,661.94	\$955.64
	10 – 14.99	698.20	991.63	1,405.97	1,556.55	850.25
	15 – 19.99	558.60	851.11	1,265.45	1,416.03	709.73
	20 – 24.99	419.00	710.59	1,124.93	1,275.51	569.21
	25 – 25.99	244.50	534.94	949.28	1,099.86	393.56
	26 – 26.99	209.60	499.81	914.15	1,064.73	358.43
	27 or More	174.70	464.68	879.02	1,029.60	323.30

CURRENT RETIREE MEDICAL PLAN PARTICIPATION: Actual census data and current plan elections (including waivers) provided by the system were used for those retirees currently participating in the Retiree Medical Plan. Current participants are assumed to maintain their current Retiree Medical Plan coverage until they are no longer eligible.

ANTICIPATED RETIREE MEDICAL PLAN PARTICIPATION: The assumed annual rates of health care plan participation for future retirees are as follows:

Years of Service	Member Participation		
	TRS 1	TRS 2	TRS 3 & TRS 4
5-9.99	20%	20%	Not Eligible
10-14.99	40	20	Not Eligible
15-19.99	70	40	40%
20-24.99	90	50	50
25-25.99	90	80	80
26-26.99	90	85	85
27 or more	90	90	90



Schedule D – Statement of Actuarial Assumptions and Methods

ANTICIPATED RETIREE MEDICAL PLAN ELECTIONS: The assumed rates of plan election for future retirees participating in the KEHP plans are provided in the following table. As the assumed plan election rates are estimates and actual results may be materially different, this assumption will need to be revised as experience evolves.

LivingWell CDHP	LivingWell PPO	LivingWell Basic CDHP
58%	39%	3%

SPOUSE COVERAGE IN RETIREE MEDICAL PLAN: Actual census data and current plan elections were used for MEHP and KEHP covered spouses (including beneficiaries) of current retirees. For spouses of future retirees, 30% of future male retirees are assumed to cover their spouse and 25% of future female retirees are assumed to cover their spouse. Male retirees are assumed to be three years older than their spouse and female retirees are assumed to be one year younger than their spouse.

DISABLED DEPENDENT CHILDREN IN RETIREE MEDICAL PLAN: The liability associated with disabled dependent children was determined to be de minimis and was therefore excluded from this valuation.

WITHDRAWAL ASSUMPTION: Future vested members who terminate employment prior to retirement are assumed to elect to withdraw their contributions based upon their age and service at termination of employment as follows:

Rates of Withdrawal Upon Termination of Employment			
Age at Termination of Employment	Years of Service		
	5 - 9	10 - 14	15+
Under Age 55	20%	15%	10%
Ages 55+	10%	10%	10%

All vested members who terminate employment prior to retirement are assumed to elect to withdraw their contributions prior to receiving a pension benefit based upon their service as follows:

Rates of Withdrawal Prior to Receiving a Pension Benefit			
Years of Service			
5 - 9	10 - 14	15 - 26	27+
25%	15%	10%	25%

All vested members who terminate employment prior to retirement and who are assumed to elect to receive a pension benefit are assumed to begin receiving their benefit at age 60.



Schedule D – Statement of Actuarial Assumptions and Methods

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%

PAYROLL GROWTH: 2.75% per annum, compounded annually.

PRICE INFLATION: 2.50% per annum, compounded annually.

FEDERAL LEGISLATION: The impacts of the Affordable Care Act (ACA) and the Inflation Reduction Act (IRA) were addressed in this valuation. Review of the information currently available did not identify any specific provisions of the legislation that are anticipated to directly impact results at this time other than plan design features and fees currently mandated by the ACA and incorporated in the plan designs, which are included in the current baseline claims costs, and the anticipation of potential changes to Medicare due to the IRA, which are included in our trend assumption and considered in our sensitivity analysis section in Schedule G. Continued monitoring of the impact on the Plan's liability due to this and other legislation, if applicable, will be required.

COVID-19: The impact of the COVID-19 pandemic was considered in this valuation; however, no changes were incorporated at this time due to the level of uncertainty regarding the impact on both plan costs and contribution levels going forward. Given the uncertainty regarding COVID- 19 (e.g., the impact of routine care being deferred, direct COVID-19 treatment and prevention costs, changes in contribution and budget projections), continued monitoring of the impact on the Plan's liability will be required.

ASSET VALUATION METHOD: 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. The amount recognized each year is 20% of the difference between market value and expected actuarial value. The ultimate assumed valuation rate of return is assumed to be 7.10% for the Health Insurance Trust and 7.10% for the Life Insurance Trust.



Schedule D – Statement of Actuarial Assumptions and Methods

ACTUARIAL COST METHOD: 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, and gender. 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. 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 deferred vested members to obtain the present value of all expected benefits payable from the system on account of the present group of members and beneficiaries.

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 accrued liability contribution.

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.

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 D – Statement of Actuarial Assumptions and Methods

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

Age	Annual Rates for Males				
	Death*	Disability	Withdrawal		
			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
50	0.115	0.28	14.25	4.50	1.10
55	0.187	0.40	15.00	6.00	1.25
60	0.304	0.50	15.00	0.00	0.00
62	0.366	0.50	15.00	0.00	0.00
65	0.478	0.50	20.00	0.00	0.00
70	0.723	0.50	20.00	0.00	0.00
75	1.141	0.50	20.00	0.00	0.00

* Base Rates

AGE	Annual Rates for Females				
	DEATH*	DISABILITY	Withdrawal		
			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
50	0.058	0.38	15.00	4.50	1.25
55	0.091	0.50	15.00	5.00	1.60
60	0.141	0.60	17.50	0.00	0.00
62	0.166	0.62	17.50	0.00	0.00
65	0.212	0.65	25.00	0.00	0.00
70	0.344	0.65	25.00	0.00	0.00
75	0.639	0.65	25.00	0.00	0.00

* Base Rates



Schedule D – Statement of Actuarial Assumptions and Methods

SEPARATIONS FROM SERVICE: Representative values of the assumed annual rates of retirement, are as follows:

Members Prior to January 1, 2022				
	Annual Rates for Males		Annual Rates for Females	
AGE	Before 27 Years of Service	After 27 Years of Service*	Before 27 Years of Service	After 27 Years of Service**
45		17.0%		17.0%
50		25.0		20.0
55	5.25%	40.0	5.0%	50.0
60	13.50	33.0	15.0	40.0
62	15.00	30.0	15.0	40.0
65	20.00	30.0	25.0	40.0
70	25.00	30.0	30.0	35.0
75	100.00	100.0	100.0	100.0

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

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

Members on and after January 1, 2022						
	Annual Rates for Males			Annual Rates for Females		
AGE	Before 20 Years of Service	20-29 Years of Service	30 or More Years of Service*	Before 20 Years of Service	20-29 Years of Service	30 or More Years of Service*
57	3.0%	5.0%	25.0%	3.0%	5.0%	30.0%
60	8.5	13.5	25.0	10.0	15.0	30.0
62	12.0	15.0	25.0	12.0	15.0	25.0
65	20.0	20.0	25.0	25.0	25.0	30.0
70	25.0	25.0	25.0	30.0	30.0	30.0
75	100.0	100.0	100.0	100.0	100.0	100.0

* Plus 20.0% in the first year attaining 30 years of service; plus 25% at age 65 in the first year attaining 30 years of service



Schedule D – Statement 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 94%.

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 E – Summary of Main Plan Provisions

AS INTERPRETED FOR VALUATION PURPOSES

ELIGIBILITY FOR ACCESS TO RETIREE MEDICAL PLAN COVERAGE:

Service Retirement:

TRS 1 and TRS 2 Members	Completion of 27 years of service, or Attainment of age 55 and 5 years of service
TRS 3 Members	Completion of 27 years of service, or Attainment of age 55 and 10 years of service, or Attainment of age 60 and 5 years of service
TRS 4 Members	Attainment of age 57 and 10 years of service, or Attainment of age 65 and 5 years of service

For employees hired prior to July 1, 2008, Retiree Medical Plan coverage eligibility is attained when an employee retires, as described above. All other employees must be eligible to retire and additionally have completed a minimum of 15 years of service to be eligible for Retiree Medical Plan coverage.

Disability Retirement: Disabled employees hired prior to July 1, 2008 with at least 5 years of service, who are totally and permanently incapable of being employed as a teacher, are eligible for Retiree Medical Plan coverage upon approval for TRS disability retirement benefits. Disabled employees hired after July 1, 2008 must have 15 years of service to be eligible for Retiree Medical Plan coverage upon approval for TRS disability retirement benefits.

Members and dependents under age 65 and eligible for Medicare due to a disability after January 1, 2013 are only eligible to enroll in the MEHP. Under age 65 members who retired prior to January 1, 2013, are grandfathered from this requirement, and allowed a choice of KEHP or MEHP coverage. Actual census data and current plan elections were used for current disabled retirees. All future disabled members under the age of 65 with Medicare are placed on the MEHP and not the KEHP. This has been consistently applied since 2013.

Survivors: Spouses of employees who die in service while eligible to retire, as well as survivors of service and disabled retirees, are eligible for Retiree Medical Plan coverage if elected within 30 days of the employee's/retiree's death with no future remarriage. Otherwise, survivor is not eligible for Retiree Medical Plan coverage.

Spousal Shared Risk Waiver for MEHP: Beginning in 2013, eligible spouses who waive the MEHP coverage will no longer have the opportunity to enroll during any annual MEHP open enrollment, so most spousal waivers on the MEHP are now permanent waivers unless a TRS specific qualifying event is met. This does not apply to the KEHP. This MEHP eligibility rule became necessary to mitigate spousal adverse selection with zero premium Medicare Advantage plans on the individual and open market.

Termination: For employees hired prior to July 1, 2008 and who terminated with at least 5 years of service, Retiree Medical Plan coverage is assumed to begin at age 60. For employees hired on or after July 1, 2008 and who terminated with at least 15 years of service, Retiree Medical Plan coverage is assumed to begin at age 60.

Reemployed Retirees: Effective January 1, 2019 and because of the Affordable Care Act (ACA) and Medicare secondary payer (MSP) federal rules, if a TRS retiree returns to work and is offered the same health insurance coverage as any full-time employee (whether the KEHP, MEHP, or another plan), then the member must waive coverage through TRS. For valuation purposes, active employees identified as currently receiving retiree health care through the system are valued as retirees. Retirees making active contributions into a second account do not qualify for insurance on that second account.



Schedule E – Summary of Main Plan Provisions

COVERED MEMBER RETIREE MEDICAL PLAN CONTRIBUTIONS:

Under Age 65 Retiree Shared Responsibility Contribution: Effective July 1, 2010, retirees under the age of 65 began a three-year phase-in of the Shared Responsibility Contribution. This contribution reduces the applicable amount of the full contribution provided by the system to retirees, by adjusting the Shared Responsibility Contribution amount by 100% less the appropriate percentage from the Retiree Percentage Contribution table below. Effective July 1, 2012, the full Shared Responsibility Contribution equals the Standard Medicare Part B premium paid by retirees ages 65 and older.

Monthly Under Age 65 Shared Responsibility Contribution Timeline			
Effective Date	Medicare Part B Monthly Cost	Formula	Shared Responsibility Contribution
July 1, 2010	\$110.50	$(1/3 \times \$110.50)$	\$ 37.00
January 1, 2011	115.40	$(1/3 \times 115.40)$	39.00
July 1, 2011	115.40	$(2/3 \times 115.40)$	77.00
January 1, 2012	99.90	$(2/3 \times 99.90)$	66.00
July 1, 2012	99.90	99.90	99.90
January 1, 2013	104.90	104.90	104.90
January 1, 2014	104.90	104.90	104.90
January 1, 2015	104.90	104.90	104.90
January 1, 2016	121.80	121.80	121.80
January 1, 2017	134.00	134.00	134.00
January 1, 2018	134.00	134.00	134.00
January 1, 2019	135.50	135.50	135.50
January 1, 2020	144.60	144.60	144.60
January 1, 2021	148.50	148.50	148.50
January 1, 2022	170.10	170.10	170.10
January 1, 2023	164.90	164.90	164.90
January 1, 2024	174.70	174.70	174.70

Retiree Years of Service Percentage Contribution: Retirees contribute the following percentages based on years of service at retirement, which are then applied to the Retiree Contribution Rate Basis:

Retiree Percentage Contribution*				
Year of Service	TRS 1		TRS 2	TRS 3 & TRS 4
	Age 65 or Older and Covered Before 1/1/2005	Age 65 After or Covered After 12/31/2004		
5 – 9.99	30%	75%	90%	Not Eligible
10 – 14.99	20	50	75	Not Eligible
15 – 19.99	10	25	55	55%
20 – 24.99	0	0	35	35
25 – 25.99	0	0	10	10
26 – 26.99	0	0	5	5
27 or more	0	0	0	0

*0% for disabled retirees that retired prior to 1/1/2002



Schedule E – Summary of Main Plan Provisions

COVERED MEMBER RETIREE MEDICAL PLAN CONTRIBUTIONS (CONTINUED):

For 2024, the TRS Board of Trustees approved a single contribution amount of up to \$877.30 as well as an additional \$8.00 per month paid to the Department of Employee Insurance (DEI) for participants on the Kentucky Employees' Health Plan (KEHP). TRS will contribute this amount towards insurance costs, less the Shared Responsibility cost of \$174.70. Under-65 retirees who are not Medicare eligible and continue on the KEHP are responsible for the remaining costs left from the total premium costs. The total premium costs are shown below.

Monthly Full Costs Effective January 1, 2024				
Tier Elected	Under Age 65 (KEHP)*			Ages 65 and Older (MEHP)
	LivingWell CDHP	LivingWell PPO	LivingWell Basic CDHP	
Single	\$930.76	\$949.04	\$901.04	\$207.00
Parent Plus	1,269.28	1,320.40	1,234.80	n/a
Couple	1,866.24	1,981.62	1,863.04	n/a
Family	2,078.08	2,185.78	2,069.88	n/a
Family C-R	1,068.66	1,126.28	1,057.40	n/a

* Does not include the additional contribution required to be paid by retirees under the age of 65 who use tobacco (\$40 for Single or Family Cross-Reference, and \$80 for Parent Plus, Couple or Family). Also, this does not include the additional contribution required to be paid by retirees under the age of 65 who do not complete their LivingWell Promise, which is an additional \$40 per month for all levels of coverage—single, parent +, couple, and family. For valuation purposes, it is conservatively assumed that, over time, 100% of KEHP retirees will complete their LivingWell Promise. This assumption will be monitored in future experience studies.

Spouse Contributions: 100% of the full cost for non-Medicare eligible dependents is paid through a combination of payments from beneficiaries and the State. Neither the State nor TRS will pay any subsidy for family style coverage.

Survivors: Spouses of employees who die in service while eligible to retire, as well as survivors of service and disabled retirees, are eligible for Retiree Medical Plan coverage if elected within 30 days of the employee's/retiree's death with no future remarriage. Otherwise, survivor is not eligible for Retiree Medical Plan coverage.

Spousal Shared Risk Waiver for MEHP: Beginning in 2013, eligible spouses who waive the MEHP coverage, will no longer have the opportunity to enroll during any annual MEHP open enrollment so most spousal waivers on the MEHP are now permanent waivers unless a TRS specific qualifying event is met. This does not apply to the KEHP. This MEHP eligibility rule became necessary to mitigate spousal adverse selection with zero premium Medicare Advantage plans on the individual and open market.

Monthly Surviving Spouse Contribution Effective January 1, 2024				
Tier Elected by Surviving Spouse	Under Age 65 (KEHP)			Ages 65 and Older (MEHP)
	LivingWell CDHP	LivingWell PPO	LivingWell Basic CDHP	
Single	\$938.76	\$957.04	\$909.04	\$207.00
Parent Plus	1,277.28	1,328.40	1,242.80	n/a



Schedule E – Summary of Main Plan Provisions

SYSTEM RETIREE MEDICAL PLAN CONTRIBUTIONS: The system Contribution Rate Basis is determined annually by the system, and the full cost is projected based on historical claims data. For retirees, the following percentages are based on years of service at retirement and are then applied to the System Contribution Rate Basis:

Percentage of System Contribution Rate Provided to Retirees*				
Year of Service	TRS 1		TRS 2	TRS 3 & TRS 4
	Age 65 or Older and Covered Before 1/1/2005	Age 65 After or Covered After 12/31/2004		
5 – 9.99	70%	25%	10%	Not Eligible
10 – 14.99	80	50	25	Not Eligible
15 – 19.99	90	75	45	45%
20 – 24.99	100	100	65	65
25 – 25.99	100	100	90	90
26 – 26.99	100	100	95	95
27 or more	100	100	100	100

*100% for disabled retirees that retired prior to 1/1/2002

ACTIVE MEMBER RETIREE MEDICAL PLAN CONTRIBUTIONS: Actively employed members make payroll contributions to the Health Insurance Trust based upon the following schedule:

Active Member Percentage of Payroll Contribution Made to Health Insurance Trust								
University Employees			School District Employees (Non-Federal)			Other Employees		
TRS 1 & TRS 2	TRS 3	TRS 4	TRS 1 & TRS 2	TRS 3	TRS 4	TRS 1 & TRS 2	TRS 3	TRS 4
2.775	2.775	2.775	3.750	3.750	3.750	3.750	3.750	3.750



Schedule E – Summary of Main Plan Provisions

LIFE INSURANCE PLAN BENEFITS:

(1) Effective July 1, 2000, the Teachers' Retirement System shall:

- (a) Provide a life insurance benefit in a minimum amount of five thousand dollars (\$5,000) for its members who are retired for service or disability if hired prior to January 1, 2022. Provide a life insurance benefit in a minimum amount of ten thousand dollars (\$10,000) for its members who are retired for service or disability if hired on or after January 1, 2022. This life insurance benefit shall be payable upon the death of a member retired for service or disability to the member's estate or to a party designated by the member on a form prescribed by the retirement system; and
- (b) Provide a life insurance benefit in a minimum amount of two thousand dollars (\$2,000) for its active contributing members if hired prior to January 1, 2022. Provide a life insurance benefit in a minimum amount of five thousand dollars (\$5,000) for its active contributing members if hired on or after January 1, 2022. This life insurance benefit shall be payable upon the death of an active contributing member to the member's estate or to a party designated by the member on a form prescribed by the retirement system.

Note: Members employed on a substitute or part-time basis and working at least 69% of a full contract year in a single fiscal year will be eligible for a life insurance benefit for the balance of the fiscal year or the immediately succeeding fiscal year under certain conditions. For non-vested members employed on a substitute or part-time basis, the life insurance benefit is provided if death occurs as the result of a physical injury on the job. For vested members employed on a substitute or part-time basis, death does not have to be the result of a physical injury on the job for life insurance benefits to be provided.



Schedule F – Tables of Member Data

**TABLE 1
ACTIVE MEMBER AGE AND SERVICE TABLE AS OF JUNE 30, 2023**

Distribution of Active Members as of June 30, 2023 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 26	27 to 29	30 to 34	35 & Over	No.	Payroll
Under 25	2,534	2,100	5	0	0	0	0	0	0	0	4,639	\$ 106,550,341
25 to 29	932	4,814	2,001	0	0	0	0	0	0	0	7,747	332,977,424
30 to 34	648	2,058	4,198	1,386	3	0	0	0	0	0	8,293	419,080,912
35 to 39	602	1,515	2,011	4,081	1,472	2	0	0	0	0	9,683	555,118,755
40 to 44	635	1,466	1,548	1,948	4,432	1,403	4	1	0	0	11,437	717,111,512
45 to 49	409	916	1,103	1,232	1,962	3,977	893	151	3	0	10,646	728,927,098
50 to 54	643	911	767	963	1,432	2,019	1,326	1,433	382	1	9,877	669,251,901
55 to 59	877	970	467	522	816	1,026	444	417	321	37	5,897	339,713,715
60 to 64	687	1,006	354	316	359	460	162	187	123	56	3,710	169,433,771
65 to 69	558	725	240	110	114	139	67	58	57	33	2,101	66,003,305
70 & Over	446	623	257	78	55	46	23	25	28	33	1,614	34,740,258
Total Count	8,971	17,104	12,951	10,636	10,645	9,072	2,919	2,272	914	160	75,644	\$ 4,138,908,992

Average Age: 43.5

Average Service: 11.1

Retirement Eligible: 9,452



Schedule F – Tables of Member Data

**TABLE 2
SCHEDULE OF TOTAL ACTIVE MEMBER VALUATION DATA**

Valuation Date	Number	Annual Payroll	Annual Average Payroll	Percentage Increase in Average Pay
6/30/2023	75,644	\$ 4,138,908,992	\$ 54,716	1.45 %
6/30/2022	74,785	4,033,509,178	53,935	(1.30)
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	3,515,113,126	48,655	2.45

**TABLE 3
ELIGIBLE DEFERRED VESTED MEMBERS AS OF JUNE 30, 2023
MALE AND FEMALE DEMOGRAPHIC BREAKDOWN**

Attained Age	Health Insurance Trust			Life Insurance Trust		
	Number of		Total	Number of		Total
	Males	Female	Number	Males	Female	Number
Under 30	1	0	1	21	101	122
30 - 34	27	35	62	203	612	815
35 - 39	172	562	734	353	1,200	1,553
40 - 44	397	1,152	1,549	505	1,530	2,035
45 - 49	356	1,106	1,462	450	1,408	1,858
50 - 54	363	1,369	1,732	442	1,636	2,078
55 - 59	247	954	1,201	299	1,124	1,423
60 & Over	265	911	1,176	343	1,104	1,447
Total	1,828	6,089	7,917	2,616	8,715	11,331



Schedule F – Tables of Member Data

TABLE 4
ALL RETIREES AND SPOUSES RECEIVING HEALTH CARE BENEFITS AS OF JUNE 30, 2023
MALE AND FEMALE DEMOGRAPHIC BREAKDOWN

Attained Age	Number of		Total Number
	Males	Female	
Under 40	0	3	3
40 - 44	2	18	20
45 - 49	27	78	105
50 - 54	347	873	1,220
55 - 59	1,053	2,351	3,404
60 - 64	1,625	3,857	5,482
65 - 69	2,376	5,936	8,312
70 - 74	3,562	8,016	11,578
75 - 79	3,043	5,803	8,846
80 - 84	1,704	3,269	4,973
85 - 89	802	1,572	2,374
90 - 94	272	712	984
95 - 99	51	216	267
100 & Over	8	34	42
Total	14,872	32,738	47,610



Schedule F – Tables of Member Data

TABLE 5
SCHEDULE OF RETIRANTS, BENEFICIARIES AND SURVIVORS ADDED TO AND REMOVED FROM ROLLS*

Health Insurance Trust									
Fiscal Year Ending June 30	Number of Members Added to Rolls	Number of Spouses** Added to Rolls	Total Number Added to Rolls	Number of Members Removed from Rolls	Number of Spouses** Removed from Rolls	Total Number Removed from Rolls	Number of Members on Rolls at the End of the Year	Number of Spouses** on Rolls at the End of the Year	Total Number on Rolls at the End of the Year
2015	1,990	731	2,721	1,190	633	1,823	38,075	7,129	45,204
2016	2,045	726	2,771	1,305	674	1,979	38,815	7,181	45,996
2017	1,835	699	2,534	1,153	691	1,844	39,497	7,189	46,686
2018	1,903	828	2,731	1,170	422	1,592	40,230	7,595	47,825
2019	1,701	666	2,367	1,220	692	1,912	40,711	7,569	48,280
2020	1,500	487	1,987	1,057	1,173	2,230	41,154	6,883	48,037
2021	1,548	448	1,996	1,527	603	2,130	41,175	6,728	47,903
2022	1,600	466	2,066	1,598	533	2,131	41,177	6,661	47,838
2023	1,619	369	1,988	1,741	475	2,216	41,055	6,555	47,610

*Reflects members, spouses, and beneficiaries participating in a health care plan.

**Includes spouses, beneficiaries, and surviving spouses.

TABLE 6
SCHEDULE OF RETIRANTS, BENEFICIARIES AND SURVIVORS ADDED TO AND REMOVED FROM ROLLS*

Life Insurance Trust								
Fiscal Year Ending June 30	Number Added to Rolls	Life Insurance Benefit (\$1,000's)	Number Removed from Rolls	Life Insurance Benefit (\$1,000's)	Number on Rolls at the End of the Year	Life Insurance Benefit (\$1,000's)	Increase in Life Insurance Benefit	Average Life Insurance Benefit
2015	2,270	11,350	1,641	8,205	45,484	227,420	1.40 %	5,000
2016	2,394	11,970	807	4,035	47,071	235,355	3.49	5,000
2017	2,175	10,875	1,021	5,105	48,225	241,125	2.45	5,000
2018	2,605	13,025	1,408	7,040	49,422	247,110	2.48	5,000
2019	2,226	11,130	210	1,050	51,438	257,190	4.08	5,000
2020	2,003	10,015	1,179	5,895	52,262	261,310	1.60	5,000
2021	1,886	9,430	2,417	12,085	51,731	258,655	(1.02)	5,000
2022	2,213	11,065	1,731	8,655	52,213	261,065	0.93	5,000
2023	2,600	13,000	1,434	7,170	53,379	266,895	2.23	5,000

* Beginning with the June 30, 2021 valuation date, the counts in the exhibit above reflect all adjustments, which resulted in a larger number removed from rolls. Prior to June 30, 2021, the exhibit reflected the initial member counts.



Schedule G – Health Insurance Trust Sensitivity Analysis

The June 30, 2023 valuation results of the Health Insurance Trust (health trust) are projections based on the actuarial assumptions. Actual experience will differ from these assumptions, either increasing or decreasing cost. The charts on the following pages provide a simple analysis on how the costs are sensitive to changes to the assumed discount rate, the assumed inflation rate, the assumed rate of payroll growth, and the assumed rates of health care costs due to inflation (trend) and/or Federal legislation. The charts show the actuarial accrued liability, the unfunded liability, the funded ratio, and the employer contribution rate under the following scenarios:

- The discount rate assumption sensitivity analysis shows the valuation results with the baseline discount rate assumption, 7.10%, together with a decrease in the discount rate to 6.10% and an increase in the discount rate to 8.10%. Under this scenario, the underlying inflation rate assumption is held constant at 2.50% and the payroll growth assumption is held constant at 2.75%.
- The inflation assumption sensitivity analysis shows the valuation results with the baseline underlying inflation rate assumption, 2.50%, together with decreases in the inflation rate to 2.25% and 2.00%. Under this scenario, the decrease in the underlying inflation rate assumption leads to corresponding decreases in the discount rate, the payroll growth assumption, the assumed rates of salary increase for active members, and the ultimate health care trend.
- The wage inflation assumption sensitivity analysis shows the valuation results with the baseline underlying payroll growth assumption, 2.75%, together with decreases in the wage inflation assumption to 1.25% and 0.00%. Under this scenario, all other assumptions, including the individual member salary scale, are held constant so that the only impact is in the amortization of the unfunded liability, leading to higher employer contribution rates.
- The health care inflation (trend) assumption sensitivity analysis shows the valuation results with the baseline trend assumption along with a 1.00% increase in all assumed trend rates and a 1.00% decrease in all assumed trend rates.
- The MEHP cost sensitivity analysis shows the valuation results with the baseline costs along with cost scenarios reflecting potential changes due to the Inflation Reduction Act. It is not yet clear how the Medicare Part D plan design changes due to the Inflation Reduction Act will impact prescription drug costs for the plan that are not reimbursed by CMS, so as an illustration we calculated plan liabilities without the current Coverage Gap Discount Program and Federal Reinsurance reductions.



Schedule G – Health Insurance Trust Sensitivity Analysis

TEACHERS' RETIREMENT SYSTEM OF KENTUCKY HEALTH INSURANCE TRUST ASSUMED DISCOUNT RATE SENSITIVITY ANALYSIS (\$1,000's)			
	Decrease Discount Rate	Valuation Results	Increase Discount Rate
Actuarial Accrued Liability	\$ 4,479,067	\$ 3,909,612	\$ 3,445,981
Actuarial Value of Assets	2,788,970	2,788,970	2,788,970
Unfunded Liability	\$ 1,690,097	\$ 1,120,642	\$ 657,011
Funded Ratio	62.27%	71.34%	80.93%
Contributions			
Normal Cost	2.71%	2.04%	1.55%
Accrued Liability	3.07%	2.17%	1.36%
Total	<u>5.78%</u>	<u>4.21%</u>	<u>2.91%</u>
Member	(3.70%)	(3.70%)	(3.70%)
Employer	(2.99%)	(2.99%)	(2.99%)
State	(2.59%)	(2.59%)	(2.59%)
Statutorily Required Prefunding*	<u>(3.50%)</u>	<u>(5.07%)</u>	<u>(6.37%)</u>
Discount Rate	6.10%	7.10%	8.10%
Payroll Growth	2.75%	2.75%	2.75%
Inflation Rate	2.50%	2.50%	2.50%
Ultimate Health Care Trend	4.50%	4.50%	4.50%

* This represents funding by active members, local school districts, universities and other employers toward the unfunded liability of the health trust. See KRS 161.540(1)(c)(3) & 161.550(5).



Schedule G – Health Insurance Trust Sensitivity Analysis

TEACHERS' RETIREMENT SYSTEM OF KENTUCKY HEALTH INSURANCE TRUST INFLATION ASSUMPTION SENSITIVITY ANALYSIS (\$1,000's)			
	Valuation Results	Decrease Inflation Rate 0.25%	Decrease Inflation Rate 0.50%
Actuarial Accrued Liability	\$ 3,909,612	\$ 3,976,854	\$ 4,051,759
Actuarial Value of Assets	2,788,970	2,788,970	2,788,970
Unfunded Liability	\$ 1,120,642	\$ 1,187,884	\$ 1,262,789
Funded Ratio	71.34%	70.13%	68.83%
Contributions			
Normal Cost	2.04%	2.08%	2.12%
Accrued Liability	2.17%	2.31%	2.45%
Total	4.21%	4.39%	4.57%
Member	(3.70%)	(3.70%)	(3.70%)
Employer	(2.99%)	(2.99%)	(2.99%)
State	(2.59%)	(2.59%)	(2.59%)
Statutorily Required Prefunding*	(5.07%)	(4.89%)	(4.71%)
Discount Rate	7.10%	6.85%	6.60%
Payroll Growth	2.75%	2.50%	2.25%
Inflation Rate	2.50%	2.25%	2.00%
Ultimate Health Care Trend	4.50%	4.25%	4.00%

* This represents funding by active members, local school districts, universities and other employers toward the unfunded liability of the health trust. See KRS 161.540(1)(c)(3) & 161.550(5).



Schedule G – Health Insurance Trust Sensitivity Analysis

TEACHERS' RETIREMENT SYSTEM OF KENTUCKY HEALTH INSURANCE TRUST WAGE INFLATION ASSUMPTION SENSITIVITY ANALYSIS (\$1,000's)			
	Valuation Results	Decrease Wage Inflation to 1.25%	No Wage Inflation
Actuarial Accrued Liability	\$ 3,909,612	\$ 3,909,612	\$ 3,909,612
Actuarial Value of Assets	2,788,970	2,788,970	2,788,970
Unfunded Liability	\$ 1,120,642	\$ 1,120,642	\$ 1,120,642
Funded Ratio	71.34%	71.34%	71.34%
Contributions			
Normal Cost	2.04%	2.04%	2.04%
Accrued Liability	2.17%	2.40%	2.61%
Total	4.21%	4.44%	4.65%
Member	(3.70%)	(3.70%)	(3.70%)
Employer	(2.99%)	(2.99%)	(2.99%)
State	(2.59%)	(2.59%)	(2.59%)
Statutorily Required Prefunding*	(5.07%)	(4.84%)	(4.63%)
Discount Rate	7.10%	7.10%	7.10%
Payroll Growth	2.75%	1.25%	0.00%
Inflation Rate	2.50%	2.50%	2.50%
Ultimate Health Care Trend	4.50%	4.50%	4.50%

* This represents funding by active members, local school districts, universities and other employers toward the unfunded liability of the health trust. See KRS 161.540(1)(c)(3) & 161.550(5).



Schedule G – Health Insurance Trust Sensitivity Analysis

TEACHERS' RETIREMENT SYSTEM OF KENTUCKY HEALTH INSURANCE TRUST HEALTH CARE TREND ASSUMPTION SENSITIVITY ANALYSIS (\$1,000's)			
	Decrease Trend Rates 1.00%	Valuation Results	Increase Trend Rates 1.00%
Actuarial Accrued Liability	\$ 3,400,209	\$ 3,909,612	\$ 4,549,344
Actuarial Value of Assets	2,788,970	2,788,970	2,788,970
Unfunded Liability	\$ 611,239	\$ 1,120,642	\$ 1,760,374
Funded Ratio	82.02%	71.34%	61.30%
Contributions			
Normal Cost	1.61%	2.04%	2.63%
Accrued Liability	1.19%	2.17%	3.42%
Total	2.80%	4.21%	6.05%
Member	(3.70%)	(3.70%)	(3.70%)
Employer	(2.99%)	(2.99%)	(2.99%)
State	(2.59%)	(2.59%)	(2.59%)
Statutorily Required Prefunding*	(6.48%)	(5.07%)	(3.23%)
Discount Rate	7.10%	7.10%	7.10%
Payroll Growth	2.75%	2.75%	2.75%
Inflation Rate	2.50%	2.50%	2.50%
Ultimate Health Care Trend	3.50%	4.50%	5.50%

* This represents funding by active members, local school districts, universities and other employers toward the unfunded liability of the health trust. See KRS 161.540(1)(c)(3) & 161.550(5).



Schedule G – Health Insurance Trust Sensitivity Analysis

The 2024 monthly TRS MEHP rate of \$207 includes \$196 in EGWP prescription drug costs. The EGWP prescription drug costs are based on projected total drug costs minus projected reimbursements from CMS and drug manufacturers for Medicare Part D rebates, subsidies, and reinsurance. If these reimbursements were not to continue at the current rate, TRS MEHP costs could increase to as much as \$552. In this case, the statutory contribution rates will be less than the actuarially determined contribution rates, the unfunded actuarial accrued liability will not be paid off in the scheduled 17 year timeframe and the health insurance fund will not reach 100% funded.

TEACHERS' RETIREMENT SYSTEM OF KENTUCKY HEALTH INSURANCE TRUST MEHP COST SENSITIVITY ANALYSIS		
(\$1,000's)		
	Valuation Results (MA Rate = \$207)	Alternative Results (MA Rate = \$552)
Actuarial Accrued Liability	\$ 3,909,612	\$ 7,576,054
Actuarial Value of Assets	2,788,970	2,788,970
Unfunded Liability	\$ 1,120,642	\$ 4,787,084
Funded Ratio	71.34%	36.81%
Contributions		
Normal Cost	2.04%	3.28%
Accrued Liability	2.17%	9.29%
Total	4.21%	12.57%
Member	(3.70%)	(3.70%)
Employer	(2.99%)	(2.99%)
State	(2.59%)	(2.59%)
Statutorily Required Prefunding*	(5.07%)	3.29%
Discount Rate	7.10%	7.10%
Payroll Growth	2.75%	2.75%
Inflation Rate	2.50%	2.50%
Ultimate Health Care Trend	4.50%	4.50%

* This represents funding by active members, local school districts, universities and other employers toward the unfunded liability of the health trust. See KRS 161.540(1)(c)(3) & 161.550(5).



Schedule H – Life Insurance Trust Sensitivity Analysis

The June 30, 2023 valuation results of the Life Insurance Trust (life trust) are projections based on the actuarial assumptions. Actual experience will differ from these assumptions, either increasing or decreasing cost. The charts on the following pages provide a simple analysis on how the costs are sensitive to changes to the assumed discount rate, the assumed inflation rate, and the assumed rate of payroll growth. The charts show the actuarial accrued liability, the unfunded liability, the funded ratio and the employer contribution rate under the following scenarios. Please note that we maintain a minimum total employer contribution rate of 0.08% for all scenarios except the 1% increase in the discount rate scenario:

- The discount rate assumption sensitivity analysis shows the valuation results with the baseline discount rate assumption 7.10%, together with a decrease in the discount rate to 6.10% and an increase in the discount rate to 8.10%. Under this scenario, the underlying inflation rate assumption is held constant at 2.50% and the payroll growth assumption is held constant at 2.75%.
- The inflation assumption sensitivity analysis shows the valuation results with the baseline underlying inflation rate assumption, 2.50%, together with decreases in the inflation rate to 2.25% and 2.00%. Under this scenario, the decrease in the underlying inflation rate assumption leads to corresponding decreases in the discount rate, the payroll growth assumption, and the assumed rates of salary increase for active members.
- The wage inflation assumption sensitivity analysis shows the valuation results with the baseline underlying wage inflation assumption, 2.75%, together with decreases in the wage inflation assumption to 1.25% and 0.00%. Under this scenario, all other assumptions, including the individual member salary scale, are held constant so that the only impact is in the amortization of the unfunded liability, leading to higher employer contribution rates.



Schedule H – Life Insurance Trust Sensitivity Analysis

TEACHERS' RETIREMENT SYSTEM OF KENTUCKY LIFE INSURANCE TRUST ASSUMED DISCOUNT RATE SENSITIVITY ANALYSIS (\$1,000's)			
	Decrease Discount Rate	Valuation Results	Increase Discount Rate
Actuarial Accrued Liability	\$ 139,906	\$ 122,611	\$ 108,622
Actuarial Value of Assets	99,027	99,027	99,027
Unfunded Liability	\$ 40,879	\$ 23,584	\$ 9,595
Funded Ratio	70.78%	80.77%	91.17%
Contributions			
Normal Cost	0.03%	0.03%	0.02%
Accrued Liability	0.06%	0.05%	0.02%
Total	<u>0.09%</u>	<u>0.08%</u>	<u>0.04%</u>
Member	<u>(0.00%)</u>	<u>(0.00%)</u>	<u>(0.00%)</u>
Employer/State	0.09%	0.08%	0.04%
Discount Rate	6.10%	7.10%	8.10%
Payroll Growth	2.75%	2.75%	2.75%
Inflation Rate	2.50%	2.50%	2.50%



Schedule H – Life Insurance Trust Sensitivity Analysis

TEACHERS' RETIREMENT SYSTEM OF KENTUCKY LIFE INSURANCE TRUST INFLATION ASSUMPTION SENSITIVITY ANALYSIS (\$1,000's)			
	Valuation Results	Decrease Inflation Rate 0.25%	Decrease Inflation Rate 0.50%
Actuarial Accrued Liability	\$ 122,611	\$ 126,744	\$ 131,122
Actuarial Value of Assets	99,027	99,027	99,027
Unfunded Liability	\$ 23,584	\$ 27,717	\$ 32,095
Funded Ratio	80.77%	78.13%	75.52%
Contributions*			
Normal Cost	0.03%	0.03%	0.03%
Accrued Liability	0.05%	0.05%	0.05%
Total	0.08%	0.08%	0.08%
Member	(0.00%)	(0.00%)	(0.00%)
Employer/State	0.08%	0.08%	0.08%
Discount Rate	7.10%	6.85%	6.60%
Payroll Growth	2.75%	2.50%	2.25%
Inflation Rate	2.50%	2.25%	2.00%

* Recommended contributions actuarially determined, but not less than 0.08%



Schedule H – Life Insurance Trust Sensitivity Analysis

TEACHERS' RETIREMENT SYSTEM OF KENTUCKY LIFE INSURANCE TRUST WAGE INFLATION ASSUMPTION SENSITIVITY ANALYSIS (\$1,000's)			
	Valuation Results	Decrease Wage Inflation to 1.25%	No Wage Inflation
Actuarial Accrued Liability	\$ 122,611	\$ 122,611	\$ 122,611
Actuarial Value of Assets	99,027	99,027	99,027
Unfunded Liability	\$ 23,584	\$ 23,584	\$ 23,584
Funded Ratio	80.77%	80.77%	80.77%
Contributions*			
Normal Cost	0.03%	0.03%	0.03%
Accrued Liability	0.05%	0.05%	0.05%
Total	0.08%	0.08%	0.08%
Member	(0.00%)	(0.00%)	(0.00%)
Employer/State	0.08%	0.08%	0.08%
Discount Rate	7.10%	7.10%	7.10%
Payroll Growth	2.75%	1.25%	0.00%
Inflation Rate	2.50%	2.50%	2.50%

* Recommended contributions actuarially determined, but not less than 0.08%



Schedule I – Health Insurance Trust 30-Year Baseline Projection

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 (thirty 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 Period: 17-year period as of Valuation Date
- Future Contributions: Based on the contribution rates defined in statute

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



Schedule I – Health Insurance Trust 30-Year Baseline Projection

Projections assume all actuarial assumptions are met and do not include any adjustment for adverse experience due to COVID-19 (either impacting claims or demographics), changes in the ACA, larger than expected increases to Medicare Advantage premiums, or lower than expected investment return or payroll growth.

(Dollar amounts in \$1,000s)

Valuation Year	Contribution Fiscal Year	Non-University Payroll (1)	University Payroll (2)	Total Payroll (3)	Unfunded Accrued Liability (4)	Funding Ratio (5)	Total Contribution (Including Member Contributions) (6)
2023	2024	\$3,946,280	\$192,629	\$4,138,909	\$1,120,642	71.3%	\$384,061
2024	2025	4,016,777	190,323	4,207,100	905,782	78.0%	396,075
2025	2026	4,087,557	190,344	4,277,901	647,093	85.0%	409,446
2026	2027	4,161,150	191,801	4,352,951	432,224	90.5%	424,437
2027	2028	4,234,674	194,163	4,428,837	106,375	97.8%	439,621
2028	2029	4,310,544	197,126	4,507,670	0	100.0%	94,215
2029	2030	4,385,843	200,390	4,586,233	0	100.0%	96,582
2030	2031	4,463,815	203,951	4,667,766	0	100.0%	99,140
2031	2032	4,545,631	207,733	4,753,364	0	100.0%	101,886
2032	2033	4,630,939	211,694	4,842,633	0	100.0%	104,814
2033	2034	4,717,507	216,249	4,933,756	0	100.0%	107,873
2034	2035	4,808,626	220,675	5,029,301	0	100.0%	111,091
2035	2036	4,904,564	225,273	5,129,837	0	100.0%	114,493
2036	2037	5,006,963	230,714	5,237,677	0	100.0%	118,089
2037	2038	5,115,374	236,410	5,351,784	0	100.0%	121,901
2038	2039	5,229,683	242,793	5,472,476	0	100.0%	125,936
2039	2040	5,350,324	249,626	5,599,950	0	100.0%	130,197
2040	2041	5,477,769	257,078	5,734,847	0	100.0%	134,685
2041	2042	5,612,359	265,096	5,877,455	0	100.0%	139,395
2042	2043	5,752,623	273,521	6,026,144	0	100.0%	144,315
2043	2044	5,900,619	282,496	6,183,115	0	100.0%	149,506
2044	2045	6,055,287	292,300	6,347,587	0	100.0%	154,949
2045	2046	6,216,417	302,567	6,518,984	0	100.0%	160,660
2046	2047	6,383,235	313,366	6,696,601	0	100.0%	166,594
2047	2048	6,558,980	324,541	6,883,521	0	100.0%	172,816
2048	2049	6,741,741	336,214	7,077,955	0	100.0%	179,359
2049	2050	6,931,017	347,790	7,278,807	0	100.0%	186,191
2050	2051	7,134,628	359,777	7,494,405	0	100.0%	193,635
2051	2052	7,349,499	371,516	7,721,015	0	100.0%	201,788
2052	2053	7,571,991	383,174	7,955,165	0	100.0%	210,530



Schedule J – Health Insurance Trust 30-Year Sensitivity Projection

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 (thirty 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 Period: 17-year period as of Valuation Date
- Future Contributions: Based on the contribution rates defined in statute
- Medicare Advantage Rate: \$552

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



Schedule J – Health Insurance Trust 30-Year Sensitivity Projection

Projections assume all actuarial assumptions are met and do not include any adjustment for adverse experience due to COVID-19 (either impacting claims or demographics), changes in the ACA, larger than expected increases to Medicare Advantage premiums, or lower than expected investment return or payroll growth. The 2024 monthly TRS MEHP rate of \$207 includes \$196 in EGWP prescription drug costs. The EGWP prescription drug costs are based on projected total drug costs minus projected reimbursements from CMS and drug manufacturers for Medicare Part D rebates, subsidies and reinsurance. If these reimbursements were not to continue at the current rate, TRS MEHP costs could increase to as much as \$552. In this case, the statutory contribution rates will be less than the actuarially determined contribution rates, the unfunded actuarial accrued liability will not be paid off in the scheduled 17 year timeframe and the health insurance fund will not reach 100% funded.

(Dollar amounts in \$1,000s)

Valuation Year	Contribution Fiscal Year	Non-University Payroll (1)	University Payroll (2)	Total Payroll (3)	Unfunded Accrued Liability (4)	Funding Ratio (5)	Total Contribution (Including Member Contributions) (6)
2023	2024	\$3,946,280	\$192,629	\$4,138,909	\$4,787,084	36.8%	\$384,061
2024	2025	4,016,777	190,323	4,207,100	4,886,398	38.7%	396,075
2025	2026	4,087,557	190,344	4,277,901	4,967,270	40.6%	409,446
2026	2027	4,161,150	191,801	4,352,951	5,118,068	41.6%	424,437
2027	2028	4,234,674	194,163	4,428,837	5,186,021	43.5%	439,621
2028	2029	4,310,544	197,126	4,507,670	5,263,555	45.1%	455,522
2029	2030	4,385,843	200,390	4,586,233	5,335,123	46.7%	472,086
2030	2031	4,463,815	203,951	4,667,766	5,399,894	48.3%	489,829
2031	2032	4,545,631	207,733	4,753,364	5,456,574	49.8%	507,532
2032	2033	4,630,939	211,694	4,842,633	5,505,041	51.3%	524,930
2033	2034	4,717,507	216,249	4,933,756	5,545,425	52.8%	542,514
2034	2035	4,808,626	220,675	5,029,301	5,577,303	54.4%	557,397
2035	2036	4,904,564	225,273	5,129,837	5,603,236	55.9%	568,381
2036	2037	5,006,963	230,714	5,237,677	5,627,256	57.3%	580,158
2037	2038	5,115,374	236,410	5,351,784	5,648,845	58.7%	592,627
2038	2039	5,229,683	242,793	5,472,476	5,667,581	60.1%	605,812
2039	2040	5,350,324	249,626	5,599,950	5,682,995	61.5%	619,743
2040	2041	5,477,769	257,078	5,734,847	5,694,576	62.8%	634,488
2041	2042	5,612,359	265,096	5,877,455	5,701,707	64.1%	650,078
2042	2043	5,752,623	273,521	6,026,144	5,703,695	65.5%	666,335
2043	2044	5,900,619	282,496	6,183,115	5,699,977	66.8%	683,506
2044	2045	6,055,287	292,300	6,347,587	5,689,780	68.0%	701,493
2045	2046	6,216,417	302,567	6,518,984	5,672,363	69.3%	720,243
2046	2047	6,383,235	313,366	6,696,601	5,647,012	70.6%	739,672
2047	2048	6,558,980	324,541	6,883,521	5,613,011	71.9%	760,135
2048	2049	6,741,741	336,214	7,077,955	5,569,313	73.2%	781,429
2049	2050	6,931,017	347,790	7,278,807	5,515,059	74.4%	803,444
2050	2051	7,134,628	359,777	7,494,405	5,449,410	75.7%	827,122
2051	2052	7,349,499	371,516	7,721,015	5,370,872	77.0%	848,910
2052	2053	7,571,991	383,174	7,955,165	5,281,613	78.2%	861,068



Schedule K – Life Insurance Trust 30-Year Baseline Projection

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 (thirty 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 Period: 21-year period as of Valuation Date
- Future Contributions: Based on Expected Actuarially Determined Contributions (not less than 0.08%)

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



Schedule K – Life Insurance Trust 30-Year Baseline Projection

(Dollar amounts in \$1,000s)

Valuation Year	Contribution Fiscal Year	Non-University Payroll (1)	University Payroll (2)	Total Payroll (3)	Unfunded Accrued Liability (4)	Funding Ratio (5)	Actuarially Determined Contribution in Dollars (6)
2023	2026	\$3,946,280	\$192,629	\$4,138,909	\$23,584	80.8%	\$3,422
2024	2027	4,016,777	190,323	4,207,100	24,113	80.8%	3,482
2025	2028	4,087,557	190,344	4,277,901	24,416	81.0%	3,543
2026	2029	4,161,150	191,801	4,352,951	28,246	78.5%	3,502
2027	2030	4,234,674	194,163	4,428,837	27,443	79.5%	3,582
2028	2031	4,310,544	197,126	4,507,670	27,120	80.2%	3,704
2029	2032	4,385,843	200,390	4,586,233	26,870	80.7%	3,846
2030	2033	4,463,815	203,951	4,667,766	26,576	81.3%	3,995
2031	2034	4,545,631	207,733	4,753,364	26,185	81.9%	4,145
2032	2035	4,630,939	211,694	4,842,633	25,666	82.5%	4,300
2033	2036	4,717,507	216,249	4,933,756	25,001	83.2%	4,463
2034	2037	4,808,626	220,675	5,029,301	24,178	84.0%	4,635
2035	2038	4,904,564	225,273	5,129,837	23,178	84.9%	4,815
2036	2039	5,006,963	230,714	5,237,677	21,979	85.8%	5,003
2037	2040	5,115,374	236,410	5,351,784	20,556	86.9%	5,202
2038	2041	5,229,683	242,793	5,472,476	18,881	88.1%	5,415
2039	2042	5,350,324	249,626	5,599,950	16,926	89.5%	5,650
2040	2043	5,477,769	257,078	5,734,847	14,657	91.0%	5,918
2041	2044	5,612,359	265,096	5,877,455	12,036	92.7%	6,248
2042	2045	5,752,623	273,521	6,026,144	9,013	94.6%	6,722
2043	2046	5,900,619	282,496	6,183,115	5,526	96.7%	7,725
2044	2047	6,055,287	292,300	6,347,587	1,474	99.1%	3,474
2045	2048	6,216,417	302,567	6,518,984	0	100.0%	1,938
2046	2049	6,383,235	313,366	6,696,601	0	100.0%	1,955
2047	2050	6,558,980	324,541	6,883,521	0	100.0%	1,969
2048	2051	6,741,741	336,214	7,077,955	0	100.0%	1,984
2049	2052	6,931,017	347,790	7,278,807	0	100.0%	1,999
2050	2053	7,134,628	359,777	7,494,405	0	100.0%	2,008
2051	2054	7,349,499	371,516	7,721,015	0	100.0%	2,011
2052	2055	7,571,991	383,174	7,955,165	0	100.0%	2,012