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**Report on the Annual Valuation of the
Kentucky Employees Retirement System**

Prepared as of June 30, 2012





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

November 20, 2012

Board of Trustees
Kentucky Retirement Systems
Perimeter Park West
1260 Louisville Road
Frankfort, KY 40601

Dear Members of the Board:

Presented in this report are the results of the annual actuarial valuation of the retirement and insurance benefits provided under the Kentucky Employees Retirement System (KERS). The purpose of the valuation was to measure the System's funding progress and to determine the required employer contribution rates for the fiscal year beginning July 1, 2013. The date of the valuation was June 30, 2012.

The valuation was based upon data, furnished by the Executive Director and the Kentucky Retirement Systems (KRS) staff, concerning active, inactive and retired members along with pertinent financial information. The complete cooperation of the KRS staff in furnishing materials requested is hereby acknowledged with appreciation.

Your attention is directed particularly to the summary of results on page 1 and the comments on page 6.

To the best of our knowledge, this report is complete and accurate. The valuation was performed by, and under the supervision of, independent actuaries who are members of the American Academy of Actuaries with experience in performing valuations for public retirement systems. The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The valuation was prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board.

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.

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The actuarial calculations were performed by qualified actuaries according to generally accepted actuarial procedures and methods. The calculations are based on the current provisions of the system, and on actuarial assumptions that are, in the aggregate, internally consistent and reasonably based on the actual experience of the system.

Respectfully submitted,

A handwritten signature in blue ink that reads 'Thomas J. Cavanaugh'.

Thomas J. Cavanaugh FSA, FCA, MAAA, EA
Chief Executive Officer

A handwritten signature in blue ink that reads 'Todd B. Green'.

Todd B. Green ASA, FCA, MAAA
Principal and Consulting Actuary

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

Alisa Bennett, FSA, EA, FCA, MAAA
Principal and Consulting Actuary

TJC/TBG/AB:kc



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**REPORT ON THE ANNUAL VALUATION OF THE
KENTUCKY EMPLOYEES RETIREMENT SYSTEM**

PREPARED AS OF JUNE 30, 2012

SECTION I – SUMMARY OF PRINCIPAL RESULTS

1. This report, prepared as of June 30, 2012, presents the results of the annual actuarial valuation of the retirement and insurance benefits provided under the System. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results, broken down between non-hazardous and hazardous members, are summarized in the following table.

SUMMARY OF PRINCIPAL RESULTS

	KERS Non-Hazardous		KERS Hazardous		KERS Totals	
	6/30/2012	6/30/2011	6/30/2012	6/30/2011	6/30/2012	6/30/2011
Contributions for next fiscal year:						
Retirement	32.57%	28.03%	17.00%	16.16%		
Insurance	<u>12.71</u>	<u>16.52</u>	<u>11.84</u>	<u>19.73</u>	N/A	N/A
Total	45.28%	44.55%	28.84%	35.89%		
Funded status as of valuation date:						
Retirement						
Actuarial accrued liability	\$11,361,048,136	\$11,182,142,032	\$752,699,457	\$721,293,444	\$12,113,747,593	\$11,903,435,476
Actuarial value of assets	3,101,316,738	3,726,986,087	497,226,296	510,748,505	3,598,543,034	4,237,734,592
Unfunded liability on actuarial value of assets	8,259,731,398	7,455,155,945	255,473,161	210,544,939	8,515,204,559	7,665,700,884
Funded ratio on actuarial value of assets	27.30%	33.33%	66.06%	70.81%	29.71%	35.60%
Market value of assets	\$2,980,401,603	\$3,538,878,093	\$478,103,794	\$510,628,492	\$3,458,505,397	\$4,049,506,585
Unfunded liability on market value of assets	8,380,646,533	7,643,263,939	274,595,663	210,664,952	8,655,242,196	7,853,928,891
Funded ratio on market value of assets	26.23%	31.65%	63.52%	70.79%	28.55%	34.02%
Insurance						
Actuarial accrued liability	\$3,125,330,157	\$4,280,089,633	\$384,592,406	\$507,058,767	\$3,509,922,563	\$4,787,148,400
Actuarial value of assets	446,080,511	451,620,442	345,573,948	329,961,615	791,654,459	781,582,057
Unfunded liability on actuarial value of assets	2,679,249,646	3,828,469,191	39,018,458	177,097,152	2,718,268,104	4,005,566,343
Funded ratio on actuarial value of assets	14.27%	10.55%	89.85%	65.07%	22.55%	16.33%
Market value of assets	\$430,805,726	\$433,305,243	\$333,298,119	\$321,071,515	\$764,103,845	\$754,376,758
Unfunded liability on market value of assets	2,694,524,431	3,846,784,390	51,294,287	185,987,252	2,745,818,718	4,032,771,642
Funded ratio on market value of assets	13.78%	10.12%	86.66%	63.32%	21.77%	15.76%
Demographic data as of valuation date:						
Number of retired participants and beneficiaries	39,226	38,597	3,253	3,064	42,479	41,661
Number of vested former members	8,976	6,265	347	334	9,323	6,599
Number of former members due a refund	35,130	32,332	2,821	2,930	37,951	35,262
Number of active members	42,196	46,617	4,086	4,291	46,282	50,908
Total salary	\$1,644,896,681	\$1,731,632,748	\$131,976,754	\$133,053,792	\$1,776,873,435	\$1,864,686,540
Average salary	\$38,982	\$37,146	\$32,300	\$31,008	\$38,392	\$36,629



2. The valuation balance sheets showing the results of the valuation are given in Schedule A.
3. Comments on the valuation results are given in Section IV, comments on the experience and actuarial gains and losses during the valuation year are given in Section V, and the rates of contribution payable by employers are given in Section VI.
4. There were no changes in benefit provisions since the last valuation for KERS Hazardous members. There were changes in benefit provisions since the last valuation for KERS Non-Hazardous members. The plan administrator - Kentucky Retirement Systems Board of Trustees - has changed the Health Insurance plans that cover Medicare eligible retirees and the plan designs have changed for the Health Insurance plans that cover non-Medicare eligible retirees. The changes are summarized below.
 - The health insurance dependent subsidy for non-hazardous retirees not eligible for Medicare has been eliminated effective January 1, 2013.
 - The self-insured Medicare plans have been replaced by Medicare Advantage plans administered by Humana for Plan Year 2013.
 - Plan design changes have also been implemented for Plan Year 2013 for the Kentucky Employees' Health Plan (KEHP), the self-insured plan for active employees and non-Medicare eligible retirees administered by the Commonwealth of Kentucky.
5. Schedule B of this report presents the development of the actuarial value of assets. Schedule C details the actuarial assumptions and methods employed. Schedule D gives a summary of the benefit and contribution provisions of the plan.
6. The investment rate of return for developing insurance liabilities and contribution rates shown in this report for June 30, 2011 and June 30, 2012 is 4.50% for KERS Non-Hazardous and 7.75% for KERS Hazardous. The lower rate for KERS Non-Hazardous is required under the parameters set by the Governmental Accounting Standards Board Statements 43 and 45 given the lack of pre-funding of insurance benefits.



SECTION II – MEMBERSHIP DATA

Data regarding the membership of the System for use as a basis for the valuation were furnished by the System’s office. The following tables summarize the membership of the system as of June 30, 2012 upon which the valuation was based. Detailed tabulations of the data are given in Schedule E.

Active Members

Employee Group	Number	Payroll	Group Averages		
			Salary	Age	Service
Non-Hazardous	42,196	\$1,644,896,681	\$38,982	44.3	9.8
Hazardous	4,086	131,976,754	32,300	41.1	7.3
Total in KERS	46,282	\$1,776,873,435	\$38,392	44.0	9.6

The following tables show a six-year history of active member valuation data.

SCHEDULE OF NON-HAZARDOUS KERS ACTIVE MEMBER VALUATION DATA

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
6/30/2007	47,913	\$1,780,223,493	\$37,155	1.9%
6/30/2008	48,085	1,837,873,488	38,221	2.9
6/30/2009	46,060	1,754,412,912	38,090	(0.3)
6/30/2010	47,090	1,815,146,388	38,546	1.2
6/30/2011	46,617	1,731,632,748	37,146	(3.6)
6/30/2012	42,196	1,644,896,681	38,982	4.9

SCHEDULE OF HAZARDOUS KERS ACTIVE MEMBER VALUATION DATA

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
6/30/2007	4,349	\$144,838,020	\$33,304	3.7%
6/30/2008	4,393	148,710,060	33,852	1.6
6/30/2009	4,334	146,043,576	33,697	(0.5)
6/30/2010	4,291	143,557,944	33,456	(0.7)
6/30/2011	4,291	133,053,792	31,008	(7.3)
6/30/2012	4,086	131,976,754	32,300	4.2



The following tables show the number and annual retirement allowances payable to retired members and their beneficiaries on the roll of the Retirement System as of the valuation date as well as certain group averages.

Non-Hazardous Retired Lives

Type of Benefit Payment	Number	Annual Benefits*	Group Averages	
			Benefit	Age
Retiree	33,254	\$763,984,686	\$22,974	67.1
Disability	1,800	25,253,036	14,029	64.3
Beneficiary	4,172	55,643,223	13,337	70.4
Total in KERS	39,226	\$844,880,945	\$21,539	67.3

* Does not include annual benefits for those members included in the Hazardous System who are also receiving a portion of their benefit from the Non Hazardous System

Hazardous Retired Lives

Type of Benefit Payment	Number	Annual Benefits	Group Averages	
			Benefit	Age
Retiree	2,807	\$45,242,426	\$16,118	62.5
Disability	130	1,059,602	8,151	58.8
Beneficiary	316	2,929,177	9,270	61.3
Total in KERS	3,253	\$49,231,205	\$15,134	62.2

This valuation also includes 47,274 inactive members (44,106 Non-Hazardous and 3,168 Hazardous; of which 8,976 Non-Hazardous are vested and 347 Hazardous are vested).



SECTION III – ASSETS

- As of June 30, 2012 the total market value of assets amounted to \$4,222,609,242 as shown in the following table. The Insurance assets include both the amount in the health care trust and the amount in the 401(h) account in the pension trust established to meet the requirements of HB1.

**MARKET VALUE OF ASSETS BY FUND
AS OF JUNE 30, 2012**

Member Group	Retirement	Insurance	KERS Total
Non-Hazardous	\$2,980,401,603	\$430,805,726	\$3,411,207,329
Hazardous	<u>478,103,794</u>	<u>333,298,119</u>	<u>811,401,913</u>
Total	\$3,458,505,397	\$764,103,845	\$4,222,609,242

- The five-year smoothed market related actuarial value of assets used for the current valuation was \$4,390,197,493. Schedule B shows the development of the actuarial value of assets as of June 30, 2012. The following table shows the actuarial value of assets allocated among member groups.

COMPARISON OF ACTUARIAL VALUE OF ASSETS

	June 30, 2012	June 30, 2011
Retirement		
Non-Hazardous	\$ 3,101,316,738	\$ 3,726,986,087
Hazardous	<u>497,226,296</u>	<u>510,748,505</u>
Total	\$ 3,598,543,034	\$ 4,237,734,592
Insurance		
Non-Hazardous	\$ 446,080,511	\$ 451,620,442
Hazardous	<u>345,573,948</u>	<u>329,961,615</u>
Total	\$ 791,654,459	\$ 781,582,057
KERS Total		
Non-Hazardous	\$ 3,547,397,249	\$ 4,178,606,529
Hazardous	<u>842,800,244</u>	<u>840,710,120</u>
Total	\$ 4,390,197,493	\$ 5,019,316,649



SECTION IV - COMMENTS ON VALUATION

Schedule A of this report contains the valuation balance sheets which show the present and prospective assets and liabilities of the System as of June 30, 2012. Separate balance sheets are shown for each employee group as well as in total for Retirement and Insurance.

Retirement

1. The total valuation balance sheet on account of retirement benefits shows that the System has total prospective retirement benefit liabilities of \$13,536,982,296, of which \$8,981,435,267 is for the prospective benefits payable on account of present retired members and beneficiaries of deceased members, \$248,789,874 is for the prospective benefits payable on account of present inactive members, and \$4,306,757,155 is for the prospective benefits payable on account of present active members. Against these retirement benefit liabilities the System has a total present actuarial value of assets of \$3,598,543,034 as of June 30, 2012. The difference of \$9,938,439,262 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of retirement benefits. Of this amount, \$841,110,018 is the present value of future contributions expected to be made by members, and the balance of \$9,097,329,244 represents the present value of future contributions payable by the employers.
2. The employers' contributions to the System on account of retirement benefits consist of normal contributions, accrued liability contributions and contributions for administrative expenses. The valuation indicates that employer normal contributions at the rate of 3.72% of payroll for non-hazardous members and 5.42% of payroll for hazardous members are required to fund the continuing benefit accruals for the average active member of KERS.
3. Prospective employer normal contributions on account of retirement benefits at the above rates have a present value of \$582,124,685. When this amount is subtracted from \$9,097,329,244, which is the present value of the total future contributions to be made by the employers, there remains \$8,515,204,559 as the amount of future accrued liability contributions.
4. For non-hazardous members, it is recommended that the accrued liability contribution rate payable by the State on account of retirement benefits be set at 28.31% of payroll. For hazardous members, it is recommended that the accrued liability contribution rate payable by the State on account of retirement benefits be set at 10.91% of payroll. These rates are sufficient to liquidate the unfunded accrued liability of \$8,259,731,398 for non-hazardous members and \$255,473,161 for hazardous members over 25 years on the assumption that the aggregate payroll for non-hazardous and hazardous members will increase by 4.50% each year.
5. The contribution rate for administrative expenses is determined to be 0.54% of payroll for non-hazardous members and 0.67% of payroll for hazardous members.



Insurance

1. The total valuation balance sheet on account of insurance benefits shows that the System has total prospective insurance benefit liabilities of \$4,710,184,207, of which \$1,798,049,543 is for the prospective benefits payable on account of present retired members and beneficiaries of deceased members, \$322,598,015 is for the prospective benefits payable on account of present inactive members, and \$2,589,536,649 is for the prospective benefits payable on account of present active members. Against these retirement benefit liabilities the System has a total present actuarial value of assets of \$791,654,459 as of June 30, 2012. The difference of \$3,918,529,748 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of retirement benefits. Of this amount, \$47,416,322 is the present value of future contributions expected to be made by members, and the balance of \$3,871,113,426 represents the present value of future contributions payable by the employers.
2. The employers' contributions to the System on account of insurance benefits consist of normal contributions, accrued liability contributions and contributions for administrative expenses. The valuation indicates that employer normal contributions at the rate of 5.88% of payroll for non-hazardous members and 9.93% of payroll for hazardous members are required to fund the continuing benefit accruals for the average active member of KERS.
3. Prospective employer normal contributions on account of insurance benefits at the above rates have a present value of \$1,152,845,322. When this amount is subtracted from \$3,871,113,426, which is the present value of the total future contributions to be made by the employers, there remains \$2,718,268,104 as the amount of future accrued liability contributions.
4. For non-hazardous members, it is recommended that the accrued liability contribution rate payable by the State on account of insurance benefits be set at 6.52% of payroll. For hazardous members, it is recommended that the accrued liability contribution rate payable by the State on account of insurance benefits be set at 1.67% of payroll. These rates are sufficient to liquidate the unfunded accrued liability of \$2,679,249,646 for non-hazardous members and \$39,018,458 for hazardous members over 25 years on the assumption that the aggregate payroll for non-hazardous and hazardous members will increase by 4.50% each year.
5. The contribution rate for administrative expenses is determined to be 0.31% of payroll for non-hazardous members and 0.24% of payroll for hazardous members.



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, 2012 is shown below (\$ millions).

**Experience Gain/(Loss)
Retirement Benefits**

		Non-Hazardous Group		Hazardous Group		Total
(1)	UAAL* as of 6/30/11	\$ 7,455.2		\$ 210.5		\$ 7,665.7
(2)	Normal cost from last valuation	75.8		9.9		85.7
(3)	Employer contributions	214.8		20.8		235.6
(4)	Interest accrual: [(1) + (2)] x .0775 - (3) x .03875	575.3		16.3		591.6
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	\$ 7,891.5		\$ 215.9		\$ 8,107.4
(6)	Change due to plan amendments	0.0		0.0		0.0
(7)	Change due to new actuarial assumption or methods	0.0		0.0		0.0
(8)	Expected UAAL after changes: (5) + (6) + (7)	\$ 7,891.5		\$ 215.9		\$ 8,107.4
(9)	Actual UAAL as of 6/30/12	\$ 8,259.7		\$ 255.5		\$ 8,515.2
(10)	Gain/(loss): (8) - (9)	\$ (368.2)		\$ (39.6)		\$ (407.8)
(11)	Accrued liabilities as of 6/30/11	\$ 11,182.1		\$ 721.3		\$ 11,903.4
(12)	Gain/(loss) as percent of actuarial accrued liabilities at start of year	(3.3%)		(5.5%)		(3.4%)

*Unfunded actuarial accrued liability



**Experience Gain/(Loss)
Insurance Benefits**

		Non-Hazardous Group	Hazardous Group	Total
(1)	UAAL* as of 6/30/11	\$ 3,828.5	\$ 177.1	\$ 4,005.6
(2)	Normal cost from last valuation	134.2	16.3	150.5
(3)	Expected employer contributions	<u>281.4</u>	<u>26.0</u>	<u>307.4</u>
(4)	Interest accrual: Non-Haz: [(1) + (2) - (3)] x .045 Haz: [(1) + (2) - (3)] x .0775	165.7	13.0	178.7
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	\$ 3,847.0	\$ 180.4	\$ 4,027.4
(6)	Change due to plan change to MA-PD	(1,251.0)	(105.8)	(1,356.8)
(7)	Change due to new actuarial assumption or methods	0.0	0.0	0.0
(8)	Expected UAAL after changes: (5) + (6) + (7)	\$ 2,596.0	\$ 74.6	\$ 2,670.6
(9)	Actual UAAL as of 6/30/12	\$ 2,679.2	\$ 39.0	\$ 2,718.2
(10)	Gain/(loss): (8) - (9)	\$ (83.2)	\$ 35.6	\$ (47.6)
(11)	Accrued liabilities as of 6/30/11	\$ 4,280.1	\$ 507.1	\$ 4,787.2
(12)	Gain/(loss) as percent of actuarial accrued liabilities at start of year	(1.9%)	7.0%	(1.0%)

* *Unfunded actuarial accrued liability*



**NON-HAZARDOUS KERS MEMBERS
ANALYSIS OF FINANCIAL EXPERIENCE**

**Gains & Losses in Accrued Liabilities
Resulting from Difference Between
Assumed Experience & Actual Experience
(\$ Millions)**

Type of Activity	Retirement \$ Gain (or Loss) For Year Ending 6/30/12	Insurance \$ Gain (or Loss) For Year Ending 6/30/12
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	\$ (61.3)	\$ 20.2
Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss.	(26.1)	1.4
Death-in Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(0.6)	(2.0)
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	141.0	(27.4)
Pay or Claims Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss. For insurance, smaller claims increases than assumed creates a gain; larger, a loss.	(7.1)	111.8
New Members. Additional unfunded accrued liability will produce a loss.	(7.8)	(3.4)
Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(325.1)	(37.9)
Death After Retirement. If retired members live longer than assumed, there is a loss. If not as long, a gain.	15.0	33.5
Other. Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>(96.2)</u>	<u>(179.4)</u>
Gain (or Loss) During Year From Financial Experience	\$ (368.2)	\$ (83.2)
Non-Recurring Items. Adjustments for plan amendments, assumption changes, method changes and data corrections	<u>0.0</u>	<u>1,251.0</u>
Composite Gain (or Loss) During Year	\$ (368.2)	\$ 1,167.8



**HAZARDOUS KERS MEMBERS
ANALYSIS OF FINANCIAL EXPERIENCE**

**Gains & Losses in Accrued Liabilities
Resulting from Difference Between
Assumed Experience & Actual Experience
(\$ Millions)**

Type of Activity	Retirement \$ Gain (or Loss) For Year Ending 6/30/12	Insurance \$ Gain (or Loss) For Year Ending 6/30/12
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	\$ (12.0)	\$ 2.4
Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss.	(0.8)	0.4
Death-in Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	0.1	(0.1)
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	20.1	10.9
Pay or Claims Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss. For insurance, smaller claims increases than assumed creates a gain; larger, a loss.	(3.8)	19.3
New Members. Additional unfunded accrued liability will produce a loss.	(2.7)	(2.3)
Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(29.9)	(21.3)
Death After Retirement. If retired members live longer than assumed, there is a loss. If not as long, a gain.	3.9	7.1
Other. Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>(14.5)</u>	<u>19.2</u>
Gain (or Loss) During Year From Financial Experience	\$ (39.6)	\$ 35.6
Non-Recurring Items. Adjustments for plan amendments, assumption changes, method changes and data corrections	<u>0.0</u>	<u>105.8</u>
Composite Gain (or Loss) During Year	\$ (39.6)	\$ 141.4



**TOTAL KERS MEMBERS
ANALYSIS OF FINANCIAL EXPERIENCE**

**Gains & Losses in Accrued Liabilities
Resulting from Difference Between
Assumed Experience & Actual Experience
(\$ Millions)**

Type of Activity	Retirement \$ Gain (or Loss) For Year Ending 6/30/12	Insurance \$ Gain (or Loss) For Year Ending 6/30/12
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	\$ (73.3)	\$ 22.6
Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss.	(26.9)	1.8
Death-in Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(0.5)	(2.1)
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	161.2	(16.5)
Pay or Claims Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss. For insurance, smaller claims increases than assumed creates a gain; larger, a loss.	(10.9)	131.1
New Members. Additional unfunded accrued liability will produce a loss.	(10.4)	(5.7)
Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(355.0)	(59.2)
Death After Retirement. If retired members live longer than assumed, there is a loss. If not as long, a gain.	18.9	40.6
Other. Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>(110.7)</u>	<u>(160.2)</u>
Gain (or Loss) During Year From Financial Experience	\$ (407.8)	\$ (47.6)
Non-Recurring Items. Adjustments for plan amendments, assumption changes, method changes and data corrections	<u>0.0</u>	<u>1,356.8</u>
Composite Gain (or Loss) During Year	\$ (407.8)	\$ 1,309.2



SECTION VI – REQUIRED CONTRIBUTION RATES

The valuation balance sheet gives the basis for determining the percentage rates for contributions to be made by employers to the Retirement System. The following tables show the rates of contribution payable by employers as determined from the present valuation for the 2013/2014 fiscal year.

Required Contribution Rates Non-Hazardous Retirement

Contribution for	Amount	% of Payroll
A. Normal Cost:		
(1) Service retirement benefits	\$ 131,143,668	7.97%
(2) Disability benefits	10,285,846	0.63
(3) Survivor benefits	2,071,853	0.13
(4) Total	\$ 143,501,367	8.72%
B. Member Contributions	\$ 82,244,834	5.00%
C. Employer Normal Cost: [A(4) - B]	\$ 61,256,533	3.72%
D. Administrative Expenses	\$ 8,882,442	0.54%
E. Unfunded Actuarial Accrued Liability Contributions*:		
(1) UAAL Contribution Based on 6/30/11 Valuation:	\$ 389,018,065	23.65%
(2) Change due to:		
a. Active decrements	\$ (2,988,661)	(0.18)%
b. Pay increases	399,403	0.02
c. Retiree mortality	(846,666)	(0.05)
d. Investment return	18,331,291	1.11
e. COLA	6,597,310	0.40
f. Assumption Change	0	0.00
g. Other	55,180,039	3.34
h. Total Change	\$ 76,672,716	4.66%
(3) UAAL Contribution Based on 6/30/12 Valuation: [E(1) +E(2)h]	\$ 465,690,781	28.31%
F. Total Recommended Employer Contribution Rate: [C+D+E(3)]	\$ 535,829,756	32.57%

**Based on 26 year amortization of the UAAL from June 30, 2011 and 25 years from June 30, 2012*



**Required Contribution Rates
Hazardous Retirement**

Contribution for	Amount	% of Payroll
A. Normal Cost:		
(1) Service retirement benefits	\$ 16,277,766	12.48%
(2) Disability benefits	1,121,967	0.83
(3) Survivor benefits	317,359	0.23
(4) Total	\$ 17,717,092	13.42%
B. Member Contributions	\$ 10,558,140	8.00%
C. Employer Normal Cost: [A(4) - B]	\$ 7,158,952	5.42%
D. Administrative Expenses	\$ 884,244	0.67%
E. Unfunded Actuarial Accrued Liability Contributions*:		
(1) UAAL Contribution Based on 6/30/11 Valuation:	\$ 11,468,780	8.69%
(2) Change due to:		
a. Active decrements	\$ (419,932)	(0.32)%
b. Pay increases	216,379	0.16
c. Retiree mortality	(217,196)	(0.16)
d. Investment return	1,685,899	1.28
e. COLA	406,133	0.31
f. Assumption Change	0	0.00
g. Other	1,263,734	0.95
h. Total Change	\$ 2,935,017	2.22%
(3) UAAL Contribution Based on 6/30/12 Valuation: [E(1) +E(2)h]	\$ 14,403,797	10.91%
F. Total Recommended Employer Contribution Rate: [C+D+E(3)]	\$ 22,446,993	17.00%

**Based on 26 year amortization of the UAAL from June 30, 2011 and 25 years from June 30, 2012*



**Required Contribution Rates
Non-Hazardous Insurance**

	Contribution for	Amount	% of Payroll
A.	Normal Cost:	\$ 99,601,271	6.06%
B.	Member Contributions*	\$ 2,960,814	0.18%
C.	Employer Normal Cost: [A - B]	\$ 96,640,457	5.88%
D.	Administrative Expenses	\$ 5,070,370	0.31%
E.	Unfunded Actuarial Accrued Liability**:	\$ 107,169,986	6.52%
F.	Total Recommended Employer Contribution Rate: [C+D+E]	\$ 208,880,813	12.71%

**The liabilities are net of retiree contributions towards their healthcare.*

*** Based on 25 year amortization of the UAAL from June 30, 2012*

**Required Contribution Rates
Hazardous Insurance**

	Contribution for	Amount	% of Payroll
A.	Normal Cost:	\$ 13,421,141	10.17%
B.	Member Contributions*	\$ 316,744	0.24%
C.	Employer Normal Cost: [A - B]	\$ 13,104,397	9.93%
D.	Administrative Expenses	\$ 322,727	0.24%
E.	Unfunded Actuarial Accrued Liability**:	\$ 2,199,894	1.67%
F.	Total Recommended Employer Contribution Rate: [C+D+E]	\$ 15,627,018	11.84%

**The liabilities are net of retiree contributions towards their healthcare.*

*** Based on 25 year amortization of the UAAL from June 30, 2012*



SECTION VII - ACCOUNTING INFORMATION

Governmental Accounting Standards Board Statements 25, 27, 43 and 45 set forth certain items of required supplementary information to be disclosed in the financial statements of the System and the employer. One such item is a distribution of the number of employees by type of membership, as follows:

**NUMBER OF ACTIVE AND RETIRED MEMBERS
AS OF JUNE 30, 2012**

GROUP	NUMBER		
	Non-Hazardous	Hazardous	Total
Retirees and beneficiaries currently receiving benefits	39,226	3,253	42,479
Terminated employees entitled to benefits but not yet receiving benefits	44,106	3,168	47,274
Active Members	<u>42,196</u>	<u>4,086</u>	<u>46,282</u>
Total	125,528	10,507	136,035

Another such item is the Schedule of Funding Progress for retirement and insurance benefits separately as shown in the following tables.



**RETIREMENT BENEFITS
SCHEDULE OF FUNDING PROGRESS**

Actuarial Valuation Date	Value of Plan Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / (c))
Non-Hazardous Members						
6/30/2007	\$ 5,396,782,459	\$ 9,485,939,277	\$ 4,089,156,818	56.9%	\$ 1,780,223,493	229.7%
6/30/2008	5,318,792,893	10,129,689,985	4,810,897,092	52.5	1,837,873,488	261.8
6/30/2009	4,794,611,365	10,658,549,532	5,863,938,167	45.0	1,754,412,912	334.2
6/30/2010	4,210,215,585	11,004,795,089	6,794,579,504	38.3	1,815,146,388	374.3
6/30/2011	3,726,986,087	11,182,142,032	7,455,155,945	33.3	1,731,632,748	430.5
6/30/2012	3,101,316,738	11,361,048,136	8,259,731,398	27.3	1,644,896,681	502.1
Hazardous Members						
6/30/2007	\$ 467,287,809	\$ 558,992,329	\$ 91,704,520	83.6%	\$ 144,838,020	63.3%
6/30/2008	502,132,214	618,010,827	115,878,613	81.2	148,710,060	77.9
6/30/2009	502,503,287	674,411,781	171,908,494	74.5	146,043,576	117.7
6/30/2010	502,729,009	688,149,451	185,420,442	73.1	143,557,944	129.2
6/30/2011	510,748,505	721,293,444	210,544,939	70.8	133,053,792	158.2
6/30/2012	497,226,296	752,699,457	255,473,161	66.1	131,976,754	193.6
Total KERS Members						
6/30/2007	\$ 5,864,070,268	\$ 10,044,931,606	\$ 4,180,861,338	58.4%	\$ 1,925,061,513	217.2%
6/30/2008	5,820,925,107	10,747,700,812	4,926,775,705	54.2	1,986,583,548	248.0
6/30/2009	5,297,114,652	11,332,961,313	6,035,846,661	46.7	1,900,456,488	317.6
6/30/2010	4,712,944,594	11,692,944,540	6,979,999,946	40.3	1,958,704,332	356.4
6/30/2011	4,237,734,592	11,903,435,476	7,665,700,884	35.6	1,864,686,540	411.1
6/30/2012	3,598,543,034	12,113,747,593	8,515,204,559	29.7	1,776,873,435	479.2



**INSURANCE BENEFITS
SCHEDULE OF FUNDING PROGRESS**

Actuarial Valuation Date	Value of Plan Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / (c))
Non-Hazardous Members						
6/30/2007	\$ 621,171,658	\$ 5,201,355,055	\$ 4,580,183,397	11.9%	\$ 1,780,223,493	257.3%
6/30/2008	603,197,761	5,431,499,285	4,828,301,524	11.1	1,837,873,488	262.7
6/30/2009	534,172,580	4,507,325,571	3,973,152,991	11.9	1,754,412,912	226.5
6/30/2010	471,341,628	4,466,136,041	3,994,794,413	10.6	1,815,146,388	220.1
6/30/2011	451,620,442	4,280,089,633	3,828,469,191	10.6	1,731,632,748	221.1
6/30/2012	446,080,511	3,125,330,157	2,679,249,646	14.3	1,644,896,681	162.9
Hazardous Members						
6/30/2007	\$ 251,536,756	\$ 504,842,981	\$ 253,306,225	49.8%	\$ 144,838,020	174.9%
6/30/2008	288,161,759	541,657,214	253,495,455	53.2	148,710,060	170.5
6/30/2009	301,634,592	491,132,170	189,497,578	61.4	146,043,576	129.8
6/30/2010	314,427,296	493,297,529	178,870,233	63.7	143,557,944	124.6
6/30/2011	329,961,615	507,058,767	177,097,152	65.1	133,053,792	133.1
6/30/2012	345,573,948	384,592,406	39,018,458	89.9	131,976,754	29.6
Total KERS Members						
6/30/2007	\$ 872,708,414	\$ 5,706,198,036	\$ 4,833,489,622	15.3%	\$ 1,925,061,513	251.1%
6/30/2008	891,359,520	5,973,156,499	5,081,796,979	14.9	1,986,583,548	255.8
6/30/2009	835,807,172	4,998,457,741	4,162,650,569	16.7	1,900,456,488	219.0
6/30/2010	785,768,924	4,959,433,570	4,173,664,646	15.8	1,958,704,332	213.1
6/30/2011	781,582,057	4,787,148,400	4,005,566,343	16.3	1,864,686,540	214.8
6/30/2012	791,654,459	3,509,922,563	2,718,268,104	22.6	1,776,873,435	153.0



RETIREMENT BENEFITS
SCHEDULE OF EMPLOYER CONTRIBUTIONS

Year Ended	Annual Required Contribution	Actual Contributions	Percentage Contributed
Non-Hazardous Members			
June 30, 2007	\$176,774,106	\$88,248,677	49.9%
June 30, 2008	264,742,985	104,655,217	39.5
June 30, 2009	294,495,010	112,383,083	38.2
June 30, 2010	348,494,678	144,050,560	41.3
June 30, 2011	381,915,236	193,754,471	50.7
June 30, 2012	441,094,470	214,786,132	48.7
Hazardous Members			
June 30, 2007	\$12,219,689	\$13,237,321	108.3%
June 30, 2008	14,147,341	15,257,079	107.8
June 30, 2009	15,708,254	15,843,289	100.9
June 30, 2010	17,814,630	17,658,058	99.1
June 30, 2011	20,605,070	19,140,508	92.9
June 30, 2012	20,264,754	20,808,540	102.7
Total KERS Members			
June 30, 2007	\$188,993,795	\$101,485,998	53.7%
June 30, 2008	278,890,326	119,912,296	43.0
June 30, 2009	310,203,264	128,226,372	41.3
June 30, 2010	366,309,308	161,708,618	44.1
June 30, 2011	402,520,306	212,894,979	52.9
June 30, 2012	461,359,224	235,594,672	51.1



**INSURANCE BENEFITS
SCHEDULE OF EMPLOYER CONTRIBUTIONS**

Year Ended	Annual Required Contribution	Retiree Drug Subsidy (RDS) Contribution	Employer Contributions	Total Contributions	Percentage Contributed
Non-Hazardous Members					
June 30, 2007	\$219,768,964	\$10,744,049	\$ 64,014,332	\$ 74,758,381	34.0%
June 30, 2008	558,745,820	6,633,538	56,744,942	63,378,480	11.3
June 30, 2009	362,707,378	8,167,982	74,542,932	82,710,914	22.8
June 30, 2010	376,556,187	8,550,914	93,976,917	102,527,831	27.2
June 30, 2011	294,897,813	0	129,335,552	129,335,552	43.9
June 30, 2012	297,904,224	0	156,057,216	156,057,216	52.4
Hazardous Members					
June 30, 2007	\$31,304,778	104,669	\$19,534,819	\$19,639,488	62.7%
June 30, 2008	51,214,929	73,891	21,997,341	22,071,232	43.1
June 30, 2009	34,670,467	186,081	20,807,204	20,993,285	60.6
June 30, 2010	35,045,278	319,059	21,921,535	22,240,594	63.5
June 30, 2011	29,585,257	0	19,952,580	19,952,580	67.4
June 30, 2012	28,326,206	0	24,538,087	24,538,087	86.6
Total KERS Members					
June 30, 2007	\$251,073,742	\$10,848,718	\$ 83,549,151	\$ 94,397,869	37.6%
June 30, 2008	609,960,749	6,707,429	78,742,283	85,449,712	14.0
June 30, 2009	397,377,845	8,354,063	95,350,136	103,704,199	26.1
June 30, 2010	411,601,465	8,869,973	115,898,452	124,768,425	30.3
June 30, 2011	324,483,070	0	149,288,132	149,288,132	46.0
June 30, 2012	326,230,430	0	180,595,303	180,595,303	55.4



The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2012. Additional information as of the latest actuarial valuation follows.

Retirement Benefits

	Non-Hazardous Members	Hazardous Members
Valuation date	6/30/2012	6/30/2012
Actuarial cost method	Entry Age	Entry Age
Amortization	Level Percent Closed	Level Percent Closed
Remaining amortization period	25 years	25 years
Asset valuation method	5 Year Smoothed Market	5 Year Smoothed Market
Actuarial assumptions		
Investment rate of return*	7.75%	7.75%
Projected salary increases**	5.0% - 17.0%	5.0% - 21.0%
Cost-of-living adjustment	None	None
*Includes price inflation at	3.50%	3.50%
**Includes wage inflation at	4.50%	4.50%

Insurance Benefits

	Non-Hazardous Members	Hazardous Members
Valuation date	6/30/2012	6/30/2012
Actuarial cost method	Entry Age	Entry Age
Amortization	Level Percent Closed	Level Percent Closed
Remaining amortization period	25 years	25 years
Asset valuation method	5 Year Smoothed Market	5 Year Smoothed Market
Medical Trend Assumption (Pre-Medicare)	9.5% - 5.0%	9.5% - 5.0%
Medical Trend Assumption (Post-Medicare)	7.5% - 5.0%	7.5% - 5.0%
Year Ultimate Trend	2019	2019
Actuarial assumptions:		
Investment rate of return*	4.50%	7.75%
*Includes price inflation at	3.50%	3.50%



SCHEDULE A

Valuation Balance Sheet and Solvency Test

The following valuation balance sheets show the assets and liabilities of the retirement system as of the current valuation date of June 30, 2012 and, for comparison purposes, as of the immediately preceding valuation date of June 30, 2011. The items shown in the balance sheet are present values actuarially determined as of the relevant valuation date.

VALUATION BALANCE SHEETS SHOWING THE ASSETS AND LIABILITIES OF THE KENTUCKY EMPLOYEES RETIREMENT SYSTEM

RETIREMENT BENEFITS NON-HAZARDOUS KERS MEMBERS

	June 30, 2012	June 30, 2011
ASSETS		
Current actuarial value of assets	\$ 3,101,316,738	\$ 3,726,986,087
Prospective contributions		
Member contributions	\$ 751,281,602	\$ 797,874,166
Employer normal contributions	519,955,001	570,896,611
Unfunded accrued liability contributions	<u>8,259,731,398</u>	<u>7,455,155,945</u>
Total prospective contributions	<u>\$ 9,530,968,001</u>	<u>\$ 8,823,926,722</u>
Total assets	<u>\$ 12,632,284,739</u>	<u>\$ 12,550,912,809</u>
LIABILITIES		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 8,473,263,446	\$ 8,268,747,284
Present value of benefits payable on account of active members	3,923,748,401	4,068,198,453
Present value of benefits payable on account of inactive members	<u>235,272,892</u>	<u>213,967,072</u>
Total liabilities	<u>\$ 12,632,284,739</u>	<u>\$ 12,550,912,809</u>



**VALUATION BALANCE SHEET
RETIREMENT BENEFITS
HAZARDOUS KERS MEMBERS**

	June 30, 2012	June 30, 2011
ASSETS		
Current actuarial value of assets	\$ 497,226,296	\$ 510,748,505
Prospective contributions		
Member contributions	\$ 89,828,416	\$ 90,314,845
Employer normal contributions	62,169,684	74,774,121
Unfunded accrued liability contributions	<u>255,473,161</u>	<u>210,544,939</u>
Total prospective contributions	<u>\$ 407,471,261</u>	<u>\$ 375,633,905</u>
 Total assets	 <u><u>\$ 904,697,557</u></u>	 <u><u>\$ 886,382,410</u></u>
LIABILITIES		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 508,171,821	\$ 470,443,306
 Present value of benefits payable on account of active members	 383,008,754	 395,987,332
 Present value of benefits payable on account of inactive members	 <u>13,516,982</u>	 <u>19,951,772</u>
 Total liabilities	 <u><u>\$ 904,697,557</u></u>	 <u><u>\$ 886,382,410</u></u>



**VALUATION BALANCE SHEET
RETIREMENT BENEFITS
TOTAL KERS MEMBERS**

	June 30, 2012	June 30, 2011
ASSETS		
Current actuarial value of assets	\$ 3,598,543,034	\$ 4,237,734,592
Prospective contributions		
Member contributions	\$ 841,110,018	\$ 888,189,011
Employer normal contributions	582,124,685	645,670,732
Unfunded accrued liability contributions	<u>8,515,204,559</u>	<u>7,665,700,884</u>
Total prospective contributions	<u>\$ 9,938,439,262</u>	<u>\$ 9,199,560,627</u>
 Total assets	 <u><u>\$ 13,536,982,296</u></u>	 <u><u>\$ 13,437,295,219</u></u>
LIABILITIES		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 8,981,435,267	\$ 8,739,190,590
 Present value of benefits payable on account of active members	 4,306,757,155	 4,464,185,785
 Present value of benefits payable on account of inactive members	 <u>248,789,874</u>	 <u>233,918,844</u>
 Total liabilities	 <u><u>\$ 13,536,982,296</u></u>	 <u><u>\$ 13,437,295,219</u></u>



**VALUATION BALANCE SHEET
INSURANCE BENEFITS
NON-HAZARDOUS KERS MEMBERS**

	June 30, 2012	June 30, 2011
ASSETS		
Current actuarial value of assets	\$ 446,080,511	\$ 451,620,442
Prospective contributions		
Member contributions	\$ 44,118,830	\$ 37,443,473
Employer normal contributions	1,052,410,976	1,489,811,511
Unfunded accrued liability contributions	<u>2,679,249,646</u>	<u>3,828,469,191</u>
Total prospective contributions	<u>\$ 3,775,779,452</u>	<u>\$ 5,355,724,175</u>
 Total assets	 <u>\$ 4,221,859,963</u>	 <u>\$ 5,807,344,617</u>
LIABILITIES		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 1,617,674,784	\$ 2,296,980,336
 Present value of benefits payable on account of active members	 2,297,791,340	 3,239,341,639
 Present value of benefits payable on account of inactive members	 <u>306,393,839</u>	 <u>271,022,642</u>
 Total liabilities	 <u>\$ 4,221,859,963</u>	 <u>\$ 5,807,344,617</u>



**VALUATION BALANCE SHEET
INSURANCE BENEFITS
HAZARDOUS KERS MEMBERS**

	June 30, 2012	June 30, 2011
ASSETS		
Current actuarial value of assets	\$ 345,573,948	\$ 329,961,615
Prospective contributions		
Member contributions	\$ 3,297,492	\$ 2,404,322
Employer normal contributions	100,434,346	127,331,720
Unfunded accrued liability contributions	<u>39,018,458</u>	<u>177,097,152</u>
Total prospective contributions	<u>\$ 142,750,296</u>	<u>\$ 306,833,194</u>
 Total assets	 <u>\$ 488,324,244</u>	 <u>\$ 636,794,809</u>
LIABILITIES		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 180,374,759	\$ 267,162,887
 Present value of benefits payable on account of active members	 291,745,309	 351,254,948
 Present value of benefits payable on account of inactive members	 <u>16,204,176</u>	 <u>18,376,974</u>
 Total liabilities	 <u>\$ 488,324,244</u>	 <u>\$ 636,794,809</u>



**VALUATION BALANCE SHEET
INSURANCE BENEFITS
TOTAL KERS MEMBERS**

	June 30, 2012	June 30, 2011
ASSETS		
Current actuarial value of assets	\$ 791,654,459	\$ 781,582,057
Prospective contributions		
Member contributions	\$ 47,416,322	\$ 39,847,795
Employer normal contributions	1,152,845,322	1,617,143,231
Unfunded accrued liability contributions	<u>2,718,268,104</u>	<u>4,005,566,343</u>
Total prospective contributions	<u>\$ 3,918,529,748</u>	<u>\$ 5,662,557,369</u>
 Total assets	 <u><u>\$ 4,710,184,207</u></u>	 <u><u>\$ 6,444,139,426</u></u>
LIABILITIES		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 1,798,049,543	\$ 2,564,143,223
 Present value of benefits payable on account of active members	 2,589,536,649	 3,590,596,587
 Present value of benefits payable on account of inactive members	 <u>322,598,015</u>	 <u>289,399,616</u>
 Total liabilities	 <u><u>\$ 4,710,184,207</u></u>	 <u><u>\$ 6,444,139,426</u></u>



The following tables provide the solvency test for non-hazardous and hazardous KERS members.

**Solvency Test
Retirement Benefits
Non-Hazardous KERS Members**

Valuation Date	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Reported Asset		
	(1)	(2)	(3)	Actuarial Value of Assets	(1)	(2)	(3)
	Active Member Contributions	Retired Members & Beneficiaries	Active Members (Employer Financed Portion)				
6/30/2007	\$ 878,842,180	\$ 6,437,235,593	\$ 2,169,861,504	\$ 5,396,782,459	100.0%	70.2%	0.0%
6/30/2008	875,178,068	7,162,496,700	2,092,015,217	5,318,792,893	100.0	62.0	0.0
6/30/2009	793,574,765	8,205,155,691	1,659,819,076	4,794,611,365	100.0	48.8	0.0
6/30/2010	869,484,042	8,329,757,802	1,805,553,245	4,210,215,585	100.0	40.1	0.0
6/30/2011	916,568,932	8,482,714,356	1,782,858,744	3,726,986,087	100.0	33.1	0.0
6/30/2012	885,137,183	8,708,536,338	1,767,374,615	3,101,316,738	100.0	25.4	0.0

**Solvency Test
Retirement Benefits
Hazardous KERS Members**

Valuation Date	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Reported Asset		
	(1)	(2)	(3)	Actuarial Value of Assets	(1)	(2)	(3)
	Active Member Contributions	Retired Members & Beneficiaries	Active Members (Employer Financed Portion)				
6/30/2007	\$ 88,670,847	\$ 306,492,350	\$ 163,829,132	\$ 467,287,809	100.0%	100.0%	44.0%
6/30/2008	89,590,638	355,771,877	172,648,312	502,132,214	100.0	100.0	32.9
6/30/2009	87,779,938	413,972,356	172,659,487	502,503,287	100.0	100.0	0.4
6/30/2010	88,511,283	441,657,241	157,980,927	502,729,009	100.0	93.8	0.0
6/30/2011	86,614,205	490,395,078	144,284,161	510,748,505	100.0	86.5	0.0
6/30/2012	82,100,877	521,688,803	148,909,777	497,226,296	100.0	79.6	0.0



**Solvency Test
Insurance Benefits
Non-Hazardous KERS Members**

Valuation Date	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Reported Asset		
	(1)	(2)	(3)	Actuarial Value of Assets	(1)	(2)	(3)
	Active Member Contributions	Retired Members & Beneficiaries	Active Members (Employer Financed Portion)				
6/30/2007	\$ 0	\$ 2,569,197,567	\$ 2,632,157,488	\$ 621,171,658	100.0%	24.2%	0.0%
6/30/2008	0	2,788,189,754	2,643,309,531	603,197,761	100.0	21.6	0.0
6/30/2009	0	2,861,867,088	1,645,458,483	534,172,580	100.0	18.7	0.0
6/30/2010	0	2,744,534,054	1,721,601,987	471,341,628	100.0	17.2	0.0
6/30/2011	0	2,568,002,978	1,712,086,655	451,620,442	100.0	17.6	0.0
6/30/2012	0	1,924,068,623	1,201,261,534	446,080,511	100.0	23.2	0.0

**Solvency Test
Insurance Benefits
Hazardous KERS Members**

Valuation Date	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Reported Asset		
	(1)	(2)	(3)	Actuarial Value of Assets	(1)	(2)	(3)
	Active Member Contributions	Retired Members & Beneficiaries	Active Members (Employer Financed Portion)				
6/30/2007	\$ 0	\$ 201,189,546	\$ 303,653,435	\$ 251,536,756	100.0%	100.0%	16.6%
6/30/2008	0	228,834,940	312,822,274	288,161,759	100.0	100.0	19.0
6/30/2009	0	242,123,365	249,008,805	301,634,592	100.0	100.0	23.9
6/30/2010	0	268,510,709	224,786,820	314,427,296	100.0	100.0	20.4
6/30/2011	0	285,539,861	221,518,906	329,961,615	100.0	100.0	20.1
6/30/2012	0	196,578,935	188,013,471	345,573,948	100.0	100.0	79.2

SCHEDULE B

**Development of Actuarial Value of Assets
Retirement Benefits
Non-Hazardous Members**



Valuation date June 30:	2011	2012	2013	2014	2015	2016
A. Actuarial Value Beginning of Year	\$ 4,210,215,585	\$ 3,726,986,087				
B. Market Value End of Year	3,538,878,093	2,980,401,603				
C. Market Value Beginning of Year	3,503,007,035	3,538,878,093				
D. Cash Flow						
D1. Contributions	303,633,346	311,192,306				
D2. Benefit Payments	(849,302,748)	(878,583,454)				
D3. Administrative Expenses	(9,299,947)	(8,907,777)				
D4. Investment Expenses	<u>(17,600,109)</u>	<u>(11,549,725)</u>				
D5. Net	(572,569,458)	(587,848,650)				
E. Investment Income						
E1. Market Total: B.-C.-D5.	608,440,516	29,372,160				
E2. Assumed Rate	7.75%	7.75%				
E3. Amount for Immediate Recognition	267,578,092	263,481,194				
E4. Amount for Phased-In Recognition	340,862,424	(234,109,034)				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	68,172,485	(46,821,807)	0	0	0	0
F2. First Prior Year	54,541,214	68,172,485	(46,821,807)	0	0	0
F3. Second Prior Year	(247,227,791)	54,541,214	68,172,485	(46,821,807)	0	0
F4. Third Prior Year	(129,965,994)	(247,227,791)	54,541,214	68,172,485	(46,821,807)	0
F5. Fourth Prior Year	<u>76,241,954</u>	<u>(129,965,994)</u>	<u>(247,227,791)</u>	<u>54,541,214</u>	<u>68,172,485</u>	<u>(46,821,807)</u>
F6. Total Recognized Investment Gain	(178,238,132)	(301,301,893)	(171,335,899)	75,891,892	21,350,678	(46,821,807)
G. Actuarial Value End of Year:						
A.+D5.+E3.+F6.	\$ 3,726,986,087	\$ 3,101,316,738				
H. Difference Between Market & Actuarial Values	\$ (188,107,994)	\$ (120,915,135)	\$ 50,420,764	\$ (25,471,128)	\$ (46,821,807)	\$ 0

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.



**Development of Actuarial Value of Assets
Retirement Benefits
Hazardous Members**

Valuation date June 30:	2011	2012	2013	2014	2015	2016
A. Actuarial Value Beginning of Year	\$ 502,729,009	\$ 510,748,505				
B. Market Value End of Year	510,628,492	478,103,794				
C. Market Value Beginning of Year	443,511,663	510,628,492				
D. Cash Flow						
D1. Contributions	32,099,490	32,590,014				
D2. Benefit Payments	(46,571,518)	(54,927,682)				
D3. Administrative Expenses	(783,633)	(887,975)				
D4. Investment Expenses	<u>(2,052,991)</u>	<u>(1,460,743)</u>				
D5. Net	(17,308,652)	(24,686,386)				
E. Investment Income						
E1. Market Total: B.-C.-D5.	84,425,481	(7,838,312)				
E2. Assumed Rate	7.75%	7.75%				
E3. Amount for Immediate Recognition	35,833,988	40,134,457				
E4. Amount for Phased-In Recognition	48,591,493	(47,972,769)				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	9,718,299	(9,594,554)	0	0	0	0
F2. First Prior Year	7,187,340	9,718,299	(9,594,554)	0	0	0
F3. Second Prior Year	(24,273,865)	7,187,340	9,718,299	(9,594,554)	0	0
F4. Third Prior Year	(12,007,500)	(24,273,865)	7,187,340	9,718,299	(9,594,554)	0
F5. Fourth Prior Year	<u>8,869,886</u>	<u>(12,007,500)</u>	<u>(24,273,865)</u>	<u>7,187,340</u>	<u>9,718,299</u>	<u>(9,594,554)</u>
F6. Total Recognized Investment Gain	(10,505,840)	(28,970,280)	(16,962,780)	7,311,085	123,745	(9,594,554)
G. Actuarial Value End of Year:						
A.+D5.+E3.+F6.	\$ 510,748,505	\$ 497,226,296				
H. Difference Between Market & Actuarial Values	\$ (120,013)	\$ (19,122,502)	\$ (2,159,722)	\$ (9,470,807)	\$ (9,594,554)	\$ 0

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.



**Development of Actuarial Value of Assets
Insurance Benefits
Non-Hazardous Members**

Valuation date June 30:	2011	2012	2013	2014	2015	2016
A. Actuarial Value Beginning of Year	\$ 471,341,628	\$ 451,620,442				
B. Market Value End of Year	433,305,243	430,805,726				
C. Market Value Beginning of Year	371,002,484	433,305,243				
D. Cash Flow						
D1. Contributions	155,036,517	181,479,543				
D2. Benefit Payments	(161,804,578)	(163,840,752)				
D3. Administrative Expenses	(4,666,615)	(5,070,370)				
D4. Investment Expenses	<u>(1,382,872)</u>	<u>(1,195,793)</u>				
D5. Net	(12,817,548)	11,372,628				
E. Investment Income						
E1. Market Total: B.-C.-D5.	75,120,307	(13,872,145)				
E2. Assumed Rate	4.50%	4.50%				
E3. Amount for Immediate Recognition	17,820,704	20,977,318				
E4. Amount for Phased-In Recognition	57,299,603	(34,849,463)				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	11,459,921	(6,969,893)	0	0	0	0
F2. First Prior Year	7,065,952	11,459,921	(6,969,893)	0	0	0
F3. Second Prior Year	(35,906,883)	7,065,952	11,459,921	(6,969,893)	0	0
F4. Third Prior Year	(13,538,974)	(35,906,883)	7,065,952	11,459,921	(6,969,893)	0
F5. Fourth Prior Year	<u>6,195,642</u>	<u>(13,538,974)</u>	<u>(35,906,883)</u>	<u>7,065,952</u>	<u>11,459,921</u>	<u>(6,969,893)</u>
F6. Total Recognized Investment Gain	(24,724,342)	(37,889,877)	(24,350,903)	11,555,980	4,490,028	(6,969,893)
G. Actuarial Value End of Year:						
A.+D5.+E3.+F6.	\$ 451,620,442	\$ 446,080,511				
H. Difference Between Market & Actuarial Values	\$ (18,315,199)	\$ (15,274,785)	\$ 9,076,118	\$ (2,479,862)	\$ (6,969,893)	\$ 0

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.



**Development of Actuarial Value of Asset
Insurance Benefits
Hazardous Members**

Valuation date June 30:	2011	2012	2013	2014	2015	2016
A. Actuarial Value Beginning of Year	\$ 314,427,296	\$ 329,961,615				
B. Market Value End of Year	321,071,515	333,298,119				
C. Market Value Beginning of Year	271,395,843	321,071,515				
D. Cash Flow						
D1. Contributions	20,887,821	25,856,162				
D2. Benefit Payments	(15,328,070)	(13,940,467)				
D3. Administrative Expenses	(222,983)	(322,727)				
D4. Investment Expenses	<u>(840,645)</u>	<u>(857,285)</u>				
D5. Net	4,496,123	10,735,683				
E. Investment Income						
E1. Market Total: B.-C.-D5.	45,179,549	1,490,921				
E2. Assumed Rate	7.75%	7.75%				
E3. Amount for Immediate Recognition	22,080,623	26,189,555				
E4. Amount for Phased-In Recognition	23,098,926	(24,698,634)				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	4,619,785	(4,939,727)	0	0	0	0
F2. First Prior Year	5,005,228	4,619,785	(4,939,727)	0	0	0
F3. Second Prior Year	(16,386,736)	5,005,228	4,619,785	(4,939,727)	0	0
F4. Third Prior Year	(9,611,455)	(16,386,736)	5,005,228	4,619,785	(4,939,727)	0
F5. Fourth Prior Year	<u>5,330,751</u>	<u>(9,611,455)</u>	<u>(16,386,736)</u>	<u>5,005,228</u>	<u>4,619,785</u>	<u>(4,939,727)</u>
F6. Total Recognized Investment Gain	(11,042,427)	(21,312,905)	(11,701,450)	4,685,286	(319,942)	(4,939,727)
G. Actuarial Value End of Year:						
A.+D5.+E3.+F6.	\$ 329,961,615	\$ 345,573,948				
H. Difference Between Market & Actuarial Values	\$ (8,890,100)	\$ (12,275,829)	\$ (574,379)	\$ (5,259,665)	\$ (4,939,727)	\$ 0

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.



SCHEDULE C

STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

The assumptions and methods used in the valuation were based on the actuarial experience study prepared as of June 30, 2008, submitted August 14, 2009, and adopted by the Board on August 20, 2009.

INVESTMENT RATE OF RETURN: 7.75% per annum, compounded annually for retirement benefits. A blended rate is necessary to meet GASB Statement 43 requirements for insurance benefits. The current blended rate for KERS non-hazardous insurance benefits is 4.50%, and the current rate for KERS hazardous insurance benefits is 7.75%.

SALARY INCREASES: Representative values of the assumed annual rates of future salary increases for both non-hazardous and hazardous members are as follows and include inflation at 4.50% per annum:

Service	Annual Rates of				
	Merit & Seniority		Base (Economy)	Increase Next Year	
	Non-Hazardous	Hazardous		Non-Hazardous	Hazardous
0-1	12.50%	16.50%	4.50%	17.00%	21.00%
1-2	4.50%	4.50%	4.50%	9.00%	9.00%
2-3	2.00%	2.50%	4.50%	6.50%	7.00%
3-4	1.50%	2.00%	4.50%	6.00%	6.50%
4-5	1.50%	1.50%	4.50%	6.00%	6.00%
5-6	1.50%	1.00%	4.50%	6.00%	5.50%
6-7	1.00%	0.50%	4.50%	5.50%	5.00%
7-8	1.00%	0.50%	4.50%	5.50%	5.00%
8-9	1.00%	0.50%	4.50%	5.50%	5.00%
9-10	0.50%	0.50%	4.50%	5.00%	5.00%
10 & over	0.50%	0.50%	4.50%	5.00%	5.00%



SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of death, disability, withdrawal and retirement are shown in the following tables:

Non-Hazardous Members

Age	Withdrawal and Vesting*	Death			Disability	Service Retirement ⁺	Service Retirement ⁺⁺
		Male	Female				
20	6.00%	0.03%	0.01%	0.04%			
25	5.08	0.03	0.01	0.05			
30	4.26	0.04	0.02	0.06			
35	3.21	0.04	0.02	0.09			
40	3.00	0.05	0.04	0.13			
45	3.00	0.08	0.05	0.22			
50	3.00	0.13	0.07	0.37			
55	3.00	0.22	0.11	0.61	8.0%		
60	3.00	0.40	0.22	0.97	10.0	10.0%	
65		0.73	0.43		22.5	25.0	
70		1.19	0.69		22.5	25.0	
75					100.0	100.0	

* Select rates of withdrawal apply in the first five years of employment regardless of age. The rates are 19.0%, 13.0%, 10.0%, 9.0% and 6.5%, respectively.

+ For members participating before 9/1/2008. If service is at least 27 years, the rate is 25%.

++ For members participating on or after 9/1/2008. If age plus service is at least 87, the rate is 25%.

Hazardous Members

Age	Withdrawal and Vesting*	Death**			Service Retirement		
		Male	Female	Disability	Service	Rate ⁺	Rate ⁺⁺
20	4.00%	0.03%	0.01%	0.05%	20	22.0%	
25	4.00	0.03	0.01	0.07	25	35.0	22.0%
30	3.50	0.04	0.02	0.09	30	38.0	35.0
35	3.00	0.04	0.02	0.13	35	60.0	38.0
40	3.00	0.05	0.04	0.20	40		60.0
45	3.00	0.08	0.05	0.33			
50	3.00	0.13	0.07	0.56			
55	3.00	0.22	0.11	0.92			
60	3.00	0.40	0.22	1.46			

* Select rates of withdrawal apply in the first five years of employment regardless of age. The rates are 26.0%, 11.5%, 8.25%, 7.5% and 7.0%, respectively.

** 75% are presumed to be non-duty related, and 25% are assumed to be duty related.

+ For members participating before 9/1/2008. The annual rate of service retirement is 100% at age 65.

++ For members participating on or after 9/1/2008. The annual rate of service retirement is 100% at age 60.



DEATH AFTER RETIREMENT: The rates of mortality for the period after service retirement are according to the 1983 Group Annuity Mortality Table for all retired members and beneficiaries as of June 30, 2006, and the 1994 Group Annuity Mortality Table for all other members. The Group Annuity Mortality Table set forward 5 years is used for the period after disability retirement. There is some margin in the current mortality tables for possible future improvement in mortality rates and that margin will be reviewed again when the next experience investigation is conducted.

PERCENT MARRIED: 100% of employees are assumed to be married, with the wife 3 years younger than the husband.

DEPENDENT CHILDREN: For hazardous members' duty-related death benefits, it is assumed that the member is survived by two dependent children each age 6.

ACTUARIAL METHOD: Entry age normal cost method. Actuarial gains and losses are reflected in the unfunded actuarial accrued liability. For pre-Medicare retiree healthcare liabilities, the current premium charged by the Kentucky Employees' Health Plan (KEHP) is used as the base cost and is projected forward using the healthcare trend assumption. No implicit rate subsidy is calculated or recognized as the subsidy is the responsibility of KEHP. For the Medicare-eligible retirees, claims were analyzed and current premiums were utilized with appropriate aging factors applied.

ASSET VALUATION METHOD: 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 market value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected market value.

HEALTH CARE BENEFITS VALUED: Medical and drug benefits for retirees under age 65 and Medicare eligible.

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

Fiscal Year Ended	Trend	
	Under Age 65	Age 65 and Over
2013	9.5%	7.5%
2014	8.5%	7.0%
2015	7.5%	6.5%
2016	6.5%	6.0%
2017	6.0%	5.5%
2018	5.5%	5.0%
2019 and beyond	5.0%	5.0%

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

Participant Age	Annual Increase
65-69	3.0%
70-74	2.5
75-79	2.0
80-84	1.0
85-89	0.5
90 and beyond	0.0



HEALTH CARE ANTICIPATED PLAN PARTICIPATION: The assumed annual rates of plan participation are as follows:

Medical	Non-Hazardous	Hazardous
Participation	90%	100%

HEALTH CARE MONTHLY RATES: Following are charts detailing expected monthly rates for pre-Medicare eligible and post-Medicare eligible retirees for the year following the valuation date.

**MEDICAL INSURANCE RATES
PRE-MEDICARE ELIGIBLE**

Effective January 1, 2012				
	Single	Parent Plus	Couple	Family
Total Premiums				
Standard PPO	\$496.14	\$764.68	\$1,144.72	\$1,272.83
Optimum PPO	\$663.30	\$922.88	\$1,432.36	\$1,595.06
Capitol Choice	\$638.16	\$927.08	\$1,414.46	\$1,568.06

Effective January 1, 2013				
	Single	Parent Plus	Couple	Family
Total Premiums				
Standard PPO	\$506.06	\$791.54	\$1,177.80	\$1,314.12
Optimum PPO	\$675.34	\$961.84	\$1,476.00	\$1,642.78
Capitol Choice	\$650.22	\$961.42	\$1,457.90	\$1,613.74

**MEDICAL INSURANCE RATES
MEDICARE ELIGIBLE**

Effective January 1, 2013	
Available Plan	Premium
Kentucky Retirement System Health Plan - Medical Only	\$157.00
Kentucky Retirement System Health Plan - Essential	\$84.08
Kentucky Retirement System Health Plan - Premium	\$198.31
Above amounts are shown as average retiree costs. In the valuation, the claims costs are converted to age 65 amounts and age adjusted.	



SCHEDULE D

SUMMARY OF MAIN BENEFIT AND CONTRIBUTION PROVISIONS

This schedule summarizes the major retirement benefit provisions of KERS included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Plan Year: July 1 through June 30

Non-Hazardous Normal Retirement:

Members whose participation began before 8/1/2004

<i>Age Requirement</i>	65
<i>Service Requirement</i>	At least one month of non-hazardous duty service credit
<i>Amount</i>	If a member has at least 48 months of service, the monthly benefit is 1.97% times final average compensation times years of service. For members who were participants in any one of the state retirement systems from January 1, 1998 through January 1, 1999, the benefit factor is 2.00%. For those members who retired between January 1, 1999 and January 31, 2009 with at least 240 months of service, the benefit factor is 2.20%.

Final compensation is calculated by taking the average of the highest five (5) fiscal years of salary. If the number of months of service credit during the five (5) year period is less than forty-eight (48), one (1) or more additional fiscal years shall be used.

If a member has less than 48 months of service, the monthly benefit is the actuarial equivalent of two times the member's contributions with interest.

Members whose participation began on or after 8/1/2004, but before 9/1/2008

<i>Age Requirement</i>	65
<i>Service Requirement</i>	At least one month of non-hazardous duty service credit
<i>Amount</i>	If a member has at least 48 months of service, the monthly benefit is 2.00% multiplied by final average compensation, multiplied by years of service.

Final compensation is calculated by taking the average of the highest five (5) fiscal years of salary. If the number of months of service credit during the five (5) year period is less than forty-eight (48), one (1) or more additional fiscal years shall be used.



Non-Hazardous Normal Retirement (continued):

If a member has less than 48 months of service, the monthly benefit is the actuarial equivalent of two times the member's contributions with interest.

Members whose participation began on or after 9/1/2008

Requirement

Age 65 with 60 months of non-hazardous duty service credit, or age 57 if age plus service equals at least 87.

Amount

The monthly benefit is the following benefit factor based on service credit at retirement plus 2.00% for each year of service greater than 30 years, multiplied by final average compensation, multiplied by years of service.

Service Credit	Benefit Factor
10 years or less	1.10%
10+ – 20 years	1.30%
20+ – 26 years	1.50%
26+ – 30 years	1.75%

Final compensation is calculated by taking the average of the last (not highest) five (5) complete fiscal years of salary. Each fiscal year used to determine final compensation must contain twelve (12) months of service credit.

Hazardous Normal Retirement:

Members whose participation began before 9/1/2008

Age Requirement

55

Service Requirement

At least one month of hazardous duty service credit

Amount

If a member has at least 60 months of service, the monthly benefit is 2.49% multiplied by final average compensation, multiplied by years of service.

Final compensation is calculated by taking the average of the highest three (3) fiscal years of salary. If the number of months of service credit during the three (3) year period is less than twenty-four (24), one (1) or more additional fiscal years shall be used.

If a member has less than 60 months of service, the monthly benefit is the actuarial equivalent of two times the member's contributions with interest.

Members whose participation began on or after 9/1/2008

Age Requirement

60

Service Requirement

At least 60 months of hazardous duty service credit



Hazardous Normal Retirement (continued):

Amount

The monthly benefit is the following benefit factor based on service credit at retirement, multiplied by final average compensation, multiplied by years of service.

Service Credit	Benefit Factor
10 years or less	1.30%
10+ – 20 years	1.50%
20+ – 25 years	2.25%
25+ years	2.50%

Final compensation is calculated by taking the average of the highest three (3) complete fiscal years of salary. Each fiscal year used to determine final compensation must contain twelve (12) months of service credit.

Non-Hazardous Early Retirement:

Members whose participation began before 9/1/2008

Requirement

Age 55 with 60 months of service or any age with 25 years of service.

Amount

Normal retirement benefit reduced by 5.0% per year for the first five years and 4.0% per year for the next five years for each year the member is younger than age 65 or has less than 27 years of service, whichever is smaller.

Members whose participation began on or after 9/1/2008

Requirement

Age 60 with 10 years of service.

Amount

Normal retirement benefit reduced by 5.0% per year for the first five years and 4.0% per year for the next five years for each year the member is younger than age 65, or does not meet the rule of 87 (age plus service) and is younger than age 57, whichever is smaller.

Hazardous Early Retirement:

Members whose participation began before 9/1/2008

Requirement

Age 50 with 15 years of service or any age with 20 years service.

Amount

Normal retirement benefit reduced by 6.5% per year for the first five years and 4.5% per year for the next five years for each year the member is younger than age 55 or has less than 20 years service, whichever is smaller.



Hazardous Early Retirement (continued):

Members whose participation began on or after 9/1/2008

Requirement

Age 50 with 15 years of service or any age with 25 years service.

Amount

Normal retirement benefit reduced by 6.5% per year for the first five years and 4.5% per year for the next five years for each year the member is younger than age 60 or has less than 25 years service, whichever is smaller.

Non-Hazardous Disability:

Age Requirement

None

Service Requirement

60 months

Members whose participation began before 8/1/2004

Normal retirement benefit except that service credit will be added to total service for the period from the last day of plan employment to the member's 65th birthday or until the combined total service as of the last day of paid employment and added service equals 25 years. The total amount of service credit added shall not exceed the member's actual service credit on the last day of paid employment. For members with at least 25 years of service but less than 27 years of service, total service shall be 27 years. For employees with 27 or more years of service credit, actual service will be used.

A contributing member in a non-hazardous position who is disabled in the line of duty is entitled to a retirement benefit of not less than 25% of the member's final monthly rate of pay plus 10% of the member's final monthly rate of pay for each dependent child. The maximum dependent child's benefit is 40% of the member's final monthly rate of pay.

Members whose participation began on or after 8/1/2004

Normal retirement benefit based on actual service with no penalty or, if larger, 20% of the Final Rate of Pay. May apply for disability even after normal retirement age.

Hazardous Disability:

Age Requirement

None

Service Requirement

60 months (waived if in line of duty disability)

Members whose participation began before 8/1/2004

Normal retirement benefit except if the member's total service credit is less than 20 years, service credit will be added for the period from the last day of paid employment to the member's 55th birthday.



Hazardous Disability (continued):

The maximum service credit added will not exceed the total service the member had on this last day of paid employment and the maximum service credit for calculating his retirement allowance, including total service and service added will not exceed 20 years. May not apply if eligible for an unreduced retirement allowance.

A member in a hazardous position who is disabled in the line of duty is entitled to the normal retirement benefit based on years of service and final compensation determined as of the date of disability (no penalty), except that the monthly retirement allowance payable shall not be less than 25% of the member's monthly final monthly rate of pay. Each dependent child shall receive 10% of the disabled member's monthly final rate of pay; however the total maximum dependent children's benefit shall not exceed 40% of the member's monthly final rate of pay.

Members whose participation began on or after 8/1/2004

Normal retirement benefit based on years of service and final compensation determined as of the date of disability (no penalty) or, if larger, 25% of the member's monthly final rate of pay. May apply for disability even after normal retirement age.

Vesting:

Members whose participation began before 9/1/2008

Age Requirement

None

Service Requirement

60 months. Service purchased after August 1, 2004 does not count toward vesting insurance benefits. Service purchased by employees who began participating on or after August 1, 2004 does not count toward vesting retirement benefits.

Amount

Normal retirement benefit deferred to normal retirement age or reduced benefit payable at early retirement age.

Normal Retirement Age

65 for non-hazardous members and 55 for hazardous members.

Members whose participation began on or after 9/1/2008

Age Requirement

None

Service Requirement

60 months. Service purchased after August 1, 2004 does not count toward vesting insurance benefits.



Vesting (continued):

Service purchased by employees who began participating on or after August 1, 2004 does not count toward vesting retirement benefits.

<i>Amount</i>	Normal retirement benefit deferred to normal retirement age or reduced benefit payable at early retirement age.
<i>Normal Retirement Age</i>	65 for non-hazardous members and 60 for hazardous members.

Pre-Retirement Death Benefit (not in line of duty):

<i>Requirement</i>	Eligible for Normal or Early Retirement, or any age with 60 months service.
<i>Amount</i>	Benefit equal to the benefit the member would have received had the member retired on the day before the date of death and elected a 100% joint and survivor form. Benefit is actuarially reduced if member is less than normal retirement age at the date of death.

Spouse's Pre-Retirement Death Benefit (in line of duty):

<i>Requirement</i>	None
<i>Amount</i>	The spouse may choose (1) a \$10,000 lump sum payment and monthly payments of 25% of the member's final monthly rate of pay or (2) benefit options offered under death not in line of duty.

Dependent Non-Spouse's Death Benefit (in line of duty) – Hazardous Plan:

<i>Requirement</i>	None
<i>Amount</i>	The non-spouse may choose (1) a \$10,000 lump sum payment or (2) benefit options offered under death not in line of duty.

Dependent Child's Death Benefit (in line of duty):

<i>Requirement</i>	None
<i>Amount</i>	10% of member's final monthly rate of pay. Dependent child payments cannot exceed 40% of the member's monthly final rate of pay.

Post-Retirement Death Benefit:

<i>Requirement</i>	Retired member in receipt of monthly benefit based on at least 48 months or more of combined service with KERS, CERS or SPRS.
<i>Amount</i>	\$5,000



Non-Hazardous Member Contributions:

Members whose participation began before 9/1/2008

5% of all creditable compensation. Interest paid on the members' accounts will be set at 2.0%. Member entitled to a full refund of contributions with interest.

Members whose participation began on or after 9/1/2008

6% of all creditable compensation, with 5% being credited to the member's account and 1% deposited to the KRS 401(h) Account. Interest paid on the members' accounts will be set at 2.5%. Member entitled to a full refund of contributions and interest in their individual account, however, the 1% contributed to the insurance fund is non-refundable.

Hazardous Member Contributions:

Members whose participation began before 9/1/2008

8% of all creditable compensation. Interest paid on the members' accounts will be set at 2.0%. Member entitled to a full refund of contributions with interest.

Members whose participation began on or after 9/1/2008

9% of all creditable compensation, with 8% being credited to the member's account and 1% deposited to the KRS 401(h) Account. Interest paid on the members' accounts will be set at 2.5%. Member entitled to a full refund of contributions and interest in their individual account, however, the 1% contributed to the insurance fund is non-refundable.



Non-Hazardous Insurance Plan for Retirees:

Members whose participation began before 7/1/2003

Requirement

In receipt of a monthly retirement allowance.

Amount

The Retirement System pays a portion of lifetime medical premiums for retirees based on the retired member's years of service credit. The percentage of the monthly contribution rate paid is show in the following table.

Service Credit	Percentage Paid*
0 – 3 years	0%
4 – 9 years	25%
10 – 14 years	50%
15 – 19 years	75%
20 or more years	100%

**100% of the monthly contribution is paid towards the health insurance for a retired member who is totally disabled from any employment as a result of a duty-related injury regardless of actual service. 100% of the monthly contribution is paid toward health insurance for the spouse and dependent children of a member who dies as a result of a duty related injury, regardless of the deceased member's service. The insurance benefit will be provided as long as the spouse and dependent children are eligible for a monthly retirement benefit.*

Members whose participation began on or after 7/1/2003, but before 9/1/2008

Requirement

Monthly retirement allowance with at least 120 months of service at retirement.

Amount

The Retirement System pays \$12.69 per month for each year of earned service for retirees. This amount is shown as of the valuation date and is indexed annually based on the CPI prior to July 1, 2008 and by 1.5% thereafter.

Members whose participation began on or after 9/1/2008

Requirement

Monthly retirement allowance with at least 180 months of service at retirement.

Amount

The Retirement System pays \$10 per month for each year of earned service for retirees. This amount will be increased annually by 1.5%.



Hazardous Insurance Plan for Retirees:

Members whose participation began before 7/1/2003

Requirement

In receipt of a monthly retirement allowance.

Amount

The Retirement System pays a portion of lifetime medical premiums for retirees, their spouse and their dependents based on the retired member's years of service credit. The percentage of the monthly contribution rate paid is show in the following table.

Service Credit	Percentage Paid*
0 – 3 years	0%
4 – 9 years	25%
10 – 14 years	50%
15 – 19 years	75%
20 or more years	100%

**100% of the monthly contribution is paid towards the health insurance for a member, member's spouse and dependents if the member is disabled in the line of duty as a result of a duty-related injury, regardless of actual service. 100% of the monthly contribution is paid toward health insurance for the spouse and dependent children of a member who dies in the line of duty regardless of the deceased member's service. The insurance benefit will be provided as long as the spouse and dependent children are eligible for a monthly retirement benefit.*

Members whose participation began on or after 7/1/2003, but before 9/1/2008

Requirement

Monthly retirement allowance with at least 120 months of service at retirement.

Amount

The Retirement System pays \$19.04 per month for each year of earned service for retirees. Upon the retiree's death, the surviving spouse will receive \$12.69 per month for each year of earned. These amounts are shown as of the valuation date and are indexed annually based on the CPI prior to July 1, 2008 and by 1.5% thereafter.

Members whose participation began on or after 9/1/2008

Requirement

Monthly retirement allowance with at least 180 months of service at retirement.

Amount

The Retirement System pays \$15 per month for each year of earned service for retirees. Upon the retiree's death, the surviving spouse will receive \$10 per month for each year of earned. These amounts will be increased annually by 1.5%.



SCHEDULE E

DETAILED TABULATIONS OF THE DATA

**Schedule of Non-Hazardous Retired Members Added to and Removed From Rolls
Last Six Fiscal Years**

Year Ending June 30	2007	2008	2009	2010	2011	2012
			<u>Number</u>			
Beginning of Year	32,140	33,849	35,307	37,883	37,945	38,597
Added	2,440	2,573	3,465	1,162	1,592	1,707
Removed	731	1,115	889	1,100	940	1,078
End of Year	33,849	35,307	37,883	37,945	38,597	39,226
			<u>Annual Allowances</u>			
Beginning of Year	\$ 566,167,003	\$ 625,435,416	\$ 710,505,270	\$ 812,559,070	\$ 801,881,911	\$ 821,197,278
Added	65,965,990	102,305,405	110,700,043	865,483	31,930,847	37,458,130
Removed	6,697,577	17,235,551	8,646,243	11,542,643	12,615,480	13,774,463
End of Year	\$ 625,435,416	\$ 710,505,270	\$ 812,559,070	\$ 801,881,911	\$ 821,197,278	\$ 844,880,945
% Increase in Allowances	10.47%	13.60%	14.36%	-1.31%	2.41%	2.88%
Average Annual Allowance	\$ 18,472	\$ 20,124	\$ 21,449	\$ 21,133	\$ 21,276	\$ 21,539



**Schedule of Hazardous Retired Members Added to and Removed From Rolls
Last Six Fiscal Years**

Year Ending June 30	2007	2008	2009	2010	2011	2012
	<u>Number</u>					
Beginning of Year	1,980	2,202	2,404	2,648	2,835	3,064
Added	241	261	339	282	288	243
Removed	19	59	95	95	59	54
End of Year	2,202	2,404	2,648	2,835	3,064	3,253
	<u>Annual Allowances</u>					
Beginning of Year	\$ 23,381,489	\$ 27,528,837	\$ 33,588,993	\$ 38,695,501	\$ 41,114,800	\$ 45,609,229
Added	4,509,381	6,565,454	5,443,628	3,315,361	5,012,933	4,213,360
Removed	362,129	505,250	337,120	896,062	518,504	591,384
End of Year	\$ 27,528,837	\$ 33,588,993	\$ 38,695,501	\$ 41,114,800	\$ 45,609,229	\$ 49,231,205
% Increase in Allowances	17.94%	22.01%	15.20%	6.25%	10.93%	7.94%
Average Annual Allowance	\$ 12,502	\$ 13,972	\$ 14,613	\$ 14,503	\$ 14,886	\$ 15,134



Non-Hazardous Retired Lives Summary June 30, 2012

	Male Lives		Female Lives		Total	
	Number	Monthly Benefits	Number	Monthly Benefits	Number	Monthly Benefits
Basic Form	9,485	\$ 14,379,888.53	3,346	\$ 6,338,745.63	12,831	\$ 20,718,634.16
Straight Life (Old Plan)	0	0.00	0	0.00	0	0.00
Joint & Survivor						
100% to Beneficiary	762	958,618.81	1,832	3,547,532.79	2,594	4,506,151.60
66-2/3% to Beneficiary	404	866,969.02	789	2,361,556.01	1,193	3,228,525.03
50% to Beneficiary	1,255	2,609,117.98	1,061	2,747,912.75	2,316	5,357,030.73
Pop-up Option	3,042	6,196,977.17	3,656	9,156,305.38	6,698	15,353,282.55
10 Years Certain	0	0.00	0	0.00	0	0.00
10 Years Certain & Life	1,937	2,965,797.25	866	1,549,757.68	2,803	4,515,554.93
Social Security Option						
Age 62 Basic	982	1,947,430.65	426	1,174,719.99	1,408	3,122,150.64
Age 62 Survivorship	578	1,231,426.25	865	2,172,686.34	1,443	3,404,112.59
Partial Deferred (Old Plan)	0	0.00	0	0.00	0	0.00
Widows Age 60	0	0.00	0	0.00	0	0.00
Dependent Child	0	0.00	0	0.00	0	0.00
Refund	0	0.00	0	0.00	0	0.00
15 Years Certain & Life	504	802,503.50	377	619,021.25	881	1,421,524.75
20 Years Certain & Life	488	859,139.52	391	848,179.24	879	1,707,318.76
5 Years Certain	0	0.00	0	0.00	0	0.00
PLSO 12 Month Basic	307	465,316.13	85	141,888.64	392	607,204.77
PLSO 24 Month Basic	170	208,041.91	37	45,150.21	207	253,192.12
PLSO 36 Month Basic	425	329,190.28	171	149,925.46	596	479,115.74
PLSO 12 Month Survivor	105	180,026.79	116	239,663.67	221	419,690.46
PLSO 24 Month Survivor	81	115,718.08	93	140,830.13	174	256,548.21
PLSO 36 Month Survivor	164	140,168.01	254	279,605.13	418	419,773.14
Total	20,689	\$ 34,256,329.88	14,365	\$ 31,513,480.30	35,054	\$ 65,769,810.18



Hazardous Retired Lives Summary June 30, 2012

	Male Lives		Female Lives		Total	
	Number	Monthly Benefits	Number	Monthly Benefits	Number	Monthly Benefits
Basic Form	442	\$ 508,261.34	333	\$ 345,620.23	775	\$ 853,881.57
Straight Life (Old Plan)	0	0.00	0	0.00	0	0.00
Joint & Survivor						
100% to Beneficiary	208	248,554.56	23	24,557.60	231	273,112.16
66-2/3% to Beneficiary	83	108,015.99	21	23,487.28	104	131,503.27
50% to Beneficiary	135	199,603.90	44	67,386.28	179	266,990.18
Pop-up Option	696	1,014,989.82	137	172,490.83	833	1,187,480.65
10 Years Certain	22	23,819.38	9	9,518.47	31	33,337.85
10 Years Certain & Life	107	113,011.20	52	44,859.04	159	157,870.24
Social Security Option						
Age 62 Basic	56	116,792.27	31	57,863.13	87	174,655.40
Age 62 Survivorship	138	333,775.93	16	25,378.01	154	359,153.94
Partial Deferred (Old Plan)	0	0.00	0	0.00	0	0.00
Widows Age 60	0	0.00	0	0.00	0	0.00
Dependent Child	0	0.00	0	0.00	0	0.00
Refund	0	0.00	0	0.00	0	0.00
15 Years Certain & Life	49	59,643.76	13	11,065.07	62	70,708.83
20 Years Certain & Life	49	62,826.41	20	30,411.72	69	93,238.13
5 Years Certain	0	0.00	0	0.00	0	0.00
PLSO 12 Month Basic	13	12,920.85	15	12,928.54	28	25,849.39
PLSO 24 Month Basic	16	16,016.98	12	10,496.63	28	26,513.61
PLSO 36 Month Basic	48	39,981.67	26	21,907.80	74	61,889.47
PLSO 12 Month Survivor	21	27,586.95	6	5,150.84	27	32,737.79
PLSO 24 Month Survivor	22	30,012.66	9	11,029.16	31	41,041.82
PLSO 36 Month Survivor	50	49,843.05	15	18,695.05	65	68,538.10
Total	2,155	\$ 2,965,656.72	782	\$ 892,845.68	2,937	\$ 3,858,502.40



Non-Hazardous Beneficiary Lives Summary June 30, 2012

	Male Lives		Female Lives		Total	
	Number	Monthly Benefits	Number	Monthly Benefits	Number	Monthly Benefits
Basic Form	9	\$ 5,087.38	21	\$ 20,690.25	30	\$ 25,777.63
Straight Life (Old Plan)	0	0.00	0	0.00	0	0.00
Joint & Survivor						
100% to Beneficiary	253	281,739.24	1,518	1,515,478.77	1,771	1,797,218.01
66-2/3% to Beneficiary	36	37,860.67	307	298,521.69	343	336,382.36
50% to Beneficiary	104	71,458.23	460	297,181.98	564	368,640.21
Pop-up Option	112	164,722.03	457	672,398.12	569	837,120.15
10 Years Certain	67	81,092.38	77	66,962.05	144	148,054.43
10 Years Certain & Life	19	18,096.78	38	54,654.23	57	72,751.01
Social Security Option						
Age 62 Basic	1	272.14	8	15,392.34	9	15,664.48
Age 62 Survivorship	54	92,511.02	248	442,812.18	302	535,323.20
Partial Deferred (Old Plan)	0	0.00	0	0.00	0	0.00
Widows Age 60	0	0.00	6	2,543.99	6	2,543.99
Dependent Child	0	0.00	0	0.00	0	0.00
Refund	3	2,712.62	7	8,134.18	10	10,846.80
15 Years Certain & Life	21	28,460.59	53	101,220.21	74	129,680.80
20 Years Certain & Life	32	40,531.31	79	128,158.13	111	168,689.44
5 Years Certain	48	50,408.13	44	39,918.21	92	90,326.34
PLSO 12 Month Basic	0	0.00	1	1,791.60	1	1,791.60
PLSO 24 Month Basic	0	0.00	0	0.00	0	0.00
PLSO 36 Month Basic	0	0.00	2	3,357.39	2	3,357.39
PLSO 12 Month Survivor	4	5,036.27	9	12,350.53	13	17,386.80
PLSO 24 Month Survivor	9	13,815.81	13	10,145.06	22	23,960.87
PLSO 36 Month Survivor	14	13,103.90	38	38,315.85	52	51,419.75
Total	786	\$ 906,908.50	3,386	\$ 3,730,026.76	4,172	\$ 4,636,935.26



Hazardous Beneficiary Lives Summary June 30, 2012

	Male Lives		Female Lives		Total	
	Number	Monthly Benefits	Number	Monthly Benefits	Number	Monthly Benefits
Basic Form	2	\$ 1,051.91	5	\$ 2,918.99	7	\$ 3,970.90
Straight Life (Old Plan)	0	0.00	0	0.00	0	0.00
Joint & Survivor						
100% to Beneficiary	9	2,980.85	115	85,544.72	124	88,525.57
66-2/3% to Beneficiary	0	0.00	15	9,740.30	15	9,740.30
50% to Beneficiary	2	1,450.30	20	7,528.22	22	8,978.52
Pop-up Option	11	7,846.28	49	31,240.78	60	39,087.06
10 Years Certain	4	4,921.56	14	17,101.64	18	22,023.20
10 Years Certain & Life	4	2,121.00	1	938.53	5	3,059.53
Social Security Option						
Age 62 Basic	0	0.00	0	0.00	0	0.00
Age 62 Survivorship	1	392.36	21	38,525.62	22	38,917.98
Partial Deferred (Old Plan)	0	0.00	0	0.00	0	0.00
Widows Age 60	0	0.00	0	0.00	0	0.00
Dependent Child	0	0.00	0	0.00	0	0.00
Refund	1	262.55	3	2,151.81	4	2,414.36
15 Years Certain & Life	3	1,456.86	4	2,696.02	7	4,152.88
20 Years Certain & Life	0	0.00	7	3,399.45	7	3,399.45
5 Years Certain	5	1,930.55	4	4,309.34	9	6,239.89
PLSO 12 Month Basic	0	0.00	0	0.00	0	0.00
PLSO 24 Month Basic	0	0.00	0	0.00	0	0.00
PLSO 36 Month Basic	0	0.00	1	125.74	1	125.74
PLSO 12 Month Survivor	0	0.00	3	3,378.45	3	3,378.45
PLSO 24 Month Survivor	1	995.41	1	789.94	2	1,785.35
PLSO 36 Month Survivor	3	1,072.35	7	7,226.54	10	8,298.89
Total	46	\$ 26,481.98	270	\$ 217,616.09	316	\$ 244,098.07



**Non-Hazardous Members
Retired and Beneficiary Information June 30, 2012
Tabulated by Attained Ages**

Attained Age	Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 45	82	\$ 1,929,500	39	\$ 403,551	278	\$ 3,420,018	399	\$ 5,753,069
45-49	655	\$ 17,634,697	95	\$ 2,164,573	122	\$ 1,619,009	872	\$ 21,418,279
50-54	2,448	\$ 77,659,014	175	\$ 2,575,913	219	\$ 3,167,494	2,842	\$ 83,402,421
55-59	5,041	\$ 152,494,901	302	\$ 5,635,961	347	\$ 5,383,685	5,690	\$ 163,514,546
60-64	7,141	\$ 189,615,680	357	\$ 4,680,990	421	\$ 7,649,417	7,919	\$ 201,946,087
65-69	6,504	\$ 141,862,286	324	\$ 3,946,050	459	\$ 7,060,227	7,287	\$ 152,868,563
70-74	4,475	\$ 83,327,904	256	\$ 3,176,990	493	\$ 7,393,006	5,224	\$ 93,897,900
75-79	2,981	\$ 47,469,596	154	\$ 1,689,228	559	\$ 7,432,107	3,694	\$ 56,590,930
80-84	2,151	\$ 31,296,443	62	\$ 698,070	550	\$ 6,645,316	2,763	\$ 38,639,829
85-89	1,217	\$ 15,122,024	31	\$ 258,574	426	\$ 3,885,655	1,674	\$ 19,266,254
90 & Over	559	\$ 5,572,642	5	\$ 23,135	298	\$ 1,987,290	862	\$ 7,583,067
Totals	33,254	\$ 763,984,686	1,800	\$ 25,253,036	4,172	\$ 55,643,223	39,226	\$ 844,880,945



**Hazardous Members
Retired and Beneficiary Information June 30, 2012
Tabulated by Attained Ages**

Attained Age	Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 45	48	\$ 1,008,111	11	\$ 114,623	47	\$ 325,203	106	\$ 1,447,937
45-49	195	\$ 4,001,701	14	\$ 123,517	13	\$ 107,303	222	\$ 4,232,521
50-54	288	\$ 6,162,537	19	\$ 176,559	24	\$ 247,219	331	\$ 6,586,315
55-59	514	\$ 9,955,857	23	\$ 204,038	38	\$ 482,626	575	\$ 10,642,521
60-64	733	\$ 12,178,022	33	\$ 292,367	45	\$ 481,727	811	\$ 12,952,116
65-69	543	\$ 7,352,410	13	\$ 92,003	42	\$ 417,487	598	\$ 7,861,900
70-74	269	\$ 2,824,442	7	\$ 18,846	52	\$ 469,041	328	\$ 3,312,329
75-79	142	\$ 1,101,486	8	\$ 31,058	29	\$ 223,071	179	\$ 1,355,615
80-84	61	\$ 418,904	2	\$ 6,589	18	\$ 77,350	81	\$ 502,844
85-89	12	\$ 194,387			4	\$ 25,077	16	\$ 219,464
90 & Over	2	\$ 44,571			4	\$ 73,072	6	\$ 117,643
Totals	2,807	\$ 45,242,426	130	\$ 1,059,602	316	\$ 2,929,177	3,253	\$ 49,231,205



**Total Non-Hazardous Active Members as of June 30, 2012
Tabulated by Attained Ages and Years of Service**

Attained Age	Years of Service to Valuation Date								Totals
	0-4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 26	27 - 29	30+	
Under 20	10								10
Avg Pay	\$11,224								\$11,224
20-24	908	19							927
Avg Pay	\$22,008	\$24,717							\$22,063
25-29	3,029	590	18						3,637
Avg Pay	\$28,302	\$31,437	\$33,939						\$28,838
30-34	2,445	2,089	656	16					5,206
Avg Pay	\$30,975	\$36,779	\$37,521	\$45,100					\$34,172
35-39	1,719	1,665	1,717	395	27	2			5,525
Avg Pay	\$31,898	\$39,056	\$42,060	\$43,332	\$51,882	\$56,217			\$38,137
40-44	1,608	1,429	1,482	1,108	485	61	32	5	6,210
Avg Pay	\$32,051	\$39,112	\$42,864	\$47,152	\$47,887	\$56,295	\$59,179	\$69,940	\$40,596
44-49	1,388	1,259	1,214	911	878	284	202	45	6,181
Avg Pay	\$32,338	\$38,820	\$43,452	\$48,131	\$49,371	\$54,179	\$58,129	\$61,416	\$42,646
50-54	1,166	1,191	1,199	758	704	285	207	93	5,603
Avg Pay	\$32,849	\$38,372	\$41,775	\$44,654	\$49,199	\$52,376	\$56,583	\$62,398	\$41,945
55-59	942	1,016	1,053	683	573	231	154	112	4,764
Avg Pay	\$34,289	\$37,994	\$41,507	\$43,913	\$47,839	\$52,496	\$54,254	\$64,639	\$41,926
60-64	507	677	676	459	355	140	97	73	2,984
Avg Pay	\$36,046	\$39,961	\$40,959	\$45,922	\$48,189	\$50,672	\$54,967	\$66,774	\$43,064
65-69	104	210	232	133	96	33	19	20	847
Avg Pay	\$43,269	\$38,275	\$42,005	\$54,834	\$50,008	\$51,333	\$58,346	\$77,748	\$45,731
70 & over	45	53	76	62	41	8	7	10	302
Avg Pay	\$39,828	\$40,049	\$38,864	\$44,069	\$49,927	\$43,639	\$62,893	\$71,470	\$43,549
Totals	13,871	10,198	8,323	4,525	3,159	1,044	718	358	42,196
Avg Pay	\$30,854	\$37,964	\$41,800	\$46,160	\$48,742	\$52,801	\$56,524	\$65,085	\$38,982



**Total Hazardous Active Members as of June 30, 2012
Tabulated by Attained Ages and Years of Service**

Attained Age	Years of Service to Valuation Date								Totals
	0-4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 26	27 - 29	30+	
Under 20 Avg Pay									
20-24 Avg Pay	195 \$21,746								195 \$21,746
25-29 Avg Pay	445 \$25,290	82 \$30,714	1 \$37,323						528 \$26,155
30-34 Avg Pay	319 \$26,747	252 \$32,146	44 \$33,408	1 \$40,437					616 \$29,454
35-39 Avg Pay	201 \$28,116	190 \$34,018	164 \$36,762	34 \$42,036					589 \$33,231
40-44 Avg Pay	197 \$26,298	174 \$34,283	144 \$38,022	105 \$41,958	17 \$44,913	2 \$61,510	1 \$62,487		640 \$34,337
44-49 Avg Pay	147 \$26,593	130 \$32,157	104 \$36,618	78 \$41,722	48 \$50,302	3 \$63,334	5 \$81,763		515 \$35,273
50-54 Avg Pay	108 \$28,150	93 \$32,883	88 \$37,514	61 \$40,523	36 \$51,263	3 \$47,979	2 \$65,276		391 \$35,784
55-59 Avg Pay	101 \$29,587	101 \$31,424	72 \$37,697	44 \$42,210	22 \$48,354	3 \$60,344	3 \$53,699	2 \$59,710	348 \$35,227
60-64 Avg Pay	40 \$29,694	69 \$34,125	53 \$37,219	29 \$41,442	10 \$39,449	4 \$57,835	1 \$52,753	1 \$75,910	207 \$36,093
65-69 Avg Pay	2 \$26,969	17 \$33,744	9 \$45,422	13 \$43,608	4 \$78,670		1 \$75,300		46 \$43,332
70 & over Avg Pay	4 \$23,410	1 \$29,168	4 \$30,451	1 \$55,804				1 \$53,414	11 \$32,166
Totals Avg Pay	1,759 \$26,226	1,109 \$32,839	683 \$37,098	366 \$41,758	137 \$49,609	15 \$57,955	13 \$68,539	4 \$62,186	4,086 \$32,300



Cavanaugh Macdonald
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**Report on the Annual Valuation of the
County Employees Retirement System**

Prepared as of June 30, 2012





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

November 20, 2012

Board of Trustees
Kentucky Retirement Systems
Perimeter Park West
1260 Louisville Road
Frankfort, KY 40601

Dear Members of the Board:

Presented in this report are the results for the annual actuarial valuation of the retirement and insurance benefits provided under the County Employees Retirement System (CERS). The purpose of the valuation was to measure the System's funding progress and to determine the required employer contribution rates for the fiscal year beginning July 1, 2013. The date of the valuation was June 30, 2012.

The valuation was based upon data, furnished by the Executive Director and the Kentucky Retirement Systems (KRS) staff, concerning active, inactive and retired members along with pertinent financial information. The complete cooperation of the KRS staff in furnishing materials requested is hereby acknowledged with appreciation.

Your attention is directed particularly to the summary of results on page 1 and the comments on page 6.

To the best of our knowledge, this report is complete and accurate. The valuation was performed by, and under the supervision of, independent actuaries who are members of the American Academy of Actuaries with experience in performing valuations for public retirement systems. The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The valuation was prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board.

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.

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The actuarial calculations were performed by qualified actuaries according to generally accepted actuarial procedures and methods. The calculations are based on the current provisions of the system, and on actuarial assumptions that are, in the aggregate, internally consistent and reasonably based on the actual experience of the system.

Respectfully submitted,

A handwritten signature in blue ink that reads 'Thomas J. Cavanaugh'.

Thomas J. Cavanaugh FSA, FCA, MAAA, EA
Chief Executive Officer

A handwritten signature in blue ink that reads 'Todd B. Green'.

Todd B. Green ASA, FCA, MAAA
Principal and Consulting Actuary

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

Alisa Bennett, FSA, EA, FCA, MAAA
Principal and Consulting Actuary

TJC/TBG/AB:kc



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**REPORT ON THE ANNUAL VALUATION OF THE
COUNTY EMPLOYEES RETIREMENT SYSTEM**

PREPARED AS OF JUNE 30, 2012

SECTION I – SUMMARY OF PRINCIPAL RESULTS

1. This report, prepared as of June 30, 2012, presents the results of the annual actuarial valuation of the retirement and insurance benefits provided under the System. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results, broken down between non-hazardous and hazardous members, are summarized in the following table.

SUMMARY OF PRINCIPAL RESULTS

	CERS Non-Hazardous		CERS Hazardous		CERS Totals	
	6/30/2012	6/30/2011	6/30/2012	6/30/2011	6/30/2012	6/30/2011
Contributions for next fiscal year:						
Retirement	13.74%	12.62%	21.77%	20.10%		
Insurance	<u>5.84</u>	<u>8.59</u>	<u>16.02</u>	<u>21.84</u>	N/A	N/A
Total	19.58%	21.21%	37.79%	41.94%		
Funded status as of valuation date:						
Retirement						
Actuarial accrued liability	\$9,139,567,695	\$8,918,085,025	\$3,009,992,047	\$2,859,041,052	\$12,149,559,743	\$11,777,126,077
Actuarial value of assets	\$5,547,235,599	\$5,629,611,183	\$1,747,379,297	\$1,779,545,393	\$7,294,614,896	\$7,409,156,576
Unfunded liability on actuarial value of assets	\$3,592,332,096	\$3,288,473,842	\$1,262,612,750	\$1,079,495,659	\$4,854,944,847	\$4,367,969,501
Funded ratio on actuarial value of assets	60.69%	63.13%	58.05%	62.24%	60.04%	62.91%
Market value of assets	\$5,372,769,813	\$5,577,252,295	\$1,677,940,479	\$1,760,602,934	\$7,050,710,292	\$7,337,855,229
Unfunded liability on market value of assets	\$3,766,797,882	\$3,340,832,730	\$1,332,051,568	\$1,098,438,118	\$5,098,849,451	\$4,439,270,848
Funded ratio on market value of assets	58.79%	62.54%	55.75%	61.58%	58.03%	62.31%
Insurance						
Actuarial accrued liability	\$2,370,771,288	\$3,073,973,205	\$1,364,843,057	\$1,647,702,755	\$3,735,614,345	\$4,721,675,960
Actuarial value of assets	\$1,512,853,851	\$1,433,450,793	\$829,040,842	\$770,790,274	\$2,341,894,693	\$2,204,241,067
Unfunded liability on actuarial value of assets	\$857,917,437	\$1,640,522,412	\$535,802,215	\$876,912,481	\$1,393,719,652	\$2,517,434,893
Funded ratio on actuarial value of assets	63.81%	46.63%	60.74%	46.78%	62.69%	46.68%
Market value of assets	\$1,439,226,170	\$1,451,984,026	\$788,070,813	\$774,509,101	\$2,227,296,983	\$2,226,493,127
Unfunded liability on market value of assets	\$931,545,118	\$1,621,989,179	\$576,772,244	\$873,193,654	\$1,508,317,362	\$2,495,182,833
Funded ratio on market value of assets	60.71%	47.23%	57.74%	47.01%	59.62%	47.15%
Demographic data as of valuation date:						
Number of retired participants and beneficiaries	45,304	43,211	6,878	6,468	52,182	49,679
Number of vested former members	12,071	9,902	617	580	12,688	10,482
Number of former members due a refund	57,645	56,012	1,794	2,194	59,439	58,206
Number of active members	83,052	85,285	9,130	9,407	92,182	94,692
Total salary	\$2,236,546,345	\$2,276,595,948	\$464,228,923	\$466,963,860	\$2,700,775,268	\$2,743,559,808
Average salary	\$26,929	\$26,694	\$50,847	\$49,640	\$29,298	\$28,974



2. The valuation balance sheets showing the results of the valuation are given in Schedule A.
3. Comments on the valuation results are given in Section IV, comments on the experience and actuarial gains and losses during the valuation year are given in Section V, and the rates of contribution payable by employers are given in Section VI.
4. There were no changes in benefit provisions since the last valuation for CERS Hazardous members. There were changes in benefit provisions since the last valuation for CERS Non-Hazardous members. The plan administrator - Kentucky Retirement Systems Board of Trustees - has changed the Health Insurance plans that cover Medicare eligible retirees and the plan designs have changed for the Health Insurance plans that cover non-Medicare eligible retirees. The changes are summarized below.
 - The health insurance dependent subsidy for non-hazardous retirees not eligible for Medicare has been eliminated effective January 1, 2013.
 - The self-insured Medicare plans have been replaced by Medicare Advantage plans administered by Humana for Plan Year 2013.
 - Plan design changes have also been implemented for Plan Year 2013 for the Kentucky Employees' Health Plan (KEHP), the self-insured plan for active employees and non-Medicare eligible retirees administered by the Commonwealth of Kentucky.
5. Schedule B of this report presents the development of the actuarial value of assets. Schedule C details the actuarial assumptions and methods employed. Schedule D gives a summary of the benefit and contribution provisions of the plan.



SECTION II – MEMBERSHIP DATA

Data regarding the membership of the System for use as a basis for the valuation were furnished by the System’s office. The following table summarizes the membership of the system as of June 30, 2012 upon which the valuation was based. Detailed tabulations of the data are given in Schedule E.

Active Members

Employee Group	Number	Payroll	Group Averages		
			Salary	Age	Service
Non-Hazardous	83,052	\$2,236,546,345	\$26,929	47.5	9.1
Hazardous	9,130	464,228,923	50,847	39.3	10.3
Total in CERS	92,182	\$2,700,775,268	\$29,298	46.7	9.2

The following tables show a six-year history of active member valuation data.

SCHEDULE OF NON-HAZARDOUS CERS ACTIVE MEMBER VALUATION DATA

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
6/30/2007	84,920	\$2,076,848,328	\$24,457	3.3%
6/30/2008	85,221	2,166,612,648	25,423	3.9
6/30/2009	83,724	2,183,611,848	26,081	2.6
6/30/2010	84,681	2,236,855,380	26,415	1.3
6/30/2011	85,285	2,276,595,948	26,694	1.1
6/30/2012	83,052	2,236,546,345	26,929	0.9

SCHEDULE OF HAZARDOUS CERS ACTIVE MEMBER VALUATION DATA

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
6/30/2007	10,063	\$458,998,956	\$45,613	2.9%
6/30/2008	10,173	474,241,332	46,618	2.2
6/30/2009	9,757	469,315,464	48,100	3.2
6/30/2010	9,562	466,548,660	48,792	1.4
6/30/2011	9,407	466,963,860	49,640	1.7
6/30/2012	9,130	464,228,923	50,847	2.4



The following tables show the number and annual retirement allowances payable to retired members and their beneficiaries on the roll of the Retirement System as of the valuation date as well as certain group averages.

Non-Hazardous Retired Lives

Type of Benefit Payment	Number	Annual Benefits*	Group Averages	
			Benefit	Age
Retiree	37,935	\$441,153,955	\$11,629	69.0
Disability	3,284	38,593,354	11,752	64.1
Beneficiary	4,085	35,261,053	8,632	67.8
Total in CERS	45,304	\$515,008,362	\$11,368	68.5

* Does not include annual benefits for those members included in the Hazardous System who are also receiving a portion of their benefit from the Non Hazardous System

Hazardous Retired Lives

Type of Benefit Payment	Number	Annual Benefits	Group Averages	
			Benefit	Age
Retiree	5,673	\$154,744,663	\$27,277	60.4
Disability	452	7,337,685	16,234	54.2
Beneficiary	753	11,139,135	14,793	54.3
Total in CERS	6,878	\$173,221,483	\$25,185	59.3

This valuation also includes 72,127 inactive members (69,716 Non-Hazardous and 2,411 Hazardous; of which 12,071 Non-Hazardous are vested and 617 Hazardous are vested).



SECTION III – ASSETS

- As of June 30, 2012 the total market value of assets amounted to \$9,278,007,275 as shown in the following table. The Insurance assets include both the amount in the health care trust and the amount in the 401(h) account in the pension trust established to meet the requirements of HB1.

**MARKET VALUE OF ASSETS BY FUND
AS OF JUNE 30, 2012**

Member Group	Retirement	Insurance	CERS Total
Non-Hazardous	\$5,372,769,813	\$1,439,226,170	\$6,811,995,983
Hazardous	<u>1,677,940,479</u>	<u>788,070,813</u>	<u>2,466,011,292</u>
Total	\$7,050,710,292	\$2,227,296,983	\$9,278,007,275

- The five-year smoothed market related actuarial value of assets used for the current valuation was \$9,636,509,589. Schedule B shows the development of the actuarial value of assets as of June 30, 2012. The following table shows the actuarial value of assets allocated among member groups.

COMPARISON OF ACTUARIAL VALUE OF ASSETS

	JUNE 30, 2012	JUNE 30, 2011
Retirement		
Non-Hazardous	\$ 5,547,235,599	\$ 5,629,611,183
Hazardous	<u>1,747,379,297</u>	<u>1,779,545,393</u>
Total	\$ 7,294,614,896	\$ 7,409,156,576
Insurance		
Non-Hazardous	\$ 1,512,853,851	\$ 1,433,450,793
Hazardous	<u>829,040,842</u>	<u>770,790,274</u>
Total	\$ 2,341,894,693	\$ 2,204,241,067
CERS Total		
Non-Hazardous	\$ 7,060,089,450	\$ 7,063,061,976
Hazardous	<u>2,576,420,139</u>	<u>2,550,335,667</u>
Total	\$ 9,636,509,589	\$ 9,613,397,643



SECTION IV - COMMENTS ON VALUATION

Schedule A of this report contains the valuation balance sheets which show the present and prospective assets and liabilities of the System as of June 30, 2012. Separate balance sheets are shown for each employee group as well as in total for all groups.

Retirement

1. The total valuation balance sheet on account of retirement benefits shows that the System has total prospective retirement benefit liabilities of \$14,309,389,202, of which \$7,045,432,041 is for the prospective benefits payable on account of present retired members and beneficiaries of deceased members, \$261,385,258 is for the prospective benefits payable on account of inactive members and \$7,002,571,903 is for the prospective benefits payable on account of present active members. Against these retirement benefit liabilities the System has a total present actuarial value of assets of \$7,294,614,896 as of June 30, 2012. The difference of \$7,014,774,306 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of retirement benefits. Of this amount, \$1,246,060,551 is the present value of future contributions expected to be made by members, and the balance of \$5,768,713,755 represents the present value of future contributions payable by the employers.
2. The employers' contributions to the System on account of retirement benefits consist of normal contributions, accrued liability contributions and contributions for administrative expenses. The valuation indicates that employer normal contributions at the rate of 3.92% of payroll for non-hazardous members and 6.15% of payroll for hazardous members are required to fund the continuing benefit accruals for the average active member of CERS.
3. Prospective employer normal contributions on account of retirement benefits at the above rates have a present value of \$913,768,908. When this amount is subtracted from \$5,768,713,755, which is the present value of the total future contributions to be made by the employers, there remains \$4,854,944,847 as the amount of future accrued liability contributions.
4. For non-hazardous members, it is recommended that the accrued liability contribution rate payable by the Counties on account of retirement benefits be set at 9.06% of payroll. For hazardous members, it is recommended that the accrued liability contribution rate payable by the participating employers on account of retirement benefits be set at 15.33% of payroll. These rates are sufficient to liquidate the unfunded accrued liability of \$3,592,332,096 for non-hazardous members and \$1,262,612,750 for hazardous members over 25 years on the assumption that the aggregate payroll for non-hazardous and hazardous members will increase by 4.50% each year.



5. For non-hazardous members, the contribution rate for administrative expenses is determined to be 0.76% of payroll. For hazardous members, the contribution rate for administrative expenses is determined to be 0.29% of payroll.

Insurance

1. The total valuation balance sheet on account of insurance benefits shows that the System has total prospective insurance benefit liabilities of \$4,714,424,549, of which \$1,487,250,402 is for the prospective benefits payable on account of present retired members and beneficiaries of deceased members, \$234,756,437 is for the prospective benefits payable on account of inactive members and \$2,992,417,710 is for the prospective benefits payable on account of present active members. Against these insurance benefit liabilities the System has a total present actuarial value of assets of \$2,341,894,693 as of June 30, 2012. The difference of \$2,372,529,856 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of insurance benefits. Of this amount, \$49,768,250 is the present value of future contributions expected to be made by members, and the balance of \$2,322,761,606 represents the present value of future contributions payable by the employers.
2. The employers' contributions to the System on account of insurance benefits consist of normal contributions and accrued liability contributions. The valuation indicates that employer normal contributions at the rate of 3.44% of payroll for non-hazardous members and 9.37% of payroll for hazardous members are required to fund the continuing benefit accruals for the average active member of CERS.
3. Prospective employer normal contributions on account of insurance benefits at the above rates have a present value of \$929,041,954. When this amount is subtracted from \$2,322,761,606, which is the present value of the total future contributions to be made by the employers, there remains \$1,393,719,652 as the amount of future accrued liability contributions.
4. For non-hazardous members, it is recommended that the accrued liability contribution rate payable by the Counties on account of insurance benefits be set at 2.16% of payroll. For hazardous members, it is recommended that the accrued liability contribution rate payable by the participating employers on account of insurance benefits be set at 6.51% of payroll. These rates are sufficient to liquidate the unfunded accrued liability of \$857,917,437 for non-hazardous members and \$535,802,215 for hazardous members over 25 years on the assumption that the aggregate payroll for non-hazardous and hazardous members will increase by 4.50% each year.
5. The contribution rate for administrative expenses is determined to be 0.24% of payroll for non-hazardous employees and 0.14% of payroll for hazardous employees.



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, 2012 is shown below (\$ millions).

**Experience Gain/(Loss)
Retirement Benefits**

		Non-Hazardous Group		Hazardous Group		Total
(1)	UAAL* as of 6/30/11	\$ 3,288.5		\$ 1,079.5		\$ 4,368.0
(2)	Normal cost from last valuation	106.5		34.6		141.1
(3)	Employer contributions	275.7		89.3		365.0
(4)	Interest accrual: [(1) + (2)] x .0775 - (3) x .03875	252.4		82.9		335.3
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	\$ 3,371.7		\$ 1,107.7		\$ 4,479.4
(6)	Change due to plan amendments	0.0		0.0		0.0
(7)	Change due to new actuarial assumption or methods	0.0		0.0		0.0
(8)	Expected UAAL after changes: (5) + (6) + (7)	\$ 3,371.7		\$ 1,107.7		\$ 4,479.4
(9)	Actual UAAL as of 6/30/12	\$ 3,592.3		\$ 1,262.6		\$ 4,854.9
(10)	Gain/(loss): (8) - (9)	\$ (220.6)		\$ (154.9)		\$ (375.5)
(11)	Accrued liabilities as of 6/30/11	\$ 8,918.1		\$ 2,859.0		\$ 11,777.1
(12)	Gain/(loss) as percent of actuarial accrued liabilities at start of year	(2.5)%		(5.4)%		(3.2)%

*Unfunded actuarial accrued liability



**Experience Gain/(Loss)
Insurance Benefits**

		Non-Hazardous Group	Hazardous Group	Total
(1)	UAAL* as of 6/30/11	\$ 1,640.5	\$ 876.9	\$ 2,517.4
(2)	Normal cost from last valuation	100.6	53.2	153.8
(3)	Expected employer contributions	<u>190.7</u>	<u>101.4</u>	<u>292.1</u>
(4)	Interest accrual: [(1) + (2) - (3)] x .0775	120.2	64.2	184.4
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	\$ 1,670.6	\$ 892.9	\$ 2,563.5
(6)	Change due to plan change to MA-PD	(833.9)	(265.8)	(1,099.7)
(7)	Change due to new actuarial assumption or methods	0.0	0.0	0.0
(8)	Expected UAAL after changes: (5) + (6) + (7)	\$ 836.7	\$ 627.1	\$ 1,463.8
(9)	Actual UAAL as of 6/30/12	\$ 857.9	\$ 535.8	\$ 1,393.7
(10)	Gain/(loss): (8) - (9)	\$ (21.2)	\$ 91.3	\$ 70.1
(11)	Accrued liabilities as of 6/30/11	\$ 3,074.0	\$ 1,647.7	\$ 4,721.7
(12)	Gain/(loss) as percent of actuarial accrued liabilities at start of year	(0.7)%	5.5 %	1.5 %

* *Unfunded actuarial accrued liability*



**NON-HAZARDOUS CERS MEMBERS
ANALYSIS OF FINANCIAL EXPERIENCE**

**Gains & Losses in Accrued Liabilities
Resulting from Difference Between
Assumed Experience & Actual Experience
(\$ Millions)**

Type of Activity	Retirement \$ Gain (or Loss) For Year Ending 6/30/12	Insurance \$ Gain (or Loss) For Year Ending 6/30/12
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	\$ (41.7)	\$ 2.2
Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss.	(36.1)	1.1
Death-in Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(1.3)	(2.6)
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	71.4	7.1
Pay or Claims Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss. For insurance, smaller claims increases than assumed creates a gain; larger, a loss.	70.8	90.0
New Members. Additional unfunded accrued liability will produce a loss.	(14.9)	(4.2)
Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(341.0)	(89.2)
Death After Retirement. If retired members live longer than assumed, there is a loss. If not as long, a gain.	22.9	28.2
Other. Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>49.4</u>	<u>(53.8)</u>
Gain (or Loss) During Year From Financial Experience	\$ (220.6)	\$ (21.2)
Non-Recurring Items. Adjustments for plan amendments, assumption changes, method changes and data corrections	<u>0.0</u>	<u>833.9</u>
Composite Gain (or Loss) During Year	\$ (220.6)	\$ 812.7



**HAZARDOUS CERS MEMBERS
ANALYSIS OF FINANCIAL EXPERIENCE**

**Gains & Losses in Accrued Liabilities
Resulting from Difference Between
Assumed Experience & Actual Experience
(\$ Millions)**

Type of Activity	Retirement \$ Gain (or Loss) For Year Ending 6/30/12	Insurance \$ Gain (or Loss) For Year Ending 6/30/12
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	\$ (19.3)	\$ (2.9)
Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss.	(5.2)	(1.4)
Death-in Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	0.2	(0.6)
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	40.8	28.1
Pay or Claims Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss. For insurance, smaller claims increases than assumed creates a gain; larger, a loss.	7.0	71.0
New Members. Additional unfunded accrued liability will produce a loss.	(12.7)	(8.6)
Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(112.2)	(47.2)
Death After Retirement. If retired members live longer than assumed, there is a loss. If not as long, a gain.	0.1	12.4
Other. Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>(53.6)</u>	<u>40.5</u>
Gain (or Loss) During Year From Financial Experience	\$ (154.9)	\$ 91.3
Non-Recurring Items. Adjustments for plan amendments, assumption changes, method changes and data corrections	<u>0.0</u>	<u>265.8</u>
Composite Gain (or Loss) During Year	\$ (154.9)	\$ 357.1



**TOTAL CERS MEMBERS
ANALYSIS OF FINANCIAL EXPERIENCE**

**Gains & Losses in Accrued Liabilities
Resulting from Difference Between
Assumed Experience & Actual Experience
(\$ Millions)**

Type of Activity	Retirement \$ Gain (or Loss) For Year Ending 6/30/12	Insurance \$ Gain (or Loss) For Year Ending 6/30/12
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	\$ (61.0)	\$ (0.7)
Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss.	(41.2)	(0.3)
Death-in Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(1.2)	(3.2)
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	112.1	35.2
Pay or Claims Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss. For insurance, smaller claims increases than assumed creates a gain; larger, a loss.	77.8	161.0
New Members. Additional unfunded accrued liability will produce a loss.	(27.6)	(12.8)
Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(453.2)	(136.4)
Death After Retirement. If retired members live longer than assumed, there is a loss. If not as long, a gain.	23.0	40.6
Other. Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>(4.2)</u>	<u>(13.3)</u>
Gain (or Loss) During Year From Financial Experience	\$ (375.5)	\$ 70.1
Non-Recurring Items. Adjustments for plan amendments, assumption changes, method changes and data corrections	<u>0.0</u>	<u>1,099.7</u>
Composite Gain (or Loss) During Year	\$ (375.5)	\$ 1,169.8



SECTION VI – REQUIRED CONTRIBUTION RATES

The valuation balance sheet gives the basis for determining the percentage rates for contributions to be made by employers to the Retirement System. The following tables show the rates of contribution payable by employers as determined from the present valuation for the 2013/2014 fiscal year.

**Required Contribution Rates
Non-Hazardous Retirement**

Contribution for	Amount	% of Payroll
A. Normal Cost:		
(1) Service retirement benefits	\$ 181,356,863	7.82%
(2) Disability benefits	15,035,995	0.65
(3) Survivor benefits	3,123,774	0.13
(4) Total	\$ 199,516,632	8.92%
B. Member Contributions	\$ 111,827,317	5.00%
C. Employer Normal Cost: [A(4) - B]	\$ 87,689,315	3.92%
D. Administrative Expenses	\$ 16,997,752	0.76%
E. Unfunded Actuarial Accrued Liability Contributions*:		
(1) UAAL Contribution Based on 6/30/11 Valuation:	\$ 177,581,780	7.94%
(2) Change due to:		
a. Active decrements	\$ 439,339	0.02%
b. Pay increases	(3,994,064)	(0.18)
c. Retiree mortality	(1,288,806)	(0.06)
d. Investment return	19,225,043	0.86
e. COLA	4,012,961	0.18
f. Assumption Change	0	0.00
g. Other	6,562,528	0.29
h. Total Change	\$ 24,957,002	1.12%
(3) UAAL Contribution Based on 6/30/12 Valuation: [E(1) +E(2)h]	\$ 202,538,782	9.06%
F. Total Recommended Employer Contribution Rate: [C+D+E(3)]	\$ 307,225,849	13.74%

* Based on 26 year amortization of the UAAL from June 30, 2011 and 25 years from June 30, 2012



**Required Contribution Rates
Hazardous Retirement**

Contribution for	Amount	% of Payroll
A. Normal Cost:		
(1) Service retirement benefits	\$ 61,321,082	13.21%
(2) Disability benefits	3,467,412	0.75
(3) Survivor benefits	916,723	0.20
(4) Total	\$ <u>65,705,217</u>	<u>14.15%</u>
B. Member Contributions	\$ 37,138,314	8.00%
C. Employer Normal Cost: [A(4) - B]	\$ 28,566,903	6.15%
D. Administrative Expenses	\$ 1,346,264	0.29%
E. Unfunded Actuarial Accrued Liability Contributions*:		
(1) UAAL Contribution Based on 6/30/11 Valuation:	\$ 58,957,073	12.70%
(2) Change due to:		
a. Active decrements	\$ (929,289)	(0.20)%
b. Pay increases	(394,672)	(0.09)
c. Retiree mortality	(8,409)	0.00
d. Investment return	6,328,690	1.36
e. COLA	1,575,627	0.34
f. Assumption Change	0	0.00
g. Other	5,658,177	1.20
h. Total Change	\$ <u>12,230,123</u>	<u>2.63%</u>
(3) UAAL Contribution Based on 6/30/12 Valuation: [E(1) +E(2)h]	\$ 71,187,196	15.33%
F. Total Recommended Employer Contribution Rate: [C+D+E(3)]	\$ 101,100,363	21.77%

* Based on 26 year amortization of the UAAL from June 30, 2011 and 25 years from June 30, 2012



**Required Contribution Rates
Non-Hazardous Insurance**

Contribution for		Amount	% of Payroll
A.	Normal Cost:	\$ 81,209,158	3.63%
B.	Member Contributions*	\$ 4,249,438	0.19%
C.	Employer Normal Cost: [A - B]	\$ 76,959,720	3.44%
D.	Administrative Expenses	\$ 5,321,955	0.24%
E.	Unfunded Actuarial Accrued Liability**:	\$ 48,370,125	2.16%
F.	Total Recommended Employer Contribution Rate: [C+D+E]	\$ 130,651,800	5.84%

**The liabilities are net of retiree contributions toward their healthcare.*

*** Based on 25 year amortization of the UAAL from June 30, 2012*

**Required Contribution Rates
Hazardous Insurance**

Contribution for		Amount	% of Payroll
A.	Normal Cost:	\$ 44,086,003	9.50%
B.	Member Contributions*	\$ 603,498	0.13%
C.	Employer Normal Cost: [A - B]	\$ 43,482,505	9.37%
D.	Administrative Expenses	\$ 668,942	0.14%
E.	Unfunded Actuarial Accrued Liability**:	\$ 30,208,991	6.51%
F.	Total Recommended Employer Contribution Rate: [C+D+E]	\$ 74,360,438	16.02%

**The liabilities are net of retiree contributions toward their healthcare.*

*** Based on 25 year amortization of the UAAL from June 30, 2012*



SECTION VII - ACCOUNTING INFORMATION

Governmental Accounting Standards Board Statements 25, 27, 43 and 45 set forth certain items of required supplementary information to be disclosed in the financial statements of the System and the employer. One such item is a distribution of the number of employees by type of membership, as follows:

**NUMBER OF ACTIVE AND RETIRED MEMBERS
AS OF JUNE 30, 2012**

GROUP	NUMBER		
	Non-Hazardous	Hazardous	Total
Retirees and beneficiaries currently receiving benefits	45,304	6,878	52,182
Terminated employees entitled to benefits but not yet receiving benefits	69,716	2,411	72,127
Active Members	<u>83,052</u>	<u>9,130</u>	<u>92,182</u>
Total	198,072	18,419	216,491

Another such item is the Schedule of Funding Progress for retirement and insurance benefits separately as shown in the following tables.



**RETIREMENT BENEFITS
SCHEDULE OF FUNDING PROGRESS**

Actuarial Valuation Date	Value of Plan Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / (c))
Non-Hazardous Members						
6/30/2007	\$ 5,467,824,480	\$ 6,659,446,126	\$ 1,191,621,646	82.1%	\$ 2,076,848,328	57.4%
6/30/2008	5,731,502,438	7,304,217,691	1,572,715,253	78.5	2,166,612,648	72.6
6/30/2009	5,650,789,991	7,912,913,512	2,262,123,521	71.4	2,183,611,848	103.6
6/30/2010	5,546,857,291	8,459,022,280	2,912,164,989	65.6	2,236,855,380	130.2
6/30/2011	5,629,611,183	8,918,085,025	3,288,473,842	63.1	2,276,595,948	144.4
6/30/2012	5,547,235,599	9,139,567,695	3,592,332,096	60.7	2,236,546,345	160.6
Hazardous Members						
6/30/2007	\$ 1,639,288,924	\$ 2,208,736,179	\$ 569,447,255	74.2%	\$ 458,998,956	124.1%
6/30/2008	1,750,867,373	2,403,122,095	652,254,722	72.9	474,241,332	137.5
6/30/2009	1,751,487,540	2,578,444,600	826,957,060	67.9	469,315,464	176.2
6/30/2010	1,749,464,388	2,672,151,907	922,687,519	65.5	466,548,660	197.8
6/30/2011	1,779,545,393	2,859,041,052	1,079,495,659	62.2	466,963,860	231.2
6/30/2012	1,747,379,297	3,009,992,047	1,262,612,750	58.1	464,228,923	272.0
Total CERS Members						
6/30/2007	\$ 7,107,113,404	\$ 8,868,182,305	\$ 1,761,068,901	80.1%	\$ 2,535,847,284	69.4%
6/30/2008	7,482,369,811	9,707,339,786	2,224,969,975	77.1	2,640,853,980	84.3
6/30/2009	7,402,277,531	10,491,358,112	3,089,080,581	70.6	2,652,927,312	116.4
6/30/2010	7,296,321,679	11,131,174,187	3,834,852,508	65.5	2,703,404,040	141.9
6/30/2011	7,409,156,576	11,777,126,077	4,367,969,501	62.9	2,743,559,808	159.2
6/30/2012	7,294,614,896	12,149,559,743	4,854,944,847	60.0	2,700,775,268	179.8



**INSURANCE BENEFITS
SCHEDULE OF FUNDING PROGRESS**

Actuarial Valuation Date	Value of Plan Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / (c))
Non-Hazardous Members						
6/30/2007	\$ 960,285,900	\$ 3,333,966,070	\$ 2,373,680,170	28.8%	\$ 2,076,848,328	114.3%
6/30/2008	1,168,883,170	3,583,193,466	2,414,310,296	32.6	2,166,612,648	111.4
6/30/2009	1,216,631,769	3,070,386,018	1,853,754,249	39.6	2,183,611,848	84.9
6/30/2010	1,293,038,593	3,158,340,174	1,865,301,581	40.9	2,236,855,380	83.4
6/30/2011	1,433,450,793	3,073,973,205	1,640,522,412	46.6	2,276,595,948	72.1
6/30/2012	1,512,853,851	2,370,771,288	857,917,437	63.8	2,236,546,345	38.4
Hazardous Members						
6/30/2007	\$ 512,926,549	\$ 1,646,460,011	\$ 1,133,533,462	31.2%	\$ 458,998,956	247.0%
6/30/2008	613,526,319	1,769,782,957	1,156,256,638	34.7	474,241,332	243.8
6/30/2009	651,130,782	1,593,548,263	942,417,481	40.9	469,315,464	200.8
6/30/2010	692,769,770	1,674,703,216	981,933,446	41.4	466,548,660	210.5
6/30/2011	770,790,274	1,647,702,755	876,912,481	46.8	466,963,860	187.8
6/30/2012	829,040,842	1,364,843,057	535,802,215	60.7	464,228,923	115.4
Total CERS Members						
6/30/2007	\$ 1,473,212,449	\$ 4,980,426,081	\$ 3,507,213,632	29.6%	\$ 2,535,847,284	138.3%
6/30/2008	1,782,409,489	5,352,976,423	3,570,566,934	33.3	2,640,853,980	135.2
6/30/2009	1,867,762,551	4,663,934,281	2,796,171,730	40.0	2,652,927,312	105.4
6/30/2010	1,985,808,363	4,833,043,390	2,847,235,027	41.1	2,703,404,040	105.3
6/30/2011	2,204,241,067	4,721,675,960	2,517,434,893	46.7	2,743,559,808	91.8
6/30/2012	2,341,894,693	3,735,614,345	1,393,719,652	62.7	2,700,775,268	51.6



RETIREMENT BENEFITS
SCHEDULE OF EMPLOYER CONTRIBUTIONS

Year Ended	Annual Required Contribution	Actual Contributions	Percentage Contributed
Non-Hazardous Members			
June 30, 2007	\$112,508,305	\$124,260,850	110.4%
June 30, 2008	138,311,398	150,925,334	109.1
June 30, 2009	161,097,151	179,284,551	111.3
June 30, 2010	186,724,383	207,075,842	110.9
June 30, 2011	218,984,628	248,518,574	113.5
June 30, 2012	261,764,019	275,736,191	105.3
Hazardous Members			
June 30, 2007	\$53,889,838	\$61,553,118	114.2%
June 30, 2008	64,082,063	72,154,734	112.6
June 30, 2009	69,056,365	78,151,677	113.2
June 30, 2010	76,390,669	82,887,128	108.5
June 30, 2011	78,795,602	85,078,181	108.0
June 30, 2012	83,588,958	89,329,217	106.9
Total CERS Members			
June 30, 2007	\$166,398,143	\$185,813,968	111.7%
June 30, 2008	202,393,461	223,080,068	110.2
June 30, 2009	230,153,516	257,436,228	111.9
June 30, 2010	263,115,052	289,962,970	110.2
June 30, 2011	297,780,230	333,596,755	112.0
June 30, 2012	345,352,977	365,065,408	105.7



**INSURANCE BENEFITS
SCHEDULE OF EMPLOYER CONTRIBUTIONS**

Year Ended	Annual Required Contribution	Retiree Drug Subsidy (RDS) Contribution	Employer Contributions	Total Contributions	Percentage Contributed
Non-Hazardous Members					
June 30, 2007	\$285,600,490	\$9,623,431	\$147,608,801	\$157,232,232	55.1%
June 30, 2008	406,541,729	6,003,181	196,110,111	202,113,292	49.7
June 30, 2009	264,733,532	7,623,628	123,852,611	131,476,239	49.7
June 30, 2010	266,331,326	9,156,991	166,607,097	175,764,088	66.0
June 30, 2011	213,429,424	0	186,885,576	186,885,576	87.6
June 30, 2012	214,421,008	0	171,924,836	171,924,836	80.2
Hazardous Members					
June 30, 2007	\$115,938,899	\$ 656,523	\$70,072,785	\$70,729,308	61.0%
June 30, 2008	168,723,639	419,774	90,113,200	90,532,974	53.7
June 30, 2009	126,757,348	627,938	70,785,241	71,413,179	56.3
June 30, 2010	129,227,449	1,493,440	83,042,875	84,536,315	65.4
June 30, 2011	109,226,667	0	98,592,286	98,592,286	90.3
June 30, 2012	110,762,577	0	92,563,664	92,563,664	83.6
Total CERS Members					
June 30, 2007	\$401,539,389	\$10,279,954	\$217,681,586	\$227,961,540	56.8%
June 30, 2008	575,265,368	6,422,955	286,223,311	292,646,266	50.9
June 30, 2009	391,490,880	8,251,566	194,637,852	202,889,418	51.8
June 30, 2010	395,558,775	10,650,431	249,649,972	260,300,403	65.8
June 30, 2011	322,656,091	0	285,477,862	285,477,862	88.5
June 30, 2012	325,183,585	0	264,488,500	264,488,500	81.3



The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2012. Additional information as of the latest actuarial valuation follows.

Retirement Benefits

	Non-Hazardous Members	Hazardous Members
Valuation date	6/30/2012	6/30/2012
Actuarial cost method	Entry Age	Entry Age
Amortization	Level percent Closed	Level percent Closed
Remaining amortization period	25 years	25 years
Asset valuation method	5 year smoothed Market	5 year smoothed Market
Actuarial assumptions		
Investment rate of return*	7.75%	7.75%
Projected salary increases**	4.75% - 13.0%	4.5% - 20.0%
Cost-of-living adjustment	None	None
*Includes price inflation at	3.50%	3.50%
**Includes wage inflation at	4.50%	4.50%

Insurance Benefits

	Non-Hazardous Members	Hazardous Members
Valuation date	6/30/2012	6/30/2012
Actuarial cost method	Entry Age	Entry Age
Amortization	Level percent Closed	Level percent Closed
Remaining amortization period	25 years	25 years
Asset valuation method	5 year smoothed Market	5 year smoothed Market
Medical Trend Assumption (Pre-Medicare)	9.5% - 5.0%	9.5% - 5.0%
Medical Trend Assumption (Post-Medicare)	7.5% - 5.0%	7.5% - 5.0%
Year Ultimate Trend	2019	2019
Actuarial assumptions:		
Investment rate of return*	7.75%	7.75%
*Includes price inflation at	3.50%	3.50%



SCHEDULE A

Valuation Balance Sheet and Solvency Test

The following valuation balance sheets show the assets and liabilities of the retirement system as of the current valuation date of June 30, 2012 and, for comparison purposes, as of the immediately preceding valuation date of June 30, 2011. The items shown in the balance sheet are present values actuarially determined as of the relevant valuation date.

VALUATION BALANCE SHEETS SHOWING THE ASSETS AND LIABILITIES OF THE COUNTY EMPLOYEES RETIREMENT SYSTEM

RETIREMENT BENEFITS NON-HAZARDOUS CERS MEMBERS

	June 30, 2012	June 30, 2011
ASSETS		
Current actuarial value of assets	\$ 5,547,235,599	\$ 5,629,611,183
Prospective contributions		
Member contributions	\$ 924,952,981	\$ 952,686,879
Employer normal contributions	666,452,549	709,345,099
Unfunded accrued liability contributions	<u>3,592,332,096</u>	<u>3,288,473,842</u>
Total prospective contributions	<u>\$ 5,183,737,626</u>	<u>\$ 4,950,505,820</u>
Total assets	<u>\$ 10,730,973,225</u>	<u>\$ 10,580,117,003</u>
LIABILITIES		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 5,174,881,611	\$ 4,864,821,271
Present value of benefits payable on account of active members	5,314,040,230	5,370,333,079
Present value of benefits payable on account of inactive members	<u>242,051,384</u>	<u>344,962,653</u>
Total liabilities	<u>\$ 10,730,973,225</u>	<u>\$ 10,580,117,003</u>



**VALUATION BALANCE SHEET
RETIREMENT BENEFITS
HAZARDOUS CERS MEMBERS**

	June 30, 2012	June 30, 2011
ASSETS		
Current actuarial value of assets	\$ 1,747,379,297	\$ 1,779,545,393
Prospective contributions		
Member contributions	\$ 321,107,570	\$ 323,181,553
Employer normal contributions	247,316,359	279,004,989
Unfunded accrued liability contributions	<u>1,262,612,750</u>	<u>1,079,495,659</u>
Total prospective contributions	<u>\$ 1,831,036,679</u>	<u>\$ 1,681,682,201</u>
Total assets	<u><u>\$ 3,578,415,976</u></u>	<u><u>\$ 3,461,227,594</u></u>
LIABILITIES		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 1,870,550,430	\$ 1,737,180,979
Present value of benefits payable on account of active members	1,688,531,673	1,692,716,049
Present value of benefits payable on account of inactive members	<u>19,333,873</u>	<u>31,330,566</u>
Total liabilities	<u><u>\$ 3,578,415,976</u></u>	<u><u>\$ 3,461,227,594</u></u>



**VALUATION BALANCE SHEET
RETIREMENT BENEFITS
TOTAL CERS MEMBERS**

	June 30, 2012	June 30, 2011
ASSETS		
Current actuarial value of assets	\$ 7,294,614,896	\$ 7,409,156,576
Prospective contributions		
Member contributions	\$ 1,246,060,551	\$ 1,275,868,432
Employer normal contributions	913,768,908	988,350,088
Unfunded accrued liability contributions	<u>4,854,944,847</u>	<u>4,367,969,501</u>
Total prospective contributions	<u>\$ 7,014,774,306</u>	<u>\$ 6,632,188,021</u>
Total assets	<u><u>\$ 14,309,389,202</u></u>	<u><u>\$ 14,041,344,597</u></u>
LIABILITIES		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 7,045,432,041	\$ 6,602,002,250
Present value of benefits payable on account of active members	7,002,571,903	7,063,049,128
Present value of benefits payable on account of inactive members	<u>261,385,258</u>	<u>376,293,219</u>
Total liabilities	<u><u>\$ 14,309,389,202</u></u>	<u><u>\$ 14,041,344,597</u></u>



**VALUATION BALANCE SHEET
INSURANCE BENEFITS
NON-HAZARDOUS CERS MEMBERS**

	June 30, 2012	June 30, 2011
ASSETS		
Current actuarial value of assets	\$ 1,512,853,851	\$ 1,433,450,793
Prospective contributions		
Member contributions	\$ 42,031,107	\$ 31,828,274
Employer normal contributions	603,105,896	801,135,367
Unfunded accrued liability contributions	<u>857,917,437</u>	<u>1,640,522,412</u>
Total prospective contributions	<u>\$ 1,503,054,440</u>	<u>\$ 2,473,486,053</u>
Total assets	<u><u>\$ 3,015,908,291</u></u>	<u><u>\$ 3,906,936,846</u></u>
LIABILITIES		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 944,340,604	\$ 1,245,819,075
Present value of benefits payable on account of active members	1,869,000,541	2,446,128,591
Present value of benefits payable on account of inactive members	<u>202,567,146</u>	<u>214,989,180</u>
Total liabilities	<u><u>\$ 3,015,908,291</u></u>	<u><u>\$ 3,906,936,846</u></u>



**VALUATION BALANCE SHEET
INSURANCE BENEFITS
HAZARDOUS CERS MEMBERS**

	June 30, 2012	June 30, 2011
ASSETS		
Current actuarial value of assets	\$ 829,040,842	\$ 770,790,274
Prospective contributions		
Member contributions	\$ 7,737,143	\$ 5,469,611
Employer normal contributions	325,936,058	410,132,921
Unfunded accrued liability contributions	<u>535,802,215</u>	<u>876,912,481</u>
Total prospective contributions	<u>\$ 869,475,416</u>	<u>\$ 1,292,515,013</u>
Total assets	<u>\$ 1,698,516,258</u>	<u>\$ 2,063,305,287</u>
LIABILITIES		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 542,909,798	\$ 734,584,639
Present value of benefits payable on account of active members	1,123,417,169	1,291,674,000
Present value of benefits payable on account of inactive members	<u>32,189,291</u>	<u>37,046,648</u>
Total liabilities	<u>\$ 1,698,516,258</u>	<u>\$ 2,063,305,287</u>



**VALUATION BALANCE SHEET
INSURANCE BENEFITS
TOTAL CERS MEMBERS**

	June 30, 2012	June 30, 2011
ASSETS		
Current actuarial value of assets	\$ 2,341,894,693	\$ 2,204,241,067
Prospective contributions		
Member contributions	\$ 49,768,250	\$ 37,297,885
Employer normal contributions	929,041,954	1,211,268,288
Unfunded accrued liability contributions	<u>1,393,719,652</u>	<u>2,517,434,893</u>
Total prospective contributions	<u>\$ 2,372,529,856</u>	<u>\$ 3,766,001,066</u>
Total assets	<u>\$ 4,714,424,549</u>	<u>\$ 5,970,242,133</u>
LIABILITIES		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 1,487,250,402	\$ 1,980,403,714
Present value of benefits payable on account of active members	2,992,417,710	3,737,802,591
Present value of benefits payable on account of inactive members	<u>234,756,437</u>	<u>252,035,828</u>
Total liabilities	<u>\$ 4,714,424,549</u>	<u>\$ 5,970,242,133</u>



The following tables provide the solvency test for non-hazardous and hazardous CERS members.

**Solvency Test
Retirement Benefits
Non-Hazardous CERS Members**

Valuation Date	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Reported Asset		
	(1)	(2)	(3)	Actuarial Value of Assets	(1)	(2)	(3)
	Active Member Contributions	Retired Members & Beneficiaries	Active Members (Employer Financed Portion)				
6/30/2007	\$ 920,126,096	\$ 3,589,512,063	\$ 2,149,807,967	\$ 5,467,824,480	100.0%	100.0%	44.6%
6/30/2008	963,213,677	4,058,767,419	2,282,236,595	5,731,502,438	100.0	100.0	31.1
6/30/2009	991,628,551	4,542,483,102	2,378,801,859	5,650,789,991	100.0	100.0	4.9
6/30/2010	1,063,746,826	4,890,659,077	2,504,616,377	5,546,857,291	100.0	91.7	0.0
6/30/2011	1,110,967,160	5,209,783,924	2,597,333,941	5,629,611,183	100.0	86.7	0.0
6/30/2012	1,117,549,337	5,416,932,995	2,605,085,363	5,547,235,599	100.0	81.8	0.0

**Solvency Test
Retirement Benefits
Hazardous CERS Members**

Valuation Date	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Reported Asset		
	(1)	(2)	(3)	Actuarial Value of Assets	(1)	(2)	(3)
	Active Member Contributions	Retired Members & Beneficiaries	Active Members (Employer Financed Portion)				
6/30/2007	\$ 317,007,367	\$ 1,275,221,775	\$ 616,507,037	\$ 1,639,288,924	100.0%	100.0%	7.6%
6/30/2008	338,324,362	1,406,982,409	657,815,324	1,750,867,373	100.0	100.0	0.8
6/30/2009	350,308,879	1,540,262,587	687,873,134	1,751,487,540	100.0	91.0	0.0
6/30/2010	369,612,720	1,622,684,455	679,854,732	1,749,464,388	100.0	85.0	0.0
6/30/2011	382,072,055	1,768,511,545	708,457,452	1,779,545,393	100.0	79.0	0.0
6/30/2012	381,672,428	1,889,884,303	738,435,316	1,747,379,297	100.0	72.3	0.0



**Solvency Test
Insurance Benefits
Non-Hazardous CERS Members**

Valuation Date	Aggregate Accrued Liabilities For				Actuarial Value of Assets	Portion of Accrued Liabilities Covered by Reported Asset		
	(1)	(2)	(3)			(1)	(2)	(3)
	Active Member Contributions	Retired Members & Beneficiaries	Active Members (Employer Financed Portion)					
6/30/2007	\$ 0	\$ 1,372,128,406	\$ 1,961,837,664	\$ 960,285,900	100.0%	70.0%	0.0%	
6/30/2008	0	1,521,450,274	2,061,743,192	1,168,883,170	100.0	76.8	0.0	
6/30/2009	0	1,478,782,753	1,591,603,265	1,216,631,769	100.0	82.3	0.0	
6/30/2010	0	1,526,533,372	1,631,806,802	1,293,038,593	100.0	84.7	0.0	
6/30/2011	0	1,460,808,255	1,613,164,950	1,433,450,793	100.0	98.1	0.0	
6/30/2012	0	1,146,907,750	1,223,863,538	1,512,853,851	100.0	100.0	29.9	

**Solvency Test
Insurance Benefits
Hazardous CERS Members**

Valuation Date	Aggregate Accrued Liabilities For				Actuarial Value of Assets	Portion of Accrued Liabilities Covered by Reported Asset		
	(1)	(2)	(3)			(1)	(2)	(3)
	Active Member Contributions	Retired Members & Beneficiaries	Active Members (Employer Financed Portion)					
6/30/2007	\$ 0	\$ 659,752,978	\$ 986,707,033	\$ 512,926,549	100.0%	77.7%	0.0%	
6/30/2008	0	722,435,184	1,047,347,773	613,526,319	100.0	84.9	0.0	
6/30/2009	0	725,899,836	867,648,427	651,130,782	100.0	89.7	0.0	
6/30/2010	0	814,300,256	860,402,960	692,769,770	100.0	85.1	0.0	
6/30/2011	0	771,631,287	876,071,468	770,790,274	100.0	99.9	0.0	
6/30/2012	0	575,099,089	789,743,968	829,040,842	100.0	100.0	32.2	



SCHEDULE B
Development of Actuarial Value of Assets
Retirement Benefits
Non-Hazardous Members

Valuation date June 30:	2011	2012	2013	2014	2015	2016
A. Actuarial Value Beginning of Year	\$ 5,546,857,291	\$ 5,629,611,183				
B. Market Value End of Year	5,577,252,295	5,372,769,813				
C. Market Value Beginning of Year	4,819,933,717	5,577,252,295				
D. Cash Flow						
D1. Contributions	393,379,256	394,922,258				
D2. Benefit Payments	(506,162,686)	(565,978,993)				
D3. Administrative Expenses	(15,567,869)	(16,962,819)				
D4. Investment Expenses	<u>(11,427,951)</u>	<u>(14,985,808)</u>				
D5. Net	(139,779,250)	(203,005,362)				
E. Investment Income						
E1. Market Total: B.-C.-D5.	897,097,828	(1,477,120)				
E2. Assumed Rate	7.75%	7.75%				
E3. Amount for Immediate Recognition	379,999,201	439,937,103				
E4. Amount for Phased-In Recognition	517,098,627	(441,414,223)				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	103,419,725	(88,282,845)	0	0	0	0
F2. First Prior Year	68,333,580	103,419,725	(88,282,845)	0	0	0
F3. Second Prior Year	(268,260,750)	68,333,580	103,419,725	(88,282,845)	0	0
F4. Third Prior Year	(134,517,035)	(268,260,750)	68,333,580	103,419,725	(88,282,845)	0
F5. Fourth Prior Year	<u>73,558,421</u>	<u>(134,517,035)</u>	<u>(268,260,750)</u>	<u>68,333,580</u>	<u>103,419,725</u>	<u>(88,282,845)</u>
F6. Total Recognized Investment Gain	(157,466,059)	(319,307,325)	(184,790,290)	83,470,460	15,136,880	(88,282,845)
G. Actuarial Value End of Year:						
A.+D5.+E3.+F6.	\$ 5,629,611,183	\$ 5,547,235,599				
H. Difference Between Market & Actuarial Values	\$ (52,358,888)	\$ (174,465,786)	\$ 10,324,504	\$ (73,145,956)	\$ (88,282,845)	\$ 0

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.

**Development of Actuarial Value of Assets
Retirement Benefits
Hazardous Members**



Valuation date June 30:	2011	2012	2013	2014	2015	2016
A. Actuarial Value Beginning of Year	\$ 1,749,464,388	\$ 1,779,545,393				
B. Market Value End of Year	1,760,602,934	1,677,940,479				
C. Market Value Beginning of Year	1,506,787,429	1,760,602,934				
D. Cash Flow						
D1. Contributions	138,996,575	131,314,624				
D2. Benefit Payments	(170,193,302)	(187,027,979)				
D3. Administrative Expenses	(1,295,026)	(1,337,844)				
D4. Investment Expenses	<u>(14,514,425)</u>	<u>(4,604,154)</u>				
D5. Net	(47,006,178)	(61,655,353)				
E. Investment Income						
E1. Market Total: B.-C.-D5.	300,821,683	(21,007,102)				
E2. Assumed Rate	7.75%	7.75%				
E3. Amount for Immediate Recognition	130,031,395	138,840,147				
E4. Amount for Phased-In Recognition	170,790,288	(159,847,249)				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	34,158,058	(31,969,450)	0	0	0	0
F2. First Prior Year	20,921,839	34,158,058	(31,969,450)	0	0	0
F3. Second Prior Year	(85,878,868)	20,921,839	34,158,058	(31,969,450)	0	0
F4. Third Prior Year	(46,582,469)	(85,878,868)	20,921,839	34,158,058	(31,969,450)	0
F5. Fourth Prior Year	<u>24,437,228</u>	<u>(46,582,469)</u>	<u>(85,878,868)</u>	<u>20,921,839</u>	<u>34,158,058</u>	<u>(31,969,450)</u>
F6. Total Recognized Investment Gain	(52,944,212)	(109,350,890)	(62,768,421)	23,110,447	2,188,608	(31,969,450)
G. Actuarial Value End of Year:						
A.+D5.+E3.+F6.	\$ 1,779,545,393	\$ 1,747,379,297				
H. Difference Between Market & Actuarial Values	\$ (18,942,459)	\$ (69,438,818)	\$ (6,670,397)	\$ (29,780,844)	\$ (31,969,450)	\$ 0

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.

**Development of Actuarial Value of Assets
Insurance Benefits
Non-Hazardous Members**



Valuation date June 30:	2011	2012	2013	2014	2015	2016
A. Actuarial Value Beginning of Year	\$ 1,293,038,593	\$ 1,433,450,793				
B. Market Value End of Year	1,451,984,026	1,439,226,170				
C. Market Value Beginning of Year	1,096,581,872	1,451,984,026				
D. Cash Flow						
D1. Contributions	217,610,265	200,993,492				
D2. Benefit Payments	(131,943,339)	(141,693,436)				
D3. Administrative Expenses	(4,762,524)	(5,321,955)				
D4. Investment Expenses	<u>(2,339,212)</u>	<u>(2,870,026)</u>				
D5. Net	78,565,190	51,108,075				
E. Investment Income						
E1. Market Total: B.-C.-D5.	276,836,964	(63,865,931)				
E2. Assumed Rate	7.75%	7.75%				
E3. Amount for Immediate Recognition	90,459,353	117,490,439				
E4. Amount for Phased-In Recognition	186,377,611	(181,356,370)				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	37,275,522	(36,271,274)	0	0	0	0
F2. First Prior Year	12,929,625	37,275,522	(36,271,274)	0	0	0
F3. Second Prior Year	(66,228,396)	12,929,625	37,275,522	(36,271,274)	0	0
F4. Third Prior Year	(36,900,933)	(66,228,396)	12,929,625	37,275,522	(36,271,274)	0
F5. Fourth Prior Year	<u>24,311,839</u>	<u>(36,900,933)</u>	<u>(66,228,399)</u>	<u>12,929,625</u>	<u>37,275,522</u>	<u>(36,271,274)</u>
F6. Total Recognized Investment Gain	(28,612,343)	(89,195,456)	(52,294,526)	13,933,873	1,004,248	(36,271,274)
G. Actuarial Value End of Year:						
A.+D5.+E3.+F6.	\$ 1,433,450,793	\$ 1,512,853,851				
H. Difference Between Market & Actuarial Values	\$ 18,533,233	\$ (73,627,681)	\$ (21,333,155)	\$ (35,267,028)	\$ (36,271,274)	\$ 0

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.

**Development of Actuarial Value of Assets
Insurance Benefits
Hazardous Members**



Valuation date June 30:	2011	2012	2013	2014	2015	2016
A. Actuarial Value Beginning of Year	\$ 692,769,770	\$ 770,790,274				
B. Market Value End of Year	774,509,101	788,070,813				
C. Market Value Beginning of Year	586,826,965	774,509,101				
D. Cash Flow						
D1. Contributions	101,037,884	94,535,608				
D2. Benefit Payments	(51,829,795)	(50,155,364)				
D3. Administrative Expenses	(580,193)	(668,942)				
D4. Investment Expenses	<u>(2,324,660)</u>	<u>(1,516,866)</u>				
D5. Net	46,303,236	42,194,436				
E. Investment Income						
E1. Market Total: B.-C.-D5.	141,378,900	(28,632,724)				
E2. Assumed Rate	7.75%	7.75%				
E3. Amount for Immediate Recognition	49,688,081	63,235,134				
E4. Amount for Phased-In Recognition	91,690,819	(91,867,858)				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	18,338,164	(18,373,572)	0	0	0	0
F2. First Prior Year	5,685,665	18,338,164	(18,373,572)	0	0	0
F3. Second Prior Year	(33,861,562)	5,685,665	18,338,164	(18,373,572)	0	0
F4. Third Prior Year	(18,967,697)	(33,861,562)	5,685,665	18,338,164	(18,373,572)	0
F5. Fourth Prior Year	<u>10,834,617</u>	<u>(18,967,697)</u>	<u>(33,861,562)</u>	<u>5,685,665</u>	<u>18,338,164</u>	<u>(18,373,572)</u>
F6. Total Recognized Investment Gain	(17,970,813)	(47,179,002)	(28,211,305)	5,650,257	(35,408)	(18,373,572)
G. Actuarial Value End of Year:						
A.+D5.+E3.+F6.	\$ 770,790,274	\$ 829,040,842				
H. Difference Between Market & Actuarial Values	\$ 3,718,827	\$ (40,970,029)	\$ (12,758,724)	\$ (18,408,981)	\$ (18,373,572)	\$ 0

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.



SCHEDULE C

STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

The assumptions and methods used in the valuation were based on the actuarial experience study prepared as of June 30, 2008, submitted August 14, 2009, and adopted by the Board on August 20, 2009.

INVESTMENT RATE OF RETURN: 7.75% per annum, compounded annually for retirement and insurance benefits.

SALARY INCREASES: Representative values of the assumed annual rates of future salary increases for both non-hazardous and hazardous members are as follows and include inflation at 4.50% per annum:

Service	Annual Rates of				
	Merit & Seniority		Base (Economy)	Increase Next Year	
	Non-Hazardous	Hazardous		Non-Hazardous	Hazardous
0-1	8.50%	15.50%	4.50%	13.00%	20.00%
1-2	5.00%	6.00%	4.50%	9.50%	10.50%
2-3	1.50%	2.00%	4.50%	6.00%	6.50%
3-4	1.50%	1.25%	4.50%	6.00%	5.75%
4-5	1.00%	1.00%	4.50%	5.50%	5.50%
5-6	1.00%	0.50%	4.50%	5.50%	5.00%
6-7	0.75%	0.00%	4.50%	5.25%	4.50%
7-8	0.75%	0.00%	4.50%	5.25%	4.50%
8-9	0.50%	0.00%	4.50%	5.00%	4.50%
9-10	0.50%	0.00%	4.50%	5.00%	4.50%
10 & Over	0.25%	0.00%	4.50%	4.75%	4.50%



SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of death, disability, withdrawal and retirement are shown in the following tables:

Non-Hazardous Members

Age	Withdrawal and Vesting*	Death			Service Retirement**
		Male	Female	Disability	
20	5.75%	0.03%	0.01%	0.04%	
25	5.75	0.03	0.01	0.05	
30	5.30	0.04	0.02	0.06	
35	4.40	0.04	0.02	0.09	
40	3.70	0.05	0.04	0.13	
45	3.02	0.08	0.05	0.22	
50	2.70	0.13	0.07	0.37	
55	2.20	0.22	0.11	0.61	8.0%
60	0.75	0.40	0.22	0.97	10.0
65		0.73	0.43		22.0
70		1.19	0.69		22.0
75					100.0

* Select rates of withdrawal apply in the first five years of employment regardless of age. The rates are 25.0%, 14.0%, 10.0%, 8.0% and 6.5%, respectively.

** If service is at least 27 years, the rate is 30% for members participating before 9/1/2008. If age plus service is at least 87, the rate is 30% for members participating on or after 9/1/2008.

Hazardous Members

Age	Withdrawal and Vesting*	Death**			Service Retirement		
		Male	Female	Disability	Service	Rate ⁺	Rate ⁺⁺
20	3.00%	0.03%	0.01%	0.05%	20	20.0%	
25	2.70	0.03	0.01	0.07	25	33.0	20.0%
30	2.50	0.04	0.02	0.09	30	33.0	33.0
35	2.50	0.04	0.02	0.13	35	40.0	33.0
40	2.50	0.05	0.04	0.20	40		40.0
45	2.50	0.08	0.05	0.33			
50	2.50	0.13	0.07	0.56			
55		0.22	0.11	0.92			
60		0.40	0.22	1.46			

* Select rates of withdrawal apply in the first five years of employment regardless of age. The rates are 14.0%, 7.5%, 6.0%, 4.5% and 4.0%, respectively.

** 75% are presumed to be non-duty related, and 25% are assumed to be duty related.

+ Applies to members participating before 9/1/2008. The annual rate of service retirement is 100% at age 62.

++ Applies to members participating on or after 9/1/2008. The annual rate of service retirement is 100% at age 60.



DEATH AFTER RETIREMENT: The rates of mortality for the period after service retirement are according to the 1983 Group Annuity Mortality Table for all retired members and beneficiaries as of June 30, 2006 and the 1994 Group Annuity Mortality Table for all other members. The Group Annuity Mortality Table set forward 5 years is used for the period after disability retirement. There is some margin in the current mortality tables for possible future improvement in mortality rates and that margin will be reviewed again when the next experience investigation is conducted.

PERCENT MARRIED: 100% of employees are assumed to be married, with the wife 3 years younger than the husband.

DEPENDENT CHILDREN: For hazardous members' duty-related death benefits, it is assumed that the member is survived by two dependent children each age 6.

ACTUARIAL METHOD: Entry age normal cost method. Actuarial gains and losses are reflected in the unfunded actuarial accrued liability. For pre-Medicare retiree healthcare liabilities, the current premium charged by the Kentucky Employees' Health Plan (KEHP) is used as the base cost is projected forward using the healthcare trend assumption. No implicit rate subsidy is calculated or recognized as the subsidy is the responsibility of KEHP. For the Medicare-eligible retirees, claims were analyzed and current premiums were utilized with appropriate aging factors applied.

ASSET VALUATION METHOD: 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 market value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected market value.

HEALTH CARE BENEFITS VALUED: Medical and drug benefits for retirees under age 65 and Medicare eligible.

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

Fiscal Year Ended	Trend	
	Under Age 65	Age 65 and Over
2013	9.5%	7.5%
2014	8.5%	7.0%
2015	7.5%	6.5%
2016	6.5%	6.0%
2017	6.0%	5.5%
2018	5.5%	5.0%
2019 and beyond	5.0%	5.0%

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

Participant Age	Annual Increase
65-69	3.0%
70-74	2.5
75-79	2.0
80-84	1.0
85-89	0.5
90 and beyond	0.0



HEALTH CARE ANTICIPATED PLAN PARTICIPATION: The assumed annual rates of plan participation are as follows:

Medical	Non-Hazardous	Hazardous
Participation	85%	100%

HEALTH CARE MONTHLY RATES: Following are charts detailing expected monthly rates for pre-Medicare eligible and post-Medicare eligible retirees for the year following the valuation date.

**MEDICAL INSURANCE RATES
PRE-MEDICARE ELIGIBLE**

Effective January 1, 2012				
	Single	Parent Plus	Couple	Family
Total Premiums				
Standard PPO	\$496.14	\$764.68	\$1,144.72	\$1,272.83
Optimum PPO	\$663.30	\$922.88	\$1,432.36	\$1,595.06
Capitol Choice	\$638.16	\$927.08	\$1,414.46	\$1,568.06

Effective January 1, 2013				
	Single	Parent Plus	Couple	Family
Total Premiums				
Standard PPO	\$506.06	\$791.54	\$1,177.80	\$1,314.12
Optimum PPO	\$675.34	\$961.84	\$1,476.00	\$1,642.78
Capitol Choice	\$650.22	\$961.42	\$1,457.90	\$1,613.74

**MEDICAL INSURANCE RATES
MEDICARE ELIGIBLE**

Effective January 1, 2013	
Available Plan	Premium
Kentucky Retirement System Health Plan - Medical Only	\$157.00
Kentucky Retirement System Health Plan - Essential	\$84.08
Kentucky Retirement System Health Plan - Premium	\$198.31
Above amounts are shown as average retiree costs. In the valuation, the claims costs are converted to age 65 amounts and age adjusted.	



SCHEDULE D

SUMMARY OF MAIN BENEFIT AND CONTRIBUTION PROVISIONS

This schedule summarizes the major retirement benefit provisions of CERS included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Plan Year: July 1 through June 30

Non-Hazardous Normal Retirement:

Members whose participation began before 8/1/2004

<i>Age Requirement</i>	65
<i>Service Requirement</i>	At least one month of non-hazardous duty service credit
<i>Amount</i>	If a member has at least 48 months of service, the monthly benefit is 2.20% multiplied by final average compensation, multiplied by years of service. Final compensation is calculated by taking the average of the highest five (5) fiscal years of salary. If the number of months of service credit during the five (5) year period is less than forty-eight (48), one (1) or more additional fiscal years shall be used. If a member has less than 48 months of service, the monthly benefit is the actuarial equivalent of two times the member's contributions with interest.

Members whose participation began on or after 8/1/2004, but before 9/1/2008

<i>Age Requirement</i>	65
<i>Service Requirement</i>	At least one month of non-hazardous duty service credit
<i>Amount</i>	If a member has at least 48 months of service, the monthly benefit is 2.00% multiplied by final average compensation, multiplied by years of service. Final compensation is calculated by taking the average of the highest five (5) fiscal years of salary. If the number of months of service credit during the five (5) year period is less than forty-eight (48), one (1) or more additional fiscal years shall be used. If a member has less than 48 months of service, the monthly benefit is the actuarial equivalent of two times the member's contributions with interest.



Non-Hazardous Normal Retirement (continued):

Members whose participation began on or after 9/1/2008

Requirement

Age 65 with 60 months of non-hazardous duty service credit, or age 57 if age plus service equals at least 87.

Amount

The monthly benefit is the following benefit factor based on service credit at retirement plus 2.00% for each year of service greater than 30 years, multiplied by final average compensation, multiplied by years of service.

Service Credit	Benefit Factor
10 years or less	1.10%
10+ – 20 years	1.30%
20+ – 26 years	1.50%
26+ – 30 years	1.75%

Final compensation is calculated by taking the average of the last (not highest) five (5) complete fiscal years of salary. Each fiscal year used to determine final compensation must contain twelve (12) months of service credit.

Hazardous Normal Retirement:

Members whose participation began before 9/1/2008

Age Requirement

55

Service Requirement

At least one month of hazardous duty service credit

Amount

If a member has at least 60 months of service, the monthly benefit is 2.50% multiplied by final average compensation, multiplied by years of service.

Final compensation is calculated by taking the average of the highest three (3) fiscal years of salary. If the number of months of service credit during the three (3) year period is less than twenty-four (24), one (1) or more additional fiscal years shall be used.

If a member has less than 60 months of service, the monthly benefit is the actuarial equivalent of two times the member's contributions with interest.

Members whose participation began on or after 9/1/2008

Age Requirement

60

Service Requirement

At least 60 months of hazardous duty service credit



Hazardous Normal Retirement (continued):

Amount

The monthly benefit is the following benefit factor based on service credit at retirement, multiplied by final average compensation, multiplied by years of service.

Service Credit	Benefit Factor
10 years or less	1.30%
10+ – 20 years	1.50%
20+ – 25 years	2.25%
25+ years	2.50%

Final compensation is calculated by taking the average of the highest three (3) complete fiscal years of salary. Each fiscal year used to determine final compensation must contain twelve (12) months of service credit.

Non-Hazardous Early Retirement:

Members whose participation began before 9/1/2008

Requirement

Age 55 with 60 months of service or any age with 25 years of service.

Amount

Normal retirement benefit reduced by 5.0% per year for the first five years and 4.0% per year for the next five years for each year the member is younger than age 65 or has less than 27 years of service, whichever is smaller.

Members whose participation began on or after 9/1/2008

Requirement

Age 60 with 10 years of service.

Amount

Normal retirement benefit reduced by 5.0% per year for the first five years and 4.0% per year for the next five years for each year the member is younger than age 65, or does not meet the rule of 87 (age plus service) and is younger than age 57, whichever is smaller.

Hazardous Early Retirement:

Members whose participation began before 9/1/2008

Requirement

Age 50 with 15 years of service or any age with 20 years service.

Amount

Normal retirement benefit reduced by 6.5% per year for the first five years and 4.5% per year for the next five years for each year the member is younger than age 55 or has less than 20 years service, whichever is smaller.



Hazardous Early Retirement (continued):

Members whose participation began on or after 9/1/2008

Requirement

Age 50 with 15 years of service or any age with 25 years service.

Amount

Normal retirement benefit reduced by 6.5% per year for the first five years and 4.5% per year for the next five years for each year the member is younger than age 60 or has less than 25 years service, whichever is smaller.

Non-Hazardous Disability:

Age Requirement

None

Service Requirement

60 months

Members whose participation began before 8/1/2004

Normal retirement benefit except that service credit will be added to total service for the period from the last day of plan employment to the member's 65th birthday or until the combined total service as of the last day of paid employment and added service equals 25 years. The total amount of service credit added shall not exceed the member's actual service credit on the last day of paid employment. For members with at least 25 years of service but less than 27 years of service, total service shall be 27 years. For employees with 27 or more years of service credit, actual service will be used.

A contributing member in a non-hazardous position who is disabled in the line of duty is entitled to a retirement benefit of not less than 25% of the member's final monthly rate of pay plus 10% of the member's final monthly rate of pay for each dependent child. The maximum dependent child's benefit is 40% of the member's final monthly rate of pay.

Members whose participation began on or after 8/1/2004

Normal retirement benefit based on actual service with no penalty or, if larger, 20% of the Final Rate of Pay. May apply for disability even after normal retirement age.

Hazardous Disability:

Age Requirement

None

Service Requirement

60 months (waived if in line of duty disability)

Members whose participation began before 8/1/2004

Normal retirement benefit except if the member's total service credit is less than 20 years, service credit will be added for the period from the last day of paid employment to the member's 55th birthday.



Hazardous Disability (continued):

The maximum service credit added will not exceed the total service the member had on this last day of paid employment and the maximum service credit for calculating his retirement allowance, including total service and service added will not exceed 20 years. May not apply if eligible for an unreduced retirement allowance.

A member in a hazardous position who is disabled in the line of duty is entitled to the normal retirement benefit based on years of service and final compensation determined as of the date of disability (no penalty), except that the monthly retirement allowance payable shall not be less than 25% of the member's monthly final monthly rate of pay. Each dependent child shall receive 10% of the disabled member's monthly final rate of pay; however the total maximum dependent children's benefit shall not exceed 40% of the member's monthly final rate of pay.

Members whose participation began on or after 8/1/2004

Normal retirement benefit based on years of service and final compensation determined as of the date of disability (no penalty) or, if larger, 25% of the member's monthly final rate of pay. May apply for disability even after normal retirement age.

Vesting:

Members whose participation began before 9/1/2008

Age Requirement

None

Service Requirement

60 months. Service purchased after August 1, 2004 does not count toward vesting insurance benefits. Service purchased by employees who began participating on or after August 1, 2004 does not count toward vesting retirement benefits.

Amount

Normal retirement benefit deferred to normal retirement age or reduced benefit payable at early retirement age.

Normal Retirement Age

65 for non-hazardous members and 55 for hazardous members.

Members whose participation began on or after 9/1/2008

Age Requirement

None

Service Requirement

60 months. Service purchased after August 1, 2004 does not count toward vesting insurance benefits.



Vesting (continued):

	Service purchased by employees who began participating on or after August 1, 2004 does not count toward vesting retirement benefits.
<i>Amount</i>	Normal retirement benefit deferred to normal retirement age or reduced benefit payable at early retirement age.
<i>Normal Retirement Age</i>	65 for non-hazardous members and 60 for hazardous members.

Pre-Retirement Death Benefit (not in line of duty):

<i>Requirement</i>	Eligible for Normal or Early Retirement, or any age with 60 months service.
<i>Amount</i>	Benefit equal to the benefit the member would have received had the member retired on the day before the date of death and elected a 100% joint and survivor form. Benefit is actuarially reduced if member is less than normal retirement age at the date of death.

Spouse's Pre-Retirement Death Benefit (in line of duty):

<i>Requirement</i>	None
<i>Amount</i>	The spouse may choose (1) a \$10,000 lump sum payment and monthly payments of 25% of the member's final monthly rate of pay or (2) benefit options offered under death not in line of duty.

Dependent Non-Spouse's Death Benefit (in line of duty) – Hazardous Plan:

<i>Requirement</i>	None
<i>Amount</i>	The non-spouse may choose (1) a \$10,000 lump sum payment or (2) benefit options offered under death not in line of duty.

Dependent Child's Death Benefit (in line of duty):

<i>Requirement</i>	None
<i>Amount</i>	10% of member's final monthly rate of pay. Dependent child payments cannot exceed 40% of the member's monthly final rate of pay.

Post-Retirement Death Benefit:

<i>Requirement</i>	Retired member in receipt of monthly benefit based on at least 48 months or more of combined service with KERS, CERS or SPRS.
<i>Amount</i>	\$5,000



Non-Hazardous Member Contributions:

Members whose participation began before 9/1/2008

5% of all creditable compensation. Interest paid on the members' accounts will be set at 2.0%. Member entitled to a full refund of contributions with interest.

Members whose participation began on or after 9/1/2008

6% of all creditable compensation, with 5% being credited to the member's account and 1% deposited to the KRS 401(h) Account. Interest paid on the members' accounts will be set at 2.5%. Member entitled to a full refund of contributions and interest in their individual account, however, the 1% contributed to the insurance fund is non-refundable.

Hazardous Member Contributions:

Members whose participation began before 9/1/2008

8% of all creditable compensation. Interest paid on the members' accounts will be set at 2.0%. Member entitled to a full refund of contributions with interest.

Members whose participation began on or after 9/1/2008

9% of all creditable compensation, with 8% being credited to the member's account and 1% deposited to the KRS 401(h) Account. Interest paid on the members' accounts will be set at 2.5%. Member entitled to a full refund of contributions and interest in their individual account, however, the 1% contributed to the insurance fund is non-refundable.



Non-Hazardous Insurance Plan for Retirees:

Members whose participation began before 7/1/2003

Requirement

In receipt of a monthly retirement allowance.

Amount

The Retirement System pays a portion of lifetime medical premiums for retirees based on the retired member's years of service credit. The percentage of the monthly contribution rate paid is show in the following table.

Service Credit	Percentage Paid*
0 – 3 years	0%
4 – 9 years	25%
10 – 14 years	50%
15 – 19 years	75%
20 or more years	100%

**100% of the monthly contribution is paid towards the health insurance for a retired member who is totally disabled from any employment as a result of a duty-related injury regardless of actual service. 100% of the monthly contribution is paid toward health insurance for the spouse and dependent children of a member who dies as a result of a duty related injury, regardless of the deceased member's service. The insurance benefit will be provided as long as the spouse and dependent children are eligible for a monthly retirement benefit.*

Members whose participation began on or after 7/1/2003, but before 9/1/2008

Requirement

Monthly retirement allowance with at least 120 months of service at retirement.

Amount

The Retirement System pays \$12.69 per month for each year of earned service for retirees. This amount is shown as of the valuation date and is indexed annually based on the CPI prior to July 1, 2008 and by 1.5% thereafter.

Members whose participation began on or after 9/1/2008

Requirement

Monthly retirement allowance with at least 180 months of service at retirement.

Amount

The Retirement System pays \$10 per month for each year of earned service for retirees. This amount will be increased annually by 1.5%.



Hazardous Insurance Plan for Retirees:

Members whose participation began before 7/1/2003

Requirement

In receipt of a monthly retirement allowance.

Amount

The Retirement System pays a portion of lifetime medical premiums for retirees, their spouse and their dependents based on the retired member's years of service credit. The percentage of the monthly contribution rate paid is show in the following table.

Service Credit	Percentage Paid*
0 – 3 years	0%
4 – 9 years	25%
10 – 14 years	50%
15 – 19 years	75%
20 or more years	100%

**100% of the monthly contribution is paid towards the health insurance for a member, member's spouse and dependents if the member is disabled in the line of duty as a result of a duty-related injury, regardless of actual service. 100% of the monthly contribution is paid toward health insurance for the spouse and dependent children of a member who dies in the line of duty regardless of the deceased member's service. The insurance benefit will be provided as long as the spouse and dependent children are eligible for a monthly retirement benefit.*

Members whose participation began on or after 7/1/2003, but before 9/1/2008

Requirement

Monthly retirement allowance with at least 120 months of service at retirement.

Amount

The Retirement System pays \$19.04 per month for each year of earned service for retirees. Upon the retiree's death, the surviving spouse will receive \$12.69 per month for each year of earned. These amounts are shown as of the valuation date and are indexed annually based on the CPI prior to July 1, 2008 and by 1.5% thereafter.

Members whose participation began on or after 9/1/2008

Requirement

Monthly retirement allowance with at least 180 months of service at retirement.

Amount

The Retirement System pays \$15 per month for each year of earned service for retirees. Upon the retiree's death, the surviving spouse will receive \$10 per month for each year of earned. These amounts will be increased annually by 1.5%.



SCHEDULE E

DETAILED TABULATIONS OF THE DATA

**Schedule of Non-Hazardous Retired Members Added to and Removed From Rolls
Last Six Fiscal Years**

Year Ending June 30	2007	2008	2009	2010	2011	2012
			<u>Number</u>			
Beginning of Year	33,102	35,564	37,579	39,756	41,038	43,211
Added	3,244	3,366	3,060	2,565	3,250	3,300
Removed	782	1,351	883	1,283	1,077	1,207
End of Year	35,564	37,579	39,756	41,038	43,211	45,304
			<u>Annual Allowances</u>			
Beginning of Year	\$ 308,269,651	\$ 348,712,020	\$ 393,757,510	\$ 440,061,418	\$ 452,613,550	\$ 483,594,068
Added	\$ 44,888,509	\$ 56,376,123	51,679,136	21,063,111	38,861,094	41,160,717
Removed	4,446,140	11,330,633	5,375,228	8,510,979	7,880,576	9,746,424
End of Year	\$ 348,712,020	\$ 393,757,510	\$ 440,061,418	\$ 452,613,550	\$ 483,594,068	\$ 515,008,362
% Increase in Allowances	13.12%	12.92%	11.76%	2.85%	6.84%	6.50%
Average Annual Allowance	\$ 9,805	\$ 10,478	\$ 11,069	\$ 11,029	\$ 11,191	\$ 11,368



**Schedule of Hazardous Retired Members Added to and Removed From Rolls
Last Six Fiscal Years**

Year Ending June 30	2007	2008	2009	2010	2011	2012
	<u>Number</u>					
Beginning of Year	4,712	5,159	5,422	5,808	6,068	6,468
Added	500	469	650	423	502	483
Removed	53	206	264	163	102	73
End of Year	5,159	5,422	5,808	6,068	6,468	6,878
	<u>Annual Allowances</u>					
Beginning of Year	\$ 100,290,052	\$ 113,735,850	\$ 127,477,109	\$ 139,886,751	\$ 146,916,812	\$ 160,259,395
Added	14,207,939	\$ 16,794,618	13,030,426	8,566,698	14,640,991	14,149,084
Removed	762,141	3,053,359	620,784	1,536,637	1,298,408	1,186,996
End of Year	\$ 113,735,850	\$ 127,477,109	\$ 139,886,751	\$ 146,916,812	\$ 160,259,395	\$ 173,221,483
% Increase in Allowances	13.41%	12.08%	9.73%	5.03%	9.08%	8.09%
Average Annual Allowance	\$ 22,046	\$ 23,511	\$ 24,085	\$ 24,212	\$ 24,777	\$ 25,185



Non-Hazardous Retired Lives Summary June 30, 2012

	Male Lives		Female Lives		Total	
	Number	Monthly Benefits	Number	Monthly Benefits	Number	Monthly Benefits
Basic Form	4,006	\$ 4,038,200.01	13,880	\$ 9,878,492.50	17,886	\$ 13,916,692.51
Straight Life (Old Plan)	0	0.00	0	0.00	0	0.00
Joint & Survivor						
100% to Beneficiary	2,238	2,520,794.47	1,068	669,550.91	3,306	3,190,345.38
66-2/3% to Beneficiary	641	1,169,259.25	409	458,636.63	1,050	1,627,895.88
50% to Beneficiary	945	1,475,896.65	1,133	1,309,647.71	2,078	2,785,544.36
Pop-up Option	3,394	5,346,685.59	2,742	2,913,436.45	6,136	8,260,122.04
10 Years Certain	0	0.00	0	0.00	0	0.00
10 Years Certain & Life	1,211	1,191,199.84	2,722	2,011,403.83	3,933	3,202,603.67
Social Security Option						
Age 62 Basic	235	546,549.56	491	605,238.76	726	1,151,788.32
Age 62 Survivorship	565	1,305,066.00	303	424,510.19	868	1,729,576.19
Partial Deferred (Old Plan)	0	0.00	0	0.00	0	0.00
Widows Age 60	0	0.00	0	0.00	0	0.00
Dependent Child	0	0.00	0	0.00	0	0.00
Refund	0	0.00	0	0.00	0	0.00
15 Years Certain & Life	551	532,710.37	629	480,636.31	1,180	1,013,346.68
20 Years Certain & Life	399	547,426.97	564	456,394.73	963	1,003,821.70
5 Years Certain	0	0.00	0	0.00	0	0.00
PLSO 12 Month Basic	118	132,355.09	403	338,160.01	521	470,515.10
PLSO 24 Month Basic	70	47,356.84	263	205,001.26	333	252,358.10
PLSO 36 Month Basic	297	143,032.43	753	351,964.75	1,050	494,997.18
PLSO 12 Month Survivor	166	205,608.84	99	98,501.60	265	304,110.44
PLSO 24 Month Survivor	106	110,243.01	72	49,106.25	178	159,349.26
PLSO 36 Month Survivor	452	282,147.25	294	133,728.32	746	415,875.57
Total	15,394	\$ 19,594,532.17	25,825	\$ 20,384,410.21	41,219	\$ 39,978,942.38



Hazardous Retired Lives Summary June 30, 2012

	Male Lives		Female Lives		Total	
	Number	Monthly Benefits	Number	Monthly Benefits	Number	Monthly Benefits
Basic Form	781	\$ 1,537,594.12	245	\$ 386,363.70	1,026	\$ 1,923,957.82
Straight Life (Old Plan)	0	0.00	0	0.00	0	0.00
Joint & Survivor						
100% to Beneficiary	599	1,190,410.78	26	29,578.49	625	1,219,989.27
66-2/3% to Beneficiary	234	603,416.71	5	14,524.60	239	617,941.31
50% to Beneficiary	387	901,205.05	25	45,689.90	412	946,894.95
Pop-up Option	2,377	6,027,205.23	95	188,026.94	2,472	6,215,232.17
10 Years Certain	40	58,156.01	3	3,890.00	43	62,046.01
10 Years Certain & Life	184	375,757.52	45	83,017.00	229	458,774.52
Social Security Option						
Age 62 Basic	97	221,485.79	11	24,135.78	108	245,621.57
Age 62 Survivorship	296	644,442.83	12	29,084.71	308	673,527.54
Partial Deferred (Old Plan)	0	0.00	0	0.00	0	0.00
Widows Age 60	0	0.00	0	0.00	0	0.00
Dependent Child	0	0.00	0	0.00	0	0.00
Refund	0	0.00	0	0.00	0	0.00
15 Years Certain & Life	70	122,223.25	10	10,982.37	80	133,205.62
20 Years Certain & Life	123	238,143.57	19	29,821.03	142	267,964.60
5 Years Certain	0	0.00	0	0.00	0	0.00
PLSO 12 Month Basic	27	50,875.63	10	12,355.51	37	63,231.14
PLSO 24 Month Basic	23	49,456.43	6	6,336.10	29	55,792.53
PLSO 36 Month Basic	57	88,795.33	22	24,358.25	79	113,153.58
PLSO 12 Month Survivor	62	150,216.84	4	8,080.23	66	158,297.07
PLSO 24 Month Survivor	69	116,125.68	3	2,816.43	72	118,942.11
PLSO 36 Month Survivor	151	225,538.65	7	6,751.85	158	232,290.50
Total	5,577	\$ 12,601,049.42	548	\$ 905,812.89	6,125	\$ 13,506,862.31



Non-Hazardous Beneficiary Lives Summary June 30, 2012

	Male Lives		Female Lives		Total	
	Number	Monthly Benefits	Number	Monthly Benefits	Number	Monthly Benefits
Basic Form	10	\$ 2,876.11	18	\$ 9,430.54	28	\$ 12,306.65
Straight Life (Old Plan)	0	0.00	0	0.00	0	0.00
Joint & Survivor						
100% to Beneficiary	330	166,394.00	1,433	924,808.75	1,763	1,091,202.75
66-2/3% to Beneficiary	0	0.00	3	3,468.30	3	3,468.30
50% to Beneficiary	96	35,994.46	319	172,463.39	415	208,457.85
Pop-up Option	125	89,213.79	475	440,689.18	600	529,902.97
10 Years Certain	85	69,188.72	146	115,635.22	231	184,823.94
10 Years Certain & Life	38	17,396.04	197	141,242.49	235	158,638.53
Social Security Option						
Age 62 Basic	0	0.00	0	0.00	0	0.00
Age 62 Survivorship	21	21,438.56	118	195,066.23	139	216,504.79
Partial Deferred (Old Plan)	0	0.00	0	0.00	0	0.00
Widows Age 60	0	0.00	1	206.92	1	206.92
Dependent Child	50	39,136.24	47	40,950.89	97	80,087.13
Refund	2	1,312.92	6	3,414.32	8	4,727.24
15 Years Certain & Life	29	26,116.63	71	68,532.05	100	94,648.68
20 Years Certain & Life	41	31,038.87	63	61,802.36	104	92,841.23
5 Years Certain	107	84,669.54	86	65,831.64	193	150,501.18
PLSO 12 Month Basic	0	0.00	1	395.49	1	395.49
PLSO 24 Month Basic	1	152.38	0	0.00	1	152.38
PLSO 36 Month Basic	1	149.07	3	581.68	4	730.75
PLSO 12 Month Survivor	6	2,292.40	27	33,608.55	33	35,900.95
PLSO 24 Month Survivor	4	5,010.62	17	14,342.54	21	19,353.16
PLSO 36 Month Survivor	31	16,878.60	77	36,691.62	108	53,570.22
Total	977	\$ 609,258.95	3,108	\$ 2,329,162.16	4,085	\$ 2,938,421.11



Hazardous Beneficiary Lives Summary June 30, 2012

	Male Lives		Female Lives		Total	
	Number	Monthly Benefits	Number	Monthly Benefits	Number	Monthly Benefits
Basic Form	21	\$ 30,975.73	23	\$ 26,712.56	44	\$ 57,688.29
Straight Life (Old Plan)	0	0.00	0	0.00	0	0.00
Joint & Survivor						
100% to Beneficiary	18	7,115.52	178	228,126.60	196	235,242.12
66-2/3% to Beneficiary	3	931.36	41	57,720.02	44	58,651.38
50% to Beneficiary	6	3,689.17	52	46,525.47	58	50,214.64
Pop-up Option	31	18,872.90	169	255,952.80	200	274,825.70
10 Years Certain	10	13,594.01	16	17,090.35	26	30,684.36
10 Years Certain & Life	5	2,005.64	1	91.02	6	2,096.66
Social Security Option						
Age 62 Basic	0	0.00	2	509.75	2	509.75
Age 62 Survivorship	82	142,906.97	1	2,890.36	83	145,797.33
Partial Deferred (Old Plan)	0	0.00	0	0.00	0	0.00
Widows Age 60	0	0.00	3	3,287.07	3	3,287.07
Dependent Child	0	0.00	0	0.00	0	0.00
Refund	3	807.23	13	7,170.11	16	7,977.34
15 Years Certain & Life	4	1,338.98	3	1,406.94	7	2,745.92
20 Years Certain & Life	4	1,520.19	14	15,135.14	18	16,655.33
5 Years Certain	1	1,457.54	2	3,455.62	3	4,913.16
PLSO 12 Month Basic	0	0.00	1	2,192.42	1	2,192.42
PLSO 24 Month Basic	0	0.00	1	1,466.49	1	1,466.49
PLSO 36 Month Basic	2	561.73	4	1,858.06	6	2,419.79
PLSO 12 Month Survivor	1	415.46	4	2,840.54	5	3,256.00
PLSO 24 Month Survivor	2	1,661.84	8	6,388.67	10	8,050.51
PLSO 36 Month Survivor	4	1,553.48	20	18,033.48	24	19,586.96
Total	197	\$ 229,407.75	556	\$ 698,853.47	753	\$ 928,261.22



Non-Hazardous Members

Retired and Beneficiary Information June 30, 2012
Tabulated by Attained Ages

Attained Age	Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 45	53	\$ 1,195,242	64	\$ 914,747	325	\$ 2,518,454	442	\$ 4,628,444
45-49	413	\$ 9,854,681	126	\$ 2,283,382	131	\$ 1,063,351	670	\$ 13,201,414
50-54	1,550	\$ 38,582,397	309	\$ 4,665,835	245	\$ 2,486,600	2,104	\$ 45,734,832
55-59	3,965	\$ 71,589,308	555	\$ 7,848,605	375	\$ 3,947,967	4,895	\$ 83,385,880
60-64	7,243	\$ 99,041,812	732	\$ 8,729,951	504	\$ 5,378,109	8,479	\$ 113,149,871
65-69	8,367	\$ 87,134,247	645	\$ 6,557,008	517	\$ 5,047,700	9,529	\$ 98,738,956
70-74	6,920	\$ 64,717,498	493	\$ 4,789,428	569	\$ 5,048,993	7,982	\$ 74,555,920
75-79	4,695	\$ 37,993,637	265	\$ 2,215,771	517	\$ 4,202,032	5,477	\$ 44,411,441
80-84	2,785	\$ 20,287,588	70	\$ 480,327	456	\$ 3,091,189	3,311	\$ 23,859,105
85-89	1,398	\$ 8,286,541	15	\$ 69,843	290	\$ 1,752,465	1,703	\$ 10,108,849
90 & Over	546	\$ 2,471,002	10	\$ 38,457	156	\$ 724,192	712	\$ 3,233,651
Totals	37,935	\$ 441,153,955	3,284	\$ 38,593,354	4,085	\$ 35,261,053	45,304	\$ 515,008,362



Hazardous Members

Retired and Beneficiary Information June 30, 2012
Tabulated by Attained Ages

Attained Age	Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 45	113	\$ 3,471,983	73	\$ 1,187,754	185	\$ 1,457,435	371	\$ 6,117,172
45-49	611	\$ 19,845,178	64	\$ 1,217,164	32	\$ 476,834	707	\$ 21,539,175
50-54	788	\$ 24,396,517	87	\$ 1,464,468	58	\$ 1,019,247	933	\$ 26,880,232
55-59	1,114	\$ 32,764,353	103	\$ 1,534,972	85	\$ 1,274,711	1,302	\$ 35,574,036
60-64	1,276	\$ 35,378,383	73	\$ 1,138,243	82	\$ 1,729,678	1,431	\$ 38,246,304
65-69	899	\$ 20,421,541	33	\$ 547,349	114	\$ 1,983,466	1,046	\$ 22,952,356
70-74	522	\$ 11,023,469	8	\$ 95,078	83	\$ 1,541,212	613	\$ 12,659,759
75-79	238	\$ 5,011,122	10	\$ 132,738	60	\$ 916,853	308	\$ 6,060,713
80-84	85	\$ 1,931,236	0	\$ -	43	\$ 620,632	128	\$ 2,551,867
85-89	25	\$ 499,454	1	\$ 19,920	10	\$ 98,889	36	\$ 618,262
90 & Over	2	\$ 1,426			1	\$ 20,179	3	\$ 21,605
Totals	5,673	\$ 154,744,663	452	\$ 7,337,685	753	\$ 11,139,135	6,878	\$ 173,221,482



**Total Non-Hazardous Active Members as of June 30, 2012
Tabulated by Attained Ages and Years of Service**

Attained Age	Years of Service to Valuation Date								Totals
	0-4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 26	27 - 29	30+	
Under 20	102	2		1					105
Avg Pay	\$10,466	\$53,933		\$11,385					\$11,303
20-24	2,003	26							2,029
Avg Pay	\$17,507	\$26,743							\$17,625
25-29	3,637	799	20						4,456
Avg Pay	\$22,110	\$29,140	\$35,450						\$23,431
30-34	3,781	1,775	661	20					6,237
Avg Pay	\$22,119	\$30,849	\$35,299	\$39,116					\$26,055
35-39	3,948	2,241	1,519	398	16	1			8,123
Avg Pay	\$21,122	\$28,356	\$36,142	\$40,810	\$45,711	\$24,000			\$26,940
40-44	4,187	3,060	2,210	1,073	283	30	16	1	10,860
Avg Pay	\$21,377	\$26,215	\$32,145	\$39,758	\$45,532	\$59,822	\$58,769	\$44,585	\$27,540
44-49	3,610	3,078	3,180	1,535	818	190	116	26	12,553
Avg Pay	\$21,218	\$26,194	\$28,361	\$33,805	\$43,425	\$49,804	\$53,849	\$56,706	\$28,042
50-54	3,087	3,041	3,306	2,349	1,244	268	187	127	13,609
Avg Pay	\$21,295	\$25,842	\$28,026	\$30,075	\$37,451	\$44,811	\$51,379	\$60,629	\$28,182
55-59	2,785	2,444	2,638	2,371	1,416	331	200	165	12,350
Avg Pay	\$21,399	\$27,318	\$28,427	\$29,164	\$34,203	\$41,228	\$49,054	\$53,886	\$28,444
60-64	1,778	1,787	1,568	1,404	1,020	208	134	117	8,016
Avg Pay	\$19,468	\$25,390	\$29,131	\$29,883	\$32,343	\$39,635	\$37,983	\$49,176	\$27,407
65-69	752	822	679	423	255	79	42	64	3,116
Avg Pay	\$16,361	\$22,127	\$25,688	\$26,898	\$32,169	\$33,487	\$36,939	\$47,121	\$23,982
70 & over	360	461	360	199	133	28	21	36	1,598
Avg Pay	\$14,053	\$19,769	\$22,499	\$22,661	\$26,525	\$36,683	\$27,533	\$44,776	\$20,981
Totals	30,030	19,536	16,141	9,773	5,185	1,135	716	536	83,052
Avg Pay	\$20,879	\$26,682	\$29,678	\$31,640	\$36,428	\$43,043	\$47,241	\$53,155	\$26,929



**Total Hazardous Active Members as of June 30, 2012
Tabulated by Attained Ages and Years of Service**

Attained Age	Years of Service to Valuation Date								Totals
	0-4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 26	27 - 29	30+	
Under 20	1								1
Avg Pay	\$36,516								\$36,516
20-24	239	2							241
Avg Pay	\$34,919	\$35,627							\$34,925
25-29	883	296	1						1,180
Avg Pay	\$40,719	\$46,236	\$63,850						\$42,122
30-34	498	788	258	5					1,549
Avg Pay	\$41,150	\$48,543	\$53,990	\$53,179					\$47,088
35-39	288	549	772	201	3				1,813
Avg Pay	\$40,075	\$47,640	\$56,450	\$58,713	\$67,190				\$51,450
40-44	175	333	625	629	149	20	2		1,933
Avg Pay	\$40,029	\$47,234	\$53,791	\$61,299	\$66,445	\$68,661	\$81,181		\$55,016
44-49	102	180	266	311	275	36	35		1,205
Avg Pay	\$41,968	\$47,910	\$53,309	\$58,633	\$64,596	\$69,774	\$79,757		\$56,753
50-54	56	107	132	146	133	36	27	12	649
Avg Pay	\$38,866	\$46,376	\$49,559	\$55,022	\$64,799	\$73,089	\$76,387	\$83,110	\$55,505
55-59	36	81	78	75	54	11	15	20	370
Avg Pay	\$38,032	\$45,734	\$50,229	\$55,816	\$61,646	\$67,620	\$64,342	\$77,617	\$53,426
60-64	9	48	38	22	20	3	1	4	145
Avg Pay	\$41,890	\$40,811	\$46,401	\$55,121	\$62,203	\$57,534	\$63,892	\$101,005	\$49,630
65-69	2	8	9	5			1		25
Avg Pay	\$33,231	\$38,400	\$58,439	\$50,974			\$77,999		\$49,299
70 & over		8	6	1	1		2	1	19
Avg Pay		\$25,872	\$58,600	\$44,405	\$9,788		\$86,552	\$113,340	\$47,327
Totals	2,289	2,400	2,185	1,395	635	106	83	37	9,130
Avg Pay	\$40,038	\$47,357	\$54,221	\$59,205	\$64,672	\$70,120	\$75,860	\$82,892	\$50,847



**Report on the Annual Valuation of the
State Police Retirement System**

Prepared as of June 30, 2012

November 20, 2012

Board of Trustees
Kentucky Retirement Systems
Perimeter Park West
1260 Louisville Road
Frankfort, KY 40601

Dear Members of the Board:

Presented in this report are the results of the annual actuarial valuation of the retirement and insurance benefits provided under the State Police Retirement System (SPRS). The purpose of the valuation was to measure the System's funding progress and to determine the required employer contribution rates for the fiscal year beginning July 1, 2013. The date of the valuation was June 30, 2012.

The valuation was based upon data, furnished by the Executive Director and the Kentucky Retirement Systems (KRS) staff, concerning active, inactive and retired members along with pertinent financial information. The complete cooperation of the KRS staff in furnishing materials requested is hereby acknowledged with appreciation.

Your attention is directed particularly to the summary of results on page 1 and the comments on page 5.

To the best of our knowledge, this report is complete and accurate. The valuation was performed by, and under the supervision of, independent actuaries who are members of the American Academy of Actuaries with experience in performing valuations for public retirement systems. The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The valuation was prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board.

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.

The actuarial calculations were performed by qualified actuaries according to generally accepted actuarial procedures and methods. The calculations are based on the current provisions of the system, and on actuarial assumptions that are, in the aggregate, internally consistent and reasonably based on the actual experience of the system.

Respectfully submitted,



Thomas J. Cavanaugh FSA, FCA, MAAA, EA
Chief Executive Officer



Todd B. Green ASA, FCA, MAAA
Principal and Consulting Actuary



Alisa Bennett, FSA, EA, FCA, MAAA
Principal and Consulting Actuary

TJC/TBG/AB:kc

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**REPORT ON THE ANNUAL VALUATION OF THE
STATE POLICE RETIREMENT SYSTEM**

PREPARED AS OF JUNE 30, 2012

SECTION I – SUMMARY OF PRINCIPAL RESULTS

1. This report, prepared as of June 30, 2012, presents the results of the annual actuarial valuation of the retirement and insurance benefits provided under the System. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized in the following table.

SUMMARY OF PRINCIPAL RESULTS

	6/30/2012	6/30/2011
Contributions for next fiscal year:		
Retirement	53.35%	47.48%
Insurance	<u>43.17</u>	<u>55.93</u>
Total	96.52%	103.41%
Funded status as of valuation date:		
Retirement		
Actuarial accrued liability	\$647,688,665	\$634,379,401
Actuarial value of assets	259,791,575	285,580,631
Unfunded liability on actuarial value of assets	387,897,090	348,798,770
Funded ratio on actuarial value of assets	40.11%	45.02%
Market value of assets	\$252,896,868	\$279,934,443
Unfunded liability on market value of assets	394,791,797	354,444,958
Funded ratio on market value of assets	39.05%	44.13%
Insurance		
Actuarial accrued liability	\$333,903,782	\$438,427,763
Actuarial value of assets	124,372,072	123,687,289
Unfunded liability on actuarial value of assets	209,531,710	314,740,474
Funded ratio on actuarial value of assets	37.25%	28.21%
Market value of assets	\$125,567,846	\$127,367,947
Unfunded liability on market value of assets	208,335,936	311,059,816
Funded ratio on market value of assets	37.61%	29.05%
Demographic data as of valuation date:		
Number of retired participants and beneficiaries	1,299	1,263
Number of vested former members	58	52
Number of former members due a refund	322	305
Number of active members	907	965
Total salary	\$48,372,506	\$48,692,616
Average salary	\$53,332	\$50,459

2. The valuation balance sheets showing the results of the valuation are given in Schedule A.
3. Comments on the valuation results are given in Section IV, comments on the experience and actuarial gains and losses during the valuation year are given in Section V, and the rates of contribution payable by employers are given in Section VI.
4. There were no changes in benefit provisions since the last valuation. However, the plan administrator - Kentucky Retirement Systems Board of Trustees - has changed the Health Insurance plans that cover Medicare eligible retirees and the plan designs have changed for the Health Insurance plans that cover non-Medicare eligible retirees. The changes are summarized below.
 - The self-insured Medicare plans have been replaced by Medicare Advantage plans administered by Humana for Plan Year 2013.
 - Plan design changes have also been implemented for Plan Year 2013 for the Kentucky Employees' Health Plan (KEHP), the self-insured plan for active employees and non-Medicare eligible retirees administered by the Commonwealth of Kentucky.
5. Schedule B of this report presents the development of the actuarial value of assets. Schedule C details the actuarial assumptions and methods employed. Schedule D gives a summary of the benefit and contribution provisions of the plan.
6. The investment rate of return for developing insurance liabilities and contribution rates shown in this report for June 30, 2011 and June 30, 2012 is 4.50%. The lower rate for insurance benefits is required under the parameters set by the Governmental Accounting Standards Board Statements 43 and 45 given the lack of pre-funding of insurance benefits.

SECTION II – MEMBERSHIP DATA

Data regarding the membership of the System for use as a basis for the valuation were furnished by the System’s office. The following tables summarize the membership of the system as of June 30, 2012 upon which the valuation was based. Detailed tabulations of the data are given in Schedule E.

Active Members

Number	Payroll	Group Averages		
		Salary	Age	Service
907	\$48,372,506	\$53,332	37.3	10.4

The following table shows a six-year history of active member valuation data.

SCHEDULE OF SPRS ACTIVE MEMBER VALUATION DATA

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
6/30/2007	957	\$49,247,580	\$51,460	10.8%
6/30/2008	993	53,269,080	53,645	4.2
6/30/2009	946	51,660,396	54,609	1.8
6/30/2010	961	51,506,712	53,597	(1.9)
6/30/2011	965	48,692,616	50,459	(5.9)
6/30/2012	907	48,372,506	53,332	5.7

The following table shows the number and annual retirement allowances payable to retired members and their beneficiaries on the roll of the Retirement System as of the valuation date as well as certain group averages.

Retired Lives

Type of Benefit Payment	Number	Annual Benefits	Group Averages	
			Benefit	Age
Retiree	1,100	\$44,869,614	\$40,791	61.6
Disability	46	\$838,716	18,233	56.3
Beneficiary	153	4,178,763	27,312	64.6
Total in SPRS	1,299	\$49,887,093	\$38,404	61.8

This valuation also includes 380 inactive members of which 58 are vested.

SECTION III - ASSETS

1. As of June 30, 2012 the total market value of assets amounted to \$378,464,714 as shown in the following table. The Insurance assets include both the amount in the health care trust and the amount in the 401(h) account in the pension trust established to meet the requirements of HB1.

Retirement	Insurance	SPRS Total
\$252,896,868	\$125,567,846	\$378,464,714

2. The five-year smoothed market related actuarial value of assets used for the current valuation was \$384,163,647. Schedule B shows the development of the actuarial value of assets as of June 30, 2012. The following table shows the actuarial value of assets.

COMPARISON OF ACTUARIAL VALUE OF ASSETS

	JUNE 30, 2012	JUNE 30, 2011
Retirement	\$ 259,791,575	\$ 285,580,631
Insurance	<u>124,372,072</u>	<u>123,687,289</u>
Total	\$ 384,163,647	\$ 409,267,920

SECTION IV - COMMENTS ON VALUATION

Schedule A of this report contains the valuation balance sheets which show the present and prospective assets and liabilities of the System as of June 30, 2012. Separate balance sheets are shown for Retirement and Insurance.

Retirement

1. The total valuation balance sheet on account of retirement benefits shows that the System has total prospective retirement benefit liabilities of \$717,995,652, of which \$520,280,073 is for the prospective benefits payable on account of present retired members and beneficiaries of deceased members, \$2,736,573 is for the prospective benefits payable on account of inactive members, \$194,979,006 is for the prospective benefits payable on account of present active members. Against these retirement benefit liabilities the System has a total present actuarial value of assets of \$259,791,575 as of June 30, 2012. The difference of \$458,204,077 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of retirement benefits. Of this amount, \$35,600,938 is the present value of future contributions expected to be made by members, and the balance of \$422,603,139 represents the present value of future contributions payable by the State.
2. The State's contributions to the System on account of retirement benefits consist of normal contributions, accrued liability contributions and contributions for administrative expenses. The valuation indicates that employer normal contributions at the rate of 7.98% of payroll are required to fund the continuing benefit accruals for the average active member of SPRS.
3. Prospective employer normal contributions on account of retirement benefits at the above rates have a present value of \$34,706,049. When this amount is subtracted from \$422,603,139, which is the present value of the total future contributions to be made by the State, there remains \$387,897,090 as the amount of future accrued liability contributions.
4. It is recommended that the accrued liability contribution rate payable by the State on account of retirement benefits be set at 45.21% of payroll. This rate is sufficient to liquidate the unfunded accrued liability of \$387,897,090 over 25 years on the assumption that the aggregate payroll for members will increase by 4.50% each year.
5. The contribution rate for administrative expenses is determined to be 0.16% of payroll.

Insurance

1. The total valuation balance sheet on account of insurance benefits shows that the System has total prospective insurance benefit liabilities of \$451,199,400, of which \$186,024,449 is for the prospective benefits payable on account of present retired members and beneficiaries of deceased members, \$4,234,280 is for the prospective benefits payable on account of inactive members, and \$260,940,671 is for the prospective benefits payable on account of present active members. Against these insurance benefit liabilities the System has a total present actuarial value of assets of \$124,372,072 as of June 30, 2012. The difference of \$326,827,328 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of insurance benefits. Of this amount, \$1,075,267 is the present value of future contributions expected to be made by members, and the balance of \$325,752,061 represents the present value of future contributions payable by the State.
2. The State's contributions to the System on account of insurance benefits consist of normal contributions and accrued liability contributions. The valuation indicates that employer normal contributions at the rate of 25.42% of payroll are required to fund the continuing benefit accruals for the average active member of SPRS.
3. Prospective employer normal contributions on account of insurance benefits at the above rates have a present value of \$116,220,351. When this amount is subtracted from \$325,752,061, which is the present value of the total future contributions to be made by the employers, there remains \$209,531,710 as the amount of future accrued liability contributions.
4. It is recommended that the accrued liability contribution rate payable by the State on account of insurance benefits be set at 17.33% of payroll. This rate is sufficient to liquidate the unfunded accrued liability of \$209,531,710 over 25 years on the assumption that the aggregate payroll for members will increase by 4.50% each year.
5. The contribution rate for administrative expenses is determined to be 0.42% 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, 2012 is shown below (\$ millions).

**Experience Gain/(Loss)
Retirement Benefits**

		Amount	
(1)	UAAL* as of 6/30/11	\$	348.8
(2)	Normal cost from last valuation		4.0
(3)	Employer contributions		15.4
(4)	Interest accrual: [(1) + (2)] x .0775 - (3) x .03875		26.7
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	\$	364.1
(6)	Change due to plan amendments		0.0
(7)	Change due to new actuarial assumption or methods		0.0
(8)	Expected UAAL after changes: (5) + (6) + (7)	\$	364.1
(9)	Actual UAAL as of 6/30/12	\$	387.9
(10)	Gain/(loss): (8) - (9)	\$	(23.8)
(11)	Accrued liabilities as of 6/30/11	\$	634.4
(12)	Gain/(loss) as percent of actuarial accrued liabilities at start of year		(3.8)%

**Unfunded actuarial accrued liability*

**Experience Gain/(Loss)
Insurance Benefits**

		Amount
(1)	UAAL* as of 6/30/11	\$ 314.7
(2)	Normal cost from last valuation	14.9
(3)	Expected employer contributions	<u>27.0</u>
(4)	Interest accrual: [(1) + (2) - (3)] x .045	13.6
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	\$ 316.2
(6)	Change due to plan change to MA-PD	(102.7)
(7)	Change due to new actuarial assumption or methods	0.0
(8)	Expected UAAL after changes: (5) + (6) + (7)	\$ 213.5
(9)	Actual UAAL as of 6/30/12	\$ 209.5
(10)	Gain/(loss): (8) - (9)	\$ 4.0
(11)	Accrued liabilities as of 6/30/11	\$ 438.4
(12)	Gain/(loss) as percent of actuarial accrued liabilities at start of year	0.9%

* *Unfunded actuarial accrued liability*

**SPRS MEMBERS
ANALYSIS OF FINANCIAL EXPERIENCE**

**Gains & Losses in Accrued Liabilities
Resulting from Difference Between
Assumed Experience & Actual Experience
(\$ Millions)**

Type of Activity	Retirement \$ Gain (or Loss) For Year Ending 6/30/12	Insurance \$ Gain (or Loss) For Year Ending 6/30/12
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	\$ 2.9	\$ 8.0
Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss.	(0.3)	(0.6)
Death-in Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	0.0	0.0
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	1.9	4.2
Pay or Claims Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss. For insurance, smaller claims increases than assumed creates a gain; larger, a loss.	(1.8)	14.2
New Members. Additional unfunded accrued liability will produce a loss.	0.0	0.0
Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(19.1)	(6.4)
Death After Retirement. If retired members live longer than assumed, there is a loss. If not as long, a gain.	0.5	2.4
Other. Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>(7.9)</u>	<u>(17.8)</u>
Gain (or Loss) During Year From Financial Experience	\$ (23.8)	\$ 4.0
Non-Recurring Items. Adjustments for plan amendments, assumption changes, method changes and data corrections	<u>0.0</u>	<u>102.7</u>
Composite Gain (or Loss) During Year	\$ (23.8)	\$ 106.7

SECTION VI – REQUIRED CONTRIBUTION RATES

The valuation balance sheet gives the basis for determining the percentage rates for contributions to be made by the State to the Retirement System. The following tables show the rates of contribution payable by employers as determined from the present valuation for the 2013/2014 fiscal year.

**Required Contribution Rates
Retirement**

Contribution for	Amount	% of Payroll
A. Normal Cost:		
(1) Service retirement benefits	\$ 7,315,734	15.12%
(2) Disability benefits	332,405	0.69
(3) Survivor benefits	82,784	0.17
(4) Total	\$ <u>7,730,923</u>	<u>15.98%</u>
B. Member Contributions	\$ 3,869,800	8.00%
C. Employer Normal Cost: [A(4) - B]	\$ 3,861,123	7.98%
D. Administrative Expenses	\$ 77,396	0.16%
E. Unfunded Actuarial Accrued Liability Contributions*:		
(1) UAAL Contribution Based on 6/30/11 Valuation:	\$ 19,039,418	39.36%
(2) Change due to:		
a. Active decrements	\$ (252,937)	(0.52)%
b. Pay increases	100,637	0.21
c. Retiree mortality	(27,990)	(0.06)
d. Investment return	1,077,664	2.23
e. COLA	486,674	1.01
f. Assumption Change	0	0.00
g. Other	1,446,507	2.98
h. Total Change	\$ <u>2,830,555</u>	<u>5.85%</u>
(3) UAAL Contribution Based on 6/30/12 Valuation: [E(1) +E(2)h]	\$ 21,869,973	45.21%
F. Total Recommended Employer Contribution Rate: [C+D+E(3)]	\$ 25,808,492	53.35%

* Based on 26 year amortization of the UAAL from June 30, 2011 and 25 years from June 30, 2012

**Required Contribution Rates
Insurance**

Contribution for	Amount	% of Payroll
A. Normal Cost	\$ 12,345,247	25.52%
B. Member Contributions*	\$ 48,373	0.10%
C. Employer Normal Cost: [A - B]	\$ 12,296,874	25.42%
D. Administrative Expenses	\$ 200,880	0.42%
E. Unfunded Actuarial Accrued Liability**	\$ 8,381,268	17.33%
F. Total Recommended Employer Contribution Rate: [C+D+E]	\$ 20,879,022	43.17%

**The liabilities are net of retiree contributions toward their healthcare.*

*** Based on 25 year amortization of the UAAL from June 30, 2012*

SECTION VII - ACCOUNTING INFORMATION

Governmental Accounting Standards Board Statements 25, 27, 43 and 45 set forth certain items of required supplementary information to be disclosed in the financial statements of the System and the employer. One such item is a distribution of the number of employees by type of membership, as follows:

**NUMBER OF ACTIVE AND RETIRED MEMBERS
AS OF JUNE 30, 2012**

GROUP	NUMBER
Retirees and beneficiaries currently receiving benefits	1,299
Terminated employees entitled to benefits but not yet receiving benefits	380
Active Members	<u>907</u>
Total	2,586

Another such item is the Schedule of Funding Progress for retirement and insurance benefits separately as shown in the following tables.

**RETIREMENT BENEFITS
SCHEDULE OF FUNDING PROGRESS**

Actuarial Valuation Date	Value of Plan Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / (c))
6/30/2007	\$ 348,806,508	\$ 547,955,286	\$ 199,148,778	63.7%	\$ 49,247,580	404.4%
6/30/2008	350,891,451	587,129,257	236,237,806	59.8	53,269,080	443.5
6/30/2009	329,966,989	602,328,868	272,361,879	54.8	51,660,396	527.2
6/30/2010	304,577,292	612,444,806	307,867,514	49.7	51,506,712	597.7
6/30/2011	285,580,631	634,379,401	348,798,770	45.0	48,692,616	716.3
6/30/2012	259,791,575	647,688,665	387,897,090	40.1	48,372,506	801.9

**INSURANCE BENEFITS
SCHEDULE OF FUNDING PROGRESS**

Actuarial Valuation Date	Value of Plan Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / (c))
6/30/2007	\$ 115,215,912	\$ 432,763,229	\$ 317,547,317	26.6%	\$ 49,247,580	644.8%
6/30/2008	123,961,197	445,107,468	321,146,271	27.8	53,269,080	602.9
6/30/2009	123,526,647	364,031,141	240,504,494	33.9	51,660,396	465.5
6/30/2010	121,175,083	434,960,495	313,785,412	27.9	51,506,712	609.2
6/30/2011	123,687,289	438,427,763	314,740,474	28.2	48,692,616	646.4
6/30/2012	124,372,072	333,903,782	209,531,710	37.2	48,372,506	433.2

**RETIREMENT BENEFITS
SCHEDULE OF EMPLOYER CONTRIBUTIONS**

Year Ended	Annual Required Contribution	Actual Contributions	Percentage Contributed
June 30, 2007	\$ 9,023,665	\$ 6,142,326	68.1%
June 30, 2008	13,823,490	7,443,277	53.8
June 30, 2009	15,951,841	8,186,259	51.3
June 30, 2010	18,764,941	9,489,399	50.6
June 30, 2011	18,463,372	12,657,225	68.6
June 30, 2012	20,497,924	15,361,781	74.9

**INSURANCE BENEFITS
SCHEDULE OF EMPLOYER CONTRIBUTIONS**

Year Ended	Annual Required Contribution	Retiree Drug Subsidy (RDS) Contribution	Employer Contributions	Total Contributions	Percentage Contributed
June 30, 2007	\$15,233,320	\$361,942	\$ 6,488,600	\$ 6,850,542	45.0%
June 30, 2008	43,469,735	183,564	7,329,229	7,512,793	17.3
June 30, 2009	29,324,666	229,240	7,413,552	7,642,792	26.1
June 30, 2010	30,302,151	273,684	8,369,428	8,643,112	28.5
June 30, 2011	25,772,574	0	11,050,964	11,050,964	42.9
June 30, 2012	28,246,786	0	11,960,468	11,960,468	42.3

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2012. Additional information as of the latest actuarial valuation follows.

Retirement Benefits	
Valuation date	6/30/2012
Actuarial cost method	Entry Age
Amortization	Level Percent Closed
Remaining amortization period	25 years
Asset valuation method	5 Year Smoothed Market
Actuarial assumptions:	
Investment rate of return*	7.75%
Projected salary increases**	4.5% - 17.0%
Cost-of-living adjustment	None
*Includes price inflation at	3.50%
**Includes wage inflation at	4.50%

Insurance Benefits	
Valuation date	6/30/2012
Actuarial cost method	Entry Age
Amortization	Level Percent Closed
Remaining amortization period	25 years
Asset valuation method	5 Year Smoothed Market
Medical Trend Assumption (Pre-Medicare)	9.5% - 5.0%
Medical Trend Assumption (Post-Medicare)	7.5% - 5.0%
Year of Ultimate Trend	2019
Actuarial assumptions:	
Investment rate of return*	4.50%
*Includes price inflation at	3.50%

SCHEDULE A

Valuation Balance Sheet and Solvency Test

The following valuation balance sheets show the assets and liabilities of the retirement system as of the current valuation date of June 30, 2012 and, for comparison purposes, as of the immediately preceding valuation date of June 30, 2011. The items shown in the balance sheet are present values actuarially determined as of the relevant valuation date.

**VALUATION BALANCE SHEETS
SHOWING THE ASSETS AND LIABILITIES OF THE
STATE POLICE RETIREMENT SYSTEM**

RETIREMENT BENEFITS

	JUNE 30, 2012	JUNE 30, 2011
ASSETS		
Current actuarial value of assets	\$ 259,791,575	\$ 285,580,631
Prospective contributions		
Member contributions	\$ 35,600,938	\$ 34,201,120
Employer normal contributions	34,706,049	33,384,470
Unfunded accrued liability contributions	<u>387,897,090</u>	<u>348,798,770</u>
Total prospective contributions	<u>\$ 458,204,077</u>	<u>\$ 416,384,360</u>
Total assets	<u><u>\$ 717,995,652</u></u>	<u><u>\$ 701,964,991</u></u>
LIABILITIES		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 520,280,073	\$ 496,684,389
Present value of benefits payable on account of active members	194,979,006	202,770,762
Present value of benefits payable on account of inactive members	<u>2,736,573</u>	<u>2,509,840</u>
Total liabilities	<u><u>\$ 717,995,652</u></u>	<u><u>\$ 701,964,991</u></u>

**VALUATION BALANCE SHEET
INSURANCE BENEFITS**

	JUNE 30, 2012	JUNE 30, 2011
ASSETS		
Current actuarial value of assets	\$ 124,372,072	\$ 123,687,289
Prospective contributions		
Member contributions	\$ 1,075,267	\$ 771,703
Employer normal contributions	116,220,351	142,703,462
Unfunded accrued liability contributions	<u>209,531,710</u>	<u>314,740,474</u>
Total prospective contributions	<u>\$ 326,827,328</u>	<u>\$ 458,215,639</u>
 Total assets	 <u><u>\$ 451,199,400</u></u>	 <u><u>\$ 581,902,928</u></u>
LIABILITIES		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 186,024,449	\$ 244,274,249
Present value of benefits payable on account of active members	260,940,671	329,463,202
Present value of benefits payable on account of inactive members	<u>4,234,280</u>	<u>8,165,477</u>
 Total liabilities	 <u><u>\$ 451,199,400</u></u>	 <u><u>\$ 581,902,928</u></u>

The following tables provide the solvency test for SPRS members.

**Solvency Test
Retirement Benefits**

Valuation Date	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Reported Asset		
	(1)	(2)	(3)	Actuarial Value of Assets	(1)	(2)	(3)
	Active Member Contributions	Retired Members & Beneficiaries	Active Members (Employer Financed Portion)				
6/30/2007	\$ 39,505,285	\$ 397,863,520	\$ 110,583,481	\$ 348,806,508	100.0%	77.7%	0.0%
6/30/2008	41,391,416	426,311,368	119,426,473	350,891,451	100.0	72.6	0.0
6/30/2009	41,664,469	459,585,353	101,079,046	329,966,989	100.0	62.7	0.0
6/30/2010	42,011,523	475,892,659	94,540,624	304,577,292	100.0	55.2	0.0
6/30/2011	43,574,097	499,194,229	91,611,075	285,580,631	100.0	48.5	0.0
6/30/2012	41,139,306	523,016,647	83,532,712	259,791,575	100.0	41.8	0.0

**Solvency Test
Insurance Benefits**

Valuation Date	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Reported Asset		
	(1)	(2)	(3)	Actuarial Value of Assets	(1)	(2)	(3)
	Active Member Contributions	Retired Members & Beneficiaries	Active Members (Employer Financed Portion)				
6/30/2007	\$ 0	\$ 172,291,142	\$ 260,472,087	\$ 115,215,912	100.0%	66.9%	0.0%
6/30/2008	0	178,655,245	266,452,223	123,961,197	100.0	69.4	0.0
6/30/2009	0	167,091,453	196,939,688	123,526,647	100.0	73.9	0.0
6/30/2010	0	253,580,827	181,379,668	121,175,083	100.0	47.8	0.0
6/30/2011	0	252,439,726	185,988,037	123,687,289	100.0	49.0	0.0
6/30/2012	0	190,258,729	143,645,053	124,372,072	100.0	65.4	0.0

SCHEDULE B

**Development of Actuarial Value of Assets
Retirement Benefits**

Valuation date June 30:	2011	2012	2013	2014	2015	2016
A. Actuarial Value Beginning of Year	\$ 304,577,292	\$ 285,580,631				
B. Market Value End of Year	279,934,443	252,896,868				
C. Market Value Beginning of Year	264,944,089	279,934,443				
D. Cash Flow						
D1. Contributions	17,882,105	20,516,672				
D2. Benefit Payments	(46,813,041)	(49,014,930)				
D3. Administrative Expenses	(134,547)	(75,970)				
D4. Investment Expenses	<u>(3,910,742)</u>	<u>(870,407)</u>				
D5. Net	(32,976,225)	(29,444,635)				
E. Investment Income						
E1. Market Total: B.-C.-D5.	47,966,579	2,407,060				
E2. Assumed Rate	7.75%	7.75%				
E3. Amount for Immediate Recognition	23,317,621	21,458,075				
E4. Amount for Phased-In Recognition	24,648,958	(19,051,015)				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	4,929,792	(3,810,203)	0	0	0	0
F2. First Prior Year	4,395,559	4,929,792	(3,810,203)	0	0	0
F3. Second Prior Year	(15,234,391)	4,395,559	4,929,792	(3,810,203)	0	0
F4. Third Prior Year	(8,083,253)	(15,234,391)	4,395,559	4,929,792	(3,810,203)	0
F5. Fourth Prior Year	<u>4,654,236</u>	<u>(8,083,253)</u>	<u>(15,234,391)</u>	<u>4,395,559</u>	<u>4,929,792</u>	<u>(3,810,203)</u>
F6. Total Recognized Investment Gain	(9,338,057)	(17,802,496)	(9,719,243)	5,515,148	1,119,589	(3,810,203)
G. Actuarial Value End of Year:						
A.+D5.+E3.+F6.	\$ 285,580,631	\$ 259,791,575				
H. Difference Between Market & Actuarial Values	\$ (5,646,188)	\$ (6,894,707)	\$ 2,824,536	\$ (2,690,612)	\$ (3,810,203)	\$ 0

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.

**Development of Actuarial Value of Assets
Insurance Benefits**

Valuation date June 30:	2011	2012	2013	2014	2015	2016
A. Actuarial Value Beginning of Year	\$ 121,175,083	\$ 123,687,289				
B. Market Value End of Year	127,367,947	125,567,846				
C. Market Value Beginning of Year	104,526,550	127,367,947				
D. Cash Flow						
D1. Contributions	11,418,135	12,301,298				
D2. Benefit Payments	(12,171,288)	(10,790,633)				
D3. Administrative Expenses	(178,949)	(200,880)				
D4. Investment Expenses	<u>(846,892)</u>	<u>(313,626)</u>				
D5. Net	(1,778,994)	996,159				
E. Investment Income						
E1. Market Total: B.-C.-D5.	24,620,391	(2,796,260)				
E2. Assumed Rate	4.50%	4.50%				
E3. Amount for Immediate Recognition	5,529,614	6,074,654				
E4. Amount for Phased-In Recognition	19,090,777	(8,870,914)				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	3,818,155	(1,774,183)	0	0	0	0
F2. First Prior Year	1,783,777	3,818,155	(1,774,183)	0	0	0
F3. Second Prior Year	(6,729,517)	1,783,777	3,818,155	(1,774,183)	0	0
F4. Third Prior Year	(3,484,262)	(6,729,517)	1,783,777	3,818,155	(1,774,183)	0
F5. Fourth Prior Year	<u>3,373,433</u>	<u>(3,484,262)</u>	<u>(6,729,517)</u>	<u>1,783,777</u>	<u>3,818,155</u>	<u>(1,774,183)</u>
F6. Total Recognized Investment Gain	(1,238,414)	(6,386,030)	(2,901,768)	3,827,749	2,043,972	(1,774,183)
G. Actuarial Value End of Year:						
A.+D5.+E3.+F6.	\$ 123,687,289	\$ 124,372,072				
H. Difference Between Market & Actuarial Values	\$ 3,680,658	\$ 1,195,774	\$ 4,097,542	\$ 269,793	\$ (1,774,183)	\$ 0

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.

SCHEDULE C

STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

The assumptions and methods used in the valuation were based on the actuarial experience study prepared as of June 30, 2008, submitted August 14, 2009, and adopted by the Board on August 20, 2009.

INVESTMENT RATE OF RETURN: 7.75% per annum, compounded annually for retirement benefits. A blended rate is necessary to meet GASB Statement 43 requirements for insurance benefits. The current blended rate for SPRS insurance benefits is 4.50%.

SALARY INCREASES: Representative values of the assumed annual rates of future salary increases for members are as follows and include inflation at 4.50% per annum:

Service	Annual Rates of		
	Merit & Seniority	Base (Economy)	Increase Next Year
0-1	12.50%	4.50%	17.00%
1-2	7.50%	4.50%	12.00%
2-3	5.50%	4.50%	10.00%
3-4	4.50%	4.50%	9.00%
4-5	3.50%	4.50%	8.00%
5-6	2.50%	4.50%	7.00%
6-7	1.50%	4.50%	6.00%
7-8	2.00%	4.50%	6.50%
8-9	1.00%	4.50%	5.50%
9-10	0.50%	4.50%	5.00%
10 & over	0.00%	4.50%	4.50%

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of death, disability, withdrawal and retirement are shown in the following tables:

Age	Withdrawal and Vesting*	Death**			Service Retirement		
		Male	Female	Disability	Service	Rate ⁺	Rate ⁺⁺
20	2.50%	0.03%	0.01%	0.05%	20	9.00%	
25	2.50	0.03	0.01	0.07	25	22.00	9.00%
30	2.50	0.04	0.02	0.09	30	25.00	22.00
35	2.50	0.04	0.02	0.13	35	33.33	25.00
40	2.50	0.05	0.04	0.20	40		33.33
45	2.50	0.08	0.05	0.33			
50	2.50	0.13	0.07	0.56			
55		0.22	0.11	0.92			
60		0.40	0.22	1.46			

* Select rates of withdrawal apply in the first five years of employment regardless of age. The rates are 20.0%, 7.5%, 3.0%, 3.0% and 3.0%, respectively.

** 75% are presumed to be non-duty related, and 25% are assumed to be duty related.

+ For members whose participation began before 9/1/2008. The annual rate of service retirement is 100% at age 55.

++ For members whose participation began on or after 9/1/2008. The annual rate of service retirement is 100% at age 60.

DEATH AFTER RETIREMENT: The rates of mortality for the period after service retirement are according to the 1983 Group Annuity Mortality Table for all retired members and beneficiaries as of June 30, 2006 and the 1994 Group Annuity Mortality Table for all other members. The Group Annuity Mortality Table set forward 5 years is used for the period after disability retirement. There is little margin in the current mortality tables for possible future improvement in mortality rates and that margin will be reviewed again when the next experience investigation is conducted.

PERCENT MARRIED: 100% of employees are assumed to be married, with the wife 3 years younger than the husband.

DEPENDENT CHILDREN: For hazardous members' duty-related death benefits, it is assumed that the member is survived by two dependent children each age 6.

ACTUARIAL METHOD: Entry age normal cost method. Actuarial gains and losses are reflected in the unfunded actuarial accrued liability. For pre-Medicare retiree healthcare liabilities, the current premium charged by the Kentucky Employees' Health Plan (KEHP) is used as the base cost is projected forward using the healthcare trend assumption. No implicit rate subsidy is calculated or recognized as the subsidy is the responsibility of KEHP. For the Medicare-eligible retirees, claims were analyzed and current premiums were utilized with appropriate aging factors applied.

ASSET VALUATION METHOD: 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 market value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected market value.

HEALTH CARE BENEFITS VALUED: Medical and drug benefits for retirees under age 65 and Medicare eligible.

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

Fiscal Year Ended	Trend	
	Under Age 65	Age 65 and Over
2013	9.5%	7.5%
2014	8.5%	7.0%
2015	7.5%	6.5%
2016	6.5%	6.0%
2017	6.0%	5.5%
2018	5.5%	5.0%
2019 and beyond	5.0%	5.0%

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

Participant Age	Annual Increase
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

HEALTH CARE ANTICIPATED PLAN PARTICIPATION: The assumed annual rates of member participation and spouse coverage are as follows:

Participation	100%
Spouse Coverage	100%

HEALTH CARE MONTHLY RATES: Following are charts detailing expected monthly rates for pre-Medicare eligible and post-Medicare eligible retirees for the year following the valuation date.

**MEDICAL INSURANCE RATES
PRE-MEDICARE ELIGIBLE**

Effective January 1, 2012				
	Single	Parent Plus	Couple	Family
Total Premiums				
Standard PPO	\$496.14	\$764.68	\$1,144.72	\$1,272.83
Optimum PPO	\$663.30	\$922.88	\$1,432.36	\$1,595.06
Capitol Choice	\$638.16	\$927.08	\$1,414.46	\$1,568.06

Effective January 1, 2013				
	Single	Parent Plus	Couple	Family
Total Premiums				
Standard PPO	\$506.06	\$791.54	\$1,177.80	\$1,314.12
Optimum PPO	\$675.34	\$961.84	\$1,476.00	\$1,642.78
Capitol Choice	\$650.22	\$961.42	\$1,457.90	\$1,613.74

**MEDICAL INSURANCE RATES
MEDICARE ELIGIBLE**

Effective January 1, 2013	
Available Plan	Premium
Kentucky Retirement System Health Plan - Medical Only	\$157.00
Kentucky Retirement System Health Plan - Essential	\$84.08
Kentucky Retirement System Health Plan - Premium	\$198.31
Above amounts are shown as average retiree costs. In the valuation, the claims costs are converted to age 65 amounts and age adjusted.	

SCHEDULE D

SUMMARY OF MAIN BENEFIT AND CONTRIBUTION PROVISIONS

This schedule summarizes the major retirement benefit provisions of SPRS included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Plan Year: July 1 through June 30

Normal Retirement:

Members whose participation began before 9/1/2008

<i>Age Requirement</i>	55
<i>Service Requirement</i>	At least one month of hazardous duty service credit
<i>Amount</i>	<p>If a member has at least 60 months of service, the monthly benefit is 2.50% multiplied by final average compensation, multiplied by years of service.</p> <p>Final compensation is calculated by taking the average of the highest three (3) fiscal years of salary. If the number of months of service credit during the three (3) year period is less than twenty-four (24), one (1) or more additional fiscal years shall be used.</p> <p>If a member has less than 60 months of service, the monthly benefit is the actuarial equivalent of two times the member's contributions with interest.</p>

Members whose participation began on or after 9/1/2008

<i>Age Requirement</i>	60
<i>Service Requirement</i>	At least 60 months of hazardous duty service credit
<i>Amount</i>	The monthly benefit is the following benefit factor based on service credit at retirement, multiplied by final average compensation, multiplied by years of service.

Service Credit	Benefit Factor
10 years or less	1.30%
10+ – 20 years	1.50%
20+ – 25 years	2.25%
25+ years	2.50%

Final compensation is calculated by taking the average of the highest three (3) complete fiscal years of salary. Each fiscal year used to determine final compensation must contain twelve (12) months of service credit.

Early Retirement:

Members whose participation began before 9/1/2008

Requirement

Age 50 with 15 years of service or any age with 20 years service.

Amount

Normal retirement benefit reduced by 6.5% per year for the first five years and 4.5% per year for the next five years for each year the member is younger than age 55 or has less than 20 years service, whichever is smaller.

Members whose participation began on or after 9/1/2008

Requirement

Age 50 with 15 years of service or any age with 25 years service.

Amount

Normal retirement benefit reduced by 6.5% per year for the first five years and 4.5% per year for the next five years for each year the member is younger than age 60 or has less than 25 years service, whichever is smaller.

Disability:

Age Requirement

None

Service Requirement

60 months (waived if in line of duty disability)

Members whose participation began before 8/1/2004

Normal retirement benefit except if the member's total service credit is less than 20 years, service credit will be added for the period from the last day of paid employment to the member's 55th birthday.

The maximum service credit added will not exceed the total service the member had on this last day of paid employment and the maximum service credit for calculating his retirement allowance, including total service and service added will not exceed 20 years. May not apply if eligible for an unreduced retirement allowance.

A member in a hazardous position who is disabled in the line of duty is entitled to the normal retirement benefit based on years of service and final compensation determined as of the date of disability (no penalty), except that the monthly retirement allowance payable shall not be less than 25% of the member's monthly final monthly rate of pay. Each dependent child shall receive 10% of the disabled member's monthly final rate of pay; however the total maximum dependent children's benefit shall not exceed 40% of the member's monthly final rate of pay.

Disability (continued):

Members whose participation began on or after 8/1/2004

Normal retirement benefit based on years of service and final compensation determined as of the date of disability (no penalty) or, if larger, 25% of the member's monthly final rate of pay. May apply for disability even after normal retirement age.

Vesting:

Members whose participation began before 9/1/2008

Age Requirement

None

Service Requirement

60 months. Service purchased after August 1, 2004 does not count toward vesting insurance benefits. Service purchased by employees who began participating on or after August 1, 2004 does not count toward vesting retirement benefits.

Amount

Normal retirement benefit deferred to normal retirement age or reduced benefit payable at early retirement age.

Normal Retirement Age

55

Members whose participation began on or after 9/1/2008

Age Requirement

None

Service Requirement

60 months. Service purchased after August 1, 2004 does not count toward vesting insurance benefits. Service purchased by employees who began participating on or after August 1, 2004 does not count toward vesting retirement benefits.

Amount

Normal retirement benefit deferred to normal retirement age or reduced benefit payable at early retirement age.

Normal Retirement Age

60

Pre-Retirement Death Benefit (not in line of duty):

Requirement

Eligible for Normal or Early Retirement, or any age with 60 months service.

Amount

Benefit equal to the benefit the member would have received had the member retired on the day before the date of death and elected a 100% joint and survivor form. Benefit is actuarially reduced if member is less than normal retirement age at the date of death.

Spouse's Pre-Retirement Death Benefit (in line of duty):

<i>Requirement</i>	None
<i>Amount</i>	The spouse may choose (1) a \$10,000 lump sum payment and monthly payments of 25% of the member's final monthly rate of pay or (2) benefit options offered under death not in line of duty.

Dependent Non-Spouse's Death Benefit (in line of duty):

<i>Requirement</i>	None
<i>Amount</i>	The non-spouse may choose (1) a \$10,000 lump sum payment or (2) benefit options offered under death not in line of duty.

Dependent Child's Death Benefit (in line of duty):

<i>Requirement</i>	None
<i>Amount</i>	10% of member's final monthly rate of pay. Dependent child payments cannot exceed 40% of the member's monthly final rate of pay.

Post-Retirement Death Benefit:

<i>Requirement</i>	Retired member in receipt of monthly benefit based on at least 48 months or more of combined service with KERS, CERS or SPRS.
<i>Amount</i>	\$5,000

Member Contributions:

<i>Members whose participation began before 9/1/2008</i>	8% of all creditable compensation. Interest paid on the members' accounts will be set at 2.0%. Member entitled to a full refund of contributions with interest.
<i>Members whose participation began on or after 9/1/2008</i>	9% of all creditable compensation, with 8% being credited to the member's account and 1% deposited to the KRS 401(h) Account. Interest paid on the members' accounts will be set at 2.5%. Member entitled to a full refund of contributions and interest in their individual account, however, the 1% contributed to the insurance fund is non-refundable.

Insurance Plan for Retirees:

Members whose participation began before 7/1/2003

Requirement

In receipt of a monthly retirement allowance.

Amount

The Retirement System pays a portion of lifetime medical premiums for retirees, their spouse and their dependents based on the retired member's years of service credit. The percentage of the monthly contribution rate paid is show in the following table.

Service Credit	Percentage Paid*
0 – 3 years	0%
4 – 9 years	25%
10 – 14 years	50%
15 – 19 years	75%
20 or more years	100%

**100% of the monthly contribution is paid towards the health insurance for a member, member's spouse and dependents if the member is disabled in the line of duty as a result of a duty-related injury, regardless of actual service. 100% of the monthly contribution is paid toward health insurance for the spouse and dependent children of a member who dies in the line of duty regardless of the deceased member's service. The insurance benefit will be provided as long as the spouse and dependent children are eligible for a monthly retirement benefit.*

Members whose participation began on or after 7/1/2003, but before 9/1/2008

Requirement

Monthly retirement allowance with at least 120 months of service at retirement.

Amount

The Retirement System pays \$19.04 per month for each year of earned service for retirees. Upon the retiree's death, the surviving spouse will receive \$12.69 per month for each year of earned. These amounts are shown as of the valuation date and are indexed annually based on the CPI prior to July 1, 2008 and by 1.5% thereafter.

Members whose participation began on or after 9/1/2008

Requirement

Monthly retirement allowance with at least 180 months of service at retirement.

Amount

The Retirement System pays \$15 per month for each year of earned service for retirees. Upon the retiree's death, the surviving spouse will receive \$10 per month for each year of earned. These amounts will be increased annually by 1.5%.

SCHEDULE E

DETAILED TABULATIONS OF THE DATA

**Schedule of Retired Members Added to and Removed From Rolls
Last Six Fiscal Years**

Year Ending June 30	2007	2008	2009	2010	2011	2012
	<u>Number</u>					
Beginning of Year	1,067	1,105	1,135	1,184	1,223	1,263
Added	49	42	75	54	52	52
Removed	11	12	26	15	12	16
End of Year	1,105	1,135	1,184	1,223	1,263	1,299
	<u>Annual Allowances</u>					
Beginning of Year	\$ 34,651,251	\$ 37,208,377	\$ 41,293,017	\$ 44,273,937	\$ 45,515,797	\$ 47,467,404
Added	2,836,956	4,330,608	3,380,331	1,543,665	2,341,589	3,026,513
Removed	279,830	245,968	399,410	301,805	389,982	606,825
End of Year	\$ 37,208,377	\$ 41,293,017	\$ 44,273,937	\$ 45,515,797	\$ 47,467,404	\$ 49,887,093
% Increase in Allowances	7.38%	10.98%	7.22%	2.80%	4.29%	5.10%
Average Annual Allowance	\$ 33,673	\$ 36,382	\$ 37,394	\$ 37,217	\$ 37,583	\$ 38,404

Retired Lives Summary June 30, 2012

	Male Lives		Female Lives		Total	
	Number	Monthly Benefits	Number	Monthly Benefits	Number	Monthly Benefits
Basic Form	107	\$ 350,923.86	10	\$ 24,305.39	117	\$ 375,229.25
Straight Life (Old Plan)	0	0.00	0	0.00	0	0.00
Joint & Survivor						
100% to Beneficiary	126	403,819.80	1	4,813.66	127	408,633.46
66-2/3% to Beneficiary	79	304,843.74	1	3,044.33	80	307,888.07
50% to Beneficiary	81	297,688.51	1	2,604.67	82	300,293.18
Pop-up Option	457	1,637,058.14	5	14,943.95	462	1,652,002.09
10 Years Certain	1	0.00	0	0.00	1	0.00
10 Years Certain & Life	33	105,094.14	1	1,737.53	34	106,831.67
Social Security Option						
Age 62 Basic	32	95,213.93	0	0.00	32	95,213.93
Age 62 Survivorship	137	342,235.09	1	7,930.47	138	350,165.56
Partial Deferred (Old Plan)	0	0.00	0	0.00	0	0.00
Widows Age 60	0	0.00	0	0.00	0	0.00
Dependent Child	0	0.00	0	0.00	0	0.00
Refund	0	0.00	0	0.00	0	0.00
15 Years Certain & Life	14	42,077.03	1	3,918.67	15	45,995.70
20 Years Certain & Life	34	111,331.65	2	3,978.81	36	115,310.46
5 Years Certain	0	0.00	0	0.00	0	0.00
PLSO 12 Month Basic	0	0.00	0	0.00	0	0.00
PLSO 24 Month Basic	0	0.00	0	0.00	0	0.00
PLSO 36 Month Basic	0	0.00	2	466.41	2	466.41
PLSO 12 Month Survivor	6	20,781.22	0	0.00	6	20,781.22
PLSO 24 Month Survivor	5	13,304.01	0	0.00	5	13,304.01
PLSO 36 Month Survivor	9	16,912.49	0	0.00	9	16,912.49
Total	1,121	\$ 3,741,283.61	25	\$ 67,743.89	1,146	\$ 3,809,027.50

Beneficiary Lives Summary June 30, 2012

	Male Lives		Female Lives		Total	
	Number	Monthly Benefits	Number	Monthly Benefits	Number	Monthly Benefits
Basic Form	0	\$ 0.00	2	\$ 1,844.42	2	\$ 1,844.42
Straight Life (Old Plan)	0	0.00	0	0.00	0	0.00
Joint & Survivor						
100% to Beneficiary	6	5,751.51	57	149,574.73	63	155,326.24
66-2/3% to Beneficiary	1	800.05	6	15,775.18	7	16,575.23
50% to Beneficiary	1	1,298.64	16	24,504.05	17	25,802.69
Pop-up Option	1	478.19	24	68,494.36	25	68,972.55
10 Years Certain	1	591.51	0	0.00	1	591.51
10 Years Certain & Life	0	0.00	0	0.00	0	0.00
Social Security Option						
Age 62 Basic	0	0.00	2	2,281.46	2	2,281.46
Age 62 Survivorship	0	0.00	30	61,029.31	30	61,029.31
Partial Deferred (Old Plan)	0	0.00	0	0.00	0	0.00
Widows Age 60	0	0.00	0	0.00	0	0.00
Dependent Child	0	0.00	0	0.00	0	0.00
Refund	0	0.00	0	0.00	0	0.00
15 Years Certain & Life	0	0.00	0	0.00	0	0.00
20 Years Certain & Life	1	6,685.69	4	6,862.09	5	13,547.78
5 Years Certain	1	2,259.08	0	0.00	1	2,259.08
PLSO 12 Month Basic	0	0.00	0	0.00	0	0.00
PLSO 24 Month Basic	0	0.00	0	0.00	0	0.00
PLSO 36 Month Basic	0	0.00	0	0.00	0	0.00
PLSO 12 Month Survivor	0	0.00	0	0.00	0	0.00
PLSO 24 Month Survivor	0	0.00	0	0.00	0	0.00
PLSO 36 Month Survivor	0	0.00	0	0.00	0	0.00
Total	12	\$ 17,864.67	141	\$ 330,365.60	153	\$ 348,230.27

**Retired and Beneficiary Information June 30, 2012
Tabulated by Attained Ages**

Attained Age	Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 45	23	\$ 840,561	9	\$ 151,517	12	\$ 138,890	44	\$ 1,130,968
45-49	93	3,562,962	5	86,424	7	108,927	105	3,758,313
50-54	146	6,178,916	7	134,618	7	133,367	160	6,446,901
55-59	180	7,765,364	8	110,810	16	364,388	204	8,240,563
60-64	266	11,244,762	5	111,124	25	888,753	296	12,244,639
65-69	185	7,405,097	7	135,687	27	683,572	219	8,224,356
70-74	106	3,760,619	1	23,873	15	520,519	122	4,305,011
75-79	52	1,912,789	4	84,663	22	664,923	78	2,662,375
80-84	33	1,449,558	0	0	16	544,839	49	1,994,397
85-89	14	709,061	0	0	4	77,317	18	786,378
90 & Over	2	39,924	0	0	2	53,268	4	93,192
Totals	1,100	\$ 44,869,614	46	\$ 838,716	153	\$ 4,178,763	1,299	\$ 49,887,092

**Total Active Members as of June 30, 2012
Tabulated by Attained Ages and Years of Service**

Attained Age	Years of Service to Valuation Date								Totals
	0-4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 26	27 - 29	30+	
Under 20 Avg Pay									
20-24 Avg Pay	20 \$41,723								20 \$41,723
25-29 Avg Pay	115 \$42,167	11 \$50,024							126 \$42,853
30-34 Avg Pay	58 \$41,791	88 \$51,006	24 \$52,731						170 \$48,106
35-39 Avg Pay	34 \$41,356	59 \$51,233	111 \$55,038	19 \$60,386	1 \$65,621				224 \$52,460
40-44 Avg Pay	7 \$44,308	37 \$50,782	73 \$55,655	97 \$63,945	29 \$65,334	2 \$72,800			245 \$59,163
44-49 Avg Pay	5 \$35,881	9 \$52,036	12 \$53,694	24 \$64,469	19 \$69,621	4 \$84,827	3 \$81,555		76 \$62,449
50-54 Avg Pay	3 \$44,885	6 \$49,045	2 \$48,855	8 \$56,096	7 \$71,147	3 \$78,589	6 \$73,240	1 \$82,000	36 \$61,962
55-59 Avg Pay				1 \$66,781	1 \$69,892		3 \$74,619	3 \$74,403	8 \$72,968
60-64 Avg Pay								1 \$85,352	1 \$85,352
65-69 Avg Pay									
70 & over Avg Pay				1 \$68,860					1 \$68,860
Totals Avg Pay	242 \$41,892	210 \$50,967	222 \$54,863	150 \$63,211	57 \$67,562	9 \$80,075	12 \$75,664	5 \$78,112	907 \$53,332