Employees Retirement System of the City of St. Louis

Actuarial Valuation as of October 1, 2010

Produced by Cheiron

March 2011

CHEIRON Classic Values, Innovative Advice

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LETTER OF TRANSMITTAL

March 11, 2011

Board of Pension Trustees
Employees Retirement System of the City of St. Louis
1114 Market Street, Suite 900
St. Louis, Missouri 63101

Dear Members of the Board:

At your request, we have conducted an actuarial valuation of the Employees Retirement System of the City of St. Louis as of October 1, 2010. The valuation is organized as follows:

- In Section I **Board Summary,** we describe the purpose of an actuarial valuation and summarize the key results found in this valuation.

- The **Main Body** of the report presents details on the System's:

  - Section II - Assets
  - Section III - Liabilities
  - Section IV - Contributions
  - Section V - Required Accounting Disclosures (GASB)

- In the **Appendices,** we conclude our report with detailed information describing the System's membership (Appendix A), actuarial assumptions and methods employed (Appendix B), and a summary of pertinent plan provisions (Appendix C).

The results of this report rely on future System experience conforming to the underlying assumptions. To the extent that actual System experience deviates from the underlying assumptions, the results would vary accordingly.

In preparing our report, we relied without audit, on information supplied by the Employees Retirement System of the City of St. Louis staff. This information includes, but is not limited to, plan provisions, employee data, and financial information. In addition, we certify that, to the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice as set out by the Actuarial Standards Board.

Finally, as Members of the American Academy of Actuaries, we certify that we meet the Qualification Standards to render the opinions contained in this report.

Sincerely,
Cheiron

Stephen McElhaney, FSA, MAAA
Principal Consulting Actuary

Mike Noble, FSA, MAAA
Consulting Actuary

SECTION I
BOARD SUMMARY

The primary purpose of the actuarial valuation and this report is to measure, describe and identify as of the valuation date:

- The financial condition of the System,
- Past and expected trends in the financial progress of the System,
- The City's contributions for Fiscal Year ending 2011, and
- Information required by the Governmental Accounting Standards Board (GASB).

In the balance of this Board Summary we present (A) the basis upon which this year's valuation was completed, (B) the key findings of this valuation including a summary of all key financial results, (C) an examination of the historical trends, and (D) the projected financial outlook for the System.

A. Valuation Basis

This October 1, 2010 valuation represents Cheiron's first valuation performed for the Employees Retirement System of the City of St. Louis. There were no changes since the October 1, 2009 valuation in the actuarial assumptions used; however, there were several changes in the methodology used to project cost-of-living adjustments and final average salary from that used by the prior actuary. The System also froze sick leave conversions to Creditable Service and/or Final Average Compensation based on sick leave accrued as of July 17, 2010.

B. Key Findings of this Valuation

The key results of the October 1, 2010 actuarial valuation are as follows:

- The actuarially determined City contribution rate as a percent of total compensation increased from 11.85% as of October 1, 2009 to 12.69% as of October 1, 2010.
- The unfunded actuarial liability for the Employees Retirement System (ERS) increased from $127 million on October 1, 2009 to $149 million on October 1, 2010.
- The System's funding ratio, the ratio of actuarial asset value over liabilities decreased from 84.0% as of October 1, 2009 to 81.8% as of October 1, 2010.
- The primary factor in the decline of the System's funded status was an overall experience loss of $22 million.
    - During the year ended September 30, 2010, the System's assets earned 10.11% on a market value basis. However, due to the asset smoothing technique which recognizes only a portion of gains or losses, the return on the actuarial asset value was 3.42% (as compared to 8.00% assumed). This resulted in an actuarial loss on investments of $30 million.

SECTION I
BOARD SUMMARY

- On the liability side, the System experienced a total gain of $8 million. The majority of this gain ($14 million) was due to salary increases less than expected and participants in receipt of payments not receiving a cost-of-living adjustment (COLA). There was also a liability loss of $6 million due to reflecting actual sick leave account balances instead of using an assumed accrual rate per year.

Following is Table I-1 which summarizes all the key results of the valuation with respect to the System's membership, assets and liabilities, and contributions. The results are presented and compared for both the current and prior plan year.

TABLE I-1
Employees Retirement System of the City of St. Louis
Summary of Principal Results

Valuation as of:	October 1, 2009	October 1, 2010	% Change
Participant Counts			
Active Participants*	5,641	5,545	(1.70%)
Disabled Participants	184	183	(0.54%)
Retirees and Beneficiaries	3,734	3,818	2.25%
Terminated Vested Participants	2,517	2,369	(5.88%)
Total	**12,076**	**11,915**	**(1.33%)**
Annual Salaries of Active Members	$ 240,409,390	$ 232,451,661	(3.31%)
Annual Retirement Allowances for Retired Members and Beneficiaries	$ 38,607,545	$ 40,586,809	5.13%
Assets and Liabilities			
Actuarial Liability (AL)	$ 794,686,379	$ 820,669,641	3.27%
Actuarial Value of Assets (AVA)	667,667,205	671,608,995	0.59%
Unfunded Actuarial Liability (UAL)	$ 127,019,174	$ 149,060,646	17.35%
Funded Ratio	84.0%	81.8%	
Contributions as a Percentage of Payroll	**Fiscal Year 2010**	**Fiscal Year 2011**	
Normal Cost Rate	7.32%	7.20%	
Unfunded Actuarial Liability Rate	4.53%	5.49%	
Total City Contribution Rate	11.85%	12.69%	
Annual Required Contribution (GASB)	$ 28,488,513	$ 29,498,116	3.54%

* Includes 416 DROP participants as of October 1, 2009 and 451 DROP participants as of October 1, 2010.

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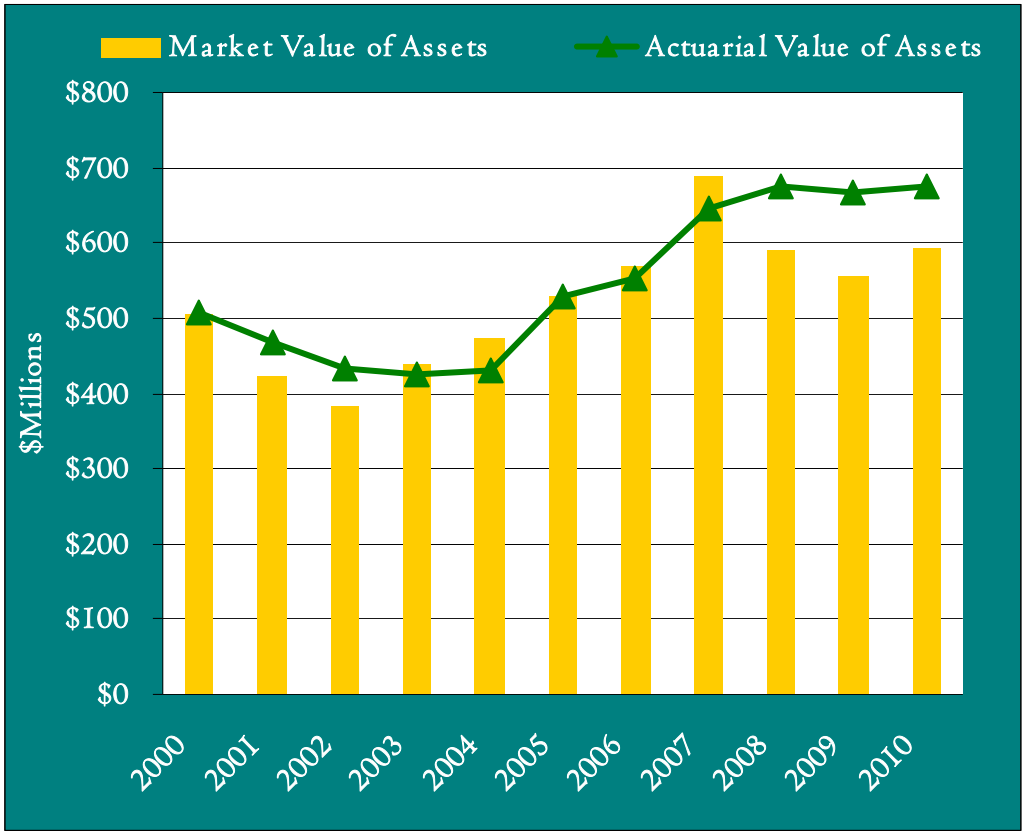
BOARD SUMMARY

C. Historical Trends

Despite the fact that for most retirement systems the greatest attention is given to the current valuation results and in particular the size of the current unfunded actuarial liability and the City's contribution, it is important to remember that each valuation is merely a snapshot in the long-term progress of a pension fund. It is more important to judge a current year's valuation result relative to historical trends, as well as trends expected into the future.

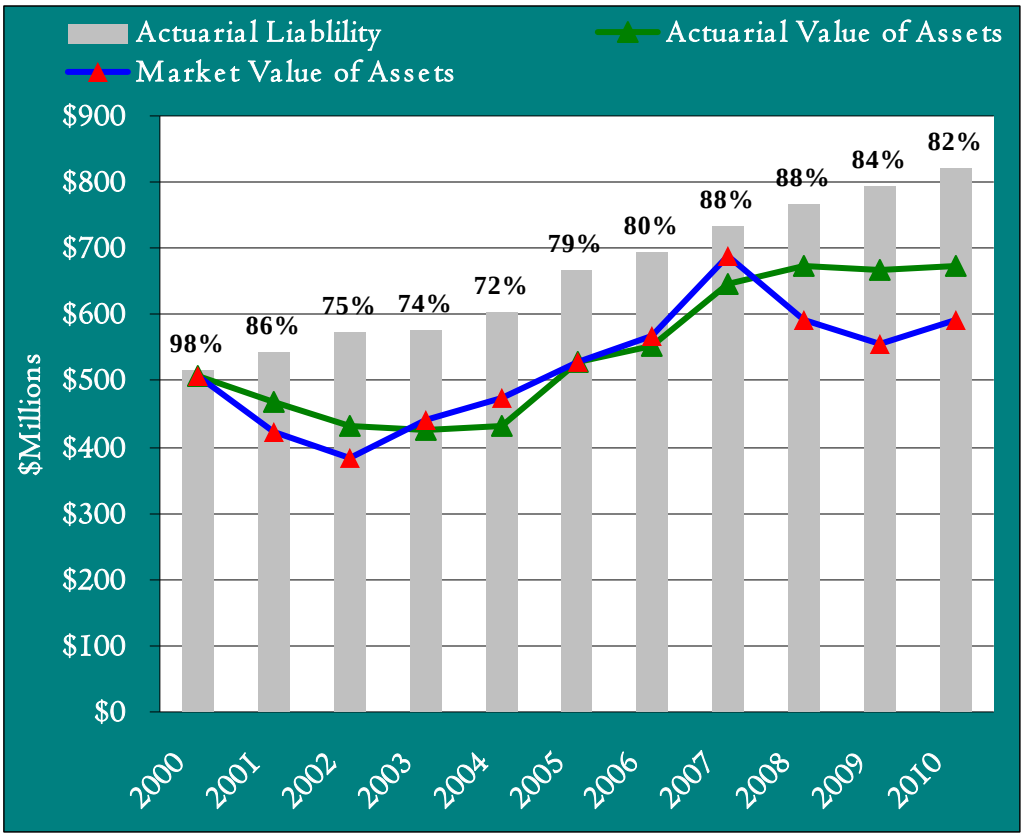
System Assets



There was a market value of assets (MVA) gain on investments in 2010, returning 10.11%, increasing from $556 million to $593 million. With the asset smoothing method in place, the actuarial value of assets has tracked a slightly smoother path through the volatility of the market value of assets. As can be seen in the graph, the actuarial value of assets (AVA) also increased from 2009 to 2010 returning 3.42% due to recent market gains.

SECTION I
BOARD SUMMARY

Assets and Liabilities

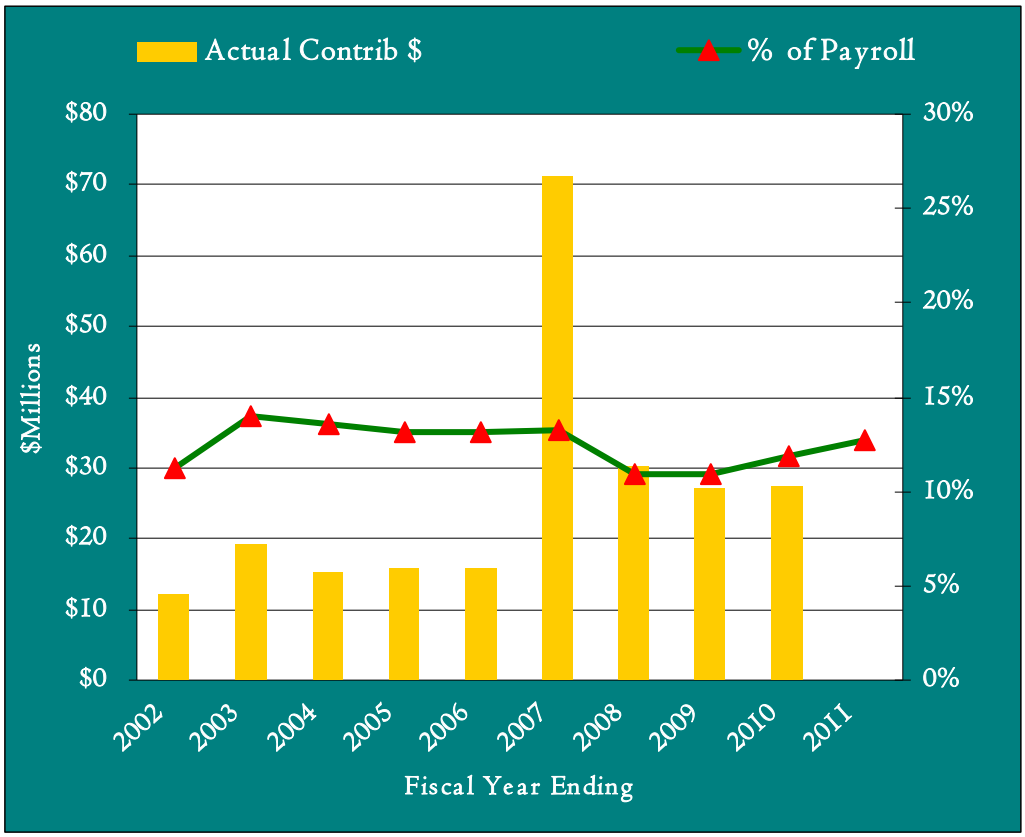


The above chart compares the actuarial value of assets to the actuarial liabilities and shows the funded ratio, which is a comparison of the Actuarial Value of Assets and Actuarial Liability. This chart shows that the funded ratio has decreased for the last two valuations primarily due to continued recognition of the 2008/2009 market losses. The funded ratio had increased each year during the period from 2004 to 2007.

SECTION I
BOARD SUMMARY

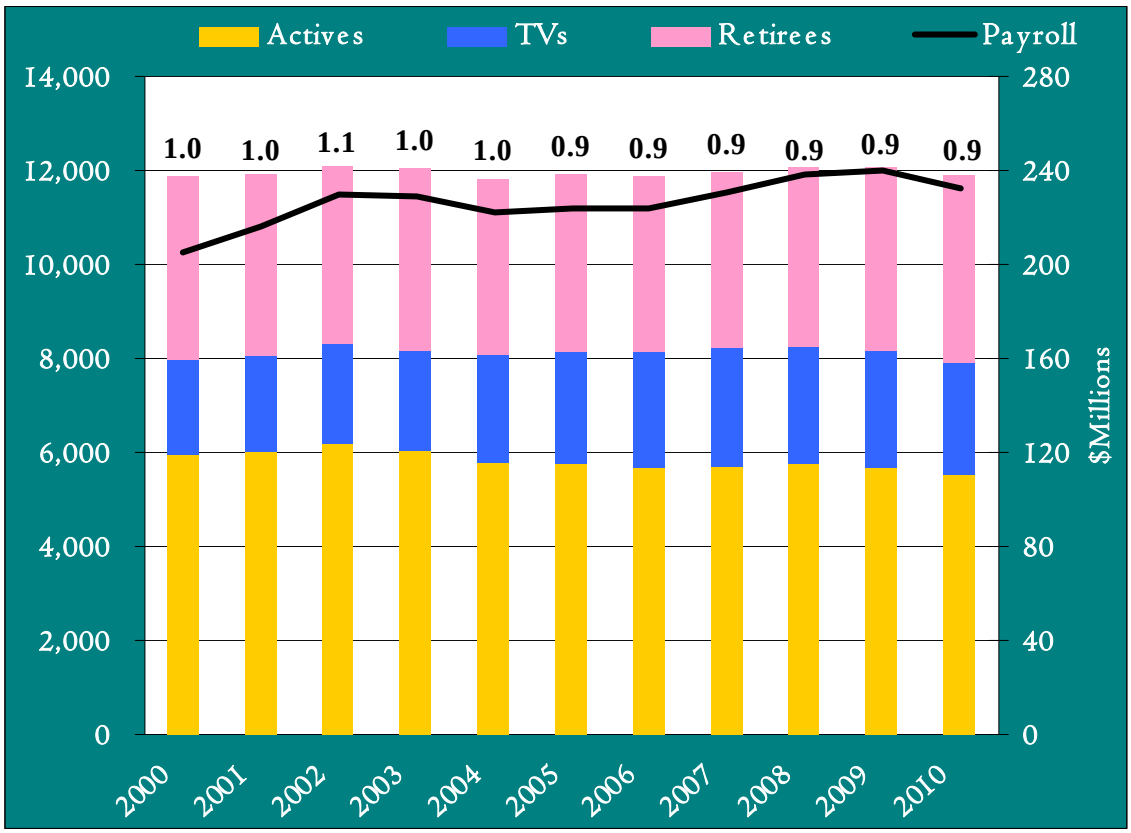
Contribution Rates

The stacked bars in this graph show the dollar amount of contributions made by the System (depicted on the left hand scale) since Fiscal Year Ending 2002. The green line shows the City's actuarial contribution rate as a percent of payroll (depicted on the right hand scale). Members do not make contributions to the System. The actuarial contribution rate increased from 11.85% of payroll in 2009 to 12.69% of payroll in 2010 due to the actuarial loss on plan assets.



SECTION I
BOARD SUMMARY

Participant Trends



The above chart provides a measure for the maturity in the System, by comparing the ratio of active members to inactive members (retirees and terminated-vesteds). The active-to-inactive ratio has declined slightly since 2000 from 1.0 active supporting each inactive member to 0.9 actives supporting each inactive member today.

D. Future Expected Financial Trends

The analysis of projected financial trends is perhaps the most important component of this valuation. In this Section, we present the implications of the October 1, 2010 valuation results in terms of (1) the projected City's contributions, and (2) projected System's funded status (ratio of assets over liabilities). For each projection set we assume three future different investment return scenarios: baseline returns of 8.00%, optimistic returns of 9.50%, and pessimistic returns of 6.50%. The projections assume there will be no future gains or losses on the liability.

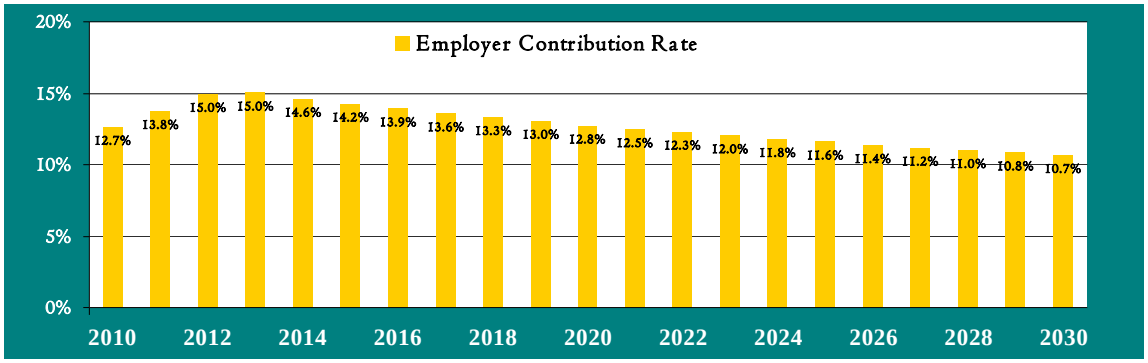
SECTION I
BOARD SUMMARY

1. Contribution Rate Projections

The first set of charts show the City's projected actuarially determined contribution rates (gold bars). The years shown in the charts are plan years beginning October 1st.

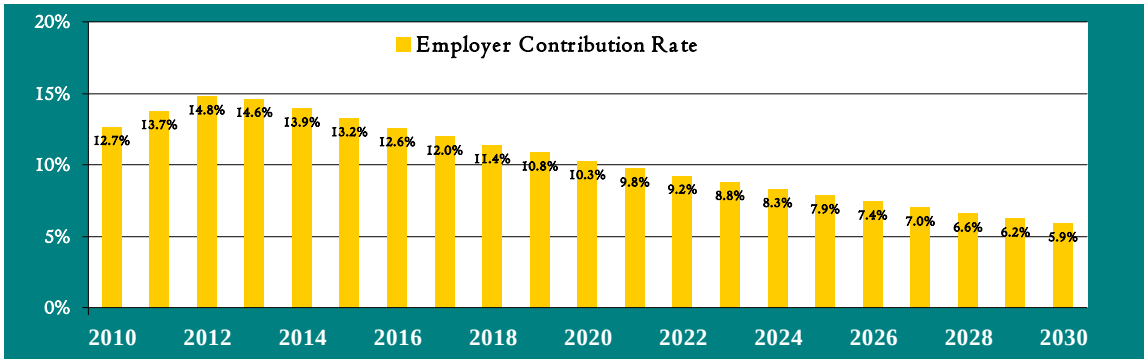
Baseline returns of 8.00%

The chart below shows that the actuarially determined contribution rate will increase from 12.7% to 15.0% of pay by 2012 due to the continued phase-in of prior investment losses. After that point, it will begin decreasing reaching a level of 10.7% of pay by 2030. These projections assume that the System earns the assumed investment rate of 8.00% on market value.



Optimistic returns of 9.50%

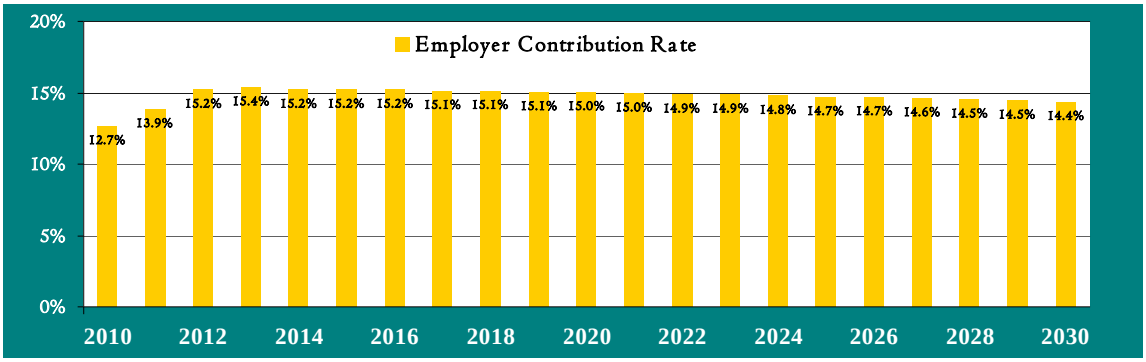
If the System earns 1.50% greater than the assumed rate in each year of the projection, the actuarially determined contribution rate will decrease to about 5.9% in 20 years, after an increase in the rate over the next few years.



SECTION I
BOARD SUMMARY

Pessimistic returns 6.50%

If the System earns 1.50% less than the assumed rate in each year of the projection, the actuarially determined contribution rate after 20 years will be 14.4%.

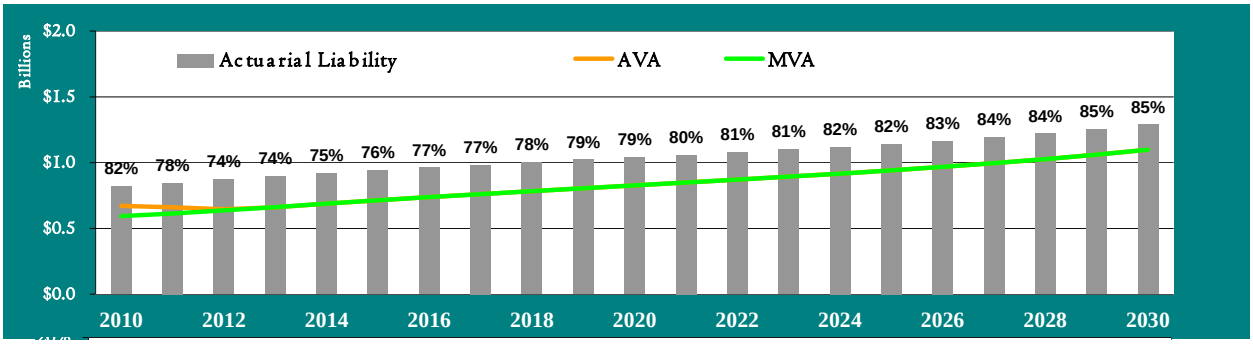


2. Asset and Liability Projections

This next set of projection charts compare the market value of assets (green line) and the actuarial or smoothed value of assets (gold line) to the System's actuarial liabilities (gray bars). In addition at the top of each chart, we show the System's funded ratio (ratio of actuarial value of assets to actuarial liabilities). The projections assume that the actuarially determined contributions, as shown in the previous charts, are made each year. The years shown in the chart signify the valuation date as of October 1st.

Baseline 8.00% return

Assuming that the System earns the assumed investment rate of 8.00%, the funded ratio will decrease to 74% over the next three years before steadily increasing for the remainder of the 20 year period.



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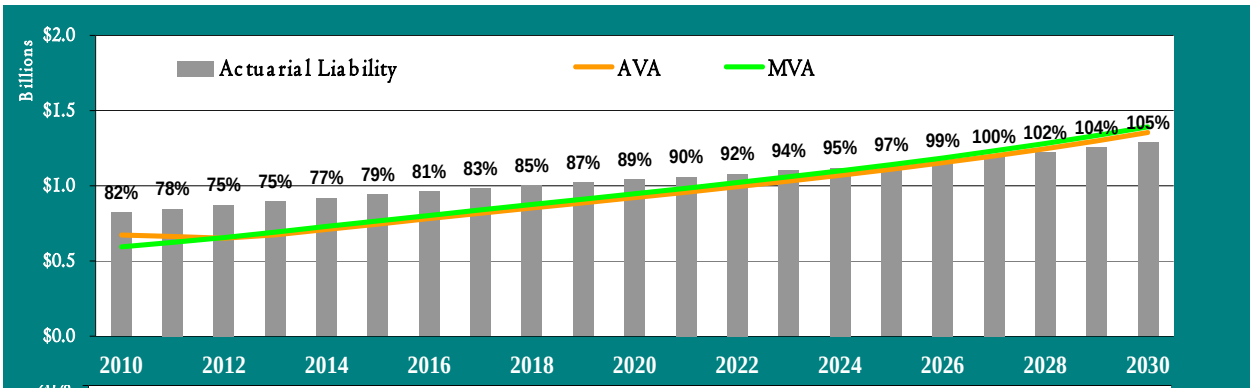
BOARD SUMMARY

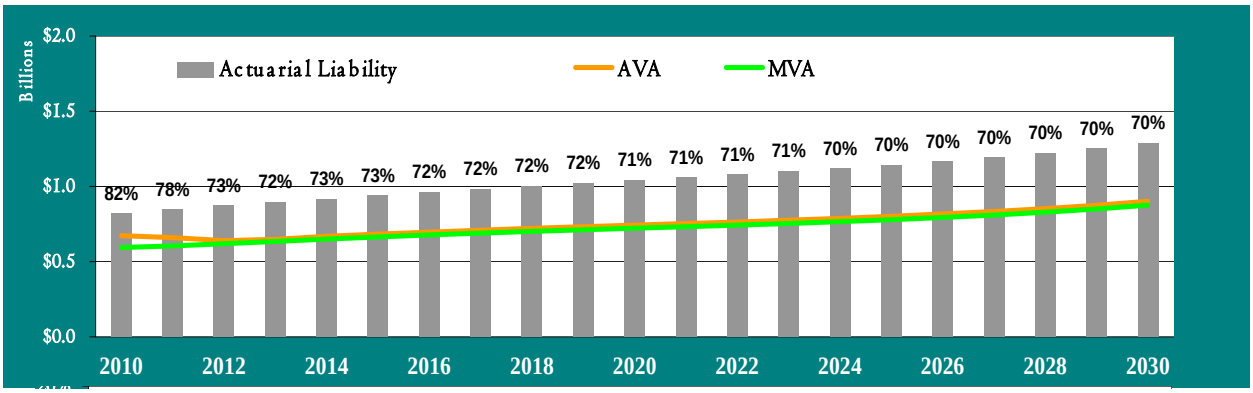
Optimistic Returns of 9.50%

If the System earns 1.50% greater than the assumed rate of return in each year of the projection, the funded ratio will increase to 105% by 2030.



Pessimistic Returns of 6.50%

If the System earns 1.50% less than the assumed rate of return in each year of the projection, the funded ratio will decrease to 70% by the end of the 20 year period.



SECTION II
ASSETS

Pension Plan assets play a key role in the financial operation of the System and in the decisions the Trustees may make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely impact benefit levels, City contributions, and the ultimate security of participants' benefits.

In this section, we present detailed information on the System assets including:

- **Disclosure** of the System assets as of October 1, 2009 and October 1, 2010;
- Statement of the **changes** in market values during the year;
- Development of the **Actuarial Value of Assets**;
- An assessment of **investment performance**; and
- A projection of the System's expected **cash flows** for the next ten years.

Disclosure

There are two types of asset values disclosed in this valuation, the market value of assets and the actuarial value of assets. The market value represents a "snap-shot" or "cash-out" value which provides the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with corresponding swings in the marketplace. As a result, market values are usually not as suitable for long-range planning as are the actuarial value of assets which reflect smoothing of annual investment returns.

Table II-1 below discloses and compares each asset value as of September 30, 2009 and 2010.

TABLE II-1
Statement of Assets at Market Value as of September 30,

Assets	2009	2010	% Change
Cash	$ 214,803	$ 120,963	(43.69%)
Receivables	1,105,416	1,132,982	2.49%
Temporary cash investments	13,886,129	11,571,742	(16.67%)
Bonds	81,990,427	87,864,936	7.16%
Common stock	217,761,831	233,499,672	7.23%
Managed international equity funds	134,651,722	148,015,438	9.92%
Real estate funds	47,906,951	50,650,587	5.73%
Domestic bond funds	49,290,491	53,803,531	9.16%
Managed hedge fund of funds	10,026,922	6,901,986	(31.17%)
Securities lending collateral	0	0	0.00%
Securities lending collateral liability	0	0	0.00%
Payable under forward foreign currency exchange contracts	0	0	0.00%
Accounts Payable	(445,355)	(454,741)	2.11%
Market Value of Assets	**$** 556,389,337	**$** 593,107,096	6.60%

SECTION II
ASSETS

Changes in Market Value

Table II-2 below shows the components of change between the market value of assets as of September 30, 2009 and September 30, 2010.

TABLE II-2
Changes in Market Values

Value of Assets – September 30, 2009		**$** 556,389,337
Additions		
Payments from Members	$ 281,933	
Employer Contributions	27,116,763	
Interest and Dividends	8,882,035	
Investment Return	49,415,860	
Total Additions	**$** 85,696,591	
Deductions		
Investment Expenses	$ (2,354,496)	
Benefit Payments	(45,971,570)	
Administrative Expenses	(652,766)	
Total Deductions	**$** (48,978,832)	
Value of Assets – September 30, 2010		**$** 593,107,096

SECTION II
ASSETS

Actuarial Value of Assets

The next table, Table II-3 shows how the actuarial value of assets is developed. The actuarial value of assets method was initialized at market value as of October 1, 2005.

The actuarial value of assets represents a "smoothed" value developed by the actuary to reduce, or eliminate, erratic results which could develop from short-term fluctuations in the market value of assets. For this System, the actuarial value has been calculated by taking the market value of assets less 80% of the investment gain (loss) during the preceding year, less 60% of the investment gain (loss) during the second preceding year, less 40% of the investment gain (loss) during the third preceding year, and less 20% of the investment gain (loss) in the fourth preceding year. If the actuarial value of assets is less than 80% or more than 120% of the market value, an adjustment is made to the actuarial value to bring the value within this corridor. The tables below illustrate the calculation of actuarial value of assets for the October 1, 2010 valuation.

Table II-3
Development of Actuarial Value of Assets

Market value of assets at September 30, 2009		$ 556,389,337
Employer Contributions		27,116,763
Payments from Members		281,933
Benefit payments		(45,971,570)
Expected return at 8.00%		43,782,524
Expected Value at September 30, 2010		$ 581,598,987
Actual Value at September 30, 2010		593,107,096
Investment (gain)/ loss		$ (11,508,109)
	Total Gain/(Loss)	**Excluded Portion**
Exclude 0% of gain/(loss)	$ 17,361,094	$ 0
Exclude 20% of gain/(loss)	38,933,065	7,786,613
Exclude 40% of gain/(loss)	(141,799,294)	(56,719,718)
Exclude 60% of 2009 gain/(loss)	(64,625,469)	(38,775,281)
Exclude 80% of 2010 gain/(loss)	11,508,109	9,206,487
Total excluded gain/(loss) for AVA calculation		$ (78,501,899)
Market value of assets at September 30, 2010		$ 593,107,096
Total gain/(loss) excluded		(78,501,899)
Actuarial value of assets at September 30, 2010		$ 671,608,995

SECTION II
ASSETS

Investment Performance

The market value of assets (MVA) returned 10.11% during plan year ending September 30, 2010, which is more than the assumed 8.00% return. A return of 3.42% was experienced on the actuarial value of assets (AVA), resulting in an actuarial loss for the year. Below we show additional historical returns.

TABLE II-4a
Historical Returns

	MVA	AVA
2006	11.35%	8.67%
2007	14.65%	10.17%
2008	-12.76%	5.85%
2009	-3.09%	1.52%
2010	10.11%	3.42%

Projection of System's Future Cash Flows

TABLE II-4b
Projection of System's Expected Cash Flows

Year Beginning October 1,	Benefit Payments	Contributions	Net Cash Flow
2010	53,798,084	29,498,069	(24,300,015)
2011	56,090,364	33,175,776	(22,914,588)
2012	59,361,948	37,300,535	(22,061,413)
2013	62,665,177	38,679,109	(23,986,068)
2014	65,725,999	38,875,998	(26,850,001)
2015	68,656,729	39,314,694	(29,342,035)
2016	71,554,324	39,778,101	(31,776,223)
2017	74,693,005	40,266,989	(34,426,016)
2018	77,103,391	40,782,156	(36,321,235)
2019	79,774,173	41,324,428	(38,449,745)

Expected contributions include Employer Contributions assuming that all contribution rates will remain level and that payroll will increase at the actuarially assumed rate of 3.5% per year. Expected benefit payments are projected for the closed group valued at October 1, 2010. Projecting any farther than ten years using a closed-group would not yield reliable predictions due to the omission of new hires.

SECTION III
LIABILITIES

In this section, we present detailed information on the System liabilities including:

- **Disclosure** of the System liabilities as of October 1, 2009 and October 1, 2010, and
- Statement of **changes** in these liabilities during the year.

Disclosure

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the people ultimately using the figures and the purpose for which they are using them.

- **Present Value of All Future Benefits:** Used for measuring all future System obligations, represents the amount of money needed today to fully pay off all benefits of the System both earned as of the valuation date and those to be earned in the future by current plan participants, under the current plan provisions.

- **Actuarial Liability:** Calculated as of valuation date as the present value of benefits allocated to service prior to that date.

Table III-1, which follows, discloses each of these liabilities for the current and prior valuations. With respect to each disclosure, a subtraction of the appropriate value of plan assets yields, for each respective type, a **net surplus** or an **unfunded liability**.

TABLE III-1
Liabilities/Net (Surplus)/Unfunded

	October 1, 2009	October 1, 2010
Present Value of Future Benefits		
Active Participant Benefits	$ 511,942,139	$ 514,843,972
Retiree and Inactive Benefits	403,205,014	419,717,802
Present Value of Future Benefits (PVB)	**$ 915,147,153**	**$ 934,561,774**
Actuarial Liability		
Active Participant Benefits	$ 391,481,365	$ 400,951,838
Retiree and Inactive Benefits	403,205,014	419,717,802
Actuarial Liability (AL)	**794,686,379**	**820,669,641**
Actuarial Value of Assets (AVA)	667,667,205	671,608,995
Net (Surplus)/Unfunded (AL – AVA)	**$ 127,019,174**	**$ 149,060,646**

SECTION III
LIABILITIES

Changes in Liabilities

Each of the Liabilities disclosed in the prior table are expected to change at each valuation. The components of that change, depending upon which liability is analyzed, can include:

- New hires since the last valuation
- Benefits accrued since the last valuation
- System amendments increasing benefits
- Passage of time which adds interest to the prior liability
- Benefits paid to retirees since the last valuation
- Participants retiring, terminating, or dying at rates different than expected
- A change in actuarial or investment assumptions
- A change in the actuarial funding method

Unfunded liabilities will change because of all of the above, and also due to changes in plan assets resulting from:

- Employer contributions different than expected
- Investment earnings different than expected
- A change in the method used to measure plan assets

In each valuation, we report on those elements of change which are of particular significance, potentially affecting the long-term financial outlook of the System. Below, we present key changes in liabilities since the last valuation.

In the table that follows, we show the components of change in the actuarial liability between October 1, 2009 and October 1, 2010.

TABLE III-2

	Actuarial Liability
Liabilities October 1, 2009	$ 794,686,379
Liabilities October 1, 2010	820,669,641
Liability Increase (Decrease)	25,983,262
Change Due to:	
Plan Amendments	0
Assumption Changes	3,960,992
Experience (Gain)/Loss	(12,023,758)
Benefits Accumulated and Other Sources	34,046,028

SECTION III
LIABILITIES

In addition, we breakdown the change in actuarial liability further by showing the total actuarial (gain)/loss by source, as shown in Table III-3 below.

TABLE III-3
(Gain)/Loss by Source as of October 1, 2010

Inactive participant mortality	$	(4,663,077)
Salary increase less than expected for continuing actives		(5,825,111)
Continuing inactives not receiving COLA		(8,166,405)
Data composition and miscellaneous changes		6,630,835
Experience (Gain)/Loss	**$**	(12,023,758)
Reflecting actual sick leave accounts		6,288,828
Change in actuarial methods for salary and COLA timing		(2,327,836)
Total (Gain)/Loss	**$**	(8,062,766)

SECTION IV
CONTRIBUTIONS

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level (if any) of contributions is needed to properly maintain the funding status of the System. Typically, the actuarial process will use a funding technique that will result in a pattern of contributions that are both stable and predictable.

For this System, the funding method employed is the **Projected Unit Credit Actuarial Cost Method**. The objective under this method is to allocate the total pension benefit to which each participant is expected to become entitled at retirement to the participant's past and future service. This allocation is accomplished by applying the plan's accrual formula to projected final salary at retirement. The difference between the Projected Unit Credit actuarial liability and the actuarial value of assets is the unfunded actuarial liability.

The unfunded actuarial liability is amortized under over a 30-year period as a level dollar amount for all years. The amortization payment is recalculated each year to reflect the entire unfunded actuarial liability as of the valuation date.

Table IV-1 below presents and compares the employer contribution rates for the System for this valuation and the prior one.

TABLE IV-1
Employer Contribution Rate

	Fiscal Year Ending 2010	Fiscal Year Ending 2011
Projected Unit Credit Normal Cost Rate	7.32%	7.20%
Amortization Payment	4.53%	5.49%
Actuarially Determined Contribution	11.85%	12.69%

The Unfunded Actuarial Liability is reamortized each year of a 30 year period. As of October 1, 2010, the Unfunded Actuarial Liability is $149,060,646. This results in an amortization payment of $12,259,884. The Unfunded Actuarial liability as of October 1, 2009 was $127,019,174 with an amortization payment of $10,447,025

SECTION V
ACCOUNTING STATEMENT INFORMATION

Statement No. 25 of the Governmental Accounting Standards Board (GASB) establishes standards for disclosure of pension information by public employee retirement systems (PERS) and governmental employers in notes to financial statements and supplementary information.

The GASB-25 actuarial liability is the same as the actuarial liability amount calculated for funding purposes.

The actuarial liability (GASB-25) is determined assuming that the System is on-going and participants continue to terminate employment, retire, etc., in accordance with the actuarial assumptions. Liabilities are discounted at the assumed valuation interest rate of 8.00% per annum.

GASB Statement No. 25 requires the actuarial liability be compared with the actuarial value of assets for funding purposes. The relevant amounts as of October 1, 2010 are exhibited in Table V-1.

Tables V-2 through V-4 are exhibits to be used with the CAFR report. Table V-2 is the Note to Required Supplementary Information, Table V-3 is a history of gains and losses in actuarial liability, and Table V-4 is the Solvency Test which shows the portion of actuarial liability covered by assets.

Finally, Tables V-5 and V-6 are additional GASB supplemental exhibits. Table V-5 shows historical GASB Annual Required Contribution information, compared to what the City actually contributed. Table V-6 shows historical unfunded actuarial liability (UAL) information, funding ratios, and the UAL as a percent of payroll.

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-1
Accounting Statement Information

	October 1, 2009	October 1, 2010
GASB No. 25 Basis		
1. Actuarial Liabilities for retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	$ 403,205,014	$ 419,717,802
2. Actuarial Liabilities for current employees	391,481,365	400,951,838
3. Total Actuarial Liability (1 + 2)	$ 794,686,379	$ 820,669,641
4. Net Actuarial Assets available for benefits	667,667,205	671,608,995
5. Unfunded Actuarial Liability (3 – 4)	$ 127,019,174	$ 149,060,646

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-2
NOTE TO REQUIRED SUPPLEMENTARY INFORMATION

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest actuarial valuation follows.

Valuation date	October 1, 2010
Actuarial cost method	Projected Unit Credit
Amortization method	Level dollar open amortization period
Remaining amortization period for the UAL	30 years
Asset valuation method	Expected Value Method
Actuarial assumptions:	
Investment rate of return	8.00%
Projected salary increases	Varies by age from 3.50% to 7.0174%
Cost-of-living adjustments	3.125% simple with a 25% lifetime cap
Inflation	3.125%

The actuarial assumptions used have been based upon recommendations by the actuary and adopted by the System's Board of Trustees.

The rate of employer contributions to the System is composed of the normal cost and an amortization of the unfunded actuarial liability. The normal cost is a level percent of payroll cost which will pay for projected benefits at retirement for the average plan participant. The actuarial liability is that portion of the present value of projected benefits that will not be paid by future employer normal costs. The difference between this liability and the actuarial value of assets as of the same date is the unfunded actuarial liability.

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-3
ANALYSIS OF FINANCIAL EXPERIENCE
Gain and Loss in Unfunded Actuarial Liability During Years Ended September 30 Resulting from Differences Between Assumed Experience and Actual Experience

Type of Activity	*Gain (or Loss) for Year ending September 30,* 2010
Investment Income	$ (30,170,089)
Combined Liability Experience	12,023,758
Gain (or Loss) During Year from Financial Experience	$ (18,146,331)
Non-Recurring Gain (or Loss) Items	(3,960,992)
Composite Gain (or Loss) During Year	$ (22,107,323)

Table V-4
SOLVENCY TEST[1]
Aggregate Actuarial Liabilities for

Valuation Date October 1	Active Member Contributions (1)	Retirees & Beneficiaries (2)	Active Member Employer Financed Contributions (3)	Actuarial Value of Reported Assets	Portion of Actuarial Liabilities Covered by Reported Assets (1)	(2)	(3)
2010	0	419,717,802	400,951,839	671,608,995	100%	100%	63%

[1] We will build to the required 10 years of disclosure information.

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-5
Supplementary Information Required by GASB – Schedule of City Contributions

Plan Year Ended September 30	Annual Required Contributions	Actual Contributions	Percentage Contributed
2001	$17,492,110	$2,768,207	15.8%
2002	$24,269,937	$12,106,532	49.9%
2003	$32,186,050	$19,115,679	59.4%
2004	$30,926,604	$15,158,997	49.0%
2005	$29,243,453	$15,752,497	53.9%
2006	$29,478,032	$15,756,456	53.5%
2007	$29,599,091	$71,301,428	240.9%
2008	$25,297,801	$30,350,011	120.0%
2009	$26,072,575	$27,252,035	104.5%
2010	$28,498,534	$27,116,763	95.2%
2011	$29,498,116	--	--

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-6
Supplementary Information Required by GASB – Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Liability (b)	Unfunded Actuarial Liability (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	Percentage of Covered Payroll* [(b) - (a)] / (c)
10/1/2000	$507,655,329	$515,673,757	$8,018,428	98.45%	$204,696,581	3.92%
10/1/2001	$466,630,792	$542,547,374	$75,916,582	86.01%	$216,527,124	35.06%
10/1/2002	$432,590,313	$574,817,702	$142,227,389	75.26%	$230,184,836	61.79%
10/1/2003	$424,917,296	$576,127,904	$151,210,608	73.75%	$228,550,406	66.16%
10/1/2004	$431,853,406	$602,795,470	$170,942,064	71.64%	$221,768,791	77.08%
10/1/2005	$527,733,171	$666,182,075	$138,448,904	79.22%	$223,837,003	61.85%
10/1/2006	$554,065,539	$695,889,716	$141,824,177	79.62%	$224,120,314	63.28%
10/1/2007	$646,569,478	$732,576,024	$86,006,546	88.26%	$231,029,237	37.23%
10/1/2008	$674,016,719	$765,842,026	$91,825,307	88.01%	$238,701,628	38.47%
10/1/2009	$667,667,205	$794,686,379	$127,019,174	84.02%	$240,409,390	52.83%
10/1/2010	$671,608,995	$820,669,641	$149,060,646	81.84%	$232,451,661	64.13%

*Not less than zero

APPENDIX A
MEMBERSHIP INFORMATION

Employees Retirement System of the City of St. Louis
Table of Plan Coverage

	10/1/2009	10/1/2010	% change
Active Members in Valuation			
Number	5,641	5,545	-1.7%
Average Age	47.2	47.3	0.2%
Average Service	12.3	12.3	0.5%
Total Payroll	$240,409,390	$232,451,662	-3.3%
Average anticipated payroll	$42,618	$41,921	-1.6%
Total Active Vested Members	3,876	3,809	-1.7%
DROP Members in Valuation (included in Active Members)			
Number	416	451	8.4%
Average Age	59.9	59.7	-0.3%
Average Service	27.0	26.7	-1.1%
Total DROP Account Balances	$17,296,945	$16,741,288	-3.2%
Average DROP Account Balances	$41,579	$37,120	-10.7%
Vested Terminated Members	2,517	2,369	-5.9%
Pensioners:			
Number in Pay Status			
Retirees	3,295	3,396	3.1%
Disabled Retirees	184	183	-0.5%
Total	3,479	3,579	2.9%
Average Age	72.70	72.66	0.0%
Average Monthly Benefit	$828	$859	3.7%
Beneficiaries in Pay Status	439	422	-3.9%

APPENDIX A
MEMBERSHIP INFORMATION

Employees Retirement System of the City of St. Louis
Pensions in Payment Status by Type and Monthly Amount

Monthly Amount	Total	Terminated			
		Retirees	Vested	Disability	Beneficiaries
Total	**6,370**	**3,396**	**2,369**	**183**	**422**
Under $500	3,857	1,594	1,981	70	212
$500-1,000	1,249	747	316	76	110
1,000-1,500	646	507	59	29	51
1,500-2,000	314	270	12	7	25
2,000-2,500	115	104	1	0	10
2,500-3,000	57	49	0	1	7
3,000-3,500	47	44	0	0	3
3,500-4,000	30	29	0	0	1
4,000-4,500	31	29	0	0	2
4,500-5,000	9	8	0	0	1
5,000 & over	15	15	0	0	0

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions and Actuarial Cost Method

1. Mortality Rates:

Healthy: 1994 Group Annuity Mortality Table
Disabled: 1983 Railroad Retirement Board Disabled Life Mortality Table

2. Mortality and Disability Rates before Retirement:

	Mortality (%)		Disability (%)	
Age	Male	Female	Male	Female
20	0.05	0.03	0.00	0.00
25	0.07	0.03	0.00	0.00
30	0.08	0.04	0.00	0.00
35	0.09	0.05	0.00	0.00
40	0.11	0.07	0.11	0.05
45	0.16	0.10	0.17	0.10
50	0.26	0.14	0.50	0.24
55	0.44	0.23	0.62	0.34
60	0.80	0.44	0.39	0.24

3. Withdrawal Rates before Retirement:

With Less Than Four Years of Creditable Service			With Four or More Years of Creditable Service		
Creditable Service	Male	Female	Age	Male	Female
0	22.0	16.0	20	25.00	13.90
1	16.0	14.0	25	17.20	10.96
2	12.0	10.0	30	10.80	8.40
3	10.0	8.0	35	8.44	7.10
			40	5.90	5.60
			45	4.30	4.40
			50	3.60	3.52
			55	3.10	2.60

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

4. Retirement Rates:

Age	Retirement Rate (%)	Age	Retirement Rate (%)
55	5.0	63	20.0
56	5.0	64	20.0
57 – 58	8.0	65	25.0
59	10.0	66	25.0
60	10.0	67-69	25.0
61	10.0	70	100.0
62	20.0		

In addition, in the first year that a participant satisfies the requirements under the "Rule of 85," the retirement rate is assumed to be 75% if the age in the first year of eligibility is 55 or less and 60% if the age in the first year of eligibility is older than 55 (100% at age 70).

5. Retirement Age for Inactive Vested Participants

For members who terminate employment with 30 or more years of creditable service or are eligible for a Rule of 85 pension, immediate commencement of benefits is assumed. All others are assumed to retire at age 61.

6. DROP Participants

Participants in the DROP are assumed to remain in the DROP for 5 years. The standard retirement rates are assumed. Interest to the DROP account is assumed to be creditable at 6% for those participants who enter the DROP after January 21, 2003. The liability and normal cost associated with the retirement decrement has been increased by 3% to account for the additional cost associated with the resumption of active participants.

7. Unknown Data for Participants

Same as those exhibited by participants with similar known characteristics. For inactive vested participants with unknown benefit amounts, $250 per month is assumed.

8. Rehires

A 0.4% load on active accrued liability and normal cost has been added to reflect the cost of rehires.

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

9. Sick Leave

Sick leave may be used to increase either Final Average Compensation, Creditable Service, or both. Prior to October 1, 2010, the valuation assumed:

- 20 hours accrued each year
- 50% of accrued hours are "banked"
- 50% of banked hours are used first to increase Final Average Compensation
- The remainder of available banked hours is used to increase Creditable Service

Effective in July 2010, the accumulation of unused sick leave hours, that can be used for benefit purposes, was frozen. Starting with the October 1, 2010 valuation, the actual unused credited sick leave hours on file were used in the valuation.

10. Percent Married

1960 US census varies by sex and age.

11. Age of Spouse

Females (or males) are three years younger (or older) than their spouses.

12. Net Investment Return

8.00% per year, net of expenses.

13. Salary Increases

Varies by age, ranging from 3.500% to 7.017%.

14. Increases in Social Security Table Wage Base

3.5% per year.

15. Cost-of-Living Adjustment

3.125% per year for 8 years and 0% thereafter.

16. Increase in Section 415 and Section 401(a)(17) limits

4.5% per year.

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

B. Actuarial Methods

1. Actuarial Value of Assets

The market value of assets less unrecognized returns in each of the last five years, but no earlier than October 1, 2005. Initial unrecognized return is equal to the difference between the actual market return and expected market return, and is recognized over a five-year period. The actuarial value is further adjusted, if necessary, to be within 20% of the market value. The actuarial asset value was initialized at the market value as of October 1, 2005.

2. Actuarial Cost Method

The cost method for valuation of liabilities used for this valuation is the Projected Unit Credit method. This is one of a family of valuation methods known as accrued benefit methods. The chief characteristic of accrued benefit methods is that the funding pattern follows the pattern of benefit accrual. Under the Projected Unit Credit Actuarial Cost method, the normal cost is determined as that portion of each participant's projected benefit attributable to service expected to be earned in the upcoming plan year. The actuarial liability, which is determined for each participant as of each valuation date, represents the actuarial present value of the portion of each participant's projected benefit attributable to service earned prior to the valuation date.

One of the significant effects of this funding method is that, depending on the demographics of the population, the Projected Unit Credit method tends to produce lower costs in the early years. There is a possibility that as the population ages the annual cost could increase over time. Given a stable population, however, this method can produce a steady contribution as a percentage of payroll.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

1. Plan Year

October 1 through September 30.

2. Final Average Compensation

One-half the sum of:
(a) The total compensation earned during the last two highest consecutive years of Creditable Service prior to termination (subject to the Section 401(a)(17) limit); and
(b) The balance of sick leave pay as of the date of retirement less sick leave hours paid upon termination and less sick leave hours considered as Creditable Service. Said balance cannot exceed 25% of a member's total sick leave pay as of the date of retirement.

3. Benefit Compensation Base

Amount of annual compensation with respect to which old age and survivor's insurance benefits would be provided to the member under the Social Security Act in effect on the date the Benefit Compensation Base is determined calculated when the member terminates employment.

4. Normal Retirement

Age Requirement:	65.
Service Requirement:	Five years of Creditable Service.
Amount:	The product of: (a) 1.30% of Final Average Compensation up to the Benefit Compensation Base, plus 2.05% of Final Average Compensation in excess of the Benefit Compensation Base, and (b) Creditable Service. Minimum $200 per month for retirees with 12 or more years of creditable service.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

5. Rule of 85 Retirement

Age/Service Requirement:	Sum of Age and Creditable Service at date of termination equals or exceeds 85.
Amount:	The product of: (a) 1.30% of Final Average Compensation up to the Benefit Compensation Base, plus 2.05% of Final Average Compensation in excess of the Benefit Compensation Base, and (b) Creditable Service.

6. Early Retirement

Age/Service Requirement:	Age 60 with five years of Creditable Service; or age 55 with 20 years of Creditable Service; or any age with 30 years of Creditable Service.
Amount:	Normal retirement amount reduced by 1/3% for each month benefit begins before age 65.

7. Disability

Age Requirement	None.
Service Requirement	Five years of Creditable Service and an active employee at disablement.
Amount	Normal retirement amount based on Creditable Service and Final Average Compensation at disability, payable immediately

8. DROP (Deferred Retirement Option Plan)

Members who have achieved eligibility for retirement can continue active employment and defer receipt of their retirement allowance for a period not to exceed five years. During the DROP period, the member's retirement allowance will be paid directly into a separate account.

Service during the DROP period shall not be counted as Creditable Service, nor shall it count toward determination of retirement allowance. A member's DROP account shall not be adjusted for any cost-of-living increases during participation in the DROP. No member returning to non-DROP status shall make any withdrawal from his/her DROP account until after termination of employment.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

The account balance is credited with interest annually. In no event does the total account balance exceed the accumulated value of five-years-payments with interest.

The annuity awarded upon full termination and subsequent benefit receipt reflects the unused sick-leave conversion to Creditable Service and/or Final Average compensation. During participation in the DROP, the annual deposit to the account does NOT reflect any conversion of unused sick leave as each participant continues to accrue sick leave hours. The unused credited sick leave hours was frozen as of July 17, 2010.

9. Vesting

Age Requirement: None.

Service Requirement: Five years of Creditable Service.

Amount: Normal or early service retirement amount.

10. Spouse Pre-Retirement Death Benefit

Service less than five years

Age Requirement: None.

Service Requirement: Five years of Creditable and an active employee.

Amount: If married, 100% of the benefit the employee would have received had he or she retired the day before he or she died and elected the joint and 100% survivor option. If the employee died prior to eligibility for early service retirement, the spouse's benefit is deferred to the employee's earliest retirement date.

Death benefits may also be payable to members who have terminated employment. The costs of those benefits are paid for by the reduction of the accrued benefit payable to the inactive vested participant.

11. Post-Retirement Death Benefit

If married, the employee and spouse may elect to have pension benefits paid in the form of a 100% joint and survivor annuity. A member may also elect a ten year certain and life equivalent form of benefit. If any one of these options is elected, the benefit amount otherwise payable is reduced to reflect the coverage. If not elected, benefits are payable for the life of the employee without reduction.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

12. Cost-of-Living Adjustment (COLA)

Based on the change in the Consumer Price Index (CPI) for the fiscal year, subject to a maximum increase of 3.125% per year (3.0% for retirements between March 21, 1972 and March 26, 1974; none for retirements prior to March 21, 1972), with a cumulative percentage increase (equal to the sum of the annual percentage increases) limited to 25%. If the increase in CPI is less than 1.0%, no adjustment is made. If the change is a decrease, the cost-of-living adjustment shall be zero unless the decrease is 3.125% or more. Adjustments begin on the second January 1 after payments begin.

13. Creditable Service

Number of years and completed months of service during which the member receives compensation after April 1, 1960. Creditable Service for employment prior to April 1, 1960 is granted only if the member was an employee of an employer of the System on April 1, 1960. Unused credited sick leave shall be considered as Creditable Service provided the member does not receive payment for the sick leave. The amount of credited sick leave was frozen on July 17, 2010.

14. Membership

Immediate upon employment.

15. Section 415 limit

$195,000.

16. Section 401(a)(17)

$245,000.

Note these limits were increased by the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA). The provisions of EGTRRA were scheduled to sunset December 31, 2010. Effective August 17, 2006, the Pension Protection Act made these changes permanent.

17. Changes Since Last Valuation

The unused credited sick leave hours was frozen as of July 17, 2010. There were no other changes in plan provisions.