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**LEXINGTON-FAYETTE  
URBAN COUNTY GOVERNMENT**  
*Lexington, Kentucky*

**Policemen's & Firefighters'  
Retirement Fund**



# **Report on the Valuation of the Lexington-Fayette Urban County Government Policemen's and Firefighters' Retirement Fund**

**Prepared as of July 1, 2012**





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October 8, 2012

Board of Trustees

Lexington-Fayette Urban County Government Policemen's and Firefighters' Pension Plan

Lexington-Fayette Urban County Government

200 East Main Street

Lexington, KY 40507

Dear Members of the Board:

We are pleased to submit herewith the results of the biennial actuarial valuation of the Lexington-Fayette Urban County Government Policemen's and Firefighters' Pension Plan prepared as of July 1, 2012. The purpose of this report is to provide a summary of the funded status of the Plan as of July 1, 2012, to recommend rates of contribution and to provide accounting information under Governmental Accounting Standards Board Statements No. 25 and 27 (GASB 25 and 27). The Lexington-Fayette County Government is solely responsible for the accuracy and comprehensiveness of the data.

The promised benefits of the Plan are included in the actuarially calculated contribution rates which are developed using the entry age normal cost method. Actuarial value of plan assets is used for actuarial valuation purposes. Gains and losses are reflected in the unfunded accrued liability that is being amortized by regular annual contributions that are equal to regular interest on the unfunded accrued liability in perpetuity. The annual required employer contribution rate is 57.52% of payroll for the plan years ending June 30, 2014 and June 30, 2015. The assumptions recommended by the actuary and adopted by the Board are in the aggregate reasonably related to the experience under the Plan and to reasonable expectations of anticipated experience under the Plan.

Since the previous valuation, revised rates of retirement, termination, disability, pre-retirement mortality and post-retirement mortality have been adopted by the Board based on information provided in an experience study for the five-year period ending June 30, 2010. In addition to revised decrements, the Board also adopted a lower assumed rate of return. The rate was lowered from 8.00% to 7.50% based on the analysis of the economic assumptions in the experience study.

The valuation has been prepared in accordance with the parameters set forth in Statement Nos. 25 and 27 of the Governmental Accounting Standards Board. The annual required contribution (ARC) of the Government under GASB for the fiscal years ending June 30, 2014 and June 30, 2015 is 57.52% of payroll, which will liquidate the unfunded accrued liability over a 23 year period on the assumption that payroll will increase 3% annually.

This is to certify that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the Plan and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the Plan.

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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.

We trust that the report will meet the approval of the Board and will furnish the desired information concerning the financial condition of the Plan. The undersigned are members of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

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 Senior Actuary

TJC/TBG:jmy



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**LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT  
POLICEMEN'S AND FIREFIGHTERS' RETIREMENT FUND  
REPORT OF ACTUARY  
ON THE VALUATION  
PREPARED AS OF JULY 1, 2012**

**SECTION I – SUMMARY OF PRINCIPAL RESULTS**

1. For convenience of reference, the principal results of the current and preceding valuations are summarized below.

Valuation Date	July 1, 2012	July 1, 2010
Active members:		
Number	1,014	1,063
Annualized compensation	\$ 54,595,799	\$ 60,512,412
Retired members and beneficiaries:		
Number	997	895
Annual benefits	\$ 42,960,998	\$ 35,456,635
Assets:		
Market Value	\$ 509,409,641	\$ 421,629,957
Actuarial Value	525,849,582	502,259,967
Unfunded actuarial accrued liability	\$ 296,806,492	\$ 221,880,771
Amortization Period	23	23
<b>Fiscal Years Ending</b>	<b>2015 &amp; 2014</b>	<b>2013 &amp; 2012</b>
Government annual required contribution rate (ARC):		
Normal	19.59%	17.51%
Accrued liability	<u>37.93</u>	<u>27.16</u>
Total	57.52%	44.67%
Member contribution rate	11.00%	11.00%



2. The major benefit and contribution provisions of the Plan as reflected in the valuation are summarized in Schedule G. The actual cost-of-living allowances granted under Section 67A.690 through July 1, 2012 were reflected in the valuation.
3. The development of the actuarial value of assets is shown in Schedule C. Schedule E of this report outlines the full set of actuarial assumptions and methods used in the valuation.  
  
Since the previous valuation, revised rates of retirement, termination, disability, pre-retirement mortality and post-retirement mortality have been adopted by the Board based on information provided in an experience study for the five-year period ending June 30, 2010. In addition to revised decrements, the Board also adopted a lower assumed rate of return. The rate was lowered from 8.00% to 7.50% based upon the analysis of the economic assumptions in the experience study.  
  
The occupational disability benefit is equal to a minimum of 60% of a member's last rate of salary, increased by  $\frac{1}{2}$  the amount by which the member's average percentage of disability exceeds 20%, but not greater than 75%. For valuation purposes, the assumed average member disability percentage has been 35%. Based on data provided by staff for occupational disabilities that occurred from 1995 to 2011, the average disability percentage has been 12.5%. As a result of this information, we lowered the assumed averaged disability percentage from 35% to 12.5%. Based on this reduction in the assumed average disability percentage, the assumed average benefit percentage for occupational disabilities will be lowered from 67.5% to 60% of salaries.
4. The entry age normal actuarial cost method was used to prepare the valuation. Schedule F contains a brief description of the actuarial cost method.
5. Comments on the valuation results as of July 1, 2012 are given in Section IV and further discussion of the contributions is set out in Section V. The valuation has been prepared with a future cost-of-living assumption of 3% per year.



## **SECTION II – MEMBERSHIP DATA**

1. Data regarding the membership of the Plan for use as a basis of the valuation were furnished by the Government. The valuation included 1,014 active members with annualized compensation totaling \$54,595,799.
2. The following table shows the number of retired members and beneficiaries as of July 1, 2012 together with the amount of their annual retirement benefits payable under the Plan as of that date.

### **THE NUMBER AND ANNUAL BENEFITS OF RETIRED MEMBERS AND BENEFICIARIES AS OF JULY 1, 2012**

<b>GROUP</b>	<b>NUMBER</b>	<b>ANNUAL RETIREMENT BENEFITS*</b>
Service Retirements	516	\$ 25,109,779
Disability Retirements	348	14,566,600
Beneficiaries of Deceased Members	<u>133</u>	<u>3,284,619</u>
Total	997	\$ 42,960,998

3. Table 1 of Schedule H shows the distribution by age and years of membership service of the number of active members included in the valuation, while Table 2 shows the number and annual benefits of retired members and beneficiaries included in the valuation, distributed by age.

## **SECTION III – ASSETS**

As of July 1, 2012, the total market value of assets amounted to \$509,409,641. The actuarial value of assets used for the current valuation was \$525,849,582. Schedule C shows the development of the actuarial value of assets as of July 1, 2012. Schedule D shows the Summary of Receipts and Disbursements.



#### **SECTION IV – COMMENTS ON VALUATION**

1. Schedule B of this report contains the valuation balance sheet which shows the present and prospective assets and liabilities of the Plan as of July 1, 2012. The valuation was prepared in accordance with the actuarial assumptions set forth in Schedule E and the actuarial cost method which is described in Schedule F.
2. The valuation balance sheet shows that the Plan has total prospective liabilities of \$996,459,020 of which \$603,280,373 is for the prospective benefits payable on account of present retired members and beneficiaries of deceased members, and \$393,178,647 is for the prospective benefits payable on account of present active members. Against these liabilities, the Plan has a total present actuarial value of assets of \$525,849,582 as of July 1, 2012. The difference of \$470,609,438 between the total liabilities and the total present assets represents the present value of future contributions.
3. The contributions to the Plan consist of normal contributions and accrued liability contributions. The valuation indicates that normal contributions at the rate of 30.59% of payroll are required under the entry age normal method. Of this amount, 11.00% is paid by the members and the remaining 19.59% is required by the Government.
4. Prospective normal contributions at the rate of 30.59% have a present value of \$173,802,946. When this amount is subtracted from \$470,609,438, which is the present value of the total future contributions to be made, there remains \$296,806,492 as the amount of unfunded accrued liability contributions. The development of the unfunded accrued liability is shown in Schedule A.



## **SECTION V – CONTRIBUTIONS PAYABLE**

1. Under Section 67A.520 of the law governing the Fund, the Government shall make current contributions to the Fund on an actuarially funded basis. The contributions shall be equal to an amount resulting from the application of a rate percent of salaries of active members determined by the entry age normal cost funding method (normal contribution). In addition, the Government shall contribute an amount resulting from the application of a rate percent of the salaries of active members which will provide each year regular interest on the remaining liability for prior service (accrued liability contribution). In any event the total contribution of the Government shall be at least seventeen percent of salaries of the active members participating in the fund.
2. The normal contribution rate is calculated as the level percentage of payroll which, if applied for the average new member during the entire period of his anticipated covered service, would be required to meet the cost of all benefits payable on his behalf. On the basis of the valuation, the normal contribution rate was determined to be 30.59%.
3. Each member shall contribute an amount equal to 11.00% of current salary each year.
4. The Government's normal contribution rate is equal to the difference between the normal contribution rate of 30.59% and the member contribution rate of 11.00%, or 19.59% of payroll.
5. The annual accrued liability contribution rate is determined to be 37.93% of payroll. This amount is equal to the regular interest on the prior service liability in perpetuity. Contributions at this level would be sufficient to amortize the unfunded accrued liability over a 23 year period on the assumption that payroll will increase 3% annually.
6. The required employer contribution rate for the plan years ending June 30, 2014 and June 30, 2015 is, therefore, 57.52% of payroll.
7. The following table summarizes the employer contributions which were determined by the July 1, 2012 valuation and are recommended for use.



**ANNUAL REQUIRED CONTRIBUTION RATE  
FOR PLAN YEARS ENDING JUNE 30, 2014 AND JUNE 30, 2015**

CONTRIBUTION	PERCENTAGE OF ACTIVE MEMBERS' COMPENSATION
Normal	19.59%
Accrued Liability	<u>37.93</u>
Total	57.52%

**SECTION VI – ACCOUNTING INFORMATION**

1. Governmental Accounting Standards Board Statements 25 and 27 set forth certain items of required supplementary information to be disclosed in the financial statements of the Plan 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 PARTICIPANTS  
AS OF JULY 1, 2012**

GROUP	NUMBER
Retired participants and beneficiaries currently receiving benefits	997
Terminated participants and beneficiaries entitled to benefits but not yet receiving benefits	0
Active Participants	<u>1,014</u>
Total	2,011



2. Another such item is the schedule of funding progress as shown below.

**SCHEDULE OF FUNDING PROGRESS**

Actuarial Valuation Date	Actuarial Value of 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)
7/01/2007	\$397,712,302	\$627,939,926	\$230,227,624	63.3%	\$57,717,156	398.9%
7/01/2008	418,311,038	664,935,356	246,624,318	62.9	61,368,960	401.9
7/01/2009	441,772,820	699,851,128	258,078,308	63.1	65,765,448	392.4
7/01/2010	502,259,967	724,140,738	221,880,771	69.4	60,512,412	366.7
7/01/2011	501,069,884	758,851,546	257,781,662	66.0	64,258,162	401.2
7/01/2012	525,849,582	822,656,074	296,806,492	63.9	54,595,799	543.6

3. Following is the calculation of the annual pension cost and net pension obligation for the fiscal year ending June 30, 2014.

Annual Pension Cost and Net Pension Obligation for Fiscal Year Ending June 30, 2012		
(a)	Employer annual required contribution	\$ 30,665,280
(b)	Interest on net pension obligation	(2,671,000)
(c)	Adjustment to annual required contribution	<u>(2,636,148)</u>
(d)	Annual pension cost (a) + (b) - (c)	\$ 28,668,786
(e)	Employer contributions made for fiscal year ending June 30, 2012	<u>47,585,689</u>
(f)	Increase (decrease) in net pension obligation (d) - (e)	\$ (18,916,903)
(g)	Net pension obligation beginning of fiscal year	<u>(35,613,328)</u>
(h)	Net pension obligation end of fiscal year (f) + (g)	\$ (54,530,231)



**TREND INFORMATION**

<u>Year Ending</u>	<u>Annual Pension Cost (APC)</u>	<u>Percentage of APC Contributed</u>	<u>Net Pension Obligation (NPO)</u>
June 30, 2012	30,485,067	162.3%	(49,127,742)
June 30, 2013	27,923,223	51.6%	(35,613,328)
June 30, 2014	28,668,786	166.0%	(54,530,231)

4. The annual required contribution (ARC) as a percentage of payroll, determined in accordance with the parameters of GASB 25/27, is shown below.

**EMPLOYER ANNUAL REQUIRED CONTRIBUTION (ARC)**

<b>EMPLOYER ANNUAL REQUIRED CONTRIBUTION (ARC)</b>	<b>FISCAL YEARS ENDING June 30, 2014 and 2015</b>
Normal (including expenses)	19.59%
Accrued liability	<u>37.93</u>
Total	57.52%

5. Additional information as of July 1, 2012 follows:

Valuation date	7/1/2012
Actuarial cost method	Entry age normal
Amortization period	Level percent of payroll open
Remaining amortization period	23 years
Asset valuation method	Actuarial Related Value
Actuarial assumptions:	
Investment rate of return (includes inflation)	7.50%
Projected salary increases (includes inflation)	10.50% to 4.00%
Inflation	3.00%
Cost-of-living adjustments	3.00%



**SECTION VII – EXPERIENCE**

1. The following table shows the estimated change in the unfunded accrued liability from various factors that resulted in an increase of \$74,925,721 in the unfunded accrued liability from \$221,880,771 as of July 1, 2010 to \$296,806,492 as of July 1, 2012.

**ANALYSIS OF FINANCIAL EXPERIENCE  
CHANGE IN UNFUNDED ACCRUED LIABILITY**

ITEM	AMOUNT OF INCREASE/(DECREASE)
Interest (7.50%) added to previous unfunded accrued liability	\$ 36,199,294
Accrued Liability Contributions	(43,410,985)
Recognized Asset (Gain)/Loss	51,633,178
COLA Gain	(2,366,645)
Assumption and Method Changes	54,222,853
Salary (Gain)/Loss	(18,629,082)
Liability (Gain)/Loss	<u>(2,722,892)</u>
Increase in Unfunded Accrued Liability	\$74,925,721



**SCHEDULE A**

**DEVELOPMENT OF THE UNFUNDED ACTUARIAL ACCRUED LIABILITY**

		July 1, 2012
(1)	Present value of prospective benefits:	
(a)	Present active members	\$ 393,178,647
(b)	Present retired members, beneficiaries and former members entitled to deferred vested benefits	<u>603,280,373</u>
(c)	Total	\$ 996,459,020
(2)	Present value of future Government and member normal contributions before expenses	<u>173,802,946</u>
(3)	Actuarial accrued liabilities 1(c) – (2)	\$ 822,656,074
(4)	Actuarial value of assets	<u>525,849,582</u>
(5)	Unfunded actuarial accrued liability (3) – (4)	\$ 296,806,492



**SCHEDULE B**  
**VALUATION BALANCE SHEET**

<u>ACTUARIAL LIABILITIES</u>		
Present value of prospective benefits payable on account of present retired members, beneficiaries of deceased members, and terminated members entitled to deferred benefits		\$ 603,280,373
Present value of prospective benefits payable on account of present active members		\$ <u>393,178,647</u>
Total liabilities		\$ <u>996,459,020</u>
 <u>PRESENT AND PROSPECTIVE ASSETS</u>  		
Actuarial value of assets		\$ 525,849,582
Present value of future contributions		
Government and member normal contributions	173,802,946	
Unfunded accrued liability contributions	<u>296,806,492</u>	
Total prospective contributions		\$ 470,609,438
Total assets		\$ <u>996,459,020</u>



**SCHEDULE C**  
**Development of Actuarial Value of Assets**

Valuation date June 30:	2011	2012	2013	2014	2015	2016
A. Actuarial Value Beginning of Year	\$ 502,259,969	\$ 501,069,884				
B. Market Value End of Year	491,370,669	509,409,641				
C. Market Value Beginning of Year	421,629,959	491,370,669				
D. Cash Flow						
D1. Contributions	\$ 22,251,294	\$ 55,469,828				
D2. Other Revenue	54,292	137,955				
D3. Beginning of Year Market Value Adjustment	0	0				
D4. Benefit Payments	(40,242,987)	(44,267,378)				
D5. Administrative Expenses	(108,497)	(158,020)				
D6. Investment Expenses	(2,543,556)	(2,624,274)				
D7. Net	\$ (20,589,454)	\$ 8,558,111				
E. Investment Income						
E1. Market Total: B.-C.-D7.	\$ 90,330,164	\$ 9,480,861				
E2. Assumed Rate (Net of Expenses)	8.00%	8.00%				
E3. Amount for Immediate Recognition	35,664,954	42,545,564				
E4. Amount for Phased-In Recognition	54,665,210	(33,064,703)				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20 * E4.	\$ 10,933,042	\$ (6,612,941)	\$ -	\$ -	\$ -	\$ -
F2. First Prior Year	656,893	10,933,042	(6,612,941)	-	-	-
F3. Second Prior Year	(24,101,088)	656,893	10,933,042	(6,612,941)	-	-
F4. Third Prior Year	(7,199,883)	(24,101,088)	656,893	10,933,042	(6,612,941)	-
F5. Fourth Prior Year	3,445,451	(7,199,883)	(24,101,088)	656,893	10,933,042	(6,612,941)
F6. Total Recognized Investment Gain	\$ (16,265,585)	\$ (26,323,977)	\$ (19,124,094)	\$ 4,976,994	\$ 4,320,101	\$ (6,612,941)
G. Preliminary Actuarial Value End of Year A.+D6.+E3.+F6.+G	\$ 501,069,884	\$ 525,849,582				
H. Corridor						
H1. 80% of Market Value	\$ 393,096,535	\$ 407,527,713				
H2. 120% of Market Value	\$ 589,644,803	\$ 611,291,569				
I. Actuarial Value End of Year H. Not Less than H1. or Greater than H2	\$ 501,069,884	\$ 525,849,582				
J. Difference Between Market & Actuarial Values	\$ (9,699,215)	\$ (16,439,941)	\$ 2,684,156	\$ (2,292,838)	\$ (6,612,939)	\$ 2

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 5 consecutive years, actuarial value will become equal to market value.



**SCHEDULE D**

**SUMMARY OF RECEIPTS AND DISBURSEMENTS**

<u>Receipts for the Period</u>	
Contributions:	
Members	\$ 8,022,094
Employer /Other	<u>47,585,689</u>
Total	55,607,783
Investment Income	<u>6,856,588</u>
<b>TOTAL</b>	<b>\$ 62,464,371</b>
<u>Disbursements for the Period</u>	
Benefit Payments	44,267,378
Refunds to Members	0
Administrative Expense	<u>158,020</u>
<b>TOTAL</b>	<b>\$ 44,425,398</b>
<u>Excess of Receipts over Disbursements</u>	<u>\$ 18,038,973</u>
<u>Reconciliation of Asset Balances</u>	
Market Value of Assets as of July 1, 2011	\$ 491,370,669
Excess of Receipts over Disbursements	<u>18,038,973</u>
Market Value of Assets as of July 1, 2012	\$ 509,409,641
Beginning of Year Market Value Adjustment	0
Market Value of Assets as of July 1, 2010 including Adjustment	\$ 509,409,641
 Rate of Return on Market Value of Assets	 1.35%



**SCHEDULE E**

**OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS**

INVESTMENT RATE OF RETURN: 7.50% per year, compounded annually.

SALARY INCREASES: Representative values of the assumed annual rates of salary increases are as follows:

<u>Service</u>	<u>Wage Inflation</u>	<u>Merit Component</u>	<u>Total Rate</u>
0	4.00%	6.50%	10.50%
1	4.00	5.50	9.50
2	4.00	3.50	7.50
3-5	4.00	3.00	7.00
6-8	4.00	2.50	6.50
9-12	4.00	2.00	6.00
13-16	4.00	1.50	5.50
16-19	4.00	1.00	5.00
20 or more	4.00	0.00	4.00

SEPARATIONS FROM ACTIVE SERVICE: For death rates, the RP-2000 Combined Table projected to 2015 with scale AA was used. Representative values of the assumed annual rates of separation from active service are as follows:

<u>Age</u>	<u>Annual Rate of</u>		
	<u>Disability</u>	<u>Male</u>	<u>Female</u>
20	0.30%	0.03%	0.02%
25	0.30	0.03	0.02
30	0.30	0.04	0.02
35	0.60	0.07	0.04
40	1.00	0.10	0.06
45	2.00	0.12	0.09
50	4.00	0.16	0.13
55	5.00	0.27	0.24



Annual Rate of Termination			
<u>Service</u>	<u>Rate</u>	<u>Service</u>	<u>Rate</u>
0	1.91%	10	1.29%
1	1.85	11	1.23
2	1.79	12	1.17
3	1.73	13	1.08
4	1.67	14	1.00
5	1.61	15	0.94
6	1.55	16	0.88
7	1.47	17	0.82
8	1.41	18	0.76
9	1.35	19	0.70

SERVICE RETIREMENT: Representative annual rates of assumed service retirement are as follows:

<u>Service</u>	<u>Rate</u>
20	5.0%
21	6.0
22	7.0
23	8.0
24	9.0
25	10.0
26	12.0
27	14.0
28	15.0
29	20.0
30	100.0



**DEATHS AFTER RETIREMENT:** The RP-2000 Combined Mortality Table projected to 2015 using scale AA, with male mortality set forward 0 years and female mortality set forward 3 years is used for the period following service retirement and for beneficiaries of deceased members. For disabled lives, male mortality was assumed to be the RP-2000 table not projected with male mortality set forward 4 years. Female mortality was assumed to be consistent with rates issued by the IRS in Revenue Ruling 96-7 for use in determining current liability for disabled lives prior to January 1, 1995.

**OCCUPATIONAL VS. NON OCCUPATIONAL DEATH:** 20% of all deaths are assumed to be due to occupational causes.

**OCCUPATIONAL VS. NON OCCUPATIONAL DISABILITY:** 75% of disabilities are assumed to be due to occupational causes. For occupational disabilities the average benefit percentage is assumed to be 60.0%.

**PERCENT MARRIED:** 75% of employees who die before retirement are assumed to be married with the husband 3 years older than the wife. 85% of employees who die after retirement are assumed to be married with the husband 3 years older than the wife.

**ASSETS:** Actuarial value, as developed in Schedule C. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected actuarial value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected actuarial value. The actuarial value of assets cannot be more than 120% or less than 80% of the market value of assets.

**VALUATION METHOD:** Entry age normal actuarial cost method. See Schedule F for a brief description of this method.

**POST-RETIREMENT BENEFIT INCREASES:** 3% Annually



## **SCHEDULE F**

### **ACTUARIAL COST METHOD**

1. The valuation is prepared on the projected benefit basis, under which the present value, at the interest rate assumed to be earned in the future (currently 7.50%), of each member's expected benefits at retirement or death is determined, based on age, service and sex. The calculations take into account the probability of a member's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his terminating with a service, disability or survivor's benefit. The present value of the expected benefits payable on account of the active members is added to the present value of the expected future payments to retired members and beneficiaries to obtain the present value of all expected benefits payable from the Plan on account of the present group of members and beneficiaries.
2. The employer contributions required to support the benefits of the Plan are determined following a level funding approach and consist of a normal contribution and an accrued liability contribution.
3. The normal contribution is determined using the entry age normal actuarial cost method. Under this method, a calculation is made to determine the level percentage of payroll which, if applied for the average new member during the entire period of his anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf.
4. The unfunded accrued liability is determined by subtracting the present value of prospective employer normal contributions and member contributions, together with the current actuarial value of assets held, from the present value of expected benefits to be paid from the Plan.



**SCHEDULE G**

**SUMMARY OF MAIN PLAN PROVISIONS  
AS INTERPRETED FOR VALUATION PURPOSES**

Member	Sworn members of the Lexington-Fayette Urban County Government Division of Police and Division of Fire and Emergency Services.
Membership Service	Service rendered on or after the date of establishment of the fund or the fund of a city existing within the boundaries of the government immediately prior to the establishment of the urban-county government.
Total Service	Prior service, membership service, and service credit purchased by a member as provided in KRS 67A.402.
Average Salary	The highest average salary of the member for any three consecutive years of service.
Retirement Annuity	
Eligibility	Anytime after completion of 20 years of Total Service (including service purchased up to 4 years).
Benefit	Annuity is 2½% of Average Salary multiplied by years of Total Service. The minimum monthly benefit is \$1,250.  Upon the death of a retired member whose marriage was in effect at least six months before retirement or one year prior to death, the surviving spouse shall receive an annuity equal to 60% of the member's final annuity or final rate of pay, whichever is greater, unless the retired member elected an alternative actuarial equivalent form at the time of retirement of either a joint and 75% or and joint and 100% survivor payment form.
Occupational Disability Benefit	
Eligibility	No requirements.
Benefit	Annuity equal to a minimum of 60% of member's last rate of salary, increased above the 60% minimum by ½ the amount by which the member's percentage of disability exceeds 20%, but not greater than 75%. The member's percentage of disability shall be the average of the impairment rating determined by two physicians selected by the Board using the American Medical Association "Guide to the Evaluation of Permanent Impairment". If a member is eligible for a service retirement annuity and the amount of the service retirement annuity exceeds the amount of the disability benefit, then the member may elect to receive an additional service retirement annuity equal to this difference.



Upon the death of a retired member whose marriage was in effect at least six months before retirement or one year prior to death, the surviving spouse shall receive an annuity equal to 60% of the member's final annuity or final rate of pay, whichever is greater, unless the retired member elected an alternative actuarial equivalent form at the time of retirement of either a joint and 75% or and joint and 100% survivor payment form.

In addition, any minor children will receive benefits as provided under the occupational death benefit provisions.

#### Non-Occupational Disability Benefit

Eligibility

5 years of Total Service.

Benefit

2½% of Average Salary times years of Total Service subject to a minimum payment of 25% of Average Salary and a maximum payment of 75% of Average Salary.

Upon the death of a retired member whose marriage was in effect at least six months before retirement or one year prior to death, the surviving spouse shall receive an annuity equal to 60% of the member's final annuity or final rate of pay, whichever is greater, unless the retired member elected an alternative actuarial equivalent form at the time of retirement of either a joint and 75% or and joint and 100% survivor payment form.

In addition, any minor children will receive benefits provided under the non-occupational death benefit provisions.

#### Termination Benefit

If a member is terminated with less than 20 years of total service credit, he is entitled to a return of his accumulated contributions, without interest.

#### Occupational Death Benefit

Eligibility

No requirements.

Benefit

Surviving Spouse receives immediate annuity equal to 60% of the member's last rate of salary until death or remarriage.

In addition, 10% of the member's last rate of salary is payable for each minor child until each child attains age 18 (age 23 if involved in educational activities). Maximum total income is 75% of final rate of salary.

If no surviving spouse or upon remarriage, then minor children will receive a benefit based on the following schedule:



One minor child	50% of Salary
Two minor children	65% of Salary
Three of more minor children	75% of Salary

#### Non-Occupational Death Benefit

**Eligibility** 5 Years of Total Service, married 6 months prior to death.

**Benefit** Surviving spouse received immediate annuity equal to 1½% of the Average Salary multiplied by years of Total Service, until death or remarriage. The minimum benefit is 15% of Average Salary. In addition, this annuity is increased by ½ for the first minor child and by ¼ for each additional child. Maximum total income is 75% of Average Salary.

If no surviving spouse or upon remarriage, then minor children will receive a benefit based on the following schedule:

One minor child	50% of Salary
Two minor children	65% of Salary
Three of more minor children	75% of Salary

#### Member Contributions

Each active member contributes 11% of current salary.

#### Employer Contributions

The government shall make current contributions to the fund on an actuarially funded basis. Such contributions shall be equal to the sum of:

- (1) An amount resulting from the application of a rate percent of salaries of active members determined under the entry age normal cost funding method (fixed by the board every two years), and
- (2) An amount resulting from the application of a rate percent of salaries of active members which will provide each year regular interest on any remaining liability for prior service.

In any event, the total contribution of the government shall be at least 17% of salaries of active members participating in the fund.

#### Post Retirement Cost-of-Living Increases

Each retired member will have his pension increased each year by an amount, to be determined by the board, of not less than 2.00% nor more than 5.00%, compounded annually. This increase shall also apply to beneficiaries of deceased members.



**SCHEDULE H**

**TABLE 1**

**DISTRIBUTION OF ACTIVE MEMBERS BY AGE AND SERVICE GROUPS**

**AS OF JULY 1, 2012**

Attained Age	Completed Years of Service										
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	> 40	Total
Under 25 Avg. Pay	5 31,344	1 30,241									6 31,160
25 to 29 Avg. Pay	19 33,180	39 37,524	17 46,227								75 38,396
30 to 34 Avg. Pay	13 32,582	59 37,085	124 45,104	21 54,539							217 43,087
35 to 39 Avg. Pay	4 35,034	25 36,440	92 45,586	119 56,252	15 66,949						255 50,758
40 to 44 Avg. Pay		12 36,328	38 46,119	81 56,332	93 66,922	12 74,013					236 58,743
45 to 49 Avg. Pay		1 33,305	20 47,834	20 55,904	50 65,791	41 79,359	9 84,565				141 66,755
50 to 54 Avg. Pay			1 52,814	9 55,982	14 64,156	15 71,834	21 83,411				60 71,400
55 to 59 Avg. Pay			2 39,566	1 57,873	4 72,746	4 72,581	5 82,995	4 76,948			20 72,054
60 to 64 Avg. Pay			1 51,024	1 56,215	1 51,042			1 77,031			4 58,828
65 to 69 Avg. Pay											
70 & up Avg. Pay											
Total Avg. Pay	41 32,948	137 36,948	295 45,644	252 56,104	177 66,428	72 76,524	35 83,648	5 76,964			1,014 53,842



**TABLE 2**  
**NUMBER OF RETIRED MEMBERS AND BENEFICIARIES**  
**AND THEIR BENEFITS BY AGE**

<u>Attained Age</u>	<u>Number of Members</u>	<u>Total Annual Benefits</u>	<u>Average Annual Benefit</u>
50 & Under	153	\$ 5,977,376	\$ 39,068
51 – 55	115	5,740,686	49,919
56 – 60	120	6,213,191	51,777
61 – 65	197	8,791,735	44,628
66 – 70	154	6,547,664	42,517
71 – 75	125	5,080,495	40,644
76 – 80	73	2,762,631	37,844
Over 80	<u>60</u>	<u>1,847,220</u>	<u>30,787</u>
Total	997	\$ 42,960,999	\$ 43,090