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**GASB Statement No. 74 Report
for the
Teachers' Retirement System
of the State of Kentucky**

Retiree Medical and Life Insurance Plans

Prepared as of June 30, 2022





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

November 14, 2022
Board of Trustees
Teachers' Retirement System of the
State of Kentucky
479 Versailles Road
Frankfort, KY 40601-3800

Members of the Board:

Presented in this report is information to assist the Teachers' Retirement System of the State of Kentucky (System) in meeting the requirements of the Governmental Accounting Standards Board (GASB) Statement No. 74 for the Retiree Medical Plan funded by the Health Insurance Trust (Health Trust) and the Life Insurance Plan funded by the Life Insurance Trust (Life Trust). The information is presented for the one-year period ending June 30, 2022. These calculations have been made on a basis that is consistent with our understanding of the accounting standard.

The annual actuarial valuation performed as of June 30, 2021 was used as the basis for much of the information presented as of June 30, 2022 in this report. The valuation was based upon data furnished by the System concerning active, inactive, and retired members along with pertinent claims data and financial information. This information was reviewed for completeness and internal consistency but was not audited. The valuation results depend on the integrity of the data. If any of the information is inaccurate or incomplete, our results may be different, and our calculations may need to be revised.

In order to prepare the results in this report, we have utilized appropriate actuarial models that were developed for this purpose. These models use assumptions about future contingent events along with recognized actuarial approaches to develop the needed results.

To the best of our knowledge, the information contained in this report is complete and accurate. These calculations were performed by, and under the supervision of, independent consulting actuaries with experience in performing valuations for public retirement systems. In addition, the valuation was prepared in accordance with generally accepted actuarial principles and practices as well as with Actuarial Standards of Practice prescribed by the Actuarial Standards Board.

Our calculation of the liabilities associated with the benefits described in this report was performed for the purpose of providing reporting and disclosure information that satisfies the requirements of GASB Statement No. 74. The calculation of the Health Trust and Life Trust liabilities for this report may not be applicable for funding purposes of the Health Trust and Life Trust. A calculation of the Health Trust's and Life Trust's liabilities for purposes other than satisfying the requirements of GASB No. 74 may produce significantly different results.



Teachers' Retirement System of the
State of Kentucky
November 14, 2022
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This is to certify that the independent consulting actuary is a member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the valuations were 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 medical plans and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of each plan.

Respectfully submitted,

A handwritten signature in blue ink that reads 'Alisa Bennett'.

Alisa Bennett, FSA, EA, FCA, MAAA
President

A handwritten signature in blue ink that reads 'Edward J. Koebel'.

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

A handwritten signature in blue ink that reads 'Cathy Turcot'.

Cathy Turcot
Principal and Managing Director

AB:JF



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Section I – Introduction

The Governmental Accounting Standards Board issued Statement No. 74 (GASB 74), “*Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*,” in June 2015. For the purposes of reporting under GASB 74, the Health Trust and Life Trust are assumed to be cost-sharing, multiple-employer, defined benefit OPEB plans with a special funding situation, where assets are accumulated in trusts or equivalent arrangements that meet the criteria in paragraph 3 of GASB 74.

This report, prepared as of June 30, 2022 (Measurement Date or MD), presents information to assist the System in meeting the requirements of GASB 74. Much of the material provided in this report is based on the data, assumptions, and results of the annual actuarial valuation of the Health Trust and Life Trust, as of June 30, 2021 (Valuation Date or VD). The results of that valuation were detailed in a report dated November 12, 2021.

GASB 74 requires the determination of the Total OPEB Liability (TOL) utilizing the Entry Age Normal (EAN) actuarial cost method. If the valuation date at which the TOL is determined is before the measurement date, as is the case here, the TOL must be rolled forward to the measurement date. The Net OPEB Liability (NOL) is then set equal to the rolled forward TOL minus the plan’s Fiduciary Net Position (FNP) (basically the market value of assets as of the Measurement Date). The plan provisions recognized in the calculation of the TOL of the Health Trust and Life Trust are summarized in Schedule B. The development of the roll-forward of the TOLs of the Health Trust and Life Trust is shown in the tables on page 10 and page 11.

Among the assumptions needed for the liability calculation is the discount rate, as defined by GASB, or a Single Equivalent Interest Rate (SEIR). To determine the SEIR, the FNP must be projected into the future for as long as there are anticipated benefits payable under the plan’s provisions applicable to the membership and beneficiaries of the Plan on the Measurement Date. Future contributions are to be projected in accordance with a plan’s funding policy and/or the application of professional judgment to consider the recent contribution history of the employers and non-employer contributing entities. If the FNP is not projected to be depleted at any point in the future, the long term expected rate of return on plan investments expected to be used to finance the benefit payments may be used as the SEIR.

If, however, at a future measurement date, the FNP is projected to be depleted, the SEIR is determined as the single rate that will generate a present value of benefit payments equal to the sum of the present value determined by discounting all projected benefit payments through the date of depletion by the long-term expected rate of return, and the present value determined by discounting those benefits after the date of depletion by a 20-year tax-exempt municipal bond (rating AA/Aa or higher) rate (Municipal Bond Index Rate). The rate used, if necessary, for this purpose is the Bond Buyer General Obligation 20-year Municipal Bond Index Rate for the month of June. Our calculations indicated the FNP is not projected to be depleted, so the Municipal Bond Index Rate was not used in the determination of the SEIR. Please see Paragraph 35(b) in the GASB 74 section for more explanation into the development of the SEIR.



Section I – Introduction (continued)

The FNP projections are based upon the Plan’s financial status on the Valuation Date, the indicated set of methods and assumptions, and the requirements of GASB 74. As such, the FNP projections are not reflective of the cash flows and asset accumulations that would occur on an ongoing plan basis, reflecting the impact of future members. Therefore, the results of this test do not necessarily indicate whether or not the fund will actually run out of money, the financial condition of the Plan, or the Plan’s ability to make benefit payments in future years.

The sections that follow provide the results of all the necessary calculations, presented in the order laid out in GASB 74, for note disclosure and Required Supplementary Information (RSI).



Section II – Financial Statement Notes

The material presented herein will follow the order presented in GASB 74. There are non-actuarial items required which are not included in this report. Paragraph numbers are provided for ease of reference.

Paragraphs 34(a)(1)-(3): CMC was not expected to supply this information.

Paragraph 34(a)(4): The data required regarding the membership of the Health Trust and Life Trust were furnished by the System. The following table summarizes the membership of the Plan as of June 30, 2021, the Valuation Date.

Membership

	Number	
	Health Insurance Trust	Life Insurance Trust
Inactive Members Or Their Beneficiaries Currently Receiving Benefits	42,215	51,731
Inactive Members Entitled To But Not Yet Receiving Benefits	7,658	10,388
Active Members	65,604	65,604
Total Membership	115,477	127,723

Paragraphs 34(a)(5)-(6) and 34(b)-(e): CMC was not expected to supply this information.

Paragraph 35(a)(1)-(4): The information is provided in the following table. As stated previously, the NOL is equal to the TOL minus the FNP. Those results as of June 30, 2022, the Measurement Date, are presented in the table below.

Measurement Date of June 30, 2022 (\$ in Thousands)		
	Health Insurance Trust	Life Insurance Trust
TOL*	\$ 4,751,706	\$ 119,484
FNP	<u>2,269,176</u>	<u>88,381</u>
NOL	\$ 2,482,530	\$ 31,103
Ratio of FNP to TOL	47.75%	73.97%

**For the Health Trust, the TOL includes the additional consideration for the current treatment of KEHP implicit subsidies that may be needed in the future. This is an additional liability from our funding Health Trust accrued liabilities.*



Section II – Financial Statement Notes (continued)

Paragraph 35(b): Listed below is the information to be disclosed regarding the actuarial assumptions and other inputs used to measure the TOL. The complete set of actuarial assumptions and other inputs utilized in developing the TOL are outlined in Schedule C. The TOL was determined by an actuarial valuation as of June 30, 2021, using assumptions based on the experience investigation for the five-year period ending June 30, 2020. The following actuarial assumptions are applied to all periods included in the measurement:

Inflation	2.50%
Real wage growth	0.25%
Wage inflation	2.75%
Salary increases, including wage inflation	3.00% - 7.50%
Long-term Investment Rate of Return, net of OPEB plan investment expense, including inflation	
Health Trust	7.10%
Life Trust	7.10%
Municipal Bond Index Rate	3.37%
Year FNP is projected to be depleted	
Health Trust	N/A
Life Trust	N/A
Single Equivalent Interest Rate, net of OPEB plan investment expense, including price inflation	
Health Trust	7.10%
Life Trust	7.10%
Health Trust Health Care Cost Trends	
Under Age 65	7.00% for FYE 2022, decreasing to an ultimate rate of 4.50% by FYE 2032
Ages 65 and Older	5.125% for FYE 2022, decreasing to an ultimate rate of 4.50% by FYE 2025
Medicare Part B Premiums	6.97% for FYE 2022 with an ultimate rate of 4.50% by FYE 2034



Section II – Financial Statement Notes (continued)

Mortality rates were based on the Pub2010 (Teachers Benefit-Weighted) Mortality Table projected generationally with MP-2020 with various set-forwards, set-backs, and adjustments for each of the groups; service retirees, contingent annuitants, disabled retirees, and active members.

The demographic actuarial assumptions for retirement, disability incidence, withdrawal, rates of plan participation, and rates of plan election used in the June 30, 2021 valuation were based on the results of the most recent actuarial experience studies for the System, which covered the five-year period ending June 30, 2020, adopted by the Board on September 20, 2021.

The remaining actuarial assumptions (e.g., initial per capita costs, health care cost trends) used in the June 30, 2021 valuation of the Health Trust were based on a review of recent plan experience done concurrently with the June 30, 2021 valuation. The health care cost trend assumption was updated for the June 30, 2021 valuation and was shown as an assumption change in the TOL roll-forward while the change in initial per capita claims costs were included with experience in the TOL roll-forward.

The long-term expected rate of return on Health Trust and Life Trust investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.



Section II – Financial Statement Notes (continued)

The target asset allocation and best estimates of arithmetic real rates of return for each major asset class, as provided by TRS's investment consultant, are summarized in the following table:

Health Insurance Trust		
Asset Class	Target Allocation	Long Term Expected Real Rate of Return
Global Equity	58.00%	5.10%
Fixed Income	9.00%	(0.10%)
Real Estate	6.50%	4.00%
Private Equity	8.50%	6.90%
Additional Category: High Yield	8.00%	1.70%
Other Additional Categories	9.00%	2.20%
Cash (LIBOR)	1.00%	(0.30%)
Total	100.00%	

Life Insurance Trust		
Asset Class	Target Allocation	Long Term Expected Real Rate of Return
U.S. Equity	40.00%	4.40%
International Equity	23.00%	5.60%
Fixed Income	18.00%	(0.10%)
Real Estate	6.00%	4.00%
Private Equity	5.00%	6.90%
Additional Categories	6.00%	2.10%
Cash (LIBOR)	2.00%	(0.30%)
Total	100.00%	



Section II – Financial Statement Notes (continued)

Health Trust Discount rate (SEIR). The discount rate used to measure the TOL as of the Measurement Date was 7.10%. The projection of cash flows used to determine the discount rate was performed in accordance with GASB 74. The projection's basis was an actuarial valuation performed as of June 30, 2021. In addition to the actuarial methods and assumptions of the June 30, 2021 actuarial valuation, the following actuarial methods and assumptions were used in the projection of cash flows:

- Total payroll for the initial projection year consists of the payroll of the active membership present on the Valuation Date. In subsequent projection years, total payroll was assumed to increase annually at a rate of 2.75%.
- The pre-65 retiree health care costs for members retired on or after July 1, 2010 were assumed to be paid by either the State or the retirees themselves.
- As administrative expenses, other than the administrative fee of \$8.00 PMPM paid to KEHP by TRS, were assumed to be paid in all years by the employer as they come due, they were not considered.
- Cash flows occur mid-year.
- Future contributions to the Health Trust were based upon the contribution rates defined in statute and the projected payroll of active employees. Per KRS 161.540(1)(c).3 and 161.550(5), when the Health Trust achieves a sufficient prefunded status, as determined by the retirement system's actuary, the following Health Trust statutory contributions are to be decreased, suspended, or eliminated:
 - Employee contributions
 - School District/University Contributions
 - State Contributions for KEHP premium subsidies payable to retirees who retire after June 30, 2010

To reflect these adjustments, open group projections were used and assumed an equal, pro rata reduction to the current statutory amounts in the years if/when the Health Trust is projected to achieve a Funded Ratio of 100% or more. Here, the current statutory amounts are adjusted to achieve total contributions equal to the Actuarially Determined Contribution (ADC), as determined by the prior year's valuation and in accordance with the Health Trust's funding policy. As the specific methodology to be used for the adjustments has yet to be determined, there may be differences between the projected results and future experience. This may also include any changes to retiree contributions for KEHP coverage pursuant to KRS 161.675(4)(b).

- In developing the adjustments to the statutory contributions in future years, the following was assumed:
 - Liabilities and cash flows are net of expected retiree contributions and any implicit subsidies attributable to coverage while participating in KEHP.
 - For the purposes of developing estimates for new entrants, active headcounts were assumed to remain flat for all future years.

Based on these assumptions, the Health Trust's FNP was not projected to be depleted.



Section II – Financial Statement Notes (continued)

Life Trust Discount rate (SEIR). The discount rate used to measure the TOL as of the Measurement Date was 7.10%. The projection of cash flows used to determine the discount rate was performed in accordance with GASB 74. The projection's basis was an actuarial valuation performed as of June 30, 2021. In addition to the actuarial methods and assumptions of the June 30, 2021 actuarial valuation, the following actuarial methods and assumptions were used in the projection of the Life Trust's cash flows:

- Total payroll for the initial projection year consists of the payroll of the active membership present on the Valuation Date. In subsequent projection years, total payroll was assumed to increase annually at a rate of 2.75%.
- The employer will contribute the Actuarially Determined Contribution (ADC) in accordance with the Life Trust's funding policy determined by a valuation performed on a date two years prior to the beginning of the fiscal year in which the ADC applies.
- As administrative expenses were assumed to be paid in all years by the employer as they come due, they were not considered.
- Active employees do not contribute to the plan.
- Cash flows occur mid-year.

Based on these assumptions, the Life Trust's FNP was not projected to be depleted.

The FNP projections are based upon the Health Trust's and the Life Trust's financial statuses on the Valuation Date, the indicated set of methods and assumptions, and the requirements of GASB 74. As such, the FNP projections are not reflective of the cash flows and asset accumulations that would occur on an ongoing basis, reflecting the impact of future members. Therefore, the results of these tests do not necessarily indicate whether or not the Health Trust and the Life Trust will actually run out of money, the financial condition of the Health Trust and the Life Trust, or the Health Trust's and the Life Trust's ability to make benefit payments in future years.



Section II – Financial Statement Notes (continued)

Paragraphs 35(b)(1) and 35(b)(2)(g): These paragraphs require disclosure of the sensitivity of the NOL to changes in the health care cost trend rates for the Health Trust and the discount rate for the Health Trust and the Life Trust. The following exhibit presents the NOL of the Health Trust, calculated using the health care cost trend rates, as well as what the Health Trust’s NOL would be if it were calculated using a health care cost trend rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate. Similarly, the exhibit presents the NOL of the Health Trust and Life Trust, calculated using the Single Equivalent Interest Rate, as well as what the Health Trust’s and Life Trust’s NOL would be if they were calculated using a Discount Rate that is 1-percentage-point lower or 1-percentage-point higher than the current Single Equivalent Interest Rate:

Discount Rate	Net OPEB Liability - Health Insurance Trust (\$ in Thousands)		
	Health Care Cost Trend Rates		
	1% Decrease	Current	1% Increase
1% Increase (8.10%)		\$ 1,959,121	
Current (7.10%)	\$ 1,861,066	\$ 2,482,530	\$ 3,255,435
1% Decrease (6.10%)		\$ 3,114,745	

Discount Rate	Net OPEB Liability - Life Insurance Trust (\$ in Thousands)	
1% Increase (8.10%)	\$	17,390
Current (7.10%)	\$	31,103
1% Decrease (6.10%)	\$	48,059



Section II – Financial Statement Notes (continued)

Paragraph 35(c): The TOL of the Health Trust and Life Trust is based upon an actuarial valuation performed as of the Valuation Date, June 30, 2021. An expected TOL is determined as of June 30, 2022 using standard roll-forward techniques. The roll-forward calculation begins with the TOL, as of June 30, 2021, subtracts the actual benefit payments (net of retiree contributions, if applicable) for the year, applies interest at the discount rate for the year, and then adds the annual normal cost (also called the Service Cost). If applicable, actuarial gains and losses arising from the difference between estimates and actual experience (excluding amounts related to benefit changes and changes in assumptions or other inputs) are reconciled to the TOL as of the Measurement Date. Last, any changes of assumptions or other inputs are reflected. The procedure used to determine the TOL of the Health Trust and Life Trust, as of June 30, 2022, is shown in the following tables:

TOL Roll Forward - Health Insurance Trust			
(\$ in Thousands)			
		Expected	Actual
(a)	TOL as of June 30, 2021*	\$ 4,446,211	\$ 4,381,853
(b)	Actual Benefit Payments and Refunds for the Year July 1, 2021 - June 30, 2022	(107,201)	(107,201)
(c)	Interest on TOL = [(a) x (0.071)] + [(b) x (0.0355)]	311,875	307,305
(d)	Service Cost for the Year July 1, 2021 - June 30, 2022 at the End of the Year	109,082	109,082
(e)	Changes of Benefit Terms	0	0
(f)	Change of Assumptions	60,667	60,667
(g)	TOL Rolled Forward to June 30, 2022 = (a) + (b) + (c) + (d) + (e) + (f)	\$ 4,820,634	\$ 4,751,706
(h)	Difference between Expected and Actual Experience (Gain)/Loss		\$ (68,928)

* The TOL used in the roll-forward as of June 30, 2021 is calculated using the discount rate as of the Prior Measurement Date.



Section II – Financial Statement Notes (continued)

TOL Roll Forward - Life Insurance Trust				
(\$ in Thousands)				
	Expected		Actual	
(a) TOL as of June 30, 2021*	\$	120,505	\$	116,656
(b) Actual Benefit Payments and Refunds for the Year July 1, 2021 - June 30, 2022		(6,178)		(6,178)
(c) Interest on TOL = [(a) x (0.071)] + [(b) x (0.0355)]		8,337		8,063
(d) Service Cost for the Year July 1, 2021 - June 30, 2022 at the End of the Year		943		943
(e) Changes of Benefit Terms		0		0
(f) Change of Assumptions		0		0
(g) TOL Rolled Forward to June 30, 2022 = (a) + (b) + (c) + (d) + (e) + (f)	\$	123,607	\$	119,484
(h) Difference between Expected and Actual Experience (Gain)/Loss			\$	(4,123)

* The TOL used in the roll-forward as of June 30, 2021 is calculated using the discount rate as of the Prior Measurement Date.



Section III – Required Supplementary Information

There are several tables of Required Supplementary Information (RSI) that need to be included in the Plan's financial statements:

Paragraphs 36(a)-(c): The required tables of schedules are provided in Appendix A.

Paragraph 36(d): The required schedule presenting the annual money-weighted rates of return is to be supplied by the System.

Paragraph 38: Information regarding changes to benefit terms and changes to assumptions or other inputs should be noted regarding the RSI. The information should be listed by the date for which the indicated change was first reflected in reported amounts.

Changes to benefit terms:

June 30, 2022 (Valuation Date: June 30, 2021)

Health Trust and Life Trust

- A new benefit tier was added for members joining the System on and after January 1, 2022. A description of the benefit provisions applicable to these members can be found in Schedule B of this report.

Changes to assumptions or other inputs:

June 30, 2022 (Valuation Date: June 30, 2021)

Health Trust

- The health care trend rates were updated to reflect future anticipated experience.

Life Trust

- None



Section III – Required Supplementary Information (continued)

Methods and assumptions used in calculations of Actuarially Determined Contributions. The Actuarially Determined Contribution rates, as a percentage of payroll, used to determine the Actuarially Determined Contribution amounts in the Schedule of Employer Contributions (Schedule A) are calculated as of the indicated Valuation Date. The following actuarial methods and assumptions (from the indicated actuarial valuations) were used to determine contribution rates reported in that schedule for the year ending June 30, 2022 for the Life Trust:

Valuation Date	June 30, 2019
Actuarial cost method	Entry Age Normal
Amortization method	Level Percent of Payroll
Amortization period (Closed)	25 Years
Asset valuation method	Five-year smoothed value
Inflation	3.00%
Real wage growth	0.50%
Wage Inflation	3.50%
Salary increases, including wage inflation	3.50% - 7.20%
Discount Rate	7.50%

The Health Trust is not funded based on an actuarially determined contribution, but instead is funded based on statutorily determined amounts as noted on page 7. The Schedule of Employer Contributions (Schedule A) details the statutorily determined amounts for the Health Trust.



Schedule A – Required Supplementary Information Tables

**SCHEDULE OF CHANGES IN THE NET OPEB LIABILITY
GASB 74 Paragraph 36(a)
(\$ in Thousands)**

Health Insurance Trust										
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Total OPEB Liability										
Service Cost at end of year	\$ 109,082	\$ 84,727	\$ 82,572	\$ 93,792	\$ 95,382	\$ 95,625				
Interest	311,875	326,008	341,430	366,254	355,491	333,990				
Change of benefit terms	0	0	0	0	0	8,926				
Difference between expected and actual experience	(68,928)	(490,732)	(585,090)	(661,228)	(210,450)	0				
Changes of assumptions	60,667	516,431	106,575	45,659	56,483	0				
Benefit payments	(107,201)	(130,648)	(145,869)	(163,666)	(161,082)	(178,500)				
Net change in Total OPEB Liability	\$ 305,495	\$ 305,786	\$ (200,382)	\$ (319,189)	\$ 135,824	\$ 260,041				
Total OPEB Liability - beginning	\$ 4,446,211	\$ 4,140,425	\$ 4,340,807	\$ 4,659,996	\$ 4,524,172	\$ 4,264,131				
Total OPEB Liability - ending (a)	\$ 4,751,706	\$ 4,446,211	\$ 4,140,425	\$ 4,340,807	\$ 4,659,996	\$ 4,524,172				
Plan Net Position										
Contributions - State of Kentucky	\$ 31,349	\$ 78,217	\$ 77,191	\$ 76,382	\$ 80,959	\$ 75,497				
Contributions - Other Employers	120,416	106,670	107,434	106,764	106,143	104,879				
Contributions - Active Member	145,682	128,117	133,471	131,677	130,778	128,819				
Net investment income	(219,500)	503,201	32,475	74,385	76,841	95,453				
Benefit payments	(107,201)	(130,648)	(145,869)	(163,666)	(161,082)	(178,500)				
Administrative expense	(2,074)	(1,728)	(2,047)	(1,803)	(1,748)	(1,539)				
Other	0	0	0	0	0	0				
Net change in Plan Net Position	\$ (31,328)	\$ 683,829	\$ 202,655	\$ 223,739	\$ 231,891	\$ 224,609				
Plan Net Position - beginning	\$ 2,300,504	\$ 1,616,675	\$ 1,414,020	\$ 1,190,281	\$ 958,390	\$ 733,781				
Plan Net Position - ending (b)	\$ 2,269,176	\$ 2,300,504	\$ 1,616,675	\$ 1,414,020	\$ 1,190,281	\$ 958,390				
Net OPEB Liability - ending (a) - (b)	\$ 2,482,530	\$ 2,145,707	\$ 2,523,750	\$ 2,926,787	\$ 3,469,715	\$ 3,565,782				



Schedule A – Required Supplementary Information Tables (continued)

**SCHEDULE OF CHANGES IN THE NET OPEB LIABILITY
GASB 74 Paragraph 36(a)
(\$ in Thousands)**

	Life Insurance Trust									
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Total OPEB Liability										
Service Cost at end of year	\$ 943	\$ 1,289	\$ 1,299	\$ 1,271	\$ 1,068	\$ 1,067				
Interest	8,337	8,926	8,563	8,256	8,026	7,761				
Change of benefit terms	0	0	0	0	0	0				
Difference between expected and actual experience	(4,123)	122	705	(204)	(717)	0				
Changes of assumptions	0	(5,792)	0	0	0	0				
Benefit payments	(6,178)	(6,120)	(5,317)	(5,153)	(5,453)	(5,151)				
Net change in Total OPEB Liability	\$ (1,021)	\$ (1,575)	\$ 5,250	\$ 4,170	\$ 2,924	\$ 3,677				
Total OPEB Liability - beginning	\$ 120,505	\$ 122,080	\$ 116,830	\$ 112,660	\$ 109,736	\$ 106,059				
Total OPEB Liability - ending (a)	\$ 119,484	\$ 120,505	\$ 122,080	\$ 116,830	\$ 112,660	\$ 109,736				
Plan Net Position										
Contributions - State of Kentucky	\$ 2,194	\$ 1,852	\$ 1,543	\$ 1,209	\$ 897	\$ 882				
Contributions - Other Employers	561	286	253	212	161	168				
Contributions - Active Member	0	0	0	0	0	0				
Net investment income	(15,582)	24,075	5,167	5,058	1,111	915				
Benefit payments	(6,178)	(6,120)	(5,317)	(5,153)	(5,453)	(5,151)				
Administrative expense	(41)	(34)	(36)	(30)	(31)	(28)				
Other	0	0	0	0	0	0				
Net change in Plan Net Position	\$ (19,046)	\$ 20,059	\$ 1,610	\$ 1,296	\$ (3,315)	\$ (3,214)				
Plan Net Position - beginning	\$ 107,427	\$ 87,368	\$ 85,758	\$ 84,462	\$ 87,777	\$ 90,991				
Plan Net Position - ending (b)	\$ 88,381	\$ 107,427	\$ 87,368	\$ 85,758	\$ 84,462	\$ 87,777				
Net OPEB Liability - ending (a) - (b)	\$ 31,103	\$ 13,078	\$ 34,712	\$ 31,072	\$ 28,198	\$ 21,959				



Schedule A – Required Supplementary Information Tables (continued)

**SCHEDULE OF THE NET OPEB LIABILITY
GASB 74 Paragraph 36(b)
(\$ in Thousands)**

Health Insurance Trust										
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Total OPEB Liability	\$ 4,751,706	\$ 4,446,211	\$ 4,140,425	\$ 4,340,807	\$ 4,659,996	\$ 4,524,172				
Plan Fiduciary Net Position	2,269,176	2,300,504	1,616,675	1,414,020	1,190,281	958,390				
Net OPEB Liability	\$ 2,482,530	\$ 2,145,707	\$ 2,523,750	\$ 2,926,787	\$ 3,469,715	\$ 3,565,782				
Plan Fiduciary Net Position as a percentage of the Total OPEB Liability	47.75%	51.74%	39.05%	32.58%	25.54%	21.18%				
Covered Payroll	\$ 3,876,491	\$ 3,638,905	\$ 3,569,262	\$ 3,497,216	\$ 3,455,660	\$ 3,415,432				
Net OPEB Liability as a percentage of covered payroll	64.04%	58.97%	70.71%	83.69%	100.41%	104.40%				



Schedule A – Required Supplementary Information Tables (continued)

**SCHEDULE OF THE NET OPEB LIABILITY
GASB 74 Paragraph 36(b)
(\$ in Thousands)**

Life Insurance Trust										
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Total OPEB Liability	\$ 119,484	\$ 120,505	\$ 122,080	\$ 116,830	\$ 112,660	\$ 109,736				
Plan Fiduciary Net Position	88,381	107,427	87,368	85,758	84,462	87,777				
Net OPEB Liability	\$ 31,103	\$ 13,078	\$ 34,712	\$ 31,072	\$ 28,198	\$ 21,959				
Plan Fiduciary Net Position as a percentage of the Total OPEB Liability	73.97%	89.15%	71.57%	73.40%	74.97%	79.99%				
Covered Payroll	\$ 3,876,491	\$ 3,638,905	\$ 3,569,262	\$ 3,497,216	\$ 3,455,660	\$ 3,415,432				
Net OPEB Liability as a percentage of covered payroll	0.80%	0.36%	0.97%	0.89%	0.82%	0.64%				



Schedule A – Required Supplementary Information Tables (continued)

**SCHEDULE OF EMPLOYER CONTRIBUTIONS
GASB 74 Paragraph 36(c)
(\$ in Thousands)**

	Health Insurance Trust									
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Statutorily Required Contributions										
Employer	\$ 120,416	\$ 106,670	\$ 107,434	\$ 106,764	\$ 106,143	\$ 104,879	\$ 104,271	\$ 77,656	\$ 52,247	\$ 36,990
State										
Pre-65 Health Insurance Premiums	\$ 56,312	\$ 55,061	\$ 54,034	\$ 53,707	\$ 58,535	\$ 53,454	\$ 52,542	\$ 46,233	\$ 84,600	\$ 106,500
SEEK .75%	23,507	23,156	23,157	22,675	22,424	22,043	21,825	21,375	20,841	23,086
Total State	<u>\$ 79,819</u>	<u>\$ 78,217</u>	<u>\$ 77,191</u>	<u>\$ 76,382</u>	<u>\$ 80,959</u>	<u>\$ 75,497</u>	<u>\$ 74,367</u>	<u>\$ 67,608</u>	<u>\$ 105,441</u>	<u>\$ 129,586</u>
Grand Total	<u>\$ 200,235</u>	<u>\$ 184,887</u>	<u>\$ 184,625</u>	<u>\$ 183,146</u>	<u>\$ 187,102</u>	<u>\$ 180,376</u>	<u>\$ 178,638</u>	<u>\$ 145,264</u>	<u>\$ 157,688</u>	<u>\$ 166,576</u>
Actual Contributions										
Employer	\$ 120,416	\$ 106,670	\$ 107,434	\$ 106,764	\$ 106,143	\$ 104,879	\$ 104,271	\$ 77,656	\$ 52,247	\$ 36,990
State	31,349	78,217	77,191	76,382	80,959	75,497	74,367	67,608	105,441	129,586
Grand Total	<u>\$ 151,765</u>	<u>\$ 184,887</u>	<u>\$ 184,625</u>	<u>\$ 183,146</u>	<u>\$ 187,102</u>	<u>\$ 180,376</u>	<u>\$ 178,638</u>	<u>\$ 145,264</u>	<u>\$ 157,688</u>	<u>\$ 166,576</u>
Contribution Deficiency / (Excess)	\$ 48,470	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
% of Statutorily Required Contributed	75.79%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Covered Payroll	\$ 3,876,491	\$ 3,638,905	\$ 3,569,262	\$ 3,497,216	\$ 3,455,660	\$ 3,415,432	\$ 3,390,539	\$ 3,455,008	\$ 3,317,422	\$ 3,310,710
Actual Contributions as a Percentage of Covered Payroll	3.92%	5.08%	5.17%	5.24%	5.41%	5.28%	5.27%	4.20%	4.75%	5.03%



Schedule A – Required Supplementary Information Tables (continued)

**SCHEDULE OF EMPLOYER CONTRIBUTIONS
GASB 74 Paragraph 36(c)
(\$ in Thousands)**

	Life Insurance Trust										
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	
Actuarially Determined Employer Contribution	\$ 2,736	\$ 2,252	\$ 1,843	\$ 1,082	\$ 1,075	\$ 1,065	\$ 1,058	\$ 1,050	\$ 1,045	\$ 1,740	
Contributions in relation to the Actually Determined Contribution	2,755	2,138	1,796	1,421	1,058	1,050	1,038	1,020	1,006	1,680	
Annual contribution deficiency/(excess)	\$ (19)	\$ 114	\$ 47	\$ (339)	\$ 17	\$ 15	\$ 20	\$ 30	\$ 39	\$ 60	
Covered Payroll	\$ 3,876,491	\$ 3,638,905	\$ 3,569,262	\$ 3,497,216	\$ 3,455,660	\$ 3,415,432	\$ 3,390,539	\$ 3,455,008	\$ 3,317,422	\$ 3,310,710	
Actual contributions as a percentage of covered payroll	0.07%	0.06%	0.05%	0.04%	0.03%	0.03%	0.03%	0.03%	0.03%	0.05%	



Schedule B – Summary of Main Benefit Provisions

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

ELIGIBILITY FOR ACCESS TO RETIREE MEDICAL PLAN COVERAGE:

Service Retirement:

Members Before 7/1/2008	Completion of 27 years of service, or Attainment of age 55 and 5 years of service
Members on and after 7/1/2008 And Before 1/1/2022	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
Members on and after 1/1/2022	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 Jan. 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 KTRS 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 age 60.



Schedule B – Summary of Main Benefit Provisions (continued)

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.

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 x \$110.50)	\$ 37.00
January 1, 2011	115.40	(1/3 x 115.40)	39.00
July 1, 2011	115.40	(2/3 x 115.40)	77.00
January 1, 2012	99.90	(2/3 x 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	148.50	148.50	148.50

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	Entered System Before 7/1/2002		Entered System After 6/30/2002 and Before 7/1/2008	Entered System After 6/30/2008
	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 B – Summary of Main Benefit Provisions (continued)

COVERED MEMBER RETIREE MEDICAL PLAN CONTRIBUTIONS (CONTINUED):

For 2022, the TRS Board of Trustees approved a single contribution amount of up to \$696.84. TRS will contribute this amount towards insurance costs, less the Shared Responsibility cost of \$148.50. There is no subsidy for non-single KEHP coverage. Under-65 retirees who are not Medicare eligible and continue on the Kentucky Employees' Health Plan (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, 2022					
Tier Elected	Under Age 65 (KEHP)				Ages 65 and Older (MEHP)
	LivingWell CDHP	LivingWell PPO	LivingWell Basic CDHP	LivingWell Limited HDP	
Single	\$ 750.30	\$ 772.16	\$ 721.54	\$ 642.02	\$211.00
Parent Plus	1,036.40	1,101.08	994.72	914.78	n/a
Couple	1,453.30	1,691.64	1,537.72	1,407.32	n/a
Family	1,623.94	1,883.60	1,713.58	1,566.78	n/a
Family C-R	866.72	929.70	846.38	772.32	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. Approximately 1,500 retirees across all four KEHP plans did not complete their LivingWell Promise for 2019. The additional contribution for these retirees will begin in 2020. 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. For 2021, 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 KTRS 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, 2022					
Tier Elected by Surviving Spouse	Under Age 65 (KEHP)				Ages 65 and Older (MEHP)
	LivingWell CDHP	LivingWell PPO	LivingWell Basic CDHP	LivingWell Limited HDP	
Single	\$758.30	\$780.16	\$729.54	\$650.02	\$211.00
Parent Plus	1,044.40	1,109.08	1,002.72	922.78	n/a



Schedule B – Summary of Main Benefit Provisions (continued)

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	Entered System Before 7/1/2002		Entered System After 6/30/2002 and Before 7/1/2008	Entered System After 6/30/2008
	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

For 2022, the TRS Board of Trustees approved a single contribution amount of up to \$696.84. TRS will contribute this amount towards insurance costs, less the Shared Responsibility cost of \$148.50. There is no subsidy for non-single KEHP coverage. Under-65 retirees who are not Medicare eligible and continue on the Kentucky Employees’ Health Plan (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, 2022					
Tier Elected	Under Age 65 (KEHP)				Ages 65 and Older (MEHP)
	LivingWell CDHP	LivingWell PPO	LivingWell Basic CDHP	LivingWell Limited HDP	
Single	\$ 750.30	\$ 772.16	\$ 721.54	\$ 642.02	\$211.00
Parent Plus	1,036.40	1,101.08	994.72	914.78	n/a
Couple	1,453.30	1,691.64	1,537.72	1,407.32	n/a
Family	1,623.94	1,883.60	1,713.58	1,566.78	n/a
Family C-R	866.72	929.70	846.38	772.32	n/a

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		
Hired before 7/1/08	Hired on/after 7/1/08 and before 1/1/22	Hired on/after 1/1/22	Hired before 7/1/08	Hired on/after 7/1/08 and before 1/1/22	Hired on/after 1/1/22	Hired before 7/1/08	Hired on/after 7/1/08 and before 1/1/22	Hired on/after 1/1/22
2.775	2.775	2.775	3.750	3.750	3.750	3.750	3.750	3.750



Schedule B – Summary of Main Benefit Provisions (continued)

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 C – 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, 2021

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	Annual Trend Rate		
	Medicare Part B	Under Age 65	Ages 65 and Older
2022	6.97%	7.00%	5.125%
2023	6.73	6.75	5.000
2024	5.22	6.50	4.750
2025	4.96	6.25	4.500
2026	5.68	6.00	4.500
2027	5.82	5.75	4.500
2028	5.91	5.50	4.500
2029	5.65	5.25	4.500
2030	5.27	5.00	4.500
2031	5.06	4.75	4.500
2032	4.87	4.50	4.500
2033	4.62	4.50	4.500
2034 and beyond	4.50	4.50	4.500

AGE RELATED MORBIDITY: Per capita health care costs are adjusted to reflect expected health care cost changes related to age. The increase to the net incurred health care claims is assumed to be:

Participant Age	Annual Increase
29 and below	0.0%
30 – 34	1.0
35 – 39	1.5
40 – 44	2.0
45 – 49	2.6
50 – 54	3.3
55 – 59	3.6
60 – 64	4.2
65 – 69	3.0
70 – 74	2.5
75 – 79	2.0
80 – 84	1.0
85 – 89	0.5
90 and over	0.0



Schedule C – Statement of Actuarial Assumptions and Methods (continued)

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. The estimated impact of KEHP implicit subsidies to the actuarial accrued liability is an increase of \$1,082,761,730.



Schedule C – Statement of Actuarial Assumptions and Methods (continued)

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, 2022				
Tier Elected	LivingWell CDHP	LivingWell PPO	LivingWell Basic CDHP	LivingWell Limited HDHP
Single	\$ 750.30	\$ 772.16	\$ 721.54	\$ 642.02
Parent Plus	1,036.40	1,101.08	994.72	914.78
Couple	1,453.30	1,691.64	1,537.72	1,407.32
Family	1,623.94	1,883.60	1,713.58	1,566.78
Family C-R	866.72	929.70	846.38	772.32

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 Cost as of January 1, 2022				
Tier Elected	LivingWell CDHP	LivingWell PPO	LivingWell Basic CDHP	LivingWell Limited HDHP
Single	\$53.46	\$89.14	\$28.34	\$25.50
Parent Plus	\$137.06	\$254.10	\$67.52	\$60.78
Couple	\$339.34	\$571.76	\$281.42	\$253.28
Family	\$398.92	\$716.64	\$337.68	\$303.92
Family C-R*	\$86.90	\$170.48	\$31.50	\$28.34
Spouse – Single	\$758.30	\$780.16	\$729.54	\$650.02
Spouse – Parent Plus	\$1,044.40	\$1,109.08	\$1,002.72	\$922.78

*Per employee/retiree



Schedule C – Statement of Actuarial Assumptions and Methods (continued)

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
- LW Limited = LivingWell Limited HDHP

Time-Specific Adjustments for Retirees Employed Before July 1, 2002 as of January 1, 2022						
Plan	Years of Service	Single	Parent Plus	Couple	Family	Family C-R
LW CDHP	5 – 9.99	\$559.76	\$762.26	\$976.88	\$1,087.94	\$642.74
	10 – 14.99	422.67	625.17	839.79	950.85	505.65
	15 – 19.99	285.59	488.09	702.71	813.77	368.57
	20 or More	148.50	351.00	565.62	676.68	231.48
LW PPO	5 – 9.99	\$549.39	\$709.90	\$982.80	\$1,029.88	\$622.14
	10 – 14.99	415.76	572.81	845.71	892.79	485.05
	15 – 19.99	282.13	435.73	708.63	755.71	347.97
	20 or More	148.50	298.64	571.54	618.62	210.88
LW Basic	5 – 9.99	\$557.03	\$790.12	\$1,119.22	\$1,238.82	\$677.80
	10 – 14.99	420.85	653.03	982.13	1,101.73	540.71
	15 – 19.99	284.68	515.95	845.05	964.65	403.63
	20 or More	148.50	378.86	707.96	827.56	266.54
LW Limited	5 – 9.99	\$499.52	\$716.92	\$1,016.96	\$1,125.78	\$606.90
	10 – 14.99	382.51	579.83	879.87	988.69	469.81
	15 – 19.99	265.51	442.75	742.79	851.61	332.73
	20 or More	148.50	305.66	605.70	714.52	195.64



Schedule C – Statement of Actuarial Assumptions and Methods (continued)

Time-Specific Adjustments for Retirees Employed On/After July 1, 2002 as of January 1, 2022						
Plan	Years of Service	Single	Parent Plus	Couple	Family	Family C-R
LW CDHP	5 – 9.99	\$642.01	\$844.51	\$1,059.13	\$1,170.19	\$724.99
	10 – 14.99	559.76	762.26	976.88	1,087.94	642.74
	15 – 19.99	450.09	652.59	867.21	978.27	533.07
	20 – 24.99	340.42	542.92	757.54	868.60	423.40
	25 – 25.99	203.33	405.83	620.45	731.51	286.31
	26 – 26.99	175.92	378.42	593.04	704.10	258.90
	27 or More	148.50	351.00	565.62	676.68	231.48
LW PPO	5 – 9.99	\$629.57	\$792.15	\$1,065.05	\$1,112.13	\$704.39
	10 – 14.99	549.39	709.90	982.80	1,029.88	622.14
	15 – 19.99	442.49	600.23	873.13	920.21	512.47
	20 – 24.99	335.59	490.56	763.46	810.54	402.80
	25 – 25.99	201.95	353.47	626.37	673.45	265.71
	26 – 26.99	175.23	326.06	598.96	646.04	238.30
	27 or More	148.50	298.64	571.54	618.62	210.88
LW Basic	5 – 9.99	\$638.73	\$872.37	\$1,201.47	\$1,321.07	\$760.05
	10 – 14.99	557.03	790.12	1,119.22	1,238.82	677.80
	15 – 19.99	448.09	680.45	1,009.55	1,129.15	568.13
	20 – 24.99	333.23	559.21	880.29	996.97	449.63
	25 – 25.99	201.28	426.37	747.45	864.13	316.79
	26 – 26.99	174.89	399.81	720.89	837.57	290.23
	27 or More	148.50	373.24	694.32	811.00	263.66
LW Limited	5 – 9.99	\$556.18	\$780.05	\$1,072.77	\$1,178.93	\$672.71
	10 – 14.99	499.52	716.92	1,016.96	1,125.78	606.90
	15 – 19.99	405.92	607.25	907.29	1,016.11	497.23
	20 – 24.99	312.31	497.58	797.62	906.44	387.56
	25 – 25.99	195.30	360.49	660.53	769.35	250.47
	26 – 26.99	171.91	333.08	633.12	741.94	223.06
	27 or More	148.50	305.66	605.72	714.52	195.64

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		
	Entered System Before 7/1/2002	Entered System After 6/30/2002 and Before 7/1/2008	Entered System After 6/30/2008
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 C – Statement of Actuarial Assumptions and Methods (continued)

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	LivingWell Limited HDHP
54%	42%	3%	1%

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 C – Statement of Actuarial Assumptions and Methods (continued)

SALARY INCREASES: Representative values of the assumed annual rates of future salary increases are as following 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.

AFFORDABLE CARE ACT (ACA): The impact of the Affordable Care Act (ACA) was addressed in this valuation. Review of the information currently available did not identify any specific provisions of the ACA that are anticipated to significantly impact results 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. Continued monitoring of the ACA’s impact on the Plan’s liability 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.

TRS and UnitedHealthcare have a gain share in place should actual claims costs drop below a medical loss ratio of 90%. Due to deferred care in 2020 because of COVID-19, TRS will receive approximately \$16 million to \$18 million in subsidy revenue returned from UnitedHealthcare in early 2022.

ASSET VALUATION METHOD: Market Value of Assets.



Schedule C – Statement of Actuarial Assumptions and Methods (continued)

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 C – Statement of Actuarial Assumptions and Methods (continued)

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 C – Statement of Actuarial Assumptions and Methods (continued)

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 D – Actuarial Cost Method

The valuations of the Health Trust and Life Trust are prepared on the projected benefit basis, which is used to determine the present value of each member's expected benefit payable at retirement, disability or death. The calculations are based on the member's age, years of service, sex, compensation, expected future salary increases, and an assumed future investment rate of return. The calculations consider the probability of a member's death or termination of employment prior to becoming eligible for a benefit and the probability of the member terminating with a service, disability, or survivor's benefit. The present value of the expected benefits payable to active members is added to the present value of the expected future payments to current benefit recipients to obtain the present value of all expected benefits payable to the present group of members and survivors.

The employer contributions required to support the benefits of the Health Trust and Life Trust 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 anticipated covered service, would be required in addition to the contributions of the member, if applicable, to meet the cost of all benefits payable on his behalf.

The unfunded 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 Health Trust and Life Trust.